



Groundwater & Environmental Services, Inc.

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January 20, 2020

Mr. Michael Squire
Division of Environmental Remediation, Remedial Bureau C
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

**Re: Soil Vapor Intrusion Summary
1-45 Orangetown Shopping Center
Orangeburg, New York
Site #C344066**

Dear Mr. Squire:

Enclosed is the *Soil Vapor Intrusion Summary Report* for the above referenced site prepared by Groundwater & Environmental Services, Inc. (GES) on behalf of UB Orangeburg, LLC. The report summarizes the results of the soil vapor and indoor air quality investigation performed at a portion of the Orangetown Shopping Center located at 1-45 Orangetown Road, Orangeburg, New York during the 4th Quarter of 2019.

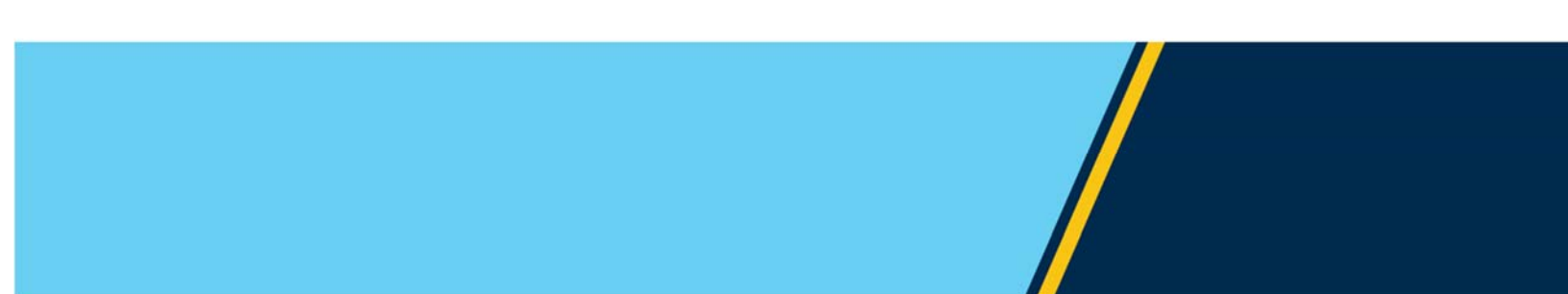
If you have any questions or comments regarding this submittal, please contact Michael DeGloria of GES at (866) 839-5195 at extension 3839.

Sincerely,
Groundwater & Environmental Services, Inc.

Jessica M. Thomas
Staff Remediation Specialist

Michael DeGloria, P.G.
Principal Project Manager

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UB Orangeburg, LLC

Soil Vapor Intrusion Summary

UB Orangeburg

1-45 Orangetown Shopping Center

NYSDEC Site Number C344066

January 20, 2020

Version 1



Soil Vapor Intrusion Summary

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, NY

Prepared for:
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Date:
January 20, 2020

Jessica M. Thomas
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Michael DeGloria, P.G.
Principal Project Manager

Table of Contents

1	Objective	2
1.1	Background Information	2
2	Scope of Work.....	3
3	Pre-Sampling Requirements	3
3.1	Pre-sampling Inspection and Preparation of Property.....	3
3.2	Product Inventories	3
4	Soil Vapor Intrusion Investigation.....	4
4.1	Sampling Collection.....	4
4.2	Quality Assurance/Quality Control.....	4
4.3	Sub-Slab and Ambient Air Sample Collection	4
4.4	Sample Analysis.....	5
5	Conclusions/Recommendations.....	7

Figures

Figure 1 – Site Location Map

Figure 2 – Site Map

Figure 3 – Sub-slab and Ambient Air Sampling Location

Tables

Table 1 – GC/MS Volatiles (TO-15)

Table 2 – Constituents of Concern Summary Comparison

Appendices

Appendix A – Correspondences

Appendix B – NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form

Appendix C – Laboratory Analytical Results

Appendix D – Data Usability Summary Report

Appendix E – NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York



Acronyms

BCA	Brownfield Cleanup Agreement
BASE	Building Assessment and Survey Evaluation
c12-DCE	cis-1,2-dichloroethylene
DUSR	data usability summary report
11-DCE	1,-dichloroethylene
EPA	Environmental Protection Agency
GES	Groundwater & Environmental Services, Inc.
µg/m ³	micrograms per cubic meter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PID	photoionization detector
SVI	soil vapor intrusion
SSD	sub-slab depressurization
PCE	tetrachloroethylene
111-TCA	1,1,1-trichloroethane
TCE	trichloroethylene
VOC	volatile organic compound

1 Objective

The objective of this report is to summarize the soil vapor and indoor air quality investigation for volatile organic compounds (VOCs) completed on December 10 and 11, 2019 at a portion of the Orangetown Shopping Center located at 1-45 Orangetown Road, Orangeburg, New York. The investigation was completed in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved Work Plan submitted to the NYSDEC on October 3, 2017 with subsequent modifications outlined in GES' *Soil Vapor Intrusion Summary Report* dated February 12, 2019. The investigation was also completed in accordance with the New York State Department of Health (NYSDOH) *Indoor Air Sampling and Analysis Guidance*, dated February 1, 2005, the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, dated October 2006 and Updates to *Soil Vapor/Indoor Air Decision Matrices*, dated May 2017. The investigation was conducted at the former Sparkle Cleaners tenant space (currently a Verizon store) located within Building #2 of the Orangetown Shopping Center (the "site"). The other (2) tenant spaces at the site (former Deli Spot and New China House) were not resampled based on previous soil vapor intrusion (SVI) investigation results which recommended *No Further Action* at all sampling locations within those tenant spaces. The NYSDEC and NYSDOH approved conducting the investigation at only the former Sparkle Cleaners tenant space in an email dated June 7, 2019. Correspondence with the NYSDEC and NYSDOH are included as **Appendix A**.

This investigation was conducted for the purpose of evaluating current sub-slab and ambient air quality at the former Sparkle Cleaners tenant space as well as evaluating the potential for soil vapor intrusion in the subject tenant space located within Building #2 in support of permanent removal of the remaining sub-slab depressurization (SSD) systems and cessation of additional sub-slab or ambient air testing. A site location map and a site map indicating pertinent site features are presented as **Figures 1 and 2**.

1.1 Background Information

The subject site is a 1.2-acre portion of the shopping plaza, located near the southeast corner of the parcel. The shopping plaza is located at the southeast corner of Orangeburg and Dutch Hill Roads in Orangeburg, New York, and is comprised of an 11-acre parcel that contains several commercial buildings. The site has been utilized as farmland, a camp, an amphitheater, and the current retail shopping center. The plaza is situated in a suburban area of mixed land use, and is surrounded predominantly by commercial and residential properties. It is served by a public water supply system. There had previously been a dry cleaner operating at the shopping center since approximately 1966. The Sparkle Cleaners, which operated as a dry cleaning facility within Building #2, is currently a Verizon store. Historical investigations identified the presence of contamination caused by the release of dry cleaning fluids.

In January 2007, JLJ Management Company entered into Brownfield Cleanup Agreement (BCA) #A3-0563-0906BCA with the NYSDEC to remediate a 1.2-acre portion of the 11-acre parcel. This BCA required the Remedial Party, JLJ Management Group, to investigate and remediate contaminated media at the site.

An environmental easement for the site was executed by the NYSDEC on September 16, 2011. The site is currently managed by GES in accordance with an approved *Site Management Plan*, *Remedial Action Work Plan* and *Final Engineering Report* completed by Kleinfelder, Inc. and approved by the NYSDEC in December of 2011.

A property transfer of the shopping center was completed on March 28, 2012. UB Orangeburg, LLC acquired the property from JLJ Management Company, Inc. at that time.

2 Scope of Work

All activities described in this report were completed in accordance with published NYSDOH guidance for indoor air and vapor intrusion evaluation for a building. This effort was undertaken to determine the actions recommended to address current and potential exposures related to soil vapor intrusion as outlined in the May 2017 Soil Vapor/Indoor Air Matrices A through C. Field activities included a pre-sampling inspection, a chemical inventory, and collection of sub-slab soil vapor and indoor air samples over an 8 hour period from designated sampling points and/or locations within the former Sparkle Cleaners tenant space. The remaining sub-slab depressurization system at the former Sparkle Cleaners has been idled since August 17, 2015. Laboratory analysis and reporting followed these field activities.

3 Pre-Sampling Requirements

3.1 Pre-sampling Inspection and Preparation of Property

On December 10, 2019, GES conducted a pre-sampling inspection within the former Sparkle Cleaners tenant space to confirm the type of structure, floor layout and physical conditions of the building being studied and to identify conditions that may affect or interfere with the planned testing. GES also confirmed the presence and integrity of the sampling points. A crack in the foundation floor was observed in the vicinity of sample point VP-5 in the former Sparkle Cleaners tenant space on December 10, 2019. GES utilized hydraulic cement to seal the crack prior to testing. This information along with information on sources of potential indoor contamination are identified on the NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms, which are provided as **Appendix B**. GES also utilized a photo-ionization detector (PID) to evaluate and determine any potential interference during the sampling event. Items that were evaluated during the building inventory included but were not limited to the use or storage of chemical products. Potential interferences are noted on the NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms.

3.2 Product Inventories

Because some consumer products contain ingredients which can contribute to levels of VOCs in the air, a product inventory was completed prior to completion of the air sampling activities on December 11, 2019 to provide an accurate assessment of the potential contribution of noted products. Each room in the former Sparkle Cleaners tenant space was inspected and the products containing or potentially containing VOCs were listed on the Products Inventory Form (attached)

along with PID readings obtained near such products. In addition, the known volatile ingredients were also recorded for each product. Several items were observed that did not register a PID reading. The product inventory is included on the attached NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms (**Appendix B**).

4 Soil Vapor Intrusion Investigation

4.1 Sampling Collection

To characterize contaminant concentration trends and potential exposures, indoor air and sub-slab vapor samples were collected over an 8-hour period from the approximate locations shown on the attached **Figure 3** and as summarized below in text and table format:

- Former Sparkle Cleaners (currently a Verizon store): Vapor extraction wells VP-5 and VP-6
- Ambient Outdoor Sample: Sample taken outside the building

Sample Location	Sample Identification	Sample Description
Former Sparkle Cleaners	Sparkle VP-5	Sub-slab
Former Sparkle Cleaners	Sparkle VP-5 Ambient	Indoor Air
Former Sparkle Cleaners	Sparkle VP-6	Sub-slab
Former Sparkle Cleaners	Sparkle VP-6 Ambient	Indoor Air
Outside (East of Building)	Outside Ambient	Ambient

4.2 Quality Assurance/Quality Control

Care was taken during all aspects of the sample collection to ensure that high quality data was obtained. Sub-slab samples were collected from the sub-slab vapor points at the approximate locations shown on **Figure 3**. To verify the integrity of the sample vapor points, a tracer gas was used to test the seal. On December 10, 2019, prior to sampling, the sub-slab vapor points were first purged of three (3) times the volume of the sampling point using a GILIAN personal air sampling system and a flow module (vacuum pump) set at a maximum flow rate of 0.2 liters per minute. Helium tracer gas was then used to confirm an adequate seal was in place at each vapor point location prior to collection of the soil gas samples.

4.3 Sub-Slab and Ambient Air Sample Collection

Once the helium tracer tests were complete and it was confirmed that each point was adequately sealed, sub-slab vapor and ambient air samples were collected using SUMMA canisters equipped with 8-hour regulators. A total of five (5) air samples were collected on December 11, 2019. Upon completion of the 8-hour sampling period, each sample collection apparatus was stored according to the sample collection method protocol and delivered to SGS-Accutest Laboratories of Dayton,

New Jersey under proper chain of custody for analysis of VOCs via Environmental Protection Agency (EPA) Method TO-15.

4.4 Sample Analysis

Laboratory analytical results indicated the presence of individual VOCs above laboratory detection limits and/or above regulatory guidelines in each sub-slab and indoor air samples collected. The analytical data is summarized on **Tables 1** and **2** and the laboratory analytical report is included as **Appendix C**. In addition, a data usability summary report (DUSR) for all samples was completed by RemVer of Colchester, Connecticut and is provided as **Appendix D**. The DUSR found all results acceptable for use.

The following compounds exceeded regulatory guidelines in one or more samples, based on the upper fence indoor air values in Appendix C of the NYSDOH Soil Vapor Intrusion Guidance document or the 90th percentile indoor air values from the EPA 2001 Building Assessment and Survey Evaluation (BASE) Database:

- Acetone
- Chloroform
- cis-1,2-Dichloroethylene (c12-DCE)
- Ethanol
- Tetrachloroethylene
- Trichloroethylene

Laboratory analytical results for the constituents of concern (COCs), carbon tetrachloride, 1,1-Dichloroethylene (11-DCE), c12-DCE, tetrachloroethylene (PCE), 1,1,1-trichloroethane (111-TCA), methyl chloride, vinyl chloride, and trichloroethylene (TCE), were then compared to the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, section 3.4.2, Indoor Air Matrices A, B, and C (attached as **Appendix E**). Based on the comparison, continued monitoring of the former Sparkle Cleaner tenant space is recommended. Refer to the Constituents of Concern Summary Comparison detailed on **Table 3**. A summary of the COCs and the matrix recommendation are detailed below:

- TCE
 - Sub-slab: 2.7 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at sample location VP-5 to $9.7 \mu\text{g}/\text{m}^3$ at sample location VP-6
 - Indoor air: Non-detect to $0.42 \mu\text{g}/\text{m}^3$ (VP-6)
 - Recommendation: Monitor (Matrix A)
- c12-DCE
 - Sub-slab: $5.2 \mu\text{g}/\text{m}^3$ at sample location VP-5 to $26 \mu\text{g}/\text{m}^3$ at sample location VP-6
 - Indoor air: Non-detect in all samples

- Recommendation: Monitor (Matrix A)
 - o The indoor air sample at sample location VP-6 is below detection limits; however, the reporting limit ($0.63 \mu\text{g}/\text{m}^3$) is greater than $0.2 \mu\text{g}/\text{m}^3$. This result combined with a sub-slab detection between 6 to $<60 \mu\text{g}/\text{m}^3$ results in a monitoring recommendation in accordance to the Soil Vapor/Indoor Air Matrix A.
- 11-DCE
 - Sub-slab: Non-detect in all samples
 - Indoor air: Non-detect in all samples
 - Recommendation: No Further Action (Matrix A)
 - o The indoor air sample at location VP-5 and VP-6 is below detection limits; however, the reporting limit ($0.63 \mu\text{g}/\text{m}^3$) is greater than $0.2 \mu\text{g}/\text{m}^3$. The sub-slab detections were also below detection limits, which were reported as non-detect $<0.79 \mu\text{g}/\text{m}^3$, which is below the recommended $1.0 \mu\text{g}/\text{m}^3$. The combined results yield a no further action recommendation in accordance to the Soil Vapor/Indoor Air Matrix A.
- Carbon tetrachloride
 - Sub-slab: Non-detect in all samples
 - Indoor air: Non-detect in all samples
 - Recommendation: No Further Action (Matrix A)
- PCE
 - Sub-slab: $3.1 \mu\text{g}/\text{m}^3$ at sample location VP-5 to $18 \mu\text{g}/\text{m}^3$ at sample location VP-6
 - Indoor air: Non-detect to $6.2 \mu\text{g}/\text{m}^3$ (VP-6)
 - Recommendation: No Further Action (Matrix B)
- 1,1,1-TCA
 - Sub-slab: Non-detect in all samples
 - Indoor air: Non-detect in all samples
 - Recommendation: No Further Action (Matrix B)
- Methylene Chloride
 - Sub-slab: Non-detect to $5.9 \mu\text{g}/\text{m}^3$ (VP-5)
 - Indoor air: Non-detect to $0.56 \mu\text{g}/\text{m}^3$ (VP-6)
 - Recommendation: No Further Action (Matrix B)
- Vinyl Chloride
 - Sub-slab: Non-detect in all samples

- Indoor air: Non-detect in all samples
- Recommendation: No Further Action (Matrix C)

5 Conclusions/Recommendations

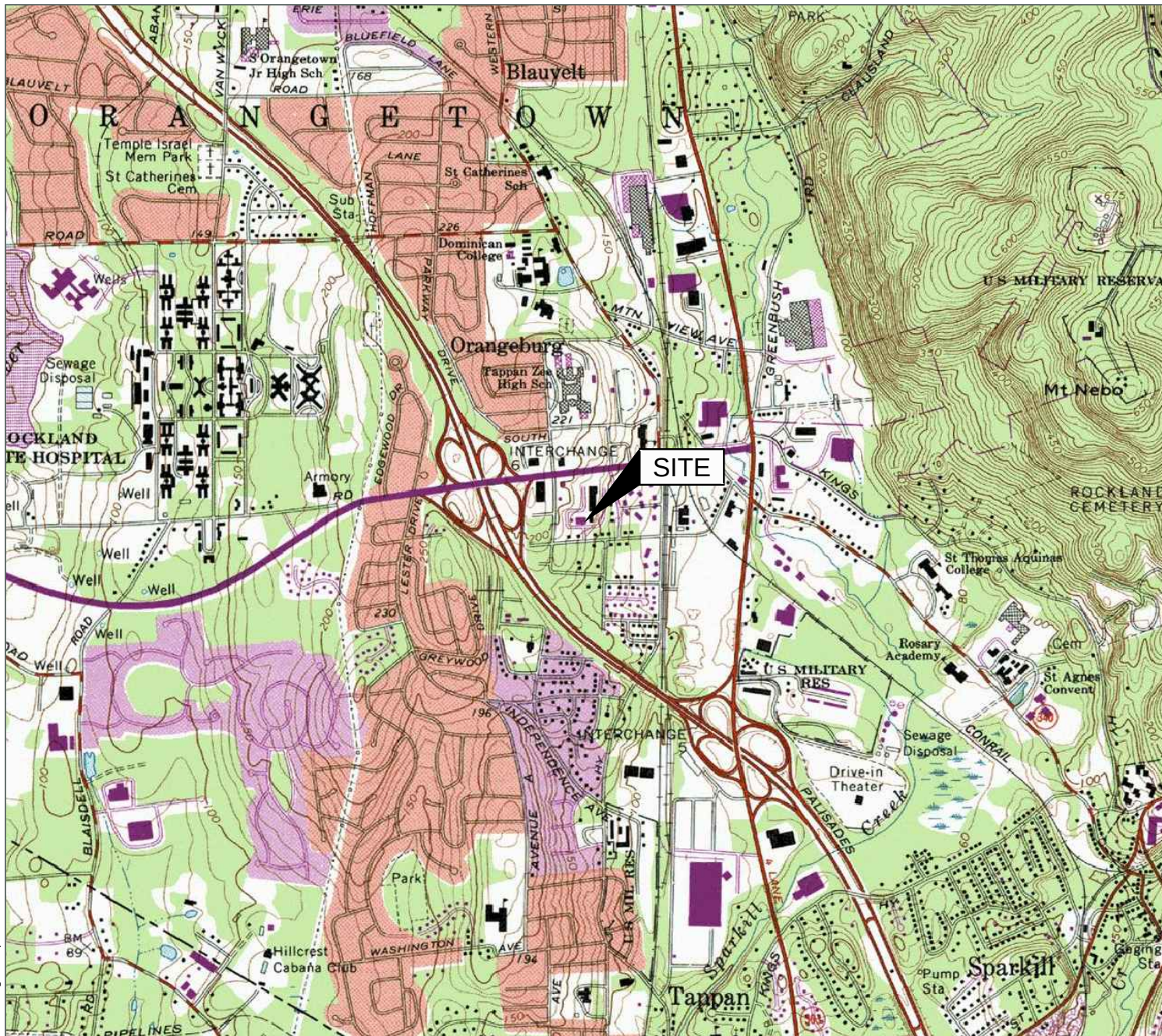
On December 10 and 11, 2019 a SVI investigation was completed at former Sparkle Cleaners tenant space (currently and a Verizon store) located within Building #2 of the Orangetown Shopping Center. This investigation was conducted for the purpose of evaluating current soil vapor and indoor air quality and the potential for soil vapor intrusion in the tenant space located within Building #2.

Based on the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, section 3.4.2, Indoor Air Matrices A, B, and C, a recommendation for Monitor at the former Sparkle Cleaners is supported by the TCE and c12-DCE concentrations at sample location VP-6, which were $0.22 \mu\text{g}/\text{m}^3$ and $0.43 \mu\text{g}/\text{m}^3$ above the no further action to monitor threshold, respectively. Furthermore, the building inventory did not identify any apparent use or storage of chemical products that could potentially contribute to the detections of the COCs in the indoor air samples.

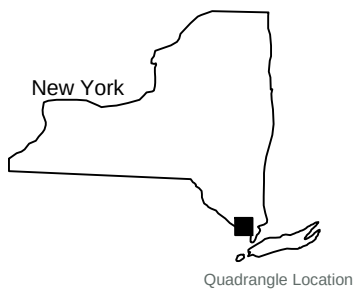
GES recommends an additional annual SVI sampling event, targeting the former Sparkle Cleaner tenant space (sample locations Sparkle VP-5 and Sparkle VP-6) during the next heating season (typically November 15th through April 15th). In addition, these and prior results continue to demonstrate that the SSD systems can remain off-line at this time.



Figures



Source:
USGS 7.5 Minute Series
Topographic Quadrangle, 1979
Nyack, New York
Contour Interval = 10'



Site Location Map

UB Orangeburg, LLC
1-45 Orangetown Shopping Center
Orangeburg, New York

Drawn
W.G.S.
Designed
Approved



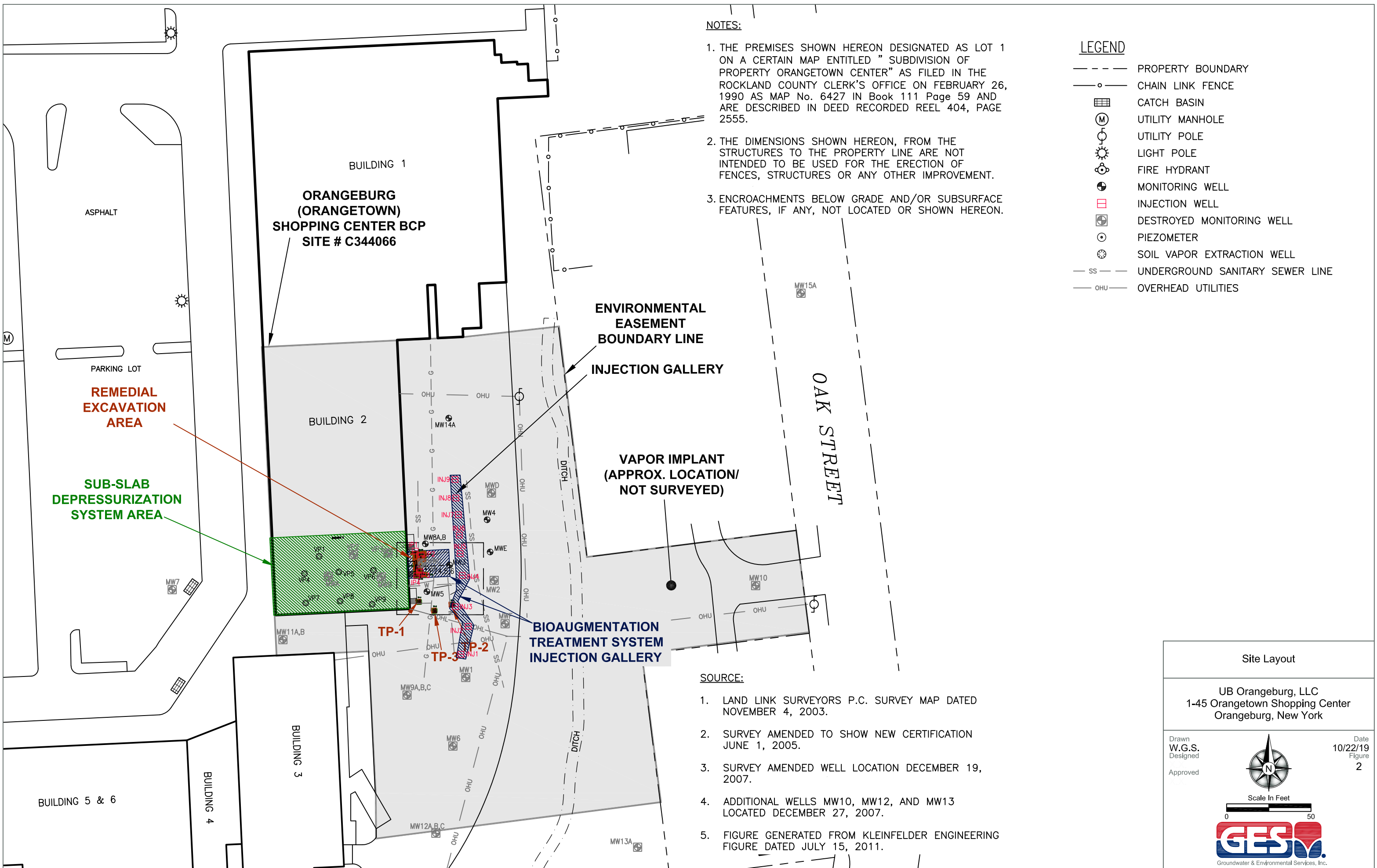
Scale In Feet



Groundwater & Environmental Services, Inc.

Date
1-23-18
Figure
1

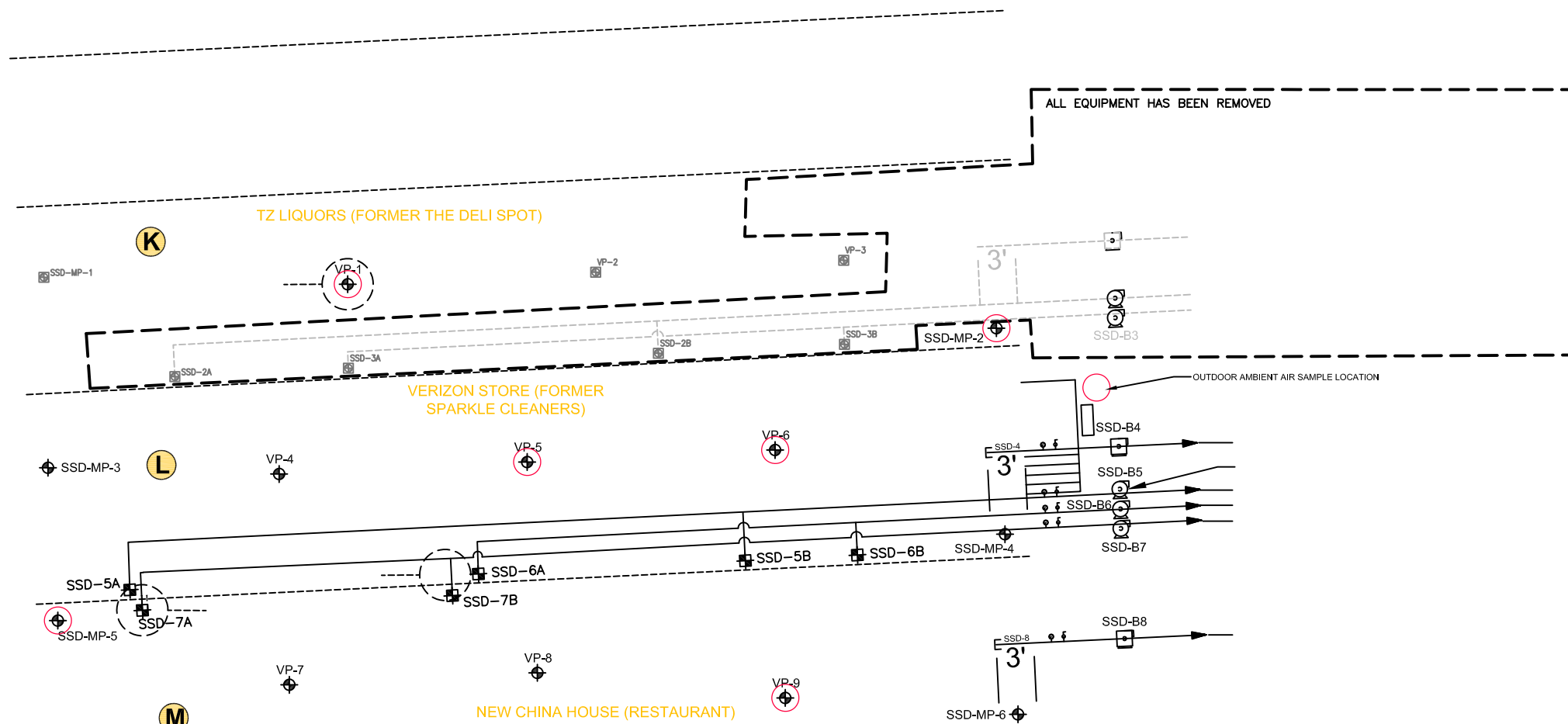
M:\Graphics\1100-Patterson-LHV\Misc\Orangeburg\Orangeburg SM.dwg, B50 sm, WShea



1. LAND LINK SURVEYORS P.C. SURVEY MAP DATED NOVEMBER 4, 2003.
2. SURVEY AMENDED TO SHOW NEW CERTIFICATION JUNE 1, 2005.
3. SURVEY AMENDED WELL LOCATION DECEMBER 19, 2007.
4. ADDITIONAL WELLS MW10, MW12, AND MW13 LOCATED DECEMBER 27, 2007.
5. FIGURE GENERATED FROM KLEINFELDER ENGINEERING FIGURE DATED JULY 15, 2011.

SSD-MP-6		SUB-SLAB MONITORING PORT
		SUB-SLAB VAPOR EXTRACTION WELL
		DETAIL NUMBER PLATE NUMBER
		SSD BLOWER (115 SCFM)
		SSD BLOWER (200 SCFM)
		VACUUM GAUGE
		PLUGGED PORT
		ABANDONED/DESTROYED WELL
		Sub-slab and/or Ambient Air Sample Location

- Ⓚ TZ LIQUORS (FORMER THE DELI SPOT)
- Ⓛ VERIZON STORE (FORMER SPARKLE CLEANERS)
- Ⓜ NEW CHINA HOUSE



Groundwater & Environmental Services, Inc.



Tables

Table 1
GC/MS Volatiles (TO-15) - ug/m3



UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	OUTSIDE	VP-6	VP-6	VP-5	VP-5	REGULATORY GUIDANCE		
Lab Sample ID:	JD234-5	JD234-1	JD234-2	JD234-3	JD234-4	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Date Sampled:	12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019			
Matrix:	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.			
Acetone	8.1	33.5	196	35.4	176	140	NS	98.9
1,3-Butadiene	ND<(0.35)	ND<(0.44)	ND<(0.35)	ND<(0.44)	ND<(0.35)	NS	NS	<3.0
Benzene	0.70	ND<(0.64)	0.89	ND<(0.64)	ND<(0.51)	29	NS	9.4
Bromodichloromethane	ND<(0.54)	ND<(0.67)	ND<(0.54)	ND<(0.67)	ND<(0.54)	NS	NS	NS
Bromoform	ND<(0.33)	ND<(0.41)	ND<(0.33)	ND<(0.41)	ND<(0.33)	NS	NS	NS
Bromomethane	ND<(0.62)	ND<(0.78)	ND<(0.62)	ND<(0.78)	ND<(0.62)	0.9	NS	<1.7
Bromoethene	ND<(0.70)	ND<(0.87)	ND<(0.70)	ND<(0.87)	ND<(0.70)	NS	NS	NS
Benzyl Chloride	ND<(0.82)	ND<(1.0)	ND<(0.82)	ND<(1.0)	ND<(0.82)	NS	NS	<6.8
Carbon disulfide	ND<(0.50)	ND<(0.62)	ND<(0.50)	ND<(0.62)	ND<(0.50)	NS	NS	4.2
Chlorobenzene	ND<(0.74)	ND<(0.92)	ND<(0.74)	ND<(0.92)	ND<(0.74)	<0.25	NS	<0.9
Chloroethane	ND<(0.42)	ND<(0.53)	ND<(0.42)	ND<(0.53)	ND<(0.42)	0.6	NS	<1.1
Chloroform	ND<(0.78)	2.0	ND<(0.78)	ND<(0.98)	ND<(0.78)	4.6	NS	1.1
Chloromethane	0.91	1.3	0.91	0.52	1.1	5.2	NS	3.7
3-Chloropropene	ND<(0.50)	ND<(0.63)	ND<(0.50)	ND<(0.63)	ND<(0.50)	NS	NS	NS
2-Chlorotoluene	ND<(0.83)	ND<(1.0)	ND<(0.83)	ND<(1.0)	ND<(0.83)	NS	NS	NS
Carbon tetrachloride	0.43	ND<(0.25)	ND<(0.20)	ND<(0.25)	ND<(0.20)	1.1	NS	<1.3
Cyclohexane	ND<(0.55)	ND<(0.69)	ND<(0.55)	ND<(0.69)	ND<(0.55)	19	NS	NS
1,1-Dichloroethane	ND<(0.65)	ND<(0.81)	ND<(0.65)	ND<(0.81)	ND<(0.65)	<0.25	NS	<0.7
1,1-Dichloroethylene	ND<(0.63)	ND<(0.79)	ND<(0.63)	ND<(0.79)	ND<(0.63)	<0.25	NS	<1.4
1,2-Dibromoethane	ND<(0.61)	ND<(0.77)	ND<(0.61)	ND<(0.77)	ND<(0.61)	<0.25	NS	<1.5
1,2-Dichloroethane	ND<(0.65)	ND<(0.81)	ND<(0.65)	ND<(0.81)	ND<(0.65)	<0.25	NS	<0.9
1,2-Dichloropropane	ND<(0.74)	ND<(0.92)	ND<(0.74)	ND<(0.92)	ND<(0.74)	<0.25	NS	<1.6
1,4-Dioxane	ND<(0.58)	ND<(0.72)	ND<(0.58)	ND<(0.72)	ND<(0.58)	NS	NS	NS
Dichlorodifluoromethane	2.0	1.9	1.9	1.9	2.0	26	NS	16.5
Dibromochloromethane	ND<(0.68)	ND<(0.85)	ND<(0.68)	ND<(0.85)	ND<(0.68)	NS	NS	NS
trans-1,2-Dichloroethylene	ND<(0.63)	1.4	ND<(0.63)	ND<(0.79)	ND<(0.63)	NS	NS	NS
cis-1,2-Dichloroethylene	ND<(0.63)	26	ND<(0.63)	5.2	ND<(0.63)	1.2	NS	<1.9
cis-1,3-Dichloropropene	ND<(0.73)	ND<(0.91)	ND<(0.73)	ND<(0.91)	ND<(0.73)	<0.25	NS	<2.3
m-Dichlorobenzene	ND<(0.48)	ND<(0.60)	ND<(0.48)	ND<(0.60)	ND<(0.48)	1	NS	<2.4
o-Dichlorobenzene	ND<(0.19)	ND<(0.24)	ND<(0.19)	ND<(0.24)	ND<(0.19)	0.9	NS	<1.2
p-Dichlorobenzene	ND<(0.48)	ND<(0.60)	ND<(0.48)	ND<(0.60)	ND<(0.48)	2.6	NS	5.5
trans-1,3-Dichloropropene	ND<(0.73)	ND<(0.91)	ND<(0.73)	ND<(0.91)	ND<(0.73)	<0.25	NS	<1.3
Ethanol	5.8	60.9	334 E	67.6	369 E	NS	NS	210
Ethylbenzene	ND<(0.69)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	13.0	NS	5.7
Ethyl Acetate	ND<(0.58)	1.4	2.3	1.8	0.76	NS	NS	5.4
4-Ethyltoluene	ND<(0.79)	ND<(0.98)	ND<(0.79)	ND<(0.98)	ND<(0.79)	NS	NS	NS
Freon 113	ND<(0.61)	ND<(0.77)	ND<(0.61)	ND<(0.77)	ND<(0.61)	NS	NS	3.5
Freon 114	ND<(0.56)	ND<(0.70)	ND<(0.56)	ND<(0.70)	ND<(0.56)	NS	NS	NS
Heptane	ND<(0.66)	ND<(0.82)	ND<(0.66)	ND<(0.82)	ND<(0.66)	NS	NS	NS
Hexachlorobutadiene	ND<(0.77)	ND<(0.96)	ND<(0.77)	ND<(0.96)	ND<(0.77)	11.0	NS	<6.8
Hexane	ND<(0.56)	1.3	0.56	1.9	ND<(0.56)	NS	NS	NS
2-Hexanone	ND<(0.65)	ND<(0.82)	ND<(0.65)	ND<(0.82)	ND<(0.65)	NS	NS	NS
Isopropyl Alcohol	0.96	9.1	27.5	11	26.3	NS	NS	250
Methylene chloride	ND<(0.56)	ND<(0.69)	0.56	5.9	ND<(0.56)	45.0	60	10
Methyl ethyl ketone	ND<(0.47)	1.3	0.65	2.4	0.50	39.0	NS	NS
Methyl Isobutyl Ketone	ND<(0.66)	ND<(0.82)	ND<(0.66)	ND<(0.82)	ND<(0.66)	5.3	NS	NS
Methyl Tert Butyl Ether	ND<(0.58)	ND<(0.72)	ND<(0.58)	ND<(0.72)	ND<(0.58)	71.0	NS	11.5
Methylmethacrylate	ND<(0.66)	ND<(0.82)	ND<(0.66)	ND<(0.82)	ND<(0.66)	1.1	NS	NS
Propylene	ND<(0.69)	ND<(0.86)	ND<(0.69)	ND<(0.86)	ND<(0.69)	NS	NS	NS
Styrene	ND<(0.68)	ND<(0.85)	ND<(0.68)	ND<(0.85)	ND<(0.68)	2.3	NS	1.9
1,1,1-Trichloroethane	ND<(0.44)	ND<(0.55)	ND<(0.44)	ND<(0.55)	ND<(0.44)	6.9	NS	20.6
1,1,2,2-Tetrachloroethane	ND<(0.55)	ND<(0.69)	ND<(0.55)	ND<(0.69)	ND<(0.55)	<0.25	NS	NS
1,1,2-Trichloroethane	ND<(0.44)	ND<(0.55)	ND<(0.44)	ND<(0.55)	ND<(0.44)	<0.25	NS	<1.5
1,2,4-Trichlorobenzene	ND<(0.59)	ND<(0.74)	ND<(0.59)	ND<(0.74)	ND<(0.59)	6.3	NS	<6.8
1,2,4-Trimethylbenzene	ND<(0.79)	ND<(0.98)	ND<(0.79)	ND<(0.98)	ND<(0.79)	18	NS	9.5
1,3,5-Trimethylbenzene	ND<(0.79)	ND<(0.98)	ND<(0.79)	ND<(0.98)	ND<(0.79)	6.5	NS	NS
2,2,4-Trimethylpentane	ND<(0.75)	ND<(0.93)	ND<(0.75)	ND<(0.93)	ND<(0.75)	NS	NS	NS

Table 1
GC/MS Volatiles (TO-15) - ug/m3



UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	OUTSIDE	VP-6	VP-6	VP-5	VP-5	REGULATORY GUIDANCE		
Lab Sample ID:	JD234-5	JD234-1	JD234-2	JD234-3	JD234-4	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Date Sampled:	12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019			
Matrix:	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.			
Tertiary Butyl Alcohol	ND<(0.49)	0.61	ND<(0.49)	ND<(0.61)	ND<(0.49)	NS	NS	NS
Tetrachloroethylene	0.29	18	6.2	3.1	ND<(0.22)	4.1	30	15.9
Tetrahydrofuran	ND<(0.47)	ND<(0.59)	ND<(0.47)	ND<(0.59)	ND<(0.47)	9.4	NS	NS
Toluene	0.64	ND<(0.75)	1.1	ND<(0.75)	ND<(0.60)	110	NS	43
Trichloroethylene	ND<(0.17)	9.7	0.42	2.7	ND<(0.17)	0.8	2	4.2
Trichlorofluoromethane	1.1	2.4	1.2	2.6	1.1	30	NS	18.1
Vinyl chloride	ND<(0.082)	ND<(0.10)	ND<(0.082)	ND<(0.10)	ND<(0.082)	<0.25	NS	<1.9
Vinyl Acetate	ND<(0.56)	ND<(0.70)	ND<(0.56)	ND<(0.70)	ND<(0.56)	NS	NS	NS
m,p-Xylene	ND<(0.69)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	21.0	NS	22.2
o-Xylene	ND<(0.69)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	13.0	NS	7.9
Xylenes (total)	ND<(0.69)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	NS	NS	NS

Note:

Results and Standards expressed in micrograms per cubic meter (µg/m3)

ND<# = Not detected, less than the laboratory reporting limit

NS = No Standard

E = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

A = Result is from run #2.

BOLD = results exceed NYSDOH 2003 Soil Vapor Indoor Upper Fence (1) standard

ITALIC = results exceed NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2) standard

"Gray" = results exceed EPA 2001 BASE 90th Percentile (3) standard

BOLD, *ITALIC*, or "Gray" indicators in the Regulatory Guidance columns indicate at least one historic exceedence was observed.

(1) Upper fence indoor air values from "Table C1. NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes', published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)

(2) NYSDOH Air Guidline Values (AGVs) from "Table 3.1 Air guideline values derived by the NYSDOH" presented in the Final Guidance for evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 ("NYSDOH Vapor Intrusion Guidance Document")

(3) 90th percentile indoor air values from "Table C-2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method" published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)

Table 2
Constituents of Concern Summary Comparison



UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Samples			Chemical Compound								Action Required		
Sample Date	Sample Location	Sample Type	TCE	c12-DCE	11 - DCE	Carbon Tetrachloride	PCE	1,1,1-TCA	Methylene Chloride	Vinyl Chloride	Matrix A (TCE, c12-DCE, 11-DCE, Carbon Tetrachloride)	Matrix B (PCE, 111-TCA, Methylene Chloride)	Matrix C (Vinyl Chloride)
12/11/2019	VP-6	Indoor Air	0.42	ND<0.63	ND<0.63	ND<0.20	6.2	ND<0.44	0.56	ND<0.082	Monitor	No Further Action	No Further Action
		Sub-slab	9.7	26	ND<0.79	ND<0.25	18	ND<0.55	ND<0.69	ND<0.10			
12/11/2019	VP-5	Indoor Air	ND<0.17	ND<0.63	ND<0.63	ND<0.20	ND<0.22	ND<0.44	ND<0.56	ND<0.082	No Further Action	No Further Action	No Further Action
		Sub-slab	2.7	5.2	ND<0.79	ND<0.25	3.1	ND<0.55	5.9	ND<0.10			

Notes:

TCE= Trichloroethene (Trichloroethylene)

c12-DCE= cis-1,2-Dichloroethene

11-DCE= 1,1-Dichloroethene (1,1-dichloroethylene)

PCE= Tetrachloroethene (Tetrachloroethylene)

1,1,1-TCA= 1,1,1-trichloroethane



Appendix A – NYSDEC Correspondences

Jessica Thomas

Subject: FW: Soil Vapor Intrusion Summary for C344066 Orangeburg Shopping Center

From: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Sent: Friday, June 7, 2019 12:06 PM
To: Michael C. DeGloria <MDeGloria@gesonline.com>
Subject: Soil Vapor Intrusion Summary for C344066 Orangeburg Shopping Center

Michael,

I've looked over the Q1 2019 Progress Report and 2019 Soil Vapor Intrusion Summary for C344066 Orangeburg Shopping Center. DOH has sent me a letter stating they have no comments for the Q1 2019 report, and I don't either. I concur with the recommendation in the SVI summary to monitor the former Sparkle Cleaners space based on the results for TCE and PCE at VP-6.

Michael Squire

Assistant Engineer
Division of Environmental Remediation, Remedial Bureau C

New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233
P: (518) 402-9546 | michael.squire@dec.ny.gov

TAKE NOTE: This E-Mail came from outside of GES. Please consider the sender and nature of email before responding back to, clicking on any links or opening any attachments. If it appears suspicious delete it immediately.



Appendix B – NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form

**NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH**

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Rich Brown Date/Time Prepared 12-11-2019 @ 10:00

Preparer's Affiliation Groundwater & Environmental Services, Inc. Phone No. 866-839-5195

Purpose of Investigation Indoor air quality

1. OCCUPANT:

Interviewed: ☒ Y ☐ N

Last Name: Verizon Representative First Name: _____

Address: 1-45 Orangetown Shopping Center

County: Rockland

Home Phone: _____ Office Phone: 845-680-8800

Number of Occupants/persons at this location 1 Age of Occupants <30

2. OWNER OR LANDLORD: (Check if same as occupant ☐)

Interviewed: Y ☒ ☐ N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential
Industrial

School
Church

Commercial/Multi-use
Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? ¹ _____

If the property is commercial, type?

Business Type(s) Telecommunications

Does it include residences (i.e., multi-use)? Y / **(N)** If yes, how many? _____

Other characteristics:

Number of floors ¹ _____

Building age Unknown

Is the building insulated? **(Y)** / N

How air tight? Tight **(Average)** / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Not applicable

Airflow near source

Not applicable

Outdoor air infiltration

Infiltrates in through doors.

Infiltration into air ducts

Infiltrates up into the return duct and down around supply vent.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other N/A
- c. Basement floor: concrete dirt stone other N/A
- d. Basement floor: uncovered covered covered with N/A
- e. Concrete floor: unsealed sealed sealed with carpet floor tiles
- f. Foundation walls: poured block stone other _____
- g. Foundation walls: unsealed sealed sealed with paint
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

 Basement/Lowest level depth below grade: N/A (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Slight crack in slab along side sampling point VP-5. The crack was filled with hydraulic cement.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

- | | | |
|----------------------------|------------------|---------------------------------|
| <u>Hot air circulation</u> | Heat pump | Hot water baseboard |
| <u>Space Heaters</u> | Stream radiation | Radiant floor |
| Electric baseboard | Wood stove | Outdoor wood boiler Other _____ |

The primary type of fuel used is:

- | | | |
|--------------------|----------|----------|
| <u>Natural Gas</u> | Fuel Oil | Kerosene |
| Electric | Propane | Solar |
| Wood | Coal | |

 Domestic hot water tank fueled by: Tenant does not know

 Boiler/furnace located in: Basement Outdoors Main Floor Other Ceiling or Roof

 Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? Y / ☒ N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Six (6) supply vents and air return on the ceiling. Supply vents are separated about 10 feet apart.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement	N/A
1 st Floor	Verizon Wireless Store
2 nd Floor	N/A
3 rd Floor	N/A
4 th Floor	N/A

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

- a. Is there an attached garage? Y / ☒ N
- b. Does the garage have a separate heating unit? Y / N / ☒ NA
- c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / ☒ NA
Please specify _____
- d. Has the building ever had a fire? Y / ☒ N When? _____
- e. Is a kerosene or unvented gas space heater present? Y / ☒ N Where? _____
- f. Is there a workshop or hobby/craft area? Y / ☒ N Where & Type? _____
- g. Is there smoking in the building? Y / ☒ N How frequently? _____
- h. Have cleaning products been used recently? ☒ Y / N When & Type? Daily
- i. Have cosmetic products been used recently? ☒ Y / N When & Type? Daily

- j. Has painting/staining been done in the last 6 months? Y / ☒ N Where & When? _____
- k. Is there new carpet, drapes or other textiles? Y / ☒ N Where & When? _____
- l. Have air fresheners been used recently? Y / ☒ N When & Type? _____
- m. Is there a kitchen exhaust fan? Y / ☒ N If yes, where vented? _____
- n. Is there a bathroom exhaust fan? ☒ Y / N If yes, where vented? to roof
- o. Is there a clothes dryer? Y / ☒ N If yes, is it vented outside? Y / N
- p. Has there been a pesticide application? Y / ☒ N When & Type? _____

Are there odors in the building?

Y / ☒ N

If yes, please describe: _____

Do any of the building occupants use solvents at work?

Y / ☒ N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work?

Y / ☒ N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)

Yes, use dry-cleaning infrequently (monthly or less)

Yes, work at a dry-cleaning service

☒ No

Unknown

Is there a radon mitigation system for the building/structure? Y / ☒ N Date of Installation: _____

Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: ☒ Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: ☒ Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

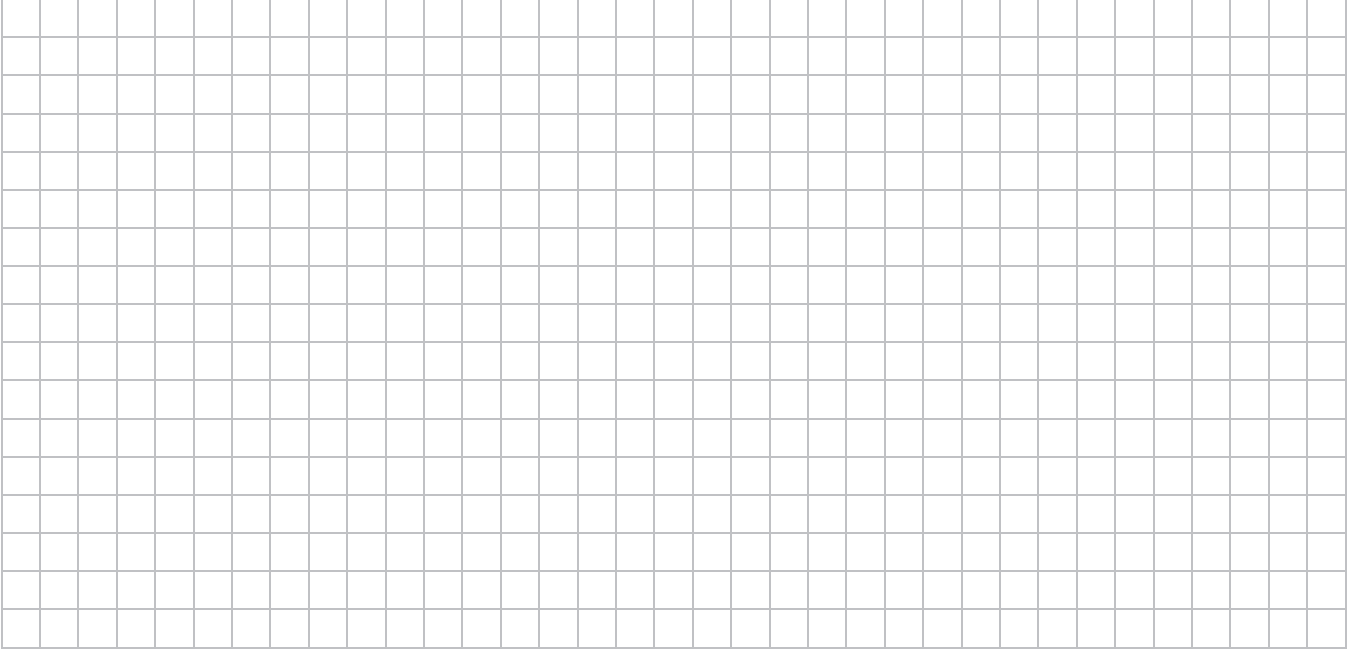
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

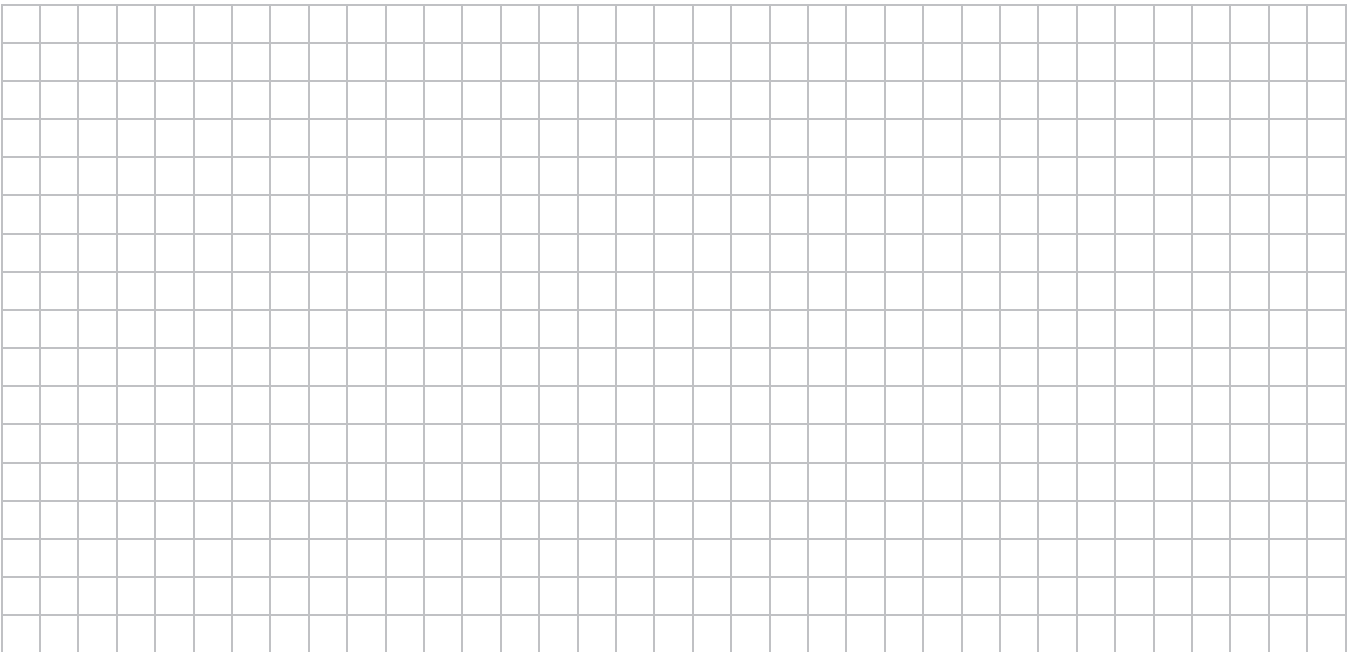
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

[illegible]

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

**** Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.**



Appendix C – Laboratory Analytical Results

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Groundwater & Environmental Services

Orangetown Shopping Center, Orangeburg, NY

1102707/02/210

SGS Job Number: JD234

Sampling Date: 12/11/19

Report to:

Groundwater & Environmental Services
63 East Street Suite 3
Pawling, NY 12564
MDeGloria@GESOnline.com; jthomas@gesonline.com;
neregion@gesonline.com
ATTN: Michael DeGloria

Total number of pages in report: **379**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Laura Degenhardt
General Manager

Client Service contact: Beth Wasserman 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.



January 13, 2020

**Mr. Michael DeGloria
Groundwater & Environmental Services
63 East Street Suite 3
Pawling, NY 12564**

RE: SGS – Dayton, Job # JD234 - Reissues

Dear Mr. DeGloria,

The final report for SGS jobs number JD234 has been edited to reflect corrections to the final results. These edits have been incorporated into the revised report which is attached. .

Specifically, this report has been upgraded to NYASPB per Ms. Jessica Thomas's request. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc.



CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at

EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!



Table of Contents

-1-

Section 1: Sample Summary	4
Section 2: Case Narrative/Conformance Summary	5
Section 3: Summary of Hits	6
Section 4: Sample Results	9
4.1: JD234-1: VP-6 SOIL VAPOR	10
4.2: JD234-2: VP-6 INDOOR	12
4.3: JD234-3: VP-5 SOIL VAPOR	15
4.4: JD234-4: VP-5 INDOOR	17
4.5: JD234-5: OUTSIDE AMBIENT	20
Section 5: Misc. Forms	22
5.1: Chain of Custody	23
5.2: Summa Canister and Flow Controller Log	26
5.3: Sample Tracking Chronicle	27
5.4: Internal Chain of Custody	28
Section 6: MS Volatiles - QC Data Summaries	29
6.1: Method Blank Summary	30
6.2: Blank Spike/Blank Spike Duplicate Summary	38
6.3: Duplicate Summary	45
6.4: Summa Cleaning Certification	49
6.5: Instrument Performance Checks (BFB)	55
6.6: Internal Standard Area Summaries	61
6.7: Initial Calibration RT/ISTD Area Summaries	65
6.8: Surrogate Recovery Summaries	111
6.9: Initial and Continuing Calibration Summaries	112
6.10: Run Sequence Reports	138
Section 7: MS Volatiles - Raw Data	144
7.1: Samples	145
7.2: Method Blanks	212
7.3: Blank Spike/Blank Spike Duplicates	220
7.4: Duplicates	242
7.5: Summa Cleaning Certifications	271
7.6: Instrument Performance Checks (BFB)	275
7.7: Initial and Continuing Calibrations	285
7.8: Instrument Run Logs	373



Sample Summary

Groundwater & Environmental Services

Job No: JD234

Orangetown Shopping Center, Orangeburg, NY
Project No: 1102707/02/210

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
---------------	----------------	---------	----------	-------------	------	------------------

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the RL

JD234-1	12/11/19	16:00	RB	12/12/19	AIR	Soil Vapor Comp.	VP-6 SOIL VAPOR
JD234-2	12/11/19	16:01	RB	12/12/19	AIR	Indoor Air Comp.	VP-6 INDOOR
JD234-3	12/11/19	16:04	RB	12/12/19	AIR	Soil Vapor Comp.	VP-5 SOIL VAPOR
JD234-4	12/11/19	16:05	RB	12/12/19	AIR	Indoor Air Comp.	VP-5 INDOOR
JD234-5	12/11/19	16:09	RB	12/12/19	AIR	Ambient Air Comp.	OUTSIDE AMBIENT

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Groundwater & Environmental Services

Job No JD234

Site: Orangetown Shopping Center, Orangeburg, NY

Report Date 1/13/2020 4:46:55 PM

On 12/12/2019, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. A SGS North America Inc. Job Number of JD234 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method TO-15

Matrix: AIR

Batch ID: V5W1621

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD235-4DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Duplicate for Chloroform, Tetrachloroethylene are outside control limits for sample JD235-4DUP. High RPD due to low concentration of hit
- JD234-2 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.

Matrix: AIR

Batch ID: V5W1622

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD398-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD234-2, JD234-4 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.
- RPD(s) for Duplicate for Acetone, Ethanol are outside control limits for sample JD398-1DUP. High RPD due to low concentration of hit

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD234
Account: Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Collected: 12/11/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

JD234-1 VP-6 SOIL VAPOR

Acetone	14.1	0.20	ppbv	TO-15
Chloroform	0.41	0.20	ppbv	TO-15
Chloromethane	0.61	0.20	ppbv	TO-15
Dichlorodifluoromethane	0.39	0.20	ppbv	TO-15
trans-1,2-Dichloroethylene	0.35	0.20	ppbv	TO-15
cis-1,2-Dichloroethylene	6.6	0.20	ppbv	TO-15
Ethanol	32.3	0.50	ppbv	TO-15
Ethyl Acetate	0.40	0.20	ppbv	TO-15
Hexane	0.38	0.20	ppbv	TO-15
Isopropyl Alcohol	3.7	0.20	ppbv	TO-15
Methyl ethyl ketone	0.44	0.20	ppbv	TO-15
Tertiary Butyl Alcohol	0.20	0.20	ppbv	TO-15
Tetrachloroethylene	2.6	0.040	ppbv	TO-15
Trichloroethylene	1.8	0.040	ppbv	TO-15
Trichlorofluoromethane	0.42	0.10	ppbv	TO-15
Acetone	33.5	0.48	ug/m3	TO-15
Chloroform	2.0	0.98	ug/m3	TO-15
Chloromethane	1.3	0.41	ug/m3	TO-15
Dichlorodifluoromethane	1.9	0.99	ug/m3	TO-15
trans-1,2-Dichloroethylene	1.4	0.79	ug/m3	TO-15
cis-1,2-Dichloroethylene	26	0.79	ug/m3	TO-15
Ethanol	60.9	0.94	ug/m3	TO-15
Ethyl Acetate	1.4	0.72	ug/m3	TO-15
Hexane	1.3	0.70	ug/m3	TO-15
Isopropyl Alcohol	9.1	0.49	ug/m3	TO-15
Methyl ethyl ketone	1.3	0.59	ug/m3	TO-15
Tertiary Butyl Alcohol	0.61	0.61	ug/m3	TO-15
Tetrachloroethylene	18	0.27	ug/m3	TO-15
Trichloroethylene	9.7	0.21	ug/m3	TO-15
Trichlorofluoromethane	2.4	0.56	ug/m3	TO-15

JD234-2 VP-6 INDOOR

Acetone	82.5	0.80	ppbv	TO-15
Benzene	0.28	0.16	ppbv	TO-15
Chloromethane	0.44	0.16	ppbv	TO-15
Dichlorodifluoromethane	0.38	0.16	ppbv	TO-15
Ethanol	177 E	2.0	ppbv	TO-15
Ethyl Acetate	0.64	0.16	ppbv	TO-15
Hexane	0.16	0.16	ppbv	TO-15
Isopropyl Alcohol	11.2	0.16	ppbv	TO-15
Methylene chloride	0.16	0.16	ppbv	TO-15
Methyl ethyl ketone	0.22	0.16	ppbv	TO-15

Summary of Hits

Job Number: JD234
Account: Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Collected: 12/11/19



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Tetrachloroethylene		0.92	0.032		ppbv	TO-15
Toluene		0.29	0.16		ppbv	TO-15
Trichloroethylene		0.079	0.032		ppbv	TO-15
Trichlorofluoromethane		0.22	0.080		ppbv	TO-15
Acetone		196	1.9		ug/m3	TO-15
Benzene		0.89	0.51		ug/m3	TO-15
Chloromethane		0.91	0.33		ug/m3	TO-15
Dichlorodifluoromethane		1.9	0.79		ug/m3	TO-15
Ethanol		334 E	3.8		ug/m3	TO-15
Ethyl Acetate		2.3	0.58		ug/m3	TO-15
Hexane		0.56	0.56		ug/m3	TO-15
Isopropyl Alcohol		27.5	0.39		ug/m3	TO-15
Methylene chloride		0.56	0.56		ug/m3	TO-15
Methyl ethyl ketone		0.65	0.47		ug/m3	TO-15
Tetrachloroethylene		6.2	0.22		ug/m3	TO-15
Toluene		1.1	0.60		ug/m3	TO-15
Trichloroethylene		0.42	0.17		ug/m3	TO-15
Trichlorofluoromethane		1.2	0.45		ug/m3	TO-15

JD234-3 VP-5 SOIL VAPOR

Acetone	14.9	0.20	ppbv	TO-15
Chloromethane	0.25	0.20	ppbv	TO-15
Dichlorodifluoromethane	0.38	0.20	ppbv	TO-15
cis-1,2-Dichloroethylene	1.3	0.20	ppbv	TO-15
Ethanol	35.9	0.50	ppbv	TO-15
Ethyl Acetate	0.51	0.20	ppbv	TO-15
Hexane	0.54	0.20	ppbv	TO-15
Isopropyl Alcohol	4.3	0.20	ppbv	TO-15
Methylene chloride	1.7	0.20	ppbv	TO-15
Methyl ethyl ketone	0.80	0.20	ppbv	TO-15
Tetrachloroethylene	0.46	0.040	ppbv	TO-15
Trichloroethylene	0.51	0.040	ppbv	TO-15
Trichlorofluoromethane	0.47	0.10	ppbv	TO-15
Acetone	35.4	0.48	ug/m3	TO-15
Chloromethane	0.52	0.41	ug/m3	TO-15
Dichlorodifluoromethane	1.9	0.99	ug/m3	TO-15
cis-1,2-Dichloroethylene	5.2	0.79	ug/m3	TO-15
Ethanol	67.6	0.94	ug/m3	TO-15
Ethyl Acetate	1.8	0.72	ug/m3	TO-15
Hexane	1.9	0.70	ug/m3	TO-15
Isopropyl Alcohol	11	0.49	ug/m3	TO-15
Methylene chloride	5.9	0.69	ug/m3	TO-15
Methyl ethyl ketone	2.4	0.59	ug/m3	TO-15
Tetrachloroethylene	3.1	0.27	ug/m3	TO-15

Summary of Hits

Job Number: JD234
Account: Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Collected: 12/11/19



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Trichloroethylene		2.7	0.21		ug/m3	TO-15
Trichlorofluoromethane		2.6	0.56		ug/m3	TO-15

JD234-4 VP-5 INDOOR

Acetone		73.9	0.80		ppbv	TO-15
Chloromethane		0.54	0.16		ppbv	TO-15
Dichlorodifluoromethane		0.41	0.16		ppbv	TO-15
Ethanol		196 E	2.0		ppbv	TO-15
Ethyl Acetate		0.21	0.16		ppbv	TO-15
Isopropyl Alcohol		10.7	0.16		ppbv	TO-15
Methyl ethyl ketone		0.17	0.16		ppbv	TO-15
Trichlorofluoromethane		0.20	0.080		ppbv	TO-15
Acetone		176	1.9		ug/m3	TO-15
Chloromethane		1.1	0.33		ug/m3	TO-15
Dichlorodifluoromethane		2.0	0.79		ug/m3	TO-15
Ethanol		369 E	3.8		ug/m3	TO-15
Ethyl Acetate		0.76	0.58		ug/m3	TO-15
Isopropyl Alcohol		26.3	0.39		ug/m3	TO-15
Methyl ethyl ketone		0.50	0.47		ug/m3	TO-15
Trichlorofluoromethane		1.1	0.45		ug/m3	TO-15

JD234-5 OUTSIDE AMBIENT

Acetone		3.4	0.16		ppbv	TO-15
Benzene		0.22	0.16		ppbv	TO-15
Chloromethane		0.44	0.16		ppbv	TO-15
Carbon tetrachloride		0.069	0.032		ppbv	TO-15
Dichlorodifluoromethane		0.41	0.16		ppbv	TO-15
Ethanol		3.1	0.40		ppbv	TO-15
Isopropyl Alcohol		0.39	0.16		ppbv	TO-15
Tetrachloroethylene		0.043	0.032		ppbv	TO-15
Toluene		0.17	0.16		ppbv	TO-15
Trichlorofluoromethane		0.20	0.080		ppbv	TO-15
Acetone		8.1	0.38		ug/m3	TO-15
Benzene		0.70	0.51		ug/m3	TO-15
Chloromethane		0.91	0.33		ug/m3	TO-15
Carbon tetrachloride		0.43	0.20		ug/m3	TO-15
Dichlorodifluoromethane		2.0	0.79		ug/m3	TO-15
Ethanol		5.8	0.75		ug/m3	TO-15
Isopropyl Alcohol		0.96	0.39		ug/m3	TO-15
Tetrachloroethylene		0.29	0.22		ug/m3	TO-15
Toluene		0.64	0.60		ug/m3	TO-15
Trichlorofluoromethane		1.1	0.45		ug/m3	TO-15

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Page 1 of 2

Client Sample ID:	VP-6 SOIL VAPOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-1	Date Received:	12/12/19
Matrix:	AIR - Soil Vapor Comp. Summa ID: A733	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W39852.D	1.48	12/25/19 02:37	DFT	n/a	n/a	V5W1621
Run #2							

	Initial Volume
Run #1	592 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	14.1	0.20	ppbv		33.5	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.41	0.20	ppbv		2.0	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.61	0.20	ppbv		1.3	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.040	ppbv		ND	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.39	0.20	ppbv		1.9	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	0.35	0.20	ppbv		1.4	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	6.6	0.20	ppbv		26	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-6 SOIL VAPOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-1	Date Received:	12/12/19
Matrix:	AIR - Soil Vapor Comp. Summa ID: A733	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	32.3	0.50	ppbv		60.9	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	0.40	0.20	ppbv		1.4	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	0.38	0.20	ppbv		1.3	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	3.7	0.20	ppbv		9.1	0.49	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.44	0.20	ppbv		1.3	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.20	0.20	ppbv		0.61	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	2.6	0.040	ppbv		18	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	1.8	0.040	ppbv		9.7	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.42	0.10	ppbv		2.4	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		65-128%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	VP-6 INDOOR		
Lab Sample ID:	JD234-2		
Matrix:	AIR - Indoor Air Comp.	Summa ID: A839	Date Sampled: 12/11/19
Method:	TO-15		Date Received: 12/12/19
Project:	Orangetown Shopping Center, Orangeburg, NY		Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W39849.D	1	12/24/19 23:50	DFT	n/a	n/a	V5W1621
Run #2	5W39867.D	1	12/26/19 16:38	DFT	n/a	n/a	V5W1622

	Initial Volume
Run #1	500 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	82.5 ^a	0.80	ppbv		196 ^a	1.9	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.16	ppbv		ND	0.35	ug/m3
71-43-2	78.11	Benzene	0.28	0.16	ppbv		0.89	0.51	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.080	ppbv		ND	0.54	ug/m3
75-25-2	252.8	Bromoform	ND	0.032	ppbv		ND	0.33	ug/m3
74-83-9	94.94	Bromomethane	ND	0.16	ppbv		ND	0.62	ug/m3
593-60-2	106.9	Bromoethene	ND	0.16	ppbv		ND	0.70	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.16	ppbv		ND	0.82	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.16	ppbv		ND	0.50	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.16	ppbv		ND	0.74	ug/m3
75-00-3	64.52	Chloroethane	ND	0.16	ppbv		ND	0.42	ug/m3
67-66-3	119.4	Chloroform	ND	0.16	ppbv		ND	0.78	ug/m3
74-87-3	50.49	Chloromethane	0.44	0.16	ppbv		0.91	0.33	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.16	ppbv		ND	0.50	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.16	ppbv		ND	0.83	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.032	ppbv		ND	0.20	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.16	ppbv		ND	0.55	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.080	ppbv		ND	0.61	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.16	ppbv		ND	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.16	ppbv		ND	0.58	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.38	0.16	ppbv		1.9	0.79	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.080	ppbv		ND	0.68	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.032	ppbv		ND	0.19	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-6 INDOOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-2	Date Received:	12/12/19
Matrix:	AIR - Indoor Air Comp. Summa ID: A839	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	177 ^a	2.0	ppbv	E	334 ^a	3.8	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.16	ppbv		ND	0.69	ug/m3
141-78-6	88	Ethyl Acetate	0.64	0.16	ppbv		2.3	0.58	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.16	ppbv		ND	0.79	ug/m3
76-13-1	187.4	Freon 113	ND	0.080	ppbv		ND	0.61	ug/m3
76-14-2	170.9	Freon 114	ND	0.080	ppbv		ND	0.56	ug/m3
142-82-5	100.2	Heptane	ND	0.16	ppbv		ND	0.66	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.072	ppbv		ND	0.77	ug/m3
110-54-3	86.17	Hexane	0.16	0.16	ppbv		0.56	0.56	ug/m3
591-78-6	100	2-Hexanone	ND	0.16	ppbv		ND	0.65	ug/m3
67-63-0	60.1	Isopropyl Alcohol	11.2	0.16	ppbv		27.5	0.39	ug/m3
75-09-2	84.94	Methylene chloride	0.16	0.16	ppbv		0.56	0.56	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.22	0.16	ppbv		0.65	0.47	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.16	ppbv		ND	0.66	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.16	ppbv		ND	0.58	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.16	ppbv		ND	0.66	ug/m3
115-07-1	42	Propylene	ND	0.40	ppbv		ND	0.69	ug/m3
100-42-5	104.1	Styrene	ND	0.16	ppbv		ND	0.68	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.080	ppbv		ND	0.55	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.080	ppbv		ND	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.16	ppbv		ND	0.75	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.16	ppbv		ND	0.49	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.92	0.032	ppbv		6.2	0.22	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.16	ppbv		ND	0.47	ug/m3
108-88-3	92.14	Toluene	0.29	0.16	ppbv		1.1	0.60	ug/m3
79-01-6	131.4	Trichloroethylene	0.079	0.032	ppbv		0.42	0.17	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.22	0.080	ppbv		1.2	0.45	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.032	ppbv		ND	0.082	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.16	ppbv		ND	0.56	ug/m3
	106.2	m,p-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
95-47-6	106.2	o-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.16	ppbv		ND	0.69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	139% ^b	106%	65-128%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-6 INDOOR			Date Sampled:	12/11/19
Lab Sample ID:	JD234-2			Date Received:	12/12/19
Matrix:	AIR - Indoor Air Comp. Summa ID: A839			Percent Solids:	n/a
Method:	TO-15				
Project:	Orangetown Shopping Center, Orangeburg, NY				

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
(a) Result is from Run# 2									
(b) Outside control limits due to matrix interference.									

ND = Not detected	J = Indicates an estimated value
RL = Reporting Limit	B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range	N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 2

Client Sample ID:	VP-5 SOIL VAPOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-3	Date Received:	12/12/19
Matrix:	AIR - Soil Vapor Comp. Summa ID: A330	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W39853.D	1	12/25/19 03:28	DFT	n/a	n/a	V5W1621
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	14.9	0.20	ppbv		35.4	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.25	0.20	ppbv		0.52	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.040	ppbv		ND	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.38	0.20	ppbv		1.9	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	1.3	0.20	ppbv		5.2	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-5 SOIL VAPOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-3	Date Received:	12/12/19
Matrix:	AIR - Soil Vapor Comp. Summa ID: A330	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	35.9	0.50	ppbv		67.6	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	0.51	0.20	ppbv		1.8	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	0.54	0.20	ppbv		1.9	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	4.3	0.20	ppbv		11	0.49	ug/m3
75-09-2	84.94	Methylene chloride	1.7	0.20	ppbv		5.9	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.80	0.20	ppbv		2.4	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.46	0.040	ppbv		3.1	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.51	0.040	ppbv		2.7	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.47	0.10	ppbv		2.6	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		65-128%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	VP-5 INDOOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-4	Date Received:	12/12/19
Matrix:	AIR - Indoor Air Comp. Summa ID: M033	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W39850.D	1	12/25/19 00:48	DFT	n/a	n/a	V5W1621
Run #2	5W39868.D	1	12/26/19 17:24	DFT	n/a	n/a	V5W1622

	Initial Volume
Run #1	500 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	73.9 ^a	0.80	ppbv		176 ^a	1.9	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.16	ppbv		ND	0.35	ug/m3
71-43-2	78.11	Benzene	ND	0.16	ppbv		ND	0.51	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.080	ppbv		ND	0.54	ug/m3
75-25-2	252.8	Bromoform	ND	0.032	ppbv		ND	0.33	ug/m3
74-83-9	94.94	Bromomethane	ND	0.16	ppbv		ND	0.62	ug/m3
593-60-2	106.9	Bromoethene	ND	0.16	ppbv		ND	0.70	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.16	ppbv		ND	0.82	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.16	ppbv		ND	0.50	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.16	ppbv		ND	0.74	ug/m3
75-00-3	64.52	Chloroethane	ND	0.16	ppbv		ND	0.42	ug/m3
67-66-3	119.4	Chloroform	ND	0.16	ppbv		ND	0.78	ug/m3
74-87-3	50.49	Chloromethane	0.54	0.16	ppbv		1.1	0.33	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.16	ppbv		ND	0.50	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.16	ppbv		ND	0.83	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.032	ppbv		ND	0.20	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.16	ppbv		ND	0.55	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.080	ppbv		ND	0.61	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.16	ppbv		ND	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.16	ppbv		ND	0.58	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.16	ppbv		2.0	0.79	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.080	ppbv		ND	0.68	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.032	ppbv		ND	0.19	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-5 INDOOR	Date Sampled:	12/11/19
Lab Sample ID:	JD234-4	Date Received:	12/12/19
Matrix:	AIR - Indoor Air Comp. Summa ID: M033	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	196 ^a	2.0	ppbv	E	369 ^a	3.8	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.16	ppbv		ND	0.69	ug/m3
141-78-6	88	Ethyl Acetate	0.21	0.16	ppbv		0.76	0.58	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.16	ppbv		ND	0.79	ug/m3
76-13-1	187.4	Freon 113	ND	0.080	ppbv		ND	0.61	ug/m3
76-14-2	170.9	Freon 114	ND	0.080	ppbv		ND	0.56	ug/m3
142-82-5	100.2	Heptane	ND	0.16	ppbv		ND	0.66	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.072	ppbv		ND	0.77	ug/m3
110-54-3	86.17	Hexane	ND	0.16	ppbv		ND	0.56	ug/m3
591-78-6	100	2-Hexanone	ND	0.16	ppbv		ND	0.65	ug/m3
67-63-0	60.1	Isopropyl Alcohol	10.7	0.16	ppbv		26.3	0.39	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.16	ppbv		ND	0.56	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.17	0.16	ppbv		0.50	0.47	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.16	ppbv		ND	0.66	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.16	ppbv		ND	0.58	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.16	ppbv		ND	0.66	ug/m3
115-07-1	42	Propylene	ND	0.40	ppbv		ND	0.69	ug/m3
100-42-5	104.1	Styrene	ND	0.16	ppbv		ND	0.68	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.080	ppbv		ND	0.55	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.080	ppbv		ND	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.16	ppbv		ND	0.75	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.16	ppbv		ND	0.49	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.032	ppbv		ND	0.22	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.16	ppbv		ND	0.47	ug/m3
108-88-3	92.14	Toluene	ND	0.16	ppbv		ND	0.60	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.032	ppbv		ND	0.17	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.20	0.080	ppbv		1.1	0.45	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.032	ppbv		ND	0.082	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.16	ppbv		ND	0.56	ug/m3
	106.2	m,p-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
95-47-6	106.2	o-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.16	ppbv		ND	0.69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%	96%	65-128%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-5 INDOOR			Date Sampled:	12/11/19
Lab Sample ID:	JD234-4			Date Received:	12/12/19
Matrix:	AIR - Indoor Air Comp. Summa ID: M033			Percent Solids:	n/a
Method:	TO-15				
Project:	Orangetown Shopping Center, Orangeburg, NY				

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
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(a) Result is from Run# 2

ND = Not detected	J = Indicates an estimated value
RL = Reporting Limit	B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range	N = Indicates presumptive evidence of a compound

4.4
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Report of Analysis

Page 1 of 2

Client Sample ID:	OUTSIDE AMBIENT	Date Sampled:	12/11/19
Lab Sample ID:	JD234-5	Date Received:	12/12/19
Matrix:	AIR - Ambient Air Comp. Summa ID: A631	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W39851.D	1	12/25/19 01:44	DFT	n/a	n/a	V5W1621
Run #2							

	Initial Volume
Run #1	500 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	3.4	0.16	ppbv		8.1	0.38	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.16	ppbv		ND	0.35	ug/m3
71-43-2	78.11	Benzene	0.22	0.16	ppbv		0.70	0.51	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.080	ppbv		ND	0.54	ug/m3
75-25-2	252.8	Bromoform	ND	0.032	ppbv		ND	0.33	ug/m3
74-83-9	94.94	Bromomethane	ND	0.16	ppbv		ND	0.62	ug/m3
593-60-2	106.9	Bromoethene	ND	0.16	ppbv		ND	0.70	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.16	ppbv		ND	0.82	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.16	ppbv		ND	0.50	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.16	ppbv		ND	0.74	ug/m3
75-00-3	64.52	Chloroethane	ND	0.16	ppbv		ND	0.42	ug/m3
67-66-3	119.4	Chloroform	ND	0.16	ppbv		ND	0.78	ug/m3
74-87-3	50.49	Chloromethane	0.44	0.16	ppbv		0.91	0.33	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.16	ppbv		ND	0.50	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.16	ppbv		ND	0.83	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.069	0.032	ppbv		0.43	0.20	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.16	ppbv		ND	0.55	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.080	ppbv		ND	0.61	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.16	ppbv		ND	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.16	ppbv		ND	0.58	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.16	ppbv		2.0	0.79	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.080	ppbv		ND	0.68	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.032	ppbv		ND	0.19	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OUTSIDE AMBIENT	Date Sampled:	12/11/19
Lab Sample ID:	JD234-5	Date Received:	12/12/19
Matrix:	AIR - Ambient Air Comp. Summa ID: A631	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	3.1	0.40	ppbv		5.8	0.75	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.16	ppbv		ND	0.69	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.16	ppbv		ND	0.58	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.16	ppbv		ND	0.79	ug/m3
76-13-1	187.4	Freon 113	ND	0.080	ppbv		ND	0.61	ug/m3
76-14-2	170.9	Freon 114	ND	0.080	ppbv		ND	0.56	ug/m3
142-82-5	100.2	Heptane	ND	0.16	ppbv		ND	0.66	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.072	ppbv		ND	0.77	ug/m3
110-54-3	86.17	Hexane	ND	0.16	ppbv		ND	0.56	ug/m3
591-78-6	100	2-Hexanone	ND	0.16	ppbv		ND	0.65	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.39	0.16	ppbv		0.96	0.39	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.16	ppbv		ND	0.56	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	0.16	ppbv		ND	0.47	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.16	ppbv		ND	0.66	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.16	ppbv		ND	0.58	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.16	ppbv		ND	0.66	ug/m3
115-07-1	42	Propylene	ND	0.40	ppbv		ND	0.69	ug/m3
100-42-5	104.1	Styrene	ND	0.16	ppbv		ND	0.68	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.080	ppbv		ND	0.55	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.080	ppbv		ND	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.16	ppbv		ND	0.75	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.16	ppbv		ND	0.49	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.043	0.032	ppbv		0.29	0.22	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.16	ppbv		ND	0.47	ug/m3
108-88-3	92.14	Toluene	0.17	0.16	ppbv		0.64	0.60	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.032	ppbv		ND	0.17	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.20	0.080	ppbv		1.1	0.45	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.032	ppbv		ND	0.082	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.16	ppbv		ND	0.56	ug/m3
	106.2	m,p-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
95-47-6	106.2	o-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.16	ppbv		ND	0.69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		65-128%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log
- Sample Tracking Chronicle
- Internal Chain of Custody

AIR

AIR CHAIN OF CUSTODY

PAGE . OF

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

FED-EX Tracking #		Canister #		
SGS Quote #		SGS Job #		
Weather Parameters		Requested Analysis		
Temperature (Fahrenheit)		Air		
Start: 32/73	Maximum: 56/73	T1015 NPS VLL Leaf T1015 NPS VLL		
Stop: 36/70	Minimum: 32/70			
Atmospheric Pressure (Inches of Hg)				
Start: 30.27	Maximum: 30.07			
Stop: 30.25	Minimum: 30.05			
Other weather comment: Snowing				
Stop Sampling Information				
Date	Time (24hr clock)	Canister Pressure (Tq)	Interior Temp (F)	Sampler Init.
11-11-19	1600	7.5	70	163 X
	1601	7.0	70	X
	1604	5.5	70	X
	1605	8.0	70	X
	1609	7.0	36	X
Comments / Remarks				
Send Lab report to: mdagloria@exsonline.com JThomas@exsonline.com Initial Assessment N2R@exsonline.com Label Verification				
Sample integrity is verified upon receipt in the Laboratory				
delivery.				
Drop Time:	11-11-19 1600	Received By:	[Signature]	
Date Time:	11/19/19 10:40	Received By:	[Signature]	

5.1

Form:SM088-03D (revised 2-12-18)

<http://www.sgs.com/en/terms-and-conditions>

JD234: Chain of Custody

Page 1 of 3



23 of 379

JD234

SGS Sample Receipt Summary

Job Number: JD234

Client: GROUNDWATER & ENVIRONMENTAL S

Project: ORANGETOWN SHOPPING CENTER, ORANG

Date / Time Received: 12/12/2019 10:40:00 AM

Delivery Method:

Airbill #s:

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security

Y or N

Y or N

- | | |
|--|---|
| 1. Custody Seals Present: ☒ ☐ | 3. COC Present: ☒ ☐ |
| 2. Custody Seals Intact: ☒ ☐ | 4. Smpl Dates/Time OK: ☒ ☐ |

Cooler Temperature

Y or N

- | | |
|--|--|
| 1. Temp criteria achieved: ☐ ☐ | |
| 2. Cooler temp verification: <u>N/A</u> | |
| 3. Cooler media: <u>N/A</u> | |
| 4. No. Coolers: <u>N/A</u> | |

Quality Control Preservation

Y or N

N/A

- | | |
|---|--|
| 1. Trip Blank present / cooler: ☐ ☒ ☐ | |
| 2. Trip Blank listed on COC: ☐ ☒ ☐ | |
| 3. Samples preserved properly: ☒ ☐ | |
| 4. VOCs headspace free: ☐ ☐ ☒ | |

Sample Integrity - Documentation

Y or N

- | | |
|---|--|
| 1. Sample labels present on bottles: ☒ ☐ | |
| 2. Container labeling complete: ☒ ☐ | |
| 3. Sample container label / COC agree: ☒ ☐ | |

Sample Integrity - Condition

Y or N

- | | |
|---|--|
| 1. Sample recvd within HT: ☒ ☐ | |
| 2. All containers accounted for: ☒ ☐ | |
| 3. Condition of sample: <u>Intact</u> | |

Sample Integrity - Instructions

Y or N N/A

- | | |
|--|--|
| 1. Analysis requested is clear: ☒ ☐ | |
| 2. Bottles received for unspecified tests: ☐ ☒ | |
| 3. Sufficient volume recvd for analysis: ☒ ☐ | |
| 4. Compositing instructions clear: ☐ ☐ ☒ | |
| 5. Filtering instructions clear: ☐ ☐ ☒ | |

Test Strip Lot #s: pH 1-12: 229517 pH 12+: 208717 Other: (Specify) _____

Comments

SM089-03
Rev. Date 12/7/17

JD234: Chain of Custody

Page 2 of 3

Job Change Order: JD234

Requested Date:	1/13/2020	Received Date:	12/12/2019
Account Name:	Groundwater & Environmental Ser	Due Date:	12/26/2019
Project Description:	Orangetown Shopping Center, Orangeburg, NY	Deliverable:	COMMA
C/O Initiated By:	BW	PM:	BW
		TAT (Days):	14
=====			
Sample #:	JD234-All	Change:	
Dept:			Upgrade deliverable to NYASPB and reissue report
TAT:	14		
=====			

Above Changes Per: Jessica Thomas Date/Time: 1/13/2020 3:02:34 PM
To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Summa Canister and Flow Controller Log

Page 1 of 1

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Received: 12/12/19

SUMMA CANISTERS													
Shipping							Receiving						
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A733	6	29.4	12/05/19	ED	CP105926W14966.D		JD234-1	12/13/19	JT	8		1.2	1.48
A839	6	29.4	12/05/19	ED	CP105926W14966.D		JD234-2	12/13/19	JT	7.5			1
A330	6	29.4	12/05/19	ED	CP105926W14966.D		JD234-3	12/13/19	JT	7.5			1
M033	6	29.4	12/05/19	ED	CP106016W14980.D		JD234-4	12/13/19	JT	7.5			1
A631	6	29.4	12/05/19	ED	CP106016W14980.D		JD234-5	12/13/19	JT	6.5			1

FLOW CONTROLLERS / OTHER									
Shipping					Receiving				
Flow Ctrl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type
FC461	12/05/19	ED	9.6	8	12/16/19	ED	10.8	11.8	Flow Controller
FC531	12/05/19	ED	9.6	8	12/16/19	ED	10.7	10.8	Flow Controller
FC717	12/05/19	ED	9.6	8	12/16/19	ED	10.7	10.8	Flow Controller
FC725	12/05/19	ED	9.6	8	12/16/19	ED	10.5	9	Flow Controller
MC230	12/05/19	ED	9.6	8	12/16/19	ED	10.3	7	Flow Controller

SGS Bottle Order(s):

BW-12219-16

Prep Date 12/05/19 **Room Temp(F)** 70 **Bar Pres "Hg** 29.92

Internal Sample Tracking Chronicle

Groundwater & Environmental Services

Job No: JD234

Orangetown Shopping Center, Orangeburg, NY
Project No: 1102707/02/210

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD234-1	Collected: 11-DEC-19 16:00	By: RB	Received: 12-DEC-19	By: AS		
VP-6 SOIL VAPOR						
JD234-1	TO-15	25-DEC-19 02:37	DFT			VTO15NYSVLL
JD234-2	Collected: 11-DEC-19 16:01	By: RB	Received: 12-DEC-19	By: AS		
VP-6 INDOOR						
JD234-2	TO-15	24-DEC-19 23:50	DFT			VTO15NYLL
JD234-2	TO-15	26-DEC-19 16:38	DFT			VTO15NYLL
JD234-3	Collected: 11-DEC-19 16:04	By: RB	Received: 12-DEC-19	By: AS		
VP-5 SOIL VAPOR						
JD234-3	TO-15	25-DEC-19 03:28	DFT			VTO15NYSVLL
JD234-4	Collected: 11-DEC-19 16:05	By: RB	Received: 12-DEC-19	By: AS		
VP-5 INDOOR						
JD234-4	TO-15	25-DEC-19 00:48	DFT			VTO15NYLL
JD234-4	TO-15	26-DEC-19 17:24	DFT			VTO15NYLL
JD234-5	Collected: 11-DEC-19 16:09	By: RB	Received: 12-DEC-19	By: AS		
OUTSIDE AMBIENT						
JD234-5	TO-15	25-DEC-19 01:44	DFT			VTO15NYLL

SGS Internal Chain of Custody

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Received: 12/12/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD234-1.1	John Nieradka	Air Storage	12/12/19 21:42	Return to Storage
JD234-2.1	John Nieradka	Air Storage	12/12/19 21:42	Return to Storage
JD234-3.1	John Nieradka	Air Storage	12/12/19 21:42	Return to Storage
JD234-4.1	John Nieradka	Air Storage	12/12/19 21:42	Return to Storage
JD234-5.1	John Nieradka	Air Storage	12/12/19 21:42	Return to Storage

5.4
5

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Initial Calibration RT/ISTD Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary**Job Number:** JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1621-MB	5W39840.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples:**Method:** TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Page 2 of 3

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1621-MB	5W39840.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples:**Method:** TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1621-MB	5W39840.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples: Method: TO-15
JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

Method Blank Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1622-MB	5W39864.D	1	12/26/19	DFT	n/a	n/a	V5W1622

The QC reported here applies to the following samples: Method: TO-15
JD234-2, JD234-4

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	90% 65-128%

Method Blank Summary

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-MB	6W14962.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here applies to the following samples:
Method: TO-15

V6W623-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-MB	6W14962.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here applies to the following samples:**Method:** TO-15

V6W623-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-MB	6W14962.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here applies to the following samples: Method: TO-15

V6W623-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 65-128%

Method Blank Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1622-MB2	5W39891A.D	1	12/27/19	DFT	n/a	n/a	V5W1622

The QC reported here applies to the following samples: Method: TO-15

JD398-1DUP

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 3

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1621-BS	5W39836.D	1	12/24/19	DFT	n/a	n/a	V5W1621
V5W1621-BSD	5W39837.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples:**Method:** TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.4	94	8.9	89	5	70-130/30
106-99-0	1,3-Butadiene	10	10.1	101	9.8	98	3	70-130/30
71-43-2	Benzene	10	10.2	102	9.8	98	4	70-130/30
75-27-4	Bromodichloromethane	10	10.3	103	10	100	3	70-130/30
75-25-2	Bromoform	10	10.3	103	10.1	101	2	70-130/30
74-83-9	Bromomethane	10	9.5	95	9.2	92	3	70-130/30
593-60-2	Bromoethene	10	10.3	103	9.9	99	4	70-130/30
100-44-7	Benzyl Chloride	10	11.7	117	11.3	113	3	70-130/30
75-15-0	Carbon disulfide	10	10.6	106	10.3	103	3	70-130/30
108-90-7	Chlorobenzene	10	9.8	98	9.5	95	3	70-130/30
75-00-3	Chloroethane	10	10	100	9.8	98	2	70-130/30
67-66-3	Chloroform	10	9.8	98	9.5	95	3	70-130/30
74-87-3	Chloromethane	10	10.1	101	9.7	97	4	70-130/30
107-05-1	3-Chloropropene	10	10.6	106	10.4	104	2	70-130/30
95-49-8	2-Chlorotoluene	10	10.6	106	10.4	104	2	70-130/30
56-23-5	Carbon tetrachloride	10	10.3	103	9.9	99	4	70-130/30
110-82-7	Cyclohexane	10	10.5	105	10.2	102	3	70-130/30
75-34-3	1,1-Dichloroethane	10	10.0	100	9.8	98	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.2	102	9.8	98	4	70-130/30
106-93-4	1,2-Dibromoethane	10	10.2	102	9.9	99	3	70-130/30
107-06-2	1,2-Dichloroethane	10	10.1	101	9.7	97	4	70-130/30
78-87-5	1,2-Dichloropropane	10	10.4	104	10.0	100	4	70-130/30
123-91-1	1,4-Dioxane	10	10.5	105	10.2	102	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.2	102	9.9	99	3	70-130/30
124-48-1	Dibromochloromethane	10	11.4	114	11.0	110	4	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.3	103	10.1	101	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.2	102	10.0	100	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.9	109	10.6	106	3	70-130/30
541-73-1	m-Dichlorobenzene	10	11.0	110	10.7	107	3	70-130/30
95-50-1	o-Dichlorobenzene	10	10.6	106	10.4	104	2	70-130/30
106-46-7	p-Dichlorobenzene	10	11.0	110	10.7	107	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.6	106	10.3	103	3	70-130/30
64-17-5	Ethanol	10	8.9	89	8.7	87	2	70-130/30
100-41-4	Ethylbenzene	10	9.9	99	9.8	98	1	70-130/30
141-78-6	Ethyl Acetate	10	10.5	105	10.2	102	3	70-130/30
622-96-8	4-Ethyltoluene	10	11.4	114	11.3	113	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 2 of 3

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1621-BS	5W39836.D	1	12/24/19	DFT	n/a	n/a	V5W1621
V5W1621-BSD	5W39837.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples:

Method: TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.9	99	9.6	96	3	70-130/30
76-14-2	Freon 114	10	10.2	102	9.8	98	4	70-130/30
142-82-5	Heptane	10	10.6	106	10.3	103	3	70-130/30
87-68-3	Hexachlorobutadiene	10	9.9	99	9.5	95	4	70-130/30
110-54-3	Hexane	10	10.4	104	10.1	101	3	70-130/30
591-78-6	2-Hexanone	10	11.9	119	11.5	115	3	70-130/30
67-63-0	Isopropyl Alcohol	10	8.7	87	8.5	85	2	70-130/30
75-09-2	Methylene chloride	10	9.6	96	9.3	93	3	70-130/30
78-93-3	Methyl ethyl ketone	10	10.2	102	10	100	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.8	108	10.4	104	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.3	103	10	100	3	70-130/30
80-62-6	Methylmethacrylate	10	10.7	107	10.6	106	1	70-130/30
115-07-1	Propylene	10	10.1	101	9.8	98	3	70-130/30
100-42-5	Styrene	10	11.4	114	11.2	112	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.8	98	9.5	95	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.0	90	8.8	88	2	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.8	108	10.6	106	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	10.9	109	10.4	104	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.5	105	10.2	102	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.7	97	9.6	96	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.2	102	9.9	99	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.3	103	10	100	3	70-130/30
127-18-4	Tetrachloroethylene	10	10.3	103	10	100	3	70-130/30
109-99-9	Tetrahydrofuran	10	10.6	106	10.4	104	2	70-130/30
108-88-3	Toluene	10	9.8	98	9.5	95	3	70-130/30
79-01-6	Trichloroethylene	10	9.7	97	9.4	94	3	70-130/30
75-69-4	Trichlorofluoromethane	10	9.9	99	9.7	97	2	70-130/30
75-01-4	Vinyl chloride	10	10.5	105	10.2	102	3	70-130/30
108-05-4	Vinyl Acetate	10	10.1	101	9.9	99	2	70-130/30
	m,p-Xylene	20	19.9	100	19.7	99	1	70-130/30
95-47-6	o-Xylene	10	9.4	94	9.2	92	2	70-130/30
1330-20-7	Xylenes (total)	30	29.2	97	28.9	96	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1621-BS	5W39836.D	1	12/24/19	DFT	n/a	n/a	V5W1621
V5W1621-BSD	5W39837.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples: Method: TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	106%	106%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1622-BS	5W39860.D	1	12/26/19	DFT	n/a	n/a	V5W1622
V5W1622-BSD	5W39861.D	1	12/26/19	DFT	n/a	n/a	V5W1622

The QC reported here applies to the following samples: Method: TO-15

JD234-2, JD234-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.9	99	9.7	97	2	70-130/30
64-17-5	Ethanol	10	9.7	97	9.6	96	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	107%	105%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 3

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-BS	6W14959.D	1	11/26/19	TCH	n/a	n/a	V6W623
V6W623-BSD	6W14960.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here applies to the following samples:**Method:** TO-15

V6W623-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	8.4	84	8.1	81	4	70-130/30
106-99-0	1,3-Butadiene	10	11.8	118	11.8	118	0	70-130/30
71-43-2	Benzene	10	9.8	98	9.5	95	3	70-130/30
75-27-4	Bromodichloromethane	10	11.9	119	11.1	111	7	70-130/30
75-25-2	Bromoform	10	10.9	109	11.0	110	1	70-130/30
74-83-9	Bromomethane	10	12.0	120	11.7	117	3	70-130/30
593-60-2	Bromoethene	10	10.8	108	10.5	105	3	70-130/30
100-44-7	Benzyl Chloride	10	10.6	106	10.7	107	1	70-130/30
75-15-0	Carbon disulfide	10	10.0	100	9.8	98	2	70-130/30
108-90-7	Chlorobenzene	10	9.7	97	9.8	98	1	70-130/30
75-00-3	Chloroethane	10	12.0	120	12.0	120	0	70-130/30
67-66-3	Chloroform	10	11.3	113	10.9	109	4	70-130/30
74-87-3	Chloromethane	10	12.1	121	11.9	119	2	70-130/30
107-05-1	3-Chloropropene	10	10.6	106	10.4	104	2	70-130/30
95-49-8	2-Chlorotoluene	10	10.7	107	10.8	108	1	70-130/30
56-23-5	Carbon tetrachloride	10	12.2	122	11.8	118	3	70-130/30
110-82-7	Cyclohexane	10	10.2	102	9.9	99	3	70-130/30
75-34-3	1,1-Dichloroethane	10	10.1	101	9.8	98	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.4	104	10.2	102	2	70-130/30
106-93-4	1,2-Dibromoethane	10	10.9	109	10.0	100	9	70-130/30
107-06-2	1,2-Dichloroethane	10	11.8	118	11.5	115	3	70-130/30
78-87-5	1,2-Dichloropropane	10	10.4	104	9.7	97	7	70-130/30
123-91-1	1,4-Dioxane	10	9.0	90	8.5	85	6	70-130/30
75-71-8	Dichlorodifluoromethane	10	12.0	120	11.6	116	3	70-130/30
124-48-1	Dibromochloromethane	10	12.2	122	11.3	113	8	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.8	108	10.5	105	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.9	109	10.6	106	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.1	111	10.3	103	7	70-130/30
541-73-1	m-Dichlorobenzene	10	10.8	108	10.8	108	0	70-130/30
95-50-1	o-Dichlorobenzene	10	11.1	111	11.2	112	1	70-130/30
106-46-7	p-Dichlorobenzene	10	10.6	106	10.6	106	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.3	113	10.4	104	8	70-130/30
64-17-5	Ethanol	10	11.8	118	11.6	116	2	70-130/30
100-41-4	Ethylbenzene	10	9.5	95	9.6	96	1	70-130/30
141-78-6	Ethyl Acetate	10	10.4	104	10.1	101	3	70-130/30
622-96-8	4-Ethyltoluene	10	10.6	106	10.7	107	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 2 of 3

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-BS	6W14959.D	1	11/26/19	TCH	n/a	n/a	V6W623
V6W623-BSD	6W14960.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here applies to the following samples:

Method: TO-15

V6W623-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.5	105	10.3	103	2	70-130/30
76-14-2	Freon 114	10	12.2	122	11.9	119	2	70-130/30
142-82-5	Heptane	10	11.0	110	10.3	103	7	70-130/30
87-68-3	Hexachlorobutadiene	10	9.1	91	9.6	96	5	70-130/30
110-54-3	Hexane	10	10.2	102	9.9	99	3	70-130/30
591-78-6	2-Hexanone	10	9.2	92	8.4	84	9	70-130/30
67-63-0	Isopropyl Alcohol	10	8.2	82	8.1	81	1	70-130/30
75-09-2	Methylene chloride	10	8.8	88	8.6	86	2	70-130/30
78-93-3	Methyl ethyl ketone	10	10.1	101	10	100	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	11.0	110	10.1	101	9	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.9	109	10.6	106	3	70-130/30
80-62-6	Methylmethacrylate	10	11.1	111	10.3	103	7	70-130/30
115-07-1	Propylene	10	10.3	103	10.1	101	2	70-130/30
100-42-5	Styrene	10	10.6	106	10.7	107	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	11.7	117	11.4	114	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.9	99	10	100	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	11.0	110	10.2	102	8	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.1	91	9.1	91	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.1	111	11.1	111	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.6	106	10.8	108	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.6	106	9.8	98	8	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.3	103	10.1	101	2	70-130/30
127-18-4	Tetrachloroethylene	10	11.5	115	10.6	106	8	70-130/30
109-99-9	Tetrahydrofuran	10	10.6	106	10.4	104	2	70-130/30
108-88-3	Toluene	10	10.5	105	9.7	97	8	70-130/30
79-01-6	Trichloroethylene	10	10.8	108	9.9	99	9	70-130/30
75-69-4	Trichlorofluoromethane	10	11.8	118	11.4	114	3	70-130/30
75-01-4	Vinyl chloride	10	12.0	120	11.8	118	2	70-130/30
108-05-4	Vinyl Acetate	10	9.8	98	9.5	95	3	70-130/30
	m,p-Xylene	20	20.2	101	20.3	102	0	70-130/30
95-47-6	o-Xylene	10	9.7	97	9.8	98	1	70-130/30
1330-20-7	Xylenes (total)	30	29.9	100	30.0	100	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-BS	6W14959.D	1	11/26/19	TCH	n/a	n/a	V6W623
V6W623-BSD	6W14960.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here applies to the following samples: Method: TO-15

V6W623-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	109%	104%	65-128%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD235-4DUP	5W39842.D	1	12/24/19	DFT	n/a	n/a	V5W1621
JD235-4	5W39841.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples:

Method: TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Compound	JD235-4 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	34.3		38.6		12	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.74		0.65	J	13	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	0.48		0.36	J	29* a	25
74-87-3	Chloromethane	ND		ND		nc	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	1.1		0.98		12	25
75-34-3	1,1-Dichloroethane	0.70		0.60	J	15	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.48		0.41	J	16	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	3.4		3.3		3	25
156-59-2	cis-1,2-Dichloroethylene	120		125		4	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	53.2		55.7		5	25
100-41-4	Ethylbenzene	1.3		1.2		8	25
141-78-6	Ethyl Acetate	ND		ND		nc	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Page 2 of 3

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD235-4DUP	5W39842.D	1	12/24/19	DFT	n/a	n/a	V5W1621
JD235-4	5W39841.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples:

Method: TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Compound	JD235-4 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-13-1	Freon 113	ND	ND			nc	25
76-14-2	Freon 114	ND	ND			nc	25
142-82-5	Heptane	1.3	1.2			8	25
87-68-3	Hexachlorobutadiene	ND	ND			nc	25
110-54-3	Hexane	1.7	1.6			6	25
591-78-6	2-Hexanone	ND	ND			nc	25
67-63-0	Isopropyl Alcohol	4.5	4.9			9	25
75-09-2	Methylene chloride	ND	ND			nc	25
78-93-3	Methyl ethyl ketone	8.4	8.4			0	25
108-10-1	Methyl Isobutyl Ketone	5.0	5.0			0	25
1634-04-4	Methyl Tert Butyl Ether	ND	ND			nc	25
80-62-6	Methylmethacrylate	ND	ND			nc	25
115-07-1	Propylene	ND	ND			nc	25
100-42-5	Styrene	ND	ND			nc	25
71-55-6	1,1,1-Trichloroethane	ND	ND			nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND			nc	25
79-00-5	1,1,2-Trichloroethane	ND	ND			nc	25
120-82-1	1,2,4-Trichlorobenzene	ND	ND			nc	25
95-63-6	1,2,4-Trimethylbenzene	ND	ND			nc	25
108-67-8	1,3,5-Trimethylbenzene	ND	ND			nc	25
540-84-1	2,2,4-Trimethylpentane	2.3	2.2			4	25
75-65-0	Tertiary Butyl Alcohol	1.2	1.1			9	25
127-18-4	Tetrachloroethylene	0.57	0.42			30* a	25
109-99-9	Tetrahydrofuran	ND	ND			nc	25
108-88-3	Toluene	5.5	5.7			4	25
79-01-6	Trichloroethylene	11.6	11.9			3	25
75-69-4	Trichlorofluoromethane	ND	ND			nc	25
75-01-4	Vinyl chloride	ND	ND			nc	25
108-05-4	Vinyl Acetate	ND	ND			nc	25
	m,p-Xylene	3.3	3.1			6	25
95-47-6	o-Xylene	1.1	0.94			16	25
1330-20-7	Xylenes (total)	4.4	4.0			10	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD235-4DUP	5W39842.D	1	12/24/19	DFT	n/a	n/a	V5W1621
JD235-4	5W39841.D	1	12/24/19	DFT	n/a	n/a	V5W1621

The QC reported here applies to the following samples: Method: TO-15

JD234-1, JD234-2, JD234-3, JD234-4, JD234-5

CAS No.	Surrogate Recoveries	DUP	JD235-4	Limits
460-00-4	4-Bromofluorobenzene	93%	95%	65-128%

(a) High RPD due to low concentration of hit

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD398-1DUP	5W39892.D	1	12/27/19	DFT	n/a	n/a	V5W1622
JD398-1	5W39869.D	1	12/26/19	DFT	n/a	n/a	V5W1622

The QC reported here applies to the following samples: Method: TO-15

JD234-2, JD234-4

CAS No.	Compound	JD398-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	4.7		2.5		61* a	25
64-17-5	Ethanol	12.5		6.2		67* a	25

CAS No.	Surrogate Recoveries	DUP	JD398-1	Limits
460-00-4	4-Bromofluorobenzene	93%	91%	65-128%

(a) High RPD due to low concentration of hit

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-SCC	6W14966.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here (Summa A639) applies to the following samples:

Method: TO-15

Batch CP10592 cleaned 11/15/19: JD234-1(A733), JD234-2(A839), JD234-3(A330)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Page 2 of 3

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-SCC	6W14966.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here (Summa A639) applies to the following samples:

Method: TO-15

Batch CP10592 cleaned 11/15/19: JD234-1(A733), JD234-2(A839), JD234-3(A330)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-SCC	6W14966.D	1	11/26/19	TCH	n/a	n/a	V6W623

The QC reported here (Summa A639) applies to the following samples: Method: TO-15

Batch CP10592 cleaned 11/15/19: JD234-1(A733), JD234-2(A839), JD234-3(A330)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92% 65-128%

Summa Cleaning Certification

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-SCC	6W14980.D	1	11/27/19	TCH	n/a	n/a	V6W623

The QC reported here (Summa M235) applies to the following samples:

Method: TO-15

Batch CP10601 cleaned 11/20/19: JD234-4(M033), JD234-5(A631)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Page 2 of 3

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-SCC	6W14980.D	1	11/27/19	TCH	n/a	n/a	V6W623

The QC reported here (Summa M235) applies to the following samples:

Method: TO-15

Batch CP10601 cleaned 11/20/19: JD234-4(M033), JD234-5(A631)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W623-SCC	6W14980.D	1	11/27/19	TCH	n/a	n/a	V6W623

The QC reported here (Summa M235) applies to the following samples: Method: TO-15

Batch CP10601 cleaned 11/20/19: JD234-4(M033), JD234-5(A631)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 65-128%

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY**Sample:** V5W1620-BFB**Injection Date:** 12/23/19**Lab File ID:** 5W39821.D**Injection Time:** 13:24**Instrument ID:** GCMS5W

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	10786	18.2	Pass
75	30.0 - 66.0% of mass 95	27616	46.7	Pass
95	Base peak, 100% relative abundance	59157	100.0	Pass
96	5.0 - 9.0% of mass 95	3976	6.72	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	46024	77.8	Pass
175	4.0 - 9.0% of mass 174	3643	6.16 (7.92) ^a	Pass
176	93.0 - 101.0% of mass 174	44272	74.8 (96.2) ^a	Pass
177	5.0 - 9.0% of mass 176	2896	4.90 (6.54) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W1620-IC1620	5W39822.D	12/23/19	14:12	00:48	Initial cal 0.1
V5W1620-IC1620	5W39823.D	12/23/19	14:56	01:32	Initial cal 0.04
V5W1620-IC1620	5W39824.D	12/23/19	15:47	02:23	Initial cal 5
V5W1620-ICC1620	5W39825.D	12/23/19	16:32	03:08	Initial cal 10
V5W1620-IC1620	5W39826.D	12/23/19	17:20	03:56	Initial cal 20
V5W1620-IC1620	5W39827.D	12/23/19	18:11	04:47	Initial cal 40
V5W1620-IC1620	5W39831.D	12/24/19	09:22	19:58	Initial cal 0.5
V5W1620-IC1620	5W39832.D	12/24/19	10:07	20:43	Initial cal 0.2
V5W1620-ICV1620	5W39833.D	12/24/19	11:01	21:37	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1621-BFB
Lab File ID: 5W39834.D
Instrument ID: GCMS5W
Injection Date: 12/24/19
Injection Time: 11:53

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	9693	18.3	Pass
75	30.0 - 66.0% of mass 95	24749	46.8	Pass
95	Base peak, 100% relative abundance	52936	100.0	Pass
96	5.0 - 9.0% of mass 95	3575	6.75	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	42795	80.8	Pass
175	4.0 - 9.0% of mass 174	3295	6.22 (7.70) ^a	Pass
176	93.0 - 101.0% of mass 174	41520	78.4 (97.0) ^a	Pass
177	5.0 - 9.0% of mass 176	2667	5.04 (6.42) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W1621-CC1620	5W39835.D	12/24/19	12:38	00:45	Continuing cal 10
V5W1621-BS	5W39836.D	12/24/19	13:23	01:30	Blank Spike
V5W1621-BSD	5W39837.D	12/24/19	14:08	02:15	Blank Spike Duplicate
V5W1621-MB	5W39840.D	12/24/19	16:34	04:41	Method Blank
JD235-4	5W39841.D	12/24/19	17:19	05:26	(used for QC only; not part of job JD234)
JD235-4DUP	5W39842.D	12/24/19	18:05	06:12	Duplicate
ZZZZZZ	5W39843.D	12/24/19	18:51	06:58	(unrelated sample)
ZZZZZZ	5W39844.D	12/24/19	19:37	07:44	(unrelated sample)
ZZZZZZ	5W39845.D	12/24/19	20:23	08:30	(unrelated sample)
ZZZZZZ	5W39846.D	12/24/19	21:13	09:20	(unrelated sample)
ZZZZZZ	5W39847.D	12/24/19	22:03	10:10	(unrelated sample)
ZZZZZZ	5W39848.D	12/24/19	22:53	11:00	(unrelated sample)
JD234-2	5W39849.D	12/24/19	23:50	11:57	VP-6 INDOOR
JD234-4	5W39850.D	12/25/19	00:48	12:55	VP-5 INDOOR
JD234-5	5W39851.D	12/25/19	01:44	13:51	OUTSIDE AMBIENT
JD234-1	5W39852.D	12/25/19	02:37	14:44	VP-6 SOIL VAPOR
JD234-3	5W39853.D	12/25/19	03:28	15:35	VP-5 SOIL VAPOR
ZZZZZZ	5W39854.D	12/25/19	04:13	16:20	(unrelated sample)
ZZZZZZ	5W39855.D	12/25/19	04:58	17:05	(unrelated sample)
ZZZZZZ	5W39856.D	12/25/19	05:48	17:55	(unrelated sample)
ZZZZZZ	5W39857.D	12/25/19	06:39	18:46	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1622-BFB

Injection Date: 12/26/19

Lab File ID: 5W39858.D

Injection Time: 09:31

Instrument ID: GCMS5W

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	10411	19.0	Pass
75	30.0 - 66.0% of mass 95	26296	47.9	Pass
95	Base peak, 100% relative abundance	54920	100.0	Pass
96	5.0 - 9.0% of mass 95	3648	6.64	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	43104	78.5	Pass
175	4.0 - 9.0% of mass 174	3443	6.27 (7.99) ^a	Pass
176	93.0 - 101.0% of mass 174	41045	74.7 (95.2) ^a	Pass
177	5.0 - 9.0% of mass 176	2753	5.01 (6.71) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W1622-CC1620	5W39859.D	12/26/19	10:17	00:46	Continuing cal 10
V5W1622-BS	5W39860.D	12/26/19	11:03	01:32	Blank Spike
V5W1622-BSD	5W39861.D	12/26/19	11:49	02:18	Blank Spike Duplicate
V5W1622-MB	5W39864.D	12/26/19	14:21	04:50	Method Blank
ZZZZZZ	5W39865.D	12/26/19	15:07	05:36	(unrelated sample)
ZZZZZZ	5W39866.D	12/26/19	15:53	06:22	(unrelated sample)
JD234-2	5W39867.D	12/26/19	16:38	07:07	VP-6 INDOOR
JD234-4	5W39868.D	12/26/19	17:24	07:53	VP-5 INDOOR
JD398-1	5W39869.D	12/26/19	18:21	08:50	(used for QC only; not part of job JD234)
ZZZZZZ	5W39871.D	12/26/19	20:22	10:51	(unrelated sample)
ZZZZZZ	5W39872.D	12/26/19	21:23	11:52	(unrelated sample)
ZZZZZZ	5W39873.D	12/26/19	22:20	12:49	(unrelated sample)
ZZZZZZ	5W39874.D	12/26/19	23:18	13:47	(unrelated sample)
ZZZZZZ	5W39875.D	12/27/19	00:17	14:46	(unrelated sample)
ZZZZZZ	5W39876.D	12/27/19	01:18	15:47	(unrelated sample)
ZZZZZZ	5W39877.D	12/27/19	02:15	16:44	(unrelated sample)
ZZZZZZ	5W39878.D	12/27/19	03:14	17:43	(unrelated sample)
ZZZZZZ	5W39879.D	12/27/19	04:20	18:49	(unrelated sample)
ZZZZZZ	5W39880.D	12/27/19	05:18	19:47	(unrelated sample)
ZZZZZZ	5W39881.D	12/27/19	06:15	20:44	(unrelated sample)
ZZZZZZ	5W39882.D	12/27/19	07:14	21:43	(unrelated sample)
ZZZZZZ	5W39883.D	12/27/19	08:14	22:43	(unrelated sample)
ZZZZZZ	5W39884.D	12/27/19	09:11	23:40	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1623-BFB

Injection Date: 12/27/19

Lab File ID: 5W39885.D

Injection Time: 10:09

Instrument ID: GCMS5W

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	10474	17.3	Pass
75	30.0 - 66.0% of mass 95	27651	45.5	Pass
95	Base peak, 100% relative abundance	60717	100.0	Pass
96	5.0 - 9.0% of mass 95	4035	6.65	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	49819	82.1	Pass
175	4.0 - 9.0% of mass 174	3779	6.22 (7.59) ^a	Pass
176	93.0 - 101.0% of mass 174	47709	78.6 (95.8) ^a	Pass
177	5.0 - 9.0% of mass 176	3099	5.10 (6.50) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W1623-CC1620	5W39886.D	12/27/19	10:55	00:46	Continuing cal 10
V5W1623-BS	5W39887.D	12/27/19	11:42	01:33	Blank Spike
V5W1622-BS2	5W39887A.D	12/27/19	11:42	01:33	Blank Spike
V5W1623-BSD	5W39888.D	12/27/19	12:28	02:19	Blank Spike Duplicate
V5W1622-BSD2	5W39888A.D	12/27/19	12:28	02:19	Blank Spike Duplicate
V5W1623-MB	5W39891.D	12/27/19	14:48	04:39	Method Blank
V5W1622-MB2	5W39891A.D	12/27/19	14:48	04:39	Method Blank
JD398-1DUP	5W39892.D	12/27/19	15:43	05:34	Duplicate
JD928-1	5W39893.D	12/27/19	16:27	06:18	(used for QC only; not part of job JD234)
JD928-1DUP	5W39894.D	12/27/19	17:12	07:03	Duplicate
JD928-1	5W39896.D	12/27/19	18:42	08:33	(used for QC only; not part of job JD234)
ZZZZZZ	5W39898.D	12/27/19	20:12	10:03	(unrelated sample)
ZZZZZZ	5W39900.D	12/27/19	21:41	11:32	(unrelated sample)
ZZZZZZ	5W39902.D	12/27/19	23:11	13:02	(unrelated sample)
ZZZZZZ	5W39903.D	12/27/19	23:57	13:48	(unrelated sample)
ZZZZZZ	5W39904.D	12/28/19	00:56	14:47	(unrelated sample)
ZZZZZZ	5W39905.D	12/28/19	01:41	15:32	(unrelated sample)
ZZZZZZ	5W39906.D	12/28/19	02:25	16:16	(unrelated sample)
ZZZZZZ	5W39907.D	12/28/19	03:10	17:01	(unrelated sample)
ZZZZZZ	5W39908.D	12/28/19	03:54	17:45	(unrelated sample)
ZZZZZZ	5W39909.D	12/28/19	04:39	18:30	(unrelated sample)
ZZZZZZ	5W39910.D	12/28/19	05:23	19:14	(unrelated sample)

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY**Sample:** V6W571-BFB**Injection Date:** 09/13/19**Lab File ID:** 6W13821.D**Injection Time:** 11:13**Instrument ID:** GCMS6W

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	16326	14.1	Pass
75	30.0 - 66.0% of mass 95	49944	43.0	Pass
95	Base peak, 100% relative abundance	116077	100.0	Pass
96	5.0 - 9.0% of mass 95	7622	6.57	Pass
173	Less than 2.0% of mass 174	753	0.65 (0.65) ^a	Pass
174	50.0 - 120.0% of mass 95	116552	100.4	Pass
175	4.0 - 9.0% of mass 174	8664	7.46 (7.43) ^a	Pass
176	93.0 - 101.0% of mass 174	113053	97.4 (97.0) ^a	Pass
177	5.0 - 9.0% of mass 176	7387	6.36 (6.53) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W571-IC571	6W13822.D	09/13/19	12:03	00:50	Initial cal 0.2
V6W571-IC571	6W13823.D	09/13/19	13:12	01:59	Initial cal 0.1
V6W571-IC571	6W13824.D	09/13/19	13:59	02:46	Initial cal 0.04
V6W571-IC571	6W13825.D	09/13/19	14:47	03:34	Initial cal 0.5
V6W571-IC571	6W13826.D	09/13/19	15:35	04:22	Initial cal 5
V6W571-ICC571	6W13827.D	09/13/19	16:23	05:10	Initial cal 10
V6W571-IC571	6W13828.D	09/13/19	17:12	05:59	Initial cal 20
V6W571-IC571	6W13830.D	09/13/19	18:52	07:39	Initial cal 40
V6W571-ICV571	6W13832.D	09/13/19	20:27	09:14	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W623-BFB

Injection Date: 11/26/19

Lab File ID: 6W14957.D

Injection Time: 08:59

Instrument ID: GCMS6W

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	12919	14.9	Pass
75	30.0 - 66.0% of mass 95	38677	44.7	Pass
95	Base peak, 100% relative abundance	86579	100.0	Pass
96	5.0 - 9.0% of mass 95	5696	6.58	Pass
173	Less than 2.0% of mass 174	788	0.91 (0.91) ^a	Pass
174	50.0 - 120.0% of mass 95	86443	99.8	Pass
175	4.0 - 9.0% of mass 174	6450	7.45 (7.46) ^a	Pass
176	93.0 - 101.0% of mass 174	84395	97.5 (97.6) ^a	Pass
177	5.0 - 9.0% of mass 176	5612	6.48 (6.65) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W623-CC571	6W14958.D	11/26/19	09:47	00:48	Continuing cal 10
V6W623-BS	6W14959.D	11/26/19	10:37	01:38	Blank Spike
V6W623-BSD	6W14960.D	11/26/19	11:25	02:26	Blank Spike Duplicate
V6W623-MB	6W14962.D	11/26/19	13:13	04:14	Method Blank
ZZZZZZ	6W14963.D	11/26/19	14:37	05:38	(unrelated sample)
ZZZZZZ	6W14964.D	11/26/19	15:25	06:26	(unrelated sample)
V6W623-SCC	6W14966.D	11/26/19	17:31	08:32	Summa Cleaning Certification
JC99159-1	6W14967.D	11/26/19	18:24	09:25	(used for QC only; not part of job JD234)
JC99159-1DUP	6W14968.D	11/26/19	19:16	10:17	Duplicate
ZZZZZZ	6W14969.D	11/26/19	20:08	11:09	(unrelated sample)
ZZZZZZ	6W14970.D	11/26/19	21:02	12:03	(unrelated sample)
ZZZZZZ	6W14971.D	11/26/19	21:55	12:56	(unrelated sample)
ZZZZZZ	6W14972.D	11/26/19	22:48	13:49	(unrelated sample)
ZZZZZZ	6W14973.D	11/26/19	23:41	14:42	(unrelated sample)
ZZZZZZ	6W14974.D	11/27/19	00:29	15:30	(unrelated sample)
ZZZZZZ	6W14975.D	11/27/19	01:17	16:18	(unrelated sample)
ZZZZZZ	6W14976.D	11/27/19	02:05	17:06	(unrelated sample)
ZZZZZZ	6W14977.D	11/27/19	02:54	17:55	(unrelated sample)
ZZZZZZ	6W14978.D	11/27/19	03:42	18:43	(unrelated sample)
V6W623-SCC	6W14980.D	11/27/19	05:23	20:24	Summa Cleaning Certification

Internal Standard Area Summary

Page 1 of 1

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Check Std: V5W1621-CC1620	Injection Date: 12/24/19
Lab File ID: 5W39835.D	Injection Time: 12:38
Instrument ID: GCMS5W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	140666	8.08	509804	10.19	231973	15.66
Upper Limit ^a	196932	8.41	713726	10.52	324762	15.99
Lower Limit ^b	84400	7.75	305882	9.86	139184	15.33

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V5W1621-BS	140206	8.08	512841	10.19	235388	15.66
V5W1621-BSD	145721	8.08	532141	10.19	241204	15.66
V5W1621-MB	149738	8.08	519837	10.19	172535	15.66
JD235-4	147312	8.10	524604	10.19	181641	15.66
JD235-4DUP	141685	8.10	501338	10.20	170626	15.66
ZZZZZZ	137358	8.08	481317	10.19	161264	15.66
ZZZZZZ	137969	8.13	499232	10.22	178795	15.66
ZZZZZZ	135677	8.08	478495	10.19	163189	15.66
ZZZZZZ	143344	8.10	504082	10.19	165972	15.66
ZZZZZZ	140022	8.09	488803	10.19	163914	15.66
ZZZZZZ	138358	8.13	495134	10.22	174729	15.66
JD234-2	147809	8.08	492557	10.19	197466	15.66
JD234-4	134799	8.09	473000	10.19	156664	15.66
JD234-5	133487	8.08	469412	10.19	156126	15.66
JD234-1	140146	8.10	474808	10.19	153354	15.66
JD234-3	138268	8.09	475924	10.19	155959	15.66
ZZZZZZ	133336	8.08	472509	10.19	165856	15.66
ZZZZZZ	137885	8.09	481706	10.19	166506	15.66
ZZZZZZ	137130	8.09	479763	10.19	160813	15.66
ZZZZZZ	136969	8.09	482331	10.19	164959	15.66

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Check Std: V5W1622-CC1620	Injection Date: 12/26/19
Lab File ID: 5W39859.D	Injection Time: 10:17
Instrument ID: GCMS5W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	134314	8.09	483556	10.19	222485	15.66
Upper Limit ^a	188040	8.42	676978	10.52	311479	15.99
Lower Limit ^b	80588	7.76	290134	9.86	133491	15.33

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V5W1622-BS	134463	8.09	487507	10.19	223090	15.66
V5W1622-BSD	135241	8.08	491295	10.19	226046	15.66
V5W1622-MB	137779	8.08	469454	10.19	146702	15.66
ZZZZZZ	121735	8.08	448791	10.19	197287	15.67
ZZZZZZ	145493	8.08	510092	10.19	167145	15.66
JD234-2	148841	8.09	516715	10.19	178965	15.66
JD234-4	150896	8.08	523367	10.19	172886	15.66
JD398-1	148386	8.09	516217	10.19	177460	15.66
ZZZZZZ	145504	8.09	501618	10.19	159993	15.66
ZZZZZZ	145937	8.09	508080	10.19	168955	15.66
ZZZZZZ	144044	8.08	497268	10.19	163912	15.66
ZZZZZZ	142887	8.08	494787	10.19	164774	15.66
ZZZZZZ	140407	8.09	488055	10.19	167467	15.66
ZZZZZZ	141117	8.09	485413	10.19	161054	15.66
ZZZZZZ	143551	8.09	493913	10.19	164724	15.66
ZZZZZZ	138977	8.08	478874	10.19	158305	15.66
ZZZZZZ	119737	8.12	370408	10.21	190202	15.63
ZZZZZZ	145705	8.09	519420	10.19	179993	15.66
ZZZZZZ	142339	8.09	506750	10.19	174358	15.66
ZZZZZZ	144894	8.09	522373	10.19	195009	15.66
ZZZZZZ	149702	8.09	543652	10.19	202239	15.66
ZZZZZZ	151095	8.09	535224	10.19	180570	15.66

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Internal Standard Area Summary

Page 1 of 1

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Check Std: V5W1623-CC1620	Injection Date: 12/27/19
Lab File ID: 5W39886.D	Injection Time: 10:55
Instrument ID: GCMS5W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	145826	8.08	526967	10.19	235220	15.66
Upper Limit ^a	204156	8.41	737754	10.52	329308	15.99
Lower Limit ^b	87496	7.75	316180	9.86	141132	15.33

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V5W1623-BS	153307	8.08	556022	10.19	243145	15.66
V5W1622-BS2	153307	8.08	556022	10.19	243145	15.66
V5W1623-BSD	147518	8.09	533669	10.19	239743	15.66
V5W1622-BSD2	147518	8.09	533669	10.19	239743	15.66
V5W1622-MB2	148532	8.08	502433	10.19	159469	15.66
V5W1623-MB	148532	8.08	502433	10.19	159469	15.66
JD398-1DUP	146819	8.09	506489	10.19	167528	15.66
JD928-1	148090	8.12	514545	10.21	191525	15.66
JD928-1DUP	147629	8.11	498170	10.21	189626	15.66
JD928-1	144723	8.10	499667	10.21	176148	15.66
ZZZZZZ	139753	8.08	483473	10.19	179123	15.66
ZZZZZZ	137457	8.08	478744	10.19	180675	15.66
ZZZZZZ	139582	8.08	482025	10.19	172926	15.66
ZZZZZZ	144407	8.09	496676	10.19	168245	15.66
ZZZZZZ	136270	8.09	488182	10.19	181398	15.66
ZZZZZZ	140711	8.09	490140	10.20	152025	15.66
ZZZZZZ	146152	8.09	505104	10.20	162462	15.66
ZZZZZZ	143023	8.09	497882	10.21	161078	15.66
ZZZZZZ	138209	8.08	481800	10.19	155131	15.66
ZZZZZZ	140317	8.09	475556	10.19	149053	15.66
ZZZZZZ	140717	8.09	478189	10.19	157918	15.66

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Check Std: V6W623-CC571	Injection Date: 11/26/19
Lab File ID: 6W14958.D	Injection Time: 09:47
Instrument ID: GCMS6W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	146316	8.15	537314	10.34	238121	15.88
Upper Limit ^a	204842	8.48	752240	10.67	333369	16.21
Lower Limit ^b	87790	7.82	322388	10.01	142873	15.55

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W623-BS	137980	8.15	482654	10.35	225304	15.88
V6W623-BSD	143648	8.15	524408	10.35	225022	15.88
V6W623-MB	132795	8.15	471856	10.34	186117	15.88
ZZZZZZ	132225	8.15	459846	10.34	178505	15.88
ZZZZZZ	135858	8.15	478725	10.34	188114	15.88
V6W623-SCC	130195	8.15	462549	10.34	181951	15.88
JC99159-1	129732	8.15	448778	10.35	191757	15.88
JC99159-1DUP	135416	8.15	470576	10.35	196466	15.88
ZZZZZZ	129798	8.15	454414	10.34	181923	15.88
ZZZZZZ	129942	8.15	461288	10.34	182752	15.88
ZZZZZZ	128807	8.15	437893	10.35	191940	15.88
ZZZZZZ	136658	8.15	477124	10.34	188167	15.88
ZZZZZZ	122568	8.15	432074	10.34	180948	15.88
ZZZZZZ	137161	8.15	487885	10.34	200215	15.88
ZZZZZZ	129500	8.15	457033	10.34	191089	15.88
ZZZZZZ	130325	8.15	466775	10.34	190867	15.88
ZZZZZZ	130184	8.15	458361	10.34	182690	15.88
ZZZZZZ	131238	8.15	467429	10.34	187304	15.88
V6W623-SCC	129855	8.15	459138	10.34	182200	15.88

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Initial Calibration Retention Time/Internal Standard Area Summary

Page 1 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15	Reporting this level
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15	
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15	
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15	
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15	
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15	
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15	
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,3-Butadiene	4.47	8.08	0.553 ok	0.555	0.495-0.615
Benzene	9.77	8.08	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.23	15.66	1.164 ok	1.163	1.103-1.223
Bromodichloromethane	10.95	10.18	1.076 ok	1.075	1.015-1.135
Bromoform	16.61	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.68	8.08	0.579 ok	0.580	0.520-0.640
Bromoethene	5.08	8.08	0.629 ok	0.630	0.570-0.690
n-Butane	4.52	8.08	0.559 ok	0.559	0.499-0.619
Benzyl Chloride	20.08	15.66	1.282 ok	1.282	1.222-1.342
n-Butylbenzene	21.10	15.66	1.347 ok	1.347	1.287-1.407
sec-Butylbenzene	20.26	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.66	1.269 ok	1.269	1.209-1.329
Carbon disulfide	6.30	8.08	0.780 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.02	8.08	0.498 ok	0.498	0.438-0.558
Chloroethane	4.81	8.08	0.595 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.04	8.08	0.500 ok	0.501	0.441-0.561
Chloroform	8.21	8.08	1.016 ok	1.017	0.957-1.077
Chloromethane	4.21	8.08	0.521 ok	0.522	0.462-0.582
3-Chloropropene	6.14	8.08	0.760 ok	0.761	0.701-0.821
2-Chlorotoluene	18.85	15.66	1.204 ok	1.203	1.143-1.263
Carbon tetrachloride	9.92	8.08	1.228 ok	1.229	1.169-1.289
Cyclohexane	10.05	8.08	1.244 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.07	8.08	0.875 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.94	8.08	0.735 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.15	10.18	1.390 ok	1.389	1.329-1.449
1,2-Dichloroethane	8.98	8.08	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.71	10.18	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.34	10.18	1.310 ok	1.309	1.249-1.369
Dichlorodifluoromethane	4.09	8.08	0.506 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.88	8.08	0.604 ok	0.605	0.545-0.665
Dibromochloromethane	13.84	10.18	1.360 ok	1.358	1.298-1.418
Dibromomethane	10.69	10.18	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.88	8.08	0.851 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.91	8.08	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.07	10.18	1.186 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.08	15.66	1.282 ok	1.282	1.222-1.342
o-Dichlorobenzene	20.66	15.66	1.319 ok	1.319	1.259-1.379
p-Dichlorobenzene	20.18	15.66	1.289 ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.75	10.18	1.252 ok	1.250	1.190-1.310

Initial Calibration Retention Time/Internal Standard Area Summary

Page 2 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15	Reporting this level
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15	
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15	
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15	
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15	
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15	
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15	
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Di-Isopropyl ether	8.13	8.08	1.006 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.33	8.08	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.02	8.08	1.116 ok	1.117	1.057-1.177
Ethylbenzene	16.27	15.66	1.039 ok	1.039	0.979-1.099
4-Ethyltoluene	19.16	15.66	1.223 ok	1.223	1.163-1.283
Freon 113	6.26	8.08	0.775 ok	0.775	0.715-0.835
Freon 114	4.28	8.08	0.530 ok	0.531	0.471-0.591
Freon 123	5.20	8.08	0.644 ok	0.644	0.584-0.704
Freon 123A	5.23	8.08	0.647 ok	0.649	0.589-0.709
Freon 142B	4.19	8.08	0.519 ok	0.520	0.460-0.580
Freon 152A	3.97	8.08	0.491 ok	0.493	0.433-0.553
Heptane	11.34	10.18	1.114 ok	1.114	1.054-1.174
Hexachlorobutadiene	23.49	15.66	1.500 ok	1.500	1.440-1.560
Hexachloroethane	21.55	15.66	1.376 ok	1.376	1.316-1.436
Hexane	8.08	8.08	1.000 ok	1.001	0.941-1.061
Iodomethane	5.88	8.08	0.728 ok	0.728	0.668-0.788
Isopropylbenzene	18.11	15.66	1.156 ok	1.157	1.097-1.217
p-Isopropyltoluene	20.50	15.66	1.309 ok	1.309	1.249-1.369
Methylene chloride	6.05	8.08	0.749 ok	0.749	0.689-0.809
Methyl Tert Butyl Ether	7.17	8.08	0.887 ok	0.886	0.826-0.946
Naphthalene	23.05	15.66	1.472 ok	1.471	1.411-1.531
Nonane	17.59	15.66	1.123 ok	1.123	1.063-1.183
Octane	14.62	10.18	1.436 ok	1.435	1.375-1.495
Pentane	5.68	8.08	0.703 ok	0.704	0.644-0.764
n-Propylbenzene	18.92	15.66	1.208 ok	1.208	1.148-1.268
Propylene	4.03	8.08	0.499 ok	0.500	0.440-0.560
Styrene	17.07	15.66	1.090 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.25	8.08	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.71	10.18	1.543 ok	1.541	1.481-1.601
1,1,2,2-Tetrachloroethane	17.22	15.66	1.100 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	12.94	10.18	1.271 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	22.93	15.66	1.464 ok	1.463	1.403-1.523
1,2,3-Trichloropropane	17.41	15.66	1.112 ok	1.112	1.052-1.172
1,2,4-Trimethylbenzene	19.88	15.66	1.269 ok	1.270	1.210-1.330
1,3,5-Trimethylbenzene	19.28	15.66	1.231 ok	1.231	1.171-1.291
2,2,4-Trimethylpentane	11.01	10.18	1.082 ok	1.080	1.020-1.140
Tetrachloroethylene	14.78	10.18	1.452 ok	1.451	1.391-1.511
Toluene	13.28	10.18	1.305 ok	1.304	1.244-1.364
Trichloroethylene	10.99	10.18	1.080 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.40	8.08	0.668 ok	0.670	0.610-0.730

Initial Calibration Retention Time/Internal Standard Area Summary

Page 3 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15	Reporting this level
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15	
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15	
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15	
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15	
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15	
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15	
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)	
Vinyl chloride	4.38	8.08	0.542 ok	0.542	0.482-0.602	
m,p-Xylene	16.51	15.66	1.054 ok	1.055	0.995-1.115	
o-Xylene	17.20	15.66	1.098 ok	1.099	1.039-1.159	
Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08 ok	8.08	7.75-8.41	159951 ok	152502	91501-213503
1,4-Difluorobenzene	10.18 ok	10.19	9.86-10.52	552979 ok	542102	325261-758943
Chlorobenzene-D5	15.66 ok	15.66	15.33-15.99	174518 ok	219150	131490-306810

Initial Calibration Retention Time/Internal Standard Area Summary

Page 4 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+/- .06)
1,3-Butadiene	4.49	8.08	0.556 ok	0.555	0.495-0.615
Benzene	9.77	8.08	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.22	15.66	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.96	10.19	1.076 ok	1.075	1.015-1.135
Bromoform	16.62	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.71	8.08	0.583 ok	0.580	0.520-0.640
Bromoethene	5.10	8.08	0.631 ok	0.630	0.570-0.690
sec-Butylbenzene	20.27	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.86	15.66	1.268 ok	1.269	1.209-1.329
Carbon disulfide	6.32	8.08	0.782 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorotrifluoroethene	4.05	8.08	0.501 ok	0.501	0.441-0.561
Chloroform	8.22	8.08	1.017 ok	1.017	0.957-1.077
Chloromethane	4.23	8.08	0.524 ok	0.522	0.462-0.582
3-Chloropropene	6.15	8.08	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.86	15.66	1.204 ok	1.203	1.143-1.263
Carbon tetrachloride	9.94	8.08	1.230 ok	1.229	1.169-1.289
Cyclohexane	10.06	8.08	1.245 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.09	8.08	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.95	8.08	0.736 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.16	10.19	1.390 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.00	8.08	1.114 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.72	10.19	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.35	10.19	1.310 ok	1.309	1.249-1.369
Dichlorodifluoromethane	4.11	8.08	0.509 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.90	8.08	0.606 ok	0.605	0.545-0.665
Dibromochloromethane	13.85	10.19	1.359 ok	1.358	1.298-1.418
Dibromomethane	10.70	10.19	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.89	8.08	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.92	8.08	0.980 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.08	10.19	1.185 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.10	15.66	1.284 ok	1.282	1.222-1.342
o-Dichlorobenzene	20.66	15.66	1.319 ok	1.319	1.259-1.379
p-Dichlorobenzene	20.20	15.66	1.290 ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.76	10.19	1.252 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.15	8.08	1.009 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.33	8.08	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.04	8.08	1.119 ok	1.117	1.057-1.177
Freon 113	6.27	8.08	0.776 ok	0.775	0.715-0.835
Freon 114	4.30	8.08	0.532 ok	0.531	0.471-0.591

Initial Calibration Retention Time/Internal Standard Area Summary

Page 5 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)		Istd RT (min.)	Rel RT	Mean Rel RT		Rel RT Range (+ /- .06)		
Freon 123	5.21	ok	8.08	0.645	ok	0.644	0.584-0.704		
Freon 123A	5.25	ok	8.08	0.650	ok	0.649	0.589-0.709		
Freon 142B	4.21	ok	8.08	0.521	ok	0.520	0.460-0.580		
Freon 152A	4.00	ok	8.08	0.495	ok	0.493	0.433-0.553		
Heptane	11.36	ok	10.19	1.115	ok	1.114	1.054-1.174		
Hexachlorobutadiene	23.49	ok	15.66	1.500	ok	1.500	1.440-1.560		
Hexachloroethane	21.55	ok	15.66	1.376	ok	1.376	1.316-1.436		
Hexane	8.11	ok	8.08	1.004	ok	1.001	0.941-1.061		
Iodomethane	5.89	ok	8.08	0.729	ok	0.728	0.668-0.788		
Isopropylbenzene	18.12	ok	15.66	1.157	ok	1.157	1.097-1.217		
p-Isopropyltoluene	20.51	ok	15.66	1.310	ok	1.309	1.249-1.369		
Methyl Tert Butyl Ether	7.20	ok	8.08	0.891	ok	0.886	0.826-0.946		
Naphthalene	23.07	ok	15.66	1.473	ok	1.471	1.411-1.531		
Nonane	17.59	ok	15.66	1.123	ok	1.123	1.063-1.183		
Octane	14.63	ok	10.19	1.436	ok	1.435	1.375-1.495		
Pentane	5.69	ok	8.08	0.704	ok	0.704	0.644-0.764		
n-Propylbenzene	18.94	ok	15.66	1.209	ok	1.208	1.148-1.268		
Propylene	4.05	ok	8.08	0.501	ok	0.500	0.440-0.560		
Styrene	17.08	ok	15.66	1.091	ok	1.090	1.030-1.150		
1,1,1-Trichloroethane	9.25	ok	8.08	1.145	ok	1.145	1.085-1.205		
1,1,1,2-Tetrachloroethane	15.71	ok	10.19	1.542	ok	1.541	1.481-1.601		
1,1,2,2-Tetrachloroethane	17.22	ok	15.66	1.100	ok	1.099	1.039-1.159		
1,1,2-Trichloroethane	12.95	ok	10.19	1.271	ok	1.270	1.210-1.330		
1,2,4-Trichlorobenzene	22.93	ok	15.66	1.464	ok	1.463	1.403-1.523		
1,2,3-Trichloropropane	17.43	ok	15.66	1.113	ok	1.112	1.052-1.172		
1,2,4-Trimethylbenzene	19.89	ok	15.66	1.270	ok	1.270	1.210-1.330		
1,3,5-Trimethylbenzene	19.28	ok	15.66	1.231	ok	1.231	1.171-1.291		
2,2,4-Trimethylpentane	11.01	ok	10.19	1.080	ok	1.080	1.020-1.140		
Tetrachloroethylene	14.79	ok	10.19	1.451	ok	1.451	1.391-1.511		
Toluene	13.30	ok	10.19	1.305	ok	1.304	1.244-1.364		
Trichloroethylene	11.00	ok	10.19	1.079	ok	1.079	1.019-1.139		
Trichlorofluoromethane	5.42	ok	8.08	0.671	ok	0.670	0.610-0.730		
Vinyl chloride	4.39	ok	8.08	0.543	ok	0.542	0.482-0.602		
Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)		Area	Mean Area	Area Range (+ /- 40 %)	
Bromochloromethane	8.08	ok	8.08	7.75-8.41		154277	ok	152502	91501-213503
1,4-Difluorobenzene	10.19	ok	10.19	9.86-10.52		537326	ok	542102	325261-758943
Chlorobenzene-D5	15.66	ok	15.66	15.33-15.99		175519	ok	219150	131490-306810

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6

Initial Calibration Retention Time/Internal Standard Area Summary

Page 6 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15 Reporting this level
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.31	8.08	0.657 ok	0.657	0.597-0.717
Acrolein	5.19	8.08	0.642 ok	0.643	0.583-0.703
Acrylonitrile	5.69	8.08	0.704 ok	0.704	0.644-0.764
Acetonitrile	5.10	8.08	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.49	8.08	0.556 ok	0.555	0.495-0.615
Benzene	9.77	8.08	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.21	15.66	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.95	10.19	1.075 ok	1.075	1.015-1.135
Bromoform	16.61	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.69	8.08	0.580 ok	0.580	0.520-0.640
Bromoethene	5.09	8.08	0.630 ok	0.630	0.570-0.690
n-Butane	4.52	8.08	0.559 ok	0.559	0.499-0.619
Benzyl Chloride	20.07	15.66	1.282 ok	1.282	1.222-1.342
n-Butylbenzene	21.08	15.66	1.346 ok	1.347	1.287-1.407
sec-Butylbenzene	20.26	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.66	1.269 ok	1.269	1.209-1.329
Carbon disulfide	6.31	8.08	0.781 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.03	8.08	0.499 ok	0.498	0.438-0.558
Chloroethane	4.82	8.08	0.597 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.05	8.08	0.501 ok	0.501	0.441-0.561
Chloroform	8.22	8.08	1.017 ok	1.017	0.957-1.077
Chloromethane	4.22	8.08	0.522 ok	0.522	0.462-0.582
3-Chloropropene	6.16	8.08	0.762 ok	0.761	0.701-0.821
2-Chlorotoluene	18.84	15.66	1.203 ok	1.203	1.143-1.263
Carbon tetrachloride	9.93	8.08	1.229 ok	1.229	1.169-1.289
Cyclohexane	10.05	8.08	1.244 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.09	8.08	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.95	8.08	0.736 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.15	10.19	1.389 ok	1.389	1.329-1.449
1,2-Dichloroethane	8.99	8.08	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.71	10.19	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.33	10.19	1.308 ok	1.309	1.249-1.369
1,4-Dioxane	11.04	10.19	1.083 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.10	8.08	0.507 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.89	8.08	0.605 ok	0.605	0.545-0.665
Dibromochloromethane	13.83	10.19	1.357 ok	1.358	1.298-1.418
Dibromomethane	10.69	10.19	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.89	8.08	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.92	8.08	0.980 ok	0.979	0.919-1.039

