# AUTO REPAIR SHOP
# 223-20 BRADDOCK AVENUE
# QUEENS VILLAGE, NEW YORK 11428
# BLOCK 10757, LOT 32

## SITE CHARACTERIZATION REPORT

**SUBMITTED TO:**

New York State Department of Environmental Conservation
Region 2
47-70 21st Street
Long Island City, NY 11101

**PREPARED FOR:**

223-20 Braddock Avenue Corp.
c/o Robert R. Dooley, Esq.
McGiff Halverson, LLP
96 South Ocean Avenue
Patchogue, NY 11772

**PREPARED BY:**

P.W. Grosser Consulting, Inc.
630 Johnson Avenue, Suite 7
Bohemia, New York 11716
Phone: 631-589-6353
Fax: 631-589-8705

Jennifer Lewis, PG, Vice President — jenniferl@pwgrosser.com
Michael Pecoraro, Project Manager — mpecoraro@pwgrosser.com

PWGC Project Number: MHD1801

**AUGUST 2024**

**SITE CHARACTERIZATION REPORT**
**223-20 BRADDOCK AVENUE**
**QUEENS VILLAGE, NEW YORK 11428**

**TABLE OF CONTENTS** **PAGE**


CERTIFICATION ..... II
1.0 INTRODUCTION ..... 1
2.0 BACKGROUND ..... 2
2.1 Site Description ..... 2
2.2 Physical Setting ..... 2
3.0 SITE HISTORY ..... 3
3.1 Island Pump and Tank – Tank Excavation Assessment Report – October 2016 ..... 3
3.2 Island Pump and Tank – Subsurface Investigation Report – April 2018 ..... 3
3.3 PWGC – Subsurface Investigation Report – May 2020 ..... 4
4.0 INVESTIGATION METHODOLOGY ..... 5
4.1 Geophysical Survey ..... 5
4.1.1 Electromagnetic Survey ..... 5
4.1.2 Ground Penetrating Radar Survey ..... 5
4.2 Groundwater Quality Evaluation ..... 5
4.2.1 Groundwater Monitoring Well Installation and Development ..... 6
4.2.2 Groundwater Monitoring Well Survey ..... 6
4.2.3 Groundwater Sample Collection Protocol ..... 6
4.3 Soil Vapor Intrusion Investigation ..... 7
4.3.1 Indoor Air Quality Questionnaire and Building Inventory ..... 7
4.3.2 Soil Vapor and Air Sampling Point Installation Protocol ..... 7
4.3.3 Soil Vapor and Air Sample Collection Protocol ..... 9
5.0 INVESTIGATION RESULTS ..... 10
5.1 Geophysical Survey Results ..... 10
5.2 Groundwater Sample Analytical Results ..... 10
5.3 Soil Vapor Intrusion Investigation Results ..... 10
5.3.1 Indoor Air Quality Questionnaire and Building Inventory Results ..... 10
5.3.2 Soil Vapor and Air Analytical Results ..... 11
5.4 Analytical Result Discussion ..... 11
5.5 Data Usability Summary Report ..... 12
6.0 CONCLUSIONS AND RECOMMENDATIONS ..... 13
6.1 Conclusions ..... 13
6.2 Recommendations ..... 13
7.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL ..... 14
8.0 REFERENCES ..... 15





P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

# SITE CHARACTERIZATION REPORT
# 223-20 BRADDOCK AVENUE
# QUEENS VILLAGE, NEW YORK 11428

## FIGURES


| | |
|---|---|
| FIGURE 1 | Site Location Map |
| FIGURE 2 | Site Plan |
| FIGURE 3 | Soil Analytical Results |
| FIGURE 4 | Soil Vapor / Ambient Air Analytical Results |
| FIGURE 5 | Groundwater Analytical Results |


## TABLES


| | |
|---|---|
| TABLE 1 | Soil Sample Analytical Results – VOCs |
| TABLE 2 | Soil Sample Analytical Results – SVOCs |
| TABLE 3 | Soil Sample Analytical Results – Metals |
| TABLE 4 | Soil Vapor / Ambient Air Sample Analytical Results – VOCs |
| TABLE 5 | Soil Vapor / Indoor Ambient Air Summary – VOCs |
| TABLE 6 | Monitoring Well Gauging Log |
| TABLE 7 | Groundwater Sample Analytical Results – VOCs |


## APPENDICES


| | |
|---|---|
| APPENDIX A | Historic Environmental Reports |
| APPENDIX B | Groundwater Monitoring Well Construction Logs |
| APPENDIX C | Groundwater Monitoring Well Development Logs |
| APPENDIX D | Groundwater Monitoring Well Sampling Logs |
| APPENDIX E | NYSDOH Building Inventory Form |
| APPENDIX F | Laboratory Analytical Reports |
| APPENDIX G | NYSDOH Guidance for Soil Vapor / Indoor Air Matrices |




P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

| ACRONYM | DEFINITION |
|---|---|
| ASP | Analytical Services Protocol |
| ASTM | American Society for Testing and Materials |
| CFR | Code of Federal Regulations |
| DER | Department of Environmental Remediation |
| ELAP | Environmental Laboratory Approval Program |
| EM | Electromagnetic |
| ESA | Environmental Site Assessment |
| GPR | Ground Penetrating Radar |
| GQS | Groundwater Quality Standard |
| GV | Guidance Value |
| NYCRR | New York Codes, Rules, and Regulations |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| PCB | Polychlorinated Biphenyl |
| PFAS | Per- and Polyfluoroalkyl Substances |
| PID | Photo-ionization Detector |
| PWGC | P.W. Grosser Consulting, Inc. |
| QA/QC | Quality Assurance / Quality Control |
| REC | Recognized Environmental Condition |
| SCO | Soil Cleanup Objective |
| SVOC | Semi-volatile Organic Compound |
| USCS | Unified Soil Classification System |
| USEPA | United States Environmental Protection Agency |
| UST | Underground Storage Tank |
| VOC | Volatile Organic Compound |



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

PWGC
CLIENT DRIVEN SOLUTIONS

## CERTIFICATION

I, Jennifer Lewis, PG, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

Signature 9/13/24
Date

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.


P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 1.0 INTRODUCTION

P.W. Grosser Consulting, Inc. (PWGC) has prepared the following Site Characterization Report on behalf of 223-20 Braddock Avenue Corp. to document the results of the Supplemental Subsurface Investigation conducted in March 2023 at 223-20 Braddock Avenue in Queens Village, NY.

This work was conducted in accordance with a Supplemental Subsurface Investigation Work Plan (SSIWP) submitted to the New York State Department of Environmental Conservation (NYSDEC) in November 2022 and approved by the NYSDEC on December 15, 2022. The work plan was prepared following evaluation of a subsurface investigation at the Site performed by PWGC in March 2020. The scope of the work plan included on-site sampling of sub-slab soil vapor and indoor air, off-site sampling of sub-slab soil vapor, soil vapor, and indoor air, and installation and sampling of monitoring wells.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 2.0 BACKGROUND

### 2.1 Site Description

The Site is located at 223-20 Braddock Avenue in the Queens Village section of Queens, New York and is identified as Block 10757 and Lot 32 on the New York City Tax Map. The Site is approximately 2,400-square feet and is bounded by Braddock Avenue to the north, 91st Road to the south, Moline Street to the east, and residential properties to the west. Currently, the Site is an auto body repair shop improved with a 1,204 square foot slab on grade building and an asphalt parking lot with an enclosed sheet metal awning extending from the building over the parking lot.

A Vicinity Map is included as **Figure 1**. A Site Plan is included as **Figure 2**.

### 2.2 Physical Setting

Regionally, groundwater flows north-northwest toward Little Neck Bay. The depth to groundwater beneath the site is estimated at 49 feet bgs. The approximate ground surface elevation is about 90 feet above mean sea level.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 3.0 SITE HISTORY

### 3.1 Island Pump and Tank – Tank Excavation Assessment Report – October 2016

On August 5, 2016, Island Pump and Tank (IPT) personnel mobilized to the site to remove an underground storage tank (UST). The UST system closure activities included the removal of one 285-gallon fiberglass waste oil UST. One 55-gallon drum containing the residual tank sludges was generated during cleaning and removal of the UST.

Following the cleaning and removal of the former UST, visual and olfactory petroleum impacts were observed within the soil at the bottom of the excavation. Soils were screened for volatile organic compounds (VOCs) using a photoionization detector (PID). Elevated PID readings, greater than 500 parts per million (ppm), were encountered within the base of the excavation. At this time, IPT notified the New York State Department of Environmental Conservation (NYSDEC) Spills Hotline, and Spill Number 16-04577 was assigned to the site.

Due to the observed petroleum impacts and elevated PID readings, soils were excavated from the base of the former UST excavation to the extent feasible. Excavation activities ensued until the structural integrity of the surrounding building and sidewalk were threatened and deemed unsafe to continue. IPT collected a total of five soil samples from the north, south, east, and west sidewalls and from the bottom of the excavation, ranging from 5.5-6 feet below ground surface (bgs) on the sidewalls and to 10 feet bgs on the bottom of the excavation. Samples were analyzed for VOCs, semi-volatile organic compounds (SVOCs), and metals. Several VOCs were detected which included petroleum related compounds and tetrachloroethylene (PCE) which contained the highest detection at 360,000 µg/kg in the eastern sidewall sample. Elevated concentrations of PCE were also detected in the north sidewall and bottom samples. The south and west sidewall samples contained significantly lower concentrations of PCE at 4.0 µg/kg and 2.6 µg/kg, respectively. SVOCs were detected in the east sidewall and bottom samples with total concentrations of 2,929 µg/kg and 5,867.4 µg/kg, respectively; however, no analytes were detected at concentrations greater than their respective Unrestricted Use Soil Cleanup Objectives (UUSCOs). Similarly, no metals were detected at concentrations greater than their respective UUSCOs. Based on the analytical results of the samples following UST removal, additional investigation was deemed necessary by the NYSDEC to further delineate the extent of soil contamination present onsite.

### 3.2 Island Pump and Tank – Subsurface Investigation Report – April 2018

In March 2018, IPT conducted a subsurface investigation at the Site which included the collection of eight soil samples from four soil borings along the eastern portion of the site, around the former UST location, and within the former UST excavation. Sample intervals ranged from 15 to 40 feet and were analyzed for VOCs and SVOCs.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

The 15 to 20 feet bgs sample collected from within the former UST excavation contained the highest total concentration of VOCs at 202,330 µg/kg, including PCE at 72,000 µg/kg. Boring B-2, collected outside the building to the east of the UST excavation, contained the next highest total VOC concentration in the 15 to 20 feet bgs interval, at 1,490 µg/kg, with no analytes exceeding UUSCOs. The total VOC concentrations in the remaining soil samples ranged from non-detect to 17 µg/kg. SVOCs were detected in only one sample, the 15 to 20 feet bgs sample from within the former UST excavation, at a total concentration of 12,520 µg/kg, with no analytes exceeding UUSCOs.

Based on the analytical results of the subsurface investigation, it appears that while residual contamination is present in the UST excavation area, soil impact does not appear to be migrating horizontally offsite. Additionally, none of the deeper soil sample intervals (ranging from 15 to 40 feet bgs) showed signs of impact. As the depth to groundwater was estimated at 49 feet bgs, it does not appear that the groundwater was being impacted at the Site.

### 3.3 PWGC – Subsurface Investigation Report – May 2020

On March 13, 2020, PWGC mobilized to the Site to conduct a subsurface investigation which included the collection of one sub-slab soil vapor sample, three soil vapor samples, one indoor air sample, and one outdoor air sample for a duration of approximately 8 hours. Samples were collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006). Samples were analyzed for VOCs by USEPA method TO-15.

Elevated concentrations of chlorinated compounds were detected in the soil vapor sample collected closest to the former tank location, SV002; PCE was the highest compound detected at a concentration of 2,170 µg/m$^3$. TCE was also detected at 72.6 µg/m$^3$ in SV002. A comparison of PCE concentrations between the one sub-slab vapor sample (SS001 at 307 µg/m$^3$) and the indoor air sample (IA001 at 1.62 µg/m$^3$) indicates that no further action is necessary, according to the Soil Vapor / Indoor Air Matrices provided in the NYSDOH Guidance document. SV001, which was collected at the western Site boundary near residential properties, contained a PCE concentration of 78.7 µg/m$^3$, indicating that low-level impacted soil vapor may be migrating towards these residential properties.

Historical analytical results are displayed on **Tables 1** through **5.** The locations of historic samples collected are displayed on **Figures 3**, **4**, and **5**. Historic environmental reports are included as **Appendix A**.


P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 4.0 INVESTIGATION METHODOLOGY

The Site Investigation included the following tasks:

- Geophysical survey
- Groundwater quality evaluation
- Soil vapor intrusion investigation

### 4.1 Geophysical Survey

On March 21, 2023, PWGC and East Coast Geophysics of Bensalem, Pennsylvania (ECG) mobilized to the Site to perform a geophysical survey. The purpose of the geophysical survey was to pre-clear sampling locations of utilities. Descriptions of the geophysical methods are described below.

#### *4.1.1 Electromagnetic Survey*

ECG utilized a Radiodetection RD4000 electromagnetic (EM) instrument. The Radiodetection RD4000 and uses the principle of EM induction to measure the variability of electrical conductivity of subsurface materials and the presence of buried metal objects. Significant contrasts in the electrical properties between non-indigenous materials and surrounding soil enable accurate delineation of buried waste materials, fill, and geologic features. The large EM response to metal makes this technique particularly well suited to identifying buried metal objects such as underground storage tanks (USTs), metallic wastes, buried drums, pipelines, reinforced building foundations, and other metal components of buried structures. It is, however, equally sensitive to metal objects on the ground surface.

#### *4.1.2 Ground Penetrating Radar Survey*

Following the electromagnetic survey, ECG utilized a Survey Systems Inc. SIR-3000 with a 400 Mhz antenna to further investigate the metallic anomalies. Ground penetrating radar (GPR) uses high frequency pulsed electromagnetic waves to acquire subsurface information. Energy is propagated downward into the ground and is reflected back to the surface from boundaries at which there are electrical property contrasts. Penetration is the greatest in unsaturated sands and fine gravels and dry, well cured concrete. Clayey, highly saline or saturated soils, areas covered by steel reinforced concrete, foundry slag, uncured concrete, or other highly conductive materials significantly reduce depth penetration of the GPR signal. The 400 MHz antenna can achieve depths of penetration up to about 20 feet, but this depth may be greatly reduced due to site-specific conditions as discussed above.

### 4.2 Groundwater Quality Evaluation

Groundwater sampling was performed in accordance with DER-10 and with Section 3.2 of the NYSDEC approved SSIWP. These groundwater monitoring wells were installed to evaluate groundwater conditions



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

on-site. A total of three groundwater samples were collected during the investigation. Groundwater sampling locations are illustrated in **Figure 2**.

#### *4.2.1 Groundwater Monitoring Well Installation and Development*

Between March 21 and March 23, 2023, three permanent groundwater monitoring wells (MW001, MW002, and MW003) were installed at the subject property. Each monitoring well was constructed of 2-inch diameter, pre-packed schedule 40 polyvinyl chloride (PVC) casing and screen with 0.010-inch slot. The groundwater monitoring wells are screened across the water table with a minimum of 10 feet of screen and solid riser to grade. A gravel pack of No. 2 Morie sand was placed in the annulus around the screen with a 2-foot bentonite seal placed 2 feet above the top of the screened zone. Above the bentonite seal, the annulus around the groundwater monitoring well was filled with #2 sand and/or non-impacted drill cuttings. The groundwater monitoring wells were finished at grade with a flush mount curb box. The groundwater monitoring well construction logs are included in **Appendix B**.

Following installation, the newly installed groundwater monitoring wells were over-pumped to restore the hydraulic properties of the aquifer. Groundwater monitoring well development continued until the pH stabilized. Due to an instrumentation error in the field, only pH was able to be recorded. Turbidity was visually noted and recorded as "turbid," "slightly turbid," or "clear." Groundwater monitoring well development water was containerized in two 55-gallon drums for disposal. The groundwater monitoring well development logs are included as **Appendix C**.

#### *4.2.2 Groundwater Monitoring Well Survey*

Following groundwater monitoring and development, PWGC collected well monitoring field data as shown on **Table 6**. An interface probe was utilized to determine the depth to water below the top of each well casing. A Topcon QS6612 survey scope was placed near the site in a singular location where each well location was visible. Elevation from the survey scope to the top of each well casing was measured. Based upon the total depth to water from the survey scope, groundwater flow appears to be towards the northeast away from the residences of concern.

#### *4.2.3 Groundwater Sample Collection Protocol*

On March 31, 2023, groundwater samples were collected from three groundwater monitoring wells at the site. Samples were collected using a Tsunami low-flow submersible pump fitted with disposable high-density polyethylene (HDPE) tubing. Samples were collected in accordance with USEPA's Low Stress (Low Flow) Purging and Sampling Procedure for The Collection of Groundwater Samples from Monitoring Wells (September 2017). A Horiba U-52 multi-parameter water quality meter outfitted with a flow through cell was utilized to monitor field parameters (turbidity, pH, temperature, oxidation-reduction potential,


P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

dissolved oxygen, and conductivity). Upon stabilization of field parameters (three consecutive readings within allowable tolerances), groundwater samples were collected. Non-disposable sampling equipment was decontaminated in accordance with the procedures specified in Section 3.5 of the approved SSIWP. Groundwater Monitoring Well Sampling Logs are included as **Appendix D**.

Groundwater samples were collected in laboratory supplied glassware and packed in a cooler with ice and shipped under proper chain-of-custody procedures to York Analytical Laboratories, a NYSDOH ELAP certified laboratory, for analysis following NYSDEC ASP-Category B Deliverables. Each groundwater sample was analyzed for the following:

- TCL VOCs by USEPA Method 8260.

## 4.3 Soil Vapor Intrusion Investigation

To evaluate potential vapor intrusion at the Site, a soil vapor intrusion investigation was performed on March 21, March 22, and March 31, 2023. The investigation consisted of the collection of soil vapor, sub-slab soil vapor, indoor air, and outdoor (ambient) air samples. In addition to the Site, a soil vapor intrusion investigation was performed at a nearby residential property to the west, located at 222-29 91st Road. Multiple requests sent via certified mail, email, and/or site visits to perform soil vapor investigations at the residences located at 222-33 91st Road and 223-10 Braddock Avenue were not answered.

Sampling was conducted in accordance with the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in New York State," (NYSDOH Guidance) October 2006 and subsequent addenda.

During the winter of 2023/2024, the NYSDEC and NYSDOH attempted to solicit sampling at additional neighboring properties; however, the neighboring properties were not responsive to the request.

### *4.3.1 Indoor Air Quality Questionnaire and Building Inventory*

Prior to sample collection, an inspection was performed to identify and minimize conditions that may interfere with the proposed testing at the Site and the residential property. The inspection evaluated the type of structure, floor layout, air flows and physical conditions of the building being studied. This information, along with information on sources of potential indoor air contamination, is included on the building inventory forms (**Appendix E**).

### *4.3.2 Soil Vapor and Air Sampling Point Installation Protocol*

Soil vapor, sub-slab soil vapor, indoor air, and outdoor air sampling was performed in accordance with the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in New York State," (NYSDOH Guidance) October 2006 and subsequent addenda.


P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

#### 4.3.2.1 Sub-Slab Soil Vapor Sampling

Sub-slab soil vapor sampling points were installed to approximately two inches beneath the floor slab in accordance with procedures specified in the NYSDOH Guidance. Sampling points were constructed of dedicated polyethylene tubing backfilled with FilPro® #2 filtration sand and sealed at the surface with hydrated bentonite. One sub-slab soil vapor sample (SS-01) was collected at the Site, near the former UST location. A second sub-slab soil vapor sample (SS-03) was collected in a residential basement located at 222-29 91st Road, west of the Site.

#### 4.3.2.2 Soil Vapor Sampling

One soil vapor sample (SS-02) was collected on 91st Road in the sidewalk adjacent to the school. The soil vapor sampling point was installed to five feet bgs, in accordance with procedures specified in the NYSDOH Guidance. Soil vapor sampling points were installed utilizing a Geoprobe® direct-push drill rig to a depth of 5 feet below grade. A six-inch stainless-steel screen was installed at the base of the sampling point with dedicated polyethylene tubing to grade. FilPro® #2 filtration sand was placed surrounding the screen and six inches above. The remainder of the soil vapor point annulus was sealed with bentonite grout to the surface.

#### 4.3.2.3 Indoor and Outdoor Air Sampling

Indoor and outdoor air samples were collected concurrently with the sub-slab soil vapor samples. The indoor air samples (IA-01 and IA-02) were co-located with sub-slab soil vapor samples and the outdoor air sample (OA-01) was collected at an upwind location as determined in the field to determine the potential contribution of outdoor air quality on indoor air. On March 21, 2023, the wind direction at the subject property was determined to be toward the east; therefore, the outdoor air sample was collected at the western property boundary.

Indoor and outdoor air samples were collected from a height representing the breathing zone (between 3 and 5 feet above the floor).

#### 4.3.2.4 Tracer Gas Testing

Prior to sampling, the integrity of soil vapor and sub-slab soil vapor sampling point seals was tested using tracer gas analysis. The environment surrounding the seal was enriched with the tracer gas (helium) as readings were collected through the sampling probe with a portable helium detector. Seals were adjusted as needed until acceptable tracer gas readings were collected from each soil vapor probe indicating the seals were intact and the sampling probes were acceptable for sample collection.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

After the initial tracer gas test was performed, one to three volumes of the sample tubing was purged prior to collecting samples. Flow rates for both purging and collecting did not exceed 0.2 liters per minute to minimize potential indoor air infiltration during sampling.

### *4.3.3 Soil Vapor and Air Sample Collection Protocol*

Soil vapor, sub-slab soil vapor, indoor air, and outdoor air samples were collected into 6-liter Summa® vacuum canisters fitted with 8-hour flow controllers for SS-01, SS-02, IA-01, and OA-01, and 24-hour flow controllers for the residential samples SS-03 and IA-02. Canisters and flow controllers were batch certified clean by the laboratory. Proper quality assurance/quality control (QA/QC) protocol was followed during the collection of soil gas samples to ensure that cross-contamination in the field did not occur.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 5.0 INVESTIGATION RESULTS

### 5.1 Geophysical Survey Results

A geophysical survey was performed as detailed in Section 3.1. Findings of the geophysical survey included the following:

- Subsurface anomalies consistent with utilities were detected and marked out using spray paint.
- ECG evaluated the locations of each soil vapor and monitoring well location, and cleared each area, relocating points as necessary to avoid known subsurface anomalies.

### 5.2 Groundwater Sample Analytical Results

Groundwater monitoring wells were installed to evaluate groundwater conditions on-site. A total of three groundwater samples (MW001, MW002 and MW003) were collected during the investigation. Groundwater sampling locations are illustrated on **Figure 2**.

Groundwater analytical results were compared to NYSDEC groundwater quality standards (GQSs) / guidance values (GVs) specified in 6 NYCRR Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations, and Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

VOCs were not detected at concentrations exceeding their respective AWQS in any of the groundwater samples. PCE was detected in each of the three samples, ranging from 0.430 µg/L to 1.40 µg/L. No other CVOCs were detected in the groundwater samples.

Analytical results are detailed in **Table 7** and the complete laboratory analytical report is included in **Appendix F**.

### 5.3 Soil Vapor Intrusion Investigation Results

#### *5.3.1 Indoor Air Quality Questionnaire and Building Inventory Results*

An inspection was performed to identify and minimize conditions that may interfere with air and vapor testing as described in Section 3.3.1. Findings of the inspection include the following:

- Multiple chemicals, including detergents, cleaning supplies, motor oil, and steering fluid, were observed in the auto repair shop. The containers appeared to be used and capped, but not deteriorated. No chlorinated solvents were observed.
- Chemical storage in the residence includes laundry detergent, bleach, and wood polisher. None of the chemical containers appeared to be deteriorated.


P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

### 5.3.2 *Soil Vapor and Air Analytical Results*

The primary method for the evaluation of sub-slab vapor and indoor air data is the use of Soil Vapor / Indoor Air Matrices provided in the NYSDOH Guidance document. The matrices incorporate both sub-slab vapor concentrations and their corresponding indoor air concentrations in a table to formulate an appropriate action for a sampling site. Matrices have been developed for 1,1-dichlorothene, cis-1,2-dichloroethene, vinyl chloride, tetrachloroethene, trichloroethene, 1,1,1-trichloroethane, and carbon tetrachloride. Although matrices have not yet been developed for other compounds, consideration is given to the comparisons between the sub-slab vapor and indoor air concentrations to determine if vapor intrusion is occurring.

Two soil vapor/indoor air sample pairs (SS-01/IA-01 and SS-03/IA-02) were compared to the NYSDOH decision matrices. PCE was detected at the auto repair shop in SS-01 at a concentration of 2,620 µg/m$^3$. This warrants mitigation, regardless of the concentration of the indoor air sample; however, the indoor air concentration was non-detect indicating that soil vapor intrusion is not occurring. PCE was detected in the residential sub-slab soil vapor sample SS-03 at a concentration of 307 µg/m$^3$. The concentration of PCE in the corresponding indoor air sample, IA-002, was 2.42 µg/m$^3$ indicating that minimal soil vapor intrusion may be occurring. Based on the NYSDOH decision matrix for PCE, no further action would typically be warranted for the residential space at these concentrations; however, these concentrations are also approaching levels that may warrant additional monitoring (if the indoor air result was between 3 and 10 µg/m$^3$). Additionally, the sampling of the residential property occurred in late March which NYSDEC has considered may not represent worst-case heating season conditions (weather conditions during the sampling ranged between the high 50s and low 60s °F).

In soil vapor sample SS-02, PCE was detected at a concentration of 3.18 µg/m$^3$ and trichloroethene (TCE), cis-1,2-dichloroethene (DCE), and vinyl chloride were not detected at concentrations greater than laboratory method detection limits (MDLs).

Analytical results are detailed in **Tables 4** and **5**. The complete laboratory analytical reports are included in **Appendix F** and copies of Soil Vapor / Indoor Air Matrices are included in **Appendix G**.

## 5.4 Analytical Result Discussion

Based upon the 2023 groundwater analytical results which contained no exceedances of NYSDEC AWQSs, there does not appear to be groundwater contamination migration offsite.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

Based upon the results of the soil vapor sampling at 222-91st Road and on-site soil vapor sampling near the western property boundary, there is the potential for offsite vapor migration toward the adjoining residential properties.

### 5.5 Data Usability Summary Report

Analytical data packages obtained from York for each sampling event were sent to Laboratory Data Consultants, Inc (LDC) of Carlsbad, CA to undergo a systematic data validation to provide assurance that the data was adequate for its intended use. All data was deemed acceptable by the data validator, incorporating data qualifiers as appropriate. Validation consisted of an evaluation of the following criteria:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (CG/MS) Tunes
- Initial and counting Calibrations
- Blanks
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Quantization Limits and Data Assessment
- Sample Quantization and Compound Identification

As of the date of this report, LDC's data usability summary report is still pending. Once received, the report will be included as **Appendix H**. Analytical data tables will be updated, as appropriate, based upon the data validator's review.


P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

PWGC has performed a Site Investigation at the subject property in conformance with the NYSDEC approved SSIWP for the following objectives:

- Geophysical survey
- Groundwater quality evaluation
- Soil vapor intrusion investigation

### 6.1 Conclusions

Based on the results of the Site Investigation, PWGC offers the following conclusions:

- Groundwater flow is towards the northeast away from the residences.
- VOCs were not detected at concentrations exceeding their respective AWQS in the groundwater samples. It does not appear that the contamination from the former UST has impacted the groundwater.
- Based on the results of the soil vapor and ambient air samples, there does not appear to be a soil vapor concern in the sidewalk adjacent to the school.
- The soil vapor and indoor air PCE concentrations in the residential space at 222-29 91st Road are approaching levels that may warrant additional monitoring. As the sampling of the residential property occurred in late March, this may not represent worst-case heating season conditions. Additional monitoring during the heating season may be warranted to confirm whether vapor intrusion is occurring at the adjoining residential properties. The NYSDEC and NYSDOH exhausted their efforts with soliciting sampling at additional nearby properties.
- PCE was detected at the auto repair shop in the sub-slab soil vapor sample at a concentration of 2,620 µg/m$^3$. Based on the NYSDOH decision matrices, mitigation is warranted for the auto repair shop.

### 6.2 Recommendations

Based on the conclusions detailed above, PWGC offers the following recommendations for the subject property:

- Install a soil vapor extraction system (SVE) at the subject property. The SVE system should include the installation of one vertical well in the vicinity of the former UST where the elevated PCE was initially discovered.
- Collect another set of sub-slab soil vapor and indoor air samples in the residential space at 222-29 91st Road during the heating season.



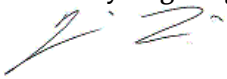
P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 7.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312. I have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.



Michael Pecoraro
Senior Hydrogeologist



Jennifer Lewis, PG
Vice President

Report Completion Date: August 1, 2024



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

## 8.0 REFERENCES

6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 and 375-6.

6 NYCRR Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations.

Commissioners Policy CP-51, Soil Cleanup Guidance, NYSDEC, October 21, 2010.

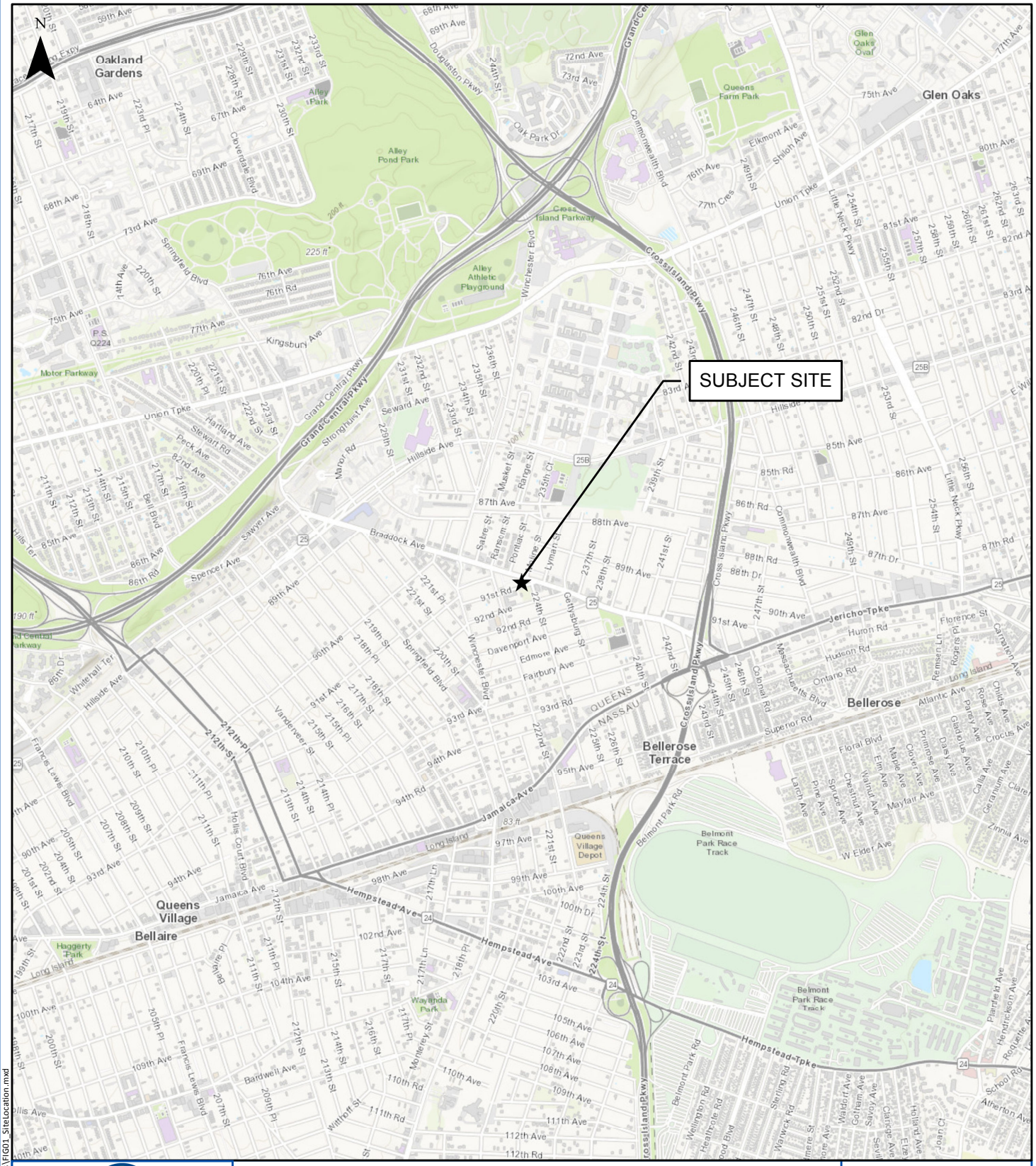
Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, ASTM Standard E 1903-19.

Technical Guidance for Site Investigation and Remediation (DER-10), NYSDEC, May 3, 2010.



P.W. GROSSER CONSULTING, INC • P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, PC
631.589.6353 • WWW.PWGROSSER.COM • PWGC.INFO@PWGROSSER.COM
BOHEMIA • MANHATTAN • SARATOGA SPRINGS • MONTICELLO • SYRACUSE • SHELTON, CT

# FIGURES




# SITE LOCATION

223-20 Braddock Ave
Queens Village, NY

0 ¼ ½ ¾ 1 Miles

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

| | |
|---|---|
| Project: | MHD1801 |
| Date: | 4/12/2019 |
| Designed by: | JL |
| Drawn by: | TS |
| Approved by: | JL |
| Figure No: | 1 |

Document Path: W:\Projects\M-R\MHD\1801\maps\FIG01_SiteLocation.mxd




Document Path: W:\Projects\M-R\MHD\1801\ArcProProject\ArcProProject\ArcProProject.aprx


PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com



UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW


DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

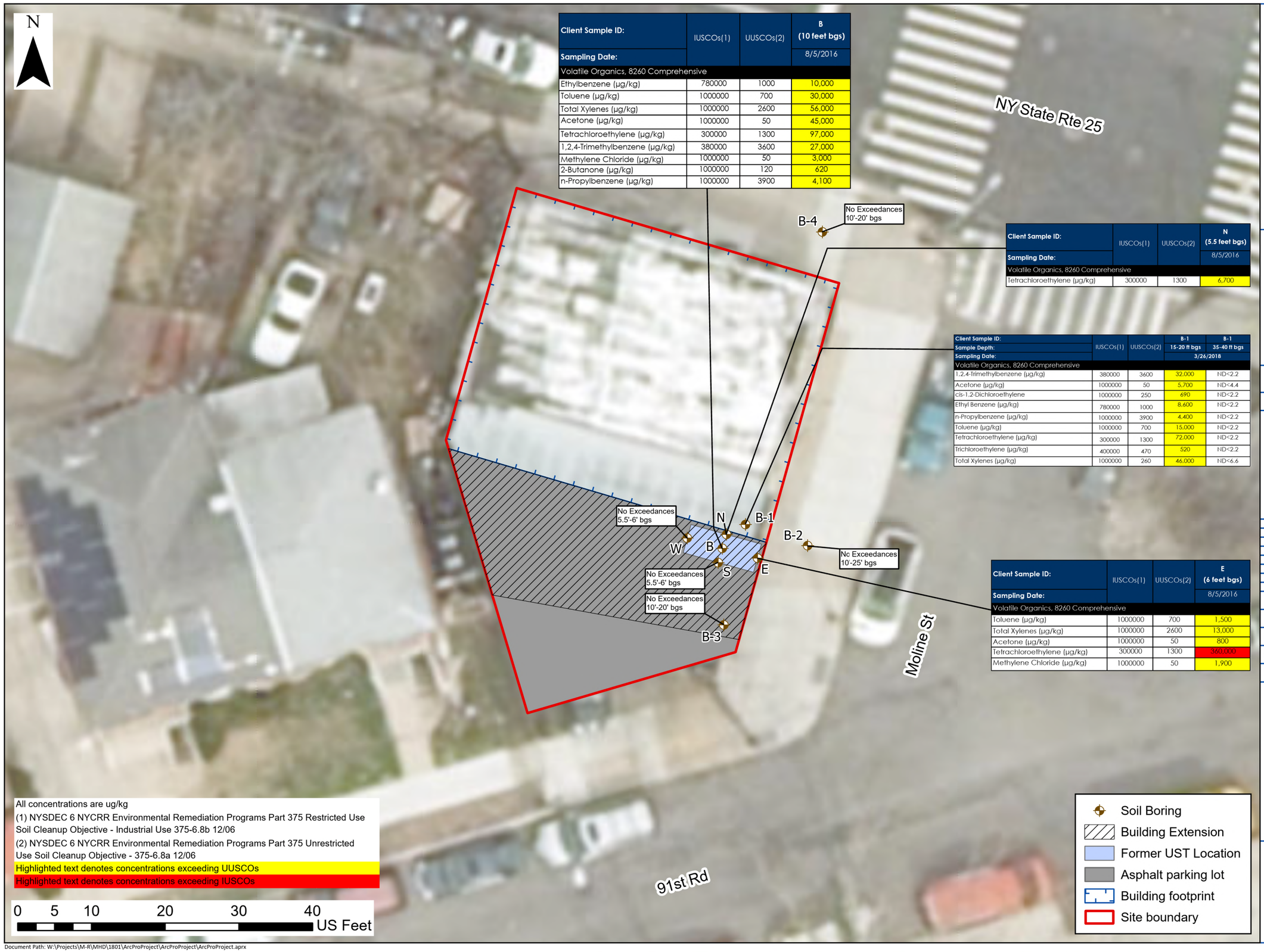
| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | JL |
| Date: | 4/4/2023 | Drawn by: | OA |
| Scale: | AS SHOWN | Approved by: | JL |

# SAMPLING LOCATIONS

223-20 Braddock Ave
Jamaica, NY

FIGURE NO:

2




| Client Sample ID: | IUSCOs(1) | UUSCOs(2) | B (10 feet bgs) |
|---|---|---|---|
| Sampling Date: | | | 8/5/2016 |
| Volatile Organics, 8260 Comprehensive | | | |
| Ethylbenzene (µg/kg) | 780000 | 1000 | 10,000 |
| Toluene (µg/kg) | 1000000 | 700 | 30,000 |
| Total Xylenes (µg/kg) | 1000000 | 2600 | 56,000 |
| Acetone (µg/kg) | 1000000 | 50 | 45,000 |
| Tetrachloroethylene (µg/kg) | 300000 | 1300 | 97,000 |
| 1,2,4-Trimethylbenzene (µg/kg) | 380000 | 3600 | 27,000 |
| Methylene Chloride (µg/kg) | 1000000 | 50 | 3,000 |
| 2-Butanone (µg/kg) | 1000000 | 120 | 620 |
| n-Propylbenzene (µg/kg) | 1000000 | 3900 | 4,100 |

| Client Sample ID: | IUSCOs(1) | UUSCOs(2) | N (5.5 feet bgs) |
|---|---|---|---|
| Sampling Date: | | | 8/5/2016 |
| Volatile Organics, 8260 Comprehensive | | | |
| Tetrachloroethylene (µg/kg) | 300000 | 1300 | 6,700 |

| Client Sample ID: | IUSCOs(1) | UUSCOs(2) | B-1 | B-1 |
|---|---|---|---|---|
| Sample Depth: | | | 15-20 ft bgs | 35-40 ft bgs |
| Sampling Date: | | | 3/26/2018 | |
| Volatile Organics, 8260 Comprehensive | | | | |
| 1,2,4-Trimethylbenzene (µg/kg) | 380000 | 3600 | 32,000 | ND<2.2 |
| Acetone (µg/kg) | 1000000 | 50 | 5,700 | ND<4.4 |
| cis-1,2-Dichloroethylene | 1000000 | 250 | 690 | ND<2.2 |
| Ethyl Benzene (µg/kg) | 780000 | 1000 | 8,600 | ND<2.2 |
| n-Propylbenzene (µg/kg) | 1000000 | 3900 | 4,400 | ND<2.2 |
| Toluene (µg/kg) | 1000000 | 700 | 15,000 | ND<2.2 |
| Tetrachloroethylene (µg/kg) | 300000 | 1300 | 72,000 | ND<2.2 |
| Trichloroethylene (µg/kg) | 400000 | 470 | 520 | ND<2.2 |
| Total Xylenes (µg/kg) | 1000000 | 260 | 46,000 | ND<6.6 |

| Client Sample ID: | IUSCOs(1) | UUSCOs(2) | E (6 feet bgs) |
|---|---|---|---|
| Sampling Date: | | | 8/5/2016 |
| Volatile Organics, 8260 Comprehensive | | | |
| Toluene (µg/kg) | 1000000 | 700 | 1,500 |
| Total Xylenes (µg/kg) | 1000000 | 2600 | 13,000 |
| Acetone (µg/kg) | 1000000 | 50 | 800 |
| Tetrachloroethylene (µg/kg) | 300000 | 1300 | 360,000 |
| Methylene Chloride (µg/kg) | 1000000 | 50 | 1,900 |

All concentrations are ug/kg
(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restricted Use Soil Cleanup Objective - Industrial Use 375-6.8b 12/06
(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestricted Use Soil Cleanup Objective - 375-6.8a 12/06
Highlighted text denotes concentrations exceeding UUSCOs
Highlighted text denotes concentrations exceeding IUSCOs

- Soil Boring
- Building Extension
- Former UST Location
- Asphalt parking lot
- Building footprint
- Site boundary

Document Path: W:\Projects\M-R\MHD\1801\ArcProProject\ArcProProject\ArcProProject.aprx


PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com



UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW


DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

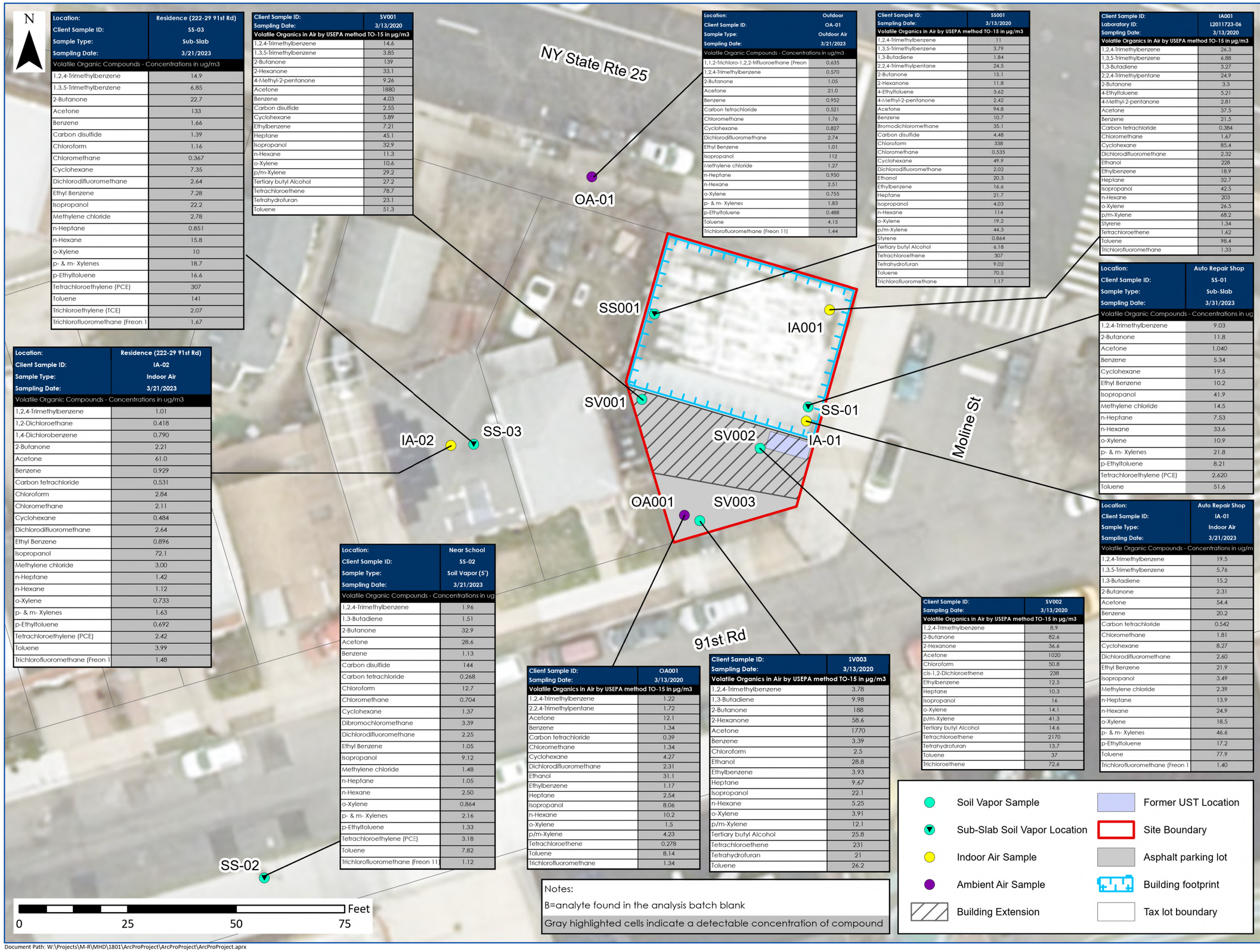
| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | MP |
| Date: | 7/22/2024 | Drawn by: | KM |
| Scale: | AS SHOWN | Approved by: | MP |

# Soil Sampling Results (Historical Results Included)

223-20 Braddock Ave
Jamaica, NY

FIGURE NO:

3




| Location: | Residence (222-29 91st Rd) |
|---|---|
| Client Sample ID: | SS-03 |
| Sample Type: | Sub-Slab |
| Sampling Date: | 3/21/2023 |
| Volatile Organic Compounds - Concentrations in ug/m3 | |
| 1,2,4-Trimethylbenzene | 14.9 |
| 1,3,5-Trimethylbenzene | 6.85 |
| 2-Butanone | 22.7 |
| Acetone | 133 |
| Benzene | 1.66 |
| Carbon disulfide | 1.39 |
| Chloroform | 1.16 |
| Chloromethane | 0.367 |
| Cyclohexane | 7.35 |
| Dichlorodifluoromethane | 2.64 |
| Ethyl Benzene | 7.28 |
| Isopropanol | 22.2 |
| Methylene chloride | 2.78 |
| n-Heptane | 0.851 |
| n-Hexane | 15.8 |
| o-Xylene | 10 |
| p- & m- Xylenes | 18.7 |
| p-Ethyltoluene | 16.6 |
| Tetrachloroethylene (PCE) | 307 |
| Toluene | 141 |
| Trichloroethylene (TCE) | 2.07 |
| Trichlorofluoromethane (Freon 1 | 1.67 |

| Client Sample ID: | SV001 |
|---|---|
| Sampling Date: | 3/13/2020 |
| Volatile Organics in Air by USEPA method TO-15 in µg/m3 | |
| 1,2,4-Trimethylbenzene | 14.6 |
| 1,3,5-Trimethylbenzene | 3.85 |
| 2-Butanone | 139 |
| 2-Hexanone | 33.1 |
| 4-Methyl-2-pentanone | 9.26 |
| Acetone | 1880 |
| Benzene | 4.03 |
| Carbon disulfide | 2.55 |
| Cyclohexane | 5.89 |
| Ethylbenzene | 7.21 |
| Heptane | 45.1 |
| Isopropanol | 32.9 |
| n-Hexane | 11.3 |
| o-Xylene | 10.6 |
| p/m-Xylene | 29.2 |
| Tertiary butyl Alcohol | 27.2 |
| Tetrachloroethene | 78.7 |
| Tetrahydrofuran | 23.1 |
| Toluene | 51.3 |

| Location: | Outdoor |
|---|---|
| Client Sample ID: | OA-01 |
| Sample Type: | Outdoor Air |
| Sampling Date: | 3/21/2023 |
| Volatile Organic Compounds - Concentrations in ug/m3 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon | 0.635 |
| 1,2,4-Trimethylbenzene | 0.570 |
| 2-Butanone | 1.05 |
| Acetone | 21.0 |
| Benzene | 0.952 |
| Carbon tetrachloride | 0.521 |
| Chloromethane | 1.76 |
| Cyclohexane | 0.827 |
| Dichlorodifluoromethane | 2.74 |
| Ethyl Benzene | 1.01 |
| Isopropanol | 112 |
| Methylene chloride | 1.27 |
| n-Heptane | 0.950 |
| n-Hexane | 2.51 |
| o-Xylene | 0.755 |
| p- & m- Xylenes | 1.83 |
| p-Ethyltoluene | 0.488 |
| Toluene | 4.15 |
| Trichlorofluoromethane (Freon 11) | 1.44 |

| Client Sample ID: | SS001 |
|---|---|
| Sampling Date: | 3/13/2020 |
| Volatile Organics in Air by USEPA method TO-15 in µg/m3 | |
| 1,2,4-Trimethylbenzene | 11 |
| 1,3,5-Trimethylbenzene | 3.79 |
| 1,3-Butadiene | 1.84 |
| 2,2,4-Trimethylpentane | 24.5 |
| 2-Butanone | 15.1 |
| 2-Hexanone | 11.8 |
| 4-Ethyltoluene | 3.62 |
| 4-Methyl-2-pentanone | 2.42 |
| Acetone | 94.8 |
| Benzene | 10.7 |
| Bromodichloromethane | 35.1 |
| Carbon disulfide | 4.48 |
| Chloroform | 338 |
| Chloromethane | 0.535 |
| Cyclohexane | 49.9 |
| Dichlorodifluoromethane | 2.02 |
| Ethanol | 20.3 |
| Ethylbenzene | 16.6 |
| Heptane | 21.7 |
| Isopropanol | 4.03 |
| n-Hexane | 114 |
| o-Xylene | 19.2 |
| p/m-Xylene | 44.3 |
| Styrene | 0.864 |
| Tertiary butyl Alcohol | 6.18 |
| Tetrachloroethene | 307 |
| Tetrahydrofuran | 9.02 |
| Toluene | 70.5 |
| Trichlorofluoromethane | 1.17 |

| Client Sample ID: | IA001 |
|---|---|
| Laboratory ID: | L2011723-06 |
| Sampling Date: | 3/13/2020 |
| Volatile Organics in Air by USEPA method TO-15 in µg/m3 | |
| 1,2,4-Trimethylbenzene | 26.3 |
| 1,3,5-Trimethylbenzene | 6.88 |
| 1,3-Butadiene | 3.27 |
| 2,2,4-Trimethylpentane | 24.9 |
| 2-Butanone | 3.3 |
| 4-Ethyltoluene | 5.21 |
| 4-Methyl-2-pentanone | 2.81 |
| Acetone | 37.5 |
| Benzene | 21.5 |
| Carbon tetrachloride | 0.384 |
| Chloromethane | 1.67 |
| Cyclohexane | 85.4 |
| Dichlorodifluoromethane | 2.32 |
| Ethanol | 228 |
| Ethylbenzene | 18.9 |
| Heptane | 32.7 |
| Isopropanol | 42.5 |
| n-Hexane | 203 |
| o-Xylene | 26.5 |
| p/m-Xylene | 68.2 |
| Styrene | 1.34 |
| Tetrachloroethene | 1.62 |
| Toluene | 98.4 |
| Trichlorofluoromethane | 1.33 |

| Location: | Residence (222-29 91st Rd) |
|---|---|
| Client Sample ID: | IA-02 |
| Sample Type: | Indoor Air |
| Sampling Date: | 3/21/2023 |
| Volatile Organic Compounds - Concentrations in ug/m3 | |
| 1,2,4-Trimethylbenzene | 1.01 |
| 1,2-Dichloroethane | 0.418 |
| 1,4-Dichlorobenzene | 0.790 |
| 2-Butanone | 2.21 |
| Acetone | 61.0 |
| Benzene | 0.929 |
| Carbon tetrachloride | 0.531 |
| Chloroform | 2.84 |
| Chloromethane | 2.11 |
| Cyclohexane | 0.484 |
| Dichlorodifluoromethane | 2.64 |
| Ethyl Benzene | 0.896 |
| Isopropanol | 72.1 |
| Methylene chloride | 3.00 |
| n-Heptane | 1.42 |
| n-Hexane | 1.12 |
| o-Xylene | 0.733 |
| p- & m- Xylenes | 1.63 |
| p-Ethyltoluene | 0.692 |
| Tetrachloroethylene (PCE) | 2.42 |
| Toluene | 3.99 |
| Trichlorofluoromethane (Freon 1 | 1.48 |

| Location: | Auto Repair Shop |
|---|---|
| Client Sample ID: | SS-01 |
| Sample Type: | Sub-Slab |
| Sampling Date: | 3/31/2023 |
| Volatile Organic Compounds - Concentrations in ug | |
| 1,2,4-Trimethylbenzene | 9.03 |
| 2-Butanone | 11.8 |
| Acetone | 1,040 |
| Benzene | 5.34 |
| Cyclohexane | 19.5 |
| Ethyl Benzene | 10.2 |
| Isopropanol | 41.9 |
| Methylene chloride | 14.5 |
| n-Heptane | 7.53 |
| n-Hexane | 33.6 |
| o-Xylene | 10.9 |
| p- & m- Xylenes | 21.8 |
| p-Ethyltoluene | 8.21 |
| Tetrachloroethylene (PCE) | 2,620 |
| Toluene | 51.6 |

| Location: | Auto Repair Shop |
|---|---|
| Client Sample ID: | IA-01 |
| Sample Type: | Indoor Air |
| Sampling Date: | 3/21/2023 |
| Volatile Organic Compounds - Concentrations in ug/m | |
| 1,2,4-Trimethylbenzene | 19.5 |
| 1,3,5-Trimethylbenzene | 5.76 |
| 1,3-Butadiene | 15.2 |
| 2-Butanone | 2.31 |
| Acetone | 54.4 |
| Benzene | 20.2 |
| Carbon tetrachloride | 0.542 |
| Chloromethane | 1.81 |
| Cyclohexane | 8.27 |
| Dichlorodifluoromethane | 2.60 |
| Ethyl Benzene | 21.9 |
| Isopropanol | 3.49 |
| Methylene chloride | 2.39 |
| n-Heptane | 13.9 |
| n-Hexane | 24.9 |
| o-Xylene | 18.5 |
| p- & m- Xylenes | 46.6 |
| p-Ethyltoluene | 17.2 |
| Toluene | 77.9 |
| Trichlorofluoromethane (Freon 1 | 1.40 |

| Location: | Near School |
|---|---|
| Client Sample ID: | SS-02 |
| Sample Type: | Soil Vapor (5') |
| Sampling Date: | 3/21/2023 |
| Volatile Organic Compounds - Concentrations in ug | |
| 1,2,4-Trimethylbenzene | 1.96 |
| 1,3-Butadiene | 1.51 |
| 2-Butanone | 32.9 |
| Acetone | 28.6 |
| Benzene | 1.13 |
| Carbon disulfide | 144 |
| Carbon tetrachloride | 0.268 |
| Chloroform | 12.7 |
| Chloromethane | 0.704 |
| Cyclohexane | 1.37 |
| Dibromochloromethane | 3.39 |
| Dichlorodifluoromethane | 2.25 |
| Ethyl Benzene | 1.05 |
| Isopropanol | 9.12 |
| Methylene chloride | 1.48 |
| n-Heptane | 1.05 |
| n-Hexane | 2.50 |
| o-Xylene | 0.864 |
| p- & m- Xylenes | 2.16 |
| p-Ethyltoluene | 1.33 |
| Tetrachloroethylene (PCE) | 3.18 |
| Toluene | 7.82 |
| Trichlorofluoromethane (Freon 11) | 1.12 |

| Client Sample ID: | OA001 |
|---|---|
| Sampling Date: | 3/13/2020 |
| Volatile Organics in Air by USEPA method TO-15 in µg/m3 | |
| 1,2,4-Trimethylbenzene | 1.22 |
| 2,2,4-Trimethylpentane | 1.72 |
| Acetone | 12.1 |
| Benzene | 1.34 |
| Carbon tetrachloride | 0.39 |
| Chloromethane | 1.34 |
| Cyclohexane | 4.27 |
| Dichlorodifluoromethane | 2.31 |
| Ethanol | 31.1 |
| Ethylbenzene | 1.17 |
| Heptane | 2.54 |
| Isopropanol | 8.06 |
| n-Hexane | 10.2 |
| o-Xylene | 1.5 |
| p/m-Xylene | 4.23 |
| Tetrachloroethene | 0.278 |
| Toluene | 8.14 |
| Trichlorofluoromethane | 1.34 |

| Client Sample ID: | SV003 |
|---|---|
| Sampling Date: | 3/13/2020 |
| Volatile Organics in Air by USEPA method TO-15 in µg/m3 | |
| 1,2,4-Trimethylbenzene | 3.78 |
| 1,3-Butadiene | 9.98 |
| 2-Butanone | 188 |
| 2-Hexanone | 58.6 |
| Acetone | 1770 |
| Benzene | 3.39 |
| Chloroform | 2.5 |
| Ethanol | 28.8 |
| Ethylbenzene | 3.93 |
| Heptane | 9.67 |
| Isopropanol | 22.1 |
| n-Hexane | 5.25 |
| o-Xylene | 3.91 |
| p/m-Xylene | 12.1 |
| Tertiary butyl Alcohol | 25.8 |
| Tetrachloroethene | 231 |
| Tetrahydrofuran | 21 |
| Toluene | 26.2 |

| Client Sample ID: | SV002 |
|---|---|
| Sampling Date: | 3/13/2020 |
| Volatile Organics in Air by USEPA method TO-15 in µg/m3 | |
| 1,2,4-Trimethylbenzene | 8.9 |
| 2-Butanone | 82.6 |
| 2-Hexanone | 36.6 |
| Acetone | 1020 |
| Chloroform | 50.8 |
| cis-1,2-Dichloroethene | 238 |
| Ethylbenzene | 12.5 |
| Heptane | 10.3 |
| Isopropanol | 16 |
| o-Xylene | 14.1 |
| p/m-Xylene | 41.3 |
| Tertiary butyl Alcohol | 14.6 |
| Tetrachloroethene | 2170 |
| Tetrahydrofuran | 13.7 |
| Toluene | 37 |
| Trichloroethene | 72.6 |

Notes:

B=analyte found in the analysis batch blank

Gray highlighted cells indicate a detectable concentration of compound

- Soil Vapor Sample
- Sub-Slab Soil Vapor Location
- Indoor Air Sample
- Ambient Air Sample
- Building Extension
- Former UST Location
- Site Boundary
- Asphalt parking lot
- Building footprint
- Tax lot boundary


PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com



UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW


DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | MP |
| Date: | 7/22/2024 | Drawn by: | KM |
| Scale: | AS SHOWN | Approved by: | MP |

# Vapor Sampling Results (Historical Results Included)

223-20 Braddock Ave
Jamaica, NY

FIGURE NO:

4

Document Path: W:\Projects\M-R\MHD\1801\ArcProProject\ArcProProject\ArcProProject.aprx




Document Path: W:\Projects\M-R\MHD\1801\ArcProProject\ArcProProject\ArcProProject.aprx

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW

DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | MP |
| Date: | 7/19/2024 | Drawn by: | KM |
| Scale: | AS SHOWN | Approved by: | MP |

# Groundwater Sampling Results

223-20 Braddock Ave
Jamaica, NY

FIGURE NO:

5

# TABLES

# Table 1
## Soil Sample Analytical Data Summary
## Volatile Organic Compounds
## 223-20 Braddock Avenue, Queens Village, New York

| Client Sample ID: | NYSDEC Part 375 Unrestricted SCOs | NYSDEC Part 375 Industrial Use SCOs | B | N | E | S | W | B-1 | | B-2 | | B-3 | | B-4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Depth | | | 10' | 5.5' | 6' | 5.5-6' | 5.5-6' | 15-20' | 35-40' | 10-15' | 20-25' | 10-15' | 15-20' | 10-15' | 15-20' |
| Laboratory ID: | | | 16H0402-05 | 16H0402-01 | 16H0402-03 | 16H0402-02 | 16H0402-04 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 |
| Sampling Date: | | | 8/5/2016 | 8/5/2016 | 8/5/2016 | 8/5/2016 | 8/5/2016 | 3/26/2018 | 3/26/2018 | 3/26/2018 | 3/26/2018 | 3/27/2018 | 3/27/2018 | 3/27/2018 | 3/27/2018 |
| Volatile Organic Compounds by USEPA method 8260 in ug/kg | | | | | | | | | | | | | | | |
| 1,2,4-Trimethylbenzene | 3,600 | 380,000 | 27,000 | 240 U | 1,400 | 1.9 U | 2.6 U | 32,000 | 2.2 U | 710 | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| 1,3,5-Trimethylbenzene | 8,400 | 380,000 | 8,100 | 240 U | 7,300 | 1.9 U | 2.6 U | 9,000 | 2.2 U | 430 | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| 2-Butanone | 120 | 1,000,000 | 620 | 240 U | 260 U | 1.9 U | 2.6 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | 50 | 1,000,000 | 45,000 | 480 U | 800 | 3.7 U | 5.1 U | 5,700 | 4.4 U | 220 U | 8.7 | 5.1 | 5.7 U | 6.1 | 3.9 |
| cis-1,2-Dichloroethylene | 250 | 1,000,000 | NA | NA | NA | NA | NA | 690 | 2.2 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| Ethylbenzene | 1,000 | 780,000 | 10,000 | 240 U | 260 U | 1.9 U | 2.6 U | 8,600 | 2.20 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| Methylene Chloride | 50 | 1,000,000 | 3,000 | 480 U | 1,900 | 3.7 U | 5.1 U | 580 U | 4.40 U | 430 U | 7.9 | 4.2 | 5.7 U | 6.0 U | 3.8 U |
| Methyl tert butyl ether | 930 | 1,000,000 | 380 | 240 U | 460 | 1.9 U | 2.6 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 12,000 | 1,000,000 | 5,200 | 240 U | 400 | 1.9 U | 2.6 U | 5,900 | 2.2 U | 390 | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| n-Butylbenzene | 12,000 | 1,000,000 | 4,100 | 240 U | 260 U | 1.9 U | 2.6 U | 2,000 | 2.2 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| n-Propylbenzene | 3,900 | 1,000,000 | NA | NA | NA | NA | NA | 4,400 | 2.2 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| o-Xylene | NS | NS | 18,000 | 240 U | 11,000 | 1.9 U | 2.6 U | NA | NA | NA | NA | NA | NA | NA | NA |
| p/m-Xylene | NS | NS | 39,000 | 480 U | 2,400 | 3.7 U | 5.1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | 11,000 | 1,000,000 | 430 | 240 U | 260 U | 1.9 U | 2.6 U | 520 | 2.2 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| Tetrachloroethylene | 1,300 | 300,000 | 97,000 | 6,700 | 360,000 | 4.0 | 2.6 | 72,000 | 2.2 U | 1,100 | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| Toluene | 700 | 1,000,000 | 30,000 | 240 U | 1,500 | 1.9 U | 2.6 U | 15,000 | 2.2 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| Trichloroethylene | 470 | 400,000 | NA | NA | NA | NA | NA | 520 | 2.2 U | 220 U | 2.5 U | 2.0 U | 2.8 U | 3.0 U | 1.9 U |
| Xylenes, total | 260 | 1,000,000 | 56,000 | 720 U | 13,000 | 5.6 U | 7.7 U | 46,000 | 6.6 U | 650 U | 7.4 U | 6.0 U | 8.5 U | 9.0 U | 5.6 U |

Notes:

New York NYCRR Part 375 Industrial Use SCO and Unrestricted Use - October 21, 2010

NA - Sample Not Analyzed

NS - No Standard

U - analyte not detected at or above the level indicated

Highlighted text denotes concentrations exceeding Unrestricted Use SCOs

Highlighted text denotes concentrations exceeding Restricted Residential SCOs

# Table 2
# Soil Sample Analytical Data Summary
# Semivolatile Organic Compounds
# 223-20 Braddock Avenue, Queens Village, New York

| Client Sample ID: | NYSDEC Part 375 Unrestricted SCOs | NYSDEC Part 375 Industrial Use SCOs | B | N | E | S | W | B-1 | | B-2 | | B-3 | | B-4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Depth | | | 10' | 5.5' | 6' | 5.5-6' | 5.5-6' | 15-20' | 35-40' | 10-15' | 20-25' | 10-15' | 15-20' | 10-15' | 15-20' |
| Laboratory ID: | | | 16H0402-05 | 16H0402-01 | 16H0402-03 | 16H0402-02 | 16H0402-04 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 | L2126832-01 |
| Sampling Date: | | | 8/5/2016 | 8/5/2016 | 8/5/2016 | 8/5/2016 | 8/5/2016 | 3/26/2018 | 3/26/2018 | 3/26/2018 | 3/26/2018 | 3/27/2018 | 3/27/2018 | 3/27/2018 | 3/27/2018 |
| Semivolatile Organic Compounds by USEPA method 8270 in ug/kg | | | | | | | | | | | | | | | |
| Acenaphthene | 20,000 | 1,000,000 | NA | NA | NA | NA | NA | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Acenaphthylene | 100,000 | 1,000,000 | NA | NA | NA | NA | NA | 300 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Anthracene | 100,000 | 1,000,000 | 110 | 21.7 U | 110 U | 42.6 U | 42.7 U | 500 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Benzo(a)anthracene | 1,000 | 11,000 | 178 | 21.7 U | 110 U | 42.6 U | 42.7 U | 480 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Benzo(a)pyrene | 1,000 | 1,100 | 85.8 | 21.7 U | 303 | 42.6 U | 42.7 U | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Benzo(b)fluoranthene | 1,000 | 11,000 | 97.8 | 21.7 U | 210 | 42.6 U | 42.7 U | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Benzo(ghi)perylene | 100,000 | 1,000,000 | 46.8 U | 21.7 U | 212 | 42.6 U | 42.7 U | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Benzo(k)fluoranthene | 800 | 110,000 | 46.8 U | 21.7 U | 124 | 42.6 U | 42.7 U | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Chrysene | 1,000 | 110,000 | 171 | 21.7 U | 110 U | 42.6 U | 42.7 U | 320 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Dibenzo(a,h)anthracene | 330 | 1,100 | NA | NA | NA | NA | NA | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Fluoranthene | 100,000 | 1,000,000 | 97.8 | 21.7 U | 110 U | 42.6 U | 42.7 U | 440 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Fluorene | 30,000 | 1,000,000 | NA | NA | NA | NA | NA | 480 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Indeno(1,2,3-cd)pyrene | 500 | 1,100 | NA | NA | NA | NA | NA | 260 U | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Naphthalene | 12,000 | 1,000,000 | 2,310 | 21.7 U | 110 U | 42.6 U | 42.7 U | 7,300 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Phenanthrene | 100,000 | 1,000,000 | 537 | 21.7 U | 110 U | 42.6 U | 42.7 U | 1,300 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |
| Pyrene | 100,000 | 1,000,000 | 2,280 | 21.7 U | 2,080 | 42.6 U | 42.7 U | 1,400 | 65 U | 160 U | 67 U | 44 U | 44 U | 44 U | 44 U |

Notes:
New York NYCRR Part 375 Industrial Use SCO and Unrestricted Use - October 21, 2010
NA - Sample Not Analyzed
NS - No Standard
U - analyte not detected at or above the level indicated
Highlighted text denotes concentrations exceeding Unrestricted Use SCOs
Highlighted text denotes concentrations exceeding Restricted Residential SCOs

# Table 3
# Soil Sample Analytical Data Summary
# Metals
# 223-20 Braddock Avenue, Queens Village, New York

| Client Sample ID:<br>Sample Depth<br>Laboratory ID:<br>Sampling Date: | NYSDEC Part 375 Unrestricted SCOs | NYSDEC Part 375 Industrial Use SCOs | B<br>10'<br>16H0402-05<br>8/5/2016 | | N<br>5.5'<br>16H0402-01<br>8/5/2016 | | E<br>6'<br>16H0402-03<br>8/5/2016 | | S<br>5.5-6'<br>16H0402-02<br>8/5/2016 | | W<br>5.5-6'<br>16H0402-04<br>8/5/2016 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RCRA Metals by USEPA method 6010/7174 in mg/kg | | | | | | | | | | | | |
| Arsenic | 13 | 16 | 4.37 | | 2.53 | | 3.14 | | 1.73 | | 1.32 | |
| Barium | 350 | 10,000 | 44.2 | | 30.8 | | 54.5 | | 14.9 | | 24.8 | |
| Cadmium | 2.5 | 60 | 0.336 | U | 0.312 | U | 0.315 | U | 0.306 | U | 0.306 | U |
| Chromium | 30 | 800 | 19.7 | | 20.0 | | 13.0 | | 11.4 | | 17.8 | |
| Lead | 63 | 3,900 | 30.1 | | 5.79 | | 25.6 | | 2.79 | | 2.19 | |
| Mercury | 0.18 | 6 | 0.0336 | U | 0.0312 | U | 0.0315 | U | 0.0306 | U | 0.0306 | U |
| Selenium | 3.9 | 6,800 | 1.67 | | 2.60 | | 2.29 | | 1.40 | | 1.76 | |
| Silver | 2 | 6,800 | 0.560 | U | 0.520 | U | 0.525 | U | 0.510 | U | 0.511 | U |

Notes:

New York NYCRR Part 375 Industrial Use SCO and Unrestricted Use - October 21, 2010

NS - No Standard

U - analyte not detected at or above the level indicated

Highlighted text denotes concentrations exceeding Unrestricted Use SCOs

Highlighted text denotes concentrations exceeding Restricted Residential SCOs

**Table 4**
**Soil Vapor - Ambient Air Analytical Data Summary**
**Volatile Organic Compounds**
**223-20 Braddock Avenue, Queens Village, New York**

| Location: | | Auto Repair Shop (Interior) | | Auto Repair Shop (Exterior) | | | Outdoor | Auto Repair Shop | | Near School | Residence (222-29 91st Rd) | | Outdoor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample ID: | | SS001 | IA001 | SV001 | SV002 | SV003 | OA001 | SS-01 | IA-01 | SS-02 | SS-03 | IA-02 | OA-01 |
| Sample Type: | CAS Number | Sub-Slab | Indoor Air | Soil Vapor | Soil Vapor | Soil Vapor | Outdoor Air | Sub-Slab | Indoor Air | Soil Vapor (5') | Sub-Slab | Indoor Air | Outdoor Air |
| Laboratory ID: | | L2011723-01 | L2011723-06 | L2011723-02 | L2011723-03 | L2011723-04 | L2011723-05 | 23C1883-01 | 23C1292-01 | 23C1292-04 | 23C1292-05 | 23C1292-06 | 23C1292-03 |
| Sampling Date: | | 3/13/2020 | 3/13/2020 | 3/13/2020 | 3/13/2020 | 3/13/2020 | 3/13/2020 | 3/31/2023 | 3/21/2023 | 3/21/2023 | 3/21/2023 | 3/21/2023 | 3/21/2023 |
| Volatile Organic Compounds - Concentrations in ug/m$^3$ | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | NA | NA | NA | NA | NA | NA | 11.5 U | 0.591 U | 0.976 U | 1.02 U | 0.644 U | 0.568 U |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 71-55-6 | 1.09 U | 3.64 U | 6.82 U | 2.73 U | 0.109 U | 0.109 U | 9.11 U | 0.470 U | 0.775 U | 0.809 U | 0.512 U | 0.452 U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 1.37 U | 4.58 U | 8.58 U | 3.43 U | 1.37 U | 1.37 U | 11.5 U | 0.591 U | 0.976 U | 1.02 U | 0.644 U | 0.568 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 76-13-1 | 1.53 U | 5.11 U | 9.58 U | 3.83 U | 1.53 U | 1.53 U | 12.8 U | 0.660 U | 1.09 U | 1.14 U | 0.719 U | 0.635 D |
| 1,1,2-Trichloroethane | 79-00-5 | 1.09 U | 3.64 U | 6.82 U | 2.73 U | 1.09 U | 1.09 U | 9.11 U | 0.470 U | 0.775 U | 0.809 U | 0.512 U | 0.452 U |
| 1,1-Dichloroethane | 75-34-3 | 0.809 U | 2.70 U | 5.06 U | 2.02 U | 0.809 U | 0.809 U | 6.76 U | 0.348 U | 0.575 U | 0.600 U | 0.380 U | 0.335 U |
| 1,1-Dichloroethylene (1,1-DCE) | 75-35-4 | 0.793 U | 2.64 U | 4.96 U | 1.98 U | 0.079 U | 0.079 U | 3.31 U | 0.171 U | 0.282 U | 0.294 U | 0.186 U | 0.164 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | 1.48 U | 4.95 U | 9.28 U | 3.71 U | 1.48 UJ | 1.48 UJ | 12.4 U | 0.639 U | 1.05 U | 1.10 U | 0.696 U | 0.614 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | 11.0 | 14.6 | 8.90 | 3.78 | 1.22 | 26.3 | 9.03 D | 19.5 D | 1.96 D | 14.9 D | 1.01 D | 0.570 D |
| 1,2-Dibromoethane | 106-93-4 | 1.54 U | 5.13 U | 9.61 U | 3.84 U | 1.54 U | 1.54 U | 12.8 U | 0.662 U | 1.09 U | 1.14 U | 0.721 U | 0.636 U |
| 1,2-Dichlorobenzene | 95-50-1 | 1.20 U | 4.01 U | 7.52 U | 3.01 U | 1.20 U | 1.20 U | 10.0 U | 0.518 U | 0.854 U | 0.892 U | 0.564 U | 0.498 U |
| 1,2-Dichloroethane | 107-06-2 | 0.809 U | 2.70 U | 5.06 U | 2.02 U | 0.809 U | 0.809 U | 6.76 U | 0.348 U | 0.575 U | 0.600 U | 0.418 D | 0.335 U |
| 1,2-Dichloropropane | 78-87-5 | 0.924 U | 3.08 U | 5.78 U | 2.31 U | 0.924 U | 0.924 U | 7.72 U | 0.398 U | 0.657 U | 0.685 U | 0.433 U | 0.383 U |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | 76-14-2 | 1.40 U | 4.66 U | 8.74 U | 3.49 U | 1.40 U | 1.40 U | 11.7 U | 0.602 U | 0.993 U | 1.04 U | 0.656 U | 0.579 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | 3.79 | 3.85 | 6.15 U | 2.46 U | 0.983 U | 6.88 | 8.21 U | 5.76 D | 0.699 U | 6.85 D | 0.461 U | 0.407 U |
| 1,3-Butadiene | 106-99-0 | 1.84 | 1.48 U | 2.77 U | 9.98 | 0.442 U | 3.27 | 11.1 U | 15.2 D | 1.51 D | 0.984 U | 0.623 U | 0.550 U |
| 1,3-Dichlorobenzene | 541-73-1 | 1.20 U | 4.01 U | 7.52 U | 3.01 U | 1.20 U | 1.20 U | 10.0 U | 0.518 U | 0.854 U | 0.892 U | 0.564 U | 0.498 U |
| 1,3-Dichloropropane | 142-28-9 | NA | NA | NA | NA | NA | NA | 7.72 U | 0.398 U | 0.657 U | 0.685 U | 0.433 U | 0.383 U |
| 1,4-Dichlorobenzene | 106-46-7 | 1.20 U | 4.01 U | 7.52 U | 3.01 U | 1.20 U | 1.20 U | 10.0 U | 0.518 U | 0.854 U | 0.892 U | 0.790 D | 0.498 U |
| 1,4-Dioxane | 123-91-1 | 0.721 U | 2.40 U | 4.50 U | 1.80 U | 0.721 U | 0.721 U | 12.0 U | 0.620 U | 1.02 U | 1.07 U | 0.676 U | 0.597 U |
| 2,2,4-Trimethylpentane | 540-84-1 | 24.5 | 3.12 U | 5.84 U | 2.34 U | 1.72 | 24.9 | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 78-93-3 | 15.1 | 139 | 82.6 | 188 | 1.47 U | 3.3 | 11.8 D | 2.31 D | 32.9 D | 22.7 D | 2.21 D | 1.05 D |
| 2-Hexanone | 591-78-6 | 11.8 | 33.1 | 36.6 | 58.6 | 0.820 UJ | 0.820 UJ | 13.7 U | 0.705 U | 1.16 U | 1.22 U | 0.769 U | 0.678 U |
| 3-Chloropropene | 107-05-1 | 0.626 U | 2.09 U | 3.91 U | 1.57 U | 0.626 U | 0.626 U | 26.1 U | 1.35 U | 2.22 U | 2.32 U | 1.47 U | 1.30 U |
| 4-Ethyltoluene | 622-96-8 | 3.62 | 3.28 U | 6.15 U | 2.46 U | 0.983 U | 5.21 | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | 108-10-1 | 2.42 | 9.26 | 12.8 U | 5.12 U | 2.05 U | 2.81 | 6.84 U | 0.353 U | 0.582 U | 0.608 U | 0.384 U | 0.339 U |
| Acetone | 67-64-1 | 94.8 | 1880 | 1020 | 1770 | 12.1 | 37.5 | 1,040 D | 54.4 D | 28.6 D | 133 D | 61.0 D | 21.0 D |
| Acrylonitrile | 107-13-1 | NA | NA | NA | NA | NA | NA | 3.62 U | 0.187 U | 0.308 U | 0.322 U | 0.204 U | 0.18 U |
| Benzene | 71-43-2 | 10.7 | 4.03 | 3.99 U | 3.39 | 1.34 | 21.5 | 5.34 D | 20.2 D | 1.13 D | 1.66 D | 0.929 D | 0.952 D |
| Benzyl chloride | 100-44-7 | 1.04 U | 3.45 U | 6.47 U | 2.59 U | 1.04 U | 1.04 U | 8.65 U | 0.446 U | 0.736 U | 0.768 U | 0.486 U | 0.429 U |
| Bromodichloromethane | 75-27-4 | 35.1 | 4.47 U | 8.37 U | 3.35 U | 1.34 U | 1.34 U | 11.2 U | 0.577 U | 5.05 D | 0.994 U | 0.628 U | 0.555 U |
| Bromoform | 75-25-2 | 2.07 U | 6.90 U | 12.9 U | 5.17 U | 2.07 U | 2.07 U | 17.3 U | 0.890 U | 1.47 U | 1.53 U | 0.970 U | 0.856 U |
| Bromomethane | 74-83-9 | 0.777 U | 2.59 U | 4.85 U | 1.94 U | 0.777 U | 0.777 U | 6.48 U | 0.334 U | 0.552 U | 0.576 U | 0.364 U | 0.322 U |
| Carbon disulfide | 75-15-0 | 4.48 | 2.55 | 3.89 U | 1.56 U | 0.623 U | 0.623 U | 5.20 U | 0.268 U | 144 D | 1.39 D | 0.292 U | 0.258 U |
| Carbon tetrachloride | 56-23-5 | 1.26 U | 4.20 U | 7.86 U | 3.15 U | 0.390 | 0.384 | 2.63 U | 0.542 D | 0.268 D | 0.233 U | 0.531 D | 0.521 D |
| Chlorobenzene | 108-90-7 | 0.921 U | 3.07 U | 5.76 U | 2.30 U | 0.921 U | 0.921 U | 7.69 U | 0.396 U | 0.654 U | 0.683 U | 0.432 U | 0.381 U |
| Chloroethane | 75-00-3 | 0.528 U | 1.76 U | 3.30 U | 1.32 U | 0.528 U | 0.528 U | 4.41 U | 0.227 U | 0.375 U | 0.391 U | 0.247 U | 0.218 U |
| Chloroform | 67-66-3 | 338 | 3.26 U | 50.8 | 2.50 | 0.977 U | 0.977 U | 8.15 U | 0.420 U | 12.7 D | 1.16 D | 2.84 D | 0.404 U |
| Chloromethane | 74-87-3 | 0.535 | 1.38 U | 2.58 U | 1.03 U | 1.34 | 1.67 | 3.45 U | 1.81 D | 0.704 D | 0.367 D | 2.11 D | 1.76 D |
| cis-1,2-Dichloroethylene | 156-59-2 | 0.793 U | 2.64 U | 238 | 1.98 U | 0.079 U | 0.079 U | 3.31 U | 0.171 U | 0.282 U | 0.294 U | 0.186 U | 0.164 U |
| cis-1,3-Dichloropropylene | 10061-01-5 | 0.908 U | 3.03 U | 5.67 U | 2.27 U | 0.908 U | 0.908 U | 7.58 U | 0.391 U | 0.645 U | 0.673 U | 0.426 U | 0.376 U |
| Cyclohexane | 110-82-7 | 49.9 | 5.89 | 4.30 U | 1.72 U | 4.27 | 85.4 | 19.5 D | 8.27 D | 1.37 D | 7.35 D | 0.484 D | 0.827 D |
| Dibromochloromethane | 124-48-1 | 1.70 U | 5.68 U | 10.6 U | 4.26 U | 1.70 U | 1.70 U | 14.2 U | 0.733 U | 3.39 D | 1.26 U | 0.799 U | 0.705 U |
| Dichlorodifluoromethane | 75-71-8 | 2.02 | 3.30 U | 6.18 U | 2.47 U | 2.31 | 2.32 | 8.26 U | 2.60 D | 2.25 D | 2.64 D | 2.64 D | 2.74 D |
| Ethanol | 64-17-5 | 20.3 | 31.5 U | 58.8 U | 28.8 | 31.1 | 228 | NA | NA | NA | NA | NA | NA |
| Ethyl acetate | 141-78-6 | 1.80 U | 6.02 U | 11.2 U | 4.50 U | 1.80 U | 1.80 U | 12.0 U | 0.62 U | 1.33 D | 1.07 U | 11.3 D | 0.597 U |
| Ethyl Benzene | 100-41-4 | 16.6 | 7.21 | 12.5 | 3.93 | 1.17 | 18.9 | 10.2 D | 21.9 D | 1.05 D | 7.28 D | 0.896 D | 1.01 D |
| Hexachlorobutadiene | 87-68-3 | 2.13 U | 7.11 U | 13.3 U | 5.33 U | 2.13 U | 2.13 U | 17.8 U | 0.918 U | 1.52 U | 1.58 U | 1.00 U | 0.883 U |
| Isopropanol | 67-63-0 | 4.03 | 32.9 | 16.0 | 22.1 | 8.06 | 42.5 | 41.9 BD | 3.49 D | 9.12 D | 22.2 D | 72.1 D | 112 DE |
| Methyl Methacrylate | 80-62-6 | NA | NA | NA | NA | NA | NA | 6.84 U | 0.352 U | 0.582 U | 0.729 D | 0.384 U | 0.339 U |
| Methyl tert-butyl ether (MTBE) | 1634-04-4 | 0.721 U | 2.40 U | 4.51 U | 1.80 U | 0.721 U | 0.721 U | 6.02 U | 0.310 U | 0.512 U | 0.535 U | 0.338 U | 0.299 U |
| Methylene chloride | 75-09-2 | 1.74 U | 5.80 U | 10.8 U | 4.34 U | 1.74 U | 1.74 U | 14.5 D | 2.39 D | 1.48 D | 2.78 D | 3.00 D | 1.27 D |
| n-Heptane | 142-82-5 | 21.7 | 45.1 | 10.3 | 9.67 | 2.54 | 32.7 | 7.53 D | 13.9 D | 1.05 D | 0.851 D | 1.42 D | 0.950 D |
| n-Hexane | 110-54-3 | 114 | 11.3 | 4.41 U | 5.25 | 10.2 | 203 | 33.6 D | 24.9 D | 2.50 D | 15.8 D | 1.12 D | 2.51 D |
| o-Xylene | 95-47-6 | 19.2 | 10.6 | 14.1 | 3.91 | 1.50 | 26.5 | 10.9 D | 18.5 D | 0.864 D | 10 D | 0.733 D | 0.755 D |
| p- & m- Xylenes | 179601-23-1 | 44.3 | 29.2 | 41.3 | 12.1 | 4.23 | 68.2 | 21.8 D | 46.6 D | 2.16 D | 18.7 D | 1.63 D | 1.83 D |
| p-Ethyltoluene | 622-96-8 | NA | NA | NA | NA | NA | NA | 8.21 D | 17.2 D | 1.33 D | 16.6 D | 0.692 D | 0.488 D |
| Propylene | 115-07-1 | NA | NA | NA | NA | NA | NA | 2.87 U | 57.1 D | 23.6 D | 0.255 U | 0.161 U | 0.143 U |
| Styrene | 100-42-5 | 0.864 | 2.84 U | 5.32 U | 2.13 U | 0.852 U | 1.34 | 7.11 U | 0.367 U | 0.605 U | 0.632 U | 0.400 U | 0.353 U |
| Tertiary butyl Alcohol | 75-65-0 | 6.18 | 27.2 | 14.6 | 25.8 | 1.52 U | 1.52 U | NA | NA | NA | NA | NA | NA |
| Tetrachloroethylene (PCE) | 127-18-4 | 307 | 78.7 | 2170 | 231 | 0.278 | 1.62 | 2,620 D | 0.584 U | 3.18 D | 307 D | 2.42 D | 0.562 U |
| Tetrahydrofuran | 109-99-9 | 9.02 | 23.1 | 13.7 | 21.0 | 1.47 U | 1.47 U | 9.85 U | 0.508 U | 0.838 U | 0.875 U | 0.553 U | 0.488 U |
| Toluene | 108-88-3 | 70.5 | 51.3 | 37.0 | 26.2 | 8.14 | 98.4 | 51.6 D | 77.9 D | 7.82 D | 141 D | 3.99 D | 4.15 D |
| trans-1,2-Dichloroethylene | 156-60-5 | 0.793 U | 2.64 U | 4.96 U | 1.98 U | 0.793 U | 0.793 U | 6.62 U | 0.341 U | 0.563 U | 0.588 U | 0.372 U | 0.328 U |
| trans-1,3-Dichloropropylene | 10061-02-6 | 0.908 U | 3.03 U | 5.67 U | 2.27 U | 0.908 U | 0.908 U | 7.58 U | 0.391 U | 0.645 U | 0.673 U | 0.426 U | 0.376 U |
| Trichloroethylene (TCE) | 79-01-6 | 1.07 U | 3.58 U | 72.6 | 2.69 U | 0.107 U | 0.107 U | 2.24 U | 0.116 U | 0.191 U | 2.07 D | 0.126 U | 0.111 U |
| Trichlorofluoromethane (Freon 11) | 75-69-4 | 1.17 | 3.75 U | 7.02 U | 2.81 U | 1.34 | 1.33 | 9.38 U | 1.40 D | 1.12 D | 1.67 D | 1.48 D | 1.44 D |
| Vinyl acetate | 108-05-4 | NA | NA | NA | NA | NA | NA | 5.88 U | 0.303 U | 0.500 U | 0.522 U | 0.330 U | 0.292 U |
| Vinyl bromide | 593-60-2 | 0.874 U | 2.92 U | 5.47 U | 2.19 U | 0.874 U | 0.874 U | 7.30 U | 0.377 U | 0.622 U | 0.649 U | 0.410 U | 0.362 U |
| Vinyl Chloride | 75-01-4 | 0.511 U | 1.71 U | 3.20 U | 1.28 U | 0.051 U | 0.051 U | 2.13 U | 0.110 U | 0.182 U | 0.190 U | 0.120 U | 0.106 U |

Notes:
D - Result is from an analysis that required a dilution
U - Not detected at the reported detection limit for the sample.
NA - Not Analyzed
Gray highlighted cells indicate a detectable concentration of compound

**Table 5**
**Soil Vapor and Indoor Air Summary**
**Volatile Organic Compounds**
**223-20 Braddock Avenue, Queens Village, New York**

| Sample Date | Location | Compound | Sub-Slab Air Concentrations (ug/m3) | Indoor Air Concentrations (ug/m3) | Guidance Recommendation[1] | Recommended Action Based on NYSDOH Guidance |
|---|---|---|---|---|---|---|
| 3/13/2020 | Auto Repair Shop (SS001 and IA001) | Carbon tetrachloride | ND | 0.384 | No Further Action | Mitigate |
| | | 1,1-DCE | ND | ND | No Further Action | |
| | | cis-1,2-DCE | ND | ND | No Further Action | |
| | | TCE | ND | ND | No Further Action | |
| | | Methylene chloride | ND | ND | No Further Action | |
| | | PCE | 307 | 1.62 | No Further Action | |
| | | Vinyl chloride | ND | ND | No Further Action | |
| | | 1,1,1-TCA | ND | ND | No Further Action | |
| 3/21/2023 | Seenauth Residence (SS-03 and IA-02) | Carbon tetrachloride | 0.233 | 0.531 | No Further Action | No Further Action |
| | | 1,1-DCE | 0.294 | 0.186 | No Further Action | |
| | | cis-1,2-DCE | 0.294 | 0.186 | No Further Action | |
| | | TCE | 2.07 | 0.126 | No Further Action | |
| | | Methylene chloride | 2.78 | 3.00 | No Further Action | |
| | | PCE | 307 | 2.42 | No Further Action | |
| | | Vinyl chloride | 0.190 | 0.120 | No Further Action | |
| | | 1,1,1-TCA | 0.809 | 0.512 | No Further Action | |
| 3/21/2023 and 3/31/2023 | Auto Repair Shop (SS-01 and IA-01) | Carbon tetrachloride | 2.63 | 0.542 | No Further Action | Mitigate |
| | | 1,1-DCE | 3.31 | 0.171 | No Further Action | |
| | | cis-1,2-DCE | 3.31 | 0.171 | No Further Action | |
| | | TCE | 2.24 | 0.116 | No Further Action | |
| | | Methylene chloride | 14.5 | 2.39 | No Further Action | |
| | | PCE | 2,620 | 0.584 | Mitigate | |
| | | Vinyl chloride | 2.13 | 0.110 | No Further Action | |
| | | 1,1,1-TCA | 9.11 | 0.470 | No Further Action | |

Notes:
1 -Action levels based on NYSDOH Matrix A for TCE, cis-1,2-DCE, 1,1-DCE and carbon tetrachloride, Matrix B for PCE, 1,1,1-TCA and methylene chloride, and Matrix C for vinyl chloride from "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", NYSDOH, October 2006. (Revised May 2017)

**Table 6**
**Monitoring Well Gauging Log**
**223-20 Braddock Avenue, Queens Village, New York**

| Monitoring Well | Reference Elevation (ft)[1] | Depth to Water (ft below TOC) | Groundwater Elevation (ft) |
|---|---|---|---|
| **March 31, 2023** | | | |
| MW001 | 93.98 | 48.82 | 45.16 |
| MW002 | 93.86 | 49.16 | 44.70 |
| MW003 | 94.14 | 49.44 | 44.70 |

[1] Reference elevation is based on an arbitrary datum of 100 feet.

**Table 7**
**Groundwater Sample Analytical Data Summary**
**Volatile Organic Compounds**
**223-20 Braddock Avenue, Queens Village, New York**

| Client Sample ID: / Laboratory ID: / Sampling Date: | Ambient Water Quality Standards | MW001 23C1881-01 3/31/2023 | | DUP001 23C1881-04 3/31/2023 | | MW002 23C1881-02 3/31/2023 | | MW003 23C1881-03 3/31/2013 | |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Organic Compounds by USEPA method 8260 in ug/l | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.216 | U | 0.216 | U | 0.216 | U | 0.216 | U |
| 1,1,1-Trichloroethane | 5 | 0.266 | U | 0.266 | U | 0.266 | U | 0.266 | U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.256 | U | 0.256 | U | 0.256 | U | 0.256 | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 5 | 0.286 | U | 0.286 | U | 0.286 | U | 0.286 | U |
| 1,1,2-Trichloroethane | 1 | 0.249 | U | 0.249 | U | 0.249 | U | 0.249 | U |
| 1,1-Dichloroethane | 5 | 0.272 | U | 0.272 | U | 0.272 | U | 0.272 | U |
| 1,1-Dichloroethylene | 5 | 0.327 | U | 0.327 | U | 0.327 | U | 0.327 | U |
| 1,2,3-Trichlorobenzene | 5 | 0.222 | U | 0.222 | U | 0.222 | U | 0.222 | U |
| 1,2,3-Trichloropropane | 0.04 | 0.273 | U | 0.273 | U | 0.273 | U | 0.273 | U |
| 1,2,4-Trichlorobenzene | 5 | 0.138 | U | 0.138 | U | 0.138 | U | 0.138 | U |
| 1,2,4-Trimethylbenzene | 5 | 0.310 | U | 0.310 | U | 0.310 | U | 0.310 | U |
| 1,2-Dibromo-3-chloropropane | 0.04 | 0.432 | U | 0.432 | U | 0.432 | U | 0.432 | U |
| 1,2-Dibromoethane | 0.0006 | 0.215 | U | 0.215 | U | 0.215 | U | 0.215 | U |
| 1,2-Dichlorobenzene | 3 | 0.270 | U | 0.270 | U | 0.270 | U | 0.270 | U |
| 1,2-Dichloroethane | 0.6 | 0.377 | U | 0.377 | U | 0.377 | U | 0.377 | U |
| 1,2-Dichloropropane | 1 | 0.327 | U | 0.327 | U | 0.327 | U | 0.327 | U |
| 1,3,5-Trimethylbenzene | 5 | 0.347 | U | 0.347 | U | 0.347 | U | 0.347 | U |
| 1,3-Dichlorobenzene | 3 | 0.283 | U | 0.283 | U | 0.283 | U | 0.283 | U |
| 1,3-Dichloropropane | 5 | 0.260 | U | 0.260 | U | 0.260 | U | 0.260 | U |
| 1,4-Dichlorobenzene | 3 | 0.311 | U | 0.311 | U | 0.311 | U | 0.311 | U |
| 1,4-Dioxane | NS | 35.3 | U | 35.3 | U | 35.3 | U | 35.3 | U |
| 2-Butanone | 50 | 0.421 | U | 0.421 | U | 0.421 | U | 0.421 | U |
| 2-Hexanone | 50 | 0.320 | U | 0.320 | U | 0.320 | U | 0.320 | U |
| 4-Methyl-2-pentanone | NS | 0.365 | U | 0.365 | U | 0.365 | U | 0.365 | U |
| Acetone | 50 | 1.35 | J | 1.34 | U | 1.34 | U | 3.56 | |
| Acrolein | NS | 0.447 | U | 0.447 | U | 0.447 | U | 0.447 | U |
| Acrylonitrile | NS | 0.422 | U | 0.422 | U | 0.422 | U | 0.422 | U |
| Benzene | 1 | 0.279 | U | 0.279 | U | 0.279 | U | 0.279 | U |
| Bromochloromethane | 5 | 0.354 | U | 0.354 | U | 0.354 | U | 0.354 | U |
| Bromodichloromethane | 50 | 0.25 | U | 0.245 | U | 0.245 | U | 0.245 | U |
| Bromoform | 50 | 0.163 | U | 0.163 | U | 0.163 | U | 0.163 | U |
| Bromomethane | 5 | 0.119 | U | 0.119 | U | 0.119 | U | 0.119 | U |
| Carbon disulfide | NS | 0.362 | U | 0.362 | U | 0.362 | U | 0.362 | U |
| Carbon tetrachloride | 5 | 0.204 | U | 0.204 | U | 0.204 | U | 0.204 | U |
| Chlorobenzene | 5 | 0.284 | U | 0.284 | U | 0.284 | U | 0.284 | U |
| Chloroethane | 5 | 0.448 | U | 0.448 | U | 0.448 | U | 0.448 | U |
| Chloroform | 7 | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| Chloromethane | 5 | 0.372 | U | 0.372 | U | 0.372 | U | 0.372 | U |
| cis-1,2-Dichloroethylene | 5 | 0.294 | U | 0.294 | U | 0.294 | U | 0.294 | U |
| cis-1,3-Dichloropropylene | 0.4 | 0.262 | U | 0.262 | U | 0.262 | U | 0.262 | U |
| Cyclohexane | NS | 0.491 | U | 0.491 | U | 0.491 | U | 0.491 | U |
| Dibromochloromethane | 50 | 0.146 | U | 0.146 | U | 0.146 | U | 0.146 | U |
| Dibromomethane | NS | 0.203 | U | 0.203 | U | 0.203 | U | 0.203 | U |
| Dichlorodifluoromethane | 5 | 0.451 | U | 0.451 | U | 0.451 | U | 0.451 | U |
| Ethyl Benzene | 5 | 0.290 | U | 0.290 | U | 0.290 | U | 0.290 | U |
| Hexachlorobutadiene | 0.5 | 0.241 | U | 0.241 | U | 0.241 | U | 0.241 | U |
| Isopropylbenzene | 5 | 0.405 | U | 0.405 | U | 0.405 | U | 0.405 | U |
| Methyl acetate | NS | 0.442 | U | 0.442 | U | 0.442 | U | 0.442 | U |
| Methyl tert-butyl ether (MTBE) | 10 | 0.244 | U | 0.244 | U | 0.244 | U | 0.244 | U |
| Methylcyclohexane | NS | 0.477 | U | 0.477 | U | 0.477 | U | 0.477 | U |
| Methylene chloride | 5 | 0.40 | U | 0.40 | U | 0.40 | U | 0.40 | U |
| Naphthalene | 10 | 0.21 | U | 0.21 | U | 0.21 | U | 0.21 | U |
| n-Butylbenzene | 5 | 0.399 | U | 0.399 | U | 0.399 | U | 0.399 | U |
| n-Propylbenzene | 5 | 0.384 | U | 0.384 | U | 0.384 | U | 0.384 | U |
| o-Xylene | 5 | 0.261 | U | 0.261 | U | 0.261 | U | 0.261 | U |
| p- & m- Xylenes | NS | 0.578 | U | 0.578 | U | 0.578 | U | 0.578 | U |
| p-Diethylbenzene | NS | 0.341 | U | 0.341 | U | 0.341 | U | 0.341 | U |
| p-Ethyltoluene | NS | 0.200 | U | 0.200 | U | 0.200 | U | 0.200 | U |
| p-Isopropyltoluene | 5 | 0.377 | U | 0.377 | U | 0.377 | U | 0.377 | U |
| sec-Butylbenzene | 5 | 0.444 | U | 0.444 | U | 0.444 | U | 0.444 | U |
| Styrene | 5 | 0.255 | U | 0.255 | U | 0.255 | U | 0.255 | U |
| tert-Butyl alcohol (TBA) | NS | 1.470 | | 1.200 | | 0.608 | U | 0.800 | J |
| tert-Butylbenzene | 5 | 0.367 | U | 0.367 | U | 0.367 | U | 0.367 | U |
| Tetrachloroethylene | 5 | 1.40 | | 1.27 | | 0.430 | J | 0.470 | J |
| Toluene | 5 | 0.430 | J | 0.460 | J | 0.380 | J | 0.750 | |
| trans-1,2-Dichloroethylene | 5 | 0.279 | U | 0.279 | U | 0.279 | U | 0.279 | U |
| trans-1,3-Dichloropropylene | 0.4 | 0.229 | U | 0.229 | U | 0.229 | U | 0.229 | U |
| Trichloroethylene | 5 | 0.249 | U | 0.249 | U | 0.249 | U | 0.249 | U |
| Trichlorofluoromethane | 5 | 0.337 | U | 0.337 | U | 0.337 | U | 0.337 | U |
| Vinyl Chloride | 2 | 0.469 | U | 0.469 | U | 0.469 | U | 0.469 | U |
| Xylenes, Total | 5 | 0.836 | U | 0.836 | U | 0.836 | U | 0.836 | U |

Notes:

(1) Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

NS - No Standard

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit and the result is an estimated concentration.