Initial Calibration Retention Time/Internal Standard Area Summary

Page 7 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15 Reporting this level
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.06	10.19	1.184 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.07	15.66	1.282 ok	1.282	1.222-1.342
o-Dichlorobenzene	20.65	15.66	1.319 ok	1.319	1.259-1.379
p-Dichlorobenzene	20.17	15.66	1.288 ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.73	10.19	1.249 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.12	8.08	1.005 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.33	8.08	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.03	8.08	1.118 ok	1.117	1.057-1.177
Ethanol	4.93	8.08	0.610 ok	0.610	0.550-0.670
Ethylbenzene	16.26	15.66	1.038 ok	1.039	0.979-1.099
Ethyl Acetate	8.17	8.08	1.011 ok	1.011	0.951-1.071
Ethyl Acrylate	10.77	10.19	1.057 ok	1.057	0.997-1.117
4-Ethyltoluene	19.15	15.66	1.223 ok	1.223	1.163-1.283
Freon 113	6.27	8.08	0.776 ok	0.775	0.715-0.835
Freon 114	4.29	8.08	0.531 ok	0.531	0.471-0.591
Freon 123	5.21	8.08	0.645 ok	0.644	0.584-0.704
Freon 123A	5.25	8.08	0.650 ok	0.649	0.589-0.709
Freon 142B	4.20	8.08	0.520 ok	0.520	0.460-0.580
Freon 152A	3.99	8.08	0.494 ok	0.493	0.433-0.553
Heptane	11.35	10.19	1.114 ok	1.114	1.054-1.174
Hexachlorobutadiene	23.49	15.66	1.500 ok	1.500	1.440-1.560
Hexachloroethane	21.55	15.66	1.376 ok	1.376	1.316-1.436
Hexane	8.10	8.08	1.002 ok	1.001	0.941-1.061
2-Hexanone	13.68	10.19	1.342 ok	1.343	1.283-1.403
Iodomethane	5.89	8.08	0.729 ok	0.728	0.668-0.788
Isopropylbenzene	18.11	15.66	1.156 ok	1.157	1.097-1.217
Isopropyl Alcohol	5.51	8.08	0.682 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.50	15.66	1.309 ok	1.309	1.249-1.369
Methylene chloride	6.06	8.08	0.750 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.50	8.08	0.928 ok	0.928	0.868-0.988
Methyl Isobutyl Ketone	12.12	10.19	1.189 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.15	8.08	0.885 ok	0.886	0.826-0.946
Methylmethacrylate	11.28	10.19	1.107 ok	1.108	1.048-1.168
Naphthalene	23.04	15.66	1.471 ok	1.471	1.411-1.531
Nonane	17.59	15.66	1.123 ok	1.123	1.063-1.183
Octane	14.62	10.19	1.435 ok	1.435	1.375-1.495
Pentane	5.69	8.08	0.704 ok	0.704	0.644-0.764
n-Propylbenzene	18.92	15.66	1.208 ok	1.208	1.148-1.268
Propylene	4.05	8.08	0.501 ok	0.500	0.440-0.560
Styrene	17.06	15.66	1.089 ok	1.090	1.030-1.150

6.7.1

6

Initial Calibration Retention Time/Internal Standard Area Summary

Page 8 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.25	8.08	1.145	ok 1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.70	10.19	1.541	ok 1.541	1.481-1.601
1,1,2,2-Tetrachloroethane	17.21	15.66	1.099	ok 1.099	1.039-1.159
1,1,2-Trichloroethane	12.94	10.19	1.270	ok 1.270	1.210-1.330
1,2,4-Trichlorobenzene	22.91	15.66	1.463	ok 1.463	1.403-1.523
1,2,3-Trichloropropane	17.40	15.66	1.111	ok 1.112	1.052-1.172
1,2,4-Trimethylbenzene	19.88	15.66	1.269	ok 1.270	1.210-1.330
1,3,5-Trimethylbenzene	19.28	15.66	1.231	ok 1.231	1.171-1.291
2,2,4-Trimethylpentane	11.01	10.19	1.080	ok 1.080	1.020-1.140
Tertiary Butyl Alcohol	6.01	8.08	0.744	ok 0.745	0.685-0.805
Tetrachloroethylene	14.78	10.19	1.450	ok 1.451	1.391-1.511
Tetrahydrofuran	8.67	8.08	1.073	ok 1.074	1.014-1.134
Toluene	13.28	10.19	1.303	ok 1.304	1.244-1.364
Trichloroethylene	11.00	10.19	1.079	ok 1.079	1.019-1.139
Trichlorofluoromethane	5.42	8.08	0.671	ok 0.670	0.610-0.730
Vinyl chloride	4.39	8.08	0.543	ok 0.542	0.482-0.602
Vinyl Acetate	7.24	8.08	0.896	ok 0.896	0.836-0.956
m,p-Xylene	16.51	15.66	1.054	ok 1.055	0.995-1.115
o-Xylene	17.20	15.66	1.098	ok 1.099	1.039-1.159
TVHC As Equiv Pentane	5.69	15.66	0.363	ok 0.363	0.303-0.423

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok 8.08	7.75-8.41	153924	ok 152502	91501-213503
1,4-Difluorobenzene	10.19	ok 10.19	9.86-10.52	550627	ok 542102	325261-758943
Chlorobenzene-D5	15.66	ok 15.66	15.33-15.99	227389	ok 219150	131490-306810

Initial Calibration Retention Time/Internal Standard Area Summary

Page 9 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.30	8.08	0.656 ok	0.657	0.597-0.717
Acrolein	5.19	8.08	0.642 ok	0.643	0.583-0.703
Acrylonitrile	5.68	8.08	0.703 ok	0.704	0.644-0.764
Acetonitrile	5.10	8.08	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.48	8.08	0.554 ok	0.555	0.495-0.615
Benzene	9.77	8.08	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.21	15.66	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.96	10.19	1.076 ok	1.075	1.015-1.135
Bromoform	16.61	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.69	8.08	0.580 ok	0.580	0.520-0.640
Bromoethene	5.09	8.08	0.630 ok	0.630	0.570-0.690
n-Butane	4.52	8.08	0.559 ok	0.559	0.499-0.619
Benzyl Chloride	20.07	15.66	1.282 ok	1.282	1.222-1.342
n-Butylbenzene	21.08	15.66	1.346 ok	1.347	1.287-1.407
sec-Butylbenzene	20.26	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.66	1.269 ok	1.269	1.209-1.329
Carbon disulfide	6.31	8.08	0.781 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.02	8.08	0.498 ok	0.498	0.438-0.558
Chloroethane	4.82	8.08	0.597 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.05	8.08	0.501 ok	0.501	0.441-0.561
Chloroform	8.22	8.08	1.017 ok	1.017	0.957-1.077
Chloromethane	4.22	8.08	0.522 ok	0.522	0.462-0.582
3-Chloropropene	6.15	8.08	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.84	15.66	1.203 ok	1.203	1.143-1.263
Carbon tetrachloride	9.93	8.08	1.229 ok	1.229	1.169-1.289
Cyclohexane	10.05	8.08	1.244 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.08	8.08	0.876 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.94	8.08	0.735 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.15	10.19	1.389 ok	1.389	1.329-1.449
1,2-Dichloroethane	8.99	8.08	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.71	10.19	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.33	10.19	1.308 ok	1.309	1.249-1.369
1,4-Dioxane	11.04	10.19	1.083 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.09	8.08	0.506 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.88	8.08	0.604 ok	0.605	0.545-0.665
Dibromochloromethane	13.84	10.19	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.69	10.19	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.88	8.08	0.851 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.91	8.08	0.979 ok	0.979	0.919-1.039

Initial Calibration Retention Time/Internal Standard Area Summary

Page 10 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.06	10.19	1.184 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.07	15.66	1.282 ok	1.282	1.222-1.342
o-Dichlorobenzene	20.65	15.66	1.319 ok	1.319	1.259-1.379
p-Dichlorobenzene	20.17	15.66	1.288 ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.73	10.19	1.249 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.11	8.08	1.004 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.33	8.08	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.03	8.08	1.118 ok	1.117	1.057-1.177
Ethanol	4.93	8.08	0.610 ok	0.610	0.550-0.670
Ethylbenzene	16.26	15.66	1.038 ok	1.039	0.979-1.099
Ethyl Acetate	8.16	8.08	1.010 ok	1.011	0.951-1.071
Ethyl Acrylate	10.76	10.19	1.056 ok	1.057	0.997-1.117
4-Ethyltoluene	19.15	15.66	1.223 ok	1.223	1.163-1.283
Freon 113	6.27	8.08	0.776 ok	0.775	0.715-0.835
Freon 114	4.29	8.08	0.531 ok	0.531	0.471-0.591
Freon 123	5.20	8.08	0.644 ok	0.644	0.584-0.704
Freon 123A	5.24	8.08	0.649 ok	0.649	0.589-0.709
Freon 142B	4.20	8.08	0.520 ok	0.520	0.460-0.580
Freon 152A	3.98	8.08	0.493 ok	0.493	0.433-0.553
Heptane	11.35	10.19	1.114 ok	1.114	1.054-1.174
Hexachlorobutadiene	23.49	15.66	1.500 ok	1.500	1.440-1.560
Hexachloroethane	21.55	15.66	1.376 ok	1.376	1.316-1.436
Hexane	8.09	8.08	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.67	10.19	1.342 ok	1.343	1.283-1.403
Iodomethane	5.88	8.08	0.728 ok	0.728	0.668-0.788
Isopropylbenzene	18.11	15.66	1.156 ok	1.157	1.097-1.217
Isopropyl Alcohol	5.51	8.08	0.682 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.50	15.66	1.309 ok	1.309	1.249-1.369
Methylene chloride	6.05	8.08	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.49	8.08	0.927 ok	0.928	0.868-0.988
Methyl Isobutyl Ketone	12.12	10.19	1.189 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.15	8.08	0.885 ok	0.886	0.826-0.946
Methylmethacrylate	11.28	10.19	1.107 ok	1.108	1.048-1.168
Naphthalene	23.03	15.66	1.471 ok	1.471	1.411-1.531
Nonane	17.59	15.66	1.123 ok	1.123	1.063-1.183
Octane	14.62	10.19	1.435 ok	1.435	1.375-1.495
Pentane	5.69	8.08	0.704 ok	0.704	0.644-0.764
n-Propylbenzene	18.92	15.66	1.208 ok	1.208	1.148-1.268
Propylene	4.04	8.08	0.500 ok	0.500	0.440-0.560
Styrene	17.05	15.66	1.089 ok	1.090	1.030-1.150

6.7.1

6

Initial Calibration Retention Time/Internal Standard Area Summary

Page 11 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.25	8.08	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.70	10.19	1.541 ok	1.541	1.481-1.601
1,1,2,2-Tetrachloroethane	17.21	15.66	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	12.94	10.19	1.270 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	22.91	15.66	1.463 ok	1.463	1.403-1.523
1,2,3-Trichloropropane	17.40	15.66	1.111 ok	1.112	1.052-1.172
1,2,4-Trimethylbenzene	19.88	15.66	1.269 ok	1.270	1.210-1.330
1,3,5-Trimethylbenzene	19.28	15.66	1.231 ok	1.231	1.171-1.291
2,2,4-Trimethylpentane	11.01	10.19	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.01	8.08	0.744 ok	0.745	0.685-0.805
Tetrachloroethylene	14.78	10.19	1.450 ok	1.451	1.391-1.511
Tetrahydrofuran	8.66	8.08	1.072 ok	1.074	1.014-1.134
Toluene	13.28	10.19	1.303 ok	1.304	1.244-1.364
Trichloroethylene	11.00	10.19	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.41	8.08	0.670 ok	0.670	0.610-0.730
Vinyl chloride	4.38	8.08	0.542 ok	0.542	0.482-0.602
Vinyl Acetate	7.24	8.08	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.51	15.66	1.054 ok	1.055	0.995-1.115
o-Xylene	17.20	15.66	1.098 ok	1.099	1.039-1.159
TVHC As Equiv Pentane	5.69	15.66	0.363 ok	0.363	0.303-0.423

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08 ok	8.08	7.75-8.41	145464 ok	152502	91501-213503
1,4-Difluorobenzene	10.19 ok	10.19	9.86-10.52	522148 ok	542102	325261-758943
Chlorobenzene-D5	15.66 ok	15.66	15.33-15.99	237353 ok	219150	131490-306810

Initial Calibration Retention Time/Internal Standard Area Summary

Page 12 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.31	8.09	0.656 ok	0.657	0.597-0.717
Acrolein	5.20	8.09	0.643 ok	0.643	0.583-0.703
Acrylonitrile	5.69	8.09	0.703 ok	0.704	0.644-0.764
Acetonitrile	5.11	8.09	0.632 ok	0.631	0.571-0.691
1,3-Butadiene	4.49	8.09	0.555 ok	0.555	0.495-0.615
Benzene	9.78	8.09	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.22	15.66	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.96	10.20	1.075 ok	1.075	1.015-1.135
Bromoform	16.61	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.69	8.09	0.580 ok	0.580	0.520-0.640
Bromoethene	5.09	8.09	0.629 ok	0.630	0.570-0.690
n-Butane	4.52	8.09	0.559 ok	0.559	0.499-0.619
Benzyl Chloride	20.07	15.66	1.282 ok	1.282	1.222-1.342
n-Butylbenzene	21.09	15.66	1.347 ok	1.347	1.287-1.407
sec-Butylbenzene	20.26	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.66	1.269 ok	1.269	1.209-1.329
Carbon disulfide	6.32	8.09	0.781 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.03	8.09	0.498 ok	0.498	0.438-0.558
Chloroethane	4.82	8.09	0.596 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.05	8.09	0.501 ok	0.501	0.441-0.561
Chloroform	8.22	8.09	1.016 ok	1.017	0.957-1.077
Chloromethane	4.22	8.09	0.522 ok	0.522	0.462-0.582
3-Chloropropene	6.16	8.09	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.84	15.66	1.203 ok	1.203	1.143-1.263
Carbon tetrachloride	9.94	8.09	1.229 ok	1.229	1.169-1.289
Cyclohexane	10.06	8.09	1.244 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.09	8.09	0.876 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.95	8.09	0.735 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.15	10.20	1.387 ok	1.389	1.329-1.449
1,2-Dichloroethane	8.99	8.09	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.71	10.20	1.050 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.33	10.20	1.307 ok	1.309	1.249-1.369
1,4-Dioxane	11.04	10.20	1.082 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.10	8.09	0.507 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.89	8.09	0.604 ok	0.605	0.545-0.665
Dibromochloromethane	13.84	10.20	1.357 ok	1.358	1.298-1.418
Dibromomethane	10.70	10.20	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.90	8.09	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.92	8.09	0.979 ok	0.979	0.919-1.039

Initial Calibration Retention Time/Internal Standard Area Summary

Page 13 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.07	10.20	1.183 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.07	15.66	1.282 ok	1.282	1.222-1.342
o-Dichlorobenzene	20.65	15.66	1.319 ok	1.319	1.259-1.379
p-Dichlorobenzene	20.18	15.66	1.289 ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.74	10.20	1.249 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.12	8.09	1.004 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.34	8.09	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.03	8.09	1.116 ok	1.117	1.057-1.177
Ethanol	4.94	8.09	0.611 ok	0.610	0.550-0.670
Ethylbenzene	16.27	15.66	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.17	8.09	1.010 ok	1.011	0.951-1.071
Ethyl Acrylate	10.77	10.20	1.056 ok	1.057	0.997-1.117
4-Ethyltoluene	19.16	15.66	1.223 ok	1.223	1.163-1.283
Freon 113	6.27	8.09	0.775 ok	0.775	0.715-0.835
Freon 114	4.30	8.09	0.532 ok	0.531	0.471-0.591
Freon 123	5.21	8.09	0.644 ok	0.644	0.584-0.704
Freon 123A	5.26	8.09	0.650 ok	0.649	0.589-0.709
Freon 142B	4.21	8.09	0.520 ok	0.520	0.460-0.580
Freon 152A	3.99	8.09	0.493 ok	0.493	0.433-0.553
Heptane	11.36	10.20	1.114 ok	1.114	1.054-1.174
Hexachlorobutadiene	23.49	15.66	1.500 ok	1.500	1.440-1.560
Hexachloroethane	21.55	15.66	1.376 ok	1.376	1.316-1.436
Hexane	8.10	8.09	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.68	10.20	1.341 ok	1.343	1.283-1.403
Iodomethane	5.89	8.09	0.728 ok	0.728	0.668-0.788
Isopropylbenzene	18.12	15.66	1.157 ok	1.157	1.097-1.217
Isopropyl Alcohol	5.52	8.09	0.682 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.51	15.66	1.310 ok	1.309	1.249-1.369
Methylene chloride	6.06	8.09	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.50	8.09	0.927 ok	0.928	0.868-0.988
Methyl Isobutyl Ketone	12.13	10.20	1.189 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.15	8.09	0.884 ok	0.886	0.826-0.946
Methylmethacrylate	11.29	10.20	1.107 ok	1.108	1.048-1.168
Naphthalene	23.04	15.66	1.471 ok	1.471	1.411-1.531
Nonane	17.60	15.66	1.124 ok	1.123	1.063-1.183
Octane	14.62	10.20	1.433 ok	1.435	1.375-1.495
Pentane	5.70	8.09	0.705 ok	0.704	0.644-0.764
n-Propylbenzene	18.92	15.66	1.208 ok	1.208	1.148-1.268
Propylene	4.05	8.09	0.501 ok	0.500	0.440-0.560
Styrene	17.06	15.66	1.089 ok	1.090	1.030-1.150

Initial Calibration Retention Time/Internal Standard Area Summary

Page 14 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.26	8.09	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.71	10.20	1.540 ok	1.541	1.481-1.601
1,1,2,2-Tetrachloroethane	17.22	15.66	1.100 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	12.94	10.20	1.269 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	22.91	15.66	1.463 ok	1.463	1.403-1.523
1,2,3-Trichloropropane	17.41	15.66	1.112 ok	1.112	1.052-1.172
1,2,4-Trimethylbenzene	19.88	15.66	1.269 ok	1.270	1.210-1.330
1,3,5-Trimethylbenzene	19.28	15.66	1.231 ok	1.231	1.171-1.291
2,2,4-Trimethylpentane	11.01	10.20	1.079 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.02	8.09	0.744 ok	0.745	0.685-0.805
Tetrachloroethylene	14.78	10.20	1.449 ok	1.451	1.391-1.511
Tetrahydrofuran	8.66	8.09	1.070 ok	1.074	1.014-1.134
Toluene	13.29	10.20	1.303 ok	1.304	1.244-1.364
Trichloroethylene	11.00	10.20	1.078 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.42	8.09	0.670 ok	0.670	0.610-0.730
Vinyl chloride	4.39	8.09	0.543 ok	0.542	0.482-0.602
Vinyl Acetate	7.25	8.09	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.54	15.66	1.056 ok	1.055	0.995-1.115
o-Xylene	17.21	15.66	1.099 ok	1.099	1.039-1.159
TVHC As Equiv Pentane	5.69	15.66	0.363 ok	0.363	0.303-0.423

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.09 ok	8.08	7.75-8.41	143063	ok 152502	91501-213503
1,4-Difluorobenzene	10.20 ok	10.19	9.86-10.52	527763	ok 542102	325261-758943
Chlorobenzene-D5	15.66 ok	15.66	15.33-15.99	265874	ok 219150	131490-306810

Initial Calibration Retention Time/Internal Standard Area Summary

Page 15 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.31	8.10	0.656 ok	0.657	0.597-0.717
Acrolein	5.20	8.10	0.642 ok	0.643	0.583-0.703
Acrylonitrile	5.69	8.10	0.702 ok	0.704	0.644-0.764
Acetonitrile	5.11	8.10	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.49	8.10	0.554 ok	0.555	0.495-0.615
Benzene	9.78	8.10	1.207 ok	1.209	1.149-1.269
Bromobenzene	18.23	15.67	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.97	10.20	1.075 ok	1.075	1.015-1.135
Bromoform	16.62	15.67	1.061 ok	1.061	1.001-1.121
Bromomethane	4.69	8.10	0.579 ok	0.580	0.520-0.640
Bromoethene	5.09	8.10	0.628 ok	0.630	0.570-0.690
n-Butane	4.52	8.10	0.558 ok	0.559	0.499-0.619
Benzyl Chloride	20.07	15.67	1.281 ok	1.282	1.222-1.342
n-Butylbenzene	21.10	15.67	1.347 ok	1.347	1.287-1.407
sec-Butylbenzene	20.27	15.67	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.67	1.268 ok	1.269	1.209-1.329
Carbon disulfide	6.32	8.10	0.780 ok	0.781	0.721-0.841
Chlorobenzene	15.73	15.67	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.02	8.10	0.496 ok	0.498	0.438-0.558
Chloroethane	4.82	8.10	0.595 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.05	8.10	0.500 ok	0.501	0.441-0.561
Chloroform	8.23	8.10	1.016 ok	1.017	0.957-1.077
Chloromethane	4.22	8.10	0.521 ok	0.522	0.462-0.582
3-Chloropropene	6.16	8.10	0.760 ok	0.761	0.701-0.821
2-Chlorotoluene	18.85	15.67	1.203 ok	1.203	1.143-1.263
Carbon tetrachloride	9.94	8.10	1.227 ok	1.229	1.169-1.289
Cyclohexane	10.06	8.10	1.242 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.09	8.10	0.875 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.95	8.10	0.735 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.16	10.20	1.388 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.00	8.10	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.72	10.20	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.34	10.20	1.308 ok	1.309	1.249-1.369
1,4-Dioxane	11.04	10.20	1.082 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.10	8.10	0.506 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.89	8.10	0.604 ok	0.605	0.545-0.665
Dibromochloromethane	13.85	10.20	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.70	10.20	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.90	8.10	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.92	8.10	0.978 ok	0.979	0.919-1.039

Initial Calibration Retention Time/Internal Standard Area Summary

Page 16 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.07	10.20	1.183	ok	1.184	1.124-1.244
m-Dichlorobenzene	20.08	15.67	1.281	ok	1.282	1.222-1.342
o-Dichlorobenzene	20.66	15.67	1.318	ok	1.319	1.259-1.379
p-Dichlorobenzene	20.18	15.67	1.288	ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.74	10.20	1.249	ok	1.250	1.190-1.310
Di-Isopropyl ether	8.13	8.10	1.004	ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.35	8.10	1.278	ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.03	8.10	1.115	ok	1.117	1.057-1.177
Ethanol	4.94	8.10	0.610	ok	0.610	0.550-0.670
Ethylbenzene	16.27	15.67	1.038	ok	1.039	0.979-1.099
Ethyl Acetate	8.18	8.10	1.010	ok	1.011	0.951-1.071
Ethyl Acrylate	10.78	10.20	1.057	ok	1.057	0.997-1.117
4-Ethyltoluene	19.16	15.67	1.223	ok	1.223	1.163-1.283
Freon 113	6.27	8.10	0.774	ok	0.775	0.715-0.835
Freon 114	4.30	8.10	0.531	ok	0.531	0.471-0.591
Freon 123	5.21	8.10	0.643	ok	0.644	0.584-0.704
Freon 123A	5.25	8.10	0.648	ok	0.649	0.589-0.709
Freon 142B	4.20	8.10	0.519	ok	0.520	0.460-0.580
Freon 152A	3.99	8.10	0.493	ok	0.493	0.433-0.553
Heptane	11.36	10.20	1.114	ok	1.114	1.054-1.174
Hexachlorobutadiene	23.49	15.67	1.499	ok	1.500	1.440-1.560
Hexachloroethane	21.56	15.67	1.376	ok	1.376	1.316-1.436
Hexane	8.10	8.10	1.000	ok	1.001	0.941-1.061
2-Hexanone	13.69	10.20	1.342	ok	1.343	1.283-1.403
Iodomethane	5.89	8.10	0.727	ok	0.728	0.668-0.788
Isopropylbenzene	18.12	15.67	1.156	ok	1.157	1.097-1.217
Isopropyl Alcohol	5.52	8.10	0.681	ok	0.682	0.622-0.742
p-Isopropyltoluene	20.51	15.67	1.309	ok	1.309	1.249-1.369
Methylene chloride	6.06	8.10	0.748	ok	0.749	0.689-0.809
Methyl ethyl ketone	7.50	8.10	0.926	ok	0.928	0.868-0.988
Methyl Isobutyl Ketone	12.13	10.20	1.189	ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.15	8.10	0.883	ok	0.886	0.826-0.946
Methylmethacrylate	11.30	10.20	1.108	ok	1.108	1.048-1.168
Naphthalene	23.04	15.67	1.470	ok	1.471	1.411-1.531
Nonane	17.60	15.67	1.123	ok	1.123	1.063-1.183
Octane	14.63	10.20	1.434	ok	1.435	1.375-1.495
Pentane	5.69	8.10	0.702	ok	0.704	0.644-0.764
n-Propylbenzene	18.93	15.67	1.208	ok	1.208	1.148-1.268
Propylene	4.05	8.10	0.500	ok	0.500	0.440-0.560
Styrene	17.06	15.67	1.089	ok	1.090	1.030-1.150

Initial Calibration Retention Time/Internal Standard Area Summary

Page 17 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.26	8.10	1.143 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.71	10.20	1.540 ok	1.541	1.481-1.601
1,1,2,2-Tetrachloroethane	17.22	15.67	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	12.95	10.20	1.270 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	22.91	15.67	1.462 ok	1.463	1.403-1.523
1,2,3-Trichloropropane	17.41	15.67	1.111 ok	1.112	1.052-1.172
1,2,4-Trimethylbenzene	19.89	15.67	1.269 ok	1.270	1.210-1.330
1,3,5-Trimethylbenzene	19.29	15.67	1.231 ok	1.231	1.171-1.291
2,2,4-Trimethylpentane	11.02	10.20	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.02	8.10	0.743 ok	0.745	0.685-0.805
Tetrachloroethylene	14.79	10.20	1.450 ok	1.451	1.391-1.511
Tetrahydrofuran	8.66	8.10	1.069 ok	1.074	1.014-1.134
Toluene	13.29	10.20	1.303 ok	1.304	1.244-1.364
Trichloroethylene	11.01	10.20	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.42	8.10	0.669 ok	0.670	0.610-0.730
Vinyl chloride	4.39	8.10	0.542 ok	0.542	0.482-0.602
Vinyl Acetate	7.25	8.10	0.895 ok	0.896	0.836-0.956
m,p-Xylene	16.55	15.67	1.056 ok	1.055	0.995-1.115
o-Xylene	17.21	15.67	1.098 ok	1.099	1.039-1.159
TVHC As Equiv Pentane	5.69	15.67	0.363 ok	0.363	0.303-0.423

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.10 ok	8.08	7.75-8.41	142724 ok	152502	91501-213503
1,4-Difluorobenzene	10.20 ok	10.19	9.86-10.52	521741 ok	542102	325261-758943
Chlorobenzene-D5	15.67 ok	15.66	15.33-15.99	298244 ok	219150	131490-306810

Initial Calibration Retention Time/Internal Standard Area Summary

Page 18 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.31	8.08	0.657 ok	0.657	0.597-0.717
Acrolein	5.20	8.08	0.644 ok	0.643	0.583-0.703
Acrylonitrile	5.69	8.08	0.704 ok	0.704	0.644-0.764
Acetonitrile	5.10	8.08	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.48	8.08	0.554 ok	0.555	0.495-0.615
Benzene	9.77	8.08	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.22	15.66	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.95	10.19	1.075 ok	1.075	1.015-1.135
Bromoform	16.61	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.69	8.08	0.580 ok	0.580	0.520-0.640
Bromoethene	5.09	8.08	0.630 ok	0.630	0.570-0.690
n-Butane	4.52	8.08	0.559 ok	0.559	0.499-0.619
Benzyl Chloride	20.07	15.66	1.282 ok	1.282	1.222-1.342
n-Butylbenzene	21.09	15.66	1.347 ok	1.347	1.287-1.407
sec-Butylbenzene	20.26	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.66	1.269 ok	1.269	1.209-1.329
Carbon disulfide	6.31	8.08	0.781 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.02	8.08	0.498 ok	0.498	0.438-0.558
Chloroethane	4.82	8.08	0.597 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.05	8.08	0.501 ok	0.501	0.441-0.561
Chloroform	8.21	8.08	1.016 ok	1.017	0.957-1.077
Chloromethane	4.22	8.08	0.522 ok	0.522	0.462-0.582
3-Chloropropene	6.15	8.08	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.84	15.66	1.203 ok	1.203	1.143-1.263
Carbon tetrachloride	9.93	8.08	1.229 ok	1.229	1.169-1.289
Cyclohexane	10.05	8.08	1.244 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.09	8.08	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.94	8.08	0.735 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.15	10.19	1.389 ok	1.389	1.329-1.449
1,2-Dichloroethane	8.99	8.08	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.71	10.19	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.33	10.19	1.308 ok	1.309	1.249-1.369
1,4-Dioxane	11.07	10.19	1.086 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.10	8.08	0.507 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.88	8.08	0.604 ok	0.605	0.545-0.665
Dibromochloromethane	13.83	10.19	1.357 ok	1.358	1.298-1.418
Dibromomethane	10.69	10.19	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.89	8.08	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.91	8.08	0.979 ok	0.979	0.919-1.039

Initial Calibration Retention Time/Internal Standard Area Summary

Page 19 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15 Reporting this level
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.07	10.19	1.184 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.07	15.66	1.282 ok	1.282	1.222-1.342
o-Dichlorobenzene	20.65	15.66	1.319 ok	1.319	1.259-1.379
p-Dichlorobenzene	20.18	15.66	1.289 ok	1.289	1.229-1.349
trans-1,3-Dichloropropene	12.74	10.19	1.250 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.13	8.08	1.006 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.33	8.08	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.03	8.08	1.118 ok	1.117	1.057-1.177
Ethanol	4.93	8.08	0.610 ok	0.610	0.550-0.670
Ethylbenzene	16.27	15.66	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.18	8.08	1.012 ok	1.011	0.951-1.071
Ethyl Acrylate	10.78	10.19	1.058 ok	1.057	0.997-1.117
4-Ethyltoluene	19.16	15.66	1.223 ok	1.223	1.163-1.283
Freon 113	6.27	8.08	0.776 ok	0.775	0.715-0.835
Freon 114	4.29	8.08	0.531 ok	0.531	0.471-0.591
Freon 123	5.20	8.08	0.644 ok	0.644	0.584-0.704
Freon 123A	5.25	8.08	0.650 ok	0.649	0.589-0.709
Freon 142B	4.20	8.08	0.520 ok	0.520	0.460-0.580
Freon 152A	3.99	8.08	0.494 ok	0.493	0.433-0.553
Heptane	11.34	10.19	1.113 ok	1.114	1.054-1.174
Hexachlorobutadiene	23.49	15.66	1.500 ok	1.500	1.440-1.560
Hexachloroethane	21.55	15.66	1.376 ok	1.376	1.316-1.436
Hexane	8.09	8.08	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.70	10.19	1.344 ok	1.343	1.283-1.403
Iodomethane	5.88	8.08	0.728 ok	0.728	0.668-0.788
Isopropylbenzene	18.11	15.66	1.156 ok	1.157	1.097-1.217
Isopropyl Alcohol	5.51	8.08	0.682 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.50	15.66	1.309 ok	1.309	1.249-1.369
Methylene chloride	6.05	8.08	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.51	8.08	0.929 ok	0.928	0.868-0.988
Methyl Isobutyl Ketone	12.14	10.19	1.191 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.17	8.08	0.887 ok	0.886	0.826-0.946
Methylmethacrylate	11.30	10.19	1.109 ok	1.108	1.048-1.168
Naphthalene	23.04	15.66	1.471 ok	1.471	1.411-1.531
Nonane	17.59	15.66	1.123 ok	1.123	1.063-1.183
Octane	14.62	10.19	1.435 ok	1.435	1.375-1.495
Pentane	5.69	8.08	0.704 ok	0.704	0.644-0.764
n-Propylbenzene	18.92	15.66	1.208 ok	1.208	1.148-1.268
Propylene	4.04	8.08	0.500 ok	0.500	0.440-0.560
Styrene	17.06	15.66	1.089 ok	1.090	1.030-1.150

Initial Calibration Retention Time/Internal Standard Area Summary

Page 20 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.25	8.08	1.145	ok	1.145
1,1,1,2-Tetrachloroethane	15.70	10.19	1.541	ok	1.541
1,1,2,2-Tetrachloroethane	17.22	15.66	1.100	ok	1.099
1,1,2-Trichloroethane	12.94	10.19	1.270	ok	1.270
1,2,4-Trichlorobenzene	22.91	15.66	1.463	ok	1.463
1,2,3-Trichloropropane	17.41	15.66	1.112	ok	1.112
1,2,4-Trimethylbenzene	19.88	15.66	1.269	ok	1.270
1,3,5-Trimethylbenzene	19.28	15.66	1.231	ok	1.231
2,2,4-Trimethylpentane	11.01	10.19	1.080	ok	1.080
Tertiary Butyl Alcohol	6.02	8.08	0.745	ok	0.745
Tetrachloroethylene	14.78	10.19	1.450	ok	1.451
Tetrahydrofuran	8.70	8.08	1.077	ok	1.074
Toluene	13.28	10.19	1.303	ok	1.304
Trichloroethylene	11.00	10.19	1.079	ok	1.079
Trichlorofluoromethane	5.42	8.08	0.671	ok	0.670
Vinyl chloride	4.38	8.08	0.542	ok	0.542
Vinyl Acetate	7.24	8.08	0.896	ok	0.896
m,p-Xylene	16.51	15.66	1.054	ok	1.055
o-Xylene	17.20	15.66	1.098	ok	1.099
TVHC As Equiv Pentane	5.69	15.66	0.363	ok	0.363

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	162846	ok
1,4-Difluorobenzene	10.19	ok	10.19	9.86-10.52	566819	ok
Chlorobenzene-D5	15.66	ok	15.66	15.33-15.99	194673	ok

Initial Calibration Retention Time/Internal Standard Area Summary

Page 21 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.32	8.08	0.658 ok	0.657	0.597-0.717
Acrolein	5.20	8.08	0.644 ok	0.643	0.583-0.703
Acrylonitrile	5.69	8.08	0.704 ok	0.704	0.644-0.764
Acetonitrile	5.11	8.08	0.632 ok	0.631	0.571-0.691
1,3-Butadiene	4.49	8.08	0.556 ok	0.555	0.495-0.615
Benzene	9.77	8.08	1.209 ok	1.209	1.149-1.269
Bromobenzene	18.22	15.66	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	10.96	10.19	1.076 ok	1.075	1.015-1.135
Bromoform	16.62	15.66	1.061 ok	1.061	1.001-1.121
Bromomethane	4.69	8.08	0.580 ok	0.580	0.520-0.640
Bromoethene	5.09	8.08	0.630 ok	0.630	0.570-0.690
n-Butane	4.52	8.08	0.559 ok	0.559	0.499-0.619
Benzyl Chloride	20.08	15.66	1.282 ok	1.282	1.222-1.342
n-Butylbenzene	21.09	15.66	1.347 ok	1.347	1.287-1.407
sec-Butylbenzene	20.26	15.66	1.294 ok	1.294	1.234-1.354
tert-Butylbenzene	19.87	15.66	1.269 ok	1.269	1.209-1.329
Carbon disulfide	6.32	8.08	0.782 ok	0.781	0.721-0.841
Chlorobenzene	15.72	15.66	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.03	8.08	0.499 ok	0.498	0.438-0.558
Chloroethane	4.82	8.08	0.597 ok	0.596	0.536-0.656
Chlorotrifluoroethene	4.05	8.08	0.501 ok	0.501	0.441-0.561
Chloroform	8.22	8.08	1.017 ok	1.017	0.957-1.077
Chloromethane	4.22	8.08	0.522 ok	0.522	0.462-0.582
3-Chloropropene	6.16	8.08	0.762 ok	0.761	0.701-0.821
2-Chlorotoluene	18.85	15.66	1.204 ok	1.203	1.143-1.263
Carbon tetrachloride	9.94	8.08	1.230 ok	1.229	1.169-1.289
Cyclohexane	10.06	8.08	1.245 ok	1.244	1.184-1.304
1,1-Dichloroethane	7.09	8.08	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.95	8.08	0.736 ok	0.736	0.676-0.796
1,2-Dibromoethane	14.15	10.19	1.389 ok	1.389	1.329-1.449
1,2-Dichloroethane	8.99	8.08	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.71	10.19	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.34	10.19	1.309 ok	1.309	1.249-1.369
1,4-Dioxane	11.10	10.19	1.089 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.10	8.08	0.507 ok	0.507	0.447-0.567
Dichlorofluoromethane	4.90	8.08	0.606 ok	0.605	0.545-0.665
Dibromochloromethane	13.85	10.19	1.359 ok	1.358	1.298-1.418
Dibromomethane	10.70	10.19	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.89	8.08	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.92	8.08	0.980 ok	0.979	0.919-1.039

Initial Calibration Retention Time/Internal Standard Area Summary

Page 22 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.07	10.19	1.184	ok	1.124-1.244
m-Dichlorobenzene	20.09	15.66	1.283	ok	1.222-1.342
o-Dichlorobenzene	20.66	15.66	1.319	ok	1.259-1.379
p-Dichlorobenzene	20.19	15.66	1.289	ok	1.229-1.349
trans-1,3-Dichloropropene	12.75	10.19	1.251	ok	1.190-1.310
Di-Isopropyl ether	8.13	8.08	1.006	ok	0.945-1.065
2,3-Dimethylpentane	10.33	8.08	1.278	ok	1.218-1.338
2,4-Dimethylpentane	9.03	8.08	1.118	ok	1.057-1.177
Ethylbenzene	16.27	15.66	1.039	ok	0.979-1.099
Ethyl Acetate	8.19	8.08	1.014	ok	0.951-1.071
Ethyl Acrylate	10.79	10.19	1.059	ok	0.997-1.117
4-Ethyltoluene	19.16	15.66	1.223	ok	1.163-1.283
Freon 113	6.27	8.08	0.776	ok	0.715-0.835
Freon 114	4.29	8.08	0.531	ok	0.471-0.591
Freon 123	5.21	8.08	0.645	ok	0.584-0.704
Freon 123A	5.25	8.08	0.650	ok	0.589-0.709
Freon 142B	4.20	8.08	0.520	ok	0.460-0.580
Freon 152A	3.99	8.08	0.494	ok	0.433-0.553
Heptane	11.35	10.19	1.114	ok	1.054-1.174
Hexachlorobutadiene	23.49	15.66	1.500	ok	1.440-1.560
Hexachloroethane	21.55	15.66	1.376	ok	1.316-1.436
Hexane	8.09	8.08	1.001	ok	0.941-1.061
2-Hexanone	13.72	10.19	1.346	ok	1.283-1.403
Iodomethane	5.89	8.08	0.729	ok	0.668-0.788
Isopropylbenzene	18.11	15.66	1.156	ok	1.097-1.217
Isopropyl Alcohol	5.53	8.08	0.684	ok	0.622-0.742
p-Isopropyltoluene	20.50	15.66	1.309	ok	1.249-1.369
Methylene chloride	6.06	8.08	0.750	ok	0.689-0.809
Methyl ethyl ketone	7.53	8.08	0.932	ok	0.868-0.988
Methyl Isobutyl Ketone	12.16	10.19	1.193	ok	1.130-1.250
Methyl Tert Butyl Ether	7.18	8.08	0.889	ok	0.826-0.946
Methylmethacrylate	11.30	10.19	1.109	ok	1.048-1.168
Naphthalene	23.05	15.66	1.472	ok	1.411-1.531
Nonane	17.59	15.66	1.123	ok	1.063-1.183
Octane	14.62	10.19	1.435	ok	1.375-1.495
Pentane	5.69	8.08	0.704	ok	0.644-0.764
n-Propylbenzene	18.92	15.66	1.208	ok	1.148-1.268
Propylene	4.04	8.08	0.500	ok	0.440-0.560
Styrene	17.07	15.66	1.090	ok	1.030-1.150
1,1,1-Trichloroethane	9.26	8.08	1.146	ok	1.085-1.205

Initial Calibration Retention Time/Internal Standard Area Summary

Page 23 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1620-IC1620	5W39822.D	12/23/19 14:12	DFT	0.1	GCMS5W	TO-15
V5W1620-IC1620	5W39823.D	12/23/19 14:56	DFT	0.04	GCMS5W	TO-15
V5W1620-IC1620	5W39824.D	12/23/19 15:47	DFT	5	GCMS5W	TO-15
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	DFT	10	GCMS5W	TO-15
V5W1620-IC1620	5W39826.D	12/23/19 17:20	DFT	20	GCMS5W	TO-15
V5W1620-IC1620	5W39827.D	12/23/19 18:11	DFT	40	GCMS5W	TO-15
V5W1620-IC1620	5W39831.D	12/24/19 09:22	DFT	0.5	GCMS5W	TO-15
V5W1620-IC1620	5W39832.D	12/24/19 10:07	DFT	0.2	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1,2-Tetrachloroethane	15.70	10.19	1.541 ok	1.541	1.481-1.601
1,1,2,2-Tetrachloroethane	17.22	15.66	1.100 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	12.95	10.19	1.271 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	22.92	15.66	1.464 ok	1.463	1.403-1.523
1,2,3-Trichloropropane	17.41	15.66	1.112 ok	1.112	1.052-1.172
1,2,4-Trimethylbenzene	19.88	15.66	1.269 ok	1.270	1.210-1.330
1,3,5-Trimethylbenzene	19.28	15.66	1.231 ok	1.231	1.171-1.291
2,2,4-Trimethylpentane	11.01	10.19	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.04	8.08	0.748 ok	0.745	0.685-0.805
Tetrachloroethylene	14.78	10.19	1.450 ok	1.451	1.391-1.511
Tetrahydrofuran	8.73	8.08	1.080 ok	1.074	1.014-1.134
Toluene	13.29	10.19	1.304 ok	1.304	1.244-1.364
Trichloroethylene	11.00	10.19	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.42	8.08	0.671 ok	0.670	0.610-0.730
Vinyl chloride	4.38	8.08	0.542 ok	0.542	0.482-0.602
Vinyl Acetate	7.25	8.08	0.897 ok	0.896	0.836-0.956
m,p-Xylene	16.52	15.66	1.055 ok	1.055	0.995-1.115
o-Xylene	17.21	15.66	1.099 ok	1.099	1.039-1.159
TVHC As Equiv Pentane	5.69	15.66	0.363 ok	0.363	0.303-0.423

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08 ok	8.08	7.75-8.41	157769	ok 152502	91501-213503
1,4-Difluorobenzene	10.19 ok	10.19	9.86-10.52	557412	ok 542102	325261-758943
Chlorobenzene-D5	15.66 ok	15.66	15.33-15.99	179630	ok 219150	131490-306810

Initial Calibration Retention Time/Internal Standard Area Summary

Page 24 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15	Reporting this level
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15	
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15	
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15	
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15	
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15	
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15	
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.15	0.632 ok	0.631	0.571-0.691
Acrolein	5.03	8.15	0.617 ok	0.615	0.555-0.675
Acrylonitrile	5.57	8.15	0.683 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.15	0.605 ok	0.603	0.543-0.663
1,3-Butadiene	4.27	8.15	0.524 ok	0.523	0.463-0.583
Benzene	9.91	8.15	1.216 ok	1.217	1.157-1.277
Bromobenzene	18.46	15.89	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.13	10.35	1.075 ok	1.076	1.016-1.136
Bromoform	16.85	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.49	8.15	0.551 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
n-Butane	4.30	8.15	0.528 ok	0.527	0.467-0.587
Benzyl Chloride	20.26	15.89	1.275 ok	1.275	1.215-1.335
n-Butylbenzene	21.25	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.44	15.89	1.286 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorobenzene	15.95	15.89	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.15	0.461 ok	0.461	0.401-0.521
Chloroethane	4.62	8.15	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.80	8.15	0.466 ok	0.465	0.405-0.525
Chloroform	8.29	8.15	1.017 ok	1.017	0.957-1.077
Chloromethane	3.98	8.15	0.488 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.15	0.746 ok	0.746	0.686-0.806
2-Chlorotoluene	19.07	15.89	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.23	8.15	1.255 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.15	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.86	8.15	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.37	10.35	1.388 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.15	1.118 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.55	10.35	1.309 ok	1.309	1.249-1.369
1,4-Dioxane	11.24	10.35	1.086 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.86	10.35	1.049 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.15	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Page 25 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15	Reporting this level
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15	
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15	
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15	
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15	
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15	
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15	
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.27	10.35	1.186 ok	1.185	1.125-1.245
m-Dichlorobenzene	20.27	15.89	1.276 ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311 ok	1.311	1.251-1.371
p-Dichlorobenzene	20.37	15.89	1.282 ok	1.282	1.222-1.342
trans-1,3-Dichloropropene	12.94	10.35	1.250 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.20	8.15	1.006 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.51	8.15	1.290 ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.17	8.15	1.125 ok	1.124	1.064-1.184
Ethylbenzene	16.50	15.89	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.26	8.15	1.013 ok	1.010	0.950-1.070
Ethyl Acrylate	10.95	10.35	1.058 ok	1.057	0.997-1.117
4-Ethyltoluene	19.37	15.89	1.219 ok	1.219	1.159-1.279
Freon 113	6.22	8.15	0.763 ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497 ok	0.497	0.437-0.557
Freon 123	5.05	8.15	0.620 ok	0.619	0.559-0.679
Freon 123A	5.09	8.15	0.625 ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486 ok	0.486	0.426-0.546
Freon 152A	3.73	8.15	0.458 ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116 ok	1.116	1.056-1.176
Hexachlorobutadiene	23.59	15.89	1.485 ok	1.485	1.425-1.545
Hexachloroethane	21.71	15.89	1.366 ok	1.366	1.306-1.426
Hexane	8.18	8.15	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.91	10.35	1.344 ok	1.342	1.282-1.402
Iodomethane	5.79	8.15	0.710 ok	0.710	0.650-0.770
Isopropylbenzene	18.35	15.89	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.37	8.15	0.659 ok	0.656	0.596-0.716
p-Isopropyltoluene	20.68	15.89	1.301 ok	1.302	1.242-1.362
Methylene chloride	5.98	8.15	0.734 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.55	8.15	0.926 ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.35	10.35	1.193 ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.18	8.15	0.881 ok	0.879	0.819-0.939
Methylmethacrylate	11.47	10.35	1.108 ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457 ok	1.457	1.397-1.517
Nonane	17.82	15.89	1.121 ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435 ok	1.435	1.375-1.495
Pentane	5.60	8.15	0.687 ok	0.686	0.626-0.746
n-Propylbenzene	19.15	15.89	1.205 ok	1.205	1.145-1.265
Propylene	3.79	8.15	0.465 ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.39	8.15	1.152 ok	1.152	1.092-1.212

Initial Calibration Retention Time/Internal Standard Area Summary

Page 26 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15	Reporting this level
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15	
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15	
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15	
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15	
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15	
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15	
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.45	15.89	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.15	10.35	1.271 ok	1.271	1.211-1.331
1,2,4-Trichlorobenzene	23.03	15.89	1.449 ok	1.449	1.389-1.509
1,2,3-Trichloropropane	17.64	15.89	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.49	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.20	10.35	1.082 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.93	8.15	0.728 ok	0.726	0.666-0.786
Tetrachloroethylene	15.01	10.35	1.450 ok	1.450	1.390-1.510
Tetrahydrofuran	8.79	8.15	1.079 ok	1.075	1.015-1.135
Toluene	13.50	10.35	1.304 ok	1.305	1.245-1.365
Trichloroethylene	11.18	10.35	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
Vinyl chloride	4.16	8.15	0.510 ok	0.509	0.449-0.569
Vinyl Acetate	7.27	8.15	0.892 ok	0.890	0.830-0.950
m,p-Xylene	16.76	15.89	1.055 ok	1.055	0.995-1.115
o-Xylene	17.44	15.89	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.59	15.89	0.352 ok	0.352	0.292-0.412

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	157175 ok	164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	568695 ok	603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	233340 ok	260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 27 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.16	8.15	0.633 ok	0.631	0.571-0.691
Acrolein	5.03	8.15	0.617 ok	0.615	0.555-0.675
Acetonitrile	4.92	8.15	0.604 ok	0.603	0.543-0.663
Benzene	9.92	8.15	1.217 ok	1.217	1.157-1.277
Bromobenzene	18.45	15.89	1.161 ok	1.162	1.102-1.222
Bromodichloromethane	11.13	10.35	1.075 ok	1.076	1.016-1.136
Bromoform	16.85	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.49	8.15	0.551 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
Benzyl Chloride	20.26	15.89	1.275 ok	1.275	1.215-1.335
n-Butylbenzene	21.24	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.45	15.89	1.287 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorobenzene	15.95	15.89	1.004 ok	1.004	0.944-1.064
Chlorotrifluoroethene	3.80	8.15	0.466 ok	0.465	0.405-0.525
Chloroform	8.29	8.15	1.017 ok	1.017	0.957-1.077
Chloromethane	3.98	8.15	0.488 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.15	0.746 ok	0.746	0.686-0.806
2-Chlorotoluene	19.08	15.89	1.201 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.22	8.15	1.254 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.15	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.86	8.15	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.38	10.35	1.389 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.15	1.118 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.55	10.35	1.309 ok	1.309	1.249-1.369
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.87	10.35	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.15	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.26	10.35	1.185 ok	1.185	1.125-1.245
m-Dichlorobenzene	20.27	15.89	1.276 ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311 ok	1.311	1.251-1.371
p-Dichlorobenzene	20.37	15.89	1.282 ok	1.282	1.222-1.342
trans-1,3-Dichloropropene	12.94	10.35	1.250 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.21	8.15	1.007 ok	1.005	0.945-1.065

Initial Calibration Retention Time/Internal Standard Area Summary

Page 28 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
2,3-Dimethylpentane	10.51	8.15	1.290 ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.17	8.15	1.125 ok	1.124	1.064-1.184
Ethylbenzene	16.50	15.89	1.038 ok	1.038	0.978-1.098
Ethyl Acrylate	10.97	10.35	1.060 ok	1.057	0.997-1.117
4-Ethyltoluene	19.37	15.89	1.219 ok	1.219	1.159-1.279
Freon 113	6.22	8.15	0.763 ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497 ok	0.497	0.437-0.557
Freon 123	5.04	8.15	0.618 ok	0.619	0.559-0.679
Freon 123A	5.10	8.15	0.626 ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486 ok	0.486	0.426-0.546
Freon 152A	3.72	8.15	0.456 ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116 ok	1.116	1.056-1.176
Hexachloroethane	21.71	15.89	1.366 ok	1.366	1.306-1.426
Hexane	8.18	8.15	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.92	10.35	1.345 ok	1.342	1.282-1.402
Iodomethane	5.79	8.15	0.710 ok	0.710	0.650-0.770
Isopropylbenzene	18.35	15.89	1.155 ok	1.155	1.095-1.215
p-Isopropyltoluene	20.68	15.89	1.301 ok	1.302	1.242-1.362
Methylene chloride	5.98	8.15	0.734 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.56	8.15	0.928 ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.36	10.35	1.194 ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.19	8.15	0.882 ok	0.879	0.819-0.939
Methylmethacrylate	11.49	10.35	1.110 ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457 ok	1.457	1.397-1.517
Nonane	17.82	15.89	1.121 ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435 ok	1.435	1.375-1.495
n-Propylbenzene	19.15	15.89	1.205 ok	1.205	1.145-1.265
Propylene	3.80	8.15	0.466 ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.38	8.15	1.151 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.45	15.89	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.15	10.35	1.271 ok	1.271	1.211-1.331
1,2,4-Trichlorobenzene	23.03	15.89	1.449 ok	1.449	1.389-1.509
1,2,3-Trichloropropane	17.64	15.89	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.49	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.21	10.35	1.083 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.94	8.15	0.729 ok	0.726	0.666-0.786
Tetrachloroethylene	15.00	10.35	1.449 ok	1.450	1.390-1.510

Initial Calibration Retention Time/Internal Standard Area Summary

Page 29 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-IC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Tetrahydrofuran	8.80	8.15	1.080 ok	1.075	1.015-1.135
Toluene	13.50	10.35	1.304 ok	1.305	1.245-1.365
Trichloroethylene	11.18	10.35	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
Vinyl chloride	4.16	8.15	0.510 ok	0.509	0.449-0.569
m,p-Xylene	16.76	15.89	1.055 ok	1.055	0.995-1.115
o-Xylene	17.44	15.89	1.098 ok	1.098	1.038-1.158

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	156950	ok 164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	561984	ok 603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	228506	ok 260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 30 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Benzene	9.93	8.15	1.218 ok	1.217	1.157-1.277
Bromobenzene	18.46	15.89	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.13	10.35	1.075 ok	1.076	1.016-1.136
Bromomethane	4.48	8.15	0.550 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
n-Butylbenzene	21.25	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.44	15.89	1.286 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorotrifluoroethene	3.80	8.15	0.466 ok	0.465	0.405-0.525
Chloroform	8.30	8.15	1.018 ok	1.017	0.957-1.077
2-Chlorotoluene	19.08	15.89	1.201 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.22	8.15	1.254 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.10	8.15	0.871 ok	0.870	0.810-0.930
1,2-Dibromoethane	14.38	10.35	1.389 ok	1.389	1.329-1.449
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
trans-1,2-Dichloroethylene	6.90	8.15	0.847 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038
o-Dichlorobenzene	20.83	15.89	1.311 ok	1.311	1.251-1.371
2,4-Dimethylpentane	9.16	8.15	1.124 ok	1.124	1.064-1.184
4-Ethyltoluene	19.37	15.89	1.219 ok	1.219	1.159-1.279
Freon 113	6.22	8.15	0.763 ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497 ok	0.497	0.437-0.557
Freon 123	5.05	8.15	0.620 ok	0.619	0.559-0.679
Freon 123A	5.10	8.15	0.626 ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486 ok	0.486	0.426-0.546
Hexachloroethane	21.71	15.89	1.366 ok	1.366	1.306-1.426
Iodomethane	5.79	8.15	0.710 ok	0.710	0.650-0.770
p-Isopropyltoluene	20.68	15.89	1.301 ok	1.302	1.242-1.362
Methylene chloride	5.97	8.15	0.733 ok	0.733	0.673-0.793
Methyl Tert Butyl Ether	7.20	8.15	0.883 ok	0.879	0.819-0.939
Nonane	17.82	15.89	1.121 ok	1.122	1.062-1.182
n-Propylbenzene	19.15	15.89	1.205 ok	1.205	1.145-1.265
Styrene	17.30	15.89	1.089 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.39	8.15	1.152 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.46	15.89	1.099 ok	1.098	1.038-1.158

Initial Calibration Retention Time/Internal Standard Area Summary

Page 31 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,2-Trichloroethane	13.16	10.35	1.271 ok	1.271	1.211-1.331
1,2,3-Trichloropropane	17.65	15.89	1.111 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
2,2,4-Trimethylpentane	11.21	10.35	1.083 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.96	8.15	0.731 ok	0.726	0.666-0.786
Tetrachloroethylene	15.00	10.35	1.449 ok	1.450	1.390-1.510
Toluene	13.51	10.35	1.305 ok	1.305	1.245-1.365
Trichloroethylene	11.19	10.35	1.081 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
m,p-Xylene	16.75	15.89	1.054 ok	1.055	0.995-1.115

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	149839	ok 164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	546769	ok 603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	220501	ok 260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 32 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.15	0.632 ok	0.631	0.571-0.691
Acrolein	5.02	8.15	0.616 ok	0.615	0.555-0.675
Acrylonitrile	5.56	8.15	0.682 ok	0.681	0.621-0.741
Acetonitrile	4.92	8.15	0.604 ok	0.603	0.543-0.663
1,3-Butadiene	4.26	8.15	0.523 ok	0.523	0.463-0.583
Benzene	9.92	8.15	1.217 ok	1.217	1.157-1.277
Bromobenzene	18.45	15.89	1.161 ok	1.162	1.102-1.222
Bromodichloromethane	11.13	10.35	1.075 ok	1.076	1.016-1.136
Bromoform	16.85	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.49	8.15	0.551 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
n-Butane	4.30	8.15	0.528 ok	0.527	0.467-0.587
n-Butylbenzene	21.24	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.44	15.89	1.286 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorobenzene	15.95	15.89	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.15	0.461 ok	0.461	0.401-0.521
Chloroethane	4.62	8.15	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.79	8.15	0.465 ok	0.465	0.405-0.525
Chloroform	8.29	8.15	1.017 ok	1.017	0.957-1.077
Chloromethane	3.97	8.15	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.15	0.746 ok	0.746	0.686-0.806
2-Chlorotoluene	19.07	15.89	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.23	8.15	1.255 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.15	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.86	8.15	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.37	10.35	1.388 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.15	1.118 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.55	10.35	1.309 ok	1.309	1.249-1.369
1,4-Dioxane	11.24	10.35	1.086 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.87	10.35	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.15	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.26	10.35	1.185 ok	1.185	1.125-1.245

Initial Calibration Retention Time/Internal Standard Area Summary

Page 33 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.27	15.89	1.276 ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311 ok	1.311	1.251-1.371
trans-1,3-Dichloropropene	12.94	10.35	1.250 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.20	8.15	1.006 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.51	8.15	1.290 ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.16	8.15	1.124 ok	1.124	1.064-1.184
Ethanol	4.73	8.15	0.580 ok	0.579	0.519-0.639
Ethylbenzene	16.50	15.89	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.24	8.15	1.011 ok	1.010	0.950-1.070
Ethyl Acrylate	10.94	10.35	1.057 ok	1.057	0.997-1.117
4-Ethyltoluene	19.37	15.89	1.219 ok	1.219	1.159-1.279
Freon 113	6.22	8.15	0.763 ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497 ok	0.497	0.437-0.557
Freon 123	5.04	8.15	0.618 ok	0.619	0.559-0.679
Freon 123A	5.10	8.15	0.626 ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486 ok	0.486	0.426-0.546
Freon 152A	3.72	8.15	0.456 ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116 ok	1.116	1.056-1.176
Hexachlorobutadiene	23.59	15.89	1.485 ok	1.485	1.425-1.545
Hexachloroethane	21.71	15.89	1.366 ok	1.366	1.306-1.426
Hexane	8.18	8.15	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.90	10.35	1.343 ok	1.342	1.282-1.402
Iodomethane	5.79	8.15	0.710 ok	0.710	0.650-0.770
Isopropylbenzene	18.35	15.89	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.36	8.15	0.658 ok	0.656	0.596-0.716
p-Isopropyltoluene	20.68	15.89	1.301 ok	1.302	1.242-1.362
Methylene chloride	5.97	8.15	0.733 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.53	8.15	0.924 ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.34	10.35	1.192 ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.17	8.15	0.880 ok	0.879	0.819-0.939
Methylmethacrylate	11.47	10.35	1.108 ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457 ok	1.457	1.397-1.517
Nonane	17.82	15.89	1.121 ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435 ok	1.435	1.375-1.495
Pentane	5.59	8.15	0.686 ok	0.686	0.626-0.746
n-Propylbenzene	19.15	15.89	1.205 ok	1.205	1.145-1.265
Propylene	3.78	8.15	0.464 ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.39	8.15	1.152 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599

Initial Calibration Retention Time/Internal Standard Area Summary

Page 34 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,2,2-Tetrachloroethane	17.45	15.89	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.15	10.35	1.271 ok	1.271	1.211-1.331
1,2,3-Trichloropropane	17.64	15.89	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.49	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.21	10.35	1.083 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.93	8.15	0.728 ok	0.726	0.666-0.786
Tetrachloroethylene	15.01	10.35	1.450 ok	1.450	1.390-1.510
Tetrahydrofuran	8.78	8.15	1.077 ok	1.075	1.015-1.135
Toluene	13.50	10.35	1.304 ok	1.305	1.245-1.365
Trichloroethylene	11.17	10.35	1.079 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
Vinyl chloride	4.15	8.15	0.509 ok	0.509	0.449-0.569
Vinyl Acetate	7.26	8.15	0.891 ok	0.890	0.830-0.950
m,p-Xylene	16.75	15.89	1.054 ok	1.055	0.995-1.115
o-Xylene	17.44	15.89	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.59	15.89	0.352 ok	0.352	0.292-0.412

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	149954 ok	164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	547333 ok	603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	223500 ok	260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 35 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15 Reporting this level
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.13	8.15	0.629 ok	0.631	0.571-0.691
Acrolein	5.01	8.15	0.615 ok	0.615	0.555-0.675
Acrylonitrile	5.55	8.15	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.91	8.15	0.602 ok	0.603	0.543-0.663
1,3-Butadiene	4.26	8.15	0.523 ok	0.523	0.463-0.583
Benzene	9.91	8.15	1.216 ok	1.217	1.157-1.277
Bromobenzene	18.45	15.89	1.161 ok	1.162	1.102-1.222
Bromodichloromethane	11.14	10.35	1.076 ok	1.076	1.016-1.136
Bromoform	16.84	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.48	8.15	0.550 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
n-Butane	4.30	8.15	0.528 ok	0.527	0.467-0.587
Benzyl Chloride	20.25	15.89	1.274 ok	1.275	1.215-1.335
n-Butylbenzene	21.24	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.44	15.89	1.286 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorobenzene	15.95	15.89	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.15	0.461 ok	0.461	0.401-0.521
Chloroethane	4.62	8.15	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.79	8.15	0.465 ok	0.465	0.405-0.525
Chloroform	8.29	8.15	1.017 ok	1.017	0.957-1.077
Chloromethane	3.97	8.15	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.15	0.746 ok	0.746	0.686-0.806
2-Chlorotoluene	19.07	15.89	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.23	8.15	1.255 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.15	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.86	8.15	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.37	10.35	1.388 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.15	1.118 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.54	10.35	1.308 ok	1.309	1.249-1.369
1,4-Dioxane	11.20	10.35	1.082 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.86	10.35	1.049 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.15	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Page 36 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15 Reporting this level
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.26	10.35	1.185 ok	1.185	1.125-1.245
m-Dichlorobenzene	20.27	15.89	1.276 ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311 ok	1.311	1.251-1.371
p-Dichlorobenzene	20.36	15.89	1.281 ok	1.282	1.222-1.342
trans-1,3-Dichloropropene	12.94	10.35	1.250 ok	1.250	1.190-1.310
Di-Isopropyl ether	8.19	8.15	1.005 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.51	8.15	1.290 ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.16	8.15	1.124 ok	1.124	1.064-1.184
Ethanol	4.71	8.15	0.578 ok	0.579	0.519-0.639
Ethylbenzene	16.50	15.89	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.23	8.15	1.010 ok	1.010	0.950-1.070
Ethyl Acrylate	10.93	10.35	1.056 ok	1.057	0.997-1.117
4-Ethyltoluene	19.37	15.89	1.219 ok	1.219	1.159-1.279
Freon 113	6.21	8.15	0.762 ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497 ok	0.497	0.437-0.557
Freon 123	5.04	8.15	0.618 ok	0.619	0.559-0.679
Freon 123A	5.09	8.15	0.625 ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486 ok	0.486	0.426-0.546
Freon 152A	3.72	8.15	0.456 ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116 ok	1.116	1.056-1.176
Hexachlorobutadiene	23.59	15.89	1.485 ok	1.485	1.425-1.545
Hexachloroethane	21.71	15.89	1.366 ok	1.366	1.306-1.426
Hexane	8.18	8.15	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.88	10.35	1.341 ok	1.342	1.282-1.402
Iodomethane	5.79	8.15	0.710 ok	0.710	0.650-0.770
Isopropylbenzene	18.35	15.89	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.34	8.15	0.655 ok	0.656	0.596-0.716
p-Isopropyltoluene	20.68	15.89	1.301 ok	1.302	1.242-1.362
Methylene chloride	5.97	8.15	0.733 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.51	8.15	0.921 ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.32	10.35	1.190 ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.15	8.15	0.877 ok	0.879	0.819-0.939
Methylmethacrylate	11.46	10.35	1.107 ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457 ok	1.457	1.397-1.517
Nonane	17.82	15.89	1.121 ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435 ok	1.435	1.375-1.495
Pentane	5.59	8.15	0.686 ok	0.686	0.626-0.746
n-Propylbenzene	19.15	15.89	1.205 ok	1.205	1.145-1.265
Propylene	3.78	8.15	0.464 ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088 ok	1.088	1.028-1.148

Initial Calibration Retention Time/Internal Standard Area Summary

Page 37 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15 Reporting this level
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.39	8.15	1.152 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.45	15.89	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.15	10.35	1.271 ok	1.271	1.211-1.331
1,2,4-Trichlorobenzene	23.02	15.89	1.449 ok	1.449	1.389-1.509
1,2,3-Trichloropropane	17.63	15.89	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.49	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.21	10.35	1.083 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.89	8.15	0.723 ok	0.726	0.666-0.786
Tetrachloroethylene	15.01	10.35	1.450 ok	1.450	1.390-1.510
Tetrahydrofuran	8.75	8.15	1.074 ok	1.075	1.015-1.135
Toluene	13.50	10.35	1.304 ok	1.305	1.245-1.365
Trichloroethylene	11.18	10.35	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
Vinyl chloride	4.15	8.15	0.509 ok	0.509	0.449-0.569
Vinyl Acetate	7.25	8.15	0.890 ok	0.890	0.830-0.950
m,p-Xylene	16.77	15.89	1.055 ok	1.055	0.995-1.115
o-Xylene	17.44	15.89	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.59	15.89	0.352 ok	0.352	0.292-0.412

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	154703	ok 164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	561366	ok 603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	240479	ok 260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 38 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.13	8.15	0.629 ok	0.631	0.571-0.691
Acrolein	5.01	8.15	0.615 ok	0.615	0.555-0.675
Acrylonitrile	5.55	8.15	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.91	8.15	0.602 ok	0.603	0.543-0.663
1,3-Butadiene	4.26	8.15	0.523 ok	0.523	0.463-0.583
Benzene	9.91	8.15	1.216 ok	1.217	1.157-1.277
Bromobenzene	18.45	15.89	1.161 ok	1.162	1.102-1.222
Bromodichloromethane	11.14	10.35	1.076 ok	1.076	1.016-1.136
Bromoform	16.84	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.48	8.15	0.550 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
n-Butane	4.30	8.15	0.528 ok	0.527	0.467-0.587
Benzyl Chloride	20.25	15.89	1.274 ok	1.275	1.215-1.335
n-Butylbenzene	21.24	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.45	15.89	1.287 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorobenzene	15.95	15.89	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.15	0.461 ok	0.461	0.401-0.521
Chloroethane	4.62	8.15	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.79	8.15	0.465 ok	0.465	0.405-0.525
Chloroform	8.29	8.15	1.017 ok	1.017	0.957-1.077
Chloromethane	3.97	8.15	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.15	0.746 ok	0.746	0.686-0.806
2-Chlorotoluene	19.07	15.89	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.23	8.15	1.255 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.15	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.86	8.15	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.37	10.35	1.388 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.15	1.118 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.54	10.35	1.308 ok	1.309	1.249-1.369
1,4-Dioxane	11.20	10.35	1.082 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.86	10.35	1.049 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.15	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Page 39 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.26	10.35	1.185	ok	1.185	1.125-1.245
m-Dichlorobenzene	20.27	15.89	1.276	ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311	ok	1.311	1.251-1.371
p-Dichlorobenzene	20.36	15.89	1.281	ok	1.282	1.222-1.342
trans-1,3-Dichloropropene	12.94	10.35	1.250	ok	1.250	1.190-1.310
Di-Isopropyl ether	8.19	8.15	1.005	ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.52	8.15	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.16	8.15	1.124	ok	1.124	1.064-1.184
Ethanol	4.71	8.15	0.578	ok	0.579	0.519-0.639
Ethylbenzene	16.50	15.89	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	8.23	8.15	1.010	ok	1.010	0.950-1.070
Ethyl Acrylate	10.92	10.35	1.055	ok	1.057	0.997-1.117
4-Ethyltoluene	19.37	15.89	1.219	ok	1.219	1.159-1.279
Freon 113	6.21	8.15	0.762	ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497	ok	0.497	0.437-0.557
Freon 123	5.04	8.15	0.618	ok	0.619	0.559-0.679
Freon 123A	5.09	8.15	0.625	ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486	ok	0.486	0.426-0.546
Freon 152A	3.72	8.15	0.456	ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116	ok	1.116	1.056-1.176
Hexachlorobutadiene	23.59	15.89	1.485	ok	1.485	1.425-1.545
Hexachloroethane	21.71	15.89	1.366	ok	1.366	1.306-1.426
Hexane	8.18	8.15	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.88	10.35	1.341	ok	1.342	1.282-1.402
Iodomethane	5.79	8.15	0.710	ok	0.710	0.650-0.770
Isopropylbenzene	18.35	15.89	1.155	ok	1.155	1.095-1.215
Isopropyl Alcohol	5.34	8.15	0.655	ok	0.656	0.596-0.716
p-Isopropyltoluene	20.68	15.89	1.301	ok	1.302	1.242-1.362
Methylene chloride	5.97	8.15	0.733	ok	0.733	0.673-0.793
Methyl ethyl ketone	7.51	8.15	0.921	ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.31	10.35	1.189	ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.15	8.15	0.877	ok	0.879	0.819-0.939
Methylmethacrylate	11.46	10.35	1.107	ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457	ok	1.457	1.397-1.517
Nonane	17.82	15.89	1.121	ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435	ok	1.435	1.375-1.495
Pentane	5.59	8.15	0.686	ok	0.686	0.626-0.746
n-Propylbenzene	19.15	15.89	1.205	ok	1.205	1.145-1.265
Propylene	3.78	8.15	0.464	ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088	ok	1.088	1.028-1.148

Initial Calibration Retention Time/Internal Standard Area Summary

Page 40 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15 Reporting this level
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.39	8.15	1.152 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.45	15.89	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.15	10.35	1.271 ok	1.271	1.211-1.331
1,2,4-Trichlorobenzene	23.02	15.89	1.449 ok	1.449	1.389-1.509
1,2,3-Trichloropropane	17.63	15.89	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.49	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.21	10.35	1.083 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.89	8.15	0.723 ok	0.726	0.666-0.786
Tetrachloroethylene	15.01	10.35	1.450 ok	1.450	1.390-1.510
Tetrahydrofuran	8.74	8.15	1.072 ok	1.075	1.015-1.135
Toluene	13.50	10.35	1.304 ok	1.305	1.245-1.365
Trichloroethylene	11.18	10.35	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
Vinyl chloride	4.15	8.15	0.509 ok	0.509	0.449-0.569
Vinyl Acetate	7.25	8.15	0.890 ok	0.890	0.830-0.950
m,p-Xylene	16.77	15.89	1.055 ok	1.055	0.995-1.115
o-Xylene	17.44	15.89	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.59	15.89	0.352 ok	0.352	0.292-0.412

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	164062	ok 164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	601377	ok 603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	263049	ok 260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 41 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.13	8.15	0.629 ok	0.631	0.571-0.691
Acrolein	5.01	8.15	0.615 ok	0.615	0.555-0.675
Acrylonitrile	5.55	8.15	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.91	8.15	0.602 ok	0.603	0.543-0.663
1,3-Butadiene	4.26	8.15	0.523 ok	0.523	0.463-0.583
Benzene	9.92	8.15	1.217 ok	1.217	1.157-1.277
Bromobenzene	18.46	15.89	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.14	10.35	1.076 ok	1.076	1.016-1.136
Bromoform	16.85	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.49	8.15	0.551 ok	0.550	0.490-0.610
Bromoethene	4.92	8.15	0.604 ok	0.604	0.544-0.664
n-Butane	4.30	8.15	0.528 ok	0.527	0.467-0.587
Benzyl Chloride	20.26	15.89	1.275 ok	1.275	1.215-1.335
n-Butylbenzene	21.25	15.89	1.337 ok	1.337	1.277-1.397
sec-Butylbenzene	20.45	15.89	1.287 ok	1.287	1.227-1.347
tert-Butylbenzene	20.06	15.89	1.262 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.15	0.768 ok	0.768	0.708-0.828
Chlorobenzene	15.95	15.89	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.15	0.461 ok	0.461	0.401-0.521
Chloroethane	4.62	8.15	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.79	8.15	0.465 ok	0.465	0.405-0.525
Chloroform	8.30	8.15	1.018 ok	1.017	0.957-1.077
Chloromethane	3.97	8.15	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.15	0.746 ok	0.746	0.686-0.806
2-Chlorotoluene	19.07	15.89	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.15	1.238 ok	1.238	1.178-1.298
Cyclohexane	10.23	8.15	1.255 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.15	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.86	8.15	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.37	10.35	1.388 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.15	1.118 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.55	10.35	1.309 ok	1.309	1.249-1.369
1,4-Dioxane	11.20	10.35	1.082 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.85	8.15	0.472 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.15	0.577 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.87	10.35	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.15	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.15	0.978 ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Page 42 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.26	10.35	1.185	ok	1.185	1.125-1.245
m-Dichlorobenzene	20.27	15.89	1.276	ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311	ok	1.311	1.251-1.371
p-Dichlorobenzene	20.37	15.89	1.282	ok	1.282	1.222-1.342
trans-1,3-Dichloropropene	12.94	10.35	1.250	ok	1.250	1.190-1.310
Di-Isopropyl ether	8.19	8.15	1.005	ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.52	8.15	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.17	8.15	1.125	ok	1.124	1.064-1.184
Ethanol	4.72	8.15	0.579	ok	0.579	0.519-0.639
Ethylbenzene	16.50	15.89	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	8.23	8.15	1.010	ok	1.010	0.950-1.070
Ethyl Acrylate	10.93	10.35	1.056	ok	1.057	0.997-1.117
4-Ethyltoluene	19.37	15.89	1.219	ok	1.219	1.159-1.279
Freon 113	6.21	8.15	0.762	ok	0.762	0.702-0.822
Freon 114	4.05	8.15	0.497	ok	0.497	0.437-0.557
Freon 123	5.05	8.15	0.620	ok	0.619	0.559-0.679
Freon 123A	5.09	8.15	0.625	ok	0.625	0.565-0.685
Freon 142B	3.96	8.15	0.486	ok	0.486	0.426-0.546
Freon 152A	3.72	8.15	0.456	ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116	ok	1.116	1.056-1.176
Hexachlorobutadiene	23.60	15.89	1.485	ok	1.485	1.425-1.545
Hexachloroethane	21.71	15.89	1.366	ok	1.366	1.306-1.426
Hexane	8.18	8.15	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.88	10.35	1.341	ok	1.342	1.282-1.402
Iodomethane	5.79	8.15	0.710	ok	0.710	0.650-0.770
Isopropylbenzene	18.35	15.89	1.155	ok	1.155	1.095-1.215
Isopropyl Alcohol	5.34	8.15	0.655	ok	0.656	0.596-0.716
p-Isopropyltoluene	20.68	15.89	1.301	ok	1.302	1.242-1.362
Methylene chloride	5.97	8.15	0.733	ok	0.733	0.673-0.793
Methyl ethyl ketone	7.50	8.15	0.920	ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.31	10.35	1.189	ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.15	8.15	0.877	ok	0.879	0.819-0.939
Methylmethacrylate	11.46	10.35	1.107	ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457	ok	1.457	1.397-1.517
Nonane	17.82	15.89	1.121	ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435	ok	1.435	1.375-1.495
Pentane	5.59	8.15	0.686	ok	0.686	0.626-0.746
n-Propylbenzene	19.15	15.89	1.205	ok	1.205	1.145-1.265
Propylene	3.79	8.15	0.465	ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088	ok	1.088	1.028-1.148

Initial Calibration Retention Time/Internal Standard Area Summary

Page 43 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.39	8.15	1.152 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.93	10.35	1.539 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.45	15.89	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.15	10.35	1.271 ok	1.271	1.211-1.331
1,2,4-Trichlorobenzene	23.03	15.89	1.449 ok	1.449	1.389-1.509
1,2,3-Trichloropropane	17.64	15.89	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.08	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.49	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.21	10.35	1.083 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.89	8.15	0.723 ok	0.726	0.666-0.786
Tetrachloroethylene	15.01	10.35	1.450 ok	1.450	1.390-1.510
Tetrahydrofuran	8.74	8.15	1.072 ok	1.075	1.015-1.135
Toluene	13.50	10.35	1.304 ok	1.305	1.245-1.365
Trichloroethylene	11.18	10.35	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.15	0.648 ok	0.648	0.588-0.708
Vinyl chloride	4.15	8.15	0.509 ok	0.509	0.449-0.569
Vinyl Acetate	7.25	8.15	0.890 ok	0.890	0.830-0.950
m,p-Xylene	16.77	15.89	1.055 ok	1.055	0.995-1.115
o-Xylene	17.45	15.89	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.59	15.89	0.352 ok	0.352	0.292-0.412

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.15 ok	8.15	7.82-8.48	185988	ok 164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	701811	ok 603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	312728	ok 260378	156227-364529

Initial Calibration Retention Time/Internal Standard Area Summary

Page 44 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.13	8.16	0.629 ok	0.631	0.571-0.691
Acrolein	5.01	8.16	0.614 ok	0.615	0.555-0.675
Acrylonitrile	5.55	8.16	0.680 ok	0.681	0.621-0.741
Acetonitrile	4.91	8.16	0.602 ok	0.603	0.543-0.663
1,3-Butadiene	4.26	8.16	0.522 ok	0.523	0.463-0.583
Benzene	9.92	8.16	1.216 ok	1.217	1.157-1.277
Bromobenzene	18.47	15.89	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.14	10.35	1.076 ok	1.076	1.016-1.136
Bromoform	16.85	15.89	1.060 ok	1.060	1.000-1.120
Bromomethane	4.48	8.16	0.549 ok	0.550	0.490-0.610
Bromoethene	4.92	8.16	0.603 ok	0.604	0.544-0.664
n-Butane	4.30	8.16	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.27	15.89	1.276 ok	1.275	1.215-1.335
n-Butylbenzene	21.26	15.89	1.338 ok	1.337	1.277-1.397
sec-Butylbenzene	20.46	15.89	1.288 ok	1.287	1.227-1.347
tert-Butylbenzene	20.07	15.89	1.263 ok	1.263	1.203-1.323
Carbon disulfide	6.26	8.16	0.767 ok	0.768	0.708-0.828
Chlorobenzene	15.96	15.89	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.16	0.461 ok	0.461	0.401-0.521
Chloroethane	4.62	8.16	0.566 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.79	8.16	0.464 ok	0.465	0.405-0.525
Chloroform	8.30	8.16	1.017 ok	1.017	0.957-1.077
Chloromethane	3.97	8.16	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.08	8.16	0.745 ok	0.746	0.686-0.806
2-Chlorotoluene	19.08	15.89	1.201 ok	1.200	1.140-1.260
Carbon tetrachloride	10.09	8.16	1.237 ok	1.238	1.178-1.298
Cyclohexane	10.23	8.16	1.254 ok	1.255	1.195-1.315
1,1-Dichloroethane	7.09	8.16	0.869 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.85	8.16	0.717 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.38	10.35	1.389 ok	1.389	1.329-1.449
1,2-Dichloroethane	9.11	8.16	1.116 ok	1.118	1.058-1.178
1,2-Dichloropropane	10.89	10.35	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.55	10.35	1.309 ok	1.309	1.249-1.369
1,4-Dioxane	11.20	10.35	1.082 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.84	8.16	0.471 ok	0.472	0.412-0.532
Dichlorofluoromethane	4.70	8.16	0.576 ok	0.577	0.517-0.637
Dibromochloromethane	14.06	10.35	1.358 ok	1.358	1.298-1.418
Dibromomethane	10.87	10.35	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.89	8.16	0.844 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.97	8.16	0.977 ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Page 45 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.26	10.35	1.185	ok	1.185	1.125-1.245
m-Dichlorobenzene	20.28	15.89	1.276	ok	1.276	1.216-1.336
o-Dichlorobenzene	20.83	15.89	1.311	ok	1.311	1.251-1.371
p-Dichlorobenzene	20.38	15.89	1.283	ok	1.282	1.222-1.342
trans-1,3-Dichloropropene	12.94	10.35	1.250	ok	1.250	1.190-1.310
Di-Isopropyl ether	8.19	8.16	1.004	ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.52	8.16	1.289	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.17	8.16	1.124	ok	1.124	1.064-1.184
Ethanol	4.72	8.16	0.578	ok	0.579	0.519-0.639
Ethylbenzene	16.50	15.89	1.038	ok	1.038	0.978-1.098
Ethyl Acetate	8.23	8.16	1.009	ok	1.010	0.950-1.070
Ethyl Acrylate	10.93	10.35	1.056	ok	1.057	0.997-1.117
4-Ethyltoluene	19.38	15.89	1.220	ok	1.219	1.159-1.279
Freon 113	6.21	8.16	0.761	ok	0.762	0.702-0.822
Freon 114	4.05	8.16	0.496	ok	0.497	0.437-0.557
Freon 123	5.04	8.16	0.618	ok	0.619	0.559-0.679
Freon 123A	5.09	8.16	0.624	ok	0.625	0.565-0.685
Freon 142B	3.96	8.16	0.485	ok	0.486	0.426-0.546
Freon 152A	3.72	8.16	0.456	ok	0.457	0.397-0.517
Heptane	11.55	10.35	1.116	ok	1.116	1.056-1.176
Hexachlorobutadiene	23.60	15.89	1.485	ok	1.485	1.425-1.545
Hexachloroethane	21.72	15.89	1.367	ok	1.366	1.306-1.426
Hexane	8.18	8.16	1.002	ok	1.004	0.944-1.064
2-Hexanone	13.88	10.35	1.341	ok	1.342	1.282-1.402
Iodomethane	5.78	8.16	0.708	ok	0.710	0.650-0.770
Isopropylbenzene	18.36	15.89	1.155	ok	1.155	1.095-1.215
Isopropyl Alcohol	5.34	8.16	0.654	ok	0.656	0.596-0.716
p-Isopropyltoluene	20.69	15.89	1.302	ok	1.302	1.242-1.362
Methylene chloride	5.97	8.16	0.732	ok	0.733	0.673-0.793
Methyl ethyl ketone	7.50	8.16	0.919	ok	0.923	0.863-0.983
Methyl Isobutyl Ketone	12.32	10.35	1.190	ok	1.191	1.131-1.251
Methyl Tert Butyl Ether	7.14	8.16	0.875	ok	0.879	0.819-0.939
Methylmethacrylate	11.46	10.35	1.107	ok	1.108	1.048-1.168
Naphthalene	23.15	15.89	1.457	ok	1.457	1.397-1.517
Nonane	17.83	15.89	1.122	ok	1.122	1.062-1.182
Octane	14.85	10.35	1.435	ok	1.435	1.375-1.495
Pentane	5.59	8.16	0.685	ok	0.686	0.626-0.746
n-Propylbenzene	19.15	15.89	1.205	ok	1.205	1.145-1.265
Propylene	3.78	8.16	0.463	ok	0.464	0.404-0.524
Styrene	17.29	15.89	1.088	ok	1.088	1.028-1.148

Initial Calibration Retention Time/Internal Standard Area Summary

Page 46 of 46

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W571-IC571	6W13822.D	09/13/19 12:03	TCH	0.2	GCMS6W	TO-15
V6W571-IC571	6W13823.D	09/13/19 13:12	TCH	0.1	GCMS6W	TO-15
V6W571-IC571	6W13824.D	09/13/19 13:59	TCH	0.04	GCMS6W	TO-15
V6W571-IC571	6W13825.D	09/13/19 14:47	TCH	0.5	GCMS6W	TO-15
V6W571-IC571	6W13826.D	09/13/19 15:35	TCH	5	GCMS6W	TO-15
V6W571-ICC571	6W13827.D	09/13/19 16:23	TCH	10	GCMS6W	TO-15
V6W571-IC571	6W13828.D	09/13/19 17:12	TCH	20	GCMS6W	TO-15
V6W571-IC571	6W13830.D	09/13/19 18:52	TCH	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.39	8.16	1.151 ok	1.152	1.092-1.212
1,1,1,2-Tetrachloroethane	15.94	10.35	1.540 ok	1.539	1.479-1.599
1,1,2,2-Tetrachloroethane	17.46	15.89	1.099 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.16	10.35	1.271 ok	1.271	1.211-1.331
1,2,4-Trichlorobenzene	23.03	15.89	1.449 ok	1.449	1.389-1.509
1,2,3-Trichloropropane	17.65	15.89	1.111 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.09	15.89	1.264 ok	1.264	1.204-1.324
1,3,5-Trimethylbenzene	19.50	15.89	1.227 ok	1.227	1.167-1.287
2,2,4-Trimethylpentane	11.22	10.35	1.084 ok	1.083	1.023-1.143
Tertiary Butyl Alcohol	5.90	8.16	0.723 ok	0.726	0.666-0.786
Tetrachloroethylene	15.01	10.35	1.450 ok	1.450	1.390-1.510
Tetrahydrofuran	8.73	8.16	1.070 ok	1.075	1.015-1.135
Toluene	13.51	10.35	1.305 ok	1.305	1.245-1.365
Trichloroethylene	11.19	10.35	1.081 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.28	8.16	0.647 ok	0.648	0.588-0.708
Vinyl chloride	4.15	8.16	0.509 ok	0.509	0.449-0.569
Vinyl Acetate	7.25	8.16	0.888 ok	0.890	0.830-0.950
m,p-Xylene	16.78	15.89	1.056 ok	1.055	0.995-1.115
o-Xylene	17.45	15.89	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.58	15.89	0.351 ok	0.352	0.292-0.412

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.16 ok	8.15	7.82-8.48	195278	ok 164244	98546-229942
1,4-Difluorobenzene	10.35 ok	10.35	10.02-10.68	735636	ok 603121	361873-844369
Chlorobenzene-D5	15.89 ok	15.89	15.56-16.22	360923	ok 260378	156227-364529

Surrogate Recovery Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Method: TO-15	Matrix: AIR
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD234-1	5W39852.D	88
JD234-2	5W39867.D	106
JD234-2	5W39849.D	139* a
JD234-3	5W39853.D	89
JD234-4	5W39868.D	96
JD234-4	5W39850.D	94
JD234-5	5W39851.D	93
JD235-4DUP	5W39842.D	93
JD398-1DUP	5W39892.D	93
V5W1621-BS	5W39836.D	106
V5W1621-BSD	5W39837.D	106
V5W1621-MB	5W39840.D	94
V5W1622-BS	5W39860.D	107
V5W1622-BSD	5W39861.D	105
V5W1622-MB	5W39864.D	90
V6W623-SCC	6W14966.D	92
V6W623-SCC	6W14980.D	93
V5W1622-MB2	5W39891A.D	94
V6W623-BS	6W14959.D	109
V6W623-BSD	6W14960.D	104
V6W623-MB	6W14962.D	93

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

(a) Outside control limits due to matrix interference.

Initial Calibration Summary

Page 1 of 4

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1620-ICC1620
 Lab FileID: 5W39825.D

Response Factor Report Air5w

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Dec 24 10:51:46 2019
 Response via : Initial Calibration

Calibration Files

20 =5w39826.D 0.5 =5w39831.D 0.2 =5w39832.D 0.1 =5w39822.D
 0.04=5w39823.D 10 =5w39825.D 5 =5w39824.D 40 =5w39827.D
 = =

Compound	20	0.5	0.2	0.1	0.04	10	5	40	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----									
2) Freon 152A	0.788	0.778	0.811	0.721	0.770	0.801	0.792	0.780	0.780	3.49
3) Chlorodifluoromethane	0.330	0.327	0.340	0.261		0.335	0.332	0.325	0.321	8.46
4) Propene	0.938	0.963	1.033	0.936	1.087	0.963	0.965	0.891	0.972	6.30
5) Chlorotrifluoroethene	1.633	1.619	1.665	1.617	1.698	1.638	1.633	1.594	1.637	1.95
6) Dichlorodifluoromethane	3.286	3.256	3.435	3.294	3.687	3.314	3.329	3.145	3.343	4.79
7) 1-Chloro-1,1-difluoroethane	2.315	2.308	2.507	2.434	2.567	2.361	2.379	2.194	2.383	4.97
8) Chloromethane	1.083	1.078	1.213	1.084	1.223	1.101	1.110	1.005	1.112	6.53
9) Dichlorotetrafluoroethane	3.071	3.069	3.276	3.106	3.473	3.081	3.138	2.787	3.125	6.24
10) Vinyl Chloride	1.084	1.040	1.078	1.020	1.095	1.090	1.093	0.995	1.062	3.62
11) 1,3-Butadiene	0.692	0.710	0.779	0.756	0.799	0.720	0.733	0.644	0.729	6.81
12) n-Butane	0.148	0.153	0.175	0.137		0.159	0.167	0.136	0.153	9.56
13) Bromomethane	1.048	1.100	1.182	1.121	1.415	1.072	1.093	0.973	1.126	11.66
14) Chloroethane	0.485	0.506	0.515	0.496		0.498	0.496	0.450	0.492	4.24
15) Dichlorofluoromethane	2.355	2.513	2.635	2.499	2.964	2.435	2.514	2.165	2.510	9.16
16) Acetonitrile	0.702	1.021	0.992			0.715	0.760	0.653	0.807	19.65
17) Freon 123	2.342	2.557	2.646	2.538	2.768	2.459	2.546	2.071	2.491	8.45
18) Freon 123A	1.262	1.342	1.395	1.354	1.308	1.306	1.350	1.158	1.309	5.56
19) Bromoethene	0.960	0.977	1.026	0.954	0.977	0.972	0.993	0.902	0.970	3.66
20) Acrolein	0.396	0.470	0.498			0.414	0.432	0.354	0.427	12.12
21) Trichlorofluoromethane	2.985	3.143	3.283	3.191	3.439	3.088	3.174	2.830	3.142	5.84
22) Acetone	0.397	0.566	0.566			0.415	0.431	0.370	0.457	18.88
23) Pentane										

Initial Calibration Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1620-ICC1620
Lab FileID: 5W39825.D

		0.309	0.316	0.292	0.309	0.214	0.324	0.328	0.292		0.298	12.25
24)	Iodomethane											
		3.204	3.246	3.283	3.260	3.500	3.281	3.322	3.051		3.268	3.82
25)	Isopropyl Alcohol											
		0.399	0.641	0.682			0.427	0.444	0.376		0.495	26.61
26)	1,1-Dichloroethene											
		1.984	2.103	2.127	2.101	2.228	2.035	2.127	1.857		2.070	5.41
27)	Freon 113											
		2.572	2.797	2.845	2.795	3.037	2.650	2.747	2.417		2.733	6.85
28)	Methylene Chloride											
		1.080	1.233	1.336	1.445		1.119	1.148	1.027		1.198	12.46
29)	Carbon Disulfide											
		3.283	3.280	3.166	3.134	3.473	3.386	3.461	3.121		3.288	4.31
30)	Ethanol											
		0.391	0.720				0.401	0.404	0.362		0.456	32.63
31)	Acrylonitrile											
		0.961	1.216	1.111			1.006	1.018	0.905		1.036	10.74
32)	3-Chloropropene											
		0.569	0.602	0.582	0.520	0.532	0.592	0.598	0.551		0.568	5.45
33)	trans-1,2-Dichloroethene											
		1.797	1.911	1.849	1.777	1.938	1.842	1.887	1.710		1.839	4.09
34)	tert-Butyl Alcohol											
		2.509	2.694	2.603			2.543	2.593	2.380		2.554	4.13
35)	Methyl tert-Butyl Ether											
		3.299	3.386	3.415	3.225	3.646	3.386	3.458	3.157		3.372	4.45
36)	Vinyl Acetate											
		3.289	3.857	3.680			3.405	3.461	3.151		3.474	7.43
37)	1,1-Dichloroethane											
		2.229	2.421	2.501	2.368	2.611	2.326	2.404	2.145		2.376	6.18
38)	2-Butanone											
		0.564	0.634	0.565			0.569	0.574	0.540		0.574	5.46
39)	Hexane											
		1.814	1.887	1.868	1.880	2.039	1.907	1.957	1.707		1.882	5.17
40)	cis-1,2-Dichloroethene											
		1.762	1.892	1.825	1.812	1.862	1.815	1.859	1.677		1.813	3.73
41)	Di-isopropyl Ether											
		0.957	0.989	0.948	0.870	0.875	0.988	1.015	0.922		0.945	5.63
42)	Ethyl Acetate											
		0.372	0.403	0.364			0.388	0.394	0.356		0.379	4.90
43)	Methyl Acrylate											
		2.049	2.427	2.280			2.122	2.193	1.918		2.165	8.24
44)	Chloroform											
		2.546	2.793	2.816	2.807	3.178	2.647	2.740	2.403		2.741	8.32
45)	2,4-Dimethylpentane											
		2.210	2.301	2.235	2.161	2.374	2.318	2.375	2.085		2.257	4.57
46)	Tetrahydrofuran											
		0.565	0.555	0.523			0.571	0.576	0.548		0.556	3.47
47)	1,1,1-Trichloroethane											
		2.490	2.666	2.737	2.699	3.231	2.560	2.648	2.393		2.678	9.38
48)	1,2-Dichloroethane											
		1.600	1.687	1.661	1.745	1.893	1.651	1.695	1.525		1.682	6.41
49)	Benzene											
		3.682	3.616	3.712	3.793	4.443	3.744	3.857	3.572		3.802	7.22
50)	Carbon Tetrachloride											
		2.649	2.698	2.701	2.645	2.951	2.715	2.779	2.544		2.710	4.38
51)	Cyclohexane											
		1.908	1.938	1.907	1.924	1.998	1.971	2.044	1.809		1.938	3.63
52)	2,3-Dimethylpentane											
		0.805	0.818	0.875	0.733	0.752	0.837	0.864	0.767		0.806	6.46

Page 3 of 4

Sample: V5W1620-ICC1620
Lab FileID: 5W39825.D

6.9.1

Initial Calibration Summary

Page 4 of 4

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1620-ICC1620
Lab FileID: 5W39825.D

		1.096	0.998	0.925	1.253	1.369	1.133	1.127	1.015		1.115	12.87
84)	1,1,2,2-Tetrachloroethane	1.666	2.259	2.030	2.658	2.659	1.848	1.965	1.327		2.051	22.58
85)	1,2,3-Trichloropropane	1.139	1.424	1.309	1.789	1.741	1.229	1.283	0.979		1.362	20.62
86)	Isopropylbenzene	3.087	4.125	3.597	4.717	4.649	3.565	3.962	2.592		3.787	19.35
87)	Bromobenzene	0.717	0.682	0.643	0.796	0.795	0.731	0.716	0.675		0.719	7.60
88)	2-Chlorotoluene	0.668	0.680	0.554	0.818	0.766	0.729	0.747	0.593		0.695	12.78
89)	n-Propylbenzene	0.743	0.734	0.589	0.701	0.570	0.798	0.826	0.648		0.701	13.26
90)	4-Bromofluorobenzene	0.922	0.837	0.801	0.830	0.834	0.934	0.934	0.907		0.875	6.25
91)	4-Ethyltoluene	2.594	2.393	1.860	2.491		2.811	2.840	2.236		2.461	13.90
92)	1,3,5-Trimethylbenzene	2.412	3.183	2.390	3.144	3.411	2.712	2.976	1.958		2.773	17.76
93)	alpha-Methylstyrene	1.061	0.881	0.621	0.746	0.659	1.055	1.033	0.905		0.870	20.39
94)	tert-Butylbenzene	0.532	0.692	0.584	0.752	0.745	0.626	0.688	0.422		0.630	18.05
95)	1,2,4-Trimethylbenzene	2.264	2.810	1.931	2.492	2.708	2.517	2.631	1.770		2.391	15.59
96)	1,3-Dichlorobenzene	1.064	0.961	0.725	0.838	0.883	0.978	0.895	0.920		0.908	11.12
97)	Benzyl Chloride	1.258	0.759	0.512			1.109	0.894	1.077		0.935	28.95
98)	1,4-Dichlorobenzene	0.974	0.823	0.640	0.669	0.718	0.853	0.756	0.850		0.785	14.08
99)	sec-Butylbenzene	0.658	0.831	0.624	0.834	0.665	0.739	0.821	0.524		0.712	15.92
100)	p-Isopropyltoluene	0.714	0.878	0.561	0.722	0.678	0.821	0.879	0.552		0.726	17.70
101)	1,2-Dichlorobenzene	1.103	1.042	0.784	0.919	0.976	1.051	0.982	0.896		0.969	10.49
102)	n-Butylbenzene	0.561	0.500	0.249	0.316		0.591	0.564	0.474		0.465	28.43
103)	Hexachloroethane	0.946	1.060	1.116	1.403	1.384	1.058	1.133	0.769		1.109	18.98
104)	1,2,4-Trichlorobenzene	0.349	0.453	0.254	0.153	0.246	0.278	0.217	0.411		0.295	34.37
105)	Naphthalene	0.918	1.297	0.696	0.551	0.543	0.752	0.566	1.008		0.791	33.77
106)	Hexachlorobutadiene	0.944	1.177	0.835	1.266	1.517	1.058	1.130	0.852		1.097	20.83
107)	I Bromochloromethane (A -----ISTD-----											
108)	TVHC as equiv Pentane	7.722	8.924	8.506			8.177	8.295	7.237		8.144	7.29

 (#) = Out of Range ### Number of calibration levels exceeded format ###

m5w1620.M

Tue Dec 24 10:55:08 2019

Initial Calibration Verification

Page 1 of 3

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1620-ICV1620
 Lab FileID: 5W39833.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\5w39833.D
 Acq On : 24 Dec 2019 11:01 am
 Sample : icv1620-10
 Misc : ms39671,v5w1620,,,,,1
 MS Integration Params: Rteint.p

Vial: 5
 Operator: danat
 Inst : Air5w
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Dec 24 10:51:46 2019
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	100	0.00	8.08
2	Freon 152A	0.780	0.793	-1.7	99	0.00	3.99
3	Chlorodifluoromethane	0.321	0.329	-2.5	99	0.00	4.03
4	Propene	0.972	0.962	1.0	100	0.00	4.05
5	Chlorotrifluoroethene	1.637	1.631	0.4	100	0.00	4.05
6	Dichlorodifluoromethane	3.343	3.281	1.9	99	0.00	4.10
7	1-Chloro-1,1-difluoroetha	2.383	2.330	2.2	99	0.00	4.20
8	Chloromethane	1.112	1.080	2.9	99	0.00	4.22
9	Dichlorotetrafluoroethane	3.125	3.033	2.9	99	0.00	4.29
10	Vinyl Chloride	1.062	1.066	-0.4	98	0.00	4.39
11	1,3-Butadiene	0.729	0.735	-0.8	102	0.00	4.49
12	n-Butane	0.153	0.160	-4.6	101	0.00	4.52
13	Bromomethane	1.126	1.065	5.4	100	0.00	4.69
14	Chloroethane	0.492	0.490	0.4	99	0.00	4.82
15	Dichlorofluoromethane	2.510	2.425	3.4	100	0.00	4.89
16	Acetonitrile	0.807	0.742	8.1	104	0.00	5.10
17	Freon 123	2.491	2.465	1.0	101	0.00	5.21
18	Freon 123A	1.309	1.300	0.7	100	0.00	5.25
19	Bromoethene	0.970	0.975	-0.5	101	0.00	5.09
20	Acrolein	0.427	0.420	1.6	102	0.00	5.20
21	Trichlorofluoromethane	3.142	3.079	2.0	100	0.00	5.42
22	Acetone	0.457	0.422	7.7	102	0.00	5.31
23	Pentane	0.298	0.323	-8.4	100	0.00	5.69
24	Iodomethane	3.268	3.256	0.4	100	0.00	5.89
25	Isopropyl Alcohol	0.495	0.432	12.7	102	0.00	5.51
26	1,1-Dichloroethene	2.070	2.068	0.1	102	0.00	5.95
27	Freon 113	2.733	2.655	2.9	101	0.00	6.27
28	Methylene Chloride	1.198	1.123	6.3	101	0.00	6.06
29	Carbon Disulfide	3.288	3.397	-3.3	101	0.00	6.31
30	Ethanol	0.456	0.401	12.1	100	0.00	4.93
31	Acrylonitrile	1.036	1.007	2.8	101	0.00	5.69
32	3-Chloropropene	0.568	0.587	-3.3	100	0.00	6.16
33	trans-1,2-Dichloroethene	1.839	1.837	0.1	100	0.00	6.89
34	tert-Butyl Alcohol	2.554	2.570	-0.6	102	0.00	6.01
35	Methyl tert-Butyl Ether	3.372	3.362	0.3	100	0.00	7.15
36	Vinyl Acetate	3.474	3.416	1.7	101	0.00	7.24
37	1,1-Dichloroethane	2.376	2.317	2.5	100	0.00	7.09
38	2-Butanone	0.574	0.572	0.3	101	0.00	7.50
39	Hexane	1.882	1.897	-0.8	100	0.00	8.10
40	cis-1,2-Dichloroethene	1.813	1.805	0.4	100	0.00	7.92
41	Di-isopropyl Ether	0.945	0.980	-3.7	100	0.00	8.12
42	Ethyl Acetate	0.379	0.384	-1.3	100	0.00	8.17

Initial Calibration Verification

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1620-ICV1620
Lab FileID: 5W39833.D

43	Methyl Acrylate	2.165	2.150	0.7	102	0.00	8.15
44	Chloroform	2.741	2.627	4.2	100	0.00	8.22
45	2,4-Dimethylpentane	2.257	2.324	-3.0	101	0.00	9.03
46	Tetrahydrofuran	0.556	0.566	-1.8	100	0.00	8.66
47	1,1,1-Trichloroethane	2.678	2.543	5.0	100	0.00	9.26
48	1,2-Dichloroethane	1.682	1.652	1.8	100	0.00	8.99
49	Benzene	3.802	3.730	1.9	100	0.00	9.77
50	Carbon Tetrachloride	2.710	2.700	0.4	100	0.00	9.94
51	Cyclohexane	1.938	1.971	-1.7	100	0.00	10.06
52	2,3-Dimethylpentane	0.806	0.827	-2.6	99	0.00	10.34
53 I	1,4-Difluorobenzene	1.000	1.000	0.0	101	0.00	10.19
54	2,2,4-Trimethylpentane	1.756	1.748	0.5	100	0.00	11.01
55	Heptane	0.328	0.337	-2.7	98	0.00	11.35
56	Trichloroethene	0.489	0.461	5.7	100	0.00	11.00
57	1,2-Dichloropropane	0.405	0.409	-1.0	100	0.00	10.71
58	Dibromomethane	0.428	0.394	7.9	100	0.00	10.70
59	Ethyl Acrylate	0.714	0.746	-4.5	101	0.00	10.77
60	Methyl Methacrylate	0.344	0.360	-4.7	99	0.00	11.28
61	1,4-Dioxane	0.214	0.219	-2.3	101	0.00	11.04
62	Bromodichloromethane	0.787	0.784	0.4	99	0.00	10.96
63	cis-1,3-Dichloropropene	0.547	0.577	-5.5	100	0.00	12.07
64	4-Methyl-2-pentanone	0.314	0.329	-4.8	99	0.00	12.12
65	trans-1,3-Dichloropropene	0.459	0.474	-3.3	100	0.00	12.73
66	Toluene	1.240	1.169	5.7	99	0.00	13.28
67	1,1,2-Trichloroethane	0.382	0.399	-4.5	99	0.00	12.94
68	1,3-Dichloropropane	0.496	0.517	-4.2	99	0.00	13.33
69	2-Hexanone	0.340	0.383	-12.6	97	0.00	13.67
70	Ethyl Methacrylate	0.511	0.575	-12.5	97	0.00	13.71
71	Dibromochloromethane	0.630	0.690	-9.5	99	0.00	13.84
72	Tetrachloroethene	0.559	0.563	-0.7	99	0.00	14.78
73	1,2-Dibromoethane	0.531	0.522	1.7	99	0.00	14.15
74	Octane	0.802	0.868	-8.2	100	0.00	14.62
75	1,1,1,2-Tetrachloroethane	0.525	0.538	-2.5	99	0.00	15.70
76 I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.66
77	Chlorobenzene	1.848	1.730	6.4	99	0.00	15.72
78	Ethylbenzene	3.194	3.089	3.3	98	0.00	16.26
79	m,p-Xylene	2.418	2.349	2.9	99	0.00	16.51
80	Styrene	1.328	1.462	-10.1	98	0.00	17.06
81	Nonane	1.965	1.899	3.4	100	0.00	17.59
82	o-Xylene	2.701	2.475	8.4	99	0.00	17.20
83	Bromoform	1.115	1.102	1.2	98	0.00	16.61
84	1,1,2,2-Tetrachloroethane	2.051	1.789	12.8	97	0.00	17.21
85	1,2,3-Trichloropropane	1.362	1.190	12.6	97	0.00	17.40
86	Isopropylbenzene	3.787	3.521	7.0	99	0.00	18.11
87	Bromobenzene	0.719	0.709	1.4	98	0.00	18.21
88	2-Chlorotoluene	0.695	0.705	-1.4	97	0.00	18.84
89	n-Propylbenzene	0.701	0.778	-11.0	98	0.00	18.92
90 S	4-Bromofluorobenzene	0.875	0.964	-10.2	104	0.00	17.90
91	4-Ethyltoluene	2.461	2.705	-9.9	97	0.00	19.15
92	1,3,5-Trimethylbenzene	2.773	2.641	4.8	98	0.00	19.28
93	alpha-Methylstyrene	0.870	1.008	-15.9	96	0.00	19.52
94	tert-Butylbenzene	0.630	0.605	4.0	97	0.00	19.87
95	1,2,4-Trimethylbenzene	2.391	2.395	-0.2	96	0.00	19.88
96	1,3-Dichlorobenzene	0.908	0.905	0.3	93	0.00	20.07
97	Benzyl Chloride	0.935	0.949	-1.5	86	0.00	20.07
98	1,4-Dichlorobenzene	0.785	0.771	1.8	91	0.00	20.17
99	sec-Butylbenzene	0.712	0.713	-0.1	97	0.00	20.26
100	p-Isopropyltoluene	0.726	0.766	-5.5	94	0.00	20.50

Initial Calibration Verification

Page 3 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1620-ICV1620
Lab FileID: 5W39833.D

101	1,2-Dichlorobenzene	0.969	0.924	4.6	88	0.00	20.65
102	n-Butylbenzene	0.465	0.544	-17.0	93	0.00	21.08
103	Hexachloroethane	1.109	0.998	10.0	95	0.00	21.55
104	1,2,4-Trichlorobenzene	0.295	0.276	6.4	100	0.00	22.91
105	Naphthalene	0.791	0.719	9.1	96	0.00	23.03
106	Hexachlorobutadiene	1.097	1.058	3.6	101	0.00	23.49
107 I	Bromochloromethane (A)	1.000	1.000	0.0	100	0.00	8.08
108	TVHC as equiv Pentane	8.144	8.253	-1.3	101	0.00	5.69

(#) = Out of Range
5w39825.D m5w1620.M

SPCC's out = 0 CCC's out = 0
Tue Dec 24 11:35:31 2019

Continuing Calibration Summary

Page 1 of 3

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1621-CC1620
 Lab FileID: 5W39835.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\5w39835.D
 Acq On : 24 Dec 2019 12:38 pm
 Sample : cc1620-10
 Misc : ms39671,v5w1621,,,,,1
 MS Integration Params: Rteint.p

Vial: 3
 Operator: danat
 Inst : Air5w
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Dec 24 10:51:46 2019
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	97	0.00	8.08
2	Freon 152A	0.780	0.804	-3.1	97	0.00	3.98
3	Chlorodifluoromethane	0.321	0.334	-4.0	97	0.00	4.02
4	Propene	0.972	0.985	-1.3	99	0.00	4.04
5	Chlorotrifluoroethene	1.637	1.650	-0.8	97	0.00	4.05
6	Dichlorodifluoromethane	3.343	3.335	0.2	97	0.00	4.09
7	1-Chloro-1,1-difluoroetha	2.383	2.383	0.0	98	0.00	4.20
8	Chloromethane	1.112	1.119	-0.6	98	0.00	4.22
9	Dichlorotetrafluoroethane	3.125	3.137	-0.4	98	0.00	4.29
10	Vinyl Chloride	1.062	1.117	-5.2	99	0.00	4.38
11	1,3-Butadiene	0.729	0.739	-1.4	99	0.00	4.48
12	n-Butane	0.153	0.159	-3.9	97	0.00	4.52
13	Bromomethane	1.126	1.077	4.4	97	0.00	4.69
14	Chloroethane	0.492	0.506	-2.8	98	0.00	4.82
15	Dichlorofluoromethane	2.510	2.458	2.1	98	0.00	4.88
16	Acetonitrile	0.807	0.745	7.7	101	0.00	5.10
17	Freon 123	2.491	2.501	-0.4	98	0.00	5.20
18	Freon 123A	1.309	1.320	-0.8	98	0.00	5.25
19	Bromoethene	0.970	0.990	-2.1	98	0.00	5.09
20	Acrolein	0.427	0.419	1.9	98	0.00	5.19
21	Trichlorofluoromethane	3.142	3.091	1.6	97	0.00	5.41
22	Acetone	0.457	0.420	8.1	98	0.00	5.30
23	Pentane	0.298	0.327	-9.7	97	0.00	5.69
24	Iodomethane	3.268	3.295	-0.8	97	0.00	5.88
25	Isopropyl Alcohol	0.495	0.434	12.3	98	0.00	5.51
26	1,1-Dichloroethene	2.070	2.100	-1.4	100	0.00	5.94
27	Freon 113	2.733	2.709	0.9	99	0.00	6.27
28	Methylene Chloride	1.198	1.148	4.2	99	0.00	6.06
29	Carbon Disulfide	3.288	3.484	-6.0	99	0.00	6.31
30	Ethanol	0.456	0.411	9.9	99	0.00	4.93
31	Acrylonitrile	1.036	1.019	1.6	98	0.00	5.68
32	3-Chloropropene	0.568	0.599	-5.5	98	0.00	6.15
33	trans-1,2-Dichloroethene	1.839	1.895	-3.0	99	0.00	6.89
34	tert-Butyl Alcohol	2.554	2.608	-2.1	99	0.00	6.01
35	Methyl tert-Butyl Ether	3.372	3.470	-2.9	99	0.00	7.15
36	Vinyl Acetate	3.474	3.523	-1.4	100	0.00	7.24
37	1,1-Dichloroethane	2.376	2.390	-0.6	99	0.00	7.09
38	2-Butanone	0.574	0.576	-0.3	98	0.00	7.50
39	Hexane	1.882	1.954	-3.8	99	0.00	8.10
40	cis-1,2-Dichloroethene	1.813	1.845	-1.8	98	0.00	7.91
41	Di-isopropyl Ether	0.945	1.005	-6.3	98	0.00	8.12
42	Ethyl Acetate	0.379	0.391	-3.2	98	0.00	8.17

Continuing Calibration Summary

Page 2 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1621-CC1620
Lab FileID: 5W39835.D

43	Methyl Acrylate	2.165	2.147	0.8	98	0.00	8.15
44	Chloroform	2.741	2.673	2.5	98	0.00	8.22
45	2,4-Dimethylpentane	2.257	2.347	-4.0	98	0.00	9.03
46	Tetrahydrofuran	0.556	0.581	-4.5	98	0.00	8.66
47	1,1,1-Trichloroethane	2.678	2.603	2.8	98	0.00	9.25
48	1,2-Dichloroethane	1.682	1.667	0.9	98	0.00	8.99
49	Benzene	3.802	3.839	-1.0	99	0.00	9.77
50	Carbon Tetrachloride	2.710	2.748	-1.4	98	0.00	9.93
51	Cyclohexane	1.938	2.033	-4.9	100	0.00	10.05
52	2,3-Dimethylpentane	0.806	0.853	-5.8	98	0.00	10.34
53 I	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00	10.19
54	2,2,4-Trimethylpentane	1.756	1.802	-2.6	99	0.00	11.01
55	Heptane	0.328	0.345	-5.2	98	0.00	11.35
56	Trichloroethene	0.489	0.470	3.9	99	0.00	11.00
57	1,2-Dichloropropane	0.405	0.421	-4.0	99	0.00	10.71
58	Dibromomethane	0.428	0.402	6.1	99	0.00	10.70
59	Ethyl Acrylate	0.714	0.754	-5.6	99	0.00	10.77
60	Methyl Methacrylate	0.344	0.369	-7.3	98	0.00	11.28
61	1,4-Dioxane	0.214	0.223	-4.2	99	0.00	11.04
62	Bromodichloromethane	0.787	0.805	-2.3	98	0.00	10.96
63	cis-1,3-Dichloropropene	0.547	0.583	-6.6	98	0.00	12.06
64	4-Methyl-2-pentanone	0.314	0.337	-7.3	98	0.00	12.12
65	trans-1,3-Dichloropropene	0.459	0.471	-2.6	97	0.00	12.73
66	Toluene	1.240	1.203	3.0	98	0.00	13.28
67	1,1,2-Trichloroethane	0.382	0.406	-6.3	98	0.00	12.94
68	1,3-Dichloropropane	0.496	0.531	-7.1	98	0.00	13.33
69	2-Hexanone	0.340	0.391	-15.0	96	0.00	13.67
70	Ethyl Methacrylate	0.511	0.586	-14.7	96	0.00	13.71
71	Dibromochloromethane	0.630	0.701	-11.3	97	0.00	13.84
72	Tetrachloroethene	0.559	0.565	-1.1	96	0.00	14.78
73	1,2-Dibromoethane	0.531	0.531	0.0	98	0.00	14.15
74	Octane	0.802	0.888	-10.7	99	0.00	14.62
75	1,1,1,2-Tetrachloroethane	0.525	0.551	-5.0	98	0.00	15.70
76 I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00	15.66
77	Chlorobenzene	1.848	1.754	5.1	98	0.00	15.72
78	Ethylbenzene	3.194	3.171	0.7	98	0.00	16.26
79	m,p-Xylene	2.418	2.382	1.5	97	0.02	16.53
80	Styrene	1.328	1.485	-11.8	97	0.00	17.06
81	Nonane	1.965	1.922	2.2	99	0.00	17.59
82	o-Xylene	2.701	2.527	6.4	98	0.00	17.20
83	Bromoform	1.115	1.118	-0.3	96	0.00	16.61
84	1,1,2,2-Tetrachloroethane	2.051	1.820	11.3	96	0.00	17.21
85	1,2,3-Trichloropropane	1.362	1.217	10.6	97	0.00	17.40
86	Isopropylbenzene	3.787	3.571	5.7	98	0.00	18.11
87	Bromobenzene	0.719	0.720	-0.1	96	0.00	18.21
88	2-Chlorotoluene	0.695	0.723	-4.0	97	0.00	18.84
89	n-Propylbenzene	0.701	0.801	-14.3	98	0.00	18.92
90 S	4-Bromofluorobenzene	0.875	0.928	-6.1	97	0.00	17.90
91	4-Ethyltoluene	2.461	2.745	-11.5	95	0.00	19.15
92	1,3,5-Trimethylbenzene	2.773	2.684	3.2	97	0.00	19.28
93	alpha-Methylstyrene	0.870	1.028	-18.2	95	0.00	19.52
94	tert-Butylbenzene	0.630	0.624	1.0	97	0.00	19.87
95	1,2,4-Trimethylbenzene	2.391	2.467	-3.2	96	0.00	19.88
96	1,3-Dichlorobenzene	0.908	0.925	-1.9	92	0.00	20.07
97	Benzyl Chloride	0.935	0.982	-5.0	87	0.00	20.07
98	1,4-Dichlorobenzene	0.785	0.793	-1.0	91	0.00	20.17
99	sec-Butylbenzene	0.712	0.727	-2.1	96	0.00	20.26
100	p-Isopropyltoluene	0.726	0.785	-8.1	94	0.00	20.50

6.9.3
6

Continuing Calibration Summary

Page 3 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1621-CC1620
Lab FileID: 5W39835.D

101	1,2-Dichlorobenzene	0.969	0.959	1.0	89	0.00	20.65
102	n-Butylbenzene	0.465	0.563	-21.1	93	0.00	21.08
103	Hexachloroethane	1.109	1.022	7.8	94	0.00	21.55
104	1,2,4-Trichlorobenzene	0.295	0.281	4.7	99	0.00	22.91
105	Naphthalene	0.791	0.733	7.3	95	0.00	23.03
106	Hexachlorobutadiene	1.097	1.067	2.7	99	0.00	23.49
107 I	Bromochloromethane (A)	1.000	1.000	0.0	97	0.00	8.08
108	TVHC as equiv Pentane	8.144	8.276	-1.6	98	0.00	5.69

(#) = Out of Range
5w39825.D m5w1620.M

SPCC's out = 0 CCC's out = 0
Tue Dec 24 14:40:18 2019

Continuing Calibration Summary

Page 1 of 3

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1622-CC1620
 Lab FileID: 5W39859.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\5w39859.D
 Acq On : 26 Dec 2019 10:17 am
 Sample : cc1620-10
 Misc : ms39818,v5w1622,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: danat
 Inst : Air5w
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Dec 24 10:51:46 2019
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	92	0.00	8.09
2	Freon 152A	0.780	0.820	-5.1	95	0.00	3.99
3	Chlorodifluoromethane	0.321	0.337	-5.0	93	0.00	4.03
4	Propene	0.972	1.029	-5.9	99	0.00	4.05
5	Chlorotrifluoroethene	1.637	1.654	-1.0	93	0.00	4.05
6	Dichlorodifluoromethane	3.343	3.375	-1.0	94	0.00	4.10
7	1-Chloro-1,1-difluoroetha	2.383	2.427	-1.8	95	0.01	4.21
8	Chloromethane	1.112	1.176	-5.8	99	0.00	4.22
9	Dichlorotetrafluoroethane	3.125	3.218	-3.0	96	0.00	4.30
10	Vinyl Chloride	1.062	1.154	-8.7	98	0.00	4.39
11	1,3-Butadiene	0.729	0.811	-11.2	104	0.00	4.49
12	n-Butane	0.153	0.179	-17.0	104	0.00	4.52
13	Bromomethane	1.126	1.133	-0.6	98	0.00	4.69
14	Chloroethane	0.492	0.533	-8.3	99	0.00	4.82
15	Dichlorofluoromethane	2.510	2.612	-4.1	99	0.00	4.89
16	Acetonitrile	0.807	0.817	-1.2	106	0.01	5.11
17	Freon 123	2.491	2.628	-5.5	99	0.00	5.21
18	Freon 123A	1.309	1.361	-4.0	96	0.00	5.25
19	Bromoethene	0.970	1.025	-5.7	97	0.00	5.09
20	Acrolein	0.427	0.448	-4.9	100	0.00	5.20
21	Trichlorofluoromethane	3.142	3.135	0.2	94	0.00	5.42
22	Acetone	0.457	0.461	-0.9	103	0.00	5.31
23	Pentane	0.298	0.339	-13.8	97	0.00	5.69
24	Iodomethane	3.268	3.273	-0.2	92	0.00	5.89
25	Isopropyl Alcohol	0.495	0.453	8.5	98	0.00	5.51
26	1,1-Dichloroethene	2.070	2.126	-2.7	96	0.00	5.95
27	Freon 113	2.733	2.713	0.7	95	0.00	6.27
28	Methylene Chloride	1.198	1.150	4.0	95	0.01	6.06
29	Carbon Disulfide	3.288	3.515	-6.9	96	0.00	6.32
30	Ethanol	0.456	0.433	5.0	100	0.00	4.93
31	Acrylonitrile	1.036	1.053	-1.6	97	0.00	5.69
32	3-Chloropropene	0.568	0.603	-6.2	94	0.00	6.16
33	trans-1,2-Dichloroethene	1.839	1.887	-2.6	95	0.00	6.89
34	tert-Butyl Alcohol	2.554	2.527	1.1	92	0.00	6.02
35	Methyl tert-Butyl Ether	3.372	3.405	-1.0	93	0.00	7.15
36	Vinyl Acetate	3.474	3.548	-2.1	96	0.00	7.25
37	1,1-Dichloroethane	2.376	2.444	-2.9	97	0.00	7.09
38	2-Butanone	0.574	0.578	-0.7	94	0.00	7.50
39	Hexane	1.882	1.999	-6.2	97	0.00	8.10
40	cis-1,2-Dichloroethene	1.813	1.884	-3.9	96	0.00	7.92
41	Di-isopropyl Ether	0.945	1.003	-6.1	94	0.00	8.12
42	Ethyl Acetate	0.379	0.400	-5.5	95	0.00	8.17

Continuing Calibration Summary

Page 2 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1622-CC1620
Lab FileID: 5W39859.D

43	Methyl Acrylate	2.165	2.209	-2.0	96	0.00	8.16
44	Chloroform	2.741	2.726	0.5	95	0.00	8.22
45	2,4-Dimethylpentane	2.257	2.419	-7.2	96	0.00	9.03
46	Tetrahydrofuran	0.556	0.573	-3.1	93	0.00	8.66
47	1,1,1-Trichloroethane	2.678	2.612	2.5	94	0.00	9.26
48	1,2-Dichloroethane	1.682	1.714	-1.9	96	0.00	8.99
49	Benzene	3.802	3.868	-1.7	95	0.00	9.77
50	Carbon Tetrachloride	2.710	2.794	-3.1	95	0.00	9.94
51	Cyclohexane	1.938	2.067	-6.7	97	0.00	10.06
52	2,3-Dimethylpentane	0.806	0.868	-7.7	96	0.00	10.34
53 I	1,4-Difluorobenzene	1.000	1.000	0.0	93	0.00	10.19
54	2,2,4-Trimethylpentane	1.756	1.870	-6.5	98	0.00	11.01
55	Heptane	0.328	0.357	-8.8	96	0.00	11.35
56	Trichloroethene	0.489	0.481	1.6	96	0.00	11.00
57	1,2-Dichloropropane	0.405	0.432	-6.7	97	0.00	10.71
58	Dibromomethane	0.428	0.400	6.5	93	0.00	10.70
59	Ethyl Acrylate	0.714	0.764	-7.0	95	0.00	10.77
60	Methyl Methacrylate	0.344	0.377	-9.6	95	0.00	11.29
61	1,4-Dioxane	0.214	0.218	-1.9	92	0.00	11.04
62	Bromodichloromethane	0.787	0.829	-5.3	96	0.00	10.96
63	cis-1,3-Dichloropropene	0.547	0.597	-9.1	95	0.00	12.07
64	4-Methyl-2-pentanone	0.314	0.338	-7.6	93	0.00	12.12
65	trans-1,3-Dichloropropene	0.459	0.483	-5.2	94	0.00	12.73
66	Toluene	1.240	1.211	2.3	94	0.00	13.28
67	1,1,2-Trichloroethane	0.382	0.419	-9.7	96	0.00	12.94
68	1,3-Dichloropropane	0.496	0.548	-10.5	96	0.00	13.33
69	2-Hexanone	0.340	0.389	-14.4	91	0.00	13.68
70	Ethyl Methacrylate	0.511	0.590	-15.5	92	0.00	13.71
71	Dibromochloromethane	0.630	0.723	-14.8	95	0.00	13.84
72	Tetrachloroethene	0.559	0.577	-3.2	93	0.00	14.78
73	1,2-Dibromoethane	0.531	0.540	-1.7	95	0.00	14.15
74	Octane	0.802	0.927	-15.6	98	0.00	14.62
75	1,1,1,2-Tetrachloroethane	0.525	0.562	-7.0	95	0.00	15.70
76 I	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00	15.66
77	Chlorobenzene	1.848	1.781	3.6	95	0.00	15.72
78	Ethylbenzene	3.194	3.204	-0.3	95	0.00	16.26
79	m,p-Xylene	2.418	2.408	0.4	94	0.02	16.54
80	Styrene	1.328	1.497	-12.7	94	0.00	17.06
81	Nonane	1.965	2.029	-3.3	100	0.00	17.59
82	o-Xylene	2.701	2.558	5.3	95	0.00	17.20
83	Bromoform	1.115	1.162	-4.2	96	0.00	16.61
84	1,1,2,2-Tetrachloroethane	2.051	1.881	8.3	95	0.00	17.21
85	1,2,3-Trichloropropane	1.362	1.260	7.5	96	0.00	17.40
86	Isopropylbenzene	3.787	3.596	5.0	95	0.00	18.11
87	Bromobenzene	0.719	0.748	-4.0	96	0.00	18.21
88	2-Chlorotoluene	0.695	0.735	-5.8	94	0.00	18.84
89	n-Propylbenzene	0.701	0.814	-16.1	96	0.00	18.92
90 S	4-Bromofluorobenzene	0.875	0.967	-10.5	97	0.00	17.90
91	4-Ethyltoluene	2.461	2.799	-13.7	93	0.00	19.15
92	1,3,5-Trimethylbenzene	2.773	2.705	2.5	93	0.00	19.28
93	alpha-Methylstyrene	0.870	1.049	-20.6	93	0.00	19.52
94	tert-Butylbenzene	0.630	0.624	1.0	94	0.00	19.87
95	1,2,4-Trimethylbenzene	2.391	2.487	-4.0	93	0.00	19.88
96	1,3-Dichlorobenzene	0.908	0.967	-6.5	93	0.00	20.07
97	Benzyl Chloride	0.935	1.043	-11.6	88	0.00	20.07
98	1,4-Dichlorobenzene	0.785	0.834	-6.2	92	0.00	20.17
99	sec-Butylbenzene	0.712	0.731	-2.7	93	0.00	20.26
100	p-Isopropyltoluene	0.726	0.798	-9.9	91	0.00	20.50

6.9.4
6

Continuing Calibration Summary

Page 3 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1622-CC1620
Lab FileID: 5W39859.D

101	1,2-Dichlorobenzene	0.969	0.984	-1.5	88	0.00	20.65
102	n-Butylbenzene	0.465	0.555	-19.4	88	0.00	21.08
103	Hexachloroethane	1.109	1.046	5.7	93	0.00	21.55
104	1,2,4-Trichlorobenzene	0.295	0.278	5.8	94	0.00	22.91
105	Naphthalene	0.791	0.686	13.3	85	0.00	23.03
106	Hexachlorobutadiene	1.097	1.042	5.0	92	0.00	23.49
107 I	Bromochloromethane (A)	1.000	1.000	0.0	92	0.00	8.09
108	TVHC as equiv Pentane	8.144	8.588	-5.5	97	0.00	5.69

(#) = Out of Range
5w39825.D m5w1620.M

SPCC's out = 0 CCC's out = 0
Thu Dec 26 13:53:43 2019

Continuing Calibration Summary

Page 1 of 3

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1623-CC1620
 Lab FileID: 5W39886.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\5w39886.D
 Acq On : 27 Dec 2019 10:55 am
 Sample : cc1620-10
 Misc : ms39917,v5w1623,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: danat
 Inst : Air5w
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Dec 24 10:51:46 2019
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	100	0.00	8.08
2	Freon 152A	0.780	0.756	3.1	95	0.00	3.99
3	Chlorodifluoromethane	0.321	0.310	3.4	93	0.00	4.02
4	Propene	0.972	0.929	4.4	97	0.00	4.05
5	Chlorotrifluoroethene	1.637	1.565	4.4	96	0.00	4.05
6	Dichlorodifluoromethane	3.343	3.098	7.3	94	0.00	4.10
7	1-Chloro-1,1-difluoroetha	2.383	2.194	7.9	93	0.00	4.20
8	Chloromethane	1.112	1.063	4.4	97	0.00	4.22
9	Dichlorotetrafluoroethane	3.125	2.991	4.3	97	0.00	4.29
10	Vinyl Chloride	1.062	1.060	0.2	97	0.00	4.39
11	1,3-Butadiene	0.729	0.689	5.5	96	0.00	4.49
12	n-Butane	0.153	0.148	3.3	93	0.00	4.52
13	Bromomethane	1.126	1.004	10.8	94	0.00	4.69
14	Chloroethane	0.492	0.472	4.1	95	0.00	4.82
15	Dichlorofluoromethane	2.510	2.292	8.7	94	0.00	4.89
16	Acetonitrile	0.807	0.700	13.3	98	0.00	5.10
17	Freon 123	2.491	2.349	5.7	96	0.00	5.21
18	Freon 123A	1.309	1.229	6.1	94	0.00	5.25
19	Bromoethene	0.970	0.926	4.5	95	0.00	5.09
20	Acrolein	0.427	0.385	9.8	93	0.00	5.20
21	Trichlorofluoromethane	3.142	2.910	7.4	94	0.00	5.42
22	Acetone	0.457	0.394	13.8	95	0.00	5.31
23	Pentane	0.298	0.310	-4.0	96	0.00	5.69
24	Iodomethane	3.268	3.160	3.3	97	0.00	5.89
25	Isopropyl Alcohol	0.495	0.392	20.8	92	0.00	5.51
26	1,1-Dichloroethene	2.070	1.971	4.8	97	0.00	5.95
27	Freon 113	2.733	2.567	6.1	97	0.00	6.27
28	Methylene Chloride	1.198	1.096	8.5	98	0.00	6.06
29	Carbon Disulfide	3.288	3.302	-0.4	98	0.00	6.31
30	Ethanol	0.456	0.392	14.0	98	0.00	4.93
31	Acrylonitrile	1.036	0.950	8.3	95	0.00	5.69
32	3-Chloropropene	0.568	0.573	-0.9	97	0.00	6.16
33	trans-1,2-Dichloroethene	1.839	1.769	3.8	96	0.00	6.89
34	tert-Butyl Alcohol	2.554	2.406	5.8	95	0.00	6.01
35	Methyl tert-Butyl Ether	3.372	3.220	4.5	95	0.00	7.15
36	Vinyl Acetate	3.474	3.243	6.6	95	0.00	7.24
37	1,1-Dichloroethane	2.376	2.242	5.6	97	0.00	7.09
38	2-Butanone	0.574	0.536	6.6	95	0.00	7.50
39	Hexane	1.882	1.838	2.3	97	0.00	8.10
40	cis-1,2-Dichloroethene	1.813	1.746	3.7	96	0.00	7.92
41	Di-isopropyl Ether	0.945	0.959	-1.5	97	0.00	8.12
42	Ethyl Acetate	0.379	0.366	3.4	95	0.00	8.17

Continuing Calibration Summary

Page 2 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1623-CC1620
Lab FileID: 5W39886.D

43	Methyl Acrylate	2.165	2.026	6.4	96	0.00	8.16
44	Chloroform	2.741	2.561	6.6	97	0.00	8.22
45	2,4-Dimethylpentane	2.257	2.240	0.8	97	0.00	9.03
46	Tetrahydrofuran	0.556	0.546	1.8	96	0.00	8.66
47	1,1,1-Trichloroethane	2.678	2.488	7.1	97	0.00	9.26
48	1,2-Dichloroethane	1.682	1.577	6.2	96	0.00	8.99
49	Benzene	3.802	3.671	3.4	98	0.00	9.77
50	Carbon Tetrachloride	2.710	2.627	3.1	97	0.00	9.94
51	Cyclohexane	1.938	1.905	1.7	97	0.00	10.05
52	2,3-Dimethylpentane	0.806	0.808	-0.2	97	0.00	10.34
53 I	1,4-Difluorobenzene	1.000	1.000	0.0	101	0.00	10.19
54	2,2,4-Trimethylpentane	1.756	1.696	3.4	97	0.00	11.01
55	Heptane	0.328	0.334	-1.8	98	0.00	11.35
56	Trichloroethene	0.489	0.448	8.4	97	0.00	11.00
57	1,2-Dichloropropane	0.405	0.398	1.7	97	0.00	10.71
58	Dibromomethane	0.428	0.385	10.0	98	0.00	10.70
59	Ethyl Acrylate	0.714	0.694	2.8	94	0.00	10.77
60	Methyl Methacrylate	0.344	0.344	0.0	95	0.00	11.29
61	1,4-Dioxane	0.214	0.205	4.2	95	0.00	11.04
62	Bromodichloromethane	0.787	0.757	3.8	96	0.00	10.96
63	cis-1,3-Dichloropropene	0.547	0.549	-0.4	95	0.00	12.07
64	4-Methyl-2-pentanone	0.314	0.309	1.6	93	0.00	12.12
65	trans-1,3-Dichloropropene	0.459	0.436	5.0	93	0.00	12.73
66	Toluene	1.240	1.146	7.6	97	0.00	13.28
67	1,1,2-Trichloroethane	0.382	0.392	-2.6	98	0.00	12.94
68	1,3-Dichloropropane	0.496	0.508	-2.4	97	0.00	13.33
69	2-Hexanone	0.340	0.353	-3.8	90	0.00	13.67
70	Ethyl Methacrylate	0.511	0.551	-7.8	93	0.00	13.71
71	Dibromochloromethane	0.630	0.679	-7.8	97	0.00	13.84
72	Tetrachloroethene	0.559	0.551	1.4	97	0.00	14.78
73	1,2-Dibromoethane	0.531	0.506	4.7	97	0.00	14.15
74	Octane	0.802	0.831	-3.6	96	0.00	14.62
75	1,1,1,2-Tetrachloroethane	0.525	0.529	-0.8	98	0.00	15.70
76 I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00	15.66
77	Chlorobenzene	1.848	1.715	7.2	97	0.00	15.72
78	Ethylbenzene	3.194	3.063	4.1	96	0.00	16.26
79	m,p-Xylene	2.418	2.316	4.2	96	0.00	16.52
80	Styrene	1.328	1.439	-8.4	95	0.00	17.06
81	Nonane	1.965	1.858	5.4	97	0.00	17.60
82	o-Xylene	2.701	2.465	8.7	97	0.00	17.20
83	Bromoform	1.115	1.118	-0.3	98	0.00	16.61
84	1,1,2,2-Tetrachloroethane	2.051	1.794	12.5	96	0.00	17.21
85	1,2,3-Trichloropropane	1.362	1.190	12.6	96	0.00	17.40
86	Isopropylbenzene	3.787	3.482	8.1	97	0.00	18.11
87	Bromobenzene	0.719	0.724	-0.7	98	0.00	18.21
88	2-Chlorotoluene	0.695	0.710	-2.2	96	0.00	18.84
89	n-Propylbenzene	0.701	0.789	-12.6	98	0.00	18.92
90 S	4-Bromofluorobenzene	0.875	0.983	-12.3	104	0.00	17.90
91	4-Ethyltoluene	2.461	2.710	-10.1	96	0.00	19.15
92	1,3,5-Trimethylbenzene	2.773	2.593	6.5	95	0.00	19.28
93	alpha-Methylstyrene	0.870	1.002	-15.2	94	0.00	19.52
94	tert-Butylbenzene	0.630	0.611	3.0	97	0.00	19.87
95	1,2,4-Trimethylbenzene	2.391	2.409	-0.8	95	0.00	19.88
96	1,3-Dichlorobenzene	0.908	0.944	-4.0	96	0.00	20.07
97	Benzyl Chloride	0.935	1.013	-8.3	91	0.00	20.07
98	1,4-Dichlorobenzene	0.785	0.806	-2.7	94	0.00	20.17
99	sec-Butylbenzene	0.712	0.718	-0.8	96	0.00	20.26
100	p-Isopropyltoluene	0.726	0.777	-7.0	94	0.00	20.50

Continuing Calibration Summary

Page 3 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V5W1623-CC1620
Lab FileID: 5W39886.D

101	1,2-Dichlorobenzene	0.969	0.963	0.6	91	0.00	20.65
102	n-Butylbenzene	0.465	0.539	-15.9	90	0.00	21.08
103	Hexachloroethane	1.109	1.011	8.8	95	0.00	21.55
104	1,2,4-Trichlorobenzene	0.295	0.270	8.5	97	0.00	22.91
105	Naphthalene	0.791	0.662	16.3	87	0.00	23.03
106	Hexachlorobutadiene	1.097	1.000	8.8	94	0.00	23.49
107 I	Bromochloromethane (A)	1.000	1.000	0.0	100	0.00	8.08
108	TVHC as equiv Pentane	8.144	7.838	3.8	96	0.00	5.69

(#) = Out of Range
5W39825.D m5w1620.M

SPCC's out = 0 CCC's out = 0
Fri Dec 27 13:33:38 2019

Initial Calibration Summary

Page 1 of 4

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICC571
 Lab FileID: 6W13827.D

Response Factor Report GCMS6W

Method : C:\msdchem\1\methods\m6w571.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Calibration Files

20 =6W13828.D 0.5 =6W13825.D 0.2 =6W13822.D 0.1 =6W13823.D
 0.04=6W13824.D 10 =6W13827.D 5 =6W13826.D 40 =6W13830.D
 = =

Compound	20	0.5	0.2	0.1	0.04	10	5	40	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----									
2) 1,1,1-Trifluoroethane									0.000	-1.00
3) Freon 152A										
	0.570	0.806	0.663	0.630		0.634	0.675	0.531	0.644	13.61
4) Chlorodifluoromethane										
	0.225	0.316	0.243			0.253	0.270	0.211	0.253	14.72
5) Propene										
	0.610	0.911	0.696	0.765		0.688	0.720	0.558	0.707	16.07
6) Chlorotrifluoroethene										
	1.543	2.224	1.838	1.806	1.827	1.725	1.800	1.450	1.777	12.97
7) Dichlorodifluoromethane										
	2.464	3.457	2.805	2.921	3.327	2.677	2.823	2.266	2.843	14.09
8) 1-Chloro-1,1-difluoroethane										
	1.597	2.326	1.916	1.933	2.061	1.802	1.921	1.516	1.884	13.54
9) Chloromethane										
	0.595	0.871	0.716	0.749		0.660	0.696	0.546	0.690	15.39
10) Dichlorotetrafluoroethane										
	2.342	3.284	2.705	2.731	2.865	2.625	2.718	2.168	2.680	12.48
11) Vinyl Chloride										
	0.769	1.071	0.874	0.845		0.864	0.886	0.723	0.862	12.76
12) 1,3-Butadiene										
	0.535	0.725	0.589			0.595	0.604	0.502	0.592	12.94
13) n-Butane										
	0.138	0.184	0.126			0.153	0.156	0.128	0.148	14.77
14) Bromomethane										
	0.850	1.142	1.000	0.982	0.884	0.937	0.966	0.798	0.945	11.18
15) Acrolein										
	0.400	0.463	0.398	0.374		0.429	0.441	0.381	0.412	7.94
16) Chloroethane										
	0.385	0.529	0.395			0.415	0.434	0.362	0.420	14.02
17) Dichlorofluoromethane										
	1.741	2.445	1.996	2.041	1.994	1.904	2.002	1.627	1.969	12.25
18) Acetonitrile										
	0.674	0.805	1.096	1.044		0.733	0.755	0.628	0.819	22.06
19) Freon 123										
	2.237	3.085	2.572	2.486	2.333	2.454	2.548	2.141	2.482	11.55
20) Freon 123A										
	1.434	1.950	1.546	1.476	1.513	1.554	1.607	1.369	1.556	11.29
21) Bromoethene										
	0.976	1.294	1.036	1.067	0.919	1.056	1.086	0.926	1.045	11.36
22) Trichlorofluoromethane										
	2.480	3.342	2.734	2.763	2.720	2.718	2.817	2.363	2.742	10.50
23) Acetone										

Initial Calibration Summary

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICC571
Lab FileID: 6W13827.D

		0.427	0.544	0.620	0.608		0.463	0.475	0.410		0.507	16.74
24)	Pentane											
		0.243	0.301	0.215			0.258	0.269	0.232		0.253	11.99
25)	1,1-Dichloro-1-fluoroethane											
											0.000	-1.00
26)	Iodomethane											
		3.129	4.043	3.444	3.453	3.362	3.369	3.445	3.037		3.410	8.78
27)	Isopropyl Alcohol											
		1.619	1.912	2.859			1.768	1.811	1.543		1.919	24.99
28)	1,1-Dichloroethene											
		1.463	1.911	1.618	1.567		1.568	1.615	1.417		1.594	9.97
29)	Freon 113											
		2.259	2.884	2.398	2.349	2.374	2.419	2.438	2.137		2.407	8.99
30)	Methylene Chloride											
		0.938	1.234	1.096	1.292	1.618	0.992	1.013	0.896		1.135	21.08
31)	Carbon Disulfide											
		2.802	3.383	2.908	3.049	2.915	2.973	2.994	2.656		2.960	7.11
32)	Ethanol											
		0.264	0.313				0.287	0.302	0.240		0.281	10.44
33)	Acrylonitrile											
		0.746	0.816	0.710			0.794	0.805	0.717		0.765	6.06
34)	3-Chloropropene											
		0.511	0.586	0.483	0.361		0.537	0.536	0.489		0.500	14.15
35)	trans-1,2-Dichloroethene											
		1.338	1.654	1.338	1.295	1.143	1.412	1.452	1.291		1.365	10.87
36)	tert-Butyl Alcohol											
		2.077	2.423	2.289	2.219	2.137	2.192	2.241	1.980		2.195	6.14
37)	Methyl tert-Butyl Ether											
		2.843	3.486	2.902	2.929	3.088	2.971	3.018	2.757		2.999	7.38
38)	Vinyl Acetate											
		2.515	2.801	2.273			2.560	2.542	2.439		2.522	6.84
39)	1,1-Dichloroethane											
		1.681	2.206	1.853	1.757	1.789	1.779	1.822	1.625		1.814	9.63
40)	2-Butanone											
		0.515	0.501	0.527	0.370		0.527	0.529	0.507		0.497	11.43
41)	Hexane											
		1.428	1.784	1.427	1.391		1.496	1.523	1.350		1.486	9.70
42)	cis-1,2-Dichloroethene											
		1.290	1.581	1.307	1.263	1.083	1.338	1.372	1.259		1.312	10.58
43)	Di-isopropyl Ether											
		0.934	1.148	0.901	0.831		0.960	0.968	0.901		0.949	10.45
44)	Ethyl Acetate											
		0.306	0.314	0.248			0.313	0.305	0.291		0.296	8.43
45)	Methyl Acrylate											
		1.762	1.811	1.646	1.480		1.816	1.803	1.673		1.713	7.19
46)	Chloroform											
		2.110	2.637	2.120	2.135	2.189	2.168	2.181	2.036		2.197	8.40
47)	2,4-Dimethylpentane											
		1.752	2.123	1.747	1.624	1.517	1.789	1.819	1.691		1.758	10.06
48)	Tetrahydrofuran											
		0.504	0.505	0.448	0.373		0.511	0.515	0.491		0.478	10.81
49)	1,1,1-Trichloroethane											
		2.103	2.569	2.151	2.188	2.082	2.144	2.192	2.074		2.188	7.33
50)	1,2-Dichloroethane											
		1.188	1.476	1.163	1.176		1.229	1.261	1.171		1.238	8.94
51)	Benzene											
		3.166	3.906	3.352	3.402	3.928	3.241	3.289	3.129		3.427	9.21
52)	Carbon Tetrachloride											
		2.265	2.752	2.273	2.146	2.157	2.296	2.360	2.271		2.315	8.21
53)	Cyclohexane											

Initial Calibration Summary

Page 3 of 4

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICC571
Lab FileID: 6W13827.D

		1.519	1.798	1.482	1.408	1.383	1.530	1.554	1.491		1.521	8.33
54)	2,3-Dimethylpentane	0.722	0.842	0.670	0.604		0.733	0.737	0.698		0.715	10.15
55)	I 1,4-Difluorobenzene	-----ISTD-----										
56)	2,2,4-Trimethylpentane	1.306	1.599	1.388	1.377	1.388	1.382	1.393	1.210		1.380	7.88
57)	Heptane	0.303	0.357	0.298	0.283		0.316	0.317	0.290		0.309	7.90
58)	Trichloroethene	0.389	0.487	0.421	0.446	0.495	0.404	0.407	0.376		0.428	10.31
59)	1,2-Dichloropropane	0.299	0.376	0.310	0.293		0.312	0.318	0.288		0.314	9.41
60)	Dibromomethane	0.437	0.533	0.458	0.468		0.453	0.462	0.435		0.464	7.10
61)	Ethyl Acrylate	0.595	0.615	0.569	0.486		0.612	0.606	0.580		0.580	7.73
62)	Methyl Methacrylate	0.334	0.358	0.303	0.230		0.343	0.337	0.322		0.318	13.28
63)	1,4-Dioxane	0.212	0.218	0.380			0.218	0.220	0.200		0.242	28.31
64)	Bromodichloromethane	0.625	0.746	0.613	0.602	0.569	0.642	0.657	0.612		0.633	8.30
65)	cis-1,3-Dichloropropene	0.484	0.552	0.443	0.410		0.502	0.504	0.475		0.481	9.54
66)	4-Methyl-2-pentanone	0.253	0.263	0.239	0.187		0.264	0.260	0.246		0.245	11.06
67)	trans-1,3-Dichloropropene	0.417	0.481	0.349	0.321		0.431	0.433	0.418		0.407	13.39
68)	Toluene	1.044	1.280	1.101	1.188	1.328	1.097	1.114	1.045		1.150	9.24
69)	1,1,2-Trichloroethane	0.353	0.444	0.367	0.351	0.306	0.372	0.382	0.353		0.366	10.55
70)	1,3-Dichloropropane	0.476	0.577	0.481	0.460		0.497	0.506	0.478		0.496	7.78
71)	2-Hexanone	0.330	0.330	0.443	0.372		0.340	0.339	0.331		0.355	11.66
72)	Ethyl Methacrylate	0.518	0.568	0.491	0.439		0.537	0.536	0.518		0.515	8.00
73)	Dibromochloromethane	0.701	0.774	0.644	0.611	0.594	0.721	0.720	0.710		0.684	9.05
74)	Tetrachloroethene	0.611	0.752	0.620	0.613	0.625	0.636	0.650	0.618		0.640	7.33
75)	1,2-Dibromoethane	0.556	0.637	0.545	0.498	0.492	0.572	0.571	0.562		0.554	8.26
76)	Octane	0.574	0.712	0.584	0.573		0.615	0.623	0.558		0.606	8.66
77)	1,1,1,2-Tetrachloroethane	0.489	0.587	0.496	0.496	0.455	0.517	0.528	0.488		0.507	7.65
78)	I Chlorobenzene-d5	-----ISTD-----										
79)	Chlorobenzene	1.936	2.580	2.144	2.164		2.044	2.124	1.746		2.105	12.15
80)	Ethylbenzene	3.002	4.061	3.612	3.964		3.207	3.354	2.722		3.417	14.41
81)	m,p-Xylene	2.368	3.241	2.748	2.889	3.245	2.493	2.585	2.143		2.714	14.63
82)	Styrene	1.911	2.294	1.630	1.463	1.308	1.996	2.031	1.714		1.794	18.12
83)	Nonane											

Initial Calibration Summary

Page 4 of 4

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICC571
Lab FileID: 6W13827.D

	1.394	1.757	1.450	1.400	1.323	1.514	1.582	1.188	1.451	11.83
84) o-Xylene	2.439	3.203	2.954	3.443		2.592	2.686	2.154	2.781	16.09
85) Bromoform	1.719	1.731	1.534	1.482		1.741	1.743	1.561	1.645	6.92
86) 1,1,2,2-Tetrachloroethane	1.766	2.012	1.837	1.824	1.748	1.861	1.913	1.525	1.811	7.85
87) 1,2,3-Trichloropropane	1.294	1.480	1.356	1.328	1.206	1.367	1.409	1.135	1.322	8.33
88) Isopropylbenzene	3.663	4.505	3.840	3.829		3.916	4.060	3.229	3.863	10.01
89) Bromobenzene	1.229	1.471	1.135	1.098	0.938	1.290	1.290	1.100	1.194	13.56
90) 2-Chlorotoluene	0.899	1.063	0.865	0.827	0.687	0.961	0.997	0.801	0.887	13.47
91) n-Propylbenzene	1.028	1.186	0.921	0.857	0.746	1.089	1.119	0.915	0.983	15.06
92) 4-Bromofluorobenzene	1.331	1.256	1.238	1.228	1.212	1.337	1.346	1.214	1.270	4.55
93) 4-Ethyltoluene	3.462	3.912	3.109	3.081	2.969	3.651	3.702	3.084	3.371	10.55
94) 1,3,5-Trimethylbenzene	3.000	3.329	2.814	2.795		3.181	3.223	2.629	2.996	8.67
95) alpha-Methylstyrene	1.571	1.622	1.213	1.081	0.949	1.646	1.626	1.382	1.386	19.84
96) tert-Butylbenzene	0.763	0.899	0.722	0.705	0.525	0.821	0.845	0.659	0.742	15.92
97) 1,2,4-Trimethylbenzene	2.956	3.231	2.764	2.645	2.568	3.162	3.195	2.564	2.886	9.92
98) 1,3-Dichlorobenzene	1.970	2.023	1.471	1.434		2.068	1.981	1.738	1.812	14.74
99) Benzyl Chloride	2.137	1.721	1.230			2.161	1.961	1.983	1.865	18.71
100) 1,4-Dichlorobenzene	1.891	1.884	1.279			1.990	1.853	1.706	1.767	14.50
101) sec-Butylbenzene	0.960	1.054	0.937	0.898	0.720	1.064	1.046	0.830	0.939	12.87
102) p-Isopropyltoluene	1.029	1.104	0.919	0.949	0.789	1.151	1.129	0.887	0.995	13.01
103) 1,2-Dichlorobenzene	1.907	1.926	1.565	1.550	1.571	2.103	1.972	1.692	1.786	12.13
104) n-Butylbenzene	0.904	0.887	0.715	0.640	0.629	0.989	0.953	0.809	0.816	17.18
105) Hexachloroethane	1.300	1.228	1.035	0.979	0.837	1.413	1.381	1.172	1.168	17.42
106) 1,2,4-Trichlorobenzene	0.880	0.603	0.517			0.868	0.786	0.897	0.758	21.19
107) Naphthalene	1.762	1.408	1.518	1.537		1.778	1.643	1.773	1.631	9.04
108) Hexachlorobutadiene	1.307	1.108	1.444			1.379	1.401	1.252	1.315	9.30
109) I Bromochloromethane (A -----ISTD-----										
110) TVHC as equiv Pentane	5.729	6.837	5.297			6.130	6.332	5.450	5.963	9.75

(#) = Out of Range ### Number of calibration levels exceeded format ###

m6w571.M

Tue Sep 17 10:41:49 2019

Initial Calibration Verification

Page 1 of 3

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICV571
 Lab FileID: 6W13832.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W13832.D
 Acq On : 13 Sep 2019 8:27 pm
 Sample : icv571-10
 Misc : MS37187,V6W571,,,,,1
 MS Integration Params: Rteint.p

Vial: 5
 Operator: thomash
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m6w571.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Sep 17 10:39:34 2019
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	107	0.00	8.15
2	1,1,1-Trifluoroethane			-----NA-----			
3	Freon 152A	0.644	0.648	-0.6	109	0.00	3.72
4	Chlorodifluoromethane	0.253	0.253	0.0	107	0.00	3.76
5	Propene	0.707	0.690	2.4	107	0.00	3.79
6	Chlorotrifluoroethene	1.777	1.798	-1.2	111	0.00	3.79
7	Dichlorodifluoromethane	2.843	2.650	6.8	106	0.00	3.85
8	1-Chloro-1,1-difluoroetha	1.884	1.846	2.0	109	0.00	3.96
9	Chloromethane	0.690	0.657	4.8	106	0.00	3.97
10	Dichlorotetrafluoroethane	2.680	2.551	4.8	104	0.00	4.05
11	Vinyl Chloride	0.862	0.854	0.9	105	0.00	4.15
12	1,3-Butadiene	0.592	0.588	0.7	105	0.00	4.26
13	n-Butane	0.148	0.153	-3.4	107	0.00	4.30
14	Bromomethane	0.945	0.926	2.0	105	0.00	4.49
15	Acrolein	0.412	0.423	-2.7	105	0.00	5.02
16	Chloroethane	0.420	0.424	-1.0	109	0.00	4.62
17	Dichlorofluoromethane	1.969	1.853	5.9	104	0.00	4.70
18	Acetonitrile	0.819	0.723	11.7	105	0.00	4.91
19	Freon 123	2.482	2.566	-3.4	112	0.00	5.05
20	Freon 123A	1.556	1.752	-12.6	120	0.00	5.09
21	Bromoethene	1.045	1.090	-4.3	110	0.00	4.92
22	Trichlorofluoromethane	2.742	2.641	3.7	104	0.00	5.28
23	Acetone	0.507	0.482	4.9	111	0.00	5.14
24	Pentane	0.253	0.266	-5.1	110	0.00	5.59
25	1,1-Dichloro-1-fluoroetha			-----NA-----			
26	Iodomethane	3.410	3.400	0.3	108	0.00	5.79
27	Isopropyl Alcohol	1.919	1.737	9.5	105	0.00	5.34
28	1,1-Dichloroethene	1.594	1.636	-2.6	111	0.00	5.86
29	Freon 113	2.407	2.443	-1.5	108	0.00	6.22
30	Methylene Chloride	1.135	1.022	10.0	110	0.00	5.97
31	Carbon Disulfide	2.960	3.303	-11.6	119	0.00	6.26
32	Ethanol	0.281	0.268	4.6	100	0.00	4.72
33	Acrylonitrile	0.765	0.817	-6.8	110	0.00	5.55
34	3-Chloropropene	0.500	0.548	-9.6	109	0.00	6.08
35	trans-1,2-Dichloroethene	1.365	1.502	-10.0	114	0.00	6.89
36	tert-Butyl Alcohol	2.195	2.006	8.6	98	0.00	5.89
37	Methyl tert-Butyl Ether	2.999	3.031	-1.1	109	0.00	7.15
38	Vinyl Acetate	2.522	2.661	-5.5	111	0.00	7.25
39	1,1-Dichloroethane	1.814	1.795	1.0	108	0.00	7.09
40	2-Butanone	0.497	0.555	-11.7	112	0.00	7.50
41	Hexane	1.486	1.563	-5.2	111	0.00	8.18
42	cis-1,2-Dichloroethene	1.312	1.370	-4.4	109	0.00	7.97

Initial Calibration Verification

Page 2 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICV571
Lab FileID: 6W13832.D

43	Di-isopropyl Ether	0.949	0.986	-3.9	109	0.00	8.19
44	Ethyl Acetate	0.296	0.349	-17.9	119	0.00	8.23
45	Methyl Acrylate	1.713	1.942	-13.4	114	0.00	8.21
46	Chloroform	2.197	2.203	-0.3	108	0.00	8.30
47	2,4-Dimethylpentane	1.758	1.812	-3.1	108	0.00	9.16
48	Tetrahydrofuran	0.478	0.488	-2.1	102	0.00	8.74
49	1,1,1-Trichloroethane	2.188	2.185	0.1	109	0.00	9.39
50	1,2-Dichloroethane	1.238	1.265	-2.2	110	0.00	9.11
51	Benzene	3.427	3.311	3.4	109	0.00	9.92
52	Carbon Tetrachloride	2.315	2.328	-0.6	108	0.00	10.09
53	Cyclohexane	1.521	1.548	-1.8	108	0.00	10.23
54	2,3-Dimethylpentane	0.715	0.729	-2.0	106	0.00	10.52
55 I	1,4-Difluorobenzene	1.000	1.000	0.0	107	0.00	10.35
56	2,2,4-Trimethylpentane	1.380	1.369	0.8	106	0.00	11.21
57	Heptane	0.309	0.319	-3.2	108	0.00	11.55
58	Trichloroethene	0.428	0.407	4.9	108	0.00	11.18
59	1,2-Dichloropropane	0.314	0.315	-0.3	108	0.00	10.89
60	Dibromomethane	0.464	0.474	-2.2	112	0.00	10.87
61	Ethyl Acrylate	0.580	0.641	-10.5	112	0.00	10.93
62	Methyl Methacrylate	0.318	0.347	-9.1	109	0.00	11.46
63	1,4-Dioxane	0.242	0.210	13.2	103	0.00	11.20
64	Bromodichloromethane	0.633	0.646	-2.1	108	0.00	11.14
65	cis-1,3-Dichloropropene	0.481	0.553	-15.0	118	0.00	12.26
66	4-Methyl-2-pentanone	0.245	0.265	-8.2	107	0.00	12.31
67	trans-1,3-Dichloropropene	0.407	0.470	-15.5	117	0.00	12.94
68	Toluene	1.150	1.106	3.8	108	0.00	13.50
69	1,1,2-Trichloroethane	0.366	0.379	-3.6	109	0.00	13.15
70	1,3-Dichloropropane	0.496	0.513	-3.4	111	0.00	13.54
71	2-Hexanone	0.355	0.357	-0.6	113	0.00	13.88
72	Ethyl Methacrylate	0.515	0.553	-7.4	111	0.00	13.91
73	Dibromochloromethane	0.684	0.724	-5.8	108	0.00	14.06
74	Tetrachloroethene	0.640	0.644	-0.6	109	0.00	15.01
75	1,2-Dibromoethane	0.554	0.600	-8.3	113	0.00	14.37
76	Octane	0.606	0.597	1.5	104	0.00	14.84
77	1,1,1,2-Tetrachloroethane	0.507	0.507	0.0	105	0.00	15.93
78 I	Chlorobenzene-d5	1.000	1.000	0.0	106	0.00	15.89
79	Chlorobenzene	2.105	2.127	-1.0	110	0.00	15.95
80	Ethylbenzene	3.417	3.285	3.9	109	0.00	16.50
81	m,p-Xylene	2.714	2.563	5.6	109	0.00	16.77
82	Styrene	1.794	2.133	-18.9	113	0.00	17.29
83	Nonane	1.451	1.520	-4.8	107	0.00	17.82
84	o-Xylene	2.781	2.623	5.7	107	0.00	17.44
85	Bromoform	1.645	1.713	-4.1	104	0.00	16.85
86	1,1,2,2-Tetrachloroethane	1.811	1.847	-2.0	105	0.00	17.44
87	1,2,3-Trichloropropane	1.322	1.377	-4.2	107	0.00	17.64
88	Isopropylbenzene	3.863	3.957	-2.4	107	0.00	18.35
89	Bromobenzene	1.194	1.377	-15.3	113	0.00	18.46
90	2-Chlorotoluene	0.887	0.979	-10.4	108	0.00	19.07
91	n-Propylbenzene	0.983	1.120	-13.9	109	0.00	19.15
92 S	4-Bromofluorobenzene	1.270	1.349	-6.2	107	0.00	18.14
93	4-Ethyltoluene	3.371	3.803	-12.8	111	0.00	19.37
94	1,3,5-Trimethylbenzene	2.996	3.231	-7.8	108	0.00	19.49
95	alpha-Methylstyrene	1.386	1.731	-24.9	112	0.00	19.72
96	tert-Butylbenzene	0.742	0.826	-11.3	107	0.00	20.06
97	1,2,4-Trimethylbenzene	2.886	3.252	-12.7	109	0.00	20.08
98	1,3-Dichlorobenzene	1.812	2.298	-26.8	118	0.00	20.27
99	Benzyl Chloride	1.865	2.489	-33.5#	122	0.00	20.26
100	1,4-Dichlorobenzene	1.767	2.280	-29.0	122	0.00	20.36

Initial Calibration Verification

Page 3 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W571-ICV571
Lab FileID: 6W13832.D

101	sec-Butylbenzene	0.939	1.063	-13.2	106	0.00	20.45
102	p-Isopropyltoluene	0.995	1.154	-16.0	106	0.00	20.68
103	1,2-Dichlorobenzene	1.786	2.177	-21.9	110	0.00	20.83
104	n-Butylbenzene	0.816	1.025	-25.6	110	0.00	21.24
105	Hexachloroethane	1.168	1.381	-18.2	104	0.00	21.71
106	1,2,4-Trichlorobenzene	0.758	0.965	-27.3	118	0.00	23.02
107	Naphthalene	1.631	2.109	-29.3	126	0.00	23.15
108	Hexachlorobutadiene	1.315	1.282	2.5	99	0.00	23.59
109 I	Bromochloromethane (A)	1.000	1.000	0.0	107	0.00	8.15
110	TVHC as equiv Pentane	5.963	6.261	-5.0	109	0.00	5.59

(#) = Out of Range
6W13827.D m6w571.M

SPCC's out = 0 CCC's out = 0
Tue Sep 17 10:41:32 2019

Continuing Calibration Summary

Page 1 of 3

Job Number: JD234
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W623-CC571
 Lab FileID: 6W14958.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W14958.D
 Acq On : 26 Nov 2019 9:47 am
 Sample : cc571-10
 Misc : MS39338,V6W623,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: thomash
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m6w571.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Tue Sep 17 10:39:34 2019
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	89	0.00	8.15
2	1,1,1-Trifluoroethane			NA			
3	Freon 152A	0.644	0.583	9.5	82	0.00	3.73
4	Chlorodifluoromethane	0.253	0.284	-12.3	100	0.00	3.77
5	Propene	0.707	0.612	13.4	79	0.00	3.79
6	Chlorotrifluoroethene	1.777	1.685	5.2	87	0.00	3.80
7	Dichlorodifluoromethane	2.843	2.952	-3.8	98	0.00	3.85
8	1-Chloro-1,1-difluoroetha	1.884	2.198	-16.7	109	0.00	3.96
9	Chloromethane	0.690	0.716	-3.8	97	0.00	3.98
10	Dichlorotetrafluoroethane	2.680	2.848	-6.3	97	0.00	4.05
11	Vinyl Chloride	0.862	0.898	-4.2	93	0.00	4.16
12	1,3-Butadiene	0.592	0.621	-4.9	93	0.00	4.27
13	n-Butane	0.148	0.162	-9.5	94	0.00	4.30
14	Bromomethane	0.945	1.010	-6.9	96	0.00	4.49
15	Acrolein	0.412	0.330	19.9	69	0.00	5.02
16	Chloroethane	0.420	0.455	-8.3	98	0.00	4.63
17	Dichlorofluoromethane	1.969	2.190	-11.2	103	0.00	4.70
18	Acetonitrile	0.819	0.554	32.4#	67	0.00	4.91
19	Freon 123	2.482	2.317	6.6	84	0.00	5.04
20	Freon 123A	1.556	1.539	1.1	88	0.00	5.09
21	Bromoethene	1.045	1.027	1.7	87	0.00	4.92
22	Trichlorofluoromethane	2.742	2.989	-9.0	98	0.00	5.28
23	Acetone	0.507	0.388	23.5	75	0.00	5.13
24	Pentane	0.253	0.225	11.1	78	0.00	5.59
25	1,1-Dichloro-1-fluoroetha			NA			
26	Iodomethane	3.410	3.268	4.2	86	0.00	5.79
27	Isopropyl Alcohol	1.919	1.447	24.6	73	0.00	5.34
28	1,1-Dichloroethene	1.594	1.560	2.1	89	0.00	5.86
29	Freon 113	2.407	2.374	1.4	88	0.00	6.21
30	Methylene Chloride	1.135	0.931	18.0	84	0.00	5.97
31	Carbon Disulfide	2.960	2.761	6.7	83	0.00	6.26
32	Ethanol	0.281	0.299	-6.4	93	0.00	4.72
33	Acrylonitrile	0.765	0.642	16.1	72	0.00	5.55
34	3-Chloropropene	0.500	0.493	1.4	82	0.00	6.08
35	trans-1,2-Dichloroethene	1.365	1.367	-0.1	86	0.00	6.89
36	tert-Butyl Alcohol	2.195	2.131	2.9	87	0.00	5.89
37	Methyl tert-Butyl Ether	2.999	3.037	-1.3	91	0.00	7.14
38	Vinyl Acetate	2.522	2.287	9.3	80	0.00	7.24
39	1,1-Dichloroethane	1.814	1.714	5.5	86	0.00	7.09
40	2-Butanone	0.497	0.467	6.0	79	0.00	7.50
41	Hexane	1.486	1.423	4.2	85	0.00	8.18
42	cis-1,2-Dichloroethene	1.312	1.327	-1.1	88	0.00	7.97

Continuing Calibration Summary

Page 2 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W623-CC571
Lab FileID: 6W14958.D

43	Di-isopropyl Ether	0.949	0.969	-2.1	90	0.00	8.18
44	Ethyl Acetate	0.296	0.289	2.4	82	0.00	8.22
45	Methyl Acrylate	1.713	1.677	2.1	82	0.00	8.21
46	Chloroform	2.197	2.316	-5.4	95	0.00	8.29
47	2,4-Dimethylpentane	1.758	1.690	3.9	84	0.00	9.16
48	Tetrahydrofuran	0.478	0.479	-0.2	84	0.00	8.74
49	1,1,1-Trichloroethane	2.188	2.430	-11.1	101	0.00	9.38
50	1,2-Dichloroethane	1.238	1.382	-11.6	100	0.00	9.11
51	Benzene	3.427	3.153	8.0	87	0.00	9.91
52	Carbon Tetrachloride	2.315	2.674	-15.5	104	0.00	10.08
53	Cyclohexane	1.521	1.453	4.5	85	0.00	10.22
54	2,3-Dimethylpentane	0.715	0.698	2.4	85	-0.01	10.51
55 I	1,4-Difluorobenzene	1.000	1.000	0.0	89	-0.01	10.34
56	2,2,4-Trimethylpentane	1.380	1.310	5.1	85	-0.01	11.20
57	Heptane	0.309	0.305	1.3	86	0.00	11.54
58	Trichloroethene	0.428	0.414	3.3	92	0.00	11.17
59	1,2-Dichloropropane	0.314	0.292	7.0	83	0.00	10.88
60	Dibromomethane	0.464	0.453	2.4	89	0.00	10.86
61	Ethyl Acrylate	0.580	0.543	6.4	79	0.00	10.92
62	Methyl Methacrylate	0.318	0.319	-0.3	83	0.00	11.45
63	1,4-Dioxane	0.242	0.198	18.2	81	0.00	11.19
64	Bromodichloromethane	0.633	0.679	-7.3	95	-0.01	11.13
65	cis-1,3-Dichloropropene	0.481	0.479	0.4	85	-0.01	12.25
66	4-Methyl-2-pentanone	0.245	0.239	2.4	81	0.00	12.31
67	trans-1,3-Dichloropropene	0.407	0.415	-2.0	86	0.00	12.93
68	Toluene	1.150	1.074	6.6	88	-0.01	13.49
69	1,1,2-Trichloroethane	0.366	0.360	1.6	87	0.00	13.14
70	1,3-Dichloropropane	0.496	0.481	3.0	86	0.00	13.54
71	2-Hexanone	0.355	0.289	18.6	76	0.00	13.87
72	Ethyl Methacrylate	0.515	0.504	2.1	84	0.00	13.90
73	Dibromochloromethane	0.684	0.752	-9.9	93	0.00	14.05
74	Tetrachloroethene	0.640	0.662	-3.4	93	-0.01	15.00
75	1,2-Dibromoethane	0.554	0.541	2.3	85	0.00	14.37
76	Octane	0.606	0.569	6.1	83	0.00	14.84
77	1,1,1,2-Tetrachloroethane	0.507	0.531	-4.7	92	-0.01	15.92
78 I	Chlorobenzene-d5	1.000	1.000	0.0	91	-0.01	15.88
79	Chlorobenzene	2.105	1.932	8.2	86	-0.01	15.94
80	Ethylbenzene	3.417	3.078	9.9	87	-0.01	16.48
81	m,p-Xylene	2.714	2.590	4.6	94	-0.01	16.76
82	Styrene	1.794	1.797	-0.2	81	0.00	17.28
83	Nonane	1.451	1.354	6.7	81	0.00	17.82
84	o-Xylene	2.781	2.555	8.1	89	0.00	17.43
85	Bromoform	1.645	1.704	-3.6	89	0.00	16.83
86	1,1,2,2-Tetrachloroethane	1.811	1.669	7.8	81	0.00	17.44
87	1,2,3-Trichloropropane	1.322	1.242	6.1	82	0.00	17.63
88	Isopropylbenzene	3.863	3.735	3.3	86	-0.01	18.34
89	Bromobenzene	1.194	1.203	-0.8	84	0.00	18.45
90	2-Chlorotoluene	0.887	0.895	-0.9	84	0.00	19.07
91	n-Propylbenzene	0.983	1.004	-2.1	84	0.00	19.14
92 S	4-Bromofluorobenzene	1.270	1.352	-6.5	92	0.00	18.12
93	4-Ethyltoluene	3.371	3.301	2.1	82	0.00	19.36
94	1,3,5-Trimethylbenzene	2.996	2.967	1.0	84	0.00	19.48
95	alpha-Methylstyrene	1.386	1.413	-1.9	78	0.00	19.71
96	tert-Butylbenzene	0.742	0.765	-3.1	84	0.00	20.06
97	1,2,4-Trimethylbenzene	2.886	2.956	-2.4	85	0.00	20.07
98	1,3-Dichlorobenzene	1.812	1.707	5.8	75	0.00	20.26
99	Benzyl Chloride	1.865	1.762	5.5	74	0.00	20.25
100	1,4-Dichlorobenzene	1.767	1.610	8.9	73	0.00	20.36

Continuing Calibration Summary

Page 3 of 3

Job Number: JD234
Account: GESNYP Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY

Sample: V6W623-CC571
Lab FileID: 6W14958.D

101	sec-Butylbenzene	0.939	0.963	-2.6	82	0.00	20.44
102	p-Isopropyltoluene	0.995	1.037	-4.2	82	0.00	20.67
103	1,2-Dichlorobenzene	1.786	1.755	1.7	76	0.00	20.82
104	n-Butylbenzene	0.816	0.855	-4.8	78	0.00	21.24
105	Hexachloroethane	1.168	1.270	-8.7	81	0.00	21.70
106	1,2,4-Trichlorobenzene	0.758	0.634	16.4	66	0.00	23.02
107	Naphthalene	1.631	1.265	22.4	64	0.00	23.15
108	Hexachlorobutadiene	1.315	1.060	19.4	70	0.00	23.59
109 I	Bromochloromethane (A)	1.000	1.000	0.0	89	0.00	8.15
110	TVHC as equiv Pentane	5.963	5.237	12.2	76	0.00	5.59

(#) = Out of Range
6W13827.D m6w571.M

SPCC's out = 0 CCC's out = 0
Tue Nov 26 14:27:27 2019

Run Sequence Report

Page 1 of 1

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Run ID: V5W1620	Method: TO-15	Instrument ID: GCMS5W
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V5W1620-BFB	5W39821.D	12/23/19 13:24	n/a	BFB Tune
V5W1620-IC1620	5W39822.D	12/23/19 14:12	n/a	Initial cal 0.1
V5W1620-IC1620	5W39823.D	12/23/19 14:56	n/a	Initial cal 0.04
V5W1620-IC1620	5W39824.D	12/23/19 15:47	n/a	Initial cal 5
V5W1620-ICC1620	5W39825.D	12/23/19 16:32	n/a	Initial cal 10
V5W1620-IC1620	5W39826.D	12/23/19 17:20	n/a	Initial cal 20
V5W1620-IC1620	5W39827.D	12/23/19 18:11	n/a	Initial cal 40
V5W1620-IC1620	5W39831.D	12/24/19 09:22	n/a	Initial cal 0.5
V5W1620-IC1620	5W39832.D	12/24/19 10:07	n/a	Initial cal 0.2
V5W1620-ICV1620	5W39833.D	12/24/19 11:01	n/a	Initial cal verification 10

6.10.1

6

Run Sequence Report

Page 1 of 1

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Run ID: V5W1621		Method: TO-15		Instrument ID: GCMS5W	
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID	
V5W1621-BFB	5W39834.D	12/24/19 11:53	n/a	BFB Tune	
V5W1621-CC1620	5W39835.D	12/24/19 12:38	n/a	Continuing cal 10	
V5W1621-BS	5W39836.D	12/24/19 13:23	n/a	Blank Spike	
V5W1621-BSD	5W39837.D	12/24/19 14:08	n/a	Blank Spike Duplicate	
V5W1621-MB	5W39840.D	12/24/19 16:34	n/a	Method Blank	
JD235-4	5W39841.D	12/24/19 17:19	n/a	(used for QC only; not part of job JD234)	
JD235-4DUP	5W39842.D	12/24/19 18:05	n/a	Duplicate	
ZZZZZZ	5W39843.D	12/24/19 18:51	n/a	(unrelated sample)	
ZZZZZZ	5W39844.D	12/24/19 19:37	n/a	(unrelated sample)	
ZZZZZZ	5W39845.D	12/24/19 20:23	n/a	(unrelated sample)	
ZZZZZZ	5W39846.D	12/24/19 21:13	n/a	(unrelated sample)	
ZZZZZZ	5W39847.D	12/24/19 22:03	n/a	(unrelated sample)	
ZZZZZZ	5W39848.D	12/24/19 22:53	n/a	(unrelated sample)	
JD234-2	5W39849.D	12/24/19 23:50	n/a	VP-6 INDOOR	
JD234-4	5W39850.D	12/25/19 00:48	n/a	VP-5 INDOOR	
JD234-5	5W39851.D	12/25/19 01:44	n/a	OUTSIDE AMBIENT	
JD234-1	5W39852.D	12/25/19 02:37	n/a	VP-6 SOIL VAPOR	
JD234-3	5W39853.D	12/25/19 03:28	n/a	VP-5 SOIL VAPOR	
ZZZZZZ	5W39854.D	12/25/19 04:13	n/a	(unrelated sample)	
ZZZZZZ	5W39855.D	12/25/19 04:58	n/a	(unrelated sample)	
ZZZZZZ	5W39856.D	12/25/19 05:48	n/a	(unrelated sample)	
ZZZZZZ	5W39857.D	12/25/19 06:39	n/a	(unrelated sample)	

6.10.2

6

Run Sequence Report

Page 1 of 1

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Run ID: V5W1622	Method: TO-15	Instrument ID: GCMS5W
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V5W1622-BFB	5W39858.D	12/26/19 09:31	n/a	BFB Tune
V5W1622-CC1620	5W39859.D	12/26/19 10:17	n/a	Continuing cal 10
V5W1622-BS	5W39860.D	12/26/19 11:03	n/a	Blank Spike
V5W1622-BSD	5W39861.D	12/26/19 11:49	n/a	Blank Spike Duplicate
V5W1622-MB	5W39864.D	12/26/19 14:21	n/a	Method Blank
ZZZZZZ	5W39865.D	12/26/19 15:07	n/a	(unrelated sample)
ZZZZZZ	5W39866.D	12/26/19 15:53	n/a	(unrelated sample)
JD234-2	5W39867.D	12/26/19 16:38	n/a	VP-6 INDOOR
JD234-4	5W39868.D	12/26/19 17:24	n/a	VP-5 INDOOR
JD398-1	5W39869.D	12/26/19 18:21	n/a	(used for QC only; not part of job JD234)
ZZZZZZ	5W39871.D	12/26/19 20:22	n/a	(unrelated sample)
ZZZZZZ	5W39872.D	12/26/19 21:23	n/a	(unrelated sample)
ZZZZZZ	5W39873.D	12/26/19 22:20	n/a	(unrelated sample)
ZZZZZZ	5W39874.D	12/26/19 23:18	n/a	(unrelated sample)
ZZZZZZ	5W39875.D	12/27/19 00:17	n/a	(unrelated sample)
ZZZZZZ	5W39876.D	12/27/19 01:18	n/a	(unrelated sample)
ZZZZZZ	5W39877.D	12/27/19 02:15	n/a	(unrelated sample)
ZZZZZZ	5W39878.D	12/27/19 03:14	n/a	(unrelated sample)
ZZZZZZ	5W39879.D	12/27/19 04:20	n/a	(unrelated sample)
ZZZZZZ	5W39880.D	12/27/19 05:18	n/a	(unrelated sample)
ZZZZZZ	5W39881.D	12/27/19 06:15	n/a	(unrelated sample)
ZZZZZZ	5W39882.D	12/27/19 07:14	n/a	(unrelated sample)
ZZZZZZ	5W39883.D	12/27/19 08:14	n/a	(unrelated sample)
ZZZZZZ	5W39884.D	12/27/19 09:11	n/a	(unrelated sample)
V5W1622-BS2	5W39887A.D	12/27/19 11:42	n/a	Blank Spike
V5W1622-BSD2	5W39888A.D	12/27/19 12:28	n/a	Blank Spike Duplicate
V5W1622-MB2	5W39891A.D	12/27/19 14:48	n/a	Method Blank
JD398-1DUP	5W39892.D	12/27/19 15:43	n/a	Duplicate

6.10.3

6

Run Sequence Report

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Run ID: V5W1623	Method: TO-15	Instrument ID: GCMS5W
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V5W1623-BFB	5W39885.D	12/27/19 10:09	n/a	BFB Tune
V5W1623-CC1620	5W39886.D	12/27/19 10:55	n/a	Continuing cal 10
V5W1623-BS	5W39887.D	12/27/19 11:42	n/a	Blank Spike
V5W1623-BSD	5W39888.D	12/27/19 12:28	n/a	Blank Spike Duplicate
V5W1623-MB	5W39891.D	12/27/19 14:48	n/a	Method Blank
JD928-1	5W39893.D	12/27/19 16:27	n/a	(used for QC only; not part of job JD234)
JD928-1DUP	5W39894.D	12/27/19 17:12	n/a	Duplicate
JD928-1	5W39896.D	12/27/19 18:42	n/a	(used for QC only; not part of job JD234)
ZZZZZZ	5W39898.D	12/27/19 20:12	n/a	(unrelated sample)
ZZZZZZ	5W39900.D	12/27/19 21:41	n/a	(unrelated sample)
ZZZZZZ	5W39902.D	12/27/19 23:11	n/a	(unrelated sample)
ZZZZZZ	5W39903.D	12/27/19 23:57	n/a	(unrelated sample)
ZZZZZZ	5W39904.D	12/28/19 00:56	n/a	(unrelated sample)
ZZZZZZ	5W39905.D	12/28/19 01:41	n/a	(unrelated sample)
ZZZZZZ	5W39906.D	12/28/19 02:25	n/a	(unrelated sample)
ZZZZZZ	5W39907.D	12/28/19 03:10	n/a	(unrelated sample)
ZZZZZZ	5W39908.D	12/28/19 03:54	n/a	(unrelated sample)
ZZZZZZ	5W39909.D	12/28/19 04:39	n/a	(unrelated sample)
ZZZZZZ	5W39910.D	12/28/19 05:23	n/a	(unrelated sample)

Run Sequence Report

Page 1 of 1

Job Number: JD234**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangetown Shopping Center, Orangeburg, NY

Run ID: V6W571	Method: TO-15	Instrument ID: GCMS6W
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V6W571-BFB	6W13821.D	09/13/19 11:13	n/a	BFB Tune
V6W571-IC571	6W13822.D	09/13/19 12:03	n/a	Initial cal 0.2
V6W571-IC571	6W13823.D	09/13/19 13:12	n/a	Initial cal 0.1
V6W571-IC571	6W13824.D	09/13/19 13:59	n/a	Initial cal 0.04
V6W571-IC571	6W13825.D	09/13/19 14:47	n/a	Initial cal 0.5
V6W571-IC571	6W13826.D	09/13/19 15:35	n/a	Initial cal 5
V6W571-ICC571	6W13827.D	09/13/19 16:23	n/a	Initial cal 10
V6W571-IC571	6W13828.D	09/13/19 17:12	n/a	Initial cal 20
V6W571-IC571	6W13830.D	09/13/19 18:52	n/a	Initial cal 40
V6W571-ICV571	6W13832.D	09/13/19 20:27	n/a	Initial cal verification 10

6.10.5

6

Run Sequence Report

Page 1 of 1

Job Number: JD234

Account: GESNYP Groundwater & Environmental Services

Project: Orangetown Shopping Center, Orangeburg, NY

Run ID: V6W623		Method: TO-15		Instrument ID: GCMS6W	
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID	
V6W623-BFB	6W14957.D	11/26/19 08:59	n/a	BFB Tune	
V6W623-CC571	6W14958.D	11/26/19 09:47	n/a	Continuing cal 10	
V6W623-BS	6W14959.D	11/26/19 10:37	n/a	Blank Spike	
V6W623-BSD	6W14960.D	11/26/19 11:25	n/a	Blank Spike Duplicate	
V6W623-MB	6W14962.D	11/26/19 13:13	n/a	Method Blank	
ZZZZZZ	6W14963.D	11/26/19 14:37	n/a	(unrelated sample)	
ZZZZZZ	6W14964.D	11/26/19 15:25	n/a	(unrelated sample)	
V6W623-SCC	6W14966.D	11/26/19 17:31	n/a	Summa Cleaning Certification	
JC99159-1	6W14967.D	11/26/19 18:24	n/a	(used for QC only; not part of job JD234)	
JC99159-1DUP	6W14968.D	11/26/19 19:16	n/a	Duplicate	
ZZZZZZ	6W14969.D	11/26/19 20:08	n/a	(unrelated sample)	
ZZZZZZ	6W14970.D	11/26/19 21:02	n/a	(unrelated sample)	
ZZZZZZ	6W14971.D	11/26/19 21:55	n/a	(unrelated sample)	
ZZZZZZ	6W14972.D	11/26/19 22:48	n/a	(unrelated sample)	
ZZZZZZ	6W14973.D	11/26/19 23:41	n/a	(unrelated sample)	
ZZZZZZ	6W14974.D	11/27/19 00:29	n/a	(unrelated sample)	
ZZZZZZ	6W14975.D	11/27/19 01:17	n/a	(unrelated sample)	
ZZZZZZ	6W14976.D	11/27/19 02:05	n/a	(unrelated sample)	
ZZZZZZ	6W14977.D	11/27/19 02:54	n/a	(unrelated sample)	
ZZZZZZ	6W14978.D	11/27/19 03:42	n/a	(unrelated sample)	
V6W623-SCC	6W14980.D	11/27/19 05:23	n/a	Summa Cleaning Certification	

6.10.6

6



MS Volatiles

Raw Data

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W39852.D
Acq On : 25 Dec 2019 2:37 am
Operator : danat
Sample : jd234-1
Misc : ms39839,v5w1621,592,,,,,1.48
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 27 12:00:13 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

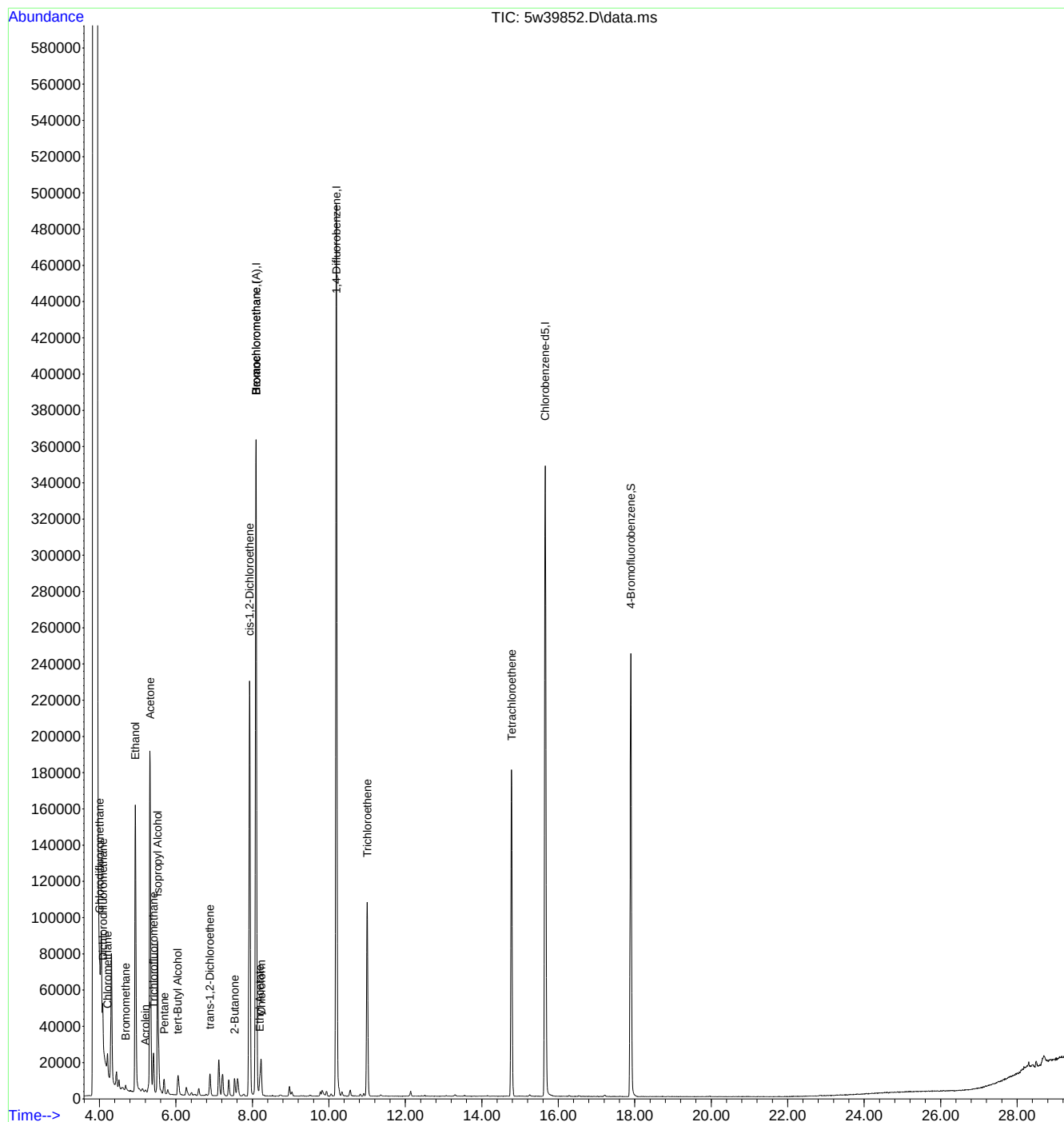
Internal Standards						
1) Bromochloromethane	8.096	130	140146	10.00	ppb(v	0.01
53) 1,4-Difluorobenzene	10.194	114	474808	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	153354	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.096	130	140146	10.00	ppb(v	0.01
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	117904	8.79	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	87.90%	
Target Compounds						
					Qvalue	
3) Chlorodifluoromethane	4.003	67	961	0.21	ppb(v	89
6) Dichlorodifluoromethane	4.089	85	18451	0.39	ppb(v	99
8) Chloromethane	4.211	50	9458	0.61	ppb(v	99
13) Bromomethane	4.688	94	1525	0.10	ppb(v	99
20) Acrolein	5.202	56	1490	0.25	ppb(v#	75
21) Trichlorofluoromethane	5.410	101	18482	0.42	ppb(v	98
22) Acetone	5.324	58	90227	14.08	ppb(v	78
23) Pentane	5.691	57	799	0.19	ppb(v	94
25) Isopropyl Alcohol	5.520	43	25464	3.67	ppb(v	76
30) Ethanol	4.939	45	206190	32.27	ppb(v	99
33) trans-1,2-Dichloroethene	6.890	61	8997	0.35	ppb(v	96
34) tert-Butyl Alcohol	6.046	59	7206	0.20	ppb(v#	84
38) 2-Butanone	7.533	72	3507	0.44	ppb(v	96
39) Hexane	8.096	57	10085	0.38	ppb(v	88
40) cis-1,2-Dichloroethene	7.924	61	167056	6.57	ppb(v	97
42) Ethyl Acetate	8.194	61	2120m	0.40	ppb(v	
44) Chloroform	8.230	83	15747	0.41	ppb(v	98
56) Trichloroethene	11.002	95	42901	1.85	ppb(v	98
72) Tetrachloroethene	14.782	166	67869	2.56	ppb(v	98

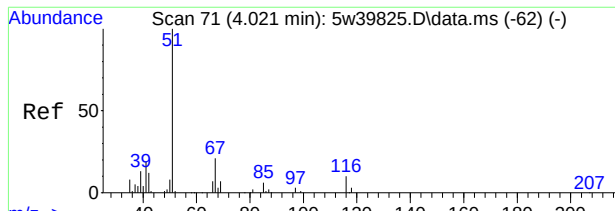
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39852.D
Acq On : 25 Dec 2019 2:37 am
Operator : danat
Sample : jd234-1
Misc : ms39839,v5w1621,592,,,,1.48
ALS Vial : 15 Sample Multiplier: 1

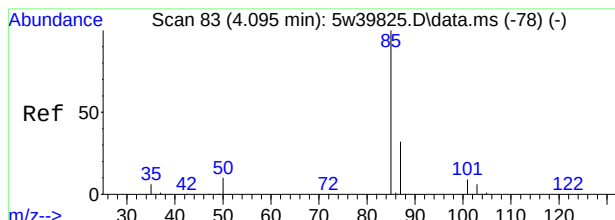
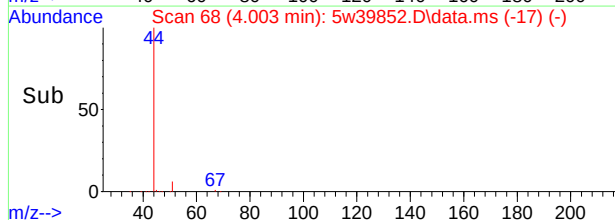
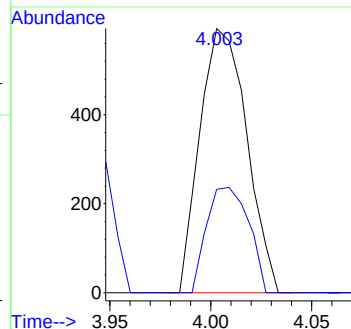
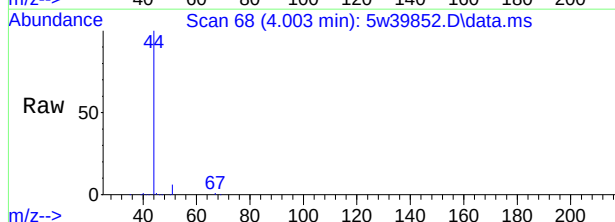
Quant Time: Dec 27 12:00:13 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





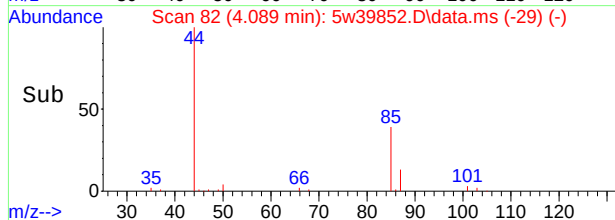
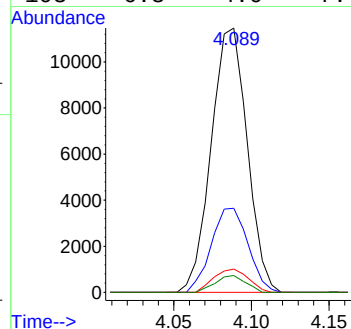
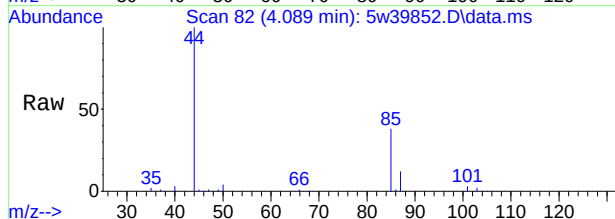
#3
Chlorodifluoromethane
Concen: 0.21 ppb(v)
RT: 4.003 min Scan# 68
Delta R.T. -0.018 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

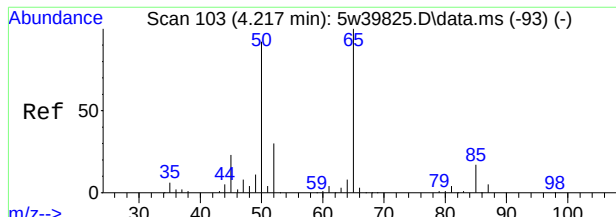
Tgt Ion: 67 Resp: 961
Ion Ratio Lower Upper
67 100
69 39.1 23.2 43.0



#6
Dichlorodifluoromethane
Concen: 0.39 ppb(v)
RT: 4.089 min Scan# 82
Delta R.T. -0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

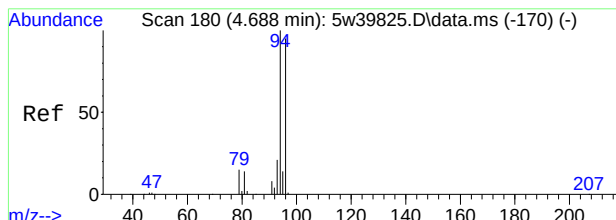
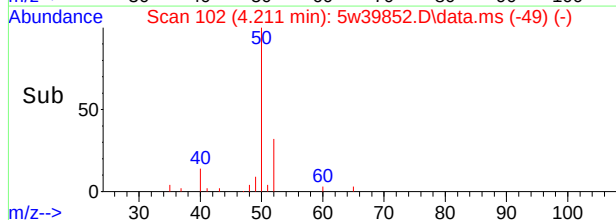
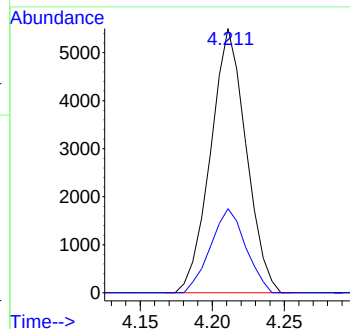
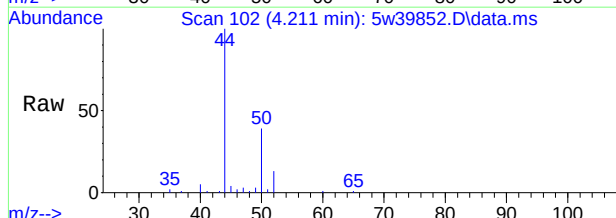
Tgt Ion: 85 Resp: 18451
Ion Ratio Lower Upper
85 100
87 31.8 22.7 42.1
101 8.9 6.1 11.3
103 6.3 4.0 7.4





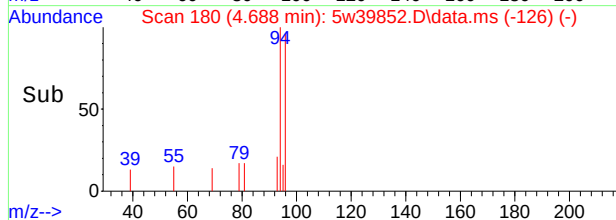
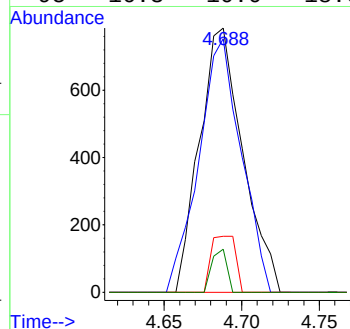
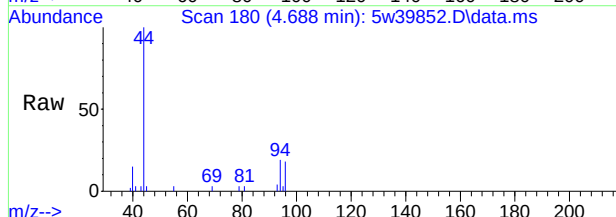
#8
Chloromethane
Concen: 0.61 ppb(v)
RT: 4.211 min Scan# 102
Delta R.T. -0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

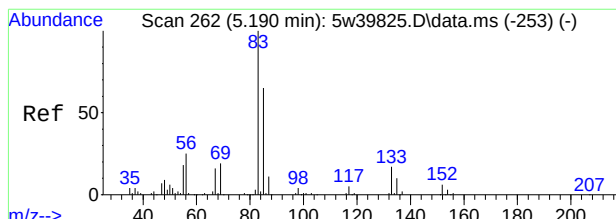
Tgt Ion: 50 Resp: 9458
Ion Ratio Lower Upper
50 100
52 31.8 22.6 42.0



#13
Bromomethane
Concen: 0.10 ppb(v)
RT: 4.688 min Scan# 180
Delta R.T. 0.000 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

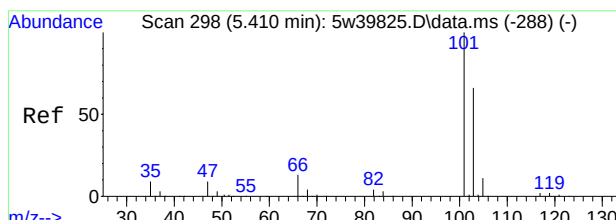
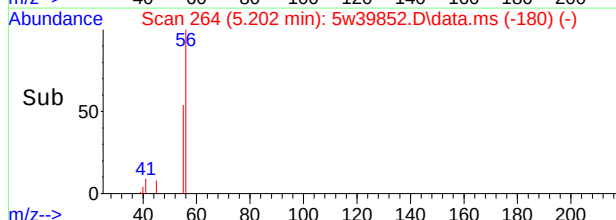
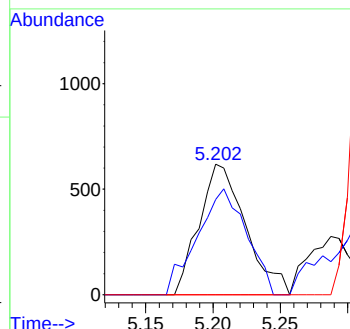
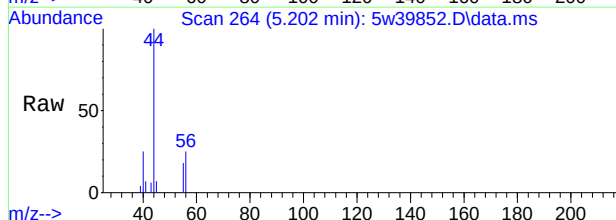
Tgt Ion: 94 Resp: 1525
Ion Ratio Lower Upper
94 100
96 95.9 66.4 123.4
93 21.1 14.6 27.2
95 16.3 10.0 18.6





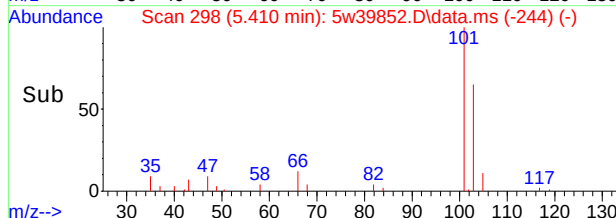
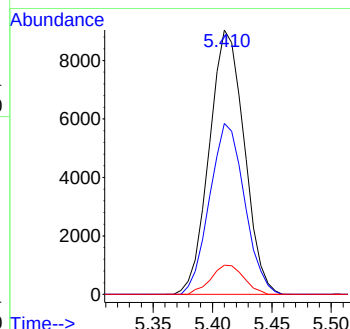
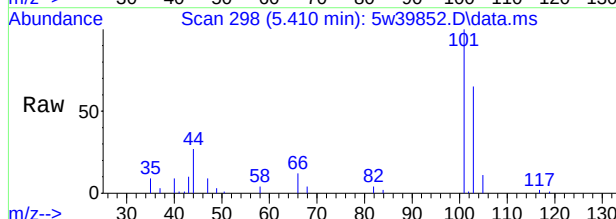
#20
Acrolein
Concen: 0.25 ppb(v)
RT: 5.202 min Scan# 264
Delta R.T. 0.012 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

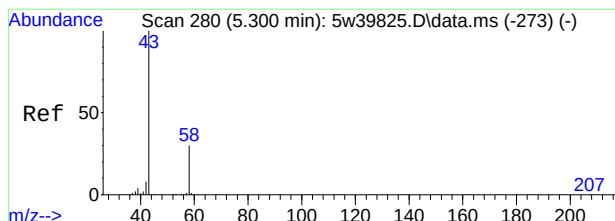
Tgt Ion	Ratio	Lower	Upper
56	100		
55	85.6	56.8	85.2#
37	0.0	17.9	26.9#



#21
Trichlorofluoromethane
Concen: 0.42 ppb(v)
RT: 5.410 min Scan# 298
Delta R.T. 0.000 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

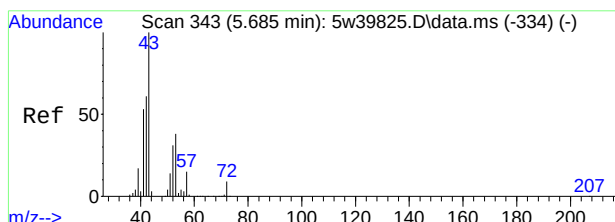
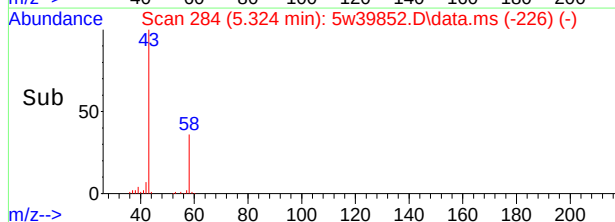
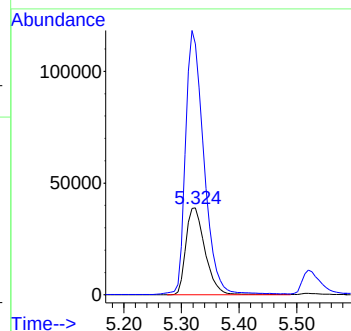
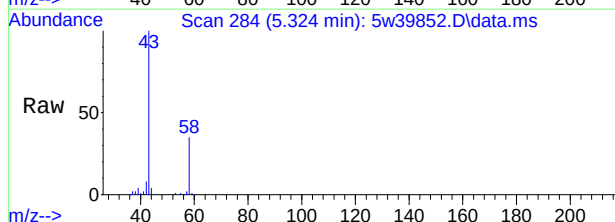
Tgt Ion	Ratio	Lower	Upper
101	100		
103	64.7	46.2	85.8
105	11.0	7.4	13.8





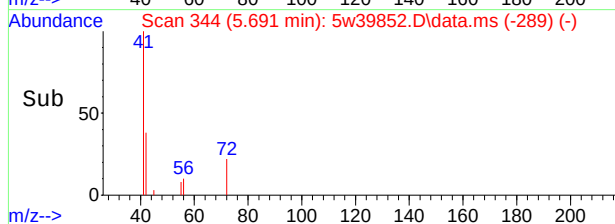
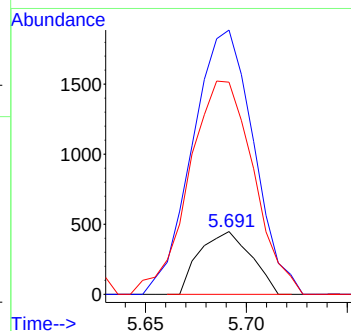
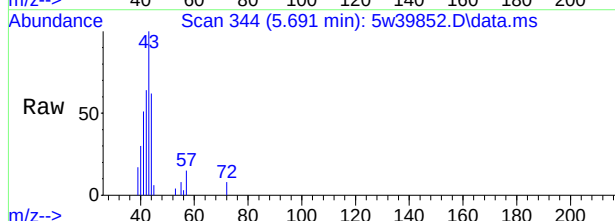
#22
Acetone
Concen: 14.08 ppb(v)
RT: 5.324 min Scan# 284
Delta R.T. 0.025 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

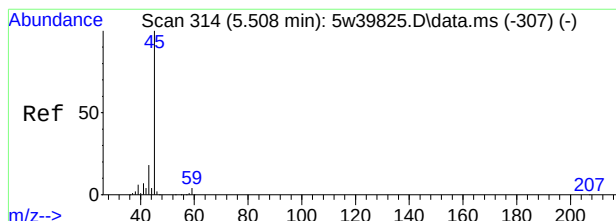
Tgt Ion: 58 Resp: 90227
Ion Ratio Lower Upper
58 100
43 288.6 234.8 436.2



#23
Pentane
Concen: 0.19 ppb(v)
RT: 5.691 min Scan# 344
Delta R.T. 0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

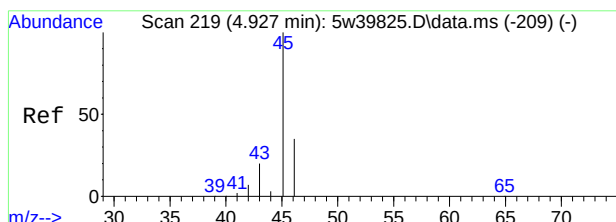
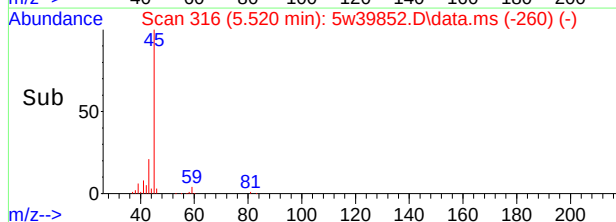
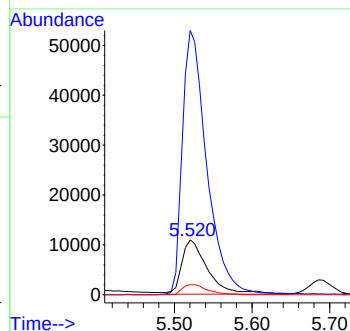
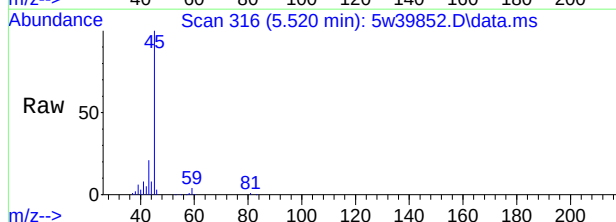
Tgt Ion: 57 Resp: 799
Ion Ratio Lower Upper
57 100
42 421.4 281.4 522.6
41 338.2 243.3 451.9





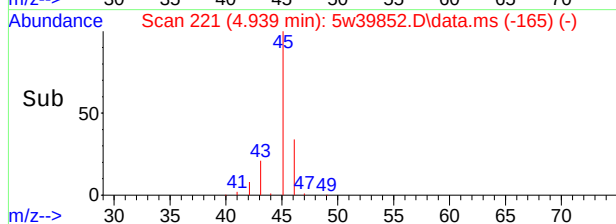
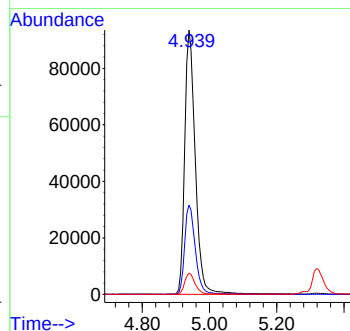
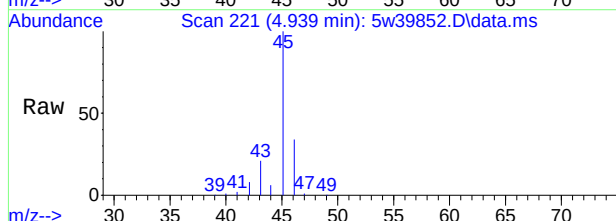
#25
Isopropyl Alcohol
Concen: 3.67 ppb(v)
RT: 5.520 min Scan# 316
Delta R.T. 0.012 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

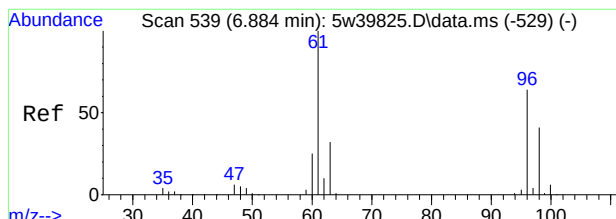
Tgt Ion:	43	Resp:	25464
Ion	Ratio	Lower	Upper
43	100		
45	479.9	385.8	716.6
59	18.6	15.3	28.3



#30
Ethanol
Concen: 32.27 ppb(v)
RT: 4.939 min Scan# 221
Delta R.T. 0.012 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

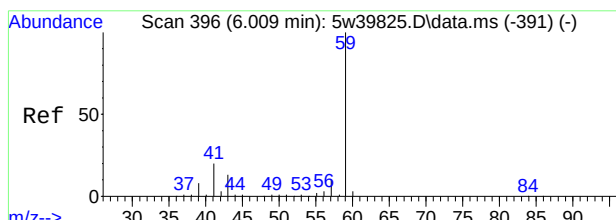
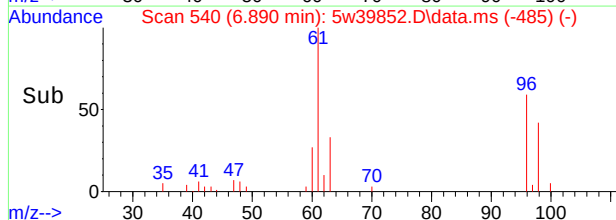
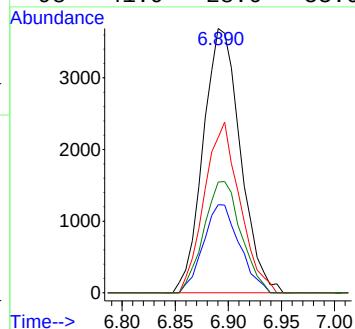
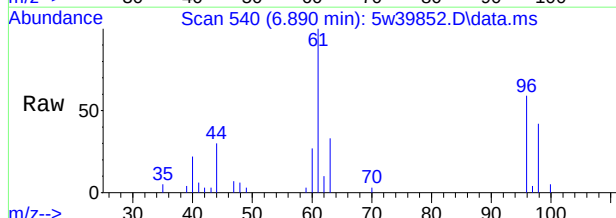
Tgt Ion:	45	Resp:	206190
Ion	Ratio	Lower	Upper
45	100		
46	33.8	24.1	44.8
42	8.1	5.5	10.1





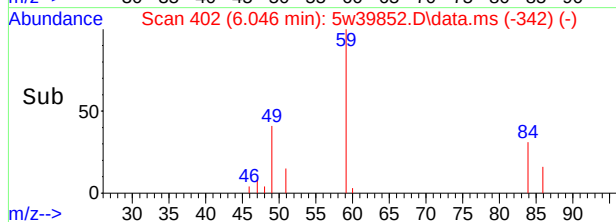
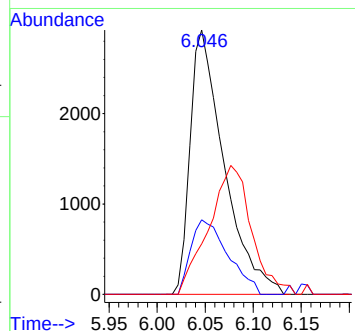
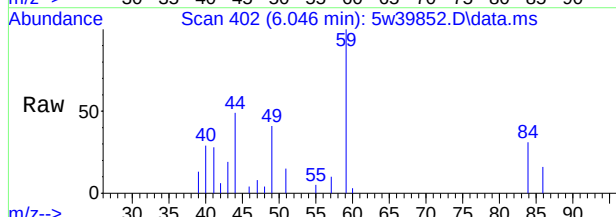
#33
trans-1,2-Dichloroethene
Concen: 0.35 ppb(v)
RT: 6.890 min Scan# 540
Delta R.T. 0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

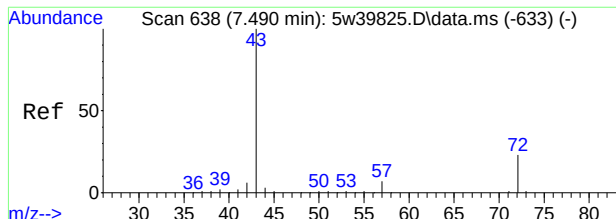
Tgt Ion: 61	Resp: 8997
Ion Ratio Lower Upper	
61 100	
63 33.3	22.7 42.3
96 58.7	45.1 83.9
98 41.9	28.6 53.0



#34
tert-Butyl Alcohol
Concen: 0.20 ppb(v)
RT: 6.046 min Scan# 402
Delta R.T. 0.037 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

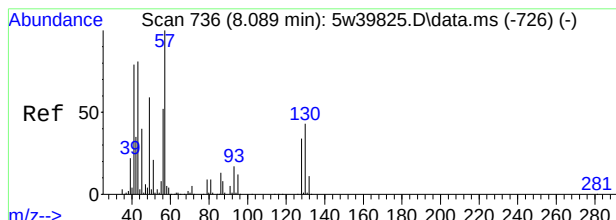
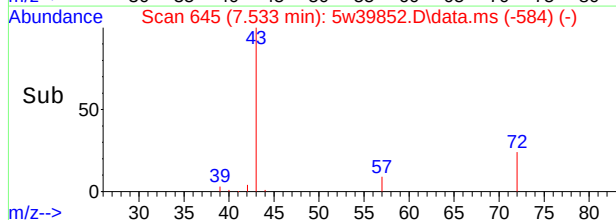
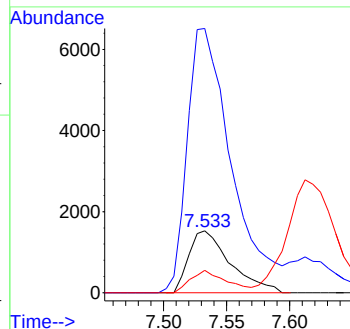
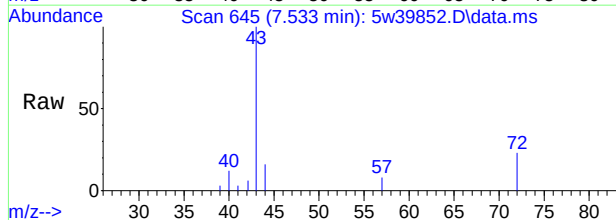
Tgt Ion: 59	Resp: 7206
Ion Ratio Lower Upper	
59 100	
41 28.3	14.3 26.5#
43 19.1	9.4 17.4#





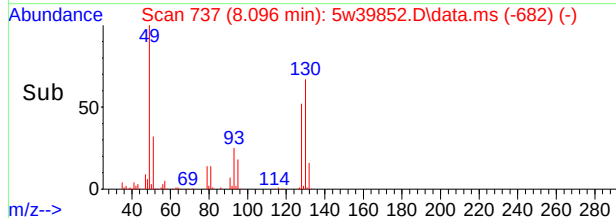
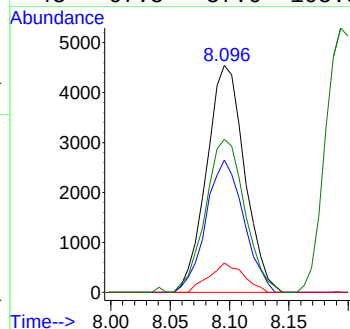
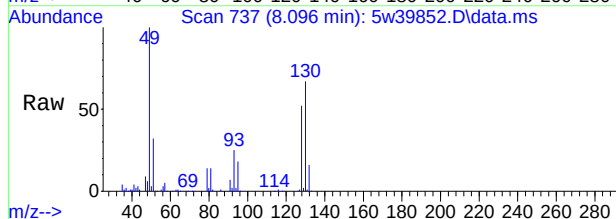
#38
2-Butanone
Concen: 0.44 ppb(v)
RT: 7.533 min Scan# 645
Delta R.T. 0.043 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

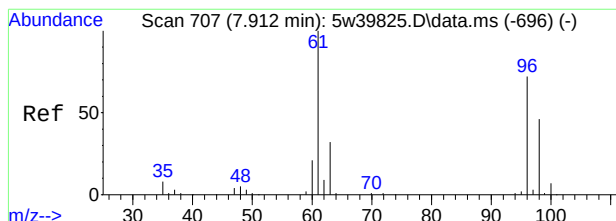
Tgt Ion: 72	Resp: 3507
Ion Ratio	Lower Upper
72 100	
43 426.3	304.5 565.5
57 36.1	22.6 42.0



#39
Hexane
Concen: 0.38 ppb(v)
RT: 8.096 min Scan# 737
Delta R.T. 0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

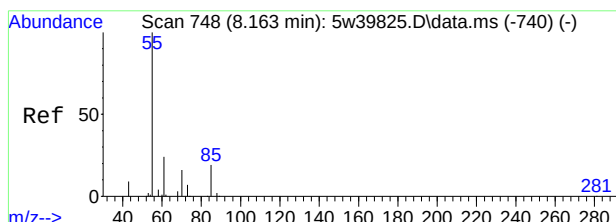
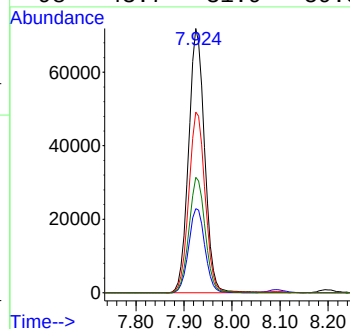
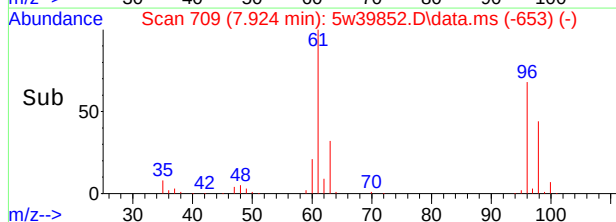
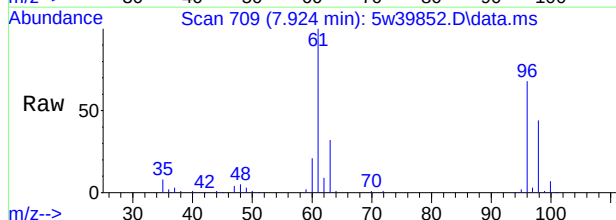
Tgt Ion: 57	Resp: 10085
Ion Ratio	Lower Upper
57 100	
56 58.3	36.5 67.7
86 13.0	9.2 17.0
43 67.5	57.0 105.8





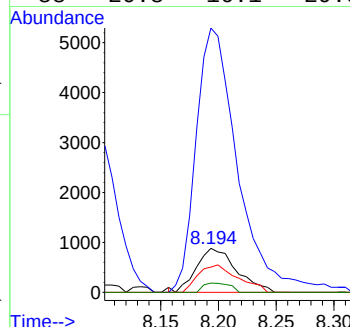
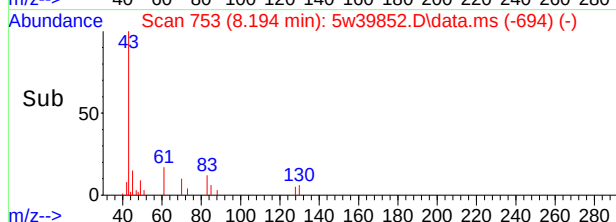
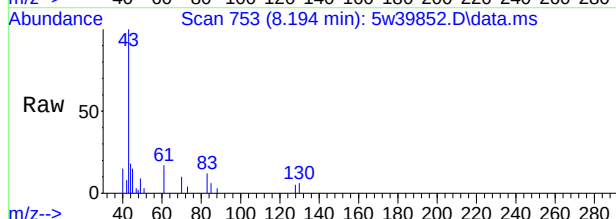
#40
cis-1,2-Dichloroethene
Concen: 6.57 ppb(v)
RT: 7.924 min Scan# 709
Delta R.T. 0.012 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

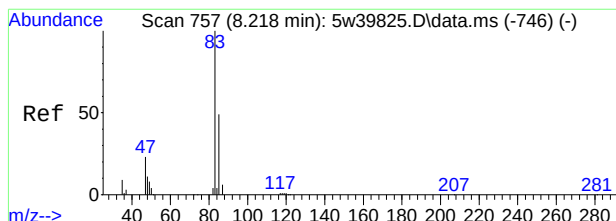
Tgt Ion:	61	Resp:	167056
Ion	Ratio	Lower	Upper
61	100		
63	31.8	22.7	42.1
96	68.4	50.7	94.1
98	43.7	31.9	59.3



#42
Ethyl Acetate
Concen: 0.40 ppb(v) m
RT: 8.194 min Scan# 753
Delta R.T. 0.031 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

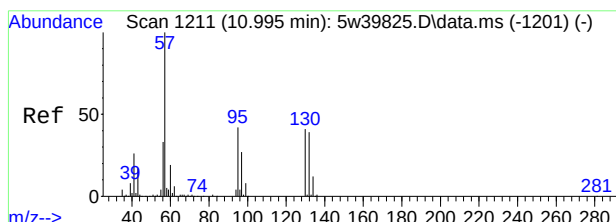
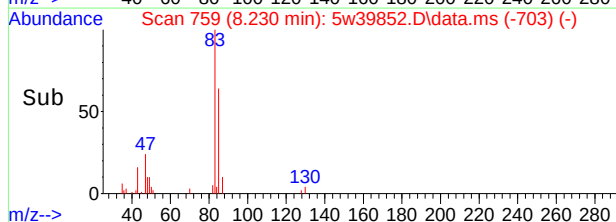
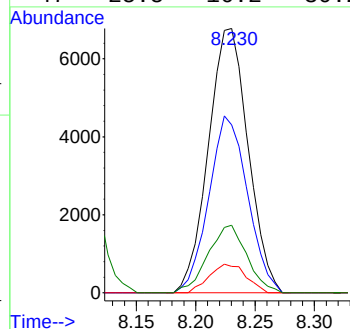
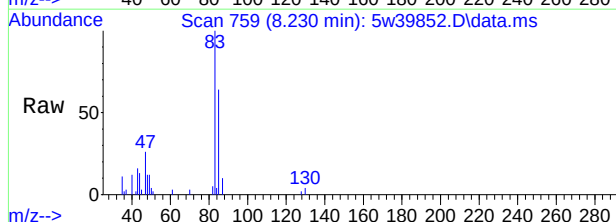
Tgt Ion:	61	Resp:	2120
Ion	Ratio	Lower	Upper
61	100		
43	599.1	466.8	867.0
70	57.5	48.1	89.3
88	20.8	16.1	29.9





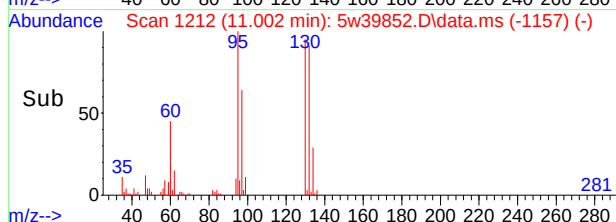
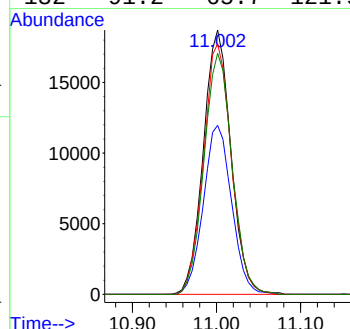
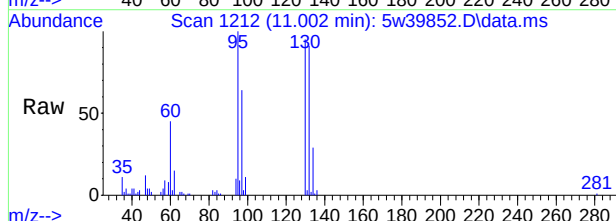
#44
Chloroform
Concen: 0.41 ppb(v)
RT: 8.230 min Scan# 759
Delta R.T. 0.012 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

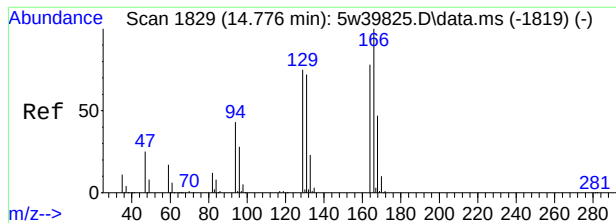
Tgt	Ion: 83	Resp:	15747
Ion	Ratio	Lower	Upper
83	100		
85	63.5	45.0	83.6
87	9.9	7.6	14.0
47	25.5	16.2	30.2



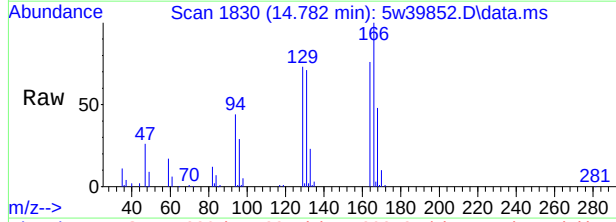
#56
Trichloroethene
Concen: 1.85 ppb(v)
RT: 11.002 min Scan# 1212
Delta R.T. 0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am

Tgt	Ion: 95	Resp:	42901
Ion	Ratio	Lower	Upper
95	100		
97	63.9	45.6	84.6
130	94.8	68.1	126.5
132	91.2	65.7	121.9

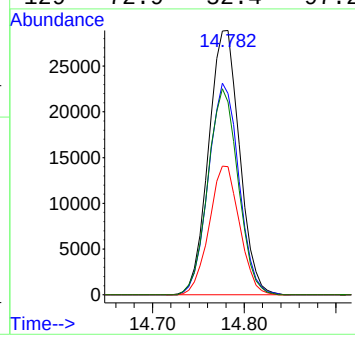
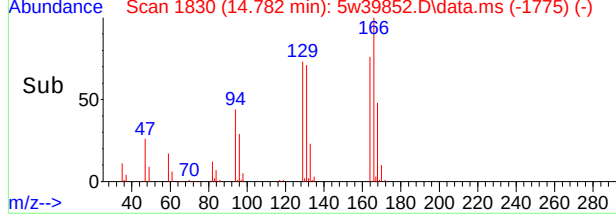




#72
Tetrachloroethene
Concen: 2.56 ppb(v)
RT: 14.782 min Scan# 1830
Delta R.T. 0.006 min
Lab File: 5w39852.D
Acq: 25 Dec 2019 2:37 am



Tgt	Ion:166	Resp:	67869
Ion	Ratio	Lower	Upper
166	100		
164	76.1	54.3	100.9
168	48.5	32.8	61.0
129	72.9	52.4	97.2



7.1.1
7

Manual Integration Approval Summary

Sample Number: JD234-1

Method: TO-15

Lab FileID: 5W39852.D

Analyst approved: 12/27/19 11:59 Dana Tryon

Injection Time: 12/25/19 02:37

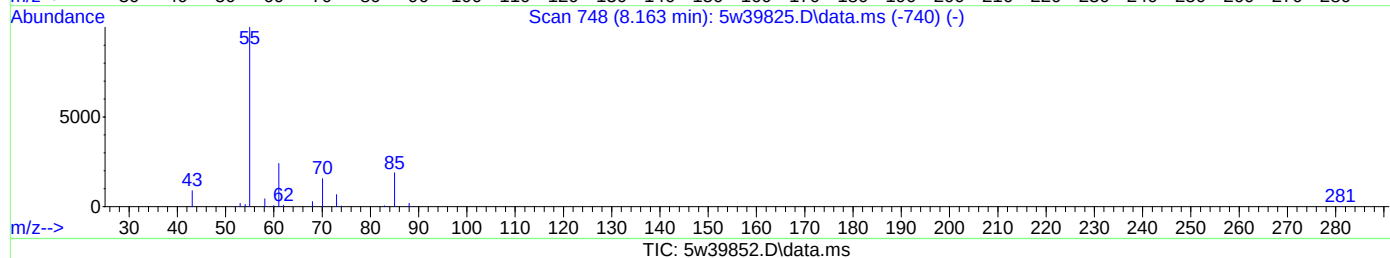
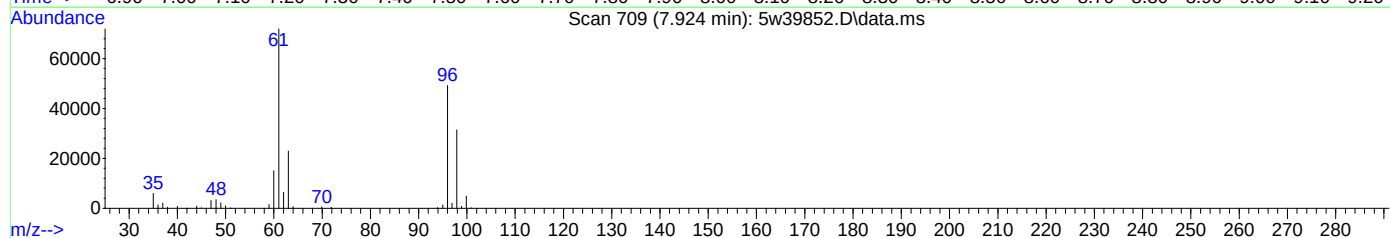
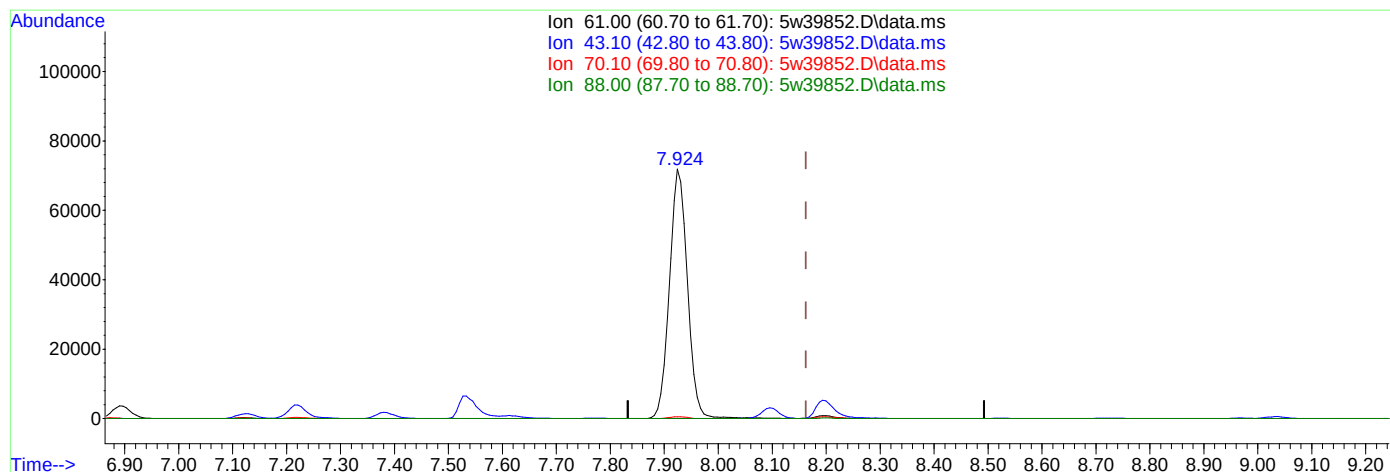
Supervisor approved: 12/27/19 12:02 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Acetate	141-78-6		8.19	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
 Data File : 5w39852.D
 Acq On : 25 Dec 2019 2:37 am
 Operator : danat
 Sample : jd234-1
 Misc : ms39839,v5w1621,592,,,,,1.48
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 26 09:01:09 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration



(42) Ethyl Acetate

7.924min (-0.238) 31.42ppb(v)

response 167056

Ion	Exp%	Act%
61.00	100	100
43.10	666.90	0.00#
70.10	68.70	0.73#
88.00	23.00	0.00#

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W39849.D
 Acq On : 24 Dec 2019 11:50 pm
 Operator : danat
 Sample : jd234-2
 Misc : ms39839,v5w1621,500,,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 27 11:48:49 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

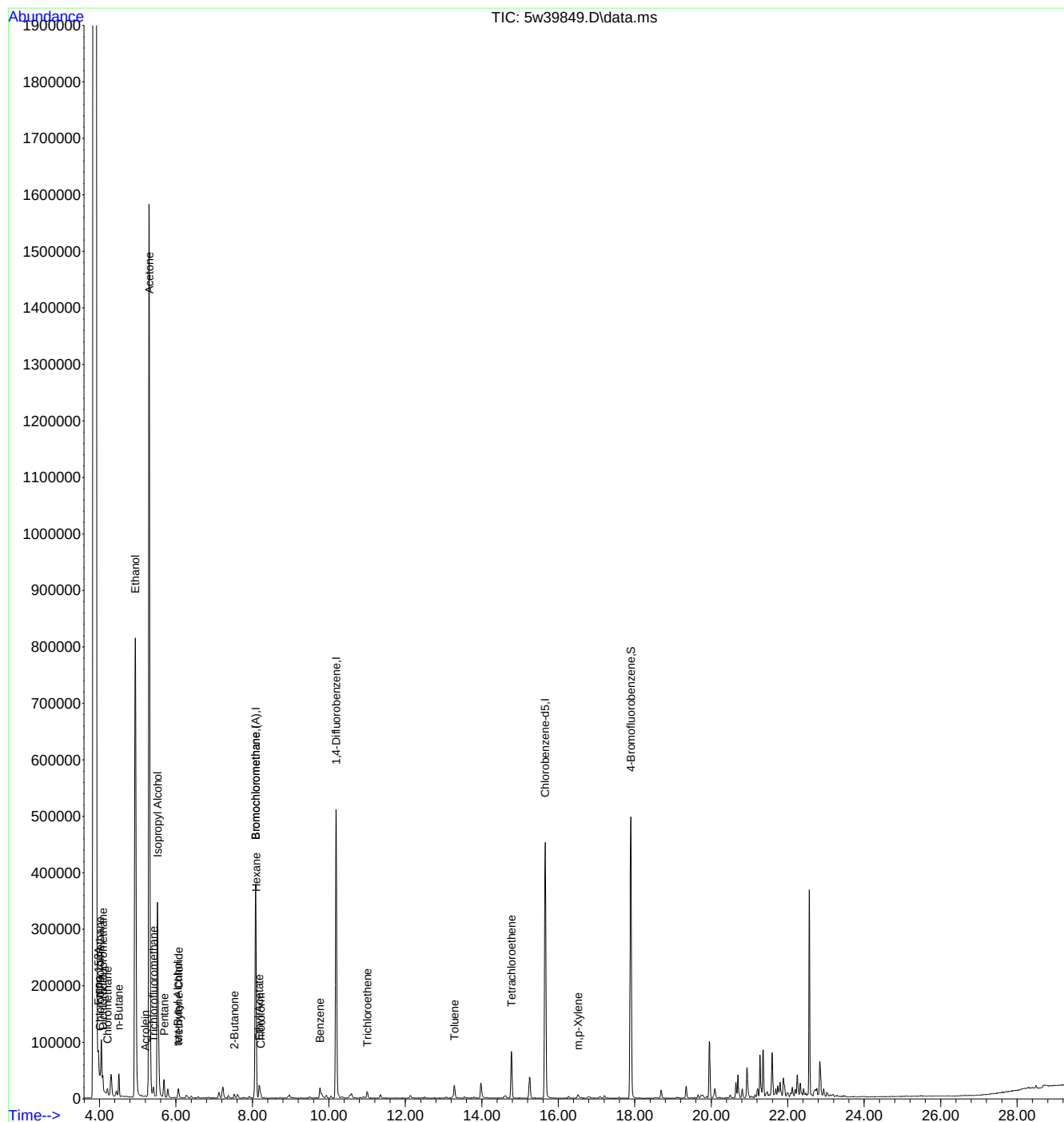
Internal Standards						
1) Bromochloromethane	8.083	130	147809	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.188	114	492557	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	197466	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	147809	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	239688	13.87	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	138.70%#	
Target Compounds						
					Qvalue	
2) Freon 152A	3.972	65	15188	1.32	ppb(v	89
3) Chlorodifluoromethane	4.015	67	1317	0.28	ppb(v	99
6) Dichlorodifluoromethane	4.088	85	23376	0.47	ppb(v	99
8) Chloromethane	4.211	50	8960	0.55	ppb(v	100
12) n-Butane	4.504	58	4011	1.77	ppb(v#	74
20) Acrolein	5.202	56	1695	0.27	ppb(v#	74
21) Trichlorofluoromethane	5.410	101	12748	0.27	ppb(v	98
22) Acetone	5.300	58	652044	96.47	ppb(v	98
23) Pentane	5.691	57	3298	0.75	ppb(v	93
25) Isopropyl Alcohol	5.520	43	102581	14.03	ppb(v	96
28) Methylene Chloride	6.071	84	3616	0.20	ppb(v	96
30) Ethanol	4.939	45	1329358	197.24	ppb(v	99
34) tert-Butyl Alcohol	6.052	59	5757	0.15	ppb(v#	11
38) 2-Butanone	7.527	72	2380	0.28	ppb(v	79
39) Hexane	8.096	57	5589	0.20	ppb(v	90
42) Ethyl Acetate	8.181	61	4485	0.80	ppb(v	97
44) Chloroform	8.218	83	4437	0.11	ppb(v	97
49) Benzene	9.766	78	19940	0.35	ppb(v	99
56) Trichloroethene	11.001	95	2368	0.10	ppb(v	98
66) Toluene	13.283	91	22266	0.36	ppb(v	98
72) Tetrachloroethene	14.776	166	31570	1.15	ppb(v	98
79) m,p-Xylene	16.514	91	7384	0.15	ppb(v	99

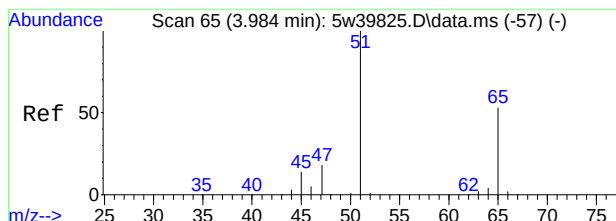
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39849.D
Acq On : 24 Dec 2019 11:50 pm
Operator : danat
Sample : jd234-2
Misc : ms39839,v5w1621,500,,,,,1
ALS Vial : 12 Sample Multiplier: 1

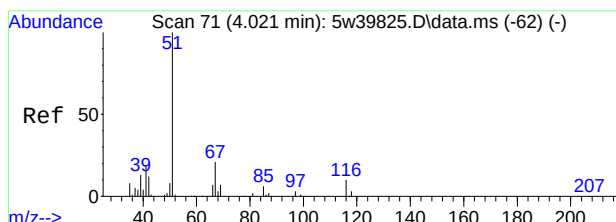
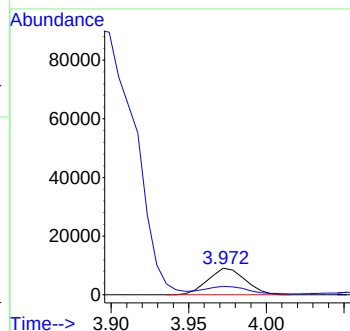
Quant Time: Dec 27 11:48:49 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





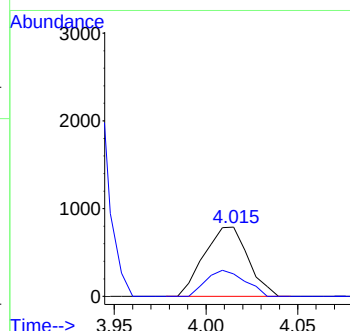
#2
Freon 152A
Concen: 1.32 ppb(v)
RT: 3.972 min Scan# 63
Delta R.T. -0.012 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

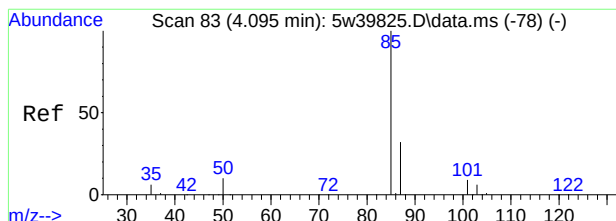
Tgt Ion: 65 Resp: 15188
Ion Ratio Lower Upper
65 100
45 31.6 18.2 33.8



#3
Chlorodifluoromethane
Concen: 0.28 ppb(v)
RT: 4.015 min Scan# 70
Delta R.T. -0.006 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

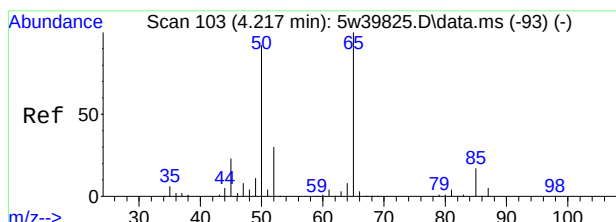
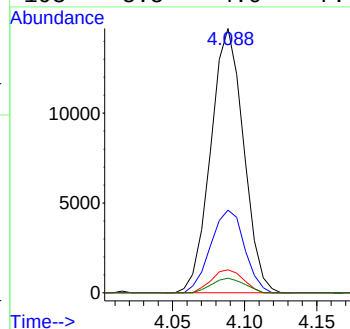
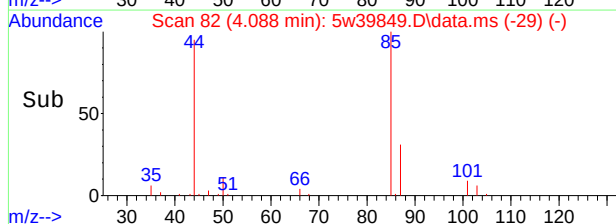
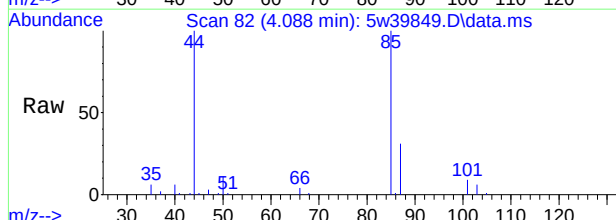
Tgt Ion: 67 Resp: 1317
Ion Ratio Lower Upper
67 100
69 32.4 23.2 43.0





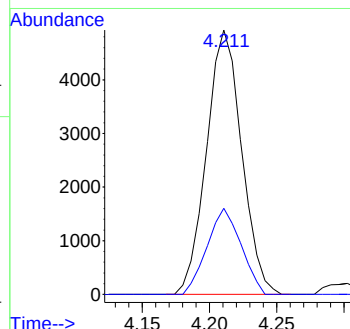
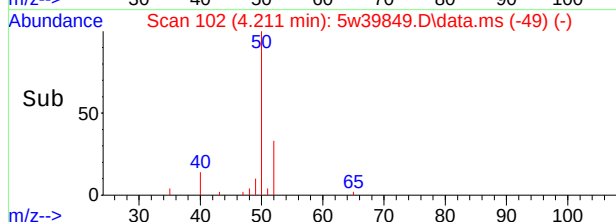
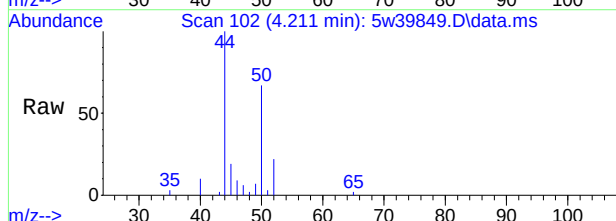
#6
Dichlorodifluoromethane
Concen: 0.47 ppb(v)
RT: 4.088 min Scan# 82
Delta R.T. -0.006 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

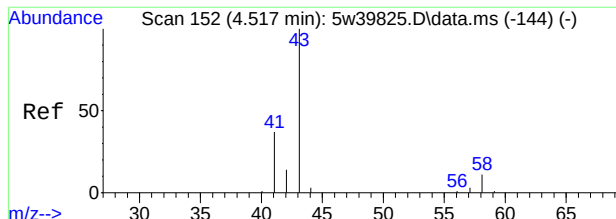
Tgt Ion:	85	Resp:	23376
Ion Ratio	Lower	Upper	
85	100		
87	31.3	22.7	42.1
101	8.7	6.1	11.3
103	5.5	4.0	7.4



#8
Chloromethane
Concen: 0.55 ppb(v)
RT: 4.211 min Scan# 102
Delta R.T. -0.006 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

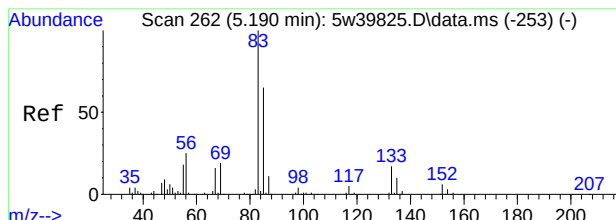
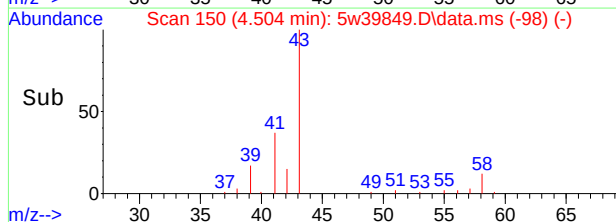
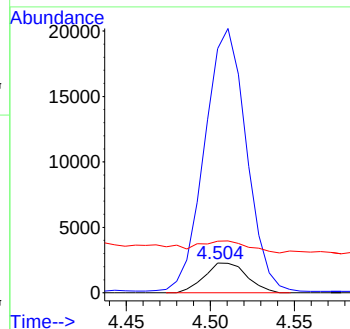
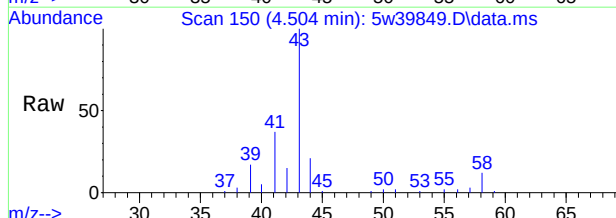
Tgt Ion:	50	Resp:	8960
Ion Ratio	Lower	Upper	
50	100		
52	32.5	22.6	42.0





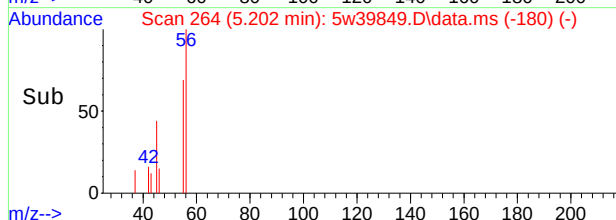
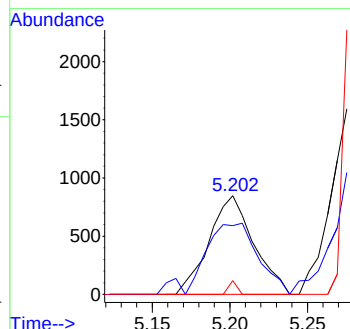
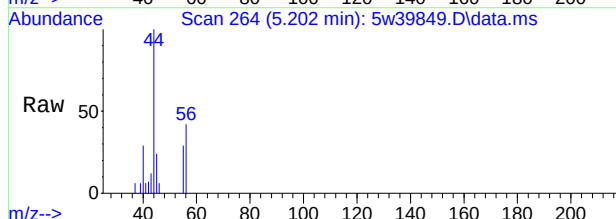
#12
n-Butane
Concen: 1.77 ppb(v)
RT: 4.504 min Scan# 150
Delta R.T. -0.012 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

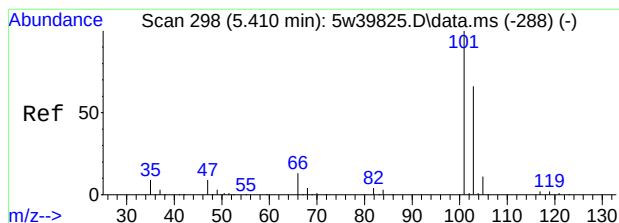
Tgt Ion	Ratio	Lower	Upper
58	100		
43	820.4	625.2	1161.2
44	173.8	29.5	54.9#



#20
Acrolein
Concen: 0.27 ppb(v)
RT: 5.202 min Scan# 264
Delta R.T. 0.012 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

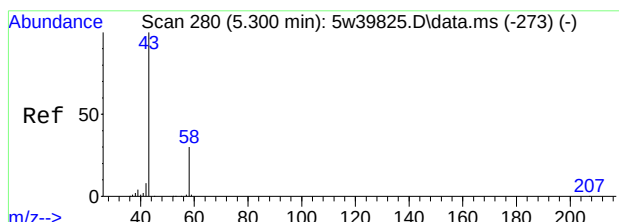
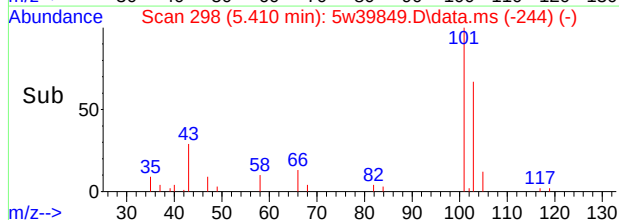
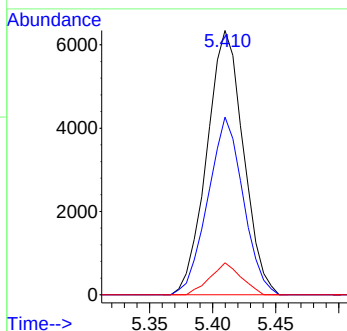
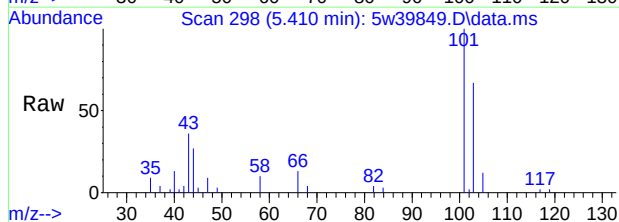
Tgt Ion	Ratio	Lower	Upper
56	100		
55	87.4	56.8	85.2#
37	0.0	17.9	26.9#





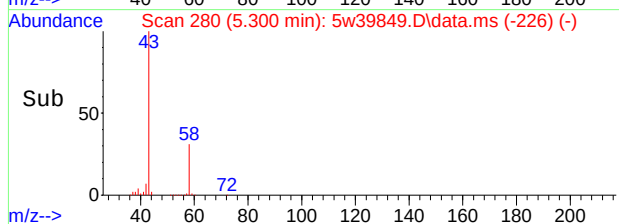
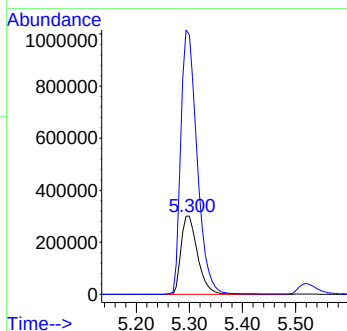
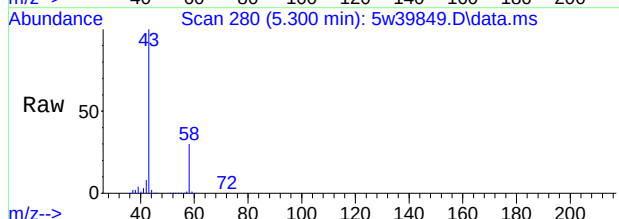
#21
Trichlorofluoromethane
Concen: 0.27 ppb(v)
RT: 5.410 min Scan# 298
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

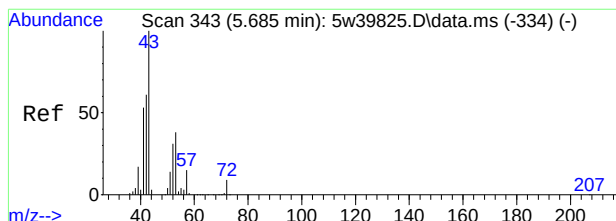
Tgt Ion:	101	Resp:	12748
Ion Ratio	Lower	Upper	
101	100		
103	67.2	46.2	85.8
105	12.1	7.4	13.8



#22
Acetone
Concen: 96.47 ppb(v)
RT: 5.300 min Scan# 280
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

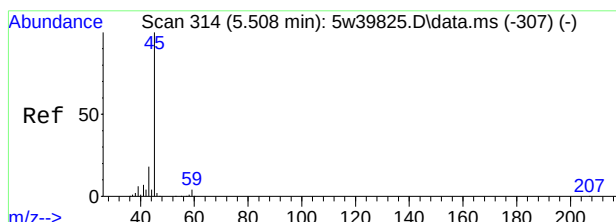
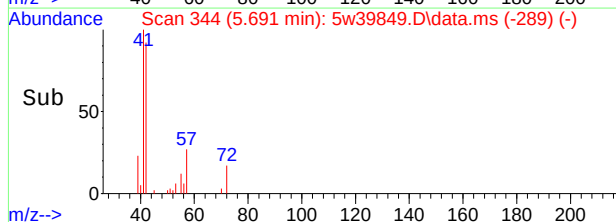
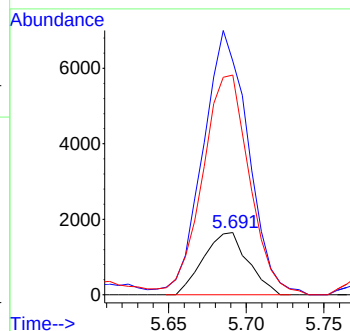
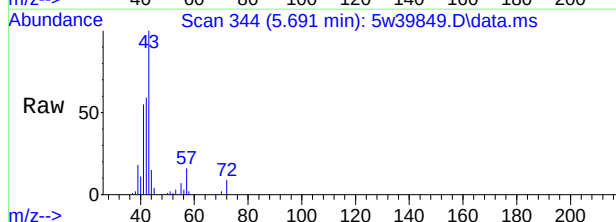
Tgt Ion:	58	Resp:	652044
Ion Ratio	Lower	Upper	
58	100		
43	331.8	234.8	436.2





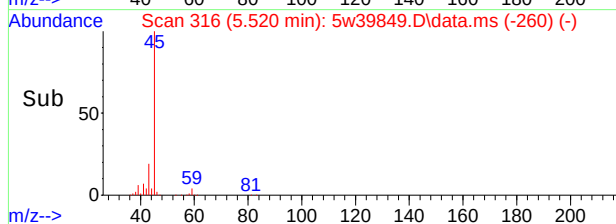
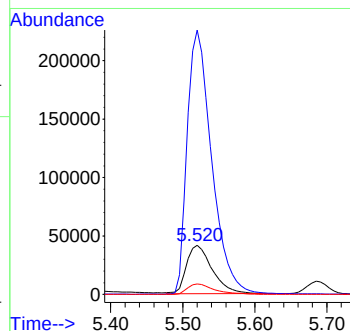
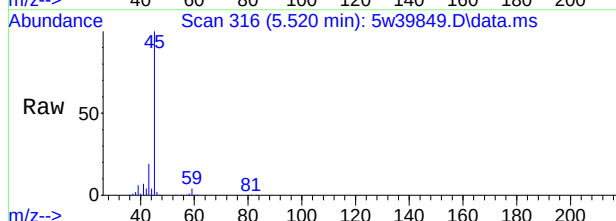
#23
 Pentane
 Concen: 0.75 ppb(v)
 RT: 5.691 min Scan# 344
 Delta R.T. 0.006 min
 Lab File: 5w39849.D
 Acq: 24 Dec 2019 11:50 pm

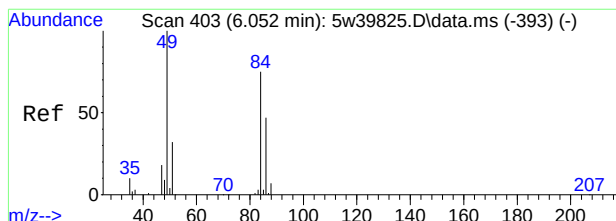
Tgt Ion: 57 Resp: 3298
 Ion Ratio Lower Upper
 57 100
 42 375.2 281.4 522.6
 41 352.8 243.3 451.9



#25
 Isopropyl Alcohol
 Concen: 14.03 ppb(v)
 RT: 5.520 min Scan# 316
 Delta R.T. 0.012 min
 Lab File: 5w39849.D
 Acq: 24 Dec 2019 11:50 pm

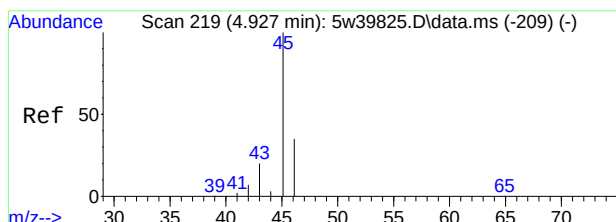
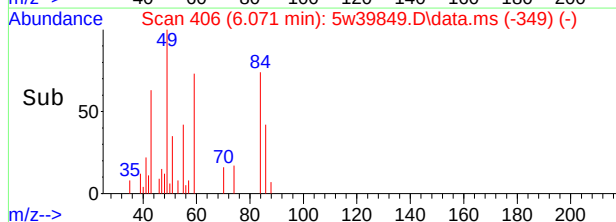
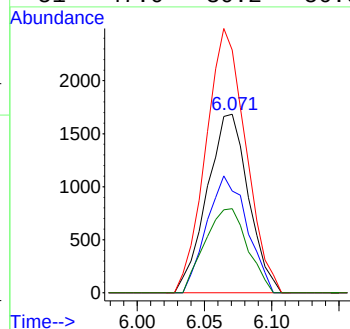
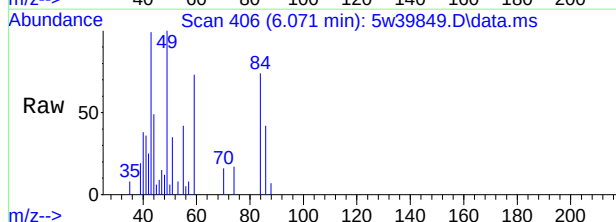
Tgt Ion: 43 Resp: 102581
 Ion Ratio Lower Upper
 43 100
 45 538.6 385.8 716.6
 59 21.3 15.3 28.3





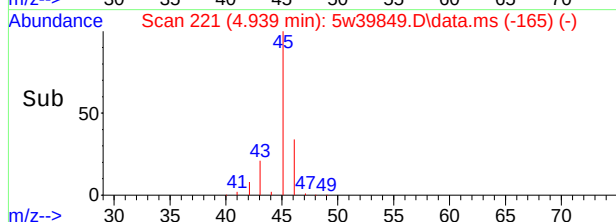
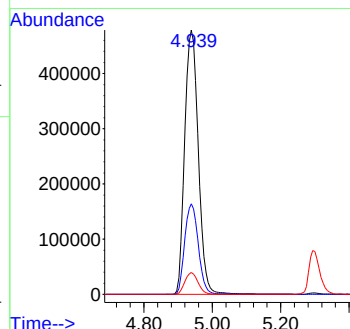
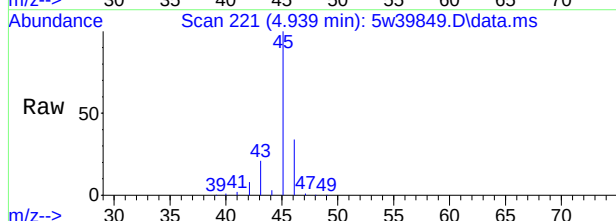
#28
Methylene Chloride
Concen: 0.20 ppb(v)
RT: 6.071 min Scan# 406
Delta R.T. 0.018 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

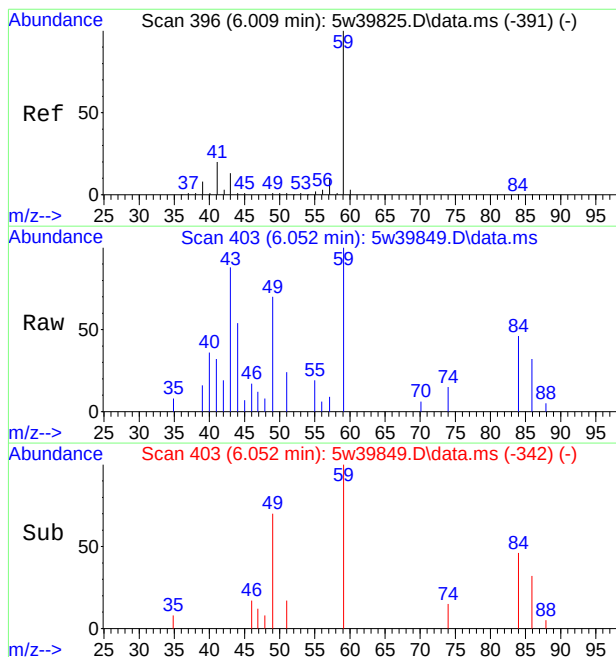
Tgt Ion: 84	Resp: 3616
Ion Ratio	Lower Upper
84 100	
86 56.9	44.2 82.0
49 135.9	93.8 174.2
51 47.0	30.2 56.0



#30
Ethanol
Concen: 197.24 ppb(v)
RT: 4.939 min Scan# 221
Delta R.T. 0.012 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

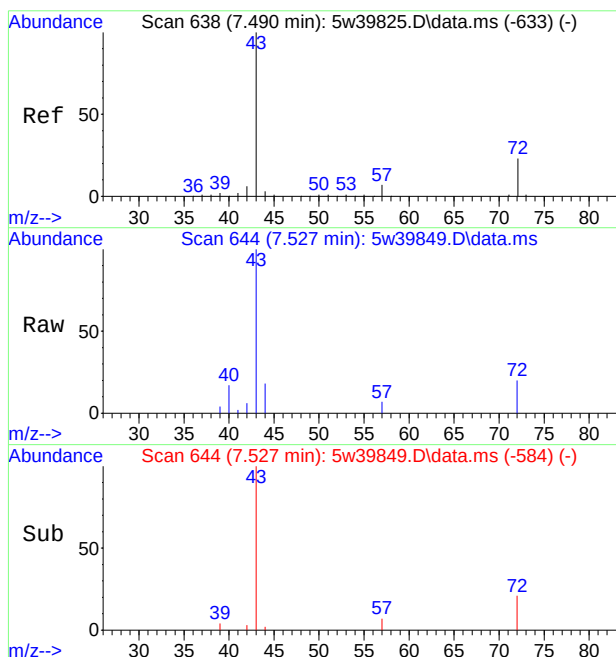
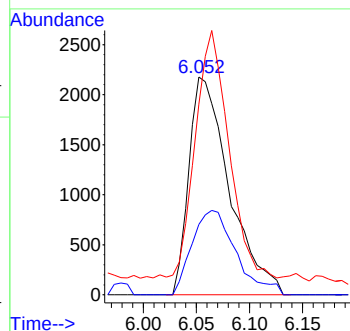
Tgt Ion: 45	Resp: 1329358
Ion Ratio	Lower Upper
45 100	
46 34.3	24.1 44.8
42 8.3	5.5 10.1





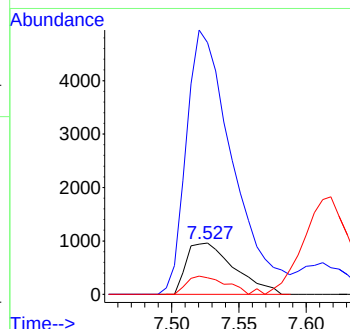
#34
tert-Butyl Alcohol
Concen: 0.15 ppb(v)
RT: 6.052 min Scan# 403
Delta R.T. 0.043 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

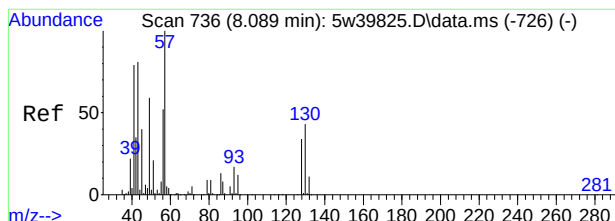
Tgt Ion: 59	Resp: 5757
Ion Ratio Lower Upper	
59 100	
41 32.3	14.3 26.5#
43 87.6	9.4 17.4#



#38
2-Butanone
Concen: 0.28 ppb(v)
RT: 7.527 min Scan# 644
Delta R.T. 0.037 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

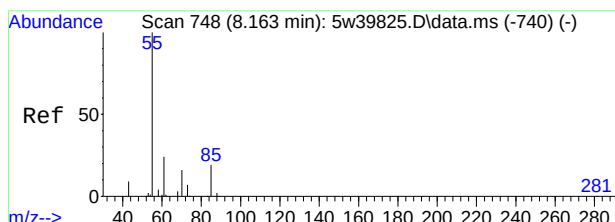
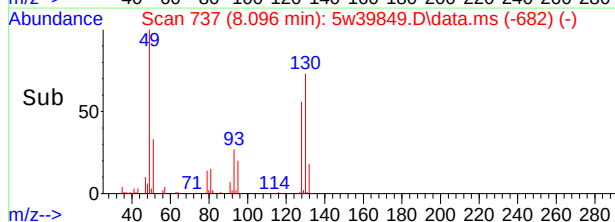
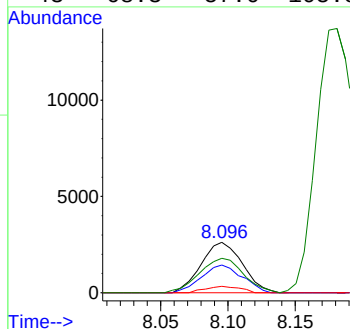
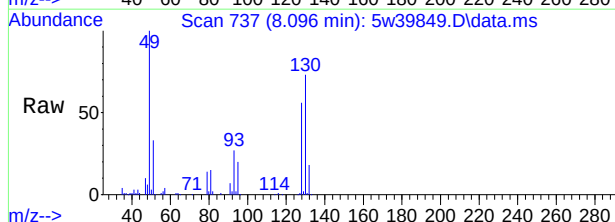
Tgt Ion: 72	Resp: 2380
Ion Ratio Lower Upper	
72 100	
43 490.9	304.5 565.5
57 32.6	22.6 42.0





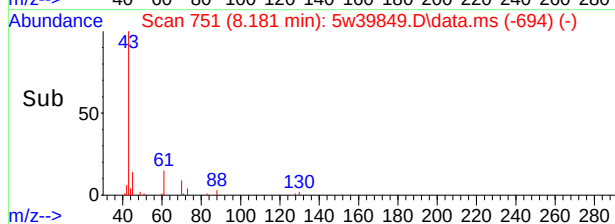
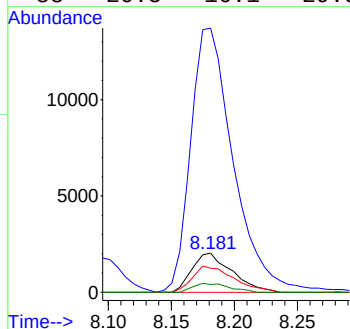
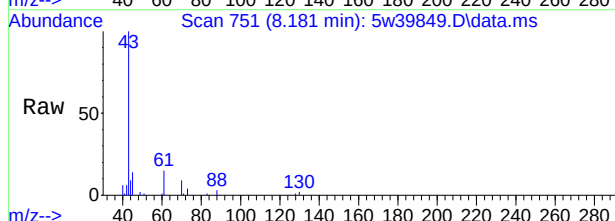
#39
Hexane
Concen: 0.20 ppb(v)
RT: 8.096 min Scan# 737
Delta R.T. 0.006 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

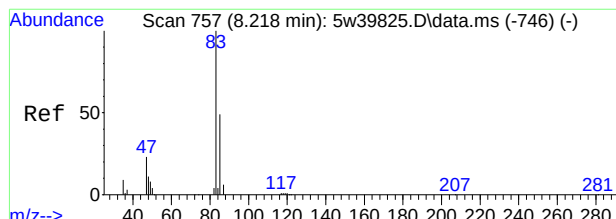
Tgt Ion: 57	Resp: 5589
Ion Ratio Lower Upper	
57 100	
56 54.9 36.5 67.7	
86 13.1 9.2 17.0	
43 68.3 57.0 105.8	



#42
Ethyl Acetate
Concen: 0.80 ppb(v)
RT: 8.181 min Scan# 751
Delta R.T. 0.018 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

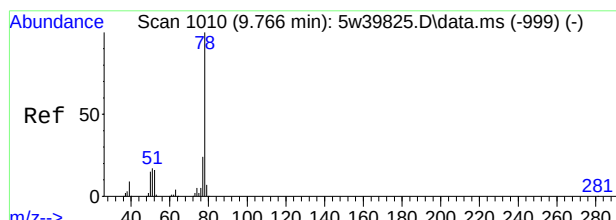
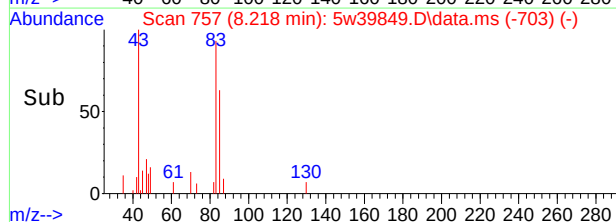
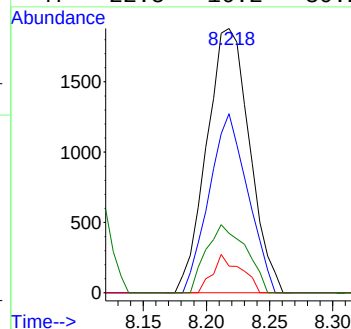
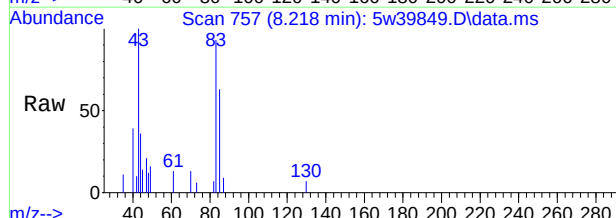
Tgt Ion: 61	Resp: 4485
Ion Ratio Lower Upper	
61 100	
43 675.0 466.8 867.0	
70 61.4 48.1 89.3	
88 20.5 16.1 29.9	





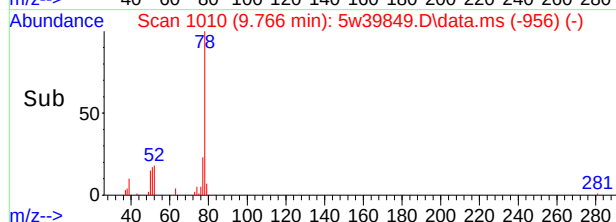
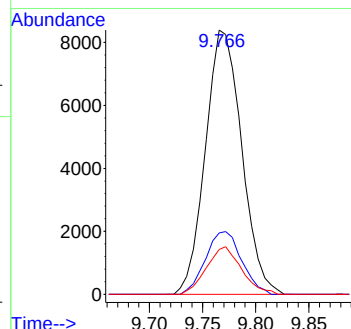
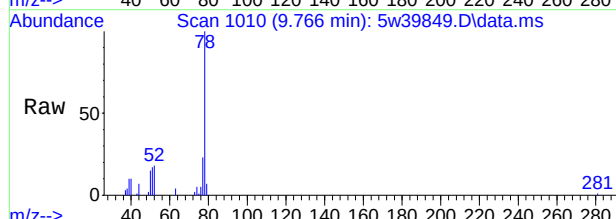
#44
Chloroform
Concen: 0.11 ppb(v)
RT: 8.218 min Scan# 757
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

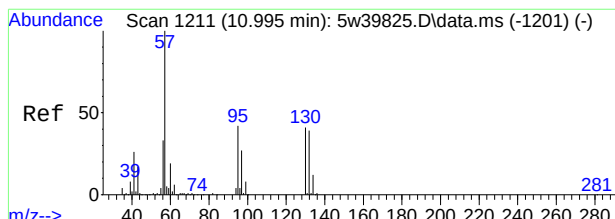
Tgt Ion: 83	Resp: 4437
Ion Ratio	Lower Upper
83 100	
85 67.8	45.0 83.6
87 10.1	7.6 14.0
47 22.5	16.2 30.2



#49
Benzene
Concen: 0.35 ppb(v)
RT: 9.766 min Scan# 1010
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

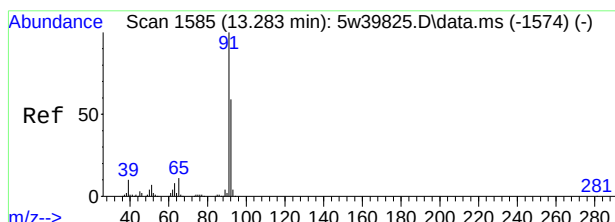
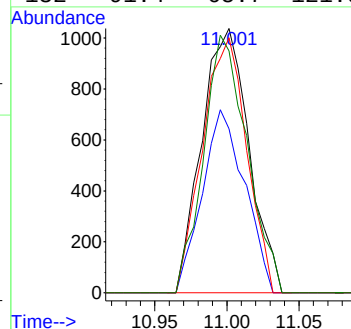
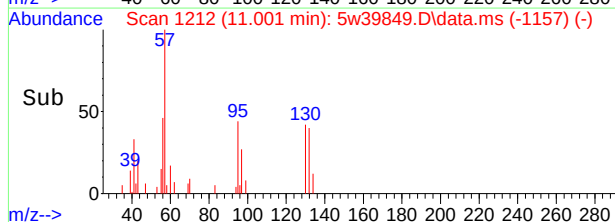
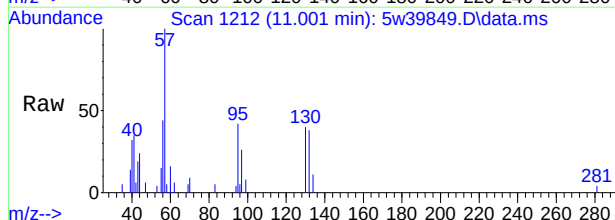
Tgt Ion: 78	Resp: 19940
Ion Ratio	Lower Upper
78 100	
77 23.2	16.7 30.9
51 17.0	11.7 21.7





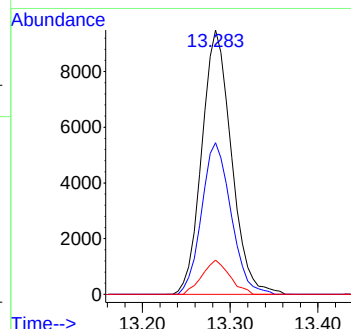
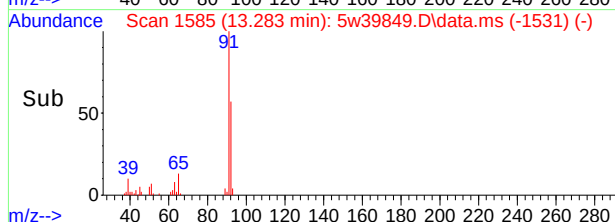
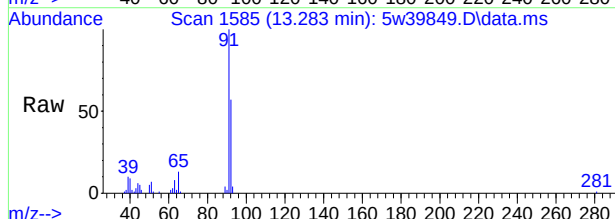
#56
Trichloroethene
Concen: 0.10 ppb(v)
RT: 11.001 min Scan# 1212
Delta R.T. 0.006 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

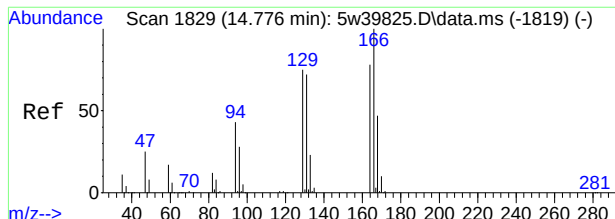
Tgt Ion:	95	Resp:	2368
Ion Ratio	Lower	Upper	
95	100		
97	62.0	45.6	84.6
130	96.4	68.1	126.5
132	91.4	65.7	121.9



#66
Toluene
Concen: 0.36 ppb(v)
RT: 13.283 min Scan# 1585
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

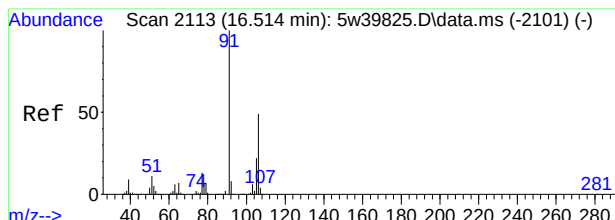
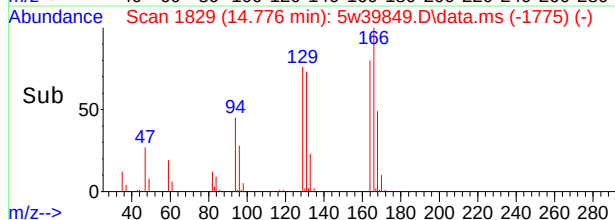
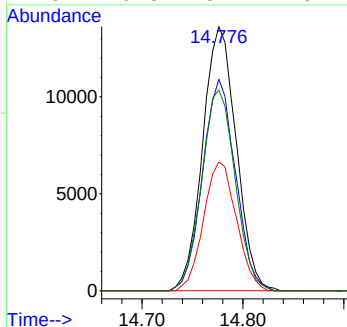
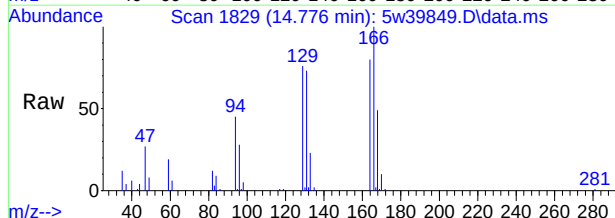
Tgt Ion:	91	Resp:	22266
Ion Ratio	Lower	Upper	
91	100		
92	57.3	41.2	76.4
65	13.0	8.0	14.8





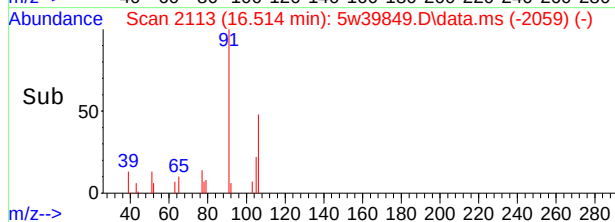
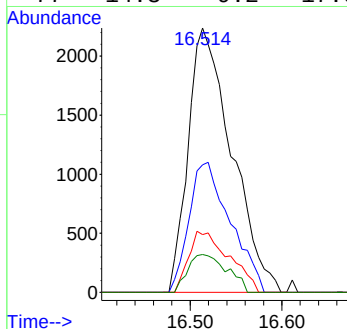
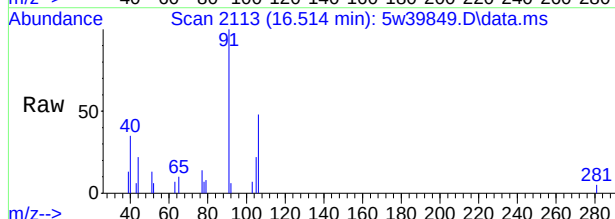
#72
Tetrachloroethene
Concen: 1.15 ppb(v)
RT: 14.776 min Scan# 1829
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

Tgt Ion:	166	Resp:	31570
Ion Ratio	Lower	Upper	
166	100		
164	80.0	54.3	100.9
168	48.8	32.8	61.0
129	76.0	52.4	97.2



#79
m,p-Xylene
Concen: 0.15 ppb(v)
RT: 16.514 min Scan# 2113
Delta R.T. 0.000 min
Lab File: 5w39849.D
Acq: 24 Dec 2019 11:50 pm

Tgt Ion:	91	Resp:	7384
Ion Ratio	Lower	Upper	
91	100		
106	48.2	34.2	63.4
105	21.9	15.3	28.3
77	14.3	9.2	17.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39867.D
 Acq On : 26 Dec 2019 4:38 pm
 Operator : danat
 Sample : jd234-2
 Misc : ms39839,v5w1622,100,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 27 12:28:08 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

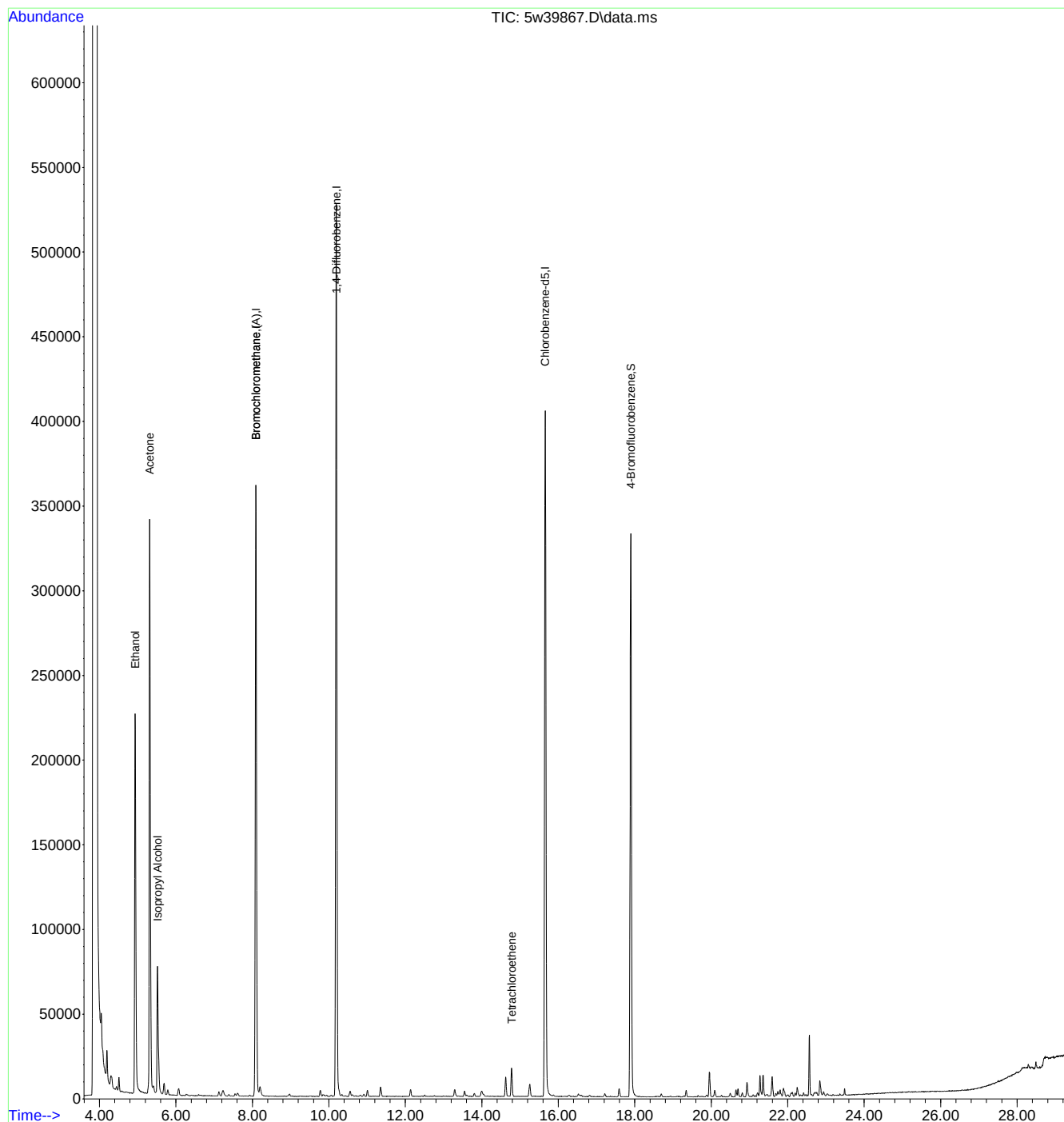
Internal Standards						
1) Bromochloromethane	8.089	130	148841	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	516715	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	178965	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.089	130	148841	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	165183	10.55	ppb(v	0.00
Spiked Amount	10.000	Range 65 - 128	Recovery	=	105.50%	
Target Compounds						
					Qvalue	
22) Acetone	5.312	58	140402	20.63	ppb(v	100
25) Isopropyl Alcohol	5.520	43	22680	3.08	ppb(v	85
30) Ethanol	4.933	45	300444	44.27	ppb(v	100
72) Tetrachloroethene	14.782	166	6748	0.23	ppb(v	94

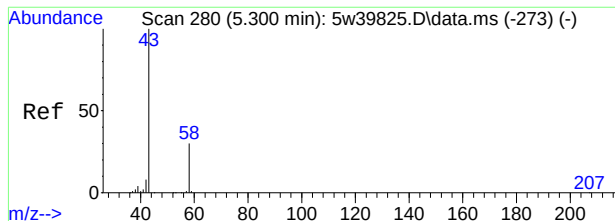
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39867.D
Acq On : 26 Dec 2019 4:38 pm
Operator : danat
Sample : jd234-2
Misc : ms39839,v5w1622,100,,,1
ALS Vial : 6 Sample Multiplier: 1

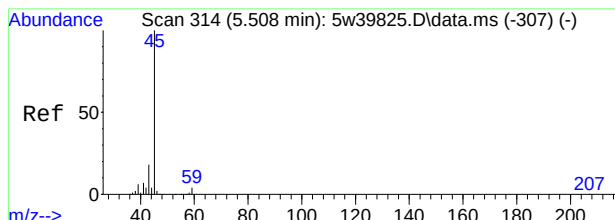
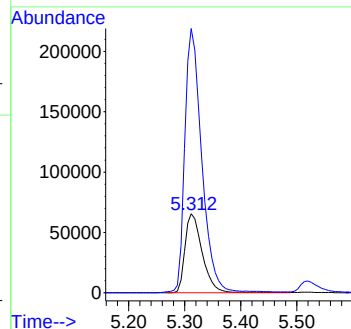
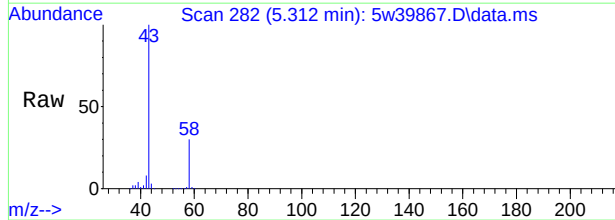
Quant Time: Dec 27 12:28:08 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





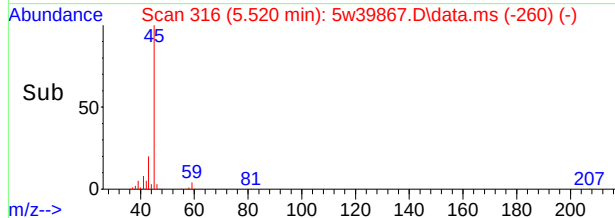
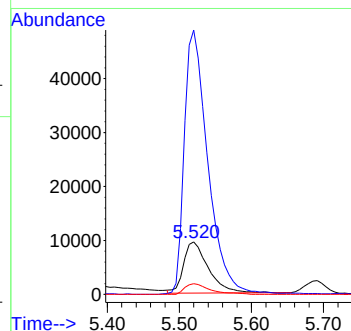
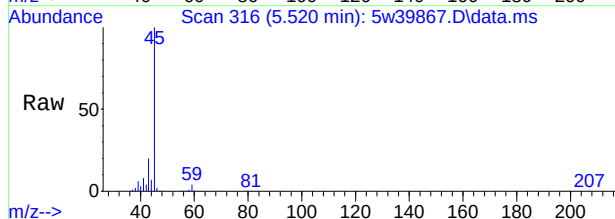
#22
Acetone
Concen: 20.63 ppb(v)
RT: 5.312 min Scan# 282
Delta R.T. 0.012 min
Lab File: 5w39867.D
Acq: 26 Dec 2019 4:38 pm