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.

Highlighted text denotes concentrations exceeding NYSDEC AWQS

# APPENDIX A

# AUTO REPAIR SHOP
# 223-20 BRADDOCK AVENUE
# QUEENS VILLAGE, NEW YORK 11428
# BLOCK 10757, LOT 32

## SUBSURFACE INVESITGATION REPORT

**SUBMITTED TO:**

New York State Department of Environmental Conservation
Region 2
47-70 21st Street
Long Island City, NY 11101

**PREPARED FOR:**

223-20 Braddock Avenue Corp.
c/o Robert R. Dooley, Esq.
McGiff Halverson, LLP
96 South Ocean Avenue
Patchogue, NY 11772

**PREPARED BY:**

P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Phone: 631-589-6353

Jennifer Lewis, PG, Sr. Project Manager jenniferl@pwgrosser.com

PWGC Project Number: MHD1801

**MAY 2020**

**SUBSURFACE INVESTIGATION REPORT**
**223-20 BRADDOCK AVENUE**
**QUEENS VILLAGE, NEW YORK 11428**

## TABLE OF CONTENTS


| | | PAGE |
|---|---|---|
| **CERTIFICATION** | | **II** |
| **1.0** | **INTRODUCTION** | **1** |
| **2.0** | **SITE DESCRIPTION AND HISTORY** | **2** |
| 2.1 | Site Description | 2 |
| 2.2 | Site History | 2 |
| 2.3 | Site Geology/Hydrogeology | 2 |
| **3.0** | **OBJECTIVES, SCOPE AND RATIONALE** | **3** |
| 3.1 | Subsurface Investigation Procedure | 3 |
| 3.2 | Soil Vapor Sampling | 3 |
| 3.3 | Soil Sampling | 3 |
| 3.4 | Laboratory Analysis | 4 |
| **4.0** | **ANALYTICAL RESULTS** | **5** |
| 4.1 | Soil Vapor, Indoor Air, and Ambient Air Sampling Results | 5 |
| 4.2 | Soil Sieve Analysis Report | 5 |
| 4.3 | Data Usability Summary Report | 5 |
| **5.0** | **CONCLUSIONS AND RECOMMENDATIONS** | **7** |
| **6.0** | **REFERENCES** | **8** |


## FIGURES


| | |
|---|---|
| Figure 1 | Vicinity Map |
| Figure 2 | Site Plan |
| Figure 3 | Soil Vapor Sampling Locations |
| Figure 4 | Soil Sampling Locations |


## TABLES


| | |
|---|---|
| Table 1 | Soil Vapor, Indoor Air, and Ambient Air VOCs |
| Table 2 | Summary Soil Sieve Analysis Summary |


## APPENDICES


| | |
|---|---|
| Appendix A | Soil Vapor, Indoor Air, and Ambient Air Sampling Log |
| Appendix B | Soil Boring Logs |
| Appendix C | Laboratory Data Reports |
| Appendix D | Data Usability Summary Report |




P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## CERTIFICATION

I, Jennifer Lewis, PG, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

Signature _____

Date

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## 1.0 INTRODUCTION

P.W. Grosser Consulting, Inc. (PWGC) has prepared the following Subsurface Investigation Report (SIR) on behalf of 223-20 Braddock Avenue Corp. to document the results of the Subsurface Investigation conducted in March 2020 at 223-20 Braddock Avenue in Queens Village, NY. This work was conducted in accordance with a Subsurface Investigation Work Plan (SIWP) submitted to the New York State Department of Environmental Conservation (NYSDEC) in June 2019 and approved by the NYSDEC on July 31, 2019. The scope of the workplan included an evaluation of soil vapor, sub-slab vapor, and indoor air and an evaluation of soil particle sizes in the event that a soil vapor mitigation system would be necessary.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## 2.0 SITE DESCRIPTION AND HISTORY

### 2.1 Site Description

The Site is located at 223-20 Braddock Avenue in the Queens Village section of Queens, New York and is identified as Block 10757 and Lot 32 on the New York City Tax Map. The Site is approximately 2,400-square feet and is bounded by Braddock Avenue to the north, 91st Road to the south, Moline Street to the east, and residential properties to the west. Currently, the Site is an auto body repair shop improved with a 1,204 square foot slab on grade building and an asphalt parking lot with a sheet metal awning extending from the building over the parking lot.

A Vicinity Map is included as **Figure 1**. A Site Plan is included as **Figure 2**.

### 2.2 Site History

The following is a recent history of events and activities associated with the Site:

- On August 5, 2016, Island Pump and Tank (IPT) personnel were on-site to remove an underground storage tank (UST). The UST system closure activities included the removal of one 285-gallon fiberglass waste oil UST. Following the removal of the former UST, observed petroleum impacts were present within the soil at the bottom of the excavation. Elevated PID readings, greater than 500 parts per million (ppm), were also encountered within the base of the excavation. At this time, IPT notified the New York State Department of Environmental Conservation (NYSDEC) Spills Hotline; Spill Number 16-04577 and Spill Case Manager, Mr. Hiralkumar Patel, were assigned to the site. Due to the observed petroleum impacts and elevated PID readings, soils were excavated from the base of the former UST excavation to the extent feasible. Excavation activities ensued until the structural integrity of the surrounding building and sidewalk were threatened and deemed unsafe to continue. IPT collected a total of five soil samples ranging from 5.5-6 feet below ground surface (bgs) on the sidewalls and to 10 feet bgs on the bottom of the excavation. Several volatile organic compounds (VOCs) were detected which included petroleum related compounds and tetrachloroethylene (PCE) which contained the highest detection at 360,000 µg/kg in the eastern sidewall sample. Elevated concentrations of PCE were also detected in the north sidewall and bottom samples. The western sidewall sample contained a concentration of PCE of only 2.6 µg/kg.
- In March 2018, IPT conducted a subsurface investigation at the Site which included the collection of eight soil samples from four soil borings along the eastern portion of the site, around the former UST location, and within the former UST excavation. The 15 to 20 feet bgs sample collected from within the excavation contained the highest concentration of VOCs, including PCE at 72,000 µg/kg. The deeper sample collected from 35 to 40 feet bgs was non-detect.

### 2.3 Site Geology/Hydrogeology

Regionally, groundwater flows north-northwest toward Little Neck Bay. The depth to groundwater beneath the site is estimated at 48 feet bgs. The approximate ground surface elevation is about 90 feet above mean sea level.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## 3.0 OBJECTIVES, SCOPE AND RATIONALE

### 3.1 Subsurface Investigation Procedure

The primary objectives of the work detailed in this report was to collect the information and field data necessary to address data gaps pertaining to on-site issues. The Scope of Work included the following tasks:

1. Soil vapor sampling
2. Soil characterization for sieve analysis

### 3.2 Soil Vapor Sampling

A total of four soil vapor samples were collected from the proposed locations on the Sampling Location Map (**Figure 3**). Samples were collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006). The subsurface sampling locations were installed on March 12, 2020 and air samples were collected on March 13, 2020.

Installation of the subsurface vapor samples was conducted by IPT. One of the samples was collected beneath the building and was installed as a sub-slab soil vapor sample (SS001). The sub-slab vapor sample was installed within 2 inches of the bottom of the concrete slab and was installed with a core drill. The remaining soil vapor samples were set at a depth of approximately 6 feet bgs to correspond to the estimated depth of the basement at the neighboring residential property to the west (SV001, SV002, SV003). The vapor implants were installed using a Geoprobe® direct-push drill rig. Sample points were constructed with a stainless-steel screen implant in the sampling zone with dedicated polyethylene tubing to grade. The annulus around the vapor implant was filled with inert material (clean sand) and sealed with bentonite grout.

One indoor air sample (IA001) and one ambient air sample (OA001) were also collected. The ambient air sample was placed on the property within the paved parking area on the up-wind side. The indoor air sample was placed in the office of the auto repair shop. Both samples were placed a minimum of 3 feet off the ground.

Approximately 24 hours following soil vapor probe installation, a tracer gas (helium) was used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seals. One to three implant volumes were then purged prior to the collection of the soil-gas samples. Flow rate for both purging and sampling did not exceed 0.2 L/min. Samples were collected in 2.7 L Summa canisters that were certified clean by the laboratory. Summa canisters were connected to the sampling ports and run continuously for a duration of approximately 8 hours. The soil vapor, indoor air, and ambient air sampling log is located in **Appendix A**.

### 3.3 Soil Sampling

A potential remedial option for the soil vapor, if warranted, is the installation of a soil vapor extraction system. For design purposes, soil samples were collected for sieve analysis to determine the permeability of the subsurface soils.

PWGC oversaw installation of three soil borings (SB001, SB002, SB003) at the Site, as shown on **Figure 4**. Soil borings were advanced to a depth of 9 feet below grade at SB001 and SB003 and to a depth of 10 feet



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

below grade at SB002 using direct-push drilling methods. Soil was collected continuously to the boring termination depth with a macro-core sampler in 3- or 5-foot increments using disposable acetate sleeves. Each sample was screened for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory indications of environmental impacts. Prior to using the PID for soil screening, the equipment was calibrated following the manufacturer standard operating procedure, including a zeroing of the instrument and a span calibration with 100 parts per million (ppm) isobutylene. The maximum PID reading was 0.5 ppm in SB001. Soil descriptions are recorded in boring logs included as **Appendix B**. One soil sample was collected from the deepest 2-foot interval from each boring and submitted to the laboratory for sieve analysis.

### 3.4 Laboratory Analysis

Samples were submitted under proper chain-of-custody procedures to Alpha Analytical Laboratories (a New York State Department of Health Environmental Laboratory Approval Program certified laboratory) for analysis. Soil vapor, indoor air, and ambient air samples were analyzed for VOCs by United States Environmental Protection Agency (USEPA) method TO-15 and the sieve analyses for the soil samples was conducted using the American Society for Testing and Materials (ASTM) D-422 method.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353
PWGROSSER.COM
630 JOHNSON AVENUE, STE 7
BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## 4.0 ANALYTICAL RESULTS

### 4.1 Soil Vapor, Indoor Air, and Ambient Air Sampling Results

The primary method for the evaluation of soil vapor and indoor air data in New York is the use of Soil Vapor / Indoor Air Matrices provided in the NYSDOH Guidance document. The matrices incorporate both soil vapor concentrations and their corresponding indoor air concentrations in a table to formulate an appropriate action for a sampling site. Matrices have been developed for 1,1-dichlorothene, cis-1,2-dichloroethene (DCE), vinyl chloride (VC), tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-Trichloroethane, and carbon tetrachloride. Although matrices have not yet been developed for other compounds, consideration is given to the comparisons between the soil vapor and indoor air concentrations to determine if vapor intrusion is occurring.

A comparison of PCE concentrations between the one sub-slab vapor sample (SS001 at 307 µg/$m^3$) and the indoor air sample (IA001 at 1.62 µg/$m^3$) indicates that no further action is necessary. The remainder of the compounds on the matrices were not detected in both the sub-slab or indoor air sample. Of the remaining compounds from the NYSDOH matrices, IA001 contained a detectable concentration of carbon tetrachloride (0.384 µg/$m^3$). The outdoor air sample (OA001) contains a similar concentration of 0.39 µg/$m^3$. The detection of carbon tetrachloride is likely indicative of background concentrations.

SV002 contained the highest concentration of chlorinated compounds and is located near the former UST location on the eastern side of the property. Concentrations of PCE and its breakdown products are as follows: PCE at 2,170 µg/$m^3$, TCE at 72.6 µg/$m^3$, DCE at 238 µg/$m^3$, and less than the detection limit for VC. This sample is the only sample that contained detectable concentrations of TCE and DCE. The compounds 1,1,1-trichloroethane, 1,1-dichloroethene, methylene chloride, and vinyl chloride were not detected at concentrations greater than detection limits in any of the samples.

SV001 is located closest to the residential properties on the western side of the property and contained a PCE concentration of 78.7 µg/$m^3$, indicating that soil vapor is not significantly migrating towards the residential property.

Analytical results are detailed in **Table 1** and the complete laboratory analytical report is included as **Appendix C**.

### 4.2 Soil Sieve Analysis Report

A sieve analysis was conducted by the ASTM D-422 procedure. The samples were collected from the deepest 2-foot interval of each boring. SB001 consisted mostly of larger grain materials (gravel and medium- to coarse-grained sand), SB002 consisted of approximately half fine-grained materials and half larger-grained materials, and SB003 consisted mostly of smaller grained materials (fine-grained sands and fines). Analytical results are detailed in **Table 2** and the complete laboratory analytical report is included in **Appendix C**.

### 4.3 Data Usability Summary Report

Analytical data packages obtained from Alpha for each sampling event were sent to Laboratory Data Consultants, Inc (LDC) of Carlsbad, CA to undergo a systematic data validation to provide assurance that the data was adequate for its intended use. All data was deemed acceptable by the data validator,

incorporating data qualifiers as appropriate. Validation consisted of an evaluation of the following criteria:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (CG/MS) Tunes
- Initial and counting Calibrations
- Blanks
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Quantization Limits and Data Assessment
- Sample Quantization and Compound Identification

A copy of LDC's data usability summary reports during this reporting period is included as **Appendix D**. **Table 1** was updated, as appropriate, based upon the data validator's review.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

A subsurface investigation was conducted at the site in March 2020. Four subsurface vapor samples, an indoor air sample, and an outdoor air sample were collected. Analytical results from this investigation indicated that there does not appear to be significant vapor migration off-site and a comparison of the indoor air sample to the sub-slab sample indicated that no further action is warranted. Elevated concentrations of chlorinated compounds were detected in the soil vapor sample collected closest to the former tank location; PCE was the highest compound detected at a concentration of 2,170 µg/$m^3$.

Although the sub-slab and indoor air sample indicate that no further action is necessary, PWGC does recommend the installation of a passive soil vapor mitigation system, consisting of a vertical screened well installed in the former location of the UST, to reduce the potential for future intrusion into the on-site building.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

## 6.0 REFERENCES

NYSDEC, Division of Environmental Restoration, 6 NYCRR Part 375 Subpart 6, Remedial Program Soil Cleanup Objectives.

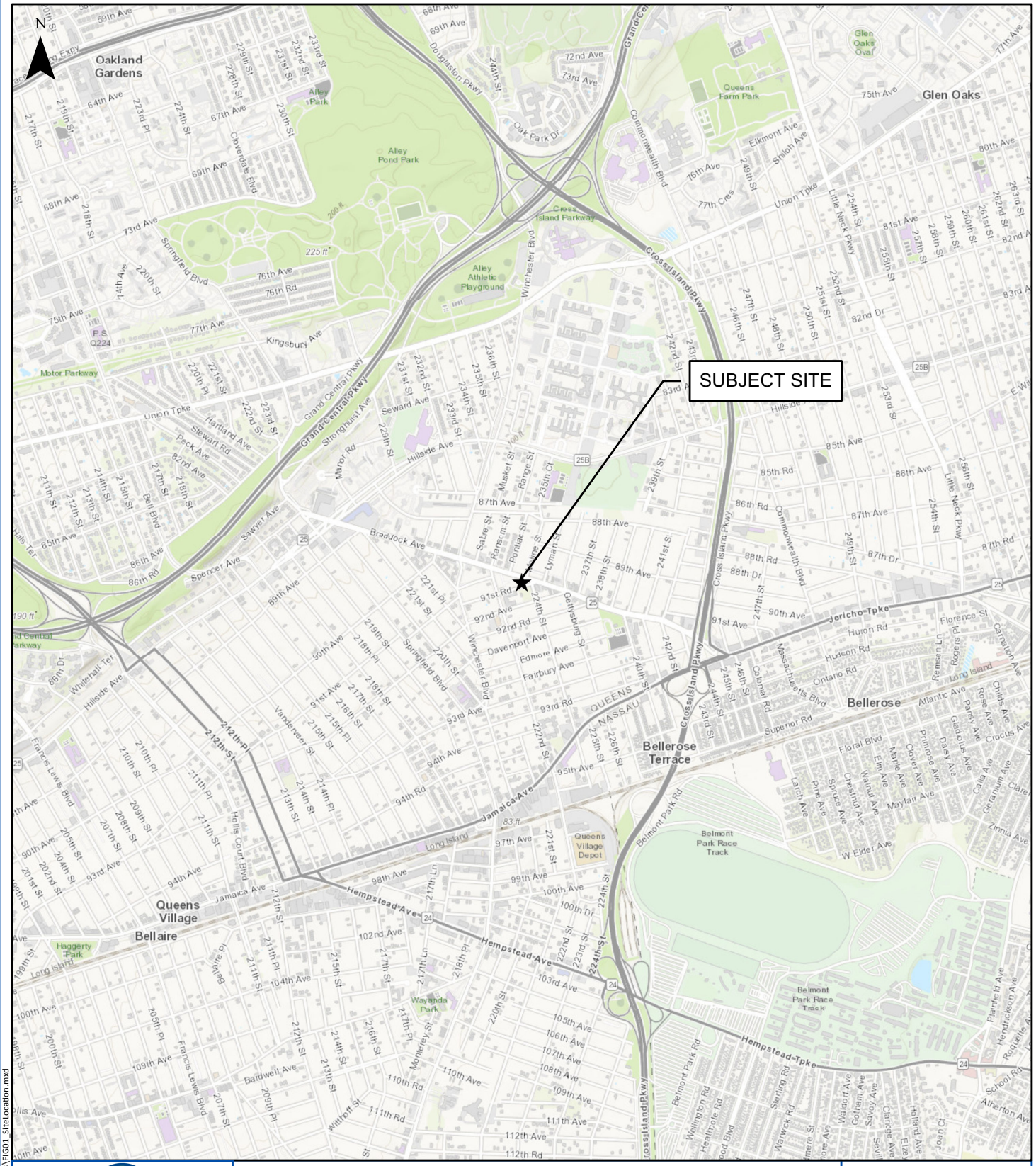
NYSDEC, Division of Environmental Remediation, May 2012, Draft DER-10, Technical Guidance for Site Investigation and Remediation.

NYSDOH, October 2006, Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York.



P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353 PWGROSSER.COM 630 JOHNSON AVENUE, STE 7 BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

# FIGURES




# SITE LOCATION

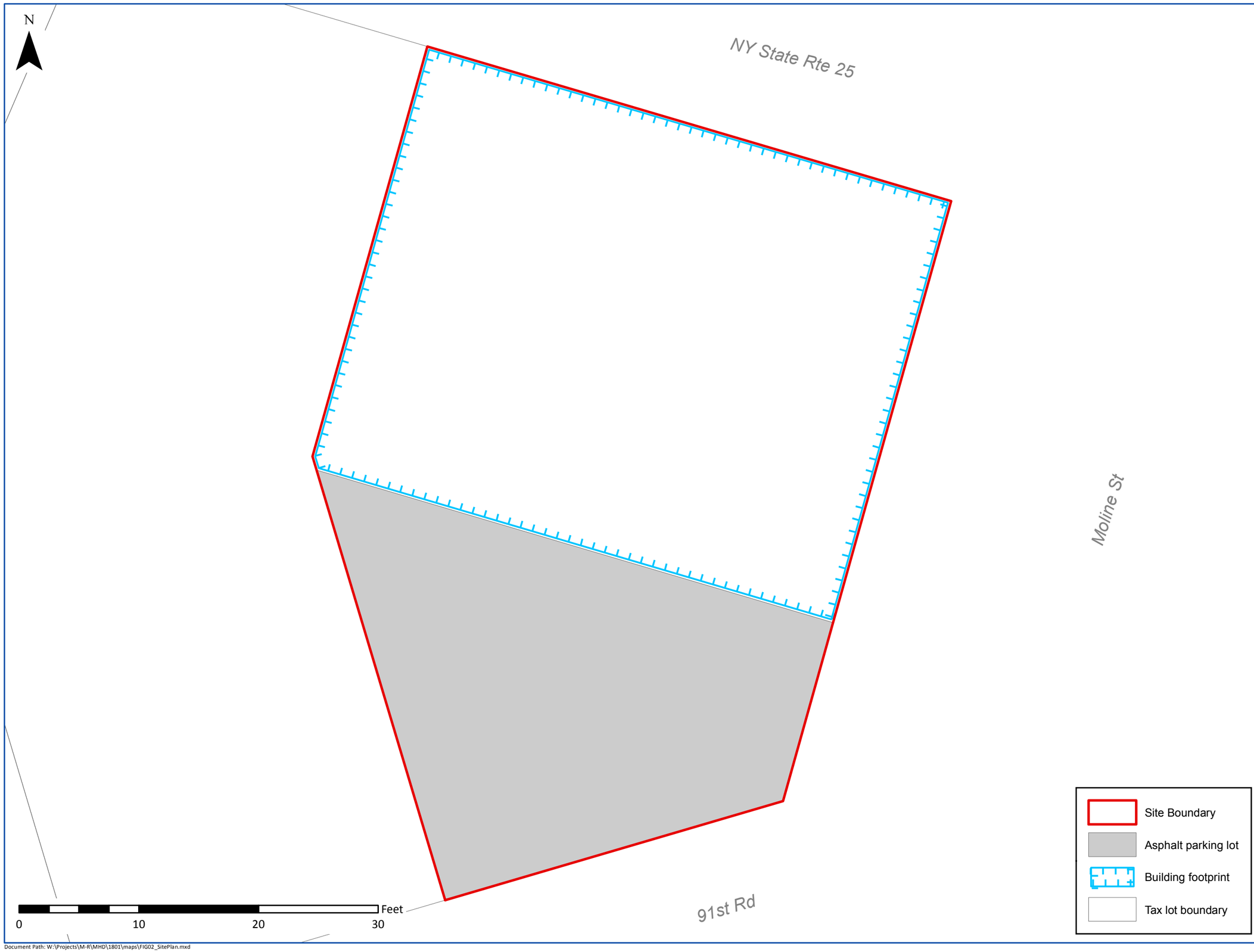
223-20 Braddock Ave
Queens Village, NY

0 ¼ ½ ¾ 1 Miles

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

| | |
|---|---|
| Project: | MHD1801 |
| Date: | 4/12/2019 |
| Designed by: | JL |
| Drawn by: | TS |
| Approved by: | JL |
| Figure No: | 1 |

Document Path: W:\Projects\M-R\MHD\1801\maps\FIG01_SiteLocation.mxd




PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW

DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | JL |
| Date: | 4/12/2019 | Drawn by: | TS |
| Scale: | AS SHOWN | Approved by: | JL |

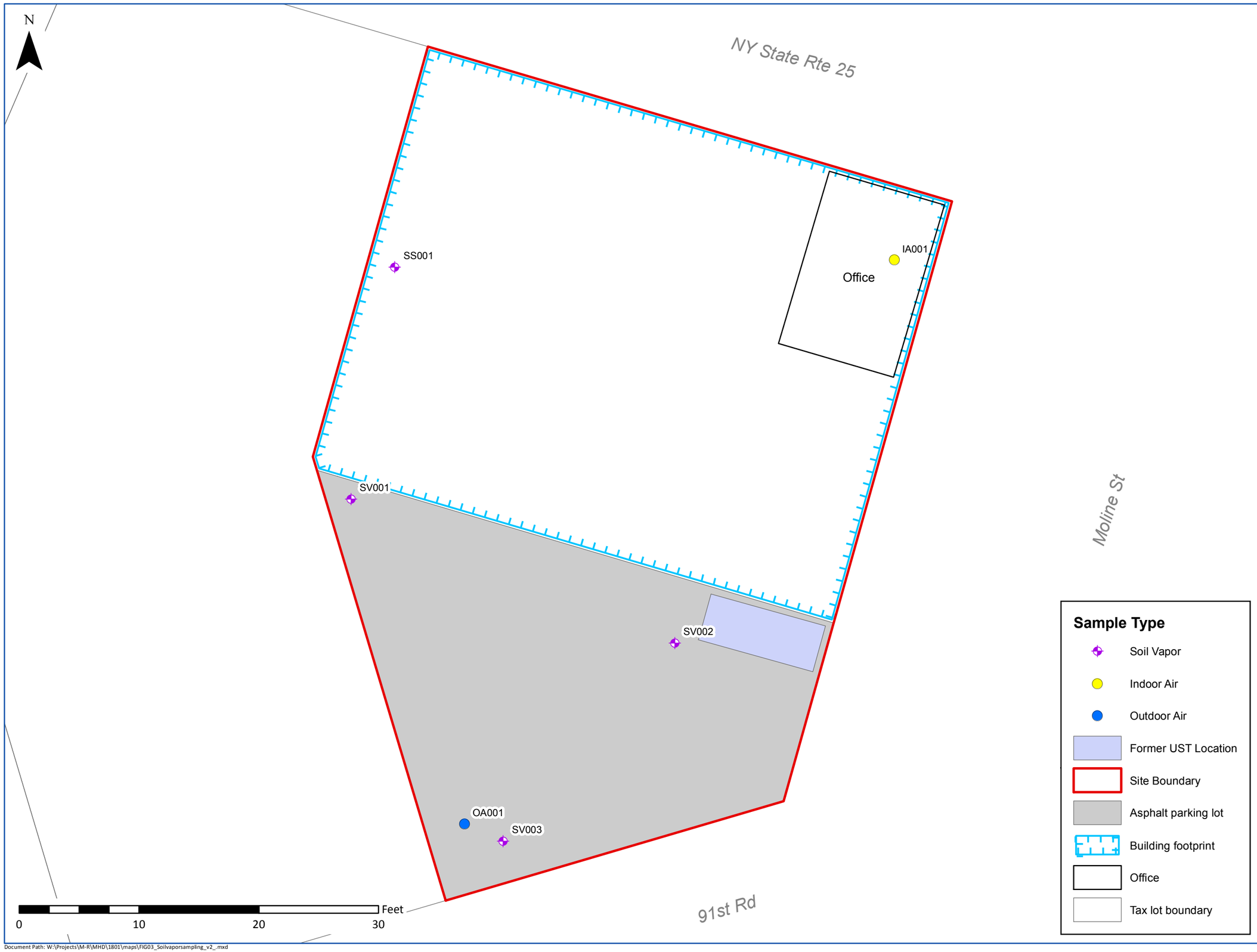
# SITE PLAN

223-20 Braddock Ave
Queens Village, NY

FIGURE NO:

2

Document Path: W:\Projects\M-R\MHD\1801\maps\FIG02_SitePlan.mxd




**Sample Type**

- Soil Vapor
- Indoor Air
- Outdoor Air
- Former UST Location
- Site Boundary
- Asphalt parking lot
- Building footprint
- Office
- Tax lot boundary

Document Path: W:\Projects\M-R\MHD\1801\maps\FIG03_Soilvaporsampling_v2_.mxd

PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW

DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

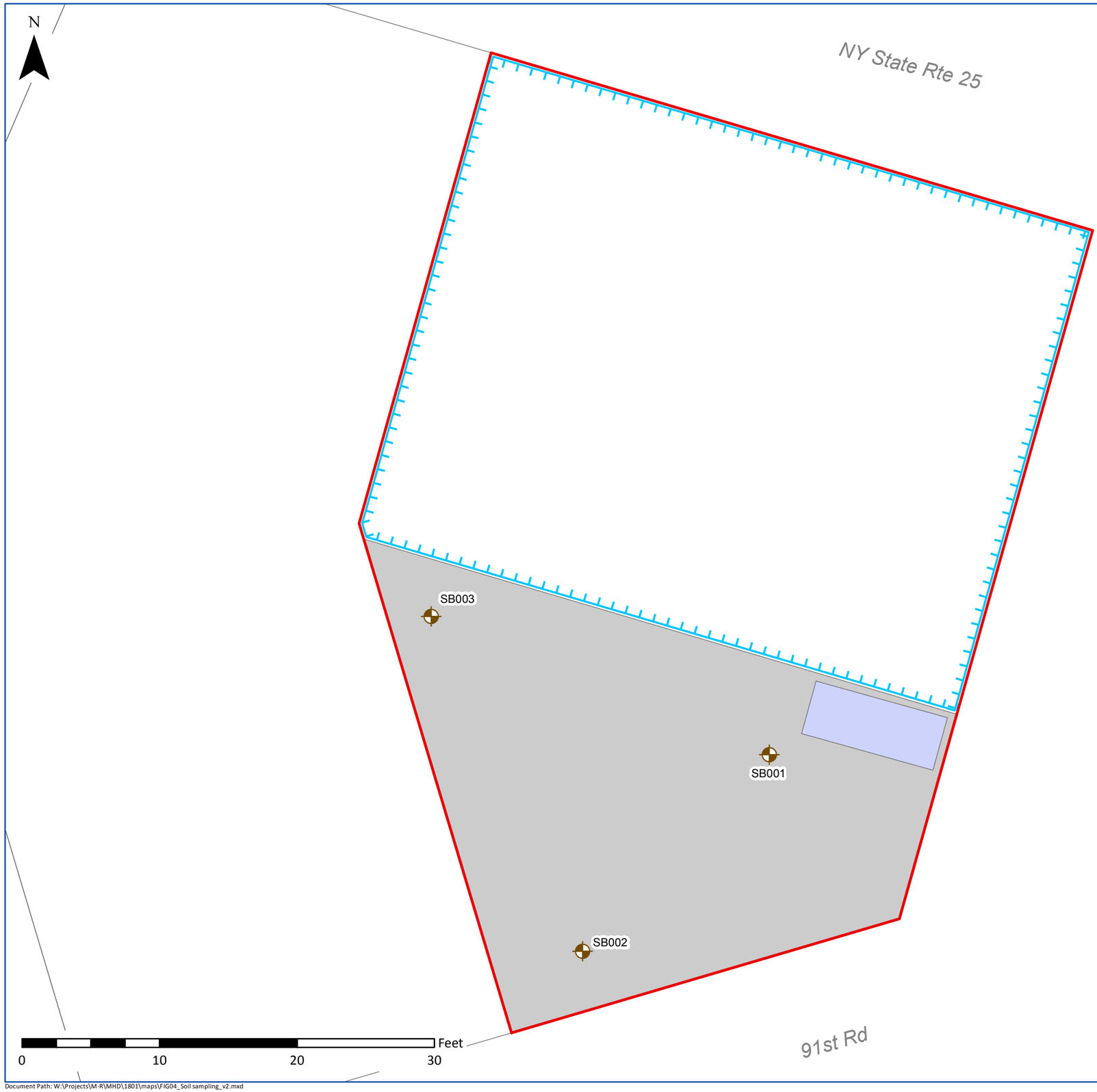
| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | JL |
| Date: | 4/29/2020 | Drawn by: | TS |
| Scale: | AS SHOWN | Approved by: | JL |

# SOIL VAPOR SAMPLING LOCATIONS

223-20 Braddock Ave
Jamaica, NY

FIGURE NO:

3




PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting Engineer & Hydrogeologist, PC
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW

DRAWING PREPARED FOR:

| REVISION | DATE | INITIAL | COMMENTS |
|---|---|---|---|
| | | | |

DRAWING INFORMATION:

| | | | |
|---|---|---|---|
| Project: | MHD1801 | Designed by: | JL |
| Date: | 3/23/2020 | Drawn by: | TS |
| Scale: | AS SHOWN | Approved by: | JL |

# SOIL SAMPLING LOCATIONS

223-20 Braddock Ave
Jamaica, NY

FIGURE NO:

4

Document Path: W:\Projects\M-R\MHD\1801\maps\FIG04_Soil sampling_v2.mxd

# TABLES

**Table 1**
**Soil Vapor Results Summary**
**223-20 Braddock Avenue, Queens Village, NY**

| Client Sample ID: | SS001 | | SV001 | | SV002 | | SV003 | | OA001 | | IA001 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Laboratory ID: | L2011723-01 | | L2011723-02 | | L2011723-03 | | L2011723-04 | | L2011723-05 | | L2011723-06 | |
| Sampling Date: | 3/13/2020 | | 3/13/2020 | | 3/13/2020 | | 3/13/2020 | | 3/13/2020 | | 3/13/2020 | |
| **Volatile Organics in Air by USEPA method TO-15 in µg/m3** | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | 1.09 | U | 3.64 | U | 6.82 | U | 2.73 | U | 0.109 | U | 0.109 | U |
| 1,1,2,2-Tetrachloroethane | 1.37 | U | 4.58 | U | 8.58 | U | 3.43 | U | 1.37 | U | 1.37 | U |
| 1,1,2-Trichloroethane | 1.09 | U | 3.64 | U | 6.82 | U | 2.73 | U | 1.09 | U | 1.09 | U |
| 1,1-Dichloroethane | 0.809 | U | 2.7 | U | 5.06 | U | 2.02 | U | 0.809 | U | 0.809 | U |
| 1,1-Dichloroethene | 0.793 | U | 2.64 | U | 4.96 | U | 1.98 | U | 0.079 | U | 0.079 | U |
| 1,2,4-Trichlorobenzene | 1.48 | U | 4.95 | U | 9.28 | U | 3.71 | U | 1.48 | UJ | 1.48 | UJ |
| 1,2,4-Trimethylbenzene | 11 | | 14.6 | | 8.9 | | 3.78 | | 1.22 | | 26.3 | |
| 1,2-Dibromoethane | 1.54 | U | 5.13 | U | 9.61 | U | 3.84 | U | 1.54 | U | 1.54 | U |
| 1,2-Dichlorobenzene | 1.2 | U | 4.01 | U | 7.52 | U | 3.01 | U | 1.2 | U | 1.2 | U |
| 1,2-Dichloroethane | 0.809 | U | 2.7 | U | 5.06 | U | 2.02 | U | 0.809 | U | 0.809 | U |
| 1,2-Dichloropropane | 0.924 | U | 3.08 | U | 5.78 | U | 2.31 | U | 0.924 | U | 0.924 | U |
| 1,3,5-Trimethylbenzene | 3.79 | | 3.85 | | 6.15 | U | 2.46 | U | 0.983 | U | 6.88 | |
| 1,3-Butadiene | 1.84 | | 1.48 | U | 2.77 | U | 9.98 | | 0.442 | U | 3.27 | |
| 1,3-Dichlorobenzene | 1.2 | U | 4.01 | U | 7.52 | U | 3.01 | U | 1.2 | U | 1.2 | U |
| 1,4-Dichlorobenzene | 1.2 | U | 4.01 | U | 7.52 | U | 3.01 | U | 1.2 | U | 1.2 | U |
| 1,4-Dioxane | 0.721 | U | 2.4 | U | 4.5 | U | 1.8 | U | 0.721 | U | 0.721 | U |
| 2,2,4-Trimethylpentane | 24.5 | | 3.12 | U | 5.84 | U | 2.34 | U | 1.72 | | 24.9 | |
| 2-Butanone | 15.1 | | 139 | | 82.6 | | 188 | | 1.47 | U | 3.3 | |
| 2-Hexanone | 11.8 | | 33.1 | | 36.6 | | 58.6 | | 0.82 | UJ | 0.82 | UJ |
| 3-Chloropropene | 0.626 | U | 2.09 | U | 3.91 | U | 1.57 | U | 0.626 | U | 0.626 | U |
| 4-Ethyltoluene | 3.62 | | 3.28 | U | 6.15 | U | 2.46 | U | 0.983 | U | 5.21 | |
| 4-Methyl-2-pentanone | 2.42 | | 9.26 | | 12.8 | U | 5.12 | U | 2.05 | U | 2.81 | |
| Acetone | 94.8 | | 1880 | | 1020 | | 1770 | | 12.1 | | 37.5 | |
| Benzene | 10.7 | | 4.03 | | 3.99 | U | 3.39 | | 1.34 | | 21.5 | |
| Benzyl chloride | 1.04 | U | 3.45 | U | 6.47 | U | 2.59 | U | 1.04 | U | 1.04 | U |
| Bromodichloromethane | 35.1 | | 4.47 | U | 8.37 | U | 3.35 | U | 1.34 | U | 1.34 | U |
| Bromoform | 2.07 | U | 6.9 | U | 12.9 | U | 5.17 | U | 2.07 | U | 2.07 | U |
| Bromomethane | 0.777 | U | 2.59 | U | 4.85 | U | 1.94 | U | 0.777 | U | 0.777 | U |
| Carbon disulfide | 4.48 | | 2.55 | | 3.89 | U | 1.56 | U | 0.623 | U | 0.623 | U |
| Carbon tetrachloride | 1.26 | U | 4.2 | U | 7.86 | U | 3.15 | U | 0.39 | | 0.384 | |
| Chlorobenzene | 0.921 | U | 3.07 | U | 5.76 | U | 2.3 | U | 0.921 | U | 0.921 | U |
| Chloroethane | 0.528 | U | 1.76 | U | 3.3 | U | 1.32 | U | 0.528 | U | 0.528 | U |
| Chloroform | 338 | | 3.26 | U | 50.8 | | 2.5 | | 0.977 | U | 0.977 | U |
| Chloromethane | 0.535 | | 1.38 | U | 2.58 | U | 1.03 | U | 1.34 | | 1.67 | |
| cis-1,2-Dichloroethene | 0.793 | U | 2.64 | U | 238 | | 1.98 | U | 0.079 | U | 0.079 | U |
| cis-1,3-Dichloropropene | 0.908 | U | 3.03 | U | 5.67 | U | 2.27 | U | 0.908 | U | 0.908 | U |
| Cyclohexane | 49.9 | | 5.89 | | 4.3 | U | 1.72 | U | 4.27 | | 85.4 | |
| Dibromochloromethane | 1.7 | U | 5.68 | U | 10.6 | U | 4.26 | U | 1.7 | U | 1.7 | U |
| Dichlorodifluoromethane | 2.02 | | 3.3 | U | 6.18 | U | 2.47 | U | 2.31 | | 2.32 | |
| Ethanol | 20.3 | | 31.5 | U | 58.8 | U | 28.8 | | 31.1 | | 228 | |
| Ethyl Acetate | 1.8 | U | 6.02 | U | 11.2 | U | 4.5 | U | 1.8 | U | 1.8 | U |
| Ethylbenzene | 16.6 | | 7.21 | | 12.5 | | 3.93 | | 1.17 | | 18.9 | |
| Freon-113 | 1.53 | U | 5.11 | U | 9.58 | U | 3.83 | U | 1.53 | U | 1.53 | U |
| Freon-114 | 1.4 | U | 4.66 | U | 8.74 | U | 3.49 | U | 1.4 | U | 1.4 | U |
| Heptane | 21.7 | | 45.1 | | 10.3 | | 9.67 | | 2.54 | | 32.7 | |
| Hexachlorobutadiene | 2.13 | U | 7.11 | U | 13.3 | U | 5.33 | U | 2.13 | U | 2.13 | U |
| Isopropanol | 4.03 | | 32.9 | | 16 | | 22.1 | | 8.06 | | 42.5 | |
| Methyl tert butyl ether | 0.721 | U | 2.4 | U | 4.51 | U | 1.8 | U | 0.721 | U | 0.721 | U |
| Methylene chloride | 1.74 | U | 5.8 | U | 10.8 | U | 4.34 | U | 1.74 | U | 1.74 | U |
| n-Hexane | 114 | | 11.3 | | 4.41 | U | 5.25 | | 10.2 | | 203 | |
| o-Xylene | 19.2 | | 10.6 | | 14.1 | | 3.91 | | 1.5 | | 26.5 | |
| p/m-Xylene | 44.3 | | 29.2 | | 41.3 | | 12.1 | | 4.23 | | 68.2 | |
| Styrene | 0.864 | | 2.84 | U | 5.32 | U | 2.13 | U | 0.852 | U | 1.34 | |
| Tertiary butyl Alcohol | 6.18 | | 27.2 | | 14.6 | | 25.8 | | 1.52 | U | 1.52 | U |
| Tetrachloroethene | 307 | | 78.7 | | 2170 | | 231 | | 0.278 | | 1.62 | |
| Tetrahydrofuran | 9.02 | | 23.1 | | 13.7 | | 21 | | 1.47 | U | 1.47 | U |
| Toluene | 70.5 | | 51.3 | | 37 | | 26.2 | | 8.14 | | 98.4 | |
| trans-1,2-Dichloroethene | 0.793 | U | 2.64 | U | 4.96 | U | 1.98 | U | 0.793 | U | 0.793 | U |
| trans-1,3-Dichloropropene | 0.908 | U | 3.03 | U | 5.67 | U | 2.27 | U | 0.908 | U | 0.908 | U |
| Trichloroethene | 1.07 | U | 3.58 | U | 72.6 | | 2.69 | U | 0.107 | U | 0.107 | U |
| Trichlorofluoromethane | 1.17 | | 3.75 | U | 7.02 | U | 2.81 | U | 1.34 | | 1.33 | |
| Vinyl bromide | 0.874 | U | 2.92 | U | 5.47 | U | 2.19 | U | 0.874 | U | 0.874 | U |
| Vinyl chloride | 0.511 | U | 1.71 | U | 3.2 | U | 1.28 | U | 0.051 | U | 0.051 | U |
| Total CVOCs | 307.0 | | 78.7 | | 2,481 | | 231.0 | | 0.3 | | 1.6 | |
| Total VOCs | 1,244 | | 2,409 | | 3,839 | | 2,426 | | 93.2 | | 943.9 | |

Notes:
U Indicates that the analyte was not detected above the laboratory MDL
J Indicates an estimated value
Total CVOCs consists of the sum of PCE, TCE, DCE, and VC
Highlighted values indicate detectable concentration of compound

**Table 2**
**Soil Sieve Analysis Summary**
**223-20 Braddock Avenue, Queens Village, NY**

| Client Sample ID: | SB001 | SB002 | SB003 |
|---|---|---|---|
| Sample Depth: | 7-9' | 8-10' | 7-9' |
| Laboratory ID: | L2011250-01 | L2011250-02 | L2011250-03 |
| Sampling Date: | 3/12/2020 | 3/12/2020 | 3/12/2020 |
| **Sieve Analysis by %** | | | |
| Cobbles | ND | ND | ND |
| % Coarse Gravel | ND | 14 | ND |
| % Fine Gravel | 31.3 | 16.3 | 6.6 |
| % Total Gravel | 31.3 | 29.9 | 6.6 |
| % Coarse Sand | 9.3 | 4.6 | 7 |
| % Medium Sand | 22.9 | 15 | 22.3 |
| % Fine Sand | 30.6 | 15.4 | 16.8 |
| % Total Sand | 62.8 | 35 | 46.1 |
| % Total Fines | 5.9 | 35.1 | 47.3 |

Notes:

ND - No detection of particle size.

# APPENDIX A
# Air Sampling Logs

P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353
PWGROSSER.COM
630 JOHNSON AVENUE, STE 7
BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

**223-20 Braddock Avenue, Queens Village, NY**

Soil Vapor Sampling Log

| Sample ID | Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Canister ID | Regulator ID |
|---|---|---|---|---|---|---|---|
| SS001 | 3/13/2020 | 9:20 | 16:25 | -30.12 | -7.35 | 2181 | 01286 |
| SV001 | 3/13/2020 | 9:35 | 16:26 | -29.92 | -7.86 | 3097 | 01395 |
| SV002 | 3/13/2020 | 9:47 | 16:27 | -29.93 | -8.48 | 3169 | 01151 |
| SV003 | 3/13/2020 | 10:05 | 16:28 | -29.92 | -8.52 | 3196 | 0340 |
| OA001 | 3/13/2020 | 10:15 | 16:29 | -29.94 | -9.20 | 2951 | 01803 |
| IA001 | 3/13/2020 | 10:20 | 16:30 | -30.35 | -11.59 | 3184 | 0774 |

# APPENDIX B
# Soil Boring Logs

P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353
PWGROSSER.COM
630 JOHNSON AVENUE, STE 7
BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

| | | | |
|---|---|---|---|
| PROJECT #: | MHD1801 | | |
| SITE ADDRESS: | 223-20 Braddock Ave, Jamaica, NY | | |
| BORING ID: | SB001 | BORING DEPTH (FT): 9 | CORE LENGTH (FT): 3 |
| WELL ID: | N/A | BORING DIAMETER (IN): 2 | WELL DIAMETER (IN): N/A |
| DRILLING CONTRACTOR: | Island Pump and Tank, Corp. | DATE STARTED: 03/12/2020 | DATE FINISHED: 03/12/2020 |
| DRILLING METHOD: | Direct Push | TIME STARTED: 11:15 | TIME FINISHED: 11:31 |
| DRILLING EQUIPMENT: | Geoprobe 7720DT | LATITUDE: N/A | LONGITUDE: N/A |
| SAMPLING METHOD: | Macrocore | PROJECT MANAGER: Jennifer Lewis | LOGGED BY: C. Precht |

| DEPTH (feet) | SAMPLE INTERVAL | USCS KEY | RECOVERY (feet) | DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor | PID Reading (ppm) | DEPTH (feet) | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|---|
| 0 | | | | Concrete, dry, no odor | 0 | 0 | |
| 1 | | | | Asphalt, brick, gravel, dry, no odor | 0 | 1 | |
| 2 | | | 2 | WELL GRADED SAND (SW): dark brown, dry, fine sand, some gravel, no odor | 0.5 | 2 | |
| 3 | | | | Concrete, dry, no odor | 0 | 3 | |
| 4 | | | 2 | WELL GRADED SAND (SW): medium brown, moist, fine to medium sand, gravel/pebbles, no odor | 0.3 | 4 | |
| 5 | | | | | | 5 | |
| 6 | | | | | 0.3 | 6 | |
| 7 | | | 2.5 | WELL GRADED SAND (SW): light brown, dry, fine to medium sand, some rock fragments, no odor | 0.4 | 7 | |
| 8 | | | | WELL GRADED SAND (SW): medium brown, moist, fine to medium sand, gravel/pebbles, no odor | 0.5 | 8 | |
| 9 | | | | | | 9 | |

| | |
|---|---|
| PROJECT #: | MHD1801 |
| SITE ADDRESS: | 223-20 Braddock Ave, Jamaica, NY |
| BORING ID: | SB002 |
| WELL ID: | N/A |
| DRILLING CONTRACTOR: | Island Pump and Tank, Corp. |
| DRILLING METHOD: | Direct Push |
| DRILLING EQUIPMENT: | Geoprobe 7720DT |
| SAMPLING METHOD: | Macrocore |

PWGC

| | |
|---|---|
| BORING DEPTH (FT): 10 | CORE LENGTH (FT): 5 |
| BORING DIAMETER (IN): 2 | WELL DIAMETER (IN): N/A |
| DATE STARTED: 03/12/2020 | DATE FINISHED: 03/12/2020 |
| TIME STARTED: 11:40 | TIME FINISHED: 12:00 |
| LATITUDE: N/A | LONGITUDE: N/A |
| PROJECT MANAGER: Jennifer Lewis | LOGGED BY: C. Precht |

| DEPTH (feet) | SAMPLE INTERVAL | USCS KEY | RECOVERY (feet) | DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor | PID Reading (ppm) |
|---|---|---|---|---|---|
| 0 | | | | Concrete, dry, no odor | 0 |
| 1 | | | | Asphalt, brick, rock fragments, dry, no odor | 0 |
| 2 | | | 2.5 | POORLY GRADED SAND (SP): dark brown, moist, fine sand, no odor | 0 |
| 3 | | | | | |
| 4 | | | | | 0.1 |
| 5 | | | | WELL GRADED SAND (SW): medium brown, moist, fine to medium sand, gravel/pebbles, no odor | |
| 6 | | | | | 0 |
| 7 | | | 3 | | |
| 8 | | | | LEAN CLAY (CL): light brown, moist, clay, no odor | 0.1 |
| 9 | | | | WELL GRADED SAND (SW): medium brown, moist, fine to medium sand, gravel/pebbles, no odor | 0 |
| 10 | | | | | |

| DEPTH (feet) | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|
| 0 | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |

| | |
|---|---|
| PROJECT #: | MHD1801 |
| SITE ADDRESS: | 223-20 Braddock Ave, Jamaica, NY |
| BORING ID: | SB003 |
| WELL ID: | N/A |
| DRILLING CONTRACTOR: | Island Pump and Tank, Corp. |
| DRILLING METHOD: | Direct Push |
| DRILLING EQUIPMENT: | Geoprobe 7720DT |
| SAMPLING METHOD: | Macrocore |

PWGC

| | |
|---|---|
| BORING DEPTH (FT): 9 | CORE LENGTH (FT): 3 |
| BORING DIAMETER (IN): 2 | WELL DIAMETER (IN): N/A |
| DATE STARTED: 03/12/2020 | DATE FINISHED: 03/12/2020 |
| TIME STARTED: 14:15 | TIME FINISHED: 14:35 |
| LATITUDE: N/A | LONGITUDE: N/A |
| PROJECT MANAGER: Jennifer Lewis | LOGGED BY: C. Precht |

| DEPTH (feet) | SAMPLE INTERVAL | USCS KEY | RECOVERY (feet) | DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor | PID Reading (ppm) | DEPTH (feet) | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|---|
| 0 | | | | Concrete, dry, no odor | 0 | 0 | |
| 1 | | | 2 | WELL GRADED SAND (SW): dark brown, moist, fine sand, some gravel/pebbles, no odor | 0 | 1 | |
| 2 | | | | | | 2 | |
| 3 | | | 2 | WELL GRADED SAND (SW): medium brown, moist, fine to medium sand, trace gravel, no odor | 0.2 | 3 | |
| 4 | | | | | | 4 | |
| 5 | | | | | | 5 | |
| 6 | | | 2.5 | LEAN CLAY (CL): light brown/gray, moist, clay, no odor | 0.1 | 6 | |
| 7 | | | | | | 7 | |
| 8 | | | | WELL GRADED SAND (SW): medium brown, moist, fine to medium sand, trace gravel, no odor | 0 | 8 | |
| 9 | | | | | | 9 | |

| | | | |
|---|---|---|---|
| **P.W. Grosser Consulting** | **End of Boring Depth (feet):** 9 | **Water Table Symbol:** ▼ | Page 1 of 1 |

# APPENDIX C
# Laboratory Data Reports

P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353
PWGROSSER.COM
630 JOHNSON AVENUE, STE 7
BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2011250 |
| Client: | P. W. Grosser<br>630 Johnson Avenue<br>Suite 7<br>Bohemia, NY 11716 |
| ATTN: | Jennifer Lewis |
| Phone: | (631) 589-6353 |
| Project Name: | MHD1801 |
| Project Number: | MHD1801 |
| Report Date: | 03/18/20 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

**Project Name:** MHD1801
**Project Number:** MHD1801

**Lab Number:** L2011250
**Report Date:** 03/18/20

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2011250-01 | SB001 | SOIL | 223-20 BRADDOCK AVE | 03/12/20 11:45 | 03/12/20 |
| L2011250-02 | SB002 | SOIL | 223-20 BRADDOCK AVE | 03/12/20 12:30 | 03/12/20 |
| L2011250-03 | SB003 | SOIL | 223-20 BRADDOCK AVE | 03/12/20 14:45 | 03/12/20 |

| | | | |
|---|---|---|---|
| **Project Name:** | MHD1801 | **Lab Number:** | L2011250 |
| **Project Number:** | MHD1801 | **Report Date:** | 03/18/20 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

**Project Name:** MHD1801 **Lab Number:** L2011250
**Project Number:** MHD1801 **Report Date:** 03/18/20

**Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Grain Size Analysis

The WG1351138-1 Laboratory Duplicate RPDs for % fine gravel (32%), % total gravel (32%) and % total fines (70%), performed on L2011250-01, are outside the acceptance criteria. The elevated RPDs have been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 03/18/20

# INORGANICS
# &
# MISCELLANEOUS

**Project Name:** MHD1801
**Project Number:** MHD1801

**Lab Number:** L2011250
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2011250-01
Client ID: SB001
Sample Location: 223-20 BRADDOCK AVE

Date Collected: 03/12/20 11:45
Date Received: 03/12/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **Grain Size Analysis - Mansfield Lab** | | | | | | | | | | |
| Cobbles | ND | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Coarse Gravel | ND | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Fine Gravel | 31.3 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Gravel | 31.3 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Coarse Sand | 9.30 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Medium Sand | 22.9 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Fine Sand | 30.6 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Sand | 62.8 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Fines | 5.90 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |

**Project Name:** MHD1801
**Project Number:** MHD1801

**Lab Number:** L2011250
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2011250-02
Client ID: SB002
Sample Location: 223-20 BRADDOCK AVE

Date Collected: 03/12/20 12:30
Date Received: 03/12/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **Grain Size Analysis - Mansfield Lab** | | | | | | | | | | |
| Cobbles | ND | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Coarse Gravel | 13.6 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Fine Gravel | 16.3 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Gravel | 29.9 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Coarse Sand | 4.60 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Medium Sand | 15.0 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Fine Sand | 15.4 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Sand | 35.0 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Fines | 35.1 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |

**Project Name:** MHD1801
**Project Number:** MHD1801

**Lab Number:** L2011250
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2011250-03
Client ID: SB003
Sample Location: 223-20 BRADDOCK AVE

Date Collected: 03/12/20 14:45
Date Received: 03/12/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **Grain Size Analysis - Mansfield Lab** | | | | | | | | | | |
| Cobbles | ND | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Coarse Gravel | ND | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Fine Gravel | 6.60 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Gravel | 6.60 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Coarse Sand | 7.00 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Medium Sand | 22.3 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Fine Sand | 16.8 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Sand | 46.1 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |
| % Total Fines | 47.3 | | % | 0.100 | NA | 1 | - | 03/14/20 18:54 | 12,D6913/D7928 | SP |

# Lab Duplicate Analysis

***Batch Quality Control***

**Project Name:** MHD1801
**Project Number:** MHD1801

***Lab Number:*** L2011250
***Report Date:*** 03/18/20

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Grain Size Analysis - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1351138-1 QC Sample: L2011250-01 Client ID: SB001 | | | | | | |
| Cobbles | ND | ND | % | NC | | 20 |
| % Coarse Gravel | ND | ND | % | NC | | 20 |
| % Fine Gravel | 31.3 | 22.7 | % | **32** | Q | 20 |
| % Total Gravel | 31.3 | 22.7 | % | **32** | Q | 20 |
| % Coarse Sand | 9.30 | 9.20 | % | 1 | | 20 |
| % Medium Sand | 22.9 | 25.6 | % | 11 | | 20 |
| % Fine Sand | 30.6 | 30.2 | % | 1 | | 20 |
| % Total Sand | 62.8 | 65.0 | % | 3 | | 20 |
| % Total Fines | 5.90 | 12.3 | % | **70** | Q | 20 |

**Project Name:** MHD1801
**Project Number:** MHD1801

**Lab Number:** L2011250
**Report Date:** 03/18/20

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2011250-01A | Plastic 8oz unpreserved for Grain Size | A | NA | | 2.6 | Y | Absent | | A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL() |
| L2011250-02A | Plastic 8oz unpreserved for Grain Size | A | NA | | 2.6 | Y | Absent | | A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL() |
| L2011250-03A | Plastic 8oz unpreserved for Grain Size | A | NA | | 2.6 | Y | Absent | | A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLES(),A2-HYDRO-FGRAVEL() |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | MHD1801 | **Lab Number:** | L2011250 |
| **Project Number:** | MHD1801 | **Report Date:** | 03/18/20 |

## GLOSSARY

***Acronyms***

| | |
|---|---|
| DL | - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EMPC | - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration. |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LOD | - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| LOQ | - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)<br><br>Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TEF | - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD. |
| TEQ | - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

***Footnotes***

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | MHD1801 | **Lab Number:** | L2011250 |
| **Project Number:** | MHD1801 | **Report Date:** | 03/18/20 |

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | MHD1801 | **Lab Number:** | L2011250 |
| **Project Number:** | MHD1801 | **Report Date:** | 03/18/20 |

***Data Qualifiers***

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | MHD1801 | **Lab Number:** | L2011250 |
| **Project Number:** | MHD1801 | **Report Date:** | 03/18/20 |

## REFERENCES

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

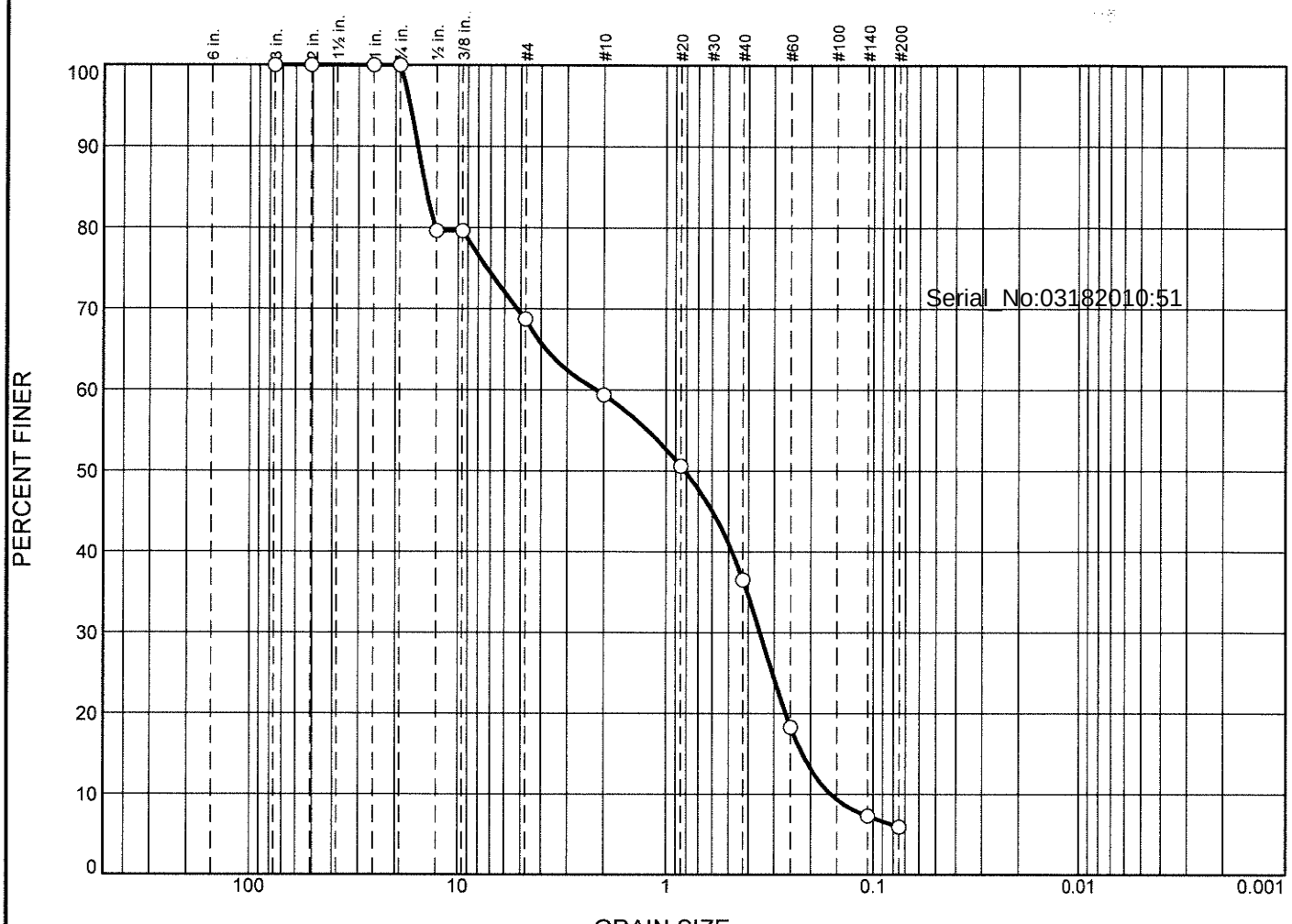
## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# ASTM D6913/D7928
# GRAIN SIZE ANALYSIS

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 31.3 | 9.3 | 22.9 | 30.6 | 5.9 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 14.3695 | 2.1769 | 0.8130 | 0.3516 | 0.2195 | 0.1602 | 0.35 | 13.59 |

| | Material Description | USCS | AASHTO |
|---|---|---|---|
| ○ | | | |

**Project No.** **Client:**

**Project:**

○ **Source of Sample:** SB001 **Sample Number:** L2011250-01

**Remarks:**

**Alpha Analytical**

**Mansfield, MA**

**Figure**

## GRAIN SIZE DISTRIBUTION TEST DATA

3/17/2020

**Location:** SB001

**Sample Number:** L2011250-01

### Sieve Test Data

**Post #200 Wash Test Weights (grams):** **Dry Sample and Tare =** 119.00
**Tare Wt. =** 0.00
**Minus #200 from wash =** 0.0%

| Dry Sample and Tare (grams) | Tare (grams) | Sieve Opening Size | Weight Retained (grams) | Sieve Weight (grams) | Percent Finer |
|---|---|---|---|---|---|
| 119.00 | 0.00 | 3" | 0.00 | 0.00 | 100.0 |
| | | 2" | 0.00 | 0.00 | 100.0 |
| | | 1" | 0.00 | 0.00 | 100.0 |
| | | 0.75 | 0.00 | 0.00 | 100.0 |
| | | 0.50 | 24.25 | 0.00 | 79.6 |
| | | 0.375 | 0.00 | 0.00 | 79.6 |
| | | #4 | 12.95 | 0.00 | 68.7 |
| | | #10 | 11.13 | 0.00 | 59.4 |
| | | #20 | 10.45 | 0.00 | 50.6 |
| | | #40 | 16.75 | 0.00 | 36.5 |
| | | #60 | 21.69 | 0.00 | 18.3 |
| | | #140 | 13.11 | 0.00 | 7.3 |
| | | #200 | 1.62 | 0.00 | 5.9 |

Serial_No:03182010:51

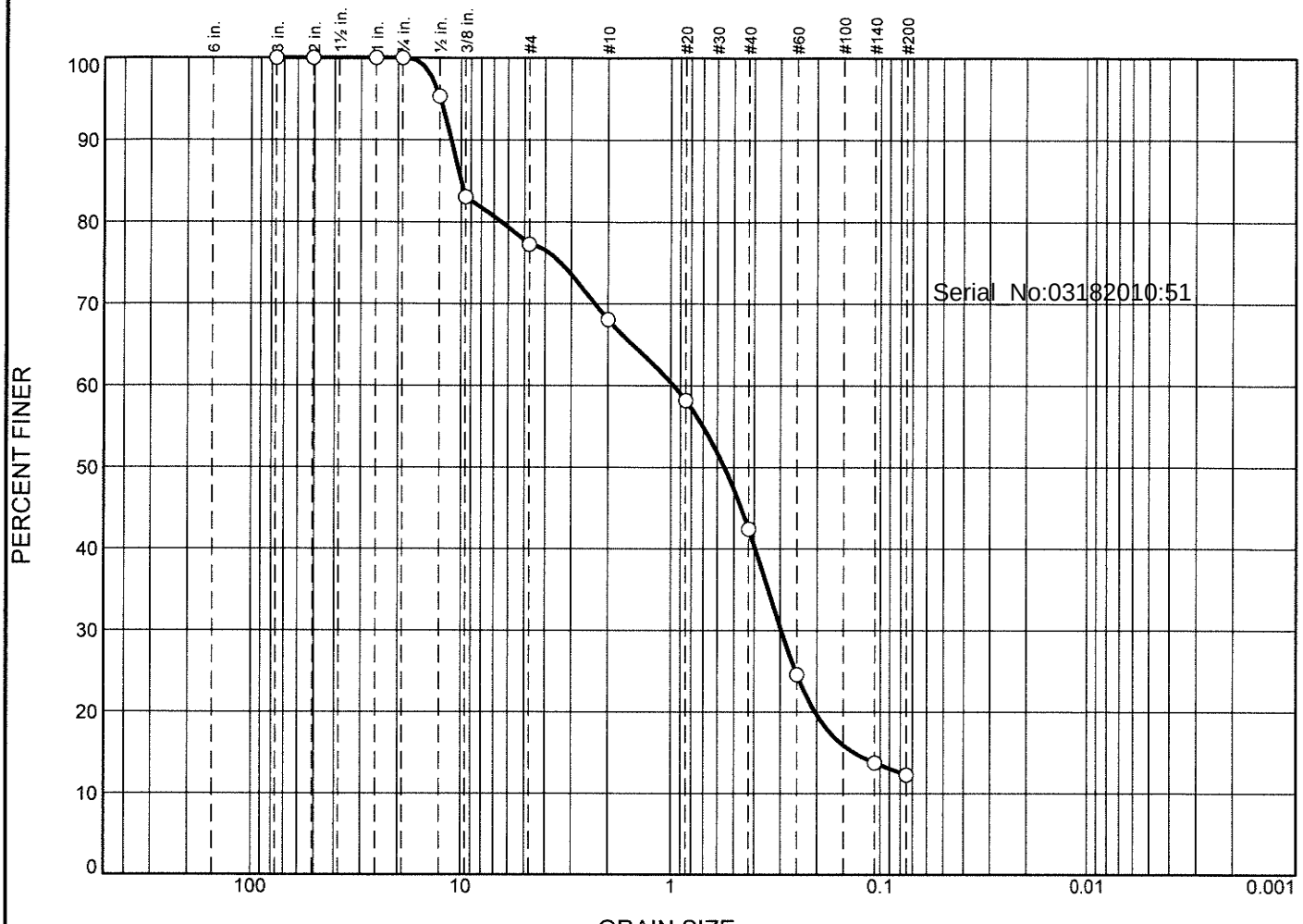
### Fractional Components

| Cobbles | Gravel | | | Sand | | | | Fines | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt | Clay | Total |
| 0.0 | 0.0 | 31.3 | 31.3 | 9.3 | 22.9 | 30.6 | 62.8 | | | 5.9 |

| $D_5$ | $D_{10}$ | $D_{15}$ | $D_{20}$ | $D_{30}$ | $D_{40}$ | $D_{50}$ | $D_{60}$ | $D_{80}$ | $D_{85}$ | $D_{90}$ | $D_{95}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1602 | 0.2195 | 0.2645 | 0.3516 | 0.4793 | 0.8130 | 2.1769 | 12.8661 | 14.3695 | 15.6254 | 16.9975 |

| Fineness Modulus | $C_u$ | $C_c$ |
|---|---|---|
| 3.58 | 13.59 | 0.35 |

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 22.7 | 9.2 | 25.6 | 30.2 | 12.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 9.9972 | 0.9695 | 0.5553 | 0.2973 | 0.1334 | | | |

| | Material Description | USCS | AASHTO |
|---|---|---|---|
| ○ | | | |

**Project No.** **Client:**
**Project:**

○ **Source of Sample:** SB001 **Sample Number:** WG1351138-1

**Remarks:**

**Alpha Analytical**

**Mansfield, MA**

**Figure**

## GRAIN SIZE DISTRIBUTION TEST DATA

3/17/2020

**Location:** SB001

**Sample Number:** WG1351138-1

### Sieve Test Data

**Post #200 Wash Test Weights (grams):** **Dry Sample and Tare =** 119.17
**Tare Wt. =** 0.00
**Minus #200 from wash =** 0.0%

| Dry Sample and Tare (grams) | Tare (grams) | Sieve Opening Size | Weight Retained (grams) | Sieve Weight (grams) | Percent Finer |
|---|---|---|---|---|---|
| 119.17 | 0.00 | 3" | 0.00 | 0.00 | 100.0 |
| | | 2" | 0.00 | 0.00 | 100.0 |
| | | 1" | 0.00 | 0.00 | 100.0 |
| | | 0.75 | 0.00 | 0.00 | 100.0 |
| | | 0.50 | 5.57 | 0.00 | 95.3 |
| | | 0.375 | 14.60 | 0.00 | 83.1 |
| | | #4 | 6.91 | 0.00 | 77.3 |
| | | #10 | 10.97 | 0.00 | 68.1 |
| | | #20 | 11.77 | 0.00 | 58.2 |
| | | #40 | 18.76 | 0.00 | 42.5 |
| | | #60 | 21.28 | 0.00 | 24.6 |
| | | #140 | 12.92 | 0.00 | 13.8 |
| | | #200 | 1.79 | 0.00 | 12.3 |

Serial_No:03182010:51

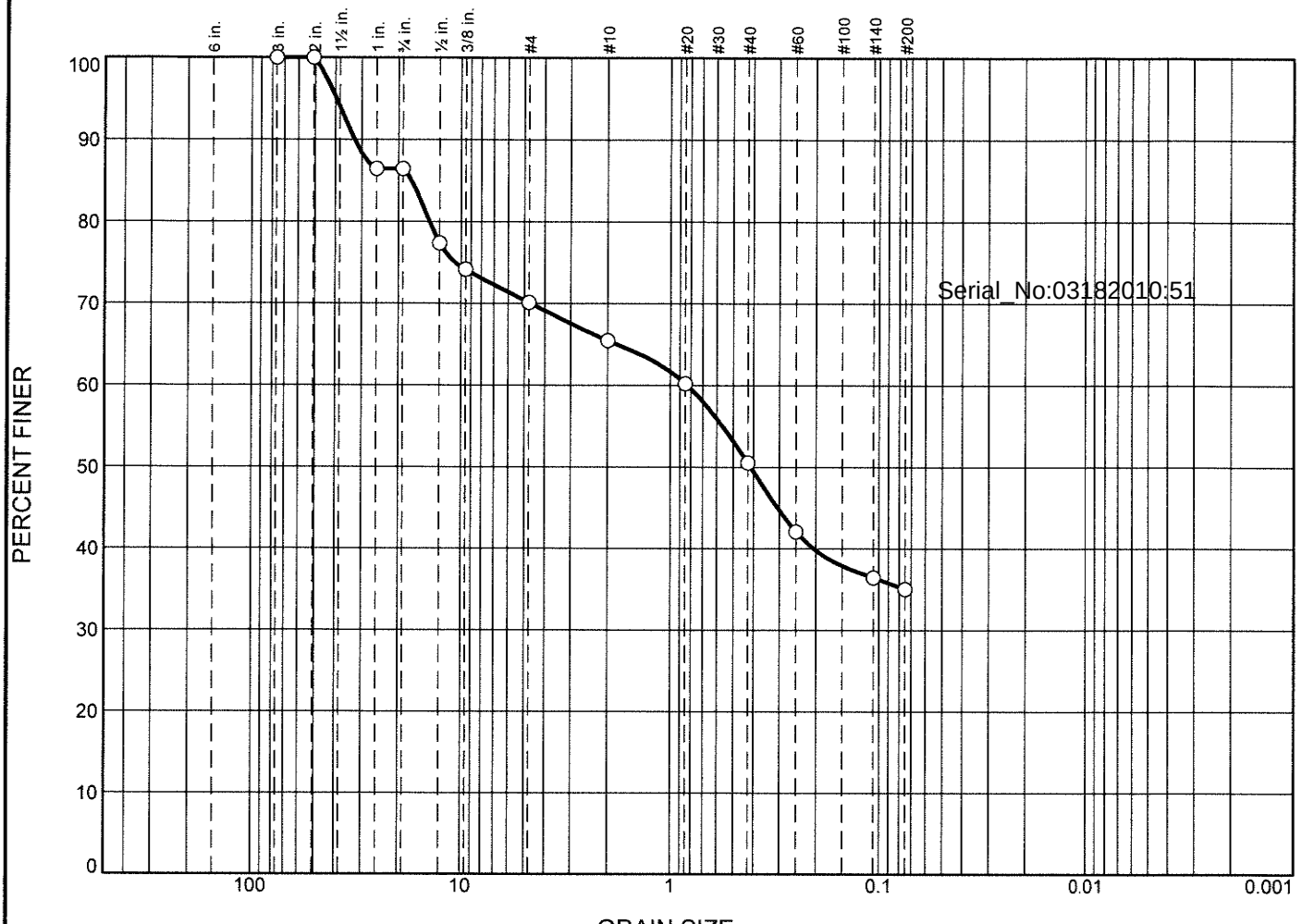
### Fractional Components

| Cobbles | Gravel | | | Sand | | | | Fines | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt | Clay | Total |
| 0.0 | 0.0 | 22.7 | 22.7 | 9.2 | 25.6 | 30.2 | 65.0 | | | 12.3 |

| $D_5$ | $D_{10}$ | $D_{15}$ | $D_{20}$ | $D_{30}$ | $D_{40}$ | $D_{50}$ | $D_{60}$ | $D_{80}$ | $D_{85}$ | $D_{90}$ | $D_{95}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.1334 | 0.2044 | 0.2973 | 0.3949 | 0.5553 | 0.9695 | 6.4484 | 9.9972 | 11.1646 | 12.5806 |

| Fineness Modulus |
|---|
| 3.09 |

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 13.6 | 16.3 | 4.6 | 15.0 | 15.4 | 35.1 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 17.3031 | 0.8313 | 0.4122 | | | | | |

| | Material Description | USCS | AASHTO |
|---|---|---|---|
| ○ | | | |

**Project No.** **Client:**

**Project:**

○ **Source of Sample:** SB002 **Sample Number:** L2011250-02

**Remarks:**

**Alpha Analytical**

**Mansfield, MA**

**Figure**

## GRAIN SIZE DISTRIBUTION TEST DATA

3/17/2020

**Location:** SB002

**Sample Number:** L2011250-02

### Sieve Test Data

**Post #200 Wash Test Weights (grams):** **Dry Sample and Tare =** 248.20
**Tare Wt. =** 0.00
**Minus #200 from wash =** 0.0%

| Dry Sample and Tare (grams) | Tare (grams) | Sieve Opening Size | Weight Retained (grams) | Sieve Weight (grams) | Percent Finer |
|---|---|---|---|---|---|
| 248.20 | 0.00 | 3" | 0.00 | 0.00 | 100.0 |
| | | 2" | 0.00 | 0.00 | 100.0 |
| | | 1" | 33.69 | 0.00 | 86.4 |
| | | 0.75 | 0.00 | 0.00 | 86.4 |
| | | 0.50 | 22.51 | 0.00 | 77.4 |
| | | 0.375 | 7.93 | 0.00 | 74.2 |
| | | #4 | 10.04 | 0.00 | 70.1 |
| | | #10 | 11.54 | 0.00 | 65.5 |
| | | #20 | 13.01 | 0.00 | 60.2 |
| | | #40 | 24.09 | 0.00 | 50.5 |
| | | #60 | 20.91 | 0.00 | 42.1 |
| | | #140 | 13.95 | 0.00 | 36.5 |
| | | #200 | 3.51 | 0.00 | 35.1 |

Serial_No:03182010:51

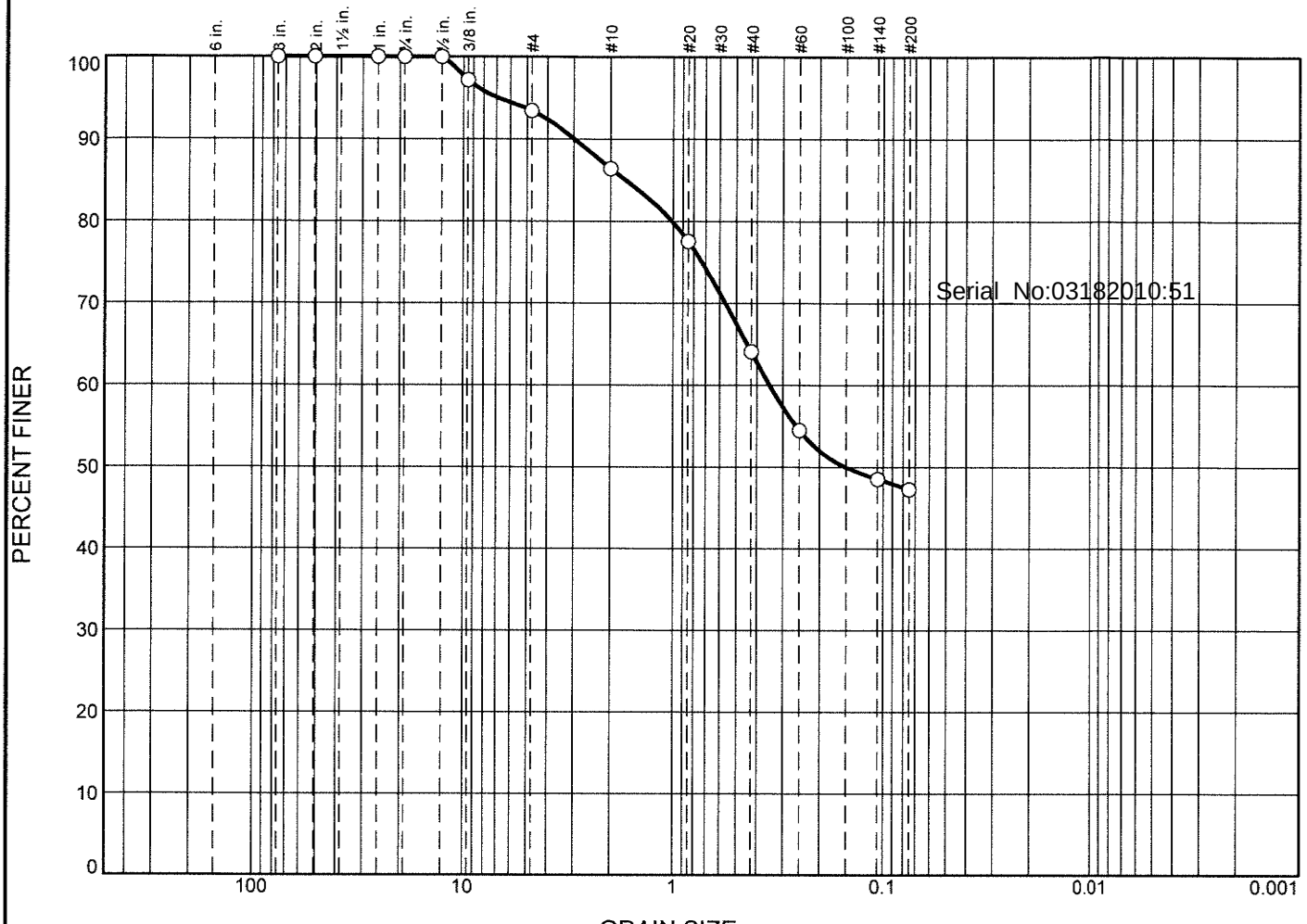
### Fractional Components

| Cobbles | Gravel | | | Sand | | | | Fines | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt | Clay | Total |
| 0.0 | 13.6 | 16.3 | 29.9 | 4.6 | 15.0 | 15.4 | 35.0 | | | 35.1 |

| $D_5$ | $D_{10}$ | $D_{15}$ | $D_{20}$ | $D_{30}$ | $D_{40}$ | $D_{50}$ | $D_{60}$ | $D_{80}$ | $D_{85}$ | $D_{90}$ | $D_{95}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0.2049 | 0.4122 | 0.8313 | 14.1896 | 17.3031 | 32.4109 | 39.6193 |

| Fineness Modulus |
|---|
| 3.08 |

# Particle Size Distribution Report




| | % +3" | % Gravel | | % Sand | | | % Fines | |
|---|---|---|---|---|---|---|---|---|
| | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay |
| ○ | 0.0 | 0.0 | 6.6 | 7.0 | 22.3 | 16.8 | 47.3 | |

| | LL | PL | $D_{85}$ | $D_{60}$ | $D_{50}$ | $D_{30}$ | $D_{15}$ | $D_{10}$ | $C_c$ | $C_u$ |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | | | 1.6938 | 0.3473 | 0.1503 | | | | | |

| | Material Description | USCS | AASHTO |
|---|---|---|---|
| ○ | | | |

**Project No.** **Client:**

**Project:**

○ **Source of Sample:** SB003 **Sample Number:** L2011250-03

**Remarks:**

**Alpha Analytical**

**Mansfield, MA**

**Figure**

## GRAIN SIZE DISTRIBUTION TEST DATA

3/17/2020

**Location:** SB003

**Sample Number:** L2011250-03

### Sieve Test Data

**Post #200 Wash Test Weights (grams):** **Dry Sample and Tare =** 169.55
**Tare Wt. =** 0.00
**Minus #200 from wash =** 0.0%

| Dry Sample and Tare (grams) | Tare (grams) | Sieve Opening Size | Weight Retained (grams) | Sieve Weight (grams) | Percent Finer |
|---|---|---|---|---|---|
| 169.55 | 0.00 | 3" | 0.00 | 0.00 | 100.0 |
| | | 2" | 0.00 | 0.00 | 100.0 |
| | | 1" | 0.00 | 0.00 | 100.0 |
| | | 0.75 | 0.00 | 0.00 | 100.0 |
| | | 0.50 | 0.00 | 0.00 | 100.0 |
| | | 0.375 | 4.79 | 0.00 | 97.2 |
| | | #4 | 6.33 | 0.00 | 93.4 |
| | | #10 | 11.92 | 0.00 | 86.4 |
| | | #20 | 15.00 | 0.00 | 77.6 |
| | | #40 | 22.86 | 0.00 | 64.1 |
| | | #60 | 16.29 | 0.00 | 54.5 |
| | | #140 | 10.04 | 0.00 | 48.6 |
| | | #200 | 2.18 | 0.00 | 47.3 |

Serial_No:03182010:51

### Fractional Components

| Cobbles | Gravel | | | Sand | | | | Fines | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coarse | Fine | Total | Coarse | Medium | Fine | Total | Silt | Clay | Total |
| 0.0 | 0.0 | 6.6 | 6.6 | 7.0 | 22.3 | 16.8 | 46.1 | | | 47.3 |

| $D_5$ | $D_{10}$ | $D_{15}$ | $D_{20}$ | $D_{30}$ | $D_{40}$ | $D_{50}$ | $D_{60}$ | $D_{80}$ | $D_{85}$ | $D_{90}$ | $D_{95}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0.1503 | 0.3473 | 1.0146 | 1.6938 | 2.9775 | 6.8793 |

| Fineness Modulus |
|---|
| 1.61 |

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**EPA TO-12** Non-methane organics
**EPA 3C** Fixed gases
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

**Service Centers**
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

**Date Rec'd in Lab** 3/13/20

**ALPHA Job #** L2011250

**Client Information**
Client: AWG
Address: (Chelsea CO) 630 Division Ave, Bronx, NY
Phone: (631-584-6353
Fax:
Email: jennifer.l@awgwater.com
These samples have been previously analyzed by Alpha ☐
**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

**Project Information**
Project Name: MHD1801
Project Location: 223-20 Braddock Ave
Project #
(Use Project name as Project #) X
Project Manager: Jennifer Lewis
ALPHAQuote #:

**Turn-Around Time**
Standard X
(Rush only if pre approved) ☐
Due Date:
# of Days:

**Deliverables**
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

**Regulatory Requirement**
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

**Billing Information**
X Same as Client Info
PO #

**Disposal Site Information**
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

**ANALYSIS**
Grave analysis

**Sample Filtration**
☐ Done
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please Specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | Grave analysis | Sample Specific Comments | Total Bottle |
|---|---|---|---|---|---|---|---|---|
| 2011250-01 | SB001 | 3/12/20 | 1145 | S | CP | X | | 1 |
| -02 | SB002 | ↓ | 1230 | S | CP | X | | 1 |
| -03 | SB003 | | 1445 | S | CP | X | | 1 |

Preservative Code:
A = None
B = HCl
C = $HNO_3$
D = $H_2SO_4$
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| AWG RS, AMC | 03/12/20 15:20 | RS, AMC | 3/12/20 15:20 |
| RS, AMC | 3/12/20 19:40 | | 3/12/20 2000 |
| | 3/13/20 0004 | | 3/13/20 00:40 |
| | 3/13/20 0530 | | 3/13/20 05:30 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

www.alphalab.com



# Alpha Analytical

## Laboratory Code: 11148

**SDG Number: L2011723**

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

# Table of Contents


New York ASP Category B Data Deliverable Package ..... 1
Table of Contents ..... 2
Sample ID Cross Reference ..... 5
SDG Narrative ..... 6
Data Qualifier Definitions ..... 8
Instrument Information ..... 11
Sample Log-in Sheet ..... 14
Lims COC (LN01) ..... 15
External Chain of Custody ..... 16
Supporting Documentation ..... 17
Air Canister Report ..... 18
Air Canister Certification Results ..... 19
Organics Analysis ..... 35
Volatile Organics in Air TO-15 Low Level ..... 36
Volatiles QC Summary ..... 37
Form 3 - Organics ..... 38
Form 4 - Organics ..... 47
Form 5 - Organics ..... 49
Form 8 - Organics ..... 53
MDL Study - Volatile Organics in Air: TO-15 ..... 55
TO15-LL ..... 55
TO15-SIM ..... 1
Volatiles Sample Data ..... 58
Form 1 - Organics ..... 59
OA001 (L2011723-05) Analyzed: 03/20/20 17:35 ..... 86
IA001 (L2011723-06) Analyzed: 03/20/20 18:16 ..... 115
SS001 (L2011723-01) Analyzed: 03/21/20 01:52 ..... 147
SV001 (L2011723-02) Analyzed: 03/21/20 02:28 ..... 185
SV002 (L2011723-03) Analyzed: 03/21/20 03:04 ..... 215
SV003 (L2011723-04) Analyzed: 03/21/20 03:40 ..... 243
Volatile Standards Data ..... 277
Initial Calibration ..... 278
Form 6 - Organics ..... 279
ICAL for AIRLAB19 on 02/25/20 ICAL16553 ..... 287
Initial Calibration Summary - Cal Date: 02/25/20 00:00 ..... 287
BFB Injected on: 02/25/20 00:05 ..... 291
STD0.2 Injected on: 02/25/20 02:44 ..... 292
STD0.5 Injected on: 02/25/20 03:24 ..... 299
STD1.0 Injected on: 02/25/20 04:06 ..... 305
STD5.0 Injected on: 02/25/20 04:46 ..... 312
STD010 Injected on: 02/25/20 05:28 ..... 318
STD020 Injected on: 02/25/20 06:07 ..... 325
STD050 Injected on: 02/25/20 06:46 ..... 331
STD100 Injected on: 02/25/20 07:28 ..... 337
ICV SUMMARY ..... 344
ICV QUANT Injected on: 02/25/20 10:32 ..... 347
ICAL for AIRPIANO3 on 03/12/20 ICAL16594 ..... 353
Initial Calibration Summary - Cal Date: 03/12/20 00:00 ..... 353
BFB Tune Injected on: 03/12/20 09:50 ..... 357
STD0.2 Injected on: 03/12/20 12:25 ..... 358

# Table of Contents


STD0.5 Injected on: 03/12/20 13:03 ..... 365
STD1.0 Injected on: 03/12/20 13:44 ..... 373
STD5.0 Injected on: 03/12/20 14:23 ..... 380
STD010 Injected on: 03/12/20 15:04 ..... 387
STD020 Injected on: 03/12/20 15:41 ..... 394
STD050 Injected on: 03/12/20 16:20 ..... 401
STD100 Injected on: 03/12/20 17:00 ..... 407
ICV Summary ..... 413
ICV Quant Injected on: 03/13/20 00:06 ..... 416
Continuing Calibration ..... 423
Form 7 - Organics ..... 424
CC Summary - AIRLAB19 Run: 03/20/20 12:08 ..... 430
CC Quant - AIRLAB19 Run: 03/20/20 12:08 ..... 433
bfb tune - Inst. AIRLAB19 03/20/20 11:27 ..... 438
CC Summary - AIRPIANO3 Run: 03/20/20 13:32 ..... 439
CC Quant - AIRPIANO3 Run: 03/20/20 13:32 ..... 442
bfb tune - Inst. AIRPIANO3 03/20/20 12:51 ..... 447
Volatiles Raw QC Data ..... 448
Laboratory Method Bl (WG1353556-4) Analyzed: 03/20/20 15:55 ..... 449
Laboratory Method Bl (WG1353541-4) Analyzed: 03/20/20 16:20 ..... 457
LCS Summary for WG1353556-3 ..... 464
Laboratory Control S (WG1353556-3) Analyzed: 03/20/20 12:51 ..... 467
LCS Summary for WG1353541-3 ..... 534
Laboratory Control S (WG1353541-3) Analyzed: 03/20/20 13:32 ..... 537
Duplicate Sample (WG1353541-5) Analyzed: 03/20/20 19:03 ..... 604
Duplicate Sample (WG1353556-5) Analyzed: 03/20/20 19:17 ..... 637
Air Calculations ..... 663
QC Batch WG1353541 ..... 665
QC Batch WG1353556 ..... 666
ICAL Sequence for AIRLAB19 on 25-FEB-2020 00:00 ICAL16553 ..... 667
ICAL Sequence for AIRPIANO3 on 12-MAR-2020 00:00 ICAL16594 ..... 669
Sequence Log ..... 671
GCMS SIM Air Analysis ..... 675
Volatiles QC Summary ..... 676
Form 3 - Organics ..... 677
Form 4 - Organics ..... 679
Form 5 - Organics ..... 680
Form 8 - Organics ..... 682
MDL Study - Volatile Organics in Air: TO-15 SIM ..... 683
Volatiles Sample Data ..... 685
Form 1 - Organics ..... 686
OA001 (L2011723-05) Analyzed: 03/20/20 17:35 ..... 690
IA001 (L2011723-06) Analyzed: 03/20/20 18:16 ..... 695
Volatile Standards Data ..... 700
Initial Calibration ..... 701
Form 6 - Organics ..... 702
ICAL for AIRPIANO3 on 03/12/20 ICAL16593 ..... 705
Initial Calibration Summary - Cal Date: 03/12/20 00:00 ..... 705
BFB Tune Injected on: 03/12/20 09:50 ..... 708
STD0.02 Injected on: 03/12/20 10:28 ..... 709

# Table of Contents


STD0.05 Injected on: 03/12/20 11:06 ..... 718
STD0.1 Injected on: 03/12/20 11:47 ..... 726
STD0.2 Injected on: 03/12/20 12:25 ..... 731
STD0.5 Injected on: 03/12/20 13:03 ..... 736
STD1.0 Injected on: 03/12/20 13:44 ..... 741
STD5.0 Injected on: 03/12/20 14:23 ..... 746
STD010 Injected on: 03/12/20 15:04 ..... 751
STD020 Injected on: 03/12/20 15:41 ..... 756
STD050 Injected on: 03/12/20 16:20 ..... 761
ICV Summary ..... 767
ICV Quant Injected on: 03/13/20 00:45 ..... 770
Continuing Calibration ..... 777
Form 7 - Organics ..... 778
CC Summary - AIRPIANO3 Run: 03/20/20 14:11 ..... 780
CC Quant - AIRPIANO3 Run: 03/20/20 14:11 ..... 783
bfb tune - Inst. AIRPIANO3 03/20/20 12:51 ..... 792
Volatiles Raw QC Data ..... 793
Laboratory Method Bl (WG1353543-4) Analyzed: 03/20/20 16:20 ..... 794
LCS Summary for WG1353543-3 ..... 797
Laboratory Control S (WG1353543-3) Analyzed: 03/20/20 14:11 ..... 800
Duplicate Sample (WG1353543-5) Analyzed: 03/20/20 19:03 ..... 809
Air Calculations ..... 814
QC Batch WG1353543 ..... 816
ICAL Sequence for AIRPIANO3 on 12-MAR-2020 00:00 ICAL16593 ..... 817
Sequence Log ..... 819

**Project Name:** MHD1801
**Project Number:** MHD1801

**Lab Number:** L2011723
**Report Date:** 03/23/20

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2011723-01 | SS001 | SOIL_VAPOR | 223-20 BRADDOCK AVE, JAMAICA, NY | 03/13/20 16:25 | 03/16/20 |
| L2011723-02 | SV001 | SOIL_VAPOR | 223-20 BRADDOCK AVE, JAMAICA, NY | 03/13/20 16:26 | 03/16/20 |
| L2011723-03 | SV002 | SOIL_VAPOR | 223-20 BRADDOCK AVE, JAMAICA, NY | 03/13/20 16:27 | 03/16/20 |
| L2011723-04 | SV003 | SOIL_VAPOR | 223-20 BRADDOCK AVE, JAMAICA, NY | 03/13/20 16:28 | 03/16/20 |
| L2011723-05 | OA001 | AIR | 223-20 BRADDOCK AVE, JAMAICA, NY | 03/13/20 16:29 | 03/16/20 |
| L2011723-06 | IA001 | AIR | 223-20 BRADDOCK AVE, JAMAICA, NY | 03/13/20 16:30 | 03/16/20 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

**Case Narrative (continued)**

Volatile Organics in Air

Canisters were released from the laboratory on March 12, 2020. The canister certification results are provided as an addendum.

L2011723-02 through -04: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

The WG1353541-3 LCS recovery for pentane (139%), 2-hexanone (140%), 1,2,4-trichlorobenzene (138%) and hexachlorobutadiene (146%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of these analytes.