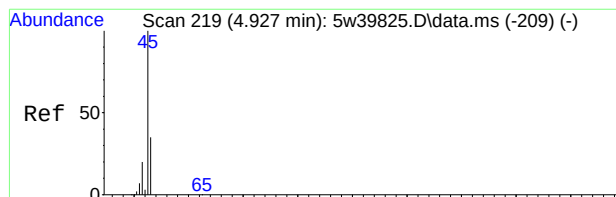
Tgt Ion: 58 Resp: 140402
Ion Ratio Lower Upper
58 100
43 334.8 234.8 436.2



#25
Isopropyl Alcohol
Concen: 3.08 ppb(v)
RT: 5.520 min Scan# 316
Delta R.T. 0.012 min
Lab File: 5w39867.D
Acq: 26 Dec 2019 4:38 pm

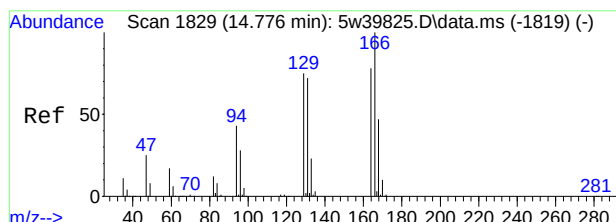
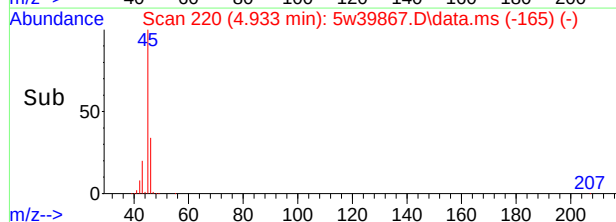
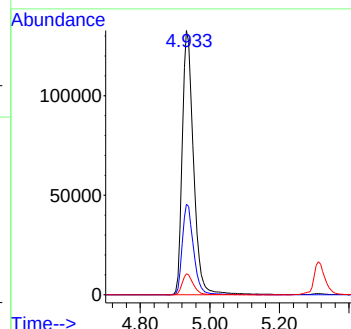
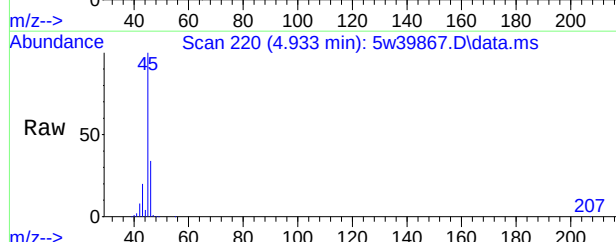
Tgt Ion: 43 Resp: 22680
Ion Ratio Lower Upper
43 100
45 505.2 385.8 716.6
59 20.5 15.3 28.3





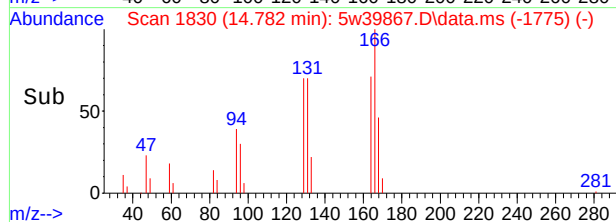
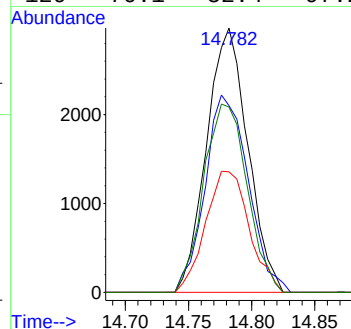
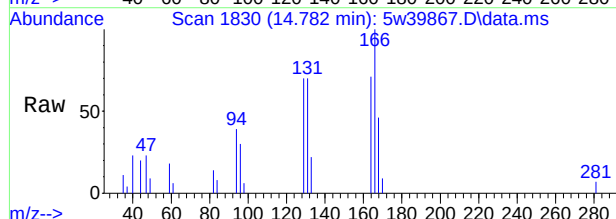
#30
Ethanol
Concen: 44.27 ppb(v)
RT: 4.933 min Scan# 220
Delta R.T. 0.006 min
Lab File: 5w39867.D
Acq: 26 Dec 2019 4:38 pm

Tgt Ion: 45 Resp: 300444
Ion Ratio Lower Upper
45 100
46 34.2 24.1 44.8
42 7.9 5.5 10.1



#72
Tetrachloroethene
Concen: 0.23 ppb(v)
RT: 14.782 min Scan# 1830
Delta R.T. 0.006 min
Lab File: 5w39867.D
Acq: 26 Dec 2019 4:38 pm

Tgt Ion: 166 Resp: 6748
Ion Ratio Lower Upper
166 100
164 70.6 54.3 100.9
168 45.5 32.8 61.0
129 70.1 52.4 97.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39853.D
 Acq On : 25 Dec 2019 3:28 am
 Operator : danat
 Sample : jd234-3
 Misc : ms39839,v5w1621,400,,,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 27 12:01:29 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

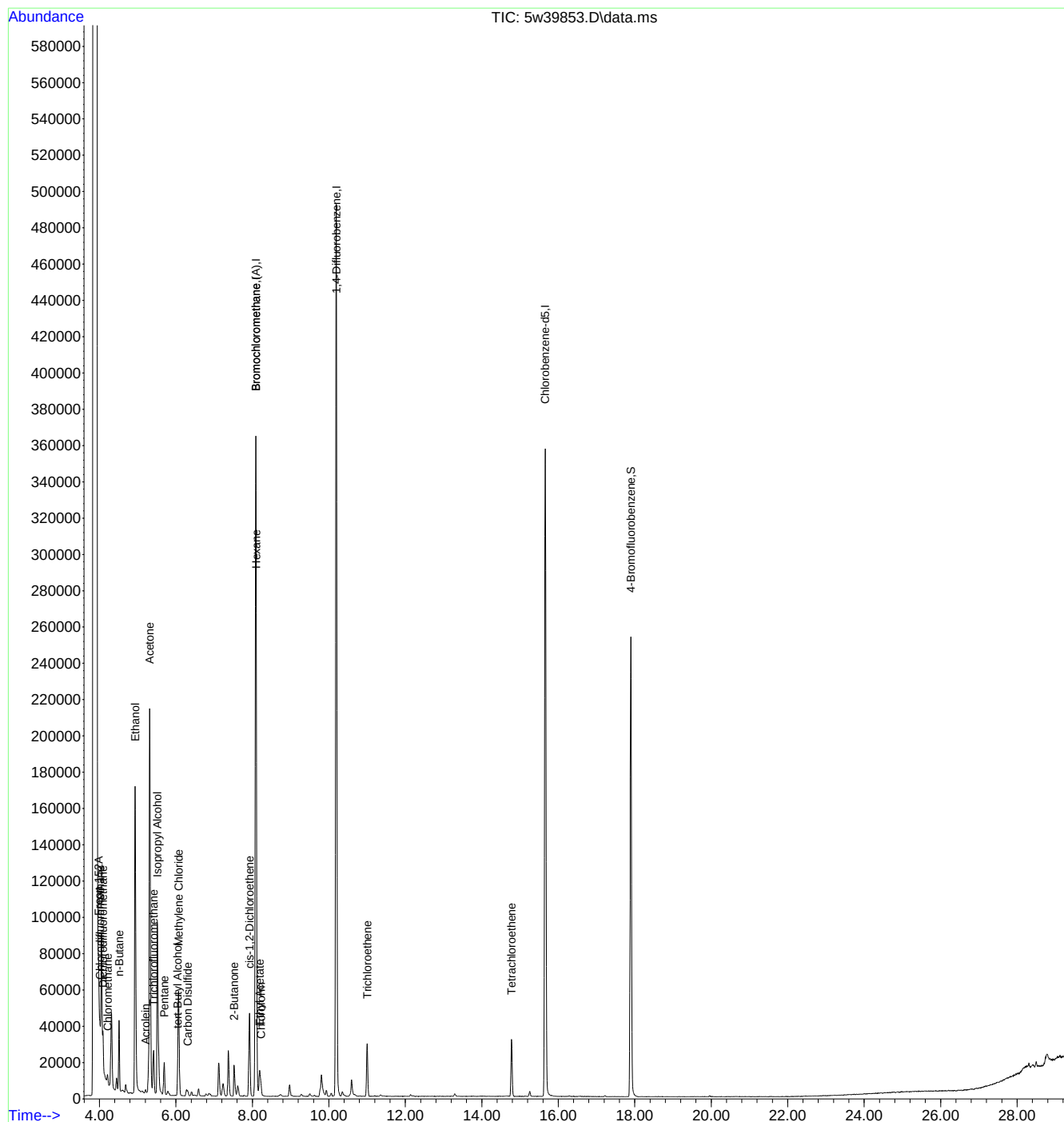
Internal Standards						
1) Bromochloromethane	8.089	130	138268	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	475924	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	155959	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.089	130	138268	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	121378	8.90	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	89.00%	
Target Compounds						
					Qvalue	
2) Freon 152A	3.978	65	9217	0.85	ppb(v#	76
3) Chlorodifluoromethane	4.015	67	1016	0.23	ppb(v	87
6) Dichlorodifluoromethane	4.094	85	17714	0.38	ppb(v	98
8) Chloromethane	4.217	50	3794	0.25	ppb(v	97
12) n-Butane	4.517	58	3810	1.80	ppb(v#	85
20) Acrolein	5.208	56	2016	0.34	ppb(v#	76
21) Trichlorofluoromethane	5.416	101	20397	0.47	ppb(v	99
22) Acetone	5.312	58	94156	14.89	ppb(v	90
23) Pentane	5.691	57	1816	0.44	ppb(v	88
25) Isopropyl Alcohol	5.514	43	29496	4.31	ppb(v	83
28) Methylene Chloride	6.070	84	27962	1.69	ppb(v	97
29) Carbon Disulfide	6.309	76	4417	0.10	ppb(v	97
30) Ethanol	4.933	45	226279	35.89	ppb(v	100
34) tert-Butyl Alcohol	6.040	59	6617	0.19	ppb(v#	78
38) 2-Butanone	7.520	72	6328	0.80	ppb(v	93
39) Hexane	8.102	57	14103	0.54	ppb(v	88
40) cis-1,2-Dichloroethene	7.924	61	32738	1.31	ppb(v	98
42) Ethyl Acetate	8.187	61	2688	0.51	ppb(v	90
44) Chloroform	8.224	83	4116	0.11	ppb(v	94
56) Trichloroethene	11.001	95	11948	0.51	ppb(v	97
72) Tetrachloroethene	14.776	166	12231	0.46	ppb(v	97

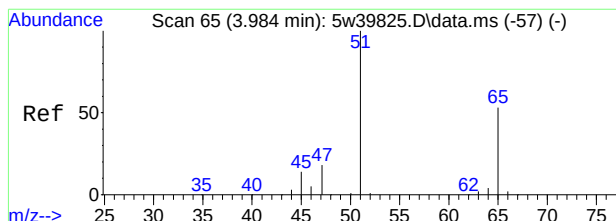
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39853.D
Acq On : 25 Dec 2019 3:28 am
Operator : danat
Sample : jd234-3
Misc : ms39839,v5w1621,400,,,1
ALS Vial : 16 Sample Multiplier: 1

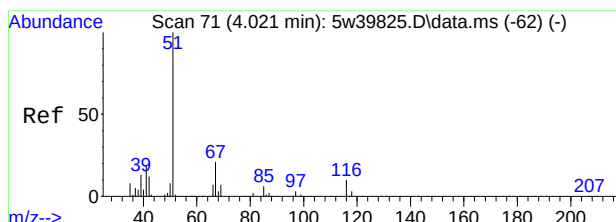
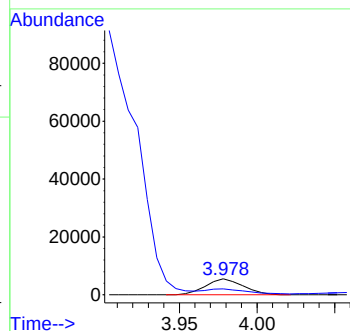
Quant Time: Dec 27 12:01:29 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





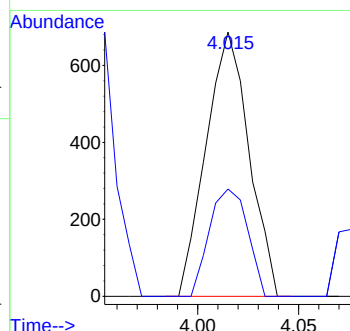
#2
Freon 152A
Concen: 0.85 ppb(v)
RT: 3.978 min Scan# 64
Delta R.T. -0.006 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

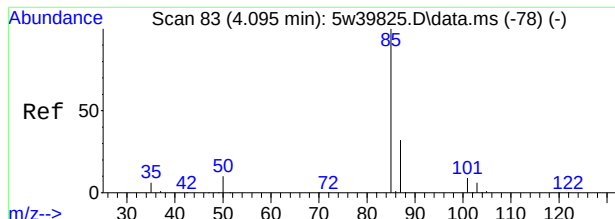
Tgt Ion: 65 Resp: 9217
Ion Ratio Lower Upper
65 100
45 38.1 18.2 33.8#



#3
Chlorodifluoromethane
Concen: 0.23 ppb(v)
RT: 4.015 min Scan# 70
Delta R.T. -0.006 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

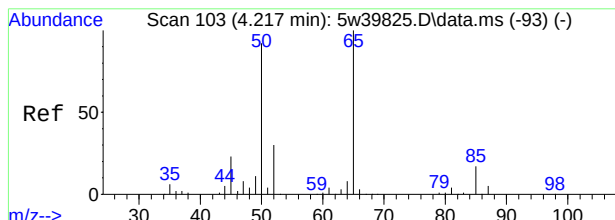
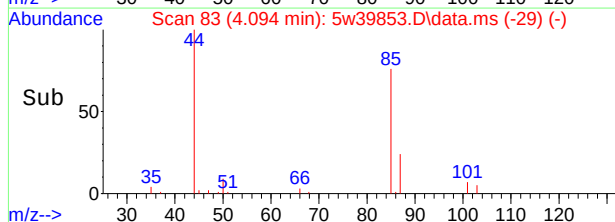
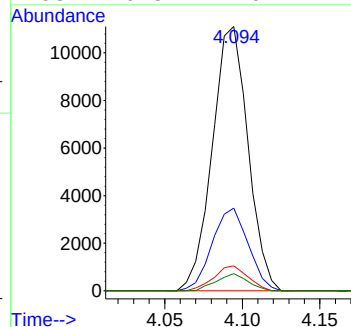
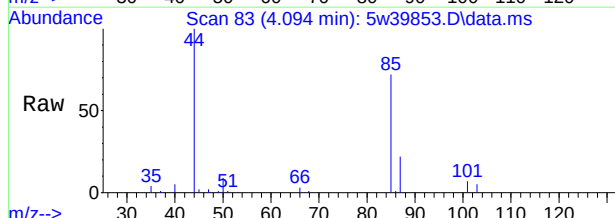
Tgt Ion: 67 Resp: 1016
Ion Ratio Lower Upper
67 100
69 40.6 23.2 43.0





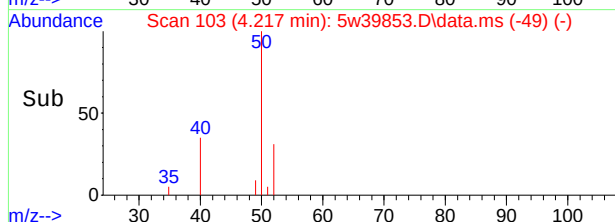
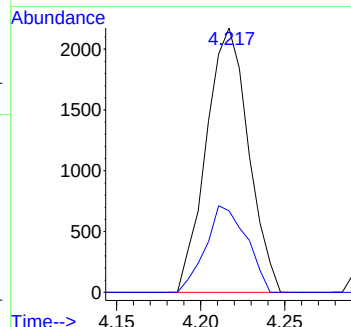
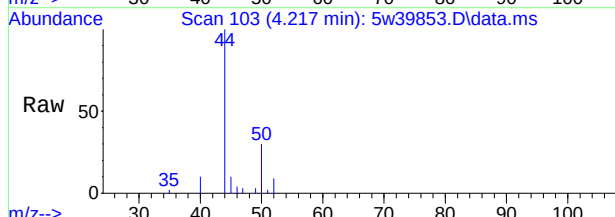
#6
Dichlorodifluoromethane
Concen: 0.38 ppb(v)
RT: 4.094 min Scan# 83
Delta R.T. -0.000 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

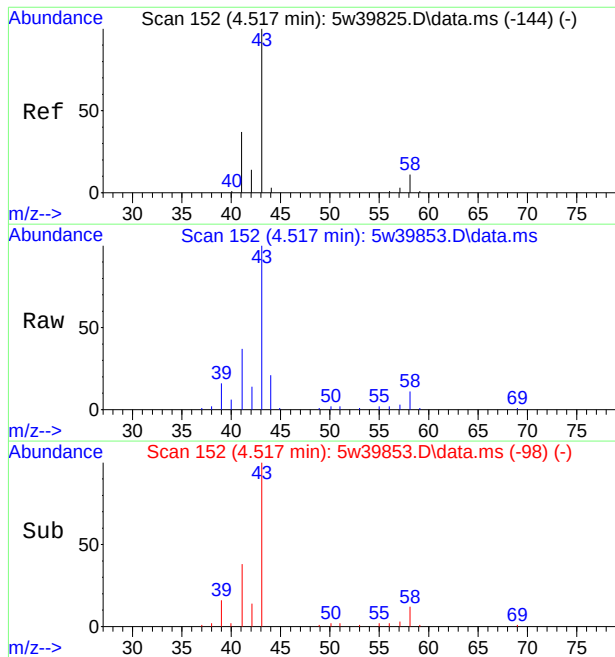
Tgt Ion:	85	Resp:	17714
Ion Ratio	Lower	Upper	
85	100		
87	31.3	22.7	42.1
101	9.5	6.1	11.3
103	6.5	4.0	7.4



#8
Chloromethane
Concen: 0.25 ppb(v)
RT: 4.217 min Scan# 103
Delta R.T. -0.000 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

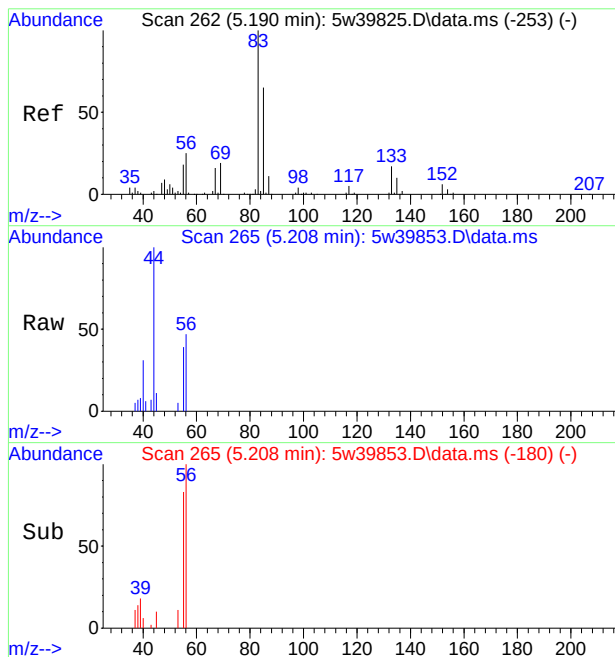
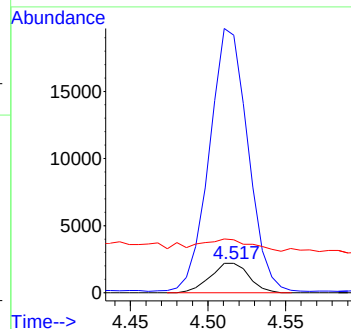
Tgt Ion:	50	Resp:	3794
Ion Ratio	Lower	Upper	
50	100		
52	30.9	22.6	42.0





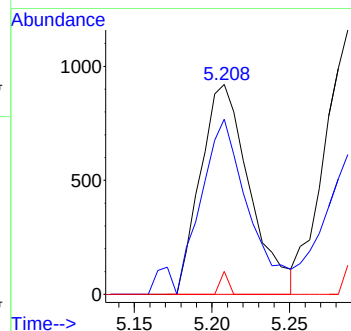
#12
n-Butane
Concen: 1.80 ppb(v)
RT: 4.517 min Scan# 152
Delta R.T. -0.000 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

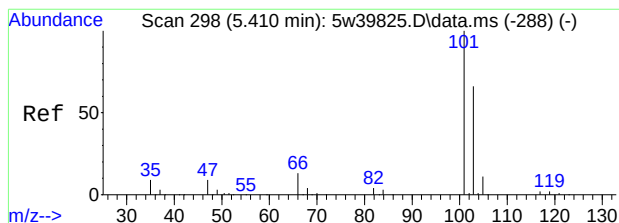
Tgt Ion	Ratio	Lower	Upper
58	100		
43	871.2	625.2	1161.2
44	179.2	29.5	54.9#



#20
Acrolein
Concen: 0.34 ppb(v)
RT: 5.208 min Scan# 265
Delta R.T. 0.018 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

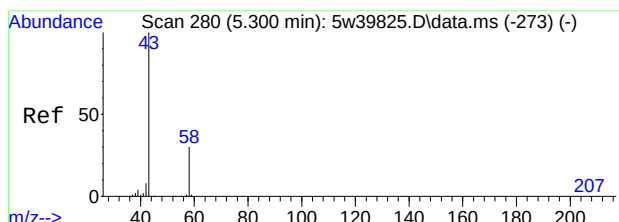
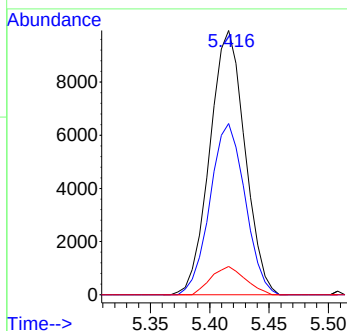
Tgt Ion	Ratio	Lower	Upper
56	100		
55	84.6	56.8	85.2
37	0.0	17.9	26.9#





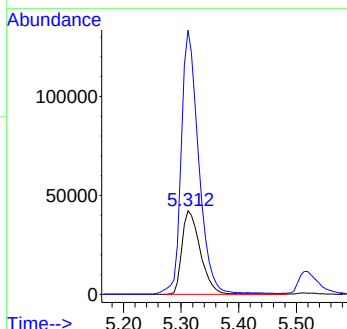
#21
Trichlorofluoromethane
Concen: 0.47 ppb(v)
RT: 5.416 min Scan# 299
Delta R.T. 0.006 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

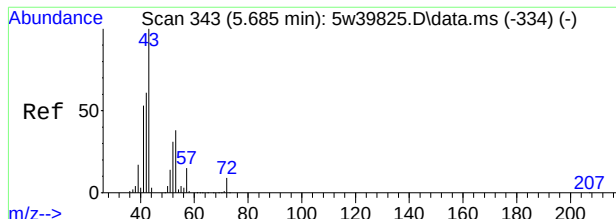
Tgt Ion:	101	Resp:	20397
Ion	Ratio	Lower	Upper
101	100		
103	64.8	46.2	85.8
105	10.7	7.4	13.8



#22
Acetone
Concen: 14.89 ppb(v)
RT: 5.312 min Scan# 282
Delta R.T. 0.012 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

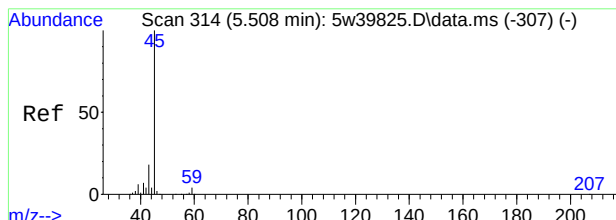
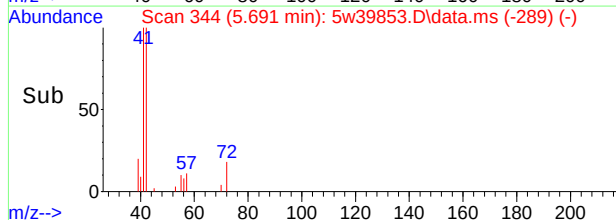
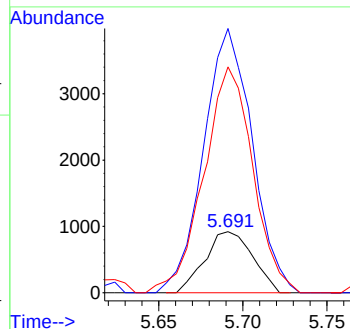
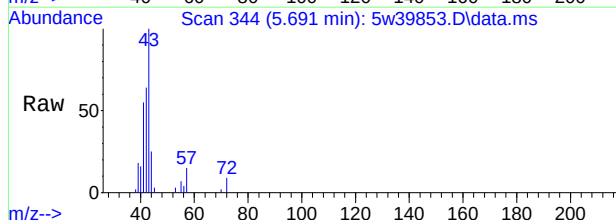
Tgt Ion:	58	Resp:	94156
Ion	Ratio	Lower	Upper
58	100		
43	315.1	234.8	436.2





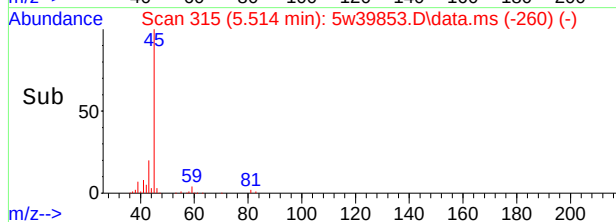
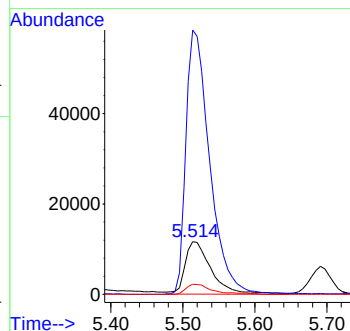
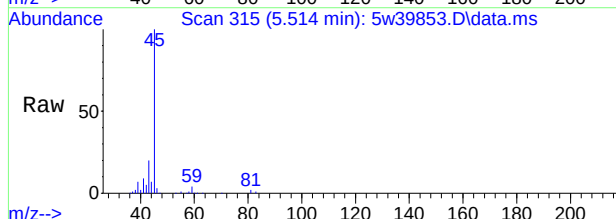
#23
 Pentane
 Concen: 0.44 ppb(v)
 RT: 5.691 min Scan# 344
 Delta R.T. 0.006 min
 Lab File: 5w39853.D
 Acq: 25 Dec 2019 3:28 am

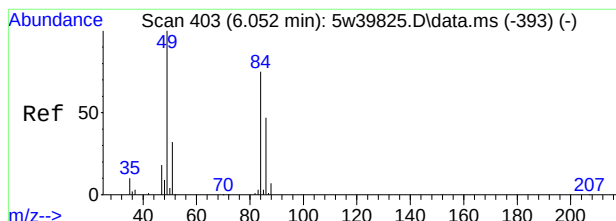
Tgt Ion: 57 Resp: 1816
 Ion Ratio Lower Upper
 57 100
 42 432.9 281.4 522.6
 41 369.8 243.3 451.9



#25
 Isopropyl Alcohol
 Concen: 4.31 ppb(v)
 RT: 5.514 min Scan# 315
 Delta R.T. 0.006 min
 Lab File: 5w39853.D
 Acq: 25 Dec 2019 3:28 am

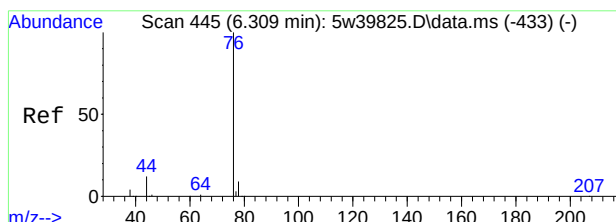
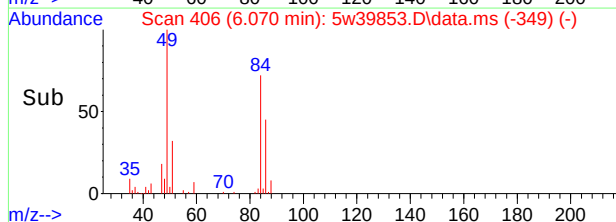
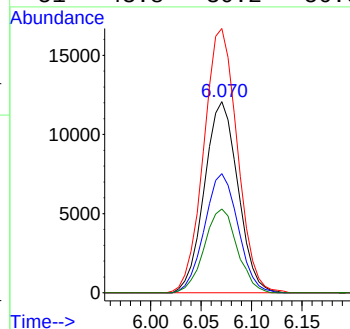
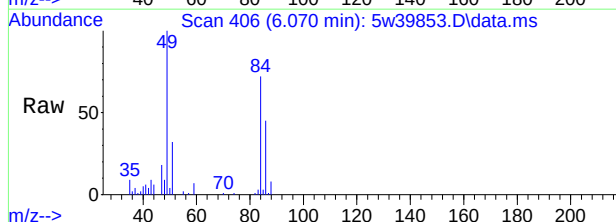
Tgt Ion: 43 Resp: 29496
 Ion Ratio Lower Upper
 43 100
 45 501.3 385.8 716.6
 59 19.2 15.3 28.3





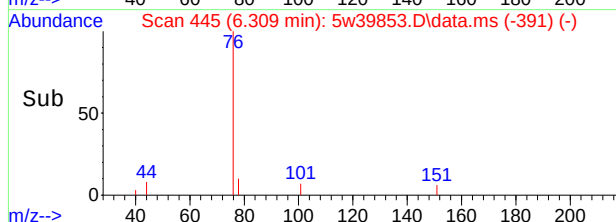
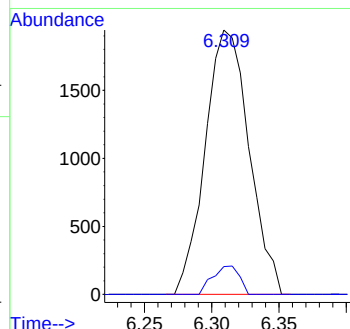
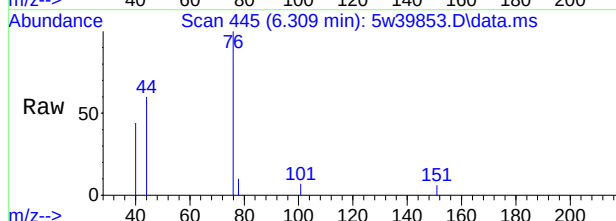
#28
Methylene Chloride
Concen: 1.69 ppb(v)
RT: 6.070 min Scan# 406
Delta R.T. 0.018 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

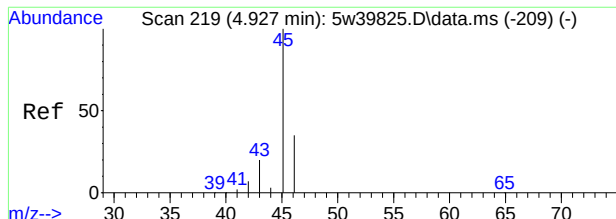
Tgt Ion: 84	Resp: 27962
Ion Ratio	Lower Upper
84 100	
86 62.3	44.2 82.0
49 138.3	93.8 174.2
51 43.8	30.2 56.0



#29
Carbon Disulfide
Concen: 0.10 ppb(v)
RT: 6.309 min Scan# 445
Delta R.T. -0.000 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

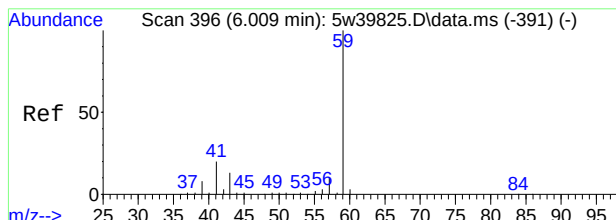
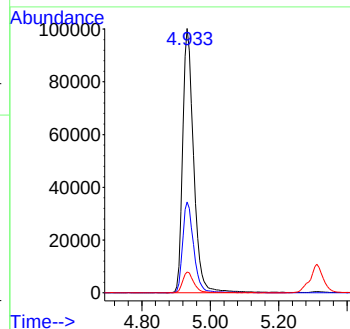
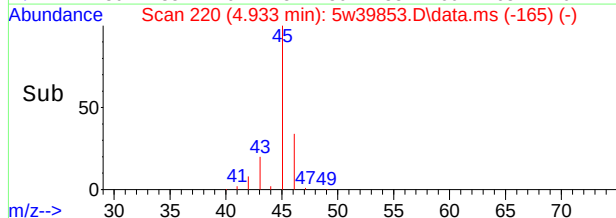
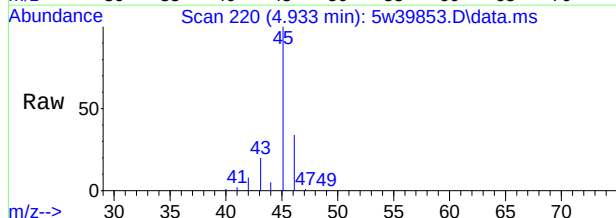
Tgt Ion: 76	Resp: 4417
Ion Ratio	Lower Upper
76 100	
78 10.5	6.5 12.1





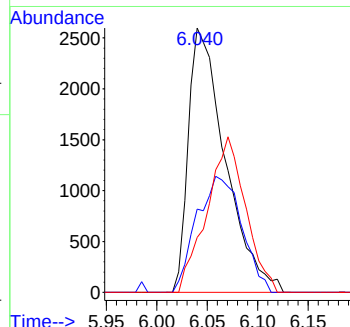
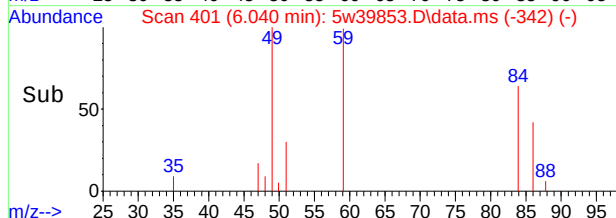
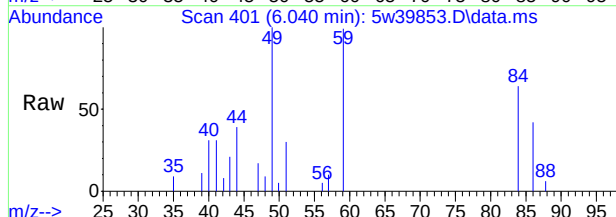
#30
Ethanol
Concen: 35.89 ppb(v)
RT: 4.933 min Scan# 220
Delta R.T. 0.006 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

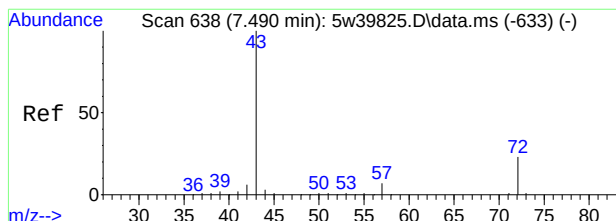
Tgt Ion: 45 Resp: 226279
Ion Ratio Lower Upper
45 100
46 34.3 24.1 44.8
42 7.8 5.5 10.1



#34
tert-Butyl Alcohol
Concen: 0.19 ppb(v)
RT: 6.040 min Scan# 401
Delta R.T. 0.030 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

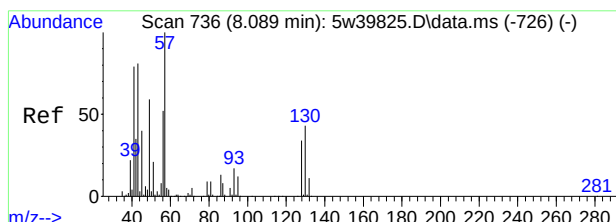
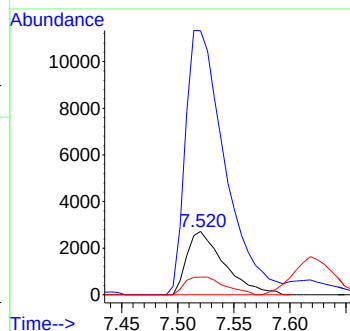
Tgt Ion: 59 Resp: 6617
Ion Ratio Lower Upper
59 100
41 31.5 14.3 26.5#
43 20.8 9.4 17.4#





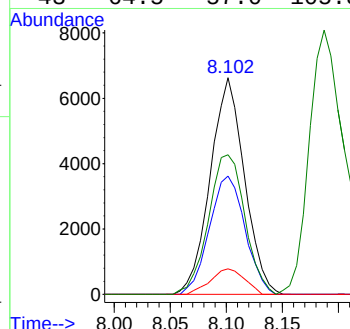
#38
2-Butanone
Concen: 0.80 ppb(v)
RT: 7.520 min Scan# 643
Delta R.T. 0.030 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

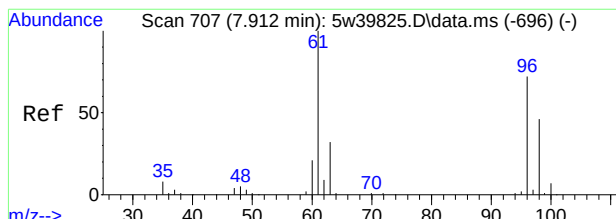
Tgt Ion:	72	Resp:	6328
Ion	Ratio	Lower	Upper
72	100		
43	416.6	304.5	565.5
57	27.9	22.6	42.0



#39
Hexane
Concen: 0.54 ppb(v)
RT: 8.102 min Scan# 738
Delta R.T. 0.012 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

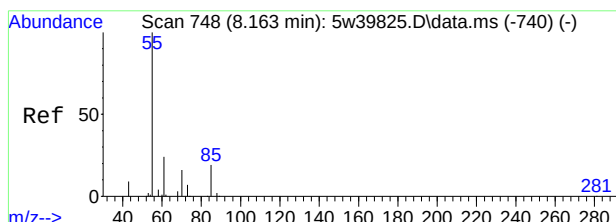
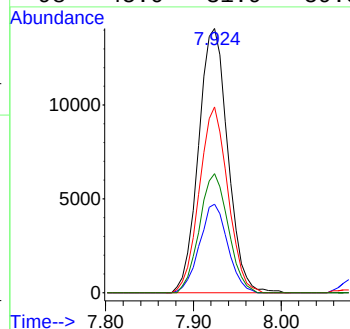
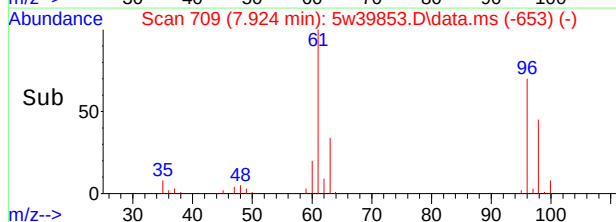
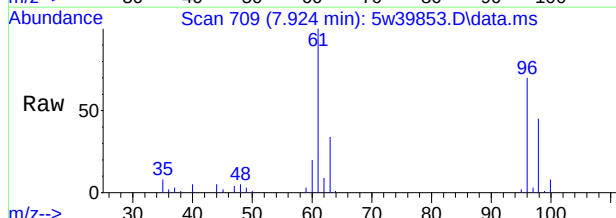
Tgt Ion:	57	Resp:	14103
Ion	Ratio	Lower	Upper
57	100		
56	54.7	36.5	67.7
86	11.8	9.2	17.0
43	64.5	57.0	105.8





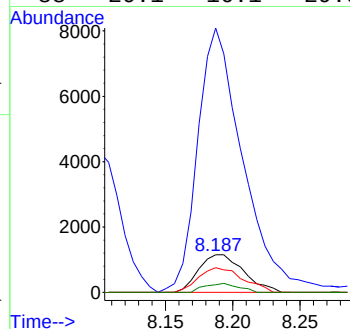
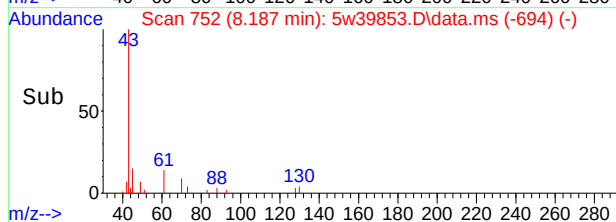
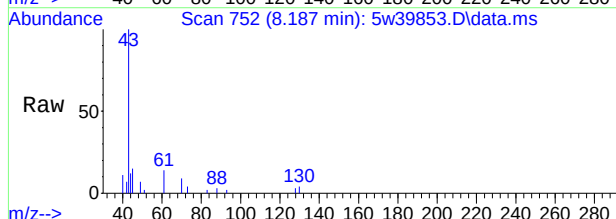
#40
cis-1,2-Dichloroethene
Concen: 1.31 ppb(v)
RT: 7.924 min Scan# 709
Delta R.T. 0.012 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

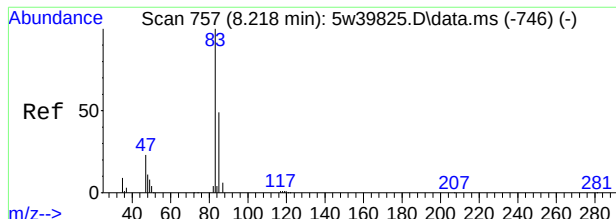
Tgt Ion:	61	Resp:	32738
Ion	Ratio	Lower	Upper
61	100		
63	33.5	22.7	42.1
96	70.3	50.7	94.1
98	45.0	31.9	59.3



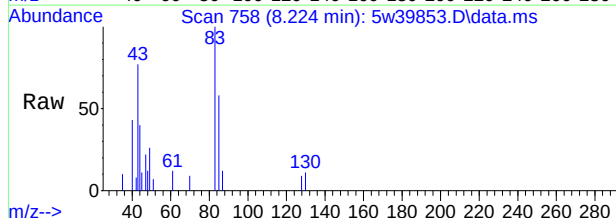
#42
Ethyl Acetate
Concen: 0.51 ppb(v)
RT: 8.187 min Scan# 752
Delta R.T. 0.024 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

Tgt Ion:	61	Resp:	2688
Ion	Ratio	Lower	Upper
61	100		
43	701.4	466.8	867.0
70	65.6	48.1	89.3
88	20.1	16.1	29.9

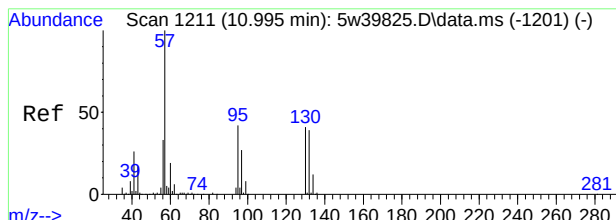
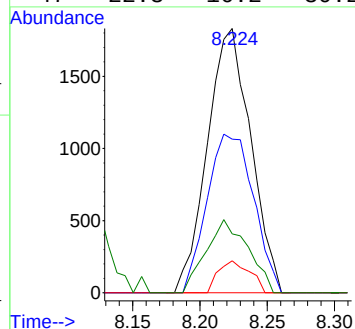
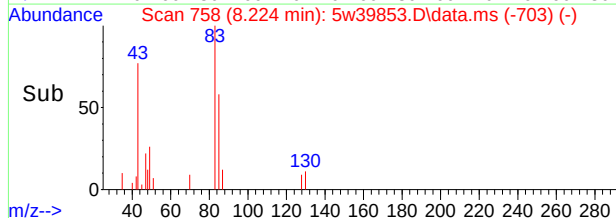




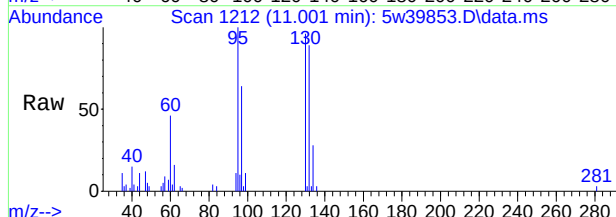
#44
Chloroform
Concen: 0.11 ppb(v)
RT: 8.224 min Scan# 758
Delta R.T. 0.006 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am



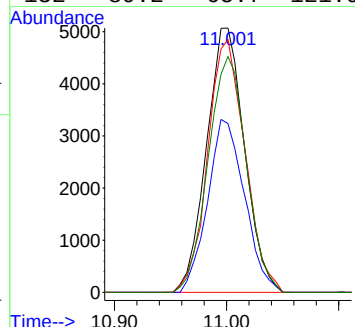
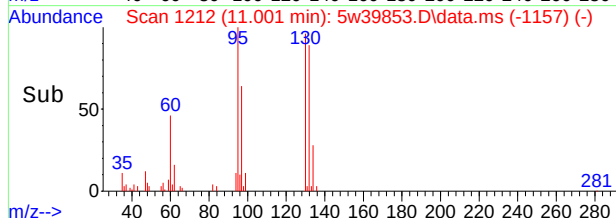
Tgt	Ion: 83	Resp:	4116
Ion	Ratio	Lower	Upper
83	100		
85	58.1	45.0	83.6
87	12.1	7.6	14.0
47	22.3	16.2	30.2

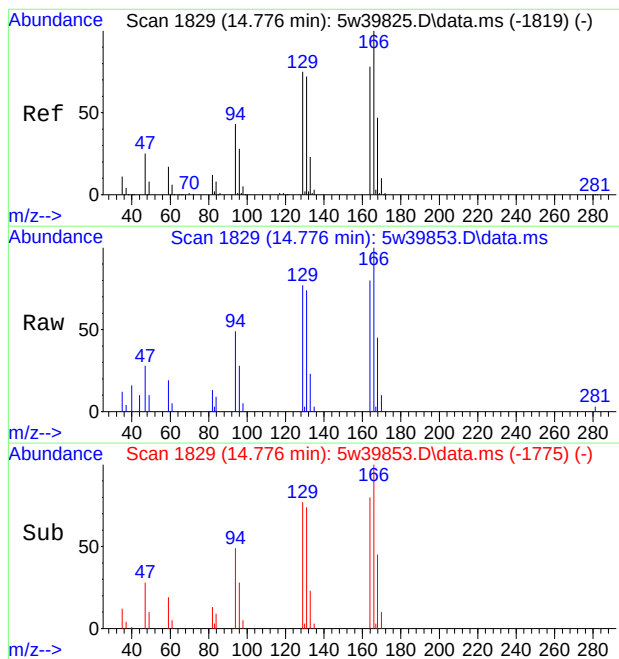


#56
Trichloroethene
Concen: 0.51 ppb(v)
RT: 11.001 min Scan# 1212
Delta R.T. 0.006 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am



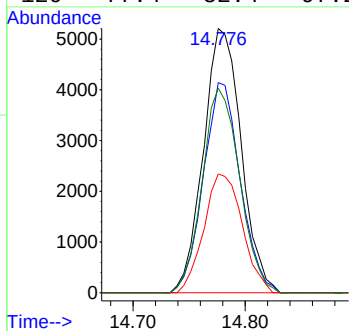
Tgt	Ion: 95	Resp:	11948
Ion	Ratio	Lower	Upper
95	100		
97	63.9	45.6	84.6
130	95.7	68.1	126.5
132	89.2	65.7	121.9





#72
Tetrachloroethene
Concen: 0.46 ppb(v)
RT: 14.776 min Scan# 1829
Delta R.T. -0.000 min
Lab File: 5w39853.D
Acq: 25 Dec 2019 3:28 am

Tgt Ion:	166	Resp:	12231
Ion Ratio	Lower	Upper	
166	100		
164	79.5	54.3	100.9
168	45.0	32.8	61.0
129	77.4	52.4	97.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39850.D
 Acq On : 25 Dec 2019 12:48 am
 Operator : danat
 Sample : jd234-4
 Misc : ms39839,v5w1621,500,,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 27 11:50:00 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

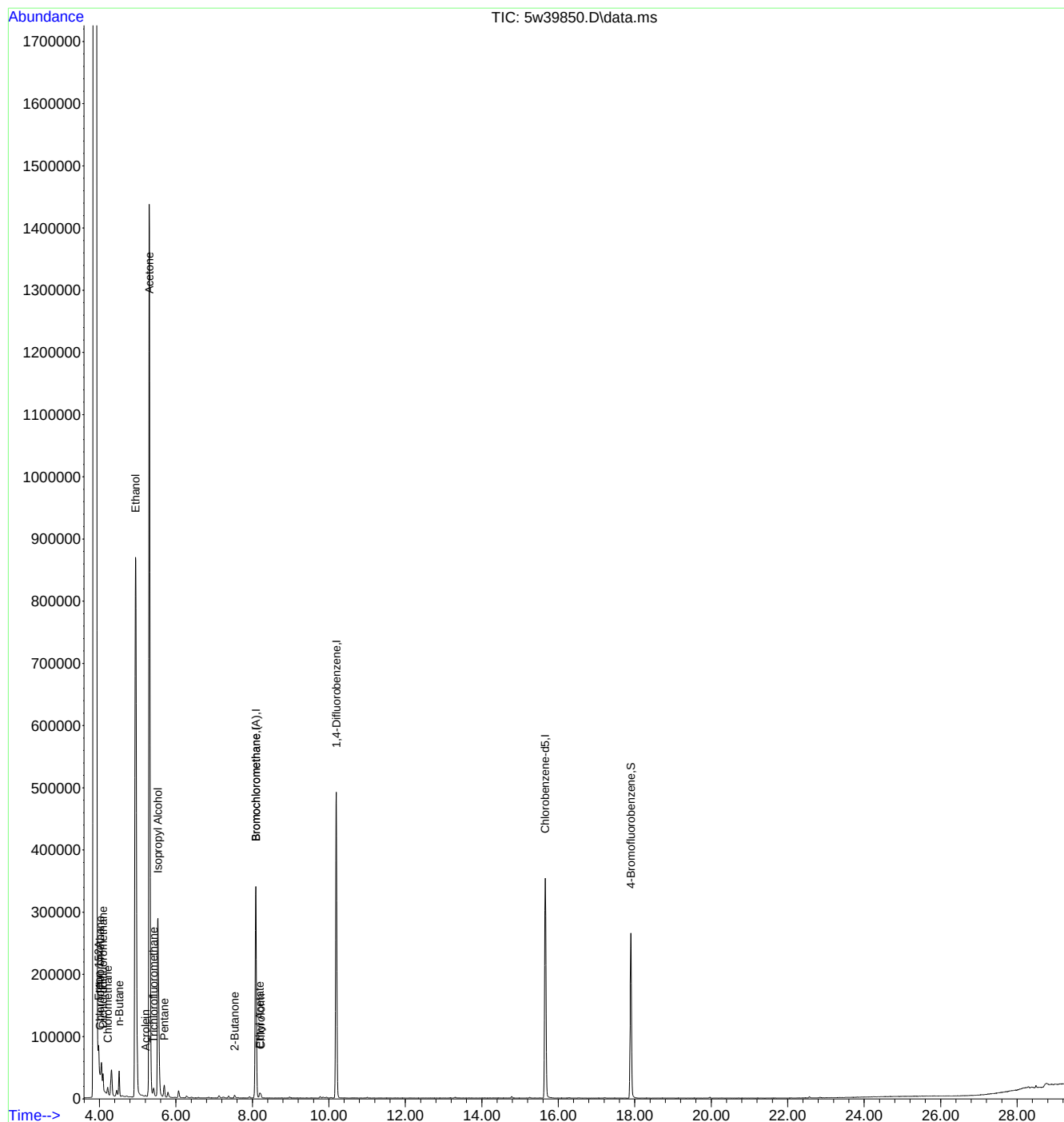
Internal Standards						
1) Bromochloromethane	8.089	130	134799	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	473000	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	156664	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.089	130	134799	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	128611	9.38	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	93.80%	
Target Compounds						
					Qvalue	
2) Freon 152A	3.978	65	17691	1.68	ppb(v	89
3) Chlorodifluoromethane	4.015	67	1210	0.28	ppb(v	94
6) Dichlorodifluoromethane	4.095	85	23253	0.52	ppb(v	99
8) Chloromethane	4.217	50	10088	0.67	ppb(v	98
12) n-Butane	4.517	58	3987	1.93	ppb(v#	87
20) Acrolein	5.208	56	1742	0.30	ppb(v#	69
21) Trichlorofluoromethane	5.416	101	10393	0.25	ppb(v	96
22) Acetone	5.300	58	595967	96.69	ppb(v	99
23) Pentane	5.691	57	1992	0.50	ppb(v	96
25) Isopropyl Alcohol	5.532	43	89337	13.40	ppb(v	96
30) Ethanol	4.945	45	1501419	244.27	ppb(v	99
38) 2-Butanone	7.533	72	1658	0.21	ppb(v	96
42) Ethyl Acetate	8.193	61	1353	0.26	ppb(v	99
44) Chloroform	8.218	83	3661	0.10	ppb(v	98

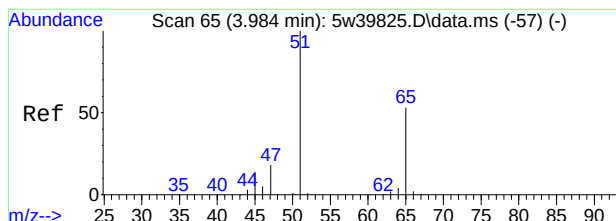
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39850.D
Acq On : 25 Dec 2019 12:48 am
Operator : danat
Sample : jd234-4
Misc : ms39839,v5w1621,500,,,,,1
ALS Vial : 13 Sample Multiplier: 1

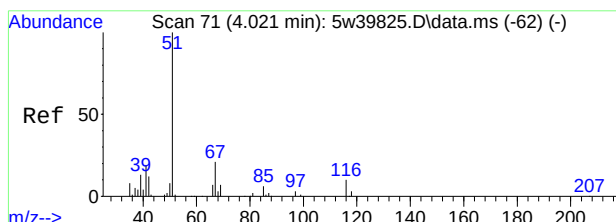
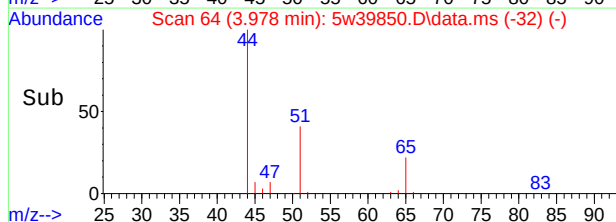
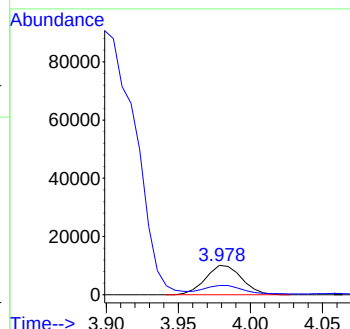
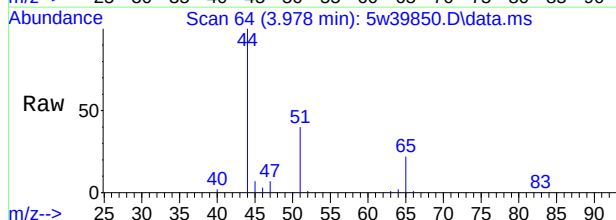
Quant Time: Dec 27 11:50:00 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





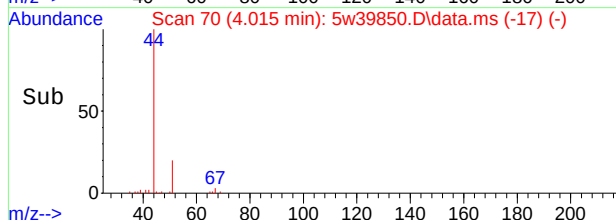
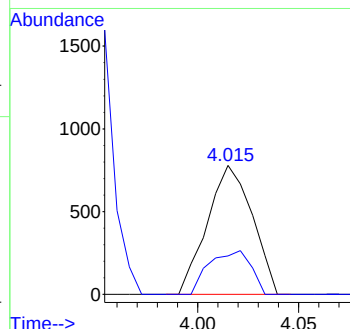
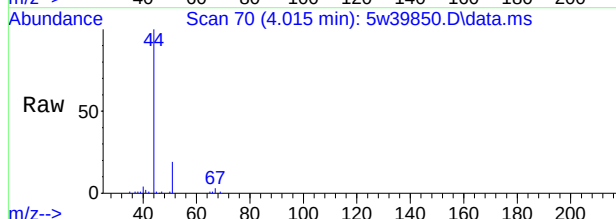
#2
 Freon 152A
 Concen: 1.68 ppb(v)
 RT: 3.978 min Scan# 64
 Delta R.T. -0.006 min
 Lab File: 5w39850.D
 Acq: 25 Dec 2019 12:48 am

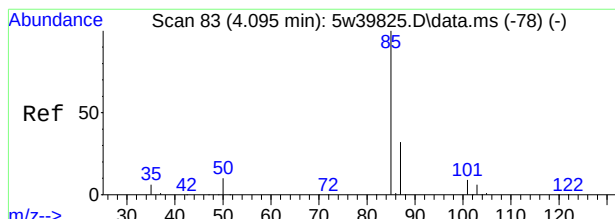
Tgt Ion: 65 Resp: 17691
 Ion Ratio Lower Upper
 65 100
 45 31.6 18.2 33.8



#3
 Chlorodifluoromethane
 Concen: 0.28 ppb(v)
 RT: 4.015 min Scan# 70
 Delta R.T. -0.006 min
 Lab File: 5w39850.D
 Acq: 25 Dec 2019 12:48 am

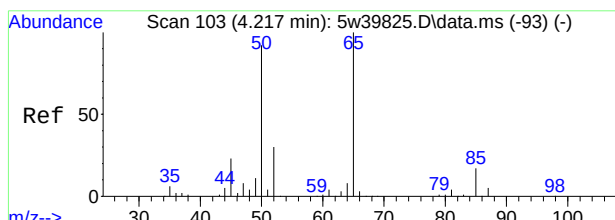
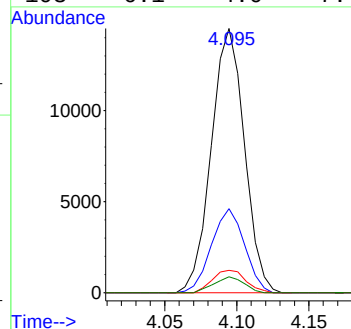
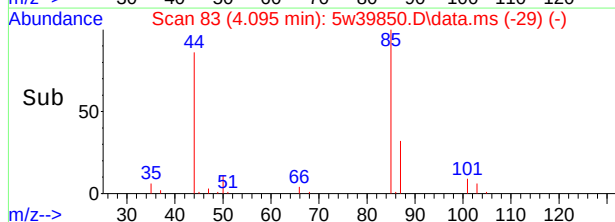
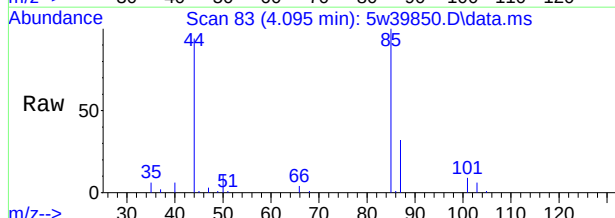
Tgt Ion: 67 Resp: 1210
 Ion Ratio Lower Upper
 67 100
 69 29.8 23.2 43.0





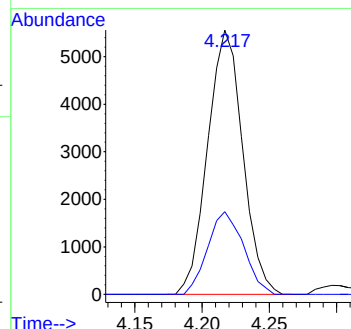
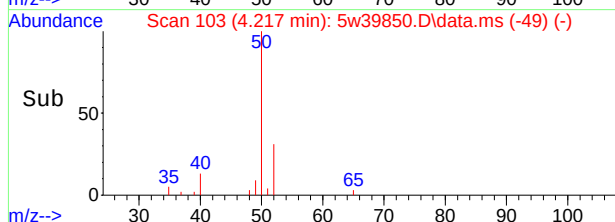
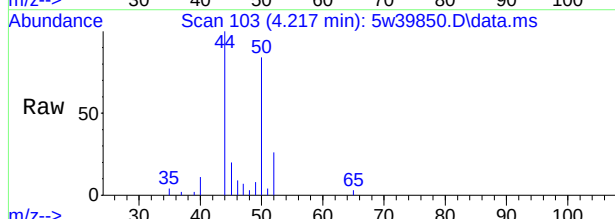
#6
Dichlorodifluoromethane
Concen: 0.52 ppb(v)
RT: 4.095 min Scan# 83
Delta R.T. 0.000 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

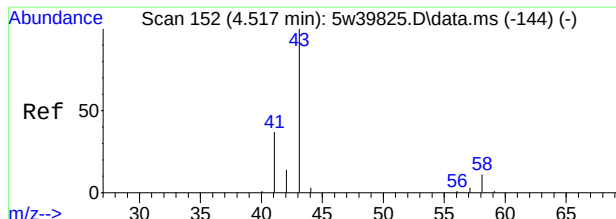
Tgt	Ion	85	Resp:	23253
	Ratio	100	Lower	Upper
	87	31.9	22.7	42.1
	101	8.5	6.1	11.3
	103	6.1	4.0	7.4



#8
Chloromethane
Concen: 0.67 ppb(v)
RT: 4.217 min Scan# 103
Delta R.T. 0.000 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

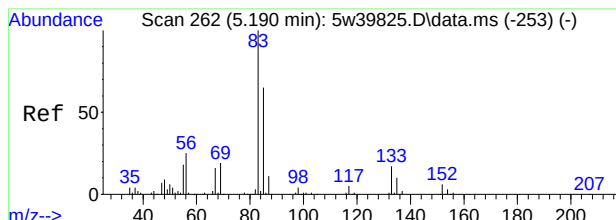
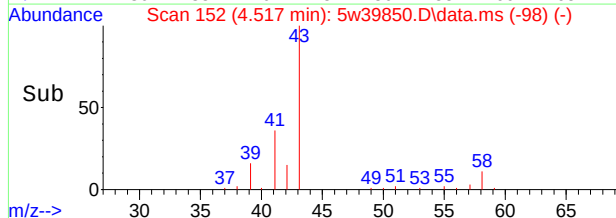
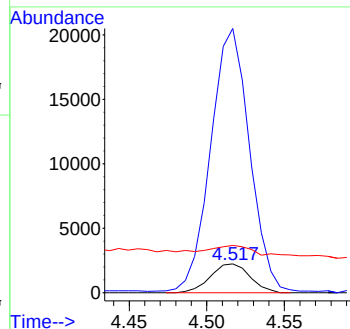
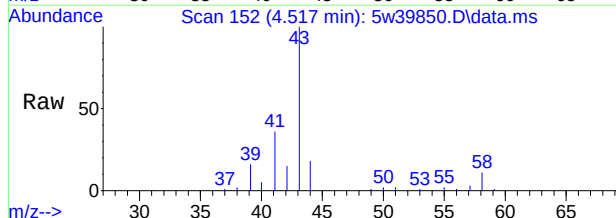
Tgt	Ion	50	Resp:	10088
	Ratio	100	Lower	Upper
	52	31.2	22.6	42.0





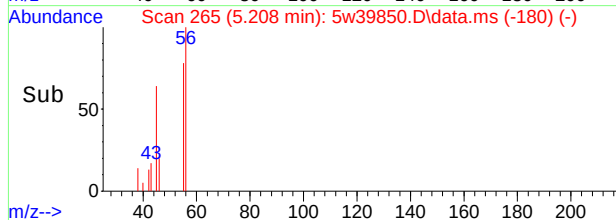
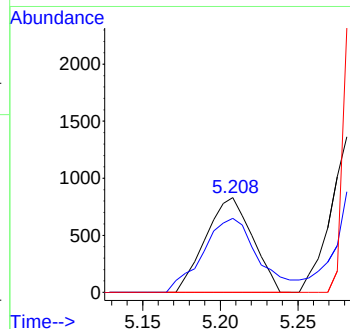
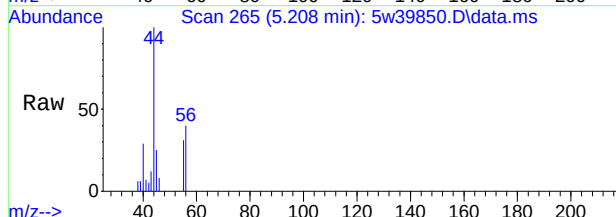
#12
n-Butane
Concen: 1.93 ppb(v)
RT: 4.517 min Scan# 152
Delta R.T. 0.000 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

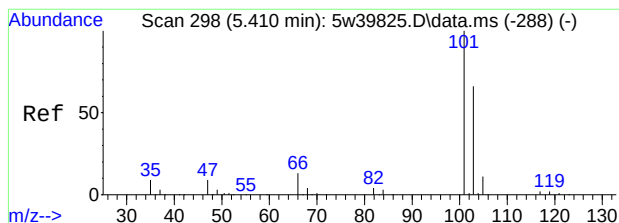
Tgt Ion	Ratio	Lower	Upper
58	100		
43	912.0	625.2	1161.2
44	163.5	29.5	54.9#



#20
Acrolein
Concen: 0.30 ppb(v)
RT: 5.208 min Scan# 265
Delta R.T. 0.018 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

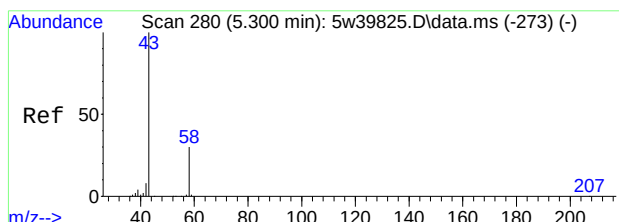
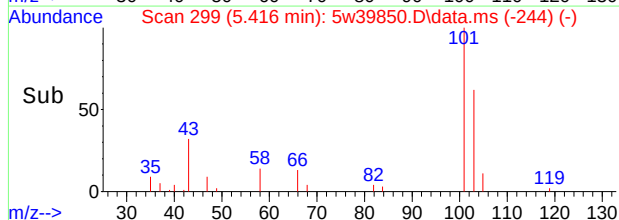
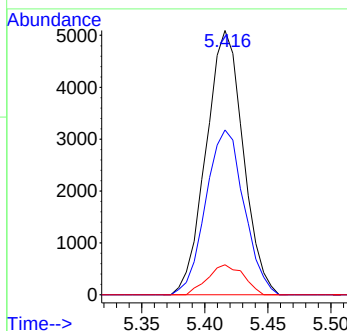
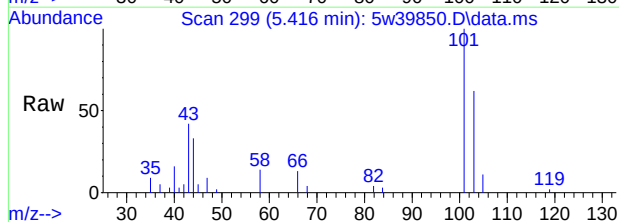
Tgt Ion	Ratio	Lower	Upper
56	100		
55	92.9	56.8	85.2#
37	0.0	17.9	26.9#





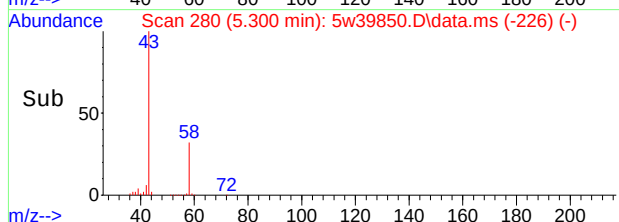
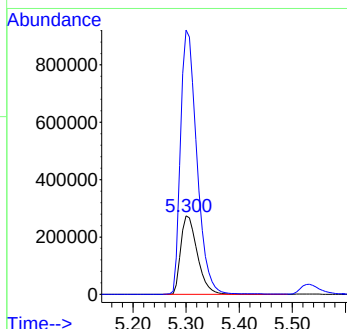
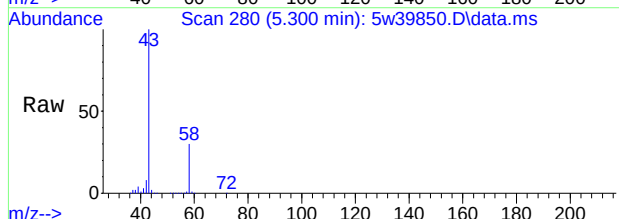
#21
Trichlorofluoromethane
Concen: 0.25 ppb(v)
RT: 5.416 min Scan# 299
Delta R.T. 0.006 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

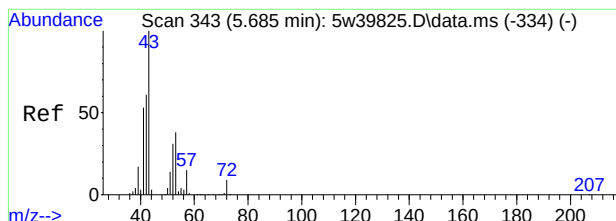
Tgt Ion:	101	Resp:	10393
Ion	Ratio	Lower	Upper
101	100		
103	62.4	46.2	85.8
105	11.4	7.4	13.8



#22
Acetone
Concen: 96.69 ppb(v)
RT: 5.300 min Scan# 280
Delta R.T. 0.000 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

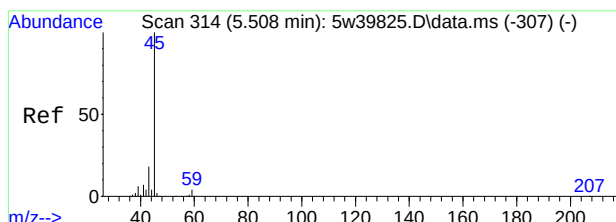
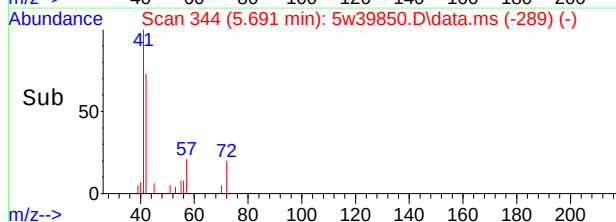
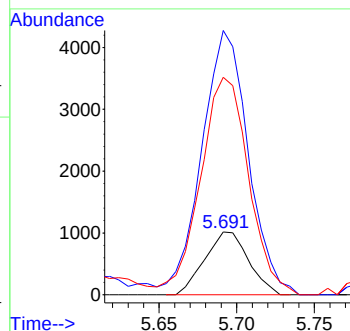
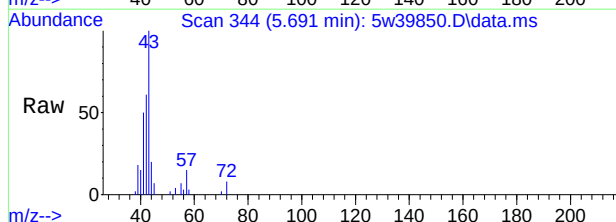
Tgt Ion:	58	Resp:	595967
Ion	Ratio	Lower	Upper
58	100		
43	337.0	234.8	436.2





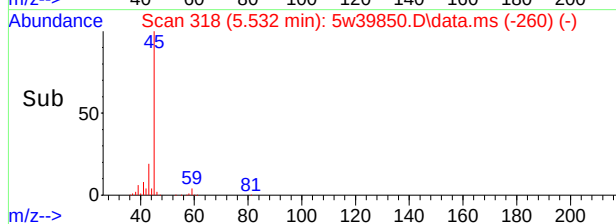
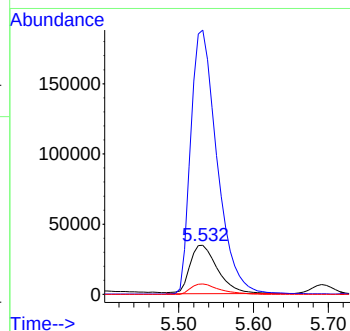
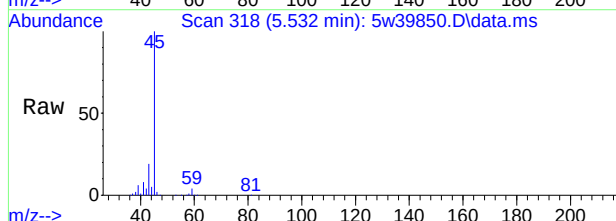
#23
Pentane
Concen: 0.50 ppb(v)
RT: 5.691 min Scan# 344
Delta R.T. 0.006 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

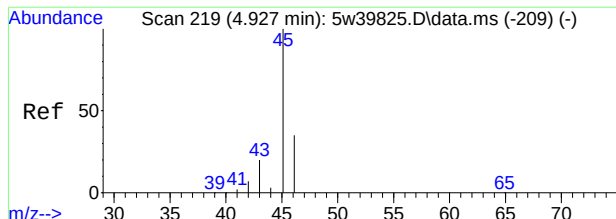
Tgt Ion: 57 Resp: 1992
Ion Ratio Lower Upper
57 100
42 420.1 281.4 522.6
41 345.8 243.3 451.9



#25
Isopropyl Alcohol
Concen: 13.40 ppb(v)
RT: 5.532 min Scan# 318
Delta R.T. 0.025 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

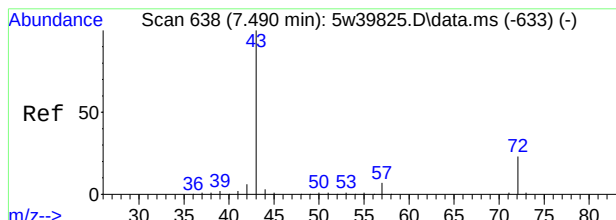
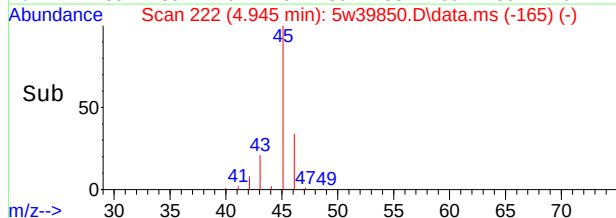
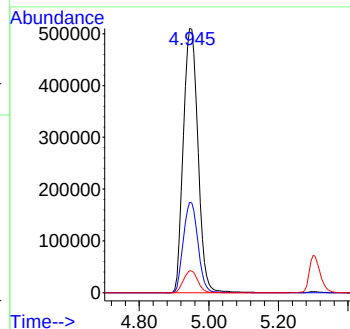
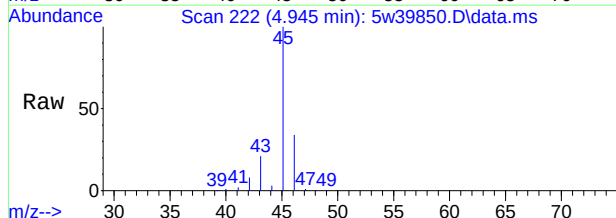
Tgt Ion: 43 Resp: 89337
Ion Ratio Lower Upper
43 100
45 538.1 385.8 716.6
59 21.1 15.3 28.3





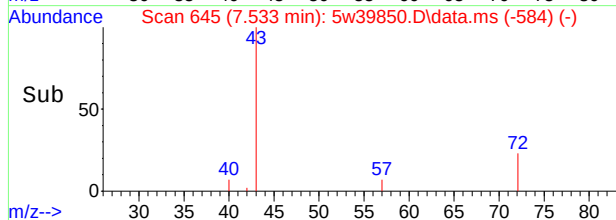
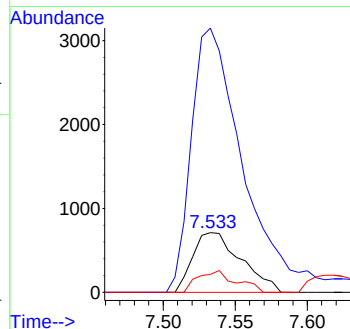
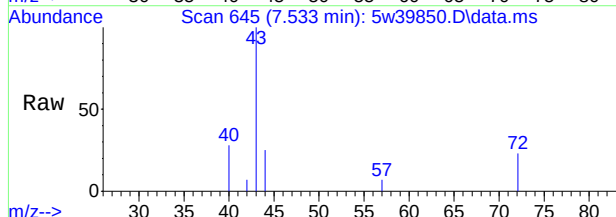
#30
Ethanol
Concen: 244.27 ppb(v)
RT: 4.945 min Scan# 222
Delta R.T. 0.018 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

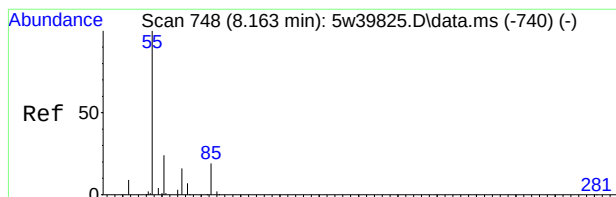
Tgt Ion: 45 Resp: 1501419
Ion Ratio Lower Upper
45 100
46 34.2 24.1 44.8
42 8.4 5.5 10.1



#38
2-Butanone
Concen: 0.21 ppb(v)
RT: 7.533 min Scan# 645
Delta R.T. 0.043 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

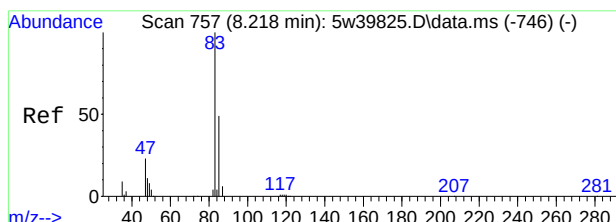
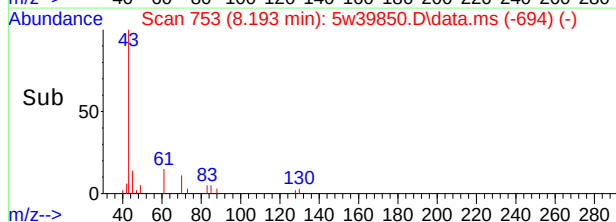
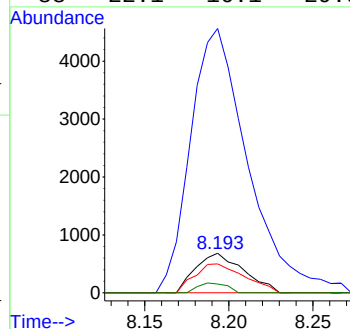
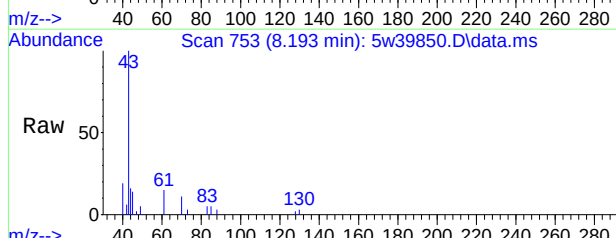
Tgt Ion: 72 Resp: 1658
Ion Ratio Lower Upper
72 100
43 443.8 304.5 565.5
57 30.1 22.6 42.0





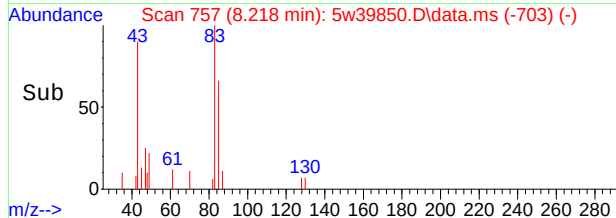
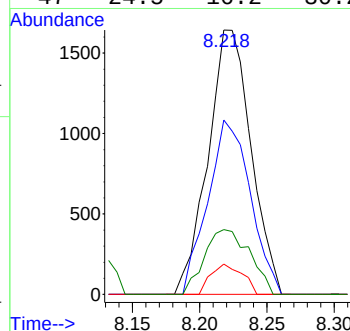
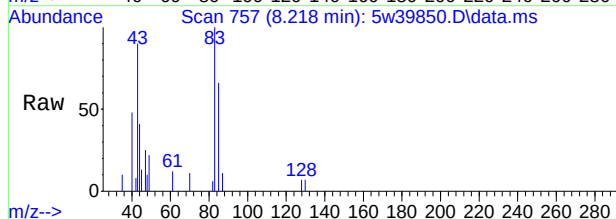
#42
Ethyl Acetate
Concen: 0.26 ppb(v)
RT: 8.193 min Scan# 753
Delta R.T. 0.031 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

Tgt Ion:	61	Resp:	1353
Ion	Ratio	Lower	Upper
61	100		
43	668.5	466.8	867.0
70	72.8	48.1	89.3
88	22.1	16.1	29.9



#44
Chloroform
Concen: 0.10 ppb(v)
RT: 8.218 min Scan# 757
Delta R.T. 0.000 min
Lab File: 5w39850.D
Acq: 25 Dec 2019 12:48 am

Tgt Ion:	83	Resp:	3661
Ion	Ratio	Lower	Upper
83	100		
85	65.9	45.0	83.6
87	11.4	7.6	14.0
47	24.5	16.2	30.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39868.D
Acq On : 26 Dec 2019 5:24 pm
Operator : danat
Sample : jd234-4
Misc : ms39839,v5w1622,100,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 27 12:29:06 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

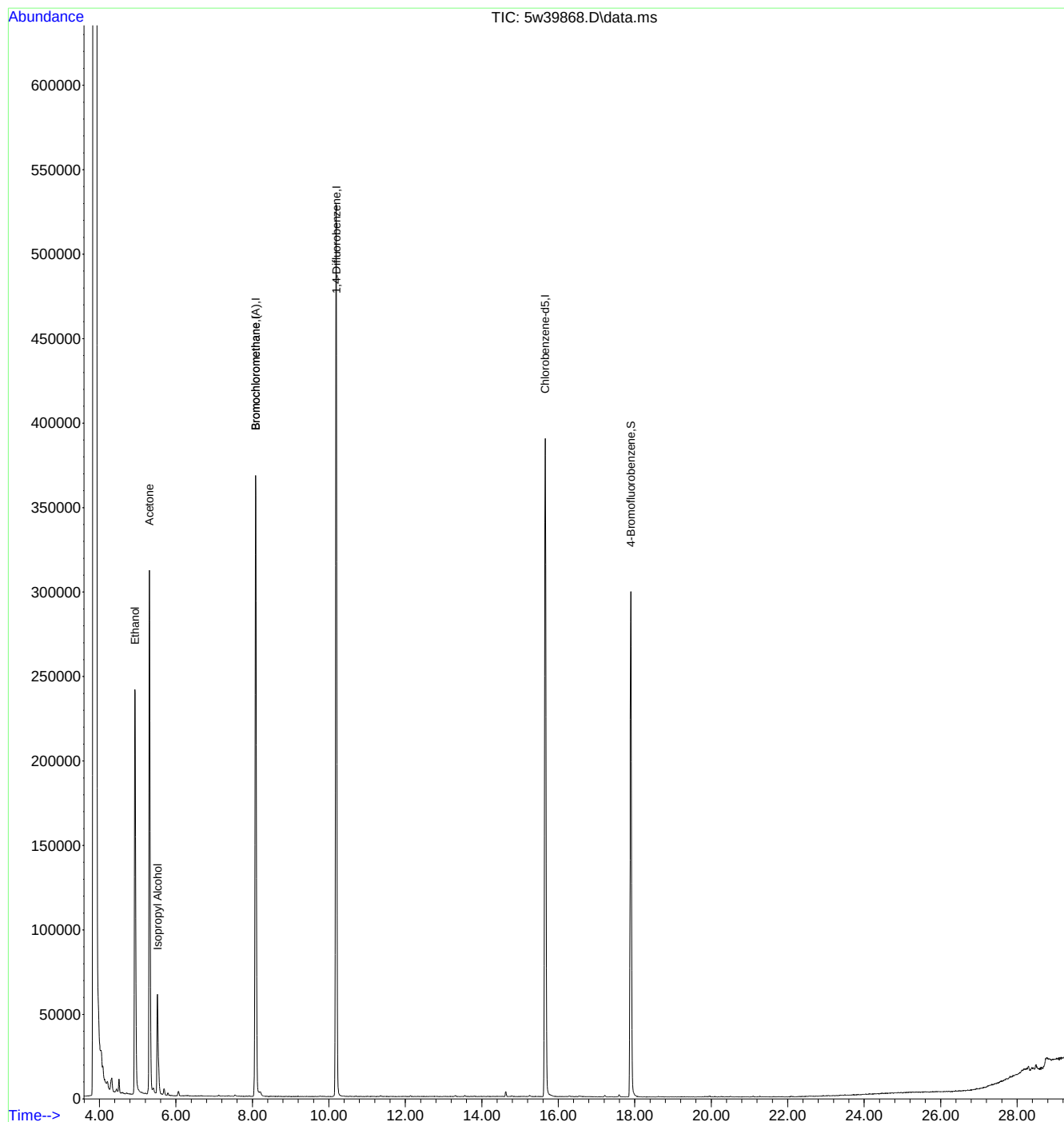
Internal Standards						
1) Bromochloromethane	8.083	130	150896	10.00	ppb(v)	0.00
53) 1,4-Difluorobenzene	10.194	114	523367	10.00	ppb(v)	0.00
76) Chlorobenzene-d5	15.657	82	172886	10.00	ppb(v)	0.00
107) Bromochloromethane (A)	8.083	130	150896	10.00	ppb(v)	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	145532	9.62	ppb(v)	0.00
Spiked Amount	10.000	Range 65 - 128	Recovery	=	96.20%	
Target Compounds						
					Qvalue	
22) Acetone	5.306	58	127496	18.48	ppb(v)	96
25) Isopropyl Alcohol	5.520	43	19442	2.60	ppb(v)	78
30) Ethanol	4.927	45	336747	48.94	ppb(v)	100

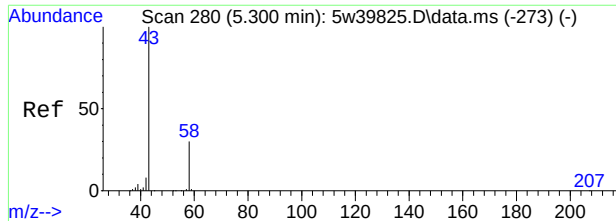
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39868.D
Acq On : 26 Dec 2019 5:24 pm
Operator : danat
Sample : jd234-4
Misc : ms39839,v5w1622,100,,,1
ALS Vial : 7 Sample Multiplier: 1

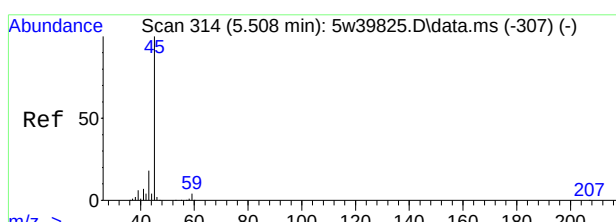
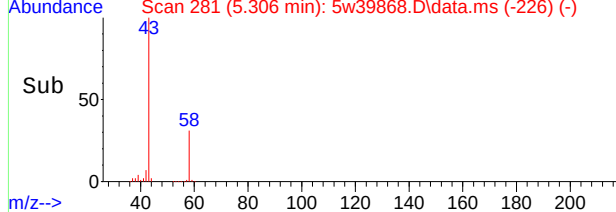
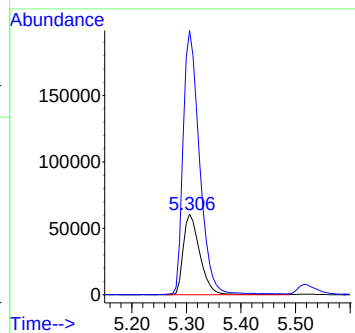
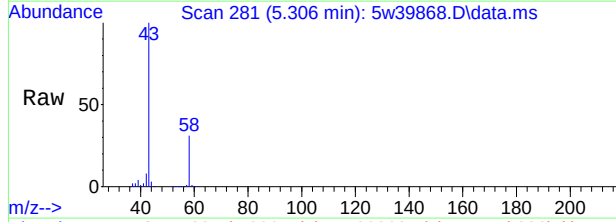
Quant Time: Dec 27 12:29:06 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





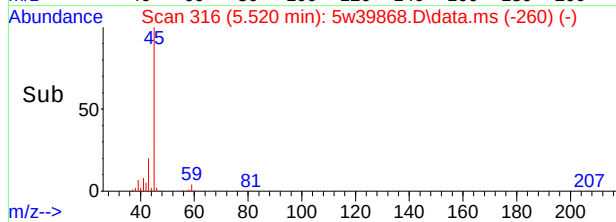
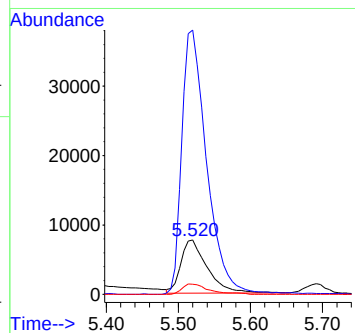
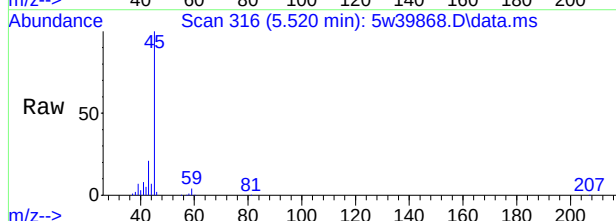
#22
Acetone
Concen: 18.48 ppb(v)
RT: 5.306 min Scan# 281
Delta R.T. 0.006 min
Lab File: 5w39868.D
Acq: 26 Dec 2019 5:24 pm

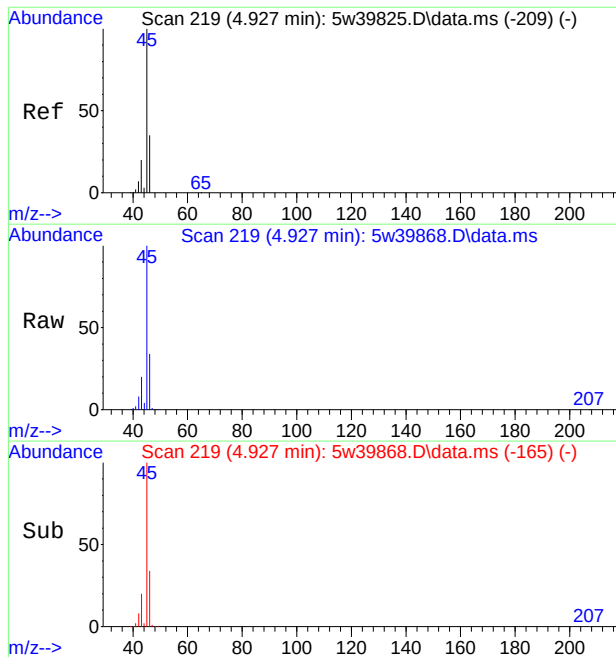
Tgt Ion:	58	Resp:	127496
Ion	Ratio	Lower	Upper
58	100		
43	327.7	234.8	436.2



#25
Isopropyl Alcohol
Concen: 2.60 ppb(v)
RT: 5.520 min Scan# 316
Delta R.T. 0.012 min
Lab File: 5w39868.D
Acq: 26 Dec 2019 5:24 pm

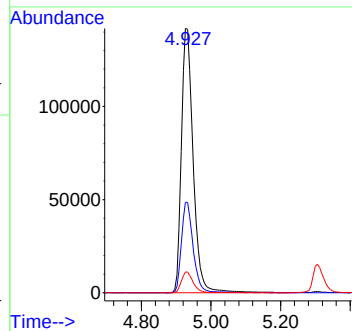
Tgt Ion:	43	Resp:	19442
Ion	Ratio	Lower	Upper
43	100		
45	485.2	385.8	716.6
59	18.4	15.3	28.3





#30
 Ethanol
 Concen: 48.94 ppb(v)
 RT: 4.927 min Scan# 219
 Delta R.T. -0.000 min
 Lab File: 5w39868.D
 Acq: 26 Dec 2019 5:24 pm

Tgt Ion:	45	Resp:	336747
Ion Ratio	Lower	Upper	
45	100		
46	34.3	24.1	44.8
42	7.8	5.5	10.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W39851.D
 Acq On : 25 Dec 2019 1:44 am
 Operator : danat
 Sample : jd234-5
 Misc : ms39839,v5w1621,500,,,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 27 11:51:19 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

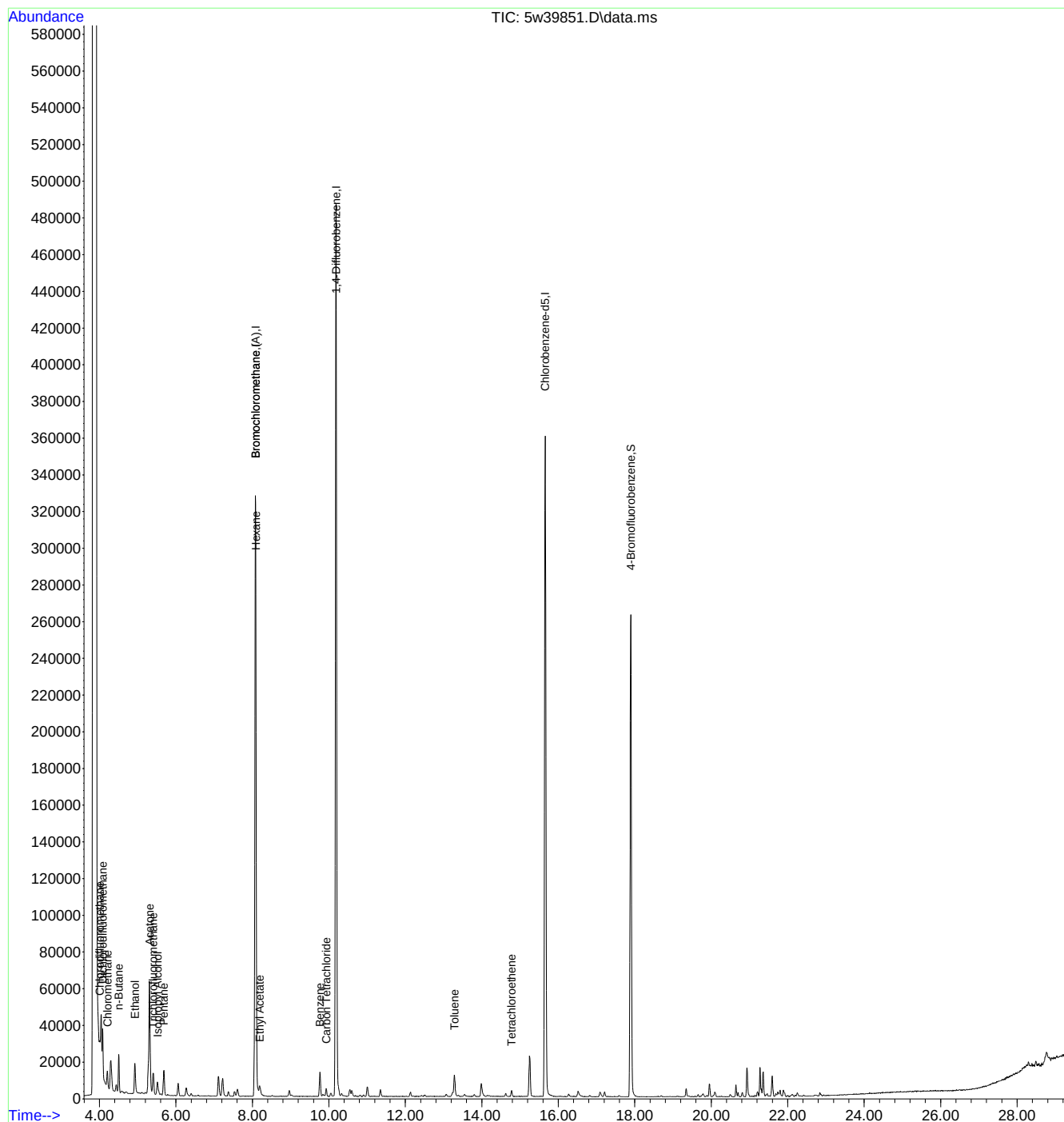
Internal Standards						
1) Bromochloromethane	8.083	130	133487	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.188	114	469412	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	156126	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	133487	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	127679	9.35	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	93.50%	
Target Compounds						
					Qvalue	
3) Chlorodifluoromethane	4.009	67	1199	0.28	ppb(v	99
6) Dichlorodifluoromethane	4.082	85	22773	0.51	ppb(v	99
8) Chloromethane	4.211	50	8234	0.55	ppb(v	99
12) n-Butane	4.504	58	2040	1.00	ppb(v#	76
21) Trichlorofluoromethane	5.404	101	10679	0.25	ppb(v	92
22) Acetone	5.312	58	25846	4.23	ppb(v	85
23) Pentane	5.685	57	1466	0.37	ppb(v	79
25) Isopropyl Alcohol	5.520	43	3207	0.49	ppb(v#	40
30) Ethanol	4.927	45	23789	3.91	ppb(v	99
39) Hexane	8.089	57	3572	0.14	ppb(v	90
42) Ethyl Acetate	8.193	61	720	0.14	ppb(v#	90
49) Benzene	9.766	78	14049	0.28	ppb(v	100
50) Carbon Tetrachloride	9.931	117	3113	0.09	ppb(v	94
66) Toluene	13.283	91	12062	0.21	ppb(v	99
72) Tetrachloroethene	14.776	166	1399	0.05	ppb(v	96

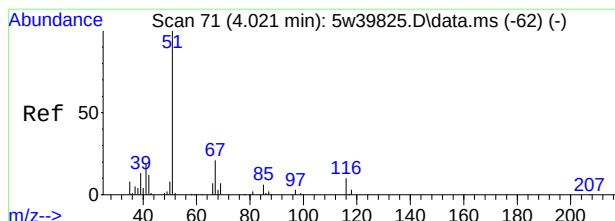
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39851.D
Acq On : 25 Dec 2019 1:44 am
Operator : danat
Sample : jd234-5
Misc : ms39839,v5w1621,500,,,1
ALS Vial : 14 Sample Multiplier: 1

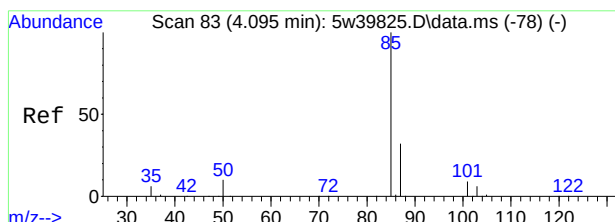
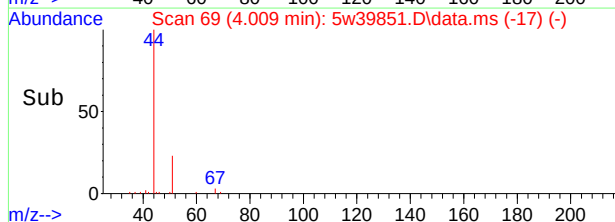
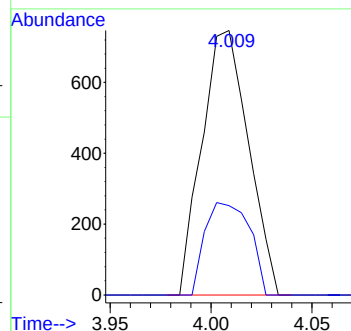
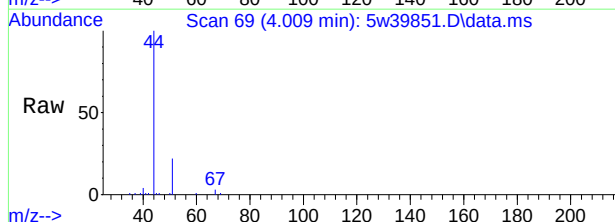
Quant Time: Dec 27 11:51:19 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





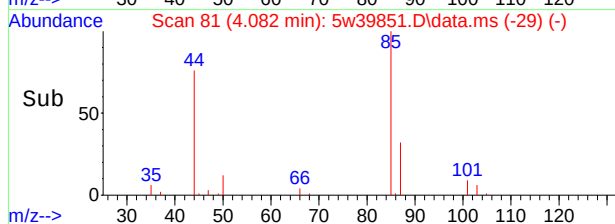
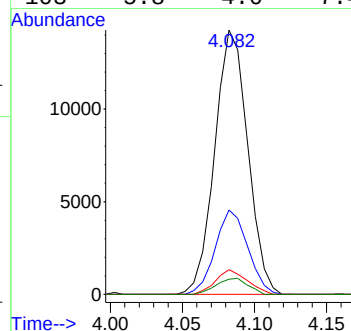
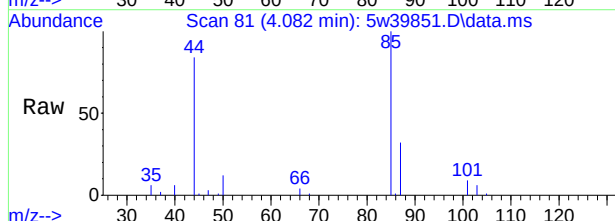
#3
Chlorodifluoromethane
Concen: 0.28 ppb(v)
RT: 4.009 min Scan# 69
Delta R.T. -0.012 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

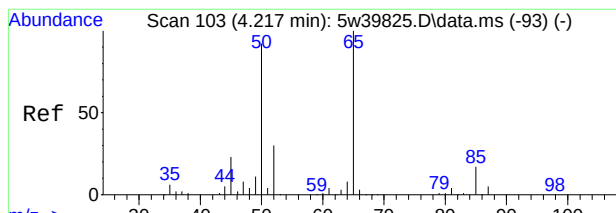
Tgt Ion: 67 Resp: 1199
Ion Ratio Lower Upper
67 100
69 33.7 23.2 43.0



#6
Dichlorodifluoromethane
Concen: 0.51 ppb(v)
RT: 4.082 min Scan# 81
Delta R.T. -0.012 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

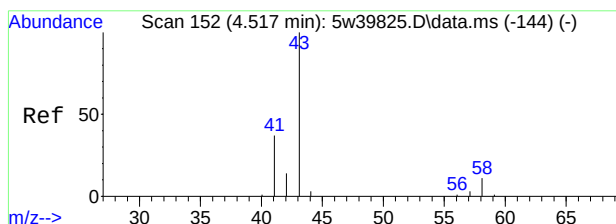
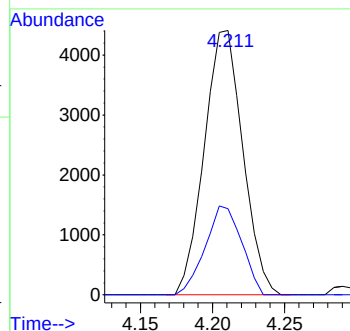
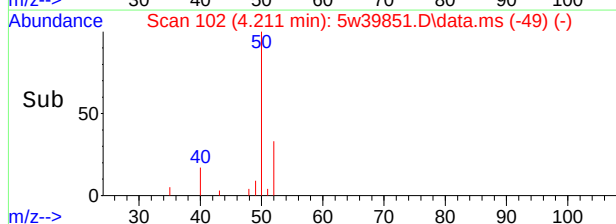
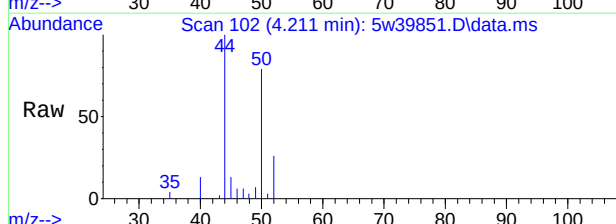
Tgt Ion: 85 Resp: 22773
Ion Ratio Lower Upper
85 100
87 32.0 22.7 42.1
101 9.3 6.1 11.3
103 5.8 4.0 7.4





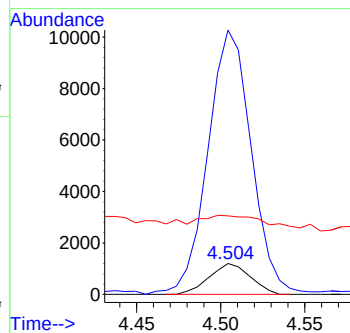
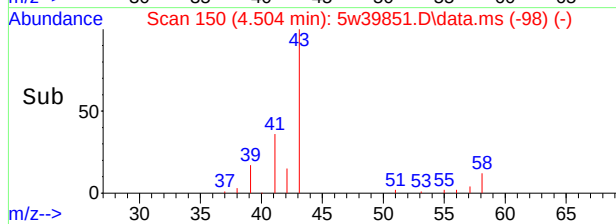
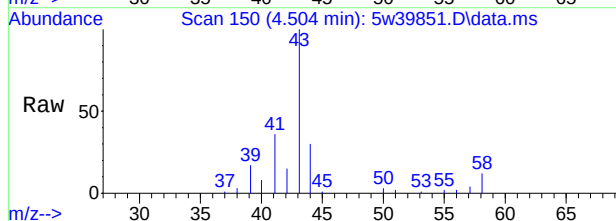
#8
Chloromethane
Concen: 0.55 ppb(v)
RT: 4.211 min Scan# 102
Delta R.T. -0.006 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

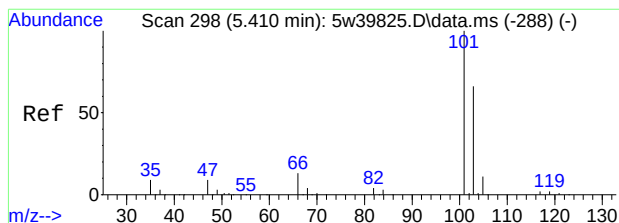
Tgt Ion: 50 Resp: 8234
Ion Ratio Lower Upper
50 100
52 32.6 22.6 42.0



#12
n-Butane
Concen: 1.00 ppb(v)
RT: 4.504 min Scan# 150
Delta R.T. -0.012 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

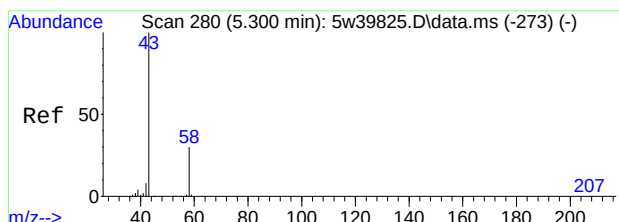
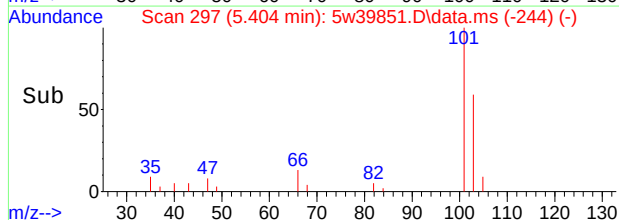
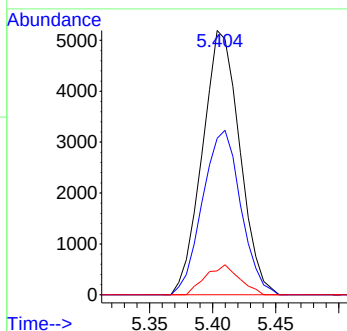
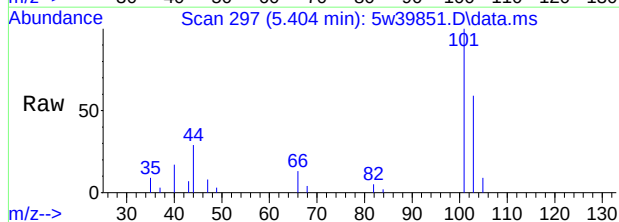
Tgt Ion: 58 Resp: 2040
Ion Ratio Lower Upper
58 100
43 854.9 625.2 1161.2
44 253.6 29.5 54.9#





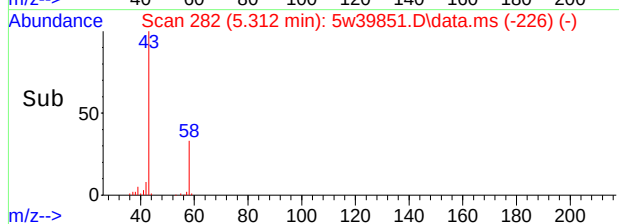
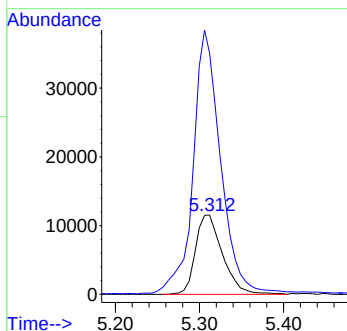
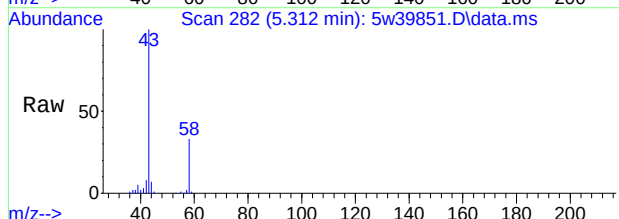
#21
Trichlorofluoromethane
Concen: 0.25 ppb(v)
RT: 5.404 min Scan# 297
Delta R.T. -0.006 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

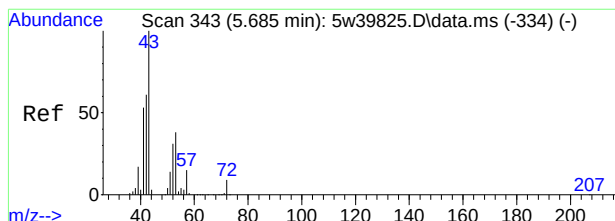
Tgt Ion:	101	Resp:	10679
Ion	Ratio	Lower	Upper
101	100		
103	59.2	46.2	85.8
105	9.1	7.4	13.8



#22
Acetone
Concen: 4.23 ppb(v)
RT: 5.312 min Scan# 282
Delta R.T. 0.012 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

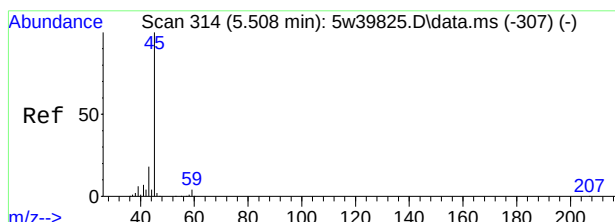
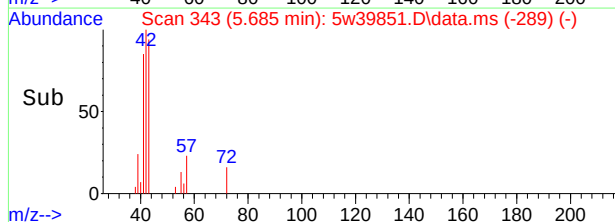
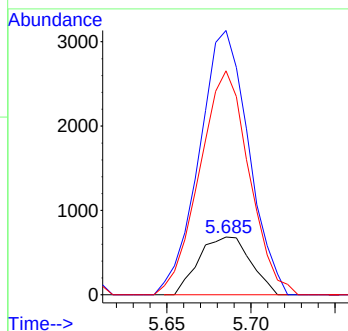
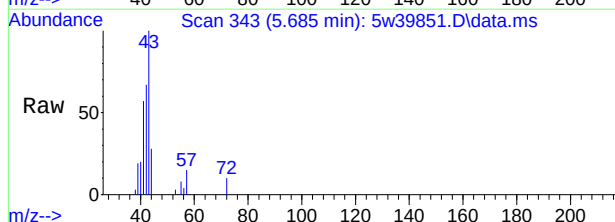
Tgt Ion:	58	Resp:	25846
Ion	Ratio	Lower	Upper
58	100		
43	304.0	234.8	436.2





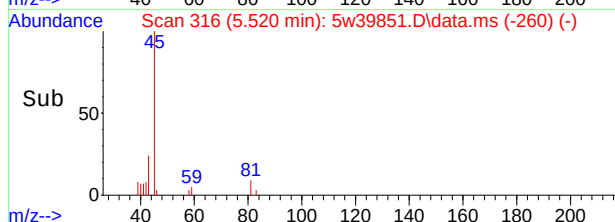
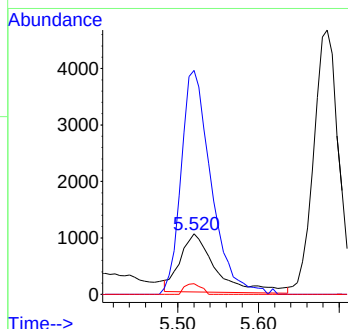
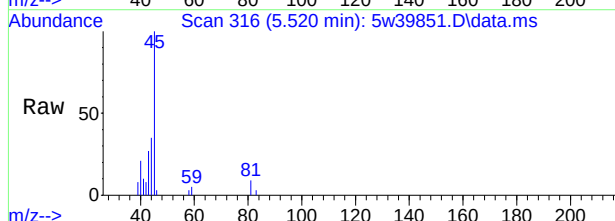
#23
 Pentane
 Concen: 0.37 ppb(v)
 RT: 5.685 min Scan# 343
 Delta R.T. -0.000 min
 Lab File: 5w39851.D
 Acq: 25 Dec 2019 1:44 am

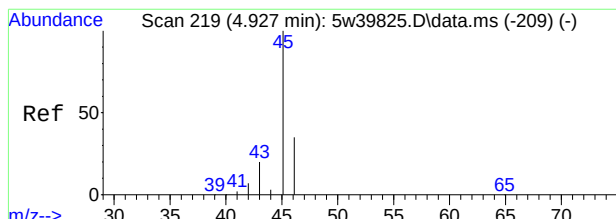
Tgt Ion	Ratio	Lower	Upper
57	100		
42	458.5	281.4	522.6
41	388.2	243.3	451.9



#25
 Isopropyl Alcohol
 Concen: 0.49 ppb(v)
 RT: 5.520 min Scan# 316
 Delta R.T. 0.012 min
 Lab File: 5w39851.D
 Acq: 25 Dec 2019 1:44 am

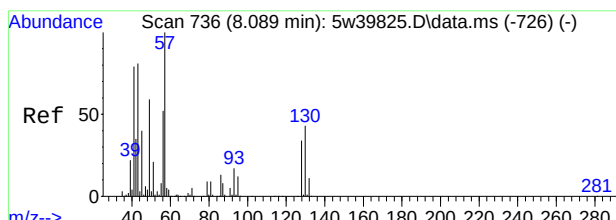
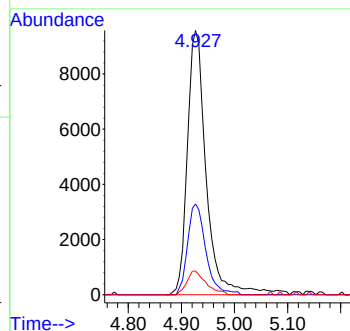
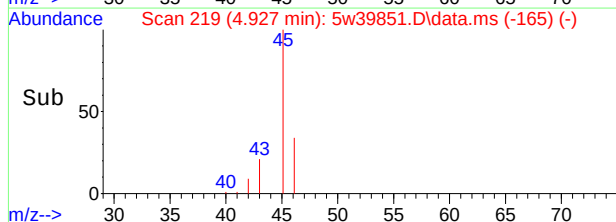
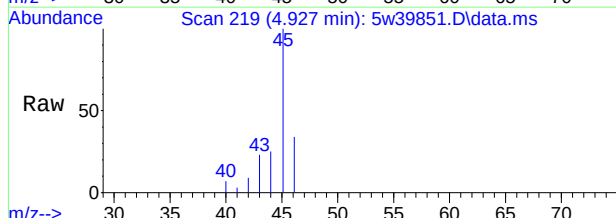
Tgt Ion	Ratio	Lower	Upper
43	100		
45	368.8	385.8	716.6#
59	17.8	15.3	28.3





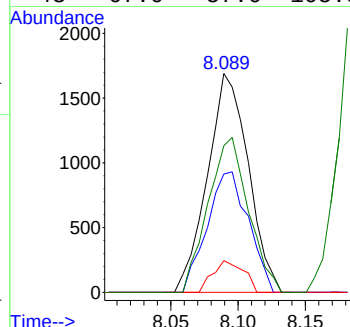
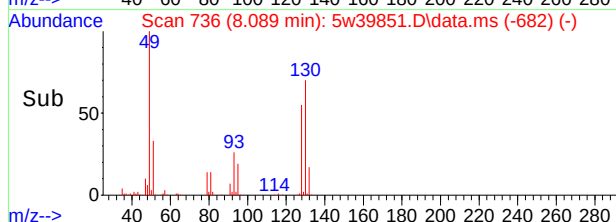
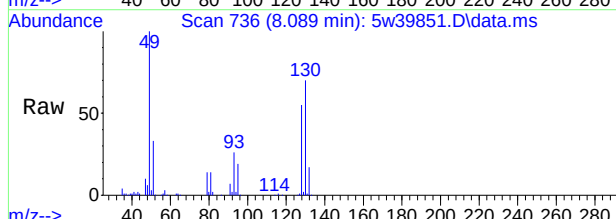
#30
Ethanol
Concen: 3.91 ppb(v)
RT: 4.927 min Scan# 219
Delta R.T. -0.000 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

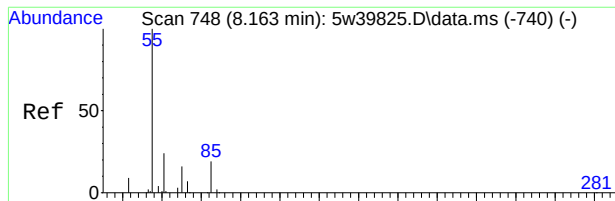
Tgt Ion:	45	Resp:	23789
Ion Ratio	Lower	Upper	
45	100		
46	34.4	24.1	44.8
42	9.1	5.5	10.1



#39
Hexane
Concen: 0.14 ppb(v)
RT: 8.089 min Scan# 736
Delta R.T. -0.000 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

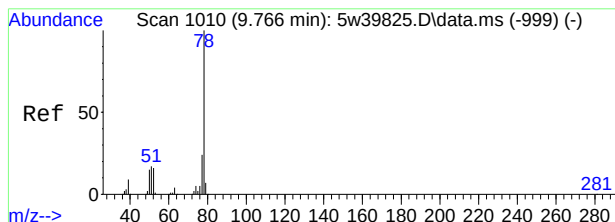
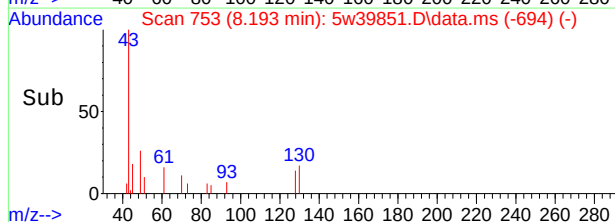
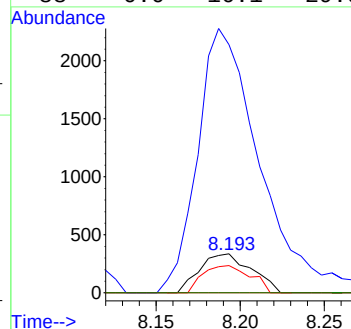
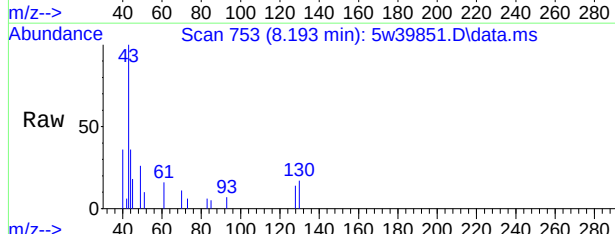
Tgt Ion:	57	Resp:	3572
Ion Ratio	Lower	Upper	
57	100		
56	54.1	36.5	67.7
86	14.6	9.2	17.0
43	67.0	57.0	105.8





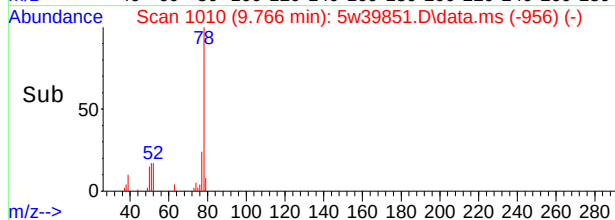
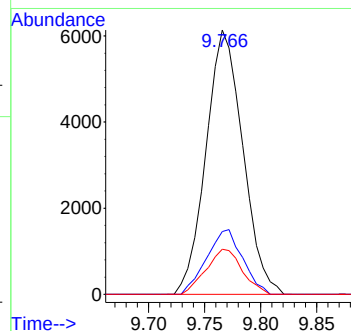
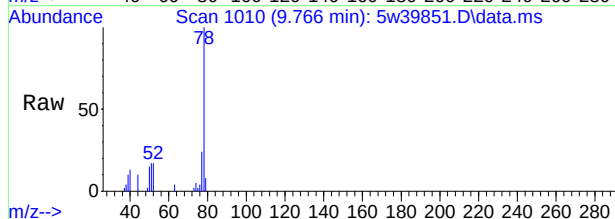
#42
Ethyl Acetate
Concen: 0.14 ppb(v)
RT: 8.193 min Scan# 753
Delta R.T. 0.031 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

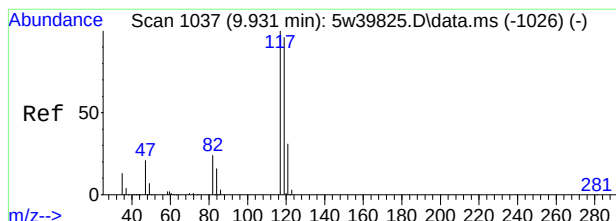
Tgt Ion:	61	Resp:	720
Ion	Ratio	Lower	Upper
61	100		
43	636.3	466.8	867.0
70	69.9	48.1	89.3
88	0.0	16.1	29.9#



#49
Benzene
Concen: 0.28 ppb(v)
RT: 9.766 min Scan# 1010
Delta R.T. -0.000 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

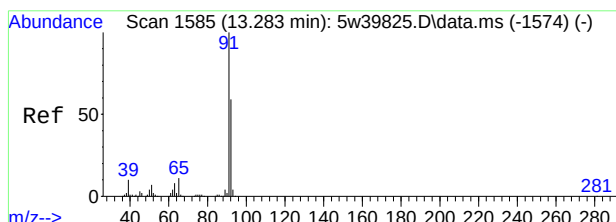
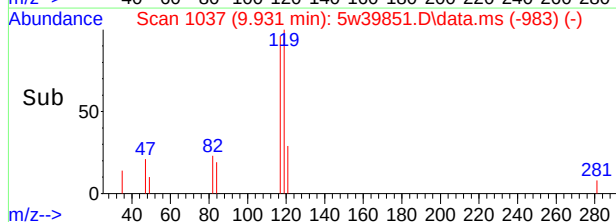
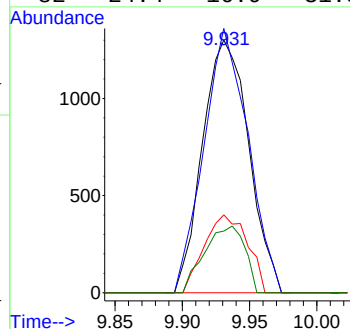
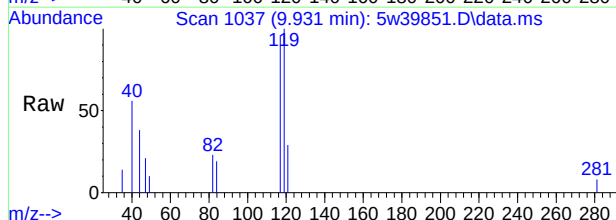
Tgt Ion:	78	Resp:	14049
Ion	Ratio	Lower	Upper
78	100		
77	23.7	16.7	30.9
51	17.1	11.7	21.7





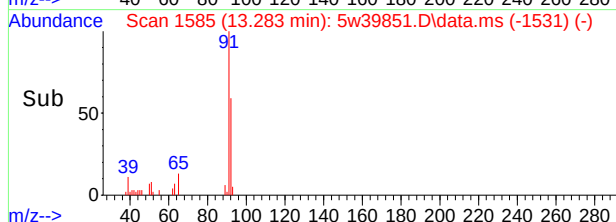
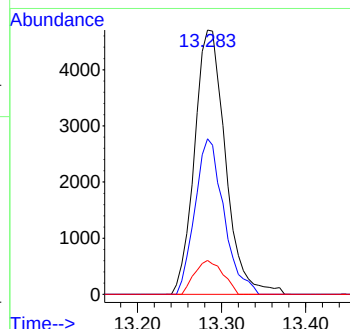
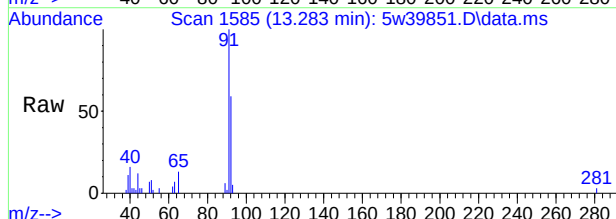
#50
Carbon Tetrachloride
Concen: 0.09 ppb(v)
RT: 9.931 min Scan# 1037
Delta R.T. -0.000 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

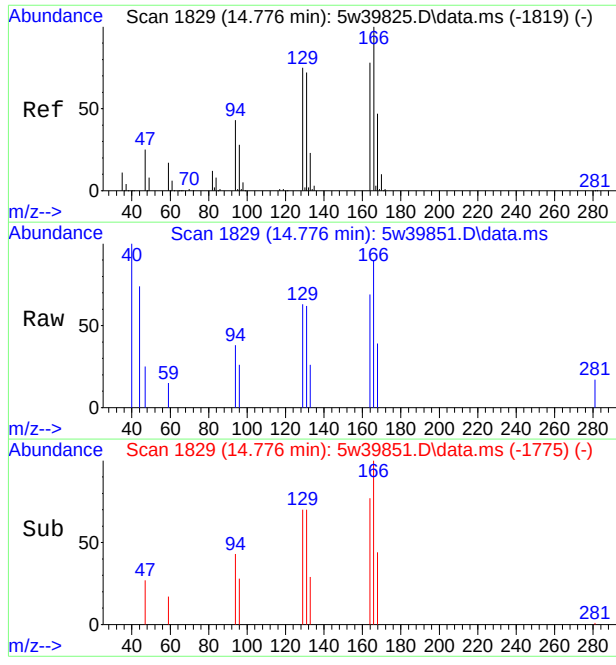
Tgt Ion:	117	Resp:	3113
Ion	Ratio	Lower	Upper
117	100		
119	104.6	67.2	124.8
121	30.8	21.6	40.2
82	24.4	16.9	31.5



#66
Toluene
Concen: 0.21 ppb(v)
RT: 13.283 min Scan# 1585
Delta R.T. -0.000 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

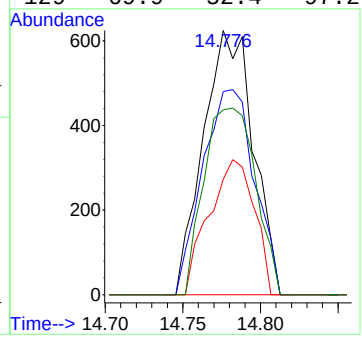
Tgt Ion:	91	Resp:	12062
Ion	Ratio	Lower	Upper
91	100		
92	58.9	41.2	76.4
65	12.8	8.0	14.8





#72
Tetrachloroethene
Concen: 0.05 ppb(v)
RT: 14.776 min Scan# 1829
Delta R.T. -0.000 min
Lab File: 5w39851.D
Acq: 25 Dec 2019 1:44 am

Tgt	Ion:166	Resp:	1399
Ion	Ratio	Lower	Upper
166	100		
164	76.8	54.3	100.9
168	43.7	32.8	61.0
129	69.9	52.4	97.2



7.1.7
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39840.D
Acq On : 24 Dec 2019 4:34 pm
Operator : danat
Sample : mb
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 26 11:04:00 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	149738	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.188	114	519837	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	172535	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	149773	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	141815	9.40	ppb(v	0.00
Spiked Amount	10.000	Range 65 - 128	Recovery	=	94.00%	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

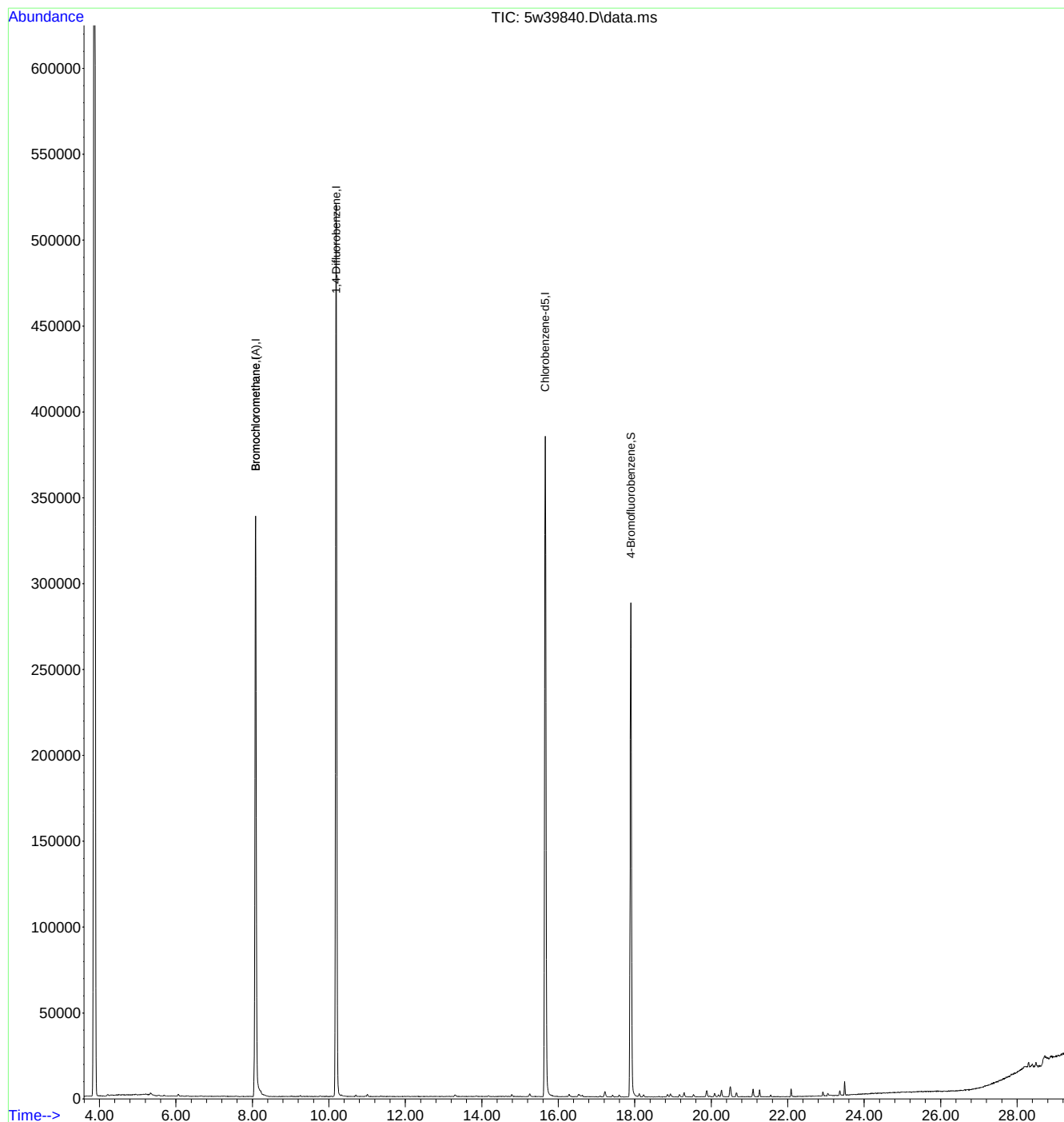
7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39840.D
Acq On : 24 Dec 2019 4:34 pm
Operator : danat
Sample : mb
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 26 11:04:00 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39864.D
Acq On : 26 Dec 2019 2:21 pm
Operator : danat
Sample : mb
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 26 14:53:24 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	137779	10.00	ppb(v)	0.00
53) 1,4-Difluorobenzene	10.188	114	469454	10.00	ppb(v)	0.00
76) Chlorobenzene-d5	15.657	82	146702	10.00	ppb(v)	0.00
107) Bromochloromethane (A)	8.083	130	137779	10.00	ppb(v)	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	115876	9.03	ppb(v)	0.00
Spiked Amount	10.000	Range 65 - 128	Recovery	=	90.30%	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

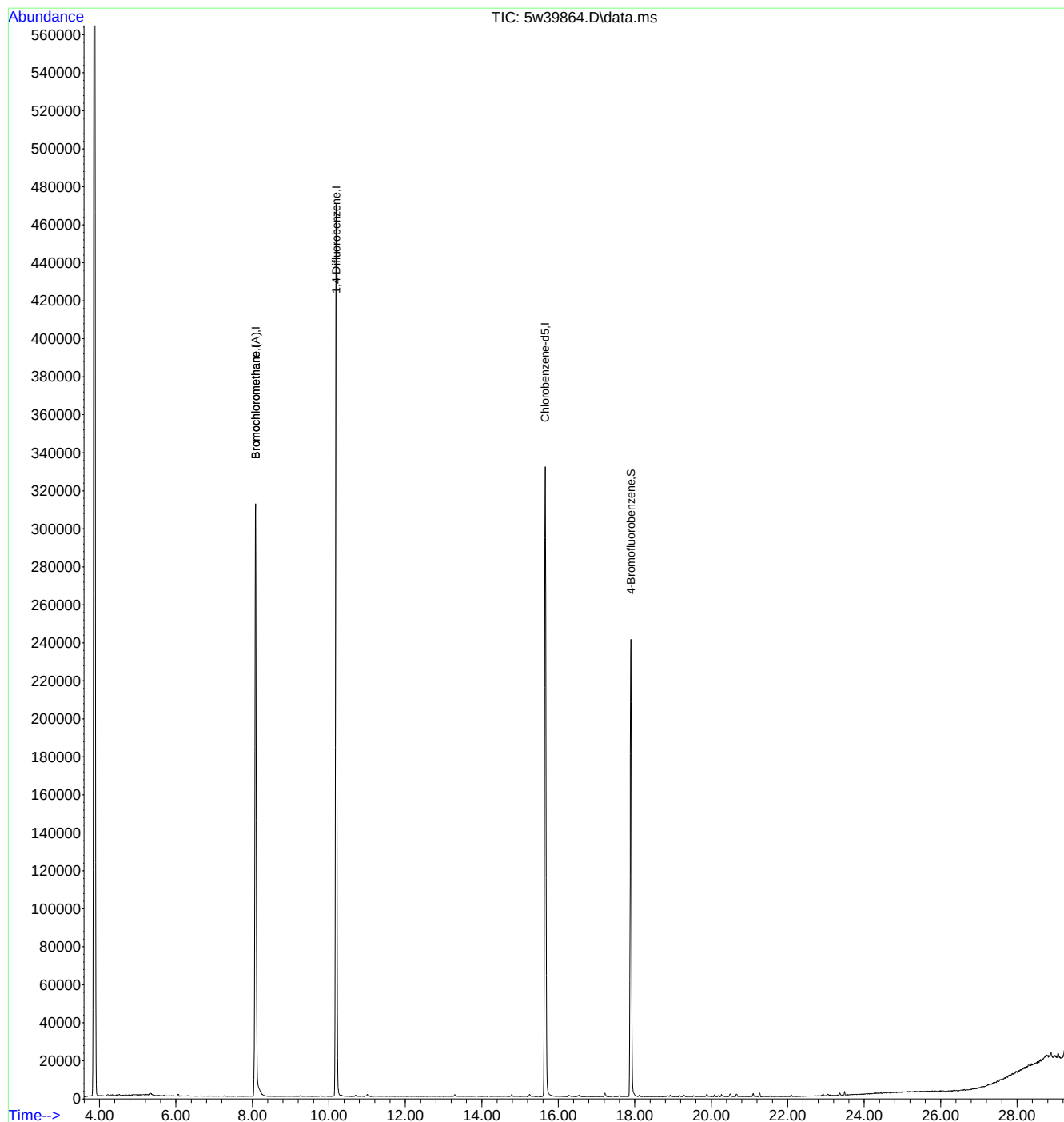
7.2.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39864.D
Acq On : 26 Dec 2019 2:21 pm
Operator : danat
Sample : mb
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 26 14:53:24 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W14962.D
Acq On : 26 Nov 2019 1:13 pm
Operator : thomash
Sample : mb
Misc : MS39338,V6W623,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 26 14:24:44 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	132795	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.342	114	471856	10.00	ppb(v #-0.01	
78) Chlorobenzene-d5	15.879	82	186117	10.00	ppb(v #-0.01	
109) Bromochloromethane (A)	8.152	130	132795	10.00	ppb(v # 0.00	

System Monitoring Compounds

92) 4-Bromofluorobenzene	18.124	95	220872	9.34	ppb(v 0.00	
Spiked Amount	10.000	Range	65 - 128	Recovery	=	93.40%

Target Compounds	Qvalue
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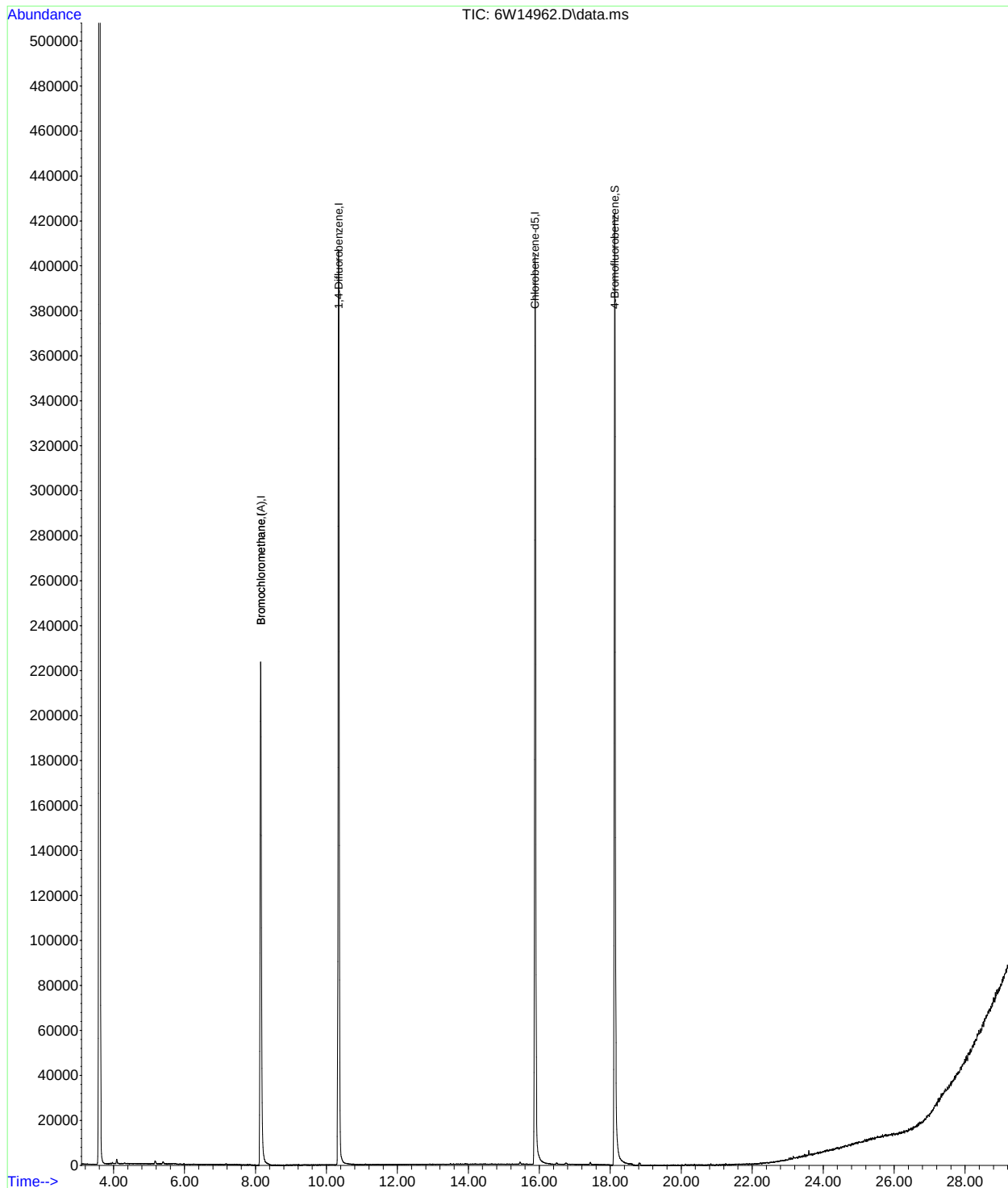
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.3

7

Data Path : C:\msdchem\1\data\
Data File : 6W14962.D
Acq On : 26 Nov 2019 1:13 pm
Operator : thomash
Sample : mb
Misc : MS39338,V6W623,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 26 14:24:44 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39891a.D
Acq On : 27 Dec 2019 2:48 pm
Operator : danat
Sample : mb2
Misc : ms39917,v5w1622,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 27 15:20:40 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	148532	10.00	ppb(v)	0.00
53) 1,4-Difluorobenzene	10.188	114	502433	10.00	ppb(v)	0.00
76) Chlorobenzene-d5	15.657	82	159469	10.00	ppb(v)	0.00
107) Bromochloromethane (A)	8.083	130	148532	10.00	ppb(v)	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	131746	9.44	ppb(v)	0.00
Spiked Amount	10.000	Range 65 - 128	Recovery	=	94.40%	

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

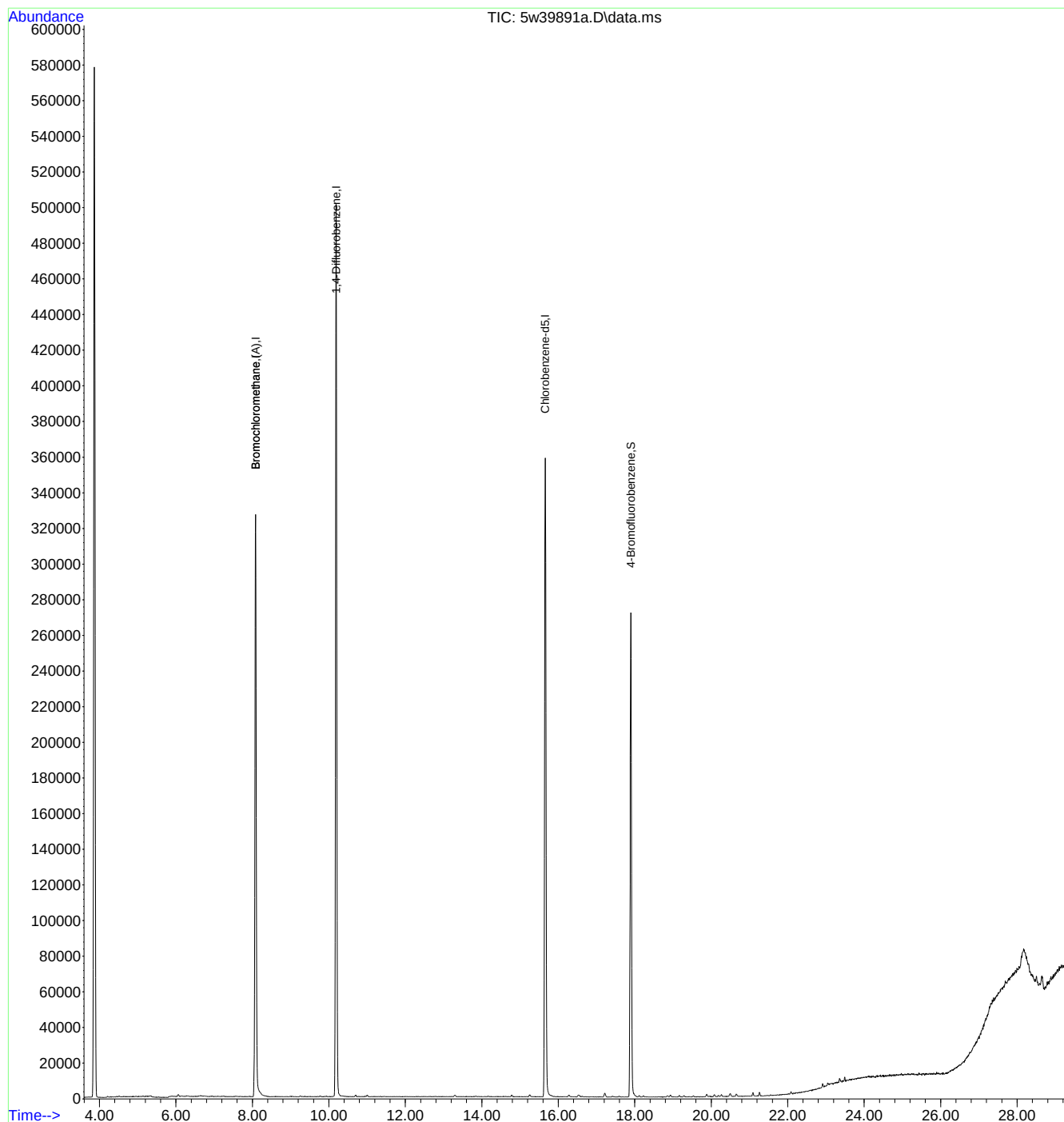
7.2.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39891a.D
Acq On : 27 Dec 2019 2:48 pm
Operator : danat
Sample : mb2
Misc : ms39917,v5w1622,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 27 15:20:40 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39836.D
 Acq On : 24 Dec 2019 1:23 pm
 Operator : danat
 Sample : bs
 Misc : ms39671,v5w1621,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:56:19 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	140206	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	512841	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	235388	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	140206	10.00	ppb(v	0.00

System Monitoring Compounds
 90) 4-Bromofluorobenzene 17.896 95 219145 10.64 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 106.40%

Target Compounds					Qvalue
2) Freon 152A	3.984	65	113796	10.41	ppb(v 99
3) Chlorodifluoromethane	4.021	67	47750	10.60	ppb(v 97
4) Propene	4.040	41	138229	10.14	ppb(v 99
5) Chlorotrifluoroethene	4.046	116	237098	10.33	ppb(v# 87
6) Dichlorodifluoromethane	4.101	85	478769	10.21	ppb(v 99
7) 1-Chloro-1,1-difluoro...	4.205	65	335001	10.03	ppb(v 100
8) Chloromethane	4.223	50	157068	10.07	ppb(v 100
9) Dichlorotetrafluoroethane	4.290	85	447514	10.21	ppb(v 99
10) Vinyl Chloride	4.382	62	155828	10.47	ppb(v 100
11) 1,3-Butadiene	4.480	54	103548	10.13	ppb(v 99
12) n-Butane	4.517	58	22219	10.32	ppb(v 94
13) Bromomethane	4.688	94	149813	9.49	ppb(v 99
14) Chloroethane	4.816	64	69012	10.00	ppb(v 98
15) Dichlorofluoromethane	4.890	67	342918	9.74	ppb(v 100
16) Acetonitrile	5.104	41	103693	9.16	ppb(v 99
17) Freon 123	5.202	83	347854	9.96	ppb(v 99
18) Freon 123A	5.251	117	184675	10.06	ppb(v 97
19) Bromoethene	5.086	106	139762	10.27	ppb(v 99
20) Acrolein	5.190	56	59123	9.87	ppb(v 99
21) Trichlorofluoromethane	5.410	101	436817	9.92	ppb(v 99
22) Acetone	5.300	58	60199	9.39	ppb(v 96
23) Pentane	5.691	57	46227	11.06	ppb(v 98
24) Iodomethane	5.881	142	468471	10.22	ppb(v 100
25) Isopropyl Alcohol	5.508	43	60617	8.74	ppb(v 99
26) 1,1-Dichloroethene	5.942	61	295806	10.19	ppb(v 99
27) Freon 113	6.266	101	380204	9.92	ppb(v 98
28) Methylene Chloride	6.058	84	161582	9.62	ppb(v 99
29) Carbon Disulfide	6.309	76	487682	10.58	ppb(v 100
30) Ethanol	4.933	45	56906	8.90	ppb(v 99
31) Acrylonitrile	5.679	53	143833	9.90	ppb(v 99
32) 3-Chloropropene	6.150	76	84410	10.60	ppb(v 99
33) trans-1,2-Dichloroethene	6.890	61	264746	10.27	ppb(v 100
34) tert-Butyl Alcohol	6.009	59	369970	10.33	ppb(v 99
35) Methyl tert-Butyl Ether	7.147	73	487388	10.31	ppb(v 100
36) Vinyl Acetate	7.239	43	491111	10.08	ppb(v 99
37) 1,1-Dichloroethane	7.086	63	333240	10.01	ppb(v 100
38) 2-Butanone	7.496	72	82409	10.24	ppb(v 96
39) Hexane	8.089	57	273737	10.37	ppb(v 97
40) cis-1,2-Dichloroethene	7.912	61	260140	10.23	ppb(v 99
41) Di-isopropyl Ether	8.114	87	141031	10.64	ppb(v 98
42) Ethyl Acetate	8.169	61	55943	10.52	ppb(v 98
43) Methyl Acrylate	8.151	55	304455	10.03	ppb(v 99
44) Chloroform	8.218	83	376661	9.80	ppb(v 99
45) 2,4-Dimethylpentane	9.025	57	333278	10.53	ppb(v 100
46) Tetrahydrofuran	8.665	72	82730	10.61	ppb(v 99
47) 1,1,1-Trichloroethane	9.258	97	367976	9.80	ppb(v 99
48) 1,2-Dichloroethane	8.989	62	238835	10.13	ppb(v 100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39836.D
 Acq On : 24 Dec 2019 1:23 pm
 Operator : danat
 Sample : bs
 Misc : ms39671,v5w1621,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:56:19 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	545845	10.24	ppb(v)	99
50) Carbon Tetrachloride	9.931	117	389784	10.26	ppb(v)	99
51) Cyclohexane	10.053	56	286192	10.54	ppb(v)	98
52) 2,3-Dimethylpentane	10.341	71	120607	10.67	ppb(v)	98
54) 2,2,4-Trimethylpentane	11.008	57	919158	10.21	ppb(v)	100
55) Heptane	11.350	71	178481	10.61	ppb(v)	99
56) Trichloroethene	10.995	95	243690	9.73	ppb(v)	99
57) 1,2-Dichloropropane	10.708	63	215453	10.37	ppb(v)	99
58) Dibromomethane	10.696	174	209621	9.54	ppb(v)	95
59) Ethyl Acrylate	10.769	55	396775	10.84	ppb(v)	100
60) Methyl Methacrylate	11.283	69	189445	10.75	ppb(v)	99
61) 1,4-Dioxane	11.044	88	114988	10.49	ppb(v)	91
62) Bromodichloromethane	10.959	83	414140	10.26	ppb(v)	100
63) cis-1,3-Dichloropropene	12.060	75	305085	10.88	ppb(v)	100
64) 4-Methyl-2-pentanone	12.121	58	173503	10.76	ppb(v)	99
65) trans-1,3-Dichloropropene	12.733	75	249561	10.61	ppb(v)	100
66) Toluene	13.283	91	623163	9.80	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	211662	10.79	ppb(v)	99
68) 1,3-Dichloropropane	13.326	76	278857	10.96	ppb(v)	100
69) 2-Hexanone	13.675	58	207724	11.91	ppb(v)	99
70) Ethyl Methacrylate	13.712	69	309531	11.81	ppb(v)	100
71) Dibromochloromethane	13.840	129	367347	11.37	ppb(v)	100
72) Tetrachloroethene	14.776	166	293923	10.25	ppb(v)	98
73) 1,2-Dibromoethane	14.146	107	278671	10.23	ppb(v)	100
74) Octane	14.623	43	454614	11.05	ppb(v)	99
75) 1,1,1,2-Tetrachloroethane	15.700	131	285801	10.61	ppb(v)	98
77) Chlorobenzene	15.718	112	425513	9.78	ppb(v)	99
78) Ethylbenzene	16.263	91	745271	9.91	ppb(v)	100
79) m,p-Xylene	16.538	91	1131038	19.87	ppb(v)	99
80) Styrene	17.058	104	357520	11.44	ppb(v)	100
81) Nonane	17.590	43	448829	9.71	ppb(v)	100
82) o-Xylene	17.205	91	595143	9.36	ppb(v)	100
83) Bromoform	16.605	173	270581	10.31	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	436717	9.04	ppb(v)	99
85) 1,2,3-Trichloropropane	17.401	75	292976	9.14	ppb(v)	99
86) Isopropylbenzene	18.110	105	839607	9.42	ppb(v)	100
87) Bromobenzene	18.214	156	177442	10.48	ppb(v)	100
88) 2-Chlorotoluene	18.838	126	172635	10.56	ppb(v)	97
89) n-Propylbenzene	18.918	120	192914	11.69	ppb(v)	96
91) 4-Ethyltoluene	19.150	105	660831	11.41	ppb(v)	99
92) 1,3,5-Trimethylbenzene	19.279	105	634851	9.72	ppb(v)	100
93) alpha-Methylstyrene	19.523	118	250497	12.23	ppb(v)	100
94) tert-Butylbenzene	19.866	134	146069	9.85	ppb(v)	99
95) 1,2,4-Trimethylbenzene	19.878	105	590518	10.49	ppb(v)	100
96) 1,3-Dichlorobenzene	20.074	146	234094	10.95	ppb(v)	98
97) Benzyl Chloride	20.068	91	256805	11.67	ppb(v)	100
98) 1,4-Dichlorobenzene	20.172	146	202714	10.97	ppb(v)	99
99) sec-Butylbenzene	20.264	134	171781	10.25	ppb(v)	99
100) p-Isopropyltoluene	20.502	134	187877	11.00	ppb(v)	97
101) 1,2-Dichlorobenzene	20.649	146	241819	10.60	ppb(v)	100
102) n-Butylbenzene	21.083	134	137730	12.59	ppb(v)	99
103) Hexachloroethane	21.555	201	245028	9.39	ppb(v)	98
104) 1,2,4-Trichlorobenzene	22.907	180	75758	10.91	ppb(v)	100
105) Naphthalene	23.029	128	196690	10.56	ppb(v)	99
106) Hexachlorobutadiene	23.488	225	254647	9.86	ppb(v)	99
108) TVHC as equiv Pentane	5.685	TIC	1158135	10.14	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W39836.D
Acq On : 24 Dec 2019 1:23 pm
Operator : danat
Sample : bs
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:56:19 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

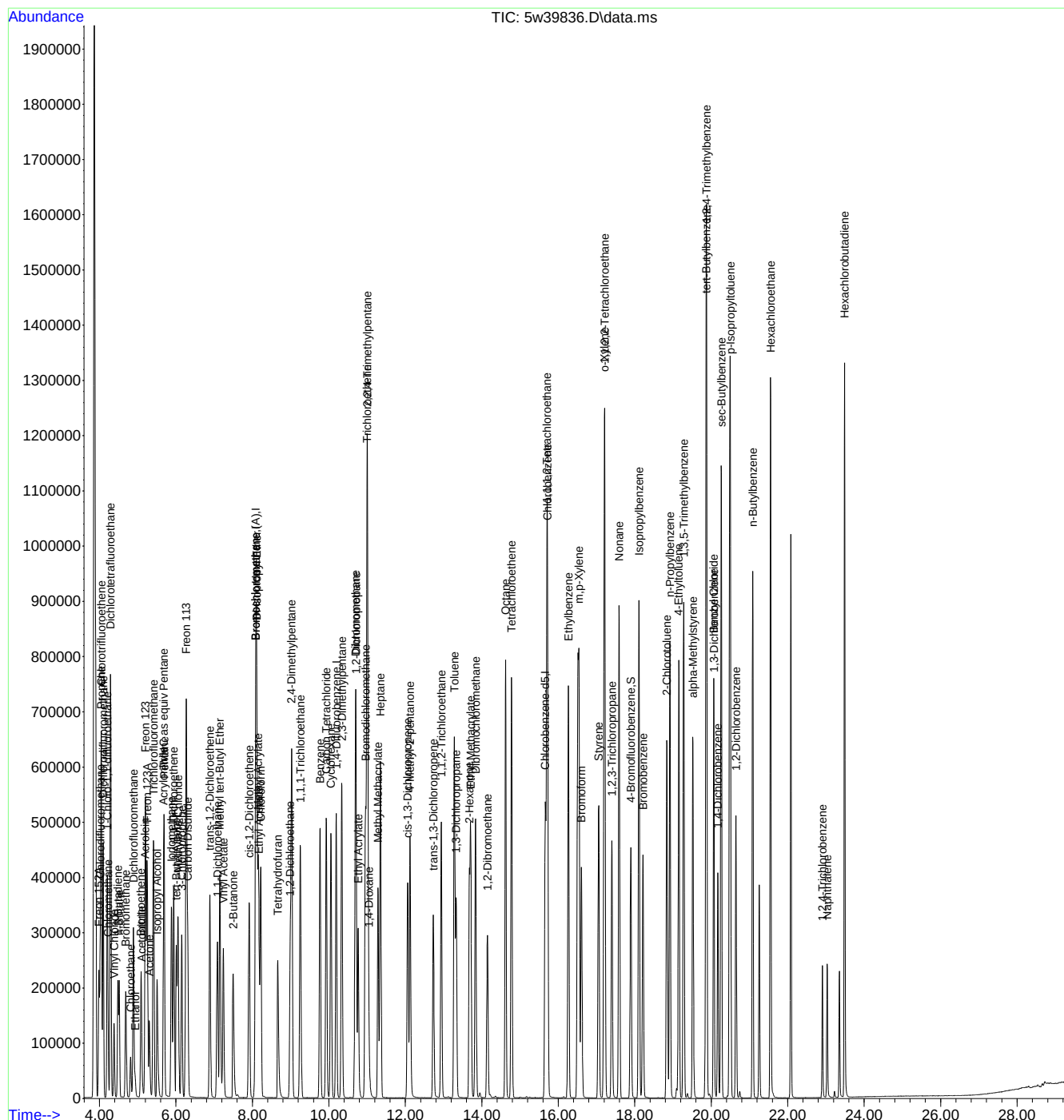
7.3.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39836.D
Acq On : 24 Dec 2019 1:23 pm
Operator : danat
Sample : bs
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:56:19 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39837.D
 Acq On : 24 Dec 2019 2:08 pm
 Operator : danat
 Sample : bsd
 Misc : ms39671,v5w1621,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 14:39:26 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	145721	10.00	ppb(v)	0.00
53) 1,4-Difluorobenzene	10.194	114	532141	10.00	ppb(v)	0.00
76) Chlorobenzene-d5	15.657	82	241204	10.00	ppb(v)	0.00
107) Bromochloromethane (A)	8.083	130	145721	10.00	ppb(v)	0.00

System Monitoring Compounds

90) 4-Bromofluorobenzene	17.896	95	223527	10.59	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	105.90%

Target Compounds					Qvalue
2) Freon 152A	3.985	65	114624	10.08	ppb(v) 99
3) Chlorodifluoromethane	4.021	67	47454	10.13	ppb(v) 99
4) Propene	4.040	41	138531	9.78	ppb(v) 99
5) Chlorotrifluoroethene	4.046	116	237698	9.96	ppb(v) 99
6) Dichlorodifluoromethane	4.095	85	480191	9.86	ppb(v) 100
7) 1-Chloro-1,1-difluoro...	4.205	65	335646	9.67	ppb(v) 100
8) Chloromethane	4.223	50	157938	9.75	ppb(v) 100
9) Dichlorotetrafluoroethane	4.290	85	445874	9.79	ppb(v) 99
10) Vinyl Chloride	4.382	62	157289	10.17	ppb(v) 100
11) 1,3-Butadiene	4.480	54	104493	9.83	ppb(v) 100
12) n-Butane	4.517	58	22507	10.06	ppb(v) 94
13) Bromomethane	4.688	94	151147	9.21	ppb(v) 98
14) Chloroethane	4.817	64	70381	9.81	ppb(v) 98
15) Dichlorofluoromethane	4.884	67	345056	9.43	ppb(v) 100
16) Acetonitrile	5.104	41	102777	8.74	ppb(v) 97
17) Freon 123	5.202	83	347804	9.58	ppb(v) 99
18) Freon 123A	5.251	117	186594	9.78	ppb(v) 98
19) Bromoethene	5.086	106	139796	9.89	ppb(v) 99
20) Acrolein	5.190	56	58658	9.42	ppb(v) 97
21) Trichlorofluoromethane	5.410	101	442579	9.67	ppb(v) 98
22) Acetone	5.300	58	59218	8.89	ppb(v) 98
23) Pentane	5.685	57	46843	10.79	ppb(v) 97
24) Iodomethane	5.881	142	473533	9.94	ppb(v) 100
25) Isopropyl Alcohol	5.508	43	61228	8.49	ppb(v) 100
26) 1,1-Dichloroethene	5.942	61	296632	9.83	ppb(v) 99
27) Freon 113	6.266	101	383988	9.64	ppb(v) 99
28) Methylene Chloride	6.058	84	162291	9.29	ppb(v) 99
29) Carbon Disulfide	6.309	76	492539	10.28	ppb(v) 100
30) Ethanol	4.933	45	57871	8.71	ppb(v) 99
31) Acrylonitrile	5.679	53	146118	9.68	ppb(v) 100
32) 3-Chloropropene	6.150	76	85670	10.35	ppb(v) 99
33) trans-1,2-Dichloroethene	6.890	61	269834	10.07	ppb(v) 100
34) tert-Butyl Alcohol	6.009	59	372135	10.00	ppb(v) 100
35) Methyl tert-Butyl Ether	7.147	73	491109	10.00	ppb(v) 99
36) Vinyl Acetate	7.239	43	498638	9.85	ppb(v) 100
37) 1,1-Dichloroethane	7.086	63	339127	9.80	ppb(v) 100
38) 2-Butanone	7.496	72	83522	9.98	ppb(v) 95
39) Hexane	8.096	57	278273	10.14	ppb(v) 90
40) cis-1,2-Dichloroethene	7.912	61	264978	10.03	ppb(v) 98
41) Di-isopropyl Ether	8.114	87	143725	10.43	ppb(v) 99
42) Ethyl Acetate	8.169	61	56282	10.18	ppb(v) 96
43) Methyl Acrylate	8.151	55	312359	9.90	ppb(v) 99
44) Chloroform	8.218	83	381147	9.54	ppb(v) 99
45) 2,4-Dimethylpentane	9.026	57	335978	10.21	ppb(v) 100
46) Tetrahydrofuran	8.665	72	83898	10.35	ppb(v) 97
47) 1,1,1-Trichloroethane	9.252	97	372102	9.53	ppb(v) 99
48) 1,2-Dichloroethane	8.989	62	238569	9.73	ppb(v) 100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39837.D
 Acq On : 24 Dec 2019 2:08 pm
 Operator : danat
 Sample : bsd
 Misc : ms39671,v5w1621,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 14:39:26 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	544464	9.83	ppb(v)	99
50) Carbon Tetrachloride	9.931	117	392009	9.93	ppb(v)	100
51) Cyclohexane	10.053	56	287042	10.17	ppb(v)	99
52) 2,3-Dimethylpentane	10.341	71	121660	10.35	ppb(v)	98
54) 2,2,4-Trimethylpentane	11.008	57	924605	9.89	ppb(v)	99
55) Heptane	11.350	71	180585	10.35	ppb(v)	99
56) Trichloroethene	10.995	95	244336	9.40	ppb(v)	98
57) 1,2-Dichloropropane	10.708	63	215643	10.00	ppb(v)	100
58) Dibromomethane	10.690	174	209326	9.18	ppb(v)	99
59) Ethyl Acrylate	10.763	55	395334	10.40	ppb(v)	100
60) Methyl Methacrylate	11.283	69	194531	10.63	ppb(v)	99
61) 1,4-Dioxane	11.038	88	116341	10.23	ppb(v)	97
62) Bromodichloromethane	10.959	83	417607	9.97	ppb(v)	100
63) cis-1,3-Dichloropropene	12.066	75	307213	10.56	ppb(v)	99
64) 4-Methyl-2-pentanone	12.121	58	174538	10.43	ppb(v)	100
65) trans-1,3-Dichloropropene	12.733	75	250949	10.28	ppb(v)	99
66) Toluene	13.283	91	628161	9.52	ppb(v)	100
67) 1,1,2-Trichloroethane	12.941	97	214941	10.56	ppb(v)	98
68) 1,3-Dichloropropane	13.332	76	279914	10.60	ppb(v)	100
69) 2-Hexanone	13.675	58	208124	11.50	ppb(v)	99
70) Ethyl Methacrylate	13.712	69	309413	11.38	ppb(v)	99
71) Dibromochloromethane	13.834	129	370039	11.04	ppb(v)	100
72) Tetrachloroethene	14.776	166	296480	9.97	ppb(v)	99
73) 1,2-Dibromoethane	14.146	107	280260	9.91	ppb(v)	99
74) Octane	14.623	43	453620	10.63	ppb(v)	99
75) 1,1,1,2-Tetrachloroethane	15.700	131	287009	10.27	ppb(v)	100
77) Chlorobenzene	15.718	112	425185	9.54	ppb(v)	99
78) Ethylbenzene	16.263	91	752309	9.76	ppb(v)	99
79) m,p-Xylene	16.538	91	1149289	19.71	ppb(v)	99
80) Styrene	17.058	104	359915	11.24	ppb(v)	99
81) Nonane	17.590	43	453977	9.58	ppb(v)	99
82) o-Xylene	17.205	91	598494	9.19	ppb(v)	99
83) Bromoform	16.605	173	271594	10.10	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	436777	8.83	ppb(v)	98
85) 1,2,3-Trichloropropane	17.401	75	294135	8.96	ppb(v)	100
86) Isopropylbenzene	18.110	105	849539	9.30	ppb(v)	100
87) Bromobenzene	18.214	156	177091	10.21	ppb(v)	99
88) 2-Chlorotoluene	18.838	126	174050	10.39	ppb(v)	97
89) n-Propylbenzene	18.918	120	193495	11.44	ppb(v)	97
91) 4-Ethyltoluene	19.150	105	669775	11.28	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	639483	9.56	ppb(v)	100
93) alpha-Methylstyrene	19.517	118	254230	12.11	ppb(v)	99
94) tert-Butylbenzene	19.866	134	145540	9.58	ppb(v)	99
95) 1,2,4-Trimethylbenzene	19.878	105	589258	10.22	ppb(v)	99
96) 1,3-Dichlorobenzene	20.074	146	233618	10.67	ppb(v)	98
97) Benzyl Chloride	20.068	91	255076	11.32	ppb(v)	100
98) 1,4-Dichlorobenzene	20.172	146	202802	10.71	ppb(v)	100
99) sec-Butylbenzene	20.264	134	170844	9.95	ppb(v)	100
100) p-Isopropyltoluene	20.502	134	188867	10.79	ppb(v)	99
101) 1,2-Dichlorobenzene	20.649	146	243747	10.43	ppb(v)	99
102) n-Butylbenzene	21.084	134	137492	12.26	ppb(v)	99
103) Hexachloroethane	21.555	201	240956	9.01	ppb(v)	99
104) 1,2,4-Trichlorobenzene	22.907	180	74365	10.45	ppb(v)	97
105) Naphthalene	23.029	128	199101	10.43	ppb(v)	100
106) Hexachlorobutadiene	23.488	225	252537	9.54	ppb(v)	100
108) TVHC as equiv Pentane	5.685	TIC	1184435	9.98	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W39837.D
Acq On : 24 Dec 2019 2:08 pm
Operator : danat
Sample : bsd
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 14:39:26 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

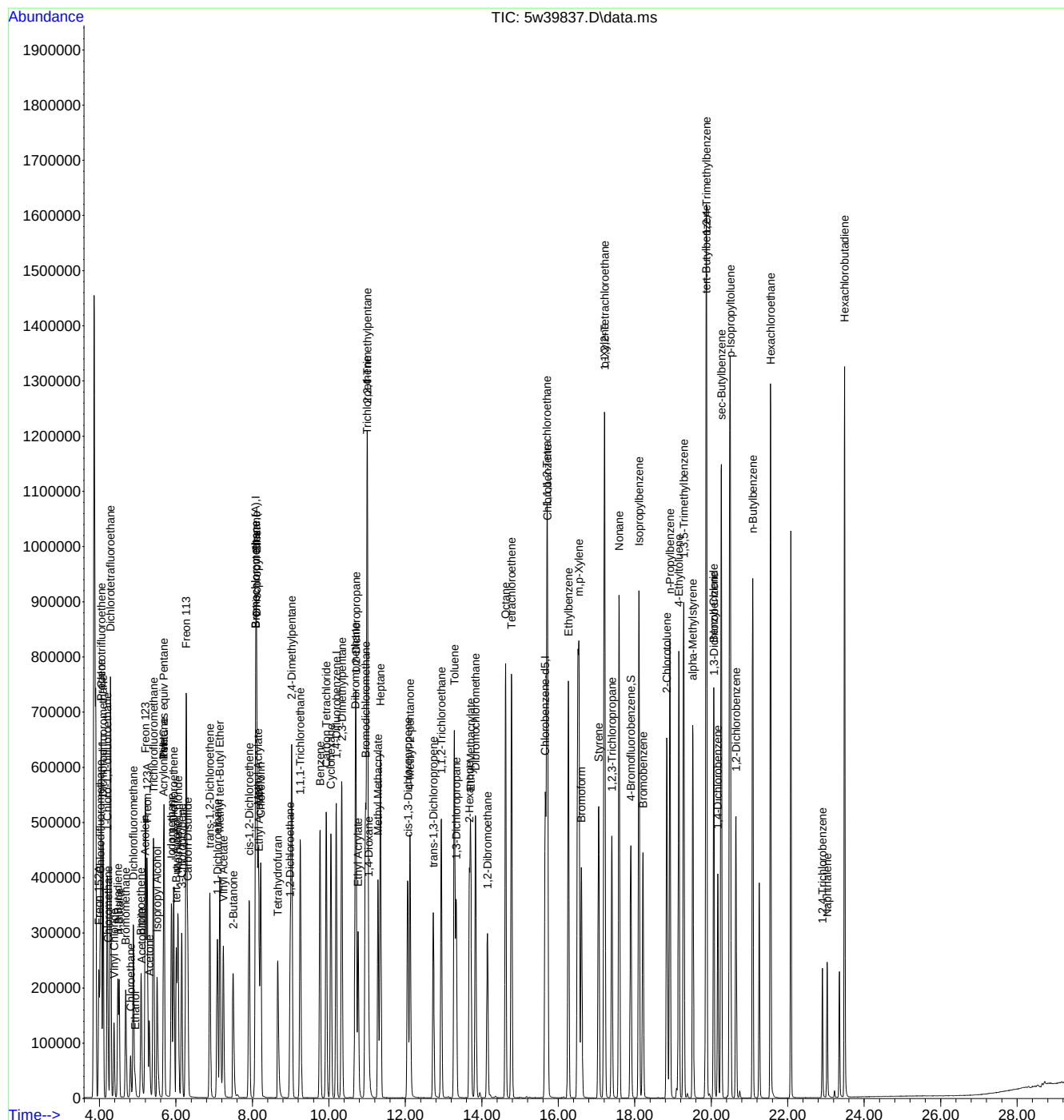
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39837.D
Acq On : 24 Dec 2019 2:08 pm
Operator : danat
Sample : bsd
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 14:39:26 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39860.D
 Acq On : 26 Dec 2019 11:03 am
 Operator : danat
 Sample : bs
 Misc : ms39818,v5w1622,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 11:45:38 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.089	130	134463	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	487507	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.663	82	223090	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.089	130	134463	10.00	ppb(v	0.00

System Monitoring Compounds

90) 4-Bromofluorobenzene	17.896	95	208074	10.66	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	106.60%

Target Compounds					Qvalue	
2) Freon 152A	3.997	65	112722	10.75	ppb(v	99
3) Chlorodifluoromethane	4.027	67	46462	10.75	ppb(v	100
4) Propene	4.052	41	138274	10.58	ppb(v	99
5) Chlorotrifluoroethene	4.058	116	229394	10.42	ppb(v#	88
6) Dichlorodifluoromethane	4.107	85	458765	10.21	ppb(v	100
7) 1-Chloro-1,1-difluoro...	4.211	65	332581	10.38	ppb(v	100
8) Chloromethane	4.229	50	157850	10.56	ppb(v	100
9) Dichlorotetrafluoroethane	4.296	85	436886	10.40	ppb(v	98
10) Vinyl Chloride	4.388	62	156812	10.98	ppb(v	99
11) 1,3-Butadiene	4.486	54	106734	10.89	ppb(v	98
12) n-Butane	4.523	58	23613	11.44	ppb(v	99
13) Bromomethane	4.694	94	153501	10.14	ppb(v	98
14) Chloroethane	4.823	64	73144	11.05	ppb(v	98
15) Dichlorofluoromethane	4.896	67	348720	10.33	ppb(v	100
16) Acetonitrile	5.110	41	108074	9.96	ppb(v	98
17) Freon 123	5.208	83	347847	10.39	ppb(v	99
18) Freon 123A	5.257	117	182227	10.35	ppb(v	99
19) Bromoethene	5.092	106	138722	10.63	ppb(v	100
20) Acrolein	5.196	56	58450	10.17	ppb(v	100
21) Trichlorofluoromethane	5.422	101	424321	10.04	ppb(v	99
22) Acetone	5.306	58	60920	9.91	ppb(v	98
23) Pentane	5.697	57	45177	11.27	ppb(v	94
24) Iodomethane	5.887	142	449105	10.22	ppb(v	99
25) Isopropyl Alcohol	5.514	43	60743	9.13	ppb(v	98
26) 1,1-Dichloroethene	5.948	61	289712	10.41	ppb(v	99
27) Freon 113	6.272	101	367423	10.00	ppb(v	99
28) Methylene Chloride	6.064	84	157021	9.75	ppb(v	97
29) Carbon Disulfide	6.315	76	475804	10.76	ppb(v	100
30) Ethanol	4.939	45	59471	9.70	ppb(v	99
31) Acrylonitrile	5.685	53	140580	10.09	ppb(v	100
32) 3-Chloropropene	6.156	76	82430	10.79	ppb(v	94
33) trans-1,2-Dichloroethene	6.896	61	259926	10.51	ppb(v	99
34) tert-Butyl Alcohol	6.015	59	348072	10.14	ppb(v	99
35) Methyl tert-Butyl Ether	7.153	73	465245	10.26	ppb(v	99
36) Vinyl Acetate	7.245	43	477886	10.23	ppb(v	100
37) 1,1-Dichloroethane	7.086	63	330006	10.33	ppb(v	100
38) 2-Butanone	7.496	72	78387	10.15	ppb(v	97
39) Hexane	8.095	57	271854	10.74	ppb(v	98
40) cis-1,2-Dichloroethene	7.918	61	254284	10.43	ppb(v	98
41) Di-isopropyl Ether	8.120	87	138394	10.89	ppb(v	95
42) Ethyl Acetate	8.169	61	54885	10.76	ppb(v	95
43) Methyl Acrylate	8.157	55	301773	10.37	ppb(v	99
44) Chloroform	8.224	83	370242	10.05	ppb(v	99
45) 2,4-Dimethylpentane	9.031	57	329184	10.84	ppb(v	99
46) Tetrahydrofuran	8.664	72	79557	10.64	ppb(v	95
47) 1,1,1-Trichloroethane	9.258	97	355239	9.86	ppb(v	99
48) 1,2-Dichloroethane	8.995	62	231969	10.26	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39860.D
 Acq On : 26 Dec 2019 11:03 am
 Operator : danat
 Sample : bs
 Misc : ms39818,v5w1622,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 11:45:38 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	529720	10.36	ppb(v)	99
50) Carbon Tetrachloride	9.937	117	379233	10.41	ppb(v)	100
51) Cyclohexane	10.059	56	281072	10.79	ppb(v)	100
52) 2,3-Dimethylpentane	10.341	71	117629	10.85	ppb(v)	100
54) 2,2,4-Trimethylpentane	11.014	57	907986	10.61	ppb(v)	100
55) Heptane	11.350	71	175823	11.00	ppb(v)	99
56) Trichloroethene	11.001	95	235684	9.89	ppb(v)	100
57) 1,2-Dichloropropane	10.714	63	211409	10.70	ppb(v)	100
58) Dibromomethane	10.695	174	197908	9.48	ppb(v)	99
59) Ethyl Acrylate	10.769	55	377071	10.83	ppb(v)	100
60) Methyl Methacrylate	11.289	69	183443	10.95	ppb(v)	99
61) 1,4-Dioxane	11.044	88	107917	10.35	ppb(v)	97
62) Bromodichloromethane	10.959	83	405276	10.56	ppb(v)	99
63) cis-1,3-Dichloropropene	12.066	75	291971	10.95	ppb(v)	99
64) 4-Methyl-2-pentanone	12.127	58	165603	10.80	ppb(v)	99
65) trans-1,3-Dichloropropene	12.733	75	239837	10.73	ppb(v)	99
66) Toluene	13.283	91	595319	9.85	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	204592	10.97	ppb(v)	100
68) 1,3-Dichloropropane	13.332	76	266687	11.03	ppb(v)	99
69) 2-Hexanone	13.675	58	196226	11.84	ppb(v)	99
70) Ethyl Methacrylate	13.712	69	295648	11.87	ppb(v)	99
71) Dibromochloromethane	13.840	129	353357	11.50	ppb(v)	99
72) Tetrachloroethene	14.782	166	281315	10.32	ppb(v)	99
73) 1,2-Dibromoethane	14.146	107	265572	10.25	ppb(v)	100
74) Octane	14.623	43	450343	11.52	ppb(v)	99
75) 1,1,1,2-Tetrachloroethane	15.700	131	274137	10.71	ppb(v)	99
77) Chlorobenzene	15.724	112	400314	9.71	ppb(v)	99
78) Ethylbenzene	16.263	91	725377	10.18	ppb(v)	100
79) m,p-Xylene	16.513	91	1089501	20.20	ppb(v)	100
80) Styrene	17.058	104	340834	11.51	ppb(v)	100
81) Nonane	17.590	43	447879	10.22	ppb(v)	99
82) o-Xylene	17.205	91	575816	9.56	ppb(v)	99
83) Bromoform	16.605	173	261627	10.52	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	428526	9.36	ppb(v)	99
85) 1,2,3-Trichloropropane	17.401	75	286993	9.45	ppb(v)	100
86) Isopropylbenzene	18.110	105	814753	9.64	ppb(v)	100
87) Bromobenzene	18.214	156	169068	10.53	ppb(v)	98
88) 2-Chlorotoluene	18.844	126	166165	10.72	ppb(v)	97
89) n-Propylbenzene	18.924	120	181900	11.63	ppb(v)	99
91) 4-Ethyltoluene	19.150	105	635265	11.57	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	612012	9.89	ppb(v)	100
93) alpha-Methylstyrene	19.523	118	241218	12.42	ppb(v)	100
94) tert-Butylbenzene	19.866	134	139987	9.96	ppb(v)	98
95) 1,2,4-Trimethylbenzene	19.878	105	566177	10.62	ppb(v)	97
96) 1,3-Dichlorobenzene	20.074	146	227757	11.24	ppb(v)	98
97) Benzyl Chloride	20.068	91	261664	12.55	ppb(v)	100
98) 1,4-Dichlorobenzene	20.172	146	198652	11.34	ppb(v)	100
99) sec-Butylbenzene	20.264	134	167233	10.53	ppb(v)	100
100) p-Isopropyltoluene	20.502	134	184133	11.37	ppb(v)	97
101) 1,2-Dichlorobenzene	20.649	146	241751	11.18	ppb(v)	99
102) n-Butylbenzene	21.083	134	131721	12.70	ppb(v)	98
103) Hexachloroethane	21.554	201	237394	9.60	ppb(v)	98
104) 1,2,4-Trichlorobenzene	22.906	180	61688	9.37	ppb(v)	98
105) Naphthalene	23.029	128	165536	9.38	ppb(v)	100
106) Hexachlorobutadiene	23.488	225	235997	9.64	ppb(v)	100
108) TVHC as equiv Pentane	5.691	TIC	1142080	10.43	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39860.D
Acq On : 26 Dec 2019 11:03 am
Operator : danat
Sample : bs
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 11:45:38 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

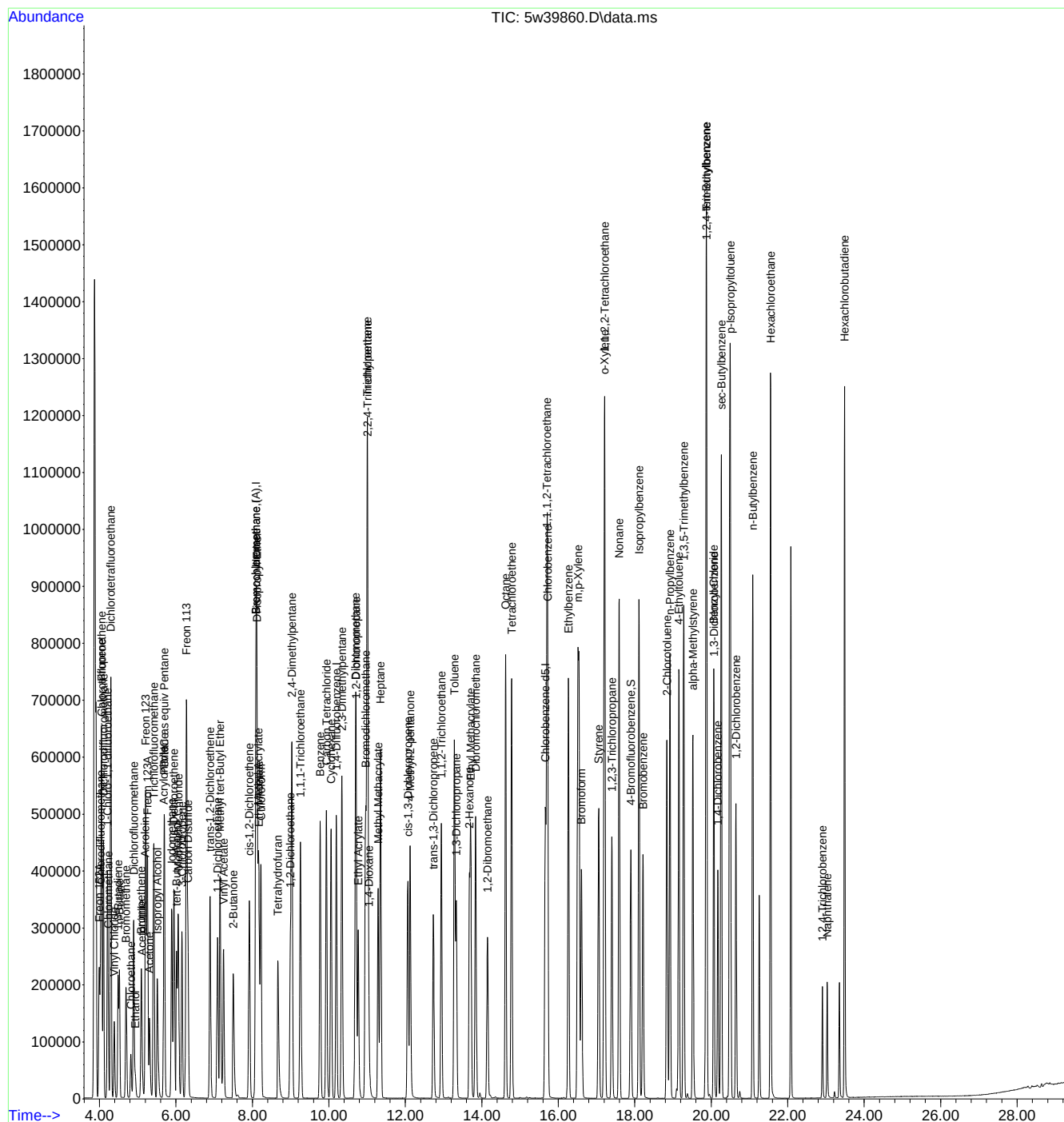
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 5w39860.D  
Acq On : 26 Dec 2019 11:03 am  
Operator : danat  
Sample : bs  
Misc : ms39818,v5w1622,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Dec 26 11:45:38 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



7.3.3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39861.D
 Acq On : 26 Dec 2019 11:49 am
 Operator : danat
 Sample : bsd
 Misc : ms39818,v5w1622,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 12:18:58 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	135241	10.00	ppb(v)	0.00
53) 1,4-Difluorobenzene	10.194	114	491295	10.00	ppb(v)	0.00
76) Chlorobenzene-d5	15.663	82	226046	10.00	ppb(v)	0.00
107) Bromochloromethane (A)	8.083	130	135241	10.00	ppb(v)	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	207069	10.47	ppb(v)	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	104.70%	
Target Compounds						
					Qvalue	
2) Freon 152A	3.990	65	113289	10.74	ppb(v)	99
3) Chlorodifluoromethane	4.027	67	47336	10.89	ppb(v)	99
4) Propene	4.046	41	138230	10.52	ppb(v)	99
5) Chlorotrifluoroethene	4.052	116	229656	10.37	ppb(v)	99
6) Dichlorodifluoromethane	4.101	85	465375	10.29	ppb(v)	99
7) 1-Chloro-1,1-difluoro...	4.205	65	332826	10.33	ppb(v)	100
8) Chloromethane	4.223	50	160204	10.65	ppb(v)	100
9) Dichlorotetrafluoroethane	4.296	85	441502	10.45	ppb(v)	100
10) Vinyl Chloride	4.388	62	156966	10.93	ppb(v)	99
11) 1,3-Butadiene	4.486	54	105100	10.66	ppb(v)	99
12) n-Butane	4.523	58	23301	11.22	ppb(v)	93
13) Bromomethane	4.694	94	152720	10.03	ppb(v)	99
14) Chloroethane	4.822	64	72268	10.86	ppb(v)	99
15) Dichlorofluoromethane	4.890	67	349884	10.31	ppb(v)	99
16) Acetonitrile	5.104	41	108486	9.94	ppb(v)	98
17) Freon 123	5.208	83	352543	10.47	ppb(v)	99
18) Freon 123A	5.251	117	183130	10.34	ppb(v)	97
19) Bromoethene	5.092	106	139578	10.64	ppb(v)	100
20) Acrolein	5.196	56	59699	10.33	ppb(v)	100
21) Trichlorofluoromethane	5.416	101	429514	10.11	ppb(v)	99
22) Acetone	5.306	58	60197	9.73	ppb(v)	96
23) Pentane	5.691	57	45777	11.36	ppb(v)	100
24) Iodomethane	5.887	142	456068	10.32	ppb(v)	100
25) Isopropyl Alcohol	5.514	43	59954	8.96	ppb(v)	100
26) 1,1-Dichloroethene	5.948	61	292101	10.43	ppb(v)	99
27) Freon 113	6.272	101	371973	10.07	ppb(v)	99
28) Methylene Chloride	6.058	84	159010	9.81	ppb(v)	97
29) Carbon Disulfide	6.309	76	480420	10.80	ppb(v)	100
30) Ethanol	4.933	45	59205	9.60	ppb(v)	98
31) Acrylonitrile	5.685	53	142495	10.17	ppb(v)	99
32) 3-Chloropropene	6.156	76	84157	10.96	ppb(v)	98
33) trans-1,2-Dichloroethene	6.890	61	258344	10.39	ppb(v)	100
34) tert-Butyl Alcohol	6.009	59	353521	10.24	ppb(v)	99
35) Methyl tert-Butyl Ether	7.153	73	468401	10.27	ppb(v)	99
36) Vinyl Acetate	7.239	43	482387	10.27	ppb(v)	99
37) 1,1-Dichloroethane	7.086	63	327944	10.21	ppb(v)	99
38) 2-Butanone	7.496	72	79201	10.20	ppb(v)	98
39) Hexane	8.095	57	271187	10.65	ppb(v)	96
40) cis-1,2-Dichloroethene	7.918	61	255505	10.42	ppb(v)	98
41) Di-isopropyl Ether	8.120	87	138455	10.83	ppb(v)	97
42) Ethyl Acetate	8.169	61	55005	10.72	ppb(v)	94
43) Methyl Acrylate	8.157	55	301909	10.31	ppb(v)	99
44) Chloroform	8.218	83	369683	9.97	ppb(v)	99
45) 2,4-Dimethylpentane	9.031	57	325583	10.66	ppb(v)	99
46) Tetrahydrofuran	8.664	72	80407	10.69	ppb(v)	97
47) 1,1,1-Trichloroethane	9.258	97	359471	9.92	ppb(v)	98
48) 1,2-Dichloroethane	8.995	62	231128	10.16	ppb(v)	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39861.D
 Acq On : 26 Dec 2019 11:49 am
 Operator : danat
 Sample : bsd
 Misc : ms39818,v5w1622,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 12:18:58 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	535830	10.42	ppb(v)	99
50) Carbon Tetrachloride	9.937	117	383400	10.46	ppb(v)	100
51) Cyclohexane	10.059	56	281821	10.76	ppb(v)	99
52) 2,3-Dimethylpentane	10.341	71	118785	10.89	ppb(v)	100
54) 2,2,4-Trimethylpentane	11.014	57	908258	10.53	ppb(v)	99
55) Heptane	11.350	71	172856	10.73	ppb(v)	98
56) Trichloroethene	10.995	95	236365	9.85	ppb(v)	98
57) 1,2-Dichloropropane	10.714	63	211649	10.63	ppb(v)	100
58) Dibromomethane	10.695	174	199888	9.50	ppb(v)	99
59) Ethyl Acrylate	10.769	55	384949	10.97	ppb(v)	100
60) Methyl Methacrylate	11.289	69	183884	10.89	ppb(v)	99
61) 1,4-Dioxane	11.044	88	108571	10.34	ppb(v)	96
62) Bromodichloromethane	10.959	83	406520	10.51	ppb(v)	100
63) cis-1,3-Dichloropropene	12.066	75	295910	11.02	ppb(v)	98
64) 4-Methyl-2-pentanone	12.121	58	166902	10.80	ppb(v)	98
65) trans-1,3-Dichloropropene	12.733	75	239252	10.62	ppb(v)	99
66) Toluene	13.283	91	603292	9.91	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	204895	10.91	ppb(v)	99
68) 1,3-Dichloropropane	13.332	76	270225	11.09	ppb(v)	99
69) 2-Hexanone	13.675	58	197518	11.82	ppb(v)	99
70) Ethyl Methacrylate	13.711	69	297560	11.85	ppb(v)	100
71) Dibromochloromethane	13.840	129	354602	11.45	ppb(v)	99
72) Tetrachloroethene	14.782	166	285572	10.40	ppb(v)	99
73) 1,2-Dibromoethane	14.146	107	269544	10.32	ppb(v)	100
74) Octane	14.623	43	453828	11.52	ppb(v)	98
75) 1,1,1,2-Tetrachloroethane	15.700	131	280026	10.85	ppb(v)	99
77) Chlorobenzene	15.724	112	409858	9.81	ppb(v)	99
78) Ethylbenzene	16.263	91	732005	10.14	ppb(v)	100
79) m,p-Xylene	16.538	91	1100674	20.14	ppb(v)	99
80) Styrene	17.058	104	347574	11.58	ppb(v)	99
81) Nonane	17.590	43	450093	10.13	ppb(v)	99
82) o-Xylene	17.205	91	579940	9.50	ppb(v)	99
83) Bromoform	16.605	173	263477	10.46	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	429431	9.26	ppb(v)	99
85) 1,2,3-Trichloropropane	17.400	75	288251	9.36	ppb(v)	99
86) Isopropylbenzene	18.110	105	819154	9.57	ppb(v)	100
87) Bromobenzene	18.214	156	169060	10.40	ppb(v)	97
88) 2-Chlorotoluene	18.844	126	169462	10.79	ppb(v)	99
89) n-Propylbenzene	18.924	120	187425	11.82	ppb(v)	95
91) 4-Ethyltoluene	19.156	105	640156	11.51	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	610790	9.74	ppb(v)	100
93) alpha-Methylstyrene	19.523	118	242832	12.34	ppb(v)	100
94) tert-Butylbenzene	19.866	134	141653	9.95	ppb(v)	99
95) 1,2,4-Trimethylbenzene	19.878	105	569529	10.54	ppb(v)	97
96) 1,3-Dichlorobenzene	20.074	146	224679	10.95	ppb(v)	98
97) Benzyl Chloride	20.068	91	246886	11.69	ppb(v)	100
98) 1,4-Dichlorobenzene	20.178	146	193917	10.92	ppb(v)	99
99) sec-Butylbenzene	20.264	134	167187	10.39	ppb(v)	98
100) p-Isopropyltoluene	20.502	134	180054	10.98	ppb(v)	99
101) 1,2-Dichlorobenzene	20.649	146	234888	10.72	ppb(v)	99
102) n-Butylbenzene	21.083	134	131286	12.49	ppb(v)	99
103) Hexachloroethane	21.554	201	231952	9.26	ppb(v)	97
104) 1,2,4-Trichlorobenzene	22.906	180	68952	10.34	ppb(v)	99
105) Naphthalene	23.029	128	182488	10.20	ppb(v)	99
106) Hexachlorobutadiene	23.488	225	241660	9.74	ppb(v)	99
108) TVHC as equiv Pentane	5.691	TIC	1173124	10.65	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W39861.D
Acq On : 26 Dec 2019 11:49 am
Operator : danat
Sample : bsd
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 12:18:58 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)= qualifier out of range (m) = manual integration (+) = signals summed						

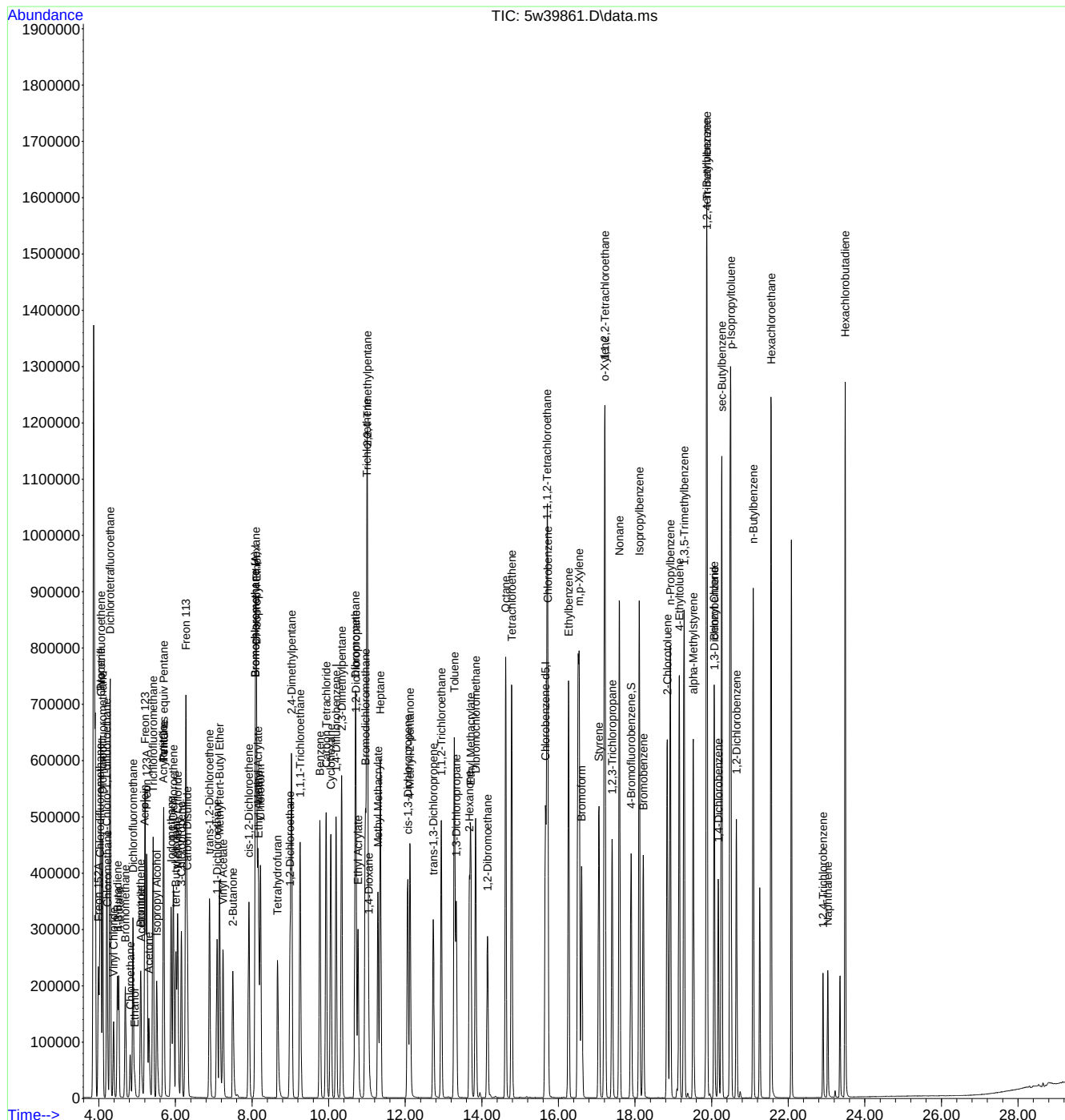
7.3.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39861.D
Acq On : 26 Dec 2019 11:49 am
Operator : danat
Sample : bsd
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 12:18:58 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W14959.D
 Acq On : 26 Nov 2019 10:37 am
 Operator : thomash
 Sample : bs
 Misc : MS39338,V6W623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 26 14:21:57 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.146	130	137980	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.349	114	482654	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.879	82	225304	10.00	ppb(v # -0.01	
109) Bromochloromethane (A)	8.146	130	137980	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.124 95 310527 10.85 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 108.50%

Target Compounds					Qvalue
3) Freon 152A	3.729	65	95784	10.78	ppb(v 97
4) Chlorodifluoromethane	3.766	67	44431	12.72	ppb(v 97
5) Propene	3.790	41	100029	10.25	ppb(v 97
6) Chlorotrifluoroethene	3.797	116	269393	10.99	ppb(v 94
7) Dichlorodifluoromethane	3.852	85	472143	12.04	ppb(v 99
8) 1-Chloro-1,1-difluoro...	3.962	65	341175	13.12	ppb(v 98
9) Chloromethane	3.980	50	114944	12.07	ppb(v 99
10) Dichlorotetrafluoroethane	4.053	85	449483	12.16	ppb(v 89
11) Vinyl Chloride	4.157	62	142797	12.01	ppb(v# 99
12) 1,3-Butadiene	4.261	54	96484	11.82	ppb(v 98
13) n-Butane	4.310	58	25180	12.37	ppb(v 83
14) Bromomethane	4.488	94	155912	11.96	ppb(v 97
15) Acrolein	5.020	56	50607	8.90	ppb(v# 94
16) Chloroethane	4.629	64	69780	12.04	ppb(v 98
17) Dichlorofluoromethane	4.702	67	332133	12.23	ppb(v 99
18) Acetonitrile	4.910	41	85459	7.56	ppb(v 95
19) Freon 123	5.045	83	351832	10.27	ppb(v 99
20) Freon 123A	5.093	117	231413	10.78	ppb(v 73
21) Bromoethene	4.922	106	155941	10.82	ppb(v 98
22) Trichlorofluoromethane	5.283	101	446841	11.81	ppb(v 99
23) Acetone	5.130	58	58642	8.39	ppb(v 99
24) Pentane	5.589	57	33556	9.61	ppb(v 88
26) Iodomethane	5.791	142	485496	10.32	ppb(v 93
27) Isopropyl Alcohol	5.344	45	218352	8.25	ppb(v 96
28) 1,1-Dichloroethene	5.858	61	228112	10.37	ppb(v 88
29) Freon 113	6.213	101	350358	10.55	ppb(v 85
30) Methylene Chloride	5.974	84	138346	8.83	ppb(v 80
31) Carbon Disulfide	6.256	76	409804	10.03	ppb(v 99
32) Ethanol	4.720	45	45698	11.77	ppb(v 99
33) Acrylonitrile	5.546	53	97414	9.23	ppb(v 99
34) 3-Chloropropene	6.085	76	73410	10.63	ppb(v 68
35) trans-1,2-Dichloroethene	6.880	61	202864	10.77	ppb(v 86
36) tert-Butyl Alcohol	5.895	59	312608	10.32	ppb(v 96
37) Methyl tert-Butyl Ether	7.143	73	449805	10.87	ppb(v 92
38) Vinyl Acetate	7.247	43	340007	9.77	ppb(v# 90
39) 1,1-Dichloroethane	7.088	63	253683	10.14	ppb(v# 99
40) 2-Butanone	7.504	72	69238	10.11	ppb(v 61
41) Hexane	8.177	57	209158	10.20	ppb(v 90
42) cis-1,2-Dichloroethene	7.969	61	197020	10.89	ppb(v 86
43) Di-isopropyl Ether	8.183	87	142543	10.89	ppb(v# 44
44) Ethyl Acetate	8.220	61	42431	10.38	ppb(v# 78
45) Methyl Acrylate	8.207	55	246249	10.42	ppb(v# 92
46) Chloroform	8.287	83	342137	11.29	ppb(v 98
47) 2,4-Dimethylpentane	9.156	57	250874	10.34	ppb(v# 94
48) Tetrahydrofuran	8.734	72	70009	10.61	ppb(v 78
49) 1,1,1-Trichloroethane	9.382	97	354533	11.74	ppb(v 96
50) 1,2-Dichloroethane	9.101	62	202212	11.84	ppb(v 97
51) Benzene	9.908	78	464036	9.81	ppb(v 95
52) Carbon Tetrachloride	10.079	117	388820	12.17	ppb(v 98
53) Cyclohexane	10.220	56	213772	10.19	ppb(v# 81
54) 2,3-Dimethylpentane	10.508	71	102660	10.40	ppb(v 75
56) 2,2,4-Trimethylpentane	11.199	57	703936	10.57	ppb(v# 97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W14959.D
 Acq On : 26 Nov 2019 10:37 am
 Operator : thomash
 Sample : bs
 Misc : MS39338,V6W623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

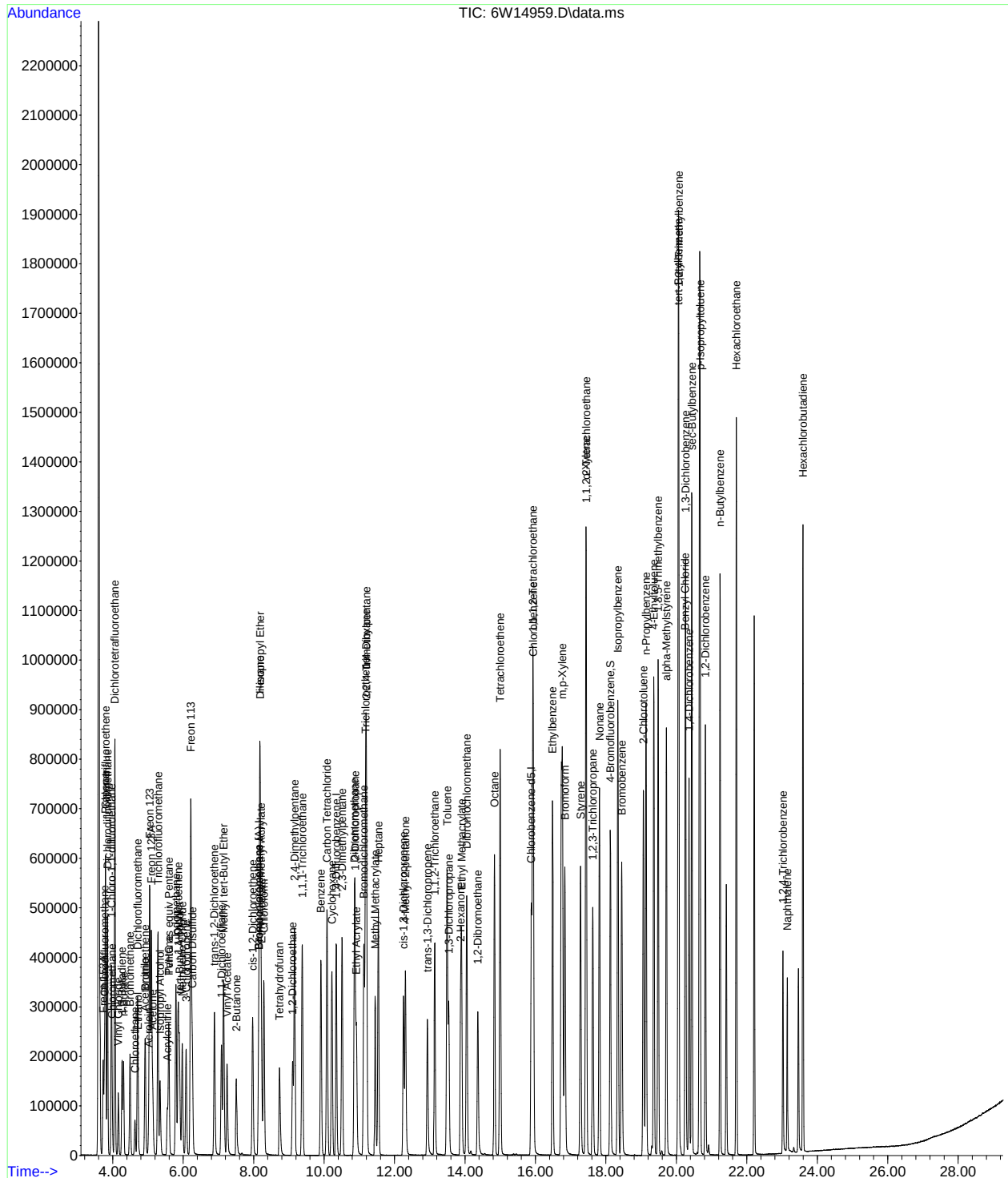
Quant Time: Nov 26 14:21:57 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.542	71	164343	11.02	ppb(v	89
58) Trichloroethene	11.174	95	223060	10.79	ppb(v	82
59) 1,2-Dichloropropane	10.881	63	157925	10.43	ppb(v	90
60) Dibromomethane	10.856	174	245444	10.96	ppb(v#	67
61) Ethyl Acrylate	10.918	55	293455	10.48	ppb(v#	93
62) Methyl Methacrylate	11.450	69	170339	11.10	ppb(v	73
63) 1,4-Dioxane	11.193	88	105423	9.04	ppb(v	71
64) Bromodichloromethane	11.126	83	364660	11.93	ppb(v#	97
65) cis-1,3-Dichloropropene	12.251	75	256964	11.06	ppb(v#	93
66) 4-Methyl-2-pentanone	12.306	58	130167	11.02	ppb(v#	71
67) trans-1,3-Dichloropropene	12.930	75	222093	11.30	ppb(v#	92
68) Toluene	13.493	91	581732	10.48	ppb(v	98
69) 1,1,2-Trichloroethane	13.144	97	194669	11.02	ppb(v	93
70) 1,3-Dichloropropane	13.536	76	258842	10.80	ppb(v#	84
71) 2-Hexanone	13.872	58	156816	9.15	ppb(v#	78
72) Ethyl Methacrylate	13.903	69	275457	11.08	ppb(v#	91
73) Dibromochloromethane	14.050	129	403148	12.21	ppb(v#	98
74) Tetrachloroethene	14.998	166	355230	11.49	ppb(v	94
75) 1,2-Dibromoethane	14.362	107	290622	10.87	ppb(v	100
76) Octane	14.839	43	307299	10.51	ppb(v#	72
77) 1,1,1,2-Tetrachloroethane	15.922	131	284523	11.63	ppb(v	98
79) Chlorobenzene	15.940	112	461452	9.73	ppb(v	89
80) Ethylbenzene	16.485	91	734251	9.54	ppb(v	95
81) m,p-Xylene	16.760	91	1235234	20.20	ppb(v	96
82) Styrene	17.280	104	428589	10.61	ppb(v	94
83) Nonane	17.818	43	324086	9.91	ppb(v#	84
84) o-Xylene	17.433	91	609391	9.72	ppb(v	95
85) Bromoform	16.833	173	402703	10.87	ppb(v	99
86) 1,1,2,2-Tetrachloroethane	17.439	83	402865	9.87	ppb(v#	97
87) 1,2,3-Trichloropropane	17.629	75	302533	10.16	ppb(v	89
88) Isopropylbenzene	18.338	105	884339	10.16	ppb(v	94
89) Bromobenzene	18.448	156	285155	10.60	ppb(v#	72
90) 2-Chlorotoluene	19.066	126	213460	10.68	ppb(v#	72
91) n-Propylbenzene	19.140	120	243399	10.99	ppb(v	65
93) 4-Ethyltoluene	19.360	105	801965	10.56	ppb(v	96
94) 1,3,5-Trimethylbenzene	19.482	105	718121	10.64	ppb(v	96
95) alpha-Methylstyrene	19.715	118	348900	11.17	ppb(v	98
96) tert-Butylbenzene	20.057	134	182854	10.93	ppb(v	85
97) 1,2,4-Trimethylbenzene	20.070	105	719772	11.07	ppb(v	88
98) 1,3-Dichlorobenzene	20.259	146	440154	10.78	ppb(v	93
99) Benzyl Chloride	20.247	91	443491	10.55	ppb(v	94
100) 1,4-Dichlorobenzene	20.357	146	423540	10.64	ppb(v	93
101) sec-Butylbenzene	20.443	134	231741	10.96	ppb(v	74
102) p-Isopropyltoluene	20.675	134	249426	11.13	ppb(v	86
103) 1,2-Dichlorobenzene	20.822	146	447089	11.11	ppb(v	94
104) n-Butylbenzene	21.238	134	206409	11.23	ppb(v	69
105) Hexachloroethane	21.703	201	308151	11.71	ppb(v	75
106) 1,2,4-Trichlorobenzene	23.024	180	155198	9.08	ppb(v	99
107) Naphthalene	23.147	128	311849	8.49	ppb(v	100
108) Hexachlorobutadiene	23.593	225	269057	9.08	ppb(v	98
110) TVHC as equiv Pentane	5.589	TIC	787312	9.57	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W14959.D
Acq On : 26 Nov 2019 10:37 am
Operator : thomash
Sample : bs
Misc : MS39338,V6W623,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 26 14:21:57 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W14960.D
 Acq On : 26 Nov 2019 11:25 am
 Operator : thomash
 Sample : bsd
 Misc : MS39338,V6W623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 26 14:22:16 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	143648	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.349	114	524408	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.879	82	225022	10.00	ppb(v # -0.01	
109) Bromochloromethane (A)	8.152	130	143648	10.00	ppb(v # 0.00	

System Monitoring Compounds						
92) 4-Bromofluorobenzene	18.124	95	298306	10.44	ppb(v 0.00	
Spiked Amount	10.000	Range	65 - 128	Recovery	=	104.40%

Target Compounds				Qvalue		
3) Freon 152A	3.729	65	98403	10.63	ppb(v	98
4) Chlorodifluoromethane	3.766	67	44682	12.29	ppb(v	95
5) Propene	3.790	41	102282	10.07	ppb(v	96
6) Chlorotrifluoroethene	3.796	116	275237	10.78	ppb(v	95
7) Dichlorodifluoromethane	3.852	85	474578	11.62	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.962	65	344539	12.73	ppb(v	98
9) Chloromethane	3.980	50	118374	11.94	ppb(v	98
10) Dichlorotetrafluoroethane	4.060	85	457319	11.88	ppb(v	86
11) Vinyl Chloride	4.157	62	145661	11.77	ppb(v#	99
12) 1,3-Butadiene	4.268	54	99999	11.76	ppb(v	98
13) n-Butane	4.310	58	26275	12.39	ppb(v	80
14) Bromomethane	4.488	94	159451	11.75	ppb(v	97
15) Acrolein	5.020	56	52173	8.81	ppb(v#	95
16) Chloroethane	4.628	64	72157	11.96	ppb(v	99
17) Dichlorofluoromethane	4.702	67	339162	11.99	ppb(v	99
18) Acetonitrile	4.916	41	87498	7.44	ppb(v	97
19) Freon 123	5.051	83	358069	10.04	ppb(v	97
20) Freon 123A	5.100	117	235099	10.52	ppb(v	72
21) Bromoethene	4.922	106	157667	10.50	ppb(v	100
22) Trichlorofluoromethane	5.283	101	449383	11.41	ppb(v	100
23) Acetone	5.136	58	59266	8.14	ppb(v	94
24) Pentane	5.589	57	34599	9.52	ppb(v	80
26) Iodomethane	5.791	142	487398	9.95	ppb(v	93
27) Isopropyl Alcohol	5.344	45	223250	8.10	ppb(v	95
28) 1,1-Dichloroethene	5.858	61	233247	10.19	ppb(v	89
29) Freon 113	6.213	101	354784	10.26	ppb(v	86
30) Methylene Chloride	5.974	84	139771	8.57	ppb(v	80
31) Carbon Disulfide	6.256	76	415281	9.77	ppb(v	98
32) Ethanol	4.720	45	46844	11.59	ppb(v	97
33) Acrylonitrile	5.546	53	98140	8.93	ppb(v	99
34) 3-Chloropropene	6.084	76	74713	10.39	ppb(v	68
35) trans-1,2-Dichloroethene	6.886	61	205186	10.46	ppb(v	86
36) tert-Butyl Alcohol	5.895	59	318398	10.10	ppb(v	96
37) Methyl tert-Butyl Ether	7.149	73	454922	10.56	ppb(v	93
38) Vinyl Acetate	7.247	43	344321	9.51	ppb(v#	90
39) 1,1-Dichloroethane	7.088	63	255323	9.80	ppb(v#	99
40) 2-Butanone	7.504	72	71013	9.96	ppb(v	60
41) Hexane	8.177	57	211210	9.90	ppb(v	90
42) cis-1,2-Dichloroethene	7.969	61	199463	10.59	ppb(v	86
43) Di-isopropyl Ether	8.183	87	144951	10.63	ppb(v#	43
44) Ethyl Acetate	8.220	61	42960	10.09	ppb(v	74
45) Methyl Acrylate	8.207	55	246630	10.02	ppb(v	93
46) Chloroform	8.293	83	343191	10.87	ppb(v	98
47) 2,4-Dimethylpentane	9.156	57	255408	10.12	ppb(v#	93
48) Tetrahydrofuran	8.733	72	71364	10.39	ppb(v	78
49) 1,1,1-Trichloroethane	9.382	97	357442	11.37	ppb(v	98
50) 1,2-Dichloroethane	9.101	62	203795	11.46	ppb(v	97
51) Benzene	9.908	78	468966	9.53	ppb(v	96
52) Carbon Tetrachloride	10.085	117	391315	11.77	ppb(v	98
53) Cyclohexane	10.220	56	216879	9.93	ppb(v#	80
54) 2,3-Dimethylpentane	10.514	71	102676	10.00	ppb(v	74
56) 2,2,4-Trimethylpentane	11.199	57	709424	9.80	ppb(v#	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W14960.D
 Acq On : 26 Nov 2019 11:25 am
 Operator : thomash
 Sample : bsd
 Misc : MS39338,V6W623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 26 14:22:16 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