Sample Receipt

The canister ID number for the sample designated SV003 (L2011723-04) is listed on the CoC as 3196 but should be 3176. The flow controller ID number for the sample designated OA001 (L2011723-05) is listed on the CoC as 01803 but should be 01808.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J Anderson Report Date: 03/23/20

Title: Technical Director/Representative

# GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

***Footnotes***

*Report Format:* Data Usability Report

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

*Report Format:* Data Usability Report

***Data Qualifiers***

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

**ND** - Not detected at the reporting limit (RL) for the sample.

*Report Format:* Data Usability Report

## Volatile Organics Instruments

Volatile Organics:

| | |
|---|---|
| Instrument: Agilent 7890 GC/5975C MSD | Columns (length x ID x df): |
| Trap: Supelco K Trap (VOACARB 3000) | RTX-VMS 20m x 0.18mm x 1um |
| Concentrator: EST Encon (or equivalent) | RTX-VMS 30m x 0.25mm x 1.4um |
| Autosampler: EST Centurion (or equivalent) | RTX-502.2 40m x 0.18mm x 1um |
| Purge time: 11 min | |

Volatile Organics: VPH

| | |
|---|---|
| Instrument: Agilent 6890 (or equivalent) | Column Type: Restek RTX 502.2 |
| Trap: Supelco K Trap (VOACARB 3000) | Column Length: 105 Meters |
| Concentrator: EST Encon (or equivalent) | df: 3.00 um |
| Autosampler: EST Centurion (or equivalent) | ID: 0.53mm |

Volatile Organics: PIANO

| | |
|---|---|
| Instrument: Agilent 7890 GC/5975C MSD | Column Type: DB-VRX |
| Trap: Supelco K Trap (VOACARB 3000) | Column Length: 60 Meters |
| Concentrator: Tekmar Velocity / EST Encon | df: 1.40 um |
| Autosampler: Varian Archon / EST Centurion | ID: 0.25 mm |
| Purge time: 11 min | Desorb: 1 min |

Volatile Organics: Dissolved Gas

Instrument: Agilent 7890 (or equivalent) with FID/TCD

| | |
|---|---|
| | Column Type: Haysep S Column |
| | Column Length: 2 Meters packed (100/200 mesh) |
| Autosampler: LEAP Headspace | Purge time: 0.6 min |

## Volatile Organics in Air Instruments

Volatile Organics in Air:

Instruments: Agilent 6890 GC / 5975 MSD Shimadzu QP2010-SE / QP2020

| | |
|---|---|
| Concentrator: Entech 7100A or 7200 | Column Type: Restek RTX-1 |
| Autosampler: Entech 7016CA or 7016D | Column Length: 60 Meters |
| | df: 1.00 um |
| | ID: 0.25 mm or 0.32 mm |

Trap 1: Glass Bead: manufacturer-Entech: 20 cm packing material
Trap 2: Tenax: manufacturer-Entech: 20 cm packing material

**Semivolatile Organics Instruments - Westborough**

Semivolatile Organics (Acid/Base/Neutral Extractables):

| | |
|---|---|
| Instrument: Agilent 5973N MSD | Injection volume: 1 ul;2 uL LVI |
| Column Type: Restek RXI-5SILMS | df: 0.32 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Polynuclear Aromatic Hydrocarbons by 8270 SIM:

| | |
|---|---|
| Instrument: Agilent 5973 MSD | Injection volume: 1 ul;2 uL LVI |
| Column Type: Restek RXI-5SILMS | df: 0.25 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Pesticides/PCB/Herbicides:

| | |
|---|---|
| Instrument: Agilent 6890 w/Dual Micro ECDs | Injection Volume: 1uL |
| Column A: Restek RTX-CL/STX-CL | df: 0.32 |
| Column B: Restek RTX/STX-CLPPesticide II | df: 0.25 |
| Column Length: 30 Meters | ID: 0.32 mm |

Petroleum/EPH:

| | |
|---|---|
| Instrument: Agilent 6890 w/FID / HP 5890 w/ FID | Injection Volume: 1uL |
| Column: Restek RTX 5 | df: 0.25 |
| Column Length: 30 Meters | |
| ID: 0.32 mm | |

**Semivolatile Organic Instruments - Mansfield**

Semivolatile Organics (ALK-PAH Extractables):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 1 ul |
| Column Type: ZB-5 | df: 0.25 um |
| Column Length: 60 Meters | ID: 0.25 mm |

Semivolatile Organics (8270):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 2 ul |
| Column Type: ZB-Semivolatiles | df: 0.25 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Semivolatile Organics (8270 SIM):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 3 ul |
| Column Type: ZB-5 | df: 0.25 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Semivolatile Organics (1,4-Dioxane):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 / 5977 MSD | Injection volume: 3 ul |
| Column Type: RTX-5 | df: 0.25um, 0.18 um |
| Column Length: 30 Meters | ID: 0.25um, 0.18 mm |

Semivolatile Organics (209 Congener):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 3 ul |
| Column Type: RTX-5, RTX-PCB | df: 0.25um, 0.18 um |
| Column Length: 60 Meters | ID: 0.25um, 0.18 mm |

Semivolatile Organics (8081):

| | |
|---|---|
| Instrument: Agilent 6890 / 7890 | Injection volume: 1 ul |
| Column Type: RTX-5 / RTX-CLP II | df: 0.25 um |
| Column Length: 60 Meters | ID: 0.25 mm |

Semivolatile Organics (8082):

| | |
|---|---|
| Instrument: Agilent 6890 w/Dual Micro ECDs | Injection Volume: 1uL |
| Column A: Restek RTX-CL/STX-CL | df: 0.32 |
| Column B: Restek RTX/STX-CLPPesticide II | df: 0.25 |
| Column Length: 30 Meters | ID: 0.32 mm |

Semivolatile Organics (SHC Extractables):

| | |
|---|---|
| Instrument: Agilent 6890 | Injection volume: 1 ul |
| Column Type: RTX-5 | df: 0.25 um |
| Column Length: 60 Meters | ID: 0.25 mm |

# Sample Delivery Group Summary

Alpha Job Number : L2011723

Account Name : P. W. Grosser
Project Number : MHD1801
Project Name : MHD1801

Received : 16-MAR-2020
Reviewer : Dylan Snook

## Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

## Cooler Information

| Cooler | Seal/Seal# | Preservation | Temperature(°C) | Additional Information |
|---|---|---|---|---|
| NA | Present/Intact/NA | | | |

## Condition Information

1) All samples on COC received? **YES**

2) Extra samples received? **NO**

3) Are there any sample container discrepancies? **NO**

4) Are there any discrepancies between sample labels & COC? **YES**
L2011723-04: Can ID #3196 vs. Can ID #3176
L2011723-05: FC ID #01803 vs. FC ID #01808

5) Are samples in appropriate containers for requested analysis? **YES**

6) Are samples properly preserved for requested analysis? **YES**

7) Are samples within holding time for requested analysis? **YES**

8) All sampling equipment returned? **YES**

## Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client? **NA**

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Mar 27 2020, 05:02 pm

Login Number: L2011723
Account: PWGROSSER P. W. GrosserProject: MHD1801
Received: 16MAR20 Due Date: 23MAR20

| Sample # | Client ID | Mat | PR | Collected |
|---|---|---|---|---|
| L2011723-01 | SS001 | 11 | S0 | 13MAR20 16:25 |
| \| ASP-B Package Due Date: 03/30/20 | | | | |
| ASP-B,CAN-RENT,FLOW-RENT,TO15-LL | | | | |
| L2011723-02 | SV001 | 11 | S0 | 13MAR20 16:26 |
| \| Package Due Date: 03/30/20 | | | | |
| CAN-RENT,FLOW-RENT,TO15-LL | | | | |
| L2011723-03 | SV002 | 11 | S0 | 13MAR20 16:27 |
| \| Package Due Date: 03/30/20 | | | | |
| CAN-RENT,FLOW-RENT,TO15-LL | | | | |
| L2011723-04 | SV003 | 11 | S0 | 13MAR20 16:28 |
| \| Package Due Date: 03/30/20 | | | | |
| CAN-RENT,FLOW-RENT,TO15-LL | | | | |
| L2011723-05 | OA001 | 10 | S0 | 13MAR20 16:29 |
| Need SIM for 7 NYS DMCs Package Due Date: 03/30/20 | | | | |
| CAN-RENT,FLOW-RENT,TO15-LL,TO15-SIM | | | | |
| L2011723-06 | IA001 | 10 | S0 | 13MAR20 16:30 |
| Need SIM for 7 NYS DMCs Package Due Date: 03/30/20 | | | | |
| CAN-RENT,FLOW-RENT,TO15-LL,TO15-SIM | | | | |



Logged By: Ethan Leighton

# AIR ANALYSIS

PAGE 1 OF 1

**CHAIN OF CUSTODY**

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/17/20

ALPHA Job #: L2011723 ~~L2011815~~ (KB)

## Client Information

Client: PWGC
Address: 630 Johnson Ave
Bohemia, NY 11716
Phone: 631-589-6353
Fax:
Email: jennifer1@pwgrosser.com

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: MHD1801
Project Location: 223-20 Braddock Ave, Jamaica, NY
Project #: MHD1801
Project Manager: Jennifer Lewis
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

## Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

| State/Fed | Program | Res / Comm |
|---|---|---|
| | | |
| | | |
| | | |

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

**All Columns Below Must Be Filled Out**

| ALPHA Lab ID (Lab Use Only) | Sample ID | COLLECTION End Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Sample Matrix* | Sampler's Initials | Can Size | I D Can | I D - Flow Controller | TO-15 | TO-15 SIM | APH Subject Non-petroleum HCs | Fixed Gases | Sulfides & Mercaptans by TO-15 | ☐ | Sample Comments (i.e. PID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~4875~~ -01 | SS001 | 3/13/20 | 0930 | 1625 | -30.12" Hg | -7.55" Hg | SV | MPP | 6L 2.7 | 2181 | 01286 | X | | | | | | |
| 11723 -02 | SV001 | | 0935 | 1636 | -29.92" Hg | -7.86" Hg | | | 2.7L | 5097 | 01595 | X | | | | | | |
| -03 | SV002 | | 0947 | 1627 | -29.93" Hg | -8.48" Hg | | | | 3169 | 01151 | X | | | | | | |
| -04 | SV003 | | 1005 | 1628 | -29.92" Hg | -8.52" Hg | | | | 3196 | 03410 | X | | | | | | |
| -05 | OA001 | | 1015 | 1629 | -29.84" Hg | -9.20" Hg | AA | | | 2591 | 01405 | X | | | | | | |
| -06 | EA001 | | 1020 | 1630 | -30.35" Hg | -11.59" Hg | AA | | | 3184 | 0774 | X | | | | | | |

(MR)

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

| Relinquished By: | Date/Time | Received By: | Date/Time: |
|---|---|---|---|
| Michael Tavarez | 3/16/20 0930 | D. Santos AAL | 3/16/20 936 |
| D. Santos AAL | 3/16/20 1300 | Ken Bailey | 3/16 2000 |
| 3/17 05 | | | 3/17/20 030 |

Form No: 101-02 Rev: (25-Sep-15)

# Supporting Documentation

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L2011723-01 | SS001 | 01286 | Flow 5 | 03/12/20 | 316616 | | - | - | - | Pass | 4.5 | 4.8 | 6 |
| L2011723-01 | SS001 | 2181 | 2.7L Can | 03/12/20 | 316616 | L2009139-04 | Pass | -29.1 | -7.3 | - | - | - | - |
| L2011723-02 | SV001 | 01395 | Flow 5 | 03/12/20 | 316616 | | - | - | - | Pass | 4.5 | 5.0 | 11 |
| L2011723-02 | SV001 | 3097 | 2.7L Can | 03/12/20 | 316616 | L2009139-04 | Pass | -29.1 | -7.7 | - | - | - | - |
| L2011723-03 | SV002 | 01131 | Flow 5 | 03/12/20 | 316616 | | - | - | - | Pass | 4.5 | 4.8 | 6 |
| L2011723-03 | SV002 | 3169 | 2.7L Can | 03/12/20 | 316616 | L2009139-04 | Pass | -29.1 | -8.7 | - | - | - | - |
| L2011723-04 | SV003 | 0340 | Flow 5 | 03/12/20 | 316616 | | - | - | - | Pass | 4.5 | 4.8 | 6 |
| L2011723-04 | SV003 | 3176 | 2.7L Can | 03/12/20 | 316616 | L2009139-04 | Pass | -29.4 | -9.0 | - | - | - | - |
| L2011723-05 | OA001 | 01808 | Flow 4 | 03/13/20 | 316773 | | - | - | - | Pass | 4.5 | 4.5 | 0 |
| L2011723-05 | OA001 | 2591 | 2.7L Can | 03/13/20 | 316773 | L2009139-05 | Pass | -29.1 | -9.1 | - | - | - | - |
| L2011723-06 | IA001 | 0774 | Flow 5 | 03/12/20 | 316616 | | - | - | - | Pass | 4.5 | 4.7 | 4 |
| L2011723-06 | IA001 | 3184 | 2.7L Can | 03/12/20 | 316616 | L2009139-04 | Pass | -29.1 | -10.9 | - | - | - | - |

# Air Canister Certification Results

Lab ID: L2009139-04
Client ID: CAN 528 SHELF 3
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/07/20 18:51
Analyst: GP

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-04
Client ID: CAN 528 SHELF 3
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air | | | | | | | | |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-04
Client ID: CAN 528 SHELF 3
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air** | | | | | | | | |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-04 Date Collected: 03/05/20 16:00
Client ID: CAN 528 SHELF 3 Date Received: 03/06/20
Sample Location: Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air | | | | | | | | |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| | Results | Qualifier | Units | RDL | Dilution Factor |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |
| No Tentatively Identified Compounds | | | | | |

# Air Canister Certification Results

Lab ID: L2009139-04 Date Collected: 03/05/20 16:00
Client ID: CAN 528 SHELF 3 Date Received: 03/06/20
Sample Location: Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air | | | | | | | | |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 111 | | 60-140 |
| Bromochloromethane | 112 | | 60-140 |
| chlorobenzene-d5 | 116 | | 60-140 |

# Air Canister Certification Results

Lab ID: L2009139-04
Client ID: CAN 528 SHELF 3
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/07/20 18:51
Analyst: GP

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air by SIM** | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acrolein | ND | 0.050 | -- | ND | 0.115 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-04 Date Collected: 03/05/20 16:00
Client ID: CAN 528 SHELF 3 Date Received: 03/06/20
Sample Location: Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air by SIM** | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-04 Date Collected: 03/05/20 16:00
Client ID: CAN 528 SHELF 3 Date Received: 03/06/20
Sample Location: Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 108 | | 60-140 |
| bromochloromethane | 109 | | 60-140 |
| chlorobenzene-d5 | 115 | | 60-140 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/07/20 19:30
Analyst: GP

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air | | | | | | | | |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air** | | | | | | | | |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air | | | | | | | | |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| | **Results** | **Qualifier** | **Units** | **RDL** | **Dilution Factor** |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |
| No Tentatively Identified Compounds | | | | | |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air | | | | | | | | |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 113 | | 60-140 |
| Bromochloromethane | 114 | | 60-140 |
| chlorobenzene-d5 | 121 | | 60-140 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/07/20 19:30
Analyst: GP

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air by SIM** | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acrolein | ND | 0.050 | -- | ND | 0.115 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air by SIM** | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |

# Air Canister Certification Results

Lab ID: L2009139-05
Client ID: CAN 2341 SHELF 4
Sample Location:

Date Collected: 03/05/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 109 | | 60-140 |
| bromochloromethane | 112 | | 60-140 |
| chlorobenzene-d5 | 119 | | 60-140 |

# Organics

# Volatile Organics in Air
# TO-15 Low Level

# Volatiles QC Summary

# Lab Duplicate Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Client Sample ID** | : IA001 | **Matrix** | : AIR |
| **Lab Sample ID** | : L2011723-06 | **Analysis Date** | : 03/20/20 18:16 |
| **Lab File ID** | : R38759 | **DUP File ID** | : r38760 |
| **Dup Sample ID** | : WG1353541-5 | **DUP Analysis Date** | : 03/20/20 19:03 |

| Parameter | Sample Concentration (ppbV) | Duplicate Concentration (ppbV) | RPD | RPD Limit |
|---|---|---|---|---|
| Dichlorodifluoromethane | 0.469 | 0.440 | 6 | 25 |
| Chloromethane | 0.808 | 0.813 | 1 | 25 |
| Freon-114 | ND | ND | NC | 25 |
| 1,3-Butadiene | 1.48 | 1.43 | 3 | 25 |
| Bromomethane | ND | ND | NC | 25 |
| Chloroethane | ND | ND | NC | 25 |
| Ethanol | 121 | 112 | 8 | 25 |
| Vinyl bromide | ND | ND | NC | 25 |
| Acetone | 15.8 | 14.6 | 8 | 25 |
| Trichlorofluoromethane | 0.237 | 0.207 | 14 | 25 |
| Isopropanol | 17.3 | 15.6 | 10 | 25 |
| Tertiary butyl Alcohol | ND | ND | NC | 25 |
| Methylene chloride | ND | ND | NC | 25 |
| 3-Chloropropene | ND | ND | NC | 25 |
| Carbon disulfide | ND | ND | NC | 25 |
| Freon-113 | ND | ND | NC | 25 |
| trans-1,2-Dichloroethene | ND | ND | NC | 25 |
| 1,1-Dichloroethane | ND | ND | NC | 25 |
| Methyl tert butyl ether | ND | ND | NC | 25 |
| 2-Butanone | 1.12 | 1.10 | 2 | 25 |
| Ethyl Acetate | ND | ND | NC | 25 |
| Chloroform | ND | ND | NC | 25 |
| Tetrahydrofuran | ND | ND | NC | 25 |
| 1,2-Dichloroethane | ND | ND | NC | 25 |
| n-Hexane | 57.7 | 55.6 | 4 | 25 |

# Lab Duplicate Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Client Sample ID** | : IA001 | **Matrix** | : AIR |
| **Lab Sample ID** | : L2011723-06 | **Analysis Date** | : 03/20/20 18:16 |
| **Lab File ID** | : R38759 | **DUP File ID** | : r38760 |
| **Dup Sample ID** | : WG1353541-5 | **DUP Analysis Date** | : 03/20/20 19:03 |

| Parameter | Sample Concentration (ppbV) | Duplicate Concentration (ppbV) | RPD | RPD Limit |
|---|---|---|---|---|
| Benzene | 6.72 | 6.68 | 1 | 25 |
| Cyclohexane | 24.8 | 23.9 | 4 | 25 |
| 1,2-Dichloropropane | ND | ND | NC | 25 |
| Bromodichloromethane | ND | ND | NC | 25 |
| 1,4-Dioxane | ND | ND | NC | 25 |
| 2,2,4-Trimethylpentane | 5.34 | 5.14 | 4 | 25 |
| Heptane | 7.98 | 7.70 | 4 | 25 |
| cis-1,3-Dichloropropene | ND | ND | NC | 25 |
| 4-Methyl-2-pentanone | 0.686 | 0.666 | 3 | 25 |
| trans-1,3-Dichloropropene | ND | ND | NC | 25 |
| 1,1,2-Trichloroethane | ND | ND | NC | 25 |
| Toluene | 26.1 | 25.0 | 4 | 25 |
| 2-Hexanone | ND | ND | NC | 25 |
| Dibromochloromethane | ND | ND | NC | 25 |
| 1,2-Dibromoethane | ND | ND | NC | 25 |
| Chlorobenzene | ND | ND | NC | 25 |
| Ethylbenzene | 4.35 | 4.18 | 4 | 25 |
| p/m-Xylene | 15.7 | 14.8 | 6 | 25 |
| Bromoform | ND | ND | NC | 25 |
| Styrene | 0.315 | 0.314 | 0 | 25 |
| 1,1,2,2-Tetrachloroethane | ND | ND | NC | 25 |
| o-Xylene | 6.09 | 5.80 | 5 | 25 |
| 4-Ethyltoluene | 1.06 | 0.984 | 7 | 25 |
| 1,3,5-Trimethylbenzene | 1.40 | 1.35 | 4 | 25 |
| 1,2,4-Trimethylbenzene | 5.34 | 5.21 | 2 | 25 |

# Lab Duplicate Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Client Sample ID** | : IA001 | **Matrix** | : AIR |
| **Lab Sample ID** | : L2011723-06 | **Analysis Date** | : 03/20/20 18:16 |
| **Lab File ID** | : R38759 | **DUP File ID** | : r38760 |
| **Dup Sample ID** | : WG1353541-5 | **DUP Analysis Date** | : 03/20/20 19:03 |

| Parameter | Sample Concentration (ppbV) | Duplicate Concentration (ppbV) | RPD | RPD Limit |
|---|---|---|---|---|
| Benzyl chloride | ND | ND | NC | 25 |
| 1,3-Dichlorobenzene | ND | ND | NC | 25 |
| 1,4-Dichlorobenzene | ND | ND | NC | 25 |
| 1,2-Dichlorobenzene | ND | ND | NC | 25 |
| 1,2,4-Trichlorobenzene | ND | ND | NC | 25 |
| Hexachlorobutadiene | ND | ND | NC | 25 |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | |
| **LCS Sample ID** | : WG1353541-3 | **Analysis Date** : 03/20/20 13:32 | **File ID** : r38754 |
| **LCSD Sample ID** | : | **Analysis Date** : | **File ID** : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| Dichlorodifluoromethane | 10 | 10.6 | 106 | | | | - | 70-130 | - |
| Chloromethane | 10 | 11.9 | 119 | | | | - | 70-130 | - |
| Freon-114 | 10 | 11.8 | 118 | | | | - | 70-130 | - |
| Vinyl chloride | 10 | 11.5 | 115 | | | | - | 70-130 | - |
| 1,3-Butadiene | 10 | 10.7 | 107 | | | | - | 70-130 | - |
| Bromomethane | 10 | 12.0 | 120 | | | | - | 70-130 | - |
| Chloroethane | 10 | 12.1 | 121 | | | | - | 70-130 | - |
| Ethanol | 50 | 50.0 | 100 | | | | - | 40-160 | - |
| Vinyl bromide | 10 | 11.8 | 118 | | | | - | 70-130 | - |
| Acetone | 50 | 57.9 | 116 | | | | - | 40-160 | - |
| Trichlorofluoromethane | 10 | 12.3 | 123 | | | | - | 70-130 | - |
| Isopropanol | 25 | 31.3 | 125 | | | | - | 40-160 | - |
| 1,1-Dichloroethene | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| Tertiary butyl Alcohol | 10 | 9.35 | 94 | | | | - | 70-130 | - |
| Methylene chloride | 10 | 11.0 | 110 | | | | - | 70-130 | - |
| 3-Chloropropene | 10 | 12.6 | 126 | | | | - | 70-130 | - |
| Carbon disulfide | 10 | 9.59 | 96 | | | | - | 70-130 | - |
| Freon-113 | 10 | 11.0 | 110 | | | | - | 70-130 | - |
| trans-1,2-Dichloroethene | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| 1,1-Dichloroethane | 10 | 11.6 | 116 | | | | - | 70-130 | - |
| Methyl tert butyl ether | 10 | 10.6 | 106 | | | | - | 70-130 | - |
| 2-Butanone | 10 | 12.0 | 120 | | | | - | 70-130 | - |
| cis-1,2-Dichloroethene | 10 | 11.5 | 115 | | | | - | 70-130 | - |
| Ethyl Acetate | 10 | 11.7 | 117 | | | | - | 70-130 | - |
| Chloroform | 10 | 10.2 | 102 | | | | - | 70-130 | - |
| Tetrahydrofuran | 10 | 11.7 | 117 | | | | - | 70-130 | - |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | |
| **LCS Sample ID** | : WG1353541-3 | **Analysis Date** : 03/20/20 13:32 | **File ID** : r38754 |
| **LCSD Sample ID** | : | **Analysis Date** : | **File ID** : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| 1,2-Dichloroethane | 10 | 11.2 | 112 | | | | - | 70-130 | - |
| n-Hexane | 10 | 10.3 | 103 | | | | - | 70-130 | - |
| 1,1,1-Trichloroethane | 10 | 11.3 | 113 | | | | - | 70-130 | - |
| Benzene | 10 | 9.73 | 97 | | | | - | 70-130 | - |
| Carbon tetrachloride | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| Cyclohexane | 10 | 10.1 | 101 | | | | - | 70-130 | - |
| 1,2-Dichloropropane | 10 | 12.3 | 123 | | | | - | 70-130 | - |
| Bromodichloromethane | 10 | 9.88 | 99 | | | | - | 70-130 | - |
| 1,4-Dioxane | 10 | 11.0 | 110 | | | | - | 70-130 | - |
| Trichloroethene | 10 | 12.0 | 120 | | | | - | 70-130 | - |
| 2,2,4-Trimethylpentane | 10 | 10.6 | 106 | | | | - | 70-130 | - |
| Heptane | 10 | 12.3 | 123 | | | | - | 70-130 | - |
| cis-1,3-Dichloropropene | 10 | 11.1 | 111 | | | | - | 70-130 | - |
| 4-Methyl-2-pentanone | 10 | 12.8 | 128 | | | | - | 70-130 | - |
| trans-1,3-Dichloropropene | 10 | 9.58 | 96 | | | | - | 70-130 | - |
| 1,1,2-Trichloroethane | 10 | 11.5 | 115 | | | | - | 70-130 | - |
| Toluene | 10 | 12.0 | 120 | | | | - | 70-130 | - |
| 2-Hexanone | 10 | 14.0 | 140 Q | | | | - | 70-130 | - |
| Dibromochloromethane | 10 | 12.9 | 129 | | | | - | 70-130 | - |
| 1,2-Dibromoethane | 10 | 11.2 | 112 | | | | - | 70-130 | - |
| Tetrachloroethene | 10 | 11.5 | 115 | | | | - | 70-130 | - |
| Chlorobenzene | 10 | 11.4 | 114 | | | | - | 70-130 | - |
| Ethylbenzene | 10 | 12.2 | 122 | | | | - | 70-130 | - |
| p/m-Xylene | 20 | 24.8 | 124 | | | | - | 70-130 | - |
| Bromoform | 10 | 11.9 | 119 | | | | - | 70-130 | - |
| Styrene | 10 | 11.5 | 115 | | | | - | 70-130 | - |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | | | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | | | |
| **LCS Sample ID** | : WG1353541-3 | **Analysis Date** | : 03/20/20 13:32 | **File ID** | : r38754 |
| **LCSD Sample ID** | : | **Analysis Date** | : | **File ID** | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **True (ppbV)** | **Found (ppbV)** | **%R** | **True (ppbV)** | **Found (ppbV)** | **%R** | **RPD** | **Recovery Limits** | **RPD Limit** |
| 1,1,2,2-Tetrachloroethane | 10 | 12.4 | 124 | | | | - | 70-130 | - |
| o-Xylene | 10 | 12.9 | 129 | | | | - | 70-130 | - |
| 4-Ethyltoluene | 10 | 11.5 | 115 | | | | - | 70-130 | - |
| 1,3,5-Trimethylbenzene | 10 | 12.1 | 121 | | | | - | 70-130 | - |
| 1,2,4-Trimethylbenzene | 10 | 13.0 | 130 | | | | - | 70-130 | - |
| Benzyl chloride | 10 | 12.6 | 126 | | | | - | 70-130 | - |
| 1,3-Dichlorobenzene | 10 | 12.1 | 121 | | | | - | 70-130 | - |
| 1,4-Dichlorobenzene | 10 | 12.1 | 121 | | | | - | 70-130 | - |
| 1,2-Dichlorobenzene | 10 | 12.1 | 121 | | | | - | 70-130 | - |
| 1,2,4-Trichlorobenzene | 10 | 13.8 | 138 Q | | | | - | 70-130 | - |
| Hexachlorobutadiene | 10 | 14.6 | 146 Q | | | | - | 70-130 | - |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | |
| **LCS Sample ID** | : WG1353556-3 | **Analysis Date** : 03/20/20 12:51 | **File ID** : r193191 |
| **LCSD Sample ID** | : | **Analysis Date** : | **File ID** : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| Dichlorodifluoromethane | 10 | 8.90 | 89 | | | | - | 70-130 | - |
| Chloromethane | 10 | 9.47 | 95 | | | | - | 70-130 | - |
| Freon-114 | 10 | 10.3 | 103 | | | | - | 70-130 | - |
| Vinyl chloride | 10 | 9.96 | 100 | | | | - | 70-130 | - |
| 1,3-Butadiene | 10 | 9.94 | 99 | | | | - | 70-130 | - |
| Bromomethane | 10 | 9.72 | 97 | | | | - | 70-130 | - |
| Chloroethane | 10 | 10.1 | 101 | | | | - | 70-130 | - |
| Ethanol | 50 | 37.8 | 76 | | | | - | 40-160 | - |
| Vinyl bromide | 10 | 9.12 | 91 | | | | - | 70-130 | - |
| Acetone | 50 | 45.6 | 91 | | | | - | 40-160 | - |
| Trichlorofluoromethane | 10 | 9.61 | 96 | | | | - | 70-130 | - |
| Isopropanol | 25 | 23.2 | 93 | | | | - | 40-160 | - |
| 1,1-Dichloroethene | 10 | 10.9 | 109 | | | | - | 70-130 | - |
| Tertiary butyl Alcohol | 10 | 9.81 | 98 | | | | - | 70-130 | - |
| Methylene chloride | 10 | 9.69 | 97 | | | | - | 70-130 | - |
| 3-Chloropropene | 10 | 13.0 | 130 | | | | - | 70-130 | - |
| Carbon disulfide | 10 | 10.3 | 103 | | | | - | 70-130 | - |
| Freon-113 | 10 | 10.6 | 106 | | | | - | 70-130 | - |
| trans-1,2-Dichloroethene | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| 1,1-Dichloroethane | 10 | 11.0 | 110 | | | | - | 70-130 | - |
| Methyl tert butyl ether | 10 | 9.54 | 95 | | | | - | 70-130 | - |
| 2-Butanone | 10 | 11.2 | 112 | | | | - | 70-130 | - |
| cis-1,2-Dichloroethene | 10 | 11.3 | 113 | | | | - | 70-130 | - |
| Ethyl Acetate | 10 | 12.4 | 124 | | | | - | 70-130 | - |
| Chloroform | 10 | 10.2 | 102 | | | | - | 70-130 | - |
| Tetrahydrofuran | 10 | 11.5 | 115 | | | | - | 70-130 | - |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | |
| **LCS Sample ID** | : WG1353556-3 | **Analysis Date** : 03/20/20 12:51 | **File ID** : r193191 |
| **LCSD Sample ID** | : | **Analysis Date** : | **File ID** : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| 1,2-Dichloroethane | 10 | 9.26 | 93 | | | | - | 70-130 | - |
| n-Hexane | 10 | 10.0 | 100 | | | | - | 70-130 | - |
| 1,1,1-Trichloroethane | 10 | 7.92 | 79 | | | | - | 70-130 | - |
| Benzene | 10 | 9.60 | 96 | | | | - | 70-130 | - |
| Carbon tetrachloride | 10 | 8.66 | 87 | | | | - | 70-130 | - |
| Cyclohexane | 10 | 10.3 | 103 | | | | - | 70-130 | - |
| 1,2-Dichloropropane | 10 | 10.4 | 104 | | | | - | 70-130 | - |
| Bromodichloromethane | 10 | 9.25 | 92 | | | | - | 70-130 | - |
| 1,4-Dioxane | 10 | 10.7 | 107 | | | | - | 70-130 | - |
| Trichloroethene | 10 | 9.60 | 96 | | | | - | 70-130 | - |
| 2,2,4-Trimethylpentane | 10 | 10.4 | 104 | | | | - | 70-130 | - |
| Heptane | 10 | 10.1 | 101 | | | | - | 70-130 | - |
| cis-1,3-Dichloropropene | 10 | 9.79 | 98 | | | | - | 70-130 | - |
| 4-Methyl-2-pentanone | 10 | 10.4 | 104 | | | | - | 70-130 | - |
| trans-1,3-Dichloropropene | 10 | 7.91 | 79 | | | | - | 70-130 | - |
| 1,1,2-Trichloroethane | 10 | 9.74 | 97 | | | | - | 70-130 | - |
| Toluene | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| 2-Hexanone | 10 | 11.9 | 119 | | | | - | 70-130 | - |
| Dibromochloromethane | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| 1,2-Dibromoethane | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| Tetrachloroethene | 10 | 11.3 | 113 | | | | - | 70-130 | - |
| Chlorobenzene | 10 | 11.8 | 118 | | | | - | 70-130 | - |
| Ethylbenzene | 10 | 10.8 | 108 | | | | - | 70-130 | - |
| p/m-Xylene | 20 | 21.5 | 108 | | | | - | 70-130 | - |
| Bromoform | 10 | 11.0 | 110 | | | | - | 70-130 | - |
| Styrene | 10 | 10.8 | 108 | | | | - | 70-130 | - |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | | | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | | | |
| **LCS Sample ID** | : WG1353556-3 | **Analysis Date** | : 03/20/20 12:51 | **File ID** | : r193191 |
| **LCSD Sample ID** | : | **Analysis Date** | : | **File ID** | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **True (ppbV)** | **Found (ppbV)** | **%R** | **True (ppbV)** | **Found (ppbV)** | **%R** | **RPD** | **Recovery Limits** | **RPD Limit** |
| 1,1,2,2-Tetrachloroethane | 10 | 12.0 | 120 | | | | - | 70-130 | - |
| o-Xylene | 10 | 10.7 | 107 | | | | - | 70-130 | - |
| 4-Ethyltoluene | 10 | 10.7 | 107 | | | | - | 70-130 | - |
| 1,3,5-Trimethylbenzene | 10 | 10.4 | 104 | | | | - | 70-130 | - |
| 1,2,4-Trimethylbenzene | 10 | 10.6 | 106 | | | | - | 70-130 | - |
| Benzyl chloride | 10 | 10.9 | 109 | | | | - | 70-130 | - |
| 1,3-Dichlorobenzene | 10 | 11.6 | 116 | | | | - | 70-130 | - |
| 1,4-Dichlorobenzene | 10 | 11.3 | 113 | | | | - | 70-130 | - |
| 1,2-Dichlorobenzene | 10 | 11.3 | 113 | | | | - | 70-130 | - |
| 1,2,4-Trichlorobenzene | 10 | 12.5 | 125 | | | | - | 70-130 | - |
| Hexachlorobutadiene | 10 | 10.6 | 106 | | | | - | 70-130 | - |

# Method Blank Summary
# Form 4
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab Sample ID** | : WG1353556-4 | **Lab File ID** | : r193194 |
| **Instrument ID** | : AIRLAB19 | | |
| **Matrix** | : AIR | **Analysis Date** | : 03/20/20 15:55 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1353556-3LCS | WG1353556-3 | 03/20/20 12:51 |
| 25P-IAS-20200312DUP | WG1353556-5 | 03/20/20 19:17 |
| SS001 | L2011723-01 | 03/21/20 01:52 |
| SV001 | L2011723-02D | 03/21/20 02:28 |
| SV002 | L2011723-03D | 03/21/20 03:04 |
| SV003 | L2011723-04D | 03/21/20 03:40 |

# Method Blank Summary
# Form 4
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab Sample ID** | : WG1353541-4 | **Lab File ID** | : r38757 |
| **Instrument ID** | : AIRPIANO3 | | |
| **Matrix** | : AIR | **Analysis Date** | : 03/20/20 16:20 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1353541-3LCS | WG1353541-3 | 03/20/20 13:32 |
| OA001 | L2011723-05 | 03/20/20 17:35 |
| IA001 | L2011723-06 | 03/20/20 18:16 |
| IA001DUP | WG1353541-5 | 03/20/20 19:03 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Air Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRLAB19 | **Analysis Date** | : 02/25/20 00:05 |
| **Tune Standard** | : WG1344146-1 | **Tune File ID** | : r192618_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 11.8 |
| 75 | 30.0 - 66.0% of mass 95 | 33 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 |
| 173 | Less than 2.0% of mass 174 | 0.4 (.5 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 78 |
| 175 | 4.0 - 9.0% of mass 174 | 5.4 (7 )1 |
| 176 | 93.0 - 101% of mass 174 | 77.4 (99.3)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5 (6.5 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STD0.2 | R1287788-1 | R192622 | 02/25/20 02:44 |
| STD0.5 | R1287788-2 | R192623 | 02/25/20 03:24 |
| STD1.0 | R1287788-3 | R192624 | 02/25/20 04:06 |
| STD5.0 | R1287788-4 | R192625 | 02/25/20 04:46 |
| STD010 | R1287788-5 | R192626 | 02/25/20 05:28 |
| STD020 | R1287788-6 | R192627 | 02/25/20 06:07 |
| STD050 | R1287788-7 | R192628 | 02/25/20 06:46 |
| STD100 | R1287788-8 | R192629 | 02/25/20 07:28 |
| ICV QUANT | R1287788-9 | R192632 | 02/25/20 10:32 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Air Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRLAB19 | **Analysis Date** | : 03/20/20 11:27 |
| **Tune Standard** | : WG1353556-1 | **Tune File ID** | : r193189_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 10 |
| 75 | 30.0 - 66.0% of mass 95 | 30.2 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.3 |
| 173 | Less than 2.0% of mass 174 | 0.3 (.4 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 78.1 |
| 175 | 4.0 - 9.0% of mass 174 | 5.4 (6.9 )1 |
| 176 | 93.0 - 101% of mass 174 | 77.8 (99.7)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.2 (6.6 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1353556-2CCAL | WG1353556-2 | R193190 | 03/20/20 12:08 |
| WG1353556-3LCS | WG1353556-3 | R193191 | 03/20/20 12:51 |
| WG1353556-4BLANK | WG1353556-4 | R193194 | 03/20/20 15:55 |
| WG1353556-5DUP | WG1353556-5 | R193198 | 03/20/20 19:17 |
| SS001 | L2011723-01 | R193208 | 03/21/20 01:52 |
| SV001 | L2011723-02D | R193209 | 03/21/20 02:28 |
| SV002 | L2011723-03D | R193210 | 03/21/20 03:04 |
| SV003 | L2011723-04D | R193211 | 03/21/20 03:40 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Air Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Analysis Date** | : 03/12/20 09:50 |
| **Tune Standard** | : WG1350408-1 | **Tune File ID** | : r38588_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 14.5 |
| 75 | 30.0 - 66.0% of mass 95 | 39.3 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.8 (1.1 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 75.2 |
| 175 | 4.0 - 9.0% of mass 174 | 5.6 (7.4 )1 |
| 176 | 93.0 - 101% of mass 174 | 71.7 (95.4)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 (6.8 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STD0.2 | R1293583-1 | R38592 | 03/12/20 12:25 |
| STD0.5 | R1293583-2 | R38593 | 03/12/20 13:03 |
| STD1.0 | R1293583-3 | R38594 | 03/12/20 13:44 |
| STD5.0 | R1293583-4 | R38595 | 03/12/20 14:23 |
| STD010 | R1293583-5 | R38596 | 03/12/20 15:04 |
| STD020 | R1293583-6 | R38597 | 03/12/20 15:41 |
| STD050 | R1293583-7 | R38598 | 03/12/20 16:20 |
| STD100 | R1293583-8 | R38599 | 03/12/20 17:00 |
| ICV Quant | R1293583-9 | R38602 | 03/13/20 00:06 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Air Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Analysis Date** | : 03/20/20 12:51 |
| **Tune Standard** | : WG1353541-1 | **Tune File ID** | : r38753_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 13.2 |
| 75 | 30.0 - 66.0% of mass 95 | 36.4 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.6 (.9 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 71.1 |
| 175 | 4.0 - 9.0% of mass 174 | 5 (7.1 )1 |
| 176 | 93.0 - 101% of mass 174 | 67.3 (94.6)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.5 (6.7 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1353541-2CCAL | WG1353541-2 | R38754 | 03/20/20 13:32 |
| WG1353541-3LCS | WG1353541-3 | R38754 | 03/20/20 13:32 |
| WG1353541-4BLANK | WG1353541-4 | R38757 | 03/20/20 16:20 |
| OA001 | L2011723-05 | R38758 | 03/20/20 17:35 |
| IA001 | L2011723-06 | R38759 | 03/20/20 18:16 |
| WG1353541-5DUP | WG1353541-5 | R38760 | 03/20/20 19:03 |

# Internal Standard Area and RT Summary
# Form 8a
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRLAB19 | **Analysis Date** | : 03/20/20 12:08 |
| **Sample No** | : WG1353556-2 | **Lab File ID** | : R193190 |

| | Bromochloromethane | | 1,4-Difluorobenzene | | Chlorobenzene-d5 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1353556-2 | 288364 | 8.78 | 940727 | 10.75 | 108860 | 14.88 |
| Upper Limit | 403710 | 9.11 | 1317018 | 11.08 | 152404 | 15.21 |
| Lower Limit | 173018 | 8.45 | 564436 | 10.42 | 65316 | 14.55 |
| Sample ID | | | | | | |
| WG1353556-3 LCS | 291035 | 8.78 | 946102 | 10.75 | 108034 | 14.88 |
| WG1353556-4 BLANK | 293906 | 8.78 | 909254 | 10.76 | 110058 | 14.88 |
| 25P-IAS-20200312 DUP | 350711 | 8.79 | 1038160 | 10.75 | 131953 | 14.88 |
| SS001 | 351122 | 8.78 | 1066245 | 10.74 | 134903 | 14.88 |
| SV001 | 320561 | 8.78 | 1004362 | 10.74 | 120197 | 14.88 |
| SV002 | 296033 | 8.78 | 913325 | 10.75 | 112218 | 14.88 |
| SV003 | 324356 | 8.78 | 995276 | 10.74 | 122231 | 14.88 |

Area Upper Limit = +40% of internal standard area
Area Lower Limit = - 40% of internal standard area

RT Upper Limit = +0.33 minutes of internal standard RT
RT Lower Limit = -0.33 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Analysis Date** | : 03/20/20 13:32 |
| **Sample No** | : WG1353541-2 | **Lab File ID** | : R38754 |

| | Bromochloromethane | | 1,4-Difluorobenzene | | Chlorobenzene-d5 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1353541-2 | 353543 | 9.58 | 970632 | 11.85 | 139948 | 16.57 |
| Upper Limit | 494960 | 9.91 | 1358885 | 12.18 | 195927 | 16.90 |
| Lower Limit | 212126 | 9.25 | 582379 | 11.52 | 83969 | 16.24 |
| Sample ID | | | | | | |
| WG1353541-3 LCS | 353543 | 9.58 | 970632 | 11.85 | 139948 | 16.57 |
| WG1353541-4 BLANK | 347721 | 9.58 | 944639 | 11.85 | 123905 | 16.53 |
| OA001 | 344464 | 9.58 | 937731 | 11.85 | 131212 | 16.57 |
| IA001 | 357016 | 9.58 | 960052 | 11.85 | 137219 | 16.58 |
| IA001 DUP | 387385 | 9.58 | 1015739 | 11.85 | 143702 | 16.57 |

Area Upper Limit = +40% of internal standard area
Area Lower Limit = - 40% of internal standard area

RT Upper Limit = +0.33 minutes of internal standard RT
RT Lower Limit = -0.33 minutes of internal standard RT

* Values outside of QC limits

**Date Created:** 11/22/19
**Created By:** Jason Hebert
**File:** PM7756-1
**Page:** 1

## Volatile Organics in Air: TO-15 (AIR)

**Holding Time:** 30 days
**Container/Sample Preservation:** 1 - Canister - 2.7 Liter

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | 0.2 | 0.0501 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.2 | 0.0614 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1,2-Trichloroethane | 79-00-5 | 0.2 | 0.067 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1-Dichloroethane | 75-34-3 | 0.2 | 0.0628 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1-Dichloroethene | 75-35-4 | 0.2 | 0.0643 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2,3-Trimethylbenzene | 526-73-8 | 0.2 | 0.0576 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.2 | 0.0674 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.2 | 0.0368 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2,4,5-Tetramethylbenzene | 95-93-2 | 0.2 | 0.0604 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dibromoethane | 106-93-4 | 0.2 | 0.0561 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dichlorobenzene | 95-50-1 | 0.2 | 0.0628 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dichloroethane | 107-06-2 | 0.2 | 0.0602 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dichloropropane | 78-87-5 | 0.2 | 0.061 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.2 | 0.0675 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,3-Butadiene | 106-99-0 | 0.2 | 0.067 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,3-Dichlorobenzene | 541-73-1 | 0.2 | 0.0627 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,4-Dichlorobenzene | 106-46-7 | 0.2 | 0.0636 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,4-Dioxane | 123-91-1 | 0.2 | 0.0805 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.2 | 0.0361 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2-Butanone | 78-93-3 | 0.5 | 0.0482 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2-Hexanone | 591-78-6 | 0.2 | 0.0648 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2-Methylthiophene | 554-14-3 | 0.2 | 0.0524 | ppbV | 70-130 | | | 25 | 25 | | | |
| 3-Methylthiophene | 616-44-4 | 0.2 | 0.0393 | ppbV | 70-130 | | | 25 | 25 | | | |
| 3-Chloropropene | 107-05-1 | 0.2 | 0.0585 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2-Ethylthiophene | 872-55-9 | 0.2 | 0.0407 | ppbV | 70-130 | | | 25 | 25 | | | |
| 4-Ethyltoluene | 622-96-8 | 0.2 | 0.037 | ppbV | 70-130 | | | 25 | 25 | | | |
| Acetone | 67-64-1 | 1 | 0.689 | ppbV | 40-160 | | | 25 | 25 | | | |
| Benzene | 71-43-2 | 0.2 | 0.0487 | ppbV | 70-130 | | | 25 | 25 | | | |
| Benzyl chloride | 100-44-7 | 0.2 | 0.0482 | ppbV | 70-130 | | | 25 | 25 | | | |
| Benzothiophene | 95-15-8 | 0.5 | 0.077 | ppbV | 70-130 | | | 25 | 25 | | | |
| Bromodichloromethane | 75-27-4 | 0.2 | 0.0504 | ppbV | 70-130 | | | 25 | 25 | | | |
| Bromoform | 75-25-2 | 0.2 | 0.0641 | ppbV | 70-130 | | | 25 | 25 | | | |
| Bromomethane | 74-83-9 | 0.2 | 0.0773 | ppbV | 70-130 | | | 25 | 25 | | | |
| Carbon disulfide | 75-15-0 | 0.2 | 0.0559 | ppbV | 70-130 | | | 25 | 25 | | | |
| Carbon tetrachloride | 56-23-5 | 0.2 | 0.0499 | ppbV | 70-130 | | | 25 | 25 | | | |
| Chlorobenzene | 108-90-7 | 0.2 | 0.0624 | ppbV | 70-130 | | | 25 | 25 | | | |
| Chloroethane | 75-00-3 | 0.2 | 0.0805 | ppbV | 70-130 | | | 25 | 25 | | | |
| Chloroform | 67-66-3 | 0.2 | 0.0633 | ppbV | 70-130 | | | 25 | 25 | | | |
| Chloromethane | 74-87-3 | 0.2 | 0.0689 | ppbV | 70-130 | | | 25 | 25 | | | |
| cis-1,2-Dichloroethene | 156-59-2 | 0.2 | 0.117 | ppbV | 70-130 | | | 25 | 25 | | | |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.2 | 0.0409 | ppbV | 70-130 | | | 25 | 25 | | | |
| Cyclohexane | 110-82-7 | 0.2 | 0.0368 | ppbV | 70-130 | | | 25 | 25 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

## Volatile Organics in Air: TO-15 (AIR)

**Holding Time:** 30 days
**Container/Sample Preservation:** 1 - Canister - 2.7 Liter

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 124-48-1 | 0.2 | 0.0614 | ppbV | 70-130 | | | 25 | 25 | | | |
| Dichlorodifluoromethane | 75-71-8 | 0.2 | 0.0583 | ppbV | 70-130 | | | 25 | 25 | | | |
| Ethyl Alcohol | 64-17-5 | 5 | 0.733 | ppbV | 40-160 | | | 25 | 25 | | | |
| Ethyl Acetate | 141-78-6 | 0.5 | 0.122 | ppbV | 70-130 | | | 25 | 25 | | | |
| Ethylbenzene | 100-41-4 | 0.2 | 0.0432 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | 0.2 | 0.0656 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 76-14-2 | 0.2 | 0.0591 | ppbV | 70-130 | | | 25 | 25 | | | |
| Hexachlorobutadiene | 87-68-3 | 0.2 | 0.0529 | ppbV | 70-130 | | | 25 | 25 | | | |
| iso-Propyl Alcohol | 67-63-0 | 0.5 | 0.478 | ppbV | 40-160 | | | 25 | 25 | | | |
| Methylene chloride | 75-09-2 | 0.5 | 0.134 | ppbV | 70-130 | | | 25 | 25 | | | |
| 4-Methyl-2-pentanone | 108-10-1 | 0.5 | 0.0421 | ppbV | 70-130 | | | 25 | 25 | | | |
| Methyl tert butyl ether | 1634-04-4 | 0.2 | 0.0525 | ppbV | 70-130 | | | 25 | 25 | | | |
| Methyl Methacrylate | 80-62-6 | 0.5 | 0.0697 | ppbV | 40-160 | | | 25 | 25 | | | |
| p/m-Xylene | 179601-23-1 | 0.4 | 0.091 | ppbV | 70-130 | | | 25 | 25 | | | |
| o-Xylene | 95-47-6 | 0.2 | 0.0453 | ppbV | 70-130 | | | 25 | 25 | | | |
| Xylene (Total) | 1330-20-7 | 0.2 | 0.0453 | ppbV | | | | 25 | 25 | | | |
| Heptane | 142-82-5 | 0.2 | 0.047 | ppbV | 70-130 | | | 25 | 25 | | | |
| n-Heptane | 142-82-5 | 0.2 | 0.047 | ppbV | 70-130 | | | 25 | 25 | | | |
| n-Hexane | 110-54-3 | 0.2 | 0.0364 | ppbV | 70-130 | | | 25 | 25 | | | |
| Propylene | 115-07-1 | 0.5 | 0.0599 | ppbV | 70-130 | | | 25 | 25 | | | |
| Styrene | 100-42-5 | 0.2 | 0.0434 | ppbV | 70-130 | | | 25 | 25 | | | |
| Tetrachloroethene | 127-18-4 | 0.2 | 0.0655 | ppbV | 70-130 | | | 25 | 25 | | | |
| Thiophene | 110-02-1 | 0.2 | 0.0389 | ppbV | 70-130 | | | 25 | 25 | | | |
| Tetrahydrofuran | 109-99-9 | 0.5 | 0.0568 | ppbV | 70-130 | | | 25 | 25 | | | |
| Toluene | 108-88-3 | 0.2 | 0.052 | ppbV | 70-130 | | | 25 | 25 | | | |
| trans-1,2-Dichloroethene | 156-60-5 | 0.2 | 0.0643 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 0.2 | 0.0643 | ppbV | | | | 25 | 25 | | | |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.2 | 0.0436 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 0.2 | 0.0409 | ppbV | | | | 25 | 25 | | | |
| Trichloroethene | 79-01-6 | 0.2 | 0.0505 | ppbV | 70-130 | | | 25 | 25 | | | |
| Trichlorofluoromethane | 75-69-4 | 0.2 | 0.0686 | ppbV | 70-130 | | | 25 | 25 | | | |
| Vinyl acetate | 108-05-4 | 1 | 0.0479 | ppbV | 70-130 | | | 25 | 25 | | | |
| Vinyl bromide | 593-60-2 | 0.2 | 0.0717 | ppbV | 70-130 | | | 25 | 25 | | | |
| Vinyl chloride | 75-01-4 | 0.2 | 0.0627 | ppbV | 70-130 | | | 25 | 25 | | | |
| Naphthalene | 91-20-3 | 0.2 | 0.0885 | ppbV | 70-130 | | | 25 | 25 | | | |
| Total HC As Hexane | NONE | 10 | 0.0364 | ppbV | 70-130 | | | 25 | 25 | | | |
| Total VOCs As Toluene | NONE | 10 | 0.052 | ppbV | 70-130 | | | 25 | 25 | | | |
| Propane | 74-98-6 | 0.5 | 0.132 | ppbV | 70-130 | | | 25 | 25 | | | |
| Acrylonitrile | 107-13-1 | 0.5 | 0.0555 | ppbV | 70-130 | | | 25 | 25 | | | |
| Acrolein | 107-02-8 | 0.5 | 0.0596 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.2 | 0.0561 | ppbV | 70-130 | | | 25 | 25 | | | |
| Isopropylbenzene | 98-82-8 | 0.2 | 0.0491 | ppbV | 70-130 | | | 25 | 25 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Volatile Organics in Air: TO-15 (AIR)**

**Holding Time:** 30 days
**Container/Sample Preservation:** 1 - Canister - 2.7 Liter

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane | 96-18-4 | 0.2 | 0.061 | ppbV | 70-130 | | | 25 | 25 | | | |
| Acetonitrile | 75-05-8 | 0.2 | 0.082 | ppbV | 70-130 | | | 25 | 25 | | | |
| Bromobenzene | 108-86-1 | 0.2 | 0.0613 | ppbV | 70-130 | | | 25 | 25 | | | |
| Chlorodifluoromethane | 75-45-6 | 0.2 | 0.0584 | ppbV | 70-130 | | | 25 | 25 | | | |
| Dichlorofluoromethane | 75-43-4 | 0.2 | 0.0807 | ppbV | 70-130 | | | 25 | 25 | | | |
| Dibromomethane | 74-95-3 | 0.2 | 0.0563 | ppbV | 70-130 | | | 25 | 25 | | | |
| Pentane | 109-66-0 | 0.2 | 0.0659 | ppbV | 70-130 | | | 25 | 25 | | | |
| Octane | 111-65-9 | 0.2 | 0.0445 | ppbV | 70-130 | | | 25 | 25 | | | |
| Tertiary-Amyl Methyl Ether | 994-05-8 | 0.2 | 0.0476 | ppbV | 70-130 | | | 25 | 25 | | | |
| o-Chlorotoluene | 95-49-8 | 0.2 | 0.0486 | ppbV | 70-130 | | | 25 | 25 | | | |
| p-Chlorotoluene | 106-43-4 | 0.2 | 0.056 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2,2-Dichloropropane | 594-20-7 | 0.2 | 0.0458 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,1-Dichloropropene | 563-58-6 | 0.2 | 0.0457 | ppbV | 70-130 | | | 25 | 25 | | | |
| Isopropyl Ether | 108-20-3 | 0.2 | 0.0621 | ppbV | 70-130 | | | 25 | 25 | | | |
| Ethyl-Tert-Butyl-Ether | 637-92-3 | 0.2 | 0.0422 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 0.2 | 0.0715 | ppbV | 70-130 | | | 25 | 25 | | | |
| Ethyl ether | 60-29-7 | 0.2 | 0.0737 | ppbV | 70-130 | | | 25 | 25 | | | |
| n-Butylbenzene | 104-51-8 | 0.2 | 0.044 | ppbV | 70-130 | | | 25 | 25 | | | |
| sec-Butylbenzene | 135-98-8 | 0.2 | 0.0429 | ppbV | 70-130 | | | 25 | 25 | | | |
| tert-Butylbenzene | 98-06-6 | 0.2 | 0.042 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.2 | 0.0495 | ppbV | 70-130 | | | 25 | 25 | | | |
| p-Isopropyltoluene | 99-87-6 | 0.2 | 0.052 | ppbV | 70-130 | | | 25 | 25 | | | |
| n-Propylbenzene | 103-65-1 | 0.2 | 0.0419 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1,3-Dichloropropane | 142-28-9 | 0.2 | 0.106 | ppbV | 70-130 | | | 25 | 25 | | | |
| Methanol | 67-56-1 | 5 | 1.84 | ppbV | 70-130 | | | 25 | 25 | | | |
| Acetaldehyde | 75-07-0 | 2.5 | 0.444 | ppbV | 70-130 | | | 25 | 25 | | | |
| Butane | 106-97-8 | 0.2 | 0.0646 | ppbV | 70-130 | | | 25 | 25 | | | |
| Nonane (C9) | 111-84-2 | 0.2 | 0.0463 | ppbV | 70-130 | | | 25 | 25 | | | |
| Decane (C10) | 124-18-5 | 0.2 | 0.0404 | ppbV | 70-130 | | | 25 | 25 | | | |
| Undecane | 1120-21-4 | 0.2 | 0.0427 | ppbV | 70-130 | | | 25 | 25 | | | |
| Indane | 496-11-7 | 0.2 | 0.0507 | ppbV | 70-130 | | | 25 | 25 | | | |
| Indene | 95-13-6 | 0.2 | 0.0433 | ppbV | 70-130 | | | 25 | 25 | | | |
| 1-Methylnaphthalene | 90-12-0 | 1 | 0.466 | ppbV | 70-130 | | | 25 | 25 | | | |
| Dodecane (C12) | 112-40-3 | 0.2 | 0.0658 | ppbV | 70-130 | | | 25 | 25 | | | |
| Butyl Acetate | 123-86-4 | 0.5 | 0.126 | ppbV | 70-130 | | | 25 | 25 | | | |
| tert-Butyl Alcohol | 75-65-0 | 0.5 | 0.0466 | ppbV | 70-130 | | | 25 | 25 | | | |
| 2-Methylnaphthalene | 91-57-6 | 1 | 0.393 | ppbV | 70-130 | | | 25 | 25 | | | |
| *1,2-Dichloroethane-d4* | *17060-07-0* | | | | | | | | | *70-130* | | |
| *Toluene-d8* | *2037-26-5* | | | | | | | | | *70-130* | | |
| *Bromofluorobenzene* | *460-00-4* | | | | | | | | | *70-130* | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

# Volatiles Sample Data

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-01 | Date Collected | : 03/13/20 16:25 |
| Client ID | : SS001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 01:52 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193208 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | 0.409 | 0.200 | -- | 2.02 | 0.989 | -- | |
| 74-87-3 | Chloromethane | 0.259 | 0.200 | -- | 0.535 | 0.413 | -- | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | U |
| 106-99-0 | 1,3-Butadiene | 0.830 | 0.200 | -- | 1.84 | 0.442 | -- | |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | 10.8 | 5.00 | -- | 20.3 | 9.42 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | 39.9 | 1.00 | -- | 94.8 | 2.38 | -- | |
| 75-69-4 | Trichlorofluoromethane | 0.208 | 0.200 | -- | 1.17 | 1.12 | -- | |
| 67-63-0 | Isopropanol | 1.64 | 0.500 | -- | 4.03 | 1.23 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 2.04 | 0.500 | -- | 6.18 | 1.52 | -- | |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | 1.44 | 0.200 | -- | 4.48 | 0.623 | -- | |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | 5.11 | 0.500 | -- | 15.1 | 1.47 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | 69.2 | 0.200 | -- | 338 | 0.977 | -- | |
| 109-99-9 | Tetrahydrofuran | 3.06 | 0.500 | -- | 9.02 | 1.47 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-01 | Date Collected | : 03/13/20 16:25 |
| Client ID | : SS001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 01:52 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193208 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 32.4 | 0.200 | -- | 114 | 0.705 | -- | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 71-43-2 | Benzene | 3.34 | 0.200 | -- | 10.7 | 0.639 | -- | |
| 56-23-5 | Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | U |
| 110-82-7 | Cyclohexane | 14.5 | 0.200 | -- | 49.9 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | 5.24 | 0.200 | -- | 35.1 | 1.34 | -- | |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 5.24 | 0.200 | -- | 24.5 | 0.934 | -- | |
| 142-82-5 | Heptane | 5.29 | 0.200 | -- | 21.7 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.590 | 0.500 | -- | 2.42 | 2.05 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 18.7 | 0.200 | -- | 70.5 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | 2.89 | 0.200 | -- | 11.8 | 0.820 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 127-18-4 | Tetrachloroethene | 45.3 | 0.200 | -- | 307 | 1.36 | -- | |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 3.82 | 0.200 | -- | 16.6 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 10.2 | 0.400 | -- | 44.3 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | 0.203 | 0.200 | -- | 0.864 | 0.852 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-01 | **Date Collected** | : 03/13/20 16:25 |
| **Client ID** | : SS001 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/21/20 01:52 |
| **Sample Matrix** | : SOIL_VAPOR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R193208 | **Instrument ID** | : AIRLAB19 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 4.43 | 0.200 | -- | 19.2 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | 0.737 | 0.200 | -- | 3.62 | 0.983 | -- | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.770 | 0.200 | -- | 3.79 | 0.983 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 2.23 | 0.200 | -- | 11.0 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-02D | Date Collected | : 03/13/20 16:26 |
| Client ID | : SV001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 02:28 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 3.333 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193209 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 75.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 0.667 | -- | ND | 3.30 | -- | U |
| 74-87-3 | Chloromethane | ND | 0.667 | -- | ND | 1.38 | -- | U |
| 76-14-2 | Freon-114 | ND | 0.667 | -- | ND | 4.66 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.667 | -- | ND | 1.71 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 0.667 | -- | ND | 1.48 | -- | U |
| 74-83-9 | Bromomethane | ND | 0.667 | -- | ND | 2.59 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.667 | -- | ND | 1.76 | -- | U |
| 64-17-5 | Ethanol | ND | 16.7 | -- | ND | 31.5 | -- | U |
| 593-60-2 | Vinyl bromide | ND | 0.667 | -- | ND | 2.92 | -- | U |
| 67-64-1 | Acetone | 793 | 3.33 | -- | 1880 | 7.91 | -- | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.667 | -- | ND | 3.75 | -- | U |
| 67-63-0 | Isopropanol | 13.4 | 1.67 | -- | 32.9 | 4.10 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.667 | -- | ND | 2.64 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 8.96 | 1.67 | -- | 27.2 | 5.06 | -- | |
| 75-09-2 | Methylene chloride | ND | 1.67 | -- | ND | 5.80 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.667 | -- | ND | 2.09 | -- | U |
| 75-15-0 | Carbon disulfide | 0.820 | 0.667 | -- | 2.55 | 2.08 | -- | |
| 76-13-1 | Freon-113 | ND | 0.667 | -- | ND | 5.11 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.667 | -- | ND | 2.64 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.667 | -- | ND | 2.70 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.667 | -- | ND | 2.40 | -- | U |
| 78-93-3 | 2-Butanone | 47.1 | 1.67 | -- | 139 | 4.93 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.667 | -- | ND | 2.64 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 1.67 | -- | ND | 6.02 | -- | U |
| 67-66-3 | Chloroform | ND | 0.667 | -- | ND | 3.26 | -- | U |
| 109-99-9 | Tetrahydrofuran | 7.82 | 1.67 | -- | 23.1 | 4.93 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-02D | Date Collected | : 03/13/20 16:26 |
| Client ID | : SV001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 02:28 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 3.333 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193209 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 75.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.667 | -- | ND | 2.70 | -- | U |
| 110-54-3 | n-Hexane | 3.20 | 0.667 | -- | 11.3 | 2.35 | -- | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.667 | -- | ND | 3.64 | -- | U |
| 71-43-2 | Benzene | 1.26 | 0.667 | -- | 4.03 | 2.13 | -- | |
| 56-23-5 | Carbon tetrachloride | ND | 0.667 | -- | ND | 4.20 | -- | U |
| 110-82-7 | Cyclohexane | 1.71 | 0.667 | -- | 5.89 | 2.30 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.667 | -- | ND | 3.08 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.667 | -- | ND | 4.47 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.667 | -- | ND | 2.40 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.667 | -- | ND | 3.58 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 0.667 | -- | ND | 3.12 | -- | U |
| 142-82-5 | Heptane | 11.0 | 0.667 | -- | 45.1 | 2.73 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.667 | -- | ND | 3.03 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 2.26 | 1.67 | -- | 9.26 | 6.84 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.667 | -- | ND | 3.03 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.667 | -- | ND | 3.64 | -- | U |
| 108-88-3 | Toluene | 13.6 | 0.667 | -- | 51.3 | 2.51 | -- | |
| 591-78-6 | 2-Hexanone | 8.08 | 0.667 | -- | 33.1 | 2.73 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 0.667 | -- | ND | 5.68 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.667 | -- | ND | 5.13 | -- | U |
| 127-18-4 | Tetrachloroethene | 11.6 | 0.667 | -- | 78.7 | 4.52 | -- | |
| 108-90-7 | Chlorobenzene | ND | 0.667 | -- | ND | 3.07 | -- | U |
| 100-41-4 | Ethylbenzene | 1.66 | 0.667 | -- | 7.21 | 2.90 | -- | |
| 179601-23-1 | p/m-Xylene | 6.72 | 1.33 | -- | 29.2 | 5.78 | -- | |
| 75-25-2 | Bromoform | ND | 0.667 | -- | ND | 6.90 | -- | U |
| 100-42-5 | Styrene | ND | 0.667 | -- | ND | 2.84 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-02D | **Date Collected** | : 03/13/20 16:26 |
| **Client ID** | : SV001 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/21/20 02:28 |
| **Sample Matrix** | : SOIL_VAPOR | **Dilution Factor** | : 3.333 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R193209 | **Instrument ID** | : AIRLAB19 |
| **Sample Amount** | : 75.0 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.667 | -- | ND | 4.58 | -- | U |
| 95-47-6 | o-Xylene | 2.44 | 0.667 | -- | 10.6 | 2.90 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.667 | -- | ND | 3.28 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.783 | 0.667 | -- | 3.85 | 3.28 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 2.97 | 0.667 | -- | 14.6 | 3.28 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.667 | -- | ND | 3.45 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.667 | -- | ND | 4.01 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.667 | -- | ND | 4.01 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.667 | -- | ND | 4.01 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.667 | -- | ND | 4.95 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.667 | -- | ND | 7.11 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-03D | Date Collected | : 03/13/20 16:27 |
| Client ID | : SV002 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:04 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 6.25 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193210 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 40.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 1.25 | -- | ND | 6.18 | -- | U |
| 74-87-3 | Chloromethane | ND | 1.25 | -- | ND | 2.58 | -- | U |
| 76-14-2 | Freon-114 | ND | 1.25 | -- | ND | 8.74 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 1.25 | -- | ND | 3.20 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 1.25 | -- | ND | 2.77 | -- | U |
| 74-83-9 | Bromomethane | ND | 1.25 | -- | ND | 4.85 | -- | U |
| 75-00-3 | Chloroethane | ND | 1.25 | -- | ND | 3.30 | -- | U |
| 64-17-5 | Ethanol | ND | 31.2 | -- | ND | 58.8 | -- | U |
| 593-60-2 | Vinyl bromide | ND | 1.25 | -- | ND | 5.47 | -- | U |
| 67-64-1 | Acetone | 428 | 6.25 | -- | 1020 | 14.8 | -- | |
| 75-69-4 | Trichlorofluoromethane | ND | 1.25 | -- | ND | 7.02 | -- | U |
| 67-63-0 | Isopropanol | 6.52 | 3.12 | -- | 16.0 | 7.67 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.25 | -- | ND | 4.96 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 4.80 | 3.12 | -- | 14.6 | 9.46 | -- | |
| 75-09-2 | Methylene chloride | ND | 3.12 | -- | ND | 10.8 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 1.25 | -- | ND | 3.91 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 1.25 | -- | ND | 3.89 | -- | U |
| 76-13-1 | Freon-113 | ND | 1.25 | -- | ND | 9.58 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.25 | -- | ND | 4.96 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.25 | -- | ND | 5.06 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 1.25 | -- | ND | 4.51 | -- | U |
| 78-93-3 | 2-Butanone | 28.0 | 3.12 | -- | 82.6 | 9.20 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | 60.0 | 1.25 | -- | 238 | 4.96 | -- | |
| 141-78-6 | Ethyl Acetate | ND | 3.12 | -- | ND | 11.2 | -- | U |
| 67-66-3 | Chloroform | 10.4 | 1.25 | -- | 50.8 | 6.10 | -- | |
| 109-99-9 | Tetrahydrofuran | 4.63 | 3.12 | -- | 13.7 | 9.20 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-03D | Date Collected | : 03/13/20 16:27 |
| Client ID | : SV002 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:04 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 6.25 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193210 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 40.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.25 | -- | ND | 5.06 | -- | U |
| 110-54-3 | n-Hexane | ND | 1.25 | -- | ND | 4.41 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.25 | -- | ND | 6.82 | -- | U |
| 71-43-2 | Benzene | ND | 1.25 | -- | ND | 3.99 | -- | U |
| 56-23-5 | Carbon tetrachloride | ND | 1.25 | -- | ND | 7.86 | -- | U |
| 110-82-7 | Cyclohexane | ND | 1.25 | -- | ND | 4.30 | -- | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.25 | -- | ND | 5.78 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 1.25 | -- | ND | 8.37 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 1.25 | -- | ND | 4.50 | -- | U |
| 79-01-6 | Trichloroethene | 13.5 | 1.25 | -- | 72.6 | 6.72 | -- | |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 1.25 | -- | ND | 5.84 | -- | U |
| 142-82-5 | Heptane | 2.52 | 1.25 | -- | 10.3 | 5.12 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.25 | -- | ND | 5.67 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 3.12 | -- | ND | 12.8 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.25 | -- | ND | 5.67 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.25 | -- | ND | 6.82 | -- | U |
| 108-88-3 | Toluene | 9.82 | 1.25 | -- | 37.0 | 4.71 | -- | |
| 591-78-6 | 2-Hexanone | 8.93 | 1.25 | -- | 36.6 | 5.12 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 1.25 | -- | ND | 10.6 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 1.25 | -- | ND | 9.61 | -- | U |
| 127-18-4 | Tetrachloroethene | 320 | 1.25 | -- | 2170 | 8.48 | -- | |
| 108-90-7 | Chlorobenzene | ND | 1.25 | -- | ND | 5.76 | -- | U |
| 100-41-4 | Ethylbenzene | 2.88 | 1.25 | -- | 12.5 | 5.43 | -- | |
| 179601-23-1 | p/m-Xylene | 9.51 | 2.50 | -- | 41.3 | 10.9 | -- | |
| 75-25-2 | Bromoform | ND | 1.25 | -- | ND | 12.9 | -- | U |
| 100-42-5 | Styrene | ND | 1.25 | -- | ND | 5.32 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-03D | **Date Collected** | : 03/13/20 16:27 |
| **Client ID** | : SV002 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/21/20 03:04 |
| **Sample Matrix** | : SOIL_VAPOR | **Dilution Factor** | : 6.25 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R193210 | **Instrument ID** | : AIRLAB19 |
| **Sample Amount** | : 40.0 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.25 | -- | ND | 8.58 | -- | U |
| 95-47-6 | o-Xylene | 3.24 | 1.25 | -- | 14.1 | 5.43 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 1.25 | -- | ND | 6.15 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 1.25 | -- | ND | 6.15 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.81 | 1.25 | -- | 8.90 | 6.15 | -- | |
| 100-44-7 | Benzyl chloride | ND | 1.25 | -- | ND | 6.47 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.25 | -- | ND | 7.52 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.25 | -- | ND | 7.52 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.25 | -- | ND | 7.52 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 1.25 | -- | ND | 9.28 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 1.25 | -- | ND | 13.3 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-04D | Date Collected | : 03/13/20 16:28 |
| Client ID | : SV003 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:40 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 2.5 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193211 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 100 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 0.500 | -- | ND | 2.47 | -- | U |
| 74-87-3 | Chloromethane | ND | 0.500 | -- | ND | 1.03 | -- | U |
| 76-14-2 | Freon-114 | ND | 0.500 | -- | ND | 3.49 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.500 | -- | ND | 1.28 | -- | U |
| 106-99-0 | 1,3-Butadiene | 4.51 | 0.500 | -- | 9.98 | 1.11 | -- | |
| 74-83-9 | Bromomethane | ND | 0.500 | -- | ND | 1.94 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.500 | -- | ND | 1.32 | -- | U |
| 64-17-5 | Ethanol | 15.3 | 12.5 | -- | 28.8 | 23.6 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.500 | -- | ND | 2.19 | -- | U |
| 67-64-1 | Acetone | 745 | 2.50 | -- | 1770 | 5.94 | -- | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.500 | -- | ND | 2.81 | -- | U |
| 67-63-0 | Isopropanol | 9.00 | 1.25 | -- | 22.1 | 3.07 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.500 | -- | ND | 1.98 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 8.52 | 1.25 | -- | 25.8 | 3.79 | -- | |
| 75-09-2 | Methylene chloride | ND | 1.25 | -- | ND | 4.34 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.500 | -- | ND | 1.57 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.500 | -- | ND | 1.56 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.500 | -- | ND | 3.83 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.500 | -- | ND | 1.98 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.500 | -- | ND | 2.02 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 78-93-3 | 2-Butanone | 63.6 | 1.25 | -- | 188 | 3.69 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.500 | -- | ND | 1.98 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 1.25 | -- | ND | 4.50 | -- | U |
| 67-66-3 | Chloroform | 0.512 | 0.500 | -- | 2.50 | 2.44 | -- | |
| 109-99-9 | Tetrahydrofuran | 7.13 | 1.25 | -- | 21.0 | 3.69 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-04D | Date Collected | : 03/13/20 16:28 |
| Client ID | : SV003 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:40 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 2.5 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193211 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 100 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.500 | -- | ND | 2.02 | -- | U |
| 110-54-3 | n-Hexane | 1.49 | 0.500 | -- | 5.25 | 1.76 | -- | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.500 | -- | ND | 2.73 | -- | U |
| 71-43-2 | Benzene | 1.06 | 0.500 | -- | 3.39 | 1.60 | -- | |
| 56-23-5 | Carbon tetrachloride | ND | 0.500 | -- | ND | 3.15 | -- | U |
| 110-82-7 | Cyclohexane | ND | 0.500 | -- | ND | 1.72 | -- | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.500 | -- | ND | 2.31 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.500 | -- | ND | 3.35 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.500 | -- | ND | 2.69 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 0.500 | -- | ND | 2.34 | -- | U |
| 142-82-5 | Heptane | 2.36 | 0.500 | -- | 9.67 | 2.05 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.500 | -- | ND | 2.27 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 1.25 | -- | ND | 5.12 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.500 | -- | ND | 2.27 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.500 | -- | ND | 2.73 | -- | U |
| 108-88-3 | Toluene | 6.96 | 0.500 | -- | 26.2 | 1.88 | -- | |
| 591-78-6 | 2-Hexanone | 14.3 | 0.500 | -- | 58.6 | 2.05 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 0.500 | -- | ND | 4.26 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.500 | -- | ND | 3.84 | -- | U |
| 127-18-4 | Tetrachloroethene | 34.0 | 0.500 | -- | 231 | 3.39 | -- | |
| 108-90-7 | Chlorobenzene | ND | 0.500 | -- | ND | 2.30 | -- | U |
| 100-41-4 | Ethylbenzene | 0.905 | 0.500 | -- | 3.93 | 2.17 | -- | |
| 179601-23-1 | p/m-Xylene | 2.78 | 1.00 | -- | 12.1 | 4.34 | -- | |
| 75-25-2 | Bromoform | ND | 0.500 | -- | ND | 5.17 | -- | U |
| 100-42-5 | Styrene | ND | 0.500 | -- | ND | 2.13 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-04D | **Date Collected** | : 03/13/20 16:28 |
| **Client ID** | : SV003 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/21/20 03:40 |
| **Sample Matrix** | : SOIL_VAPOR | **Dilution Factor** | : 2.5 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R193211 | **Instrument ID** | : AIRLAB19 |
| **Sample Amount** | : 100 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.500 | -- | ND | 3.43 | -- | U |
| 95-47-6 | o-Xylene | 0.900 | 0.500 | -- | 3.91 | 2.17 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.500 | -- | ND | 2.46 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.500 | -- | ND | 2.46 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.768 | 0.500 | -- | 3.78 | 2.46 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.500 | -- | ND | 2.59 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.500 | -- | ND | 3.01 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.500 | -- | ND | 3.01 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.500 | -- | ND | 3.01 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.500 | -- | ND | 3.71 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.500 | -- | ND | 5.33 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-05 | Date Collected | : 03/13/20 16:29 |
| Client ID | : OA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 17:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38758 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | 0.467 | 0.200 | -- | 2.31 | 0.989 | -- | |
| 74-87-3 | Chloromethane | 0.648 | 0.200 | -- | 1.34 | 0.413 | -- | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | U |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | 16.5 | 5.00 | -- | 31.1 | 9.42 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | 5.09 | 1.00 | -- | 12.1 | 2.38 | -- | |
| 75-69-4 | Trichlorofluoromethane | 0.238 | 0.200 | -- | 1.34 | 1.12 | -- | |
| 67-63-0 | Isopropanol | 3.28 | 0.500 | -- | 8.06 | 1.23 | -- | |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 2.89 | 0.200 | -- | 10.2 | 0.705 | -- | |
| 71-43-2 | Benzene | 0.421 | 0.200 | -- | 1.34 | 0.639 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-05 | Date Collected | : 03/13/20 16:29 |
| Client ID | : OA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 17:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38758 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 110-82-7 | Cyclohexane | 1.24 | 0.200 | -- | 4.27 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 0.368 | 0.200 | -- | 1.72 | 0.934 | -- | |
| 142-82-5 | Heptane | 0.619 | 0.200 | -- | 2.54 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 2.16 | 0.200 | -- | 8.14 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 0.269 | 0.200 | -- | 1.17 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 0.974 | 0.400 | -- | 4.23 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | ND | 0.200 | -- | ND | 0.852 | -- | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 0.345 | 0.200 | -- | 1.50 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.249 | 0.200 | -- | 1.22 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-05 | **Date Collected** | : 03/13/20 16:29 |
| **Client ID** | : OA001 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/20/20 17:35 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R38758 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-06 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 18:16 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38759 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | 0.469 | 0.200 | -- | 2.32 | 0.989 | -- | |
| 74-87-3 | Chloromethane | 0.808 | 0.200 | -- | 1.67 | 0.413 | -- | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 106-99-0 | 1,3-Butadiene | 1.48 | 0.200 | -- | 3.27 | 0.442 | -- | |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | 121 | 5.00 | -- | 228 | 9.42 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | 15.8 | 1.00 | -- | 37.5 | 2.38 | -- | |
| 75-69-4 | Trichlorofluoromethane | 0.237 | 0.200 | -- | 1.33 | 1.12 | -- | |
| 67-63-0 | Isopropanol | 17.3 | 0.500 | -- | 42.5 | 1.23 | -- | |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | 1.12 | 0.500 | -- | 3.30 | 1.47 | -- | |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 57.7 | 0.200 | -- | 203 | 0.705 | -- | |
| 71-43-2 | Benzene | 6.72 | 0.200 | -- | 21.5 | 0.639 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-06 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 18:16 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38759 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 110-82-7 | Cyclohexane | 24.8 | 0.200 | -- | 85.4 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 5.34 | 0.200 | -- | 24.9 | 0.934 | -- | |
| 142-82-5 | Heptane | 7.98 | 0.200 | -- | 32.7 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.686 | 0.500 | -- | 2.81 | 2.05 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 26.1 | 0.200 | -- | 98.4 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 4.35 | 0.200 | -- | 18.9 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 15.7 | 0.400 | -- | 68.2 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | 0.315 | 0.200 | -- | 1.34 | 0.852 | -- | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 6.09 | 0.200 | -- | 26.5 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | 1.06 | 0.200 | -- | 5.21 | 0.983 | -- | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.40 | 0.200 | -- | 6.88 | 0.983 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.34 | 0.200 | -- | 26.3 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-06 | **Date Collected** | : 03/13/20 16:30 |
| **Client ID** | : IA001 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/20/20 18:16 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R38759 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353541-4 | Date Collected | : NA |
| Client ID | : WG1353541-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 03/20/20 16:20 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38757 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | U |
| 74-87-3 | Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | U |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | U |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | U |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | ND | 1.00 | -- | ND | 2.38 | -- | U |
| 75-69-4 | Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | U |
| 67-63-0 | Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353541-4 | Date Collected | : NA |
| Client ID | : WG1353541-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 03/20/20 16:20 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38757 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 71-43-2 | Benzene | ND | 0.200 | -- | ND | 0.639 | -- | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | U |
| 110-82-7 | Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | U |
| 142-82-5 | Heptane | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | ND | 0.200 | -- | ND | 0.754 | -- | U |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 127-18-4 | Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | U |
| 179601-23-1 | p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | U |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | ND | 0.200 | -- | ND | 0.852 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : WG1353541-4 | **Date Collected** | : NA |
| **Client ID** | : WG1353541-4BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/20/20 16:20 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R38757 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | U |
| 622-96-8 | 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353541-5 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001DUP | Date Received | : 03/16/20 |
| Sample Location | : | Date Analyzed | : 03/20/20 19:03 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38760 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | 0.440 | 0.200 | -- | 2.18 | 0.989 | -- | |
| 74-87-3 | Chloromethane | 0.813 | 0.200 | -- | 1.68 | 0.413 | -- | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 106-99-0 | 1,3-Butadiene | 1.43 | 0.200 | -- | 3.16 | 0.442 | -- | |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | 112 | 5.00 | -- | 211 | 9.42 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | 14.6 | 1.00 | -- | 34.7 | 2.38 | -- | |
| 75-69-4 | Trichlorofluoromethane | 0.207 | 0.200 | -- | 1.16 | 1.12 | -- | |
| 67-63-0 | Isopropanol | 15.6 | 0.500 | -- | 38.3 | 1.23 | -- | |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | 1.10 | 0.500 | -- | 3.24 | 1.47 | -- | |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 55.6 | 0.200 | -- | 196 | 0.705 | -- | |
| 71-43-2 | Benzene | 6.68 | 0.200 | -- | 21.3 | 0.639 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353541-5 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001DUP | Date Received | : 03/16/20 |
| Sample Location | : | Date Analyzed | : 03/20/20 19:03 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38760 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 110-82-7 | Cyclohexane | 23.9 | 0.200 | -- | 82.3 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 5.14 | 0.200 | -- | 24.0 | 0.934 | -- | |
| 142-82-5 | Heptane | 7.70 | 0.200 | -- | 31.6 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.666 | 0.500 | -- | 2.73 | 2.05 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 25.0 | 0.200 | -- | 94.2 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 4.18 | 0.200 | -- | 18.2 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 14.8 | 0.400 | -- | 64.3 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | 0.314 | 0.200 | -- | 1.34 | 0.852 | -- | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 5.80 | 0.200 | -- | 25.2 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | 0.984 | 0.200 | -- | 4.84 | 0.983 | -- | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.35 | 0.200 | -- | 6.64 | 0.983 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.21 | 0.200 | -- | 25.6 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : WG1353541-5 | **Date Collected** | : 03/13/20 16:30 |
| **Client ID** | : IA001DUP | **Date Received** | : 03/16/20 |
| **Sample Location** | : | **Date Analyzed** | : 03/20/20 19:03 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15 | **Analyst** | : EW |
| **Lab File ID** | : R38760 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353556-4 | Date Collected | : NA |
| Client ID | : WG1353556-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 03/20/20 15:55 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193194 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | U |
| 74-87-3 | Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | U |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | U |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | U |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | ND | 1.00 | -- | ND | 2.38 | -- | U |
| 75-69-4 | Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | U |
| 67-63-0 | Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353556-4 | Date Collected | : NA |
| Client ID | : WG1353556-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 03/20/20 15:55 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193194 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 71-43-2 | Benzene | ND | 0.200 | -- | ND | 0.639 | -- | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | U |
| 110-82-7 | Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | U |
| 142-82-5 | Heptane | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | ND | 0.200 | -- | ND | 0.754 | -- | U |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 127-18-4 | Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | U |
| 179601-23-1 | p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | U |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | ND | 0.200 | -- | ND | 0.852 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : WG1353556-4 | Date Collected | : NA |
| Client ID | : WG1353556-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 03/20/20 15:55 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193194 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | U |
| 622-96-8 | 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38758.D
Acq On : 20 Mar 2020 5:35 PM
Operator : AIRPIANO3:EW
Sample : L2011723-05,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:10:57 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : TO15-NY-7-SIM - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.583 | 49 | 344464 | 10.000 | ppbV | 0.03 |
| Standard Area = 353543 | | | Recovery = | 97.43% | | |
| 43) 1,4-difluorobenzene | 11.847 | 114 | 937731 | 10.000 | ppbV | 0.03 |
| Standard Area = 970632 | | | Recovery = | 96.61% | | |
| 67) chlorobenzene-D5 | 16.567 | 54 | 131212 | 10.000 | ppbV | 0.02 |
| Standard Area = 139948 | | | Recovery = | 93.76% | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 4.006 | 85 | 14529 | 0.467 | ppbV | 100 |
| 6) chloromethane | 4.186 | 50 | 9270 | 0.648 | ppbV | 95 |
| 7) Freon-114 | 4.312 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 4.612 | | 0 | N.D. | | |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 5.326 | 31 | 221303 | 16.493 | ppbV # | 82 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.897 | 43 | 113709M6 | 5.089 | ppbV | |
| 21) trichlorofluoromethane | 6.097 | 101 | 5785 | 0.238 | ppbV | 100 |
| 22) isopropyl alcohol | 6.227 | 45 | 93823 | 3.284 | ppbV # | 96 |
| 27) tertiary butyl alcohol | 6.972 | 59 | 2070 | 0.060 | ppbV # | 47 |
| 28) methylene chloride | 7.038 | 49 | 2895 | 0.135 | ppbV | 97 |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | |
| 30) carbon disulfide | 0.000 | | 0 | N.D. | d | |
| 31) Freon 113 | 7.362 | 101 | 2252 | 0.068 | ppbV | 90 |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | |
| 34) MTBE | 0.000 | | 0 | N.D. | d | |
| 36) 2-butanone | 8.900 | 43 | 15499 | 0.366 | ppbV | 95 |
| 38) Ethyl Acetate | 9.708 | 61 | 3340 | 0.472 | ppbV | 86 |
| 39) chloroform | 0.000 | | 0 | N.D. | d | |
| 40) Tetrahydrofuran | 10.225 | 42 | 1743 | 0.066 | ppbV # | 89 |
| 42) 1,2-dichloroethane | 10.592 | | 0 | N.D. | | |
| 44) hexane | 9.658 | 57 | 100486 | 2.889 | ppbV # | 49 |
| 50) benzene | 11.413 | 78 | 28608 | 0.421 | ppbV | 99 |
| 53) cyclohexane | 11.727 | 56 | 46645 | 1.238 | ppbV | 93 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38758.D
Acq On : 20 Mar 2020 5:35 PM
Operator : AIRPIANO3:EW
Sample : L2011723-05,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:10:57 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : TO15-NY-7-SIM - .

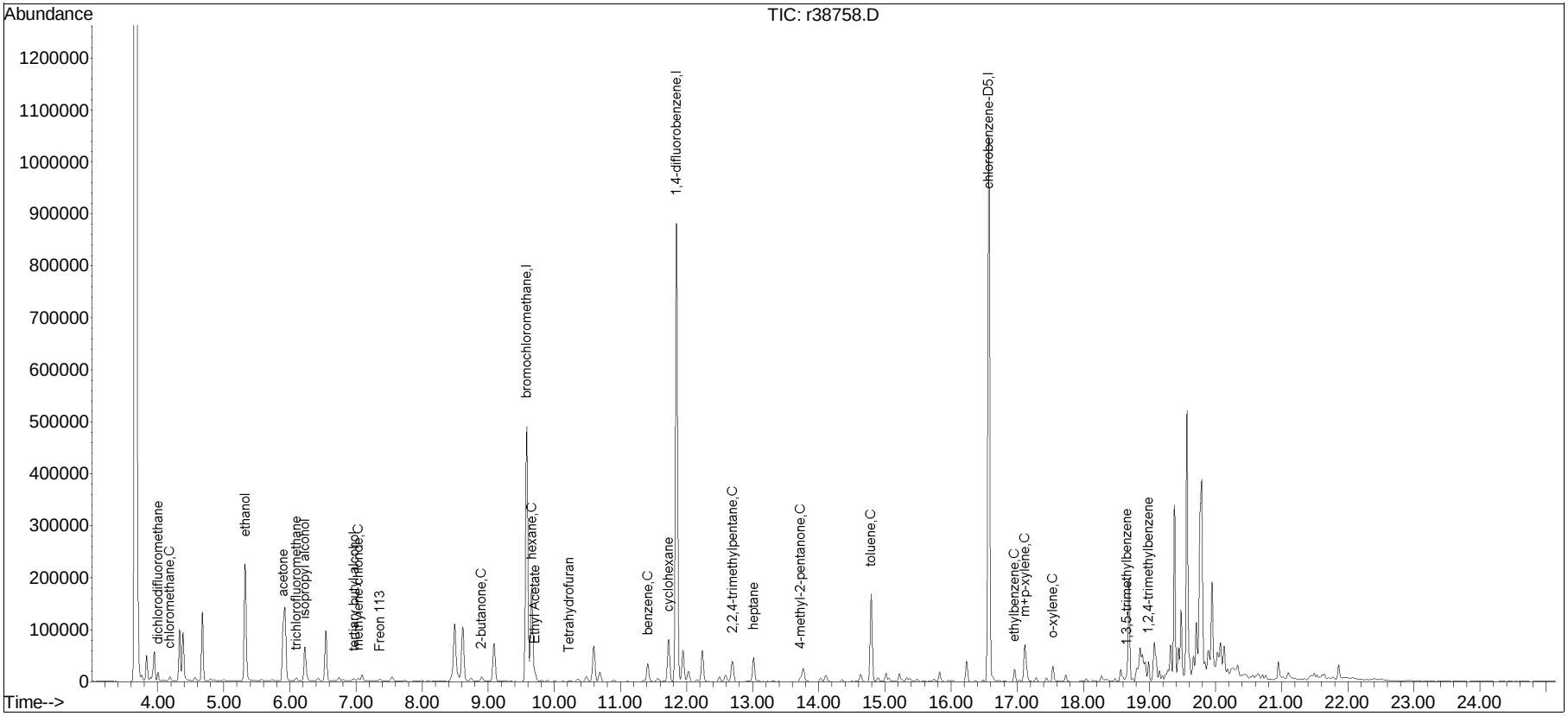
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | d | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 60) 2,2,4-trimethylpentane | 12.693 | 57 | 40782 | 0.368 | ppbV # | 86 |
| 62) heptane | 13.013 | 43 | 26930 | 0.619 | ppbV | 93 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 13.725 | 43 | 5307 | 0.108 | ppbV | 91 |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | | |
| 68) toluene | 14.792 | 91 | 143719 | 2.158 | ppbV | 100 |
| 72) 2-hexanone | 0.000 | | 0 | N.D. | d | |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | |
| 81) ethylbenzene | 16.958 | 91 | 21330 | 0.269 | ppbV | 92 |
| 83) m+p-xylene | 17.117 | 91 | 63247 | 0.974 | ppbV | 88 |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 17.442 | | 0 | N.D. | | |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | |
| 87) o-xylene | 17.542 | 91 | 21924 | 0.345 | ppbV | 89 |
| 96) 4-ethyl toluene | 18.592 | | 0 | N.D. | | |
| 97) 1,3,5-trimethylbenzene | 18.658 | 105 | 5480 | 0.066 | ppbV # | 96 |
| 99) 1,2,4-trimethylbenzene | 18.983 | 105 | 19325 | 0.249 | ppbV # | 58 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. | d | |
| 103) 1,4-dichlorobenzene | 19.175 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 0.000 | | 0 | N.D. | d | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

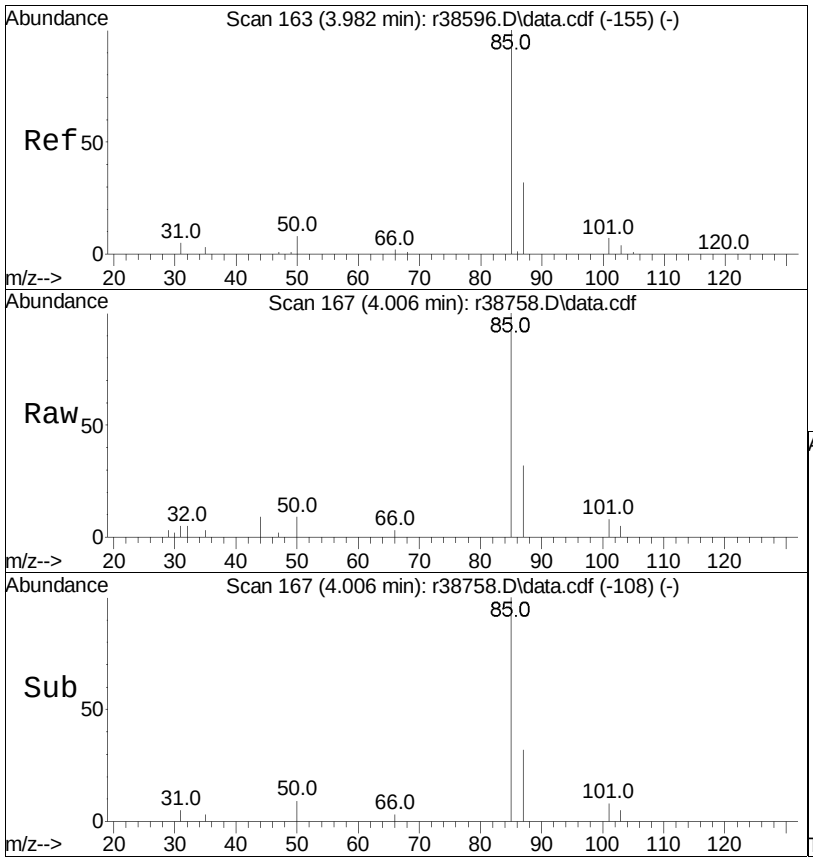
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : TO15-NY-7-SIM - .\Airpiano3\2020\03\200320T\r38754.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38758.D
Acq On : 20 Mar 2020 5:35 PM
Operator : AIRPIANO3:EW
Sample : L2011723-05,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:10:57 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

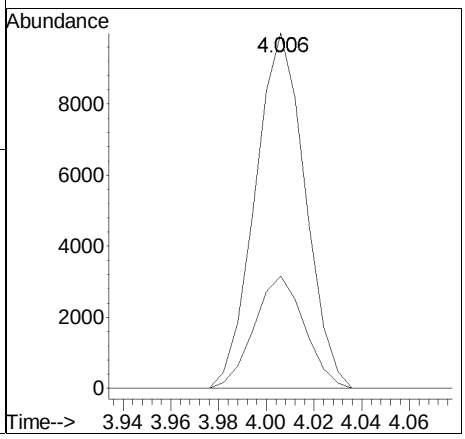


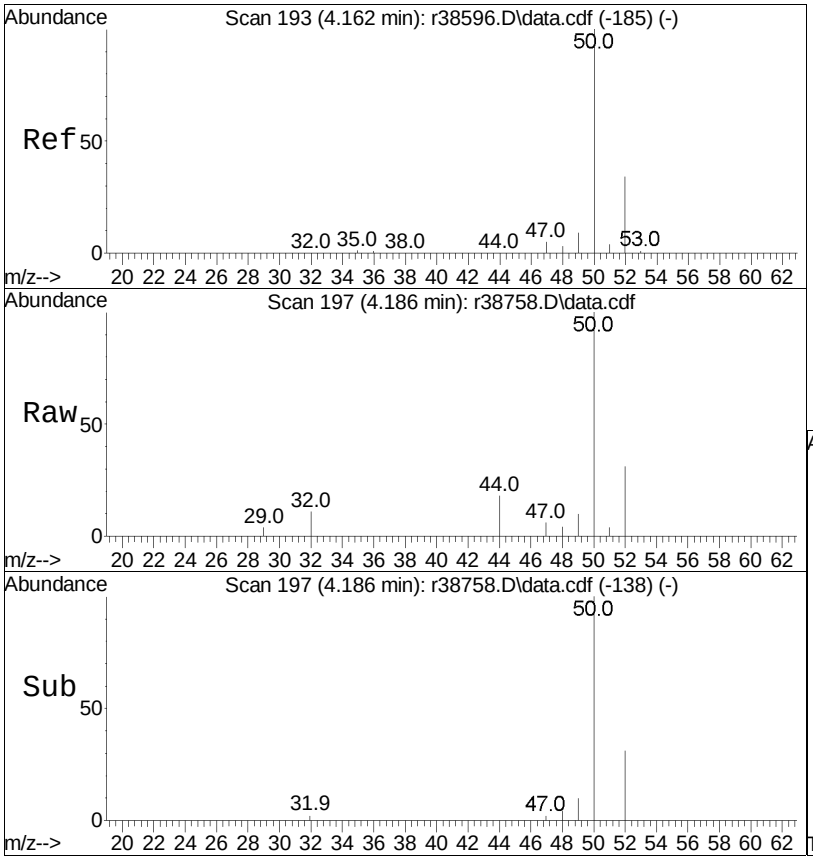



#5
dichlorodifluoromethane
Concen: 0.47 ppbV
RT: 4.006 min Scan# 167
Delta R.T. 0.024 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 85 Resp: 14529

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.6 | 25.4 | 38.0 |

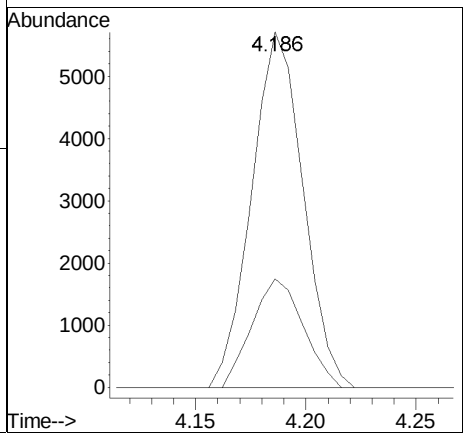


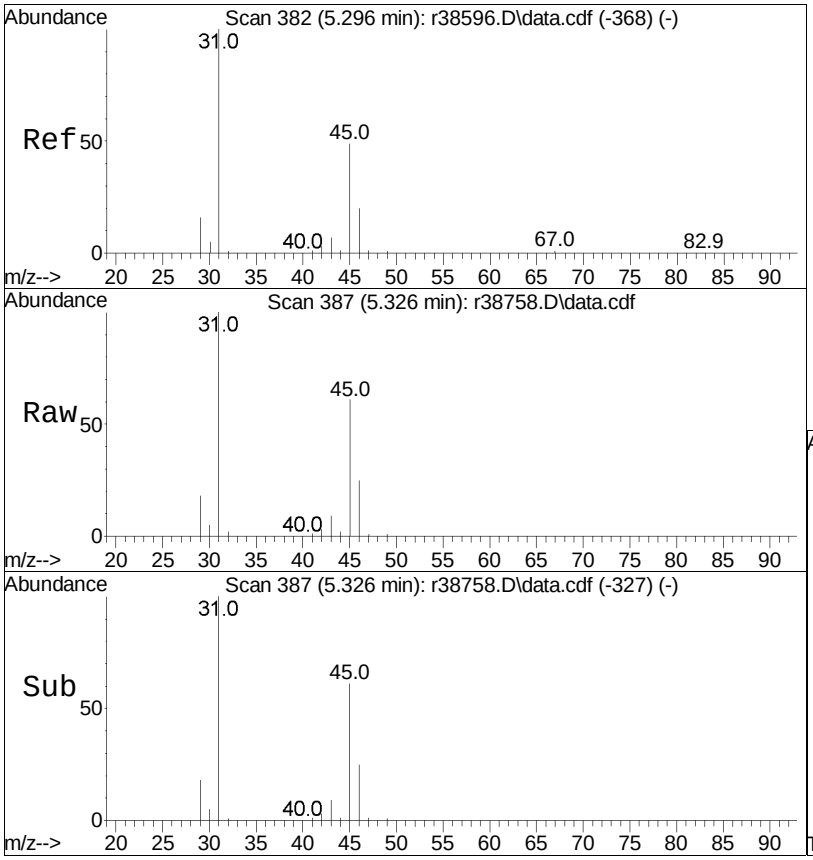



#6
chloromethane
Concen: 0.65 ppbV
RT: 4.186 min Scan# 197
Delta R.T. 0.024 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 50 Resp: 9270

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 30.6 | 26.9 | 40.3 |

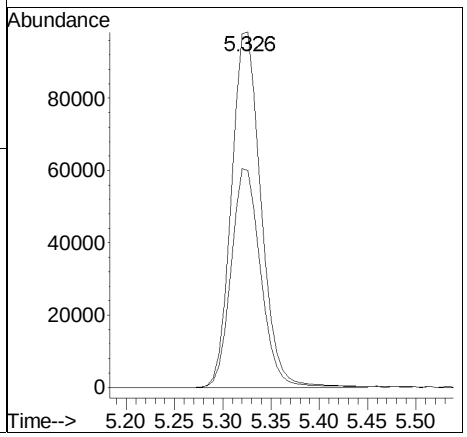


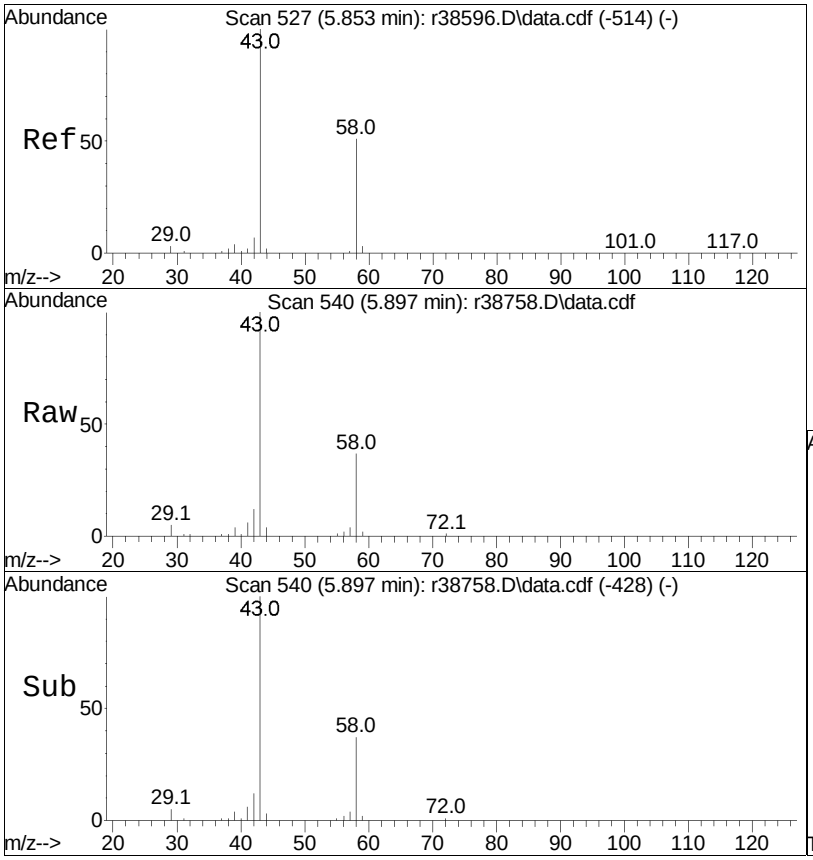



#15
ethanol
Concen: 16.49 ppbV
RT: 5.326 min Scan# 387
Delta R.T. 0.030 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 31 Resp: 221303

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 61.1 | 39.0 | 58.4# |

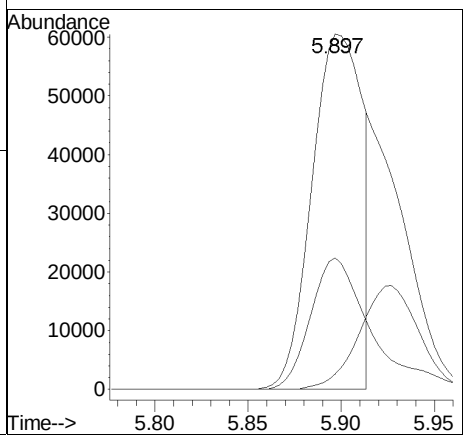


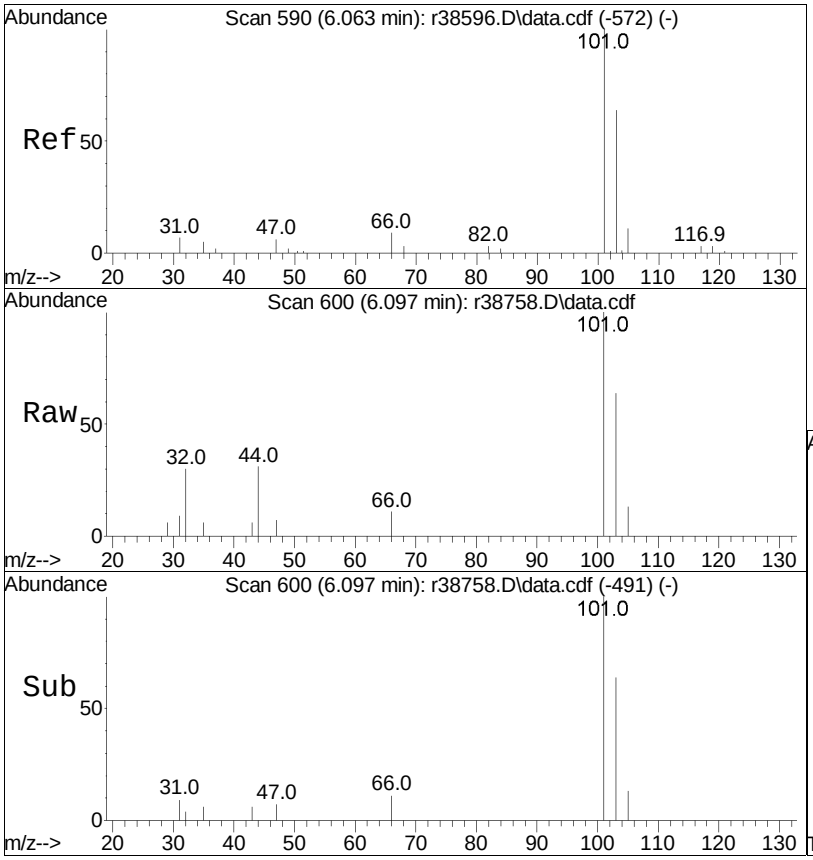



#19
acetone
Concen: 5.09 ppbV m
RT: 5.897 min Scan# 540
Delta R.T. 0.043 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 43 Resp: 113709

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 37.0 | 40.6 | 60.8# |
| 57 | 4.3 | 1.0 | 1.6# |

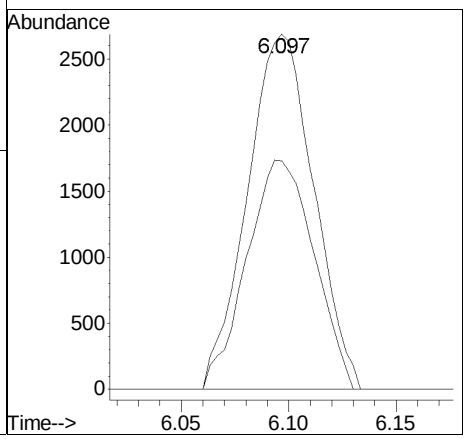


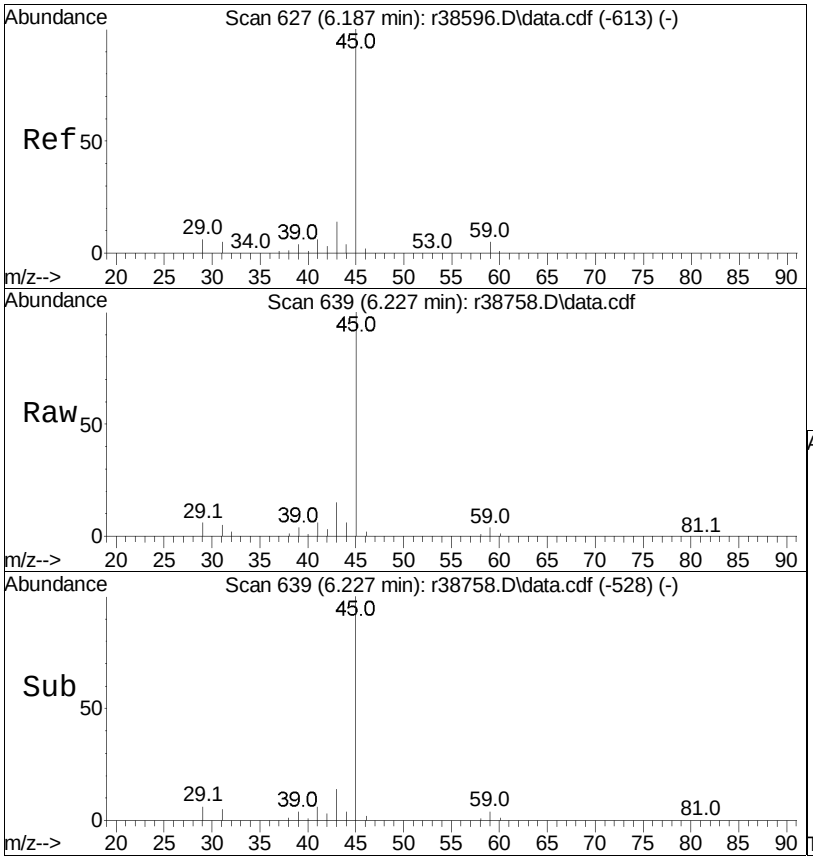



#21
trichlorofluoromethane
Concen: 0.24 ppbV
RT: 6.097 min Scan# 600
Delta R.T. 0.033 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion:101 Resp: 5785

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.3 | 51.4 | 77.0 |

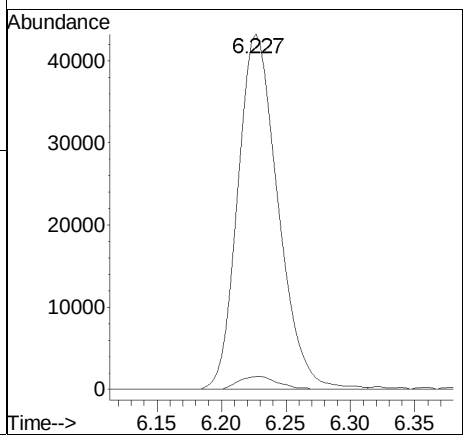


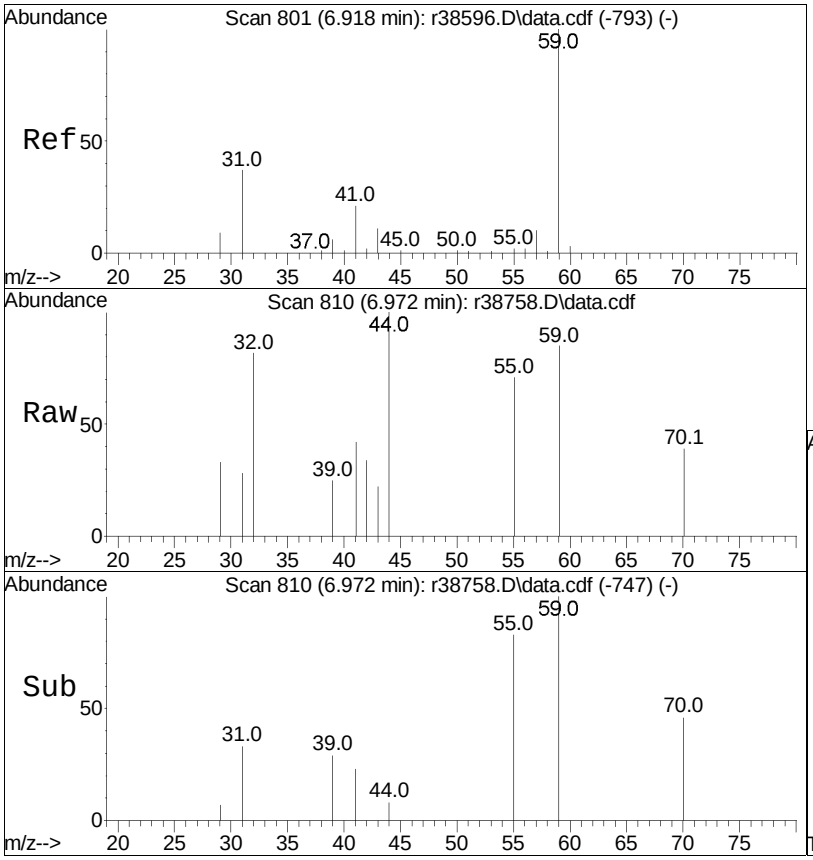



#22
isopropyl alcohol
Concen:  3.28 ppbV
RT:  6.227 min  Scan# 639
Delta R.T.  0.040 min
Lab File:  r38758.D
Acq: 20 Mar 2020  5:35 PM

Tgt Ion: 45 Resp:  93823

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 3.6 | 3.9 | 5.9# |

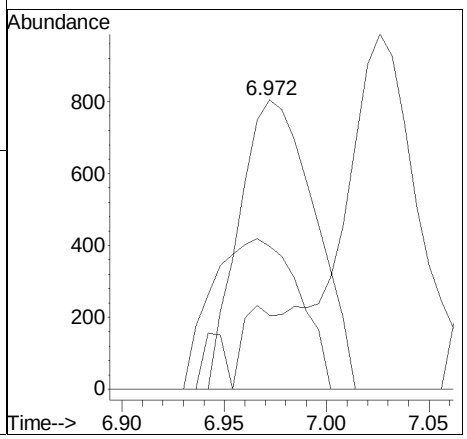


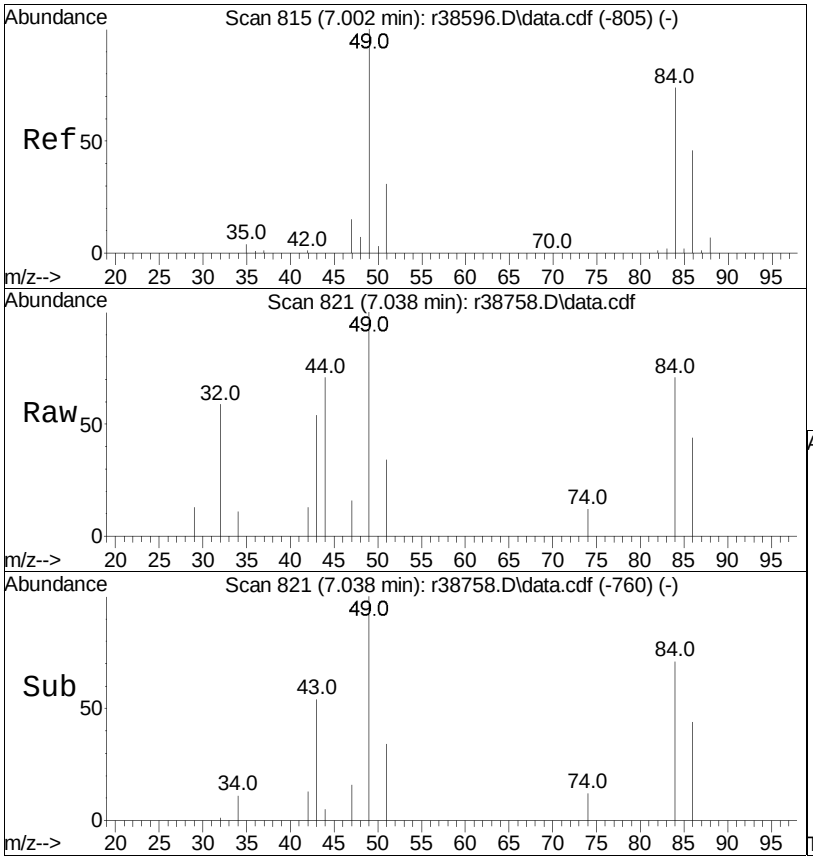



#27
tertiary butyl alcohol
Concen: 0.06 ppbV
RT: 6.972 min Scan# 810
Delta R.T. 0.054 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 59 Resp: 2070

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 49.4 | 16.9 | 25.3# |
| 43 | 25.6 | 8.9 | 13.3# |

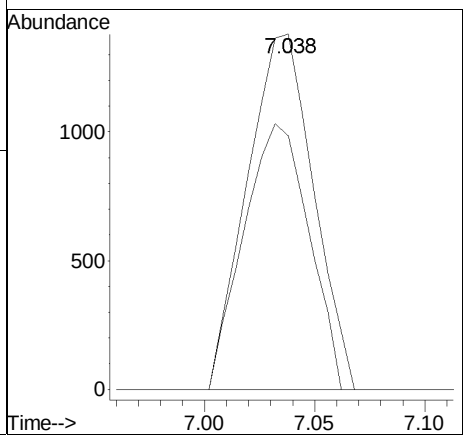


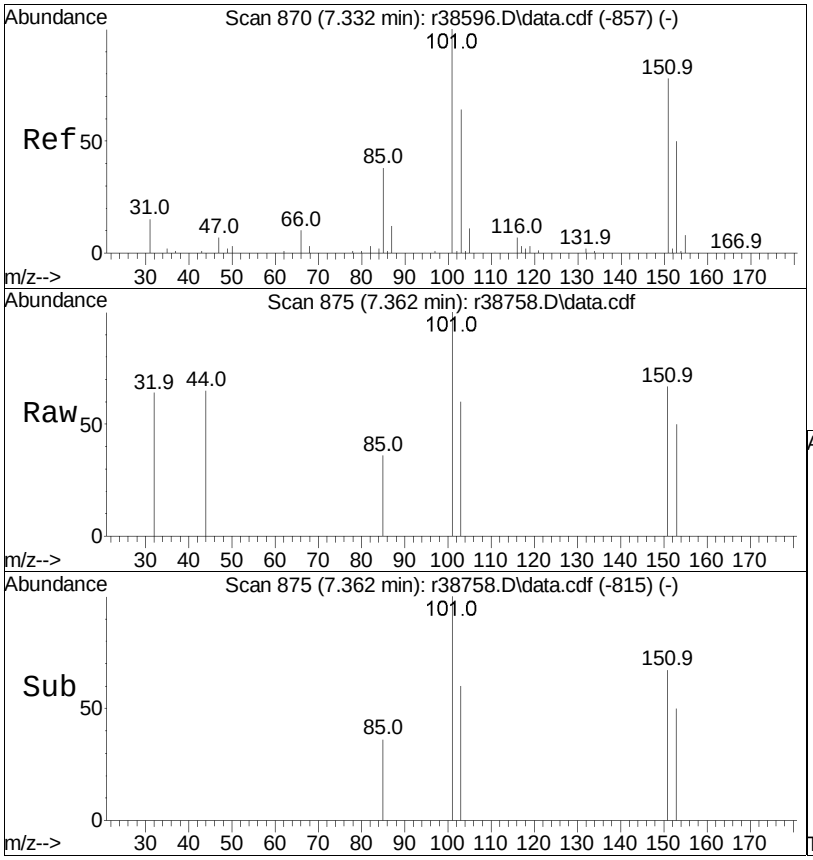



#28
methylene chloride
Concen: 0.13 ppbV
RT: 7.038 min Scan# 821
Delta R.T. 0.036 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 49 Resp: 2895

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 71.4 | 59.3 | 88.9 |

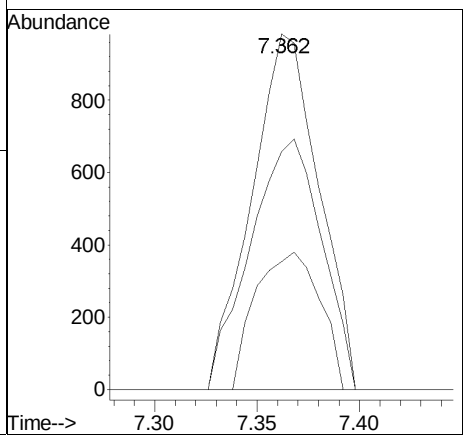


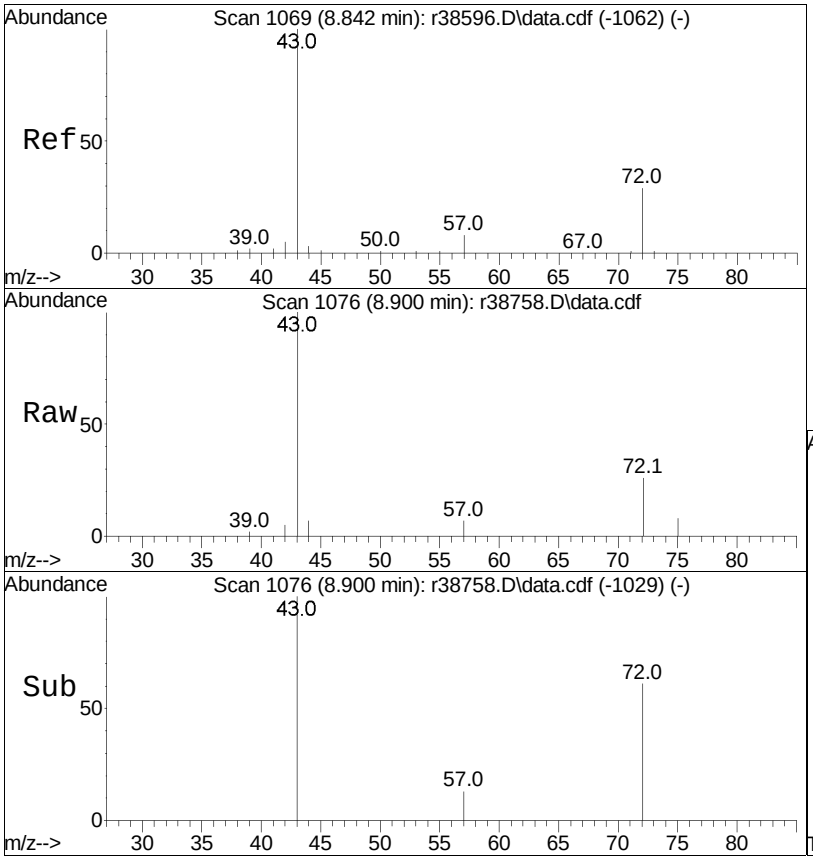



#31
Freon 113
Concen: 0.07 ppbV
RT: 7.362 min Scan# 875
Delta R.T. 0.030 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion:101 Resp: 2252

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 36.0 | 30.6 | 45.8 |
| 151 | 67.0 | 62.4 | 93.6 |

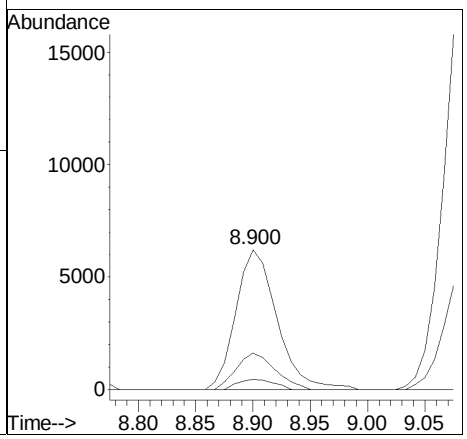


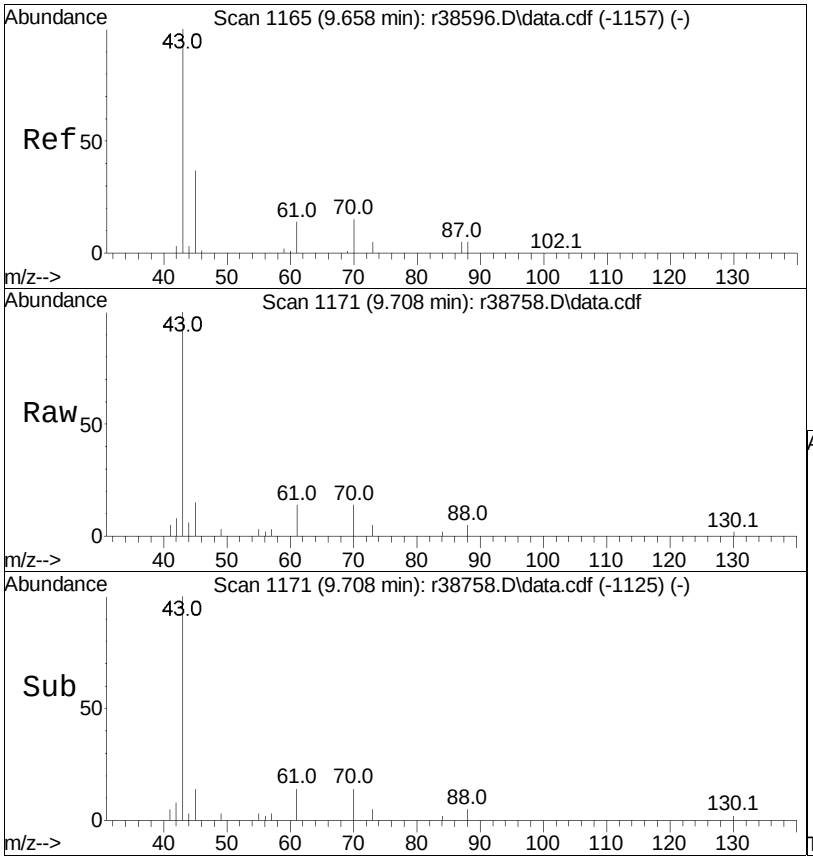



#36
2-butanone
Concen: 0.37 ppbV
RT: 8.900 min Scan# 1076
Delta R.T. 0.058 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 43 Resp: 15499

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.1 | 23.1 | 34.7 |
| 57 | 7.3 | 6.3 | 9.5 |

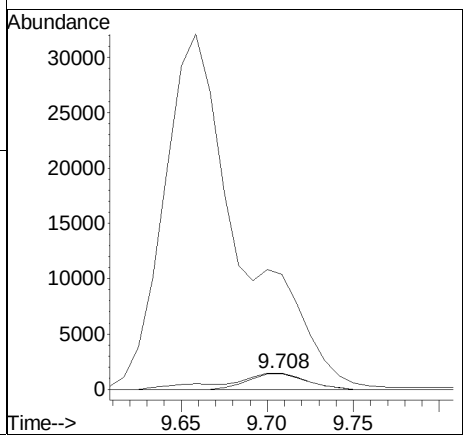


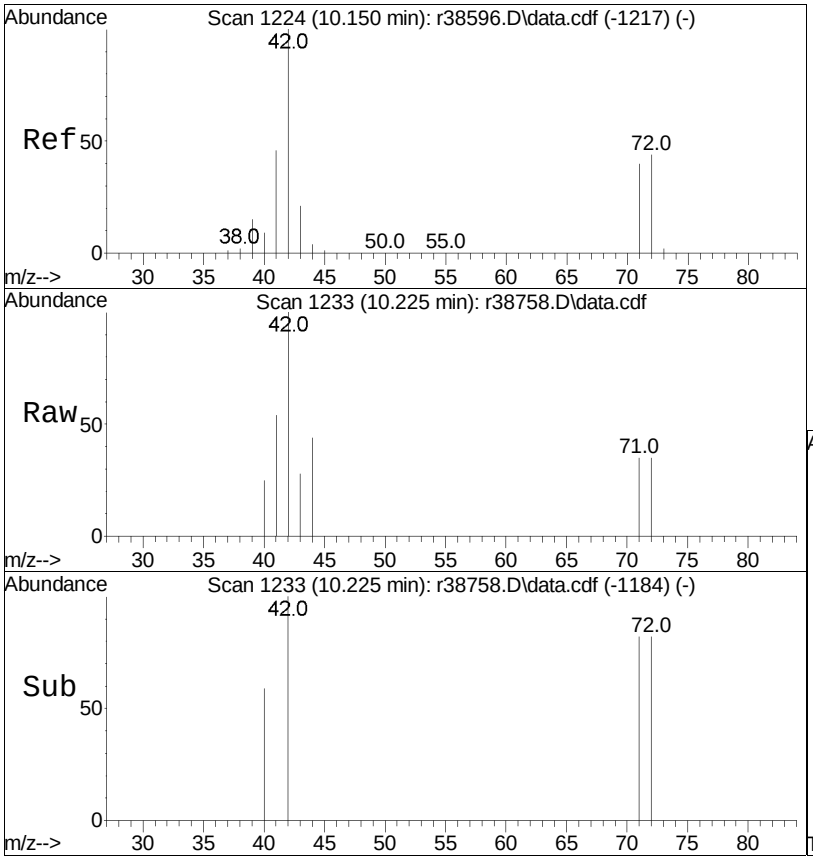



#38
Ethyl Acetate
Concen: 0.47 ppbV
RT: 9.708 min Scan# 1171
Delta R.T. 0.050 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 61 Resp: 3340

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 103.9 | 85.8 | 128.6 |
| 43 | 732.6 | 631.4 | 947.2 |

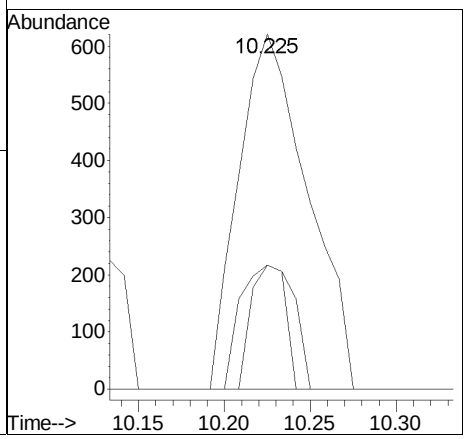


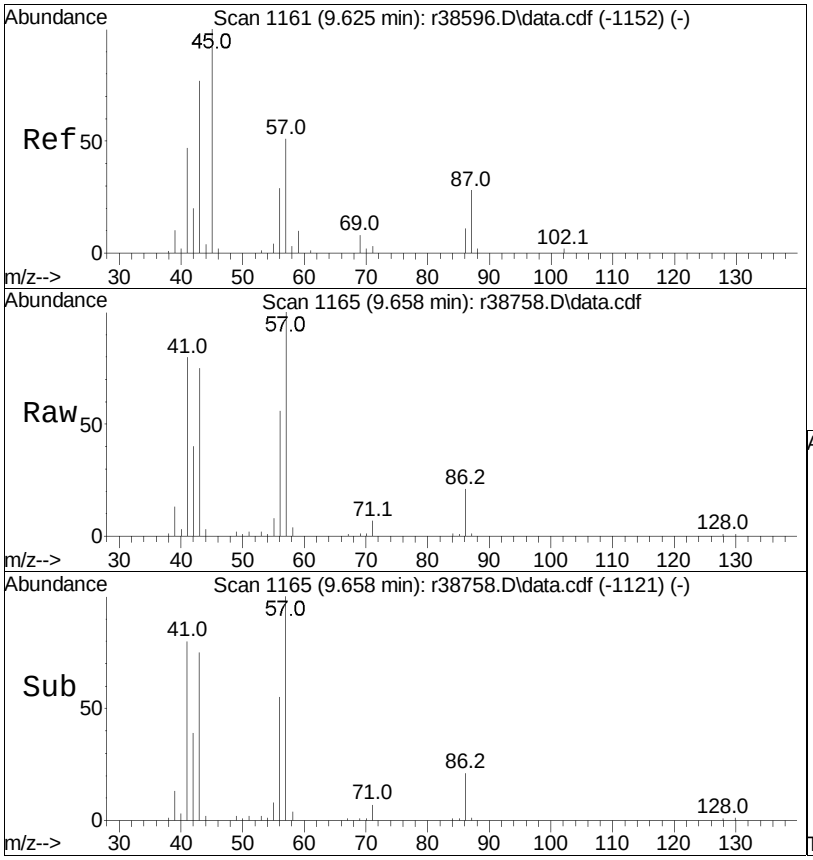



#40
Tetrahydrofuran
Concen: 0.07 ppbV
RT: 10.225 min Scan# 1233
Delta R.T. 0.075 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 42 Resp: 1743

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 34.9 | 31.8 | 47.8 |
| 72 | 34.9 | 35.2 | 52.8# |

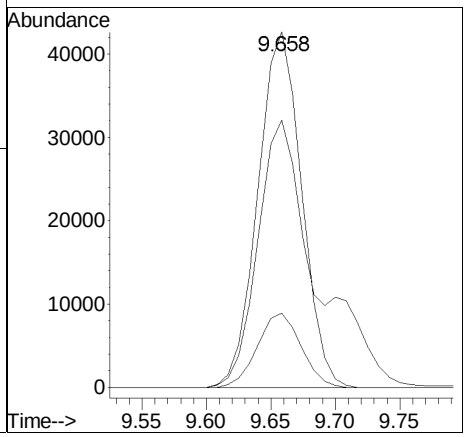


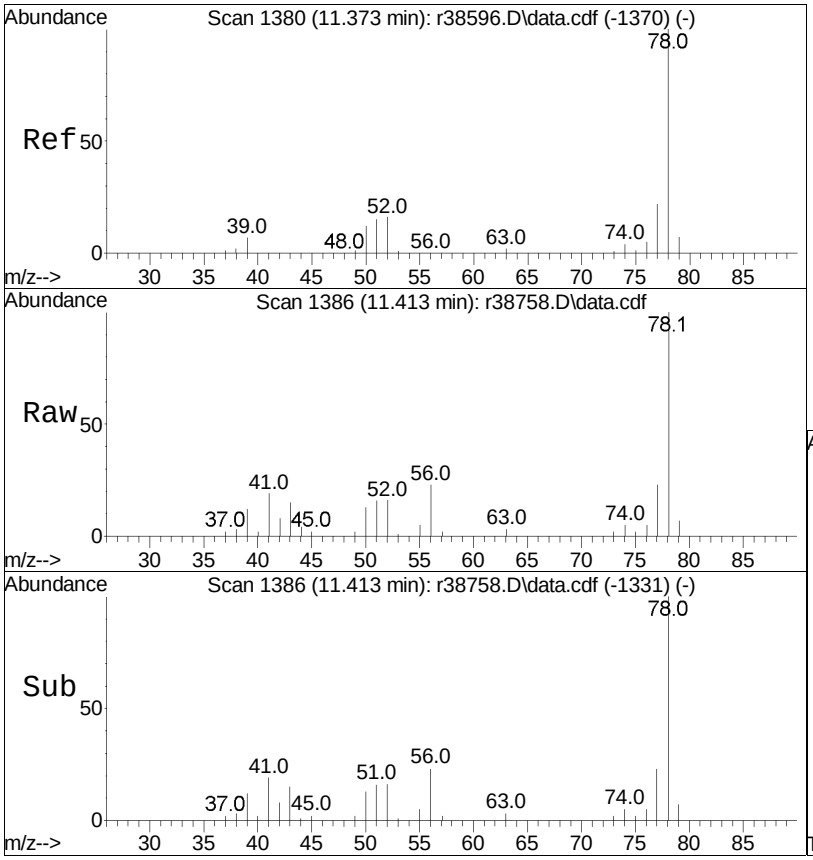



#44
hexane
Concen: 2.89 ppbV
RT: 9.658 min Scan# 1165
Delta R.T. 0.033 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 57 Resp: 100486

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 75.3 | 119.3 | 178.9# |
| 86 | 20.9 | 17.0 | 25.6 |

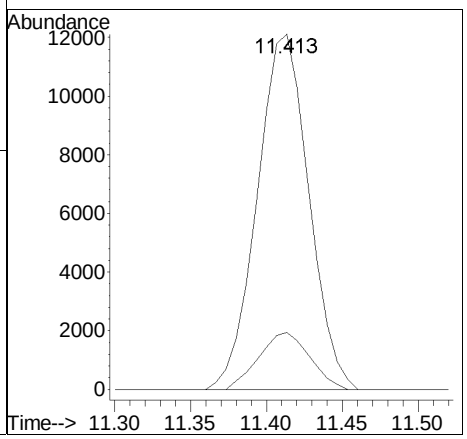


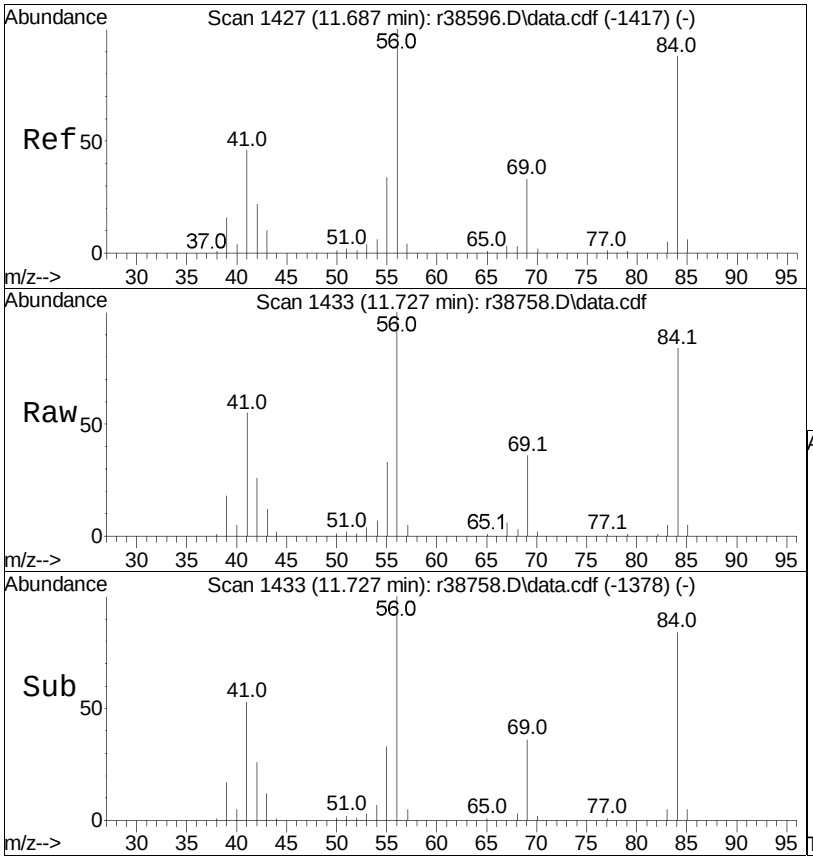



#50
benzene
Concen: 0.42 ppbV
RT: 11.413 min Scan# 1386
Delta R.T. 0.040 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 78 Resp: 28608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 16.0 | 12.6 | 18.8 |

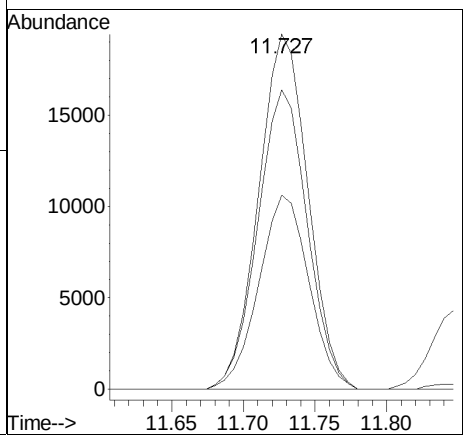


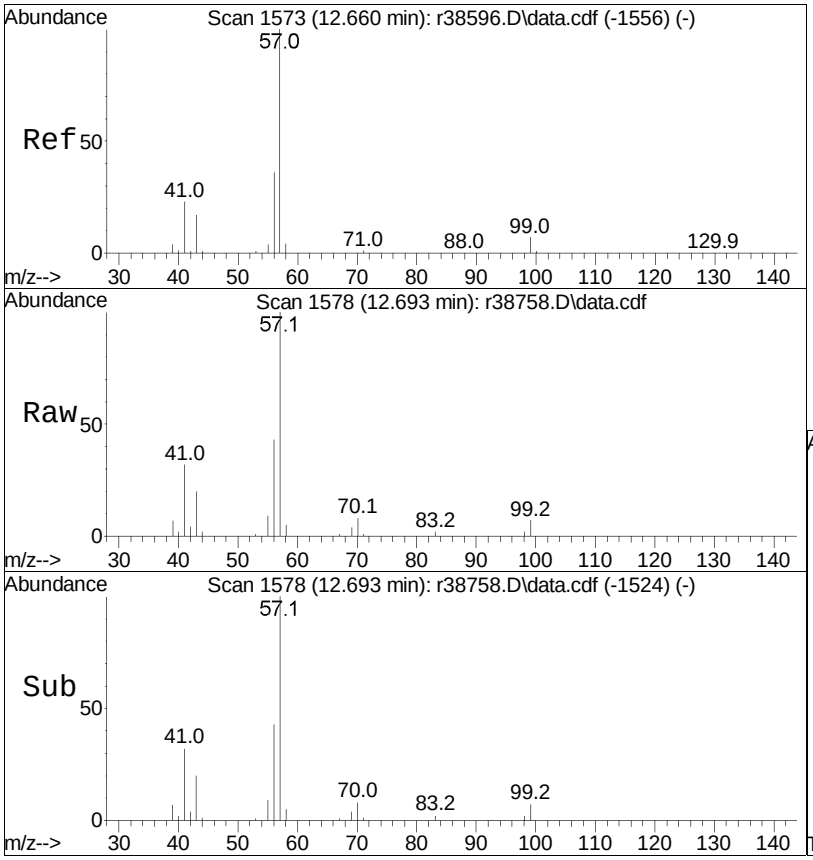



#53
cyclohexane
Concen: 1.24 ppbV
RT: 11.727 min Scan# 1433
Delta R.T. 0.040 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 56 Resp: 46645

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 84.3 | 70.2 | 105.2 |
| 41 | 54.6 | 36.9 | 55.3 |

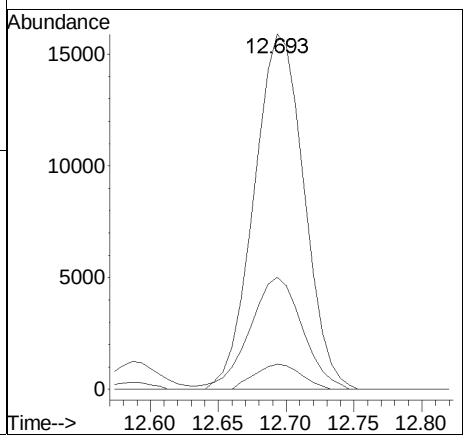


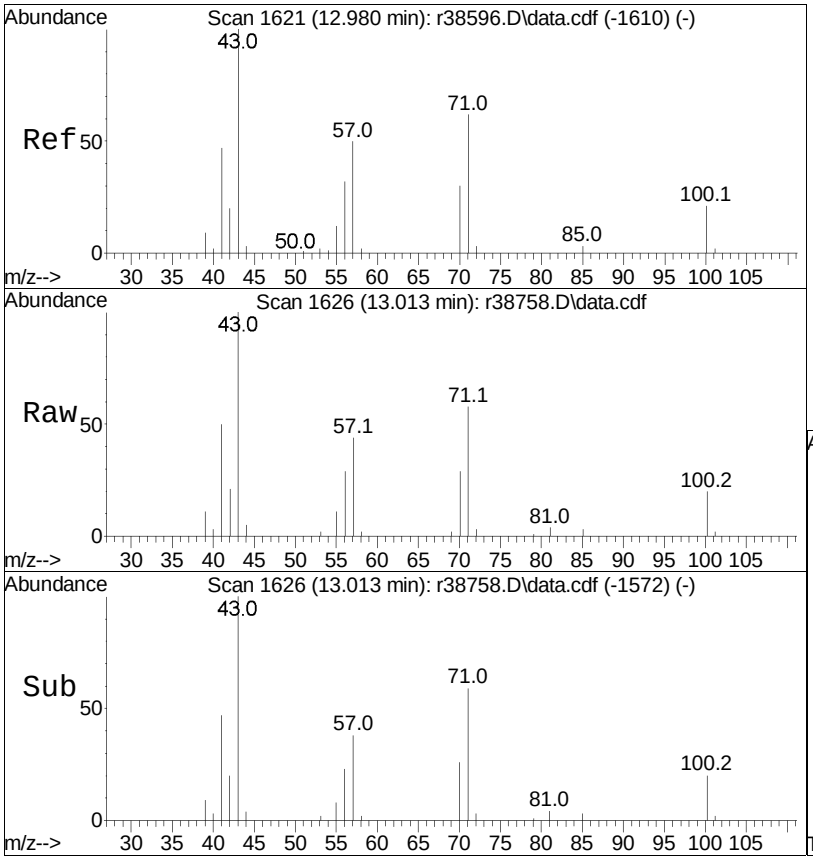



#60
2,2,4-trimethylpentane
Concen: 0.37 ppbV
RT: 12.693 min Scan# 1578
Delta R.T. 0.033 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 57 Resp: 40782

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.1 | 5.4 | 8.2 |
| 41 | 31.6 | 18.2 | 27.2# |

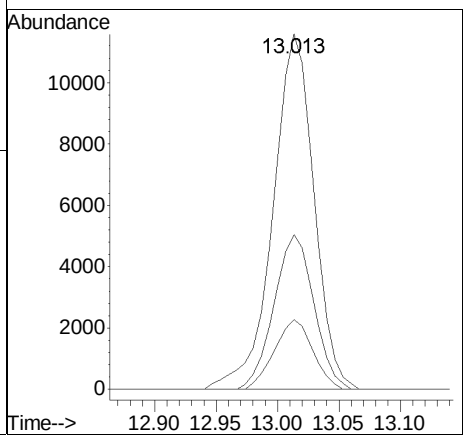


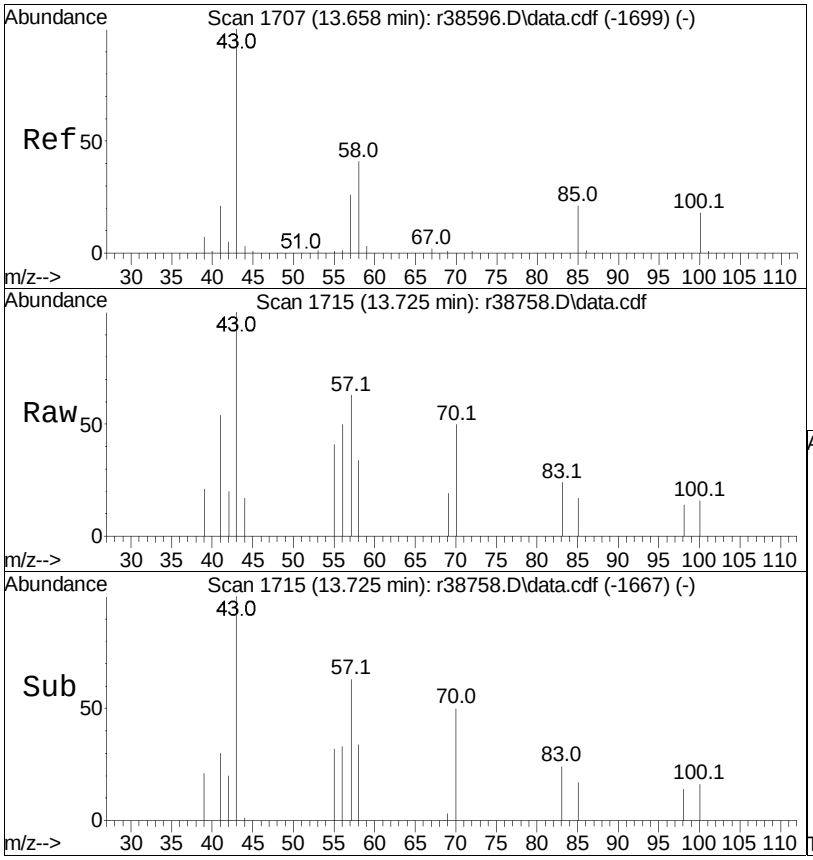



#62
heptane
Concen: 0.62 ppbV
RT: 13.013 min Scan# 1626
Delta R.T. 0.033 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 43 Resp: 26930

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 43.6 | 39.8 | 59.6 |
| 100 | 19.6 | 17.3 | 25.9 |

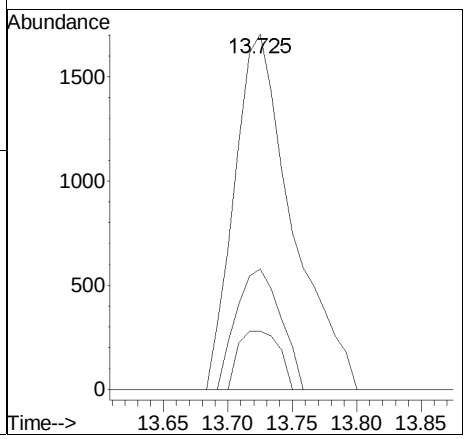


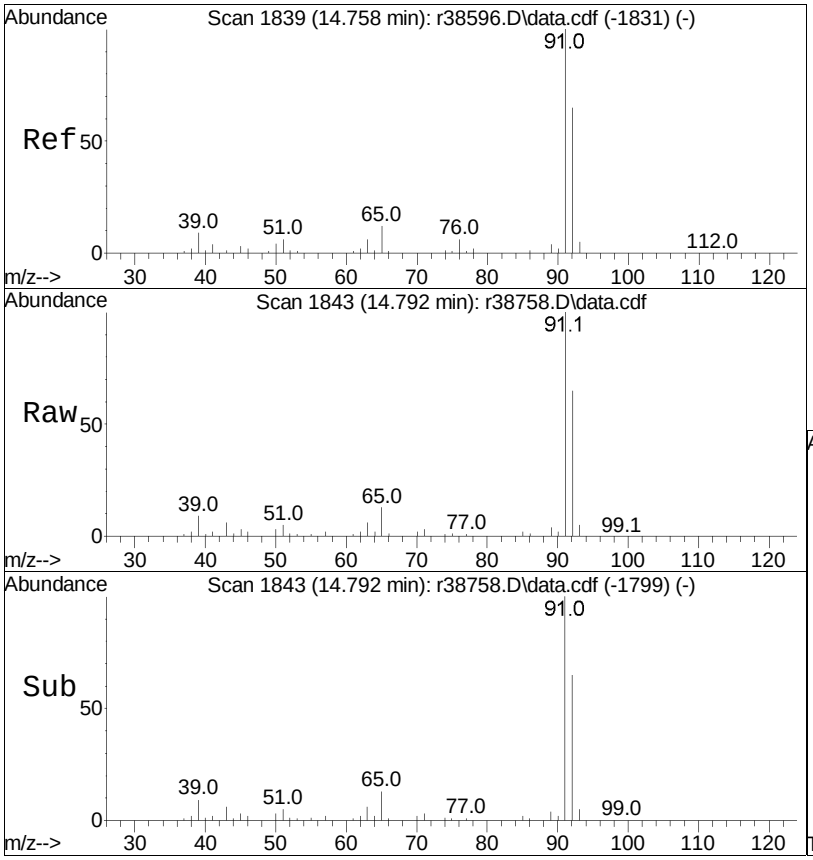



#64
4-methyl-2-pentanone
Concen: 0.11 ppbV
RT: 13.725 min Scan# 1715
Delta R.T. 0.067 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 43 Resp: 5307

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.9 | 32.5 | 48.7 |
| 100 | 16.4 | 14.7 | 22.1 |

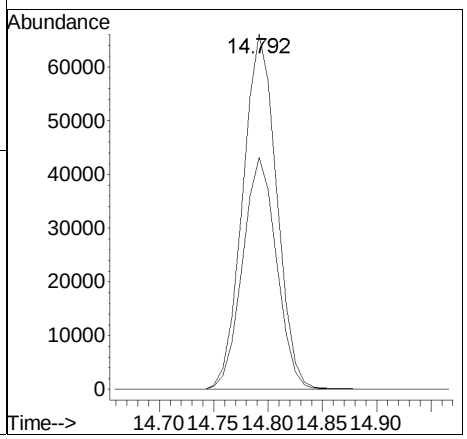


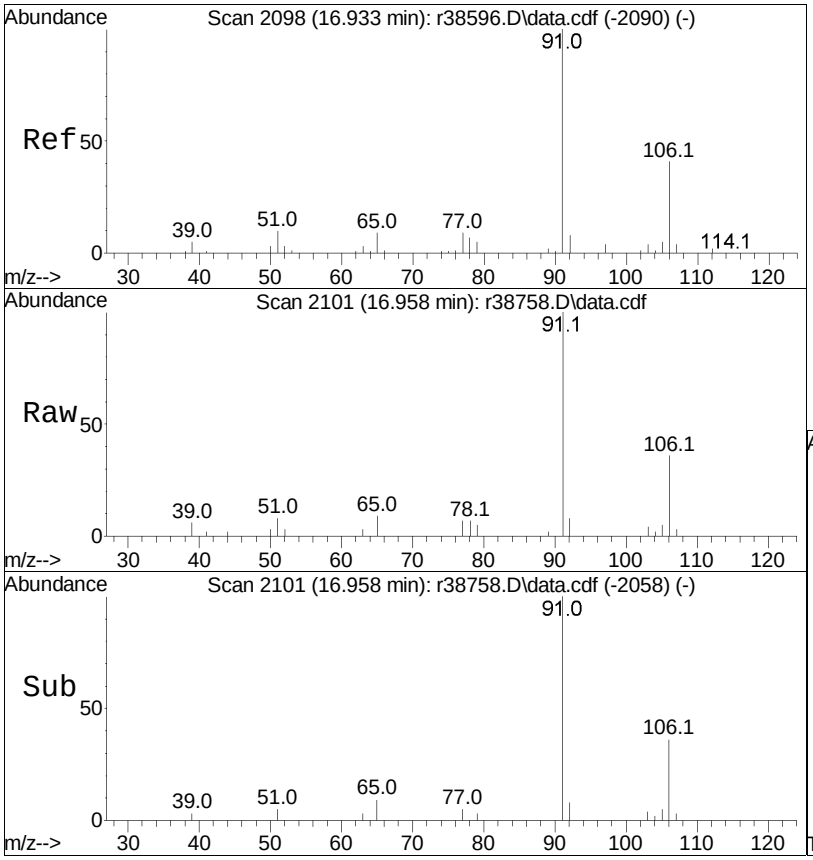



#68
toluene
Concen: 2.16 ppbV
RT: 14.792 min Scan# 1843
Delta R.T. 0.033 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 91 Resp: 143719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.3 | 52.4 | 78.6 |

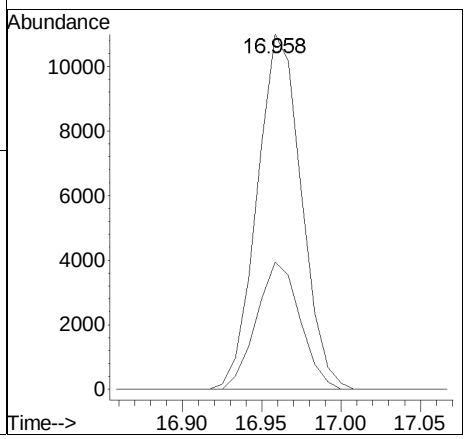


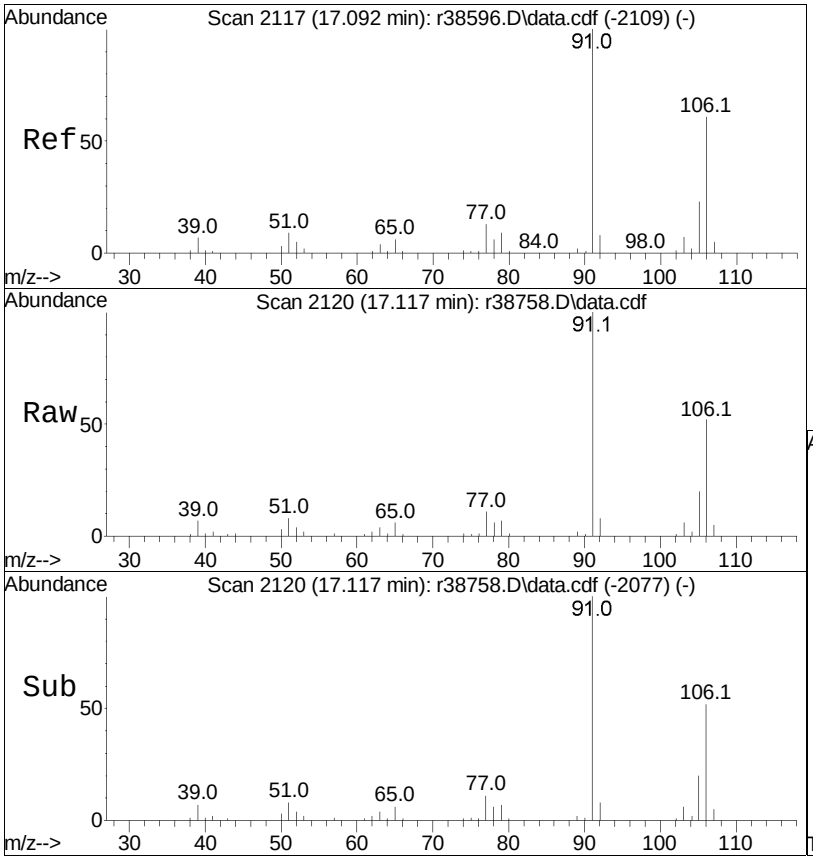



#81
ethylbenzene
Concen: 0.27 ppbV
RT: 16.958 min Scan# 2101
Delta R.T. 0.025 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 91 Resp: 21330

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 35.8 | 32.6 | 48.8 |

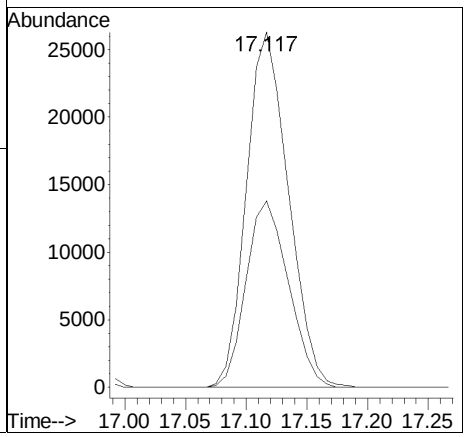


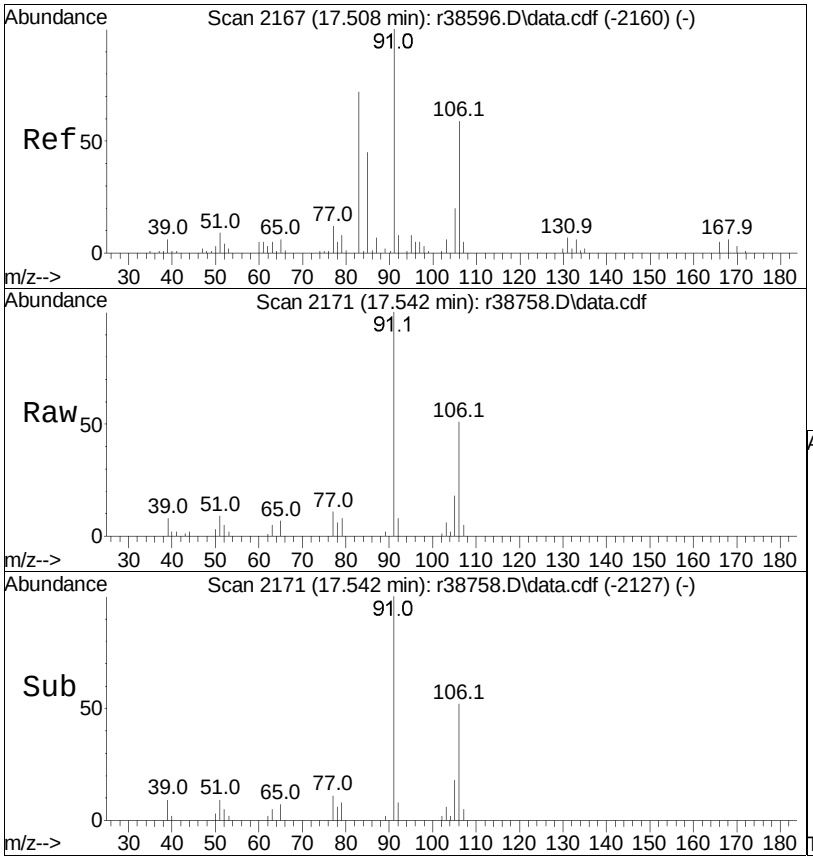



#83
m+p-xylene
Concen: 0.97 ppbV
RT: 17.117 min Scan# 2120
Delta R.T. 0.025 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 91 Resp: 63247

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 52.5 | 49.0 | 73.6 |

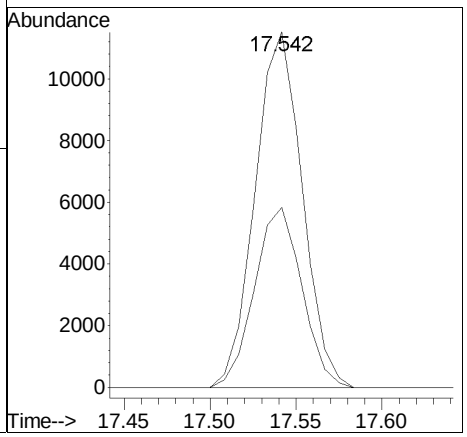


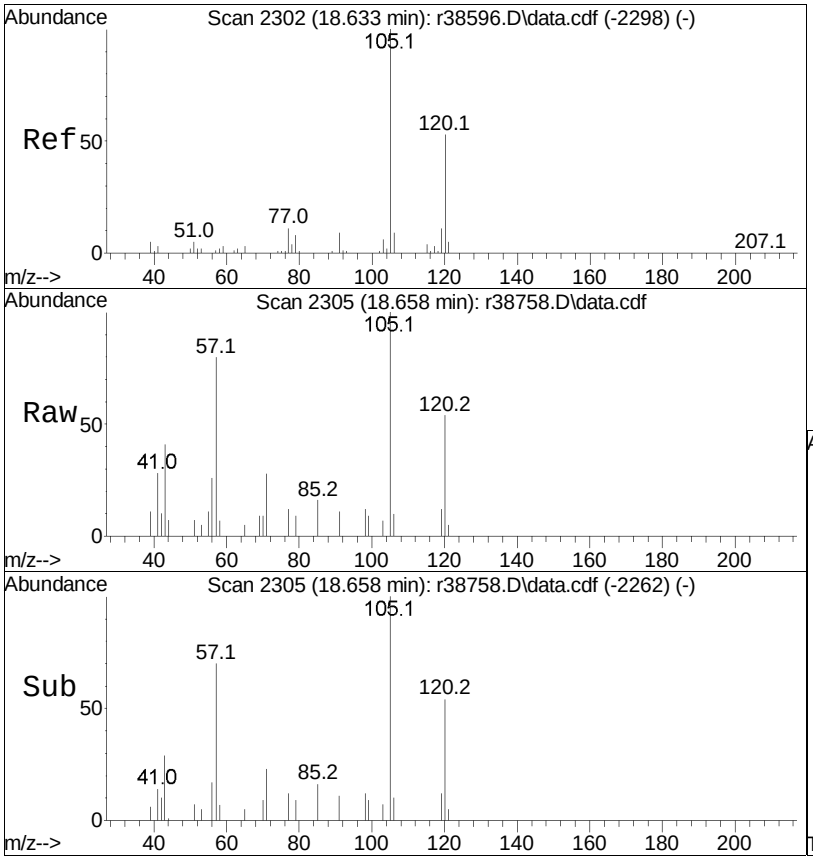



#87
o-xylene
Concen: 0.34 ppbV
RT: 17.542 min Scan# 2171
Delta R.T. 0.033 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion: 91 Resp: 21924

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 50.7 | 47.4 | 71.0 |

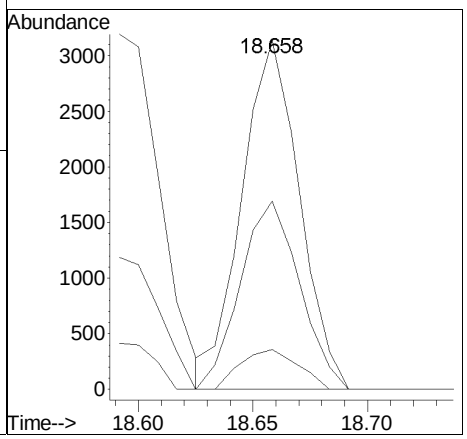


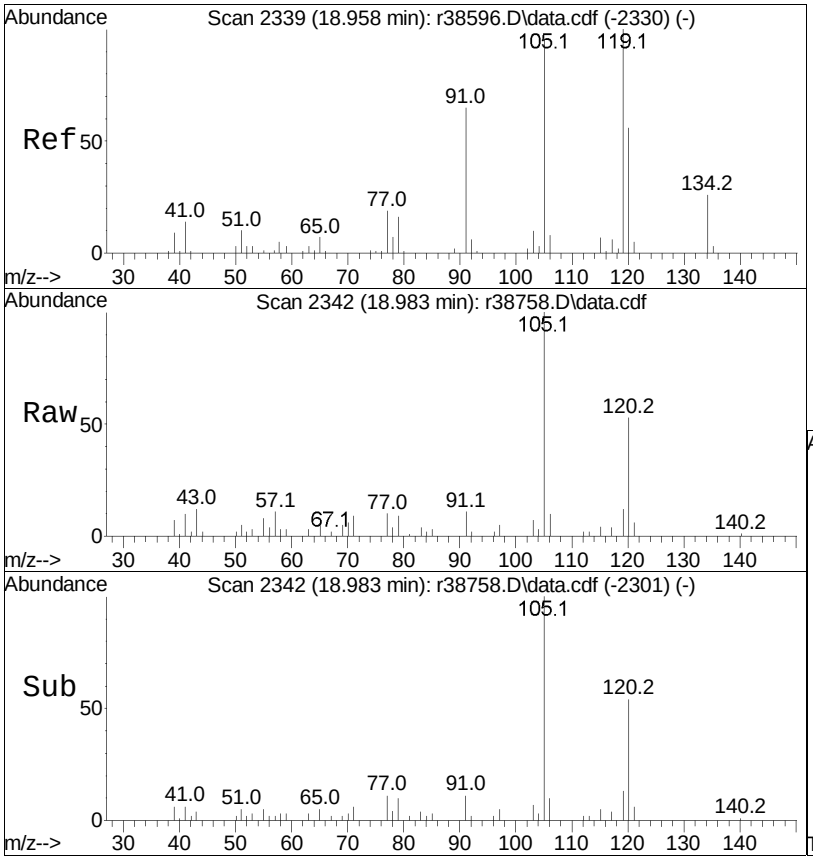



#97
1,3,5-trimethylbenzene
Concen: 0.07 ppbV
RT: 18.658 min Scan# 2305
Delta R.T. 0.025 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion:105 Resp: 5480

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 54.0 | 41.6 | 62.4 |
| 91 | 11.5 | 7.0 | 10.4# |

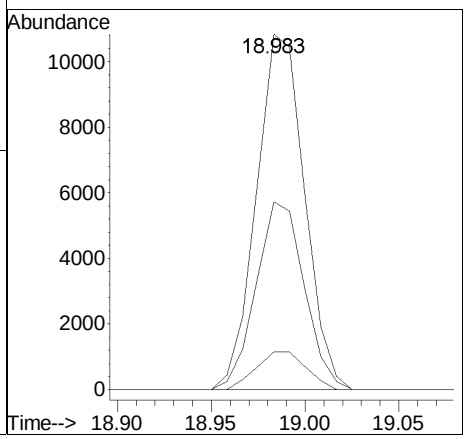





#99
1,2,4-trimethylbenzene
Concen: 0.25 ppbV
RT: 18.983 min Scan# 2342
Delta R.T. 0.025 min
Lab File: r38758.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion:105 Resp: 19325

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 52.8 | 47.1 | 70.7 |
| 91 | 10.6 | 55.0 | 82.6# |

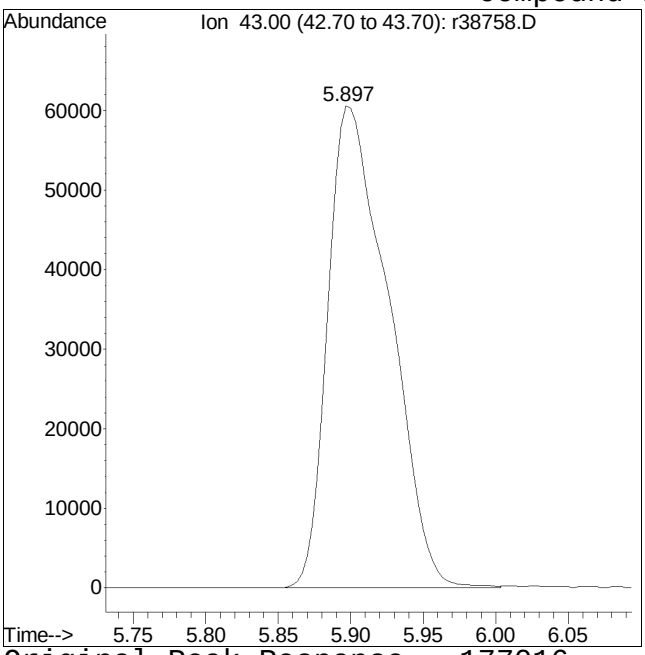


Manual Integration Report

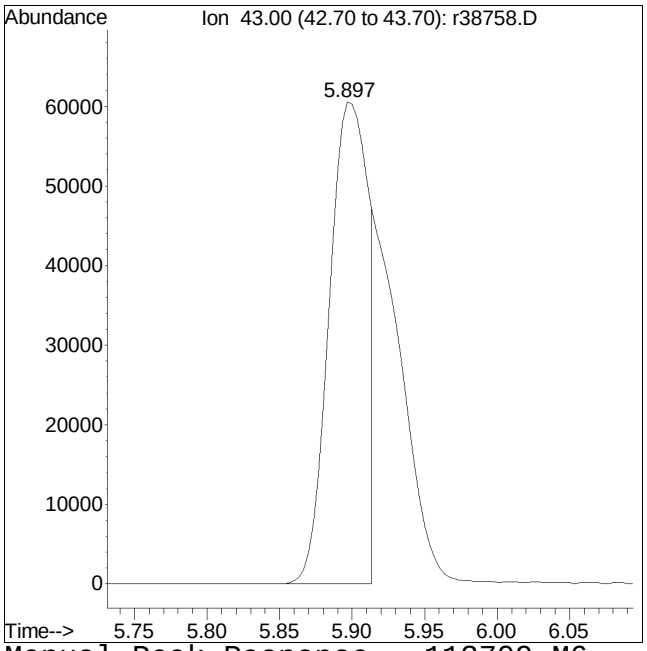
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38758.D
Date Inj'd : 3/20/2020 0:5: 5
Sample : L2011723-05,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:04 am

Compound #19: acetone




Original Peak Response = 177016




Manual Peak Response = 113709 M6

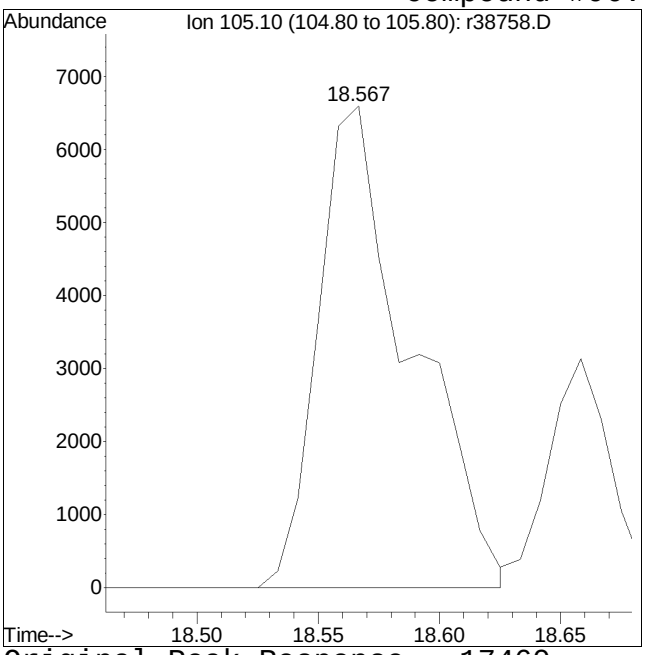
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

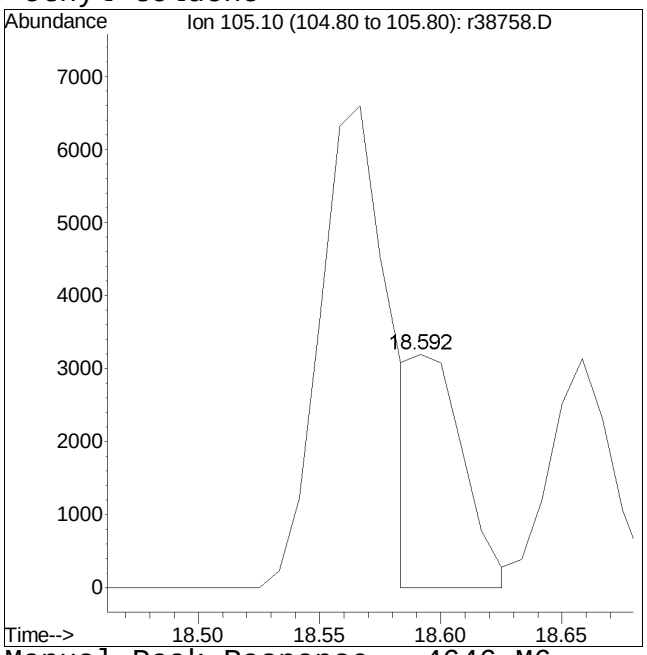
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38758.D
Date Inj'd : 3/20/2020 0:5: 5
Sample : L2011723-05,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:04 am

Compound #96: 4-ethyl toluene




Original Peak Response = 17460




Manual Peak Response = 4646 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38759.D
Acq On : 20 Mar 2020 6:16 PM
Operator : AIRPIANO3:EW
Sample : L2011723-06,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:12:50 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : TO15-NY-7-SIM - .

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) bromochloromethane | 9.583 | 49 | 357016 | 10.000 | ppbV | | 0.03 |
| Standard Area = 353543 | | | Recovery = 100.98% | | | | |
| 43) 1,4-difluorobenzene | 11.847 | 114 | 960052 | 10.000 | ppbV | | 0.03 |
| Standard Area = 970632 | | | Recovery = 98.91% | | | | |
| 67) chlorobenzene-D5 | 16.575 | 54 | 137219 | 10.000 | ppbV | | 0.03 |
| Standard Area = 139948 | | | Recovery = 98.05% | | | | |
| System Monitoring Compounds | | | | | | | |
| Target Compounds | | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 4.006 | 85 | 15118 | 0.469 | ppbV | | 97 |
| 6) chloromethane | 4.186 | 50 | 11986 | 0.808 | ppbV | | 96 |
| 7) Freon-114 | 4.318 | | 0 | N.D. | | | |
| 10) 1,3-butadiene | 4.612 | 54 | 25671 | 1.480 | ppbV | | 86 |
| 13) bromomethane | 4.936 | | 0 | N.D. | | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | | |
| 15) ethanol | 5.326 | 31 | 1688074 | 121.386 | ppbV | # | 79 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | | |
| 19) acetone | 5.900 | 43 | 365985M6 | 15.803 | ppbV | | |
| 21) trichlorofluoromethane | 6.100 | 101 | 5960 | 0.237 | ppbV | | 97 |
| 22) isopropyl alcohol | 6.223 | 45 | 513424 | 17.339 | ppbV | # | 97 |
| 27) tertiary butyl alcohol | 6.972 | 59 | 3568 | 0.101 | ppbV | # | 1 |
| 28) methylene chloride | 7.038 | 49 | 3162 | 0.142 | ppbV | | 93 |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | | |
| 30) carbon disulfide | 7.326 | | 0 | N.D. | | | |
| 31) Freon 113 | 7.368 | 101 | 2303 | 0.067 | ppbV | | 97 |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | d | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | d | | |
| 34) MTBE | 0.000 | | 0 | N.D. | d | | |
| 36) 2-butanone | 8.892 | 43 | 48987 | 1.115 | ppbV | | 96 |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | d | | |
| 39) chloroform | 9.750 | 83 | 2837 | 0.082 | ppbV | # | 88 |
| 40) Tetrahydrofuran | 10.208 | 42 | 12377 | 0.450 | ppbV | | 92 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | d | | |
| 44) hexane | 9.658 | 57 | 2055152 | 57.709 | ppbV | # | 48 |
| 50) benzene | 11.413 | 78 | 467355 | 6.723 | ppbV | | 100 |
| 53) cyclohexane | 11.733 | 56 | 958925 | 24.858 | ppbV | | 95 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38759.D
Acq On : 20 Mar 2020 6:16 PM
Operator : AIRPIANO3:EW
Sample : L2011723-06,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:12:50 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : TO15-NY-7-SIM - .

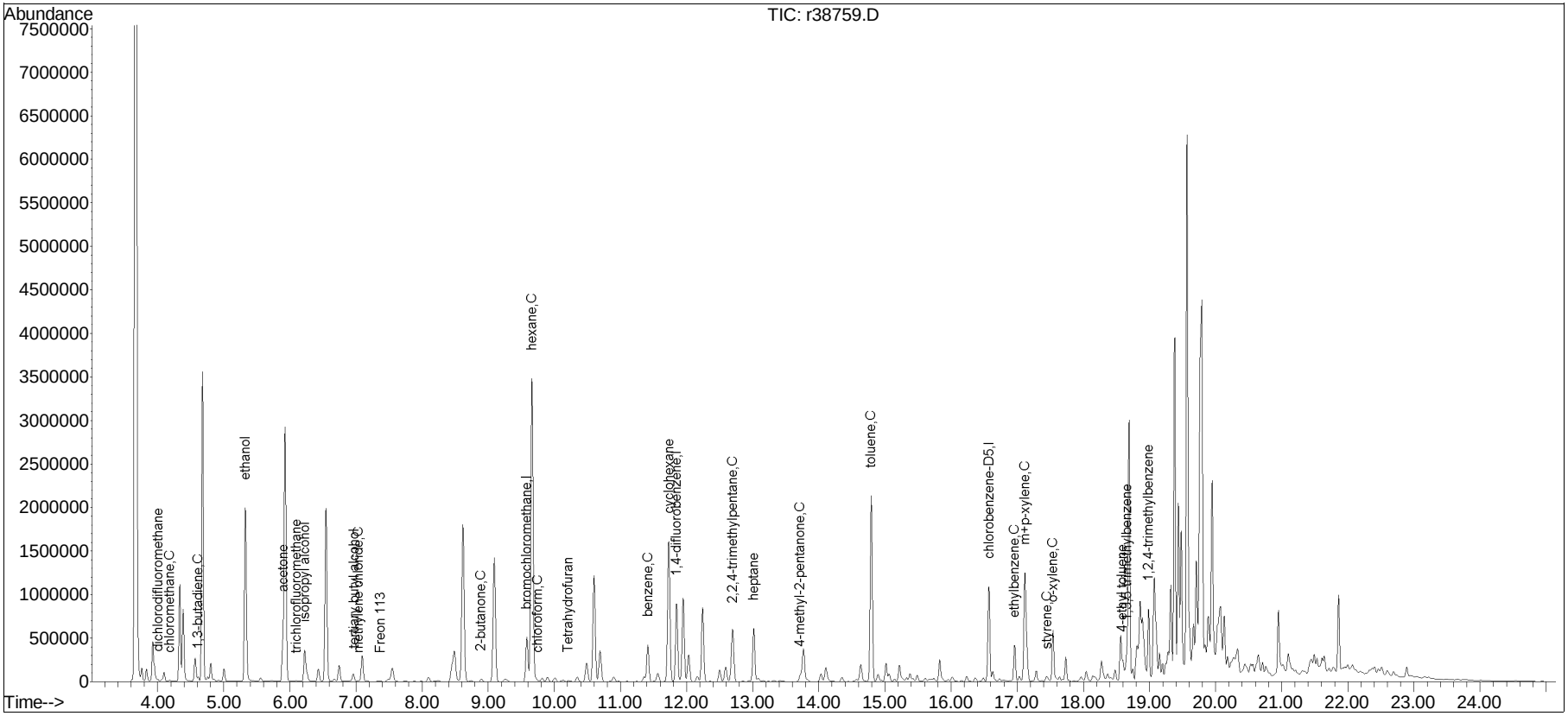
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | d | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | d | | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | d | | |
| 60) 2,2,4-trimethylpentane | 12.700 | 57 | 605165 | 5.340 | ppbV | # | 88 |
| 62) heptane | 13.013 | 43 | 355547 | 7.984 | ppbV | | 91 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | | |
| 64) 4-methyl-2-pentanone | 13.717 | 43 | 34435 | 0.686 | ppbV | # | 89 |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | d | | |
| 68) toluene | 14.792 | 91 | 1818461 | 26.114 | ppbV | | 99 |
| 72) 2-hexanone | 0.000 | | 0 | N.D. | d | | |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | | |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | | |
| 81) ethylbenzene | 16.958 | 91 | 360980 | 4.353 | ppbV | | 94 |
| 83) m+p-xylene | 17.117 | 91 | 1067446 | 15.722 | ppbV | | 93 |
| 84) bromoform | 0.000 | | 0 | N.D. | | | |
| 85) styrene | 17.450 | 104 | 19109 | 0.315 | ppbV | | 98 |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | | |
| 87) o-xylene | 17.542 | 91 | 404889 | 6.086 | ppbV | | 92 |
| 96) 4-ethyl toluene | 18.592 | 105 | 113971M6 | 1.064 | ppbV | | |
| 97) 1,3,5-trimethylbenzene | 18.658 | 105 | 121959 | 1.400 | ppbV | | 95 |
| 99) 1,2,4-trimethylbenzene | 18.983 | 105 | 433251 | 5.345 | ppbV | # | 57 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. | d | | |
| 103) 1,4-dichlorobenzene | 19.167 | | 0 | N.D. | | | |
| 107) 1,2-dichlorobenzene | 0.000 | | 0 | N.D. | | | |
| 115) 1,2,4-trichlorobenzene | 20.908 | | 0 | N.D. | | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | | |

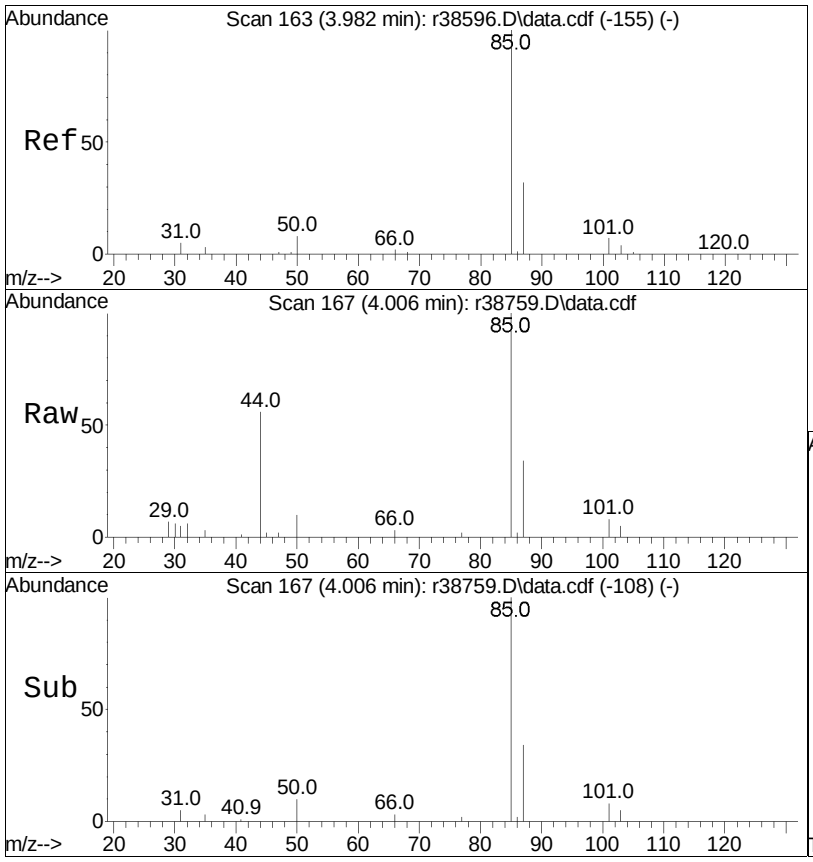
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : TO15-NY-7-SIM - .\Airpiano3\2020\03\200320T\r38754.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38759.D
Acq On : 20 Mar 2020 6:16 PM
Operator : AIRPIANO3:EW
Sample : L2011723-06,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:12:50 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

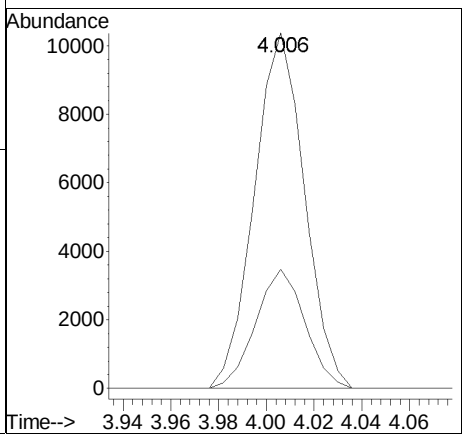


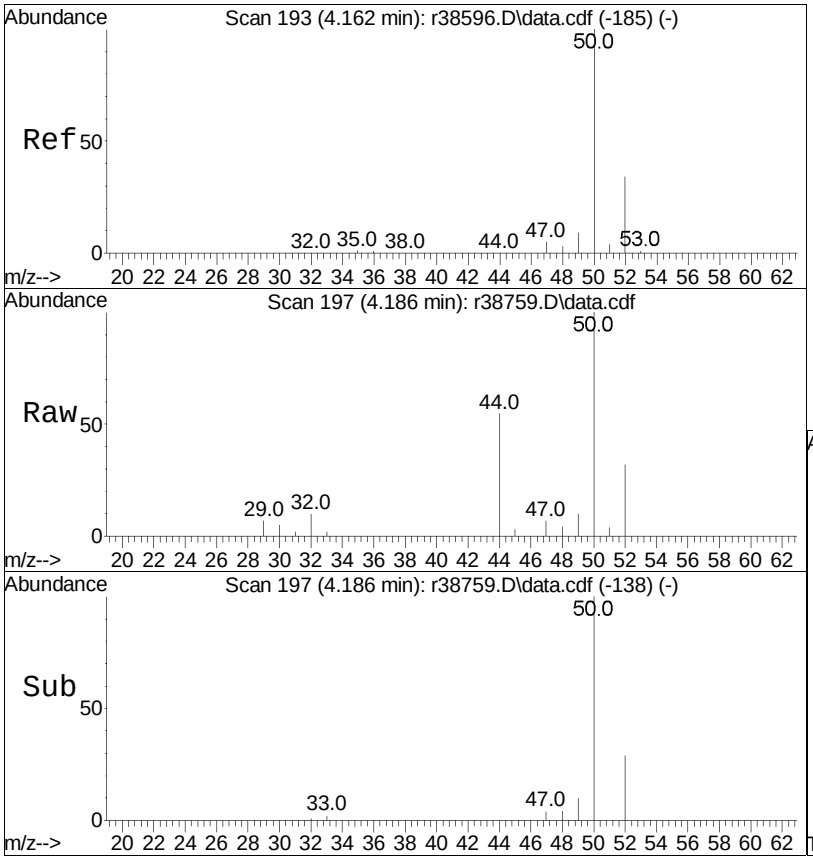



#5
dichlorodifluoromethane
Concen: 0.47 ppbV
RT: 4.006 min Scan# 167
Delta R.T. 0.024 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 85 Resp: 15118

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 33.6 | 25.4 | 38.0 |

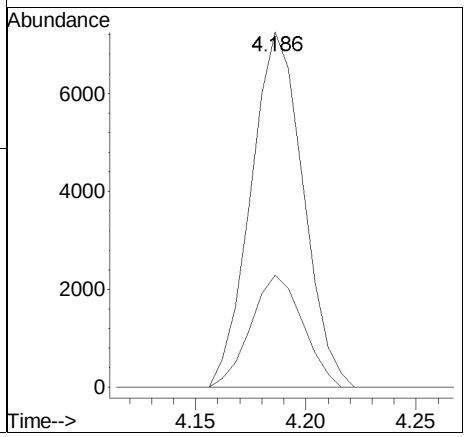


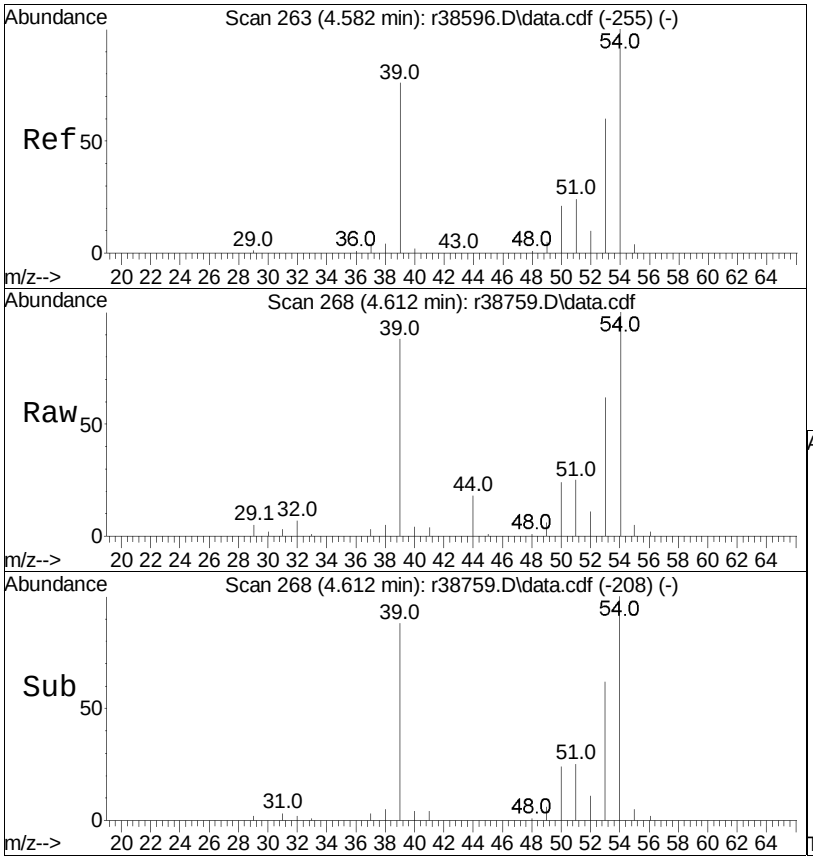



#6
chloromethane
Concen: 0.81 ppbV
RT: 4.186 min Scan# 197
Delta R.T. 0.024 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 50 Resp: 11986

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.6 | 26.9 | 40.3 |

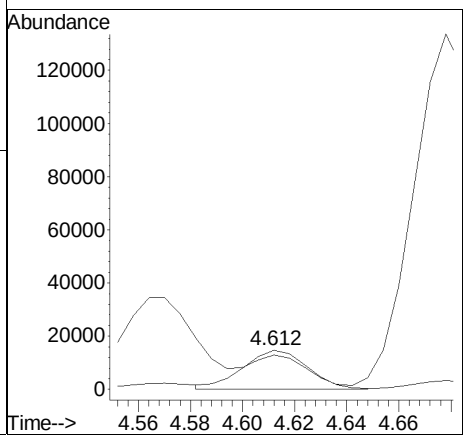


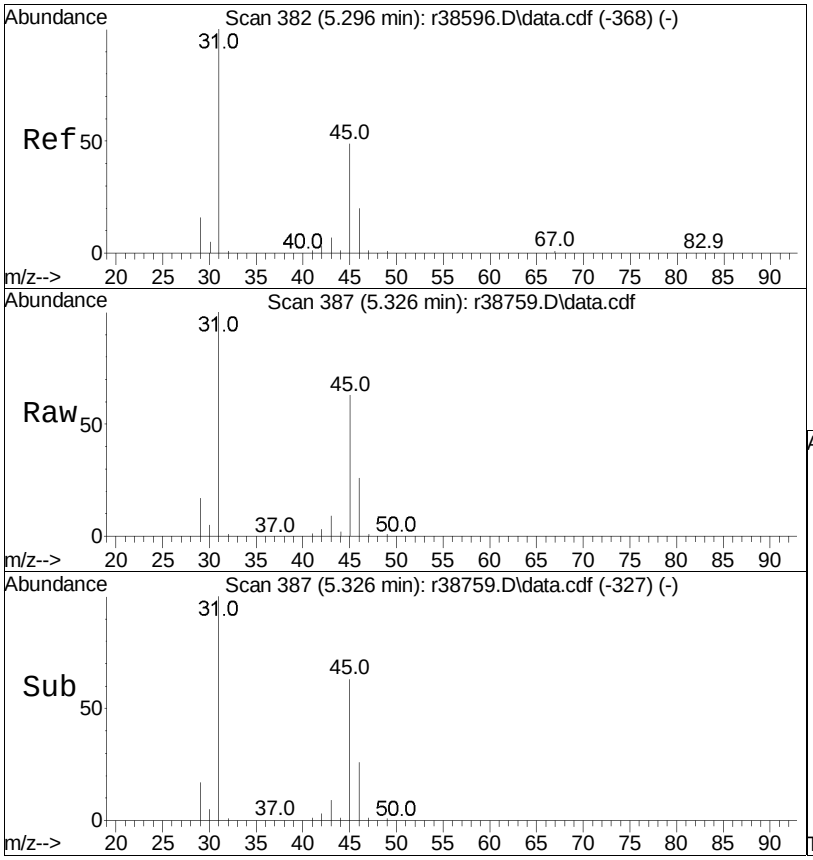



#10
1,3-butadiene
Concen: 1.48 ppbV
RT: 4.612 min Scan# 268
Delta R.T. 0.030 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 54 Resp: 25671

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 87.9 | 60.9 | 91.3 |

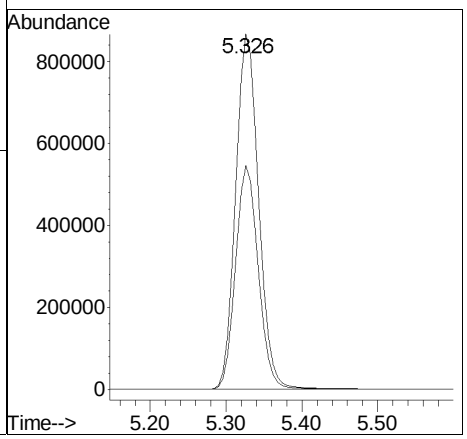


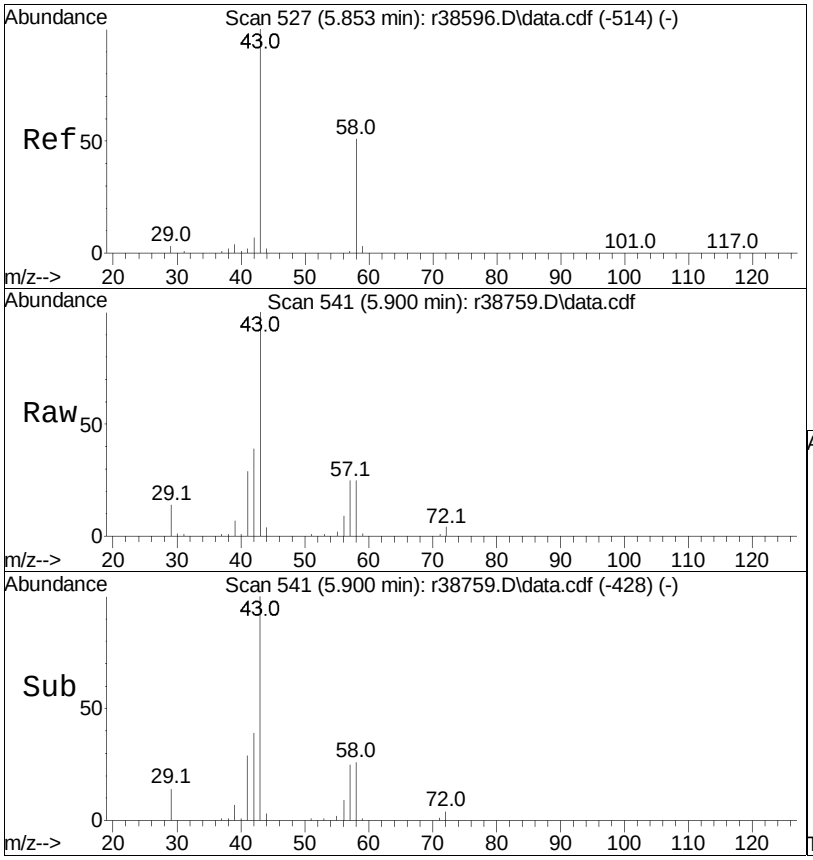



#15
ethanol
Concen: 121.39 ppbV
RT: 5.326 min Scan# 387
Delta R.T. 0.030 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 31 Resp: 1688074

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 63.0 | 39.0 | 58.4# |

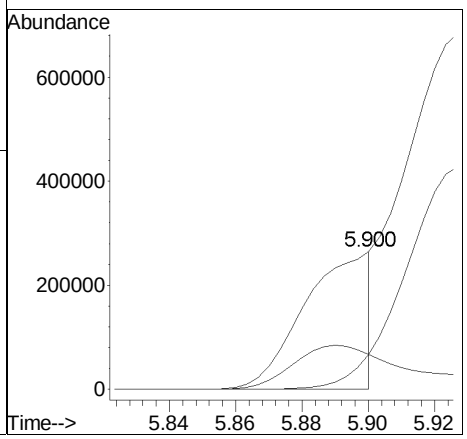


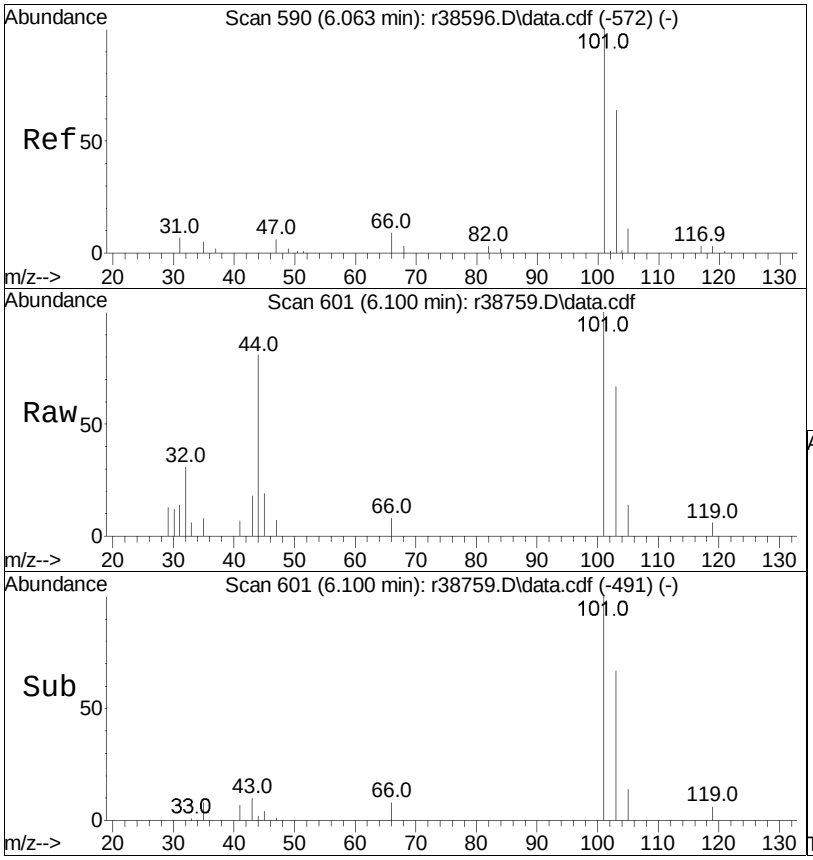



#19
acetone
Concen: 15.80 ppbV m
RT: 5.900 min Scan# 541
Delta R.T. 0.047 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 43 Resp: 365985