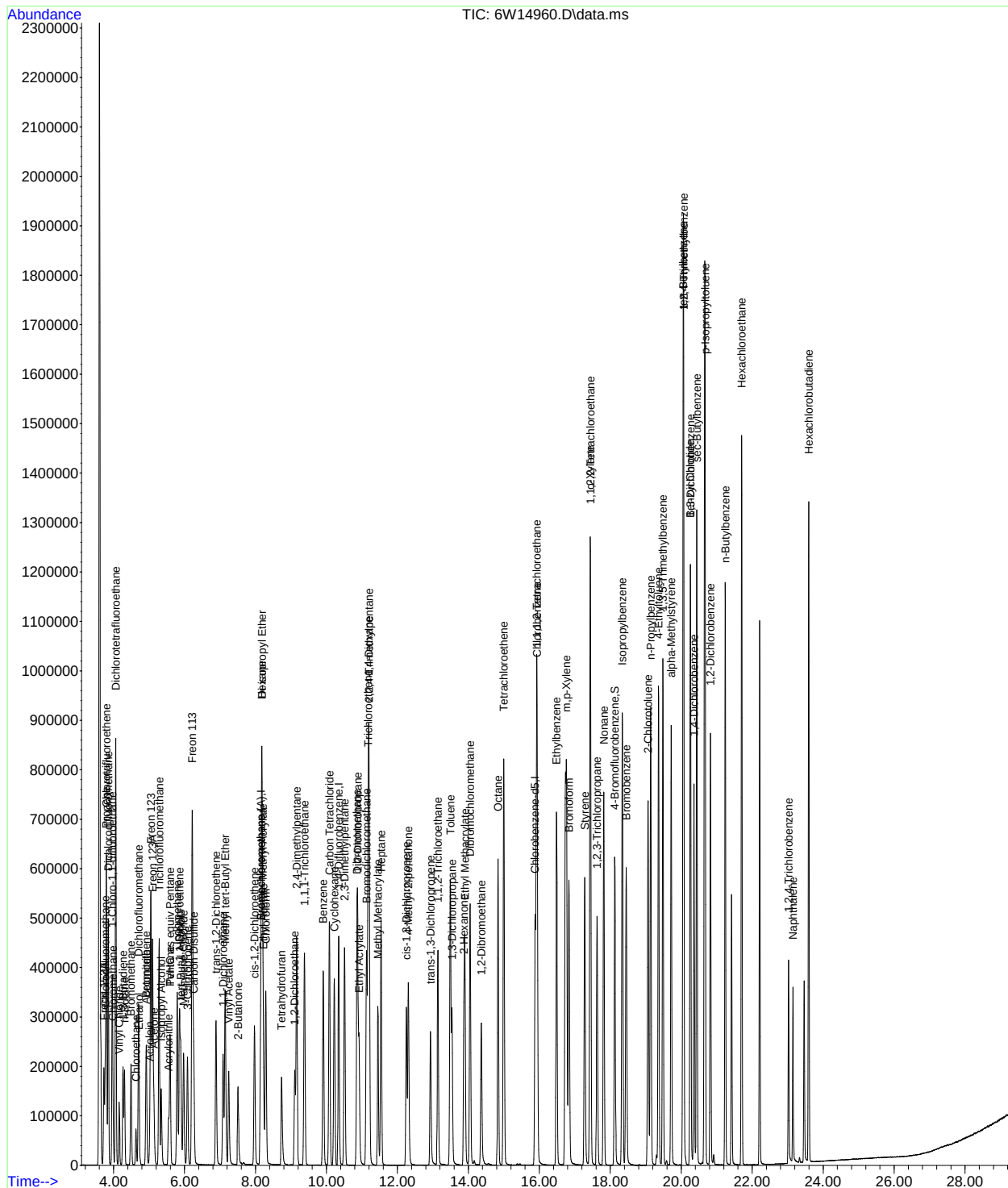
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.541	71	166199	10.26	ppb(v	89
58) Trichloroethene	11.174	95	223267	9.94	ppb(v	82
59) 1,2-Dichloropropane	10.881	63	159322	9.68	ppb(v	91
60) Dibromomethane	10.856	174	245503	10.09	ppb(v#	67
61) Ethyl Acrylate	10.924	55	296616	9.75	ppb(v#	92
62) Methyl Methacrylate	11.450	69	171183	10.26	ppb(v#	72
63) 1,4-Dioxane	11.193	88	107376	8.48	ppb(v#	69
64) Bromodichloromethane	11.132	83	367619	11.07	ppb(v#	96
65) cis-1,3-Dichloropropene	12.251	75	258945	10.26	ppb(v#	93
66) 4-Methyl-2-pentanone	12.306	58	130071	10.13	ppb(v#	73
67) trans-1,3-Dichloropropene	12.930	75	222439	10.41	ppb(v#	93
68) Toluene	13.493	91	586534	9.73	ppb(v	99
69) 1,1,2-Trichloroethane	13.144	97	195941	10.21	ppb(v	92
70) 1,3-Dichloropropane	13.536	76	261146	10.03	ppb(v#	84
71) 2-Hexanone	13.872	58	156726	8.42	ppb(v#	77
72) Ethyl Methacrylate	13.903	69	276148	10.22	ppb(v#	90
73) Dibromochloromethane	14.050	129	405989	11.31	ppb(v#	99
74) Tetrachloroethene	14.998	166	356274	10.61	ppb(v	94
75) 1,2-Dibromoethane	14.368	107	290601	10.00	ppb(v	99
76) Octane	14.839	43	308841	9.72	ppb(v#	70
77) 1,1,1,2-Tetrachloroethane	15.922	131	282793	10.64	ppb(v	98
79) Chlorobenzene	15.940	112	465079	9.82	ppb(v	88
80) Ethylbenzene	16.485	91	739194	9.61	ppb(v	94
81) m,p-Xylene	16.760	91	1238238	20.28	ppb(v	95
82) Styrene	17.280	104	431214	10.68	ppb(v	94
83) Nonane	17.818	43	327820	10.04	ppb(v#	84
84) o-Xylene	17.433	91	611712	9.77	ppb(v	94
85) Bromoform	16.833	173	405966	10.97	ppb(v	98
86) 1,1,2,2-Tetrachloroethane	17.439	83	405949	9.96	ppb(v#	98
87) 1,2,3-Trichloropropane	17.629	75	303255	10.20	ppb(v	90
88) Isopropylbenzene	18.338	105	894952	10.29	ppb(v	94
89) Bromobenzene	18.448	156	287950	10.72	ppb(v#	71
90) 2-Chlorotoluene	19.066	126	215178	10.78	ppb(v#	74
91) n-Propylbenzene	19.140	120	243636	11.02	ppb(v	68
93) 4-Ethyltoluene	19.360	105	810509	10.68	ppb(v	96
94) 1,3,5-Trimethylbenzene	19.482	105	725198	10.76	ppb(v	96
95) alpha-Methylstyrene	19.715	118	352196	11.29	ppb(v	97
96) tert-Butylbenzene	20.057	134	184170	11.02	ppb(v	86
97) 1,2,4-Trimethylbenzene	20.070	105	721024	11.10	ppb(v	89
98) 1,3-Dichlorobenzene	20.259	146	441072	10.82	ppb(v	94
99) Benzyl Chloride	20.253	91	447865	10.67	ppb(v	93
100) 1,4-Dichlorobenzene	20.357	146	423402	10.65	ppb(v	93
101) sec-Butylbenzene	20.443	134	234065	11.08	ppb(v	75
102) p-Isopropyltoluene	20.675	134	251420	11.23	ppb(v	85
103) 1,2-Dichlorobenzene	20.822	146	449323	11.18	ppb(v	94
104) n-Butylbenzene	21.244	134	208840	11.38	ppb(v	62
105) Hexachloroethane	21.703	201	311624	11.85	ppb(v	74
106) 1,2,4-Trichlorobenzene	23.024	180	154588	9.06	ppb(v	99
107) Naphthalene	23.147	128	308588	8.41	ppb(v	100
108) Hexachlorobutadiene	23.593	225	283206	9.57	ppb(v	97
110) TVHC as equiv Pentane	5.589	TIC	796071	9.29	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\msdchem\1\data\  
Data File : 6W14960.D  
Acq On : 26 Nov 2019 11:25 am  
Operator : thomash  
Sample : bsd  
Misc : MS39338,V6W623,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
```

Quant Time: Nov 26 14:22:16 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration



7.3.6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W39842.D
 Acq On : 24 Dec 2019 6:05 pm
 Operator : danat
 Sample : jd235-4dup
 Misc : ms39818,v5w1621,100,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 26 11:19:00 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

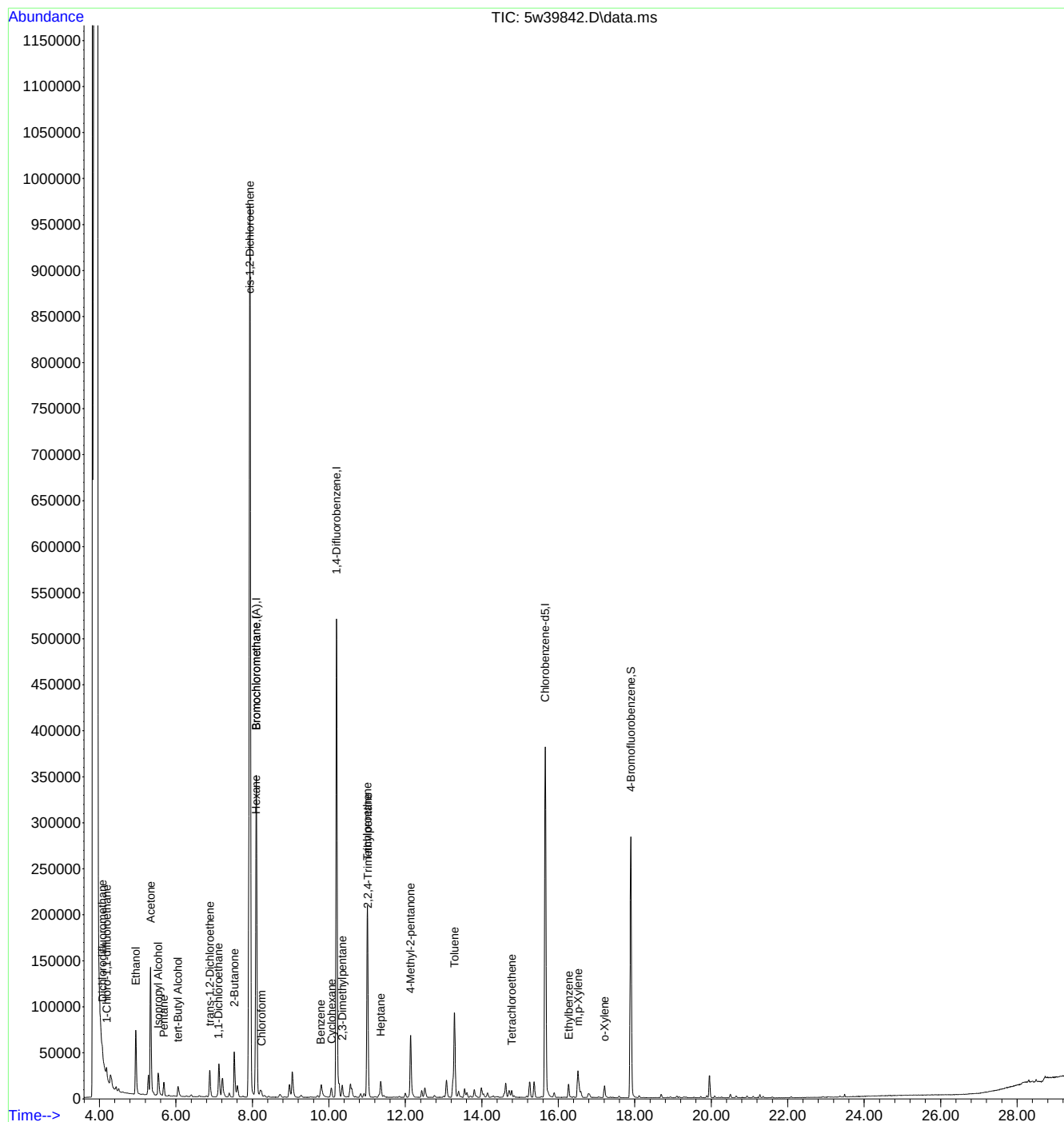
Internal Standards						
1) Bromochloromethane	8.102	130	141685	10.00	ppb(v	0.02
53) 1,4-Difluorobenzene	10.200	114	501338	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	170626	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.102	130	141685	10.00	ppb(v	0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	139049	9.32	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	93.20%	
Target Compounds						
					Qvalue	
6) Dichlorodifluoromethane	4.076	85	4799	0.10	ppb(v	97
7) 1-Chloro-1,1-difluoroethane	4.186	65	8006	0.24	ppb(v#	70
22) Acetone	5.336	58	62498	9.65	ppb(v	93
23) Pentane	5.685	57	1638	0.39	ppb(v	97
25) Isopropyl Alcohol	5.538	43	8661	1.24	ppb(v	73
30) Ethanol	4.951	45	89952	13.92	ppb(v	99
33) trans-1,2-Dichloroethene	6.884	61	21361	0.82	ppb(v	98
34) tert-Butyl Alcohol	6.052	59	10107	0.28	ppb(v#	85
37) 1,1-Dichloroethane	7.104	63	5064	0.15	ppb(v#	94
38) 2-Butanone	7.527	72	17165	2.11	ppb(v	99
39) Hexane	8.089	57	10799	0.40	ppb(v	92
40) cis-1,2-Dichloroethene	7.930	61	800850	31.18	ppb(v	98
44) Chloroform	8.236	83	3480	0.09	ppb(v	97
49) Benzene	9.784	78	8718	0.16	ppb(v	98
51) Cyclohexane	10.071	56	6713	0.24	ppb(v	96
52) 2,3-Dimethylpentane	10.353	71	2468	0.22	ppb(v	86
54) 2,2,4-Trimethylpentane	11.020	57	48807	0.55	ppb(v#	91
55) Heptane	11.356	71	4883	0.30	ppb(v	99
56) Trichloroethene	11.007	95	72749	2.97	ppb(v	99
64) 4-Methyl-2-pentanone	12.133	58	19761	1.25	ppb(v	92
66) Toluene	13.283	91	88289	1.42	ppb(v	99
72) Tetrachloroethene	14.782	166	2924	0.10	ppb(v	97
78) Ethylbenzene	16.269	91	15981	0.29	ppb(v	98
79) m,p-Xylene	16.513	91	31579	0.77	ppb(v	97
82) o-Xylene	17.205	91	10810	0.23	ppb(v	97

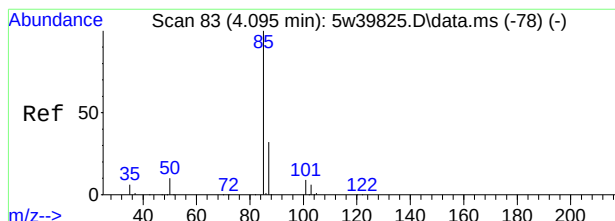
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39842.D
Acq On : 24 Dec 2019 6:05 pm
Operator : danat
Sample : jd235-4dup
Misc : ms39818,v5w1621,100,,,1
ALS Vial : 5 Sample Multiplier: 1

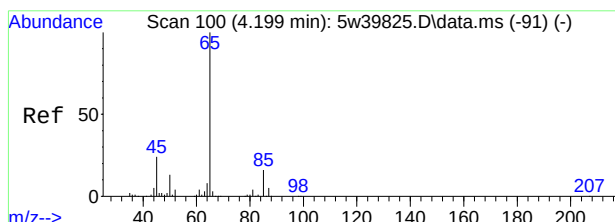
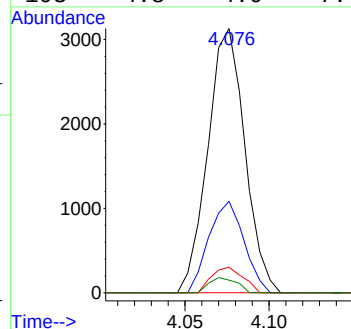
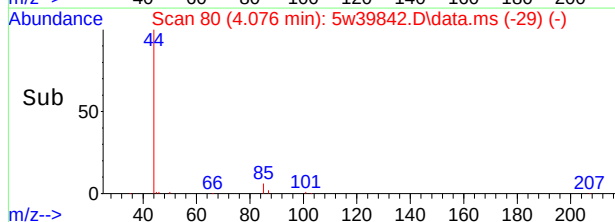
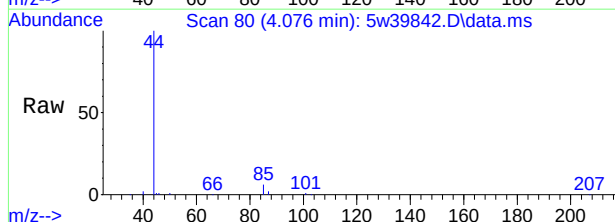
Quant Time: Dec 26 11:19:00 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





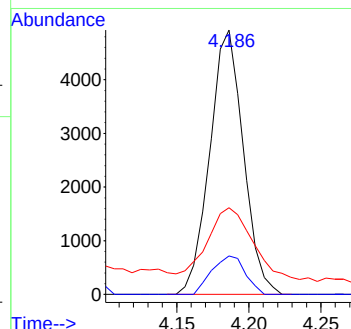
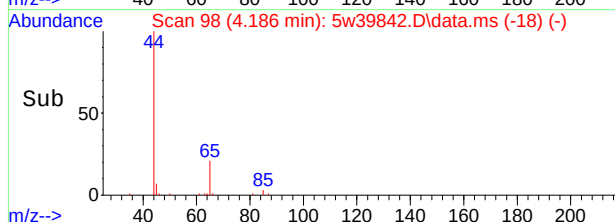
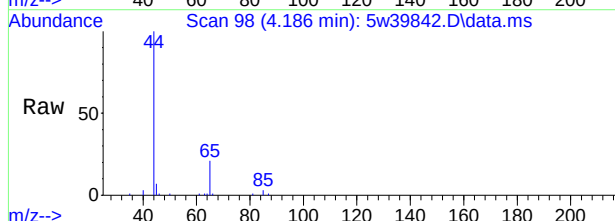
#6
Dichlorodifluoromethane
Concen: 0.10 ppb(v)
RT: 4.076 min Scan# 80
Delta R.T. -0.018 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

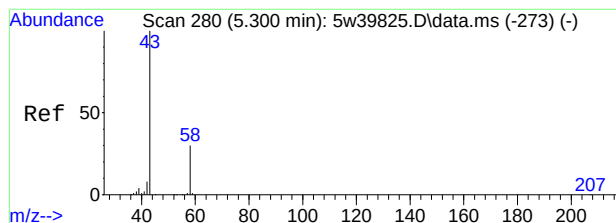
Tgt	Ion	85	Resp:	4799
Ion	Ratio	100	Lower	Upper
87	34.5	22.7	42.1	
101	9.7	6.1	11.3	
103	4.8	4.0	7.4	



#7
1-Chloro-1,1-difluoroethane
Concen: 0.24 ppb(v)
RT: 4.186 min Scan# 98
Delta R.T. -0.012 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

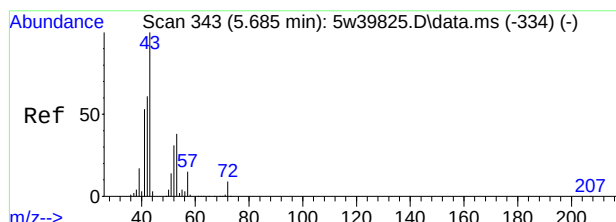
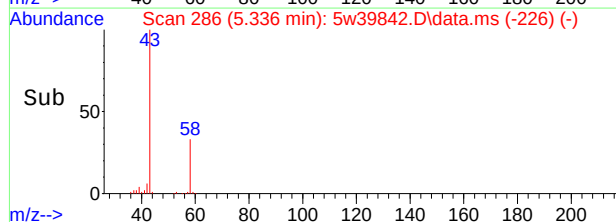
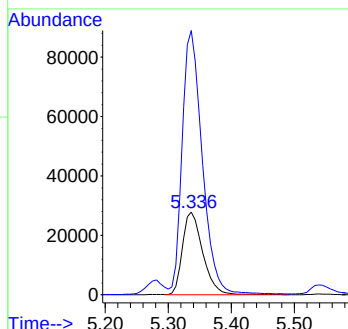
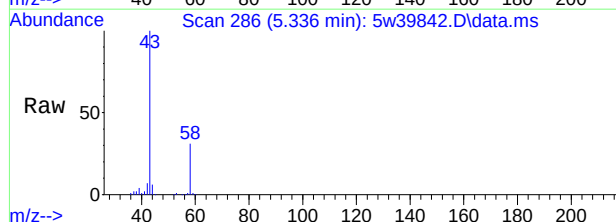
Tgt	Ion	65	Resp:	8006
Ion	Ratio	100	Lower	Upper
85	14.4	12.4	18.6	
45	0.0	18.9	28.3#	





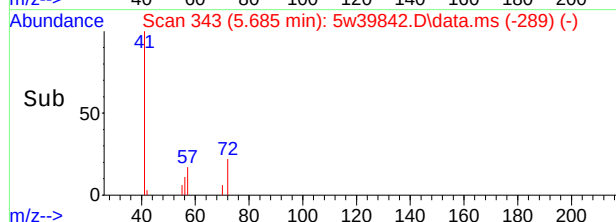
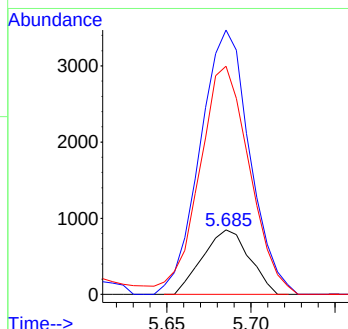
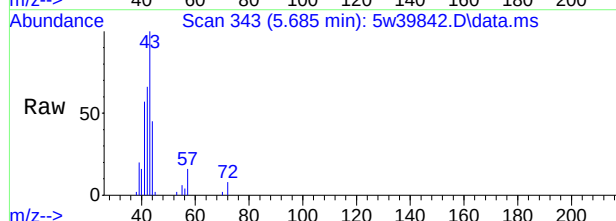
#22
Acetone
Concen: 9.65 ppb(v)
RT: 5.336 min Scan# 286
Delta R.T. 0.037 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

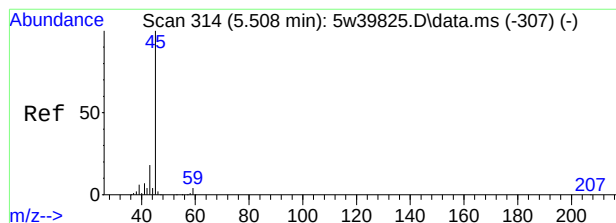
Tgt Ion: 58 Resp: 62498
Ion Ratio Lower Upper
58 100
43 320.0 234.8 436.2



#23
Pentane
Concen: 0.39 ppb(v)
RT: 5.685 min Scan# 343
Delta R.T. -0.000 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

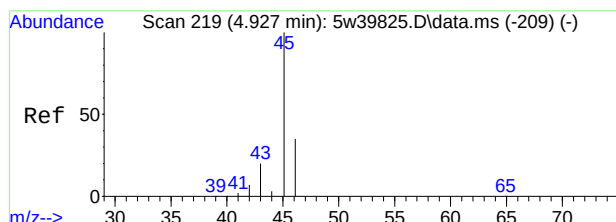
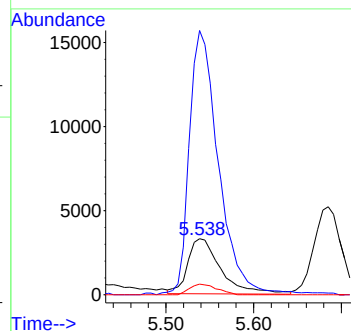
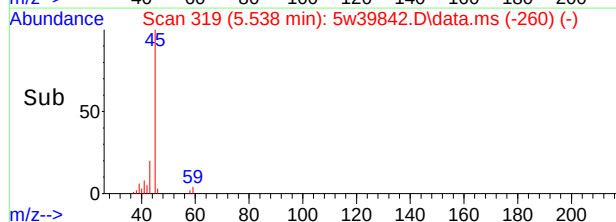
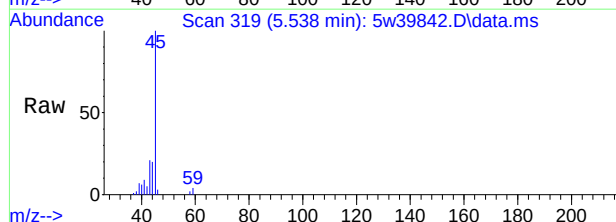
Tgt Ion: 57 Resp: 1638
Ion Ratio Lower Upper
57 100
42 410.5 281.4 522.6
41 354.0 243.3 451.9





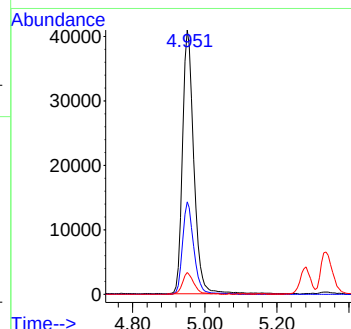
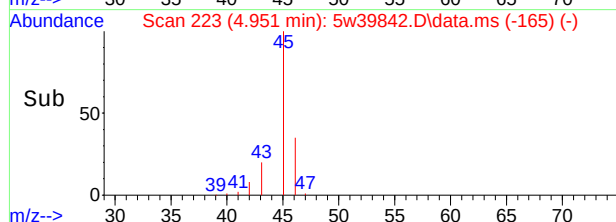
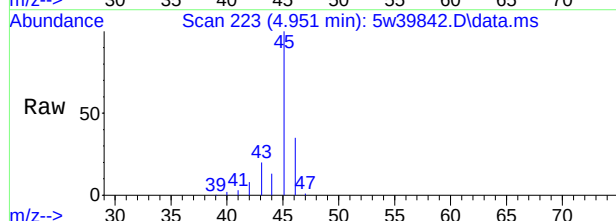
#25
Isopropyl Alcohol
Concen: 1.24 ppb(v)
RT: 5.538 min Scan# 319
Delta R.T. 0.031 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

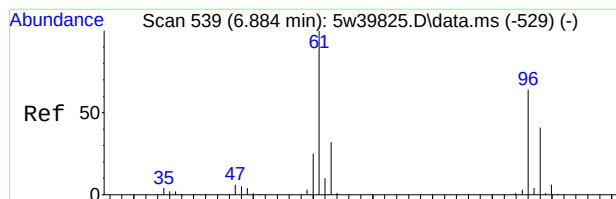
Tgt Ion	Ratio	Lower	Upper
43	100		
45	470.6	385.8	716.6
59	18.8	15.3	28.3



#30
Ethanol
Concen: 13.92 ppb(v)
RT: 4.951 min Scan# 223
Delta R.T. 0.024 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

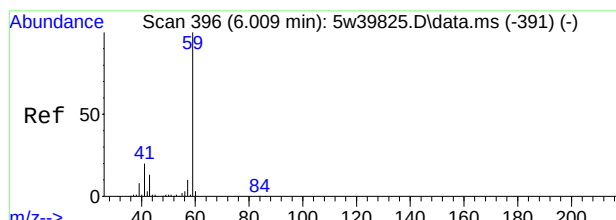
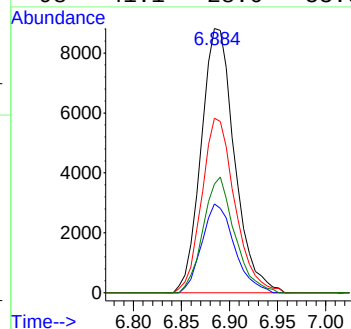
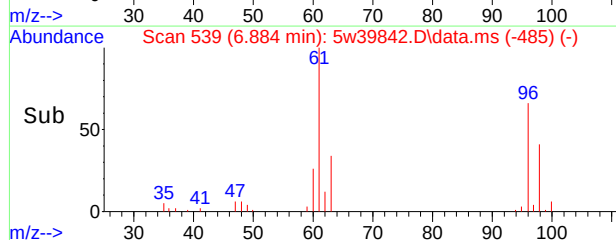
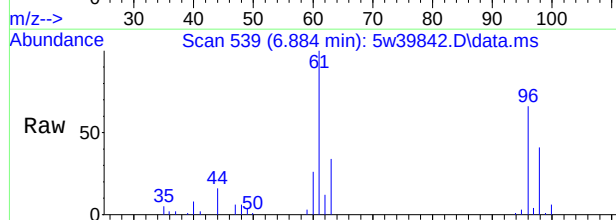
Tgt Ion	Ratio	Lower	Upper
45	100		
46	35.0	24.1	44.8
42	8.3	5.5	10.1





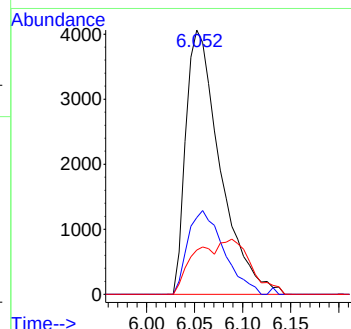
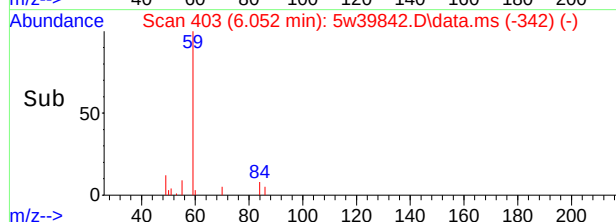
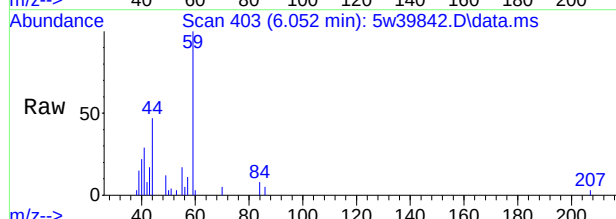
#33
trans-1,2-Dichloroethene
Concen: 0.82 ppb(v)
RT: 6.884 min Scan# 539
Delta R.T. -0.000 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

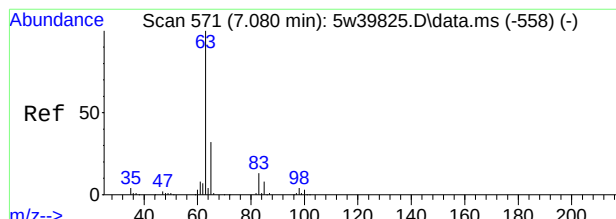
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	21361		
63	33.6		22.7	42.3
96	66.0		45.1	83.9
98	41.1		28.6	53.0



#34
tert-Butyl Alcohol
Concen: 0.28 ppb(v)
RT: 6.052 min Scan# 403
Delta R.T. 0.043 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

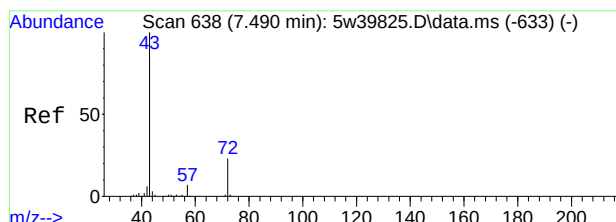
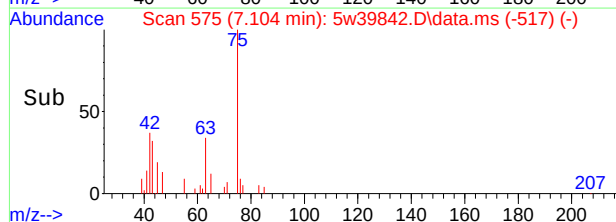
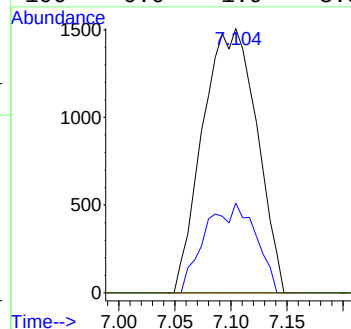
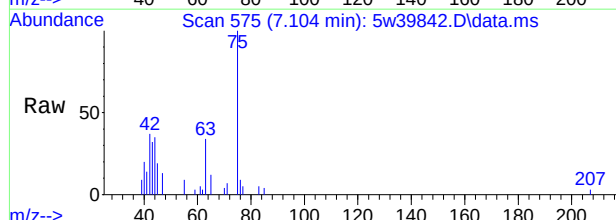
Tgt Ion	Ratio	Resp	Lower	Upper
59	100	10107		
41	29.0		14.3	26.5#
43	16.7		9.4	17.4





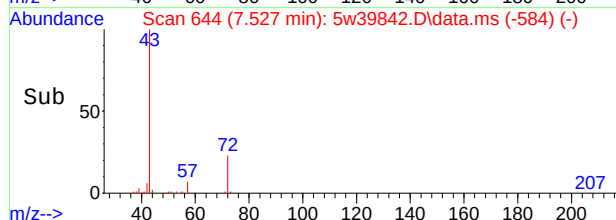
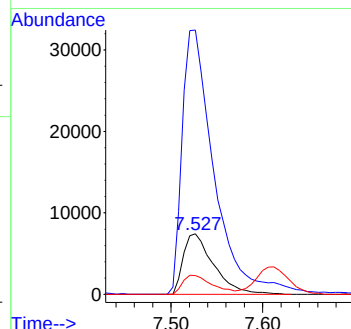
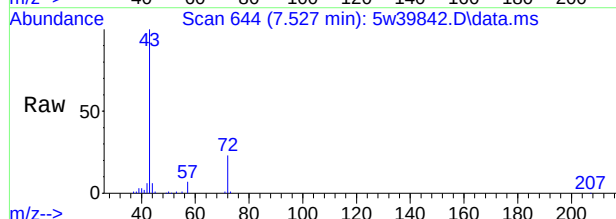
#37
1,1-Dichloroethane
Concen: 0.15 ppb(v)
RT: 7.104 min Scan# 575
Delta R.T. 0.024 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

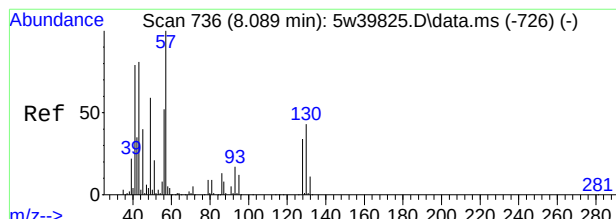
Tgt Ion: 63	Resp: 5064
Ion Ratio Lower Upper	
63 100	
65 34.0	22.1 41.1
98 0.0	3.1 5.8#
100 0.0	1.9 3.5#



#38
2-Butanone
Concen: 2.11 ppb(v)
RT: 7.527 min Scan# 644
Delta R.T. 0.037 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

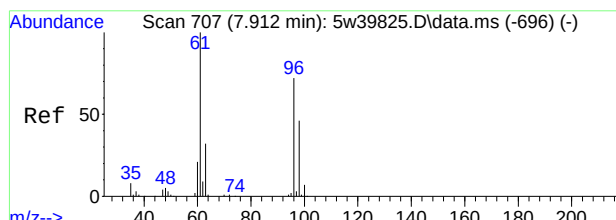
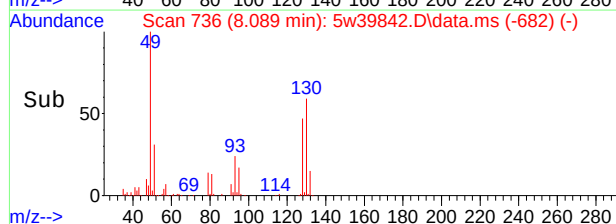
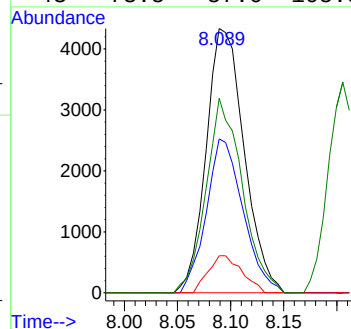
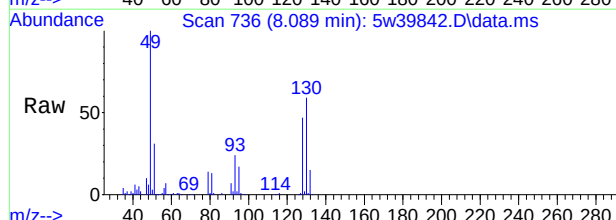
Tgt Ion: 72	Resp: 17165
Ion Ratio Lower Upper	
72 100	
43 436.8	304.5 565.5
57 30.9	22.6 42.0





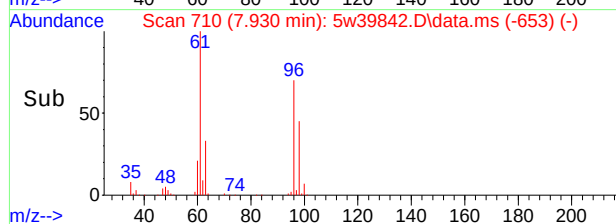
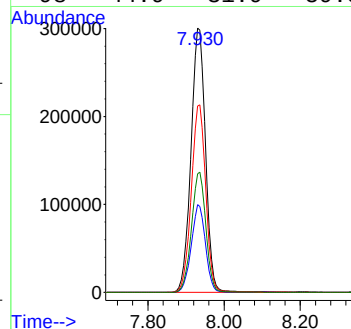
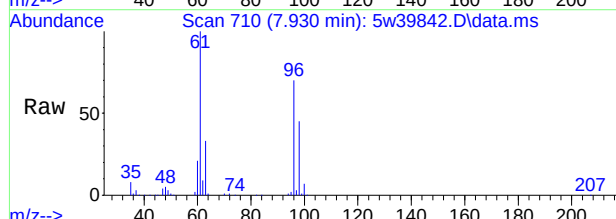
#39
Hexane
Concen: 0.40 ppb(v)
RT: 8.089 min Scan# 736
Delta R.T. -0.000 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

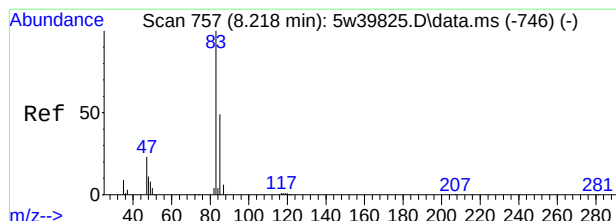
Tgt Ion: 57 Resp: 10799
Ion Ratio Lower Upper
57 100
56 58.2 36.5 67.7
86 14.0 9.2 17.0
43 73.5 57.0 105.8



#40
cis-1,2-Dichloroethene
Concen: 31.18 ppb(v)
RT: 7.930 min Scan# 710
Delta R.T. 0.018 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

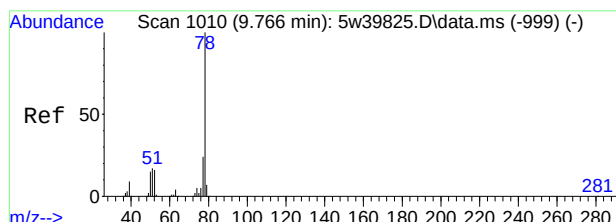
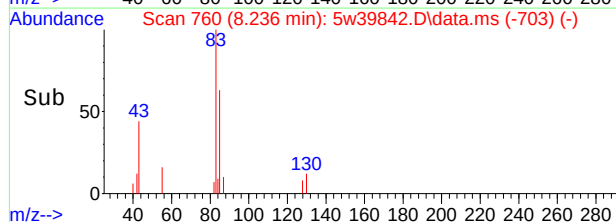
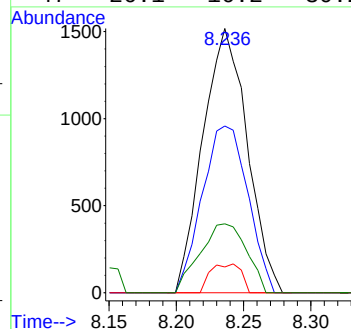
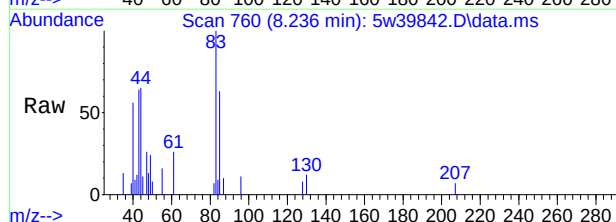
Tgt Ion: 61 Resp: 800850
Ion Ratio Lower Upper
61 100
63 33.2 22.7 42.1
96 70.5 50.7 94.1
98 44.9 31.9 59.3





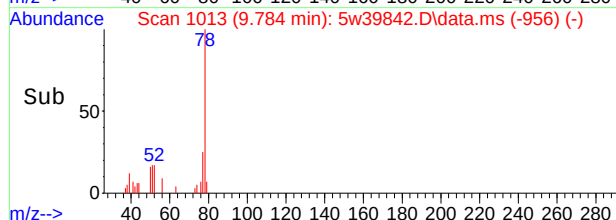
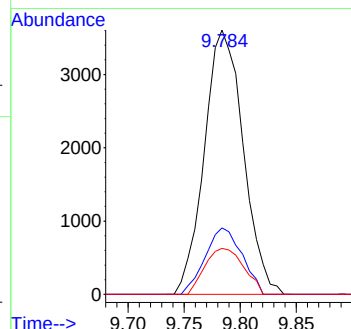
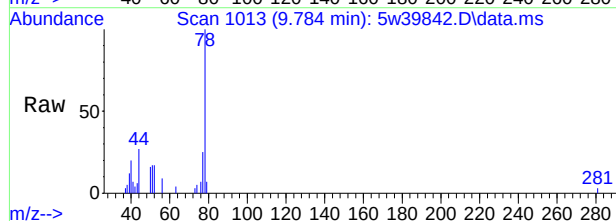
#44
Chloroform
Concen: 0.09 ppb(v)
RT: 8.236 min Scan# 760
Delta R.T. 0.018 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

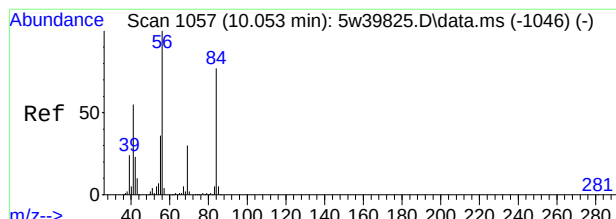
Tgt Ion: 83	Resp: 3480
Ion Ratio	Lower Upper
83 100	
85 63.1	45.0 83.6
87 9.7	7.6 14.0
47 26.1	16.2 30.2



#49
Benzene
Concen: 0.16 ppb(v)
RT: 9.784 min Scan# 1013
Delta R.T. 0.018 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

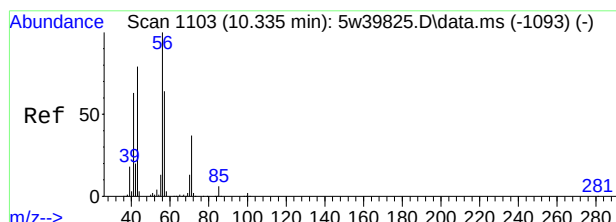
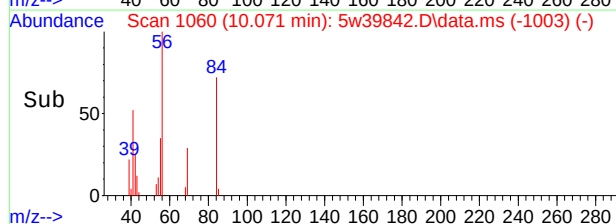
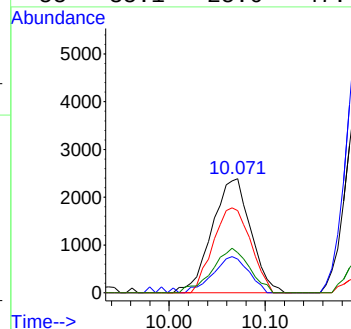
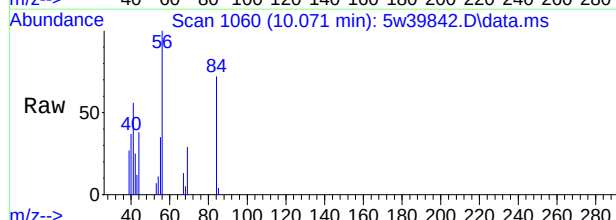
Tgt Ion: 78	Resp: 8718
Ion Ratio	Lower Upper
78 100	
77 25.1	16.7 30.9
51 17.4	11.7 21.7





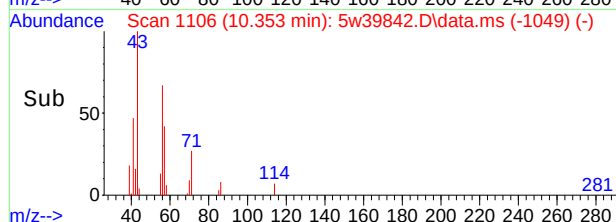
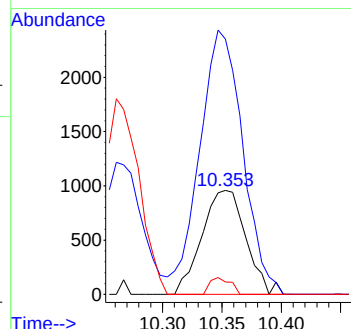
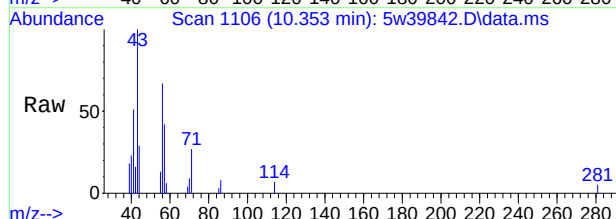
#51
Cyclohexane
Concen: 0.24 ppb(v)
RT: 10.071 min Scan# 1060
Delta R.T. 0.018 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

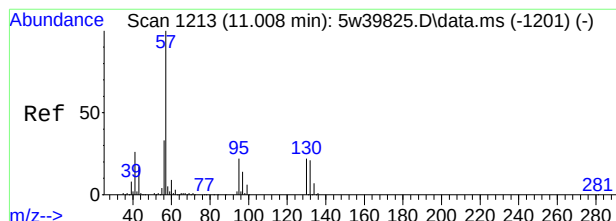
Tgt	Ion: 56	Resp:	6713
Ion	Ratio	Lower	Upper
56	100		
69	29.4	20.9	38.7
84	72.1	54.3	100.8
55	35.1	25.6	47.4



#52
2,3-Dimethylpentane
Concen: 0.22 ppb(v)
RT: 10.353 min Scan# 1106
Delta R.T. 0.018 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

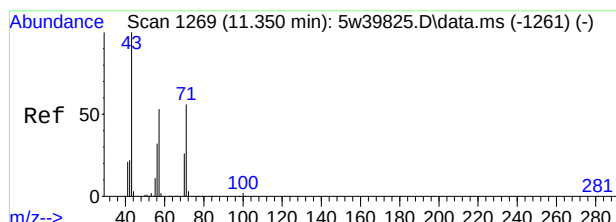
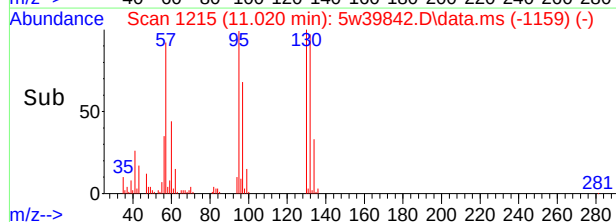
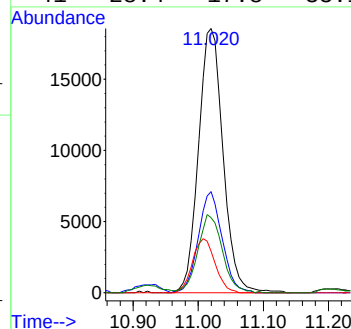
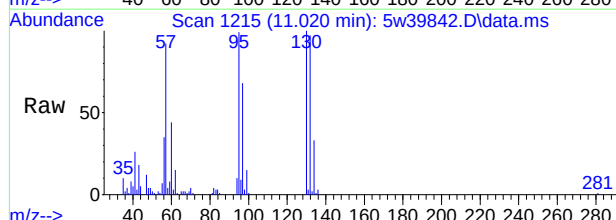
Tgt	Ion: 71	Resp:	2468
Ion	Ratio	Lower	Upper
71	100		
56	245.7	190.5	353.7
85	12.0	10.5	19.5





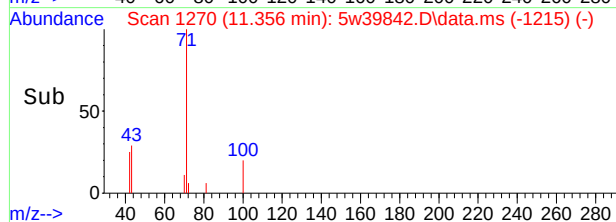
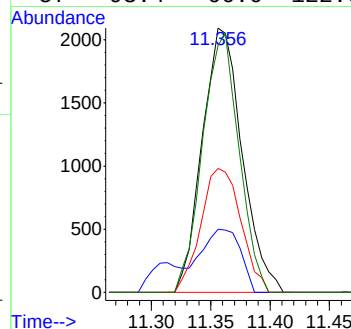
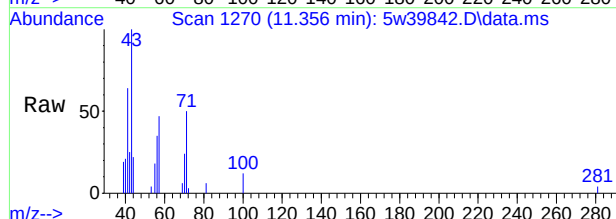
#54
2,2,4-Trimethylpentane
Concen: 0.55 ppb(v)
RT: 11.020 min Scan# 1215
Delta R.T. 0.012 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

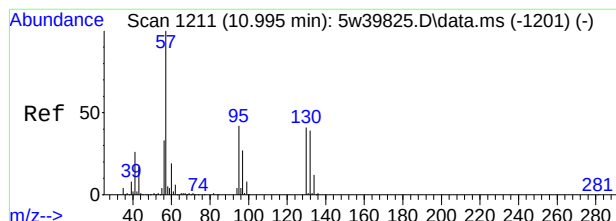
Tgt Ion:	57	Resp:	48807
Ion Ratio	Lower	Upper	
57	100		
56	38.2	23.2	43.2
99	15.7	4.3	8.1#
41	28.4	17.8	33.1



#55
Heptane
Concen: 0.30 ppb(v)
RT: 11.356 min Scan# 1270
Delta R.T. 0.006 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

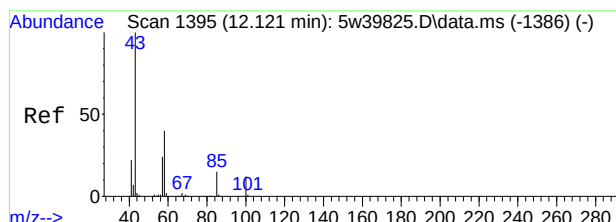
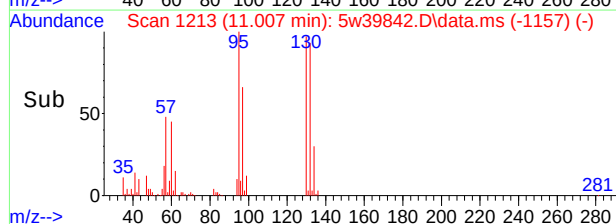
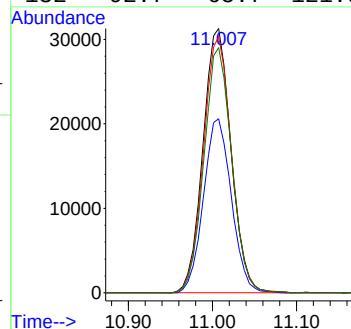
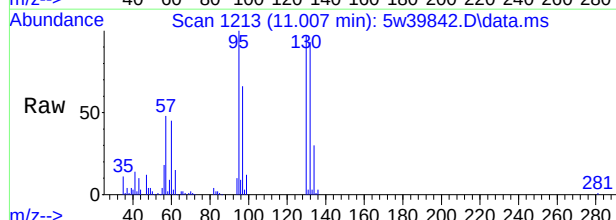
Tgt Ion:	71	Resp:	4883
Ion Ratio	Lower	Upper	
71	100		
100	23.9	16.7	31.1
70	46.8	33.5	62.1
57	93.4	66.0	122.6





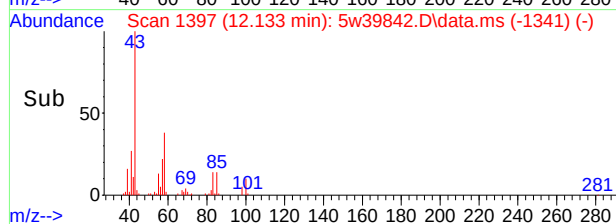
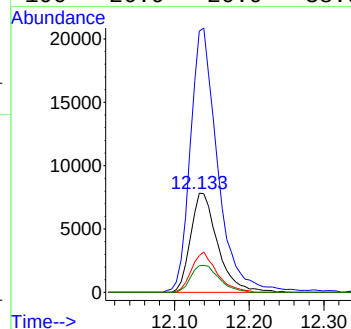
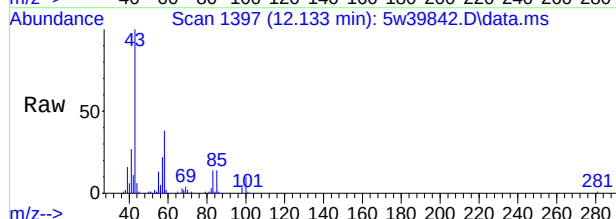
#56
Trichloroethene
Concen: 2.97 ppb(v)
RT: 11.007 min Scan# 1213
Delta R.T. 0.012 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

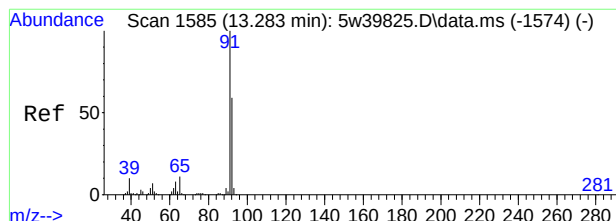
Tgt Ion:	95	Resp:	72749
Ion Ratio	Lower	Upper	
95	100		
97	65.9	45.6	84.6
130	96.9	68.1	126.5
132	92.7	65.7	121.9



#64
4-Methyl-2-pentanone
Concen: 1.25 ppb(v)
RT: 12.133 min Scan# 1397
Delta R.T. 0.012 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

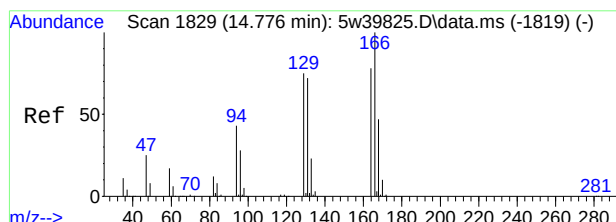
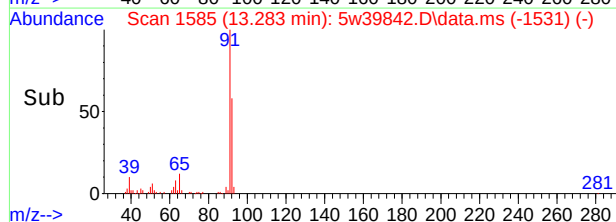
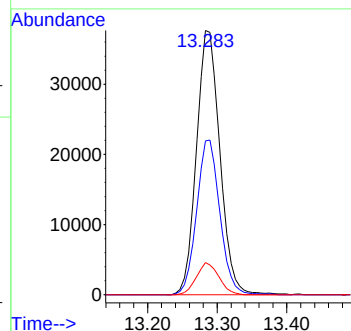
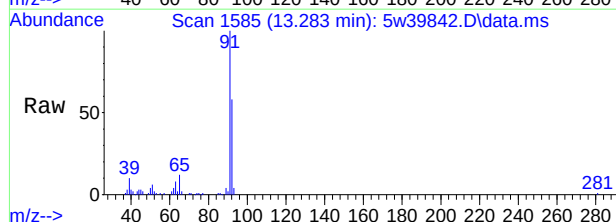
Tgt Ion:	58	Resp:	19761
Ion Ratio	Lower	Upper	
58	100		
43	263.2	173.3	321.8
85	37.1	27.6	51.2
100	26.9	20.9	38.9





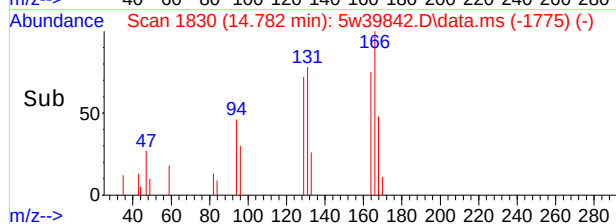
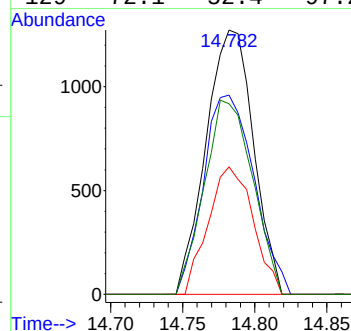
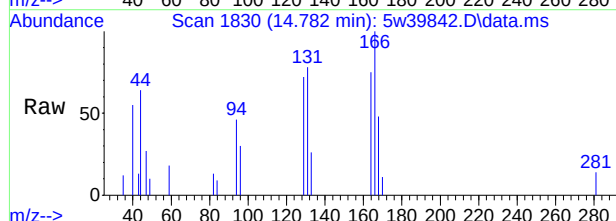
#66
Toluene
Concen: 1.42 ppb(v)
RT: 13.283 min Scan# 1585
Delta R.T. -0.000 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

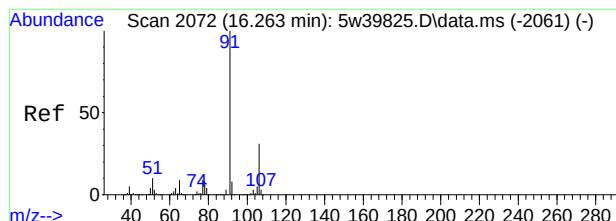
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	88289		
92	58.2		41.2	76.4
65	12.2		8.0	14.8



#72
Tetrachloroethene
Concen: 0.10 ppb(v)
RT: 14.782 min Scan# 1830
Delta R.T. 0.006 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

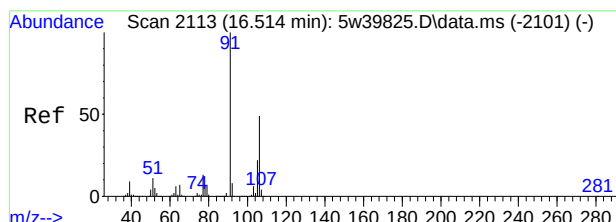
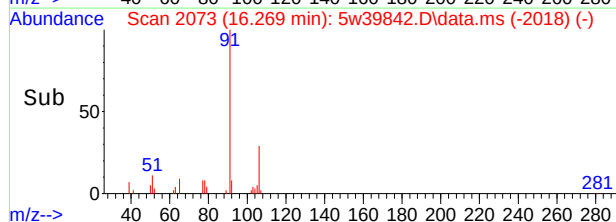
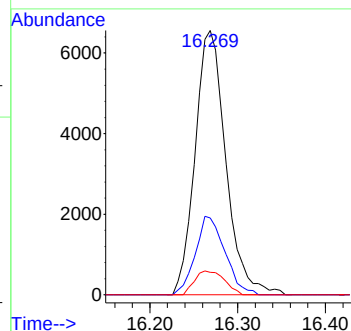
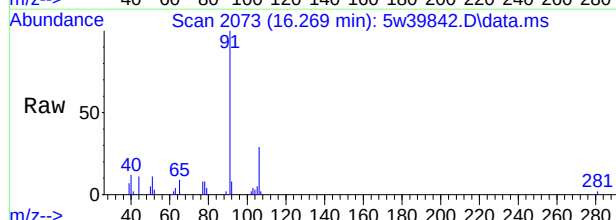
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	2924		
164	75.4		54.3	100.9
168	48.2		32.8	61.0
129	72.1		52.4	97.2





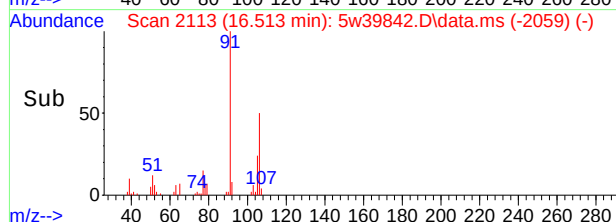
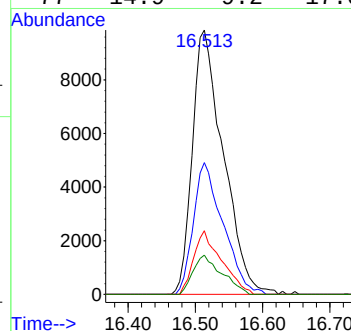
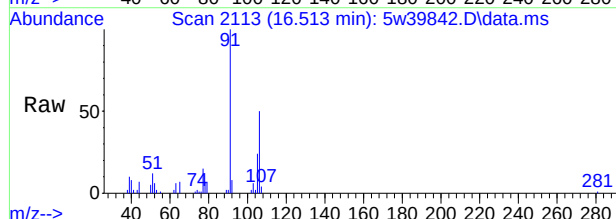
#78
Ethylbenzene
Concen: 0.29 ppb(v)
RT: 16.269 min Scan# 2073
Delta R.T. 0.006 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

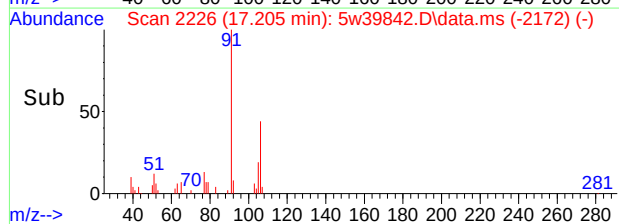
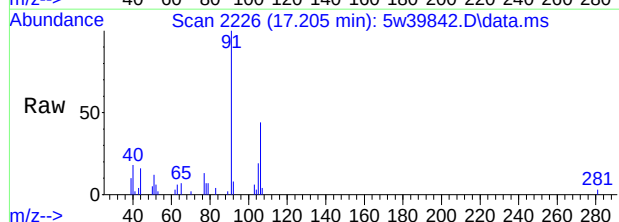
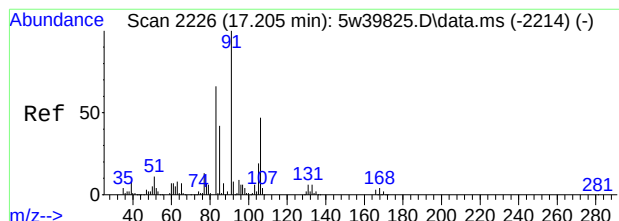
Tgt Ion	Ratio	Lower	Upper
91	100		
106	29.1	21.3	39.6
77	8.5	6.1	11.3



#79
m,p-Xylene
Concen: 0.77 ppb(v)
RT: 16.513 min Scan# 2113
Delta R.T. -0.000 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

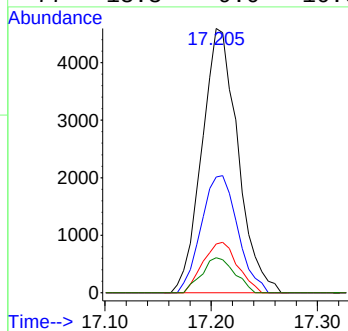
Tgt Ion	Ratio	Lower	Upper
91	100		
106	49.8	34.2	63.4
105	24.1	15.3	28.3
77	14.9	9.2	17.0





#82
o-Xylene
Concen: 0.23 ppb(v)
RT: 17.205 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 5w39842.D
Acq: 24 Dec 2019 6:05 pm

Tgt Ion:	91	Resp:	10810
Ion	Ratio	Lower	Upper
91	100		
106	43.8	32.6	60.6
105	18.5	13.3	24.7
77	13.3	9.0	16.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W39892.D
 Acq On : 27 Dec 2019 3:43 pm
 Operator : danat
 Sample : jd398-1dup
 Misc : ms39917,v5w1622,500,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 27 16:19:26 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

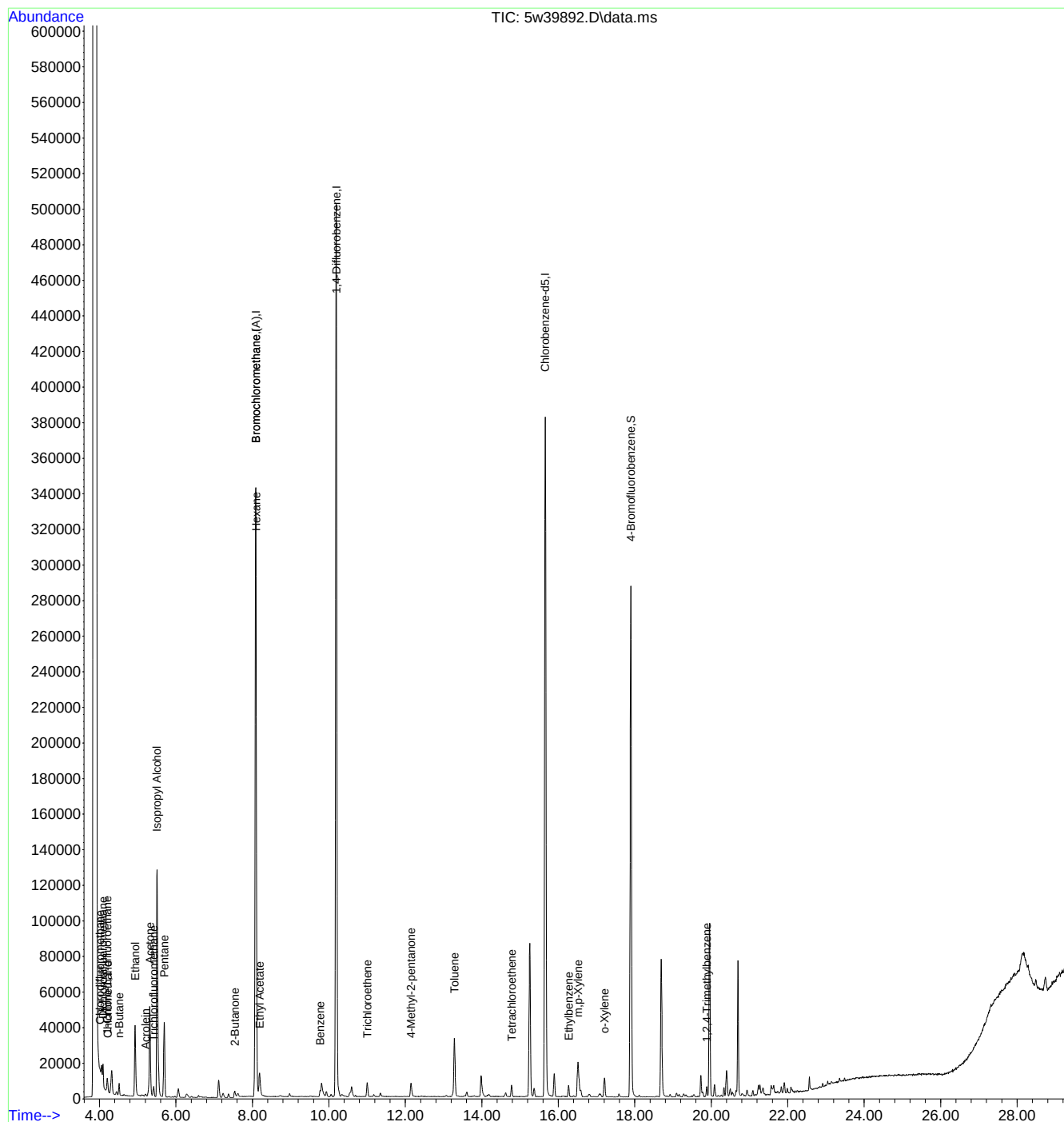
Internal Standards						
1) Bromochloromethane	8.089	130	146819	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	506489	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	167528	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.089	130	146819	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	136942	9.34	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	93.40%	
Target Compounds						
					Qvalue	
3) Chlorodifluoromethane	4.015	67	491	0.10	ppb(v	95
6) Dichlorodifluoromethane	4.095	85	11166	0.23	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	4.199	65	5358	0.15	ppb(v#	70
8) Chloromethane	4.217	50	4087	0.25	ppb(v	95
12) n-Butane	4.517	58	667	0.30	ppb(v#	47
20) Acrolein	5.208	56	1169	0.19	ppb(v#	84
21) Trichlorofluoromethane	5.416	101	5306	0.12	ppb(v	97
22) Acetone	5.318	58	20692	3.08	ppb(v	93
23) Pentane	5.691	57	4866	1.11	ppb(v	88
25) Isopropyl Alcohol	5.502	43	36766	5.06	ppb(v	85
30) Ethanol	4.933	45	52030	7.77	ppb(v	97
38) 2-Butanone	7.539	72	1594	0.19	ppb(v	83
39) Hexane	8.096	57	2201	0.08	ppb(v	89
42) Ethyl Acetate	8.187	61	2539	0.46	ppb(v	98
49) Benzene	9.772	78	4074	0.07	ppb(v	97
56) Trichloroethene	11.001	95	2748	0.11	ppb(v	94
64) 4-Methyl-2-pentanone	12.152	58	2737	0.17	ppb(v	87
66) Toluene	13.283	91	32430	0.52	ppb(v	100
72) Tetrachloroethene	14.782	166	2603	0.09	ppb(v	97
78) Ethylbenzene	16.269	91	6943	0.13	ppb(v	97
79) m,p-Xylene	16.514	91	22382	0.55	ppb(v	97
82) o-Xylene	17.205	91	9234	0.20	ppb(v	97
95) 1,2,4-Trimethylbenzene	19.884	105	3787	0.09	ppb(v#	60

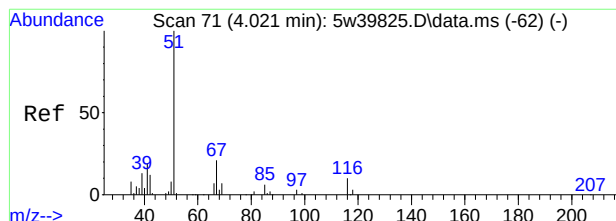
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39892.D
Acq On : 27 Dec 2019 3:43 pm
Operator : danat
Sample : jd398-1dup
Misc : ms39917,v5w1622,500,,,1
ALS Vial : 4 Sample Multiplier: 1

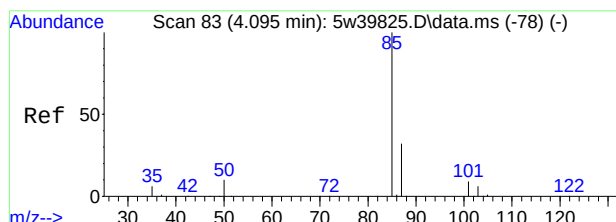
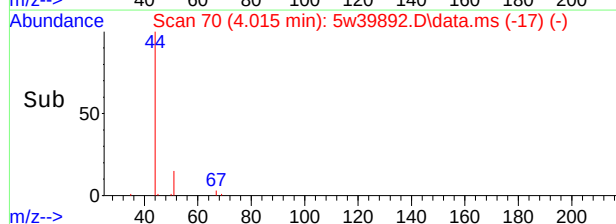
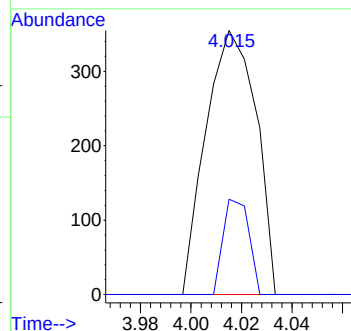
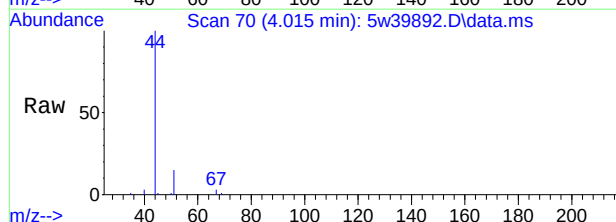
Quant Time: Dec 27 16:19:26 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration





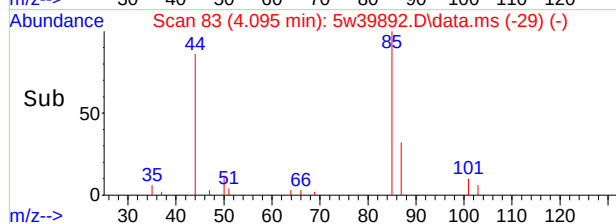
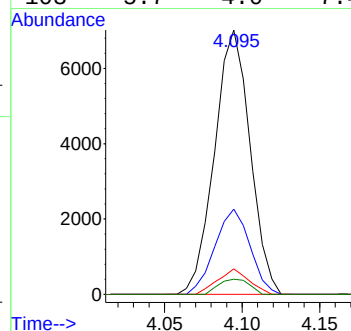
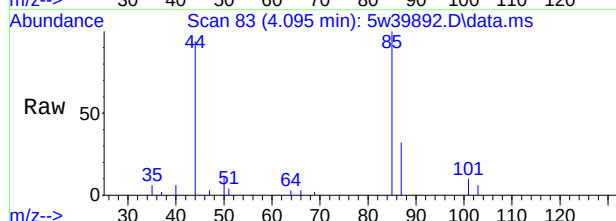
#3
Chlorodifluoromethane
Concen: 0.10 ppb(v)
RT: 4.015 min Scan# 70
Delta R.T. -0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

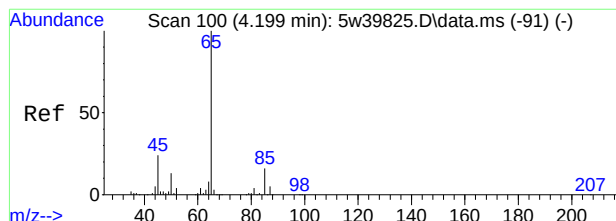
Tgt Ion: 67 Resp: 491
Ion Ratio Lower Upper
67 100
69 36.1 23.2 43.0



#6
Dichlorodifluoromethane
Concen: 0.23 ppb(v)
RT: 4.095 min Scan# 83
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

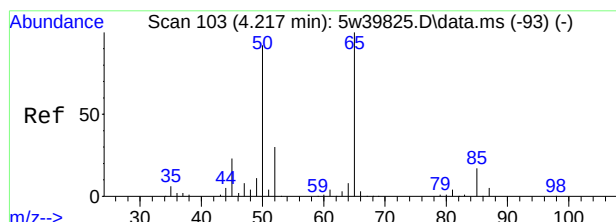
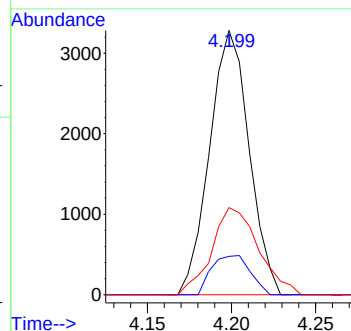
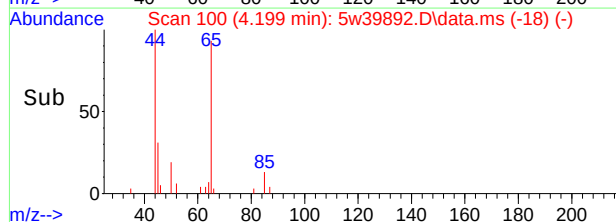
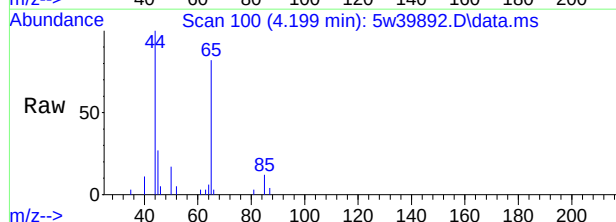
Tgt Ion: 85 Resp: 11166
Ion Ratio Lower Upper
85 100
87 32.3 22.7 42.1
101 9.6 6.1 11.3
103 5.7 4.0 7.4





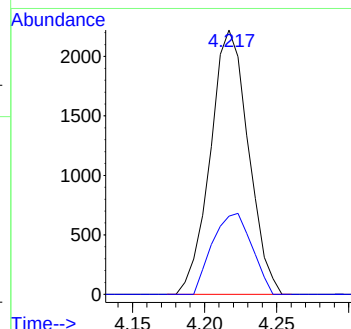
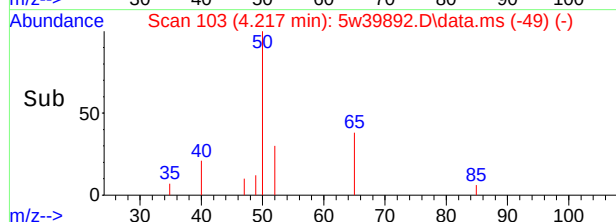
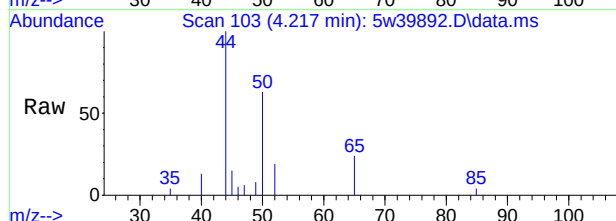
#7
1-Chloro-1,1-difluoroethane
Concen: 0.15 ppb(v)
RT: 4.199 min Scan# 100
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

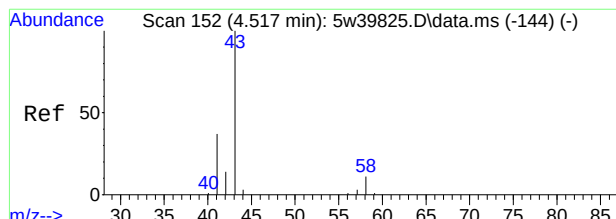
Tgt Ion	Ratio	Lower	Upper
65	100		
85	14.5	12.4	18.6
45	0.0	18.9	28.3#



#8
Chloromethane
Concen: 0.25 ppb(v)
RT: 4.217 min Scan# 103
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

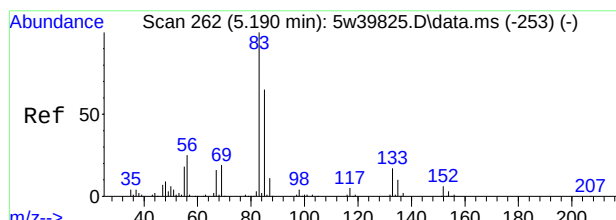
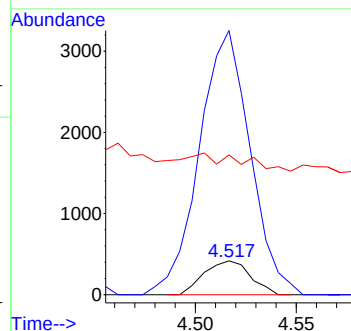
Tgt Ion	Ratio	Lower	Upper
50	100		
52	29.6	22.6	42.0





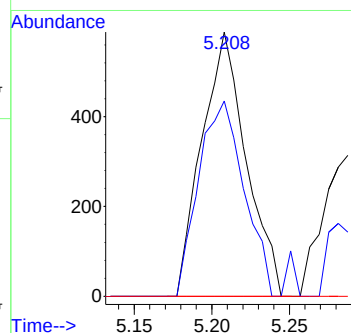
#12
n-Butane
Concen: 0.30 ppb(v)
RT: 4.517 min Scan# 152
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

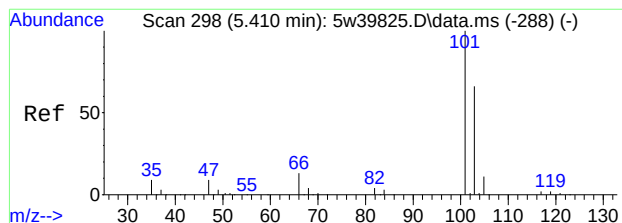
Tgt Ion	Ratio	Lower	Upper
58	100		
43	778.9	625.2	1161.2
44	412.0	29.5	54.9#



#20
Acrolein
Concen: 0.19 ppb(v)
RT: 5.208 min Scan# 265
Delta R.T. 0.018 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

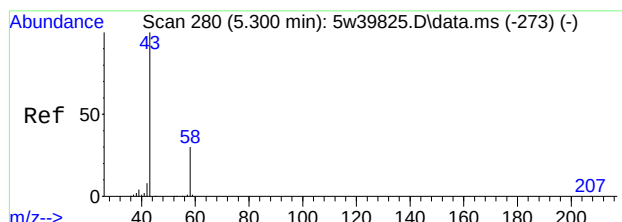
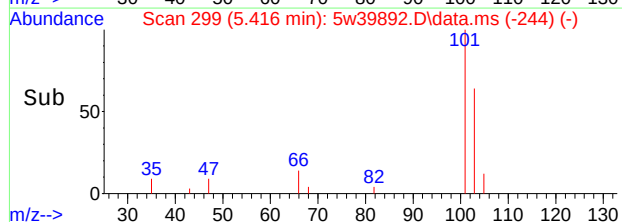
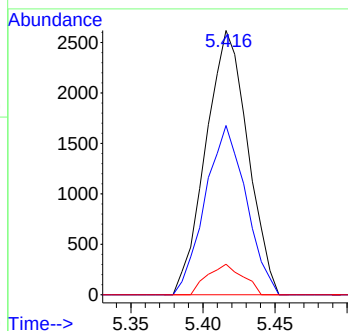
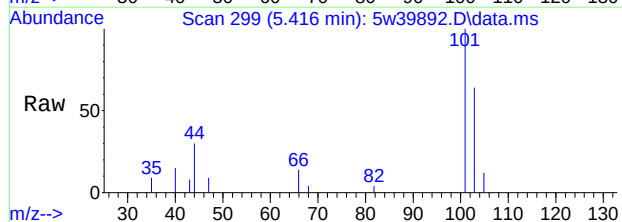
Tgt Ion	Ratio	Lower	Upper
56	100		
55	75.7	56.8	85.2
37	0.0	17.9	26.9#





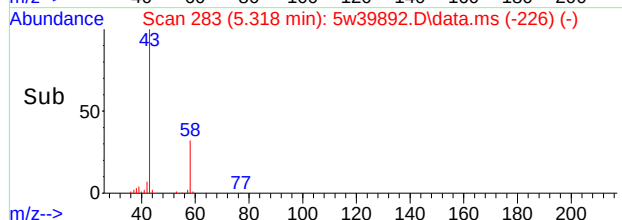
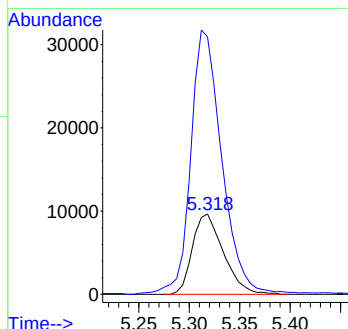
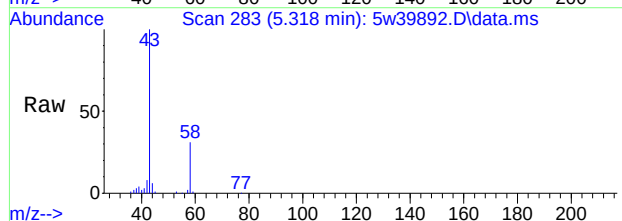
#21
Trichlorofluoromethane
Concen: 0.12 ppb(v)
RT: 5.416 min Scan# 299
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

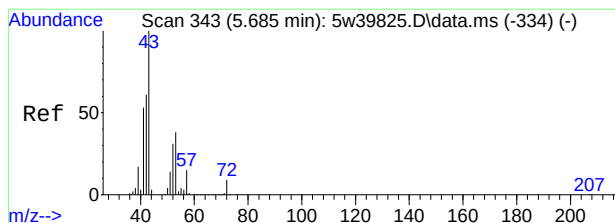
Tgt	Ion	101	Resp:	5306
Ion	Ratio	Lower	Upper	
101	100			
103	64.0	46.2	85.8	
105	11.5	7.4	13.8	



#22
Acetone
Concen: 3.08 ppb(v)
RT: 5.318 min Scan# 283
Delta R.T. 0.018 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

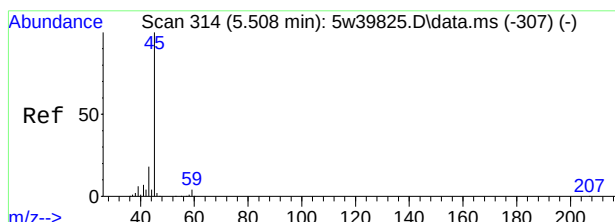
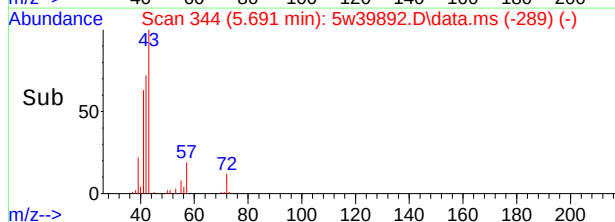
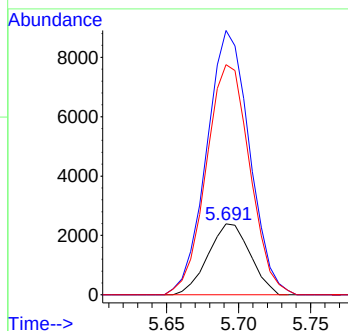
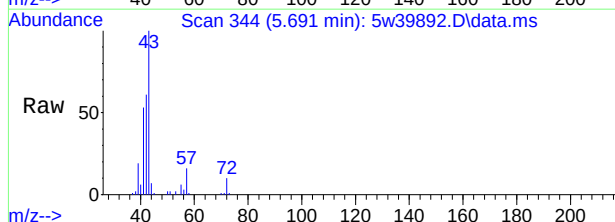
Tgt	Ion	58	Resp:	20692
Ion	Ratio	Lower	Upper	
58	100			
43	320.6	234.8	436.2	





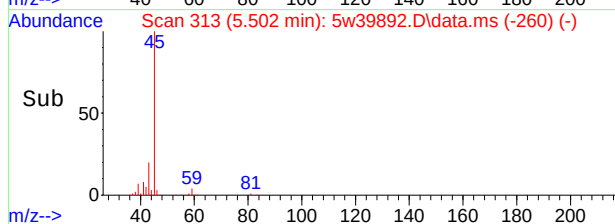
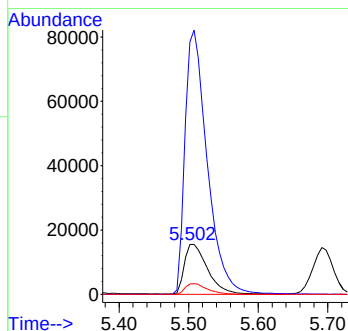
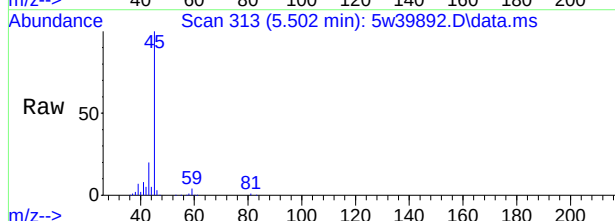
#23
Pentane
Concen: 1.11 ppb(v)
RT: 5.691 min Scan# 344
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

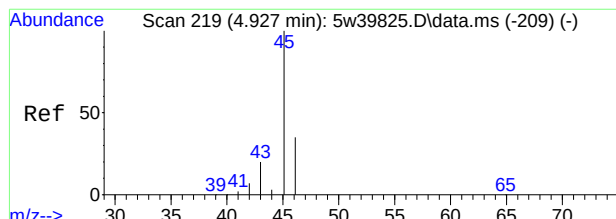
Tgt Ion: 57 Resp: 4866
Ion Ratio Lower Upper
57 100
42 372.8 281.4 522.6
41 324.5 243.3 451.9



#25
Isopropyl Alcohol
Concen: 5.06 ppb(v)
RT: 5.502 min Scan# 313
Delta R.T. -0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

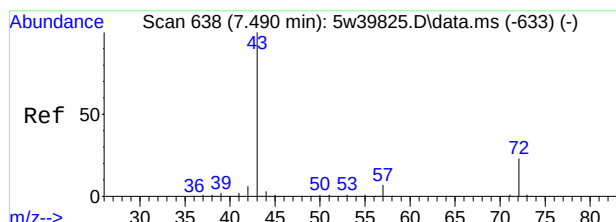
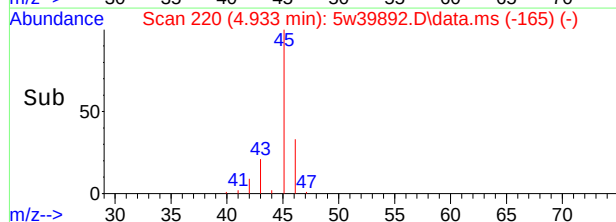
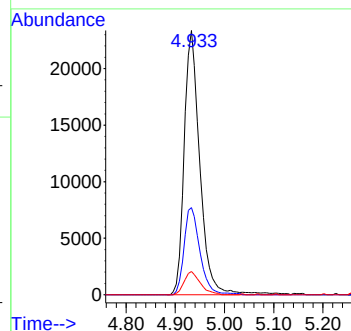
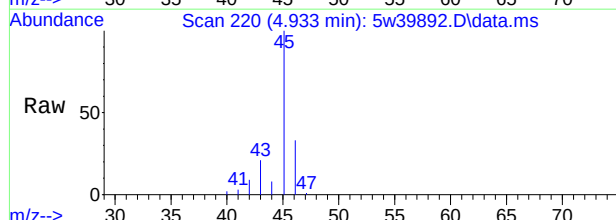
Tgt Ion: 43 Resp: 36766
Ion Ratio Lower Upper
43 100
45 504.0 385.8 716.6
59 20.8 15.3 28.3





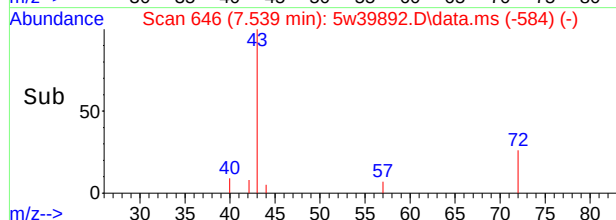
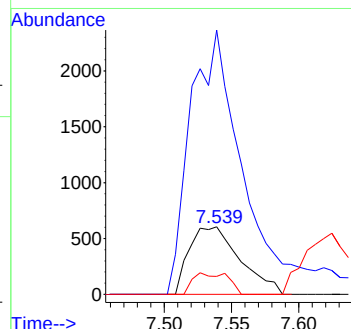
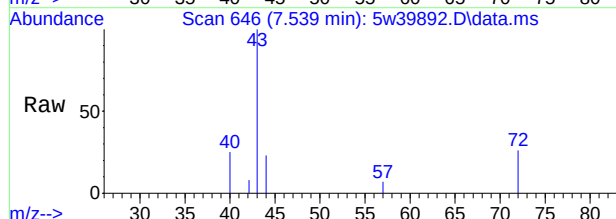
#30
Ethanol
Concen: 7.77 ppb(v)
RT: 4.933 min Scan# 220
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

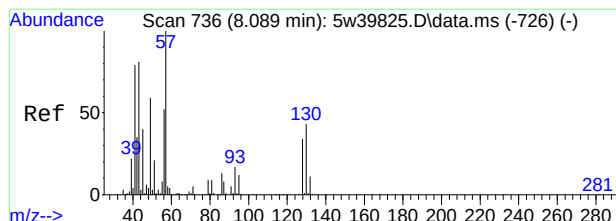
Tgt Ion	Ratio	Lower	Upper
45	100		
46	33.0	24.1	44.8
42	8.8	5.5	10.1



#38
2-Butanone
Concen: 0.19 ppb(v)
RT: 7.539 min Scan# 646
Delta R.T. 0.049 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

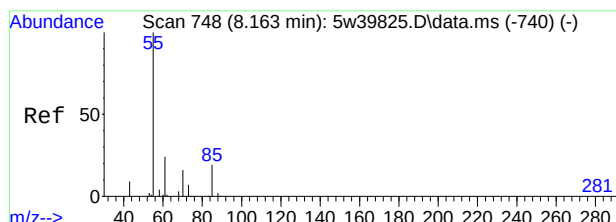
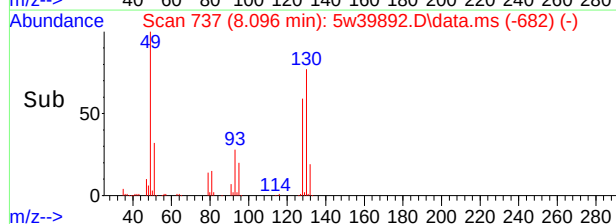
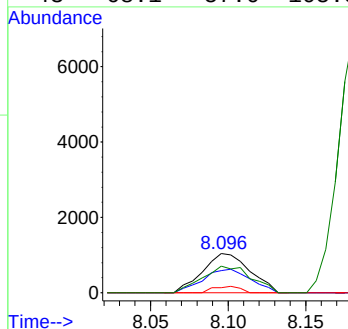
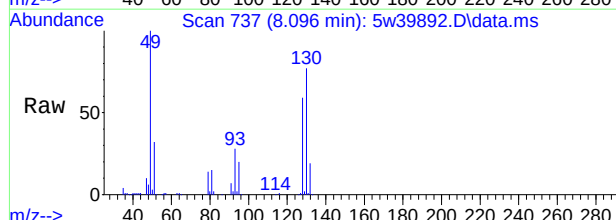
Tgt Ion	Ratio	Lower	Upper
72	100		
43	391.2	304.5	565.5
57	26.4	22.6	42.0





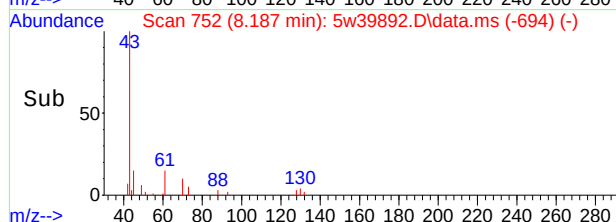
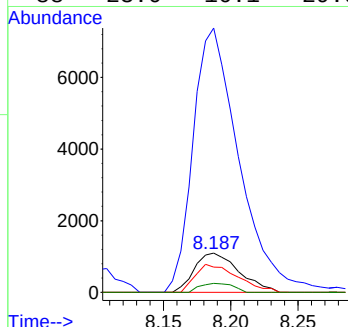
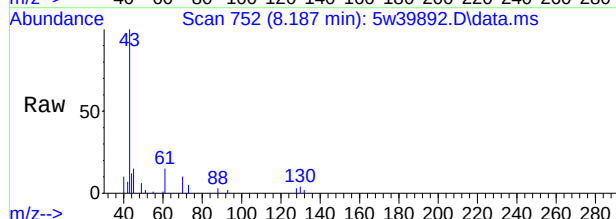
#39
Hexane
Concen: 0.08 ppb(v)
RT: 8.096 min Scan# 737
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

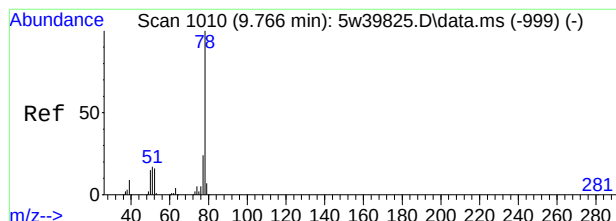
Tgt Ion:	57	Resp:	2201
Ion Ratio	Lower	Upper	
57	100		
56	56.7	36.5	67.7
86	13.1	9.2	17.0
43	68.1	57.0	105.8



#42
Ethyl Acetate
Concen: 0.46 ppb(v)
RT: 8.187 min Scan# 752
Delta R.T. 0.024 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

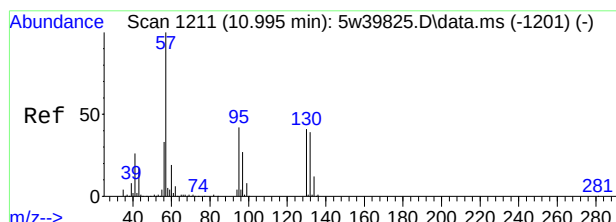
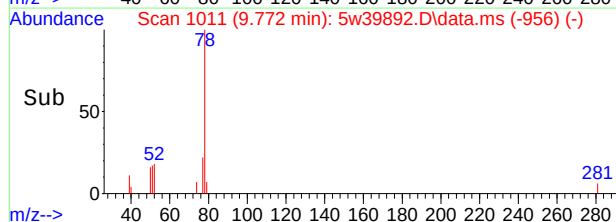
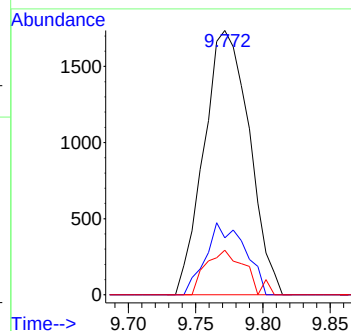
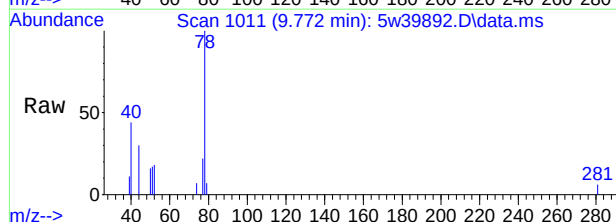
Tgt Ion:	61	Resp:	2539
Ion Ratio	Lower	Upper	
61	100		
43	671.0	466.8	867.0
70	64.5	48.1	89.3
88	23.0	16.1	29.9





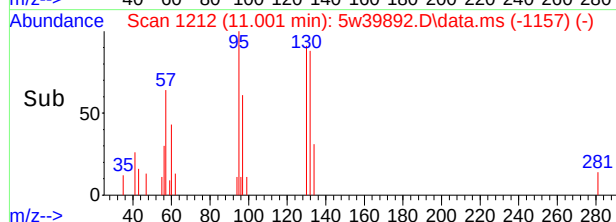
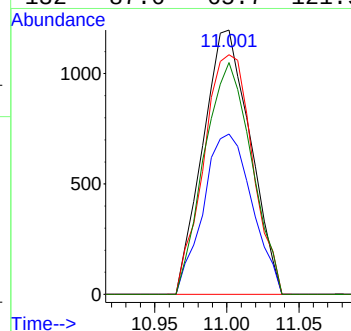
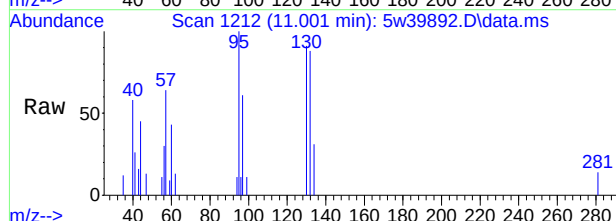
#49
Benzene
Concen: 0.07 ppb(v)
RT: 9.772 min Scan# 1011
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

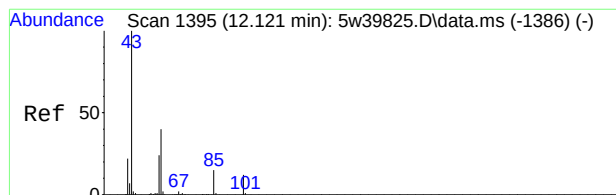
Tgt Ion: 78 Resp: 4074
Ion Ratio Lower Upper
78 100
77 21.5 16.7 30.9
51 16.9 11.7 21.7



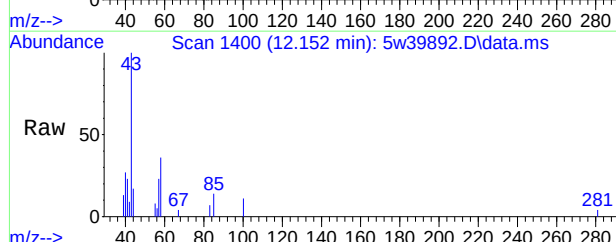
#56
Trichloroethene
Concen: 0.11 ppb(v)
RT: 11.001 min Scan# 1212
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

Tgt Ion: 95 Resp: 2748
Ion Ratio Lower Upper
95 100
97 60.7 45.6 84.6
130 90.7 68.1 126.5
132 87.6 65.7 121.9

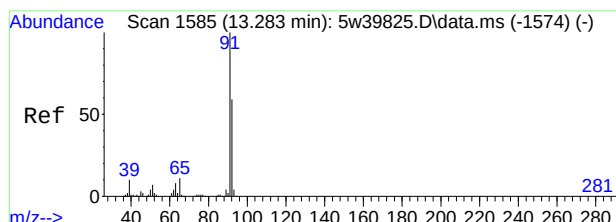
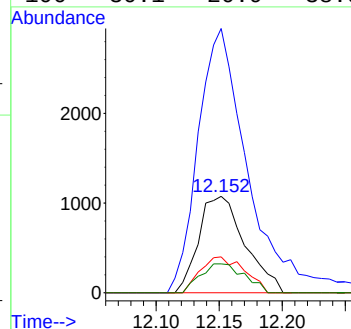
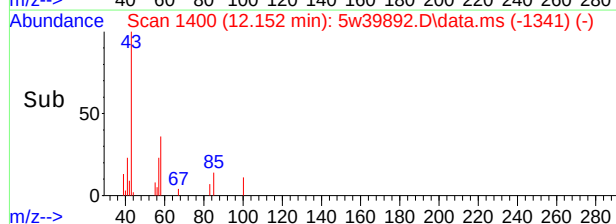




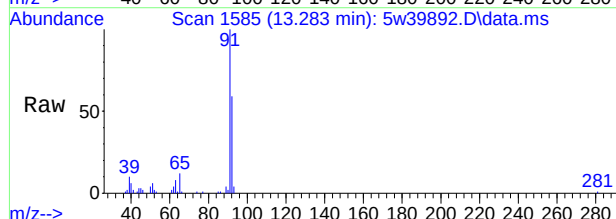
#64
4-Methyl-2-pentanone
Concen: 0.17 ppb(v)
RT: 12.152 min Scan# 1400
Delta R.T. 0.031 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm



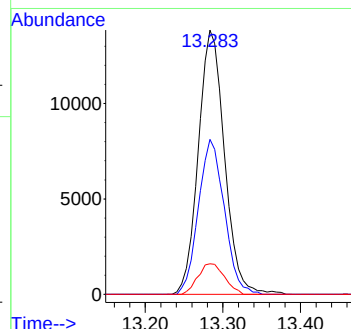
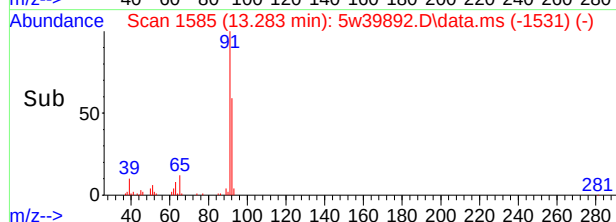
Tgt Ion: 58 Resp: 2737
Ion Ratio Lower Upper
58 100
43 274.2 173.3 321.8
85 37.3 27.6 51.2
100 30.1 20.9 38.9

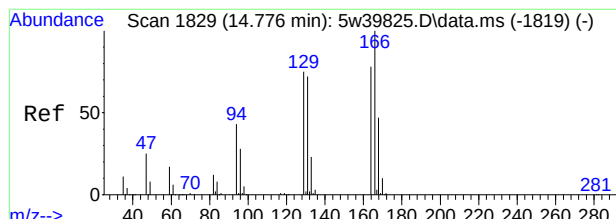


#66
Toluene
Concen: 0.52 ppb(v)
RT: 13.283 min Scan# 1585
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm



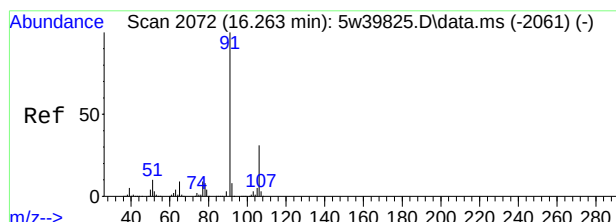
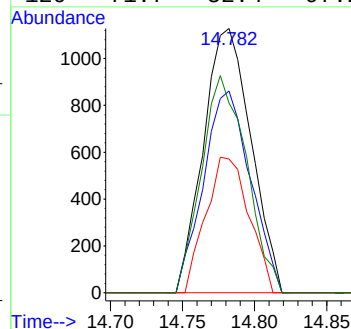
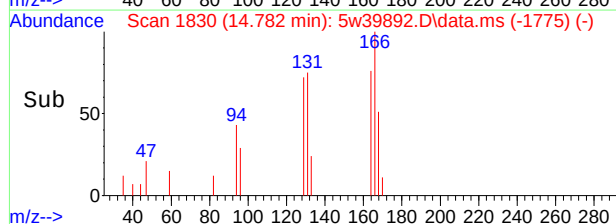
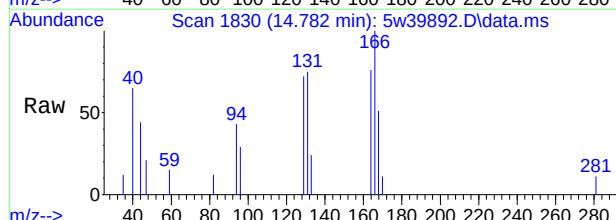
Tgt Ion: 91 Resp: 32430
Ion Ratio Lower Upper
91 100
92 58.6 41.2 76.4
65 11.6 8.0 14.8





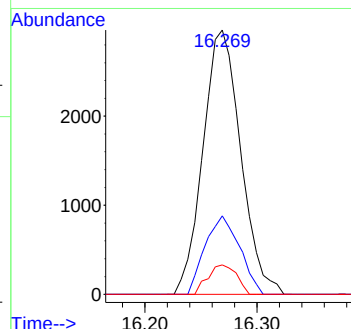
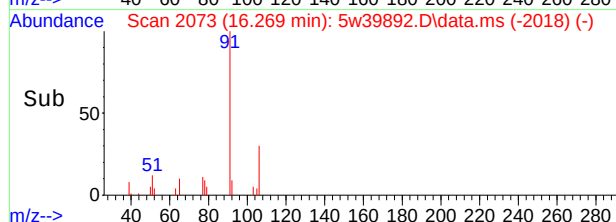
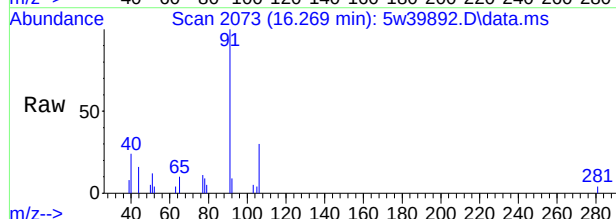
#72
Tetrachloroethene
Concen: 0.09 ppb(v)
RT: 14.782 min Scan# 1830
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

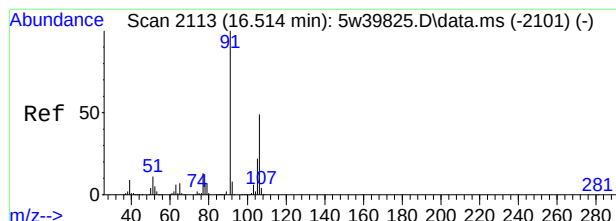
Tgt	Ion:166	Resp:	2603
Ion	Ratio	Lower	Upper
166	100		
164	76.4	54.3	100.9
168	50.6	32.8	61.0
129	71.7	52.4	97.2



#78
Ethylbenzene
Concen: 0.13 ppb(v)
RT: 16.269 min Scan# 2073
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

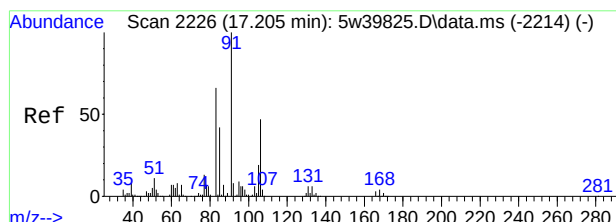
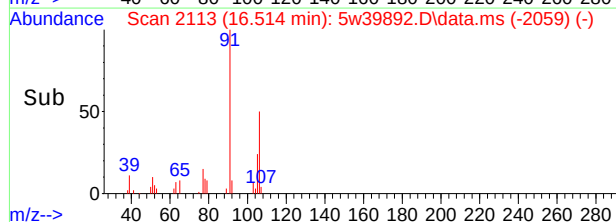
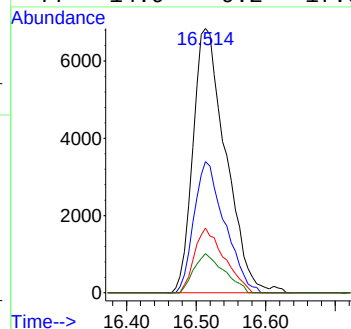
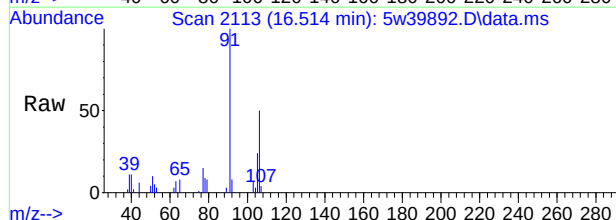
Tgt	Ion: 91	Resp:	6943
Ion	Ratio	Lower	Upper
91	100		
106	29.6	21.3	39.6
77	11.2	6.1	11.3





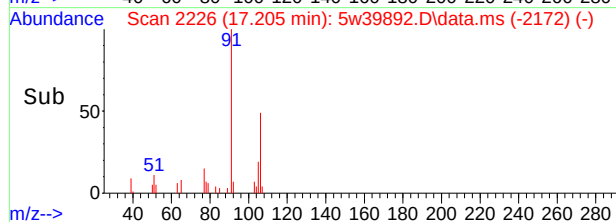
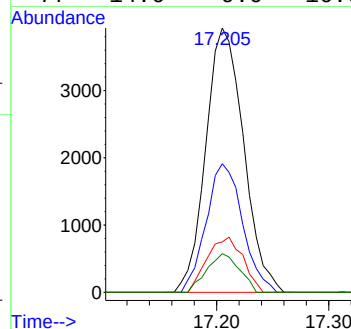
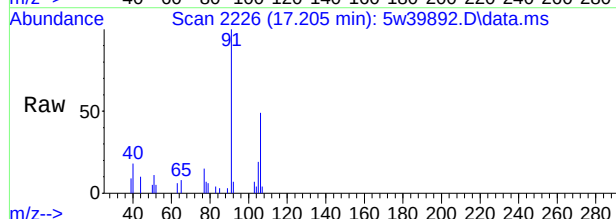
#79
m,p-Xylene
Concen: 0.55 ppb(v)
RT: 16.514 min Scan# 2113
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

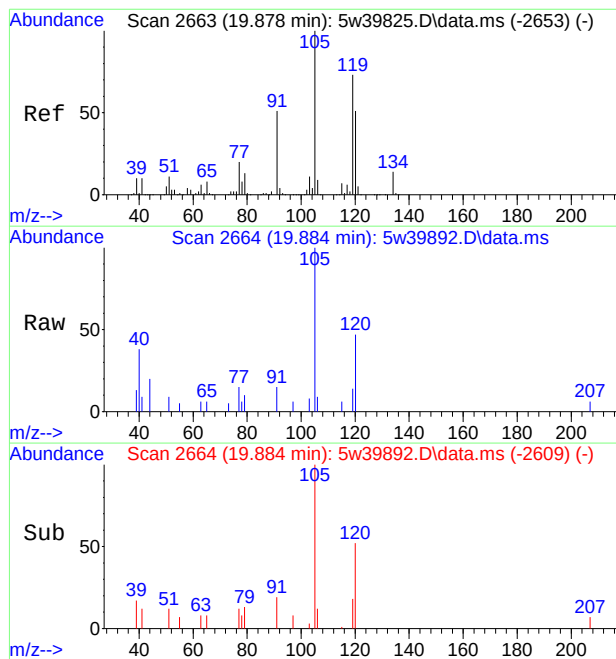
Tgt	Ion	91	Resp:	22382
	Ratio	100	Lower	Upper
	106	49.6	34.2	63.4
	105	24.5	15.3	28.3
	77	14.9	9.2	17.0



#82
o-Xylene
Concen: 0.20 ppb(v)
RT: 17.205 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

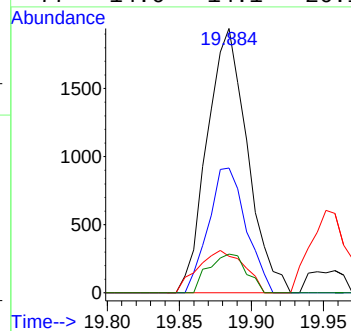
Tgt	Ion	91	Resp:	9234
	Ratio	100	Lower	Upper
	106	48.7	32.6	60.6
	105	19.1	13.3	24.7
	77	14.6	9.0	16.6





#95
1,2,4-Trimethylbenzene
Concen: 0.09 ppb(v)
RT: 19.884 min Scan# 2664
Delta R.T. 0.006 min
Lab File: 5w39892.D
Acq: 27 Dec 2019 3:43 pm

Tgt	Ion:105	Resp:	3787
Ion	Ratio	Lower	Upper
105	100		
120	47.2	35.8	66.6
119	13.9	51.3	95.3#
77	14.6	14.1	26.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W14966.D
Acq On : 26 Nov 2019 5:31 pm
Operator : thomash
Sample : scc(a639),cp10592
Misc : MS39331,V6W623,,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 27 11:53:04 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.146	130	130195	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.343	114	462549	10.00	ppb(v #-0.01	
78) Chlorobenzene-d5	15.879	82	181951	10.00	ppb(v #-0.01	
109) Bromochloromethane (A)	8.146	130	130195	10.00	ppb(v # 0.00	

System Monitoring Compounds

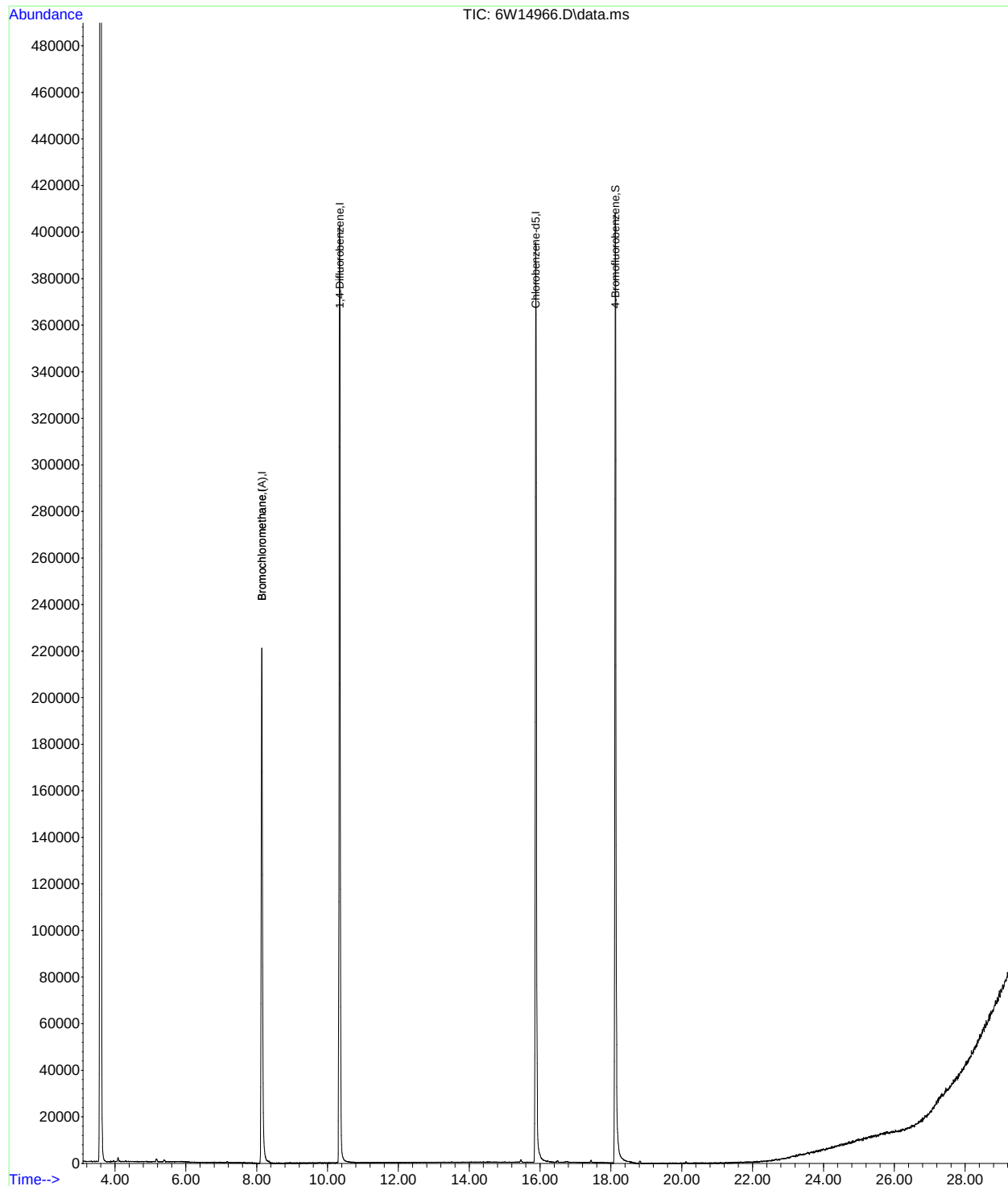
92) 4-Bromofluorobenzene	18.124	95	212930	9.21	ppb(v 0.00	
Spiked Amount	10.000	Range	65 - 128	Recovery	=	92.10%

Target Compounds	Qvalue
------------------	--------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W14966.D
Acq On : 26 Nov 2019 5:31 pm
Operator : thomash
Sample : scc(a639),cp10592
Misc : MS39331,V6W623,,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 27 11:53:04 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W14980.D
Acq On : 27 Nov 2019 5:23 am
Operator : thomash
Sample : scc(m235),cp10601
Misc : MS39428,V6W623,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 27 11:54:52 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.146	130	129855	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.342	114	459138	10.00	ppb(v #-0.01	
78) Chlorobenzene-d5	15.879	82	182200	10.00	ppb(v #-0.01	
109) Bromochloromethane (A)	8.146	130	129855	10.00	ppb(v # 0.00	

System Monitoring Compounds

92) 4-Bromofluorobenzene	18.124	95	215716	9.32	ppb(v 0.00	
Spiked Amount	10.000	Range	65 - 128	Recovery	=	93.20%

Target Compounds	Qvalue
------------------	--------

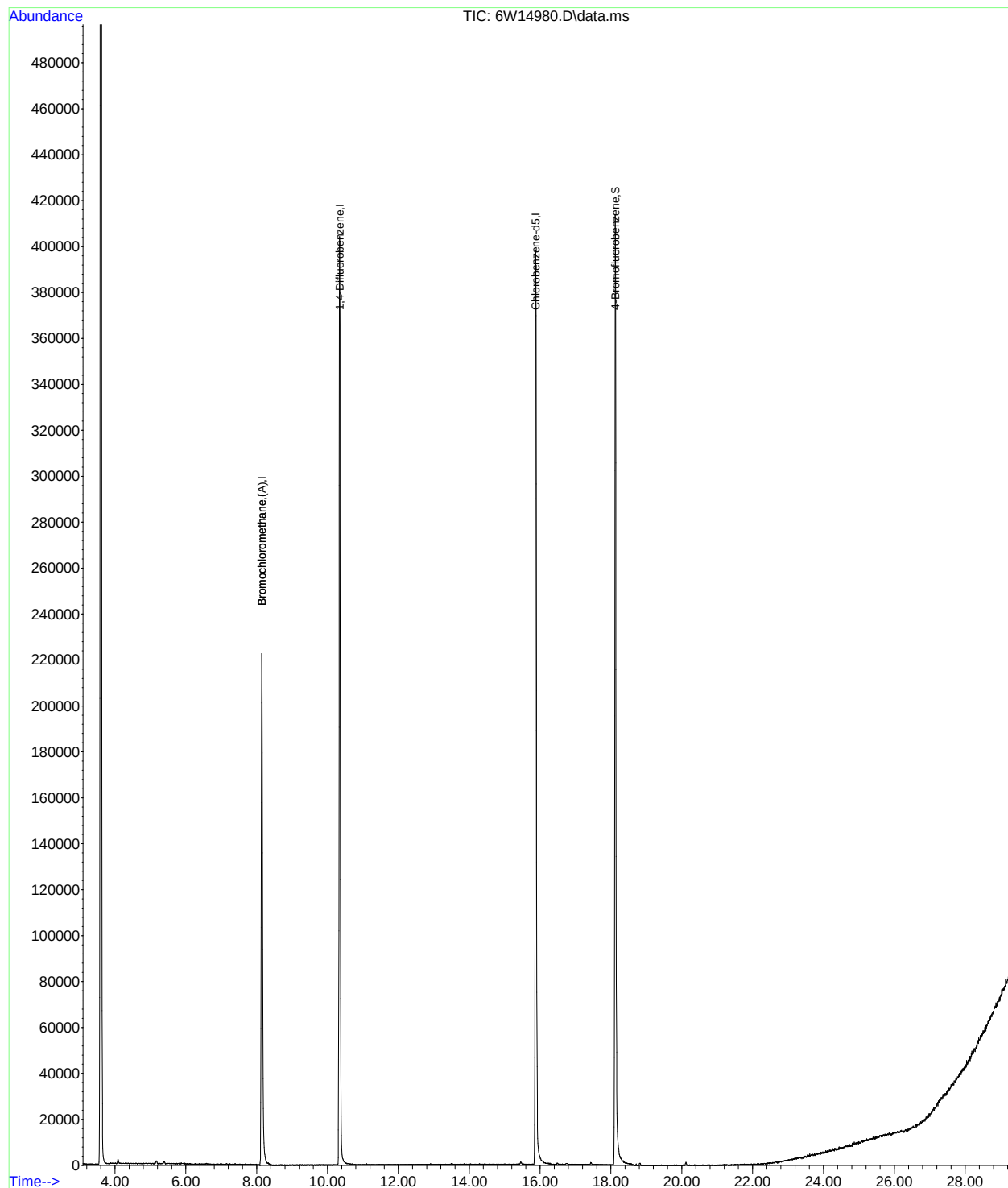
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.5.2

7

Data Path : C:\msdchem\1\data\
Data File : 6W14980.D
Acq On : 27 Nov 2019 5:23 am
Operator : thomash
Sample : scc(m235),cp10601
Misc : MS39428,V6W623,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 27 11:54:52 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration

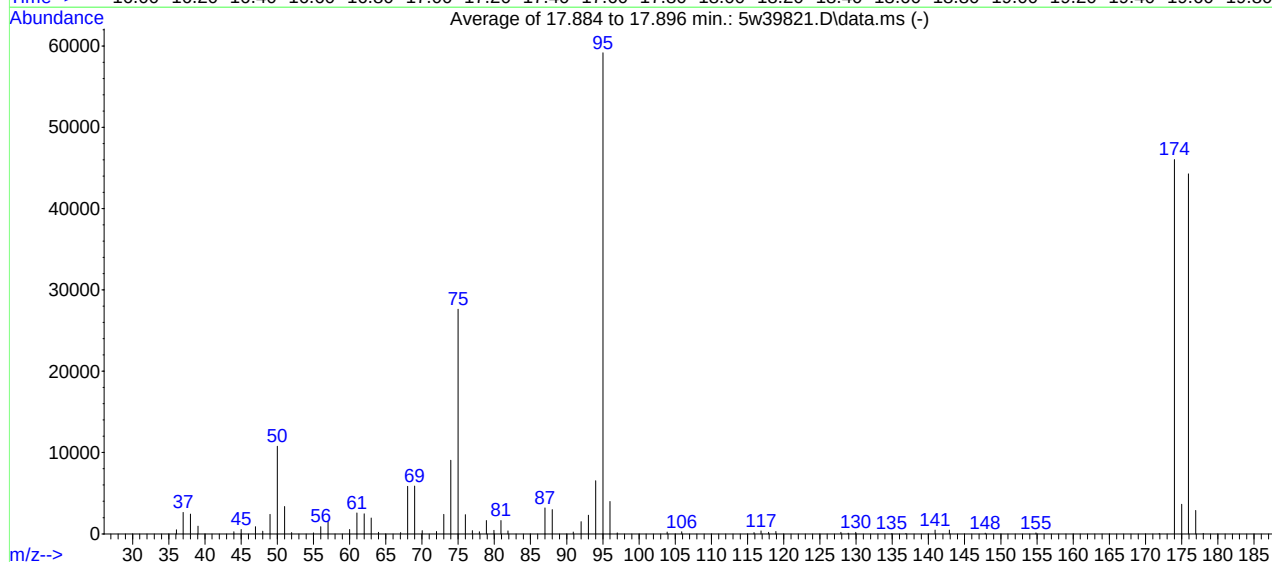
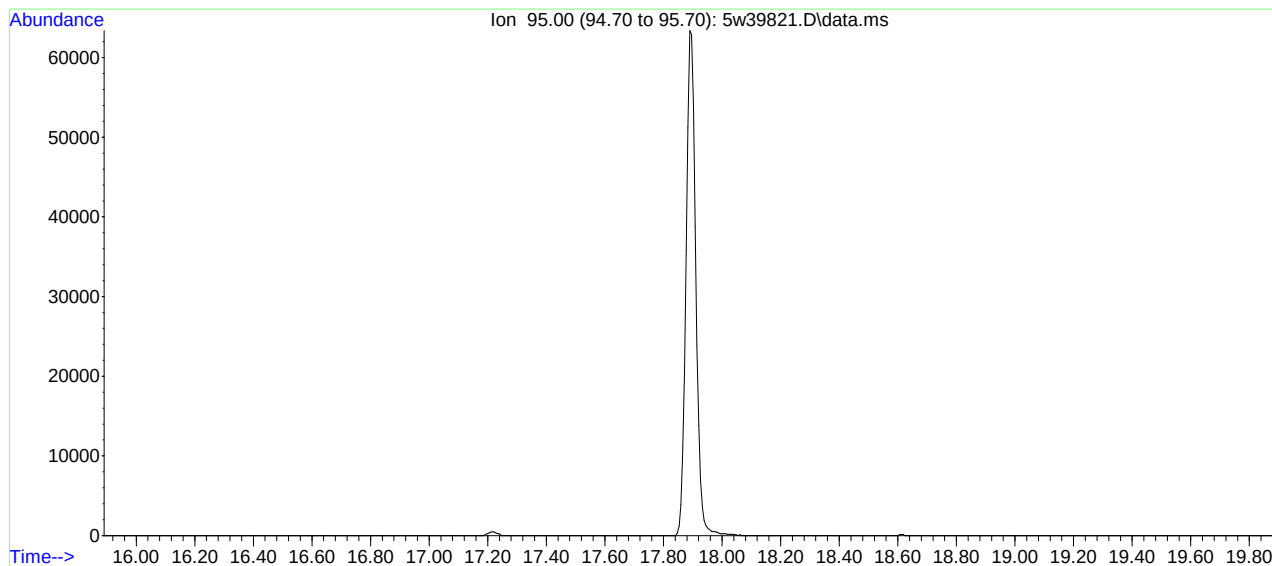


BFB

Data File : C:\msdchem\1\data\5w39821.D
Acq On : 23 Dec 2019 1:24 pm
Sample : bfb
Misc : ms39671,v5w1620,,,,,1
MS Integration Params: Rteint.p

Vial: 2
Operator: danat
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
Title : T0-15 Full Scan Mode



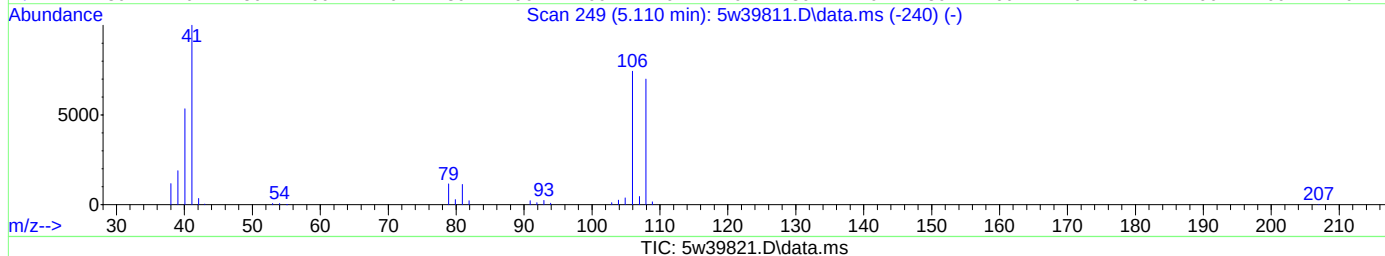
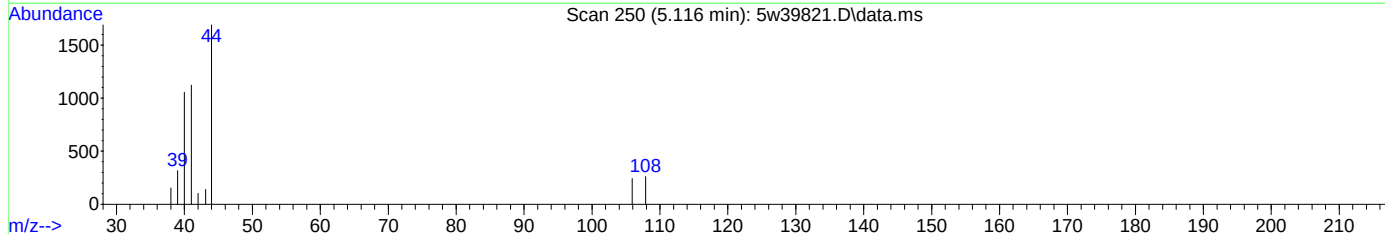
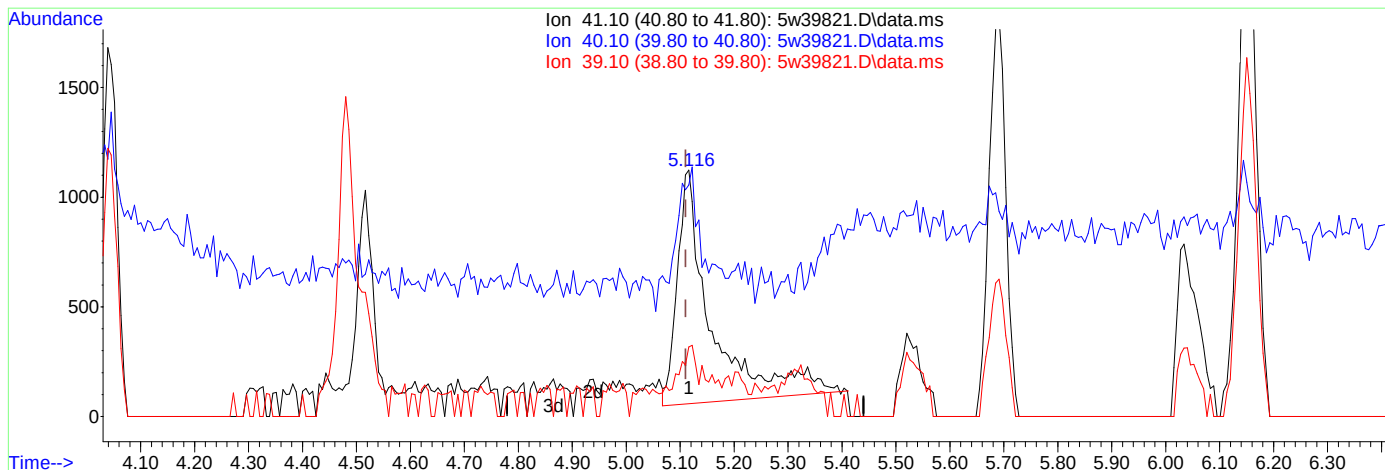
AutoFind: Scans 2337, 2338, 2339; Background Corrected with Scan 2328

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.2	10786	PASS
75	95	30	66	46.7	27616	PASS
95	95	100	100	100.0	59157	PASS
96	95	5	9	6.7	3976	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	77.8	46024	PASS
175	174	4	9	7.9	3643	PASS
176	174	93	101	96.2	44272	PASS
177	176	5	9	6.5	2896	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39821.D
Acq On : 23 Dec 2019 1:24 pm
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 23 13:58:16 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 09:19:08 2019
Response via : Initial Calibration



(16) Acetonitrile

5.116min (+0.006) 0.28ppb(v)

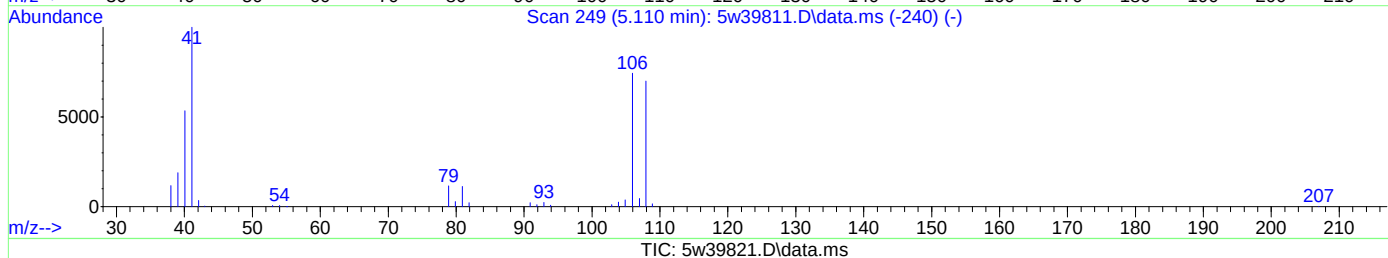
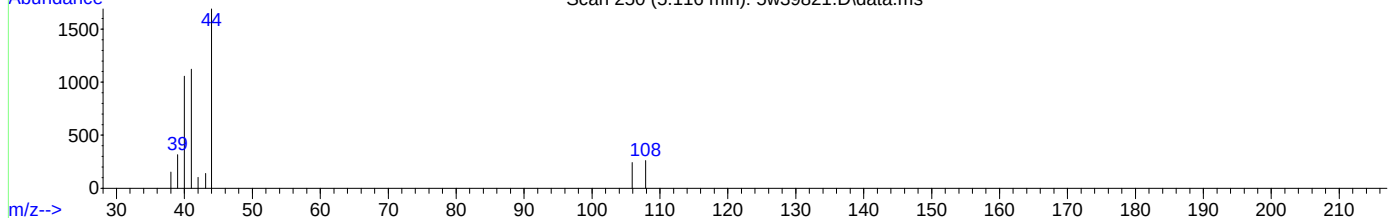
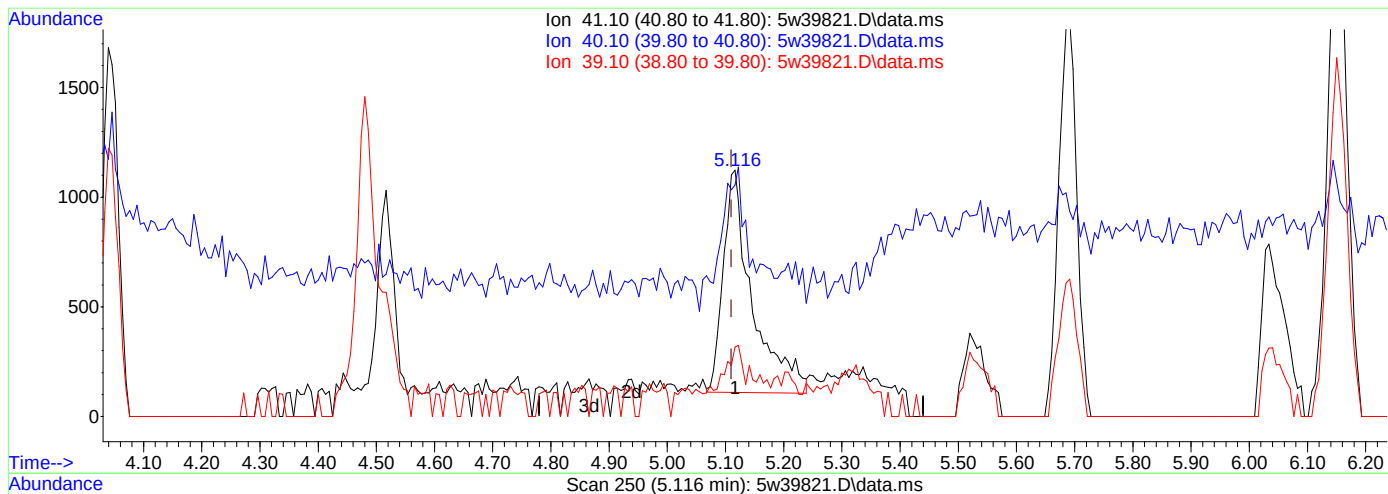
response 4667

Ion	Exp%	Act%
41.10	100	100
40.10	54.60	94.03#
39.10	19.00	28.23#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39821.D
Acq On : 23 Dec 2019 1:24 pm
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 23 13:58:16 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 09:19:08 2019
Response via : Initial Calibration



(16) Acetonitrile

5.116min (+0.006) 0.21ppb(v) m

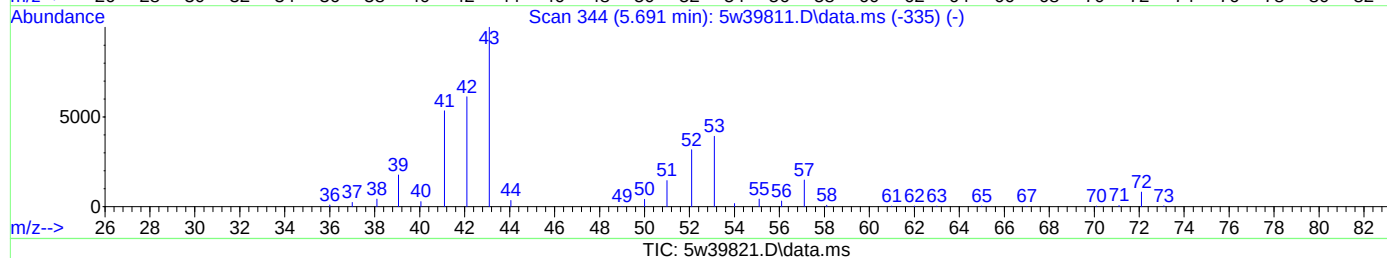
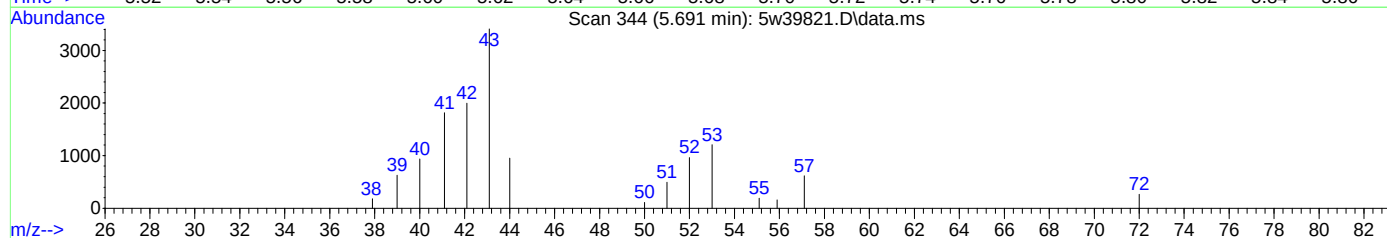
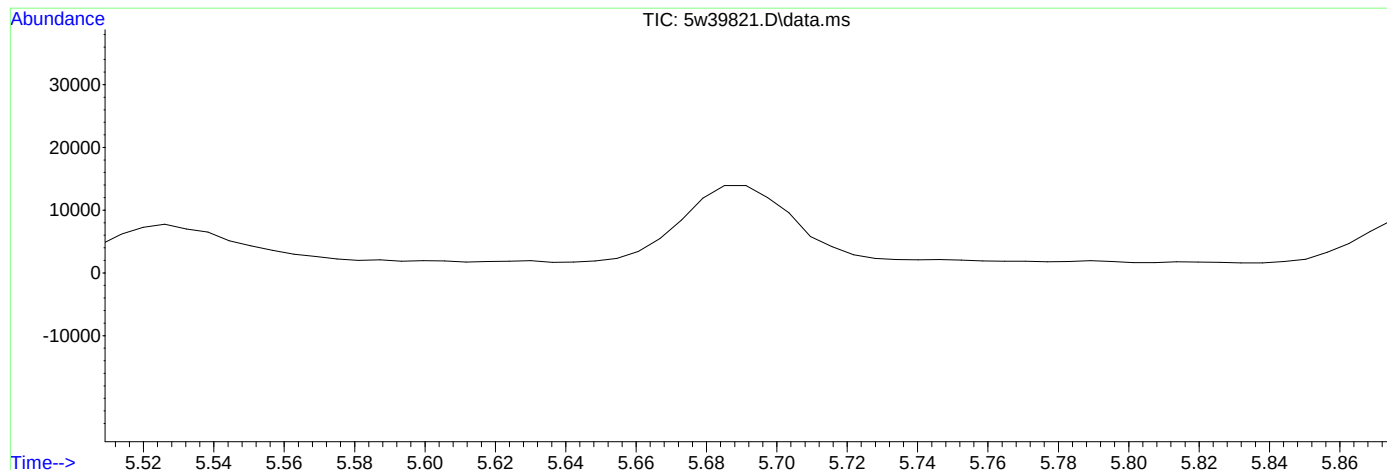
response 3523

Ion	Exp%	Act%
41.10	100	100
40.10	54.60	94.03#
39.10	19.00	28.23#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39821.D
Acq On : 23 Dec 2019 1:24 pm
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 23 13:58:16 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 09:19:08 2019
Response via : Initial Calibration



(108) TVHC as equiv Pentane

5.691min (-5.691) 0.00ppb(v)

response 0

Signal	Exp%	Act%
--------	------	------

TIC	100	0.00
-----	-----	------

0.00	0.00	0.00
------	------	------

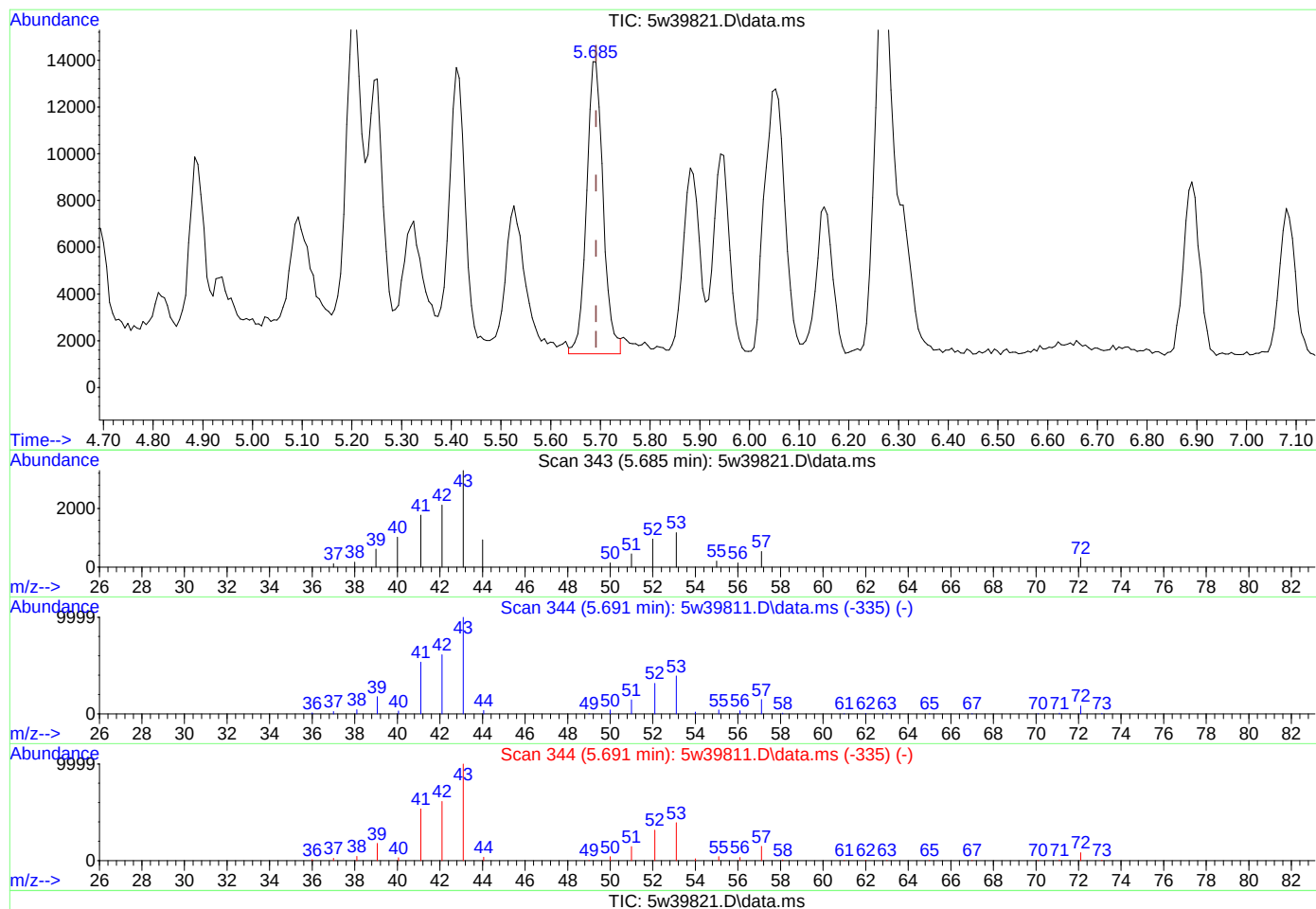
0.00	0.00	0.00
------	------	------

0.00	0.00	0.00
------	------	------

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39821.D
Acq On : 23 Dec 2019 1:24 pm
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 23 13:58:16 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 09:19:08 2019
Response via : Initial Calibration



(108) TVHC as equiv Pentane

5.685min (-0.006) 0.18ppb(v) m

response 29179

Signal	Exp%	Act%
--------	------	------

TIC	100	100
-----	-----	-----

0.00	0.00	0.00
------	------	------

0.00	0.00	0.00
------	------	------

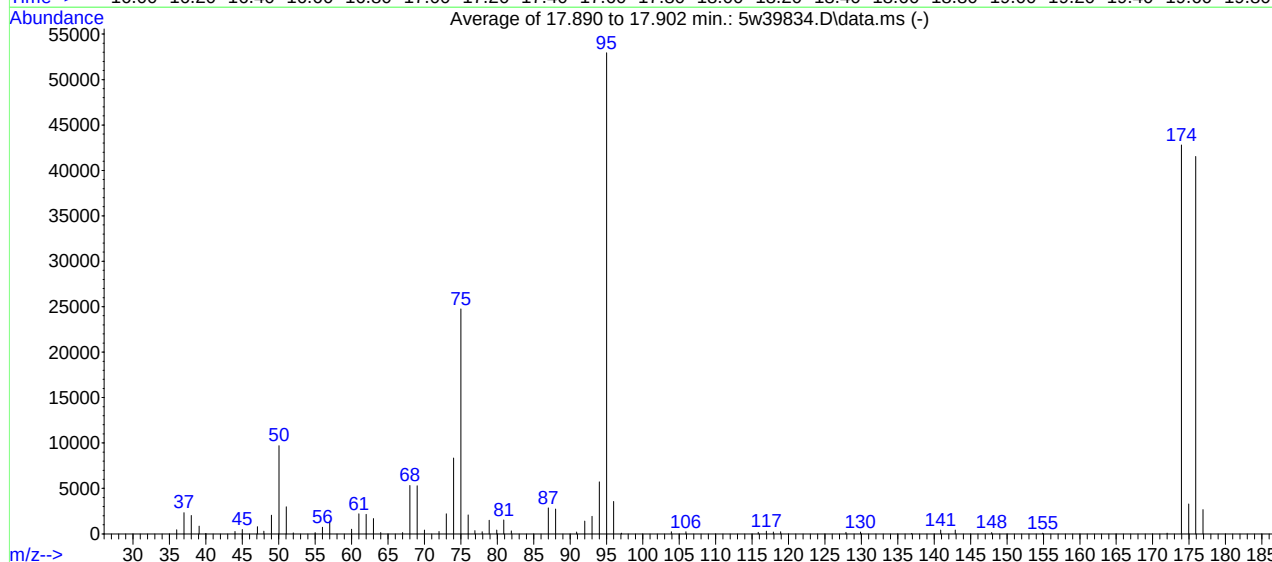
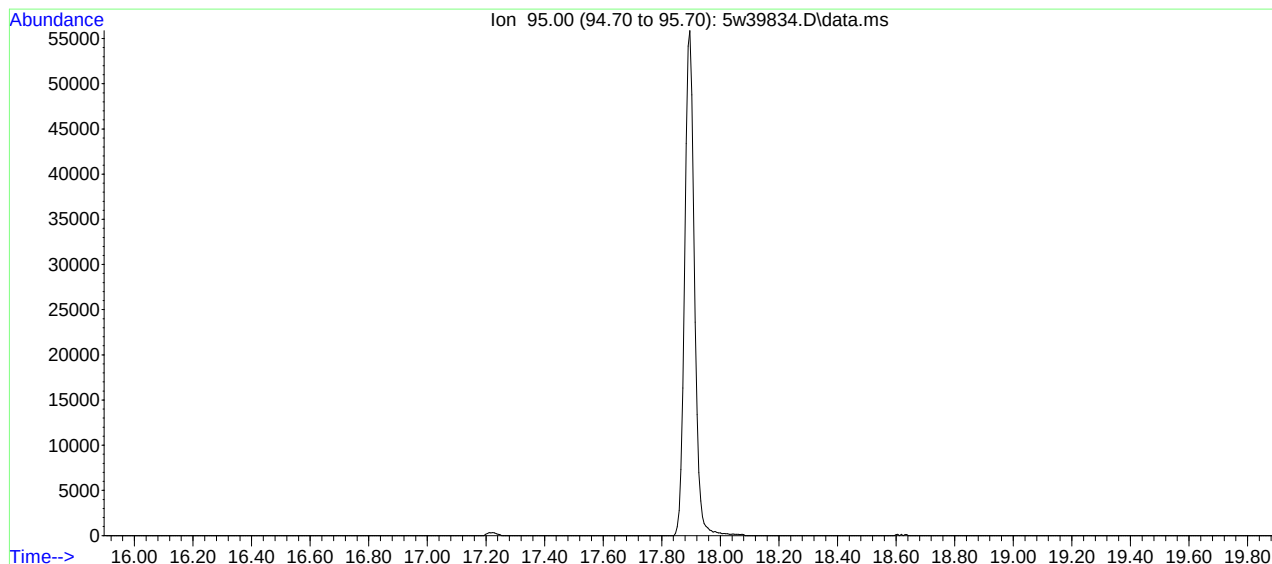
0.00	0.00	0.00
------	------	------

BFB

Data File : C:\msdchem\1\data\5w39834.D
Acq On : 24 Dec 2019 11:53 am
Sample : bfb
Misc : ms39671,v5w1621,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: danat
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2338, 2339, 2340; Background Corrected with Scan 2328

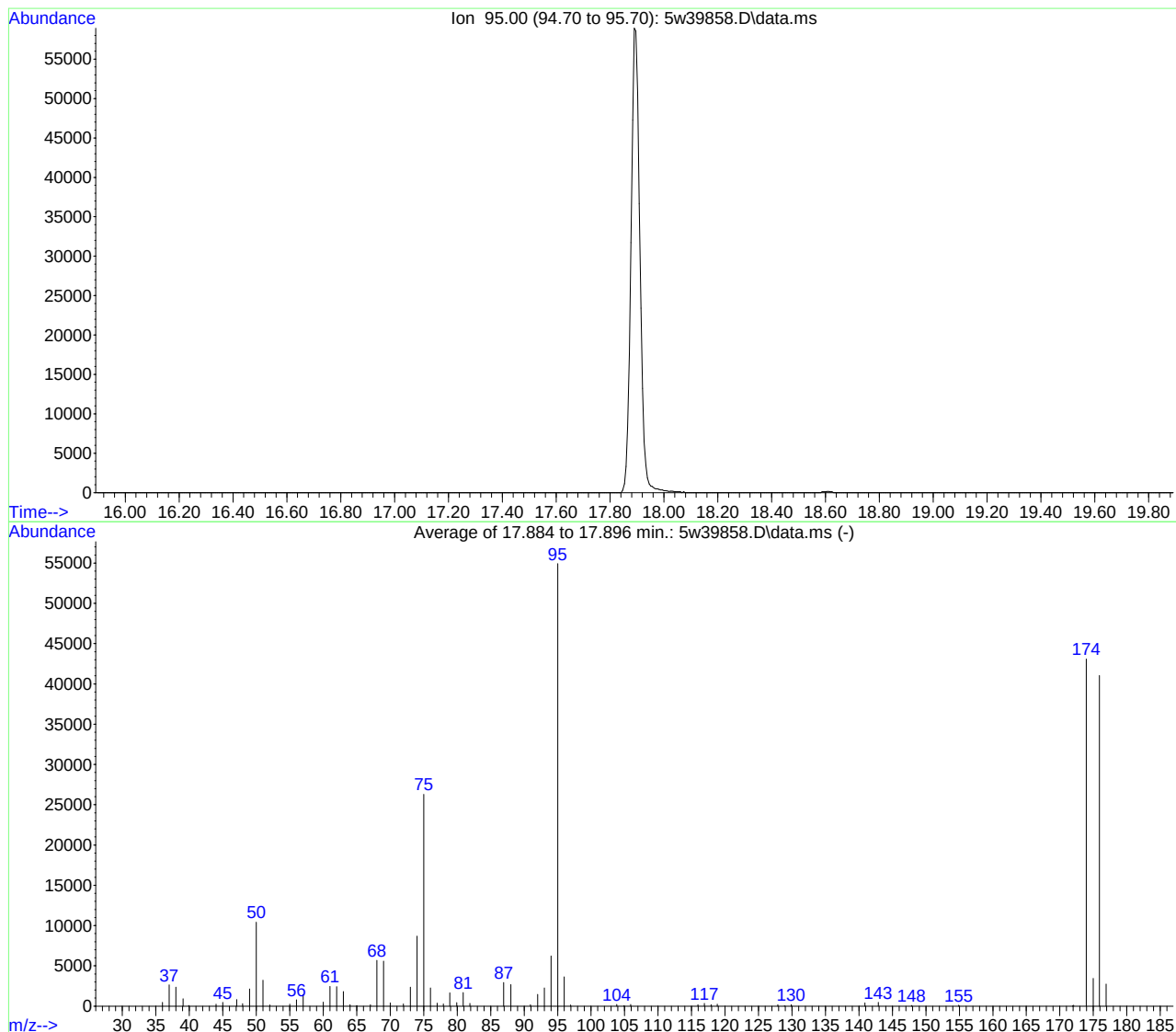
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.3	9693	PASS
75	95	30	66	46.8	24749	PASS
95	95	100	100	100.0	52936	PASS
96	95	5	9	6.8	3575	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	80.8	42795	PASS
175	174	4	9	7.7	3295	PASS
176	174	93	101	97.0	41520	PASS
177	176	5	9	6.4	2667	PASS

BFB

Data File : C:\msdchem\1\data\5w39858.D
Acq On : 26 Dec 2019 9:31 am
Sample : bfb
Misc : ms39818,v5w1622,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: danat
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2337, 2338, 2339; Background Corrected with Scan 2328

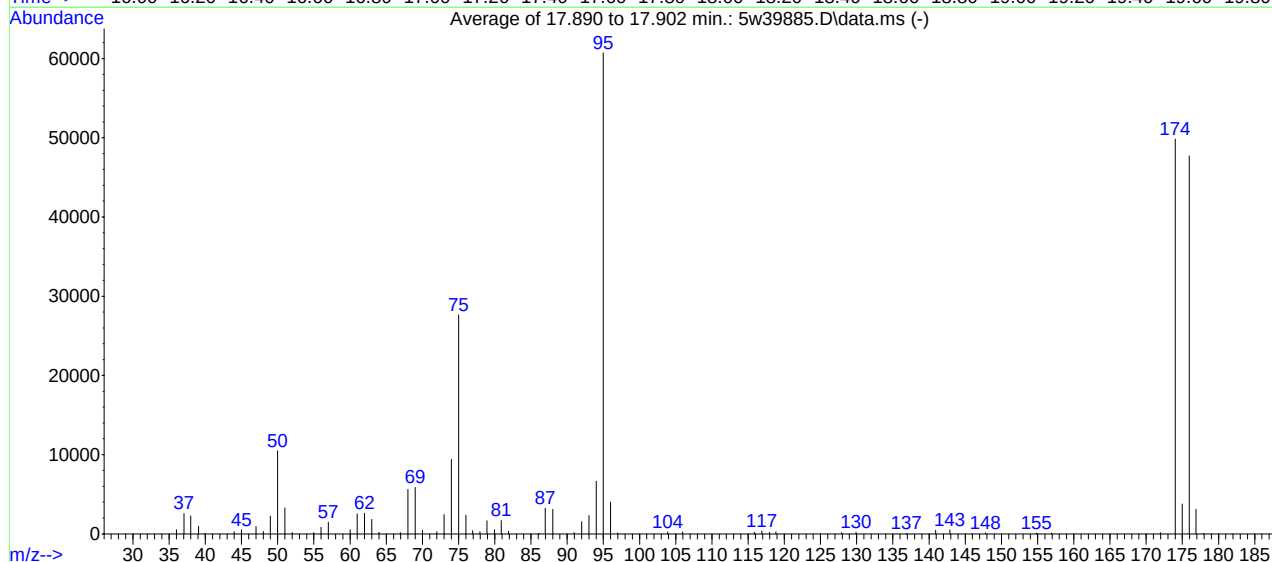
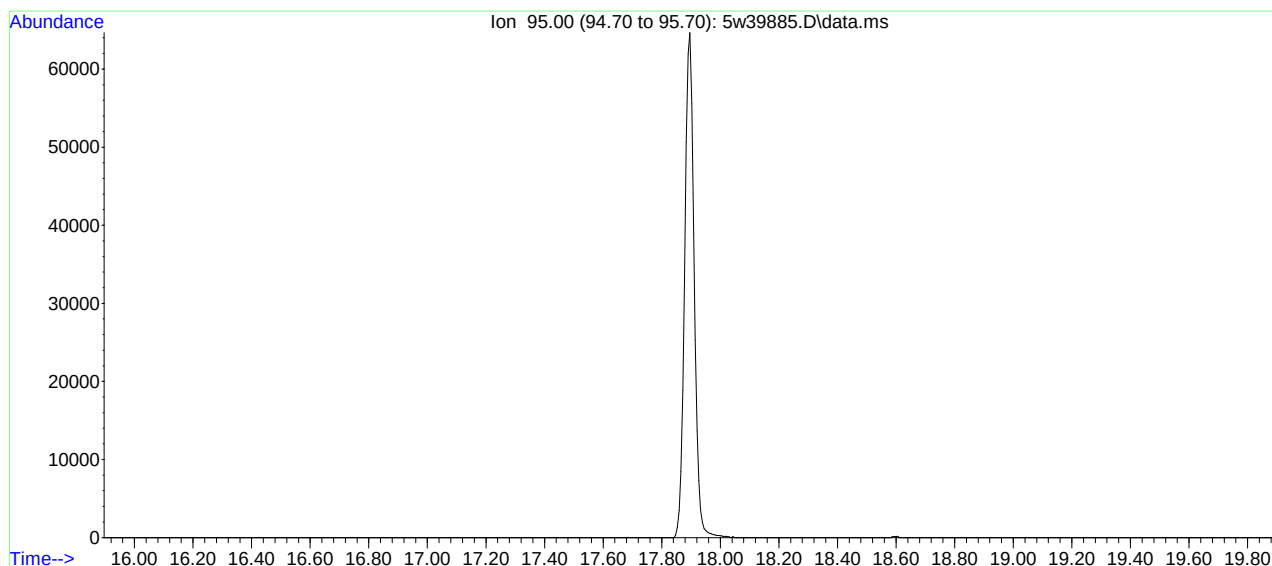
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.0	10411	PASS
75	95	30	66	47.9	26296	PASS
95	95	100	100	100.0	54920	PASS
96	95	5	9	6.6	3648	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.5	43104	PASS
175	174	4	9	8.0	3443	PASS
176	174	93	101	95.2	41045	PASS
177	176	5	9	6.7	2753	PASS

BFB

Data File : C:\msdchem\1\data\5w39885.D
 Acq On : 27 Dec 2019 10:09 am
 Sample : bfb
 Misc : ms39917,v5w1623,,,,,1
 MS Integration Params: Rteint.p

Vial: 1
 Operator: danat
 Inst : Air5w
 Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1620.M (RTE Integrator)
 Title : T0-15 Full Scan Mode



AutoFind: Scans 2338, 2339, 2340; Background Corrected with Scan 2328

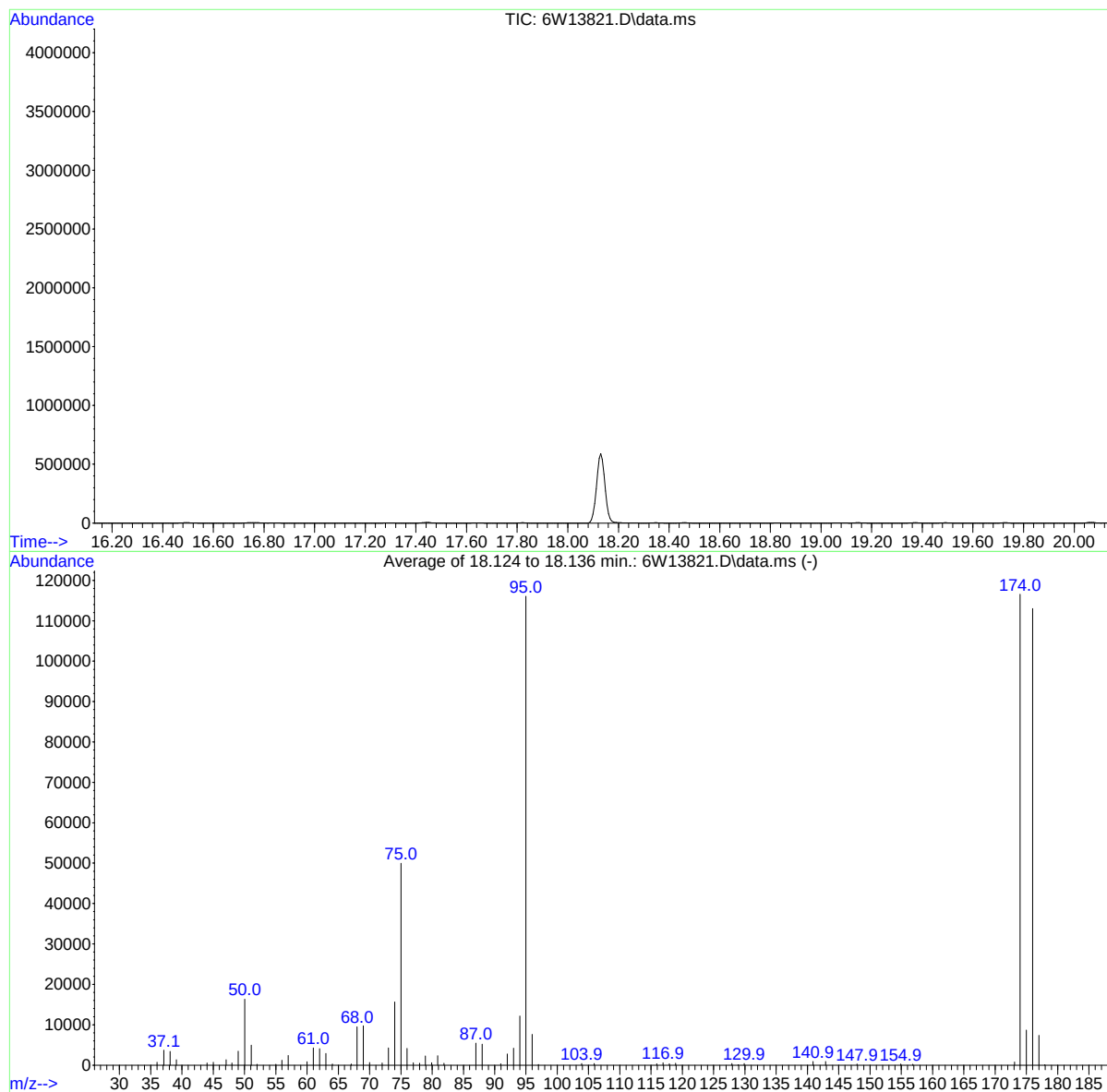
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.3	10474	PASS
75	95	30	66	45.5	27651	PASS
95	95	100	100	100.0	60717	PASS
96	95	5	9	6.6	4035	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	82.1	49819	PASS
175	174	4	9	7.6	3779	PASS
176	174	93	101	95.8	47709	PASS
177	176	5	9	6.5	3099	PASS

BFB

Data File : C:\msdchem\1\data\6W13821.D
Acq On : 13 Sep 2019 11:13 am
Sample : bfb
Misc : MS37187,V6W570,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\m6w571.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2458, 2459, 2460; Background Corrected with Scan 2448

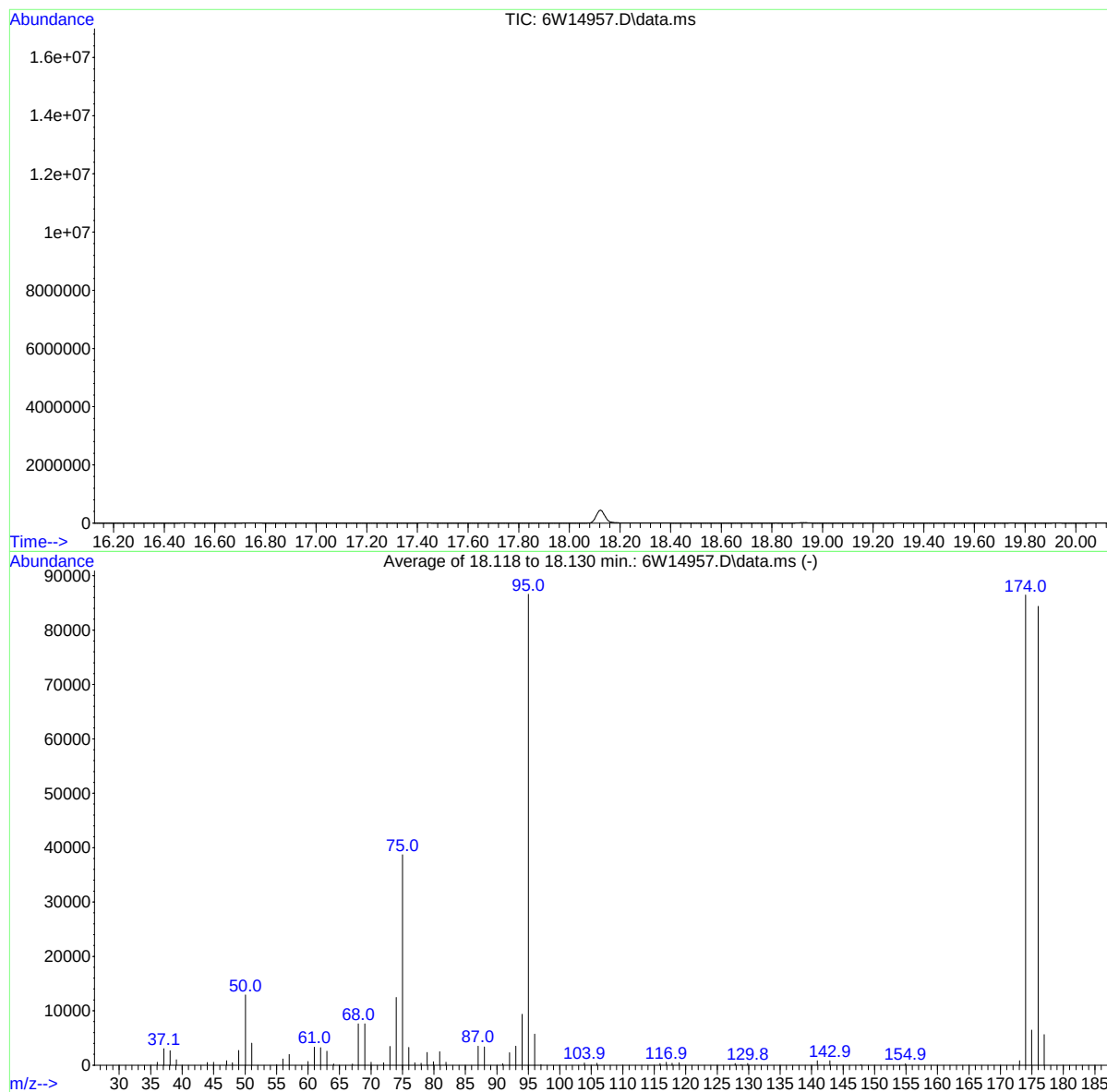
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.1	16326	PASS
75	95	30	66	43.0	49944	PASS
95	95	100	100	100.0	116977	PASS
96	95	5	9	6.6	7622	PASS
173	174	0.00	2	0.6	753	PASS
174	95	50	120	100.4	116552	PASS
175	174	4	9	7.4	8664	PASS
176	174	93	101	97.0	113053	PASS
177	176	5	9	6.5	7387	PASS

BFB

Data File : C:\msdchem\1\data\6W14957.D
Acq On : 26 Nov 2019 8:59 am
Sample : bfb
Misc : MS39338,V6W623,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\m6w571.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2457, 2458, 2459; Background Corrected with Scan 2447

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.9	12919	PASS
75	95	30	66	44.7	38677	PASS
95	95	100	100	100.0	86579	PASS
96	95	5	9	6.6	5696	PASS
173	174	0.00	2	0.9	788	PASS
174	95	50	120	99.8	86443	PASS
175	174	4	9	7.5	6450	PASS
176	174	93	101	97.6	84395	PASS
177	176	5	9	6.6	5612	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39822.D
 Acq On : 23 Dec 2019 2:12 pm
 Operator : danat
 Sample : ic1620-0.1
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 23 16:30:02 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 16:27:02 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.077	130	159951	10.00	ppb(v	-0.01
53) 1,4-Difluorobenzene	10.182	114	552979	10.00	ppb(v	-0.01
76) Chlorobenzene-d5	15.657	82	174518	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.077	130	159951	10.00	ppb(v	-0.01

System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.890	95	144780	9.75	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	97.50%

Target Compounds					Qvalue	
2) Freon 152A	3.972	65	1153	0.09	ppb(v	95
3) Chlorodifluoromethane	4.015	67	417	0.08	ppb(v	83
4) Propene	4.034	41	1497	0.10	ppb(v#	60
5) Chlorotrifluoroethene	4.040	116	2587	0.10	ppb(v#	82
6) Dichlorodifluoromethane	4.089	85	5268	0.10	ppb(v	99
7) 1-Chloro-1,1-difluoro...	4.193	65	3894	0.10	ppb(v#	73
8) Chloromethane	4.211	50	1734	0.10	ppb(v	92
9) Dichlorotetrafluoroethane	4.278	85	4968	0.10	ppb(v	95
10) Vinyl Chloride	4.376	62	1632	0.09	ppb(v#	97
11) 1,3-Butadiene	4.474	54	1210	0.10	ppb(v	95
12) n-Butane	4.517	58	219	0.08	ppb(v#	1
13) Bromomethane	4.682	94	1793	0.10	ppb(v	95
14) Chloroethane	4.811	64	793	0.10	ppb(v#	72
15) Dichlorofluoromethane	4.878	67	3997	0.10	ppb(v	98
17) Freon 123	5.202	83	4060	0.10	ppb(v	97
18) Freon 123A	5.233	117	2166	0.10	ppb(v	91
19) Bromoethene	5.080	106	1526	0.10	ppb(v#	94
21) Trichlorofluoromethane	5.404	101	5104	0.10	ppb(v	96
23) Pentane	5.679	57	494	0.09	ppb(v	80
24) Iodomethane	5.881	142	5214	0.10	ppb(v	93
26) 1,1-Dichloroethene	5.936	61	3361	0.10	ppb(v	95
27) Freon 113	6.260	101	4470	0.10	ppb(v	92
28) Methylene Chloride	6.052	84	2312	0.12	ppb(v	96
29) Carbon Disulfide	6.303	76	5013	0.10	ppb(v	99
32) 3-Chloropropene	6.138	76	832	0.09	ppb(v	83
33) trans-1,2-Dichloroethene	6.884	61	2843	0.10	ppb(v	92
35) Methyl tert-Butyl Ether	7.172	73	5159	0.10	ppb(v	95
37) 1,1-Dichloroethane	7.074	63	3787	0.10	ppb(v#	96
39) Hexane	8.083	57	3007	0.10	ppb(v	83
40) cis-1,2-Dichloroethene	7.906	61	2899	0.10	ppb(v	97
41) Di-isopropyl Ether	8.126	87	1391	0.09	ppb(v	87
44) Chloroform	8.206	83	4490	0.10	ppb(v	97
45) 2,4-Dimethylpentane	9.019	57	3457	0.09	ppb(v	99
47) 1,1,1-Trichloroethane	9.246	97	4317	0.10	ppb(v	94
48) 1,2-Dichloroethane	8.983	62	2791	0.11	ppb(v#	87
49) Benzene	9.766	78	6067	0.10	ppb(v	99
50) Carbon Tetrachloride	9.925	117	4230	0.10	ppb(v	98
51) Cyclohexane	10.047	56	3078	0.10	ppb(v	96
52) 2,3-Dimethylpentane	10.335	71	1172	0.09	ppb(v#	95
54) 2,2,4-Trimethylpentane	11.008	57	9763	0.09	ppb(v	98
55) Heptane	11.344	71	1738	0.09	ppb(v#	94
56) Trichloroethene	10.989	95	2830	0.11	ppb(v	97
57) 1,2-Dichloropropane	10.708	63	2337	0.10	ppb(v	92
58) Dibromomethane	10.690	174	2652	0.12	ppb(v	97
62) Bromodichloromethane	10.953	83	4452	0.11	ppb(v	95
63) cis-1,3-Dichloropropene	12.066	75	2961	0.11	ppb(v	98
65) trans-1,3-Dichloropropene	12.751	75	2676	0.13	ppb(v	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W39822.D
 Acq On : 23 Dec 2019 2:12 pm
 Operator : danat
 Sample : ic1620-0.1
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 23 16:30:02 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 16:27:02 2019
 Response via : Initial Calibration

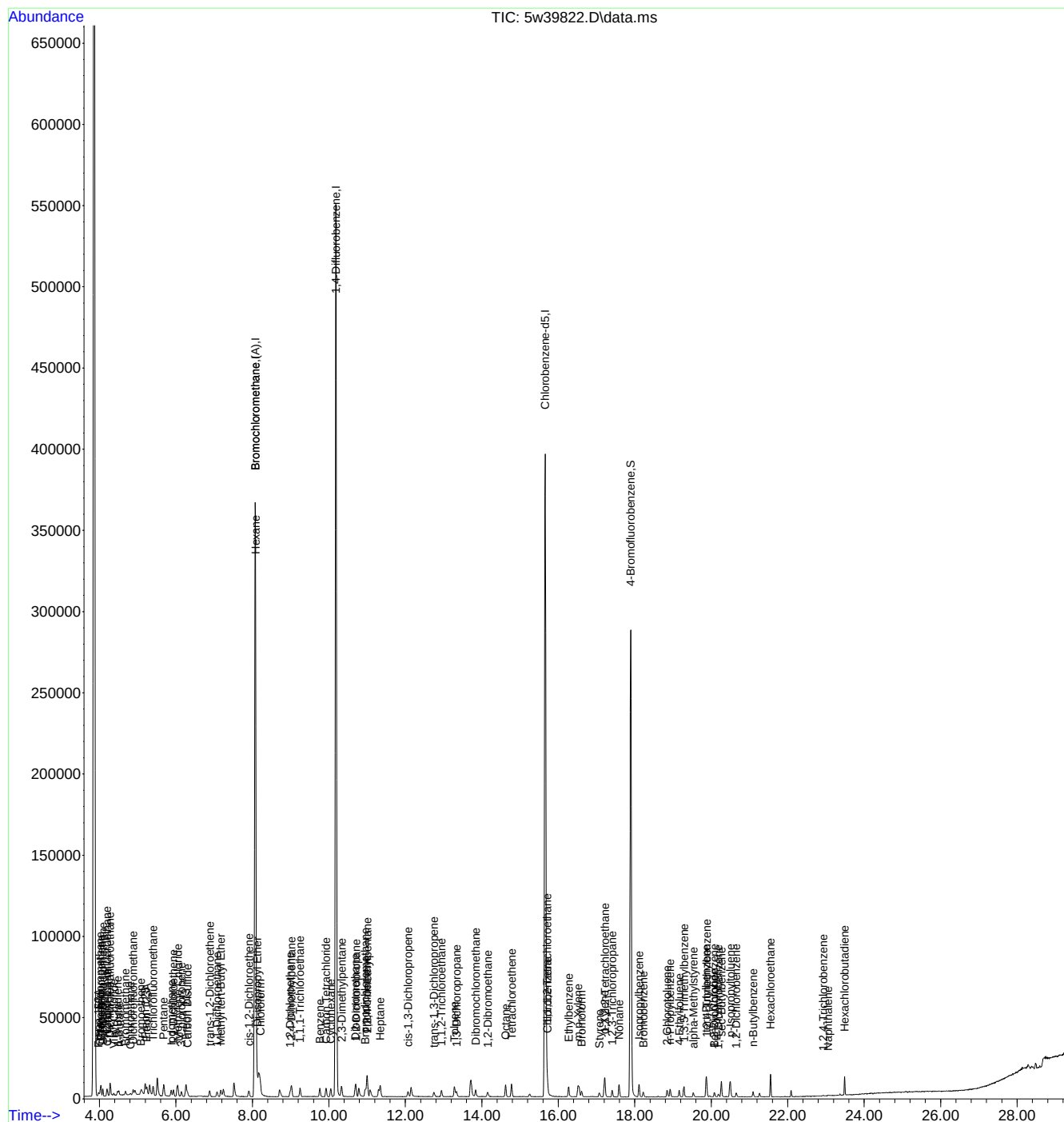
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) Toluene	13.284	91	7119	0.12	ppb(v	98
67) 1,1,2-Trichloroethane	12.941	97	2060	0.11	ppb(v	97
68) 1,3-Dichloropropane	13.339	76	2796	0.12	ppb(v	98
71) Dibromochloromethane	13.840	129	3298	0.11	ppb(v#	95
72) Tetrachloroethene	14.782	166	3061	0.11	ppb(v	99
73) 1,2-Dibromoethane	14.152	107	3208	0.14	ppb(v#	96
74) Octane	14.623	43	4334	0.10	ppb(v	96
75) 1,1,1,2-Tetrachloroethane	15.706	131	2857	0.10	ppb(v#	1
77) Chlorobenzene	15.718	112	3730	0.13	ppb(v	91
78) Ethylbenzene	16.269	91	7534	0.14	ppb(v	96
79) m,p-Xylene	16.514	91	11373	0.27	ppb(v	94
80) Styrene	17.070	104	2327	0.11	ppb(v	93
81) Nonane	17.590	43	3950	0.11	ppb(v#	97
82) o-Xylene	17.205	91	7088	0.15	ppb(v	96
83) Bromoform	16.612	173	2187	0.13	ppb(v#	96
84) 1,1,2,2-Tetrachloroethane	17.217	83	4638	0.13	ppb(v#	93
85) 1,2,3-Trichloropropane	17.413	75	3122	0.14	ppb(v	98
86) Isopropylbenzene	18.110	105	8232	0.13	ppb(v	96
87) Bromobenzene	18.227	156	1390	0.13	ppb(v	82
88) 2-Chlorotoluene	18.851	126	1428	0.13	ppb(v	81
89) n-Propylbenzene	18.924	120	1224	0.11	ppb(v	98
91) 4-Ethyltoluene	19.163	105	4347	0.11	ppb(v	98
92) 1,3,5-Trimethylbenzene	19.285	105	5487	0.12	ppb(v	93
93) alpha-Methylstyrene	19.536	118	1302	0.10	ppb(v	90
94) tert-Butylbenzene	19.866	134	1313	0.12	ppb(v	90
95) 1,2,4-Trimethylbenzene	19.885	105	4349	0.11	ppb(v	94
96) 1,3-Dichlorobenzene	20.080	146	1463	0.12	ppb(v	94
97) Benzyl Chloride	20.080	91	1144	0.11	ppb(v#	85
98) 1,4-Dichlorobenzene	20.184	146	1168	0.11	ppb(v	89
99) sec-Butylbenzene	20.264	134	1455	0.12	ppb(v	96
100) p-Isopropyltoluene	20.502	134	1260	0.10	ppb(v	93
101) 1,2-Dichlorobenzene	20.655	146	1604	0.12	ppb(v	94
102) n-Butylbenzene	21.096	134	551	0.09	ppb(v	96
103) Hexachloroethane	21.549	201	2448	0.13	ppb(v	94
104) 1,2,4-Trichlorobenzene	22.925	180	267	0.09	ppb(v#	60
105) Naphthalene	23.054	128	962	0.12	ppb(v#	69
106) Hexachlorobutadiene	23.488	225	2210	0.14	ppb(v	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39822.D
Acq On : 23 Dec 2019 2:12 pm
Operator : danat
Sample : ic1620-0.1
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 23 16:30:02 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 16:27:02 2019
Response via : Initial Calibration



7.7.1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39823.D
 Acq On : 23 Dec 2019 2:56 pm
 Operator : danat
 Sample : ic1620-0.04
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 24 10:51:29 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 17:55:57 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	154277	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	537326	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	175519	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	154277	10.00	ppb(v	0.00

System Monitoring Compounds

90) 4-Bromofluorobenzene	17.896	95	146394	9.55	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	95.50%

Target Compounds					Qvalue	
2) Freon 152A	3.997	65	475	0.04	ppb(v#	82
4) Propene	4.052	41	671	0.05	ppb(v#	21
5) Chlorotrifluoroethene	4.052	116	1048	0.04	ppb(v#	88
6) Dichlorodifluoromethane	4.107	85	2275	0.04	ppb(v#	94
7) 1-Chloro-1,1-difluoroethane	4.211	65	1584	0.04	ppb(v#	24
8) Chloromethane	4.229	50	755	0.04	ppb(v	98
9) Dichlorotetrafluoroethane	4.296	85	2143	0.04	ppb(v	97
10) Vinyl Chloride	4.388	62	676	0.04	ppb(v#	91
11) 1,3-Butadiene	4.486	54	493	0.04	ppb(v#	71
13) Bromomethane	4.706	94	873	0.05	ppb(v#	78
15) Dichlorofluoromethane	4.902	67	1829	0.05	ppb(v#	94
17) Freon 123	5.208	83	1708	0.04	ppb(v#	92
18) Freon 123A	5.251	117	807	0.04	ppb(v	97
19) Bromoethene	5.098	106	603	0.04	ppb(v#	84
21) Trichlorofluoromethane	5.422	101	2122	0.04	ppb(v	92
23) Pentane	5.691	57	132	0.03	ppb(v	91
24) Iodomethane	5.893	142	2160	0.04	ppb(v	94
26) 1,1-Dichloroethene	5.948	61	1375	0.04	ppb(v	92
27) Freon 113	6.272	101	1874	0.04	ppb(v	92
29) Carbon Disulfide	6.315	76	2143	0.04	ppb(v#	74
32) 3-Chloropropene	6.150	76	328	0.04	ppb(v#	90
33) trans-1,2-Dichloroethene	6.890	61	1196	0.04	ppb(v	95
35) Methyl tert-Butyl Ether	7.196	73	2250	0.04	ppb(v	95
37) 1,1-Dichloroethane	7.092	63	1611	0.04	ppb(v#	96
39) Hexane	8.108	57	1258	0.04	ppb(v#	80
40) cis-1,2-Dichloroethene	7.918	61	1149	0.04	ppb(v	90
41) Di-isopropyl Ether	8.151	87	540	0.04	ppb(v#	72
44) Chloroform	8.218	83	1961	0.05	ppb(v#	90
45) 2,4-Dimethylpentane	9.038	57	1465	0.04	ppb(v	90
47) 1,1,1-Trichloroethane	9.252	97	1994	0.05	ppb(v#	94
48) 1,2-Dichloroethane	9.001	62	1168	0.05	ppb(v#	82
49) Benzene	9.772	78	2742	0.05	ppb(v	96
50) Carbon Tetrachloride	9.937	117	1821	0.04	ppb(v	93
51) Cyclohexane	10.059	56	1233	0.04	ppb(v#	89
52) 2,3-Dimethylpentane	10.328	71	464	0.04	ppb(v#	77
54) 2,2,4-Trimethylpentane	11.014	57	4113	0.04	ppb(v	94
55) Heptane	11.356	71	721	0.04	ppb(v#	86
56) Trichloroethene	10.995	95	1343	0.05	ppb(v	96
57) 1,2-Dichloropropane	10.720	63	871	0.04	ppb(v#	90
58) Dibromomethane	10.702	174	1196	0.05	ppb(v	94
62) Bromodichloromethane	10.959	83	1881	0.05	ppb(v#	89
63) cis-1,3-Dichloropropene	12.078	75	1225	0.04	ppb(v#	76
65) trans-1,3-Dichloropropene	12.763	75	978	0.04	ppb(v#	72
66) Toluene	13.296	91	3485	0.06	ppb(v	95
67) 1,1,2-Trichloroethane	12.953	97	855	0.04	ppb(v#	79
68) 1,3-Dichloropropane	13.351	76	1119	0.04	ppb(v#	93
71) Dibromochloromethane	13.846	129	1304	0.04	ppb(v#	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39823.D
 Acq On : 23 Dec 2019 2:56 pm
 Operator : danat
 Sample : ic1620-0.04
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 24 10:51:29 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 17:55:57 2019
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	Tetrachloroethene	14.788	166	1465	0.05	ppb(v	92
73)	1,2-Dibromoethane	14.164	107	1410	0.05	ppb(v#	89
74)	Octane	14.629	43	1792	0.04	ppb(v	91
75)	1,1,1,2-Tetrachloroethane	15.706	131	1225	0.04	ppb(v#	1
77)	Chlorobenzene	15.718	112	1733	0.06	ppb(v	93
80)	Styrene	17.076	104	848	0.04	ppb(v#	86
81)	Nonane	17.590	43	1690	0.05	ppb(v#	93
83)	Bromoform	16.617	173	961	0.05	ppb(v#	94
84)	1,1,2,2-Tetrachloroethane	17.223	83	1867	0.05	ppb(v#	94
85)	1,2,3-Trichloropropane	17.425	75	1222	0.05	ppb(v	92
86)	Isopropylbenzene	18.116	105	3264	0.05	ppb(v	99
87)	Bromobenzene	18.220	156	558	0.05	ppb(v	91
88)	2-Chlorotoluene	18.857	126	538	0.04	ppb(v#	92
89)	n-Propylbenzene	18.936	120	400	0.03	ppb(v	97
92)	1,3,5-Trimethylbenzene	19.285	105	2395	0.05	ppb(v	88
93)	alpha-Methylstyrene	19.536	118	463	0.03	ppb(v	82
94)	tert-Butylbenzene	19.860	134	523	0.05	ppb(v	75
95)	1,2,4-Trimethylbenzene	19.890	105	1901	0.05	ppb(v#	84
96)	1,3-Dichlorobenzene	20.098	146	620	0.04	ppb(v#	80
98)	1,4-Dichlorobenzene	20.202	146	504	0.04	ppb(v#	60
99)	sec-Butylbenzene	20.270	134	467	0.04	ppb(v#	82
100)	p-Isopropyltoluene	20.508	134	476	0.04	ppb(v	82
101)	1,2-Dichlorobenzene	20.661	146	685	0.04	ppb(v#	92
103)	Hexachloroethane	21.554	201	972	0.05	ppb(v	88
104)	1,2,4-Trichlorobenzene	22.931	180	173	0.05	ppb(v#	72
105)	Naphthalene	23.072	128	381	0.04	ppb(v#	69
106)	Hexachlorobutadiene	23.488	225	1065	0.06	ppb(v	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

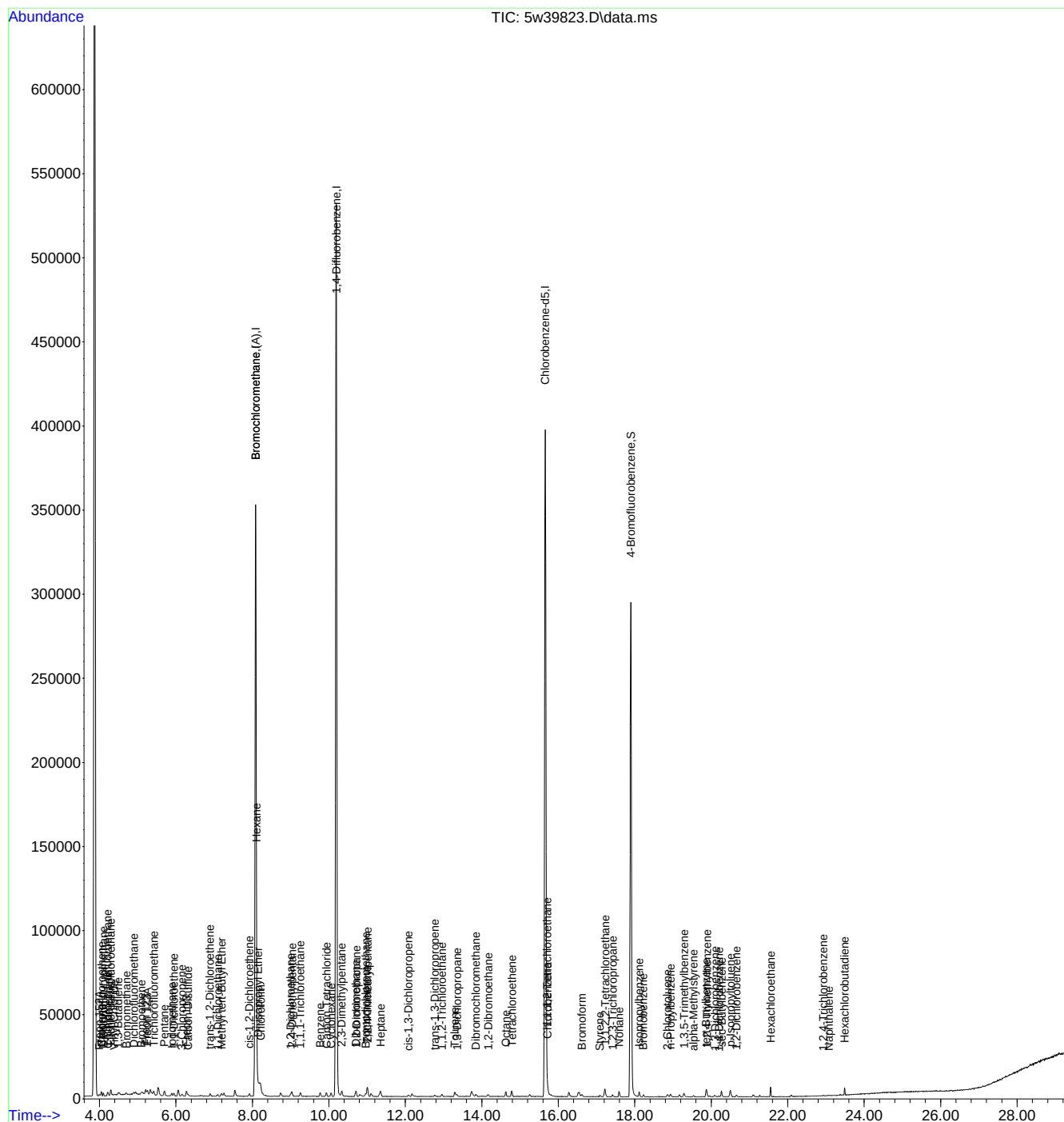
7.7.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39823.D
Acq On : 23 Dec 2019 2:56 pm
Operator : danat
Sample : ic1620-0.04
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 24 10:51:29 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 17:55:57 2019
Response via : Initial Calibration



7.7.2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39824.D
 Acq On : 23 Dec 2019 3:47 pm
 Operator : danat
 Sample : ic1620-5
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 16:25:04 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 09:19:08 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	153924	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	550627	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	227389	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	153924	10.00	ppb(v	0.00

System Monitoring Compounds

90) 4-Bromofluorobenzene	17.896	95	212378	10.32	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	103.20%

Target Compounds					Qvalue	
2) Freon 152A	3.991	65	60990	4.39	ppb(v	98
3) Chlorodifluoromethane	4.027	67	25555	4.27	ppb(v	98
4) Propene	4.046	41	74249	3.99	ppb(v	100
5) Chlorotrifluoroethene	4.052	116	125650	4.55	ppb(v#	89
6) Dichlorodifluoromethane	4.101	85	256196	4.35	ppb(v	98
7) 1-Chloro-1,1-difluoro...	4.205	65	183070	4.11	ppb(v	99
8) Chloromethane	4.223	50	85396	3.90	ppb(v	99
9) Dichlorotetrafluoroethane	4.290	85	241495	4.07	ppb(v	98
10) Vinyl Chloride	4.388	62	84135	3.81	ppb(v	100
11) 1,3-Butadiene	4.486	54	56387	3.66	ppb(v	99
12) n-Butane	4.523	58	12828	3.73	ppb(v	77
13) Bromomethane	4.694	94	84109	3.98	ppb(v	100
14) Chloroethane	4.817	64	38194	3.73	ppb(v	98
15) Dichlorofluoromethane	4.890	67	193508	3.88	ppb(v	100
16) Acetonitrile	5.104	41	58496	3.60	ppb(v	97
17) Freon 123	5.208	83	195961	3.90	ppb(v	99
18) Freon 123A	5.251	117	103862	4.05	ppb(v	94
19) Bromoethene	5.092	106	76447	4.06	ppb(v	100
20) Acrolein	5.190	56	33236	3.62	ppb(v	95
21) Trichlorofluoromethane	5.416	101	244282	4.52	ppb(v	100
22) Acetone	5.306	58	33144	3.78	ppb(v	100
23) Pentane	5.691	57	25281	4.24	ppb(v	93
24) Iodomethane	5.887	142	255669	4.82	ppb(v	97
25) Isopropyl Alcohol	5.508	43	34149	3.79	ppb(v	85
26) 1,1-Dichloroethene	5.948	61	163709	4.36	ppb(v	96
27) Freon 113	6.273	101	211433	4.63	ppb(v	98
28) Methylene Chloride	6.059	84	88384	4.42	ppb(v	95
29) Carbon Disulfide	6.309	76	266385	4.60	ppb(v	100
30) Ethanol	4.933	45	31127	3.79	ppb(v	99
31) Acrylonitrile	5.685	53	78322	4.48	ppb(v	99
32) 3-Chloropropene	6.156	76	46011	4.63	ppb(v	85
33) trans-1,2-Dichloroethene	6.891	61	145221	4.43	ppb(v	95
34) tert-Butyl Alcohol	6.010	59	199546	4.38	ppb(v	98
35) Methyl tert-Butyl Ether	7.154	73	266123	4.48	ppb(v	99
36) Vinyl Acetate	7.239	43	266353	4.21	ppb(v	97
37) 1,1-Dichloroethane	7.086	63	185019	4.39	ppb(v	99
38) 2-Butanone	7.496	72	44158	4.75	ppb(v	92
39) Hexane	8.096	57	150653	4.33	ppb(v	97
40) cis-1,2-Dichloroethene	7.918	61	143101	4.41	ppb(v	96
41) Di-isopropyl Ether	8.120	87	78086	4.69	ppb(v	82
42) Ethyl Acetate	8.169	61	30359	4.64	ppb(v	89
43) Methyl Acrylate	8.151	55	168769	4.58	ppb(v	99
44) Chloroform	8.218	83	210863	4.44	ppb(v	99
45) 2,4-Dimethylpentane	9.026	57	182756	4.34	ppb(v	98
46) Tetrahydrofuran	8.671	72	44292	4.61	ppb(v	93
47) 1,1,1-Trichloroethane	9.252	97	203778	4.46	ppb(v	100
48) 1,2-Dichloroethane	8.989	62	130450	4.37	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39824.D
 Acq On : 23 Dec 2019 3:47 pm
 Operator : danat
 Sample : ic1620-5
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 16:25:04 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 09:19:08 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.766	78	296830	4.51	ppb(v)	98
50) Carbon Tetrachloride	9.931	117	213892	4.60	ppb(v)	99
51) Cyclohexane	10.053	56	157344	4.34	ppb(v)	96
52) 2,3-Dimethylpentane	10.335	71	66457	4.48	ppb(v)	94
54) 2,2,4-Trimethylpentane	11.008	57	511204	4.40	ppb(v)	98
55) Heptane	11.350	71	97559	4.56	ppb(v)	96
56) Trichloroethene	10.995	95	131027	4.55	ppb(v)	95
57) 1,2-Dichloropropane	10.708	63	118328	4.46	ppb(v)	99
58) Dibromomethane	10.690	174	110699	4.84	ppb(v)	99
59) Ethyl Acrylate	10.769	55	205845	4.67	ppb(v)	99
60) Methyl Methacrylate	11.283	69	101085	4.71	ppb(v)	95
61) 1,4-Dioxane	11.044	88	60767	4.92	ppb(v)	93
62) Bromodichloromethane	10.953	83	223762	4.52	ppb(v)	99
63) cis-1,3-Dichloropropene	12.060	75	155389	4.62	ppb(v)	98
64) 4-Methyl-2-pentanone	12.121	58	91932	4.67	ppb(v)	96
65) trans-1,3-Dichloropropene	12.733	75	122096	4.58	ppb(v)	99
66) Toluene	13.284	91	325217	4.64	ppb(v)	100
67) 1,1,2-Trichloroethane	12.941	97	109595	4.67	ppb(v)	98
68) 1,3-Dichloropropane	13.332	76	141677	4.58	ppb(v)	95
69) 2-Hexanone	13.675	58	101212	4.91	ppb(v)	95
70) Ethyl Methacrylate	13.712	69	156960	4.82	ppb(v)	99
71) Dibromochloromethane	13.834	129	184941	4.77	ppb(v)	99
72) Tetrachloroethene	14.776	166	155390	4.82	ppb(v)	99
73) 1,2-Dibromoethane	14.146	107	137796	4.60	ppb(v)	96
74) Octane	14.623	43	245502	4.25	ppb(v)	95
75) 1,1,1,2-Tetrachloroethane	15.700	131	152366	4.78	ppb(v)	99
77) Chlorobenzene	15.718	112	207397	5.17	ppb(v)	96
78) Ethylbenzene	16.263	91	382481	5.08	ppb(v)	99
79) m,p-Xylene	16.514	91	573167	9.95	ppb(v)	98
80) Styrene	17.058	104	168736	5.36	ppb(v)	99
81) Nonane	17.590	43	245466	4.65	ppb(v)	96
82) o-Xylene	17.205	91	311505	4.91	ppb(v)	98
83) Bromoform	16.605	173	128181	5.27	ppb(v)	100
84) 1,1,2,2-Tetrachloroethane	17.211	83	223382	4.97	ppb(v)	99
85) 1,2,3-Trichloropropane	17.401	75	145908	4.93	ppb(v)	99
86) Isopropylbenzene	18.110	105	450401	5.09	ppb(v)	99
87) Bromobenzene	18.214	156	81418	5.22	ppb(v)	96
88) 2-Chlorotoluene	18.838	126	84983	5.32	ppb(v)	92
89) n-Propylbenzene	18.918	120	93906	5.36	ppb(v)	98
91) 4-Ethyltoluene	19.150	105	322927	5.31	ppb(v)	99
92) 1,3,5-Trimethylbenzene	19.279	105	338346	5.22	ppb(v)	99
93) alpha-Methylstyrene	19.517	118	117486	5.46	ppb(v)	99
94) tert-Butylbenzene	19.866	134	78222	5.21	ppb(v)	98
95) 1,2,4-Trimethylbenzene	19.878	105	299148	5.30	ppb(v)	97
96) 1,3-Dichlorobenzene	20.068	146	101723	5.08	ppb(v)	99
97) Benzyl Chloride	20.068	91	101589	5.08	ppb(v)	99
98) 1,4-Dichlorobenzene	20.172	146	85962	5.08	ppb(v)	99
99) sec-Butylbenzene	20.264	134	93355	5.47	ppb(v)	97
100) p-Isopropyltoluene	20.502	134	99986	5.70	ppb(v)	98
101) 1,2-Dichlorobenzene	20.649	146	111688	5.39	ppb(v)	100
102) n-Butylbenzene	21.084	134	64073	6.05	ppb(v)	94
103) Hexachloroethane	21.555	201	128870	5.39	ppb(v)	94
104) 1,2,4-Trichlorobenzene	22.907	180	24661	4.39	ppb(v)	98
105) Naphthalene	23.035	128	64342	4.41	ppb(v)	100
106) Hexachlorobutadiene	23.488	225	128434	5.37	ppb(v)	99
108) TVHC as equiv Pentane	5.691	TIC	638424	4.12	ppb(v)	100

7.7.3
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39824.D
Acq On : 23 Dec 2019 3:47 pm
Operator : danat
Sample : ic1620-5
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 16:25:04 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 09:19:08 2019
Response via : Initial Calibration

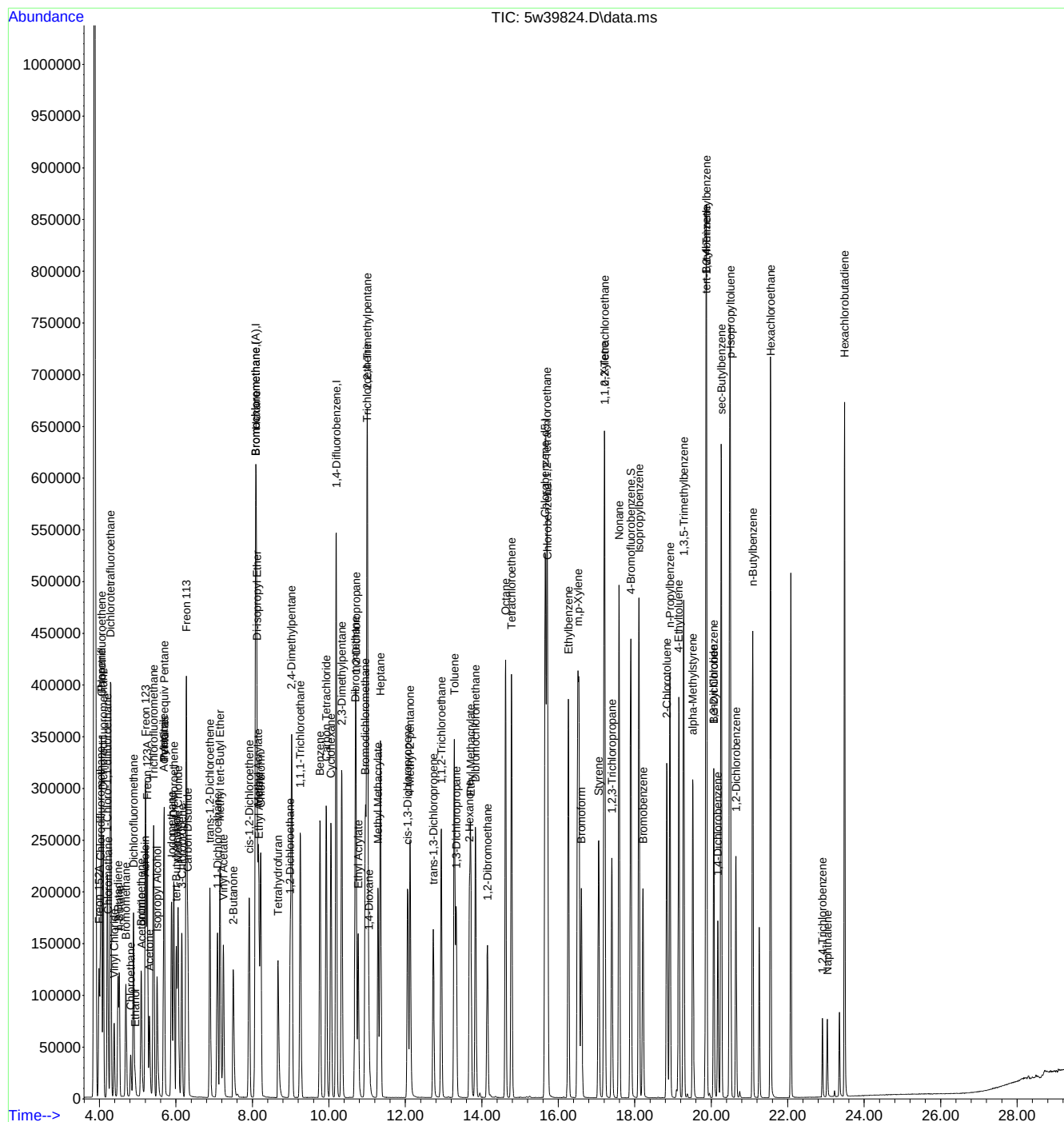
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 5w39824.D  
Acq On : 23 Dec 2019 3:47 pm  
Operator : danat  
Sample : ic1620-5  
Misc : ms39671,v5w1620,,,,,1  
ALS Vial : 3 Sample Multiplier: 1
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Quant Time: Dec 23 16:25:04 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 09:19:08 2019
Response via : Initial Calibration



7.7.3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39825.D
 Acq On : 23 Dec 2019 4:32 pm
 Operator : danat
 Sample : icc1620-10
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:06:30 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 16:30:33 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	145464	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	522148	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	237353	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	145464	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	221646	11.04	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	110.40%	
Target Compounds						
					Qvalue	
2) Freon 152A	3.984	65	116468	10.44	ppb(v	97
3) Chlorodifluoromethane	4.021	67	48719	11.19	ppb(v	99
4) Propene	4.040	41	140116	9.99	ppb(v	100
5) Chlorotrifluoroethene	4.046	116	238208	10.03	ppb(v#	89
6) Dichlorodifluoromethane	4.095	85	482079	10.03	ppb(v	99
7) 1-Chloro-1,1-difluoro...	4.199	65	343494	9.91	ppb(v	99
8) Chloromethane	4.217	50	160106	9.96	ppb(v	99
9) Dichlorotetrafluoroethane	4.290	85	448148	9.93	ppb(v	96
10) Vinyl Chloride	4.382	62	158523	10.15	ppb(v	100
11) 1,3-Butadiene	4.480	54	104770	9.79	ppb(v	98
12) n-Butane	4.517	58	23074	10.15	ppb(v	96
13) Bromomethane	4.688	94	156002	9.75	ppb(v	98
14) Chloroethane	4.816	64	72471	10.07	ppb(v	98
15) Dichlorofluoromethane	4.884	67	354251	9.75	ppb(v	99
16) Acetonitrile	5.098	41	103960	7.44	ppb(v	98
17) Freon 123	5.202	83	357736	9.58	ppb(v	100
18) Freon 123A	5.245	117	189963	9.68	ppb(v	95
19) Bromoethene	5.086	106	141412	9.96	ppb(v	99
20) Acrolein	5.190	56	60192	8.88	ppb(v	96
21) Trichlorofluoromethane	5.410	101	449247	9.71	ppb(v	99
22) Acetone	5.300	58	60369	8.41	ppb(v	97
23) Pentane	5.685	57	47138	9.98	ppb(v	95
24) Iodomethane	5.881	142	477275	10.19	ppb(v	97
25) Isopropyl Alcohol	5.508	43	62108	7.29	ppb(v	99
26) 1,1-Dichloroethene	5.942	61	296014	9.68	ppb(v	96
27) Freon 113	6.266	101	385547	9.59	ppb(v	96
28) Methylene Chloride	6.052	84	162739	8.83	ppb(v	93
29) Carbon Disulfide	6.309	76	492553	10.56	ppb(v	100
30) Ethanol	4.927	45	58392	6.55	ppb(v	99
31) Acrylonitrile	5.679	53	146343	9.41	ppb(v	100
32) 3-Chloropropene	6.150	76	86043	10.85	ppb(v	84
33) trans-1,2-Dichloroethene	6.884	61	267934	10.15	ppb(v	95
34) tert-Butyl Alcohol	6.009	59	369919	9.74	ppb(v	98
35) Methyl tert-Butyl Ether	7.147	73	492592	10.10	ppb(v	98
36) Vinyl Acetate	7.239	43	495258	9.66	ppb(v	97
37) 1,1-Dichloroethane	7.080	63	338354	9.77	ppb(v	100
38) 2-Butanone	7.490	72	82700	9.98	ppb(v	89
39) Hexane	8.089	57	277444	10.12	ppb(v	95
40) cis-1,2-Dichloroethene	7.912	61	264054	9.99	ppb(v	95
41) Di-isopropyl Ether	8.114	87	143653	10.24	ppb(v	81
42) Ethyl Acetate	8.163	61	56386	10.45	ppb(v	82
43) Methyl Acrylate	8.151	55	308603	9.68	ppb(v	98
44) Chloroform	8.218	83	385013	9.64	ppb(v	99
45) 2,4-Dimethylpentane	9.025	57	337150	10.19	ppb(v	98
46) Tetrahydrofuran	8.664	72	83018	10.29	ppb(v	93
47) 1,1,1-Trichloroethane	9.252	97	372460	9.67	ppb(v	99
48) 1,2-Dichloroethane	8.989	62	240233	9.95	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39825.D
 Acq On : 23 Dec 2019 4:32 pm
 Operator : danat
 Sample : icc1620-10
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:06:30 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 16:30:33 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.766	78	544581	10.17	ppb(v)	99
50) Carbon Tetrachloride	9.931	117	394917	10.17	ppb(v)	98
51) Cyclohexane	10.053	56	286674	9.96	ppb(v)	97
52) 2,3-Dimethylpentane	10.335	71	121776	10.29	ppb(v)	96
54) 2,2,4-Trimethylpentane	11.008	57	923629	9.57	ppb(v)	99
55) Heptane	11.350	71	180005	10.34	ppb(v)	96
56) Trichloroethene	10.995	95	242860	9.78	ppb(v)	93
57) 1,2-Dichloropropane	10.708	63	215770	9.94	ppb(v)	99
58) Dibromomethane	10.689	174	207502	9.68	ppb(v)	97
59) Ethyl Acrylate	10.763	55	389814	11.03	ppb(v)	99
60) Methyl Methacrylate	11.283	69	191592	11.12	ppb(v)	93
61) 1,4-Dioxane	11.038	88	114157	10.03	ppb(v)	98
62) Bromodichloromethane	10.959	83	417174	10.36	ppb(v)	99
63) cis-1,3-Dichloropropene	12.060	75	303081	11.58	ppb(v)	99
64) 4-Methyl-2-pentanone	12.121	58	174968	11.20	ppb(v)	93
65) trans-1,3-Dichloropropene	12.733	75	248158	11.56	ppb(v)	98
66) Toluene	13.283	91	624106	10.56	ppb(v)	98
67) 1,1,2-Trichloroethane	12.941	97	211332	11.35	ppb(v)	99
68) 1,3-Dichloropropane	13.326	76	275102	11.58	ppb(v)	94
69) 2-Hexanone	13.675	58	207938	14.19	ppb(v)	93
70) Ethyl Methacrylate	13.705	69	311026	13.34	ppb(v)	99
71) Dibromochloromethane	13.840	129	367261	12.47	ppb(v)	99
72) Tetrachloroethene	14.776	166	300074	11.31	ppb(v)	98
73) 1,2-Dibromoethane	14.146	107	275917	11.34	ppb(v)	97
74) Octane	14.623	43	457580	11.08	ppb(v)	95
75) 1,1,1,2-Tetrachloroethane	15.700	131	285258	10.91	ppb(v)	98
77) Chlorobenzene	15.718	112	416812	9.69	ppb(v)	97
78) Ethylbenzene	16.263	91	753235	9.17	ppb(v)	99
79) m,p-Xylene	16.514	91	1135693	18.13	ppb(v)	98
80) Styrene	17.052	104	355390	11.98	ppb(v)	99
81) Nonane	17.590	43	451483	9.00	ppb(v)	96
82) o-Xylene	17.205	91	598545	8.16	ppb(v)	99
83) Bromoform	16.605	173	268908	10.85	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	438603	8.48	ppb(v)	99
85) 1,2,3-Trichloropropane	17.401	75	291712	8.77	ppb(v)	99
86) Isopropylbenzene	18.110	105	846257	8.94	ppb(v)	99
87) Bromobenzene	18.214	156	173466	11.08	ppb(v)	93
88) 2-Chlorotoluene	18.844	126	173148	10.67	ppb(v)	90
89) n-Propylbenzene	18.918	120	189360	11.86	ppb(v)	99
91) 4-Ethyltoluene	19.150	105	667259	12.25	ppb(v)	99
92) 1,3,5-Trimethylbenzene	19.279	105	643713	9.89	ppb(v)	99
93) alpha-Methylstyrene	19.523	118	250356	14.10	ppb(v)	99
94) tert-Butylbenzene	19.866	134	148480	9.27	ppb(v)	94
95) 1,2,4-Trimethylbenzene	19.878	105	597530	11.14	ppb(v)	98
96) 1,3-Dichlorobenzene	20.068	146	232126	13.05	ppb(v)	100
97) Benzyl Chloride	20.068	91	263179	18.38	ppb(v)	98
98) 1,4-Dichlorobenzene	20.172	146	202373	13.70	ppb(v)	99
99) sec-Butylbenzene	20.264	134	175469	9.89	ppb(v)	95
100) p-Isopropyltoluene	20.502	134	194860	11.72	ppb(v)	99
101) 1,2-Dichlorobenzene	20.649	146	249454	12.78	ppb(v)	99
102) n-Butylbenzene	21.083	134	140213	17.08	ppb(v)	91
103) Hexachloroethane	21.554	201	251006	8.96	ppb(v)	93
104) 1,2,4-Trichlorobenzene	22.907	180	65879	17.43	ppb(v)	99
105) Naphthalene	23.029	128	178511	15.38	ppb(v)	100
106) Hexachlorobutadiene	23.488	225	251002	10.57	ppb(v)	99
108) TVHC as equiv Pentane	5.685	TIC	1189514	9.45	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39825.D
Acq On : 23 Dec 2019 4:32 pm
Operator : danat
Sample : icc1620-10
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:06:30 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 16:30:33 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

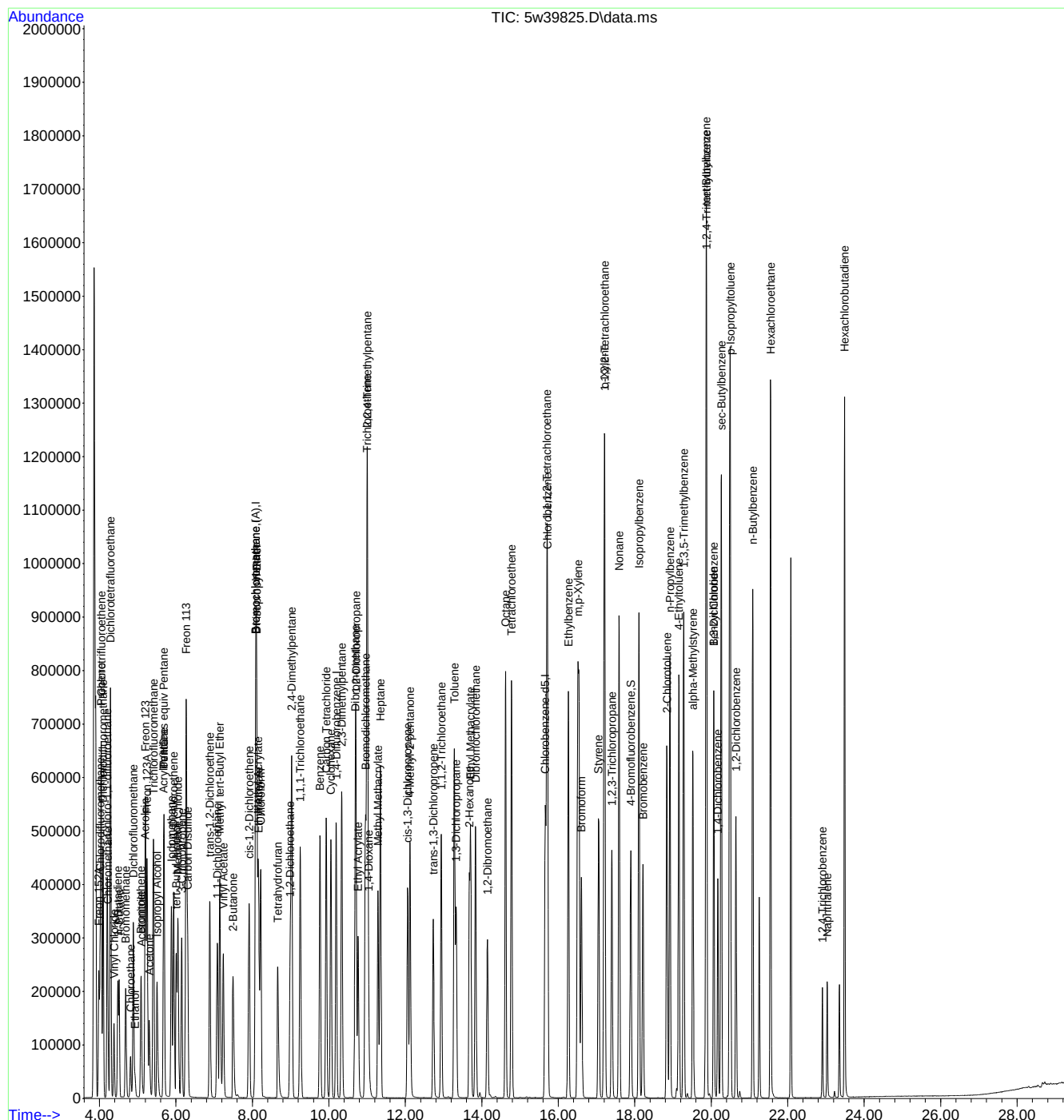
7.7.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39825.D
Acq On : 23 Dec 2019 4:32 pm
Operator : danat
Sample : icc1620-10
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:06:30 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 16:30:33 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39826.D
 Acq On : 23 Dec 2019 5:20 pm
 Operator : danat
 Sample : ic1620-20
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:54:39 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 17:10:50 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.090	130	143063	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.200	114	527763	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.663	82	265874	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.090	130	143063	10.00	ppb(v	0.00

System Monitoring Compounds
 90) 4-Bromofluorobenzene 17.896 95 245259 10.68 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 106.80%

Target Compounds					Qvalue
2) Freon 152A	3.991	65	225407	20.36	ppb(v 100
3) Chlorodifluoromethane	4.027	67	94356	21.52	ppb(v 99
4) Propene	4.046	41	268343	19.45	ppb(v 99
5) Chlorotrifluoroethene	4.052	116	467276	20.00	ppb(v 99
6) Dichlorodifluoromethane	4.101	85	940173	19.88	ppb(v 100
7) 1-Chloro-1,1-difluoro...	4.211	65	662399	19.47	ppb(v 100
8) Chloromethane	4.223	50	309811	19.61	ppb(v 99
9) Dichlorotetrafluoroethane	4.297	85	878717	19.83	ppb(v 100
10) Vinyl Chloride	4.388	62	310094	20.13	ppb(v 100
11) 1,3-Butadiene	4.486	54	198037	18.90	ppb(v 99
12) n-Butane	4.523	58	42350	18.89	ppb(v 93
13) Bromomethane	4.694	94	299932	19.15	ppb(v 99
14) Chloroethane	4.823	64	138635	19.56	ppb(v 98
15) Dichlorofluoromethane	4.890	67	673962	18.96	ppb(v 100
16) Acetonitrile	5.110	41	200740	15.61	ppb(v 98
17) Freon 123	5.208	83	669976	18.39	ppb(v 99
18) Freon 123A	5.257	117	361220	18.84	ppb(v 95
19) Bromoethene	5.092	106	274675	19.69	ppb(v 99
20) Acrolein	5.196	56	113432	17.51	ppb(v 100
21) Trichlorofluoromethane	5.422	101	854064	18.87	ppb(v 99
22) Acetone	5.306	58	113544	16.75	ppb(v 99
23) Pentane	5.698	57	88530	19.06	ppb(v 95
24) Iodomethane	5.893	142	916826	19.82	ppb(v 100
25) Isopropyl Alcohol	5.520	43	114239	14.63	ppb(v 99
26) 1,1-Dichloroethene	5.948	61	567602	19.00	ppb(v 99
27) Freon 113	6.273	101	736038	18.77	ppb(v 99
28) Methylene Chloride	6.065	84	308876	17.45	ppb(v 99
29) Carbon Disulfide	6.315	76	939442	20.25	ppb(v 100
30) Ethanol	4.939	45	111952	14.43	ppb(v 99
31) Acrylonitrile	5.685	53	275012	18.25	ppb(v 100
32) 3-Chloropropene	6.156	76	162673	20.51	ppb(v 98
33) trans-1,2-Dichloroethene	6.897	61	514202	19.75	ppb(v 99
34) tert-Butyl Alcohol	6.022	59	718017	19.35	ppb(v 99
35) Methyl tert-Butyl Ether	7.154	73	943961	19.64	ppb(v 100
36) Vinyl Acetate	7.245	43	941048	18.83	ppb(v 100
37) 1,1-Dichloroethane	7.092	63	637799	18.82	ppb(v 99
38) 2-Butanone	7.496	72	161357	19.81	ppb(v 95
39) Hexane	8.096	57	519079	19.20	ppb(v 99
40) cis-1,2-Dichloroethene	7.918	61	504087	19.40	ppb(v 99
41) Di-isopropyl Ether	8.120	87	273819	19.76	ppb(v 97
42) Ethyl Acetate	8.169	61	106485	19.84	ppb(v 95
43) Methyl Acrylate	8.157	55	586264	18.85	ppb(v 100
44) Chloroform	8.224	83	728605	18.68	ppb(v 99
45) 2,4-Dimethylpentane	9.032	57	632408	19.36	ppb(v 100
46) Tetrahydrofuran	8.665	72	161618	20.23	ppb(v 98
47) 1,1,1-Trichloroethane	9.258	97	712407	18.92	ppb(v 100
48) 1,2-Dichloroethane	8.995	62	457931	19.30	ppb(v 100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39826.D
 Acq On : 23 Dec 2019 5:20 pm
 Operator : danat
 Sample : ic1620-20
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:54:39 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 17:10:50 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.778	78	1053432	19.93	ppb(v)	99
50) Carbon Tetrachloride	9.937	117	757945	19.78	ppb(v)	100
51) Cyclohexane	10.059	56	545940	19.30	ppb(v)	98
52) 2,3-Dimethylpentane	10.341	71	230449	19.68	ppb(v)	98
54) 2,2,4-Trimethylpentane	11.014	57	1713341	17.71	ppb(v)	100
55) Heptane	11.356	71	340265	19.20	ppb(v)	99
56) Trichloroethene	11.002	95	471561	18.87	ppb(v)	99
57) 1,2-Dichloropropane	10.714	63	412715	18.83	ppb(v)	100
58) Dibromomethane	10.702	174	410988	19.09	ppb(v)	96
59) Ethyl Acrylate	10.769	55	771012	21.04	ppb(v)	100
60) Methyl Methacrylate	11.289	69	376929	21.05	ppb(v)	98
61) 1,4-Dioxane	11.044	88	222117	19.30	ppb(v)	99
62) Bromodichloromethane	10.965	83	815051	19.88	ppb(v)	99
63) cis-1,3-Dichloropropene	12.066	75	616524	22.59	ppb(v)	99
64) 4-Methyl-2-pentanone	12.127	58	338052	20.79	ppb(v)	97
65) trans-1,3-Dichloropropene	12.739	75	513372	22.95	ppb(v)	100
66) Toluene	13.290	91	1235648	20.45	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	423243	21.90	ppb(v)	99
68) 1,3-Dichloropropane	13.332	76	557658	22.51	ppb(v)	99
69) 2-Hexanone	13.675	58	423163	25.86	ppb(v)	99
70) Ethyl Methacrylate	13.712	69	604497	23.67	ppb(v)	99
71) Dibromochloromethane	13.840	129	744187	23.82	ppb(v)	100
72) Tetrachloroethene	14.782	166	586717	21.32	ppb(v)	99
73) 1,2-Dibromoethane	14.152	107	573462	22.70	ppb(v)	99
74) Octane	14.623	43	858272	20.13	ppb(v)	99
75) 1,1,1,2-Tetrachloroethane	15.706	131	556537	20.68	ppb(v)	98
77) Chlorobenzene	15.724	112	861643	17.99	ppb(v)	100
78) Ethylbenzene	16.269	91	1488996	16.45	ppb(v)	100
79) m,p-Xylene	16.544	91	2261301	32.84	ppb(v)	99
80) Styrene	17.058	104	757344	21.92	ppb(v)	100
81) Nonane	17.596	43	847784	15.39	ppb(v)	100
82) o-Xylene	17.211	91	1159691	14.66	ppb(v)	100
83) Bromoform	16.612	173	582717	20.63	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.217	83	886122	15.78	ppb(v)	99
85) 1,2,3-Trichloropropane	17.407	75	605691	16.66	ppb(v)	98
86) Isopropylbenzene	18.116	105	1641332	15.82	ppb(v)	99
87) Bromobenzene	18.220	156	381093	21.27	ppb(v)	98
88) 2-Chlorotoluene	18.845	126	355259	19.29	ppb(v)	99
89) n-Propylbenzene	18.924	120	395352	21.31	ppb(v)	91
91) 4-Ethyltoluene	19.157	105	1379121	21.63	ppb(v)	99
92) 1,3,5-Trimethylbenzene	19.285	105	1282622	17.64	ppb(v)	99
93) alpha-Methylstyrene	19.524	118	564263	26.22	ppb(v)	100
94) tert-Butylbenzene	19.872	134	282808	16.00	ppb(v)	99
95) 1,2,4-Trimethylbenzene	19.884	105	1203971	19.59	ppb(v)	91
96) 1,3-Dichlorobenzene	20.074	146	565700	26.76	ppb(v)	98
97) Benzyl Chloride	20.068	91	668765	35.72	ppb(v)	99
98) 1,4-Dichlorobenzene	20.178	146	517712	29.13	ppb(v)	99
99) sec-Butylbenzene	20.264	134	349945	17.65	ppb(v)	98
100) p-Isopropyltoluene	20.509	134	379684	19.71	ppb(v)	96
101) 1,2-Dichlorobenzene	20.649	146	586294	25.40	ppb(v)	99
102) n-Butylbenzene	21.090	134	298390	28.42	ppb(v)	91
103) Hexachloroethane	21.555	201	502910	16.37	ppb(v)	98
104) 1,2,4-Trichlorobenzene	22.907	180	185702	38.18	ppb(v)	99
105) Naphthalene	23.035	128	488053	33.89	ppb(v)	99
106) Hexachlorobutadiene	23.488	225	502006	18.66	ppb(v)	99
108) TVHC as equiv Pentane	5.691	TIC	2209421	18.10	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39826.D
Acq On : 23 Dec 2019 5:20 pm
Operator : danat
Sample : ic1620-20
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:54:39 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 17:10:50 2019
Response via : Initial Calibration

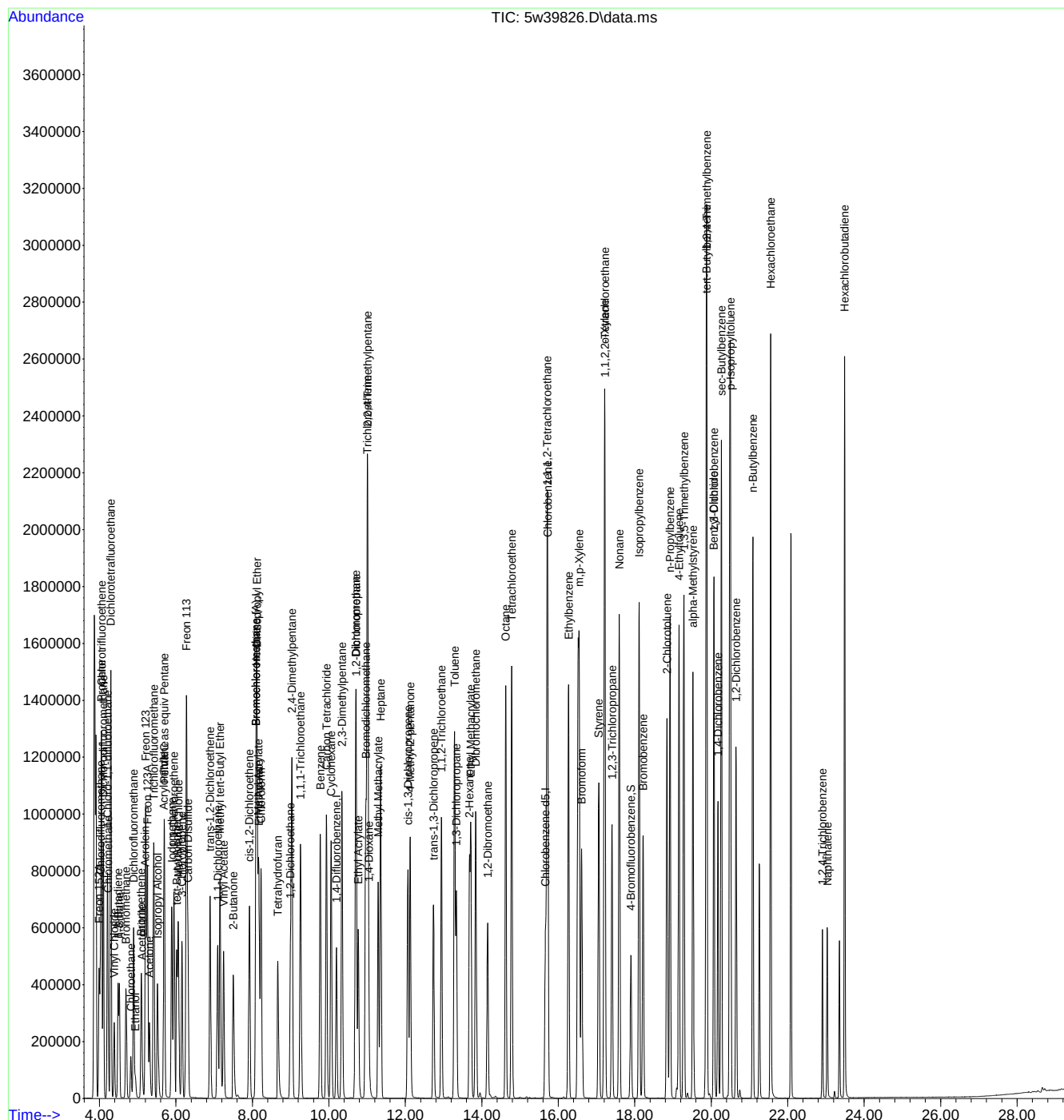
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)= qualifier out of range (m)= manual integration (+)= signals summed						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39826.D
Acq On : 23 Dec 2019 5:20 pm
Operator : danat
Sample : ic1620-20
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 23 17:54:39 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 17:10:50 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39827.D
 Acq On : 23 Dec 2019 6:11 pm
 Operator : danat
 Sample : ic1620-40
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 08:53:52 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 17:55:57 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.096	130	142724	10.00	ppb(v	0.01
53) 1,4-Difluorobenzene	10.200	114	521741	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.669	82	298244	10.00	ppb(v	0.01
107) Bromochloromethane (A)	8.096	130	142724	10.00	ppb(v	0.01

System Monitoring Compounds
 90) 4-Bromofluorobenzene 17.902 95 270635 10.39 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 103.90%

Target Compounds					Qvalue
2) Freon 152A	3.991	65	445121	40.19	ppb(v 99
3) Chlorodifluoromethane	4.021	67	185624	41.91	ppb(v 98
4) Propene	4.046	41	508500	37.12	ppb(v 99
5) Chlorotrifluoroethene	4.052	116	910132	39.04	ppb(v 100
6) Dichlorodifluoromethane	4.101	85	1795532	38.09	ppb(v 99
7) 1-Chloro-1,1-difluoro...	4.205	65	1252548	37.06	ppb(v 100
8) Chloromethane	4.223	50	573848	36.52	ppb(v 100
9) Dichlorotetrafluoroethane	4.296	85	1591303	36.05	ppb(v 97
10) Vinyl Chloride	4.388	62	567823	36.90	ppb(v 100
11) 1,3-Butadiene	4.486	54	367434	35.48	ppb(v 98
12) n-Butane	4.523	58	77529	34.98	ppb(v 94
13) Bromomethane	4.694	94	555659	35.82	ppb(v 100
14) Chloroethane	4.823	64	256884	36.46	ppb(v 99
15) Dichlorofluoromethane	4.890	67	1235987	35.16	ppb(v 100
16) Acetonitrile	5.110	41	372755	30.38	ppb(v 98
17) Freon 123	5.208	83	1182058	32.97	ppb(v 99
18) Freon 123A	5.251	117	661239	34.90	ppb(v 95
19) Bromoethene	5.092	106	514747	37.08	ppb(v 100
20) Acrolein	5.196	56	201893	32.04	ppb(v 99
21) Trichlorofluoromethane	5.416	101	1615855	36.13	ppb(v 99
22) Acetone	5.306	58	211149	32.27	ppb(v 97
23) Pentane	5.691	57	166586	36.24	ppb(v 91
24) Iodomethane	5.887	142	1741562	37.80	ppb(v 98
25) Isopropyl Alcohol	5.520	43	214670	29.13	ppb(v 98
26) 1,1-Dichloroethene	5.948	61	1060061	35.87	ppb(v 98
27) Freon 113	6.272	101	1380123	35.64	ppb(v 98
28) Methylene Chloride	6.064	84	586133	33.91	ppb(v 97
29) Carbon Disulfide	6.315	76	1781690	38.42	ppb(v 100
30) Ethanol	4.939	45	206843	28.72	ppb(v 99
31) Acrylonitrile	5.685	53	516821	35.00	ppb(v 99
32) 3-Chloropropene	6.156	76	314288	39.55	ppb(v 97
33) trans-1,2-Dichloroethene	6.896	61	976399	37.67	ppb(v 98
34) tert-Butyl Alcohol	6.022	59	1359008	36.95	ppb(v 98
35) Methyl tert-Butyl Ether	7.153	73	1802348	37.71	ppb(v 99
36) Vinyl Acetate	7.245	43	1798756	36.51	ppb(v 99
37) 1,1-Dichloroethane	7.092	63	1224474	36.57	ppb(v 99
38) 2-Butanone	7.502	72	308358	38.01	ppb(v 89
39) Hexane	8.096	57	974489	36.37	ppb(v 97
40) cis-1,2-Dichloroethene	7.924	61	957390	37.11	ppb(v 99
41) Di-isopropyl Ether	8.126	87	526352	38.14	ppb(v 88
42) Ethyl Acetate	8.175	61	203018	37.97	ppb(v 99
43) Methyl Acrylate	8.163	55	1095045	35.70	ppb(v 99
44) Chloroform	8.230	83	1371917	35.65	ppb(v 99
45) 2,4-Dimethylpentane	9.032	57	1190598	36.73	ppb(v 99
46) Tetrahydrofuran	8.665	72	312689	39.14	ppb(v 96
47) 1,1,1-Trichloroethane	9.264	97	1366323	36.71	ppb(v 99
48) 1,2-Dichloroethane	9.001	62	870553	36.99	ppb(v 99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39827.D
 Acq On : 23 Dec 2019 6:11 pm
 Operator : danat
 Sample : ic1620-40
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 08:53:52 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Dec 23 17:55:57 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.778	78	2039415	38.70	ppb(v)	99
50) Carbon Tetrachloride	9.943	117	1452443	38.06	ppb(v)	99
51) Cyclohexane	10.059	56	1032987	36.82	ppb(v)	98
52) 2,3-Dimethylpentane	10.347	71	437927	37.60	ppb(v)	97
54) 2,2,4-Trimethylpentane	11.020	57	3006877	32.05	ppb(v)	99
55) Heptane	11.362	71	635763	36.53	ppb(v)	98
56) Trichloroethene	11.008	95	874236	35.72	ppb(v)	99
57) 1,2-Dichloropropane	10.720	63	768092	35.80	ppb(v)	99
58) Dibromomethane	10.702	174	808856	38.30	ppb(v)	96
59) Ethyl Acrylate	10.775	55	1483010	40.52	ppb(v)	99
60) Methyl Methacrylate	11.295	69	720013	40.25	ppb(v)	96
61) 1,4-Dioxane	11.044	88	419399	37.12	ppb(v)	94
62) Bromodichloromethane	10.971	83	1544788	38.15	ppb(v)	100
63) cis-1,3-Dichloropropene	12.072	75	1204549	43.71	ppb(v)	98
64) 4-Methyl-2-pentanone	12.133	58	636419	39.28	ppb(v)	97
65) trans-1,3-Dichloropropene	12.739	75	1040749	45.94	ppb(v)	100
66) Toluene	13.289	91	2347722	39.15	ppb(v)	100
67) 1,1,2-Trichloroethane	12.947	97	832567	42.89	ppb(v)	100
68) 1,3-Dichloropropane	13.338	76	1085113	43.40	ppb(v)	99
69) 2-Hexanone	13.687	58	808454	47.21	ppb(v)	97
70) Ethyl Methacrylate	13.718	69	1153139	44.06	ppb(v)	99
71) Dibromochloromethane	13.846	129	1469428	46.10	ppb(v)	99
72) Tetrachloroethene	14.788	166	1138637	41.40	ppb(v)	99
73) 1,2-Dibromoethane	14.158	107	1176216	46.07	ppb(v)	99
74) Octane	14.629	43	1555251	36.85	ppb(v)	97
75) 1,1,1,2-Tetrachloroethane	15.712	131	1047165	39.13	ppb(v)	98
77) Chlorobenzene	15.730	112	1693444	32.05	ppb(v)	100
78) Ethylbenzene	16.269	91	2922858	29.67	ppb(v)	100
79) m,p-Xylene	16.550	91	4302657	57.41	ppb(v)	99
80) Styrene	17.064	104	1555467	39.50	ppb(v)	100
81) Nonane	17.602	43	1525351	25.68	ppb(v)	98
82) o-Xylene	17.211	91	2149038	25.34	ppb(v)	99
83) Bromoform	16.618	173	1211037	38.03	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.223	83	1583031	26.05	ppb(v)	98
85) 1,2,3-Trichloropropane	17.407	75	1168429	29.48	ppb(v)	99
86) Isopropylbenzene	18.122	105	3091692	27.52	ppb(v)	99
87) Bromobenzene	18.226	156	805230	39.64	ppb(v)	96
88) 2-Chlorotoluene	18.850	126	707937	34.47	ppb(v)	97
89) n-Propylbenzene	18.930	120	773548	36.77	ppb(v)	86
91) 4-Ethyltoluene	19.162	105	2667215	36.79	ppb(v)	99
92) 1,3,5-Trimethylbenzene	19.291	105	2336415	29.21	ppb(v)	99
93) alpha-Methylstyrene	19.530	118	1079465	42.51	ppb(v)	99
94) tert-Butylbenzene	19.872	134	503041	26.25	ppb(v)	97
95) 1,2,4-Trimethylbenzene	19.890	105	2111884	30.74	ppb(v)	90
96) 1,3-Dichlorobenzene	20.080	146	1097300	43.80	ppb(v)	99
97) Benzyl Chloride	20.074	91	1284524	54.07	ppb(v)	99
98) 1,4-Dichlorobenzene	20.178	146	1014428	47.28	ppb(v)	99
99) sec-Butylbenzene	20.270	134	624535	28.64	ppb(v)	91
100) p-Isopropyltoluene	20.508	134	658523	30.55	ppb(v)	95
101) 1,2-Dichlorobenzene	20.655	146	1068600	39.50	ppb(v)	99
102) n-Butylbenzene	21.096	134	564890	44.82	ppb(v)	83
103) Hexachloroethane	21.561	201	917589	27.45	ppb(v)	94
104) 1,2,4-Trichlorobenzene	22.907	180	489820	77.97	ppb(v)	99
105) Naphthalene	23.035	128	1202309	66.71	ppb(v)	100
106) Hexachlorobutadiene	23.494	225	1016746	34.07	ppb(v)	99
108) TVHC as equiv Pentane	5.691	TIC	4131482	34.58	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39827.D
Acq On : 23 Dec 2019 6:11 pm
Operator : danat
Sample : ic1620-40
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 08:53:52 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Dec 23 17:55:57 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39831.D
 Acq On : 24 Dec 2019 9:22 am
 Operator : danat
 Sample : ic1620-0.5
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 09:54:44 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 08:58:04 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.077	130	162846	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.188	114	566819	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	194673	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.077	130	162846	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	162844	9.50	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	95.00%	
Target Compounds						
					Qvalue	
2) Freon 152A	3.991	65	6337	0.50	ppb(v	97
3) Chlorodifluoromethane	4.021	67	2666	0.52	ppb(v	97
4) Propene	4.040	41	7837	0.51	ppb(v#	92
5) Chlorotrifluoroethene	4.046	116	13179	0.50	ppb(v	98
6) Dichlorodifluoromethane	4.101	85	26514	0.50	ppb(v	100
7) 1-Chloro-1,1-difluoro...	4.205	65	18789	0.49	ppb(v#	94
8) Chloromethane	4.223	50	8774	0.49	ppb(v	96
9) Dichlorotetrafluoroethane	4.290	85	24985	0.50	ppb(v	98
10) Vinyl Chloride	4.382	62	8464	0.49	ppb(v#	98
11) 1,3-Butadiene	4.480	54	5784	0.49	ppb(v	98
12) n-Butane	4.517	58	1247	0.50	ppb(v#	79
13) Bromomethane	4.688	94	8959	0.51	ppb(v	98
14) Chloroethane	4.817	64	4123	0.52	ppb(v	96
15) Dichlorofluoromethane	4.884	67	20462	0.52	ppb(v	99
16) Acetonitrile	5.104	41	8317	0.60	ppb(v#	77
17) Freon 123	5.202	83	20816	0.52	ppb(v	98
18) Freon 123A	5.251	117	10930	0.51	ppb(v	94
19) Bromoethene	5.086	106	7959	0.51	ppb(v	99
20) Acrolein	5.202	56	3829	0.55	ppb(v#	69
21) Trichlorofluoromethane	5.416	101	25590	0.51	ppb(v	97
22) Acetone	5.312	58	4605	0.64	ppb(v	91
23) Pentane	5.691	57	2574	0.50	ppb(v	86
24) Iodomethane	5.881	142	26430	0.50	ppb(v	98
25) Isopropyl Alcohol	5.514	43	5216	0.64	ppb(v	86
26) 1,1-Dichloroethene	5.942	61	17122	0.51	ppb(v	97
27) Freon 113	6.273	101	22777	0.52	ppb(v	98
28) Methylene Chloride	6.052	84	10039	0.52	ppb(v	97
29) Carbon Disulfide	6.309	76	26706	0.51	ppb(v	98
30) Ethanol	4.933	45	5866	0.76	ppb(v	98
31) Acrylonitrile	5.685	53	9899	0.59	ppb(v	99
32) 3-Chloropropene	6.150	76	4902	0.53	ppb(v	95
33) trans-1,2-Dichloroethene	6.890	61	15561	0.53	ppb(v	99
34) tert-Butyl Alcohol	6.022	59	21935	0.53	ppb(v	95
35) Methyl tert-Butyl Ether	7.166	73	27573	0.51	ppb(v	98
36) Vinyl Acetate	7.239	43	31404	0.57	ppb(v	100
37) 1,1-Dichloroethane	7.086	63	19712	0.52	ppb(v	98
38) 2-Butanone	7.515	72	5160	0.56	ppb(v	100
39) Hexane	8.090	57	15362	0.51	ppb(v	90
40) cis-1,2-Dichloroethene	7.912	61	15408	0.53	ppb(v	99
41) Di-isopropyl Ether	8.126	87	8050	0.52	ppb(v	97
42) Ethyl Acetate	8.175	61	3282	0.53	ppb(v	97
43) Methyl Acrylate	8.163	55	19763	0.57	ppb(v	99
44) Chloroform	8.212	83	22738	0.52	ppb(v	96
45) 2,4-Dimethylpentane	9.026	57	18737	0.51	ppb(v	94
46) Tetrahydrofuran	8.701	72	4522	0.50	ppb(v	93
47) 1,1,1-Trichloroethane	9.252	97	21711	0.52	ppb(v	99
48) 1,2-Dichloroethane	8.989	62	13737	0.51	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39831.D
 Acq On : 24 Dec 2019 9:22 am
 Operator : danat
 Sample : ic1620-0.5
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 09:54:44 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 08:58:04 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.766	78	29442	0.49	ppb(v	99
50) Carbon Tetrachloride	9.931	117	21967	0.51	ppb(v	99
51) Cyclohexane	10.053	56	15781	0.50	ppb(v	99
52) 2,3-Dimethylpentane	10.335	71	6662	0.51	ppb(v	95
54) 2,2,4-Trimethylpentane	11.008	57	53144	0.54	ppb(v	98
55) Heptane	11.344	71	9432	0.51	ppb(v	98
56) Trichloroethene	10.995	95	13862	0.53	ppb(v	99
57) 1,2-Dichloropropane	10.708	63	11546	0.50	ppb(v	98
58) Dibromomethane	10.690	174	11813	0.52	ppb(v	95
59) Ethyl Acrylate	10.781	55	20539	0.51	ppb(v	99
60) Methyl Methacrylate	11.295	69	9634	0.49	ppb(v	97
61) 1,4-Dioxane	11.075	88	6377	0.52	ppb(v#	82
62) Bromodichloromethane	10.953	83	21295	0.49	ppb(v	99
63) cis-1,3-Dichloropropene	12.066	75	14371	0.47	ppb(v	99
64) 4-Methyl-2-pentanone	12.139	58	9539	0.55	ppb(v	97
65) trans-1,3-Dichloropropene	12.739	75	12250	0.48	ppb(v	97
66) Toluene	13.284	91	36778	0.57	ppb(v	99
67) 1,1,2-Trichloroethane	12.941	97	10117	0.47	ppb(v	96
68) 1,3-Dichloropropane	13.332	76	12877	0.46	ppb(v	97
69) 2-Hexanone	13.700	58	8240	0.43	ppb(v	88
70) Ethyl Methacrylate	13.718	69	12500	0.43	ppb(v	96
71) Dibromochloromethane	13.834	129	15657	0.44	ppb(v	99
72) Tetrachloroethene	14.776	166	15085	0.50	ppb(v	99
73) 1,2-Dibromoethane	14.146	107	13110	0.46	ppb(v	98
74) Octane	14.623	43	21298	0.47	ppb(v	99
75) 1,1,1,2-Tetrachloroethane	15.700	131	14711	0.50	ppb(v#	59
77) Chlorobenzene	15.718	112	17727	0.52	ppb(v	99
78) Ethylbenzene	16.269	91	29515	0.48	ppb(v	99
79) m,p-Xylene	16.514	91	46792	1.00	ppb(v	99
80) Styrene	17.064	104	12191	0.47	ppb(v	96
81) Nonane	17.590	43	21164	0.58	ppb(v	97
82) o-Xylene	17.205	91	26738	0.51	ppb(v	100
83) Bromoform	16.612	173	9717	0.46	ppb(v	98
84) 1,1,2,2-Tetrachloroethane	17.217	83	21985	0.57	ppb(v	97
85) 1,2,3-Trichloropropane	17.407	75	13858	0.55	ppb(v	97
86) Isopropylbenzene	18.110	105	40154	0.57	ppb(v	98
87) Bromobenzene	18.220	156	6641	0.49	ppb(v	95
88) 2-Chlorotoluene	18.844	126	6622	0.50	ppb(v	97
89) n-Propylbenzene	18.924	120	7148	0.52	ppb(v	86
91) 4-Ethyltoluene	19.156	105	23292	0.49	ppb(v	97
92) 1,3,5-Trimethylbenzene	19.279	105	30984	0.61	ppb(v	99
93) alpha-Methylstyrene	19.524	118	8578	0.50	ppb(v	96
94) tert-Butylbenzene	19.866	134	6735	0.56	ppb(v	94
95) 1,2,4-Trimethylbenzene	19.878	105	27353	0.61	ppb(v	99
96) 1,3-Dichlorobenzene	20.074	146	9356	0.54	ppb(v	97
97) Benzyl Chloride	20.068	91	7383	0.43	ppb(v	95
98) 1,4-Dichlorobenzene	20.178	146	8008	0.53	ppb(v	98
99) sec-Butylbenzene	20.264	134	8091	0.59	ppb(v	95
100) p-Isopropyltoluene	20.502	134	8543	0.61	ppb(v	93
101) 1,2-Dichlorobenzene	20.649	146	10145	0.54	ppb(v	97
102) n-Butylbenzene	21.090	134	4865	0.54	ppb(v	96
103) Hexachloroethane	21.549	201	10316	0.49	ppb(v	85
104) 1,2,4-Trichlorobenzene	22.913	180	4413	0.70	ppb(v	98
105) Naphthalene	23.041	128	12628	0.76	ppb(v	98
106) Hexachlorobutadiene	23.488	225	11459	0.58	ppb(v	97
108) TVHC as equiv Pentane	5.685	TIC	72658	0.55	ppb(v	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39831.D
Acq On : 24 Dec 2019 9:22 am
Operator : danat
Sample : ic1620-0.5
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 09:54:44 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 08:58:04 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)= qualifier out of range (m)= manual integration (+)= signals summed						

(QT Reviewed)

Quant Time: Dec 24 09:54:44 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 08:58:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W39832.D
 Acq On : 24 Dec 2019 10:07 am
 Operator : danat
 Sample : ic1620-0.2
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 10:38:58 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 09:55:58 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	157769	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.188	114	557412	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	179630	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	157769	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	143867	9.04	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery	=	90.40%	
Target Compounds						
					Qvalue	
2) Freon 152A	3.990	65	2558	0.21	ppb(v	97
3) Chlorodifluoromethane	4.027	67	1072	0.21	ppb(v	95
4) Propene	4.039	41	3258	0.22	ppb(v#	79
5) Chlorotrifluoroethene	4.052	116	5255	0.20	ppb(v	96
6) Dichlorodifluoromethane	4.101	85	10838	0.21	ppb(v	99
7) 1-Chloro-1,1-difluoro...	4.205	65	7911	0.21	ppb(v#	85
8) Chloromethane	4.223	50	3827	0.22	ppb(v	98
9) Dichlorotetrafluoroethane	4.290	85	10336	0.21	ppb(v	95
10) Vinyl Chloride	4.382	62	3400	0.20	ppb(v#	92
11) 1,3-Butadiene	4.486	54	2459	0.22	ppb(v	96
12) n-Butane	4.517	58	553	0.23	ppb(v#	49
13) Bromomethane	4.694	94	3730	0.22	ppb(v	98
14) Chloroethane	4.816	64	1624	0.21	ppb(v#	94
15) Dichlorofluoromethane	4.896	67	8314	0.22	ppb(v	98
16) Acetonitrile	5.110	41	3130m	0.23	ppb(v	
17) Freon 123	5.208	83	8349	0.21	ppb(v	93
18) Freon 123A	5.251	117	4402	0.21	ppb(v	100
19) Bromoethene	5.092	106	3237	0.21	ppb(v	99
20) Acrolein	5.202	56	1571	0.23	ppb(v#	75
21) Trichlorofluoromethane	5.416	101	10360	0.21	ppb(v	99
22) Acetone	5.324	58	1785	0.25	ppb(v	92
23) Pentane	5.691	57	920	0.18	ppb(v	82
24) Iodomethane	5.887	142	10359	0.20	ppb(v	99
25) Isopropyl Alcohol	5.532	43	2151	0.27	ppb(v	70
26) 1,1-Dichloroethene	5.948	61	6712	0.21	ppb(v	96
27) Freon 113	6.272	101	8977	0.21	ppb(v	95
28) Methylene Chloride	6.058	84	4216	0.22	ppb(v	98
29) Carbon Disulfide	6.315	76	9989	0.19	ppb(v	100
31) Acrylonitrile	5.691	53	3506	0.21	ppb(v	94
32) 3-Chloropropene	6.156	76	1835	0.20	ppb(v	92
33) trans-1,2-Dichloroethene	6.890	61	5835	0.20	ppb(v	97
34) tert-Butyl Alcohol	6.040	59	8215	0.20	ppb(v	93
35) Methyl tert-Butyl Ether	7.178	73	10776	0.20	ppb(v	96
36) Vinyl Acetate	7.251	43	11613	0.21	ppb(v	96
37) 1,1-Dichloroethane	7.086	63	7892	0.21	ppb(v#	98
38) 2-Butanone	7.533	72	1784	0.20	ppb(v	93
39) Hexane	8.089	57	5893	0.20	ppb(v	82
40) cis-1,2-Dichloroethene	7.918	61	5757	0.20	ppb(v	95
41) Di-isopropyl Ether	8.132	87	2992	0.20	ppb(v	83
42) Ethyl Acetate	8.187	61	1147	0.19	ppb(v	86
43) Methyl Acrylate	8.169	55	7193	0.21	ppb(v	99
44) Chloroform	8.218	83	8884	0.21	ppb(v	95
45) 2,4-Dimethylpentane	9.025	57	7052	0.20	ppb(v	92
46) Tetrahydrofuran	8.726	72	1649	0.19	ppb(v	85
47) 1,1,1-Trichloroethane	9.258	97	8637	0.21	ppb(v	99
48) 1,2-Dichloroethane	8.989	62	5240	0.20	ppb(v#	92
49) Benzene	9.772	78	11712	0.20	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39832.D
 Acq On : 24 Dec 2019 10:07 am
 Operator : danat
 Sample : ic1620-0.2
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

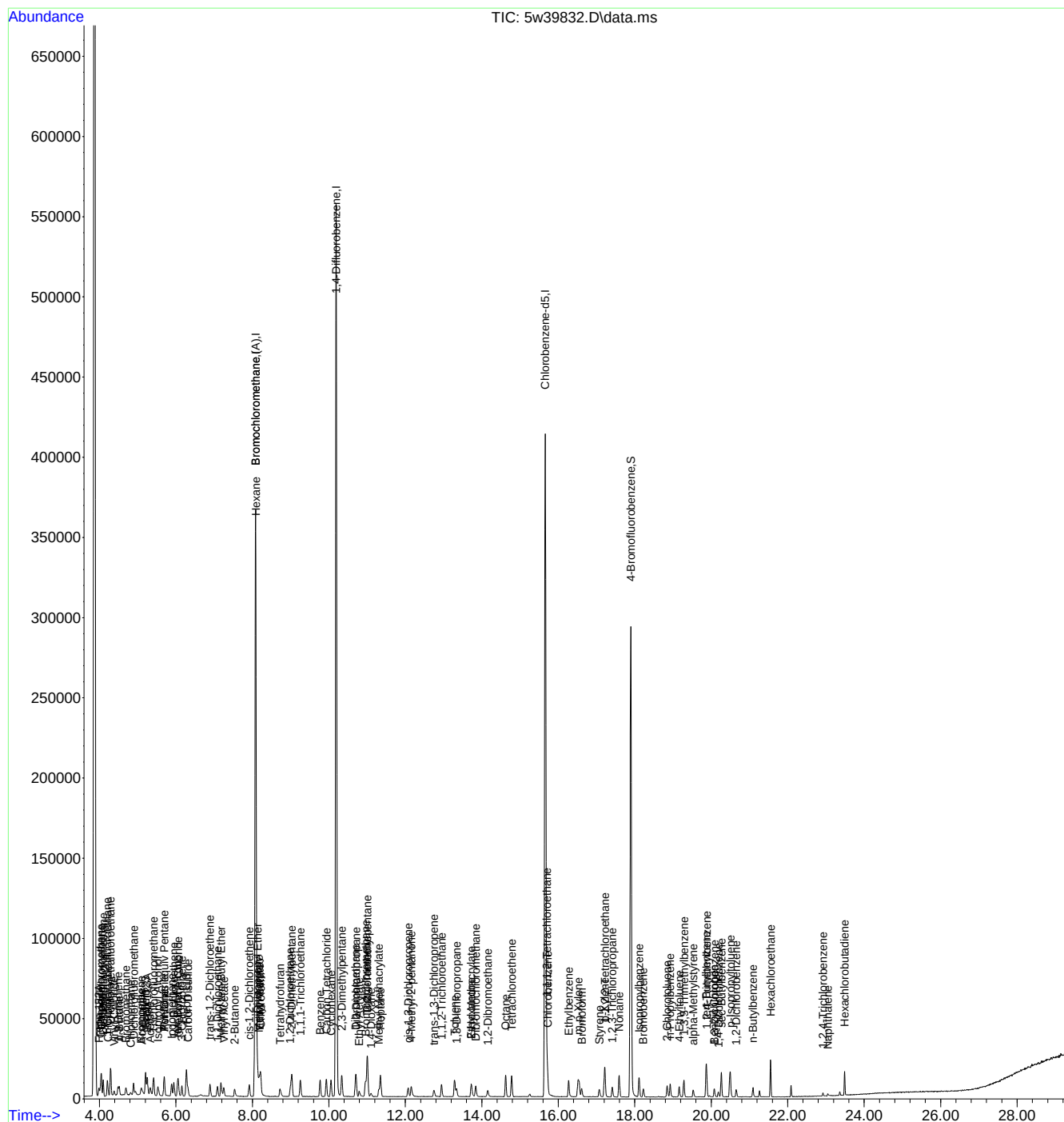
Quant Time: Dec 24 10:38:58 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 09:55:58 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
50) Carbon Tetrachloride	9.937	117	8524	0.20	ppb(v	97
51) Cyclohexane	10.059	56	6017	0.20	ppb(v	95
52) 2,3-Dimethylpentane	10.335	71	2761	0.22	ppb(v	99
54) 2,2,4-Trimethylpentane	11.008	57	20112	0.21	ppb(v	98
55) Heptane	11.350	71	3513	0.19	ppb(v	99
56) Trichloroethene	10.995	95	5309	0.20	ppb(v	97
57) 1,2-Dichloropropane	10.708	63	4498	0.20	ppb(v	97
58) Dibromomethane	10.696	174	4425	0.19	ppb(v	99
59) Ethyl Acrylate	10.793	55	6958	0.17	ppb(v	99
60) Methyl Methacrylate	11.301	69	3195	0.16	ppb(v#	95
61) 1,4-Dioxane	11.099	88	2308	0.19	ppb(v#	73
62) Bromodichloromethane	10.959	83	8284	0.19	ppb(v	99
63) cis-1,3-Dichloropropene	12.072	75	5072	0.17	ppb(v	93
64) 4-Methyl-2-pentanone	12.158	58	2853	0.16	ppb(v	89
65) trans-1,3-Dichloropropene	12.751	75	4387	0.17	ppb(v	97
66) Toluene	13.289	91	11569	0.17	ppb(v	99
67) 1,1,2-Trichloroethane	12.947	97	3673	0.17	ppb(v	95
68) 1,3-Dichloropropane	13.338	76	4446	0.16	ppb(v	97
69) 2-Hexanone	13.724	58	2181	0.11	ppb(v	96
70) Ethyl Methacrylate	13.724	69	3729	0.13	ppb(v#	97
71) Dibromochloromethane	13.846	129	5587	0.16	ppb(v#	89
72) Tetrachloroethene	14.782	166	5170	0.17	ppb(v	94
73) 1,2-Dibromoethane	14.152	107	4646	0.16	ppb(v#	92
74) Octane	14.623	43	8039	0.18	ppb(v	97
75) 1,1,1,2-Tetrachloroethane	15.700	131	5206	0.18	ppb(v#	1
77) Chlorobenzene	15.724	112	6238	0.19	ppb(v	92
78) Ethylbenzene	16.269	91	11580	0.20	ppb(v	96
79) m,p-Xylene	16.520	91	17378	0.40	ppb(v	99
80) Styrene	17.070	104	4023	0.16	ppb(v	94
81) Nonane	17.590	43	6964	0.20	ppb(v	100
82) o-Xylene	17.211	91	10259	0.21	ppb(v	97
83) Bromoform	16.617	173	3324	0.17	ppb(v	98
84) 1,1,2,2-Tetrachloroethane	17.217	83	7293	0.20	ppb(v#	94
85) 1,2,3-Trichloropropane	17.413	75	4704	0.20	ppb(v	97
86) Isopropylbenzene	18.110	105	12924	0.19	ppb(v	98
87) Bromobenzene	18.220	156	2311	0.18	ppb(v	96
88) 2-Chlorotoluene	18.850	126	1992	0.16	ppb(v	100
89) n-Propylbenzene	18.924	120	2115	0.16	ppb(v	97
91) 4-Ethyltoluene	19.162	105	6682	0.15	ppb(v	97
92) 1,3,5-Trimethylbenzene	19.285	105	8587	0.17	ppb(v	96
93) alpha-Methylstyrene	19.529	118	2231	0.13	ppb(v	93
94) tert-Butylbenzene	19.866	134	2099	0.19	ppb(v	96
95) 1,2,4-Trimethylbenzene	19.884	105	6938	0.16	ppb(v	95
96) 1,3-Dichlorobenzene	20.086	146	2604	0.15	ppb(v	94
97) Benzyl Chloride	20.080	91	1840	0.11	ppb(v#	96
98) 1,4-Dichlorobenzene	20.190	146	2300	0.16	ppb(v	92
99) sec-Butylbenzene	20.264	134	2243	0.17	ppb(v	96
100) p-Isopropyltoluene	20.502	134	2016	0.15	ppb(v	89
101) 1,2-Dichlorobenzene	20.655	146	2816	0.15	ppb(v	93
102) n-Butylbenzene	21.089	134	896	0.10	ppb(v	97
103) Hexachloroethane	21.554	201	4010	0.21	ppb(v	96
104) 1,2,4-Trichlorobenzene	22.919	180	912	0.14	ppb(v	89
105) Naphthalene	23.047	128	2501	0.14	ppb(v	96
106) Hexachlorobutadiene	23.488	225	3001	0.16	ppb(v	94
108) TVHC as equiv Pentane	5.691	TIC	26841m	0.21	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