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 25.5 | 40.6 | 60.8# |
| 57 | 25.1 | 1.0 | 1.6# |

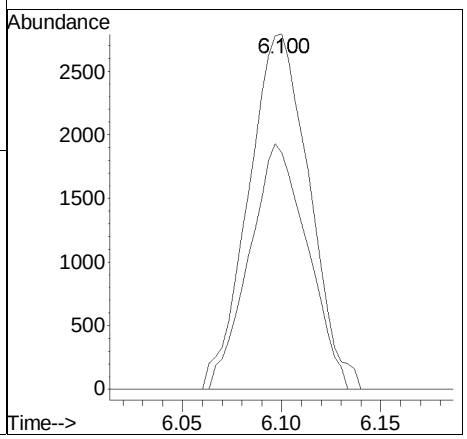


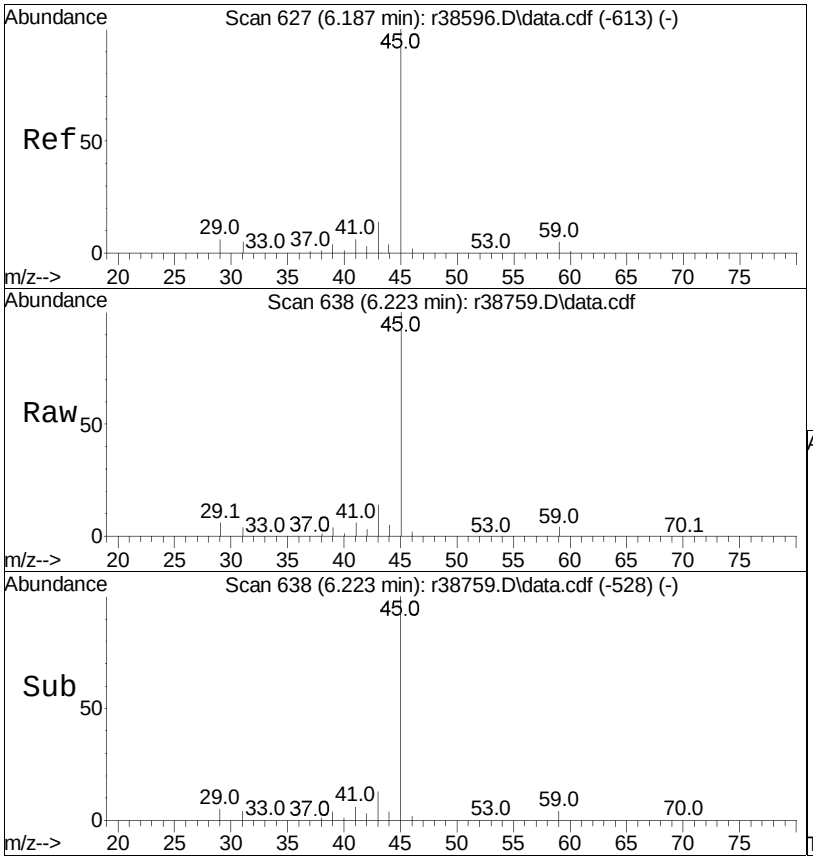



#21
trichlorofluoromethane
Concen: 0.24 ppbV
RT: 6.100 min Scan# 601
Delta R.T. 0.037 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:101 Resp: 5960

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 66.6 | 51.4 | 77.0 |

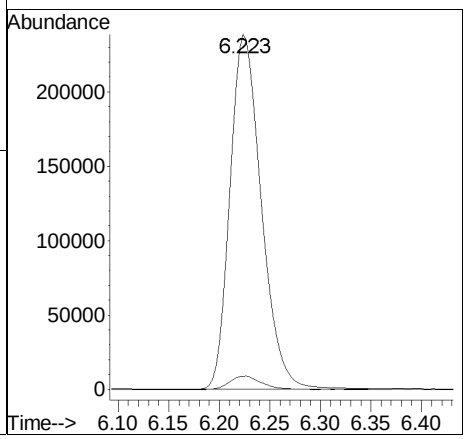


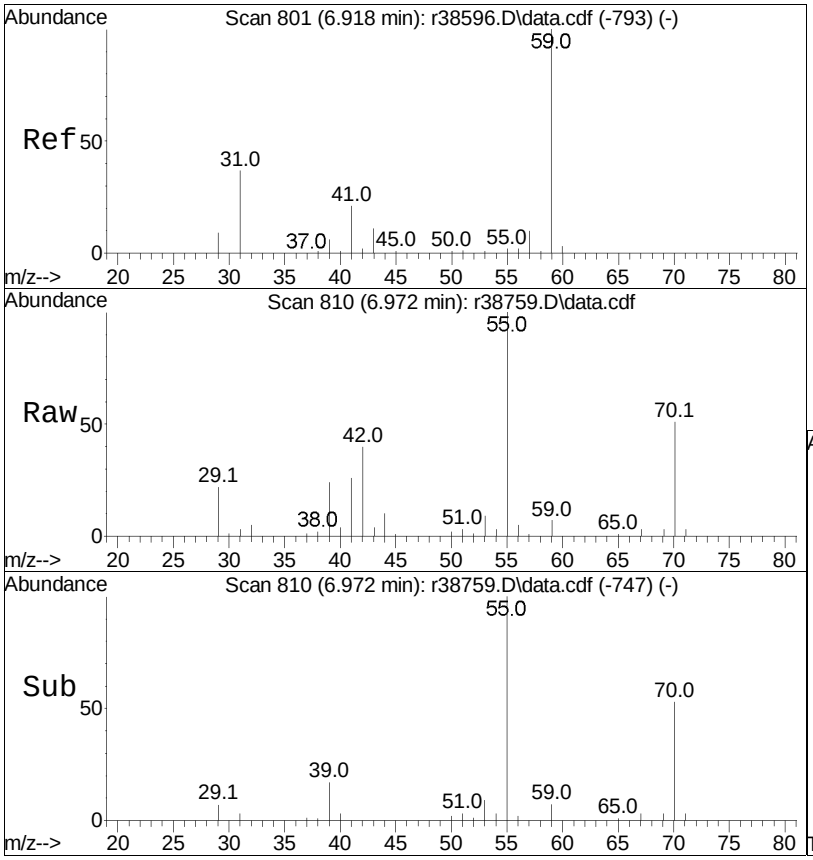



#22
isopropyl alcohol
Concen:  17.34 ppbV
RT:  6.223 min  Scan# 638
Delta R.T.  0.037 min
Lab File:  r38759.D
Acq: 20 Mar 2020  6:16 PM

Tgt Ion: 45 Resp:  513424

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 3.8 | 3.9 | 5.9# |

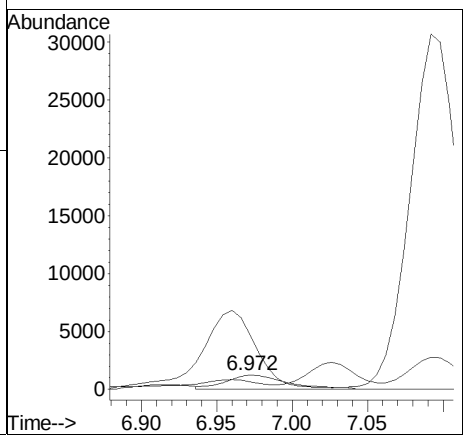


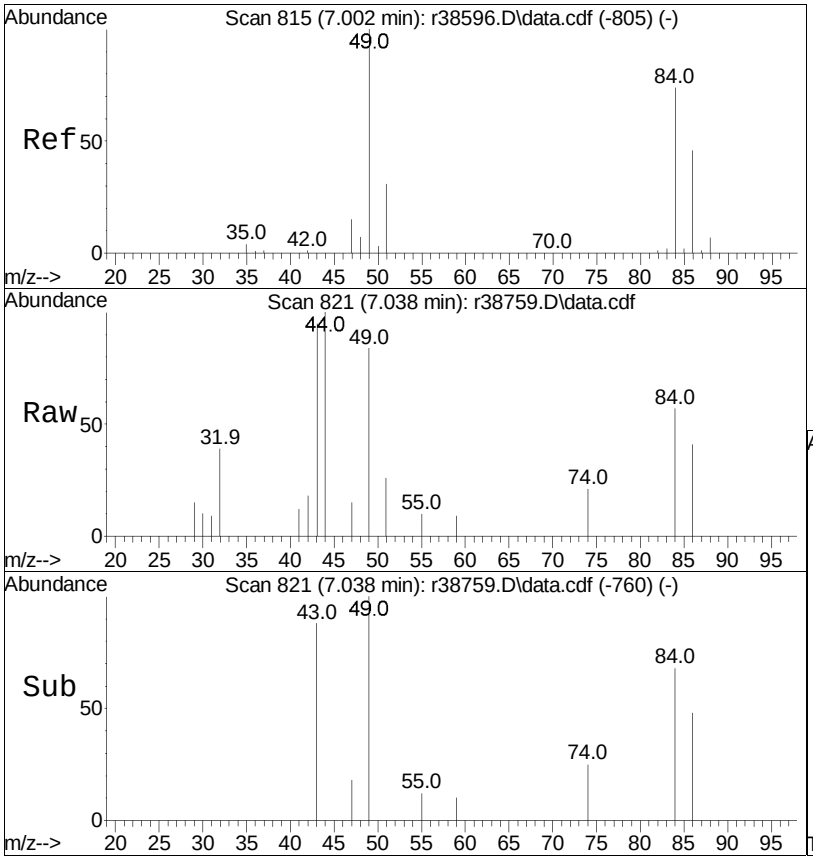



#27
tertiary butyl alcohol
Concen: 0.10 ppbV
RT: 6.972 min Scan# 810
Delta R.T. 0.054 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 59 Resp: 3568

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 379.6 | 16.9 | 25.3# |
| 43 | 52.9 | 8.9 | 13.3# |

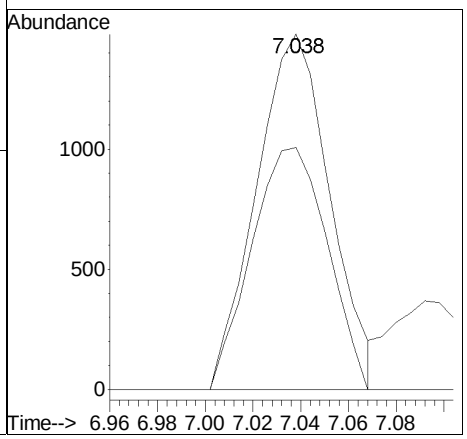


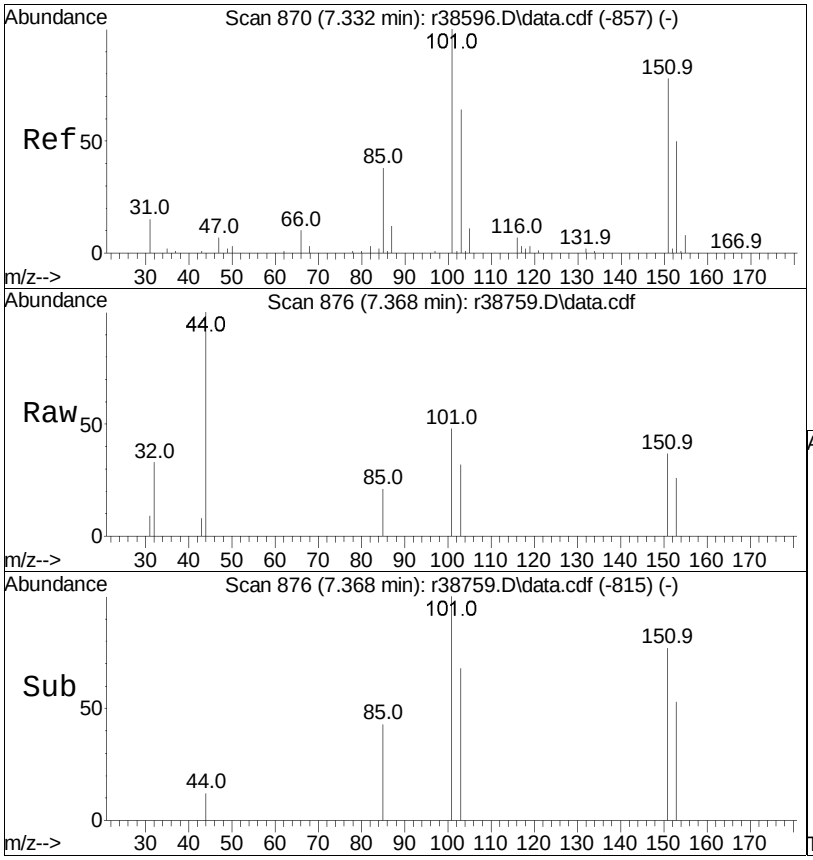



#28
methylene chloride
Concen: 0.14 ppbV
RT: 7.038 min Scan# 821
Delta R.T. 0.036 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 49 Resp: 3162

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 68.1 | 59.3 | 88.9 |

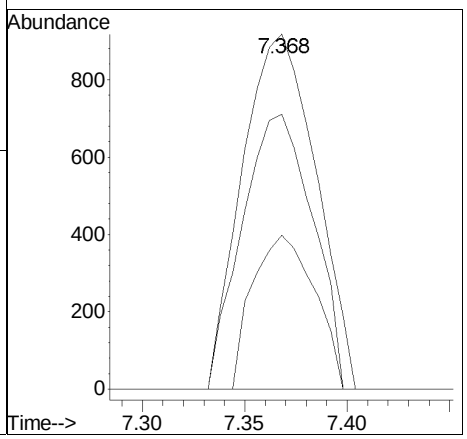


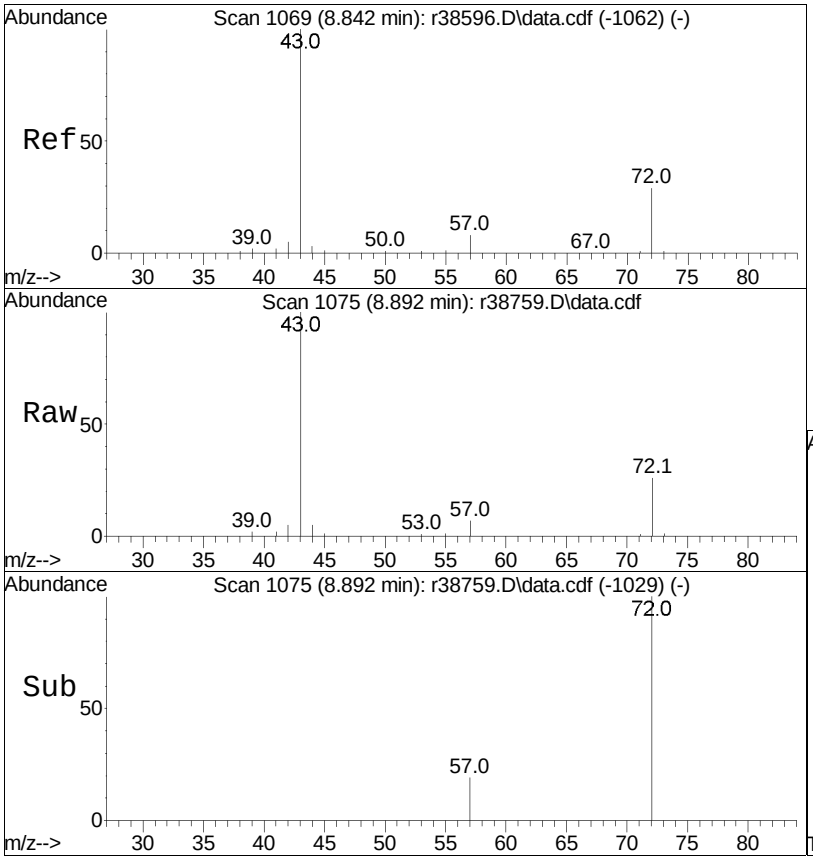



#31
Freon 113
Concen: 0.07 ppbV
RT: 7.368 min Scan# 876
Delta R.T. 0.036 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:101 Resp: 2303

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 43.4 | 30.6 | 45.8 |
| 151 | 77.5 | 62.4 | 93.6 |

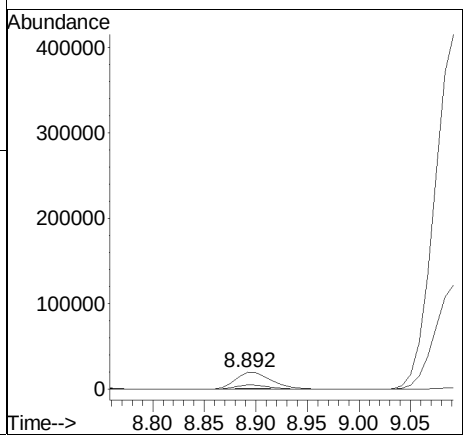


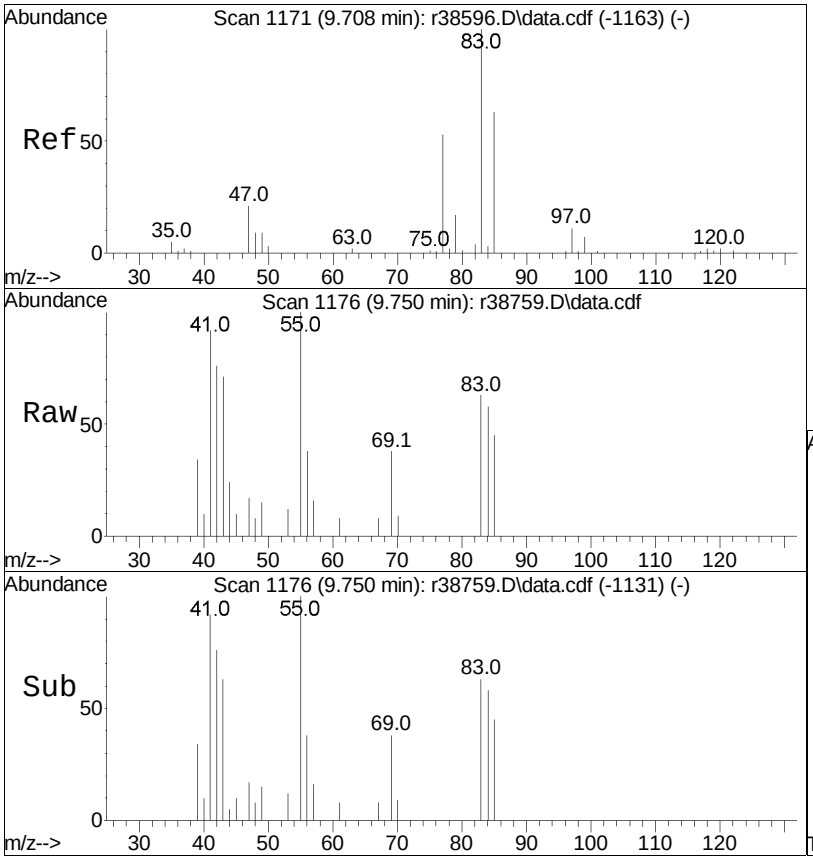



#36
2-butanone
Concen: 1.12 ppbV
RT: 8.892 min Scan# 1075
Delta R.T. 0.050 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 43 Resp: 48987

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.3 | 23.1 | 34.7 |
| 57 | 6.9 | 6.3 | 9.5 |

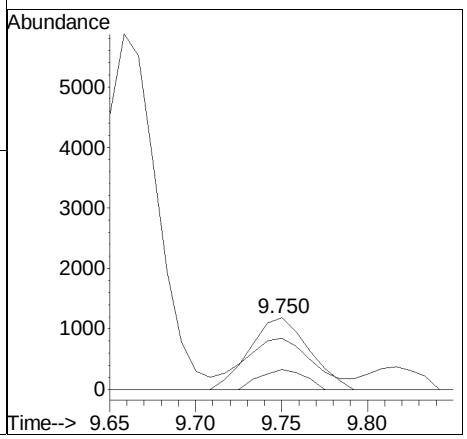


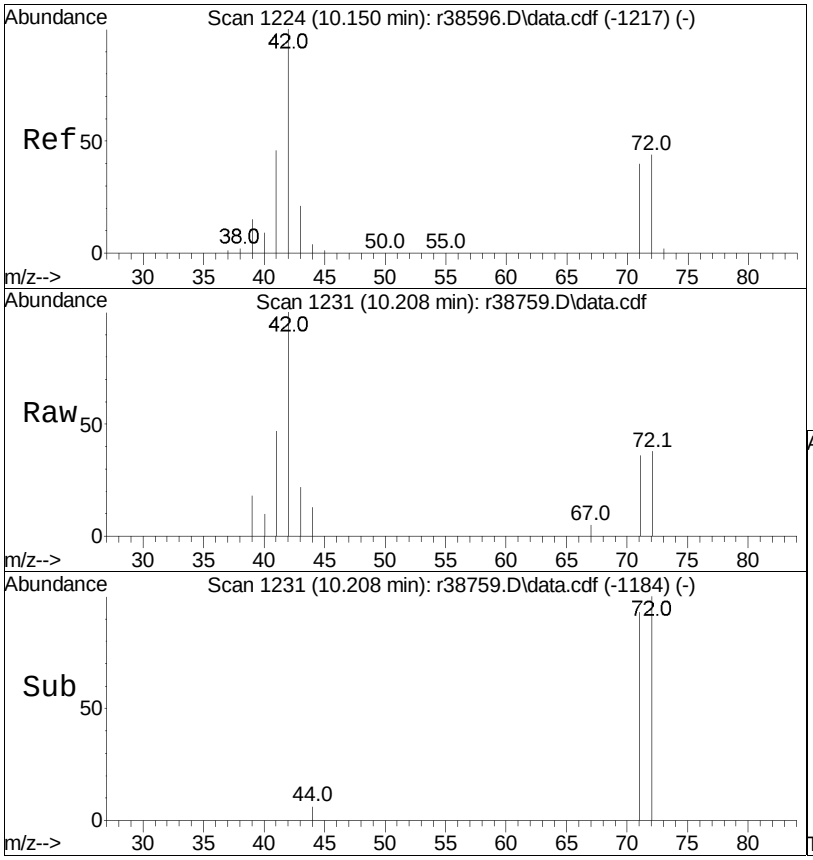



#39
chloroform
Concen: 0.08 ppbV
RT: 9.750 min Scan# 1176
Delta R.T. 0.042 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 83 Resp: 2837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 71.5 | 50.4 | 75.6 |
| 47 | 27.8 | 16.9 | 25.3# |

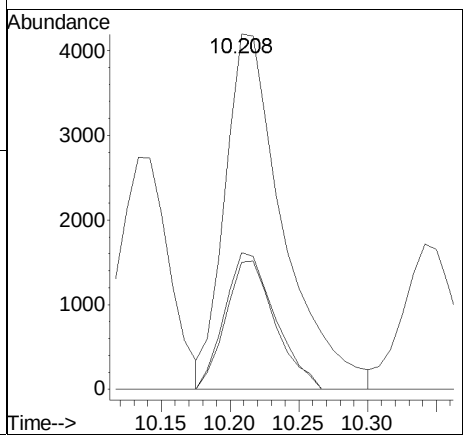


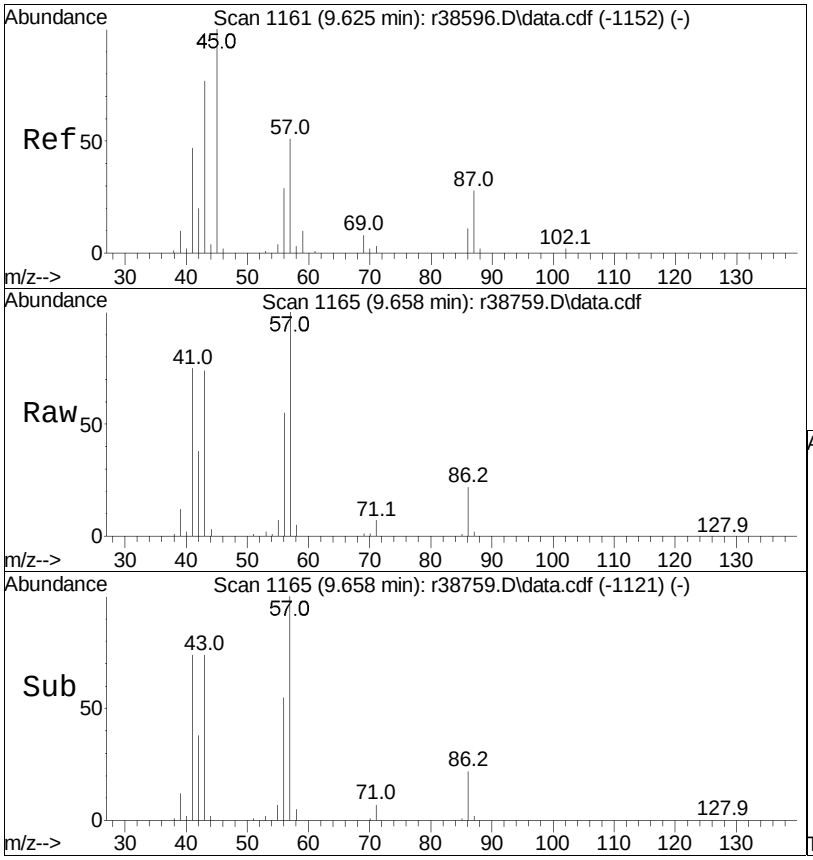



#40
Tetrahydrofuran
Concen: 0.45 ppbV
RT: 10.208 min Scan# 1231
Delta R.T. 0.058 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 42 Resp: 12377

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 35.8 | 31.8 | 47.8 |
| 72 | 38.5 | 35.2 | 52.8 |

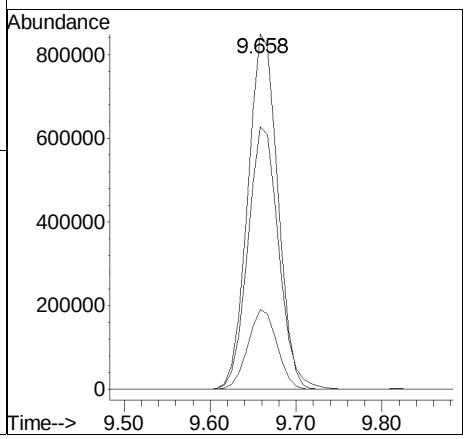


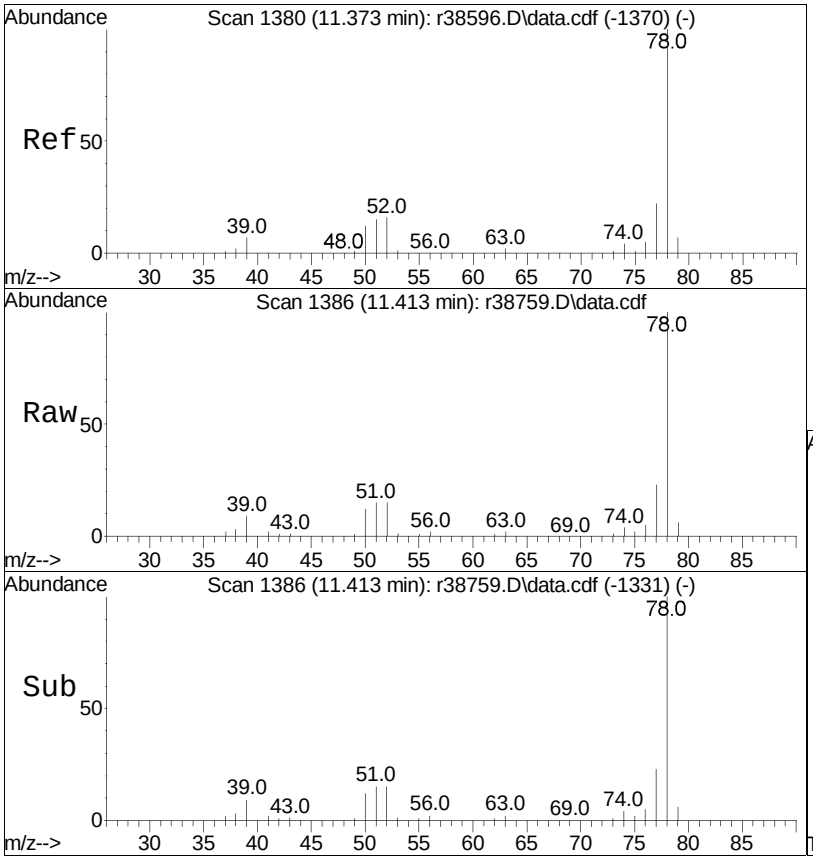



#44
hexane
Concen: 57.71 ppbV
RT: 9.658 min Scan# 1165
Delta R.T. 0.033 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 57 Resp: 2055152

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 73.9 | 119.3 | 178.9# |
| 86 | 22.5 | 17.0 | 25.6 |

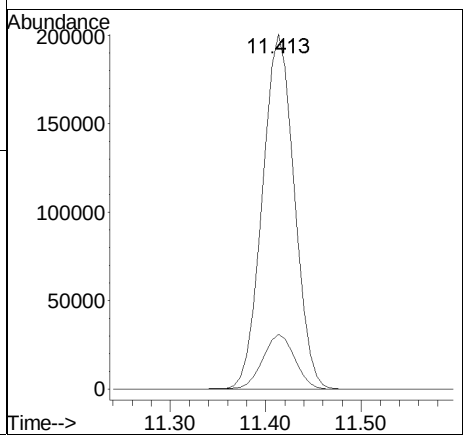


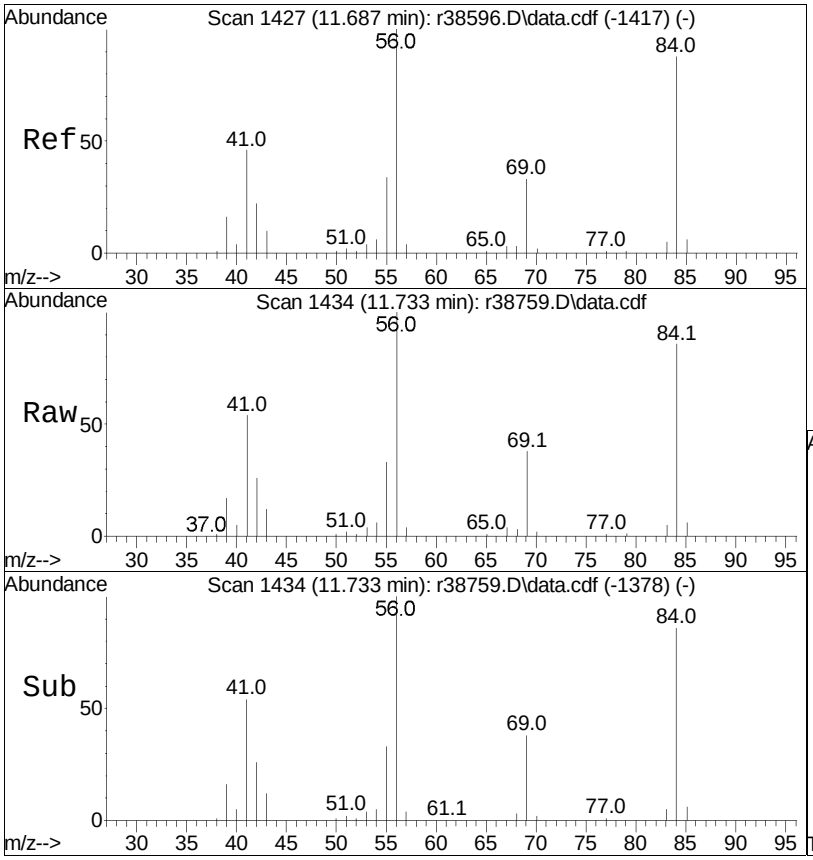



#50
benzene
Concen: 6.72 ppbV
RT: 11.413 min Scan# 1386
Delta R.T. 0.040 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 78 Resp: 467355

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 15.5 | 12.6 | 18.8 |

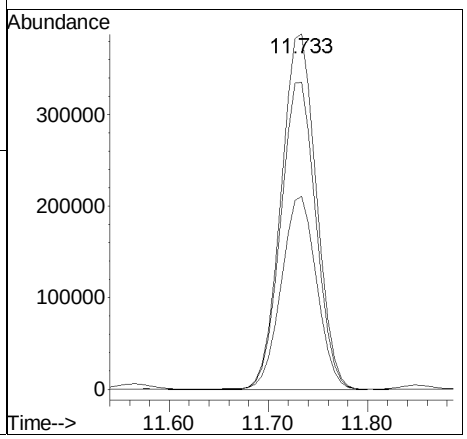


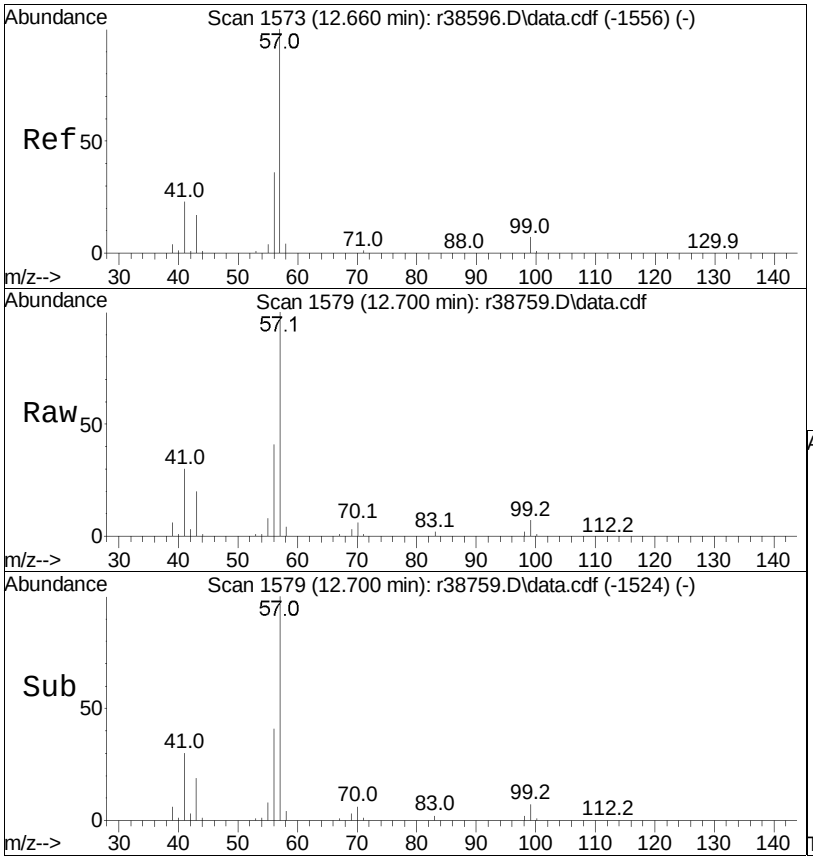



#53
cyclohexane
Concen: 24.86 ppbV
RT: 11.733 min Scan# 1434
Delta R.T. 0.047 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 56 Resp: 958925

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 86.4 | 70.2 | 105.2 |
| 41 | 54.3 | 36.9 | 55.3 |

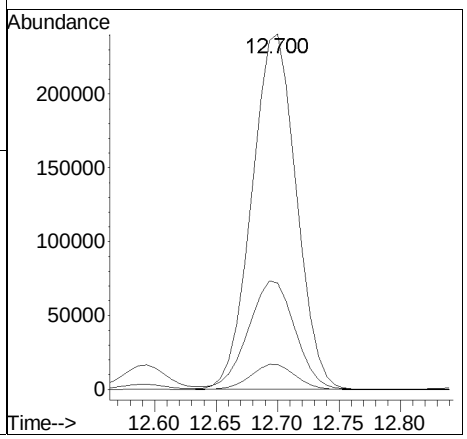


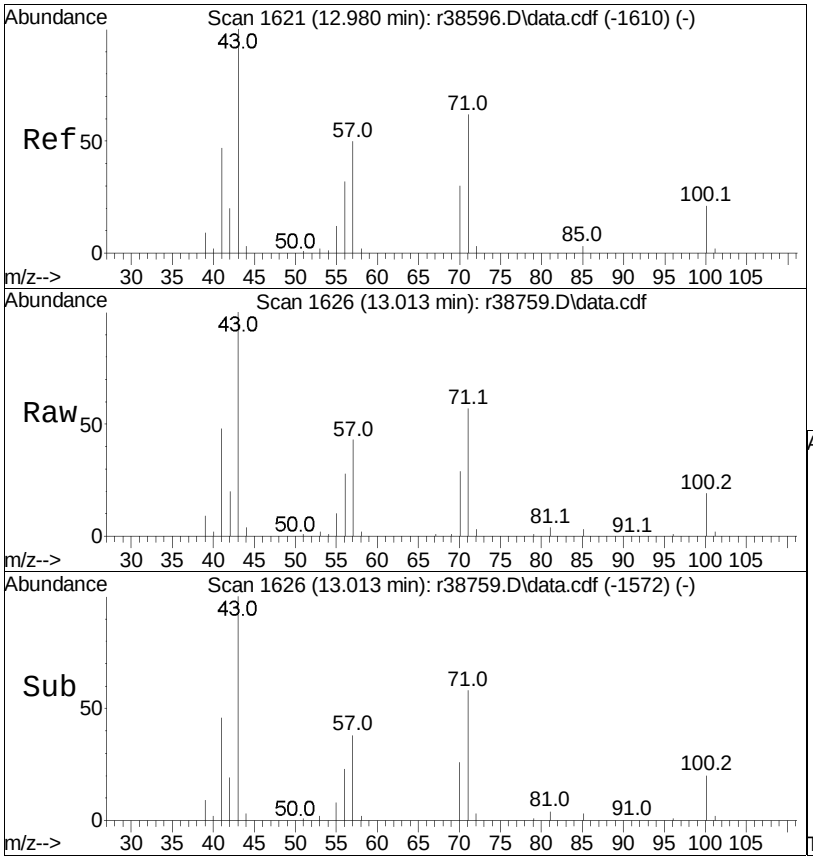



#60
2,2,4-trimethylpentane
Concen: 5.34 ppbV
RT: 12.700 min Scan# 1579
Delta R.T. 0.040 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 57 Resp: 605165

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.0 | 5.4 | 8.2 |
| 41 | 29.9 | 18.2 | 27.2# |

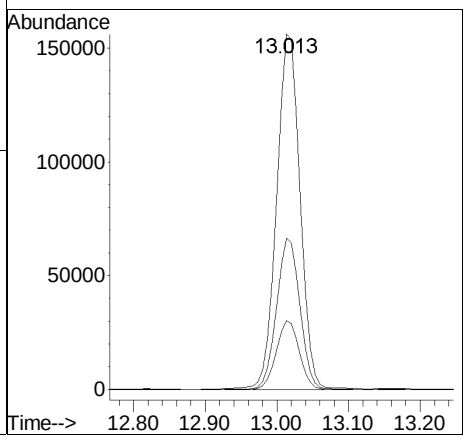


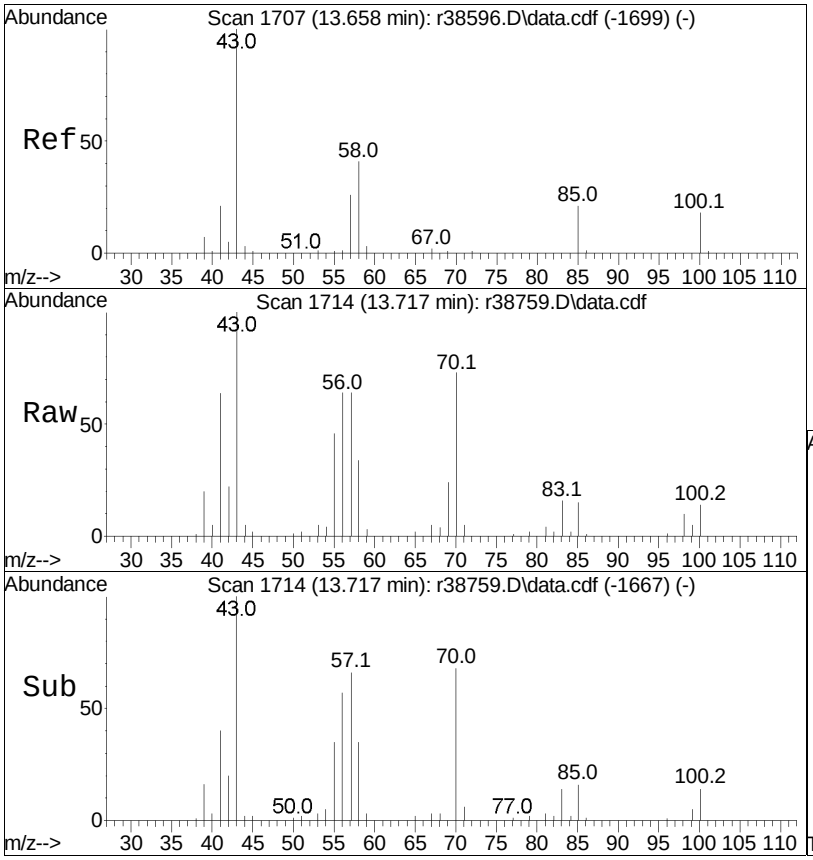



#62
heptane
Concen: 7.98 ppbV
RT: 13.013 min Scan# 1626
Delta R.T. 0.033 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 43 Resp: 355547

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 42.6 | 39.8 | 59.6 |
| 100 | 19.4 | 17.3 | 25.9 |

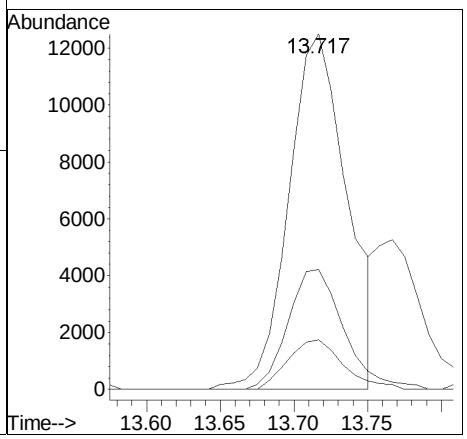


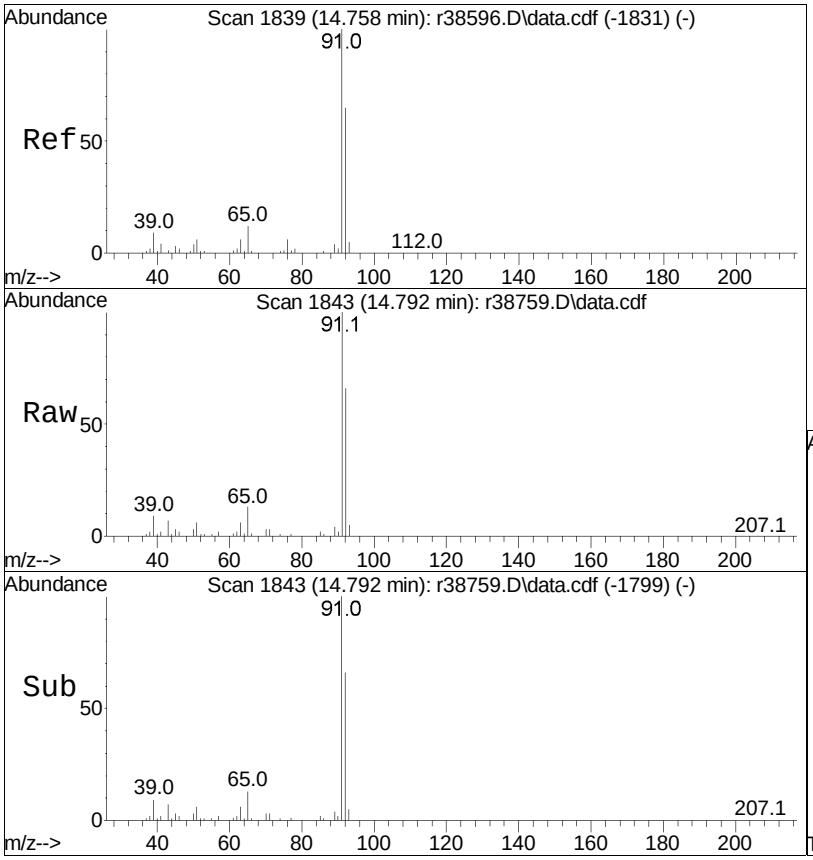



#64
4-methyl-2-pentanone
Concen: 0.69 ppbV
RT: 13.717 min Scan# 1714
Delta R.T. 0.058 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 43 Resp: 34435

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.7 | 32.5 | 48.7 |
| 100 | 14.0 | 14.7 | 22.1# |

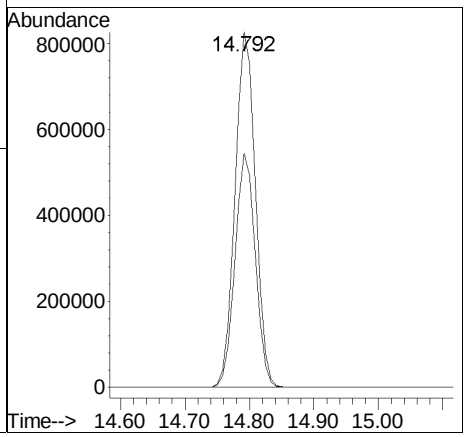


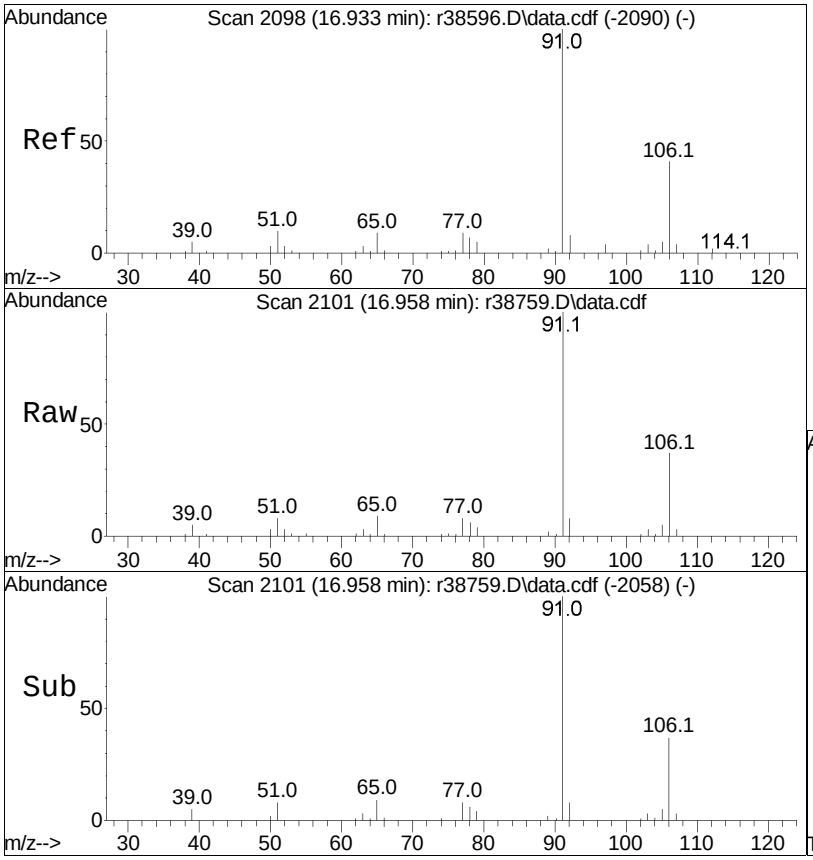



#68
toluene
Concen: 26.11 ppbV
RT: 14.792 min Scan# 1843
Delta R.T. 0.033 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 91 Resp: 1818461

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.9 | 52.4 | 78.6 |

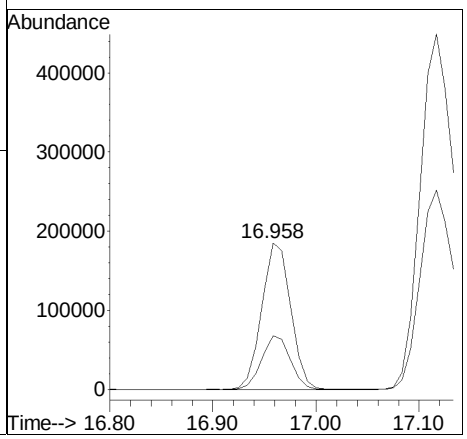


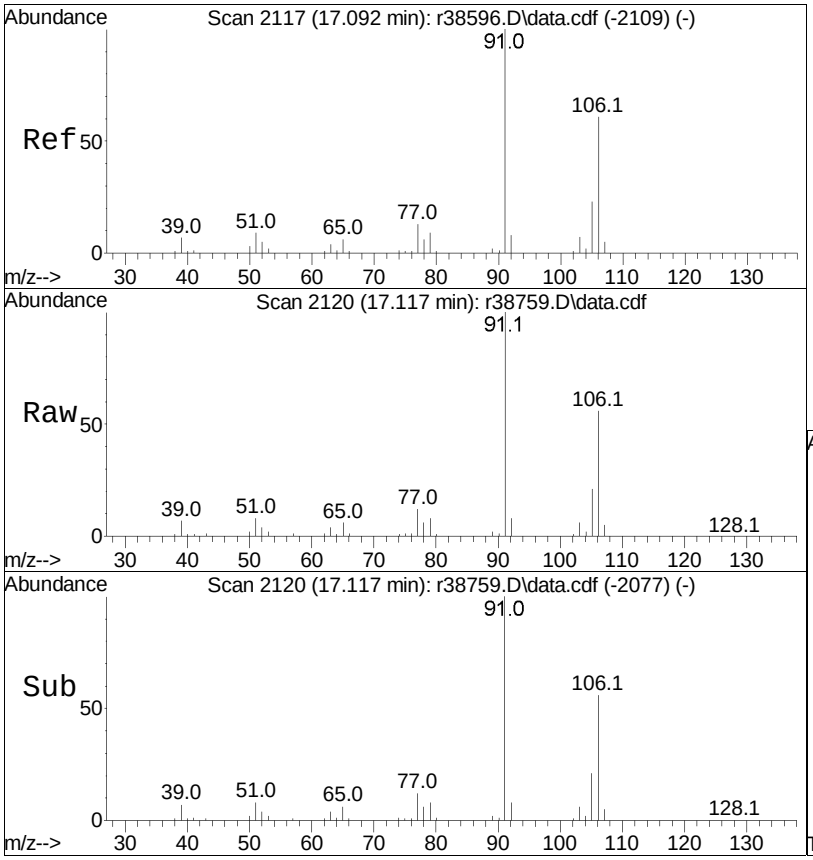



#81
ethylbenzene
Concen: 4.35 ppbV
RT: 16.958 min Scan# 2101
Delta R.T. 0.025 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 91 Resp: 360980

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 36.7 | 32.6 | 48.8 |

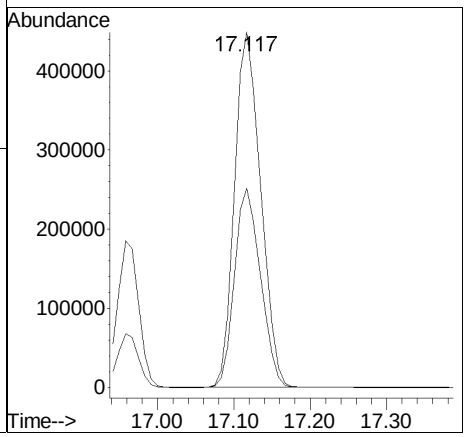


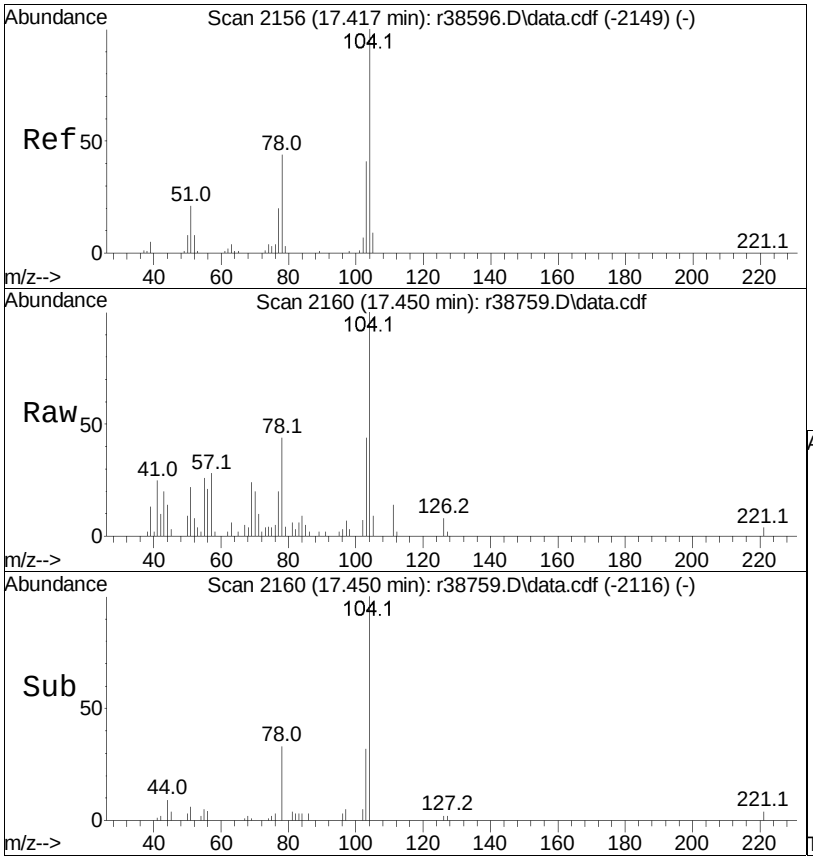



#83
m+p-xylene
Concen: 15.72 ppbV
RT: 17.117 min Scan# 2120
Delta R.T. 0.025 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 91 Resp: 1067446

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 56.1 | 49.0 | 73.6 |

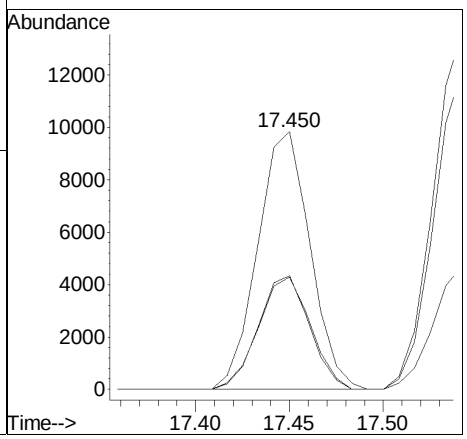


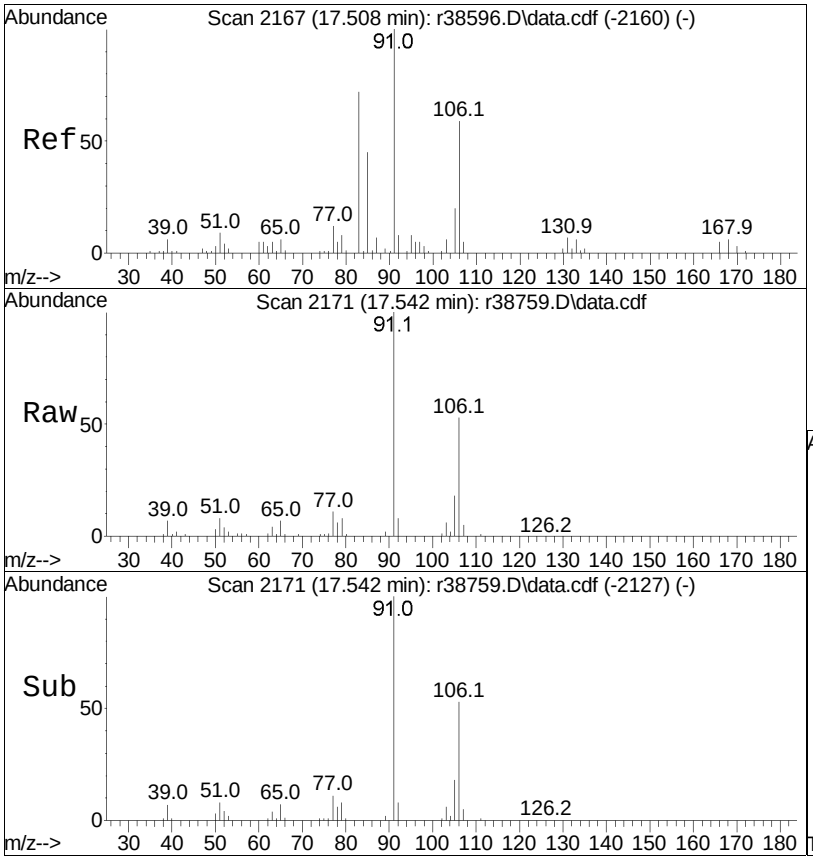



#85
styrene
Concen: 0.32 ppbV
RT: 17.450 min Scan# 2160
Delta R.T. 0.033 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:104 Resp: 19109

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 44.1 | 33.1 | 49.7 |
| 78 | 43.6 | 35.0 | 52.6 |

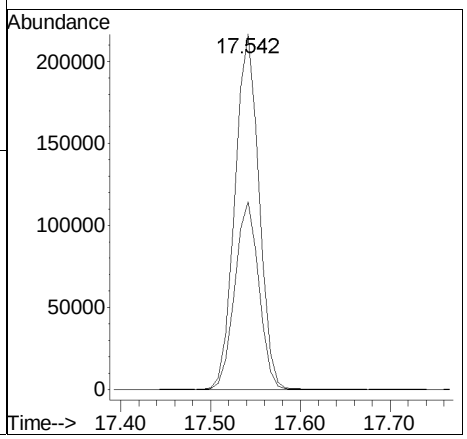


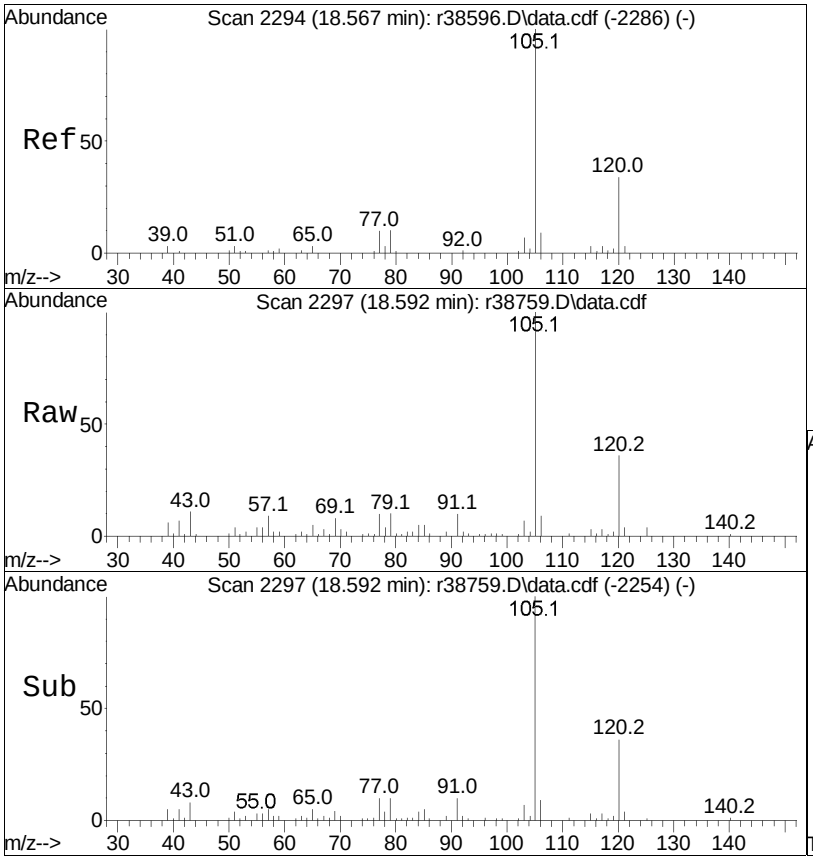



#87
o-xylene
Concen: 6.09 ppbV
RT: 17.542 min Scan# 2171
Delta R.T. 0.033 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion: 91 Resp: 404889

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 52.9 | 47.4 | 71.0 |

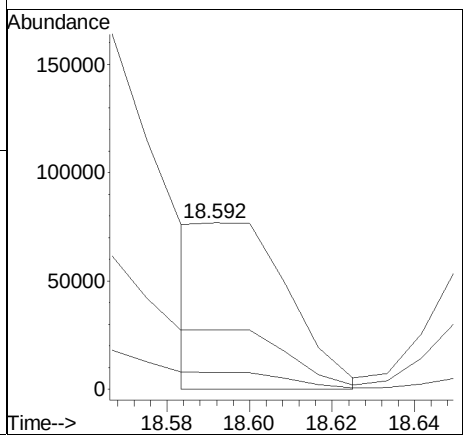


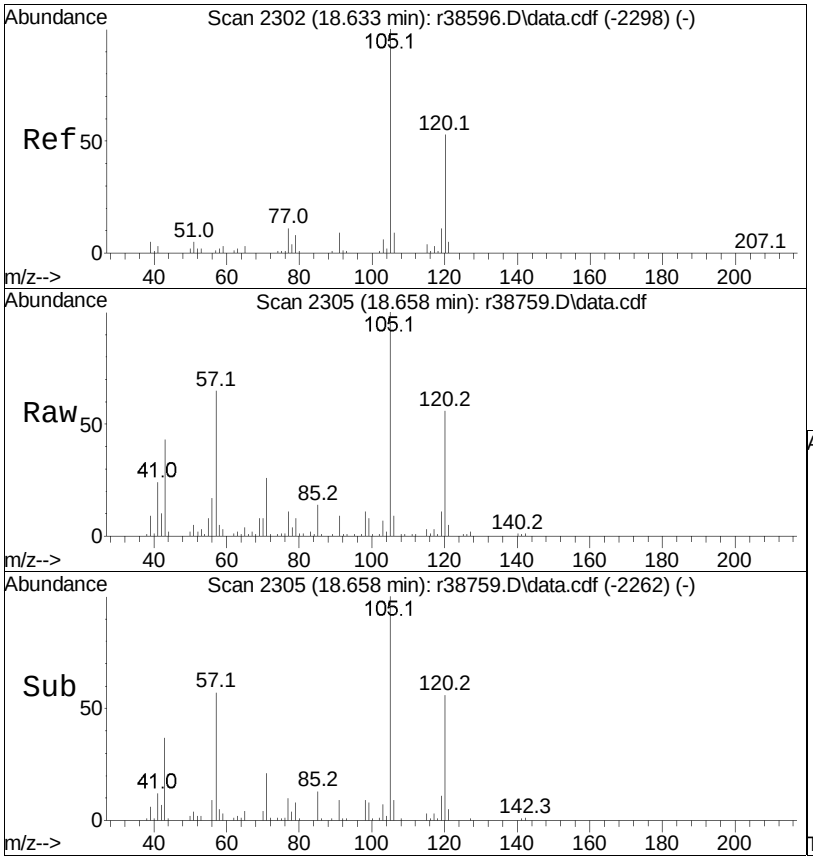



#96
4-ethyl toluene
Concen: 1.06 ppbV m
RT: 18.592 min Scan# 2297
Delta R.T. 0.025 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:105 Resp: 113971

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 35.9 | 27.0 | 40.4 |
| 91 | 10.0 | 7.4 | 11.0 |

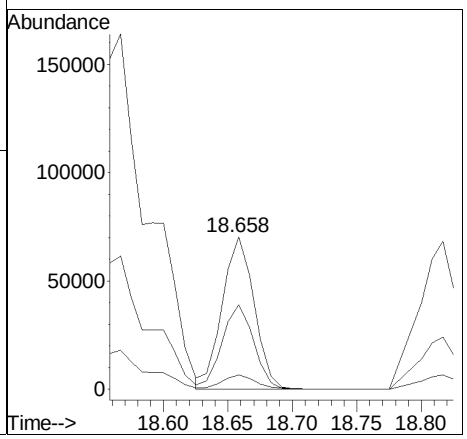


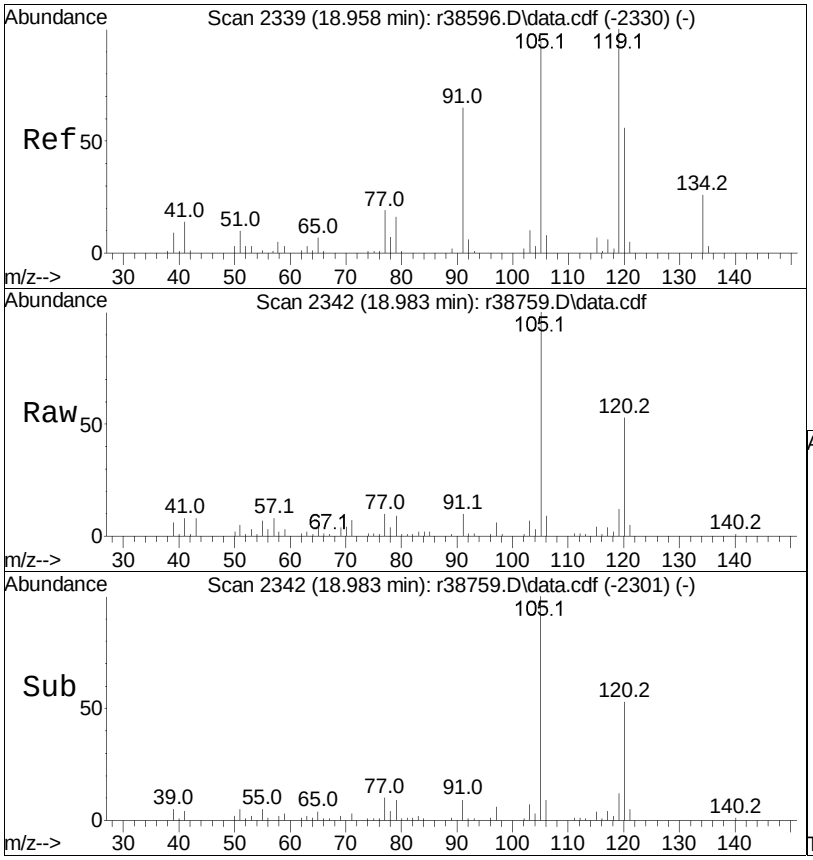



#97
1,3,5-trimethylbenzene
Concen: 1.40 ppbV
RT: 18.658 min Scan# 2305
Delta R.T. 0.025 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:105 Resp: 121959

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 55.5 | 41.6 | 62.4 |
| 91 | 9.5 | 7.0 | 10.4 |

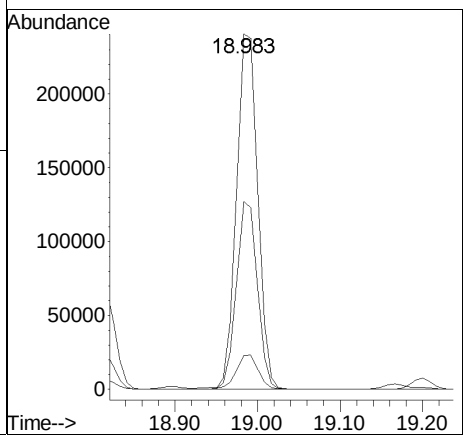





#99
1,2,4-trimethylbenzene
Concen: 5.34 ppbV
RT: 18.983 min Scan# 2342
Delta R.T. 0.025 min
Lab File: r38759.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:105 Resp: 433251

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 52.8 | 47.1 | 70.7 |
| 91 | 9.6 | 55.0 | 82.6# |

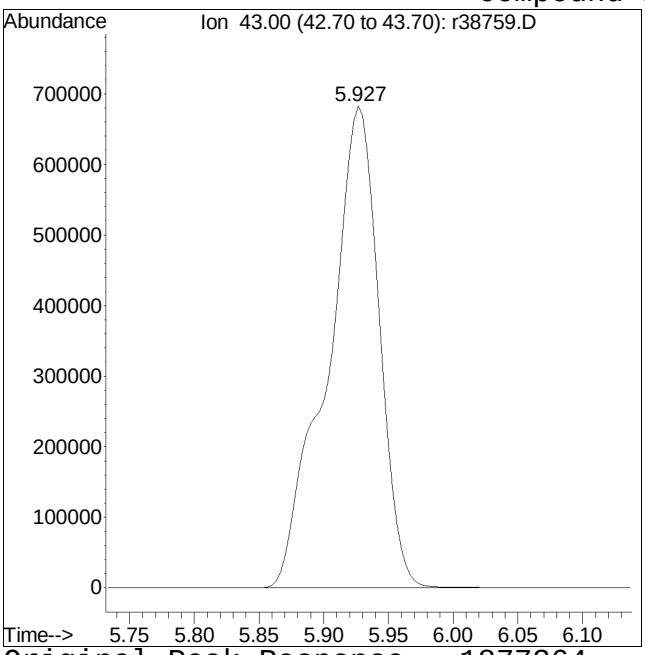


# Manual Integration Report

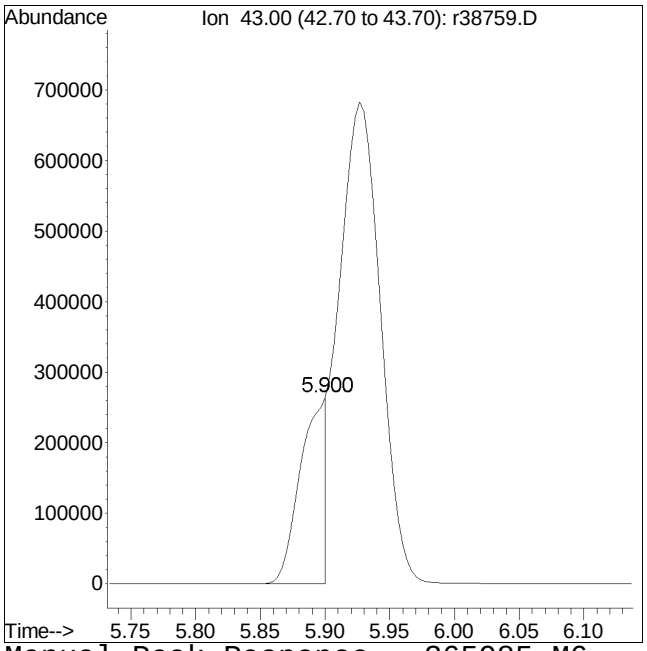
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38759.D
Date Inj'd : 3/20/2020 0:6: 6
Sample : L2011723-06,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:04 am

## Compound #19: acetone




Original Peak Response = 1877364




Manual Peak Response = 365985 M6

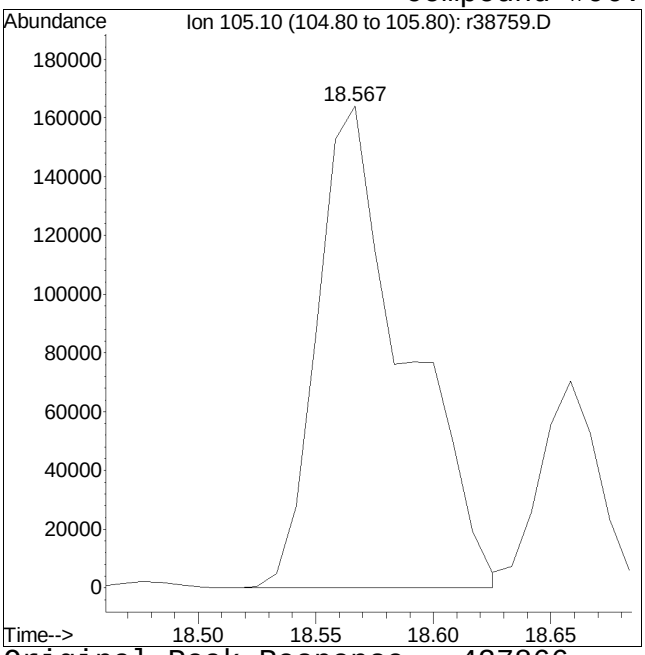
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

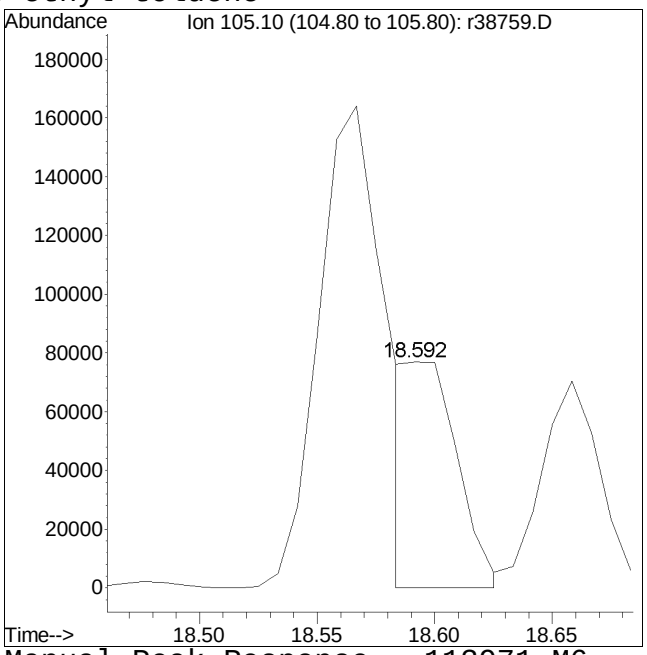
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38759.D
Date Inj'd : 3/20/2020 0:6: 6
Sample : L2011723-06,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:04 am

Compound #96: 4-ethyl toluene




Original Peak Response = 427866




Manual Peak Response = 113971 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193208.D
Acq On : 21 Mar 2020 1:52 AM
Operator : AIRLAB19:EW
Sample : L2011723-01,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:39:35 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.775 | 49 | 351122 | 10.000 | ppbV | 0.00 |
| Standard Area = 288364 | | | Recovery = 121.76% | | | |
| 43) 1,4-difluorobenzene | 10.740 | 114 | 1066245 | 10.000 | ppbV | 0.00 |
| Standard Area = 940727 | | | Recovery = 113.34% | | | |
| 67) chlorobenzene-D5 | 14.875 | 54 | 134903 | 10.000 | ppbV | 0.00 |
| Standard Area = 108860 | | | Recovery = 123.92% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 3.562 | 85 | 8056 | 0.409 | ppbV | 98 |
| 6) chloromethane | 3.772 | 50 | 3260 | 0.259 | ppbV | 99 |
| 7) Freon-114 | 3.910 | | 0 | N.D. | | |
| 9) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 4.240 | 54 | 11175 | 0.830 | ppbV | 96 |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 4.792 | | 0 | N.D. | | |
| 15) ethanol | 4.930 | 31 | 111277 | 10.846 | ppbV # | 63 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.483 | 43 | 753012 | 39.937 | ppbV # | 100 |
| 21) trichlorofluoromethane | 5.697 | 101 | 4308 | 0.208 | ppbV | 97 |
| 22) isopropyl alcohol | 5.770 | 45 | 58862 | 1.643 | ppbV | 100 |
| 26) 1,1-dichloroethene | 0.000 | | 0 | N.D. | d | |
| 27) tertiary butyl alcohol | 6.432 | 59 | 67138 | 2.044 | ppbV # | 95 |
| 28) methylene chloride | 6.540 | 49 | 8130 | 0.353 | ppbV | 88 |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | |
| 30) carbon disulfide | 6.846 | 76 | 92534 | 1.444 | ppbV # | 82 |
| 31) Freon 113 | 6.822 | 101 | 2249 | 0.067 | ppbV | 96 |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | d | |
| 34) MTBE | 0.000 | | 0 | N.D. | d | |
| 36) 2-butanone | 8.133 | 43 | 215839 | 5.107 | ppbV | 96 |
| 37) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | d | |
| 39) chloroform | 8.908 | 83 | 2032881 | 69.225 | ppbV | 94 |
| 40) Tetrahydrofuran | 9.308 | 42 | 87023 | 3.064 | ppbV | 99 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | d | |

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193208.D
Acq On : 21 Mar 2020 1:52 AM
Operator : AIRLAB19:EW
Sample : L2011723-01,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:39:35 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 44) hexane | 8.817 | 57 | 1267156 | 32.423 | ppbV # | 16 |
| 48) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | | |
| 50) benzene | 10.393 | 78 | 257634 | 3.341 | ppbV | 99 |
| 52) carbon tetrachloride | 10.553 | 117 | 1427 | 0.069 | ppbV | 86 |
| 53) cyclohexane | 10.687 | 56 | 618830 | 14.476 | ppbV | 99 |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | d | |
| 57) bromodichloromethane | 11.440 | 83 | 176126 | 5.239 | ppbV | 98 |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 59) trichloroethene | 11.487 | | 0 | N.D. | | |
| 60) 2,2,4-trimethylpentane | 11.513 | 57 | 646251 | 5.239 | ppbV | 94 |
| 62) heptane | 11.780 | 43 | 252318 | 5.291 | ppbV | 97 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 12.417 | 43 | 30288 | 0.590 | ppbV | 96 |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | d | |
| 68) toluene | 13.367 | 91 | 1537209 | 18.713 | ppbV | 98 |
| 72) 2-hexanone | 13.567 | 43 | 137889 | 2.889 | ppbV # | 67 |
| 74) dibromochloromethane | 13.750 | 129 | 5012 | 0.159 | ppbV | 95 |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 78) tetrachloroethene | 14.358 | 166 | 1635655 | 45.318 | ppbV | 99 |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | |
| 81) ethylbenzene | 15.192 | 91 | 376214 | 3.818 | ppbV | 99 |
| 83) m+p-xylene | 15.317 | 91 | 788667 | 10.153 | ppbV | 99 |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 15.600 | 104 | 15270 | 0.203 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | |
| 87) o-xylene | 15.683 | 91 | 337741 | 4.432 | ppbV | 99 |
| 96) 4-ethyl toluene | 16.608 | 105 | 95122M6 | 0.737 | ppbV | |
| 97) 1,3,5-trimethylbenzene | 16.658 | 105 | 79878 | 0.770 | ppbV | 95 |
| 99) 1,2,4-trimethylbenzene | 16.983 | 105 | 213713 | 2.227 | ppbV # | 59 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | |
| 102) 1,3-dichlorobenzene | 17.167 | | 0 | N.D. | | |
| 103) 1,4-dichlorobenzene | 17.167 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 17.442 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 0.000 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

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

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193208.D
Acq On : 21 Mar 2020 1:52 AM
Operator : AIRLAB19:EW
Sample : L2011723-01,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:39:35 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

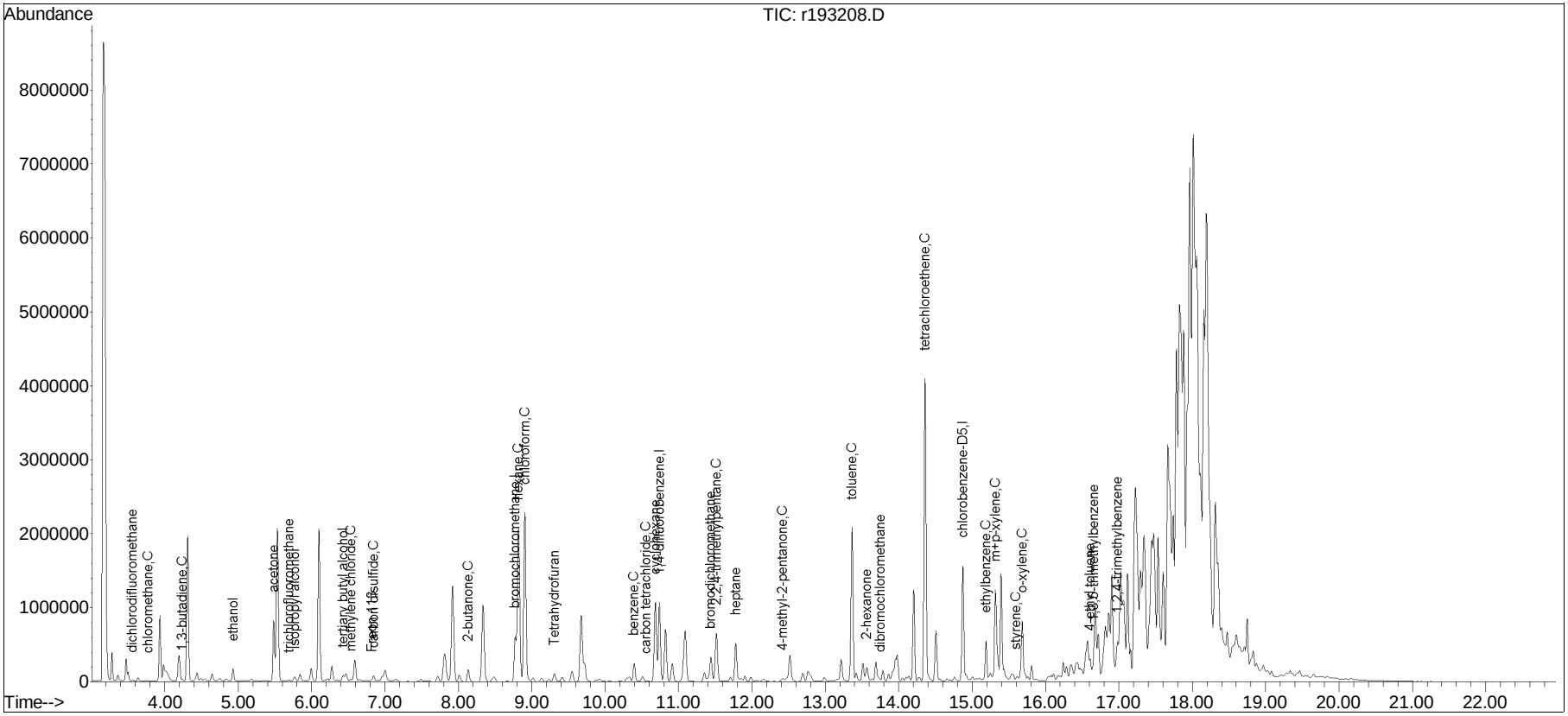
CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

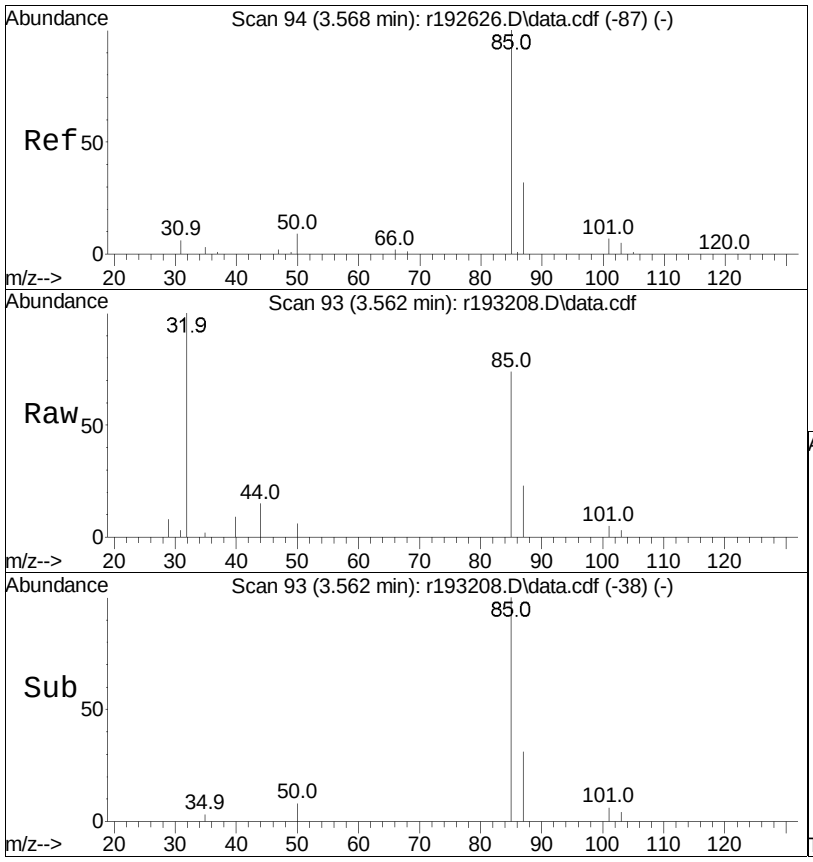
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : TO15-NY - .s\Data\Airlab19\2020\03\200320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193208.D
Acq On : 21 Mar 2020 1:52 AM
Operator : AIRLAB19:EW
Sample : L2011723-01,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:39:35 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

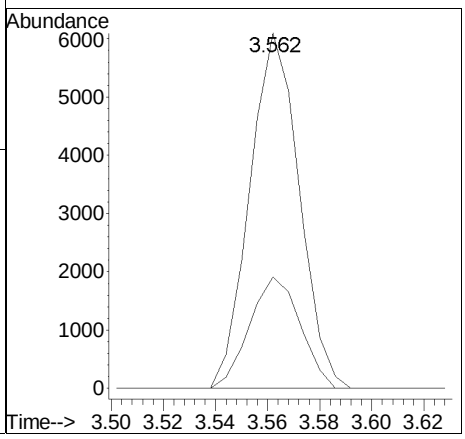


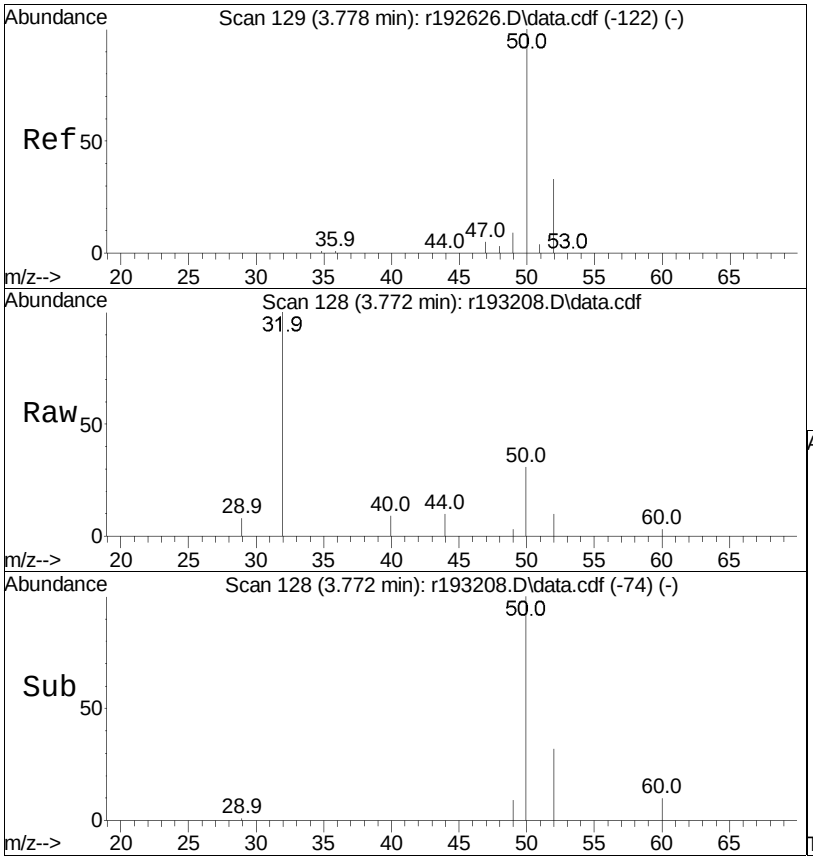



#5
dichlorodifluoromethane
Concen: 0.41 ppbV
RT: 3.562 min Scan# 93
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 85 Resp: 8056

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.4 | 25.9 | 38.9 |

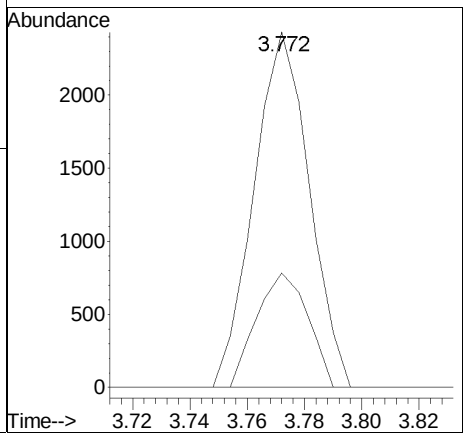


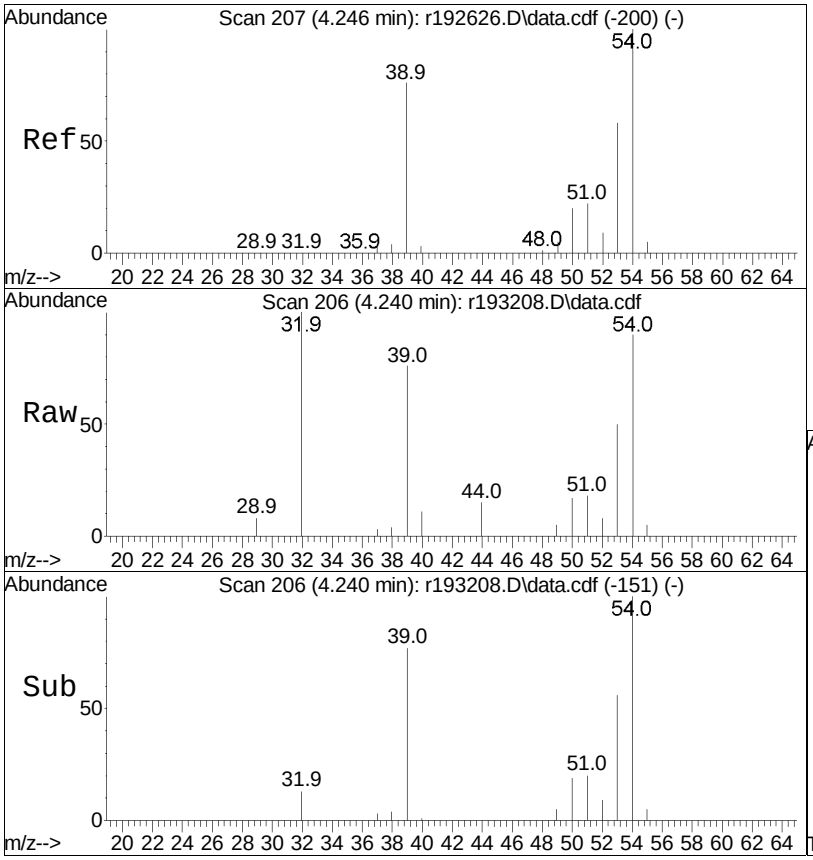



#6
chloromethane
Concen: 0.26 ppbV
RT: 3.772 min Scan# 128
Delta R.T. -0.006 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 50 Resp: 3260

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 32.2 | 26.3 | 39.5 |

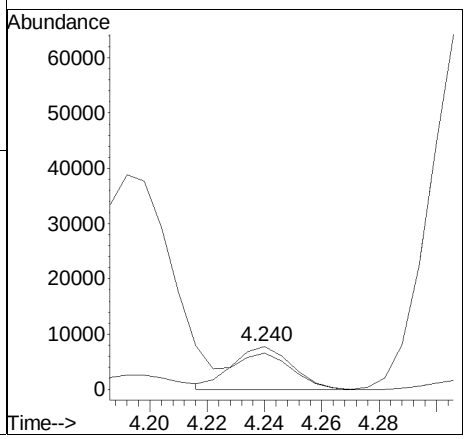


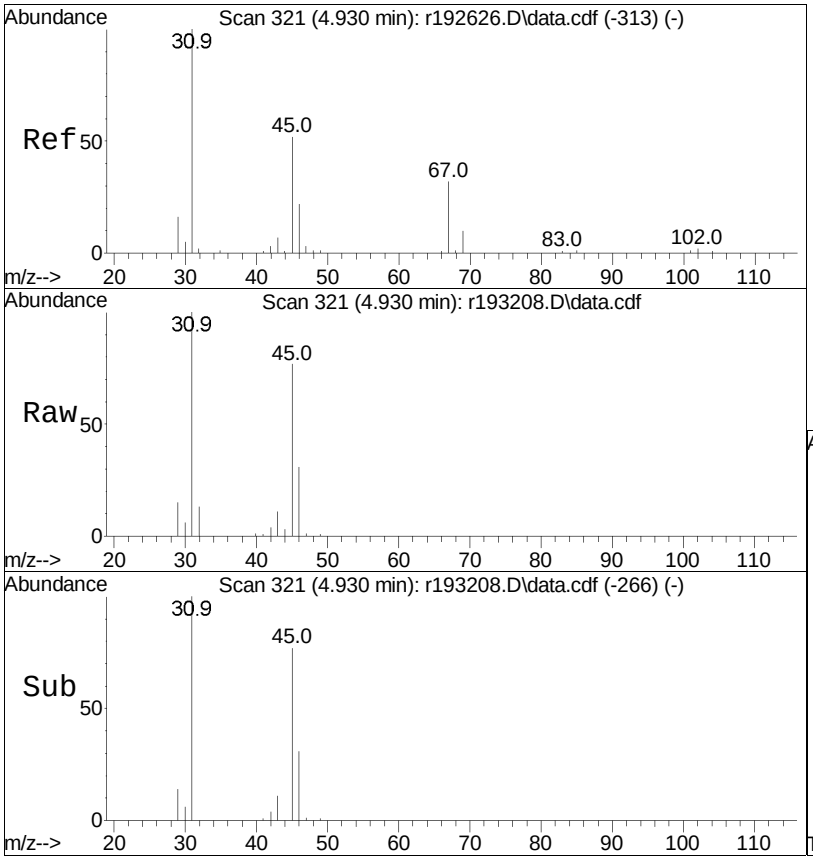



#10
1,3-butadiene
Concen: 0.83 ppbV
RT: 4.240 min Scan# 206
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 54 Resp: 11175

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 84.8 | 65.3 | 97.9 |

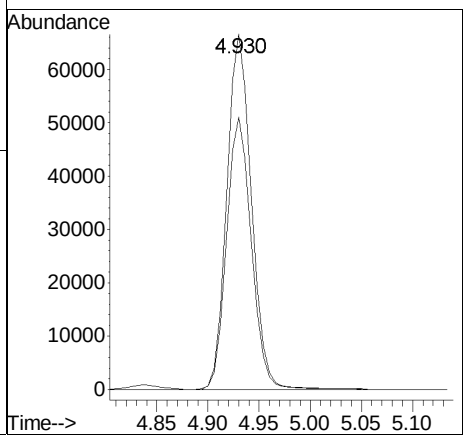


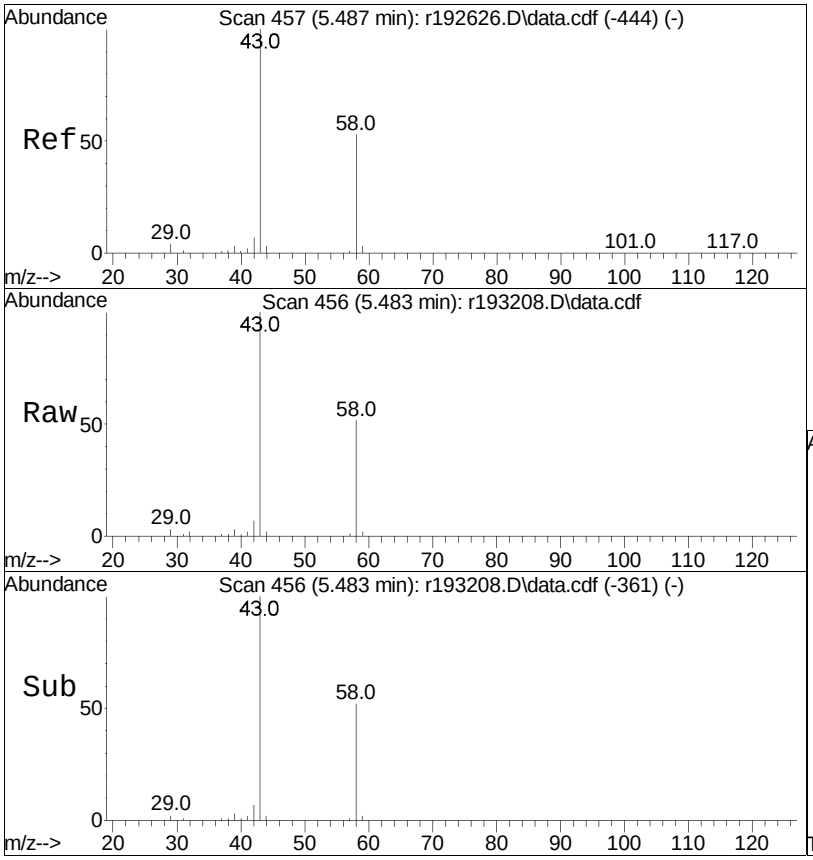



#15
ethanol
Concen: 10.85 ppbV
RT: 4.930 min Scan# 321
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 31 Resp: 111277

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 76.7 | 40.6 | 60.8# |

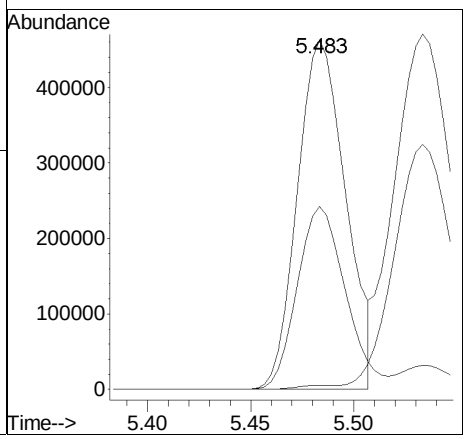


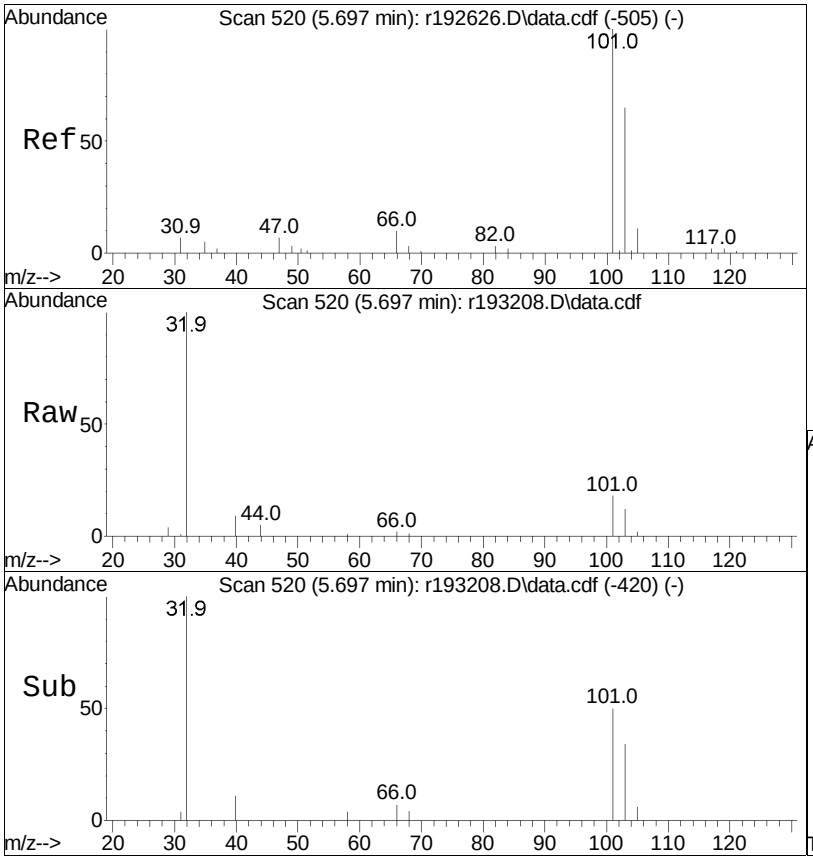



#19
acetone
Concen: 39.94 ppbV
RT: 5.483 min Scan# 456
Delta R.T. -0.013 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 43 Resp: 753012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 52.3 | 42.0 | 63.0 |
| 57 | 1.2 | 1.4 | 2.0# |

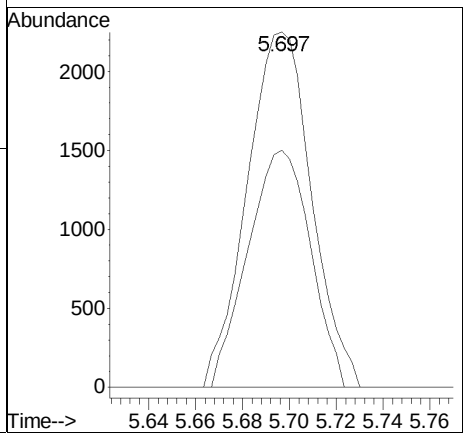


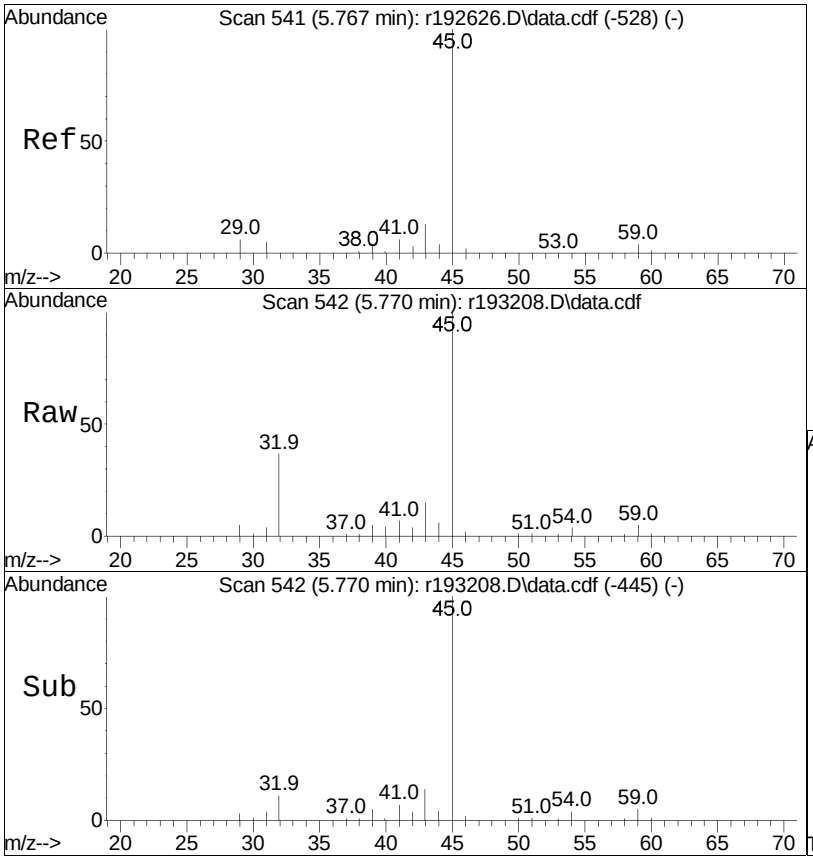



#21
trichlorofluoromethane
Concen: 0.21 ppbV
RT: 5.697 min Scan# 520
Delta R.T. 0.003 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:101 Resp: 4308

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 66.8 | 51.4 | 77.2 |

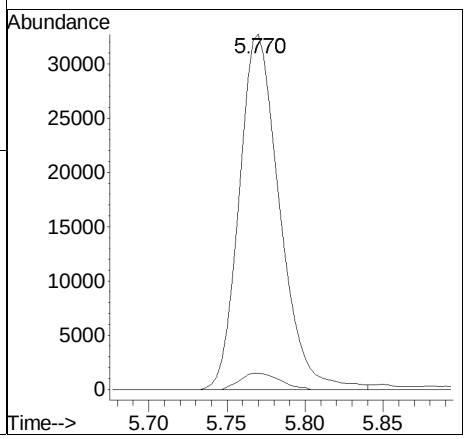


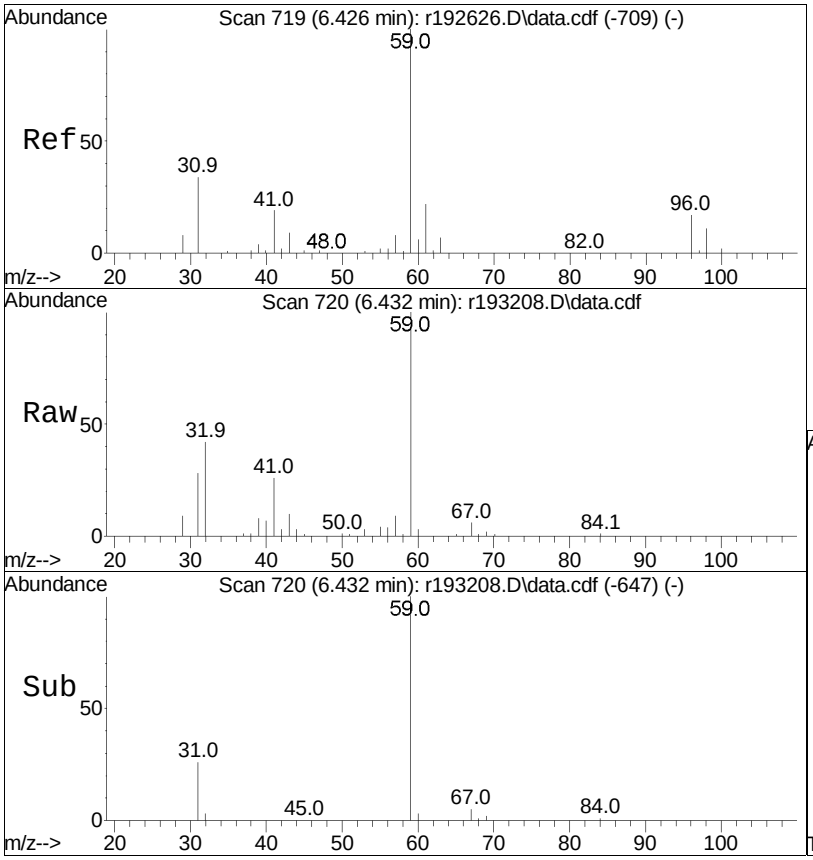



#22
isopropyl alcohol
Concen: 1.64 ppbV
RT: 5.770 min Scan# 542
Delta R.T. -0.007 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 45 Resp: 58862

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 4.6 | 3.7 | 5.5 |

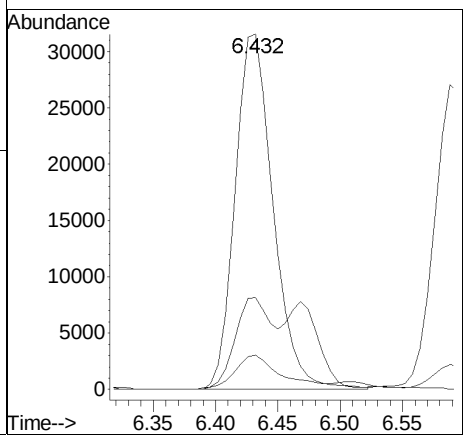


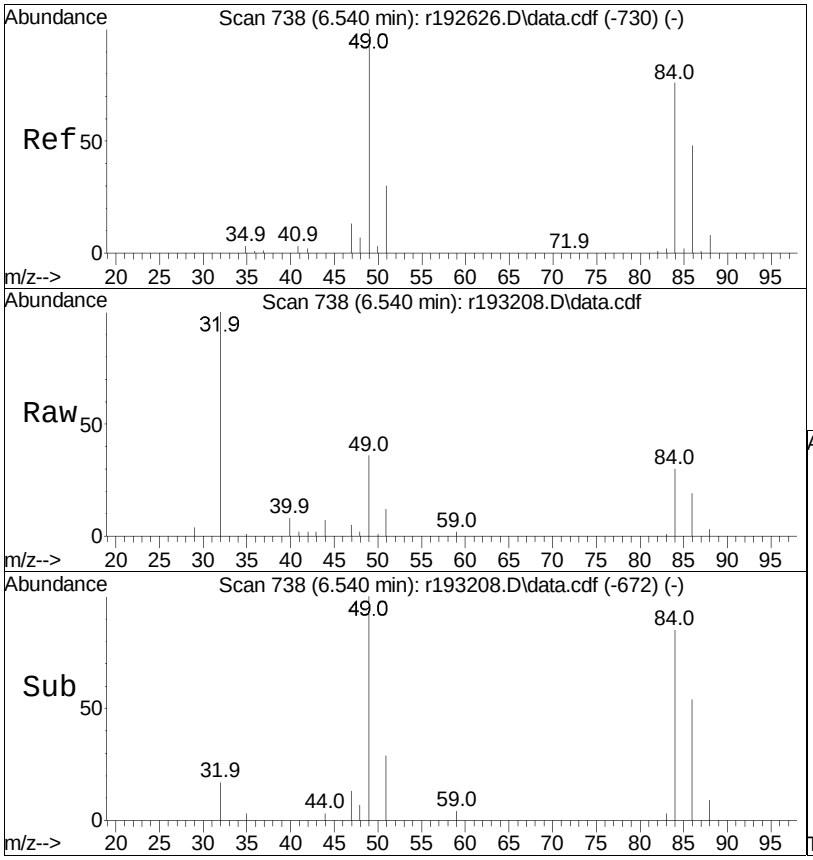



#27
tertiary butyl alcohol
Concen: 2.04 ppbV
RT: 6.432 min Scan# 720
Delta R.T. -0.018 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 59 Resp: 67138

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 25.8 | 18.8 | 28.2 |
| 43 | 9.6 | 9.8 | 14.8# |

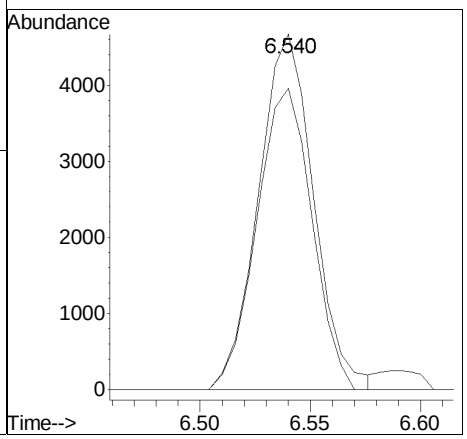


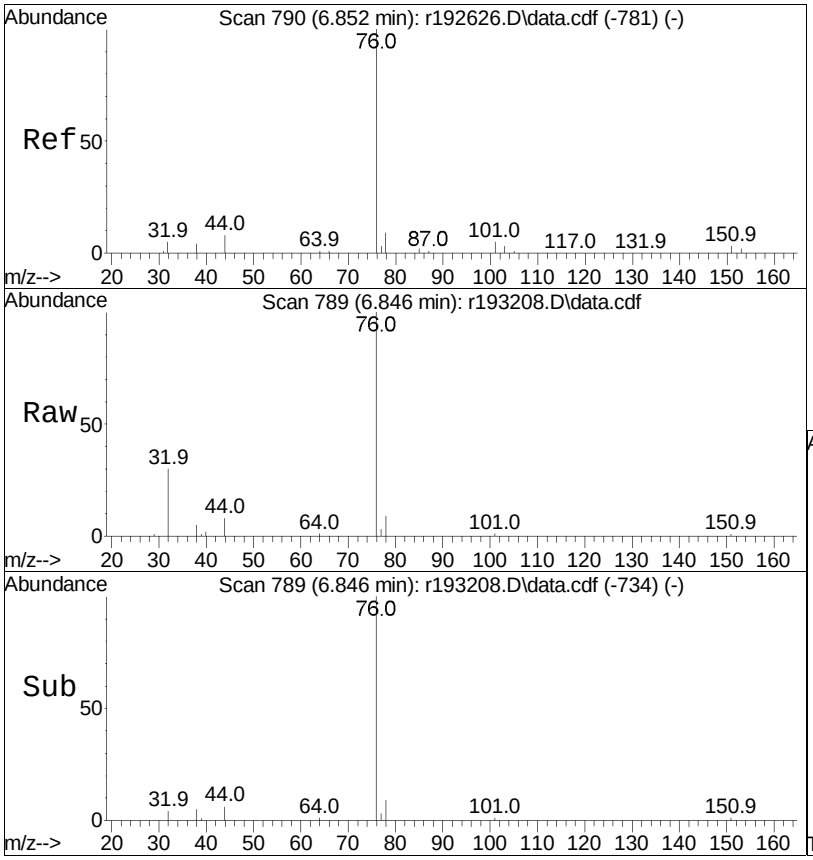



#28
methylene chloride
Concen: 0.35 ppbV
RT: 6.540 min Scan# 738
Delta R.T. 0.006 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 49 Resp: 8130

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 84.7 | 59.8 | 89.6 |

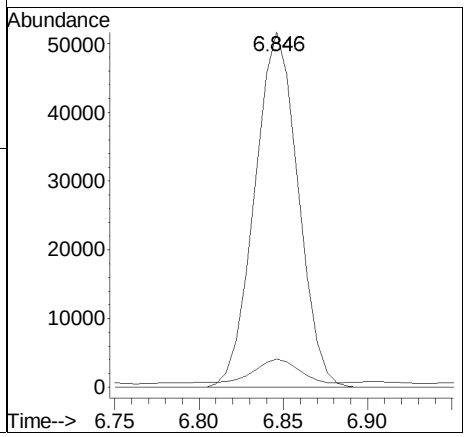


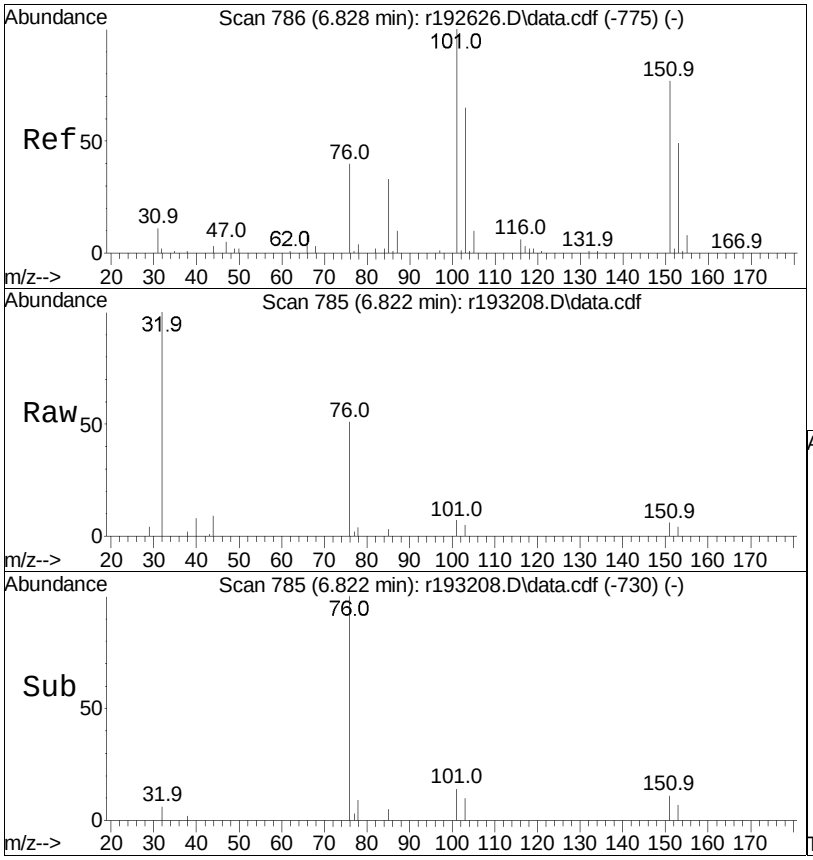



#30
carbon disulfide
Concen: 1.44 ppbV
RT: 6.846 min Scan# 789
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 76 Resp: 92534

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 8.0 | 12.3 | 18.5# |

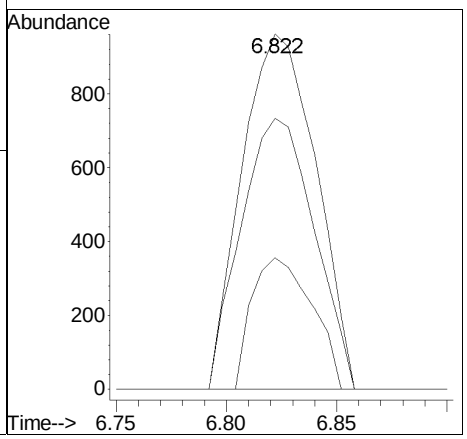


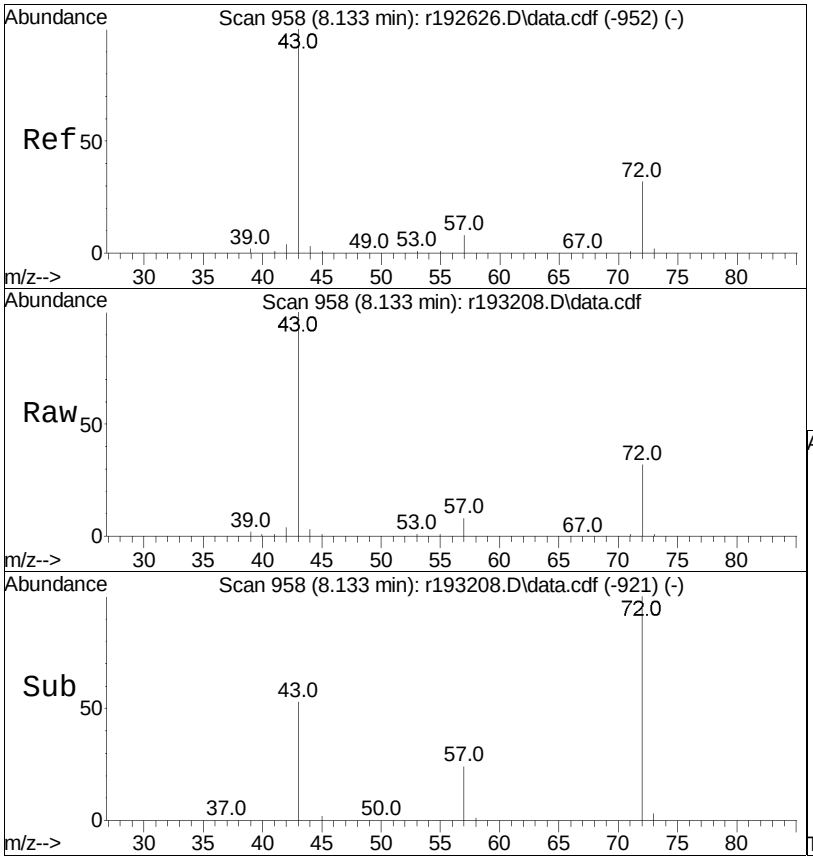



#31
Freon 113
Concen: 0.07 ppbV
RT: 6.822 min Scan# 785
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:101 Resp: 2249

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 37.0 | 26.7 | 40.1 |
| 151 | 76.3 | 63.4 | 95.2 |

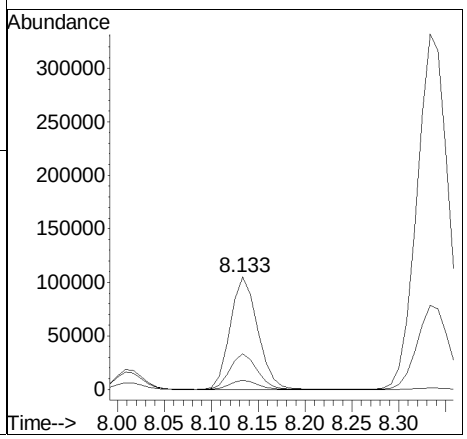


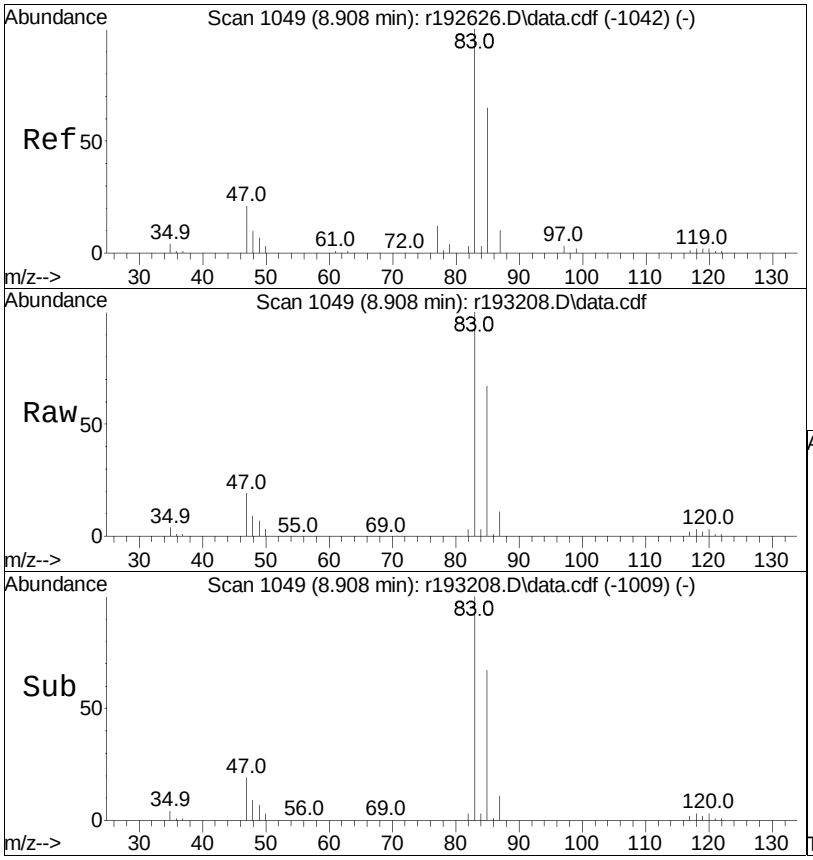



#36
2-butanone
Concen: 5.11 ppbV
RT: 8.133 min Scan# 958
Delta R.T. -0.025 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 43 Resp: 215839

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 31.7 | 27.7 | 41.5 |
| 57 | 8.1 | 6.3 | 9.5 |

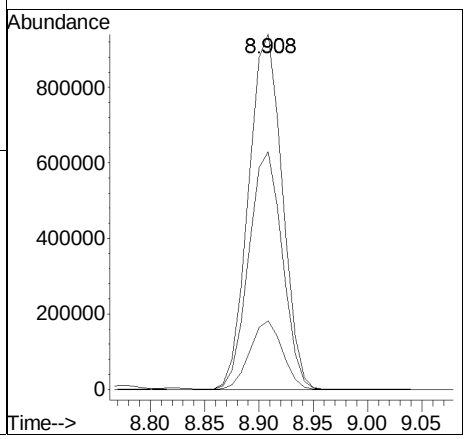


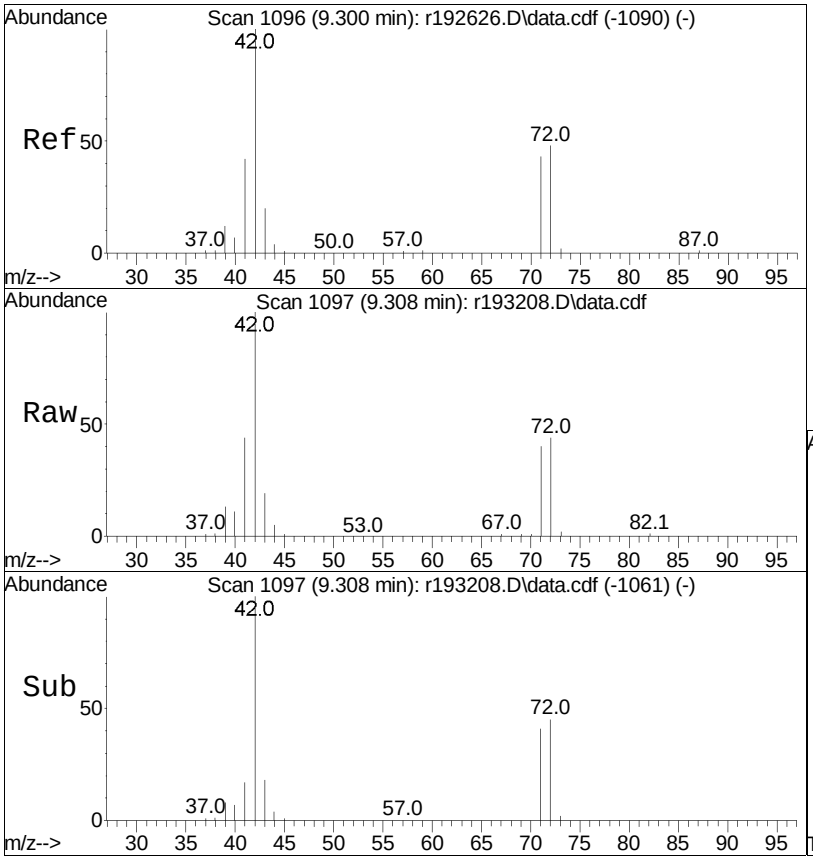



#39
chloroform
Concen: 69.23 ppbV
RT: 8.908 min Scan# 1049
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 83 Resp: 2032881

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 66.9 | 50.1 | 75.1 |
| 47 | 19.3 | 17.6 | 26.4 |

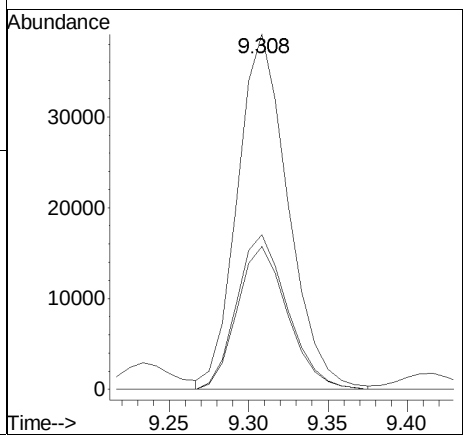


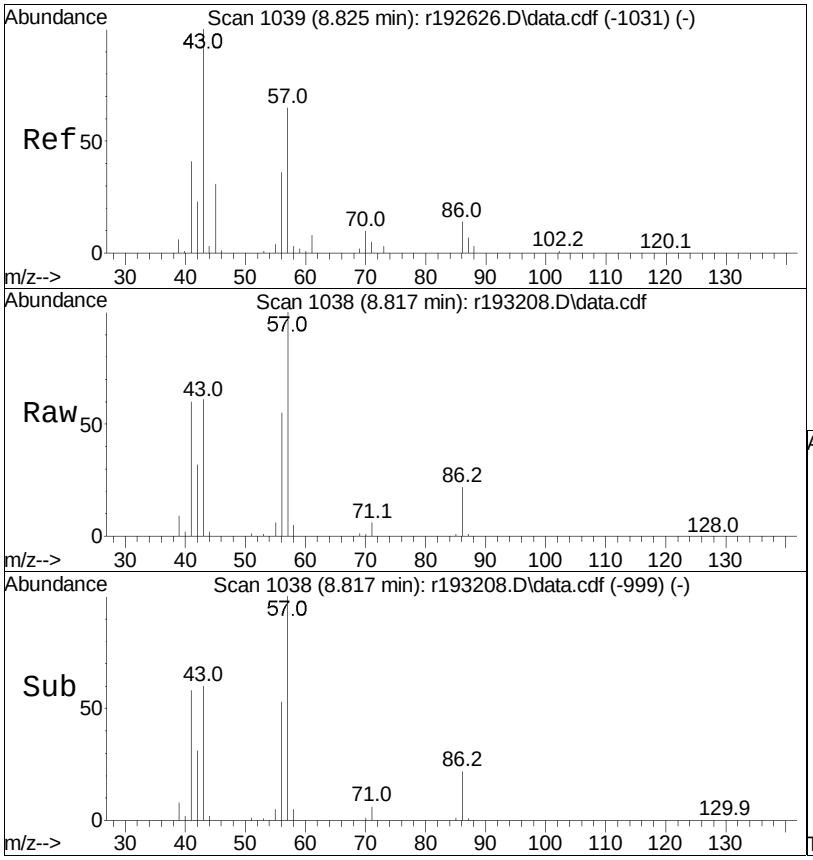



#40
Tetrahydrofuran
Concen: 3.06 ppbV
RT: 9.308 min Scan# 1097
Delta R.T. -0.033 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 42 Resp: 87023

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 40.2 | 32.5 | 48.7 |
| 72 | 43.6 | 33.7 | 50.5 |

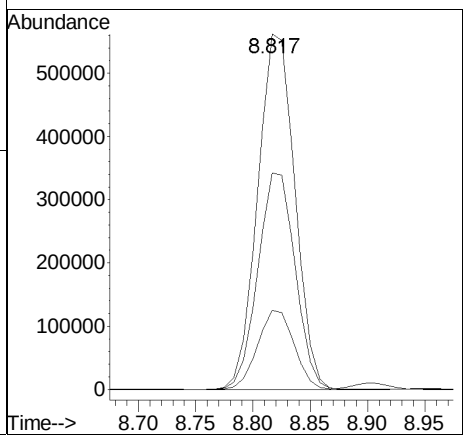


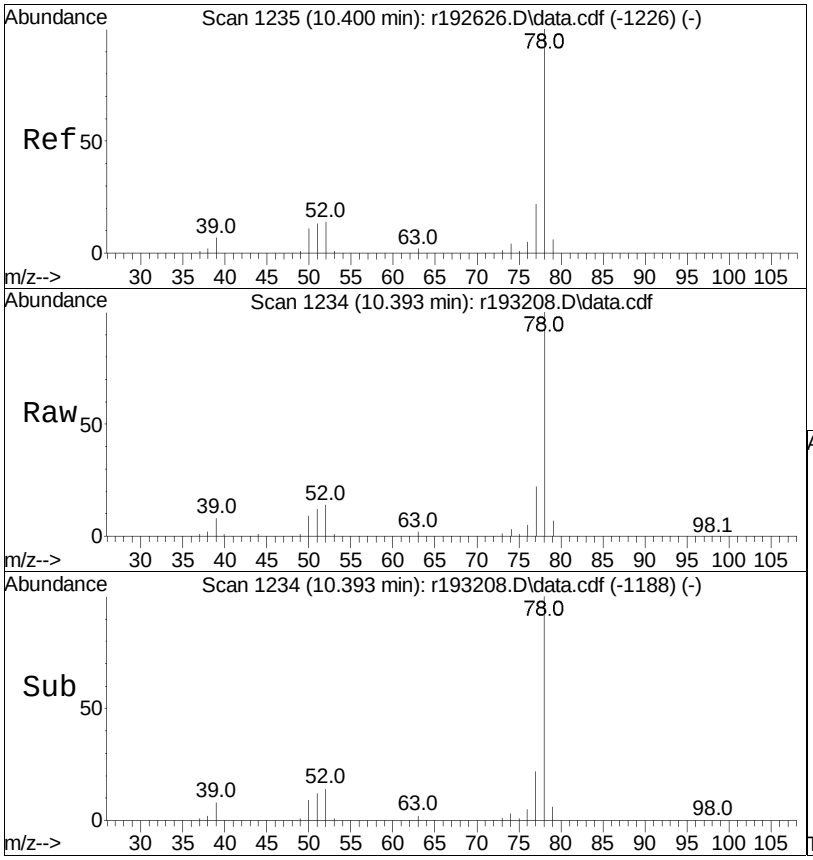



#44
hexane
Concen: 32.42 ppbV
RT: 8.817 min Scan# 1038
Delta R.T. -0.008 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 57 Resp: 1267156

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 60.9 | 159.3 | 238.9# |
| 86 | 22.3 | 15.7 | 23.5 |

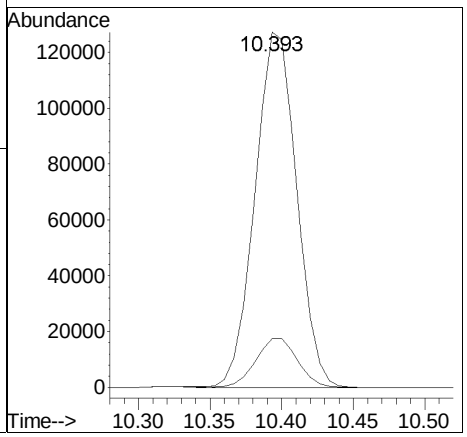


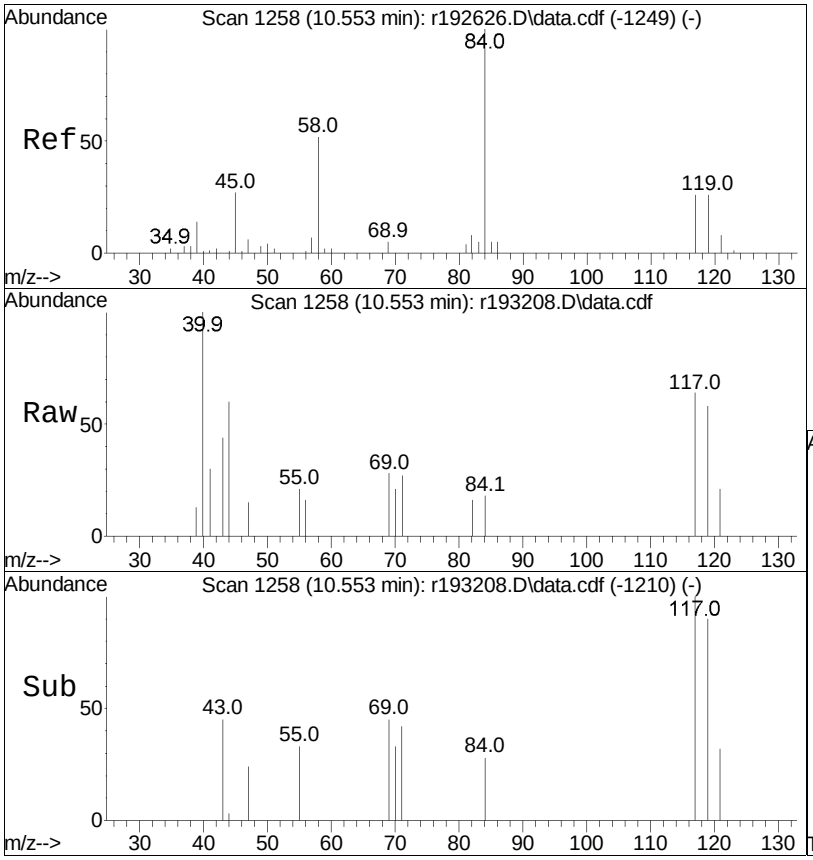



#50
benzene
Concen: 3.34 ppbV
RT: 10.393 min Scan# 1234
Delta R.T. -0.007 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 78 Resp: 257634

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 13.8 | 11.4 | 17.2 |

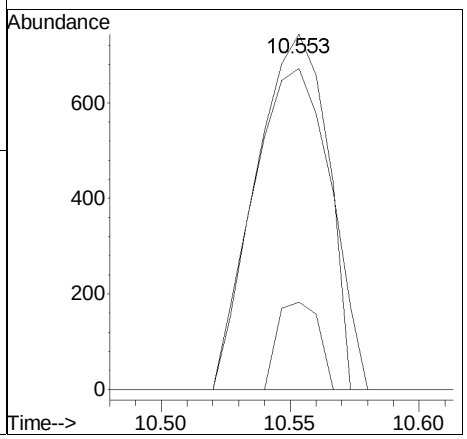


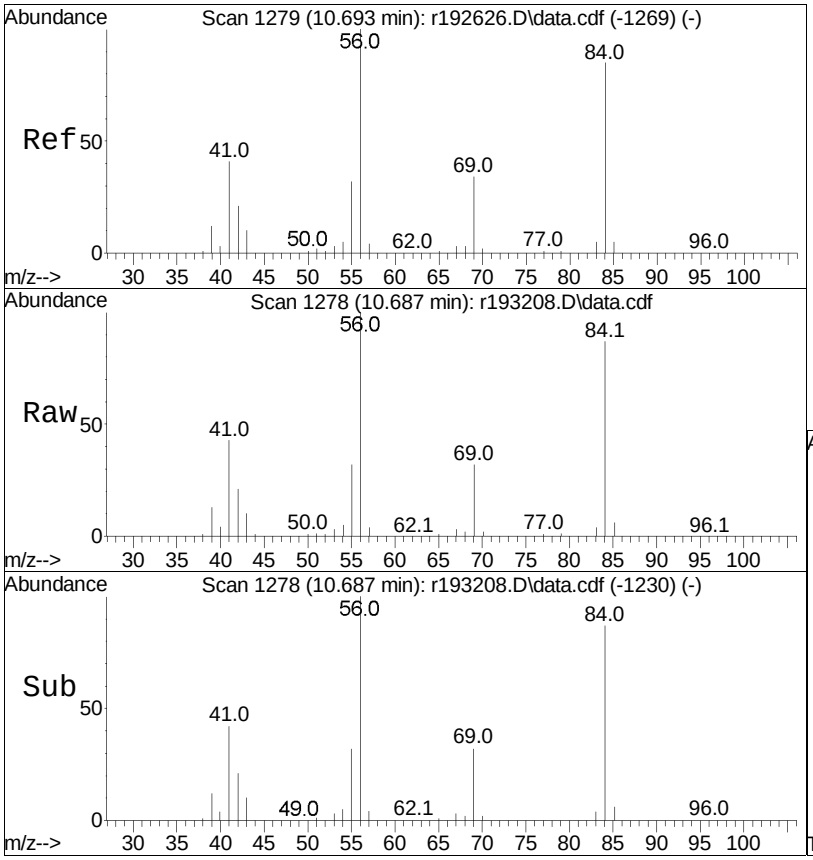



#52
carbon tetrachloride
Concen: 0.07 ppbV
RT: 10.553 min Scan# 1258
Delta R.T. -0.007 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:117 Resp: 1427

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 90.3 | 85.4 | 128.2 |
| 82 | 24.6 | 22.6 | 33.8 |

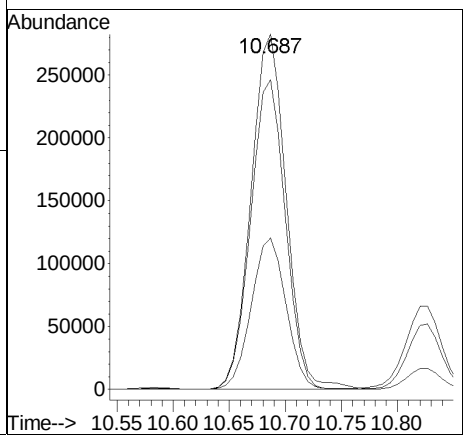


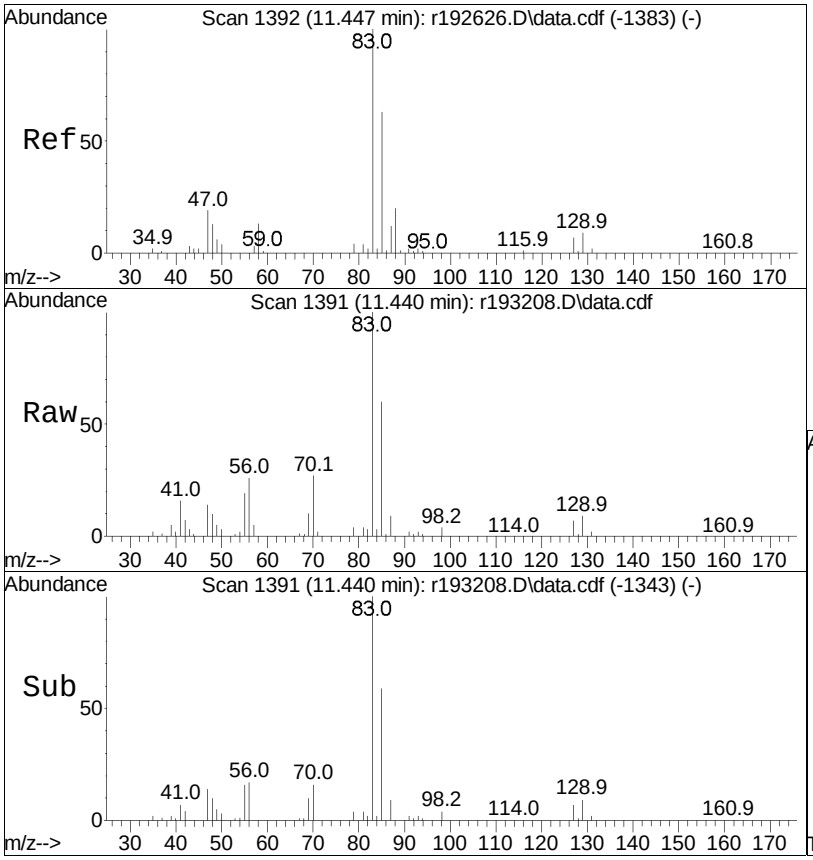



#53
cyclohexane
Concen: 14.48 ppbV
RT: 10.687 min Scan# 1278
Delta R.T. -0.007 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 56 Resp: 618830

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 87.1 | 69.8 | 104.6 |
| 41 | 42.6 | 32.1 | 48.1 |

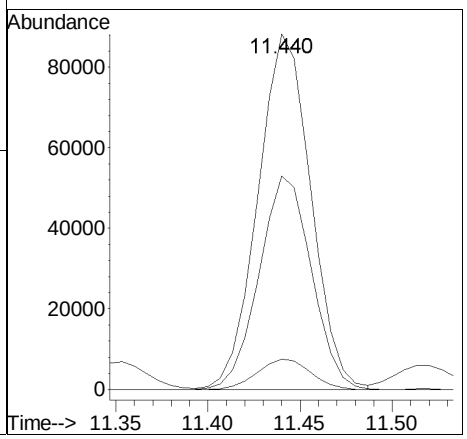


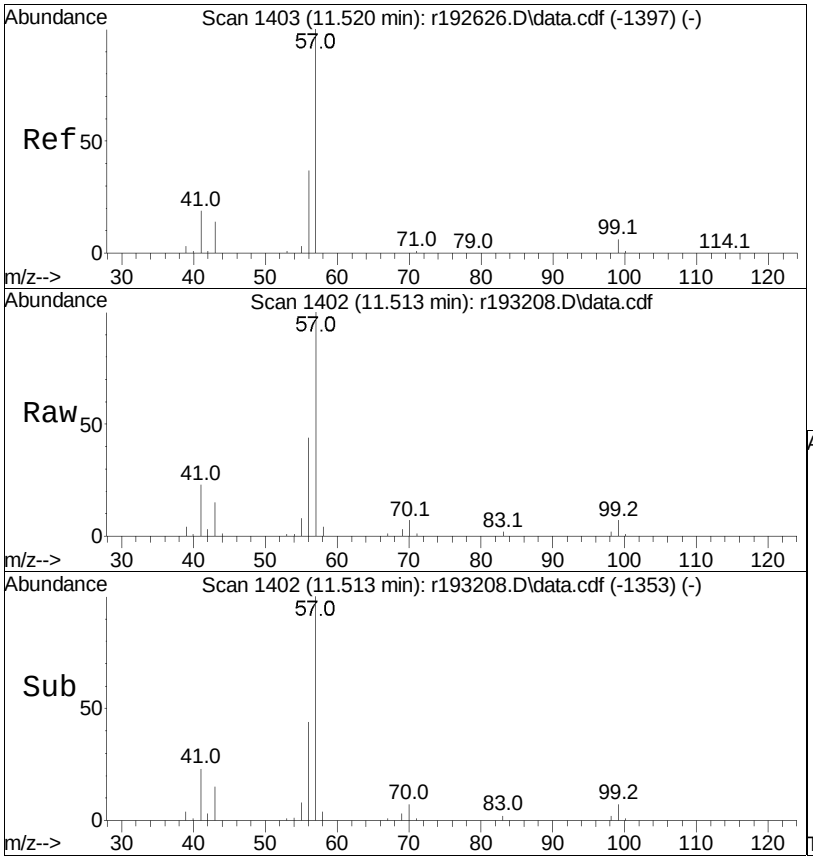



#57
bromodichloromethane
Concen: 5.24 ppbV
RT: 11.440 min Scan# 1391
Delta R.T. -0.007 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 83 Resp: 176126

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 60.1 | 49.1 | 73.7 |
| 129 | 8.5 | 7.8 | 11.6 |

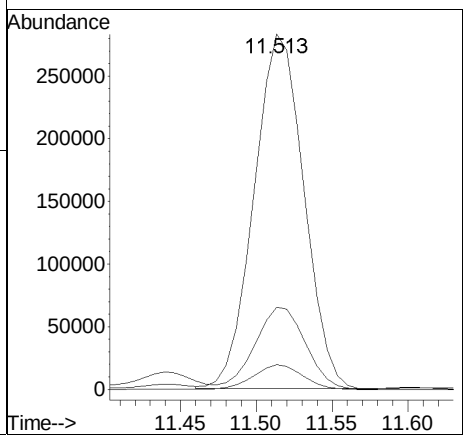


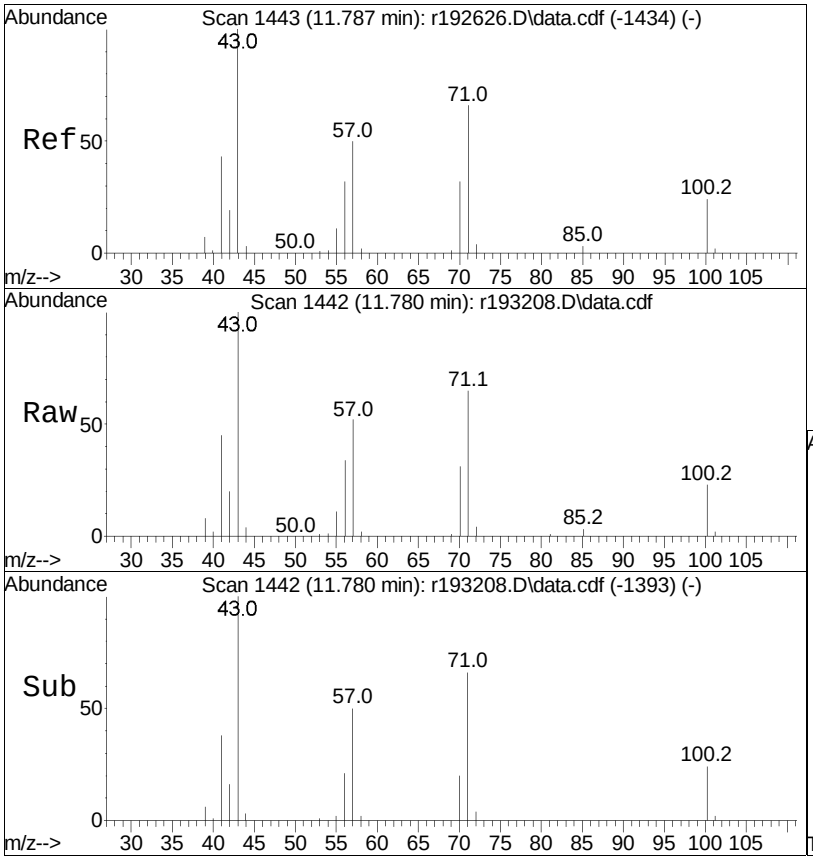



#60
2,2,4-trimethylpentane
Concen: 5.24 ppbV
RT: 11.513 min Scan# 1402
Delta R.T. -0.007 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 57 Resp: 646251

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.0 | 6.0 | 9.0 |
| 41 | 23.1 | 15.6 | 23.4 |

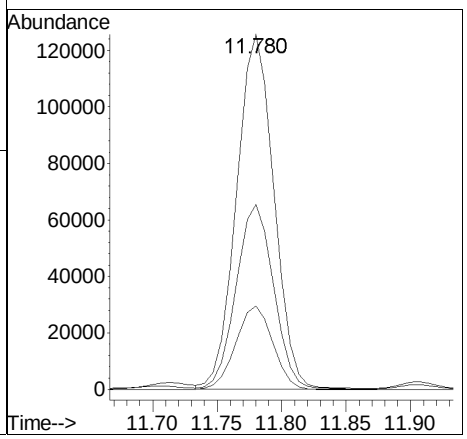


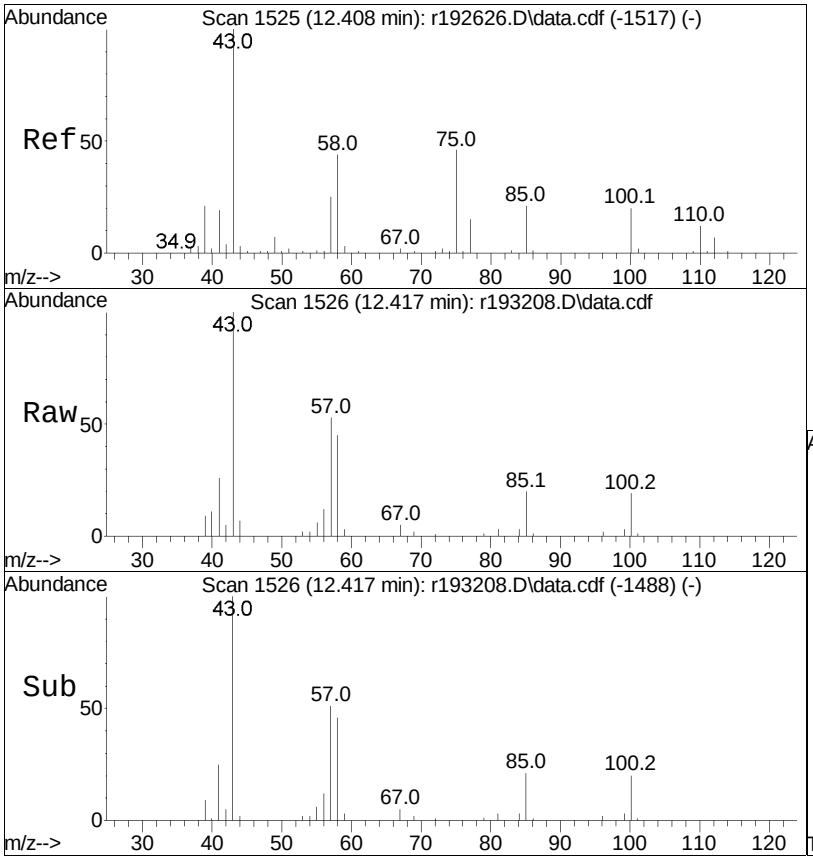



#62
heptane
Concen: 5.29 ppbV
RT: 11.780 min Scan# 1442
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 43 Resp: 252318

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 52.1 | 41.0 | 61.6 |
| 100 | 23.5 | 21.4 | 32.2 |

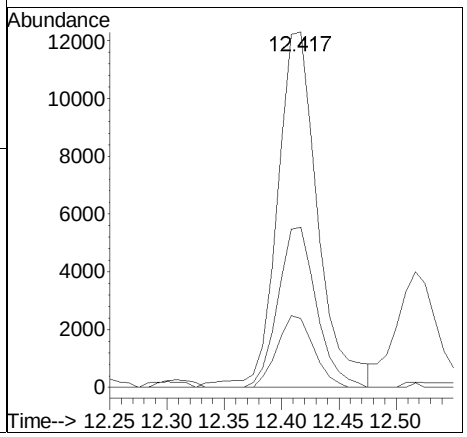


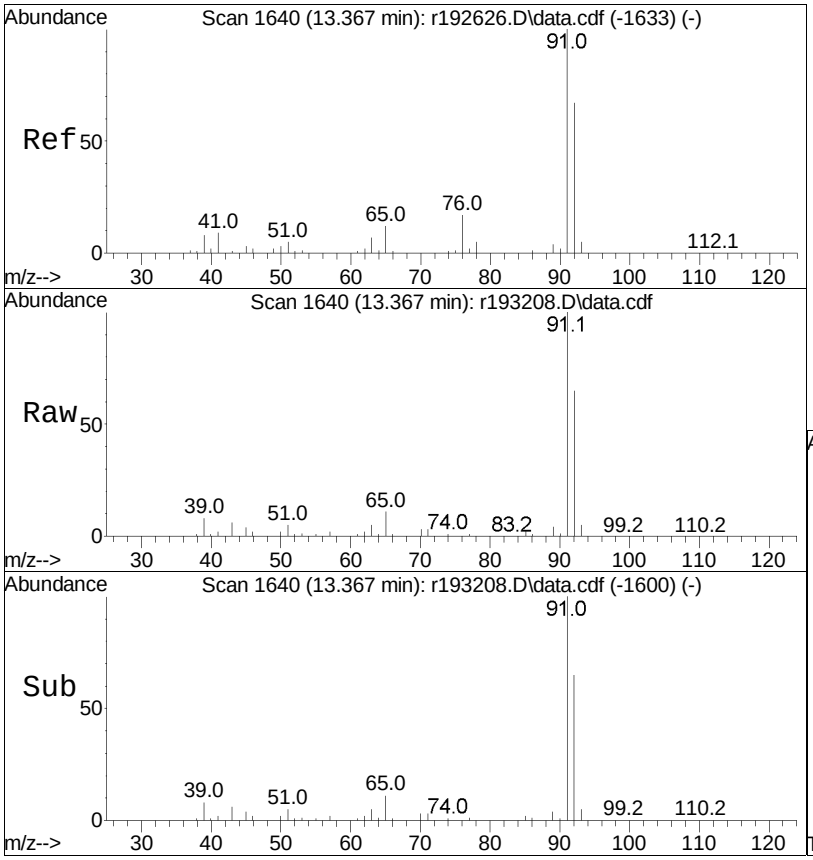



#64
4-methyl-2-pentanone
Concen: 0.59 ppbV
RT: 12.417 min Scan# 1526
Delta R.T. -0.017 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 43 Resp: 30288

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 45.1 | 32.9 | 49.3 |
| 100 | 19.4 | 15.4 | 23.2 |

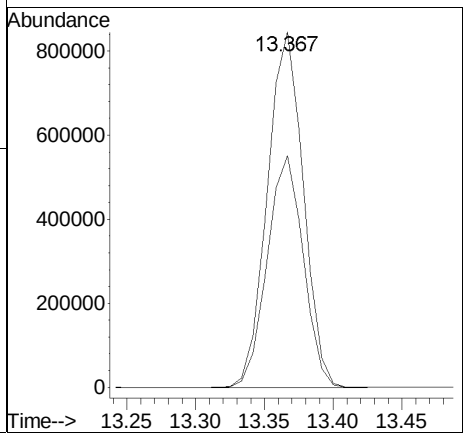


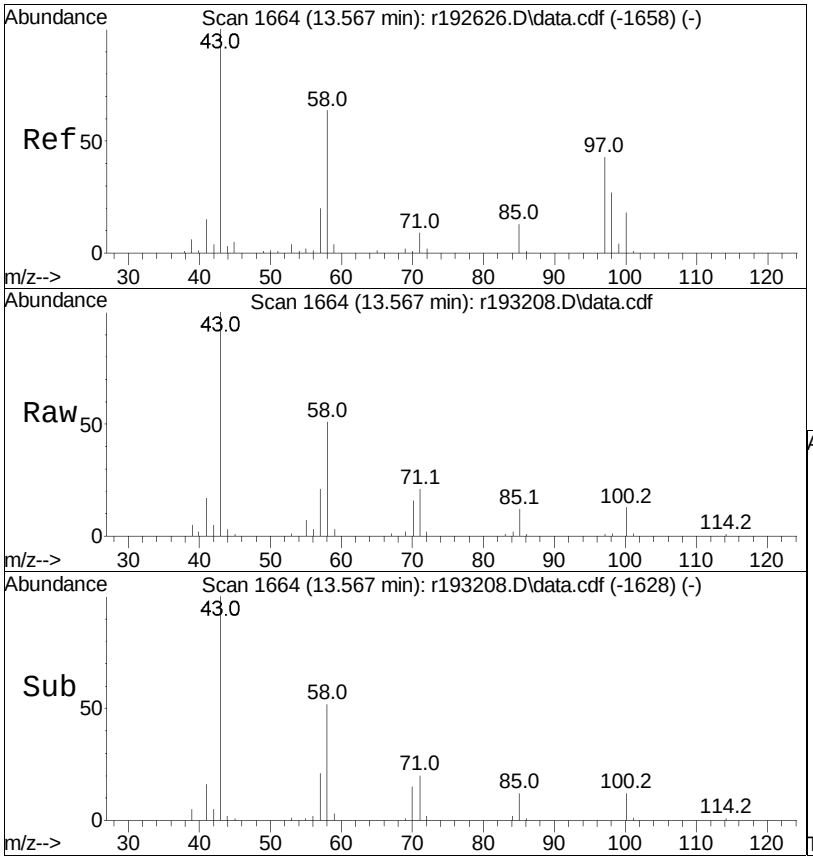



#68
toluene
Concen: 18.71 ppbV
RT: 13.367 min Scan# 1640
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 91 Resp: 1537209

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.2 | 53.3 | 79.9 |

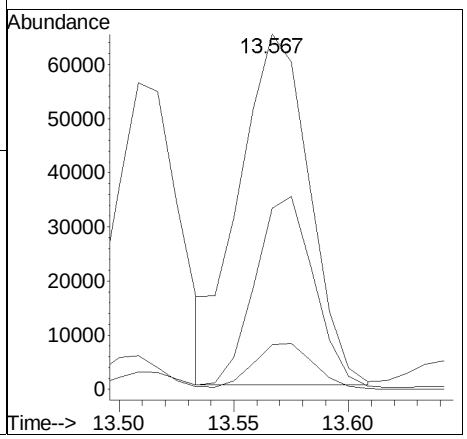


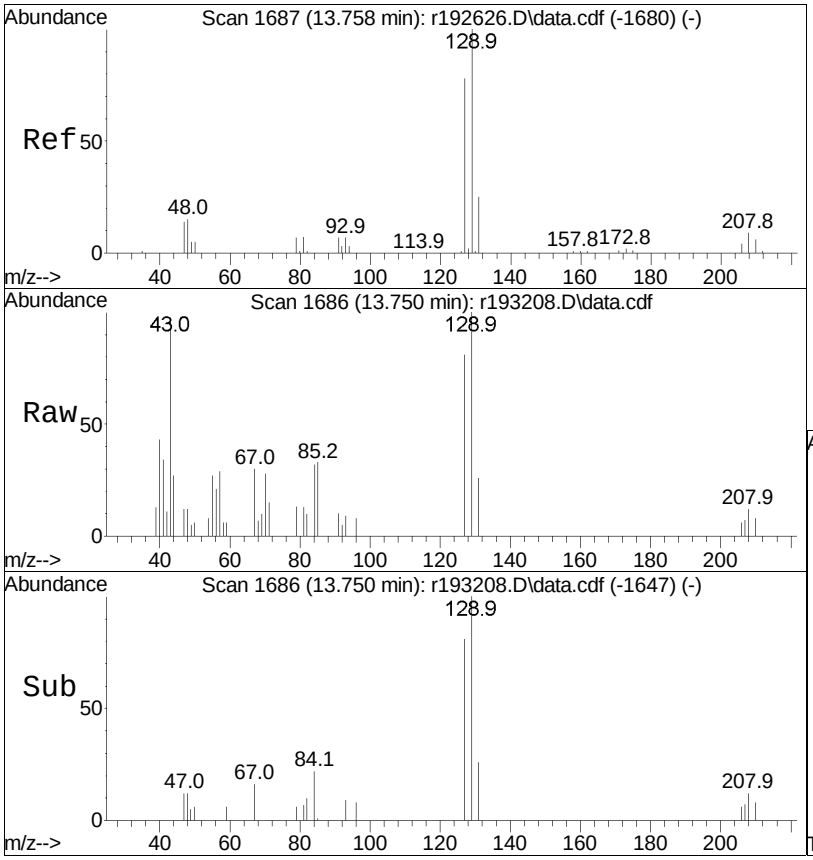



#72
2-hexanone
Concen: 2.89 ppbV
RT: 13.567 min Scan# 1664
Delta R.T. -0.033 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 43 Resp: 137889

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 51.0 | 62.6 | 94.0# |
| 100 | 12.6 | 26.5 | 39.7# |

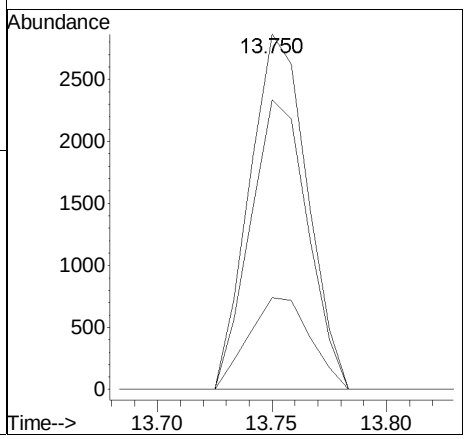


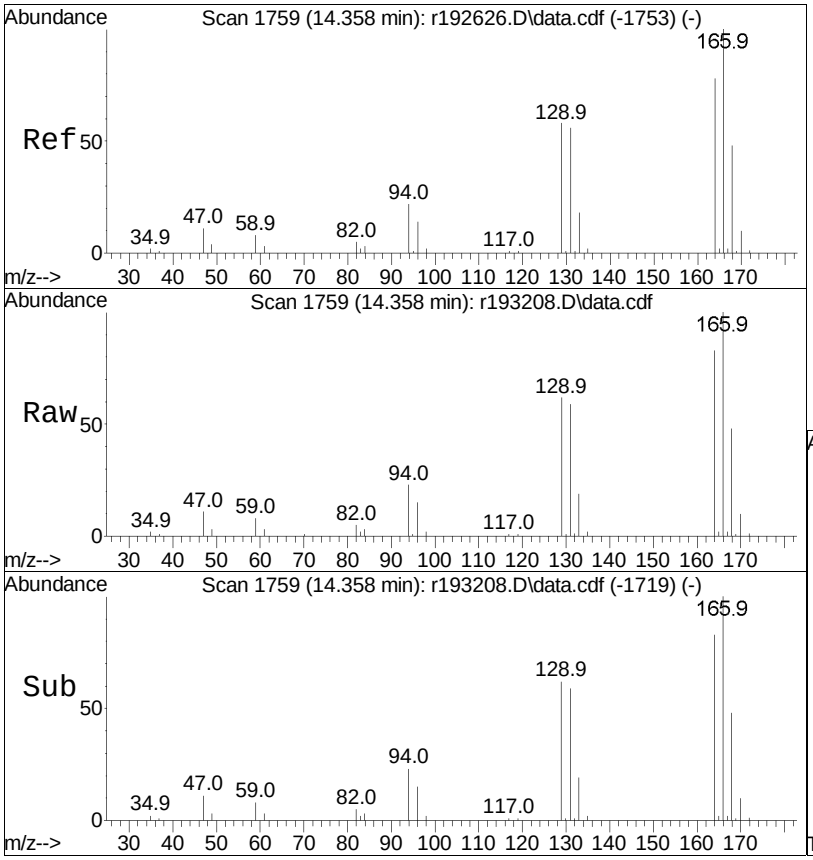



#74
dibromochloromethane
Concen: 0.16 ppbV
RT: 13.750 min Scan# 1686
Delta R.T. -0.008 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:129 Resp: 5012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 81.5 | 60.9 | 91.3 |
| 131 | 25.8 | 19.7 | 29.5 |

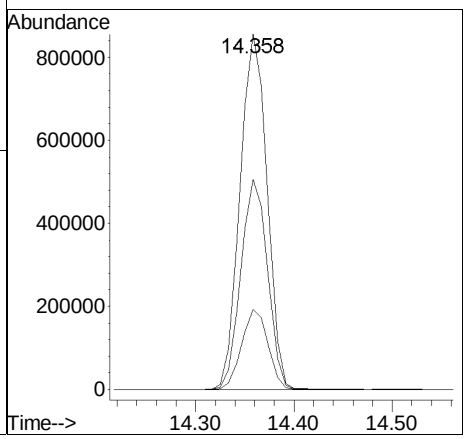


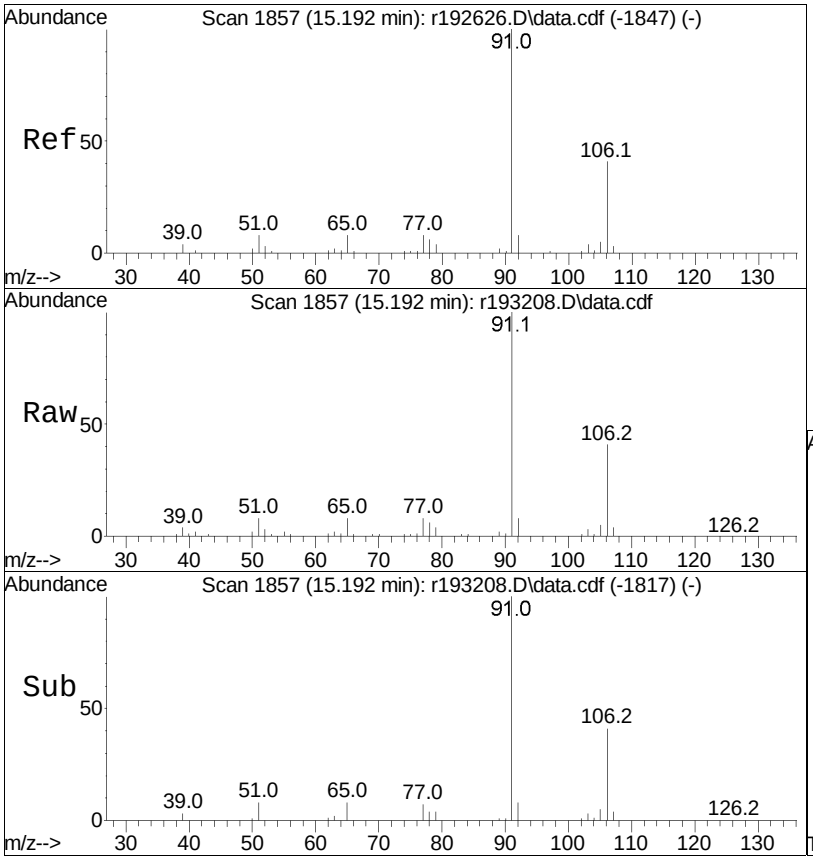



#78
tetrachloroethene
Concen: 45.32 ppbV
RT: 14.358 min Scan# 1759
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:166 Resp: 1635655

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 59.1 | 46.4 | 69.6 |
| 94 | 22.5 | 18.5 | 27.7 |

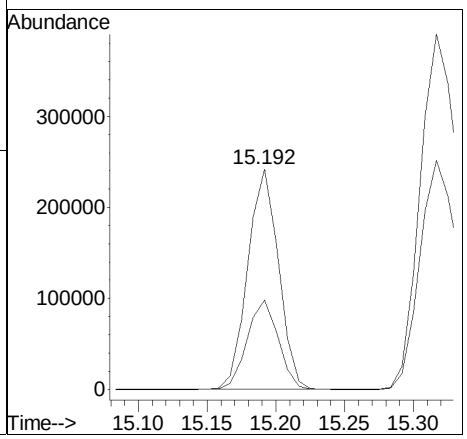


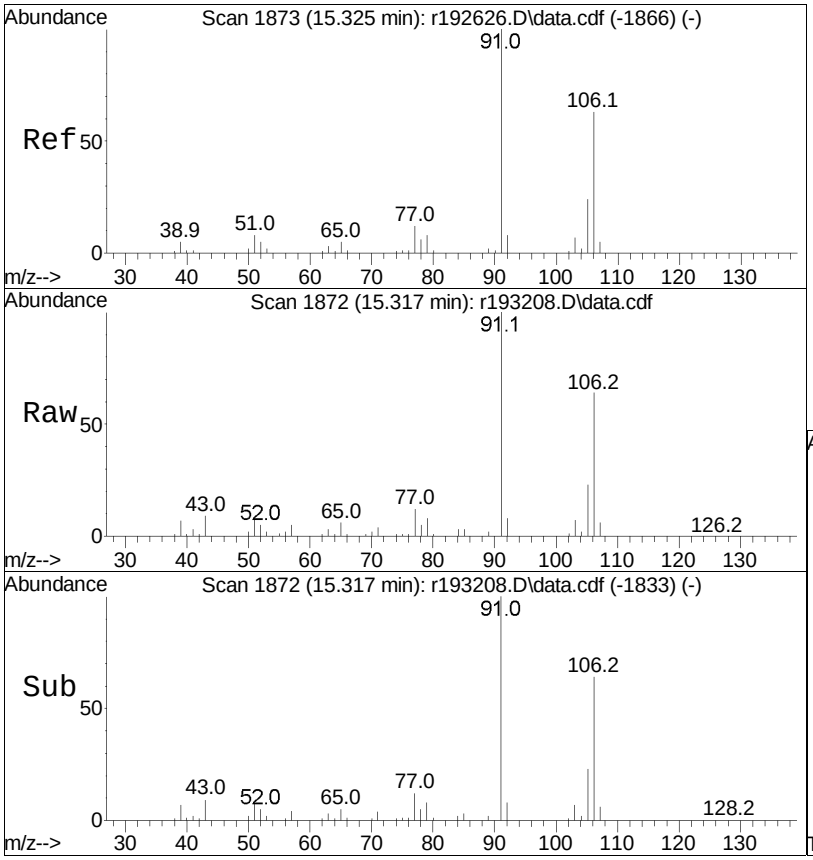



#81
ethylbenzene
Concen: 3.82 ppbV
RT: 15.192 min Scan# 1857
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 91 Resp: 376214

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 40.5 | 32.9 | 49.3 |

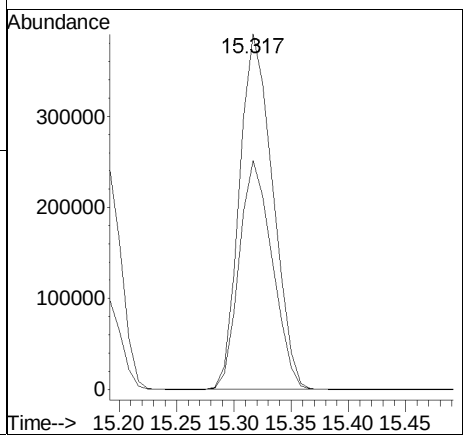


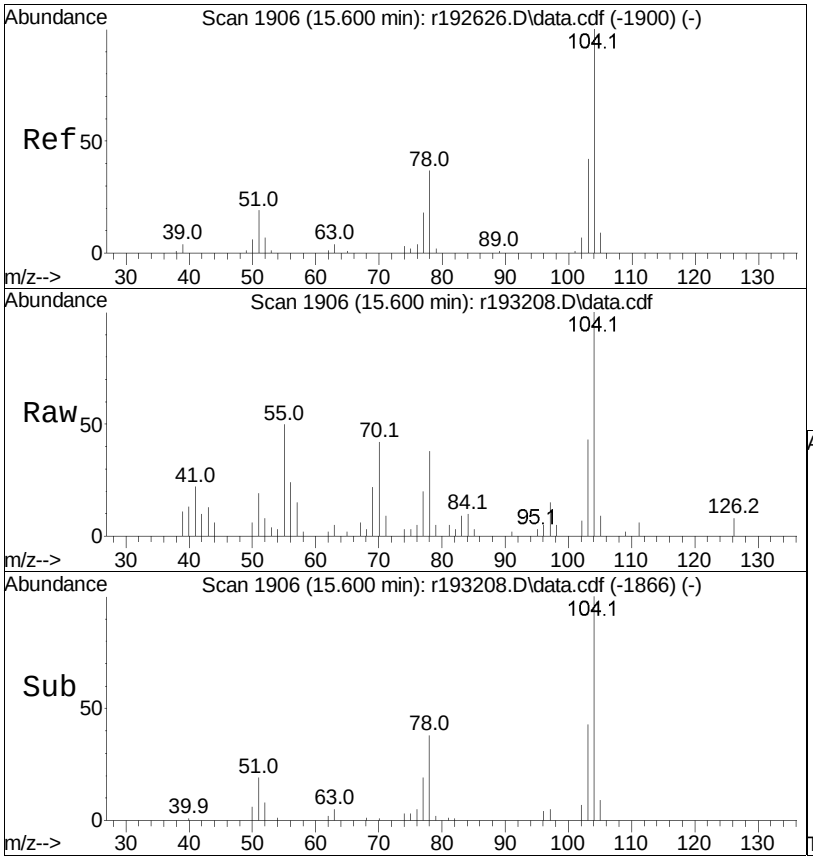



#83
m+p-xylene
Concen: 10.15 ppbV
RT: 15.317 min Scan# 1872
Delta R.T. -0.008 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 91 Resp: 788667

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 64.4 | 51.0 | 76.4 |

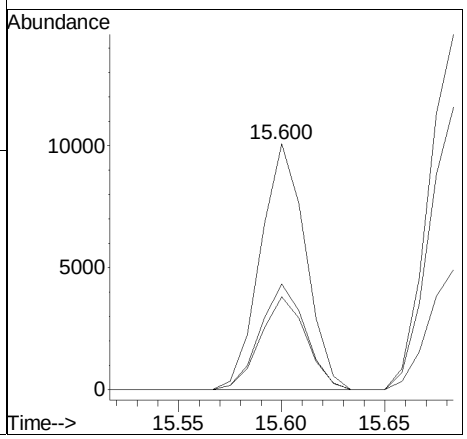


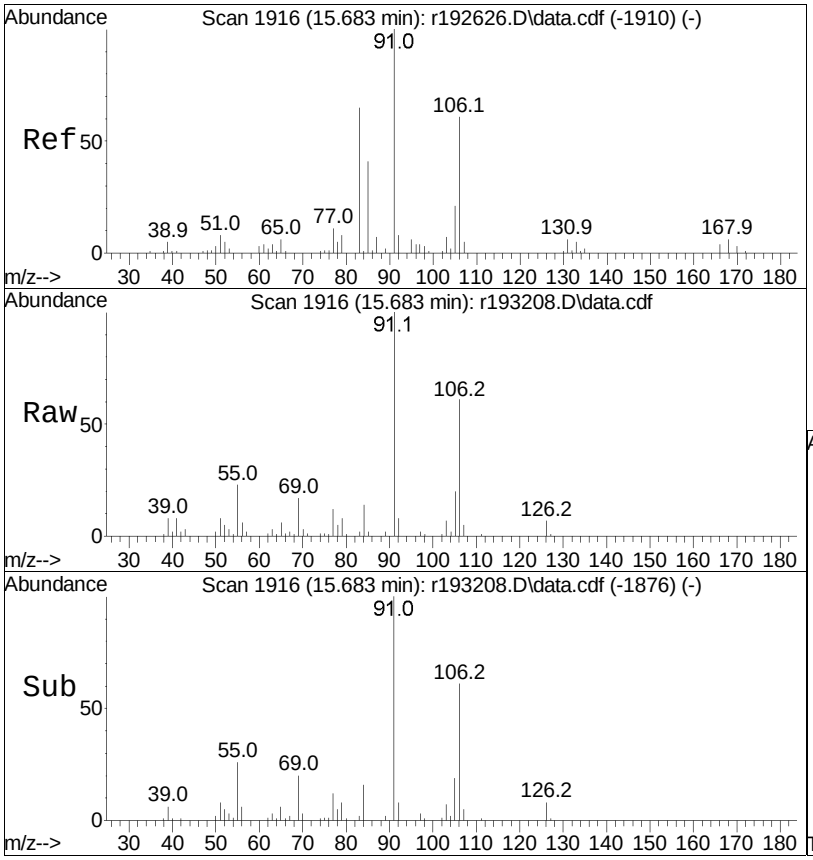



#85
styrene
Concen: 0.20 ppbV
RT: 15.600 min Scan# 1906
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:104 Resp: 15270

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 42.9 | 33.4 | 50.0 |
| 78 | 37.7 | 30.6 | 46.0 |

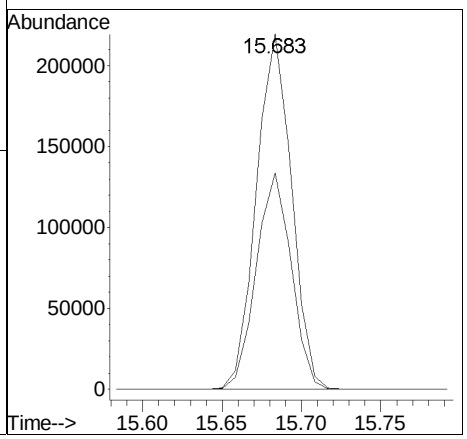


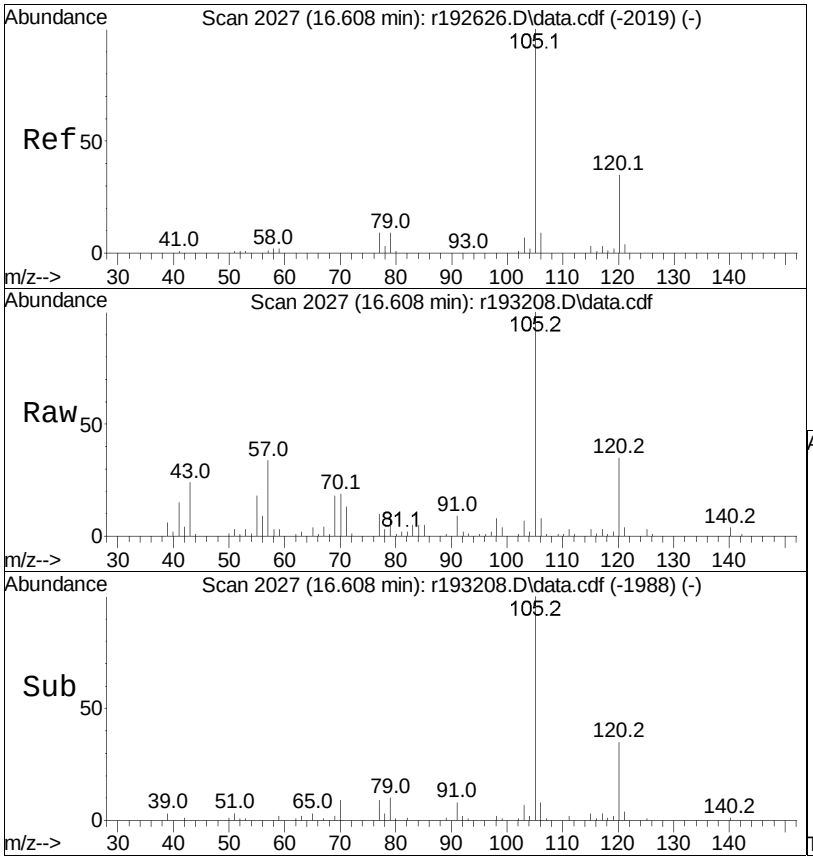



#87
o-xylene
Concen: 4.43 ppbV
RT: 15.683 min Scan# 1916
Delta R.T. 0.000 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion: 91 Resp: 337741

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 60.9 | 47.8 | 71.8 |

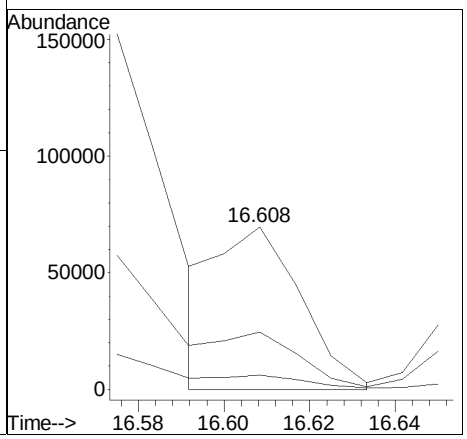


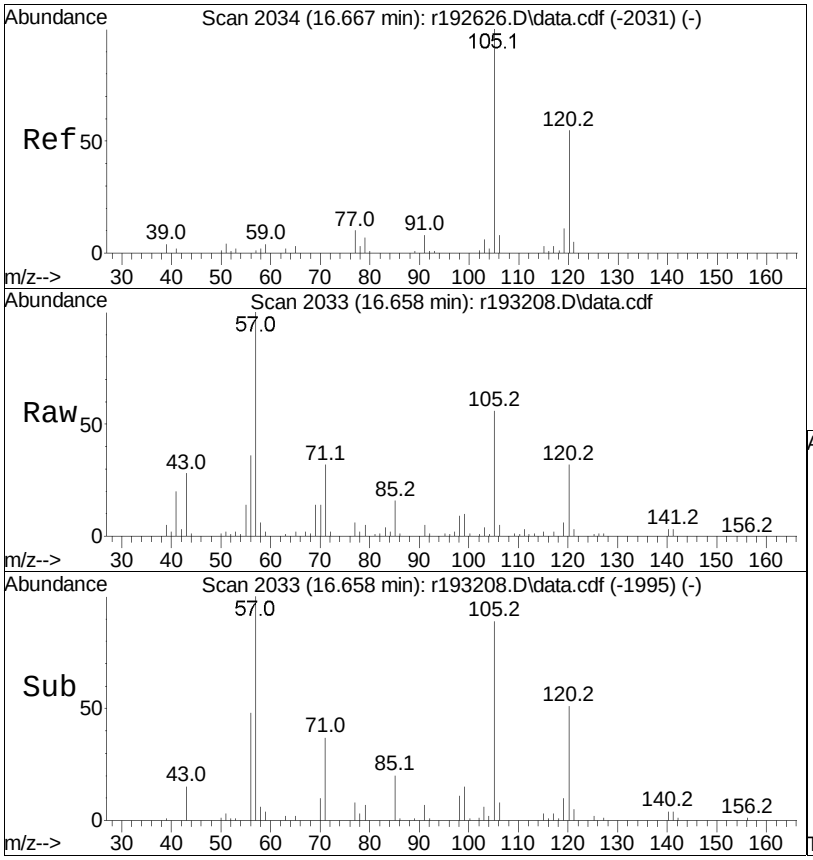



#96
4-ethyl toluene
Concen: 0.74 ppbV m
RT: 16.608 min Scan# 2027
Delta R.T. -0.008 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:105 Resp: 95122

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 35.4 | 27.2 | 40.8 |
| 91 | 8.8 | 7.0 | 10.4 |

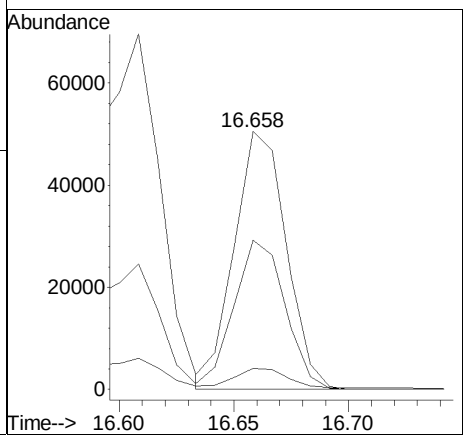


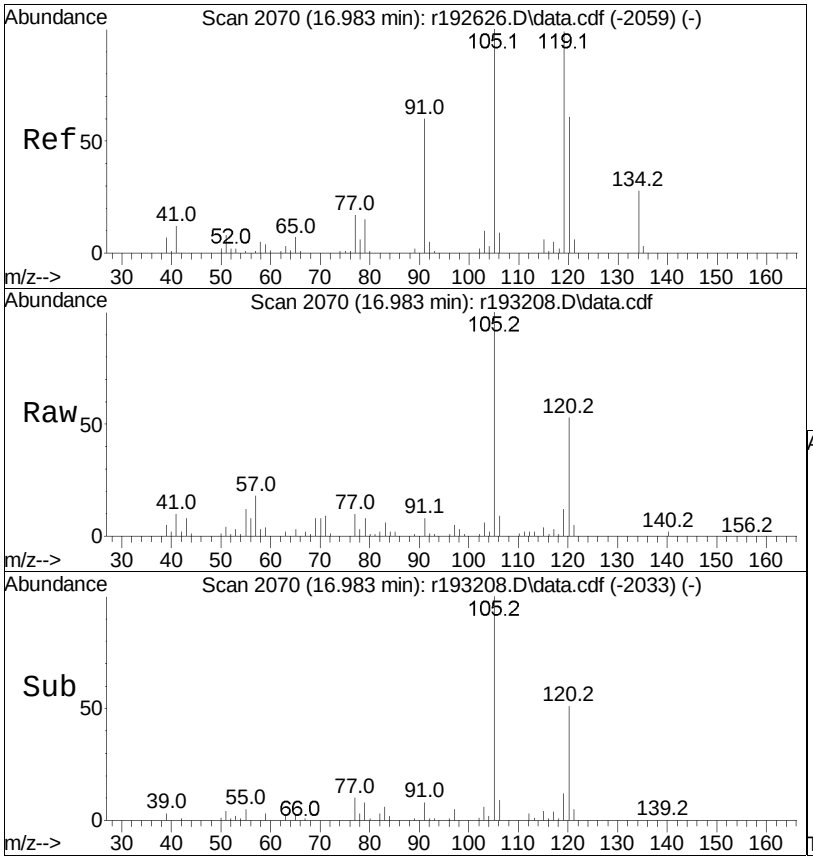



#97
1,3,5-trimethylbenzene
Concen: 0.77 ppbV
RT: 16.658 min Scan# 2033
Delta R.T. -0.017 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:105 Resp: 79878

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 57.8 | 42.6 | 64.0 |
| 91 | 8.2 | 6.6 | 9.8 |

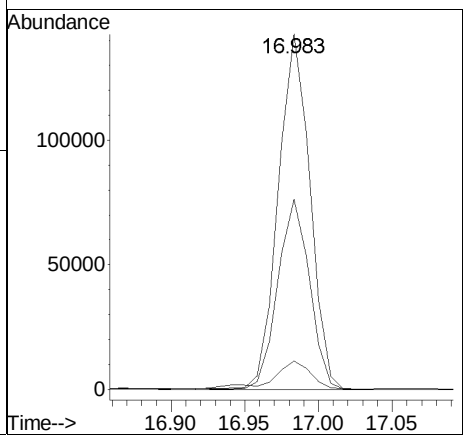





#99
1,2,4-trimethylbenzene
Concen: 2.23 ppbV
RT: 16.983 min Scan# 2070
Delta R.T. -0.008 min
Lab File: r193208.D
Acq: 21 Mar 2020 1:52 AM

Tgt Ion:105 Resp: 213713

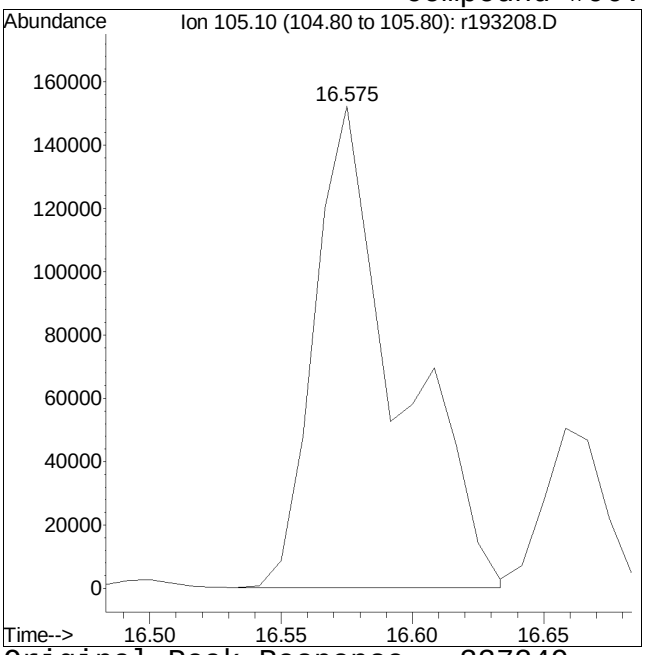
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 53.5 | 49.2 | 73.8 |
| 91 | 8.0 | 49.9 | 74.9# |



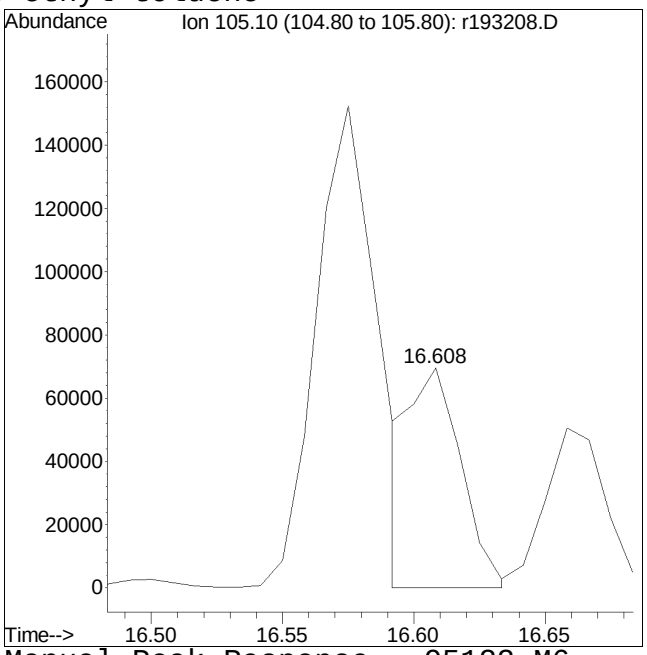
# Manual Integration Report

Data Path : O:\Forensics\Data\Airlab19QMethod : TFS19_200224.M
Data File : r193208.D Operator : AIRLAB19:EW
Date Inj'd : 3/21/2020 0:1: 2 Instrument :
Sample : L2011723-01,3,250,250 Quant Date : 3/21/2020 7:57 am

## Compound #96: 4-ethyl toluene




Original Peak Response = 337249




Manual Peak Response = 95122 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193209.D
Acq On : 21 Mar 2020 2:28 AM
Operator : AIRLAB19:EW
Sample : L2011723-02D,3,75,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:41:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.775 | 49 | 320561 | 10.000 | ppbV | 0.00 |
| Standard Area = 288364 | | | Recovery = 111.17% | | | |
| 43) 1,4-difluorobenzene | 10.740 | 114 | 1004362 | 10.000 | ppbV | 0.00 |
| Standard Area = 940727 | | | Recovery = 106.76% | | | |
| 67) chlorobenzene-D5 | 14.875 | 54 | 120197 | 10.000 | ppbV | 0.00 |
| Standard Area = 108860 | | | Recovery = 110.41% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 3.562 | 85 | 2107 | 0.117 | ppbV | 100 |
| 6) chloromethane | 3.772 | 50 | 702 | 0.061 | ppbV | 97 |
| 7) Freon-114 | 0.000 | | 0 | N.D. | | |
| 9) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 0.000 | | 0 | N.D. | d | |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 4.930 | 31 | 39666 | 4.235 | ppbV # | 62 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.483 | 43 | 4095854 | 237.941 | ppbV # | 98 |
| 21) trichlorofluoromethane | 5.697 | 101 | 1026 | 0.054 | ppbV | 95 |
| 22) isopropyl alcohol | 5.763 | 45 | 131205 | 4.012 | ppbV | 100 |
| 26) 1,1-dichloroethene | 0.000 | | 0 | N.D. | | |
| 27) tertiary butyl alcohol | 6.426 | 59 | 80562 | 2.687 | ppbV # | 97 |
| 28) methylene chloride | 6.534 | | 0 | N.D. | | |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | |
| 30) carbon disulfide | 6.846 | 76 | 14408 | 0.246 | ppbV # | 92 |
| 31) Freon 113 | 6.822 | | 0 | N.D. | | |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | |
| 34) MTBE | 0.000 | | 0 | N.D. | d | |
| 36) 2-butanone | 8.125 | 43 | 545208 | 14.131 | ppbV | 95 |
| 37) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | d | |
| 39) chloroform | 0.000 | | 0 | N.D. | d | |
| 40) Tetrahydrofuran | 9.308 | 42 | 60823 | 2.346 | ppbV | 98 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | | |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193209.D
Acq On : 21 Mar 2020 2:28 AM
Operator : AIRLAB19:EW
Sample : L2011723-02D,3,75,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:41:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 44) hexane | 8.817 | 57 | 35356 | 0.960 ppbV # | 21 |
| 48) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | |
| 50) benzene | 10.400 | 78 | 27359 | 0.377 ppbV | 99 |
| 52) carbon tetrachloride | 0.000 | | 0 | N.D. | |
| 53) cyclohexane | 10.687 | 56 | 20718 | 0.514 ppbV | 98 |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. d | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. d | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | |
| 59) trichloroethene | 0.000 | | 0 | N.D. | |
| 60) 2,2,4-trimethylpentane | 0.000 | | 0 | N.D. d | |
| 62) heptane | 11.780 | 43 | 147899 | 3.293 ppbV | 96 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | |
| 64) 4-methyl-2-pentanone | 12.425 | 43 | 32766 | 0.678 ppbV | 94 |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. d | |
| 68) toluene | 13.367 | 91 | 298677 | 4.081 ppbV | 98 |
| 72) 2-hexanone | 13.575 | 43 | 103089 | 2.424 ppbV # | 81 |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | |
| 78) tetrachloroethene | 14.358 | 166 | 111593 | 3.470 ppbV | 96 |
| 80) chlorobenzene | 0.000 | | 0 | N.D. d | |
| 81) ethylbenzene | 15.192 | 91 | 43794 | 0.499 ppbV | 98 |
| 83) m+p-xylene | 15.317 | 91 | 139441 | 2.015 ppbV | 99 |
| 84) bromoform | 0.000 | | 0 | N.D. | |
| 85) styrene | 15.600 | 104 | 3372 | 0.050 ppbV | 100 |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. d | |
| 87) o-xylene | 15.683 | 91 | 49703 | 0.732 ppbV | 100 |
| 96) 4-ethyl toluene | 16.617 | 105 | 22527M6 | 0.196 ppbV | |
| 97) 1,3,5-trimethylbenzene | 16.667 | 105 | 21733 | 0.235 ppbV | 96 |
| 99) 1,2,4-trimethylbenzene | 16.983 | 105 | 76194 | 0.891 ppbV # | 61 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. d | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. d | |
| 103) 1,4-dichlorobenzene | 0.000 | | 0 | N.D. d | |
| 107) 1,2-dichlorobenzene | 17.442 | | 0 | N.D. | |
| 115) 1,2,4-trichlorobenzene | 0.000 | | 0 | N.D. | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | |

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

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193209.D
Acq On : 21 Mar 2020 2:28 AM
Operator : AIRLAB19:EW
Sample : L2011723-02D,3,75,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:41:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