```
Data Path : C:\msdchem\1\data\  
Data File : 5w39832.D  
Acq On : 24 Dec 2019 10:07 am  
Operator : danat  
Sample : ic1620-0.2  
Misc : ms39671,v5w1620,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Dec 24 10:38:58 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 09:55:58 2019
Response via : Initial Calibration



7.7.8

Manual Integration Approval Summary

Sample Number:

V5W1620-IC1620

Method:

TO-15

Lab FileID:

5W39832.D

Analyst approved:

12/24/19 10:54 Dana Tryon

Injection Time:

12/24/19 10:07

Supervisor approved:

12/26/19 11:06 Dana Tryon

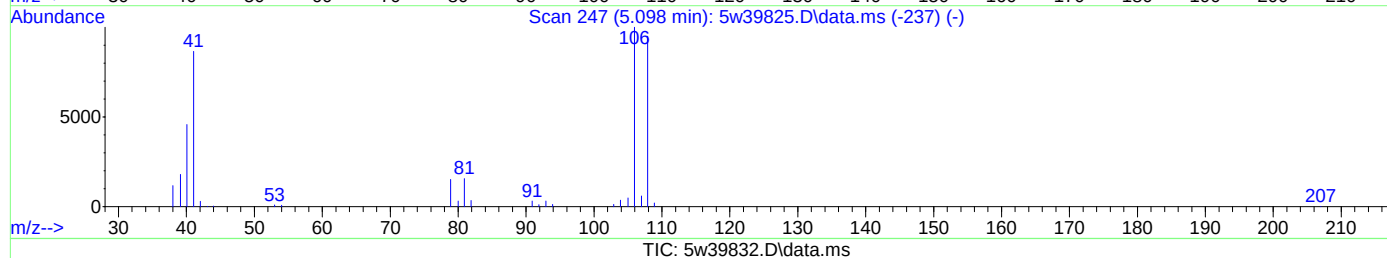
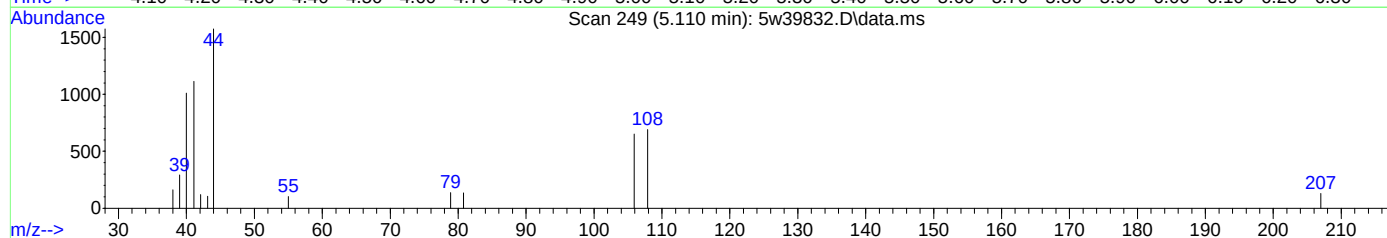
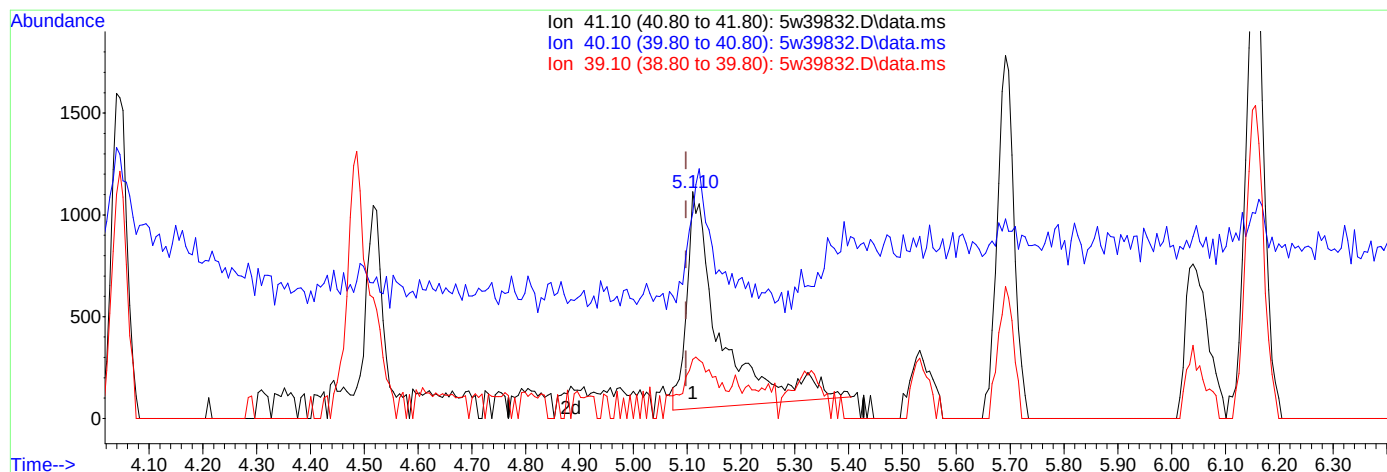
Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetonitrile	75-05-8		5.11	Poor instrument integration
TVHC As Equiv Pentane			5.69	Missed peak

7.7.8.1
7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39832.D
Acq On : 24 Dec 2019 10:07 am
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 10:36:57 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 09:55:58 2019
Response via : Initial Calibration



(16) Acetonitrile

5.110min (+0.012) 0.34ppb(v)

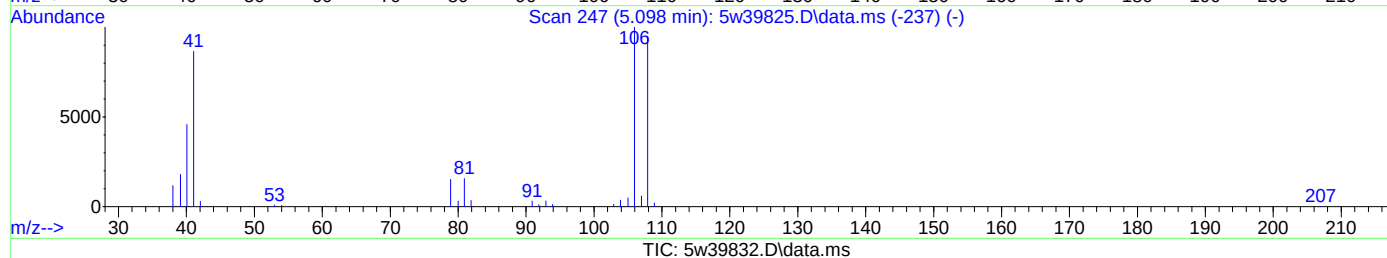
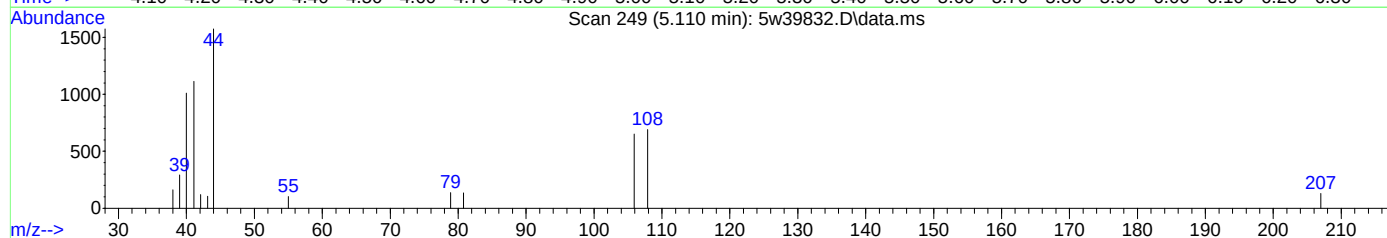
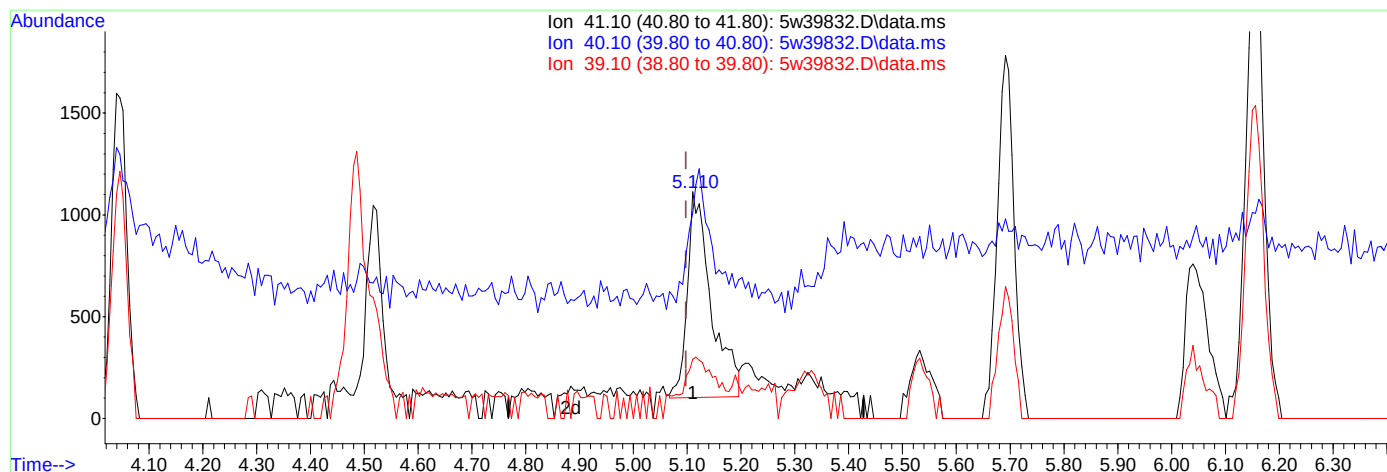
response 4589

Ion	Exp%	Act%
41.10	100	100
40.10	53.90	90.75#
39.10	20.70	26.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39832.D
Acq On : 24 Dec 2019 10:07 am
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 10:36:57 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 09:55:58 2019
Response via : Initial Calibration



(16) Acetonitrile

5.110min (+0.012) 0.23ppb(v) m

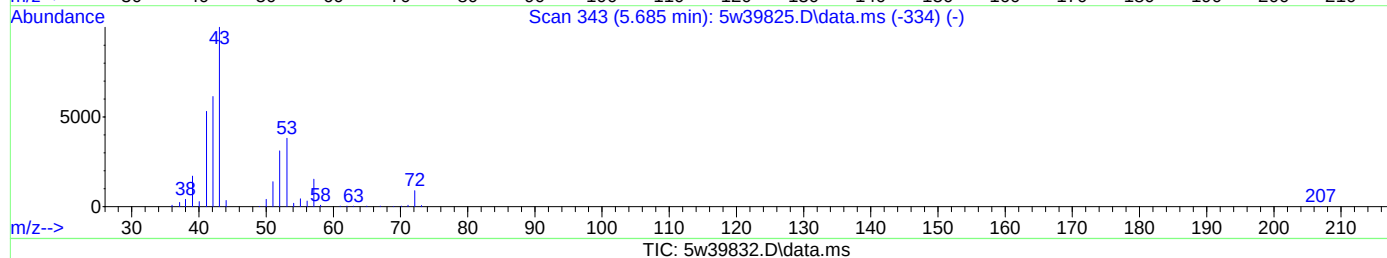
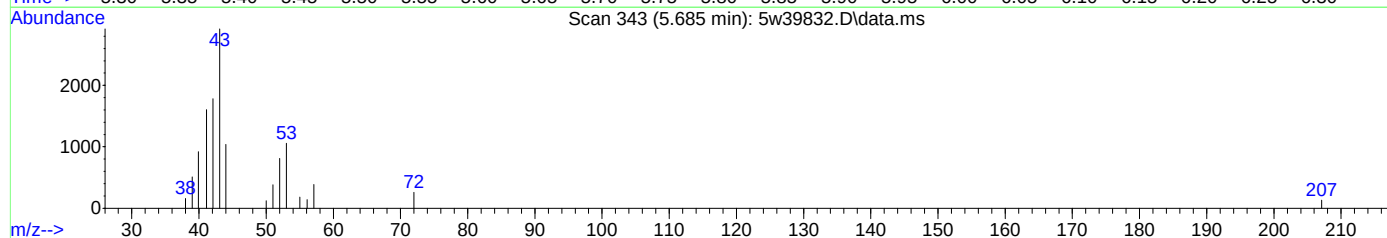
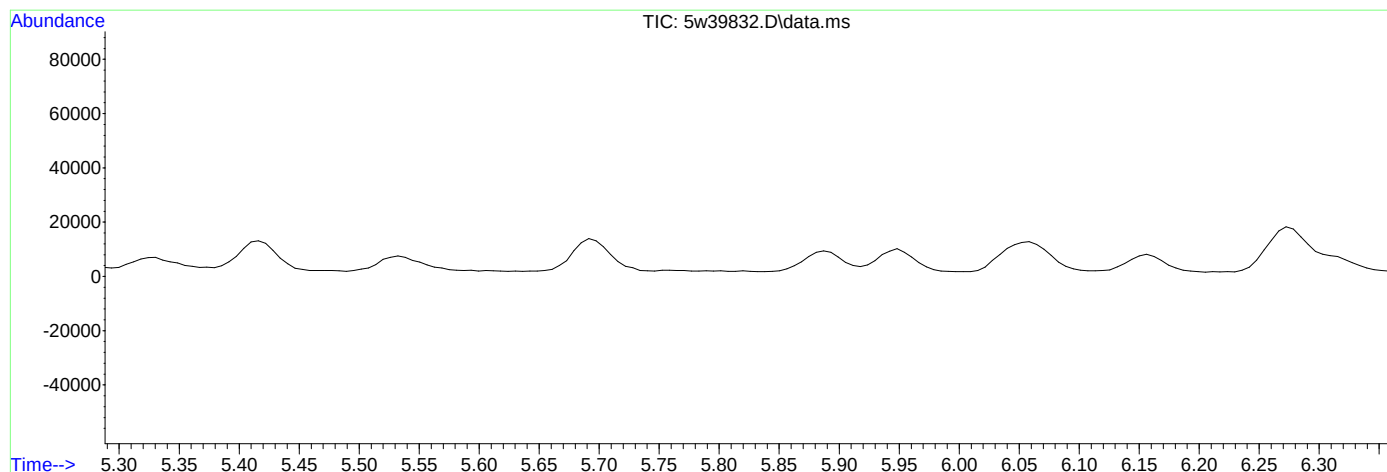
response 3130

Ion	Exp%	Act%
41.10	100	100
40.10	53.90	90.75#
39.10	20.70	26.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39832.D
Acq On : 24 Dec 2019 10:07 am
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 10:36:57 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 09:55:58 2019
Response via : Initial Calibration



(108) TVHC as equiv Pentane

5.685min (-5.685) 0.00ppb(v)

response 0

Signal	Exp%	Act%
--------	------	------

TIC	100	0.00
-----	-----	------

0.00	0.00	0.00
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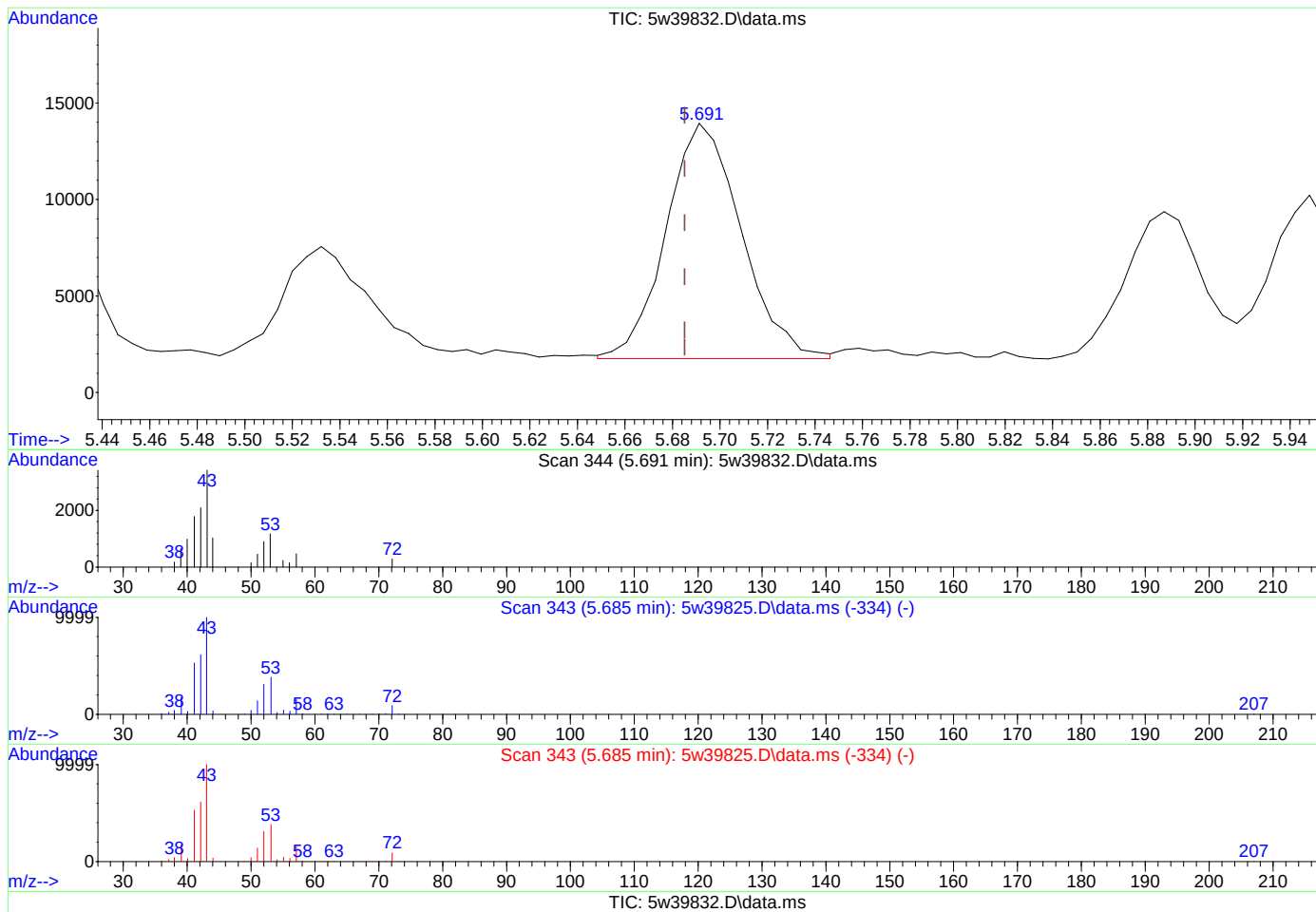
0.00	0.00	0.00
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0.00	0.00	0.00
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Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 5w39832.D
Acq On : 24 Dec 2019 10:07 am
Operator : danat
Sample : ic1620-0.2
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 24 10:36:57 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 09:55:58 2019
Response via : Initial Calibration



(108) TVHC as equiv Pentane

5.691min (+0.006) 0.21ppb(v) m

response 26841

Signal	Exp%	Act%
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TIC	100	100
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0.00	0.00	0.00
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0.00	0.00	0.00
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0.00	0.00	0.00
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39833.D
 Acq On : 24 Dec 2019 11:01 am
 Operator : danat
 Sample : icv1620-10
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 24 11:33:08 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	146147	10.00	ppb(v)	0.00
53) 1,4-Difluorobenzene	10.194	114	526012	10.00	ppb(v)	0.00
76) Chlorobenzene-d5	15.657	82	238739	10.00	ppb(v)	0.00
107) Bromochloromethane (A)	8.083	130	146147	10.00	ppb(v)	0.00

System Monitoring Compounds						
90) 4-Bromofluorobenzene	17.896	95	230075	11.02	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	110.20%

Target Compounds					Qvalue
2) Freon 152A	3.990	65	115823	10.16	ppb(v) 100
3) Chlorodifluoromethane	4.027	67	48041	10.23	ppb(v) 99
4) Propene	4.046	41	140624	9.90	ppb(v) 99
5) Chlorotrifluoroethene	4.052	116	238398	9.96	ppb(v) 100
6) Dichlorodifluoromethane	4.101	85	479501	9.81	ppb(v) 100
7) 1-Chloro-1,1-difluoro...	4.205	65	340454	9.78	ppb(v) 100
8) Chloromethane	4.223	50	157800	9.71	ppb(v) 98
9) Dichlorotetrafluoroethane	4.290	85	443238	9.71	ppb(v) 97
10) Vinyl Chloride	4.388	62	155811	10.04	ppb(v) 99
11) 1,3-Butadiene	4.486	54	107366	10.07	ppb(v) 99
12) n-Butane	4.523	58	23322	10.40	ppb(v) 95
13) Bromomethane	4.694	94	155592	9.46	ppb(v) 100
14) Chloroethane	4.816	64	71642	9.96	ppb(v) 99
15) Dichlorofluoromethane	4.890	67	354345	9.66	ppb(v) 100
16) Acetonitrile	5.104	41	108389	9.19	ppb(v) 98
17) Freon 123	5.208	83	360311	9.90	ppb(v) 99
18) Freon 123A	5.251	117	190017	9.93	ppb(v) 99
19) Bromoethene	5.092	106	142504	10.05	ppb(v) 99
20) Acrolein	5.196	56	61383	9.83	ppb(v) 99
21) Trichlorofluoromethane	5.416	101	449919	9.80	ppb(v) 98
22) Acetone	5.306	58	61736	9.24	ppb(v) 97
23) Pentane	5.691	57	47239	10.85	ppb(v) 97
24) Iodomethane	5.887	142	475898	9.96	ppb(v) 99
25) Isopropyl Alcohol	5.508	43	63170	8.74	ppb(v) 97
26) 1,1-Dichloroethene	5.948	61	302198	9.99	ppb(v) 99
27) Freon 113	6.272	101	388084	9.72	ppb(v) 99
28) Methylene Chloride	6.058	84	164159	9.37	ppb(v) 98
29) Carbon Disulfide	6.309	76	496421	10.33	ppb(v) 100
30) Ethanol	4.933	45	58655	8.80	ppb(v) 98
31) Acrylonitrile	5.685	53	147231	9.72	ppb(v) 99
32) 3-Chloropropene	6.156	76	85795	10.34	ppb(v) 97
33) trans-1,2-Dichloroethene	6.890	61	268456	9.99	ppb(v) 100
34) tert-Butyl Alcohol	6.009	59	375595	10.06	ppb(v) 99
35) Methyl tert-Butyl Ether	7.153	73	491352	9.97	ppb(v) 100
36) Vinyl Acetate	7.239	43	499185	9.83	ppb(v) 99
37) 1,1-Dichloroethane	7.086	63	338662	9.75	ppb(v) 99
38) 2-Butanone	7.496	72	83564	9.96	ppb(v) 96
39) Hexane	8.095	57	277237	10.08	ppb(v) 94
40) cis-1,2-Dichloroethene	7.918	61	263816	9.96	ppb(v) 99
41) Di-isopropyl Ether	8.120	87	143267	10.37	ppb(v) 98
42) Ethyl Acetate	8.169	61	56122	10.12	ppb(v) 95
43) Methyl Acrylate	8.151	55	314279	9.93	ppb(v) 99
44) Chloroform	8.218	83	383865	9.58	ppb(v) 98
45) 2,4-Dimethylpentane	9.025	57	339715	10.30	ppb(v) 100
46) Tetrahydrofuran	8.664	72	82791	10.19	ppb(v) 96
47) 1,1,1-Trichloroethane	9.258	97	371611	9.49	ppb(v) 99
48) 1,2-Dichloroethane	8.995	62	241378	9.82	ppb(v) 99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39833.D
 Acq On : 24 Dec 2019 11:01 am
 Operator : danat
 Sample : icv1620-10
 Misc : ms39671,v5w1620,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 24 11:33:08 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	545117	9.81	ppb(v)	99
50) Carbon Tetrachloride	9.937	117	394633	9.96	ppb(v)	100
51) Cyclohexane	10.059	56	288086	10.17	ppb(v)	99
52) 2,3-Dimethylpentane	10.341	71	120798	10.25	ppb(v)	95
54) 2,2,4-Trimethylpentane	11.014	57	919516	9.95	ppb(v)	100
55) Heptane	11.350	71	177142	10.27	ppb(v)	99
56) Trichloroethene	10.995	95	242376	9.43	ppb(v)	99
57) 1,2-Dichloropropane	10.708	63	214962	10.09	ppb(v)	99
58) Dibromomethane	10.695	174	207434	9.21	ppb(v)	97
59) Ethyl Acrylate	10.769	55	392493	10.45	ppb(v)	100
60) Methyl Methacrylate	11.283	69	189583	10.48	ppb(v)	100
61) 1,4-Dioxane	11.044	88	115006	10.23	ppb(v)	93
62) Bromodichloromethane	10.959	83	412309	9.96	ppb(v)	100
63) cis-1,3-Dichloropropene	12.066	75	303286	10.55	ppb(v)	99
64) 4-Methyl-2-pentanone	12.121	58	173210	10.47	ppb(v)	98
65) trans-1,3-Dichloropropene	12.733	75	249146	10.33	ppb(v)	99
66) Toluene	13.283	91	614929	9.43	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	209999	10.44	ppb(v)	99
68) 1,3-Dichloropropane	13.332	76	272004	10.42	ppb(v)	100
69) 2-Hexanone	13.675	58	201444	11.26	ppb(v)	100
70) Ethyl Methacrylate	13.712	69	302365	11.25	ppb(v)	99
71) Dibromochloromethane	13.840	129	362797	10.95	ppb(v)	99
72) Tetrachloroethene	14.776	166	296170	10.07	ppb(v)	98
73) 1,2-Dibromoethane	14.146	107	274330	9.81	ppb(v)	99
74) Octane	14.623	43	456393	10.82	ppb(v)	99
75) 1,1,1,2-Tetrachloroethane	15.700	131	282828	10.24	ppb(v)	99
77) Chlorobenzene	15.718	112	412915	9.36	ppb(v)	99
78) Ethylbenzene	16.263	91	737520	9.67	ppb(v)	100
79) m,p-Xylene	16.513	91	1121678	19.43	ppb(v)	99
80) Styrene	17.058	104	348974	11.01	ppb(v)	99
81) Nonane	17.590	43	453316	9.66	ppb(v)	99
82) o-Xylene	17.205	91	590920	9.16	ppb(v)	99
83) Bromoform	16.605	173	262984	9.88	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	427155	8.72	ppb(v)	100
85) 1,2,3-Trichloropropane	17.401	75	284104	8.74	ppb(v)	99
86) Isopropylbenzene	18.110	105	840569	9.30	ppb(v)	100
87) Bromobenzene	18.214	156	169359	9.86	ppb(v)	99
88) 2-Chlorotoluene	18.844	126	168415	10.15	ppb(v)	100
89) n-Propylbenzene	18.918	120	185806	11.10	ppb(v)	97
91) 4-Ethyltoluene	19.150	105	645904	10.99	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	630544	9.52	ppb(v)	99
93) alpha-Methylstyrene	19.523	118	240637	11.58	ppb(v)	99
94) tert-Butylbenzene	19.866	134	144505	9.61	ppb(v)	99
95) 1,2,4-Trimethylbenzene	19.878	105	571757	10.02	ppb(v)	97
96) 1,3-Dichlorobenzene	20.074	146	216021	9.97	ppb(v)	98
97) Benzyl Chloride	20.068	91	226601	10.16	ppb(v)	100
98) 1,4-Dichlorobenzene	20.172	146	184187	9.82	ppb(v)	99
99) sec-Butylbenzene	20.264	134	170167	10.01	ppb(v)	99
100) p-Isopropyltoluene	20.502	134	182916	10.56	ppb(v)	100
101) 1,2-Dichlorobenzene	20.649	146	220659	9.54	ppb(v)	99
102) n-Butylbenzene	21.083	134	129772	11.69	ppb(v)	98
103) Hexachloroethane	21.554	201	238204	9.00	ppb(v)	97
104) 1,2,4-Trichlorobenzene	22.906	180	65863	9.35	ppb(v)	99
105) Naphthalene	23.035	128	171556	9.08	ppb(v)	99
106) Hexachlorobutadiene	23.488	225	252549	9.64	ppb(v)	100
108) TVHC as equiv Pentane	5.691	TIC	1206128	10.13	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39833.D
Acq On : 24 Dec 2019 11:01 am
Operator : danat
Sample : icv1620-10
Misc : ms39671,v5w1620,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 24 11:33:08 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed						

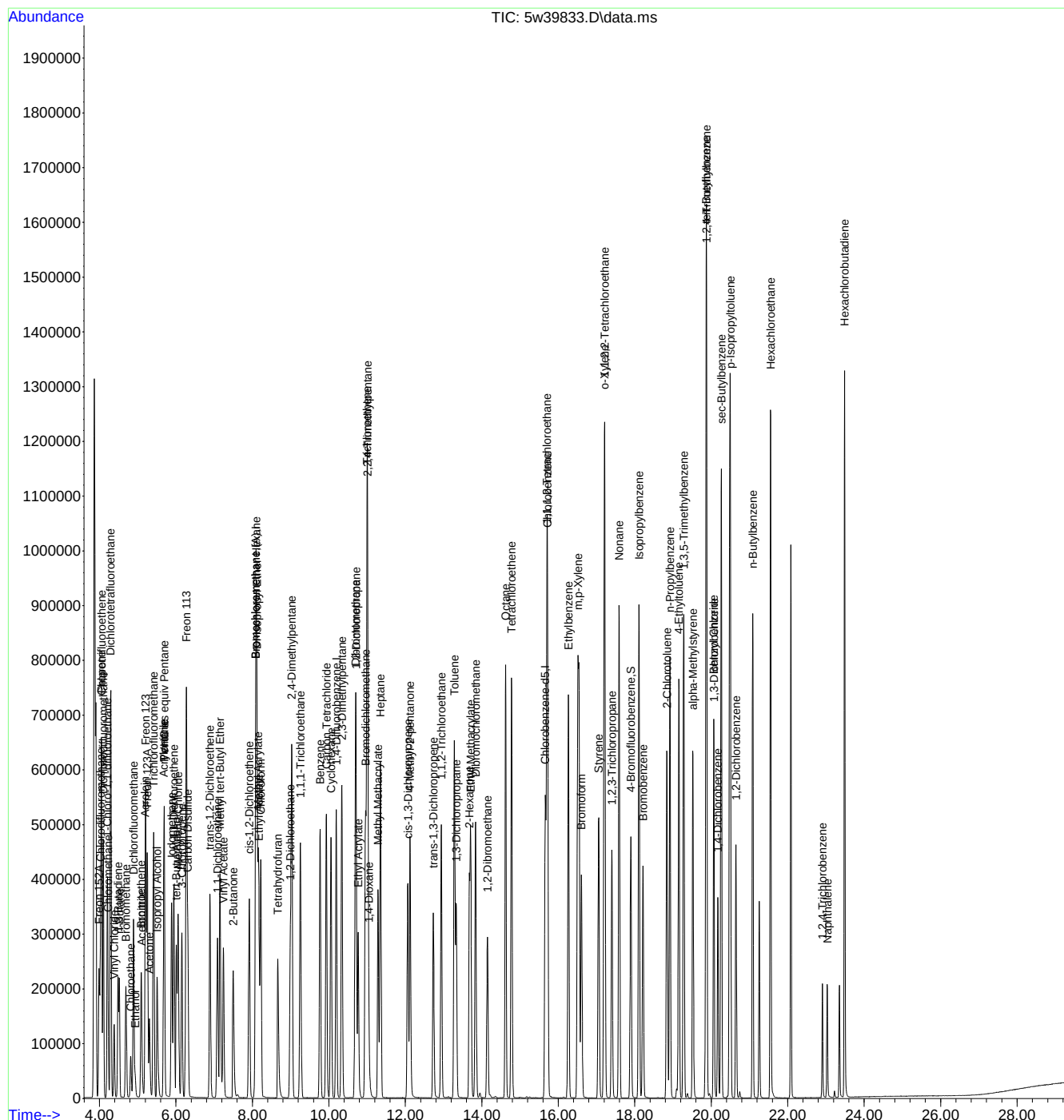
7.7.9

7

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 5w39833.D  
Acq On : 24 Dec 2019 11:01 am  
Operator : danat  
Sample : icv1620-10  
Misc : ms39671,v5w1620,,,,,1  
ALS Vial : 5 Sample Multiplier: 1
```

Quant Time: Dec 24 11:33:08 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



7.7.9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39835.D
 Acq On : 24 Dec 2019 12:38 pm
 Operator : danat
 Sample : cc1620-10
 Misc : ms39671,v5w1621,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:09:20 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	140666	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	509804	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.657	82	231973	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	140666	10.00	ppb(v	0.00

System Monitoring Compounds

90) 4-Bromofluorobenzene	17.896	95	215373	10.61	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	106.10%

Target Compounds					Qvalue
2) Freon 152A	3.984	65	113131	10.31	ppb(v 98
3) Chlorodifluoromethane	4.021	67	47030	10.40	ppb(v 98
4) Propene	4.039	41	138548	10.13	ppb(v 99
5) Chlorotrifluoroethene	4.046	116	232038	10.08	ppb(v 99
6) Dichlorodifluoromethane	4.095	85	469129	9.98	ppb(v 100
7) 1-Chloro-1,1-difluoro...	4.205	65	335157	10.00	ppb(v 100
8) Chloromethane	4.223	50	157466	10.07	ppb(v 100
9) Dichlorotetrafluoroethane	4.290	85	441279	10.04	ppb(v 99
10) Vinyl Chloride	4.382	62	157156	10.52	ppb(v 99
11) 1,3-Butadiene	4.480	54	103905	10.13	ppb(v 99
12) n-Butane	4.517	58	22407	10.38	ppb(v 98
13) Bromomethane	4.688	94	151482	9.57	ppb(v 100
14) Chloroethane	4.816	64	71203	10.28	ppb(v 99
15) Dichlorofluoromethane	4.884	67	345774	9.79	ppb(v 100
16) Acetonitrile	5.104	41	104797	9.23	ppb(v 99
17) Freon 123	5.202	83	351796	10.04	ppb(v 100
18) Freon 123A	5.251	117	185748	10.08	ppb(v 98
19) Bromoethene	5.086	106	139242	10.20	ppb(v 99
20) Acrolein	5.190	56	58901	9.80	ppb(v 100
21) Trichlorofluoromethane	5.410	101	434744	9.84	ppb(v 99
22) Acetone	5.300	58	59037	9.18	ppb(v 99
23) Pentane	5.691	57	45958	10.96	ppb(v 97
24) Iodomethane	5.881	142	463499	10.08	ppb(v 99
25) Isopropyl Alcohol	5.508	43	61087	8.78	ppb(v 97
26) 1,1-Dichloroethene	5.942	61	295409	10.14	ppb(v 100
27) Freon 113	6.266	101	381032	9.91	ppb(v 98
28) Methylene Chloride	6.058	84	161469	9.58	ppb(v 98
29) Carbon Disulfide	6.309	76	490053	10.60	ppb(v 100
30) Ethanol	4.933	45	57778	9.01	ppb(v 100
31) Acrylonitrile	5.679	53	143350	9.84	ppb(v 98
32) 3-Chloropropene	6.150	76	84314	10.55	ppb(v 99
33) trans-1,2-Dichloroethene	6.890	61	266553	10.30	ppb(v 99
34) tert-Butyl Alcohol	6.009	59	366789	10.21	ppb(v 99
35) Methyl tert-Butyl Ether	7.147	73	488042	10.29	ppb(v 100
36) Vinyl Acetate	7.239	43	495515	10.14	ppb(v 99
37) 1,1-Dichloroethane	7.086	63	336206	10.06	ppb(v 99
38) 2-Butanone	7.496	72	80998	10.03	ppb(v 99
39) Hexane	8.096	57	274925	10.38	ppb(v 90
40) cis-1,2-Dichloroethene	7.912	61	259496	10.17	ppb(v 98
41) Di-isopropyl Ether	8.120	87	141349	10.63	ppb(v 99
42) Ethyl Acetate	8.169	61	54977	10.30	ppb(v 98
43) Methyl Acrylate	8.151	55	302044	9.92	ppb(v 99
44) Chloroform	8.218	83	376009	9.75	ppb(v 99
45) 2,4-Dimethylpentane	9.025	57	330141	10.40	ppb(v 99
46) Tetrahydrofuran	8.664	72	81697	10.44	ppb(v 98
47) 1,1,1-Trichloroethane	9.252	97	366103	9.72	ppb(v 100
48) 1,2-Dichloroethane	8.989	62	234493	9.91	ppb(v 100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39835.D
 Acq On : 24 Dec 2019 12:38 pm
 Operator : danat
 Sample : cc1620-10
 Misc : ms39671,v5w1621,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:09:20 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	540062	10.10	ppb(v)	99
50) Carbon Tetrachloride	9.931	117	386548	10.14	ppb(v)	100
51) Cyclohexane	10.053	56	285992	10.49	ppb(v)	100
52) 2,3-Dimethylpentane	10.341	71	119921	10.57	ppb(v)	99
54) 2,2,4-Trimethylpentane	11.008	57	918822	10.26	ppb(v)	100
55) Heptane	11.350	71	175835	10.52	ppb(v)	100
56) Trichloroethene	10.995	95	239793	9.63	ppb(v)	98
57) 1,2-Dichloropropane	10.708	63	214387	10.38	ppb(v)	98
58) Dibromomethane	10.696	174	204692	9.38	ppb(v)	97
59) Ethyl Acrylate	10.769	55	384314	10.56	ppb(v)	100
60) Methyl Methacrylate	11.283	69	187970	10.72	ppb(v)	99
61) 1,4-Dioxane	11.038	88	113438	10.41	ppb(v)	99
62) Bromodichloromethane	10.959	83	410241	10.22	ppb(v)	100
63) cis-1,3-Dichloropropene	12.060	75	297103	10.66	ppb(v)	99
64) 4-Methyl-2-pentanone	12.121	58	171770	10.71	ppb(v)	100
65) trans-1,3-Dichloropropene	12.733	75	240184	10.27	ppb(v)	99
66) Toluene	13.283	91	613478	9.71	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	206928	10.61	ppb(v)	99
68) 1,3-Dichloropropane	13.332	76	270730	10.70	ppb(v)	100
69) 2-Hexanone	13.675	58	199276	11.49	ppb(v)	99
70) Ethyl Methacrylate	13.712	69	298725	11.46	ppb(v)	99
71) Dibromochloromethane	13.840	129	357239	11.12	ppb(v)	99
72) Tetrachloroethene	14.776	166	287855	10.10	ppb(v)	98
73) 1,2-Dibromoethane	14.146	107	270927	10.00	ppb(v)	99
74) Octane	14.623	43	452894	11.08	ppb(v)	99
75) 1,1,1,2-Tetrachloroethane	15.700	131	280915	10.49	ppb(v)	99
77) Chlorobenzene	15.718	112	406996	9.49	ppb(v)	100
78) Ethylbenzene	16.263	91	735537	9.93	ppb(v)	99
79) m,p-Xylene	16.532	91	1105143	19.71	ppb(v)	100
80) Styrene	17.058	104	344468	11.18	ppb(v)	99
81) Nonane	17.590	43	445791	9.78	ppb(v)	100
82) o-Xylene	17.205	91	586087	9.35	ppb(v)	100
83) Bromoform	16.605	173	259283	10.03	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	422125	8.87	ppb(v)	99
85) 1,2,3-Trichloropropane	17.401	75	282348	8.94	ppb(v)	100
86) Isopropylbenzene	18.110	105	828294	9.43	ppb(v)	100
87) Bromobenzene	18.214	156	167086	10.01	ppb(v)	99
88) 2-Chlorotoluene	18.844	126	167817	10.41	ppb(v)	100
89) n-Propylbenzene	18.918	120	185895	11.43	ppb(v)	98
91) 4-Ethyltoluene	19.150	105	636803	11.16	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	622619	9.68	ppb(v)	100
93) alpha-Methylstyrene	19.523	118	238462	11.81	ppb(v)	99
94) tert-Butylbenzene	19.866	134	144661	9.90	ppb(v)	98
95) 1,2,4-Trimethylbenzene	19.878	105	572174	10.32	ppb(v)	100
96) 1,3-Dichlorobenzene	20.074	146	214577	10.19	ppb(v)	98
97) Benzyl Chloride	20.068	91	227842	10.51	ppb(v)	100
98) 1,4-Dichlorobenzene	20.172	146	183912	10.10	ppb(v)	100
99) sec-Butylbenzene	20.264	134	168674	10.21	ppb(v)	98
100) p-Isopropyltoluene	20.502	134	182207	10.82	ppb(v)	98
101) 1,2-Dichlorobenzene	20.649	146	222434	9.89	ppb(v)	99
102) n-Butylbenzene	21.083	134	130560	12.11	ppb(v)	99
103) Hexachloroethane	21.554	201	237109	9.22	ppb(v)	99
104) 1,2,4-Trichlorobenzene	22.906	180	65164	9.52	ppb(v)	98
105) Naphthalene	23.029	128	169980	9.26	ppb(v)	100
106) Hexachlorobutadiene	23.488	225	247542	9.72	ppb(v)	100
108) TVHC as equiv Pentane	5.685	TIC	1164083	10.16	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W39835.D
Acq On : 24 Dec 2019 12:38 pm
Operator : danat
Sample : cc1620-10
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:09:20 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

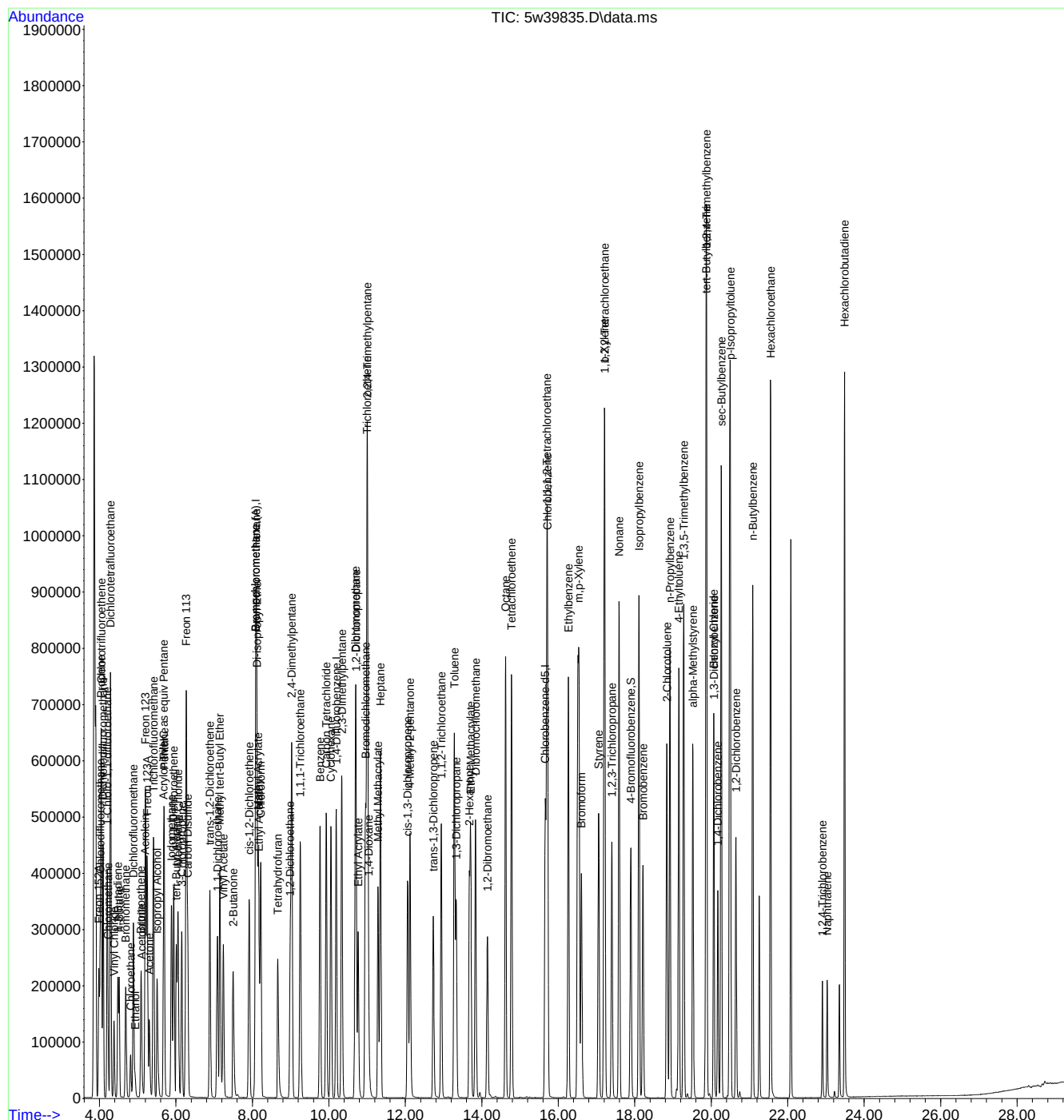
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39835.D
Acq On : 24 Dec 2019 12:38 pm
Operator : danat
Sample : cc1620-10
Misc : ms39671,v5w1621,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 24 13:09:20 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39859.D
 Acq On : 26 Dec 2019 10:17 am
 Operator : danat
 Sample : cc1620-10
 Misc : ms39818,v5w1622,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 13:53:15 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.090	130	134314	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	483556	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.663	82	222485	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.090	130	134314	10.00	ppb(v	0.00

System Monitoring Compounds
 90) 4-Bromofluorobenzene 17.896 95 215125 11.05 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 110.50%

Target Compounds					Qvalue
2) Freon 152A	3.991	65	110077	10.51	ppb(v 98
3) Chlorodifluoromethane	4.027	67	45259	10.48	ppb(v 99
4) Propene	4.046	41	138161	10.58	ppb(v 99
5) Chlorotrifluoroethene	4.052	116	222219	10.11	ppb(v 100
6) Dichlorodifluoromethane	4.101	85	453243	10.09	ppb(v 100
7) 1-Chloro-1,1-difluoro...	4.211	65	325942	10.18	ppb(v 99
8) Chloromethane	4.223	50	157959	10.58	ppb(v 99
9) Dichlorotetrafluoroethane	4.297	85	432227	10.30	ppb(v 99
10) Vinyl Chloride	4.388	62	155065	10.87	ppb(v 99
11) 1,3-Butadiene	4.486	54	108951	11.12	ppb(v 98
12) n-Butane	4.523	58	24019	11.65	ppb(v 93
13) Bromomethane	4.694	94	152224	10.07	ppb(v 99
14) Chloroethane	4.823	64	71534	10.82	ppb(v 99
15) Dichlorofluoromethane	4.890	67	350846	10.41	ppb(v 100
16) Acetonitrile	5.110	41	109698	10.12	ppb(v 98
17) Freon 123	5.208	83	352966	10.55	ppb(v 100
18) Freon 123A	5.251	117	182763	10.39	ppb(v 95
19) Bromoethene	5.092	106	137704	10.57	ppb(v 99
20) Acrolein	5.196	56	60142	10.48	ppb(v 99
21) Trichlorofluoromethane	5.416	101	421124	9.98	ppb(v 97
22) Acetone	5.306	58	61934	10.08	ppb(v 94
23) Pentane	5.691	57	45555	11.38	ppb(v 99
24) Iodomethane	5.887	142	439596	10.01	ppb(v 99
25) Isopropyl Alcohol	5.514	43	60788	9.15	ppb(v 93
26) 1,1-Dichloroethene	5.948	61	285531	10.27	ppb(v 98
27) Freon 113	6.273	101	364381	9.93	ppb(v 98
28) Methylene Chloride	6.065	84	154480	9.60	ppb(v 97
29) Carbon Disulfide	6.315	76	472088	10.69	ppb(v 100
30) Ethanol	4.933	45	58157	9.50	ppb(v 100
31) Acrylonitrile	5.685	53	141480	10.17	ppb(v 98
32) 3-Chloropropene	6.156	76	80969	10.61	ppb(v 98
33) trans-1,2-Dichloroethene	6.890	61	253429	10.26	ppb(v 98
34) tert-Butyl Alcohol	6.016	59	339361	9.89	ppb(v 98
35) Methyl tert-Butyl Ether	7.154	73	457276	10.10	ppb(v 98
36) Vinyl Acetate	7.245	43	476552	10.21	ppb(v 99
37) 1,1-Dichloroethane	7.086	63	328226	10.29	ppb(v 100
38) 2-Butanone	7.496	72	77617	10.06	ppb(v 97
39) Hexane	8.096	57	268521	10.62	ppb(v 97
40) cis-1,2-Dichloroethene	7.918	61	253027	10.39	ppb(v 99
41) Di-isopropyl Ether	8.120	87	134711	10.61	ppb(v 95
42) Ethyl Acetate	8.169	61	53769	10.55	ppb(v 92
43) Methyl Acrylate	8.157	55	296666	10.20	ppb(v 98
44) Chloroform	8.218	83	366078	9.94	ppb(v 99
45) 2,4-Dimethylpentane	9.032	57	324958	10.72	ppb(v 100
46) Tetrahydrofuran	8.665	72	77008	10.31	ppb(v 95
47) 1,1,1-Trichloroethane	9.258	97	350826	9.75	ppb(v 99
48) 1,2-Dichloroethane	8.995	62	230209	10.19	ppb(v 100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39859.D
 Acq On : 26 Dec 2019 10:17 am
 Operator : danat
 Sample : cc1620-10
 Misc : ms39818,v5w1622,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 13:53:15 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	519583	10.17	ppb(v)	100
50) Carbon Tetrachloride	9.937	117	375261	10.31	ppb(v)	99
51) Cyclohexane	10.059	56	277561	10.67	ppb(v)	99
52) 2,3-Dimethylpentane	10.341	71	116560	10.76	ppb(v)	99
54) 2,2,4-Trimethylpentane	11.014	57	904379	10.65	ppb(v)	100
55) Heptane	11.350	71	172720	10.89	ppb(v)	99
56) Trichloroethene	11.002	95	232441	9.84	ppb(v)	99
57) 1,2-Dichloropropane	10.714	63	208895	10.66	ppb(v)	100
58) Dibromomethane	10.696	174	193569	9.35	ppb(v)	99
59) Ethyl Acrylate	10.769	55	369653	10.71	ppb(v)	100
60) Methyl Methacrylate	11.289	69	182407	10.97	ppb(v)	98
61) 1,4-Dioxane	11.044	88	105358	10.19	ppb(v)	97
62) Bromodichloromethane	10.959	83	400683	10.52	ppb(v)	99
63) cis-1,3-Dichloropropene	12.066	75	288621	10.92	ppb(v)	100
64) 4-Methyl-2-pentanone	12.121	58	163281	10.74	ppb(v)	98
65) trans-1,3-Dichloropropene	12.733	75	233326	10.52	ppb(v)	99
66) Toluene	13.283	91	585384	9.77	ppb(v)	100
67) 1,1,2-Trichloroethane	12.941	97	202724	10.96	ppb(v)	99
68) 1,3-Dichloropropane	13.332	76	264910	11.04	ppb(v)	99
69) 2-Hexanone	13.675	58	188264	11.45	ppb(v)	98
70) Ethyl Methacrylate	13.712	69	285291	11.54	ppb(v)	100
71) Dibromochloromethane	13.840	129	349839	11.48	ppb(v)	100
72) Tetrachloroethene	14.782	166	278959	10.32	ppb(v)	99
73) 1,2-Dibromoethane	14.146	107	261060	10.16	ppb(v)	100
74) Octane	14.623	43	448298	11.56	ppb(v)	98
75) 1,1,1,2-Tetrachloroethane	15.700	131	271596	10.69	ppb(v)	99
77) Chlorobenzene	15.718	112	396226	9.64	ppb(v)	100
78) Ethylbenzene	16.263	91	712834	10.03	ppb(v)	100
79) m,p-Xylene	16.538	91	1071594	19.92	ppb(v)	99
80) Styrene	17.058	104	333059	11.27	ppb(v)	100
81) Nonane	17.590	43	451335	10.33	ppb(v)	98
82) o-Xylene	17.205	91	569203	9.47	ppb(v)	99
83) Bromoform	16.605	173	258447	10.42	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	418468	9.17	ppb(v)	100
85) 1,2,3-Trichloropropane	17.401	75	280319	9.25	ppb(v)	99
86) Isopropylbenzene	18.110	105	800127	9.50	ppb(v)	100
87) Bromobenzene	18.214	156	166346	10.39	ppb(v)	98
88) 2-Chlorotoluene	18.844	126	163503	10.58	ppb(v)	99
89) n-Propylbenzene	18.918	120	181078	11.61	ppb(v)	99
91) 4-Ethyltoluene	19.150	105	622678	11.37	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	601803	9.75	ppb(v)	100
93) alpha-Methylstyrene	19.517	118	233310	12.05	ppb(v)	99
94) tert-Butylbenzene	19.866	134	138834	9.90	ppb(v)	98
95) 1,2,4-Trimethylbenzene	19.878	105	553411	10.41	ppb(v)	100
96) 1,3-Dichlorobenzene	20.074	146	215077	10.65	ppb(v)	99
97) Benzyl Chloride	20.068	91	232082	11.16	ppb(v)	99
98) 1,4-Dichlorobenzene	20.172	146	185552	10.62	ppb(v)	99
99) sec-Butylbenzene	20.264	134	162741	10.27	ppb(v)	97
100) p-Isopropyltoluene	20.502	134	177488	10.99	ppb(v)	99
101) 1,2-Dichlorobenzene	20.649	146	218913	10.15	ppb(v)	99
102) n-Butylbenzene	21.084	134	123392	11.93	ppb(v)	97
103) Hexachloroethane	21.555	201	232668	9.43	ppb(v)	96
104) 1,2,4-Trichlorobenzene	22.907	180	61744	9.40	ppb(v)	99
105) Naphthalene	23.029	128	152618	8.67	ppb(v)	100
106) Hexachlorobutadiene	23.488	225	231773	9.49	ppb(v)	98
108) TVHC as equiv Pentane	5.691	TIC	1153491	10.55	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W39859.D
Acq On : 26 Dec 2019 10:17 am
Operator : danat
Sample : cc1620-10
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 13:53:15 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)= qualifier out of range (m)= manual integration (+)= signals summed						

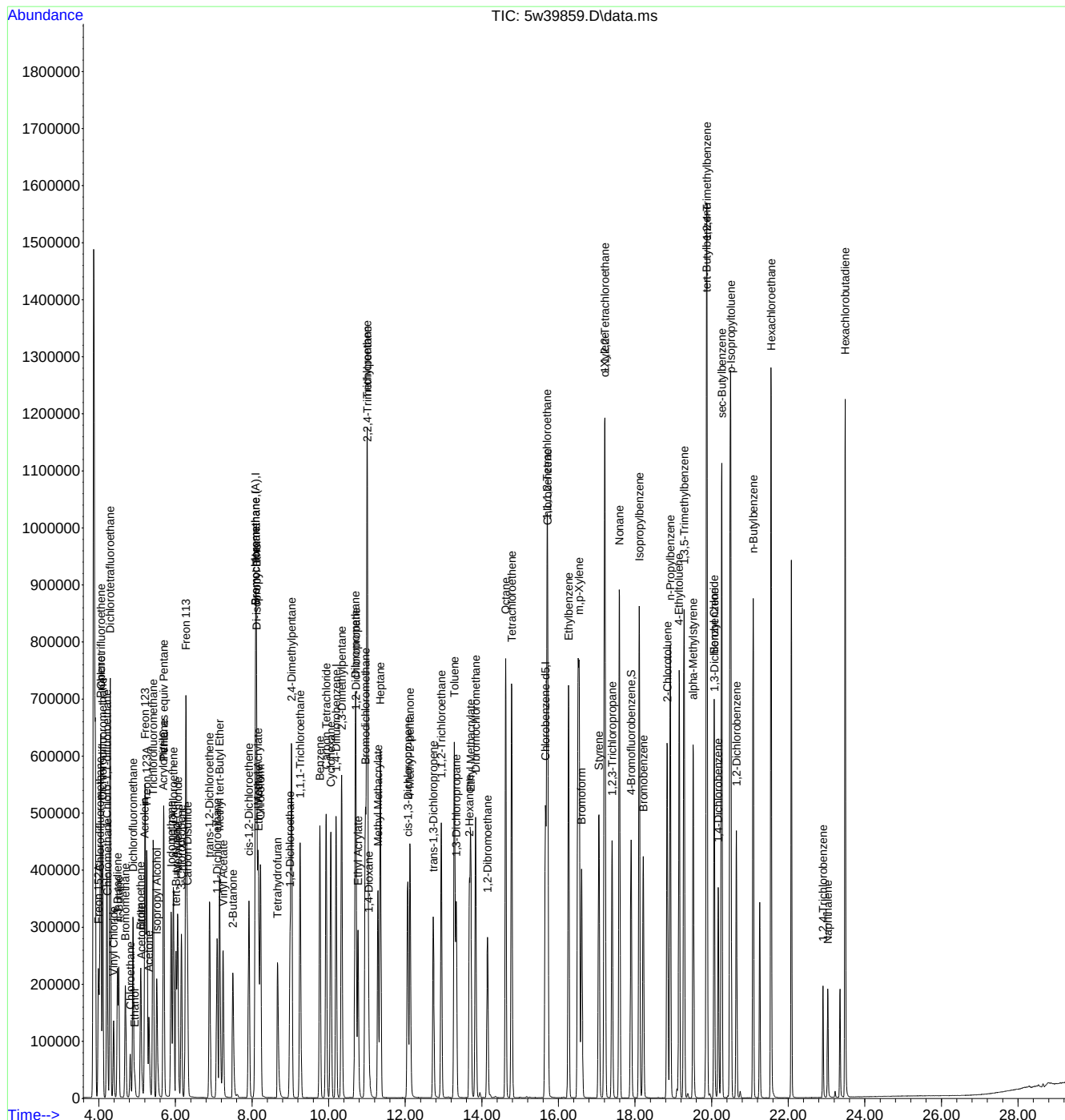
7.7.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39859.D
Acq On : 26 Dec 2019 10:17 am
Operator : danat
Sample : cc1620-10
Misc : ms39818,v5w1622,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 26 13:53:15 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39886.D
 Acq On : 27 Dec 2019 10:55 am
 Operator : danat
 Sample : cc1620-10
 Misc : ms39917,v5w1623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 27 13:33:22 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.083	130	145826	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.194	114	526967	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.663	82	235220	10.00	ppb(v	0.00
107) Bromochloromethane (A)	8.083	130	145826	10.00	ppb(v	0.00

System Monitoring Compounds
 90) 4-Bromofluorobenzene 17.896 95 231124 11.23 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 112.30%

Target Compounds					Qvalue
2) Freon 152A	3.990	65	110217	9.69	ppb(v 99
3) Chlorodifluoromethane	4.021	67	45238	9.65	ppb(v 100
4) Propene	4.046	41	135421	9.56	ppb(v 99
5) Chlorotrifluoroethene	4.052	116	228149	9.56	ppb(v 99
6) Dichlorodifluoromethane	4.101	85	451821	9.27	ppb(v 100
7) 1-Chloro-1,1-difluoro...	4.205	65	319948	9.21	ppb(v 99
8) Chloromethane	4.223	50	154947	9.56	ppb(v 100
9) Dichlorotetrafluoroethane	4.290	85	436164	9.57	ppb(v 97
10) Vinyl Chloride	4.388	62	154513	9.98	ppb(v 100
11) 1,3-Butadiene	4.486	54	100524	9.45	ppb(v 99
12) n-Butane	4.523	58	21513	9.61	ppb(v 94
13) Bromomethane	4.694	94	146482	8.92	ppb(v 99
14) Chloroethane	4.822	64	68760	9.58	ppb(v 97
15) Dichlorofluoromethane	4.890	67	334234	9.13	ppb(v 99
16) Acetonitrile	5.104	41	102096	8.67	ppb(v 99
17) Freon 123	5.208	83	342482	9.43	ppb(v 98
18) Freon 123A	5.251	117	179225	9.39	ppb(v 99
19) Bromoethene	5.092	106	135027	9.54	ppb(v 99
20) Acrolein	5.196	56	56212	9.02	ppb(v 100
21) Trichlorofluoromethane	5.416	101	424359	9.26	ppb(v 99
22) Acetone	5.306	58	57452	8.62	ppb(v 97
23) Pentane	5.691	57	45205	10.40	ppb(v 95
24) Iodomethane	5.887	142	460800	9.67	ppb(v 100
25) Isopropyl Alcohol	5.514	43	57216	7.93	ppb(v 100
26) 1,1-Dichloroethene	5.948	61	287488	9.52	ppb(v 99
27) Freon 113	6.272	101	374307	9.39	ppb(v 99
28) Methylene Chloride	6.058	84	159795	9.14	ppb(v 98
29) Carbon Disulfide	6.309	76	481539	10.04	ppb(v 100
30) Ethanol	4.933	45	57171	8.60	ppb(v 99
31) Acrylonitrile	5.685	53	138478	9.16	ppb(v 100
32) 3-Chloropropene	6.156	76	83557	10.09	ppb(v 98
33) trans-1,2-Dichloroethene	6.890	61	258026	9.62	ppb(v 99
34) tert-Butyl Alcohol	6.009	59	350917	9.42	ppb(v 100
35) Methyl tert-Butyl Ether	7.153	73	469505	9.55	ppb(v 99
36) Vinyl Acetate	7.239	43	472863	9.33	ppb(v 99
37) 1,1-Dichloroethane	7.086	63	326984	9.44	ppb(v 98
38) 2-Butanone	7.496	72	78224	9.34	ppb(v 96
39) Hexane	8.095	57	268097	9.77	ppb(v 96
40) cis-1,2-Dichloroethene	7.918	61	254649	9.63	ppb(v 100
41) Di-isopropyl Ether	8.120	87	139801	10.14	ppb(v 95
42) Ethyl Acetate	8.169	61	53321	9.64	ppb(v 94
43) Methyl Acrylate	8.157	55	295394	9.36	ppb(v 99
44) Chloroform	8.218	83	373442	9.34	ppb(v 100
45) 2,4-Dimethylpentane	9.031	57	326683	9.92	ppb(v 100
46) Tetrahydrofuran	8.664	72	79619	9.82	ppb(v 99
47) 1,1,1-Trichloroethane	9.258	97	362880	9.29	ppb(v 99
48) 1,2-Dichloroethane	8.995	62	229897	9.37	ppb(v 99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5w39886.D
 Acq On : 27 Dec 2019 10:55 am
 Operator : danat
 Sample : cc1620-10
 Misc : ms39917,v5w1623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 27 13:33:22 2019
 Quant Method : C:\msdchem\1\methods\m5w1620.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Dec 24 10:51:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Benzene	9.772	78	535307	9.65	ppb(v)	99
50) Carbon Tetrachloride	9.937	117	383148	9.69	ppb(v)	100
51) Cyclohexane	10.053	56	277814	9.83	ppb(v)	99
52) 2,3-Dimethylpentane	10.341	71	117858	10.02	ppb(v)	100
54) 2,2,4-Trimethylpentane	11.014	57	893813	9.66	ppb(v)	99
55) Heptane	11.350	71	176211	10.20	ppb(v)	100
56) Trichloroethene	10.995	95	236266	9.18	ppb(v)	99
57) 1,2-Dichloropropane	10.708	63	209530	9.82	ppb(v)	99
58) Dibromomethane	10.695	174	202971	8.99	ppb(v)	97
59) Ethyl Acrylate	10.769	55	365501	9.71	ppb(v)	100
60) Methyl Methacrylate	11.289	69	181353	10.01	ppb(v)	97
61) 1,4-Dioxane	11.044	88	108042	9.59	ppb(v)	94
62) Bromodichloromethane	10.959	83	398762	9.61	ppb(v)	99
63) cis-1,3-Dichloropropene	12.066	75	289202	10.04	ppb(v)	99
64) 4-Methyl-2-pentanone	12.121	58	162591	9.81	ppb(v)	99
65) trans-1,3-Dichloropropene	12.733	75	229894	9.51	ppb(v)	100
66) Toluene	13.283	91	603651	9.24	ppb(v)	99
67) 1,1,2-Trichloroethane	12.941	97	206605	10.25	ppb(v)	99
68) 1,3-Dichloropropane	13.332	76	267479	10.23	ppb(v)	99
69) 2-Hexanone	13.675	58	186230	10.39	ppb(v)	98
70) Ethyl Methacrylate	13.712	69	290165	10.77	ppb(v)	99
71) Dibromochloromethane	13.840	129	357634	10.77	ppb(v)	100
72) Tetrachloroethene	14.782	166	290108	9.85	ppb(v)	99
73) 1,2-Dibromoethane	14.146	107	266383	9.51	ppb(v)	99
74) Octane	14.623	43	438024	10.36	ppb(v)	100
75) 1,1,1,2-Tetrachloroethane	15.700	131	278808	10.07	ppb(v)	99
77) Chlorobenzene	15.718	112	403398	9.28	ppb(v)	99
78) Ethylbenzene	16.263	91	720370	9.59	ppb(v)	99
79) m,p-Xylene	16.520	91	1089631	19.16	ppb(v)	100
80) Styrene	17.058	104	338496	10.84	ppb(v)	99
81) Nonane	17.596	43	437148	9.46	ppb(v)	100
82) o-Xylene	17.205	91	579771	9.13	ppb(v)	99
83) Bromoform	16.605	173	262929	10.03	ppb(v)	99
84) 1,1,2,2-Tetrachloroethane	17.211	83	421896	8.74	ppb(v)	98
85) 1,2,3-Trichloropropane	17.400	75	279994	8.74	ppb(v)	99
86) Isopropylbenzene	18.110	105	819017	9.20	ppb(v)	99
87) Bromobenzene	18.214	156	170218	10.06	ppb(v)	99
88) 2-Chlorotoluene	18.844	126	166919	10.21	ppb(v)	98
89) n-Propylbenzene	18.924	120	185512	11.25	ppb(v)	91
91) 4-Ethyltoluene	19.150	105	637367	11.01	ppb(v)	100
92) 1,3,5-Trimethylbenzene	19.279	105	609987	9.35	ppb(v)	99
93) alpha-Methylstyrene	19.523	118	235636	11.51	ppb(v)	99
94) tert-Butylbenzene	19.866	134	143711	9.70	ppb(v)	97
95) 1,2,4-Trimethylbenzene	19.878	105	566688	10.08	ppb(v)	98
96) 1,3-Dichlorobenzene	20.074	146	222090	10.40	ppb(v)	98
97) Benzyl Chloride	20.068	91	238344	10.84	ppb(v)	100
98) 1,4-Dichlorobenzene	20.172	146	189641	10.27	ppb(v)	100
99) sec-Butylbenzene	20.264	134	168880	10.08	ppb(v)	100
100) p-Isopropyltoluene	20.502	134	182756	10.71	ppb(v)	99
101) 1,2-Dichlorobenzene	20.649	146	226610	9.94	ppb(v)	100
102) n-Butylbenzene	21.083	134	126792	11.60	ppb(v)	99
103) Hexachloroethane	21.554	201	237840	9.12	ppb(v)	98
104) 1,2,4-Trichlorobenzene	22.906	180	63606	9.16	ppb(v)	97
105) Naphthalene	23.029	128	155817	8.37	ppb(v)	99
106) Hexachlorobutadiene	23.488	225	235242	9.11	ppb(v)	100
108) TVHC as equiv Pentane	5.691	TIC	1142927	9.62	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5w39886.D
Acq On : 27 Dec 2019 10:55 am
Operator : danat
Sample : cc1620-10
Misc : ms39917,v5w1623,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 27 13:33:22 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration

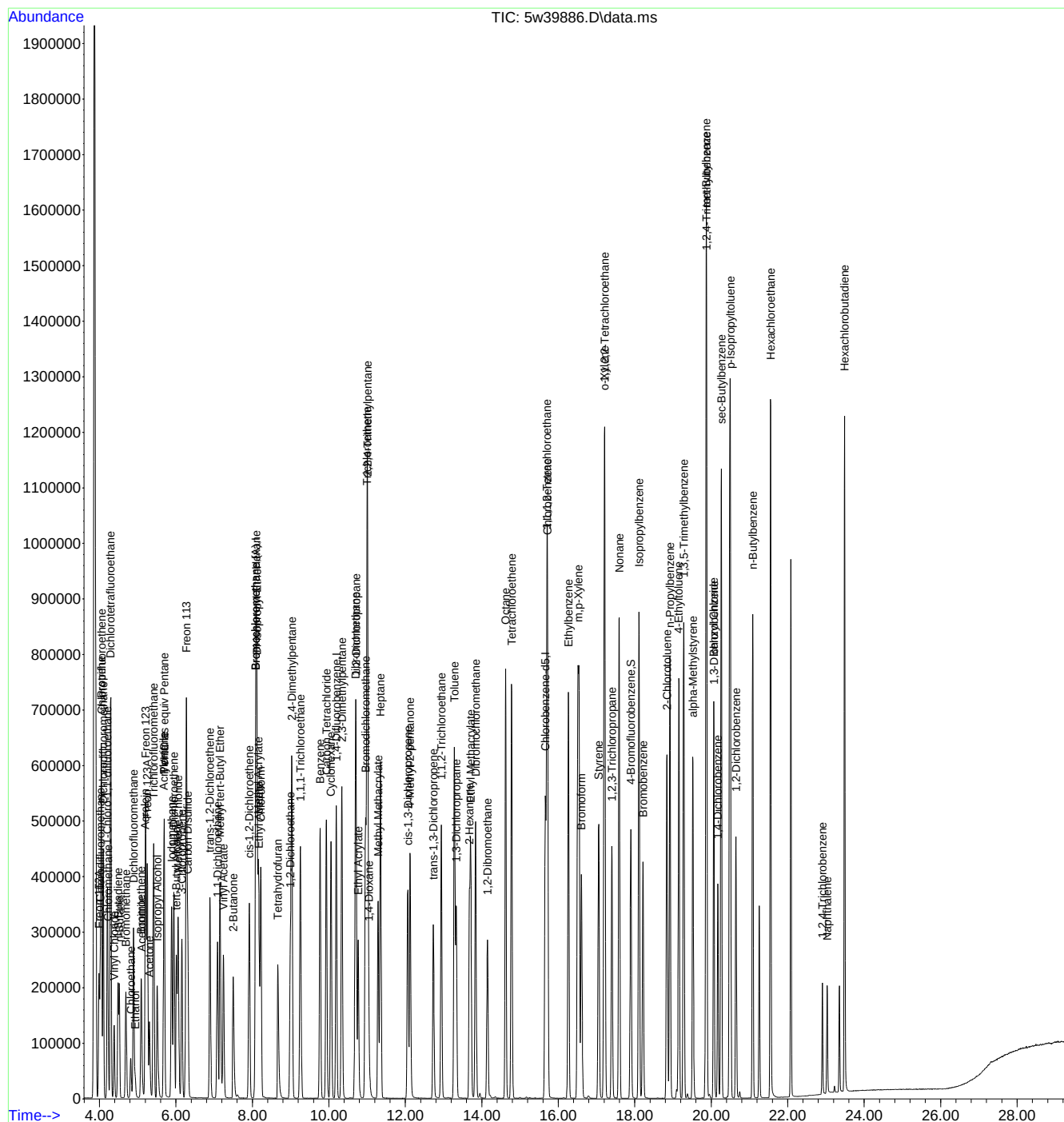
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

Quantitation Report (QT Reviewed)

```
Data Path : C:\msdchem\1\data\  
Data File : 5w39886.D  
Acq On : 27 Dec 2019 10:55 am  
Operator : danat  
Sample : cc1620-10  
Misc : ms39917,v5w1623,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Dec 27 13:33:22 2019
Quant Method : C:\msdchem\1\methods\m5w1620.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Tue Dec 24 10:51:47 2019
Response via : Initial Calibration



7.7.12

Data Path : C:\msdchem\1\data\
 Data File : 6W13822.D
 Acq On : 13 Sep 2019 12:03 pm
 Operator : thomash
 Sample : ic571-0.2
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 17:18:30 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.152	130	157175	10.00	ppb(v #	0.00
55) 1,4-Difluorobenzene	10.349	114	568695	10.00	ppb(v #	0.00
78) Chlorobenzene-d5	15.885	82	233340	10.00	ppb(v #	0.00
109) Bromochloromethane (A)	8.152	130	157175	10.00	ppb(v #	0.00

System Monitoring Compounds						
92) 4-Bromofluorobenzene	18.130	95	288972	10.90	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	109.00%

Target Compounds				Qvalue		
3) Freon 152A	3.729	65	2083	0.16	ppb(v	96
4) Chlorodifluoromethane	3.760	67	765	0.15	ppb(v#	44
5) Propene	3.790	41	2189	0.13	ppb(v#	91
6) Chlorotrifluoroethene	3.796	116	5779	0.22	ppb(v#	92
7) Dichlorodifluoromethane	3.845	85	8818	0.17	ppb(v#	99
8) 1-Chloro-1,1-difluoro...	3.955	65	6024	0.14	ppb(v#	71
9) Chloromethane	3.980	50	2251	0.11	ppb(v	94
10) Dichlorotetrafluoroethane	4.053	85	8504	0.16	ppb(v	86
11) Vinyl Chloride	4.157	62	2746	0.13	ppb(v#	97
12) 1,3-Butadiene	4.268	54	1853	0.12	ppb(v	97
13) n-Butane	4.304	58	397	0.10	ppb(v#	36
14) Bromomethane	4.494	94	3144	0.18	ppb(v	91
15) Acrolein	5.032	56	1251	0.14	ppb(v#	80
16) Chloroethane	4.622	64	1243	0.12	ppb(v#	88
17) Dichlorofluoromethane	4.702	67	6274	0.14	ppb(v	98
18) Acetonitrile	4.928	41	3444	0.15	ppb(v	94
19) Freon 123	5.051	83	8084	0.18	ppb(v	93
20) Freon 123A	5.093	117	4860	0.20	ppb(v	76
21) Bromoethene	4.922	106	3256	0.20	ppb(v#	92
22) Trichlorofluoromethane	5.283	101	8593	0.18	ppb(v	91
23) Acetone	5.155	58	1950	0.15	ppb(v	82
24) Pentane	5.601	57	675	0.13	ppb(v	58
26) Iodomethane	5.791	142	10825	0.26	ppb(v	85
27) Isopropyl Alcohol	5.375	45	8987	0.17	ppb(v#	92
28) 1,1-Dichloroethene	5.864	61	5087	0.15	ppb(v	87
29) Freon 113	6.219	101	7538	0.20	ppb(v#	84
30) Methylene Chloride	5.980	84	3445	0.18	ppb(v#	74
31) Carbon Disulfide	6.262	76	9141	0.16	ppb(v	97
33) Acrylonitrile	5.571	53	2231	0.13	ppb(v	97
34) 3-Chloropropene	6.084	76	1519	0.17	ppb(v#	62
35) trans-1,2-Dichloroethene	6.892	61	4207	0.15	ppb(v	87
36) tert-Butyl Alcohol	5.932	59	7195	0.18	ppb(v	96
37) Methyl tert-Butyl Ether	7.180	73	9124	0.18	ppb(v	95
38) Vinyl Acetate	7.271	43	7145	0.12	ppb(v#	91
39) 1,1-Dichloroethane	7.094	63	5826	0.16	ppb(v#	92
40) 2-Butanone	7.547	72	1656	0.17	ppb(v#	56
41) Hexane	8.183	57	4486	0.14	ppb(v#	63
42) cis-1,2-Dichloroethene	7.975	61	4109	0.15	ppb(v	85
43) Di-isopropyl Ether	8.201	87	2833	0.19	ppb(v	53
44) Ethyl Acetate	8.256	61	780	0.12	ppb(v#	43
45) Methyl Acrylate	8.244	55	5173	0.14	ppb(v	99
46) Chloroform	8.293	83	6664	0.16	ppb(v	96
47) 2,4-Dimethylpentane	9.168	57	5492	0.15	ppb(v	95
48) Tetrahydrofuran	8.795	72	1409	0.18	ppb(v	87
49) 1,1,1-Trichloroethane	9.394	97	6762	0.17	ppb(v	98
50) 1,2-Dichloroethane	9.113	62	3656	0.14	ppb(v#	89
51) Benzene	9.914	78	10537	0.17	ppb(v	97
52) Carbon Tetrachloride	10.085	117	7146	0.17	ppb(v	96
53) Cyclohexane	10.226	56	4658	0.15	ppb(v	83
54) 2,3-Dimethylpentane	10.514	71	2106	0.16	ppb(v#	76
56) 2,2,4-Trimethylpentane	11.205	57	15787	0.15	ppb(v#	95
57) Heptane	11.548	71	3392	0.18	ppb(v	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13822.D
 Acq On : 13 Sep 2019 12:03 pm
 Operator : thomash
 Sample : ic571-0.2
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 17:18:30 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
58) Trichloroethene	11.181	95	4787	0.20	ppb(v	85
59) 1,2-Dichloropropane	10.893	63	3526	0.14	ppb(v#	93
60) Dibromomethane	10.862	174	5209	0.27	ppb(v#	64
61) Ethyl Acrylate	10.954	55	6473	0.14	ppb(v#	88
62) Methyl Methacrylate	11.474	69	3441	0.15	ppb(v	73
63) 1,4-Dioxane	11.242	88	4326	0.31	ppb(v#	24
64) Bromodichloromethane	11.132	83	6969	0.15	ppb(v#	95
65) cis-1,3-Dichloropropene	12.269	75	5034	0.14	ppb(v#	92
66) 4-Methyl-2-pentanone	12.349	58	2722	0.14	ppb(v#	68
67) trans-1,3-Dichloropropene	12.942	75	3967	0.13	ppb(v#	92
68) Toluene	13.499	91	12520	0.19	ppb(v	99
69) 1,1,2-Trichloroethane	13.150	97	4177	0.19	ppb(v	89
70) 1,3-Dichloropropane	13.548	76	5473	0.15	ppb(v#	78
71) 2-Hexanone	13.909	58	5038	0.15	ppb(v#	77
72) Ethyl Methacrylate	13.921	69	5580	0.14	ppb(v#	88
73) Dibromochloromethane	14.056	129	7323	0.19	ppb(v#	95
74) Tetrachloroethene	15.010	166	7051	0.26	ppb(v	91
75) 1,2-Dibromoethane	14.374	107	6200	0.19	ppb(v#	93
76) Octane	14.845	43	6640	0.12	ppb(v#	82
77) 1,1,1,2-Tetrachloroethane	15.934	131	5646	0.21	ppb(v#	1
79) Chlorobenzene	15.952	112	10005	0.27	ppb(v	87
80) Ethylbenzene	16.497	91	16857	0.27	ppb(v	94
81) m,p-Xylene	16.760	91	25652	0.53	ppb(v	96
82) Styrene	17.286	104	7608	0.26	ppb(v	90
83) Nonane	17.818	43	6767	0.16	ppb(v#	83
84) o-Xylene	17.439	91	13784	0.26	ppb(v	92
85) Bromoform	16.846	173	7160	0.31	ppb(v	96
86) 1,1,2,2-Tetrachloroethane	17.451	83	8574	0.23	ppb(v#	99
87) 1,2,3-Trichloropropane	17.641	75	6327	0.21	ppb(v	94
88) Isopropylbenzene	18.350	105	17922	0.29	ppb(v	91
89) Bromobenzene	18.461	156	5295	0.30	ppb(v#	72
90) 2-Chlorotoluene	19.072	126	4037	0.31	ppb(v#	72
91) n-Propylbenzene	19.146	120	4299	0.29	ppb(v	73
93) 4-Ethyltoluene	19.372	105	14507	0.26	ppb(v	95
94) 1,3,5-Trimethylbenzene	19.488	105	13134	0.28	ppb(v	91
95) alpha-Methylstyrene	19.727	118	5660	0.23	ppb(v	94
96) tert-Butylbenzene	20.057	134	3371	0.31	ppb(v	77
97) 1,2,4-Trimethylbenzene	20.076	105	12897	0.26	ppb(v	86
98) 1,3-Dichlorobenzene	20.265	146	6864m	0.23	ppb(v	
99) Benzyl Chloride	20.259	91	5738	0.13	ppb(v#	90
100) 1,4-Dichlorobenzene	20.369	146	5968	0.19	ppb(v	89
101) sec-Butylbenzene	20.443	134	4375	0.34	ppb(v#	64
102) p-Isopropyltoluene	20.675	134	4291	0.29	ppb(v	88
103) 1,2-Dichlorobenzene	20.828	146	7305	0.27	ppb(v#	91
104) n-Butylbenzene	21.250	134	3335	0.27	ppb(v	61
105) Hexachloroethane	21.709	201	4830	0.31	ppb(v	78
106) 1,2,4-Trichlorobenzene	23.031	180	2413	0.21	ppb(v	97
107) Naphthalene	23.153	128	7084	0.23	ppb(v	99
108) Hexachlorobutadiene	23.593	225	6740	0.44	ppb(v	97
110) TVHC as equiv Pentane	5.589	TIC	16650m	0.13	ppb(v	

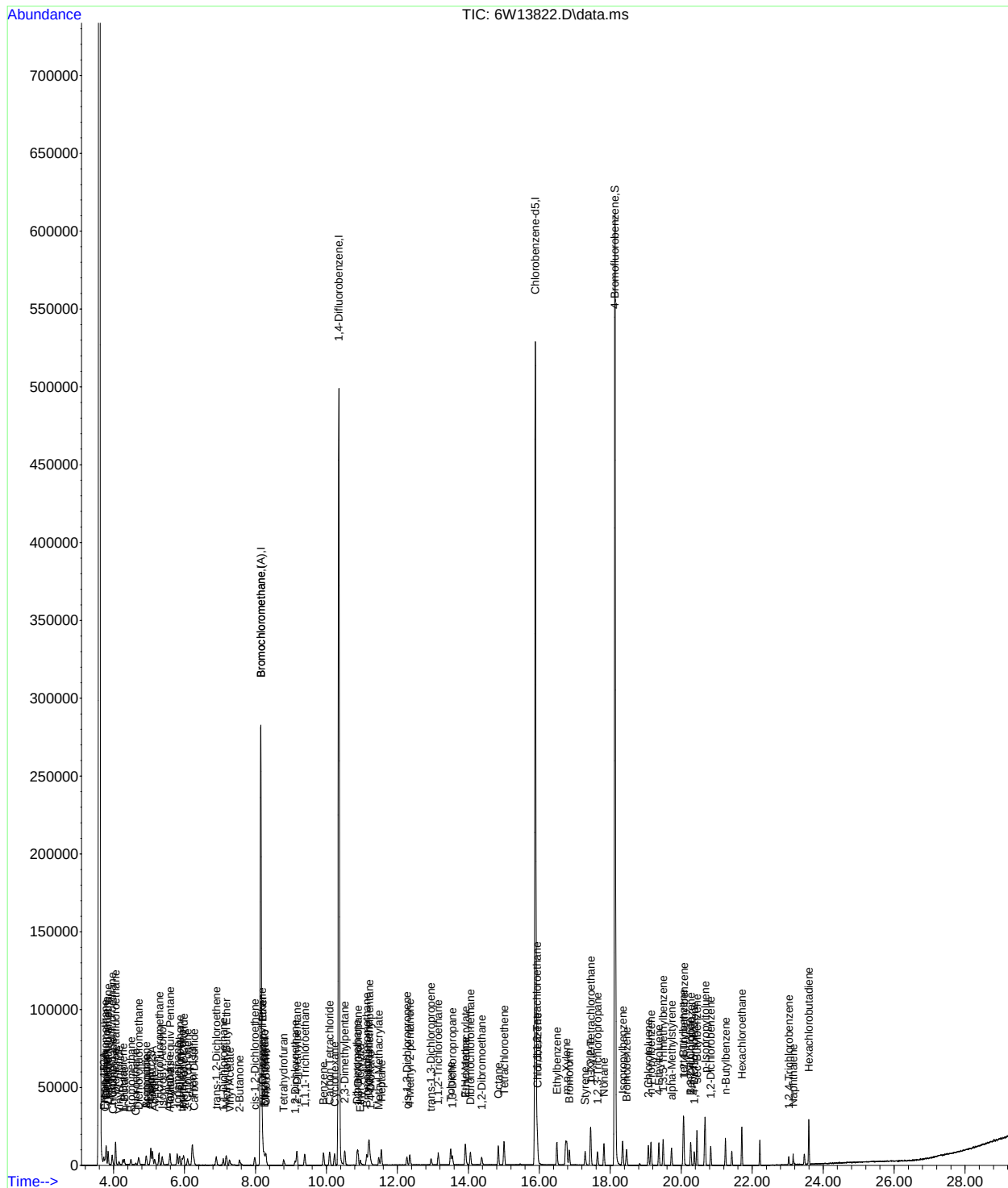
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.13

7

Data Path : C:\msdchem\1\data\
Data File : 6W13822.D
Acq On : 13 Sep 2019 12:03 pm
Operator : thomash
Sample : ic571-0.2
Misc : MS37187,V6W571,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 17:18:30 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:

V6W571-IC571

Method:

TO-15

Lab FileID:

6W13822.D

Analyst approved:

09/16/19 09:58 Thomas Hilbig

Injection Time:

09/13/19 12:03

Supervisor approved:

09/18/19 11:16 Dana Tryon

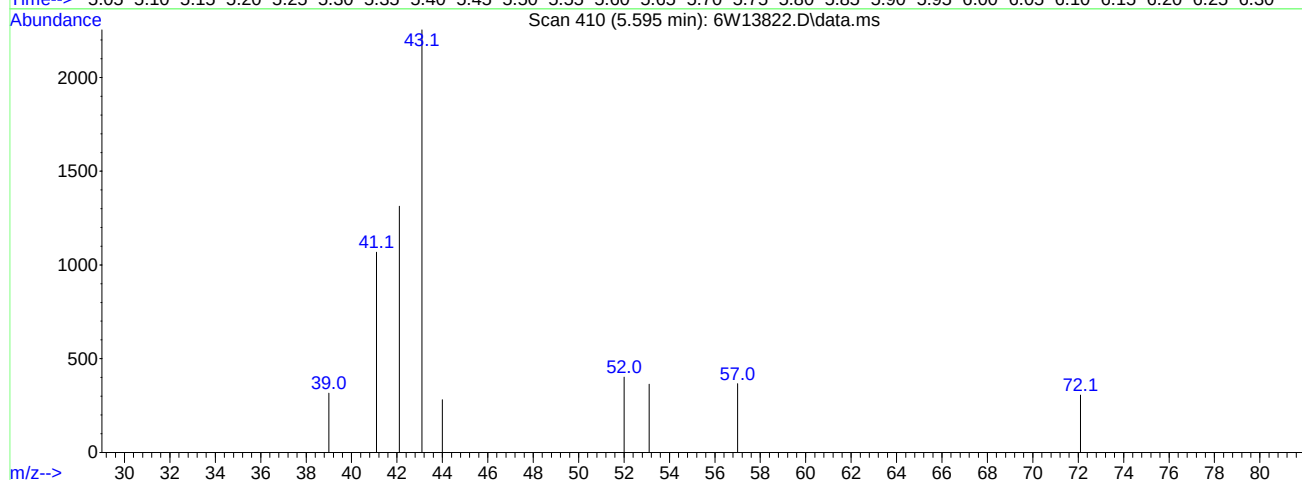
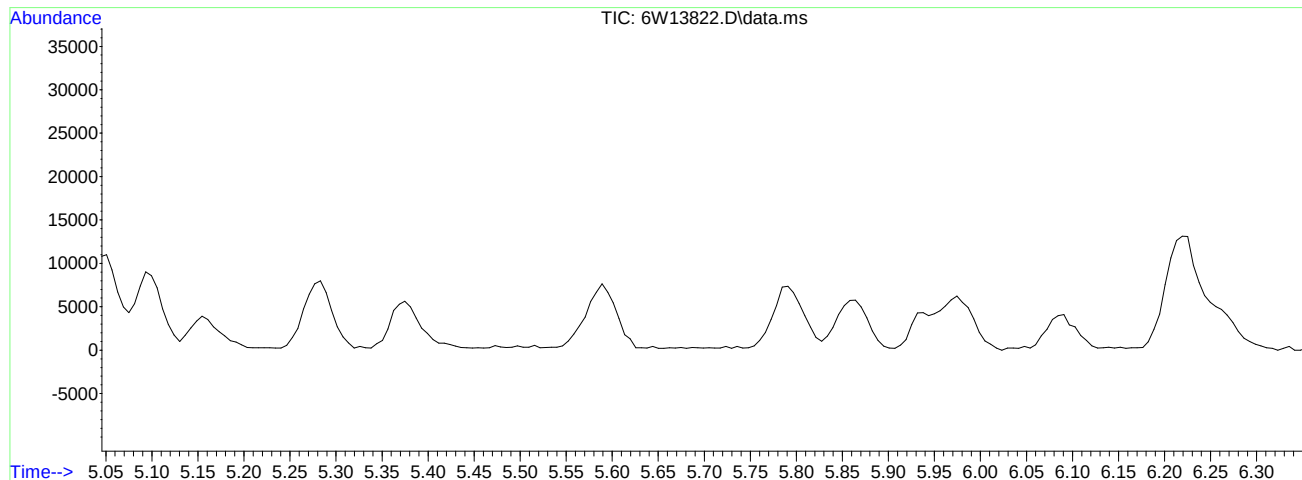
Parameter	CAS	Sig#	R.T. (min.)	Reason
TVHC As Equiv Pentane			5.59	Missed peak
m-Dichlorobenzene	541-73-1		20.27	Missed peak

7.7.13.1
7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W13822.D
Acq On : 13 Sep 2019 12:03 pm
Operator : thomash
Sample : ic571-0.2
Misc : MS37187,V6W570,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 12:38:27 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



TIC: 6W13822.D\data.ms

(110) TVHC as equiv Pentane

5.595min (-5.595) 0.00ppb(v)

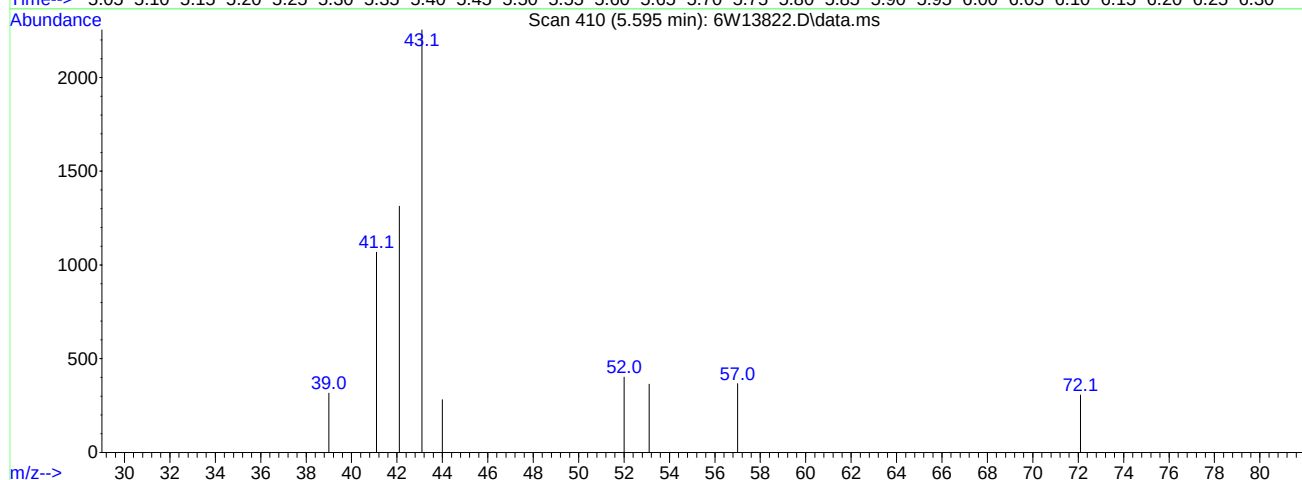
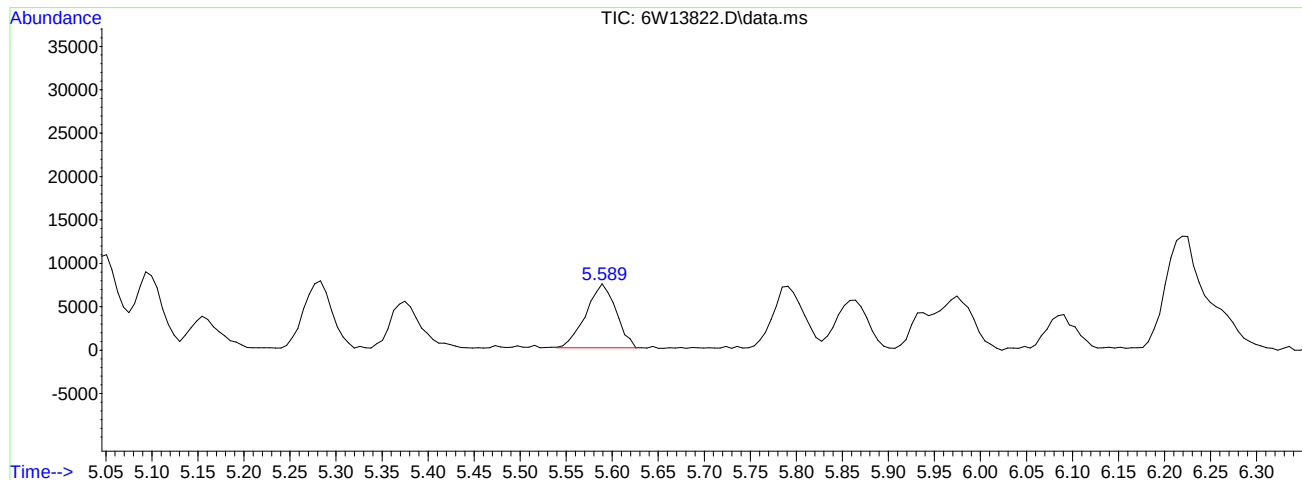
response 0

Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W13822.D
Acq On : 13 Sep 2019 12:03 pm
Operator : thomash
Sample : ic571-0.2
Misc : MS37187,V6W570,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 12:38:27 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