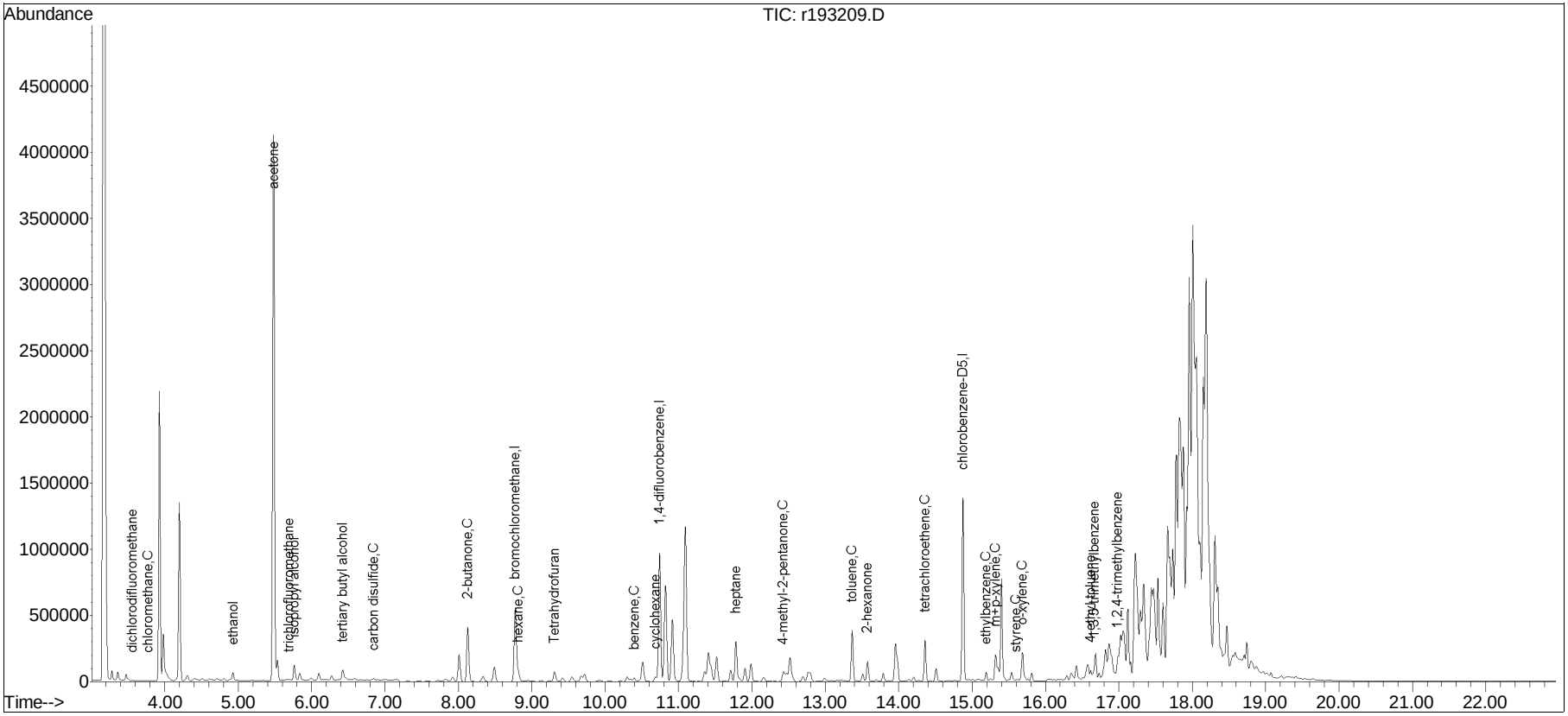
CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

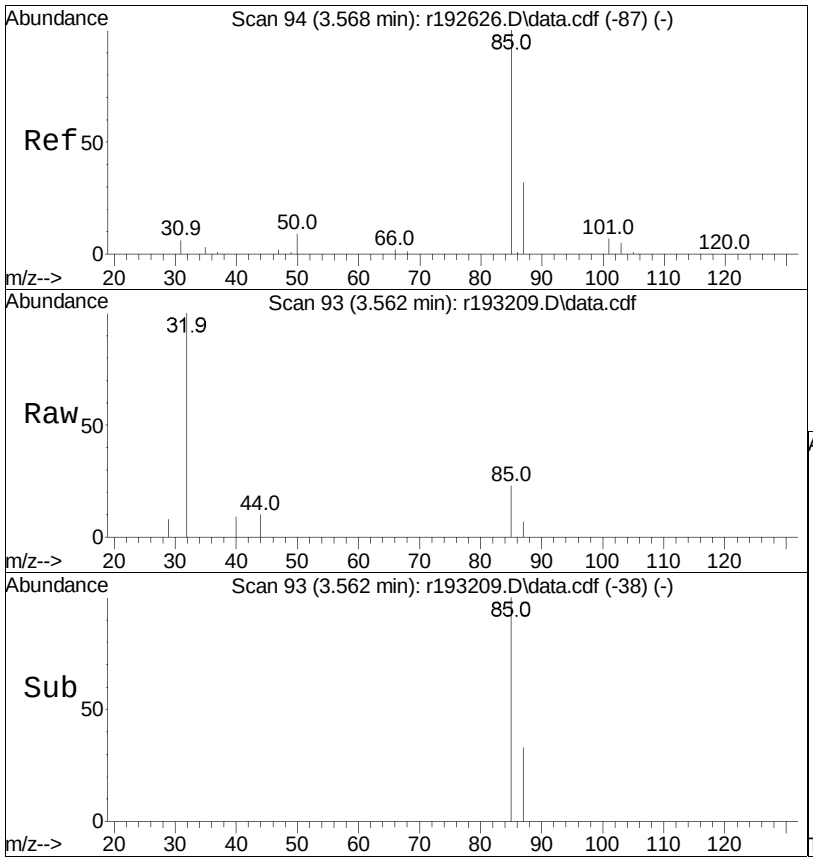
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : TO15-NY - .s\Data\Airlab19\2020\03\200320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193209.D
Acq On : 21 Mar 2020 2:28 AM
Operator : AIRLAB19:EW
Sample : L2011723-02D,3,75,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:41:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

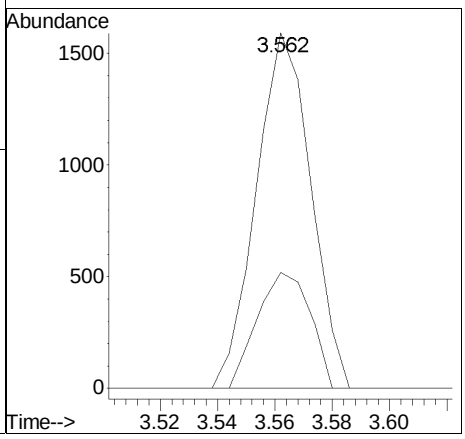


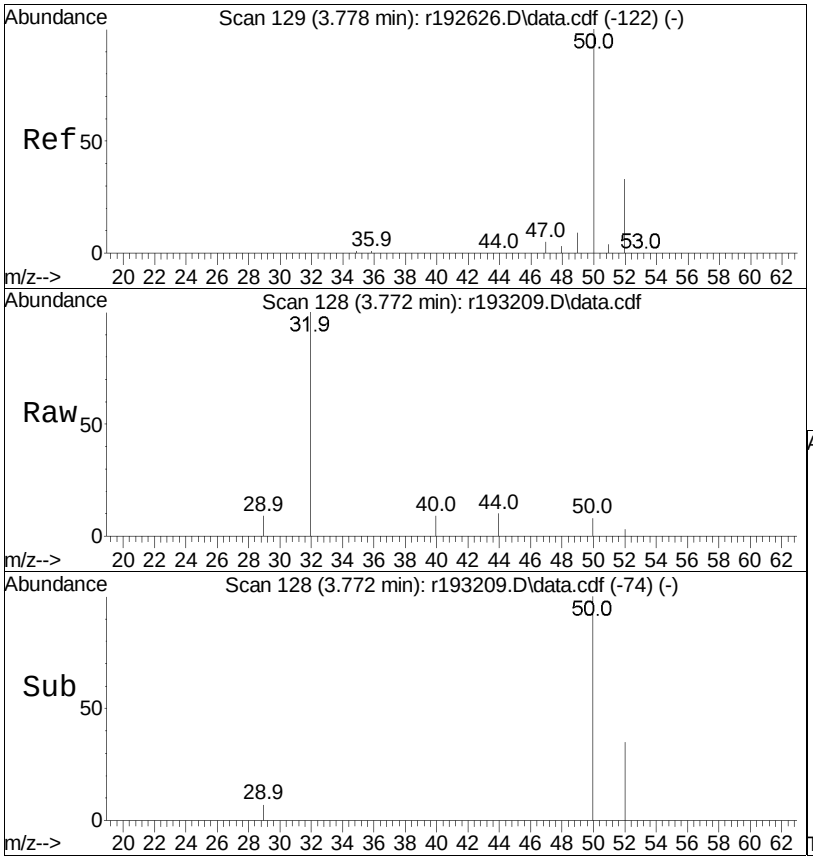



#5
dichlorodifluoromethane
Concen: 0.12 ppbV
RT: 3.562 min Scan# 93
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 85 Resp: 2107

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.6 | 25.9 | 38.9 |

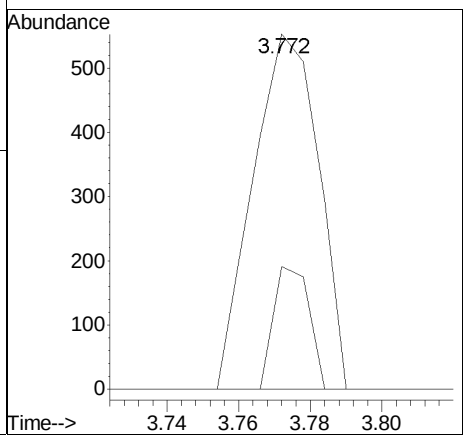


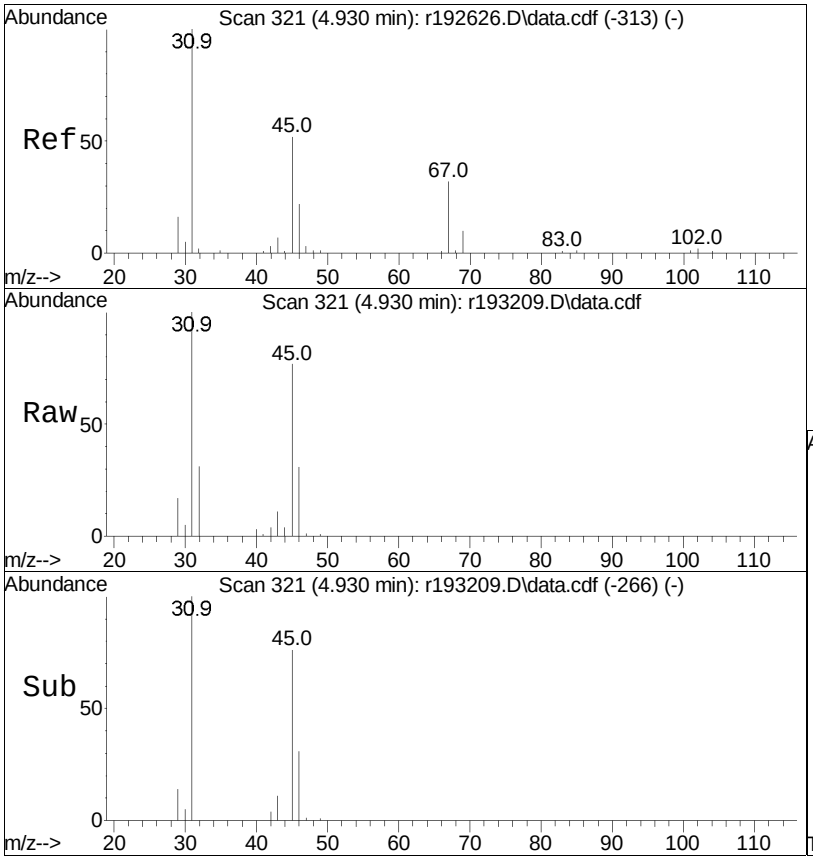



#6
chloromethane
Concen: 0.06 ppbV
RT: 3.772 min Scan# 128
Delta R.T. -0.006 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 50 Resp: 702

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 34.5 | 26.3 | 39.5 |

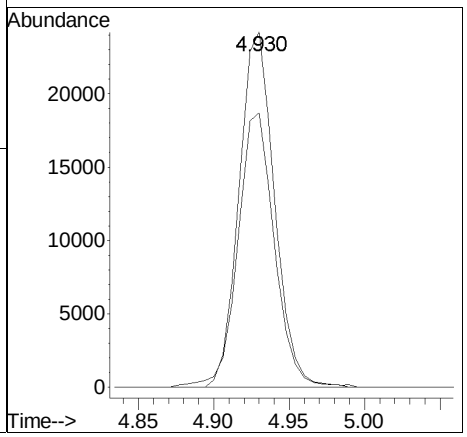


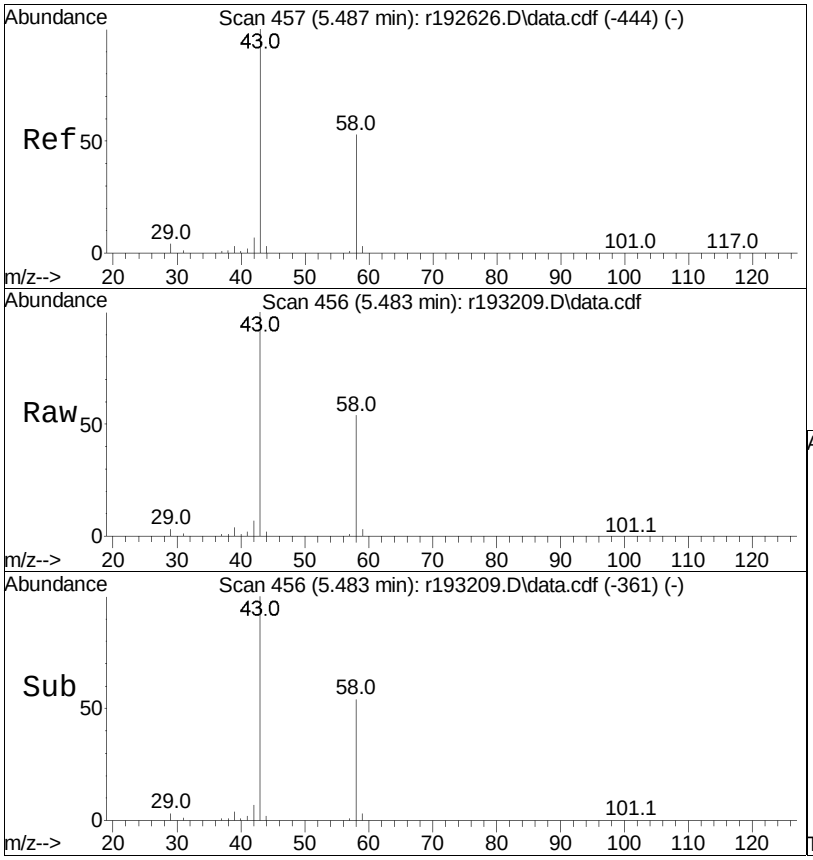



#15
ethanol
Concen: 4.23 ppbV
RT: 4.930 min Scan# 321
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 31 Resp: 39666

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 77.3 | 40.6 | 60.8# |

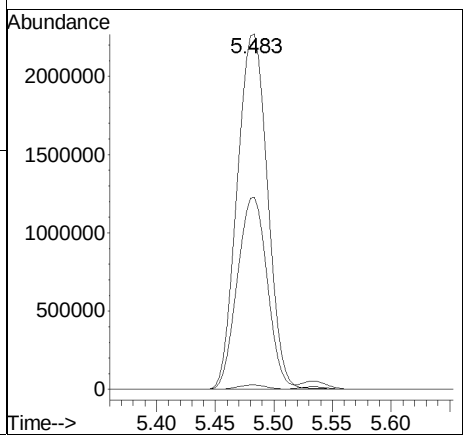


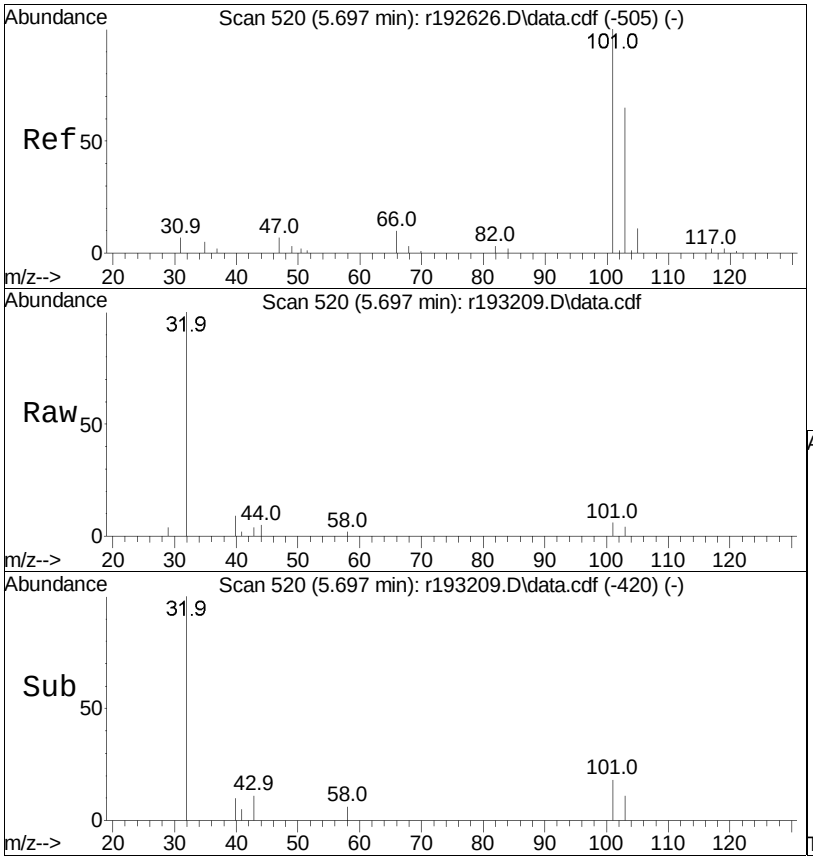



#19
acetone
Concen: 237.94 ppbV
RT: 5.483 min Scan# 456
Delta R.T. -0.013 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 43 Resp: 4095854

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 54.1 | 42.0 | 63.0 |
| 57 | 1.3 | 1.4 | 2.0# |

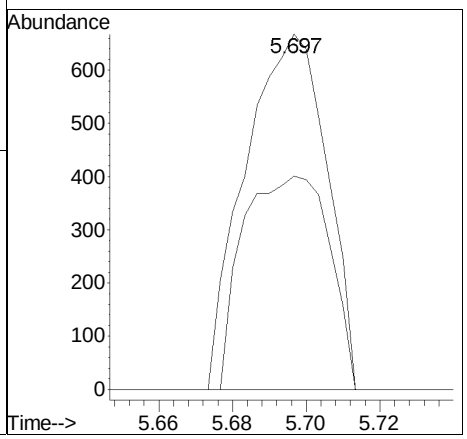


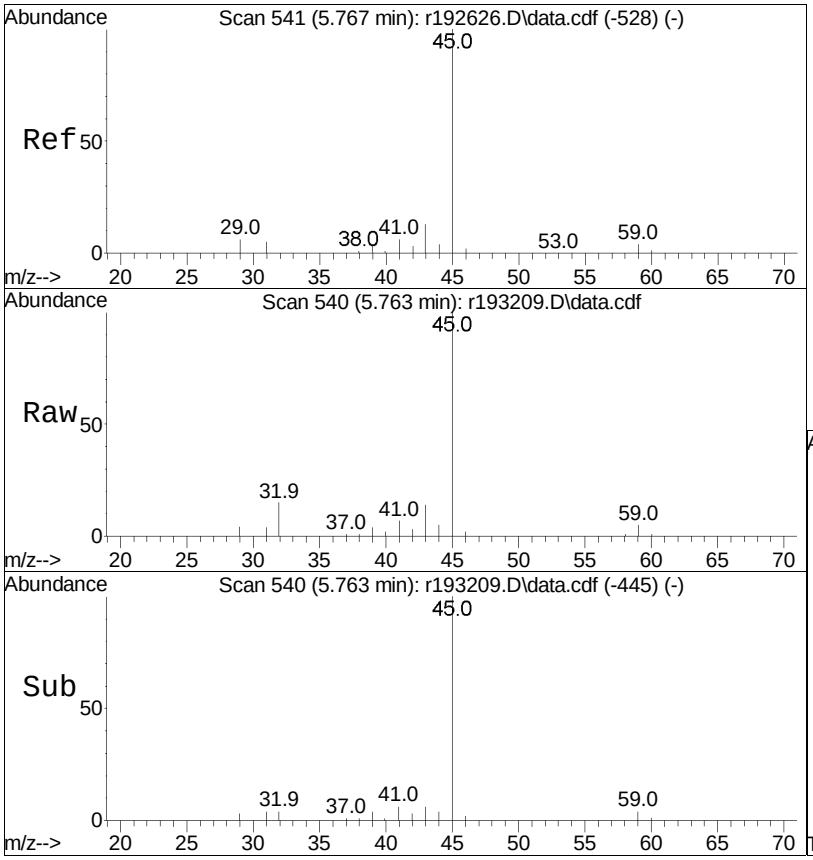



#21
trichlorofluoromethane
Concen: 0.05 ppbV
RT: 5.697 min Scan# 520
Delta R.T. 0.003 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion:101 Resp: 1026

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 60.0 | 51.4 | 77.2 |

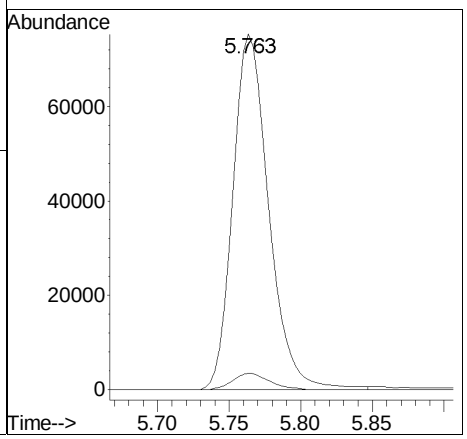


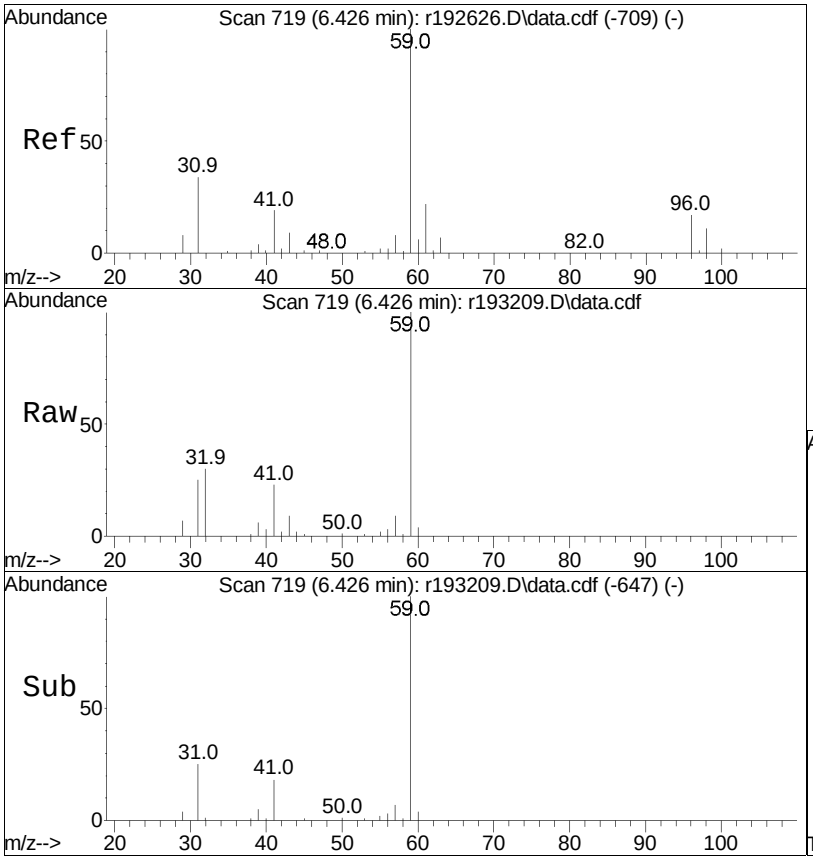



#22
isopropyl alcohol
Concen: 4.01 ppbV
RT: 5.763 min Scan# 540
Delta R.T. -0.013 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 45 Resp: 131205

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 4.6 | 3.7 | 5.5 |

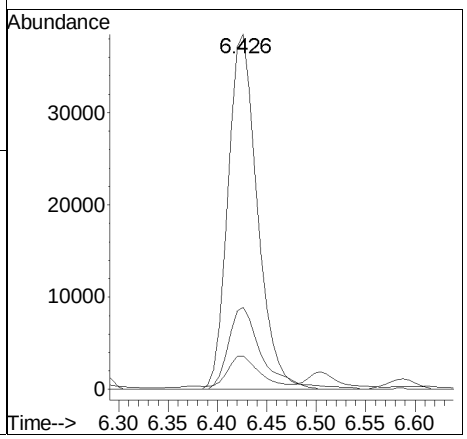


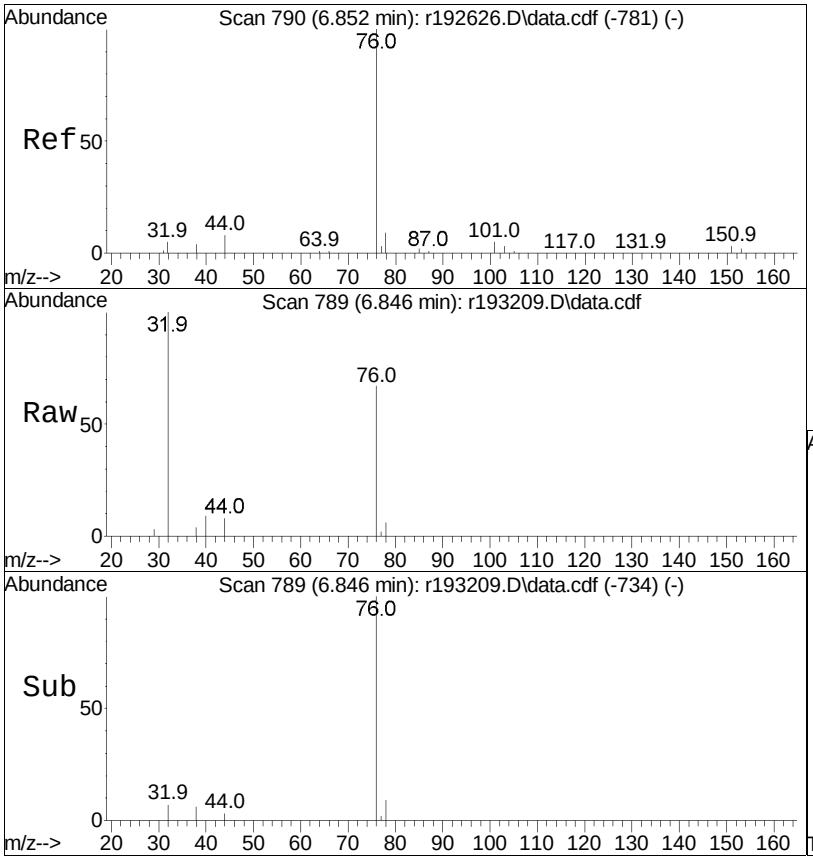



#27
tertiary butyl alcohol
Concen: 2.69 ppbV
RT: 6.426 min Scan# 719
Delta R.T. -0.024 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 59 Resp: 80562

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 23.1 | 18.8 | 28.2 |
| 43 | 9.4 | 9.8 | 14.8# |

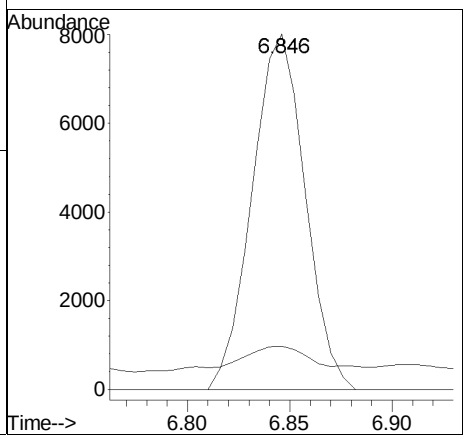


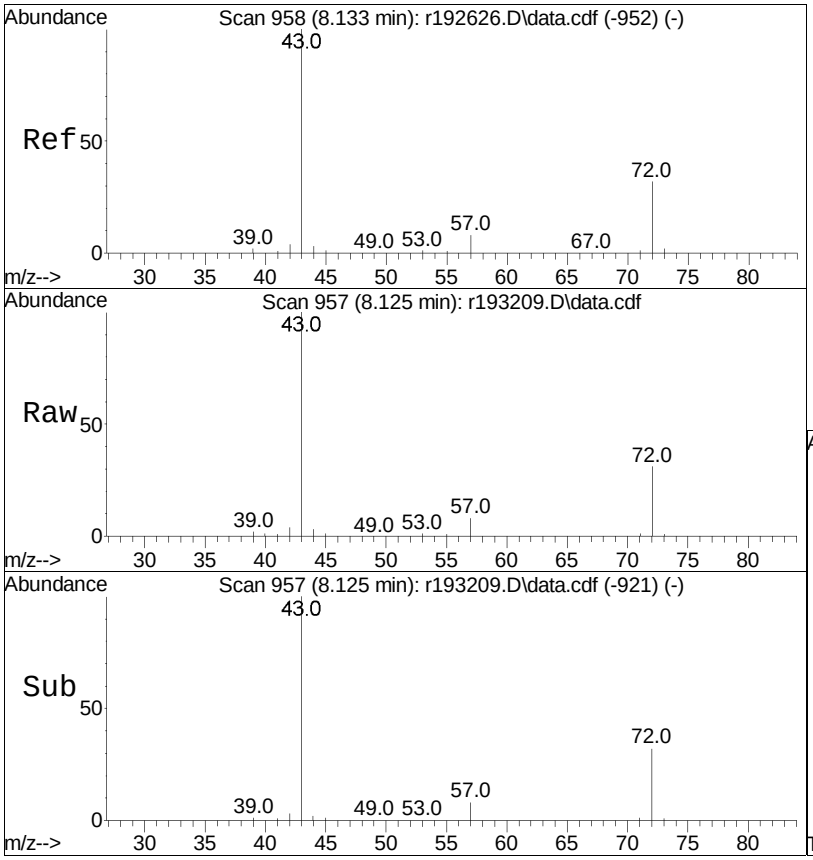



#30
carbon disulfide
Concen: 0.25 ppbV
RT: 6.846 min Scan# 789
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 76 Resp: 14408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 12.2 | 12.3 | 18.5# |

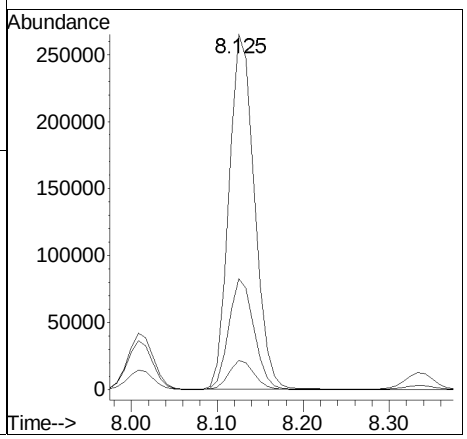


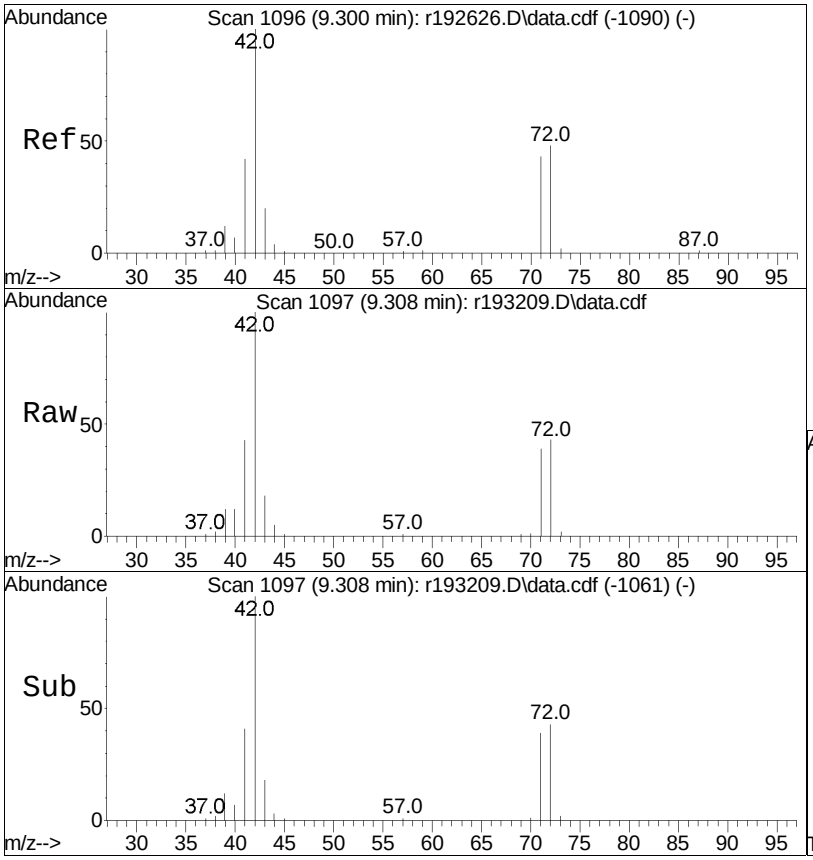



#36
2-butanone
Concen: 14.13 ppbV
RT: 8.125 min Scan# 957
Delta R.T. -0.033 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 43 Resp: 545208

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 31.1 | 27.7 | 41.5 |
| 57 | 8.2 | 6.3 | 9.5 |

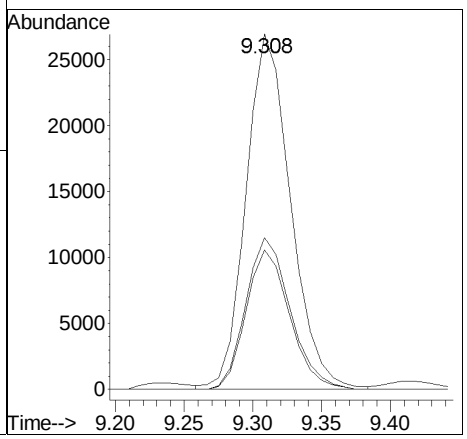


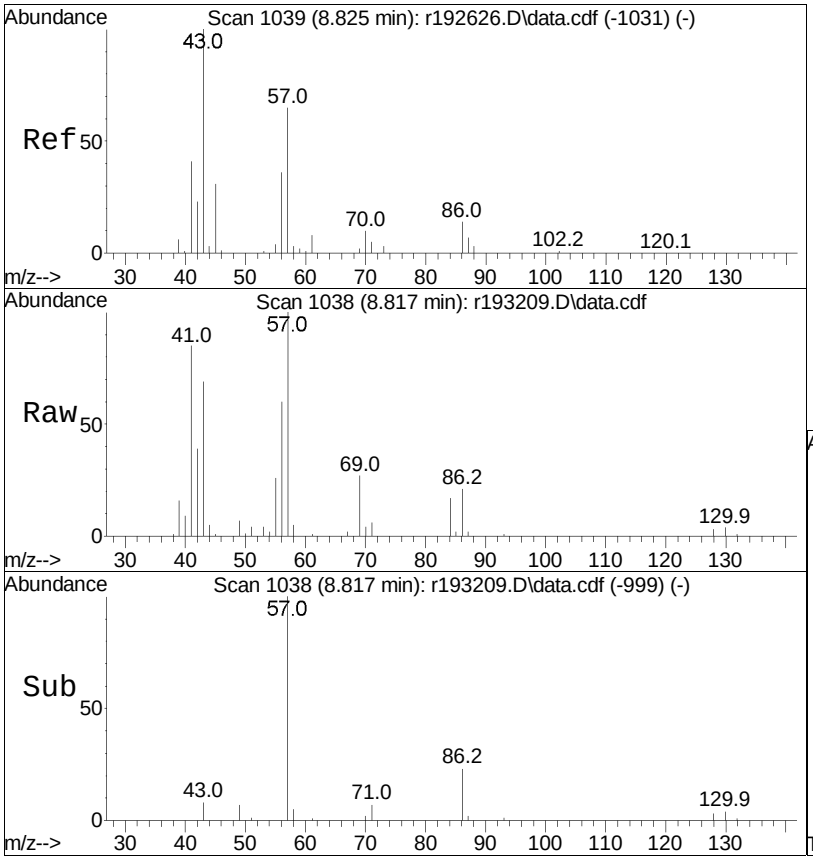



#40
Tetrahydrofuran
Concen: 2.35 ppbV
RT: 9.308 min Scan# 1097
Delta R.T. -0.033 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 42 Resp: 60823

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 39.3 | 32.5 | 48.7 |
| 72 | 42.7 | 33.7 | 50.5 |

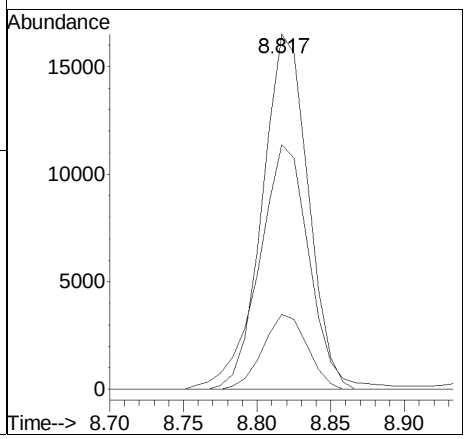


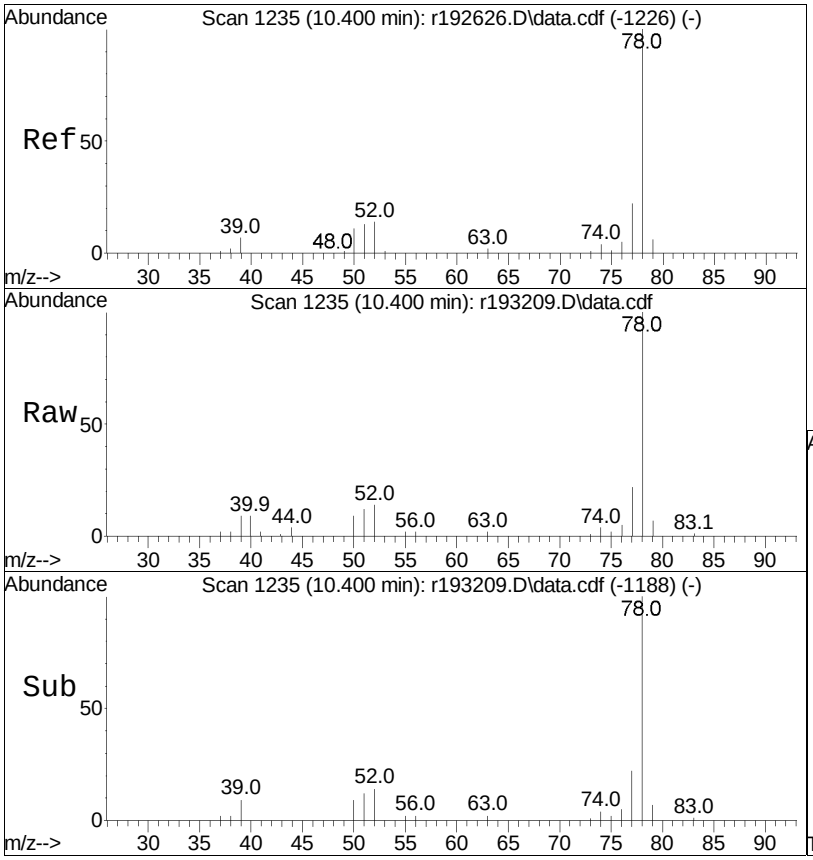



#44
hexane
Concen: 0.96 ppbV
RT: 8.817 min Scan# 1038
Delta R.T. -0.008 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 57 Resp: 35356

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 68.9 | 159.3 | 238.9# |
| 86 | 21.1 | 15.7 | 23.5 |

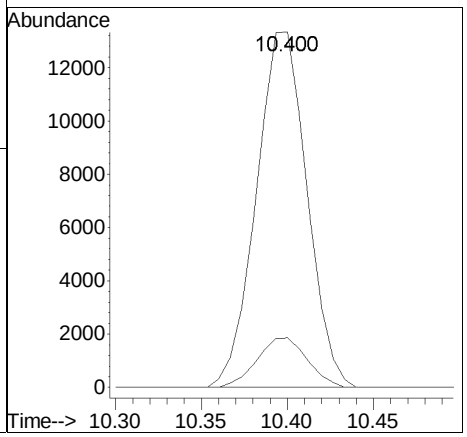


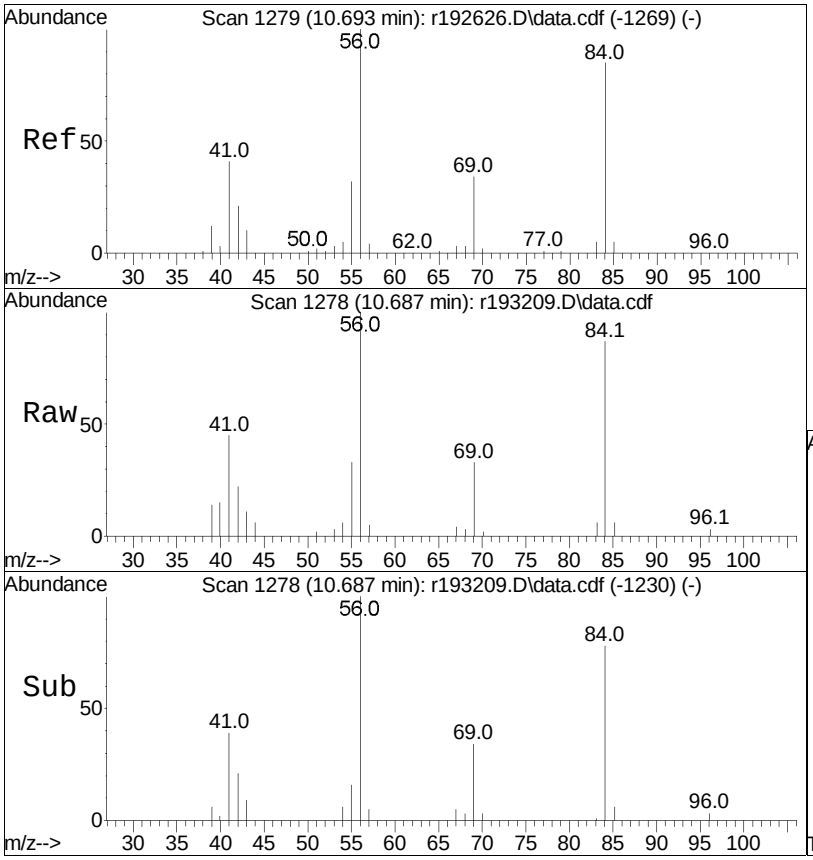



#50
benzene
Concen: 0.38 ppbV
RT: 10.400 min Scan# 1235
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 78 Resp: 27359

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 13.9 | 11.4 | 17.2 |

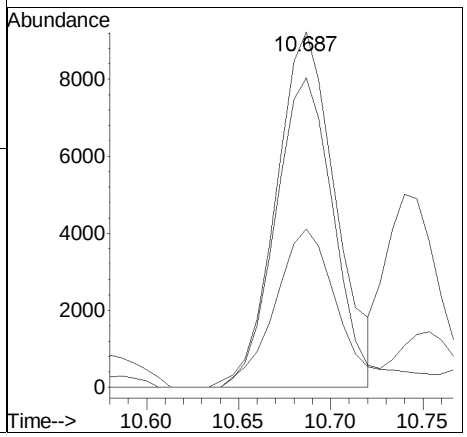


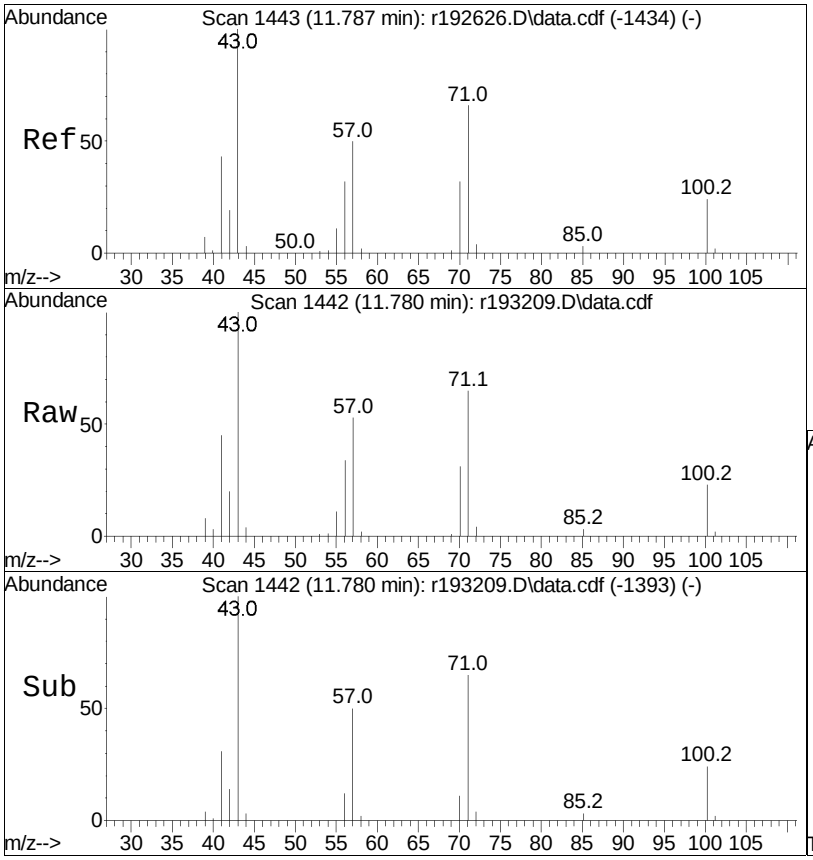



#53
cyclohexane
Concen: 0.51 ppbV
RT: 10.687 min Scan# 1278
Delta R.T. -0.007 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 56 Resp: 20718

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 87.1 | 69.8 | 104.6 |
| 41 | 44.6 | 32.1 | 48.1 |

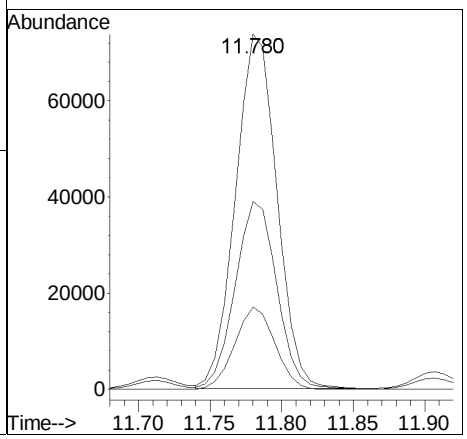


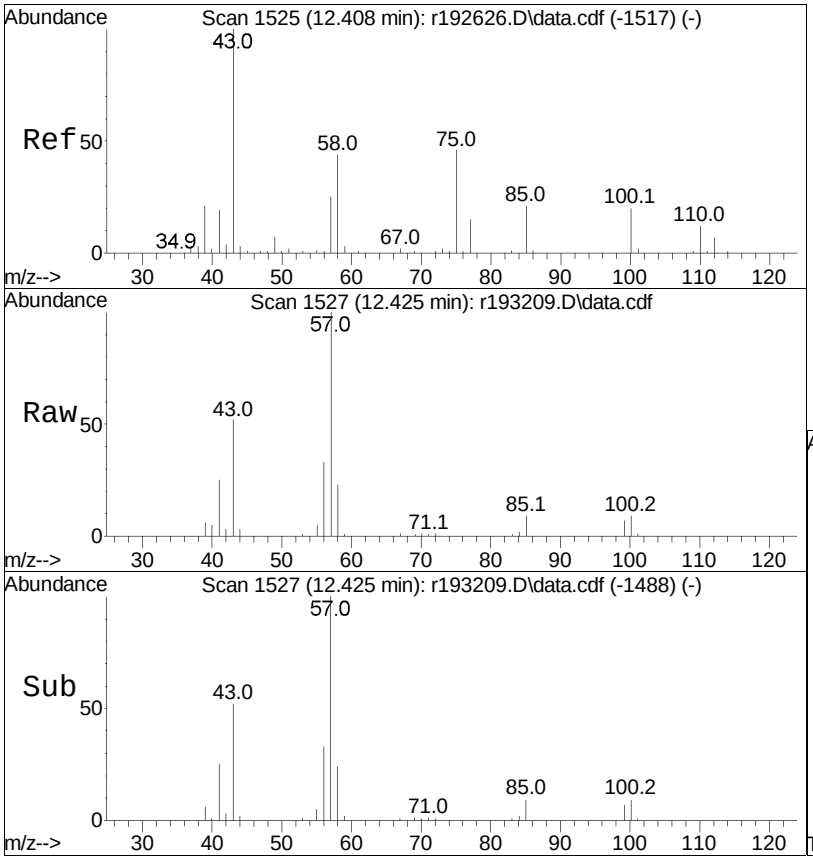



#62
heptane
Concen: 3.29 ppbV
RT: 11.780 min Scan# 1442
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 43 Resp: 147899

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 52.8 | 41.0 | 61.6 |
| 100 | 23.2 | 21.4 | 32.2 |

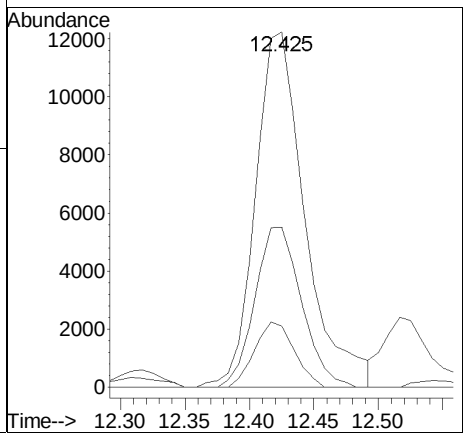


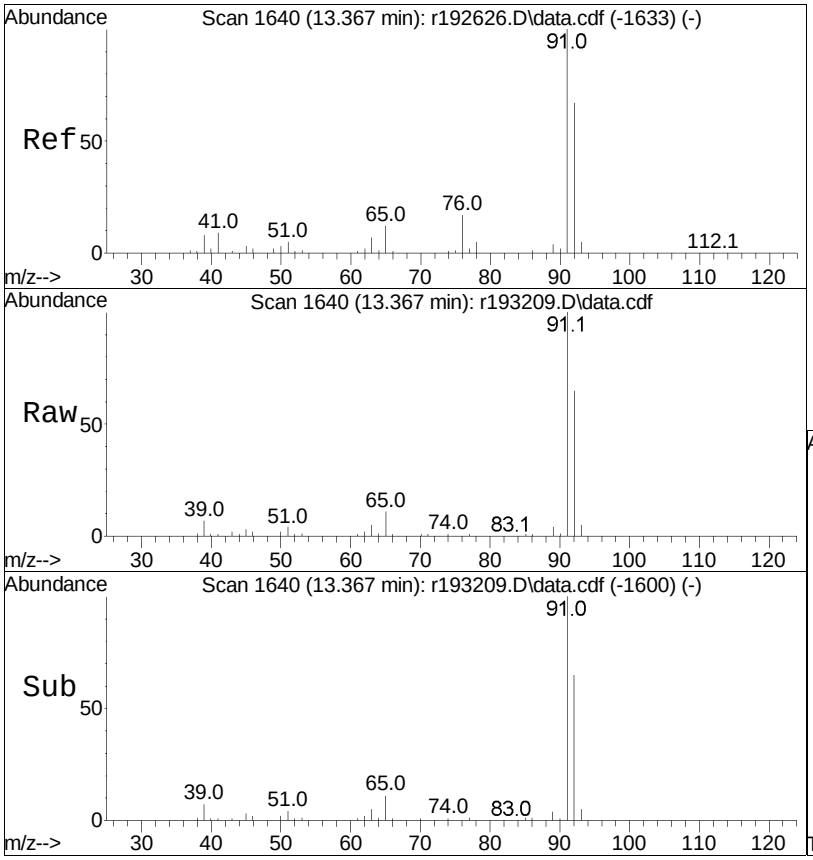



#64
4-methyl-2-pentanone
Concen: 0.68 ppbV
RT: 12.425 min Scan# 1527
Delta R.T. -0.008 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 43 Resp: 32766

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 45.1 | 32.9 | 49.3 |
| 100 | 17.3 | 15.4 | 23.2 |

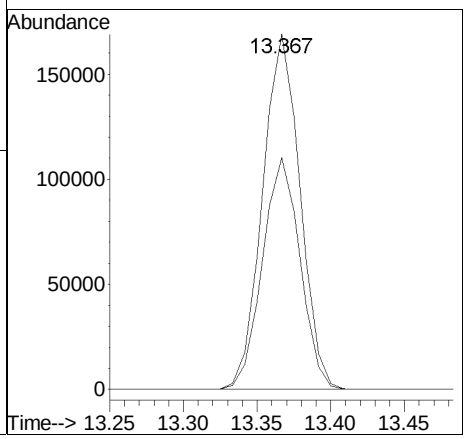


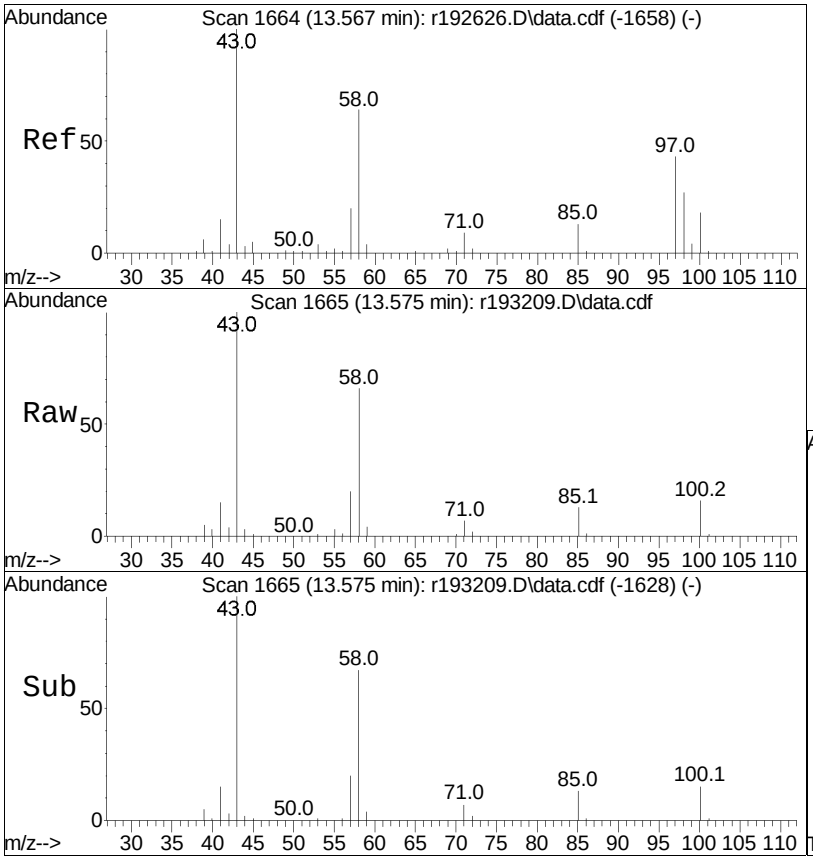



#68
toluene
Concen: 4.08 ppbV
RT: 13.367 min Scan# 1640
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 91 Resp: 298677

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.2 | 53.3 | 79.9 |

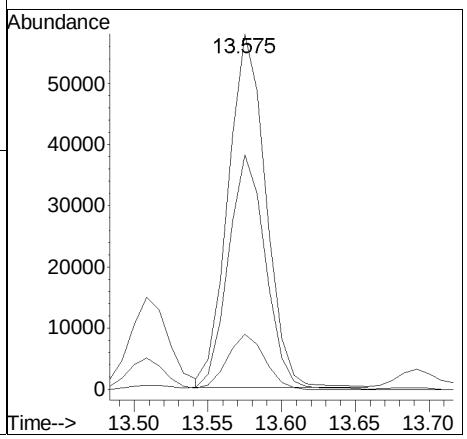


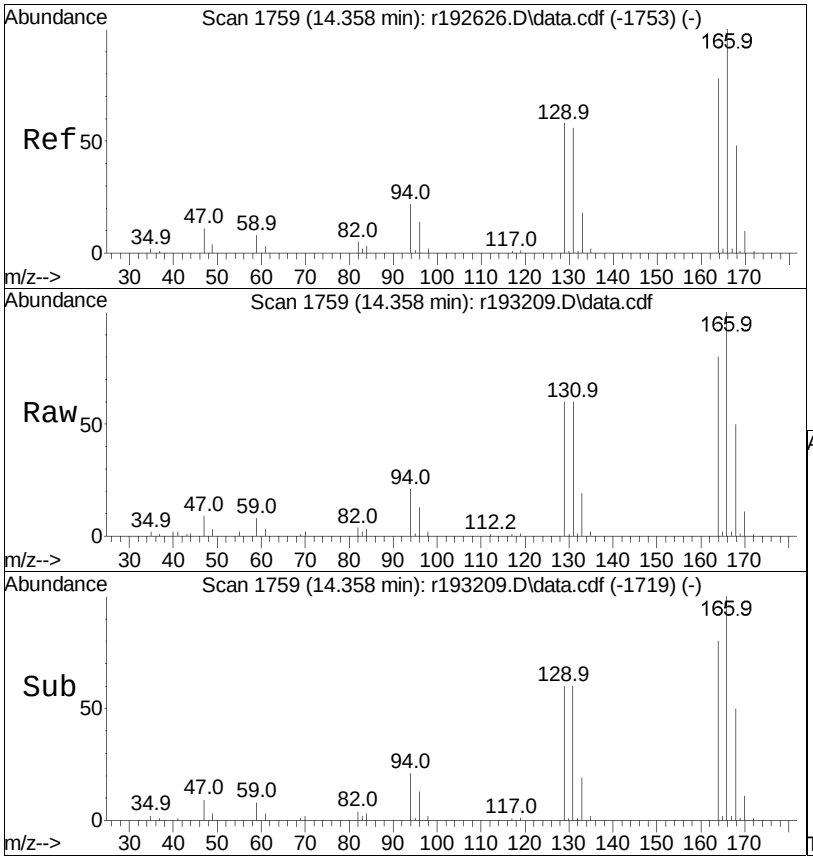



#72
2-hexanone
Concen: 2.42 ppbV
RT: 13.575 min Scan# 1665
Delta R.T. -0.025 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 43 Resp: 103089

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 66.1 | 62.6 | 94.0 |
| 100 | 15.5 | 26.5 | 39.7# |

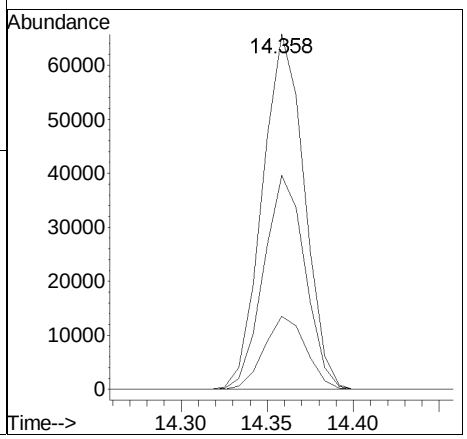


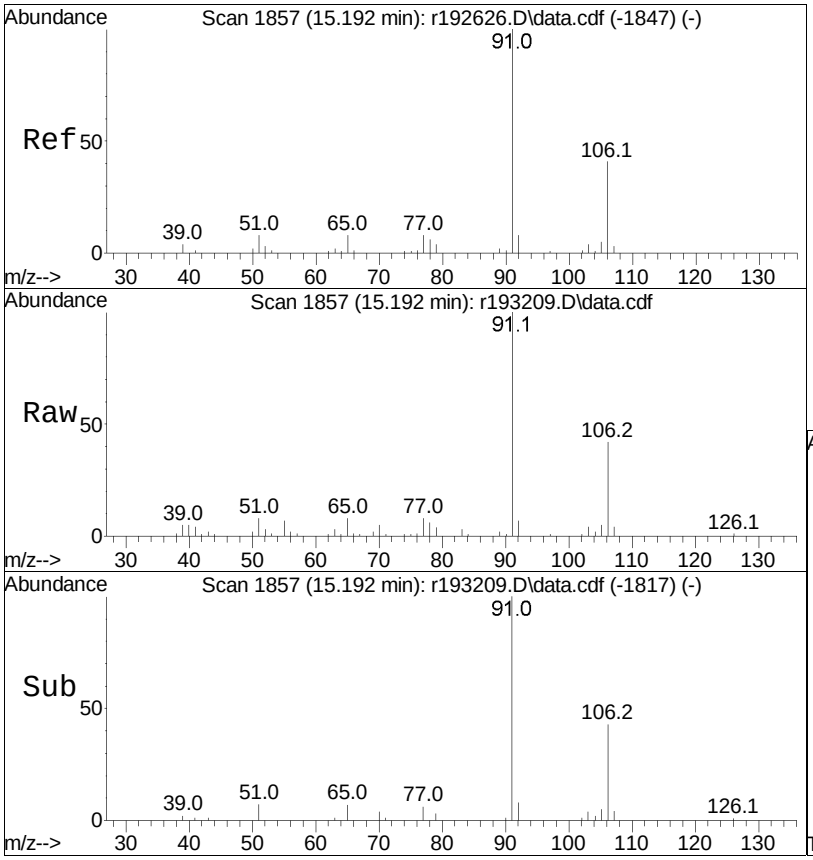



#78
tetrachloroethene
Concen: 3.47 ppbV
RT: 14.358 min Scan# 1759
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion:166 Resp: 111593

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 60.2 | 46.4 | 69.6 |
| 94 | 20.6 | 18.5 | 27.7 |

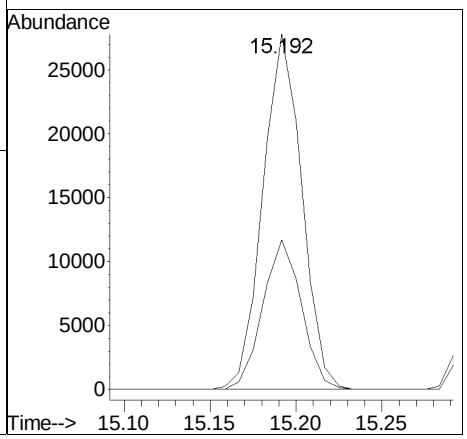


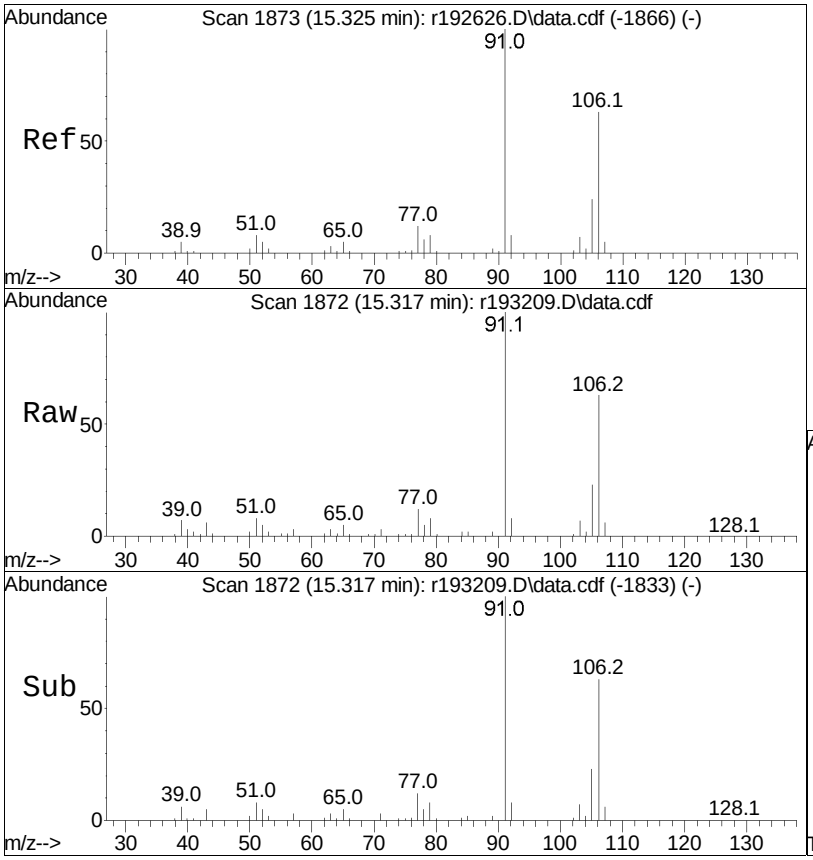



#81
ethylbenzene
Concen: 0.50 ppbV
RT: 15.192 min Scan# 1857
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 91 Resp: 43794

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 42.1 | 32.9 | 49.3 |

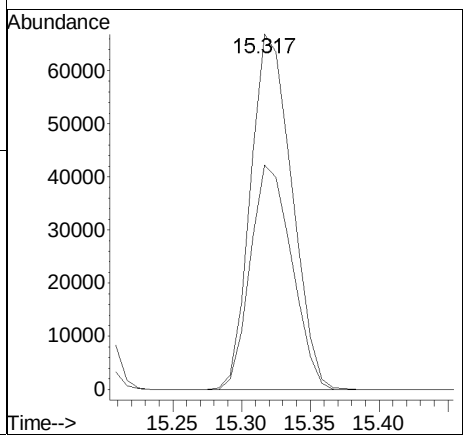


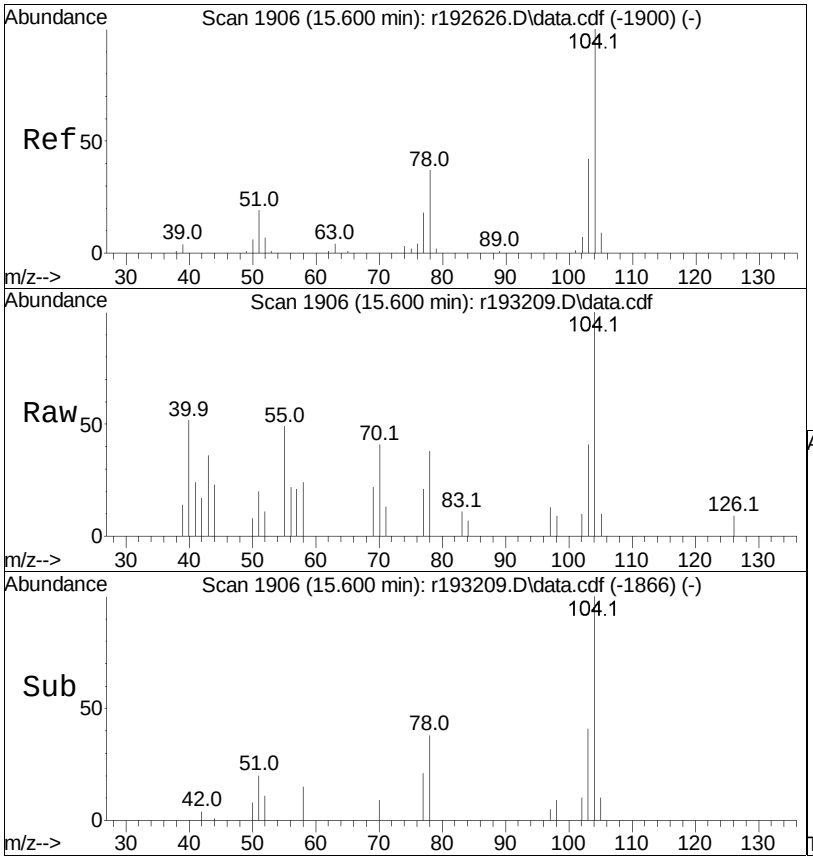



#83
m+p-xylene
Concen: 2.01 ppbV
RT: 15.317 min Scan# 1872
Delta R.T. -0.008 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 91 Resp: 139441

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 63.1 | 51.0 | 76.4 |

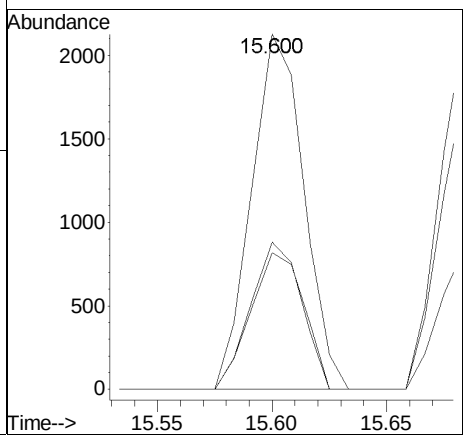


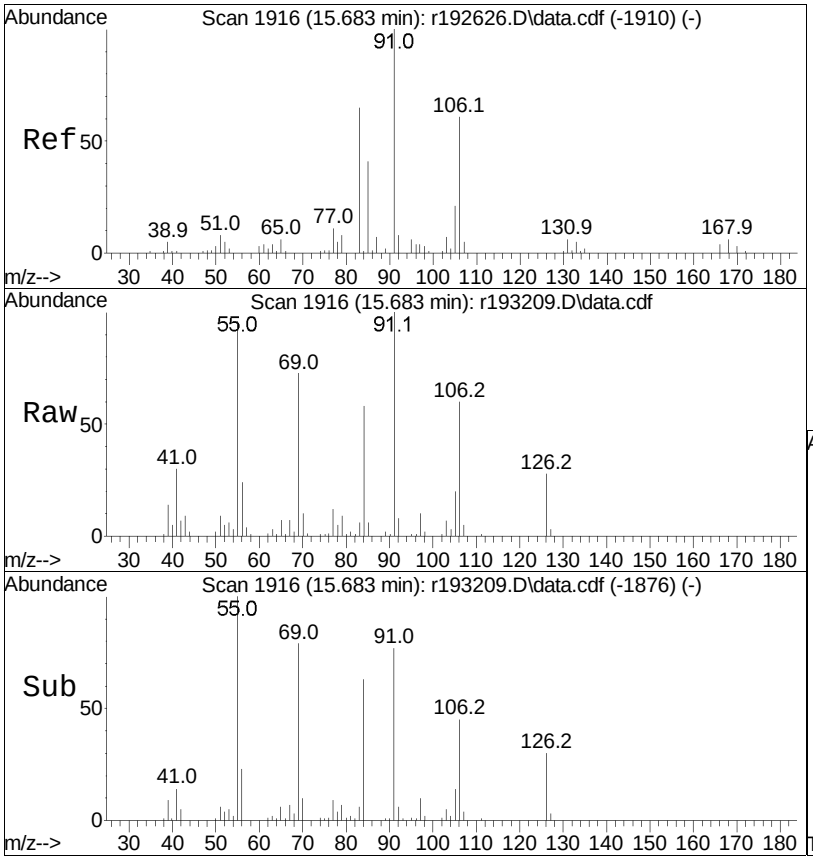



#85
styrene
Concen: 0.05 ppbV
RT: 15.600 min Scan# 1906
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion:104 Resp: 3372

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 41.4 | 33.4 | 50.0 |
| 78 | 38.5 | 30.6 | 46.0 |

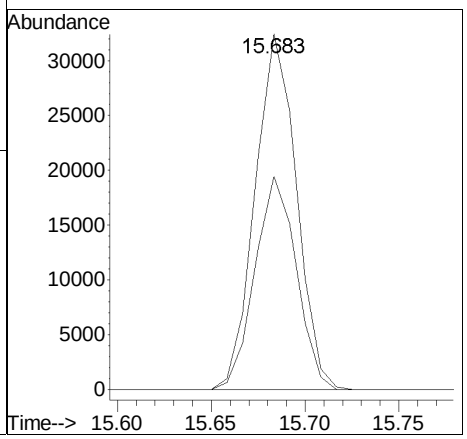


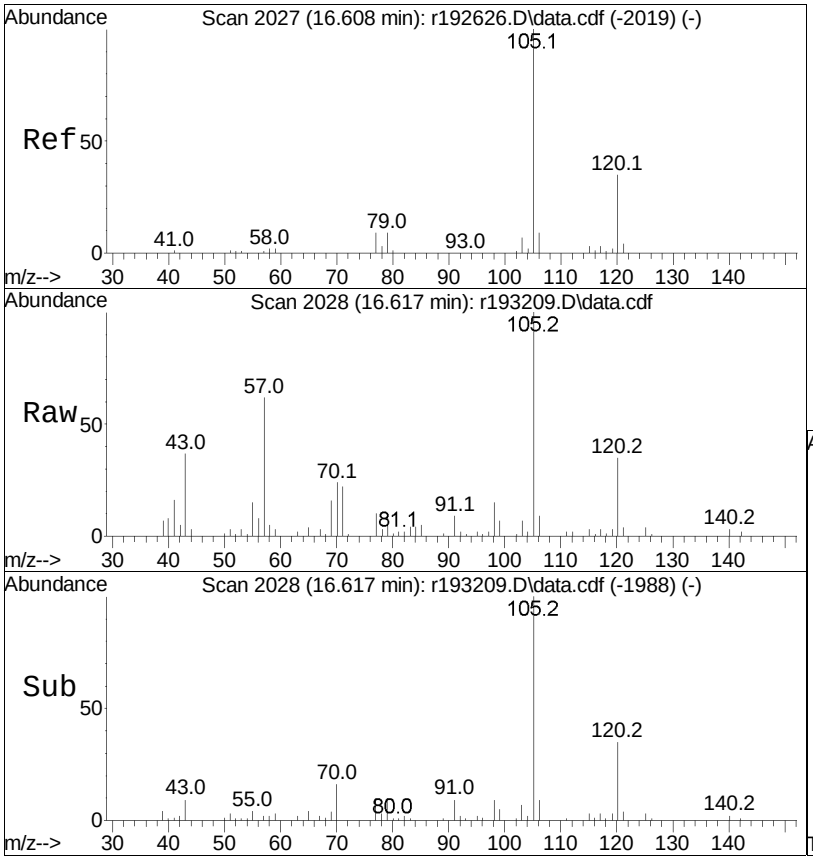



#87
o-xylene
Concen: 0.73 ppbV
RT: 15.683 min Scan# 1916
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion: 91 Resp: 49703

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 60.0 | 47.8 | 71.8 |

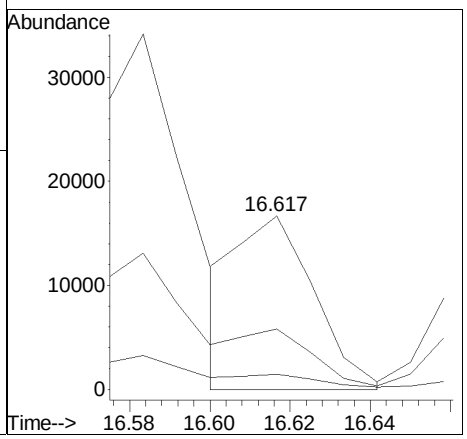


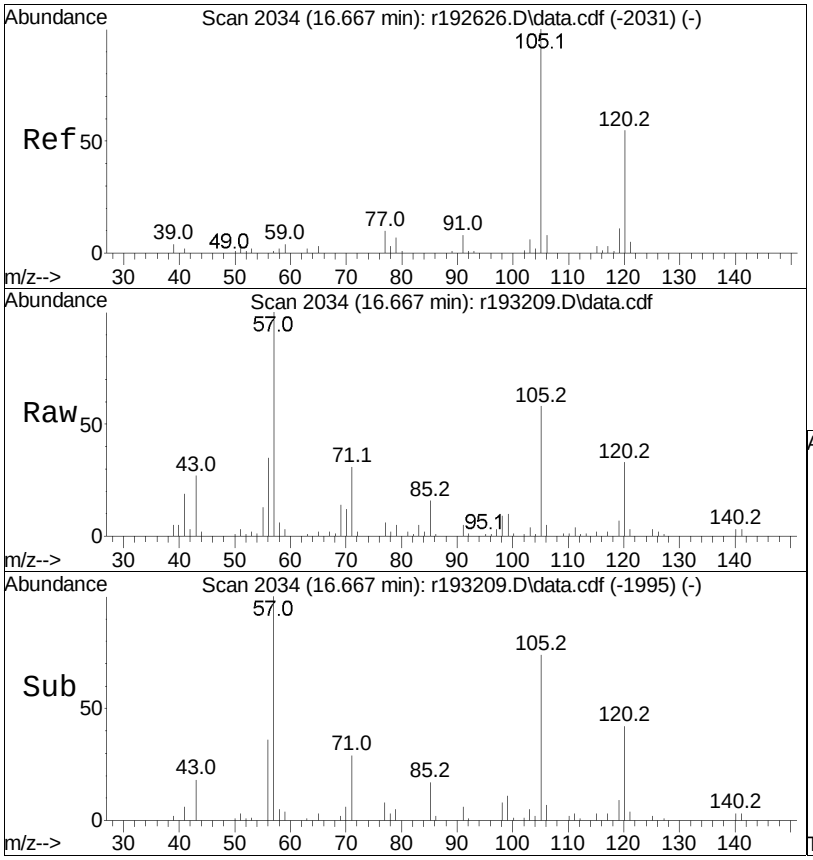



#96
4-ethyl toluene
Concen: 0.20 ppbV m
RT: 16.617 min Scan# 2028
Delta R.T. 0.000 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion:105 Resp: 22527

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 34.9 | 27.2 | 40.8 |
| 91 | 8.7 | 7.0 | 10.4 |

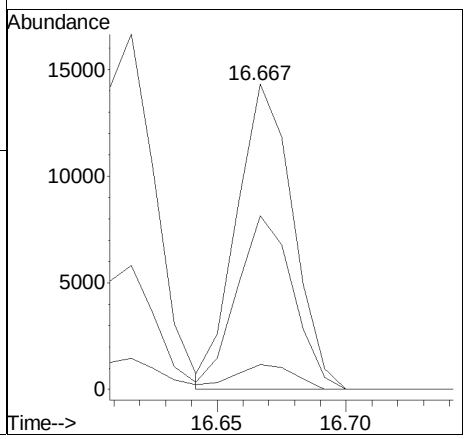


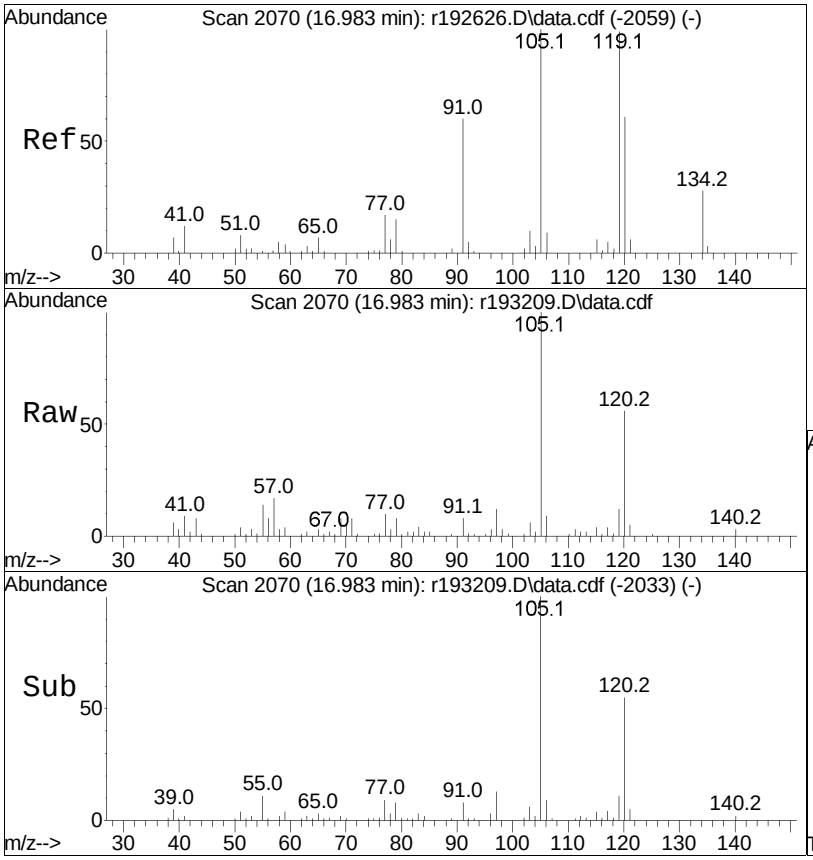



#97
1,3,5-trimethylbenzene
Concen: 0.24 ppbV
RT: 16.667 min Scan# 2034
Delta R.T. -0.008 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion:105 Resp: 21733

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 56.9 | 42.6 | 64.0 |
| 91 | 8.1 | 6.6 | 9.8 |

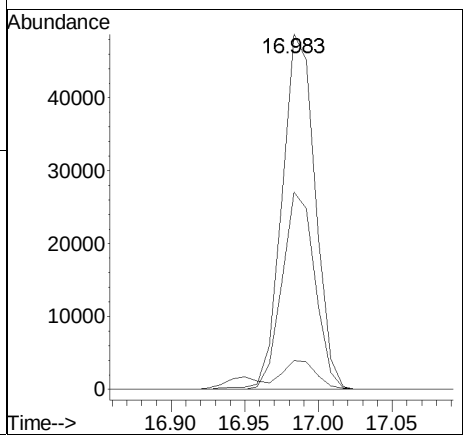





#99
1,2,4-trimethylbenzene
Concen: 0.89 ppbV
RT: 16.983 min Scan# 2070
Delta R.T. -0.008 min
Lab File: r193209.D
Acq: 21 Mar 2020 2:28 AM

Tgt Ion:105 Resp: 76194

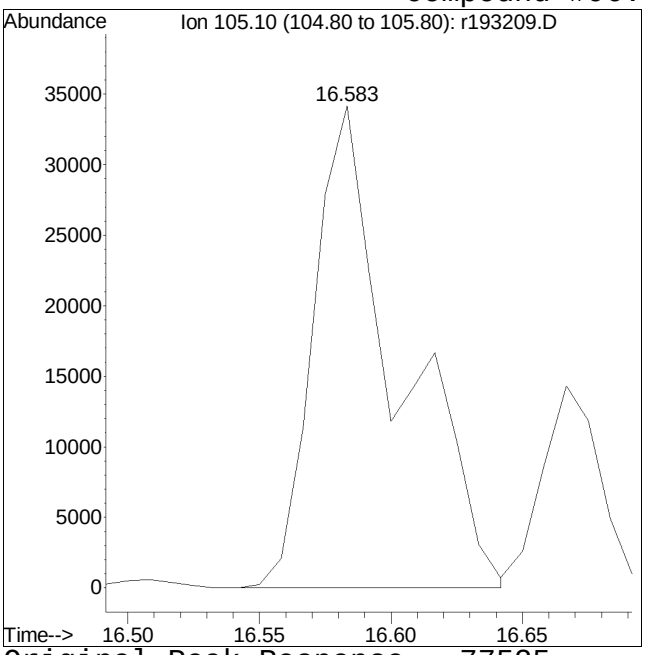
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 55.5 | 49.2 | 73.8 |
| 91 | 8.2 | 49.9 | 74.9# |



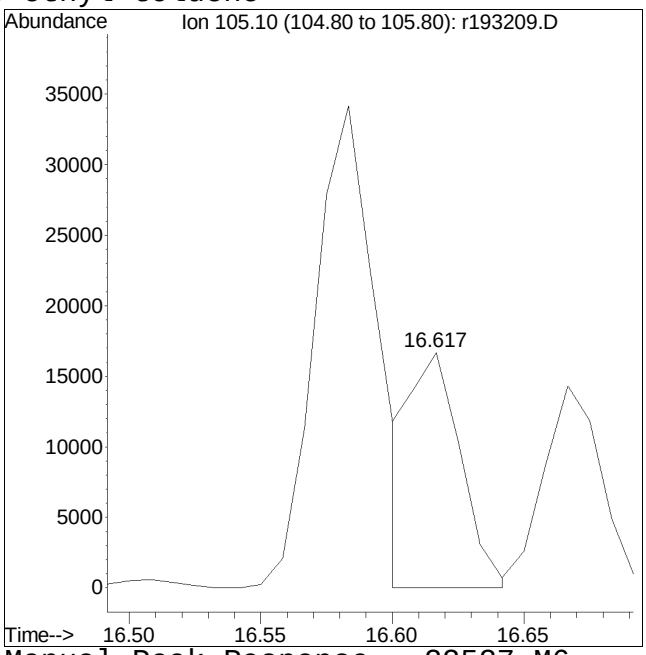
Manual Integration Report

Data Path : O:\Forensics\Data\Airlab19QMethod : TFS19_200224.M
Data File : r193209.D Operator : AIRLAB19:EW
Date Inj'd : 3/21/2020 0:2: 8 Instrument :
Sample : L2011723-02D,3,75,250 Quant Date : 3/21/2020 7:57 am

Compound #96: 4-ethyl toluene




Original Peak Response = 77525




Manual Peak Response = 22527 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193210.D
Acq On : 21 Mar 2020 3:04 AM
Operator : AIRLAB19:EW
Sample : L2011723-03D,3,40,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:43:23 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.775 | 49 | 296033 | 10.000 | ppbV | 0.00 |
| Standard Area = 288364 | | | Recovery = 102.66% | | | |
| 43) 1,4-difluorobenzene | 10.747 | 114 | 913325 | 10.000 | ppbV | 0.00 |
| Standard Area = 940727 | | | Recovery = 97.09% | | | |
| 67) chlorobenzene-D5 | 14.875 | 54 | 112218 | 10.000 | ppbV | 0.00 |
| Standard Area = 108860 | | | Recovery = 103.08% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 3.556 | 85 | 1115 | 0.067 | ppbV | 97 |
| 6) chloromethane | 0.000 | | 0 | N.D. | d | |
| 7) Freon-114 | 0.000 | | 0 | N.D. | | |
| 9) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 0.000 | | 0 | N.D. | d | |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 4.936 | 31 | 12046 | 1.393 | ppbV # | 61 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.483 | 43 | 1088002 | 68.442 | ppbV # | 99 |
| 21) trichlorofluoromethane | 5.690 | | 0 | N.D. | | |
| 22) isopropyl alcohol | 5.770 | 45 | 31526 | 1.044 | ppbV | 99 |
| 26) 1,1-dichloroethene | 0.000 | | 0 | N.D. | | |
| 27) tertiary butyl alcohol | 6.438 | 59 | 21253 | 0.768 | ppbV | 96 |
| 28) methylene chloride | 6.540 | | 0 | N.D. | | |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | |
| 30) carbon disulfide | 6.840 | | 0 | N.D. | | |
| 31) Freon 113 | 6.822 | | 0 | N.D. | | |
| 32) trans-1,2-dichloroethene | 7.533 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | |
| 34) MTBE | 0.000 | | 0 | N.D. | | |
| 36) 2-butanone | 8.133 | 43 | 159608 | 4.479 | ppbV | 95 |
| 37) cis-1,2-dichloroethene | 8.600 | 61 | 191731 | 9.607 | ppbV | 96 |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | | |
| 39) chloroform | 8.908 | 83 | 41339 | 1.670 | ppbV | 93 |
| 40) Tetrahydrofuran | 9.325 | 42 | 17746 | 0.741 | ppbV | 98 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | | |

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193210.D
Acq On : 21 Mar 2020 3:04 AM
Operator : AIRLAB19:EW
Sample : L2011723-03D,3,40,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:43:23 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 44) hexane | 8.817 | 57 | 6528 | 0.195 | ppbV # | 26 |
| 48) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | | |
| 50) benzene | 10.400 | 78 | 10952 | 0.166 | ppbV | 99 |
| 52) carbon tetrachloride | 0.000 | | 0 | N.D. | | |
| 53) cyclohexane | 10.687 | 56 | 1939 | 0.053 | ppbV # | 92 |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | d | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 59) trichloroethene | 11.487 | 130 | 50792 | 2.158 | ppbV | 96 |
| 60) 2,2,4-trimethylpentane | 0.000 | | 0 | N.D. | d | |
| 62) heptane | 11.780 | 43 | 16465 | 0.403 | ppbV | 97 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 0.000 | | 0 | N.D. | d | |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | | |
| 68) toluene | 13.367 | 91 | 107408 | 1.572 | ppbV | 99 |
| 72) 2-hexanone | 13.583 | 43 | 56738 | 1.429 | ppbV # | 79 |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 78) tetrachloroethene | 14.358 | 166 | 1536096 | 51.163 | ppbV | 97 |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | |
| 81) ethylbenzene | 15.192 | 91 | 37803 | 0.461 | ppbV | 100 |
| 83) m+p-xylene | 15.317 | 91 | 98318 | 1.522 | ppbV | 98 |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 15.600 | | 0 | N.D. | | |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | |
| 87) o-xylene | 15.683 | 91 | 32862 | 0.518 | ppbV | 97 |
| 96) 4-ethyl toluene | 16.617 | 105 | 11228M6 | 0.105 | ppbV | |
| 97) 1,3,5-trimethylbenzene | 16.667 | 105 | 8187 | 0.095 | ppbV # | 92 |
| 99) 1,2,4-trimethylbenzene | 16.983 | 105 | 23054 | 0.289 | ppbV # | 60 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 103) 1,4-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 17.433 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 0.000 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

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

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193210.D
Acq On : 21 Mar 2020 3:04 AM
Operator : AIRLAB19:EW
Sample : L2011723-03D,3,40,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:43:23 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

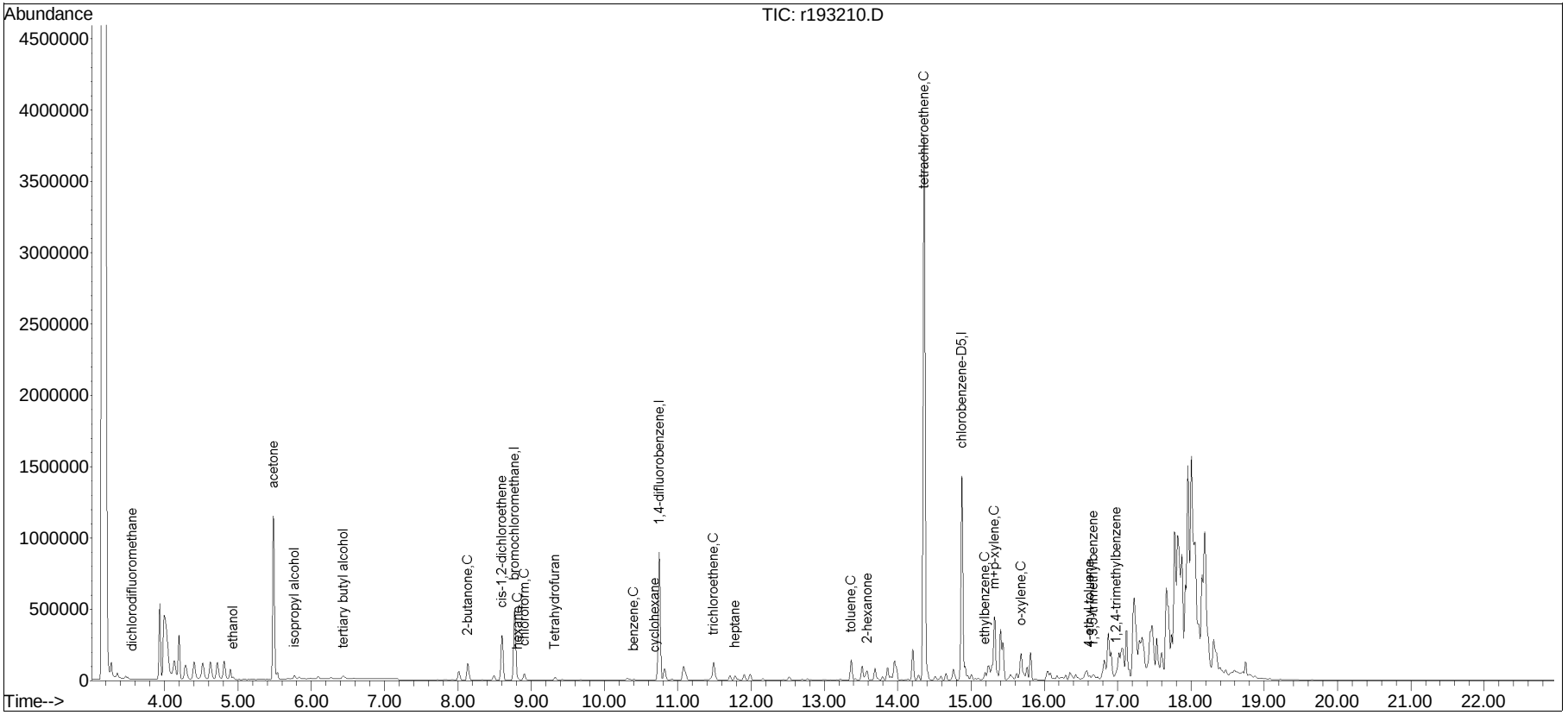
CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

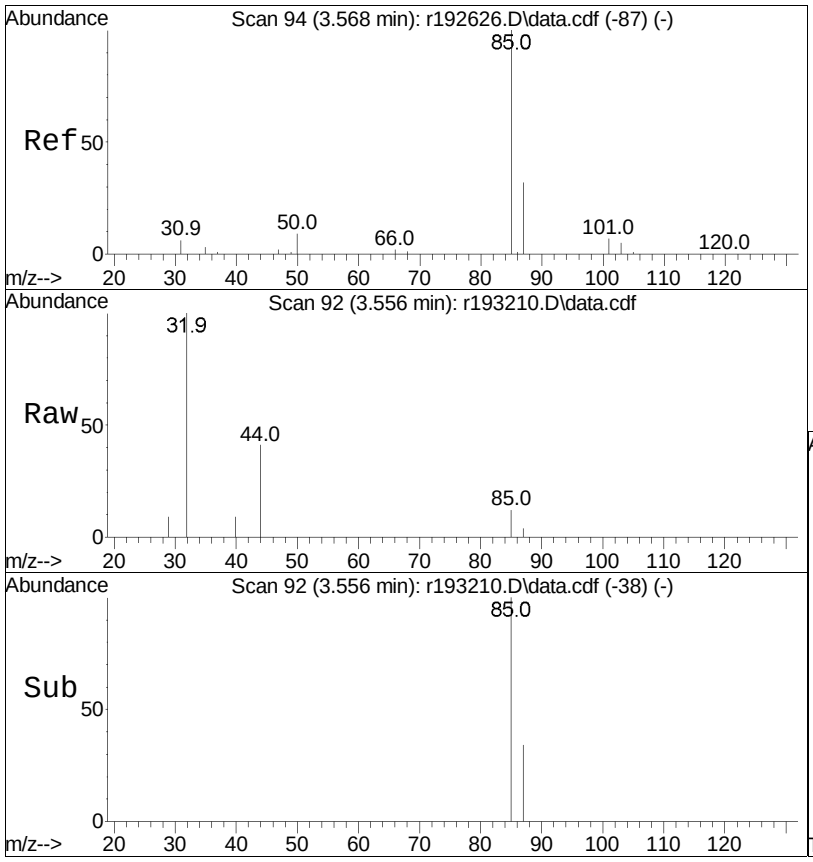
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : TO15-NY - .s\Data\Airlab19\2020\03\200320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193210.D
Acq On : 21 Mar 2020 3:04 AM
Operator : AIRLAB19:EW
Sample : L2011723-03D,3,40,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:43:23 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

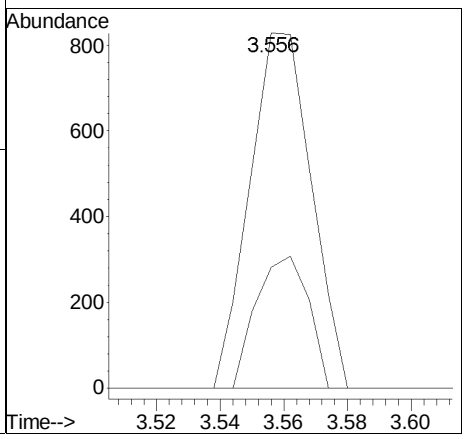


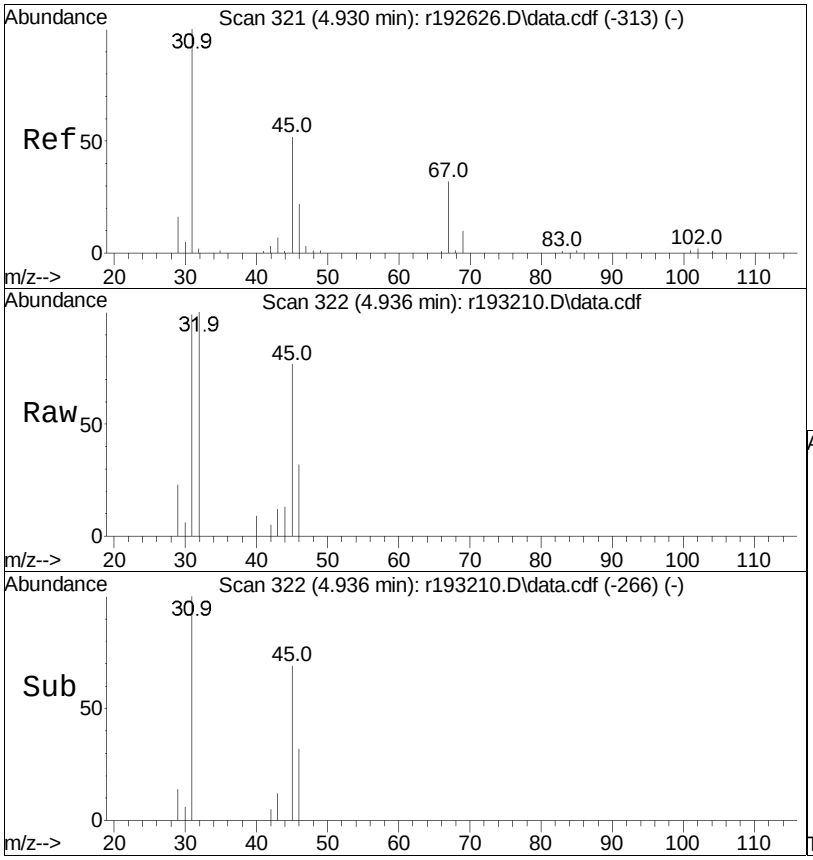



#5
dichlorodifluoromethane
Concen: 0.07 ppbV
RT: 3.556 min Scan# 92
Delta R.T. -0.006 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 85 Resp: 1115