TIC: 6W13822.D\data.ms

(110) TVHC as equiv Pentane

5.589min (-0.006) 0.13ppb(v) m

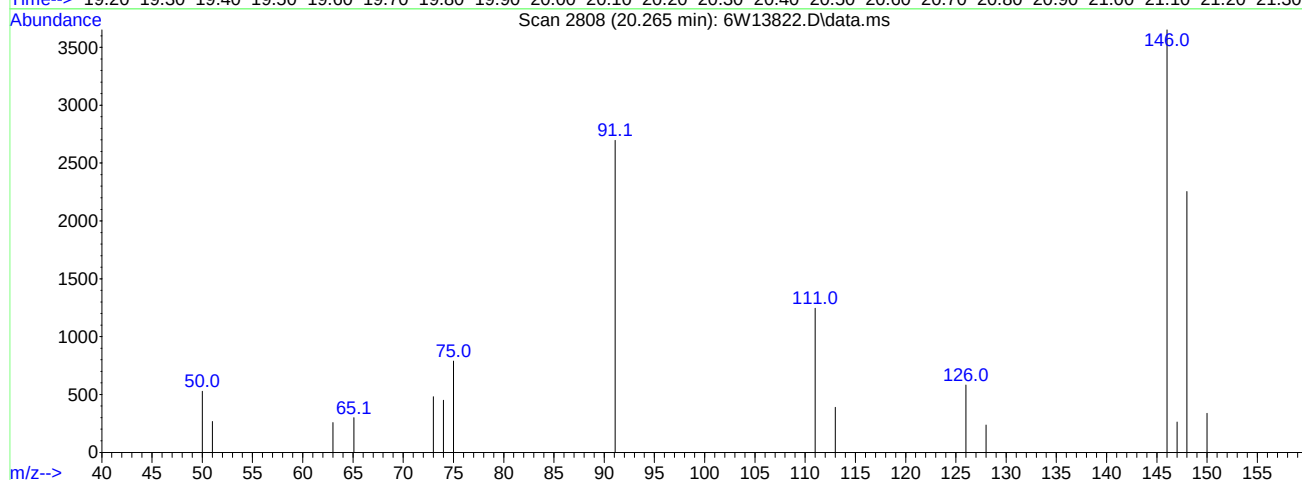
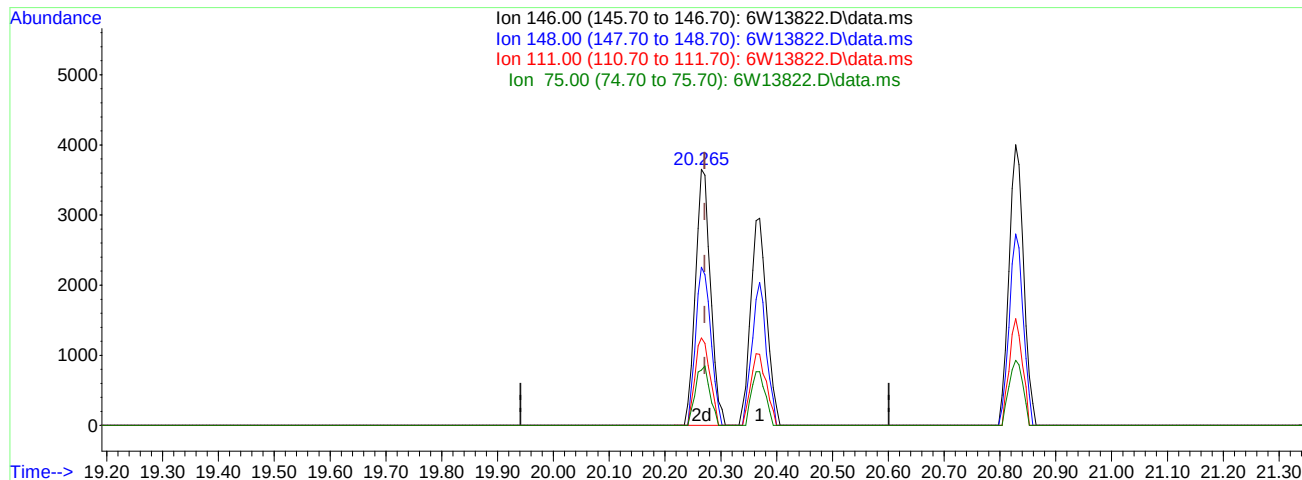
response 16650

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W13822.D
Acq On : 13 Sep 2019 12:03 pm
Operator : thomash
Sample : ic571-0.2
Misc : MS37187,V6W571,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 17:18:30 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



TIC: 6W13822.D\data.ms

(98) 1,3-Dichlorobenzene

20.265min (-0.006) 0.23ppb(v) m

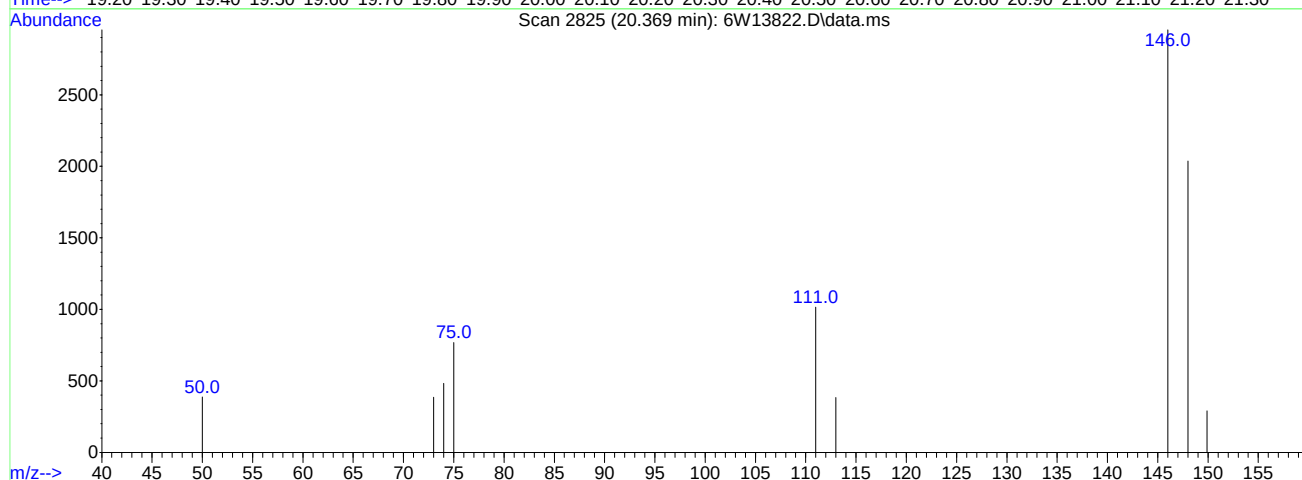
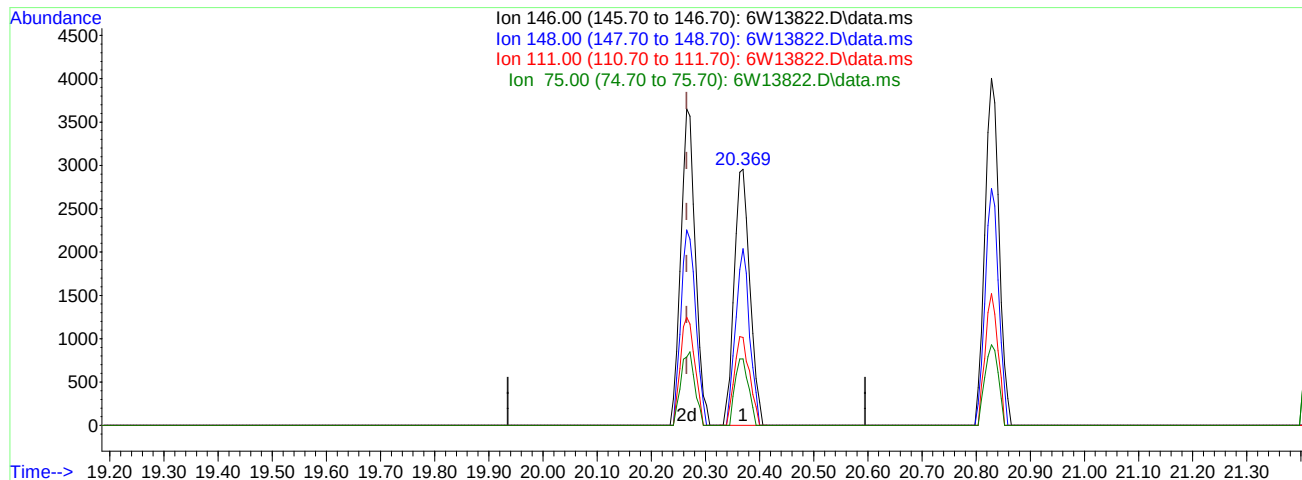
response 6864

Ion	Exp%	Act%
146.00	100	100
148.00	64.40	61.75
111.00	42.90	34.12
75.00	34.80	21.58#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\Raw Data\
Data File : 6W13822.D
Acq On : 13 Sep 2019 12:03 pm
Operator : thomash
Sample : ic571-0.2
Misc : MS37187,V6W571,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 16 09:54:13 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Sep 16 09:11:28 2019
Response via : Initial Calibration



TIC: 6W13822.D\data.ms

(98) 1,3-Dichlorobenzene

20.369min (+0.104) 0.14ppb(v)

response 5968

Ion	Exp%	Act%
146.00	100	100
148.00	64.40	68.93
111.00	42.90	34.38
75.00	34.80	25.96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13823.D
 Acq On : 13 Sep 2019 1:12 pm
 Operator : thomash
 Sample : ic571-0.1
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 10:40:35 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	156950	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.349	114	561984	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.885	82	228506	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.152	130	156950	10.00	ppb(v # 0.00	

System Monitoring Compounds						
92) 4-Bromofluorobenzene	18.130	95	280637	10.81	ppb(v 0.00	
Spiked Amount	10.000	Range	65 - 128	Recovery	=	108.10%

Target Compounds					Qvalue	
3) Freon 152A	3.723	65	989	0.08	ppb(v#	47
5) Propene	3.796	41	1200	0.07	ppb(v	91
6) Chlorotrifluoroethene	3.796	116	2834	0.11	ppb(v#	90
7) Dichlorodifluoromethane	3.845	85	4585	0.09	ppb(v#	92
8) 1-Chloro-1,1-difluoro...	3.956	65	3034	0.07	ppb(v#	66
9) Chloromethane	3.980	50	1175	0.06	ppb(v	99
10) Dichlorotetrafluoroethane	4.053	85	4286	0.08	ppb(v	86
11) Vinyl Chloride	4.157	62	1327	0.06	ppb(v#	99
14) Bromomethane	4.488	94	1542	0.09	ppb(v#	82
15) Acrolein	5.032	56	587	0.07	ppb(v#	63
17) Dichlorofluoromethane	4.702	67	3204	0.07	ppb(v#	93
18) Acetonitrile	4.922	41	1638	0.07	ppb(v#	85
19) Freon 123	5.044	83	3902	0.09	ppb(v	93
20) Freon 123A	5.100	117	2317	0.09	ppb(v	76
21) Bromoethene	4.922	106	1674	0.10	ppb(v#	90
22) Trichlorofluoromethane	5.283	101	4336	0.09	ppb(v	98
23) Acetone	5.161	58	954	0.08	ppb(v	84
26) Iodomethane	5.791	142	5419	0.13	ppb(v	81
28) 1,1-Dichloroethene	5.858	61	2459	0.07	ppb(v	88
29) Freon 113	6.219	101	3687	0.10	ppb(v#	85
30) Methylene Chloride	5.980	84	2028	0.11	ppb(v#	75
31) Carbon Disulfide	6.262	76	4785	0.08	ppb(v#	76
34) 3-Chloropropene	6.084	76	566	0.06	ppb(v#	80
35) trans-1,2-Dichloroethene	6.886	61	2033	0.07	ppb(v	89
36) tert-Butyl Alcohol	5.944	59	3482	0.09	ppb(v	96
37) Methyl tert-Butyl Ether	7.186	73	4597	0.09	ppb(v	93
39) 1,1-Dichloroethane	7.088	63	2757	0.08	ppb(v#	92
40) 2-Butanone	7.559	72	581	0.06	ppb(v#	53
41) Hexane	8.183	57	2183	0.07	ppb(v#	47
42) cis-1,2-Dichloroethene	7.975	61	1982	0.07	ppb(v	84
43) Di-isopropyl Ether	8.207	87	1304	0.09	ppb(v#	51
45) Methyl Acrylate	8.250	55	2323	0.06	ppb(v#	67
46) Chloroform	8.293	83	3351	0.08	ppb(v#	91
47) 2,4-Dimethylpentane	9.168	57	2549	0.07	ppb(v	95
48) Tetrahydrofuran	8.801	72	585	0.07	ppb(v	78
49) 1,1,1-Trichloroethane	9.382	97	3434	0.09	ppb(v#	85
50) 1,2-Dichloroethane	9.113	62	1846	0.07	ppb(v#	86
51) Benzene	9.920	78	5340	0.09	ppb(v	97
52) Carbon Tetrachloride	10.085	117	3368	0.08	ppb(v	96
53) Cyclohexane	10.220	56	2210	0.07	ppb(v	84
54) 2,3-Dimethylpentane	10.514	71	948	0.07	ppb(v#	84
56) 2,2,4-Trimethylpentane	11.211	57	7737	0.07	ppb(v#	96
57) Heptane	11.554	71	1590	0.08	ppb(v	83
58) Trichloroethene	11.181	95	2508	0.11	ppb(v	87
59) 1,2-Dichloropropane	10.893	63	1645	0.07	ppb(v#	74
60) Dibromomethane	10.869	174	2632	0.14	ppb(v#	70
61) Ethyl Acrylate	10.966	55	2732	0.06	ppb(v#	82
62) Methyl Methacrylate	11.486	69	1295	0.06	ppb(v#	69
64) Bromodichloromethane	11.132	83	3385	0.08	ppb(v#	90
65) cis-1,3-Dichloropropene	12.263	75	2303	0.07	ppb(v#	85
66) 4-Methyl-2-pentanone	12.355	58	1051	0.05	ppb(v#	78
67) trans-1,3-Dichloropropene	12.942	75	1803	0.06	ppb(v#	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13823.D
 Acq On : 13 Sep 2019 1:12 pm
 Operator : thomash
 Sample : ic571-0.1
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 10:40:35 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
68) Toluene	13.499	91	6676	0.10	ppb(v	94
69) 1,1,2-Trichloroethane	13.150	97	1971	0.09	ppb(v	90
70) 1,3-Dichloropropane	13.548	76	2583	0.07	ppb(v#	74
71) 2-Hexanone	13.915	58	2088	0.06	ppb(v#	76
72) Ethyl Methacrylate	13.927	69	2465	0.06	ppb(v#	66
73) Dibromochloromethane	14.056	129	3434	0.09	ppb(v#	99
74) Tetrachloroethene	15.004	166	3447	0.13	ppb(v	93
75) 1,2-Dibromoethane	14.380	107	2800	0.08	ppb(v#	94
76) Octane	14.845	43	3220	0.06	ppb(v#	80
77) 1,1,1,2-Tetrachloroethane	15.928	131	2786	0.10	ppb(v#	1
79) Chlorobenzene	15.952	112	4945	0.14	ppb(v	88
80) Ethylbenzene	16.497	91	9058	0.15	ppb(v	94
81) m,p-Xylene	16.760	91	13204	0.28	ppb(v#	93
82) Styrene	17.292	104	3344	0.12	ppb(v	92
83) Nonane	17.818	43	3198	0.08	ppb(v#	93
84) o-Xylene	17.439	91	7867	0.15	ppb(v	95
85) Bromoform	16.846	173	3387	0.15	ppb(v#	94
86) 1,1,2,2-Tetrachloroethane	17.451	83	4168	0.11	ppb(v#	94
87) 1,2,3-Trichloropropane	17.641	75	3034	0.10	ppb(v	90
88) Isopropylbenzene	18.350	105	8750	0.14	ppb(v	90
89) Bromobenzene	18.454	156	2508	0.15	ppb(v#	64
90) 2-Chlorotoluene	19.078	126	1890	0.15	ppb(v#	49
91) n-Propylbenzene	19.146	120	1959	0.13	ppb(v	88
93) 4-Ethyltoluene	19.372	105	7040	0.13	ppb(v	93
94) 1,3,5-Trimethylbenzene	19.488	105	6387	0.14	ppb(v	98
95) alpha-Methylstyrene	19.727	118	2470	0.10	ppb(v	90
96) tert-Butylbenzene	20.057	134	1612	0.15	ppb(v	67
97) 1,2,4-Trimethylbenzene	20.076	105	6043	0.13	ppb(v#	87
98) 1,3-Dichlorobenzene	20.265	146	3277	0.11	ppb(v	91
99) Benzyl Chloride	20.259	91	2720	0.06	ppb(v#	79
100) 1,4-Dichlorobenzene	20.369	146	2911	0.09	ppb(v	86
101) sec-Butylbenzene	20.449	134	2051	0.16	ppb(v	67
102) p-Isopropyltoluene	20.681	134	2169	0.15	ppb(v#	63
103) 1,2-Dichlorobenzene	20.828	146	3542	0.13	ppb(v	95
104) n-Butylbenzene	21.244	134	1463	0.12	ppb(v	69
105) Hexachloroethane	21.709	201	2237	0.14	ppb(v	70
106) 1,2,4-Trichlorobenzene	23.031	180	1244	0.11	ppb(v	95
107) Naphthalene	23.153	128	3513	0.11	ppb(v	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13824.D
 Acq On : 13 Sep 2019 1:59 pm
 Operator : thomash
 Sample : ic571-0.04
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 10:40:43 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	149839	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.349	114	546769	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.885	82	220501	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.152	130	149839	10.00	ppb(v # 0.00	

System Monitoring Compounds						
92) 4-Bromofluorobenzene	18.130	95	267299	10.67	ppb(v 0.00	
Spiked Amount	10.000	Range	65 - 128	Recovery	=	106.70%

Target Compounds						Qvalue
6) Chlorotrifluoroethene	3.797	116	1095	0.04	ppb(v#	62
7) Dichlorodifluoromethane	3.845	85	1994	0.04	ppb(v#	84
8) 1-Chloro-1,1-difluoroethene	3.956	65	1235	0.03	ppb(v#	1
10) Dichlorotetrafluoroethane	4.053	85	1717	0.03	ppb(v#	80
14) Bromomethane	4.482	94	530	0.03	ppb(v#	81
17) Dichlorofluoromethane	4.696	67	1195	0.03	ppb(v#	88
19) Freon 123	5.051	83	1398	0.03	ppb(v#	86
20) Freon 123A	5.100	117	907	0.04	ppb(v#	60
21) Bromoethene	4.916	106	551	0.03	ppb(v#	75
22) Trichlorofluoromethane	5.277	101	1630	0.04	ppb(v#	80
26) Iodomethane	5.791	142	2015	0.05	ppb(v	82
29) Freon 113	6.219	101	1423	0.04	ppb(v	91
30) Methylene Chloride	5.974	84	970	0.05	ppb(v#	63
31) Carbon Disulfide	6.262	76	1747	0.03	ppb(v#	76
35) trans-1,2-Dichloroethene	6.898	61	685	0.03	ppb(v#	61
36) tert-Butyl Alcohol	5.962	59	1281	0.03	ppb(v#	60
37) Methyl tert-Butyl Ether	7.198	73	1851	0.04	ppb(v#	54
39) 1,1-Dichloroethane	7.100	63	1072	0.03	ppb(v#	52
42) cis-1,2-Dichloroethene	7.969	61	649	0.03	ppb(v#	65
46) Chloroform	8.299	83	1312	0.03	ppb(v#	83
47) 2,4-Dimethylpentane	9.162	57	909	0.03	ppb(v#	75
49) 1,1,1-Trichloroethane	9.394	97	1248	0.03	ppb(v#	84
51) Benzene	9.926	78	2354	0.04	ppb(v#	80
52) Carbon Tetrachloride	10.086	117	1293	0.03	ppb(v#	72
53) Cyclohexane	10.220	56	829	0.03	ppb(v#	73
56) 2,2,4-Trimethylpentane	11.205	57	3035	0.03	ppb(v#	95
58) Trichloroethene	11.193	95	1083	0.05	ppb(v	83
64) Bromodichloromethane	11.132	83	1244	0.03	ppb(v#	89
68) Toluene	13.505	91	2905	0.05	ppb(v#	86
69) 1,1,2-Trichloroethane	13.157	97	670	0.03	ppb(v#	46
73) Dibromochloromethane	14.062	129	1299	0.04	ppb(v#	86
74) Tetrachloroethene	15.004	166	1366	0.05	ppb(v	93
75) 1,2-Dibromoethane	14.380	107	1076	0.03	ppb(v#	91
77) 1,1,1,2-Tetrachloroethane	15.928	131	995	0.04	ppb(v#	1
81) m,p-Xylene	16.748	91	5724	0.12	ppb(v#	91
82) Styrene	17.298	104	1154	0.04	ppb(v#	58
83) Nonane	17.824	43	1167	0.03	ppb(v#	60
86) 1,1,2,2-Tetrachloroethane	17.457	83	1542	0.04	ppb(v#	91
87) 1,2,3-Trichloropropane	17.647	75	1064	0.04	ppb(v#	65
89) Bromobenzene	18.461	156	827	0.05	ppb(v	73
90) 2-Chlorotoluene	19.079	126	606	0.05	ppb(v#	57
91) n-Propylbenzene	19.152	120	658	0.05	ppb(v	69
93) 4-Ethyltoluene	19.372	105	2619	0.05	ppb(v#	82
95) alpha-Methylstyrene	19.727	118	837	0.04	ppb(v	88
96) tert-Butylbenzene	20.057	134	463	0.04	ppb(v	77
97) 1,2,4-Trimethylbenzene	20.082	105	2265	0.05	ppb(v#	77
101) sec-Butylbenzene	20.443	134	635	0.05	ppb(v	91
102) p-Isopropyltoluene	20.681	134	696	0.05	ppb(v	62
103) 1,2-Dichlorobenzene	20.828	146	1386	0.05	ppb(v	90
104) n-Butylbenzene	21.250	134	555	0.05	ppb(v	56
105) Hexachloroethane	21.709	201	738	0.05	ppb(v	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W13824.D
Acq On : 13 Sep 2019 1:59 pm
Operator : thomash
Sample : ic571-0.04
Misc : MS37187,V6W571,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 10:40:43 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)=qualifier out of range (m)=manual integration (+)=signals summed						

(QT Reviewed)

Quant Time: Sep 17 10:40:43 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
09/18/19 11:16

Data Path : C:\msdchem\1\data\
Data File : 6W13825.D
Acq On : 13 Sep 2019 2:47 pm
Operator : thomash
Sample : ic571-0.5
Misc : MS37187,V6W571,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 09:14:33 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	149954	10.00	ppb(v #	0.00
55) 1,4-Difluorobenzene	10.349	114	547333	10.00	ppb(v #	0.00
78) Chlorobenzene-d5	15.885	82	223500	10.00	ppb(v #	0.00
109) Bromochloromethane (A)	8.152	130	149954	10.00	ppb(v #	0.00

System Monitoring Compounds
92) 4-Bromofluorobenzene 18.130 95 280808 11.06 ppb(v 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 110.60%

Target Compounds					Qvalue
3) Freon 152A	3.723	65	6044	0.48	ppb(v 99
4) Chlorodifluoromethane	3.760	67	2371	0.50	ppb(v 84
5) Propene	3.784	41	6834	0.41	ppb(v 97
6) Chlorotrifluoroethene	3.790	116	16674	0.66	ppb(v 94
7) Dichlorodifluoromethane	3.845	85	25919	0.52	ppb(v 99
8) 1-Chloro-1,1-difluoro...	3.956	65	17440	0.44	ppb(v 97
9) Chloromethane	3.974	50	6531	0.34	ppb(v 89
10) Dichlorotetrafluoroethane	4.053	85	24626	0.49	ppb(v 86
11) Vinyl Chloride	4.151	62	8032	0.40	ppb(v# 96
12) 1,3-Butadiene	4.261	54	5439	0.37	ppb(v 94
13) n-Butane	4.304	58	1382	0.37	ppb(v# 71
14) Bromomethane	4.488	94	8560	0.50	ppb(v 98
15) Acrolein	5.020	56	3468	0.41	ppb(v# 86
16) Chloroethane	4.622	64	3966	0.40	ppb(v# 93
17) Dichlorofluoromethane	4.702	67	18330	0.43	ppb(v 95
18) Acetonitrile	4.922	41	6037	0.28	ppb(v 99
19) Freon 123	5.045	83	23130	0.54	ppb(v 98
20) Freon 123A	5.100	117	14622	0.63	ppb(v 74
21) Bromoethene	4.922	106	9699	0.61	ppb(v# 96
22) Trichlorofluoromethane	5.277	101	25061	0.56	ppb(v 99
23) Acetone	5.149	58	4079	0.34	ppb(v 87
24) Pentane	5.589	57	2259	0.45	ppb(v 79
26) Iodomethane	5.791	142	30315	0.75	ppb(v 85
27) Isopropyl Alcohol	5.363	45	14335	0.29	ppb(v 98
28) 1,1-Dichloroethene	5.858	61	14327	0.45	ppb(v 89
29) Freon 113	6.219	101	21621	0.60	ppb(v 87
30) Methylene Chloride	5.974	84	9253	0.51	ppb(v 84
31) Carbon Disulfide	6.256	76	25362	0.46	ppb(v 100
32) Ethanol	4.726	45	2350	0.25	ppb(v# 95
33) Acrylonitrile	5.558	53	6120	0.36	ppb(v 96
34) 3-Chloropropene	6.085	76	4396	0.51	ppb(v 63
35) trans-1,2-Dichloroethene	6.886	61	12400	0.46	ppb(v 84
36) tert-Butyl Alcohol	5.925	59	18169	0.49	ppb(v 95
37) Methyl tert-Butyl Ether	7.167	73	26135	0.53	ppb(v 95
38) Vinyl Acetate	7.259	43	21002	0.38	ppb(v 95
39) 1,1-Dichloroethane	7.094	63	16538	0.48	ppb(v 99
40) 2-Butanone	7.534	72	3758	0.41	ppb(v 74
41) Hexane	8.183	57	13375	0.44	ppb(v# 71
42) cis-1,2-Dichloroethene	7.975	61	11854	0.46	ppb(v 87
43) Di-isopropyl Ether	8.195	87	8609	0.60	ppb(v 52
44) Ethyl Acetate	8.244	61	2353	0.37	ppb(v 60
45) Methyl Acrylate	8.226	55	13582	0.38	ppb(v 99
46) Chloroform	8.293	83	19774	0.50	ppb(v 97
47) 2,4-Dimethylpentane	9.162	57	15921	0.47	ppb(v 91
48) Tetrahydrofuran	8.776	72	3787	0.49	ppb(v 84
49) 1,1,1-Trichloroethane	9.388	97	19261	0.50	ppb(v 96
50) 1,2-Dichloroethane	9.113	62	11064	0.43	ppb(v# 93
51) Benzene	9.920	78	29289	0.51	ppb(v 95
52) Carbon Tetrachloride	10.092	117	20632	0.52	ppb(v 91
53) Cyclohexane	10.226	56	13483	0.45	ppb(v# 82
54) 2,3-Dimethylpentane	10.514	71	6313	0.52	ppb(v 85
56) 2,2,4-Trimethylpentane	11.211	57	43767	0.43	ppb(v# 98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13825.D
 Acq On : 13 Sep 2019 2:47 pm
 Operator : thomash
 Sample : ic571-0.5
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 09:14:33 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

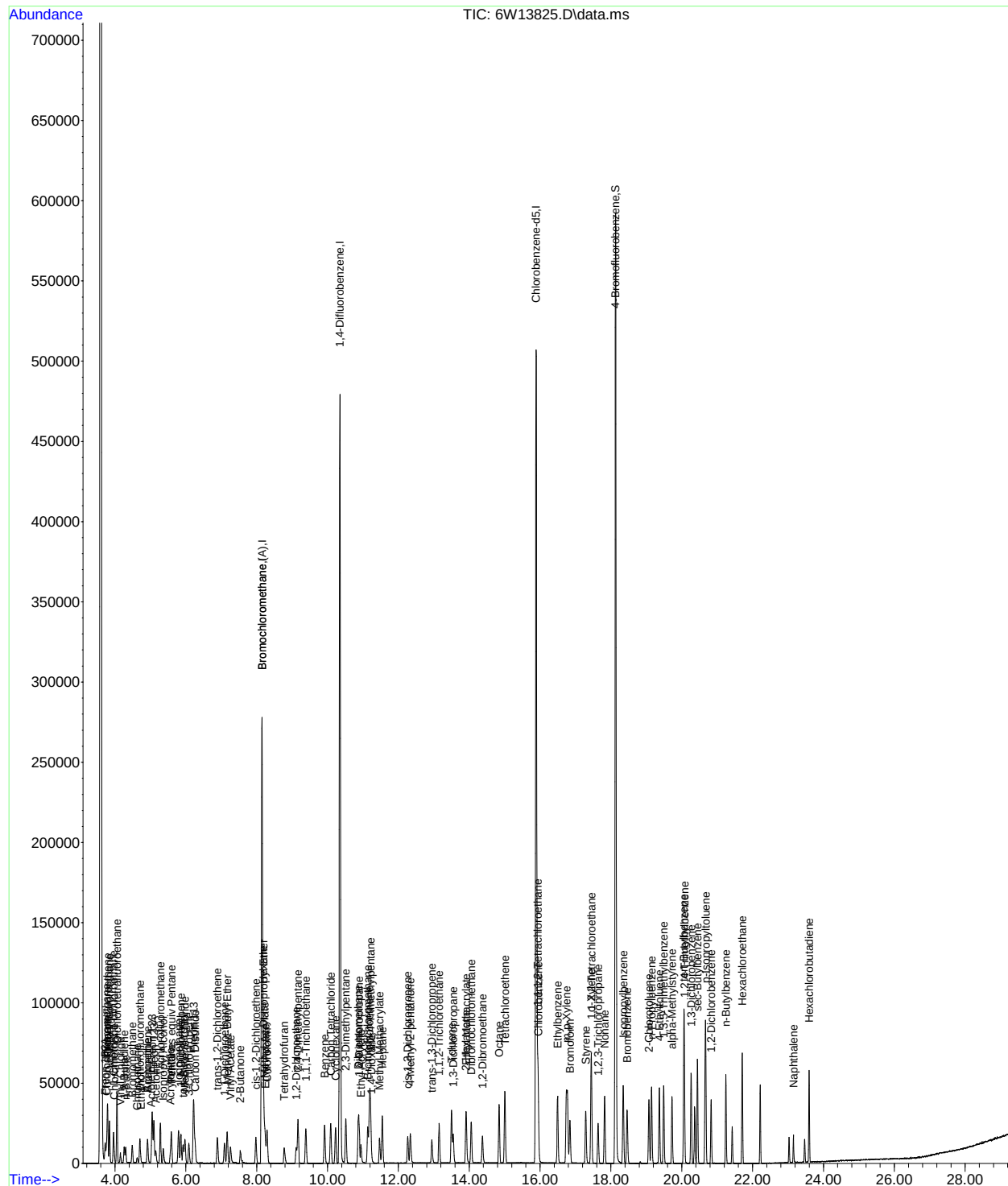
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.548	71	9763	0.53	ppb(v	88
58) Trichloroethene	11.174	95	13337	0.59	ppb(v	87
59) 1,2-Dichloropropane	10.893	63	10289	0.44	ppb(v	95
60) Dibromomethane	10.869	174	14588	0.78	ppb(v#	67
61) Ethyl Acrylate	10.942	55	16840	0.37	ppb(v#	91
62) Methyl Methacrylate	11.468	69	9790	0.45	ppb(v#	71
63) 1,4-Dioxane	11.236	88	5975	0.44	ppb(v#	36
64) Bromodichloromethane	11.132	83	20408	0.47	ppb(v#	96
65) cis-1,3-Dichloropropene	12.263	75	15119	0.45	ppb(v#	93
66) 4-Methyl-2-pentanone	12.337	58	7201	0.38	ppb(v#	70
67) trans-1,3-Dichloropropene	12.942	75	13176	0.45	ppb(v#	90
68) Toluene	13.499	91	35039	0.56	ppb(v	96
69) 1,1,2-Trichloroethane	13.150	97	12142	0.56	ppb(v	92
70) 1,3-Dichloropropane	13.548	76	15792	0.46	ppb(v#	82
71) 2-Hexanone	13.903	58	9042	0.28	ppb(v#	80
72) Ethyl Methacrylate	13.915	69	15550	0.40	ppb(v#	89
73) Dibromochloromethane	14.056	129	21194	0.57	ppb(v#	98
74) Tetrachloroethene	15.010	166	20586	0.79	ppb(v	91
75) 1,2-Dibromoethane	14.374	107	17444	0.54	ppb(v	99
76) Octane	14.845	43	19482	0.36	ppb(v#	76
77) 1,1,1,2-Tetrachloroethane	15.934	131	16052	0.61	ppb(v#	70
79) Chlorobenzene	15.952	112	28835	0.83	ppb(v	86
80) Ethylbenzene	16.497	91	45377	0.75	ppb(v	95
81) m,p-Xylene	16.748	91	72435	1.56	ppb(v	94
82) Styrene	17.292	104	25633	0.92	ppb(v	92
83) Nonane	17.824	43	19636	0.49	ppb(v#	84
84) o-Xylene	17.439	91	35794	0.71	ppb(v	91
85) Bromoform	16.846	173	19348	0.88	ppb(v	98
86) 1,1,2,2-Tetrachloroethane	17.451	83	22479	0.62	ppb(v#	97
87) 1,2,3-Trichloropropane	17.641	75	16536	0.57	ppb(v	94
88) Isopropylbenzene	18.351	105	50346	0.84	ppb(v	92
89) Bromobenzene	18.455	156	16437	0.98	ppb(v#	72
90) 2-Chlorotoluene	19.072	126	11879	0.95	ppb(v#	67
91) n-Propylbenzene	19.146	120	13251	0.93	ppb(v	64
93) 4-Ethyltoluene	19.366	105	43717	0.81	ppb(v	96
94) 1,3,5-Trimethylbenzene	19.488	105	37207	0.81	ppb(v	96
95) alpha-Methylstyrene	19.721	118	18127	0.78	ppb(v	93
96) tert-Butylbenzene	20.057	134	10049	0.95	ppb(v	71
97) 1,2,4-Trimethylbenzene	20.076	105	36111	0.77	ppb(v#	84
98) 1,3-Dichlorobenzene	20.265	146	22603	0.80	ppb(v#	92
101) sec-Butylbenzene	20.443	134	11775	0.97	ppb(v	81
102) p-Isopropyltoluene	20.675	134	12342	0.87	ppb(v	88
103) 1,2-Dichlorobenzene	20.828	146	21526	0.82	ppb(v	92
104) n-Butylbenzene	21.244	134	9909	0.82	ppb(v	66
105) Hexachloroethane	21.709	201	13721	0.91	ppb(v	74
107) Naphthalene	23.153	128	15730	0.52	ppb(v	99
108) Hexachlorobutadiene	23.593	225	12387	0.84	ppb(v	95
110) TVHC as equiv Pentane	5.589	TIC	51262m	0.43	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W13825.D
Acq On : 13 Sep 2019 2:47 pm
Operator : thomash
Sample : ic571-0.5
Misc : MS37187,V6W571,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 16 09:14:33 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:

V6W571-IC571

Lab FileID:

6W13825.D

Injection Time:

09/13/19 14:47

Method:

TO-15

Analyst approved:

09/16/19 09:58 Thomas Hilbig

Supervisor approved:

09/18/19 11:16 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
TVHC As Equiv Pentane			5.59	Missed peak

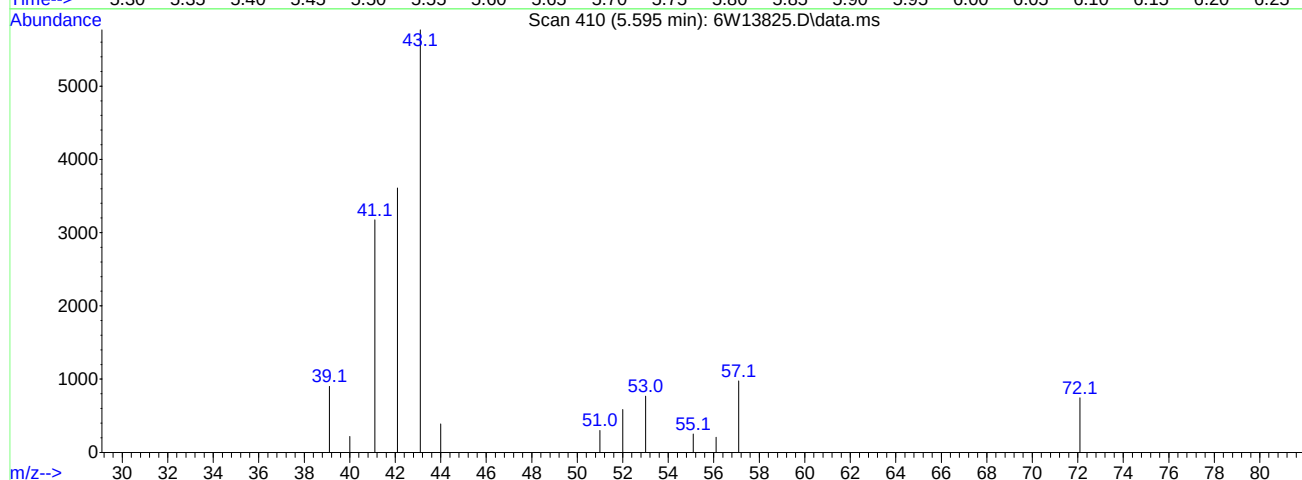
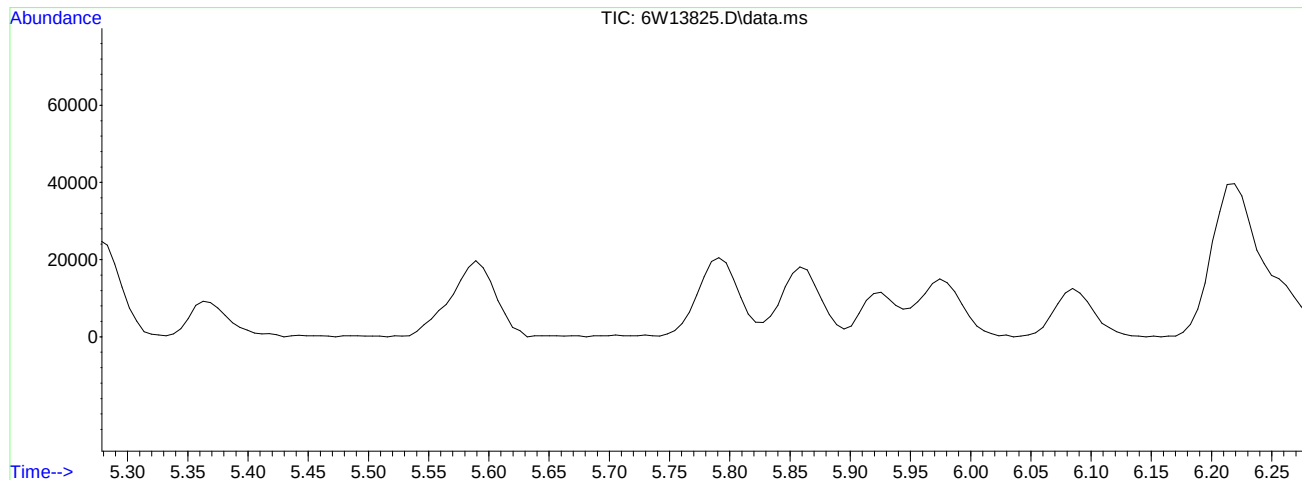
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7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W13825.D
Acq On : 13 Sep 2019 2:47 pm
Operator : thomash
Sample : ic571-0.5
Misc : MS37187,V6W570,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 17:08:19 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



TIC: 6W13825.D\data.ms

(110) TVHC as equiv Pentane

5.595min (-5.595) 0.00ppb(v)

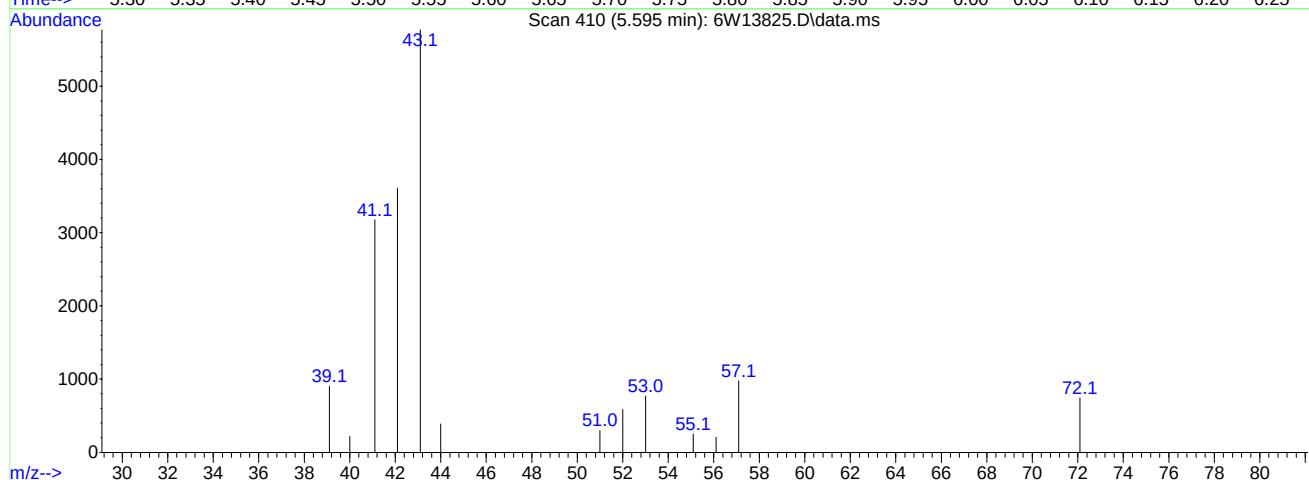
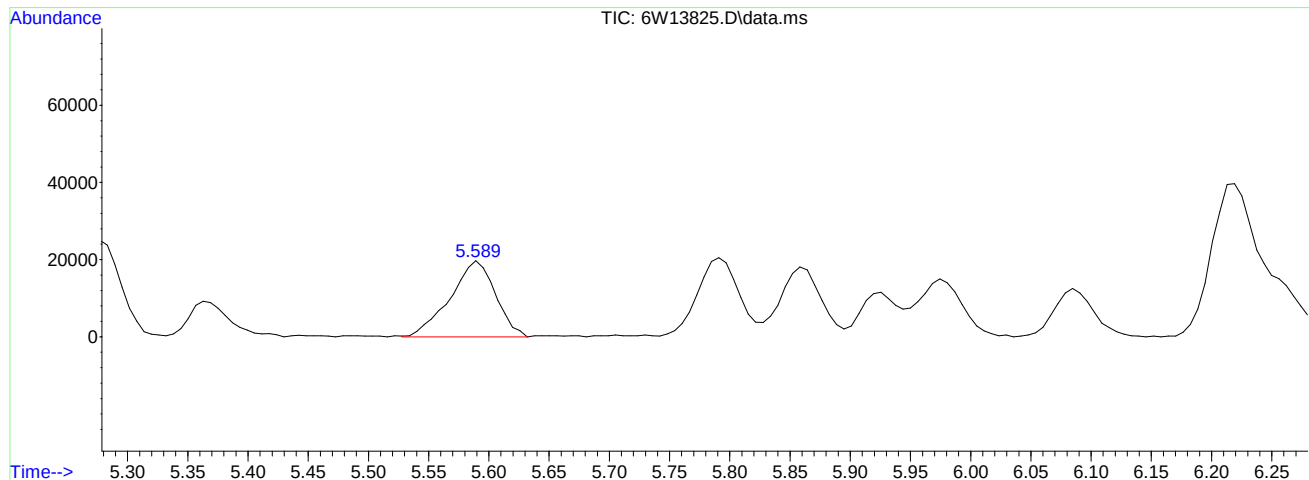
response 0

Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W13825.D
Acq On : 13 Sep 2019 2:47 pm
Operator : thomash
Sample : ic571-0.5
Misc : MS37187,V6W570,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 17:08:19 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



TIC: 6W13825.D\data.ms

(110) TVHC as equiv Pentane

5.589min (-0.006) 0.43ppb(v) m

response 51262

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13826.D
 Acq On : 13 Sep 2019 3:35 pm
 Operator : thomash
 Sample : ic571-5
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:14:16 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.152	130	154703	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.349	114	561366	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.891	82	240479	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.152	130	154703	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.130 95 323715 11.85 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 118.50%

Target Compounds					Qvalue
3) Freon 152A	3.723	65	52245	4.05	ppb(v 94
4) Chlorodifluoromethane	3.760	67	20891	4.27	ppb(v 96
5) Propene	3.784	41	55721	3.25	ppb(v 97
6) Chlorotrifluoroethene	3.790	116	139224	5.36	ppb(v 95
7) Dichlorodifluoromethane	3.845	85	218336	4.25	ppb(v 99
8) 1-Chloro-1,1-difluoro...	3.956	65	148588	3.61	ppb(v 98
9) Chloromethane	3.974	50	53811	2.75	ppb(v 99
10) Dichlorotetrafluoroethane	4.047	85	210212	4.07	ppb(v 88
11) Vinyl Chloride	4.151	62	68518	3.27	ppb(v 100
12) 1,3-Butadiene	4.261	54	46732	3.06	ppb(v 94
13) n-Butane	4.298	58	12060	3.10	ppb(v 81
14) Bromomethane	4.482	94	74741	4.24	ppb(v 97
15) Acrolein	5.014	56	34117	3.95	ppb(v# 92
16) Chloroethane	4.622	64	33589	3.30	ppb(v 97
17) Dichlorofluoromethane	4.696	67	154868	3.51	ppb(v 99
18) Acetonitrile	4.910	41	58379	2.64	ppb(v 99
19) Freon 123	5.044	83	197086	4.46	ppb(v 97
20) Freon 123A	5.093	117	124337	5.15	ppb(v 78
21) Bromoethene	4.916	106	84010	5.15	ppb(v 97
22) Trichlorofluoromethane	5.277	101	217894	4.69	ppb(v 100
23) Acetone	5.130	58	36714	2.96	ppb(v 86
24) Pentane	5.589	57	20798	4.00	ppb(v 87
26) Iodomethane	5.791	142	266466	6.42	ppb(v 86
27) Isopropyl Alcohol	5.344	45	140119	2.76	ppb(v 99
28) 1,1-Dichloroethene	5.858	61	124920	3.80	ppb(v 85
29) Freon 113	6.213	101	188572	5.10	ppb(v 87
30) Methylene Chloride	5.974	84	78362	4.21	ppb(v 82
31) Carbon Disulfide	6.256	76	231621	4.09	ppb(v 100
32) Ethanol	4.714	45	23334	2.37	ppb(v 97
33) Acrylonitrile	5.546	53	62286	3.58	ppb(v 99
34) 3-Chloropropene	6.084	76	41467	4.70	ppb(v 70
35) trans-1,2-Dichloroethene	6.886	61	112328	4.02	ppb(v 85
36) tert-Butyl Alcohol	5.895	59	173322	4.50	ppb(v 96
37) Methyl tert-Butyl Ether	7.149	73	233427	4.61	ppb(v 94
38) Vinyl Acetate	7.247	43	196664	3.49	ppb(v# 91
39) 1,1-Dichloroethane	7.088	63	140930	3.92	ppb(v 99
40) 2-Butanone	7.510	72	40911	4.34	ppb(v 66
41) Hexane	8.183	57	117837	3.78	ppb(v 90
42) cis-1,2-Dichloroethene	7.969	61	106098	4.01	ppb(v 87
43) Di-isopropyl Ether	8.189	87	74856	5.08	ppb(v 55
44) Ethyl Acetate	8.226	61	23628	3.62	ppb(v 69
45) Methyl Acrylate	8.213	55	139454	3.74	ppb(v 94
46) Chloroform	8.293	83	168688	4.15	ppb(v 97
47) 2,4-Dimethylpentane	9.162	57	140674	4.02	ppb(v 95
48) Tetrahydrofuran	8.746	72	39858	5.04	ppb(v 81
49) 1,1,1-Trichloroethane	9.388	97	169585	4.28	ppb(v 97
50) 1,2-Dichloroethane	9.107	62	97556	3.67	ppb(v# 96
51) Benzene	9.914	78	254387	4.29	ppb(v 95
52) Carbon Tetrachloride	10.085	117	182575	4.49	ppb(v 95
53) Cyclohexane	10.226	56	120225	3.91	ppb(v# 83
54) 2,3-Dimethylpentane	10.514	71	57008	4.53	ppb(v 74
56) 2,2,4-Trimethylpentane	11.205	57	391034	3.76	ppb(v# 95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13826.D
 Acq On : 13 Sep 2019 3:35 pm
 Operator : thomash
 Sample : ic571-5
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:14:16 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

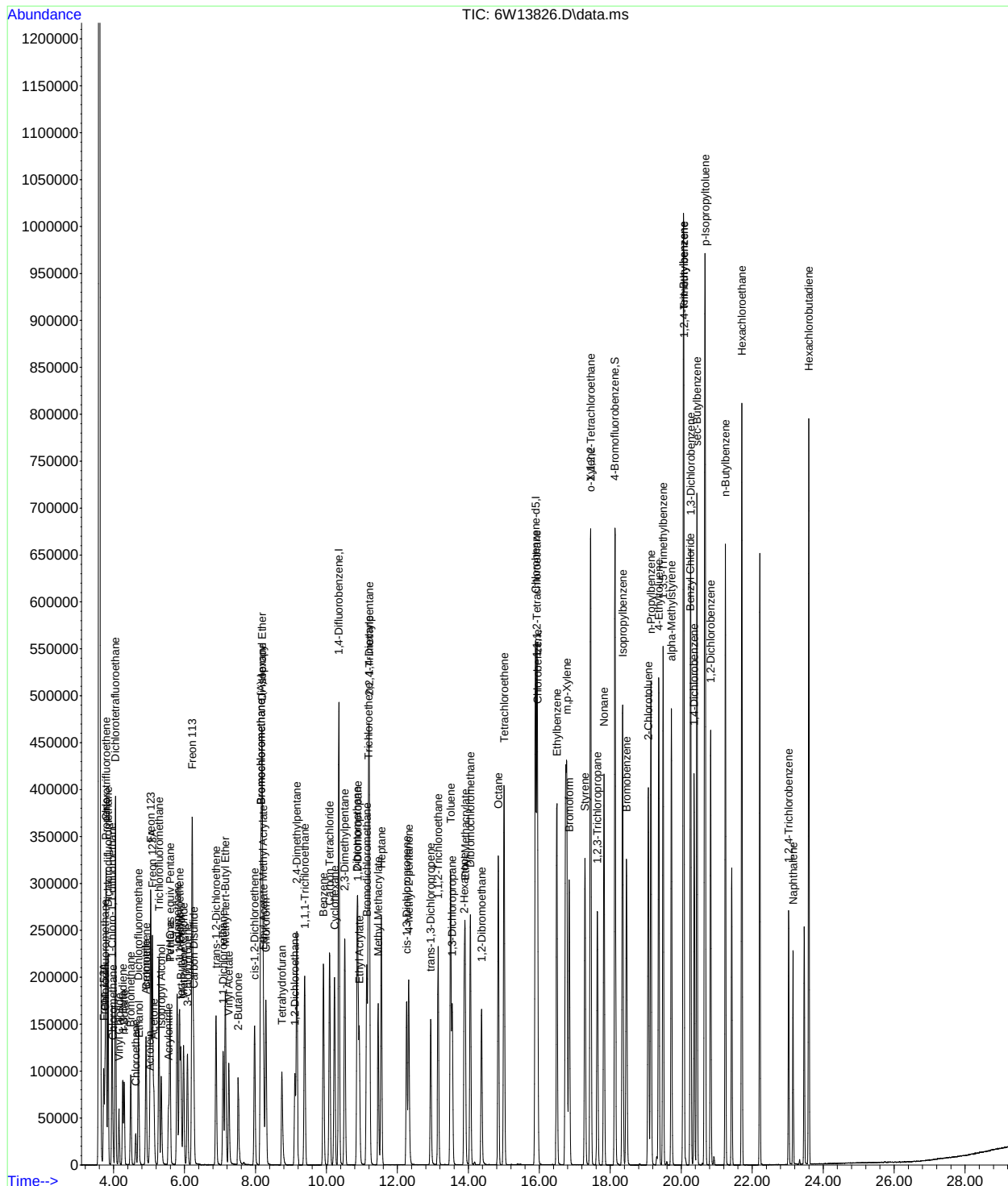
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.548	71	88901	4.71	ppb(v	89
58) Trichloroethene	11.181	95	114197	4.90	ppb(v#	78
59) 1,2-Dichloropropane	10.887	63	89235	3.70	ppb(v	97
60) Dibromomethane	10.862	174	129735	6.75	ppb(v#	67
61) Ethyl Acrylate	10.930	55	169987	3.69	ppb(v#	93
62) Methyl Methacrylate	11.456	69	94474	4.27	ppb(v	72
63) 1,4-Dioxane	11.199	88	61829	4.46	ppb(v#	68
64) Bromodichloromethane	11.138	83	184455	4.14	ppb(v	98
65) cis-1,3-Dichloropropene	12.263	75	141346	4.09	ppb(v#	93
66) 4-Methyl-2-pentanone	12.318	58	73048	3.74	ppb(v#	75
67) trans-1,3-Dichloropropene	12.936	75	121616	4.04	ppb(v#	93
68) Toluene	13.499	91	312659	4.86	ppb(v	98
69) 1,1,2-Trichloroethane	13.150	97	107261	4.84	ppb(v	92
70) 1,3-Dichloropropane	13.542	76	141968	4.07	ppb(v#	83
71) 2-Hexanone	13.885	58	95280	2.83	ppb(v#	77
72) Ethyl Methacrylate	13.909	69	150490	3.80	ppb(v#	91
73) Dibromochloromethane	14.056	129	202188	5.32	ppb(v#	98
74) Tetrachloroethene	15.010	166	182337	6.79	ppb(v	92
75) 1,2-Dibromoethane	14.374	107	160139	4.85	ppb(v	98
76) Octane	14.845	43	174994	3.17	ppb(v#	76
77) 1,1,1,2-Tetrachloroethane	15.928	131	148080	5.47	ppb(v	96
79) Chlorobenzene	15.952	112	255397	6.79	ppb(v	86
80) Ethylbenzene	16.497	91	403316	6.22	ppb(v	92
81) m,p-Xylene	16.772	91	621720	12.43	ppb(v	93
82) Styrene	17.286	104	244263	8.11	ppb(v	93
83) Nonane	17.824	43	190252	4.43	ppb(v#	86
84) o-Xylene	17.439	91	323001	5.93	ppb(v	92
85) Bromoform	16.839	173	209576	8.83	ppb(v	98
86) 1,1,2,2-Tetrachloroethane	17.445	83	230075	5.93	ppb(v#	98
87) 1,2,3-Trichloropropane	17.635	75	169439	5.40	ppb(v	91
88) Isopropylbenzene	18.350	105	488202	7.55	ppb(v	93
89) Bromobenzene	18.454	156	155055	8.56	ppb(v#	71
90) 2-Chlorotoluene	19.072	126	119819	8.93	ppb(v#	71
91) n-Propylbenzene	19.146	120	134581	8.79	ppb(v	66
93) 4-Ethyltoluene	19.366	105	445103	7.65	ppb(v	95
94) 1,3,5-Trimethylbenzene	19.488	105	387532	7.88	ppb(v	93
95) alpha-Methylstyrene	19.721	118	195526	7.84	ppb(v	97
96) tert-Butylbenzene	20.063	134	101575	8.95	ppb(v	78
97) 1,2,4-Trimethylbenzene	20.076	105	384173	7.64	ppb(v#	85
98) 1,3-Dichlorobenzene	20.265	146	238218	7.83	ppb(v#	92
99) Benzyl Chloride	20.253	91	235784	5.27	ppb(v	94
100) 1,4-Dichlorobenzene	20.363	146	222820	6.87	ppb(v	92
101) sec-Butylbenzene	20.443	134	125785	9.60	ppb(v	78
102) p-Isopropyltoluene	20.675	134	135723	8.89	ppb(v	88
103) 1,2-Dichlorobenzene	20.828	146	237124	8.38	ppb(v	92
104) n-Butylbenzene	21.244	134	114564	8.86	ppb(v	68
105) Hexachloroethane	21.709	201	166066	10.20	ppb(v	73
106) 1,2,4-Trichlorobenzene	23.024	180	94539	7.90	ppb(v	98
107) Naphthalene	23.153	128	197580	6.12	ppb(v	99
108) Hexachlorobutadiene	23.593	225	168426	10.61	ppb(v	97
110) TVHC as equiv Pentane	5.589	TIC	489794	3.98	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W13826.D
Acq On : 13 Sep 2019 3:35 pm
Operator : thomash
Sample : ic571-5
Misc : MS37187,V6W571,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:14:16 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Fri Sep 13 08:49:40 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13827.D
 Acq On : 13 Sep 2019 4:23 pm
 Operator : thomash
 Sample : icc571-10
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:15:25 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	164062	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.355	114	601377	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.891	82	263049	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.152	130	164062	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.130 95 351623 11.76 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 117.60%

Target Compounds					Qvalue
3) Freon 152A	3.723	65	103998	7.60	ppb(v 93
4) Chlorodifluoromethane	3.760	67	41573	8.01	ppb(v 97
5) Propene	3.784	41	112897	6.21	ppb(v 100
6) Chlorotrifluoroethene	3.790	116	282966	10.28	ppb(v 95
7) Dichlorodifluoromethane	3.845	85	439262	8.07	ppb(v 99
8) 1-Chloro-1,1-difluoro...	3.956	65	295578	6.77	ppb(v 98
9) Chloromethane	3.974	50	108224	5.21	ppb(v 100
10) Dichlorotetrafluoroethane	4.053	85	430662	7.87	ppb(v# 84
11) Vinyl Chloride	4.151	62	141740	6.37	ppb(v 98
12) 1,3-Butadiene	4.261	54	97575	6.02	ppb(v 97
13) n-Butane	4.304	58	25072	6.08	ppb(v 75
14) Bromomethane	4.482	94	153706	8.23	ppb(v 97
15) Acrolein	5.014	56	70339	7.69	ppb(v 98
16) Chloroethane	4.622	64	68139	6.30	ppb(v 99
17) Dichlorofluoromethane	4.696	67	312448	6.68	ppb(v 99
18) Acetonitrile	4.910	41	120298	5.13	ppb(v 99
19) Freon 123	5.044	83	402538	8.59	ppb(v 98
20) Freon 123A	5.093	117	254940	9.97	ppb(v 78
21) Bromoethene	4.916	106	173226	10.01	ppb(v 98
22) Trichlorofluoromethane	5.277	101	445994	9.05	ppb(v 100
23) Acetone	5.130	58	75909	5.76	ppb(v 90
24) Pentane	5.589	57	42252	7.65	ppb(v 91
26) Iodomethane	5.791	142	552722	12.55	ppb(v 87
27) Isopropyl Alcohol	5.344	45	290097	5.38	ppb(v 99
28) 1,1-Dichloroethene	5.858	61	257206	7.38	ppb(v 85
29) Freon 113	6.213	101	396891	10.12	ppb(v 87
30) Methylene Chloride	5.974	84	162819	8.26	ppb(v 81
31) Carbon Disulfide	6.256	76	487688	8.12	ppb(v 99
32) Ethanol	4.714	45	47092	4.51	ppb(v 99
33) Acrylonitrile	5.546	53	130198	7.05	ppb(v 99
34) 3-Chloropropene	6.085	76	88085	9.41	ppb(v 66
35) trans-1,2-Dichloroethene	6.886	61	231623	7.81	ppb(v 85
36) tert-Butyl Alcohol	5.895	59	359638	8.81	ppb(v 95
37) Methyl tert-Butyl Ether	7.149	73	487426	9.08	ppb(v 94
38) Vinyl Acetate	7.247	43	419926	7.03	ppb(v# 91
39) 1,1-Dichloroethane	7.088	63	291860	7.66	ppb(v# 99
40) 2-Butanone	7.510	72	86468	8.65	ppb(v 64
41) Hexane	8.183	57	245358	7.43	ppb(v 89
42) cis-1,2-Dichloroethene	7.969	61	219577	7.83	ppb(v 85
43) Di-isopropyl Ether	8.189	87	157569	10.09	ppb(v# 50
44) Ethyl Acetate	8.226	61	51395	7.43	ppb(v 68
45) Methyl Acrylate	8.213	55	297879	7.53	ppb(v 94
46) Chloroform	8.293	83	355692	8.24	ppb(v 98
47) 2,4-Dimethylpentane	9.162	57	293520	7.92	ppb(v 96
48) Tetrahydrofuran	8.740	72	83771	9.99	ppb(v 81
49) 1,1,1-Trichloroethane	9.388	97	351826	8.38	ppb(v 97
50) 1,2-Dichloroethane	9.107	62	201666	7.15	ppb(v# 97
51) Benzene	9.914	78	531789	8.45	ppb(v 95
52) Carbon Tetrachloride	10.085	117	376710	8.74	ppb(v 97
53) Cyclohexane	10.226	56	250966	7.69	ppb(v# 83
54) 2,3-Dimethylpentane	10.520	71	120195	9.01	ppb(v 74
56) 2,2,4-Trimethylpentane	11.211	57	831043	7.47	ppb(v# 95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13827.D
 Acq On : 13 Sep 2019 4:23 pm
 Operator : thomash
 Sample : icc571-10
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:15:25 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration

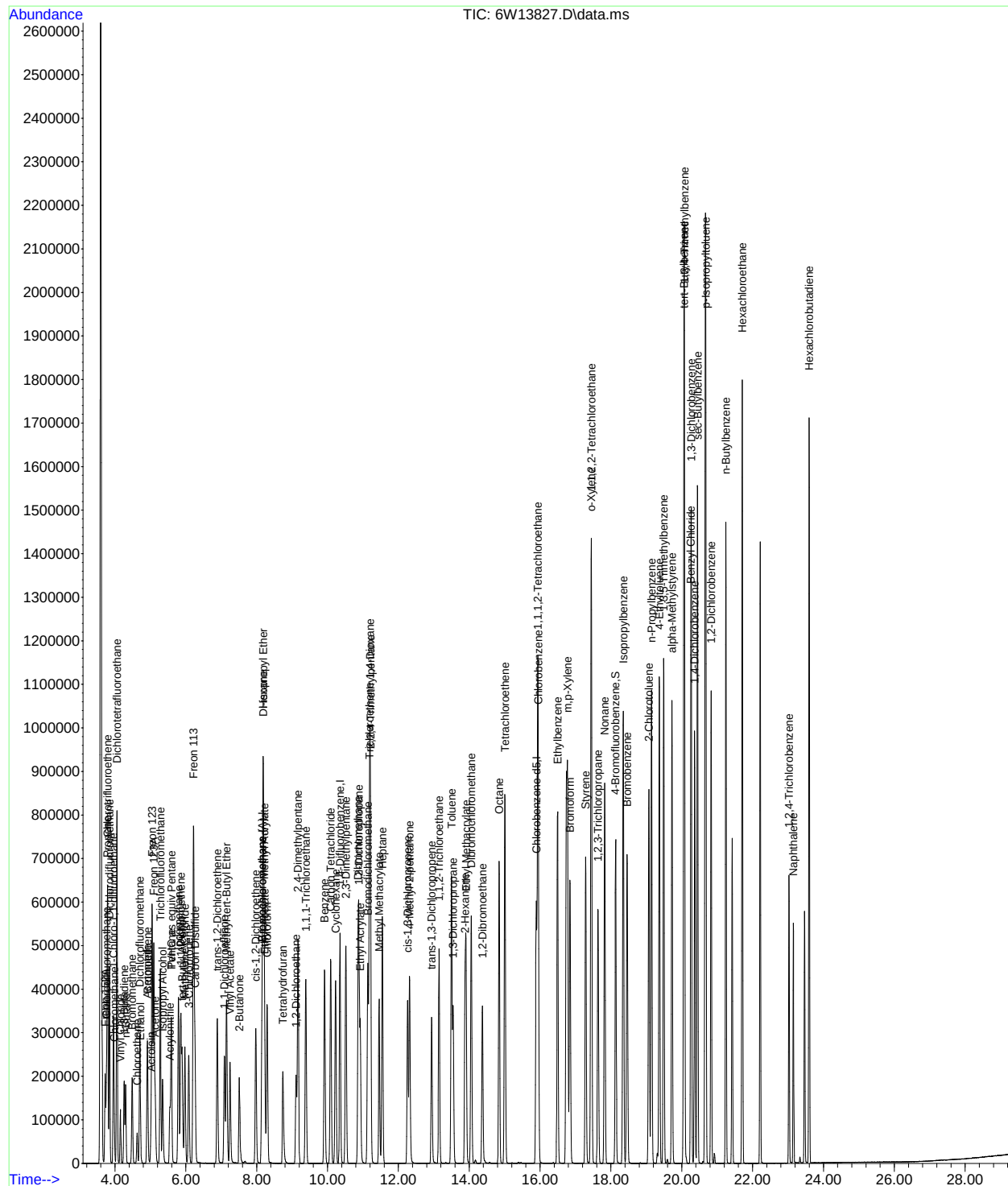
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.548	71	189806	9.38	ppb(v	89
58) Trichloroethene	11.181	95	242740	9.73	ppb(v	81
59) 1,2-Dichloropropane	10.887	63	187897	7.27	ppb(v	97
60) Dibromomethane	10.862	174	272471	13.23	ppb(v#	67
61) Ethyl Acrylate	10.924	55	367784	7.45	ppb(v#	93
62) Methyl Methacrylate	11.456	69	206052	8.70	ppb(v#	70
63) 1,4-Dioxane	11.199	88	131283	8.84	ppb(v#	66
64) Bromodichloromethane	11.138	83	386020	8.09	ppb(v#	97
65) cis-1,3-Dichloropropene	12.263	75	302050	8.17	ppb(v#	93
66) 4-Methyl-2-pentanone	12.312	58	158988	7.59	ppb(v#	74
67) trans-1,3-Dichloropropene	12.936	75	259101	8.03	ppb(v#	92
68) Toluene	13.499	91	659441	9.56	ppb(v	98
69) 1,1,2-Trichloroethane	13.150	97	223438	9.41	ppb(v	93
70) 1,3-Dichloropropane	13.542	76	298894	8.00	ppb(v#	83
71) 2-Hexanone	13.878	58	204383	5.67	ppb(v#	78
72) Ethyl Methacrylate	13.909	69	322726	7.60	ppb(v#	91
73) Dibromochloromethane	14.056	129	433313	10.65	ppb(v#	99
74) Tetrachloroethene	15.010	166	382203	13.29	ppb(v	93
75) 1,2-Dibromoethane	14.374	107	343930	9.73	ppb(v	99
76) Octane	14.845	43	370000	6.25	ppb(v#	76
77) 1,1,1,2-Tetrachloroethane	15.934	131	311191	10.73	ppb(v	98
79) Chlorobenzene	15.952	112	537644	13.07	ppb(v	87
80) Ethylbenzene	16.497	91	843558	11.89	ppb(v	94
81) m,p-Xylene	16.772	91	1311332	23.96	ppb(v	93
82) Styrene	17.286	104	525138	15.93	ppb(v	93
83) Nonane	17.824	43	398334	8.48	ppb(v#	85
84) o-Xylene	17.439	91	681704	11.44	ppb(v	93
85) Bromoform	16.839	173	458032	17.63	ppb(v	99
86) 1,1,2,2-Tetrachloroethane	17.445	83	489660	11.54	ppb(v#	98
87) 1,2,3-Trichloropropane	17.635	75	359530	10.47	ppb(v	90
88) Isopropylbenzene	18.351	105	1030093	14.56	ppb(v	93
89) Bromobenzene	18.454	156	339244	17.13	ppb(v#	72
90) 2-Chlorotoluene	19.072	126	252812	17.23	ppb(v#	70
91) n-Propylbenzene	19.146	120	286401	17.10	ppb(v	64
93) 4-Ethyltoluene	19.366	105	960297	15.09	ppb(v	95
94) 1,3,5-Trimethylbenzene	19.488	105	836835	15.55	ppb(v	94
95) alpha-Methylstyrene	19.721	118	433030	15.86	ppb(v	97
96) tert-Butylbenzene	20.063	134	216071	17.40	ppb(v	80
97) 1,2,4-Trimethylbenzene	20.076	105	831645	15.12	ppb(v	89
98) 1,3-Dichlorobenzene	20.265	146	543986	16.34	ppb(v#	92
99) Benzyl Chloride	20.253	91	568473	11.61	ppb(v	94
100) 1,4-Dichlorobenzene	20.363	146	523480	14.76	ppb(v#	92
101) sec-Butylbenzene	20.449	134	279766	19.53	ppb(v	76
102) p-Isopropyltoluene	20.675	134	302654	18.13	ppb(v	87
103) 1,2-Dichlorobenzene	20.828	146	553254	17.87	ppb(v#	93
104) n-Butylbenzene	21.244	134	260200	18.39	ppb(v	66
105) Hexachloroethane	21.709	201	371776	20.88	ppb(v	73
106) 1,2,4-Trichlorobenzene	23.024	180	228343	17.45	ppb(v	99
107) Naphthalene	23.147	128	467607	13.25	ppb(v	100
108) Hexachlorobutadiene	23.593	225	362707	20.89	ppb(v	98
110) TVHC as equiv Pentane	5.589	TIC	1005731	7.71	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13827.D
 Acq On : 13 Sep 2019 4:23 pm
 Operator : thomash
 Sample : icc571-10
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:15:25 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 08:49:40 2019
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13828.D
 Acq On : 13 Sep 2019 5:12 pm
 Operator : thomash
 Sample : ic571-20
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:42:39 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 17:18:46 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.152	130	185988	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.355	114	701811	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.891	82	312728	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.152	130	185988	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.137 95 416122 10.48 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 104.80%

Target Compounds					Qvalue
3) Freon 152A	3.723	65	212060	16.73	ppb(v 93
4) Chlorodifluoromethane	3.760	67	83592	16.60	ppb(v 98
5) Propene	3.790	41	226829	16.13	ppb(v 98
6) Chlorotrifluoroethene	3.790	116	573907	16.50	ppb(v 94
7) Dichlorodifluoromethane	3.846	85	916689	16.42	ppb(v 100
8) 1-Chloro-1,1-difluoro...	3.956	65	594065	16.03	ppb(v 98
9) Chloromethane	3.974	50	221429	16.13	ppb(v 99
10) Dichlorotetrafluoroethane	4.054	85	871336	16.61	ppb(v# 84
11) Vinyl Chloride	4.151	62	286108	16.94	ppb(v 99
12) 1,3-Butadiene	4.262	54	199129	17.04	ppb(v 96
13) n-Butane	4.304	58	51427	17.86	ppb(v 76
14) Bromomethane	4.488	94	316029	17.25	ppb(v 97
15) Acrolein	5.014	56	148913	19.02	ppb(v 98
16) Chloroethane	4.622	64	143178	17.36	ppb(v 98
17) Dichlorofluoromethane	4.702	67	647583	16.87	ppb(v 99
18) Acetonitrile	4.910	41	250661	15.20	ppb(v 98
19) Freon 123	5.051	83	832249	17.35	ppb(v 98
20) Freon 123A	5.094	117	533420	17.84	ppb(v 77
21) Bromoethene	4.916	106	363162	18.14	ppb(v 98
22) Trichlorofluoromethane	5.277	101	922393	17.41	ppb(v 98
23) Acetone	5.130	58	158888	15.76	ppb(v 84
24) Pentane	5.589	57	90546	18.68	ppb(v 85
26) Iodomethane	5.791	142	1163786	17.78	ppb(v 87
27) Isopropyl Alcohol	5.344	45	602206	13.75	ppb(v 99
28) 1,1-Dichloroethene	5.858	61	544165	17.67	ppb(v# 84
29) Freon 113	6.213	101	840359	18.24	ppb(v 87
30) Methylene Chloride	5.974	84	348957	15.54	ppb(v 82
31) Carbon Disulfide	6.256	76	1042406	18.46	ppb(v 99
32) Ethanol	4.720	45	98188	17.56	ppb(v 98
33) Acrylonitrile	5.546	53	277560	19.10	ppb(v 98
34) 3-Chloropropene	6.085	76	190003	20.41	ppb(v 64
35) trans-1,2-Dichloroethene	6.886	61	497839	19.36	ppb(v 84
36) tert-Butyl Alcohol	5.895	59	772550	18.46	ppb(v 95
37) Methyl tert-Butyl Ether	7.149	73	1057513	18.55	ppb(v 94
38) Vinyl Acetate	7.247	43	935477	19.77	ppb(v# 91
39) 1,1-Dichloroethane	7.094	63	625387	18.01	ppb(v 98
40) 2-Butanone	7.504	72	191510	20.98	ppb(v 64
41) Hexane	8.183	57	531118	18.74	ppb(v 86
42) cis-1,2-Dichloroethene	7.975	61	480002	19.49	ppb(v 85
43) Di-isopropyl Ether	8.189	87	347272	19.42	ppb(v# 47
44) Ethyl Acetate	8.226	61	113856	20.74	ppb(v 69
45) Methyl Acrylate	8.214	55	655348	20.59	ppb(v 93
46) Chloroform	8.299	83	784970	18.86	ppb(v 98
47) 2,4-Dimethylpentane	9.168	57	651519	19.79	ppb(v 94
48) Tetrahydrofuran	8.740	72	187574	21.44	ppb(v 79
49) 1,1,1-Trichloroethane	9.388	97	782250	18.94	ppb(v 96
50) 1,2-Dichloroethane	9.113	62	441917	18.84	ppb(v# 96
51) Benzene	9.920	78	1177706	17.99	ppb(v 95
52) Carbon Tetrachloride	10.092	117	842556	19.44	ppb(v 97
53) Cyclohexane	10.226	56	565083	19.91	ppb(v# 83
54) 2,3-Dimethylpentane	10.520	71	268511	20.13	ppb(v 74
56) 2,2,4-Trimethylpentane	11.211	57	1833569	18.38	ppb(v# 95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13828.D
 Acq On : 13 Sep 2019 5:12 pm
 Operator : thomash
 Sample : ic571-20
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:42:39 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 17:18:46 2019
 Response via : Initial Calibration

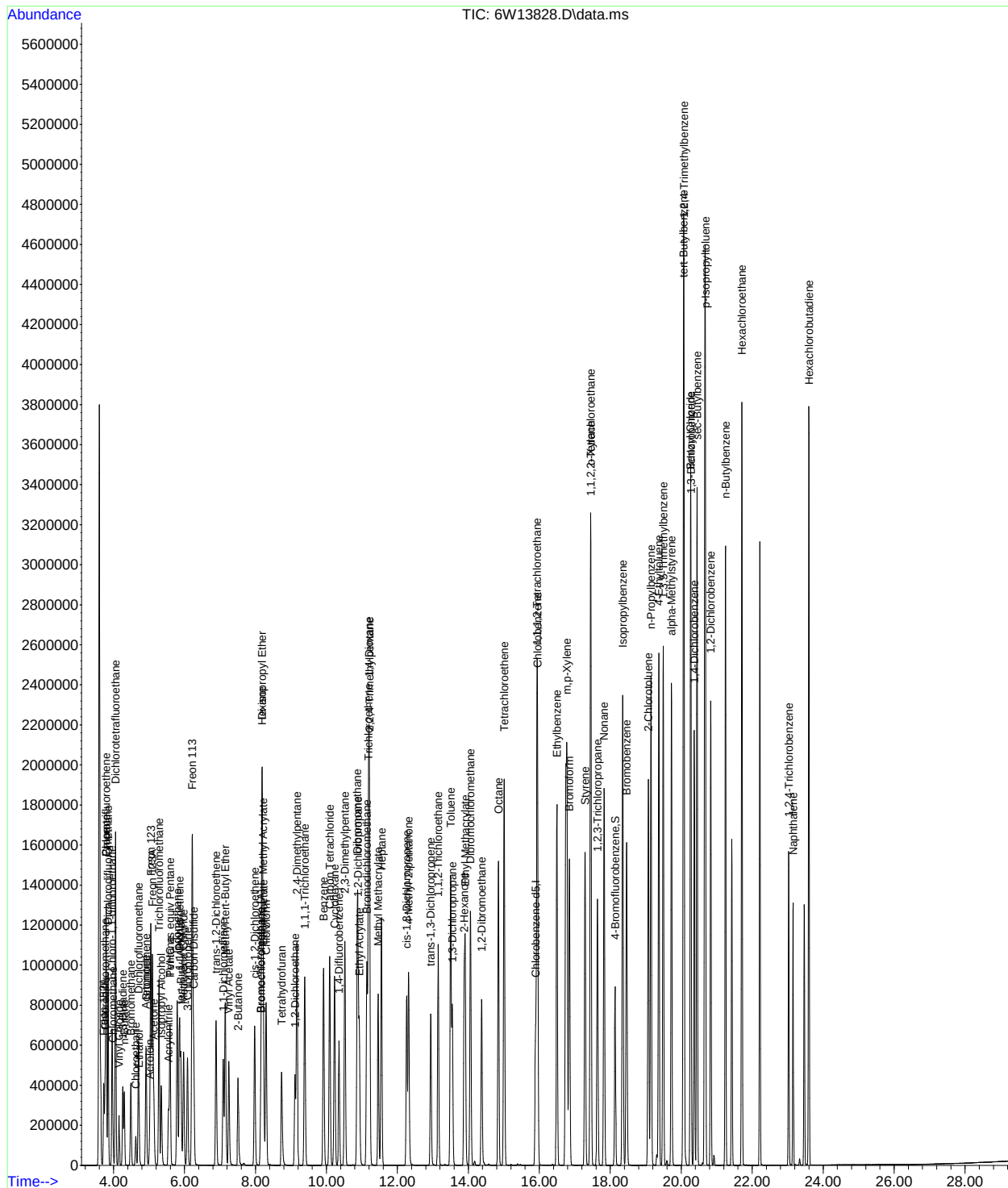
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.554	71	425187	19.29	ppb(v	89
58) Trichloroethene	11.181	95	546433	17.56	ppb(v	83
59) 1,2-Dichloropropane	10.893	63	420076	18.60	ppb(v	98
60) Dibromomethane	10.869	174	613339	18.40	ppb(v#	65
61) Ethyl Acrylate	10.930	55	835563	20.61	ppb(v#	93
62) Methyl Methacrylate	11.456	69	468570	21.26	ppb(v#	71
63) 1,4-Dioxane	11.199	88	298154	16.38	ppb(v#	57
64) Bromodichloromethane	11.138	83	877369	19.59	ppb(v	98
65) cis-1,3-Dichloropropene	12.264	75	679635	20.09	ppb(v#	93
66) 4-Methyl-2-pentanone	12.312	58	354828	20.82	ppb(v#	73
67) trans-1,3-Dichloropropene	12.936	75	585593	20.70	ppb(v#	92
68) Toluene	13.499	91	1465586	17.63	ppb(v	98
69) 1,1,2-Trichloroethane	13.151	97	495833	19.08	ppb(v	94
70) 1,3-Dichloropropane	13.548	76	668257	18.89	ppb(v#	82
71) 2-Hexanone	13.879	58	463053	18.08	ppb(v#	77
72) Ethyl Methacrylate	13.909	69	727178	20.16	ppb(v#	92
73) Dibromochloromethane	14.056	129	983797	20.70	ppb(v#	99
74) Tetrachloroethene	15.010	166	856976	18.81	ppb(v	94
75) 1,2-Dibromoethane	14.374	107	779767	20.11	ppb(v	98
76) Octane	14.851	43	806018	18.48	ppb(v#	74
77) 1,1,1,2-Tetrachloroethane	15.934	131	685843	19.05	ppb(v	97
79) Chlorobenzene	15.952	112	1210725	17.51	ppb(v	87
80) Ethylbenzene	16.497	91	1877413	16.49	ppb(v	94
81) m,p-Xylene	16.772	91	2961714	33.03	ppb(v	94
82) Styrene	17.292	104	1195532	21.39	ppb(v	91
83) Nonane	17.825	43	871662	18.53	ppb(v#	83
84) o-Xylene	17.445	91	1525799	16.40	ppb(v	93
85) Bromoform	16.846	173	1075461	20.89	ppb(v	98
86) 1,1,2,2-Tetrachloroethane	17.451	83	1104487	18.93	ppb(v#	99
87) 1,2,3-Trichloropropane	17.641	75	809313	19.06	ppb(v	89
88) Isopropylbenzene	18.351	105	2291210	18.18	ppb(v	93
89) Bromobenzene	18.461	156	768915	20.43	ppb(v#	70
90) 2-Chlorotoluene	19.073	126	562058	19.97	ppb(v#	71
91) n-Propylbenzene	19.146	120	642984	20.84	ppb(v	67
93) 4-Ethyltoluene	19.372	105	2165103	20.34	ppb(v	95
94) 1,3,5-Trimethylbenzene	19.495	105	1876660	19.56	ppb(v	94
95) alpha-Methylstyrene	19.721	118	982320	23.16	ppb(v	97
96) tert-Butylbenzene	20.064	134	477076	20.26	ppb(v	77
97) 1,2,4-Trimethylbenzene	20.076	105	1848848	20.20	ppb(v	96
98) 1,3-Dichlorobenzene	20.272	146	1231846	23.08	ppb(v#	92
99) Benzyl Chloride	20.259	91	1336466	25.86	ppb(v	92
100) 1,4-Dichlorobenzene	20.369	146	1182843	24.02	ppb(v#	91
101) sec-Butylbenzene	20.449	134	600144	20.14	ppb(v	75
102) p-Isopropyltoluene	20.681	134	643625	20.44	ppb(v	84
103) 1,2-Dichlorobenzene	20.828	146	1192483	21.41	ppb(v	94
104) n-Butylbenzene	21.250	134	565150	22.53	ppb(v	61
105) Hexachloroethane	21.709	201	813365	22.71	ppb(v	74
106) 1,2,4-Trichlorobenzene	23.031	180	550116	27.89	ppb(v	99
107) Naphthalene	23.153	128	1102216	22.96	ppb(v	100
108) Hexachlorobutadiene	23.600	225	817741	19.62	ppb(v	97
110) TVHC as equiv Pentane	5.589	TIC	2131076	18.63	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W13828.D
Acq On : 13 Sep 2019 5:12 pm
Operator : thomash
Sample : ic571-20
Misc : MS37187,V6W571,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 13 17:42:39 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Fri Sep 13 17:18:46 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13830.D
 Acq On : 13 Sep 2019 6:52 pm
 Operator : thomash
 Sample : ic571-40
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 08:17:55 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 17:43:38 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.158	130	195278	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.355	114	735636	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.891	82	360923	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.158	130	195278	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.136 95 437987 9.49 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 94.90%

Target Compounds						Qvalue
3) Freon 152A	3.723	65	414831	32.04	ppb(v	93
4) Chlorodifluoromethane	3.760	67	164885	32.28	ppb(v	96
5) Propene	3.784	41	435844	30.50	ppb(v	98
6) Chlorotrifluoroethene	3.790	116	1132859	31.82	ppb(v	94
7) Dichlorodifluoromethane	3.839	85	1769627	30.98	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.956	65	1184490	31.32	ppb(v	98
9) Chloromethane	3.974	50	426105	30.54	ppb(v	98
10) Dichlorotetrafluoroethane	4.047	85	1693474	31.50	ppb(v	85
11) Vinyl Chloride	4.151	62	565052	32.70	ppb(v	99
12) 1,3-Butadiene	4.255	54	391858	32.91	ppb(v	95
13) n-Butane	4.298	58	99867	33.75	ppb(v	76
14) Bromomethane	4.482	94	623235	33.04	ppb(v	97
15) Acrolein	5.014	56	297555	36.50	ppb(v	98
16) Chloroethane	4.622	64	282498	33.50	ppb(v	97
17) Dichlorofluoromethane	4.696	67	1270643	32.25	ppb(v	99
18) Acetonitrile	4.910	41	490862	29.54	ppb(v	99
19) Freon 123	5.045	83	1672248	33.84	ppb(v	98
20) Freon 123A	5.093	117	1069126	34.59	ppb(v	75
21) Bromoethene	4.916	106	723694	34.90	ppb(v	97
22) Trichlorofluoromethane	5.277	101	1845665	33.80	ppb(v	98
23) Acetone	5.130	58	320360	31.38	ppb(v	87
24) Pentane	5.589	57	181278	36.10	ppb(v	82
26) Iodomethane	5.785	142	2372243	35.08	ppb(v	88
27) Isopropyl Alcohol	5.344	45	1205139	27.44	ppb(v	99
28) 1,1-Dichloroethene	5.852	61	1106590	34.90	ppb(v	85
29) Freon 113	6.213	101	1669021	34.94	ppb(v	85
30) Methylene Chloride	5.974	84	699839	30.65	ppb(v	80
31) Carbon Disulfide	6.256	76	2074533	35.37	ppb(v	99
32) Ethanol	4.720	45	187806	32.99	ppb(v	98
33) Acrylonitrile	5.546	53	560306	37.06	ppb(v	99
34) 3-Chloropropene	6.085	76	381627	38.90	ppb(v	64
35) trans-1,2-Dichloroethene	6.886	61	1008252	37.52	ppb(v	84
36) tert-Butyl Alcohol	5.901	59	1546403	35.58	ppb(v	95
37) Methyl tert-Butyl Ether	7.143	73	2153549	36.35	ppb(v	94
38) Vinyl Acetate	7.247	43	1904788	38.43	ppb(v#	91
39) 1,1-Dichloroethane	7.094	63	1268999	35.30	ppb(v#	99
40) 2-Butanone	7.504	72	395757	40.96	ppb(v	62
41) Hexane	8.183	57	1054815	35.82	ppb(v	84
42) cis-1,2-Dichloroethene	7.975	61	983244	38.17	ppb(v	83
43) Di-isopropyl Ether	8.189	87	703502	37.64	ppb(v#	44
44) Ethyl Acetate	8.226	61	227460	39.17	ppb(v	69
45) Methyl Acrylate	8.213	55	1307181	38.93	ppb(v	94
46) Chloroform	8.299	83	1590228	36.68	ppb(v	98
47) 2,4-Dimethylpentane	9.168	57	1320664	38.27	ppb(v#	93
48) Tetrahydrofuran	8.733	72	383796	41.29	ppb(v	79
49) 1,1,1-Trichloroethane	9.388	97	1619892	37.63	ppb(v	97
50) 1,2-Dichloroethane	9.113	62	914921	37.52	ppb(v#	96
51) Benzene	9.920	78	2443889	36.07	ppb(v	95
52) Carbon Tetrachloride	10.092	117	1774002	39.13	ppb(v	97
53) Cyclohexane	10.226	56	1164478	39.10	ppb(v#	83
54) 2,3-Dimethylpentane	10.520	71	545393	38.90	ppb(v	75
56) 2,2,4-Trimethylpentane	11.217	57	3560488	34.46	ppb(v#	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13830.D
 Acq On : 13 Sep 2019 6:52 pm
 Operator : thomash
 Sample : ic571-40
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 08:17:55 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Sep 13 17:43:38 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.554	71	853651	37.17	ppb(v	88
58) Trichloroethene	11.187	95	1106709	34.53	ppb(v	81
59) 1,2-Dichloropropane	10.893	63	846616	36.18	ppb(v	97
60) Dibromomethane	10.869	174	1280128	37.13	ppb(v#	66
61) Ethyl Acrylate	10.930	55	1705640	39.94	ppb(v#	92
62) Methyl Methacrylate	11.462	69	948691	40.64	ppb(v#	68
63) 1,4-Dioxane	11.199	88	587839	31.97	ppb(v#	49
64) Bromodichloromethane	11.144	83	1800675	38.47	ppb(v#	97
65) cis-1,3-Dichloropropene	12.263	75	1398137	39.39	ppb(v#	94
66) 4-Methyl-2-pentanone	12.318	58	725279	40.33	ppb(v#	71
67) trans-1,3-Dichloropropene	12.942	75	1231430	41.29	ppb(v#	91
68) Toluene	13.505	91	3074511	35.89	ppb(v	97
69) 1,1,2-Trichloroethane	13.157	97	1039957	38.43	ppb(v	93
70) 1,3-Dichloropropane	13.548	76	1405805	38.26	ppb(v#	82
71) 2-Hexanone	13.885	58	974736	36.91	ppb(v#	75
72) Ethyl Methacrylate	13.915	69	1524982	40.27	ppb(v#	91
73) Dibromochloromethane	14.062	129	2088113	41.70	ppb(v#	99
74) Tetrachloroethene	15.010	166	1817553	38.38	ppb(v	95
75) 1,2-Dibromoethane	14.380	107	1654900	40.68	ppb(v	100
76) Octane	14.851	43	1641638	36.37	ppb(v#	72
77) 1,1,1,2-Tetrachloroethane	15.940	131	1435168	38.28	ppb(v	96
79) Chlorobenzene	15.959	112	2520668	32.25	ppb(v	87
80) Ethylbenzene	16.503	91	3930410	30.82	ppb(v	94
81) m,p-Xylene	16.778	91	6186752	61.32	ppb(v	94
82) Styrene	17.292	104	2474266	37.98	ppb(v	93
83) Nonane	17.831	43	1715633	31.93	ppb(v#	82
84) o-Xylene	17.445	91	3109032	29.85	ppb(v	94
85) Bromoform	16.852	173	2253984	37.65	ppb(v	99
86) 1,1,2,2-Tetrachloroethane	17.457	83	2202328	32.95	ppb(v#	98
87) 1,2,3-Trichloropropane	17.647	75	1638313	33.66	ppb(v	89
88) Isopropylbenzene	18.357	105	4661557	32.54	ppb(v	93
89) Bromobenzene	18.467	156	1588581	36.46	ppb(v#	70
90) 2-Chlorotoluene	19.079	126	1155908	35.59	ppb(v#	68
91) n-Propylbenzene	19.152	120	1321644	36.90	ppb(v	63
93) 4-Ethyltoluene	19.378	105	4452356	36.15	ppb(v	95
94) 1,3,5-Trimethylbenzene	19.501	105	3795467	34.40	ppb(v	93
95) alpha-Methylstyrene	19.727	118	1994762	39.85	ppb(v	97
96) tert-Butylbenzene	20.070	134	950913	34.92	ppb(v	80
97) 1,2,4-Trimethylbenzene	20.088	105	3702068	34.99	ppb(v#	80
98) 1,3-Dichlorobenzene	20.278	146	2509799	39.87	ppb(v#	92
99) Benzyl Chloride	20.265	91	2862467	45.76	ppb(v	92
100) 1,4-Dichlorobenzene	20.375	146	2463302	42.13	ppb(v#	91
101) sec-Butylbenzene	20.455	134	1198864	34.82	ppb(v	71
102) p-Isopropyltoluene	20.687	134	1279833	35.11	ppb(v	83
103) 1,2-Dichlorobenzene	20.834	146	2443222	37.62	ppb(v	93
104) n-Butylbenzene	21.256	134	1168404	39.64	ppb(v	58
105) Hexachloroethane	21.715	201	1692216	40.15	ppb(v	69
106) 1,2,4-Trichlorobenzene	23.031	180	1295093	53.85	ppb(v	98
107) Naphthalene	23.153	128	2559137	45.23	ppb(v	100
108) Hexachlorobutadiene	23.600	225	1807875	37.72	ppb(v	98
110) TVHC as equiv Pentane	5.583	TIC	4257116	35.94	ppb(v	100

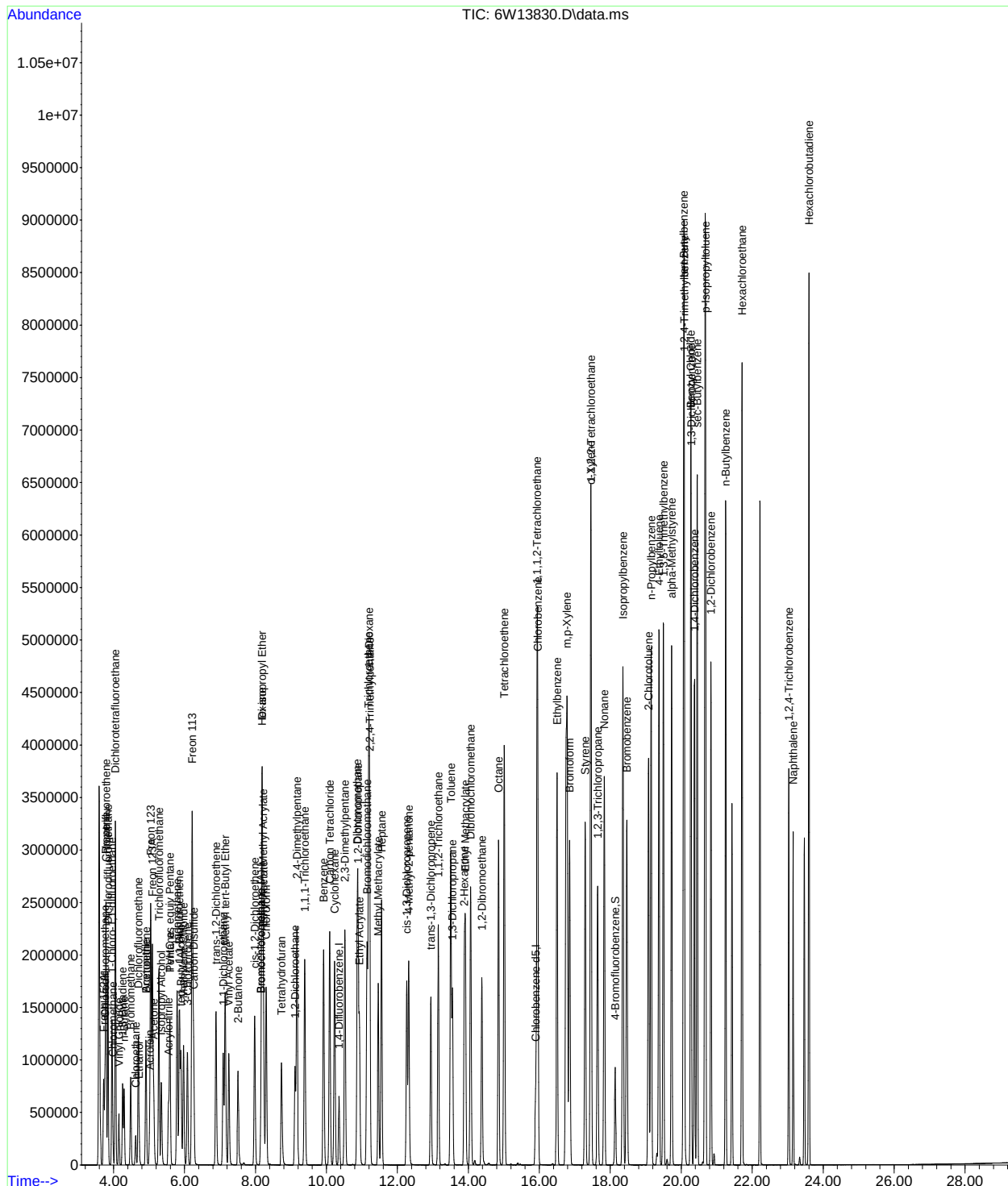
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.20

7

Data Path : C:\msdchem\1\data\
Data File : 6WJ3830.D
Acq On : 13 Sep 2019 6:52 pm
Operator : thomash
Sample : ic571-40
Misc : MS37187,V6W571,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 16 08:17:55 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Fri Sep 13 17:43:38 2019
Response via : Initial Calibration



7.7.20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13832.D
 Acq On : 13 Sep 2019 8:27 pm
 Operator : thomash
 Sample : icv571-10
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 17 10:40:07 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.152	130	175068	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.355	114	645035	10.00	ppb(v # 0.00	
78) Chlorobenzene-d5	15.891	82	279223	10.00	ppb(v # 0.00	
109) Bromochloromethane (A)	8.152	130	175068	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.136 95 376794 10.62 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 106.20%

Target Compounds					Qvalue
3) Freon 152A	3.723	65	113510	10.06	ppb(v 93
4) Chlorodifluoromethane	3.760	67	44361	10.01	ppb(v 97
5) Propene	3.790	41	120727	9.75	ppb(v 98
6) Chlorotrifluoroethene	3.790	116	314812	10.12	ppb(v 94
7) Dichlorodifluoromethane	3.845	85	464001	9.32	ppb(v 99
8) 1-Chloro-1,1-difluoro...	3.955	65	323175	9.80	ppb(v 98
9) Chloromethane	3.974	50	115037	9.52	ppb(v 99
10) Dichlorotetrafluoroethane	4.053	85	446631	9.52	ppb(v 85
11) Vinyl Chloride	4.151	62	149432	9.90	ppb(v 99
12) 1,3-Butadiene	4.261	54	102908	9.93	ppb(v 96
13) n-Butane	4.304	58	26761	10.36	ppb(v 75
14) Bromomethane	4.488	94	162095	9.80	ppb(v 99
15) Acrolein	5.020	56	74079	10.26	ppb(v 99
16) Chloroethane	4.622	64	74201	10.09	ppb(v 97
17) Dichlorofluoromethane	4.702	67	324396	9.41	ppb(v 99
18) Acetonitrile	4.910	41	126534	8.82	ppb(v 99
19) Freon 123	5.051	83	449312	10.34	ppb(v 98
20) Freon 123A	5.093	117	306742	11.26	ppb(v 77
21) Bromoethene	4.922	106	190872	10.43	ppb(v 98
22) Trichlorofluoromethane	5.277	101	462350	9.63	ppb(v 98
23) Acetone	5.136	58	84384	9.51	ppb(v 84
24) Pentane	5.589	57	46600	10.52	ppb(v 86
26) Iodomethane	5.791	142	595171	9.97	ppb(v 87
27) Isopropyl Alcohol	5.344	45	304103	9.05	ppb(v 99
28) 1,1-Dichloroethene	5.858	61	286373	10.26	ppb(v 85
29) Freon 113	6.219	101	427620	10.15	ppb(v 86
30) Methylene Chloride	5.974	84	178919	9.00	ppb(v 81
31) Carbon Disulfide	6.256	76	578265	11.16	ppb(v 99
32) Ethanol	4.720	45	46955	9.53	ppb(v 98
33) Acrylonitrile	5.546	53	143076	10.69	ppb(v 97
34) 3-Chloropropene	6.084	76	95965	10.96	ppb(v 67
35) trans-1,2-Dichloroethene	6.886	61	262911	11.00	ppb(v 84
36) tert-Butyl Alcohol	5.895	59	351243	9.14	ppb(v 96
37) Methyl tert-Butyl Ether	7.149	73	530560	10.10	ppb(v 94
38) Vinyl Acetate	7.247	43	465872	10.55	ppb(v# 90
39) 1,1-Dichloroethane	7.094	63	314269	9.90	ppb(v 99
40) 2-Butanone	7.504	72	97123	11.17	ppb(v 63
41) Hexane	8.183	57	273571	10.52	ppb(v 86
42) cis-1,2-Dichloroethene	7.975	61	239822	10.44	ppb(v 83
43) Di-isopropyl Ether	8.189	87	172530	10.39	ppb(v# 50
44) Ethyl Acetate	8.226	61	61052	11.77	ppb(v 67
45) Methyl Acrylate	8.213	55	339963	11.34	ppb(v 93
46) Chloroform	8.299	83	385693	10.03	ppb(v 98
47) 2,4-Dimethylpentane	9.162	57	317200	10.31	ppb(v# 95
48) Tetrahydrofuran	8.739	72	85393	10.20	ppb(v 81
49) 1,1,1-Trichloroethane	9.388	97	382519	9.99	ppb(v 96
50) 1,2-Dichloroethane	9.107	62	221382	10.22	ppb(v# 96
51) Benzene	9.920	78	579607	9.66	ppb(v 95
52) Carbon Tetrachloride	10.092	117	407537	10.06	ppb(v 98
53) Cyclohexane	10.226	56	271082	10.18	ppb(v# 82
54) 2,3-Dimethylpentane	10.520	71	127607	10.19	ppb(v 76
56) 2,2,4-Trimethylpentane	11.211	57	883200	9.92	ppb(v# 94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W13832.D
 Acq On : 13 Sep 2019 8:27 pm
 Operator : thomash
 Sample : icv571-10
 Misc : MS37187,V6W571,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 17 10:40:07 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.548	71	205771	10.32	ppb(v	89
58) Trichloroethene	11.180	95	262695	9.51	ppb(v	81
59) 1,2-Dichloropropane	10.893	63	203251	10.04	ppb(v	97
60) Dibromomethane	10.868	174	305507	10.21	ppb(v#	64
61) Ethyl Acrylate	10.930	55	413482	11.04	ppb(v#	93
62) Methyl Methacrylate	11.456	69	223731	10.91	ppb(v#	72
63) 1,4-Dioxane	11.199	88	135561	8.70	ppb(v#	65
64) Bromodichloromethane	11.138	83	416629	10.20	ppb(v	98
65) cis-1,3-Dichloropropene	12.263	75	356662	11.49	ppb(v#	92
66) 4-Methyl-2-pentanone	12.312	58	170736	10.81	ppb(v#	72
67) trans-1,3-Dichloropropene	12.936	75	303440	11.55	ppb(v#	91
68) Toluene	13.499	91	713349	9.62	ppb(v	97
69) 1,1,2-Trichloroethane	13.150	97	244209	10.34	ppb(v	92
70) 1,3-Dichloropropane	13.542	76	331085	10.34	ppb(v#	82
71) 2-Hexanone	13.878	58	230327	10.06	ppb(v#	77
72) Ethyl Methacrylate	13.909	69	356793	10.74	ppb(v#	92
73) Dibromochloromethane	14.056	129	466826	10.58	ppb(v#	99
74) Tetrachloroethene	15.010	166	415575	10.06	ppb(v	94
75) 1,2-Dibromoethane	14.374	107	387006	10.83	ppb(v	98
76) Octane	14.845	43	385375	9.86	ppb(v#	75
77) 1,1,1,2-Tetrachloroethane	15.934	131	326725	9.99	ppb(v	97
79) Chlorobenzene	15.952	112	593859	10.10	ppb(v	87
80) Ethylbenzene	16.497	91	917235	9.61	ppb(v	94
81) m,p-Xylene	16.772	91	1431311	18.89	ppb(v	94
82) Styrene	17.286	104	595660	11.89	ppb(v	92
83) Nonane	17.824	43	424412	10.48	ppb(v#	85
84) o-Xylene	17.439	91	732296	9.43	ppb(v	94
85) Bromoform	16.845	173	478203	10.41	ppb(v#	98
86) 1,1,2,2-Tetrachloroethane	17.445	83	515824	10.20	ppb(v#	98
87) 1,2,3-Trichloropropane	17.641	75	384517	10.42	ppb(v	90
88) Isopropylbenzene	18.350	105	1104755	10.24	ppb(v	93
89) Bromobenzene	18.461	156	384392	11.53	ppb(v#	69
90) 2-Chlorotoluene	19.072	126	273302	11.03	ppb(v#	71
91) n-Propylbenzene	19.146	120	312708	11.40	ppb(v	67
93) 4-Ethyltoluene	19.372	105	1061817	11.28	ppb(v	95
94) 1,3,5-Trimethylbenzene	19.488	105	902219	10.78	ppb(v	94
95) alpha-Methylstyrene	19.721	118	483355	12.49	ppb(v	97
96) tert-Butylbenzene	20.063	134	230658	11.13	ppb(v	79
97) 1,2,4-Trimethylbenzene	20.076	105	908054	11.27	ppb(v	88
98) 1,3-Dichlorobenzene	20.265	146	641784	12.68	ppb(v#	91
99) Benzyl Chloride	20.259	91	694858	13.34	ppb(v	93
100) 1,4-Dichlorobenzene	20.363	146	636519	12.90	ppb(v#	92
101) sec-Butylbenzene	20.449	134	296733	11.32	ppb(v	73
102) p-Isopropyltoluene	20.675	134	322158	11.60	ppb(v	89
103) 1,2-Dichlorobenzene	20.828	146	607869	12.19	ppb(v#	93
104) n-Butylbenzene	21.244	134	286229	12.57	ppb(v	66
105) Hexachloroethane	21.709	201	385740	11.83	ppb(v	72
106) 1,2,4-Trichlorobenzene	23.024	180	269518	12.73	ppb(v	99
107) Naphthalene	23.147	128	588789	12.93	ppb(v	100
108) Hexachlorobutadiene	23.593	225	357859	9.74	ppb(v	98
110) TVHC as equiv Pentane	5.589	TIC	1096095	10.50	ppb(v	100

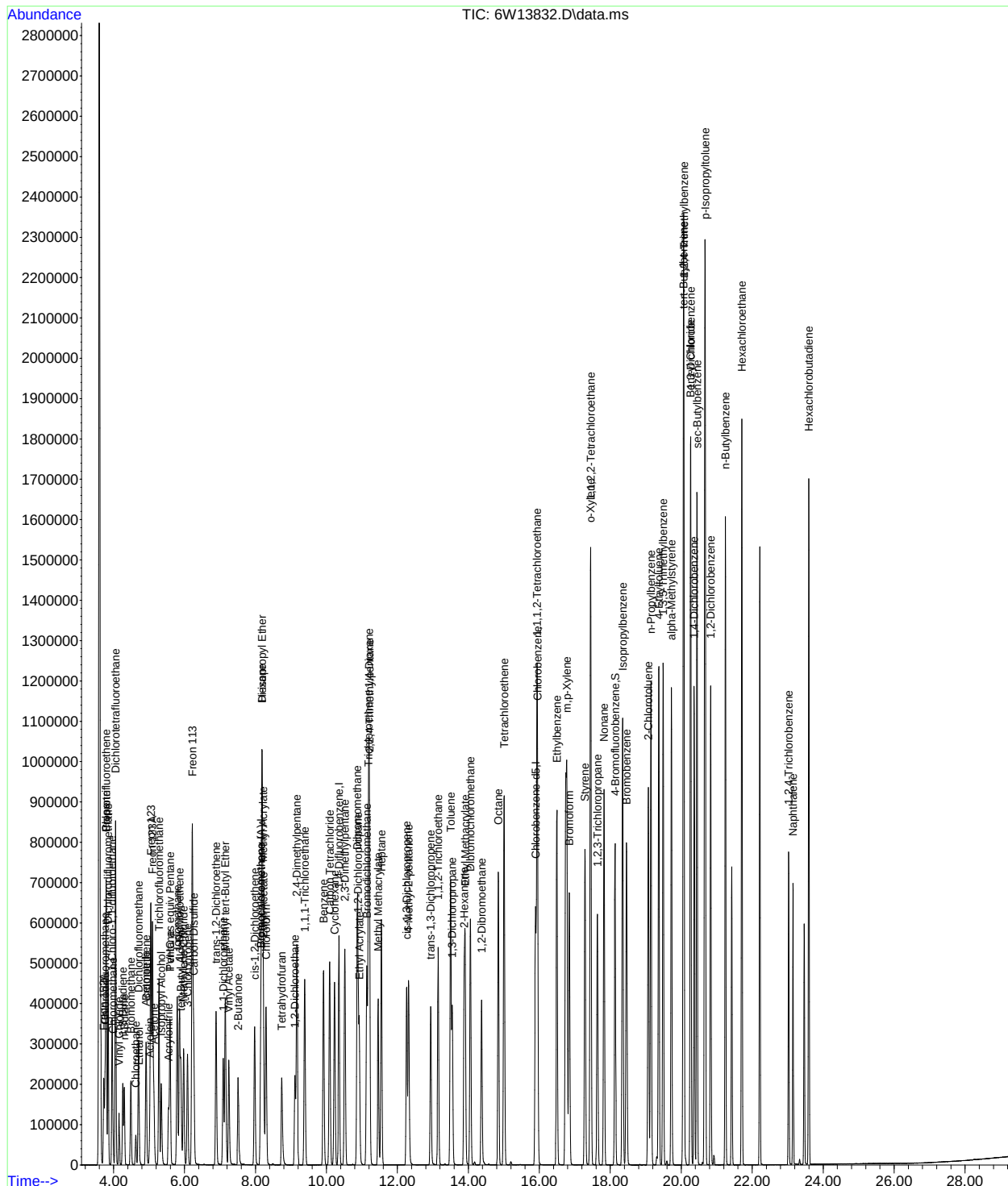
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.21

7

Data Path : C:\msdchem\1\data\
Data File : 6W13832.D
Acq On : 13 Sep 2019 8:27 pm
Operator : thomash
Sample : icv571-10
Misc : MS37187,V6W571,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 17 10:40:07 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W14958.D
 Acq On : 26 Nov 2019 9:47 am
 Operator : thomash
 Sample : cc571-10
 Misc : MS39338,V6W623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 26 14:21:37 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.146	130	146316	10.00	ppb(v # 0.00	
55) 1,4-Difluorobenzene	10.342	114	537314	10.00	ppb(v #-0.01	
78) Chlorobenzene-d5	15.879	82	238121	10.00	ppb(v #-0.01	
109) Bromochloromethane (A)	8.146	130	146316	10.00	ppb(v # 0.00	

System Monitoring Compounds
 92) 4-Bromofluorobenzene 18.124 95 321993 10.65 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 106.50%

Target Compounds					Qvalue
3) Freon 152A	3.729	65	85317	9.05	ppb(v 99
4) Chlorodifluoromethane	3.766	67	41513	11.21	ppb(v 98
5) Propene	3.790	41	89604	8.66	ppb(v 96
6) Chlorotrifluoroethene	3.796	116	246477	9.48	ppb(v 94
7) Dichlorodifluoromethane	3.851	85	431987	10.39	ppb(v 99
8) 1-Chloro-1,1-difluoro...	3.962	65	321654	11.67	ppb(v 98
9) Chloromethane	3.980	50	104822	10.38	ppb(v 99
10) Dichlorotetrafluoroethane	4.053	85	416654	10.63	ppb(v 89
11) Vinyl Chloride	4.157	62	131435	10.42	ppb(v# 99
12) 1,3-Butadiene	4.267	54	90885	10.50	ppb(v 99
13) n-Butane	4.304	58	23686	10.97	ppb(v 83
14) Bromomethane	4.488	94	147813	10.69	ppb(v 98
15) Acrolein	5.020	56	48314	8.01	ppb(v# 95
16) Chloroethane	4.628	64	66514	10.82	ppb(v 99
17) Dichlorofluoromethane	4.702	67	320387	11.12	ppb(v 99
18) Acetonitrile	4.910	41	81056	6.76	ppb(v 98
19) Freon 123	5.044	83	338970	9.33	ppb(v 98
20) Freon 123A	5.093	117	225115	9.89	ppb(v 73
21) Bromoethene	4.922	106	150291	9.83	ppb(v 99
22) Trichlorofluoromethane	5.277	101	437266	10.90	ppb(v 99
23) Acetone	5.130	58	56836	7.67	ppb(v 99
24) Pentane	5.589	57	32979	8.91	ppb(v 83
26) Iodomethane	5.791	142	478101	9.58	ppb(v 93
27) Isopropyl Alcohol	5.344	45	211742	7.54	ppb(v 95
28) 1,1-Dichloroethene	5.858	61	228270	9.79	ppb(v 87
29) Freon 113	6.213	101	347357	9.86	ppb(v 85
30) Methylene Chloride	5.974	84	136213	8.20	ppb(v 80
31) Carbon Disulfide	6.256	76	404009	9.33	ppb(v 99
32) Ethanol	4.720	45	43721	10.62	ppb(v 97
33) Acrylonitrile	5.546	53	93870	8.39	ppb(v 98
34) 3-Chloropropene	6.078	76	72172	9.86	ppb(v 67
35) trans-1,2-Dichloroethene	6.886	61	200078	10.01	ppb(v 86
36) tert-Butyl Alcohol	5.895	59	311846	9.71	ppb(v 97
37) Methyl tert-Butyl Ether	7.143	73	444309	10.12	ppb(v 92
38) Vinyl Acetate	7.241	43	334642	9.07	ppb(v# 92
39) 1,1-Dichloroethane	7.088	63	250840	9.45	ppb(v 99
40) 2-Butanone	7.504	72	68400	9.42	ppb(v 60
41) Hexane	8.177	57	208148	9.58	ppb(v 89
42) cis-1,2-Dichloroethene	7.969	61	194234	10.12	ppb(v 87
43) Di-isopropyl Ether	8.183	87	141839	10.22	ppb(v# 45
44) Ethyl Acetate	8.220	61	42271	9.75	ppb(v 71
45) Methyl Acrylate	8.207	55	245359	9.79	ppb(v# 93
46) Chloroform	8.287	83	338911	10.54	ppb(v 99
47) 2,4-Dimethylpentane	9.156	57	247283	9.62	ppb(v# 93
48) Tetrahydrofuran	8.740	72	70054	10.01	ppb(v 75
49) 1,1,1-Trichloroethane	9.382	97	355602	11.11	ppb(v 98
50) 1,2-Dichloroethane	9.107	62	202170	11.16	ppb(v 98
51) Benzene	9.908	78	461390	9.20	ppb(v 96
52) Carbon Tetrachloride	10.079	117	391248	11.55	ppb(v 95
53) Cyclohexane	10.220	56	212606	9.56	ppb(v# 81
54) 2,3-Dimethylpentane	10.508	71	102161	9.76	ppb(v 74
56) 2,2,4-Trimethylpentane	11.199	57	703923	9.49	ppb(v# 97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W14958.D
 Acq On : 26 Nov 2019 9:47 am
 Operator : thomash
 Sample : cc571-10
 Misc : MS39338,V6W623,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 26 14:21:37 2019
 Quant Method : C:\msdchem\1\methods\m6w571.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Tue Sep 17 10:39:34 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Heptane	11.541	71	163900	9.87	ppb(v	87
58) Trichloroethene	11.174	95	222233	9.66	ppb(v	81
59) 1,2-Dichloropropane	10.881	63	156701	9.30	ppb(v	91
60) Dibromomethane	10.856	174	243414	9.77	ppb(v#	68
61) Ethyl Acrylate	10.917	55	291525	9.35	ppb(v#	92
62) Methyl Methacrylate	11.450	69	171213	10.02	ppb(v	71
63) 1,4-Dioxane	11.193	88	106343	8.19	ppb(v	71
64) Bromodichloromethane	11.125	83	364992	10.73	ppb(v	97
65) cis-1,3-Dichloropropene	12.251	75	257122	9.94	ppb(v	93
66) 4-Methyl-2-pentanone	12.306	58	128164	9.75	ppb(v#	72
67) trans-1,3-Dichloropropene	12.930	75	223235	10.20	ppb(v#	92
68) Toluene	13.487	91	577250	9.35	ppb(v	97
69) 1,1,2-Trichloroethane	13.144	97	193620	9.84	ppb(v	92
70) 1,3-Dichloropropane	13.536	76	258225	9.68	ppb(v#	85
71) 2-Hexanone	13.872	58	155154	8.13	ppb(v#	80
72) Ethyl Methacrylate	13.903	69	270843	9.78	ppb(v#	91
73) Dibromochloromethane	14.050	129	404006	10.99	ppb(v#	99
74) Tetrachloroethene	14.998	166	355790	10.34	ppb(v	94
75) 1,2-Dibromoethane	14.368	107	290854	9.77	ppb(v	100
76) Octane	14.839	43	305849	9.40	ppb(v#	72
77) 1,1,1,2-Tetrachloroethane	15.922	131	285134	10.47	ppb(v	98
79) Chlorobenzene	15.940	112	460159	9.18	ppb(v	89
80) Ethylbenzene	16.485	91	732836	9.01	ppb(v	94
81) m,p-Xylene	16.760	91	1233282	19.08	ppb(v	95
82) Styrene	17.280	104	427814	10.02	ppb(v	93
83) Nonane	17.818	43	322534	9.33	ppb(v#	84
84) o-Xylene	17.433	91	608454	9.19	ppb(v	95
85) Bromoform	16.833	173	405831	10.36	ppb(v	99
86) 1,1,2,2-Tetrachloroethane	17.439	83	397473	9.22	ppb(v#	97
87) 1,2,3-Trichloropropane	17.629	75	295685	9.39	ppb(v	89
88) Isopropylbenzene	18.338	105	889437	9.67	ppb(v	94
89) Bromobenzene	18.448	156	286530	10.08	ppb(v#	71
90) 2-Chlorotoluene	19.066	126	213220	10.09	ppb(v	72
91) n-Propylbenzene	19.140	120	239148	10.22	ppb(v	65
93) 4-Ethyltoluene	19.360	105	786146	9.79	ppb(v	96
94) 1,3,5-Trimethylbenzene	19.482	105	706439	9.90	ppb(v	95
95) alpha-Methylstyrene	19.715	118	336348	10.19	ppb(v	96
96) tert-Butylbenzene	20.057	134	182258	10.31	ppb(v	87
97) 1,2,4-Trimethylbenzene	20.070	105	703796	10.24	ppb(v	88
98) 1,3-Dichlorobenzene	20.259	146	406493	9.42	ppb(v	93
99) Benzyl Chloride	20.247	91	419641	9.45	ppb(v	94
100) 1,4-Dichlorobenzene	20.357	146	383381	9.11	ppb(v	93
101) sec-Butylbenzene	20.443	134	229236	10.26	ppb(v	75
102) p-Isopropyltoluene	20.669	134	246908	10.42	ppb(v	89
103) 1,2-Dichlorobenzene	20.822	146	418002	9.83	ppb(v	94
104) n-Butylbenzene	21.244	134	203634	10.48	ppb(v	62
105) Hexachloroethane	21.703	201	302486	10.87	ppb(v	75
106) 1,2,4-Trichlorobenzene	23.024	180	150889	8.35	ppb(v	98
107) Naphthalene	23.147	128	301248	7.76	ppb(v	99
108) Hexachlorobutadiene	23.593	225	252316	8.06	ppb(v	98
110) TVHC as equiv Pentane	5.589	TIC	766276	8.78	ppb(v	100

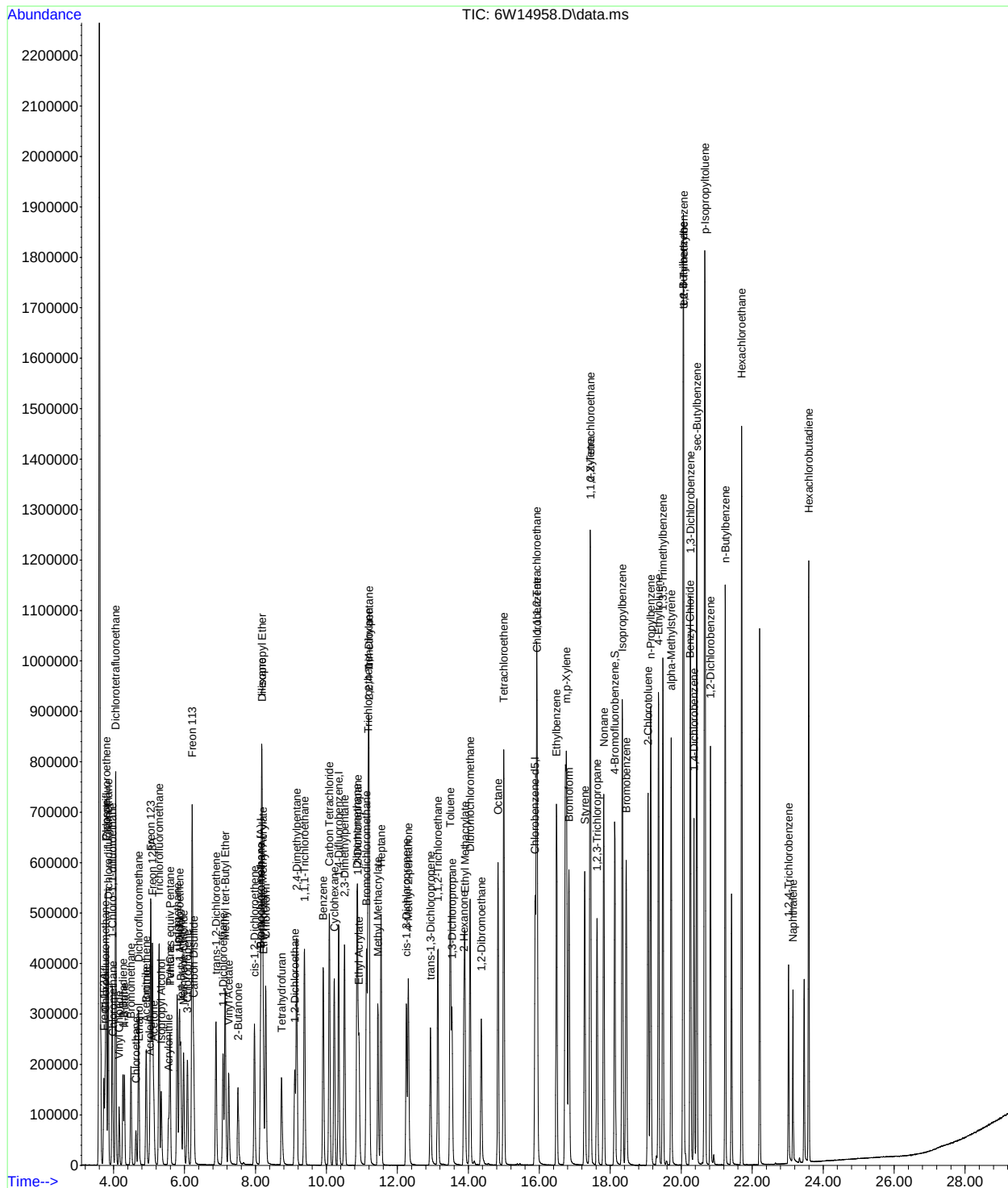
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.22

7


```
Data Path : C:\msdchem\1\data\  
Data File : 6W14958.D  
Acq On : 26 Nov 2019 9:47 am  
Operator : thomash  
Sample : cc571-10  
Misc : MS39338,V6W623,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
```

Quant Time: Nov 26 14:21:37 2019
Quant Method : C:\msdchem\1\methods\m6w571.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Sep 17 10:39:34 2019
Response via : Initial Calibration



Batch ID: NSW 1620

Analyst Signature:

Columns: 2 x 1 - 60m x 0.32mm x 1.0 μ m

Method: SWT 15

Seq. File: 20191223.S

Initial Cal. Method: MSW/620

Method: TOLUENE

Lot #	Description	Conc.
A58459	Inf/Surr	100 μ g/ml
A58690	To15 std (A971)	40 μ g/ml
A58691	To15 std (A964)	0.4 μ g/ml
A58692	To15 std (A978)	1.0 μ g/ml

Lot #	Description	Conc.
AS 8669	T015 LGS (A965)	40 <i>phlv</i>

Supervisor Signature:

Date: 12/20/19

Supervisor Signature: _____										Date: 12/30/17	
AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comment:
1	SW39818	AFD									
2	SW39819	IC1620-0.2		A971	80						not used
2	SW39820	IC1620-0.5		A971	200			✓	✓		not used
2	SW39821	IC1620-0.2		A971	80			✓	✓		not used
1	SW39822	IC1620-0.1		A964	100			✓	✓		OK
1	SW39823	IC1620-0.05		A964	40			✓	✓		OK
3	SW39824	IC1620-5		A971	100			✓	✓		OK
3	SW39825	IC1620-10		A971	100			✓	✓		OK
3	SW39826	IC1620-20		A971	200			✓	✓		OK
3	SW39827	IC1620-40		A971	400			✓	✓		OK
4	SW39828	IC3		A962	100						
2	SW39829	IC1620-0.5		A981	200						
2	SW39830	IC1620-0.2		A981	80						end compounds high
2	SW39831	IC1620-0.5		A981	200			✓	✓		OK
2	SW39832	IC1620-0.2		A981	80			✓	✓		OK
2	SW39833	IC1620-10		A965	100			✓	✓		OK
JF 12/21/17											

All strikeouts must be initial and dated. Comment in column 12.

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

12/24/19

Columns: KTX1-60cm x 0.31mm x i.c.

Method: SWT05

Seq. File: 2019 1224.S

Initial Cal. Method: MSW/620

Method: T015-C703

Lot #	Description	Conc.

Lot #	Description	Conc.
A58459	Int / Sur	100
A58690	Top Std (A971)	40 pp/bv

Supervisor Signature:

Supervisor Signature: *Welle*

Date: 12/27/19

Supervisor Signature: <i>[Signature]</i>										Date: 12/21/19	
AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW39834	8FJ		Q971	400					OK	time 1153
3	SW39835	CL620-10		A971	100			✓	✓	OK	
3	SW39836	BS		A971	100			✓	✓	OK	
3	SW39837	OSO		A971	100			✓	✓	OK	
4	SW39838	IB		A962	100					OK	
4	SW39839	MB		A962	400					not in cell	
4	SW39840	MB		A962	400			✓	✓	OK	
5	SW39841	JD235-4	Vto15TMC1	M117	100	1		✓	✓	OK	
5	SW39842	JD235-4	MS39818	M117	100	1		✓	✓	OK	
6	SW39843	JD235-5		M167	148	1.48		✓	✓	OK	
7	SW39844	JD235-6		A900	100	1		✓	✓	OK	
8	SW39845	JD235-7		A671	158	1.58		✓	✓	OK	
9	SW39846	JD235-1		M165	400	1		✓	✓	OK	in 20ml, acetone
10	SW39847	JD235-2		A1066	400	1		✓	✓	OK	
11	SW39848	JD235-3		A293	400	1		✓	✓	OK	
12	SW39849	JD234-2	Vto15TMC1	A879	500	1		✓	✓	OK	purge, acetone
13	SW39850	JD234-4	MS39831	M033	500	1		✓	✓	OK	purge, acetone
14	SW39851	JD234-5		A631	500	1		✓	✓	OK	
15	SW39852	JD234-1	Vto15TMC1	A733	400	1.48		✓	✓	OK	
16	SW39853	JD234-3		A330	400	1		✓	✓	OK	
1	SW39854	JD236-3	Vto15TMC1	A635	100	1		✓	✓	OK	
2	SW39855	JD236-4	MS39818	A874	100	1		✓	✓	OK	
3	SW39856	JD236-1		A221	400	1		✓	✓	OK	
4	SW39857	JD236-2		A315	400	1		✓	✓	OK	
5	SW39858										

12/26/19

All strikeouts must be initialed by the analyst.

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

265

TO-15

Batch ID: V5W1622

Date: 12/26/19

Analyst Signature: *[Signature]*Columns: *Rx 1-6um x 0.5um x 1.9um*Method: *SLTO15*Seq. File: *20191226.S*Initial Cal. Method: *V5W1622*

AS Data

Method: *TO 15. CTD5*

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A58159	Int/Surr	100 ppb
A58160	TO15 Std (A471)	40 ppb

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the crit of SCS SOP EQA044.

Supervisor Signature: *[Signature]*

Date: 12/30/19

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW39850	BFB		Open	400						
2	SW39851	CL620-40		A471	100			✓	✓	OK	film 931
2	SW39860	DS		A471	100			✓	✓	OK	
2	SW39861	DSO		A471	100			✓	✓	OK	
3	SW39862	IS		A462	100						
3	SW39863	IS		A462	400						
2	SW39864	MS		A462	400		L	✓	✓	OK	
4	SW39865	SD355-4	✓ TO15 SL MS 400 S	A679	100	1		✓	✓	OK	
5	SW39866	SD275-7	✓ TO15 SL MS 400 S	A671	20	1.58		✓	✓	OK/a	
6	SW39867	SD234-2		A731	100	1		✓	✓	OK/a	
7	SW39868	SD234-4		M033	100	1		✓	✓	OK/a	
8	SW39869	SD398-1	✓ TO15 SL MS 400 S	A829	500	1		✓	✓	OK	
8	SW39870	SD398-1 dup	MS 34917	A829	500	1		✓	✓	OK	bad prog
9	SW39871	SD398-2		A837	500	1		✓	✓	OK	
10	SW39872	SD398-3		A871	500	1		✓	✓	OK	
11	SW39873	SD378-4		A851	740	1.48		✓	✓	OK	
12	SW39874	SD378-5		A985	775	1.55		✓	✓	OK	
13	SW39875	SD378-6		A112	500	1		✓	✓	OK	
14	SW39876	SD398-7		A724	500	1		✓	✓	OK	
15	SW39877	SD398-8		A855	740	1.48		✓	✓	OK	
16	SW39878	SD398-9		A1091	775	1.55		✓	✓	OK	
1	SW39879	SD398-10		A1164	825	1.75		✓	✓	OK	
2	SW39880	SD400-1		A1071	775	1.55		✓	✓	OK	
3	SW39881	SD400-2		A878	500	1.58		✓	✓	OK	
4	SW39882	SD400-3		A739	790	1.58		✓	✓	OK	run 4x, MEK
5	SW39883	SD400-4		M224	790	1.58		✓	✓	OK	run 4x, MEK
6	SW39884	SD400-5		A650	500	1		✓	✓	OK	
7	SW39885	SD400-6		A1065	500	1				Not run	

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

TO-15

Batch ID: V5W1623

Date: 12/27/19

Analyst Signature: *[Signature]*

Columns: 15m x 0.32mm x 1.0µm

Method: 2.105

Seq. File: 20191227.5

Initial Cal. Method: V5W1620

AS Data

Method: 2.105, CDS

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A58489	Int. Sum.	100 µg/ml
A58690	TO15 STD (A971)	40 µg/ml

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of SGS SOP EQA044.

Supervisor Signature: *[Signature]*

Date: 12/30/19

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW39725	2F3		0967	400					OK	
2	SW39726	CC1620-10		A971	100			✓	✓	OK	
2	SW39727	25		A971	100			✓	✓	OK	
2	SW39728	250		A971	100			✓	✓	OK	
3	SW39729	50		A962	100						
3	SW39730	50		A962	100						
3	SW39731	MD		A962	400			✓	✓	OK	
4	SW39732	JD398-1		A972	500	1		✓	✓	OK	for V5W1622
5	SW39733	JD428-1	TO15SC	T3AG	20	1		✓	✓	OK	
5	SW39734	JD428-1	MS10163	T3AG	20	1		✓	✓	OK	for V5W1622
3	SW39735	50		A962	100	1		✓	✓	OK	
3	SW39736	JD428-1		T3AG	5	1		✓	✓	OK	
3	SW39737	50		A962	100			✓	✓	OK	
6	SW39738	JD428-2		T3AG, T3AG	100	500		✓	✓	OK	
3	SW39739	50		A962	100	1		✓	✓	OK	
7	SW39740	JD428-3		T3AG	40	1000		✓	✓	OK	
3	SW39741	50		A962	100			✓	✓	OK	
8	SW39742	JD400-3	TO15SC	A973	100	1.58		✓	✓	OK	
9	SW39743	JD400-4	MS39117	A974	100	1.58		✓	✓	OK	
10	SW39744	JD400-6		A965	500	1		✓	✓	OK	
11	SW39745	JD429-4	TO15SC	A974	20	1		✓	✓	OK	for V5W1622
12	SW39746	JD429-5	MS39117	A976	10	1		✓	✓	OK	
13	SW39747	JD429-6		A976	10	1		✓	✓	OK	
14	SW39748	JD473-1	TO15SC	A971	20	1		✓	✓	OK	for V5W1622
15	SW39749	JD480-1	TO15SC	A971	20	1		✓	✓	OK	for V5W1622
16	SW39750	JD480-2	MS40029	A971	20	1		✓	✓	OK	non targets ↑
17	SW39751										non targets ↑
2	SW39752										

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Test Gauge ID: TG-

[illegible]

Definition:

$$\text{Final DF} = (\text{Original Canister DF}) \times (\text{Secondary Canister DF})$$

Dilution Factor at Instrument = (Final Canister Dilution Factor) x (Normal Sampling Volume in cc)

(Sample Volume in cc Injected)

Example:

Original Canister is diluted 2x for manual sample draw. 75cc from this canister is added to a 375cc minican and brought to 14.7 psig or 750cc equiv volume. This results in an additional dilution of $750/75 = 10$. The final canister dilution factor is $2 \times 10 = 20$. From the dilution canister 20cc is injected at the instrument where normal volume is 400cc. This is an additional instrument dilution factor of 20. The final dilution multiplier is $20(\text{from canister dilution}) \times 20(\text{from instrument dilution}) = 400$

Notes:

All strikeouts must be initial, dated and reason code applied as follows: # 1 = Reviewer Correction Error, # 2 = Transcription Error, # 3 = Computer Miscalculation, # 4 = Analyst's Correction Error

DAYT-AIR-0003-05-FORM-Canister Secondary Dilution Log

1/9/18

JUN

TO-15

Batch ID: V6W571

Date: 9/13/19

Analyst Signature: [Signature]

AS Data

Method: TO15.CTD3

Columns: PTX-160x0.32mmx1.0umMethod: GC/MSSeq. File: 6W20190913.SInitial Cal. Method: TH 9/11/19
mbw571.1

Standard Data

Lot #	Description	Conc.
A58590	TO15 LCS (A965)	40 ppbv

Standard Data

Lot #	Description	Conc.
A58459	Int / Surr.	100 ppbv
A58596	TO15 STD (A964)	0.4 ppbv
A58589	TO15 STD (A971)	10 ppbv
A58593	TO15 STD (A977)	40 ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of SGS SOP EQA044.

Supervisor Signature: [Signature]

Date: 9/18/19

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	6W13821	BFB		A964	40					OK	
1	6W13822	IC 571-a2		A964	200			✓	✓	OK	
1	6W13823	IC 571-a.1		A964	100			✓	✓	OK	
1	6W13824	IC 571-a.14		A964	40			✓	✓	OK	
2	6W13825	IC 571-a.5		A971	20			✓	✓	OK	
3	6W13826	IC 571-5		A977	50			✓	✓	OK	
3	6W13827	IC 571-10		A977	100			✓	✓	OK	
3	6W13828	IC 571-20		A977	200			✓	✓	OK	
4	6W13829	IB		A963	100					—	
3	6W13830	IC 571-40		A977	400			✓	✓	OK	
4	6W13831	IB		A963	100					—	
5	6W13832	ICV 571-10		A965	100			✓	✓	OK	benzyl chloride not high
TH 9/16/19											

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Batch ID: V644623

Analyst Signature: RLH

Columns: PTX-1 60x0.32mm x 1.5mm

Method: 6/27/15

Seq. File: 62-20191-26, 3

Initial Cal. Method: MBW571.M

Standard Data

Standard Data		
Lot #	Description	Conc.
A58653	Int / Surin.	100ppm
A58654	T615 STD (A968)	40ppm

Supervisor Signature:

Date: 11/27/14

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

121

1/9/18



Appendix D – Data Usability Summary Report

Quality Assessment Data Usability Summary Report

RemVēr Project #2019GE01			
Client Project # 1102707-02-210			
Site:	Orangetown Shopping Center	Site #:	C344066
Client:	GES, Inc.	Site Owner:	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JD234		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☒ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVēr performed a data quality assessment (DQA) on analytical data reported in Sample Delivery Group (SDG) #JD234 for air samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVēr followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by SGS or during the DQA process.

Reported Methods

- | | |
|--|--|
| ☐ Method 1311 TCLP
☐ Method 1312 SPLP
☐ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other: _____)
☐ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☐ Method 8081B Pesticides
☐ Method 8082 PCBs
☐ Method 8151 Chlorinated Herbicides
☐ Method 8260C VOCs GC/MS
☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
☐ Method 9010/9012/9014 Cyanides (_____) | ☐ Method TO-13A PAHs (air)
☒ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Extractable Petroleum Hydrocarbons (EPH)
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ EPH-total
☐ Other Methods:
Method 9060A Total Organic Carbon
Method MCAWW 300.0 Anions (IC)
Method RSK-175 Dissolved Gases
Method SM4500 Nitrite
Method 353 Nitrite & Nitrate |
|--|--|

Quality Control Requirements Summary

- | | |
|---|--|
| ☒ Duplicate (internal)
☐ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blank(s)
☐ Equipment, Method, &/or Rinsate Blank | ☒ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____ |
|---|--|

Intended Use of Data under Review

The client collected air samples during a two-consecutive day collection event beginning December 10, 2019 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided ambient and sub-slab/soil vapor monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified for SDG: #JD234

Of the five samples (two soil gas, two indoor ambient air, and one outdoor ambient) discussed herein, RemVēr rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use. Some analytes had quality issues associated with results falling beyond the calibrated range requiring qualifier flagging. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Field Notes & COC sheets
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (SGS SDG Report: #JD234)

☒ SDG Narrative	☒ Spike recoveries
☒ Contract Lab Sample Information Sheets	☒ Duplicate results
☒ Data Package Summary Forms	☒ Confirmation (lab check/QC) samples
☒ Chain-of-Custody (COC) Forms	☒ Internal standard area & retention time summary
☒ Test Results (no tentatively identified compounds [TICs])	☒ Chromatograms
☒ Calibration standards	☒ Raw data files
☒ Surrogate recoveries	☒ Other specific information
☒ Blank results	

The SDG reported on the following samples:

Sample ID	SDG #JD234– Sample #	Matrix	Sampled	Received
VP-6-A	#-1	IA	12/11/19	12/12/19
VP-6-SV	#-2	SV	12/11/19	12/12/19
VP-5-A	#-3	IA	12/11/19	12/12/19
VP-5-SV	#-4	SV	12/11/19	12/12/19
Outdoor Ambient	#-5	OA	12/11/19	12/12/19

NOTES: SV = Soil Gas (Vapor) IA = Indoor Ambient Air OA = Outdoor Ambient Air

All samples associated with SDG #JD234 were analyzed using USEPA Method TO-15.

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	Complete (Y/N)	Comments
JD234	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	Hold Times (Y/N)	Preservation (Y/N)	Exception Comment
JD234	Y	Y	None

Do all QC data fall within the protocol required limits and specifications? (1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, and (9) sample data									
SDG	1	2	3	4	5	6	7	8	9
JD234	☐	☐	☐	☐	☒	☐	☒	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Were the data generated using established and agreed upon analytical protocols?		
Laboratory Report	Protocols (Y/N)	Exception Comment
JD234	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	Confirmation (Y/N)	Exception Comment
JD234	Y	None

Were correct data qualifiers used and are they consistent with the most current guidance?		
Laboratory Report	Qualifiers (Y/N)	Comment
JD234	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Were quality control (QC) exceedances specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	QC Exceedances Documented (Y/N)	Comment
JD234	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The air samples came from a collection event over two-consecutive days, beginning December 10, 2019. GES provided air sampling field notes related to the effort with the COC.

Laboratory Report Inspection

The laboratory produced SDG report #JD234. The original report was issued on 27Dec2019 and a full ASP Category B report issued 13Jan2020. The final report contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JD234, single, one-page COC). The laboratory noted no quality issues.

Sample Preservation & Holding Time Evaluation

Laboratory received the canister samples on 12/12/2019 @ 10:40 (designated as SDG-JD234) in proper condition. Holding times and preservation requirements were met. There were no issues noted with either the canisters or flow controllers.

Analytical

The laboratory ran the samples in two batches:

Sample	V5W1621	V5W1622
#-1 SV	X	
#-2 IA	X	X
#-3 IA	X	
#-4 SV	X	X
#-5 OA	X	

The second batch was to make another analytical run due to certain analytes being out of calibration in the first run. Each batch included the required method blank, lab duplicate, and associated QA/QC samples and calibration checks.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standard (external or internal) were acceptable in both batches for all analytes, with the following exceptions:

- The laboratory flagged Batch V5W1621 Samples #-01 and #-02 Ethanol results as “E,” indicating it is estimated and exceeding calibration range. Therefore, they re-ran the samples in a second batch (V5W1622) and achieved the same result. Thus, RemVër flagged these results with E J+.

CCV were acceptable in both batches for all analytes.

Blank Evaluation

There were no associated blanks, other than the ambient indoor and outdoor air samples. All laboratory method blanks performed within acceptable parameters.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JD234.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes. The surrogate 4-Bromofluorobenzene performed within acceptable parameters across all Method TO-15 batches and sample runs in SDG JD234, with one exception. Sample #-2 (Batch V5W1621) was greater than the upper control limit (>UCL) due to matrix interference. RemVër flagged all results in that sample as estimated or J-flagged (either UJ or J).

Site-Specific Matrix Spikes and Matrix Spike Duplicates

No matrix spike/matrix spike duplicate (MS/MSD) runs were required for the analyses per TO-15 Method.

Duplicates

The laboratory used internal duplicates for these VOC analytes; most laboratory duplicate analytes met the RPD performance criteria of <25% with exceptions. These analytical exceptions, therefore, required a J-flag in their particular batch as estimated results due to the lack of analytical precision. The resultant high RPD was due to low analyte concentrations.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

All samples were run as two batches, where the second batch provided a check on Acetone and Ethanol due to high concentrations. Due to certain sample issues or laboratory performance (result beyond calibration range for Ethanol in Samples #-02 and #-04, some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

RemVër modified SGS's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2019Q4air_DUSR.xlsx [EXCEL file]).

References

- Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p
- NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p
- NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p
- USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p
- USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p
- USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: <http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2019Q4air_DUSR.xls [NOTE: RemVër modified the SGS work products by adding quality flags, which are in yellow highlight.]

Prepared by: Kurt A. Frantzen, PhD, CHMM
January 14, 2020



GES PO# 1107983

Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (<i>i.e.</i> , dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B EB TB BB	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (<i>see below</i>).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Attachment 1

Data Usability Reviewer: Kurt A. Frantzen, PhD, CHMM

Experience

2013-Present	d/b/a RemVēr	Owner
2014-2019	AECC	Senior EHS Consultant
2011-2012	RemVēr, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVēr, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986
PhD—Life Sci. / Biochem, NU—Lincoln 1985
MS—Plant Pathology, Kansas State Univ. 1980
BS—Biology, NU—Omaha 1978

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)	Am. Chemistry Society
Am. Assoc. Advance Science	NY Academy of Science
LSP Association	Am. Institute of Biological Sciences

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
 - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
 - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
 - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
 - Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
 - *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 61 Conference Papers & Invited Professional Presentations
 - 1999-2014, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
 - 2010-2013, Invited Lecturer, Pace University Law School

Attachment 2 DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
—	—	—	—

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	VOCs	No Comment
—	—	—	—	—	—

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	4-Bromofluorobenzene	Sample #-2 Flag All UJ or J
—	—	—	—	—	—

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs	—	—	—	—	—	No Comment, none required
—	—	—	—	—	—	—

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 25%	Compounds	Notes
N/A	N/A	N/A	N/A	N/A	N/A
N/A		N/A	N/A	N/A	N/A
LAB DUPLICATES					
Batch V5W1621	Lab Sample	N/A	X	Chloroform & Tetrachloroethylene	Flag Analytes UJ / J
Batch V5W1622	Lab Sample	N/A	X	Acetone & Ethanol	Flag Analytes UJ / J
Reasonable Confidence Achieved		Not Applicable		Significant QC Variances Noted	☒ Y ☐ N
Requested Reporting Limits Achieved		☒ Y	☐ N	Preservation Requirements Met	☒ Y ☐ N
Holding Time Requirements Met		☒ Y	☐ N		
Abbreviations: RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report Notes: * Typical lab contaminants, not site-related					

Attachment 3 DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
All	All Other VOCs	—	—	—	—	No Flag
#-2 & #-4	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag E J+
All	Chloroform & Tetrachloroethylene	Duplicate	—	>UCL	—	Flag UJ or J
All	Acetone & Ethanol		—	>UCL	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.



Appendix E – NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:

Trichloroethene (TCE), *cis*-1,2-Dichloroethene (c12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)		
	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:

Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)		
	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:

Vinyl Chloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)	
	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.