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 34.1 | 25.9 | 38.9 |

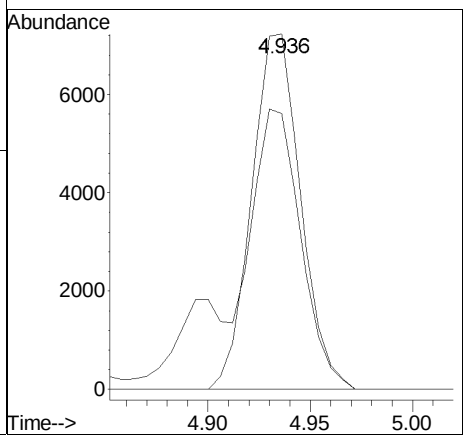


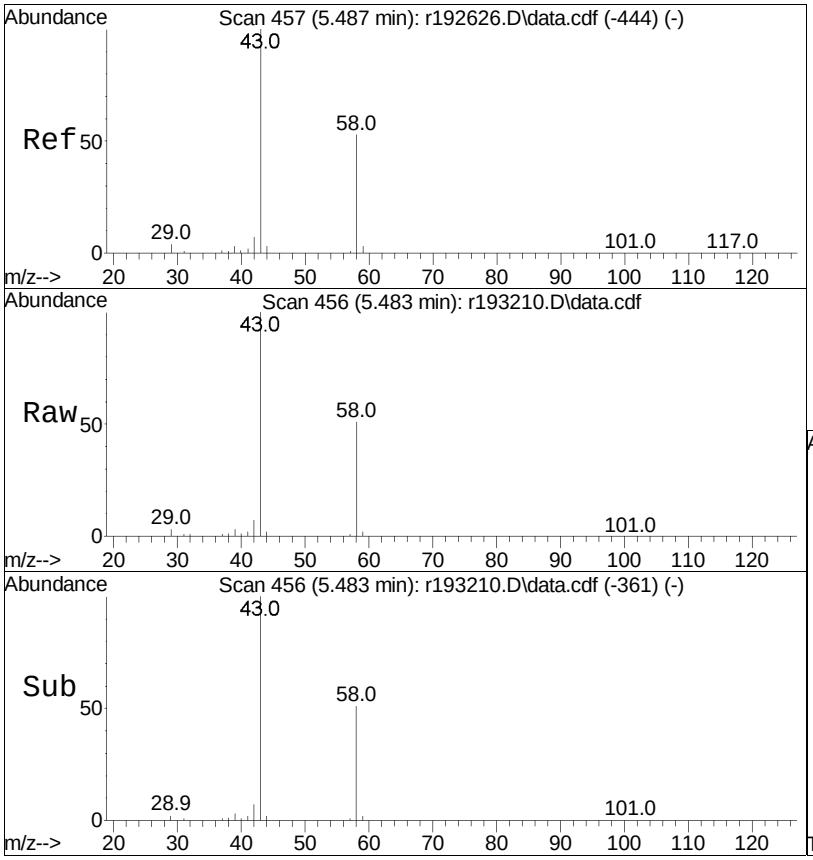



#15
ethanol
Concen: 1.39 ppbV
RT: 4.936 min Scan# 322
Delta R.T. 0.006 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 31 Resp: 12046

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 77.6 | 40.6 | 60.8# |

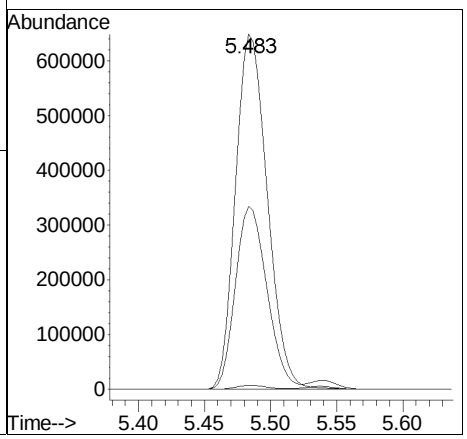


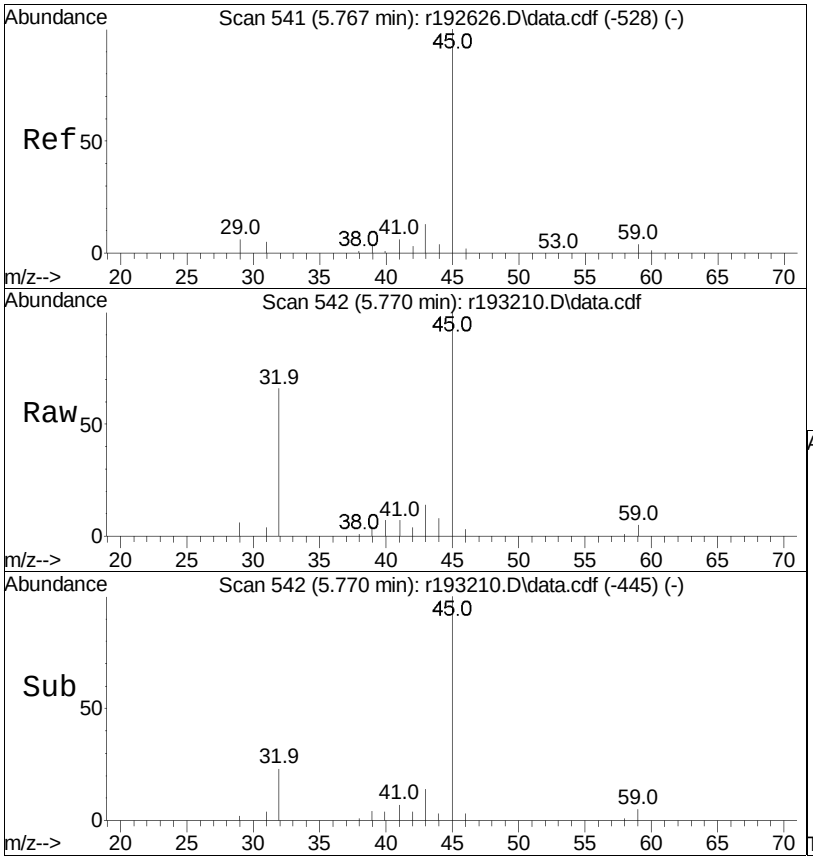



#19
acetone
Concen: 68.44 ppbV
RT: 5.483 min Scan# 456
Delta R.T. -0.013 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 43 Resp: 1088002

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 51.5 | 42.0 | 63.0 |
| 57 | 1.1 | 1.4 | 2.0# |

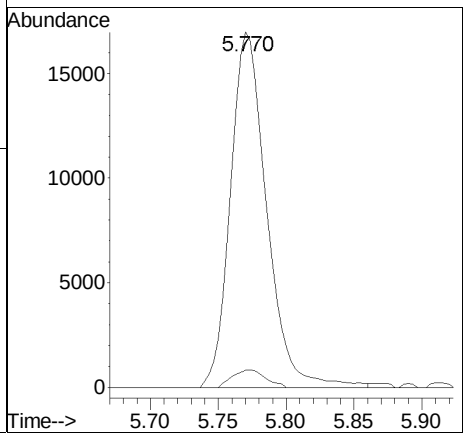


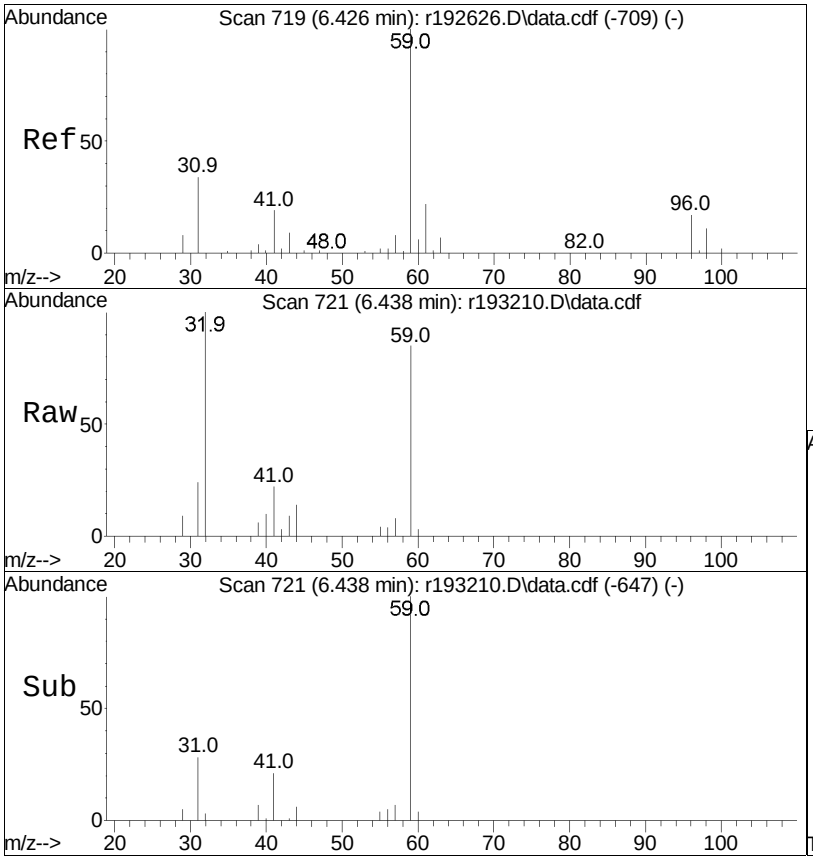



#22
isopropyl alcohol
Concen: 1.04 ppbV
RT: 5.770 min Scan# 542
Delta R.T. -0.007 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 45 Resp: 31526

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 4.8 | 3.7 | 5.5 |

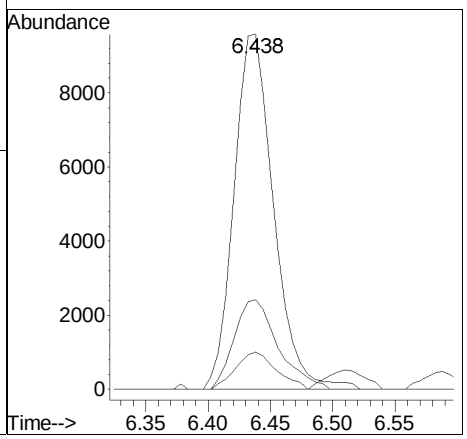


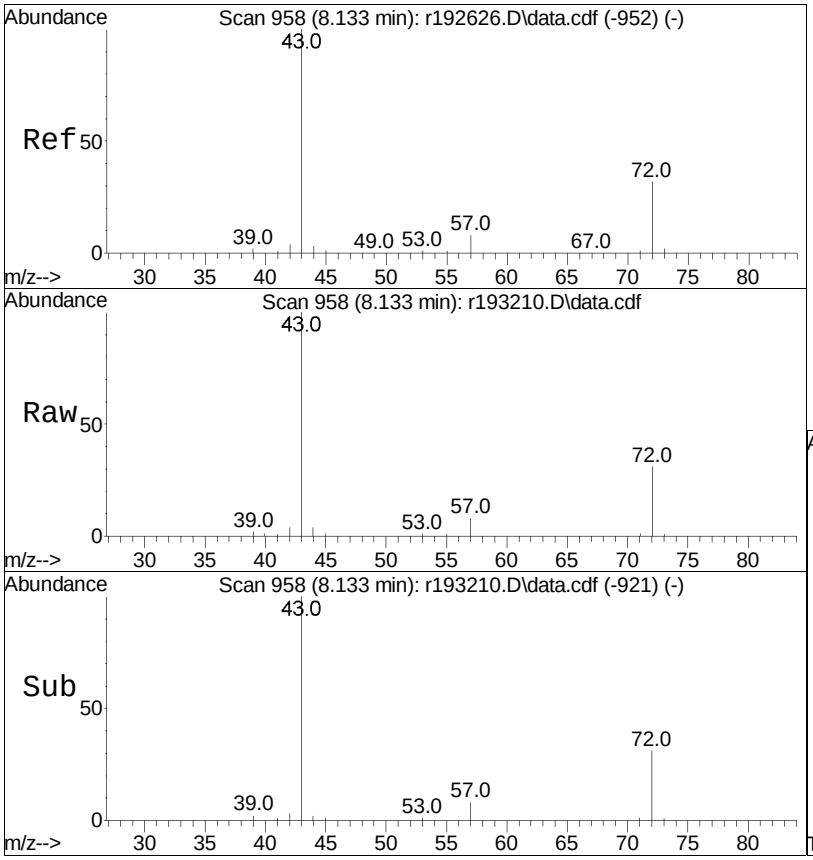



#27
tertiary butyl alcohol
Concen: 0.77 ppbV
RT: 6.438 min Scan# 721
Delta R.T. -0.012 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 59 Resp: 21253

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 25.3 | 18.8 | 28.2 |
| 43 | 10.5 | 9.8 | 14.8 |

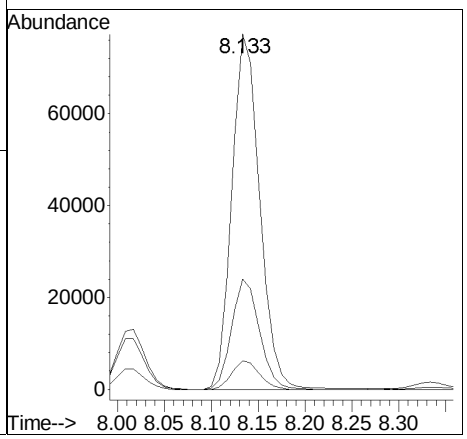


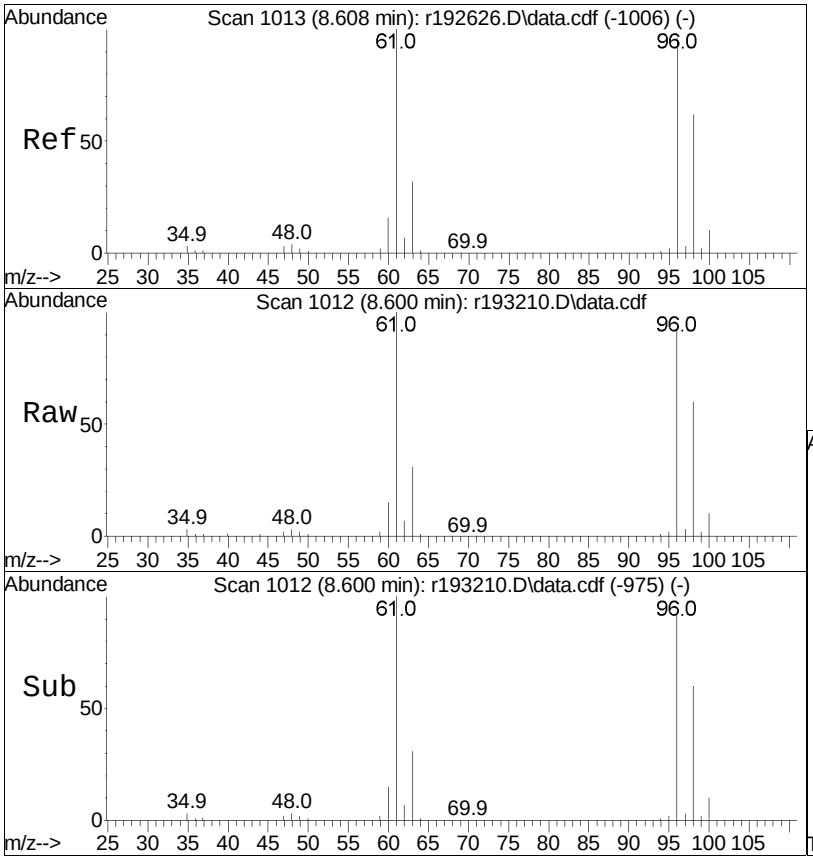



#36
2-butanone
Concen: 4.48 ppbV
RT: 8.133 min Scan# 958
Delta R.T. -0.025 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 43 Resp: 159608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 31.1 | 27.7 | 41.5 |
| 57 | 8.1 | 6.3 | 9.5 |

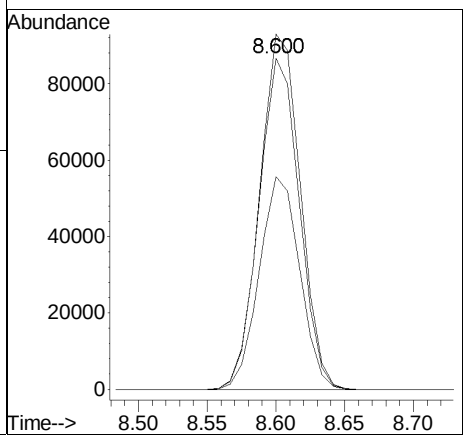


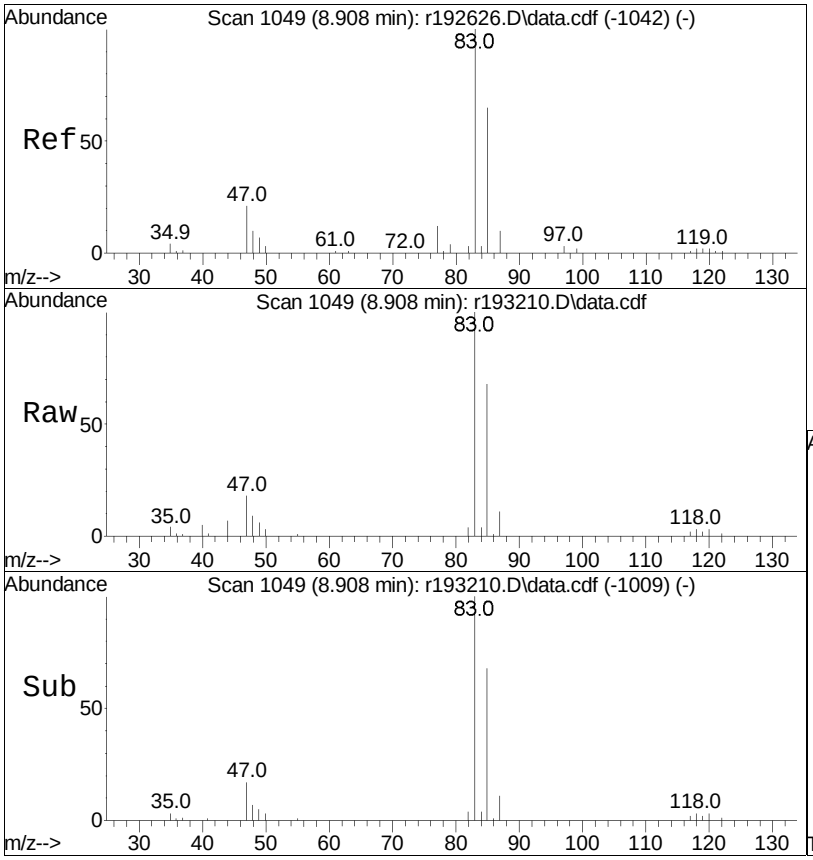



#37
cis-1,2-dichloroethene
Concen: 9.61 ppbV
RT: 8.600 min Scan# 1012
Delta R.T. -0.008 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 61 Resp: 191731

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 93.2 | 77.4 | 116.0 |
| 98 | 59.9 | 51.0 | 76.6 |

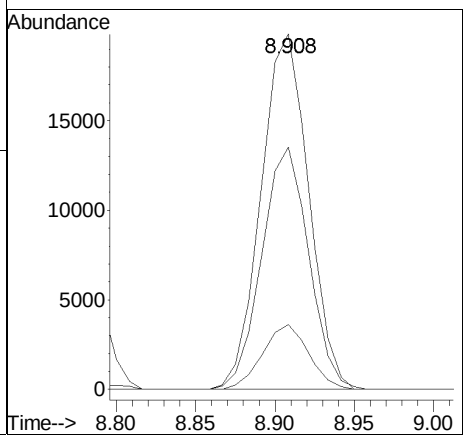


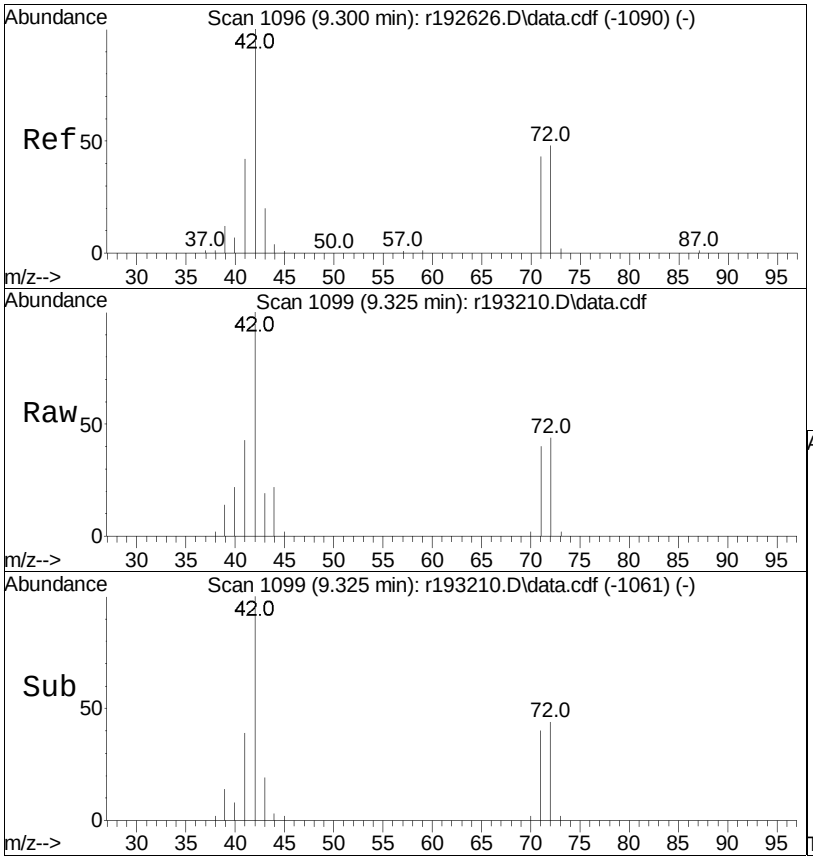



#39
chloroform
Concen: 1.67 ppbV
RT: 8.908 min Scan# 1049
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 83 Resp: 41339

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 68.2 | 50.1 | 75.1 |
| 47 | 18.2 | 17.6 | 26.4 |

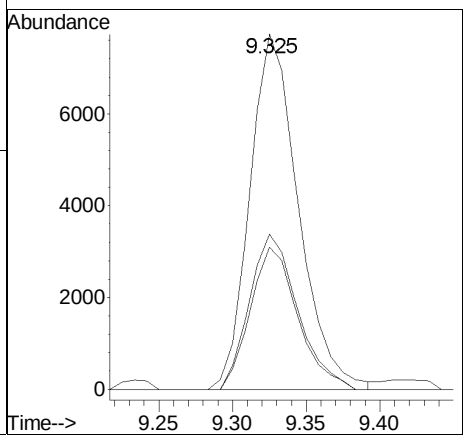


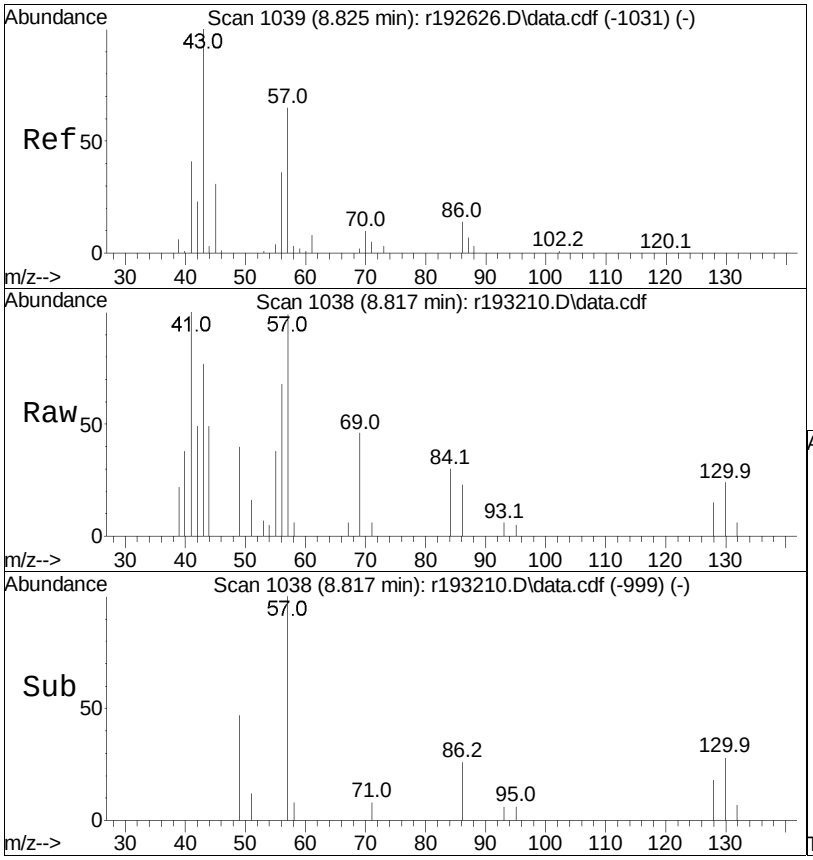



#40
Tetrahydrofuran
Concen: 0.74 ppbV
RT: 9.325 min Scan# 1099
Delta R.T. -0.017 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 42 Resp: 17746

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 40.0 | 32.5 | 48.7 |
| 72 | 43.7 | 33.7 | 50.5 |

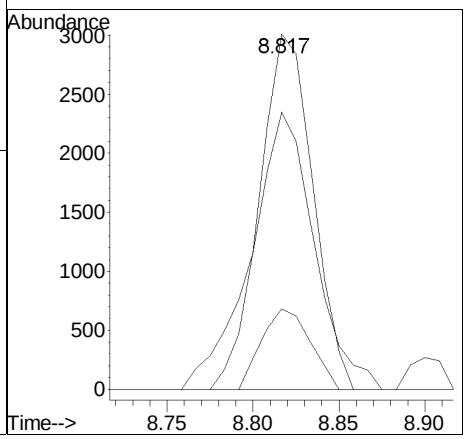


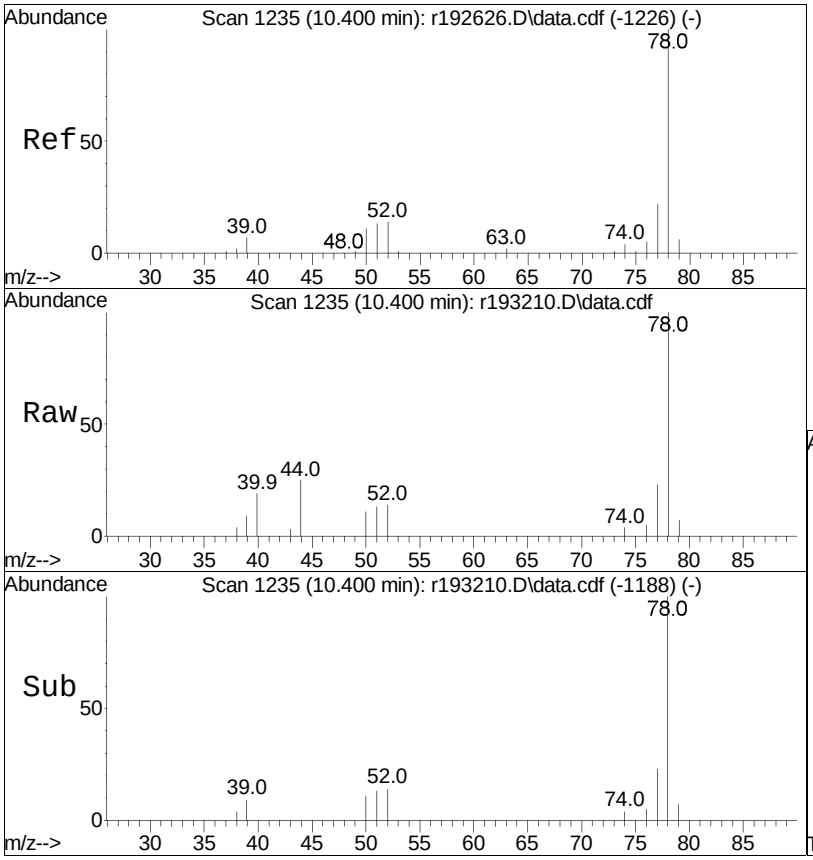



#44
hexane
Concen: 0.20 ppbV
RT: 8.817 min Scan# 1038
Delta R.T. -0.008 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 57 Resp: 6528

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 78.0 | 159.3 | 238.9# |
| 86 | 22.7 | 15.7 | 23.5 |

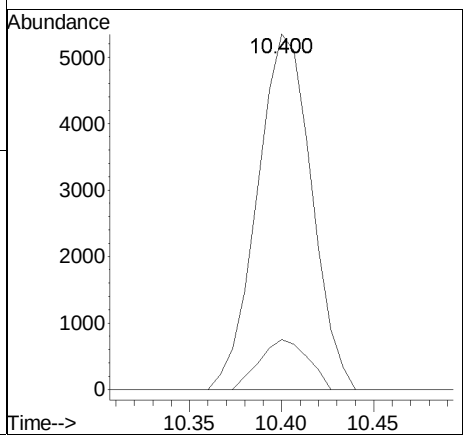


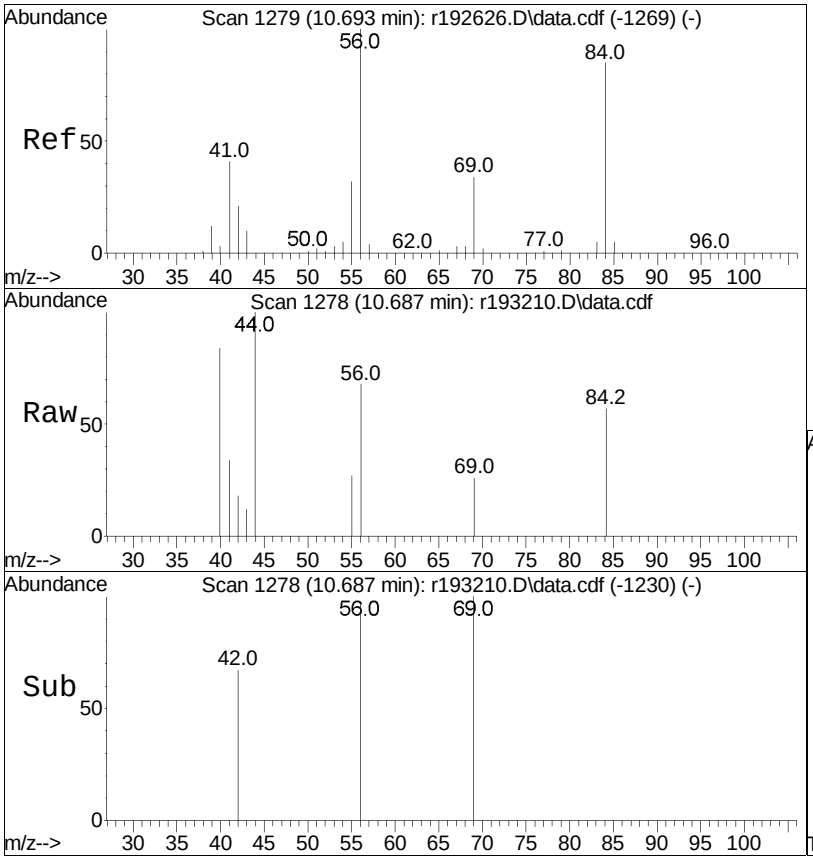



#50
benzene
Concen: 0.17 ppbV
RT: 10.400 min Scan# 1235
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 78 Resp: 10952

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 14.0 | 11.4 | 17.2 |

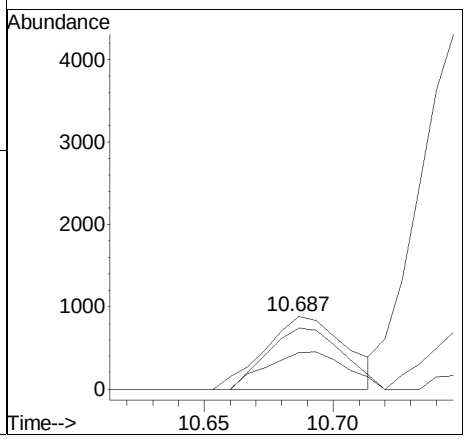


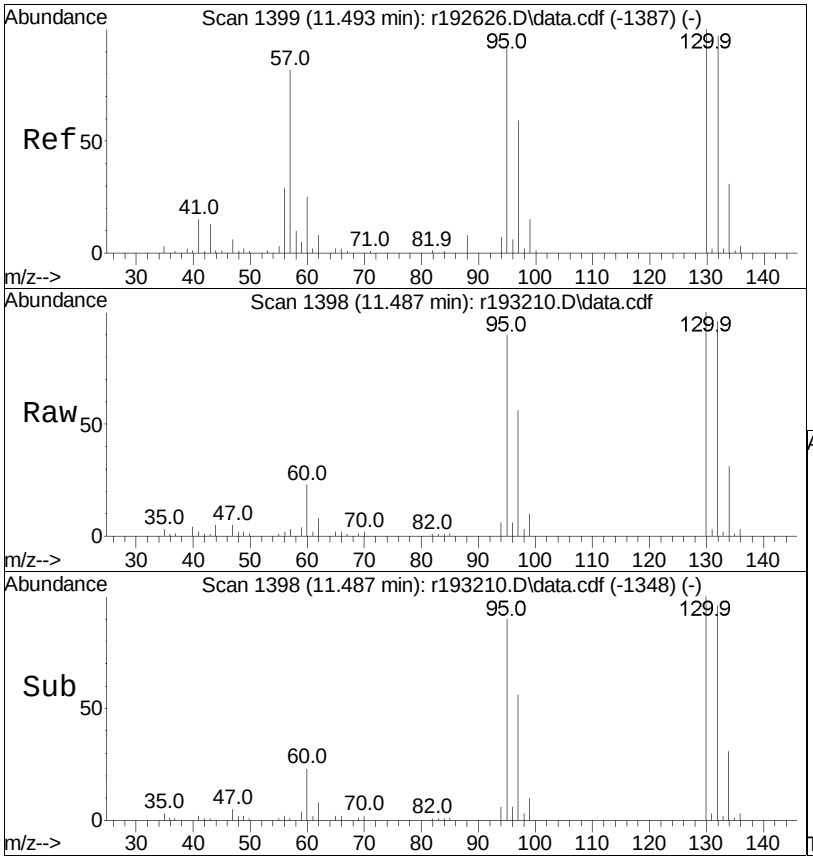



#53
cyclohexane
Concen: 0.05 ppbV
RT: 10.687 min Scan# 1278
Delta R.T. -0.007 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 56 Resp: 1939

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 84.1 | 69.8 | 104.6 |
| 41 | 50.5 | 32.1 | 48.1# |

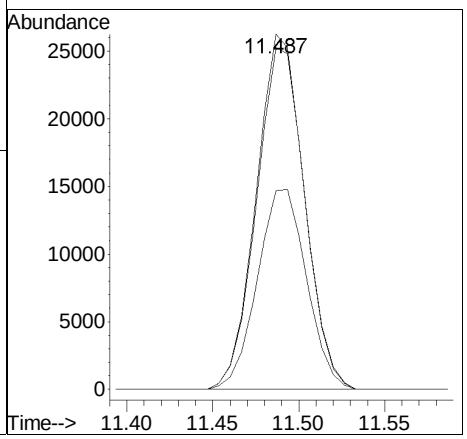


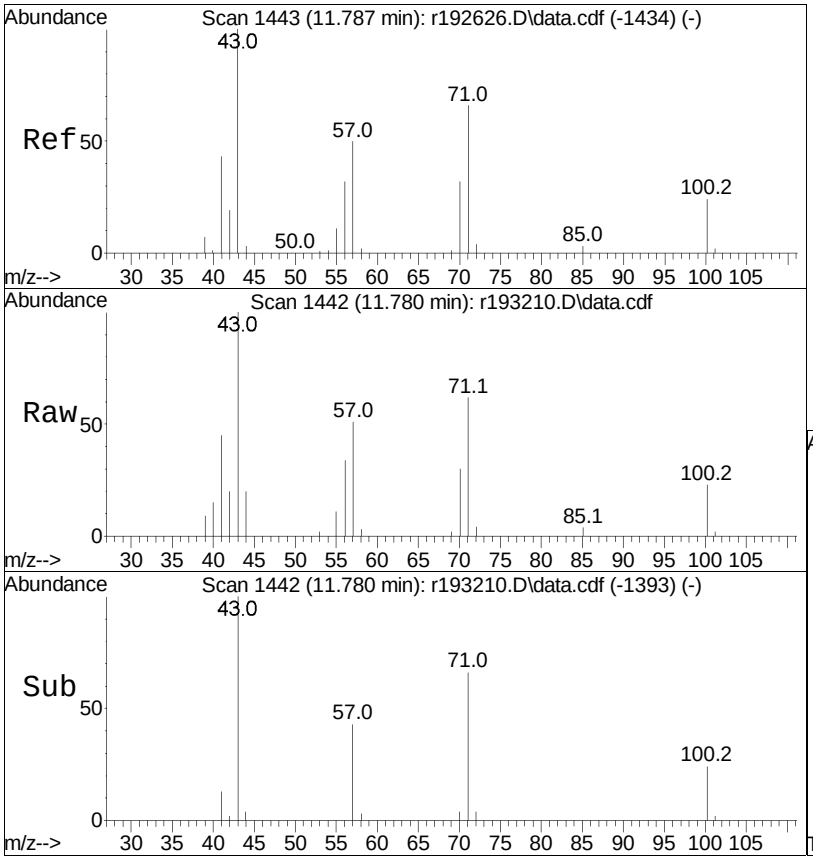



#59
trichloroethene
Concen: 2.16 ppbV
RT: 11.487 min Scan# 1398
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion:130 Resp: 50792

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 96.2 | 73.8 | 110.8 |
| 97 | 55.9 | 46.9 | 70.3 |

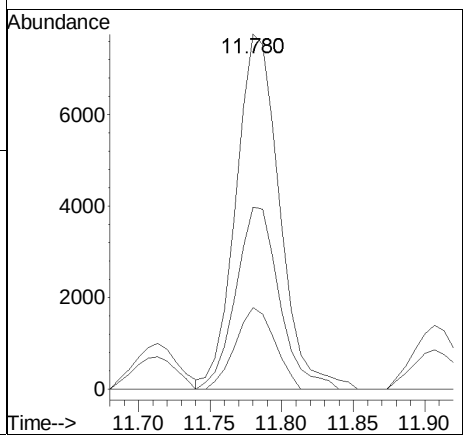


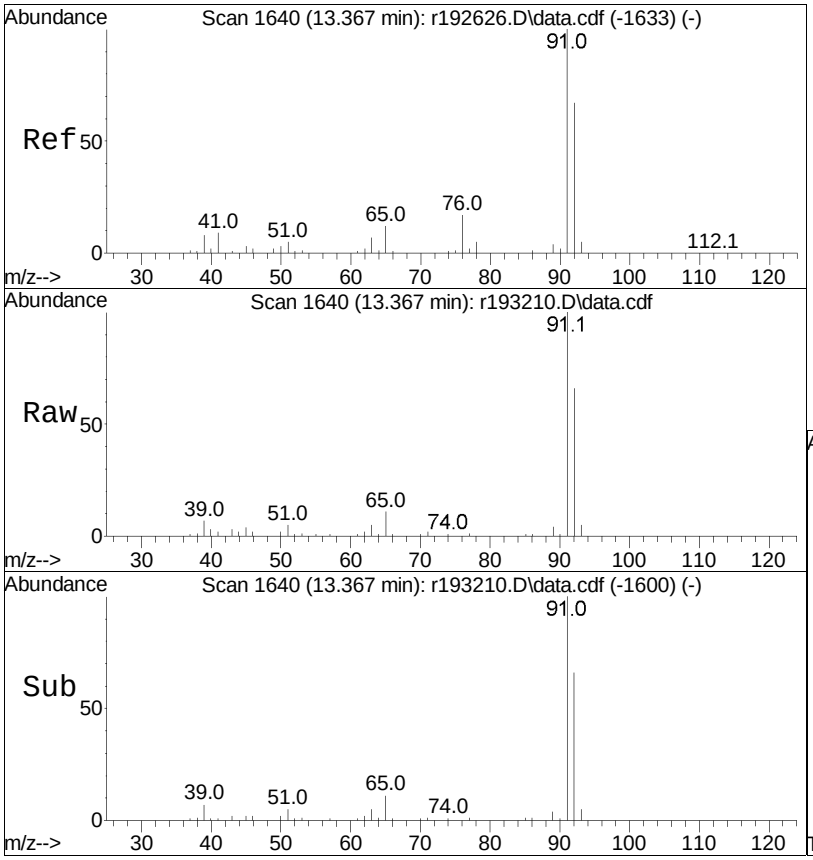



#62
heptane
Concen: 0.40 ppbV
RT: 11.780 min Scan# 1442
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 43 Resp: 16465

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 51.3 | 41.0 | 61.6 |
| 100 | 23.0 | 21.4 | 32.2 |

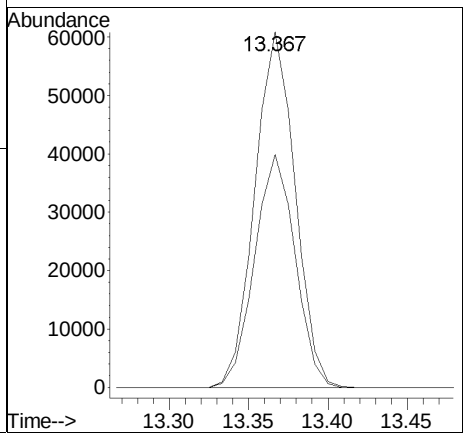


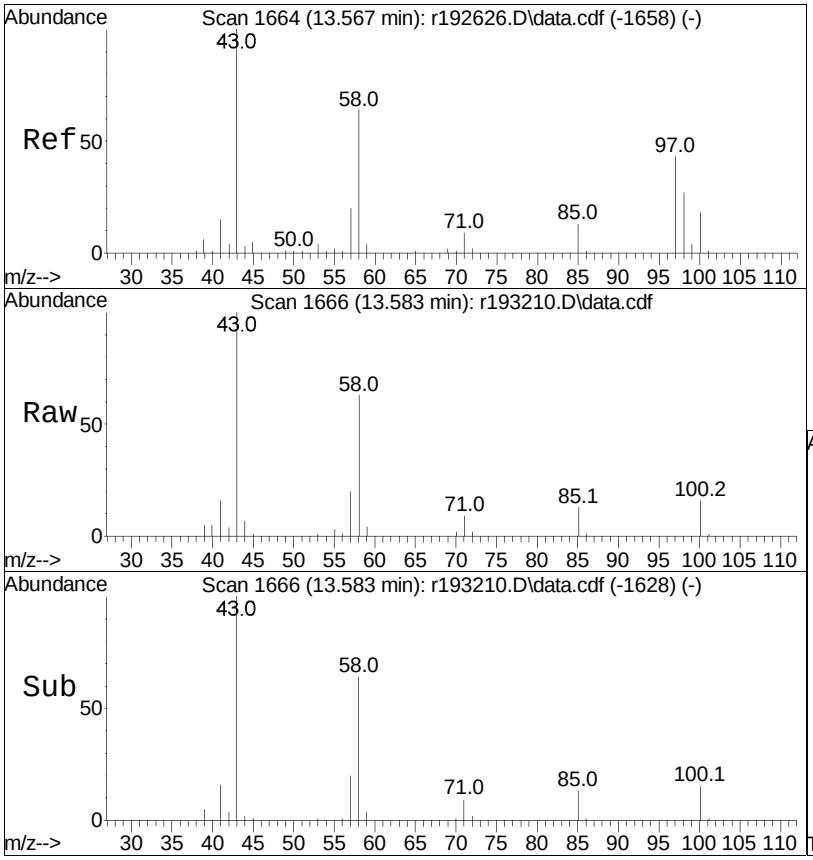



#68
toluene
Concen: 1.57 ppbV
RT: 13.367 min Scan# 1640
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 91 Resp: 107408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.6 | 53.3 | 79.9 |

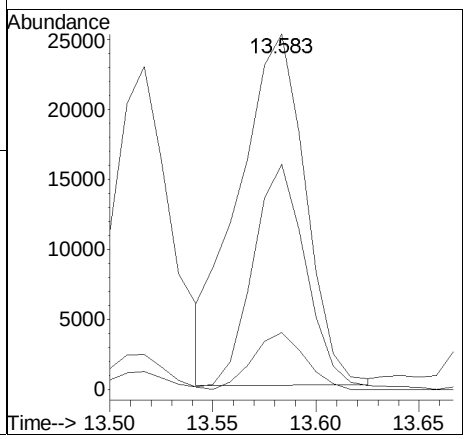


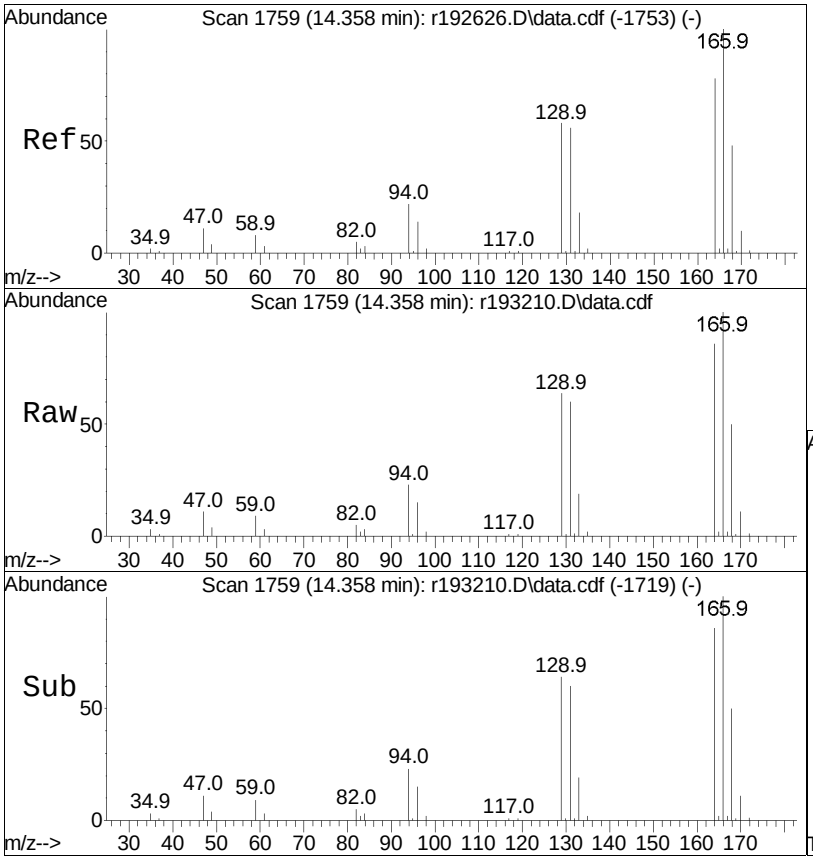



#72
2-hexanone
Concen: 1.43 ppbV
RT: 13.583 min Scan# 1666
Delta R.T. -0.017 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 43 Resp: 56738

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 63.3 | 62.6 | 94.0 |
| 100 | 16.0 | 26.5 | 39.7# |

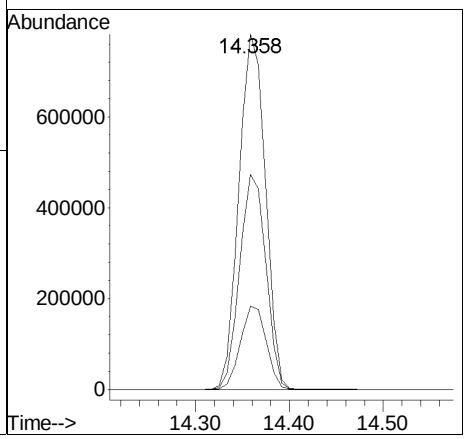


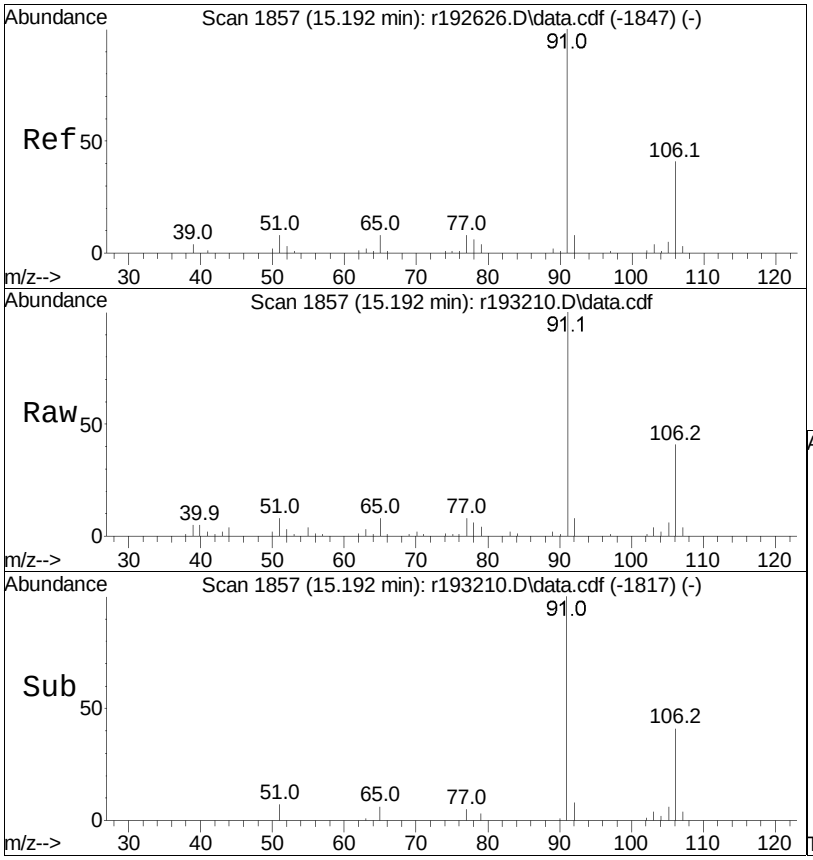



#78
tetrachloroethene
Concen: 51.16 ppbV
RT: 14.358 min Scan# 1759
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion:166 Resp: 1536096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 60.5 | 46.4 | 69.6 |
| 94 | 23.4 | 18.5 | 27.7 |

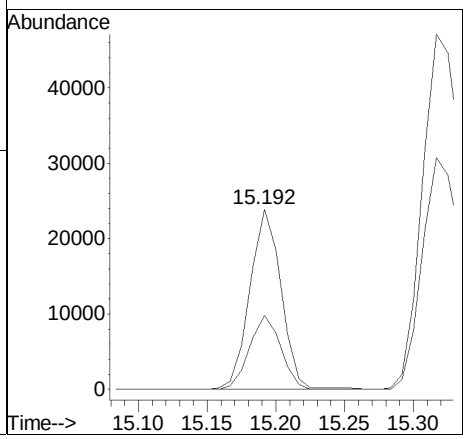


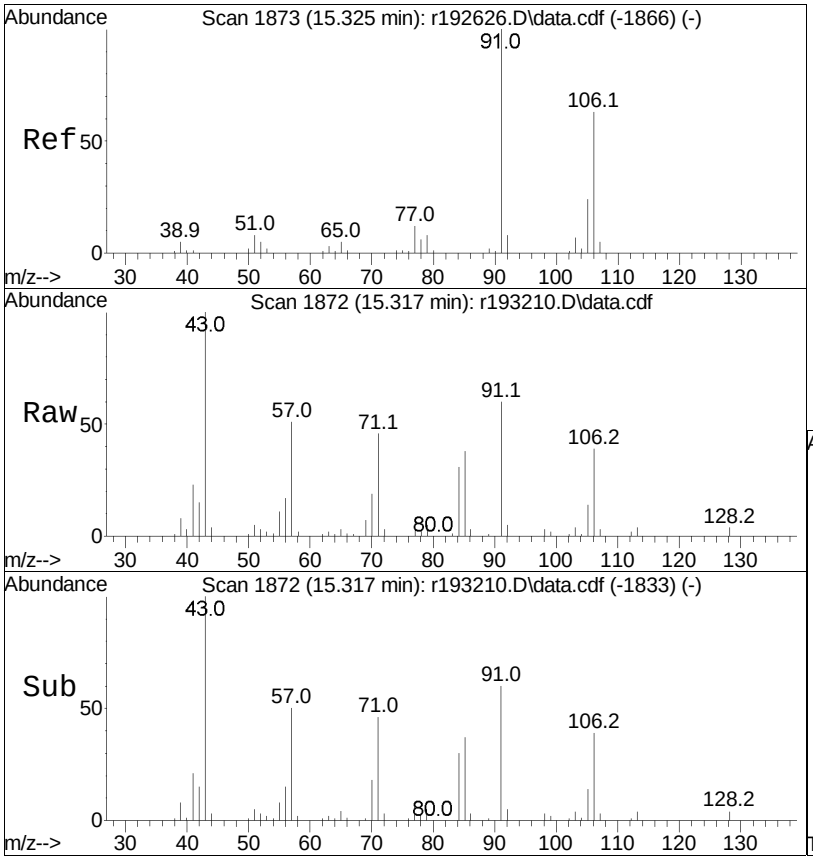



#81
ethylbenzene
Concen: 0.46 ppbV
RT: 15.192 min Scan# 1857
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 91 Resp: 37803

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 41.0 | 32.9 | 49.3 |

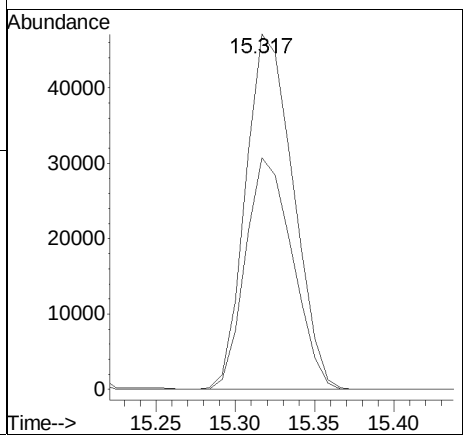


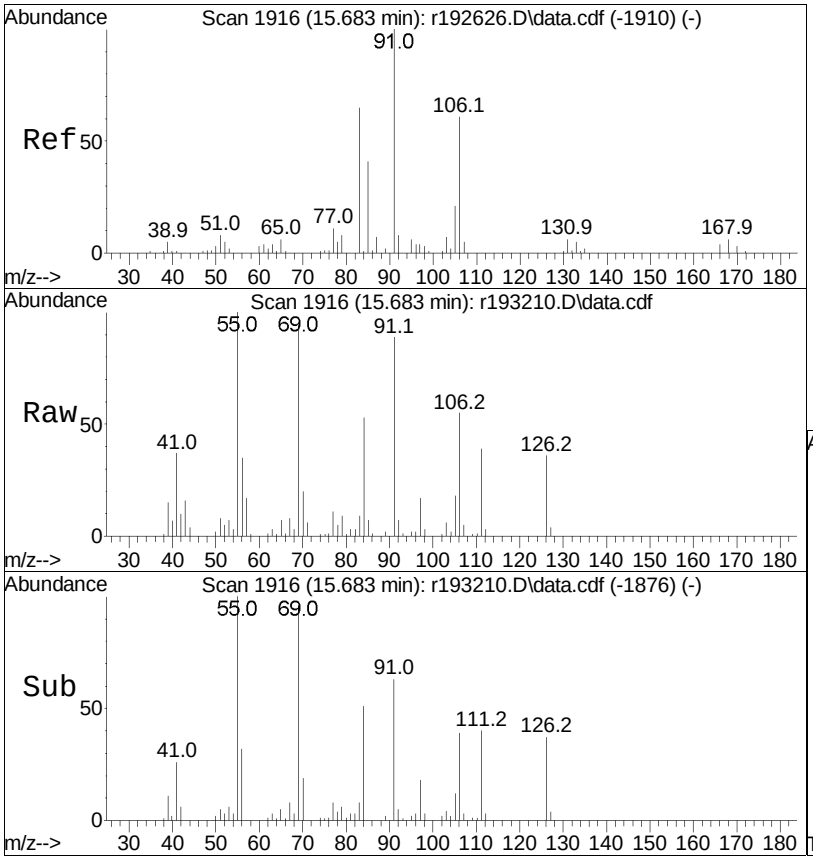



#83
m+p-xylene
Concen: 1.52 ppbV
RT: 15.317 min Scan# 1872
Delta R.T. -0.008 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 91 Resp: 98318

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 65.2 | 51.0 | 76.4 |

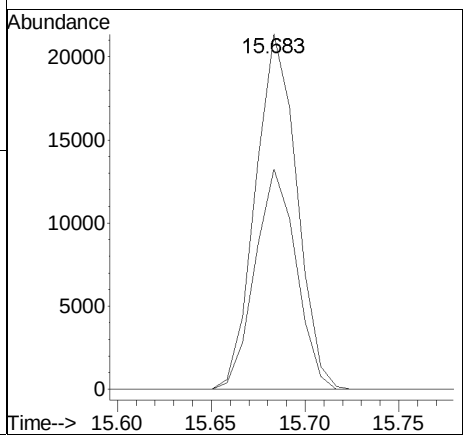


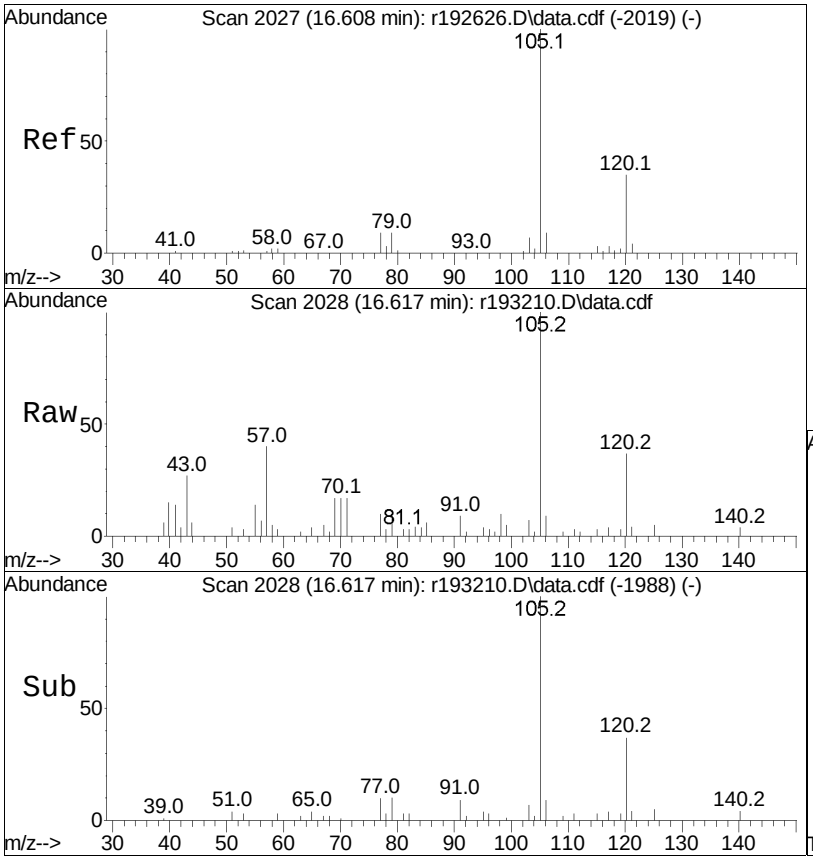



#87
o-xylene
Concen: 0.52 ppbV
RT: 15.683 min Scan# 1916
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion: 91 Resp: 32862

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 62.0 | 47.8 | 71.8 |

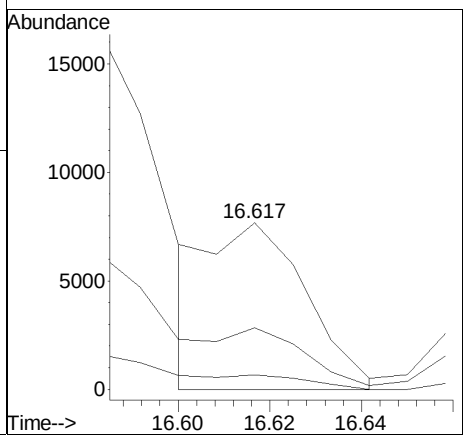


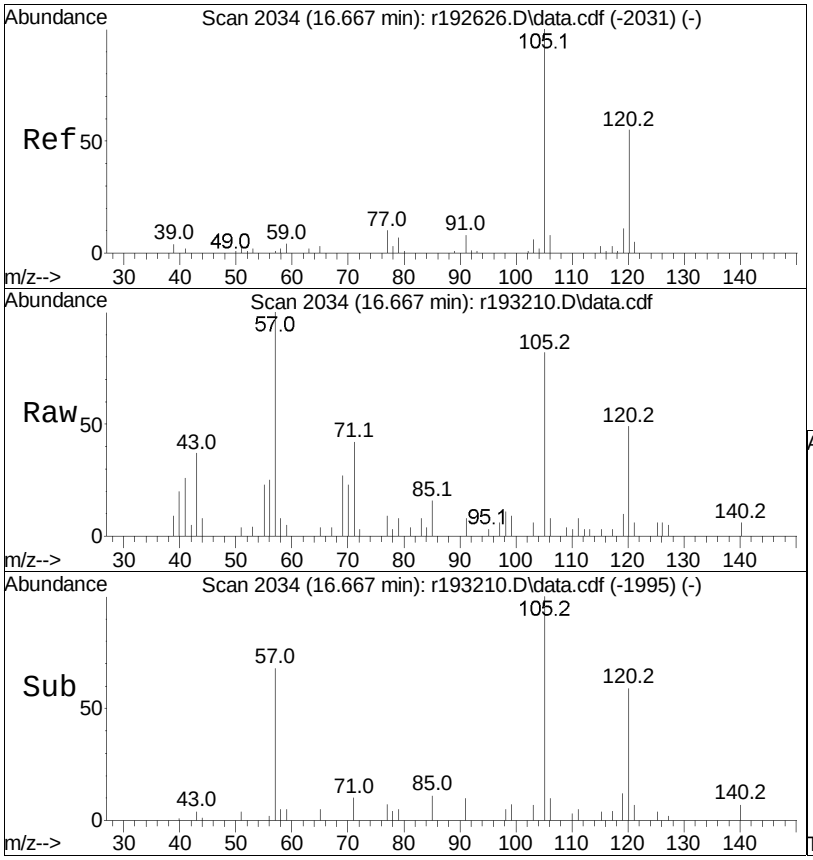



#96
4-ethyl toluene
Concen: 0.10 ppbV m
RT: 16.617 min Scan# 2028
Delta R.T. 0.000 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion:105 Resp: 11228

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 37.0 | 27.2 | 40.8 |
| 91 | 8.7 | 7.0 | 10.4 |

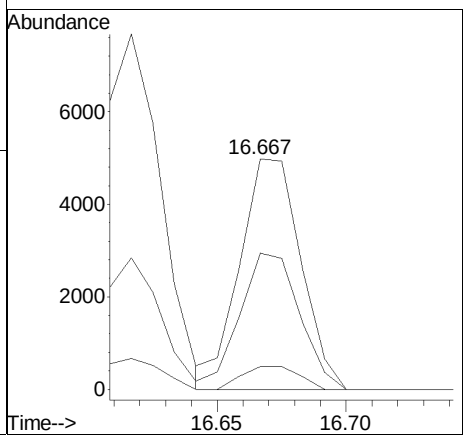


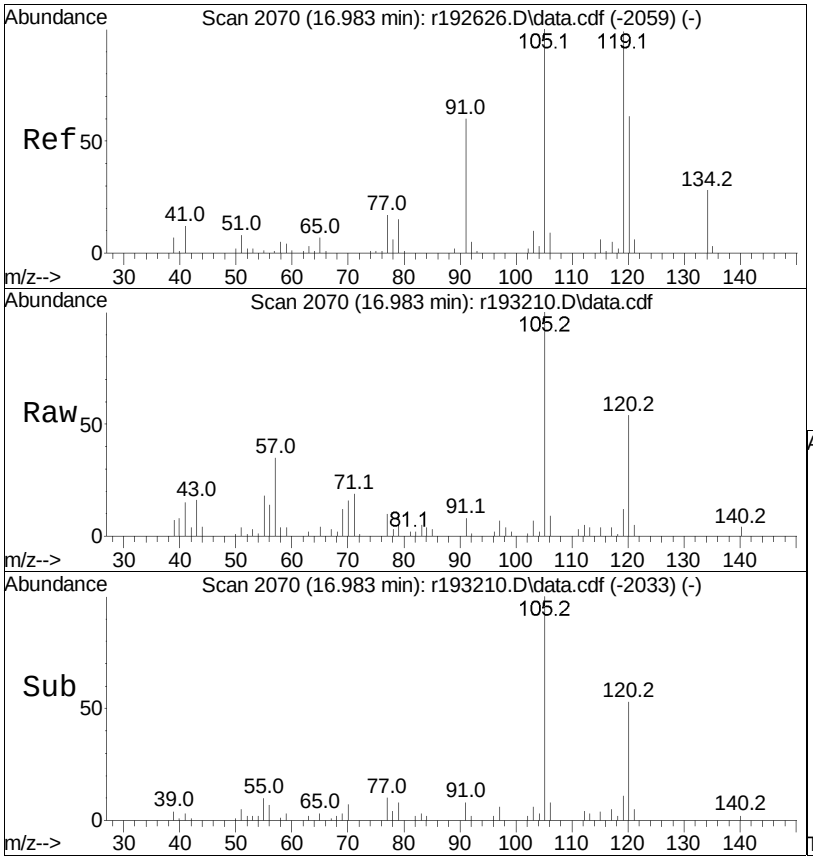



#97
1,3,5-trimethylbenzene
Concen: 0.09 ppbV
RT: 16.667 min Scan# 2034
Delta R.T. -0.008 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion:105 Resp: 8187

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 59.2 | 42.6 | 64.0 |
| 91 | 9.9 | 6.6 | 9.8# |

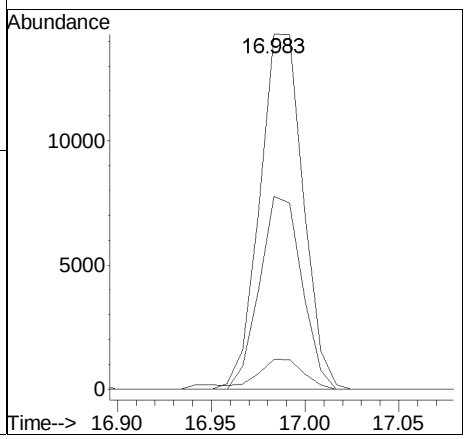





#99
1,2,4-trimethylbenzene
Concen: 0.29 ppbV
RT: 16.983 min Scan# 2070
Delta R.T. -0.008 min
Lab File: r193210.D
Acq: 21 Mar 2020 3:04 AM

Tgt Ion:105 Resp: 23054

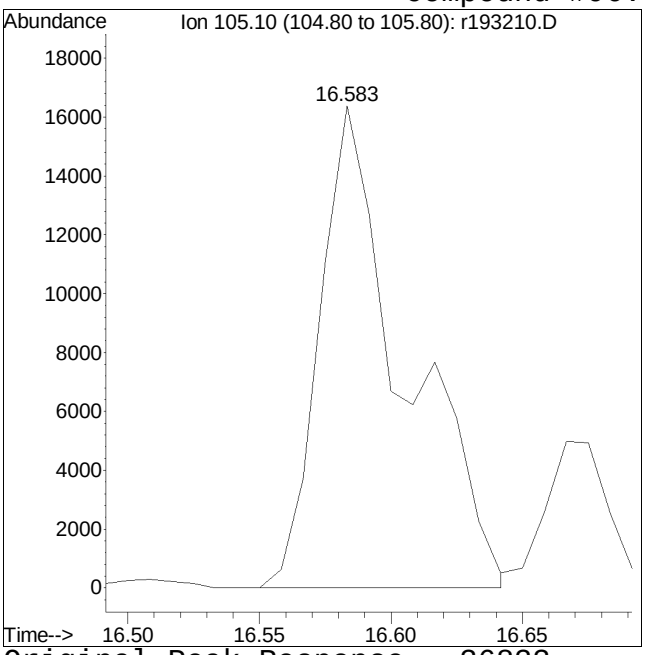
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 54.3 | 49.2 | 73.8 |
| 91 | 8.4 | 49.9 | 74.9# |



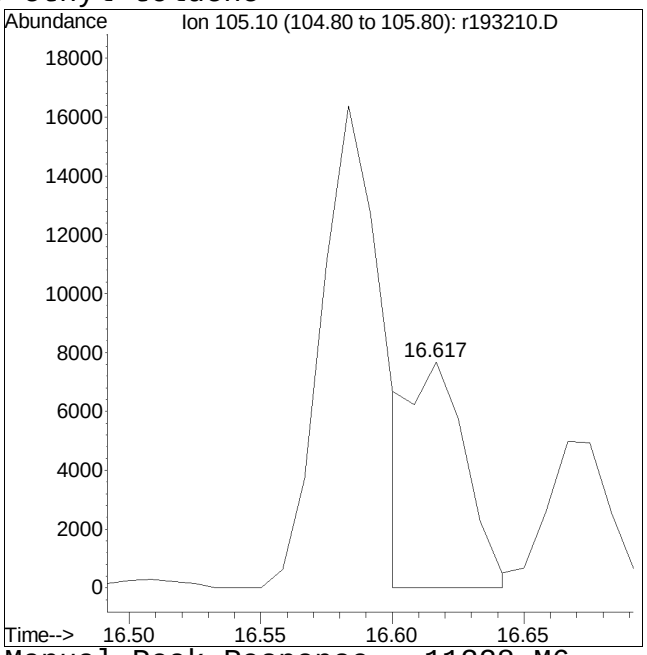
Manual Integration Report

Data Path : O:\Forensics\Data\Airlab19QMethod : TFS19_200224.M
Data File : r193210.D Operator : AIRLAB19:EW
Date Inj'd : 3/21/2020 0:3: 4 Instrument :
Sample : L2011723-03D,3,40,250 Quant Date : 3/21/2020 7:58 am

Compound #96: 4-ethyl toluene




Original Peak Response = 36833




Manual Peak Response = 11228 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193211.D
Acq On : 21 Mar 2020 3:40 AM
Operator : AIRLAB19:EW
Sample : L2011723-04D,3,100,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:45:17 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.775 | 49 | 324356 | 10.000 | ppbV | 0.00 |
| Standard Area = 288364 | | | Recovery = 112.48% | | | |
| 43) 1,4-difluorobenzene | 10.740 | 114 | 995276 | 10.000 | ppbV | 0.00 |
| Standard Area = 940727 | | | Recovery = 105.80% | | | |
| 67) chlorobenzene-D5 | 14.875 | 54 | 122231 | 10.000 | ppbV | 0.00 |
| Standard Area = 108860 | | | Recovery = 112.28% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 3.556 | 85 | 3534 | 0.194 | ppbV | 98 |
| 6) chloromethane | 3.766 | 50 | 1397 | 0.120 | ppbV | 98 |
| 7) Freon-114 | 0.000 | | 0 | N.D. | d | |
| 9) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 4.192 | 54 | 22450 | 1.804 | ppbV # | 1 |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 4.930 | 31 | 57925 | 6.112 | ppbV # | 66 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.483 | 43 | 5190456 | 298.002 | ppbV # | 100 |
| 21) trichlorofluoromethane | 5.690 | 101 | 1608 | 0.084 | ppbV | 96 |
| 22) isopropyl alcohol | 5.763 | 45 | 119124 | 3.600 | ppbV | 100 |
| 26) 1,1-dichloroethene | 0.000 | | 0 | N.D. | | |
| 27) tertiary butyl alcohol | 6.426 | 59 | 103346 | 3.407 | ppbV # | 97 |
| 28) methylene chloride | 6.540 | | 0 | N.D. | | |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | |
| 30) carbon disulfide | 6.840 | 76 | 6537 | 0.110 | ppbV # | 60 |
| 31) Freon 113 | 6.828 | | 0 | N.D. | | |
| 32) trans-1,2-dichloroethene | 7.542 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | |
| 34) MTBE | 0.000 | | 0 | N.D. | d | |
| 36) 2-butanone | 8.133 | 43 | 993849 | 25.457 | ppbV | 95 |
| 37) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | d | |
| 39) chloroform | 8.908 | 83 | 5567 | 0.205 | ppbV | 95 |
| 40) Tetrahydrofuran | 9.308 | 42 | 74834 | 2.853 | ppbV | 98 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | | |

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193211.D
Acq On : 21 Mar 2020 3:40 AM
Operator : AIRLAB19:EW
Sample : L2011723-04D,3,100,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:45:17 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 44) hexane | 8.825 | 57 | 21722 | 0.595 | ppbV # | 27 |
| 48) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | | |
| 50) benzene | 10.400 | 78 | 30477 | 0.423 | ppbV | 99 |
| 52) carbon tetrachloride | 0.000 | | 0 | N.D. | | |
| 53) cyclohexane | 10.687 | 56 | 4392 | 0.110 | ppbV | 96 |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | d | |
| 58) 1,4-dioxane | 11.493 | | 0 | N.D. | | |
| 59) trichloroethene | 11.487 | 130 | 2224 | 0.087 | ppbV | 93 |
| 60) 2,2,4-trimethylpentane | 11.520 | 57 | 22014 | 0.191 | ppbV # | 92 |
| 62) heptane | 11.780 | 43 | 41996 | 0.943 | ppbV | 97 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 12.417 | 43 | 8112 | 0.169 | ppbV | 94 |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | | |
| 68) toluene | 13.367 | 91 | 207155 | 2.783 | ppbV | 97 |
| 72) 2-hexanone | 13.575 | 43 | 246686 | 5.704 | ppbV # | 81 |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 78) tetrachloroethene | 14.358 | 166 | 445228 | 13.615 | ppbV | 97 |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | |
| 81) ethylbenzene | 15.192 | 91 | 32341 | 0.362 | ppbV | 98 |
| 83) m+p-xylene | 15.317 | 91 | 78329 | 1.113 | ppbV | 99 |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 15.600 | 104 | 3798 | 0.056 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | |
| 87) o-xylene | 15.683 | 91 | 24848 | 0.360 | ppbV | 99 |
| 96) 4-ethyl toluene | 16.583 | 105 | 13157M6 | 0.113 | ppbV | |
| 97) 1,3,5-trimethylbenzene | 16.633 | 105 | 10609 | 0.113 | ppbV | 94 |
| 99) 1,2,4-trimethylbenzene | 16.942 | 105 | 26668 | 0.307 | ppbV # | 61 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | |
| 102) 1,3-dichlorobenzene | 17.117 | | 0 | N.D. | | |
| 103) 1,4-dichlorobenzene | 17.117 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 17.383 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 0.000 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

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

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193211.D
Acq On : 21 Mar 2020 3:40 AM
Operator : AIRLAB19:EW
Sample : L2011723-04D,3,100,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:45:17 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

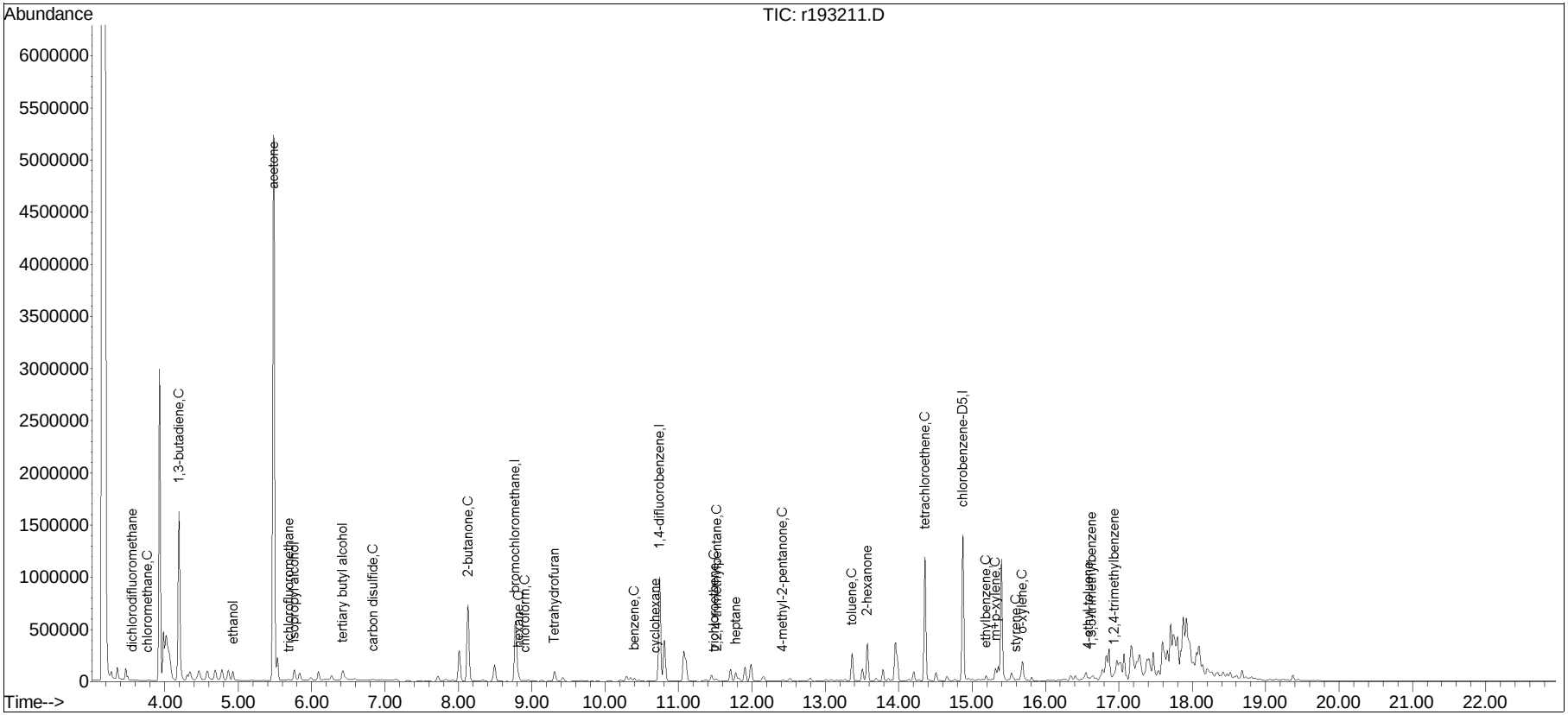
CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY - .

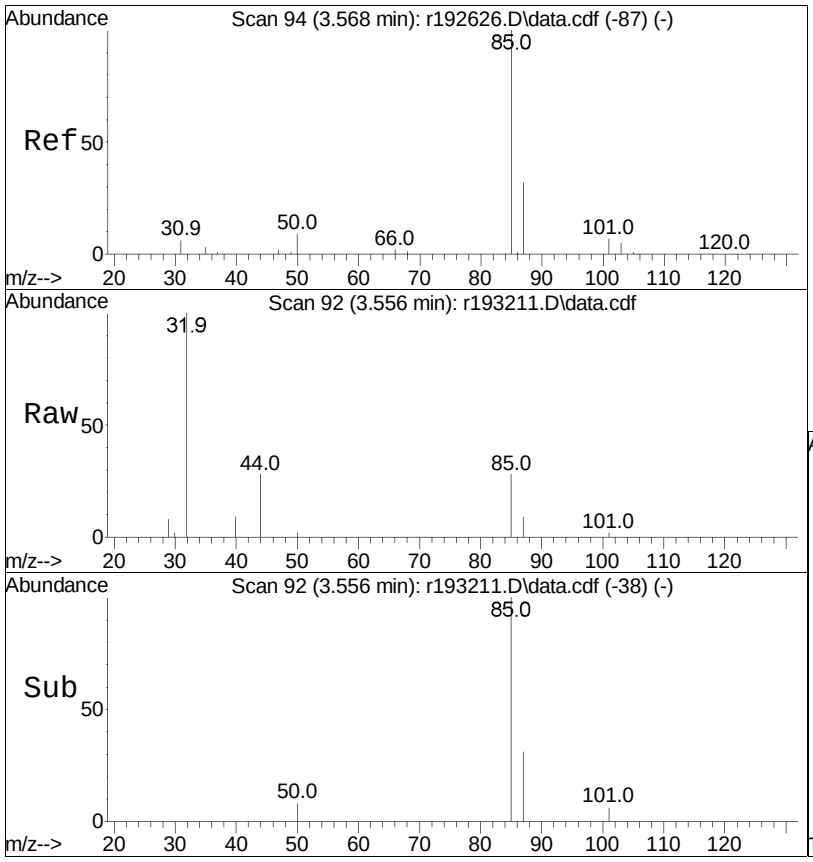
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : TO15-NY - .s\Data\Airlab19\2020\03\200320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193211.D
Acq On : 21 Mar 2020 3:40 AM
Operator : AIRLAB19:EW
Sample : L2011723-04D,3,100,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:45:17 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

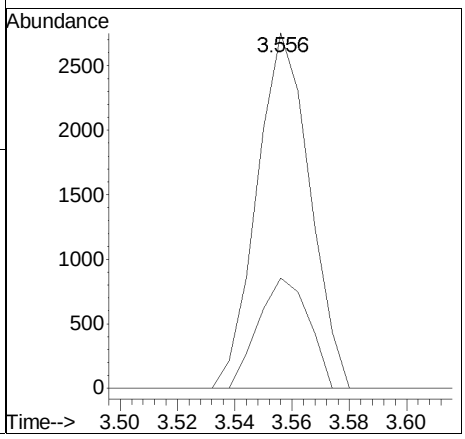


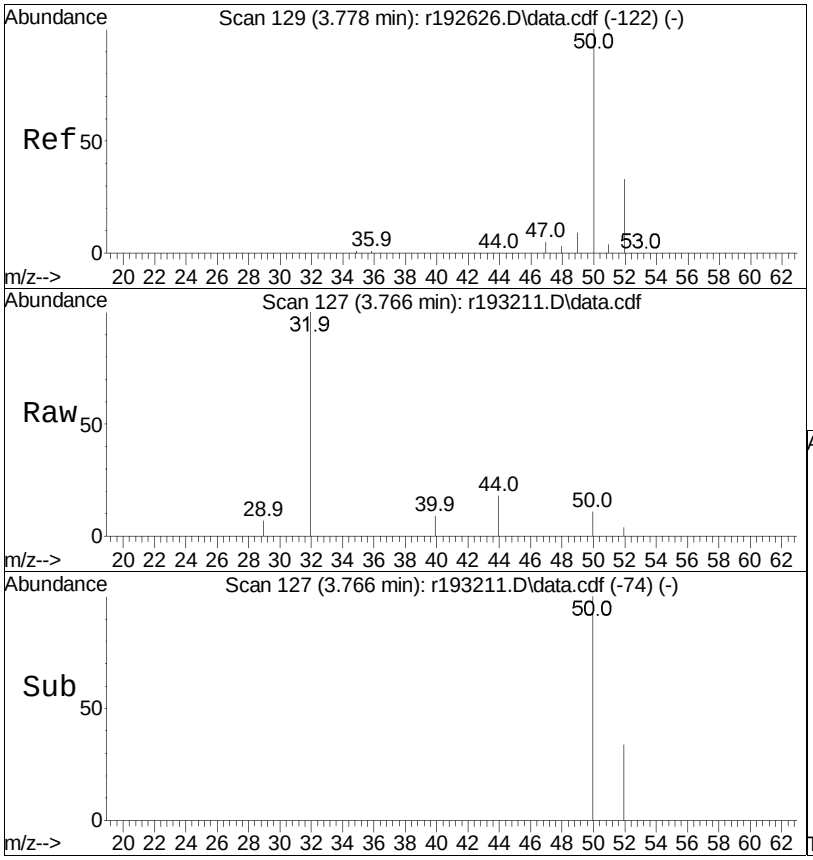



#5
dichlorodifluoromethane
Concen: 0.19 ppbV
RT: 3.556 min Scan# 92
Delta R.T. -0.006 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 85 Resp: 3534

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.1 | 25.9 | 38.9 |

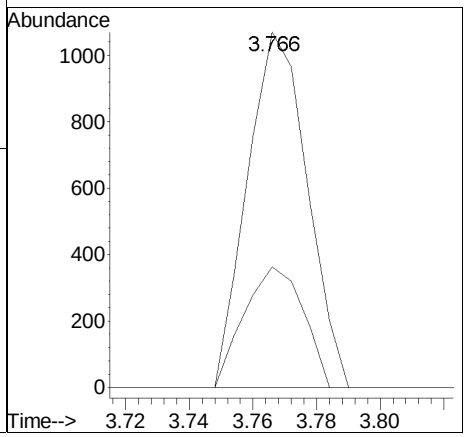


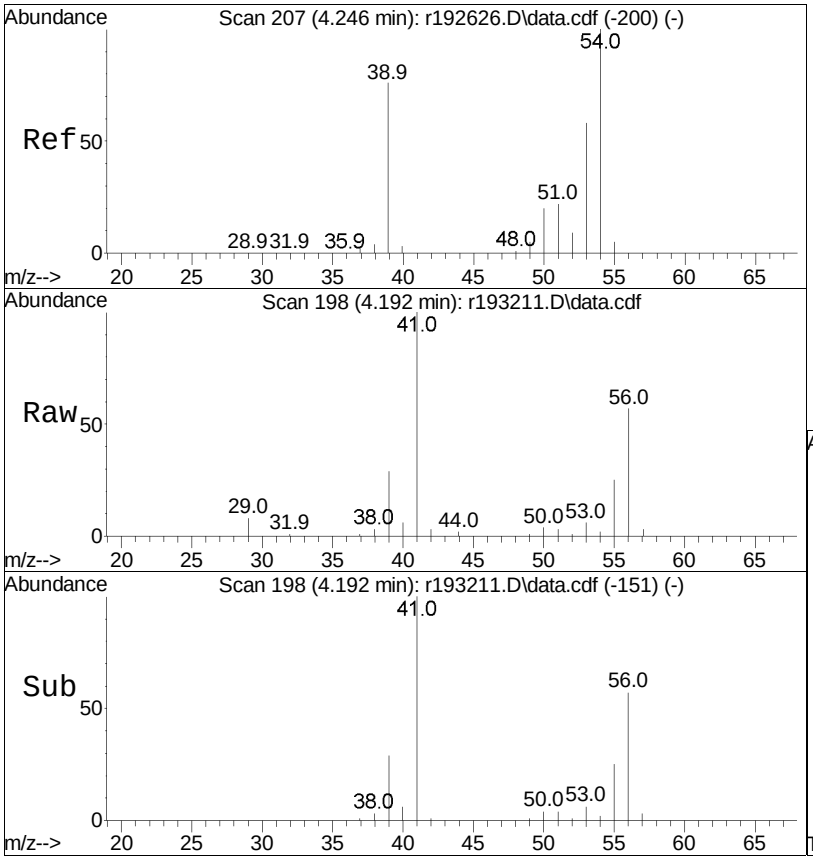



#6
chloromethane
Concen: 0.12 ppbV
RT: 3.766 min Scan# 127
Delta R.T. -0.012 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 50 Resp: 1397

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 33.9 | 26.3 | 39.5 |

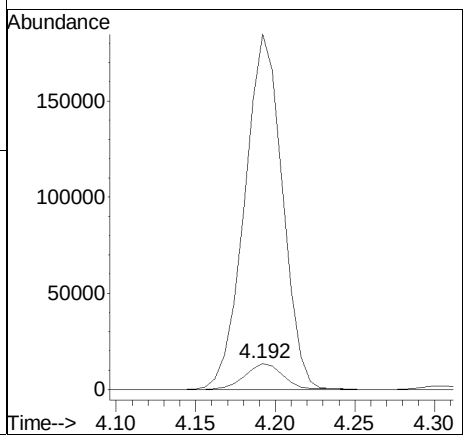


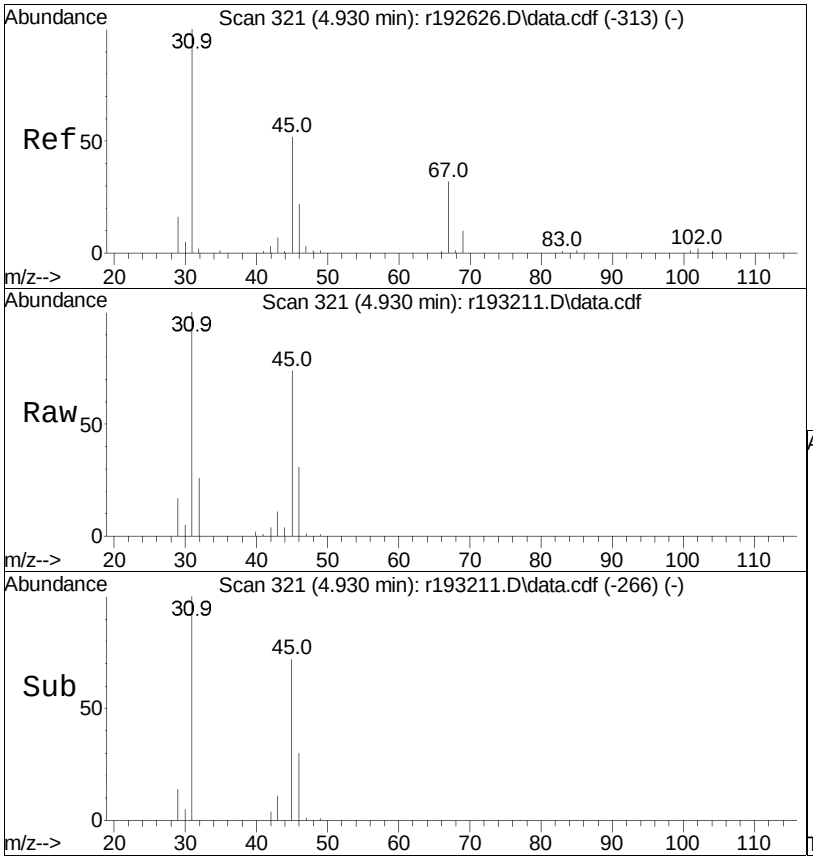



#10
1,3-butadiene
Concen: 1.80 ppbV
RT: 4.192 min Scan# 198
Delta R.T. -0.048 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 54 Resp: 22450

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 1376.1 | 65.3 | 97.9# |

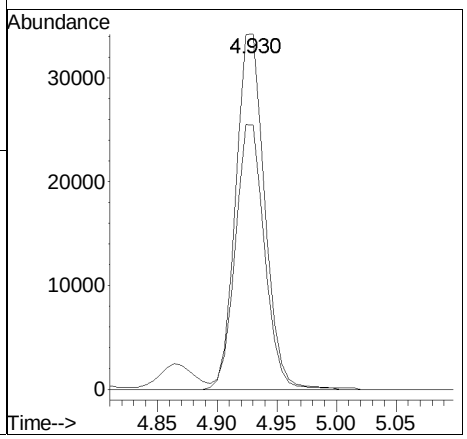


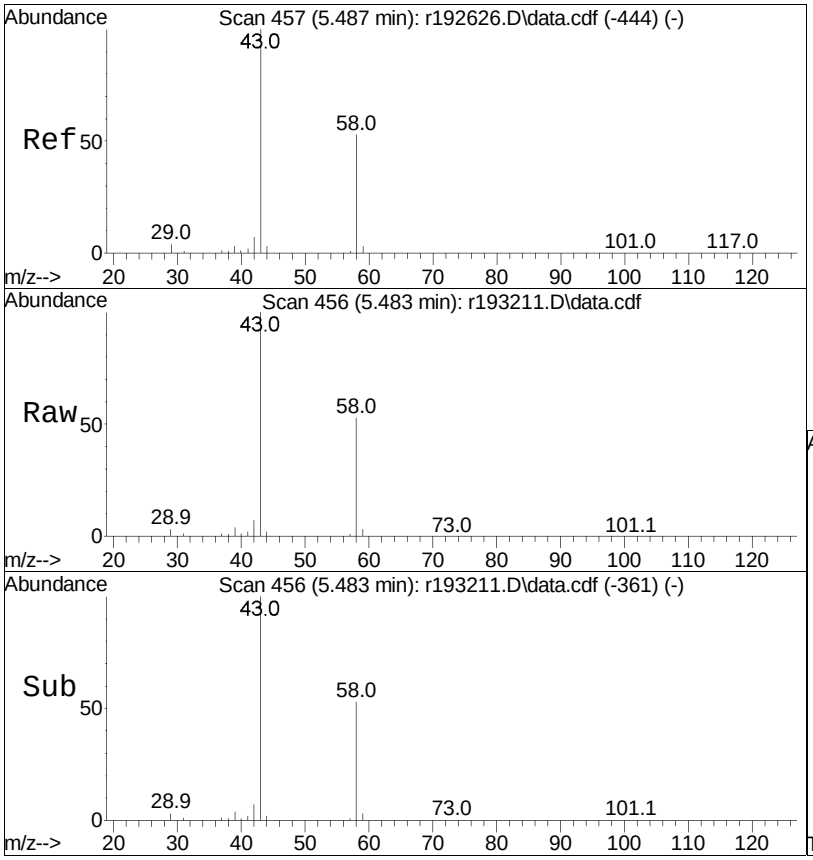



#15
ethanol
Concen: 6.11 ppbV
RT: 4.930 min Scan# 321
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 31 Resp: 57925

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 74.4 | 40.6 | 60.8# |

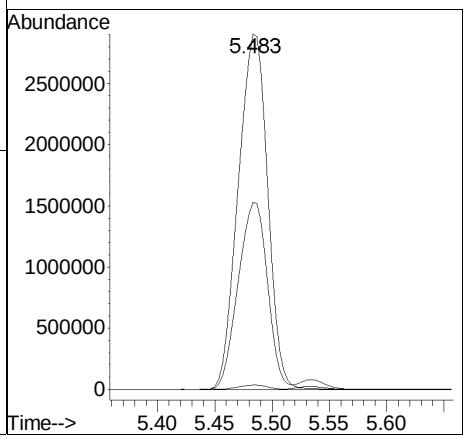


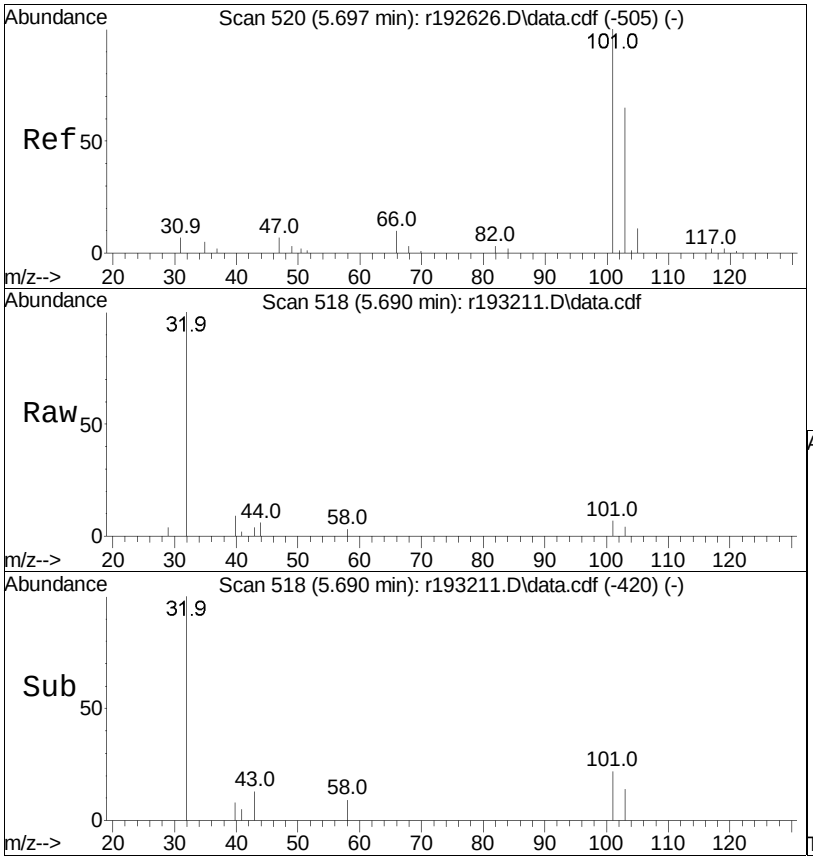



#19
acetone
Concen: 298.00 ppbV
RT: 5.483 min Scan# 456
Delta R.T. -0.013 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 43 Resp: 5190456

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 52.7 | 42.0 | 63.0 |
| 57 | 1.2 | 1.4 | 2.0# |

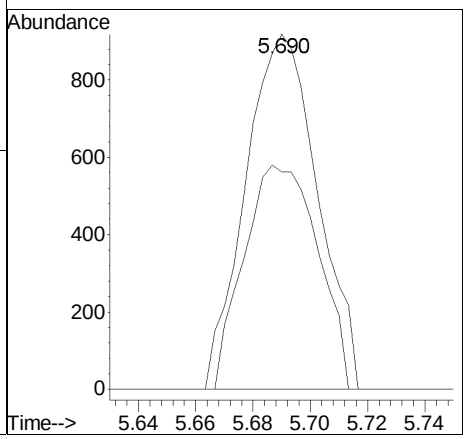


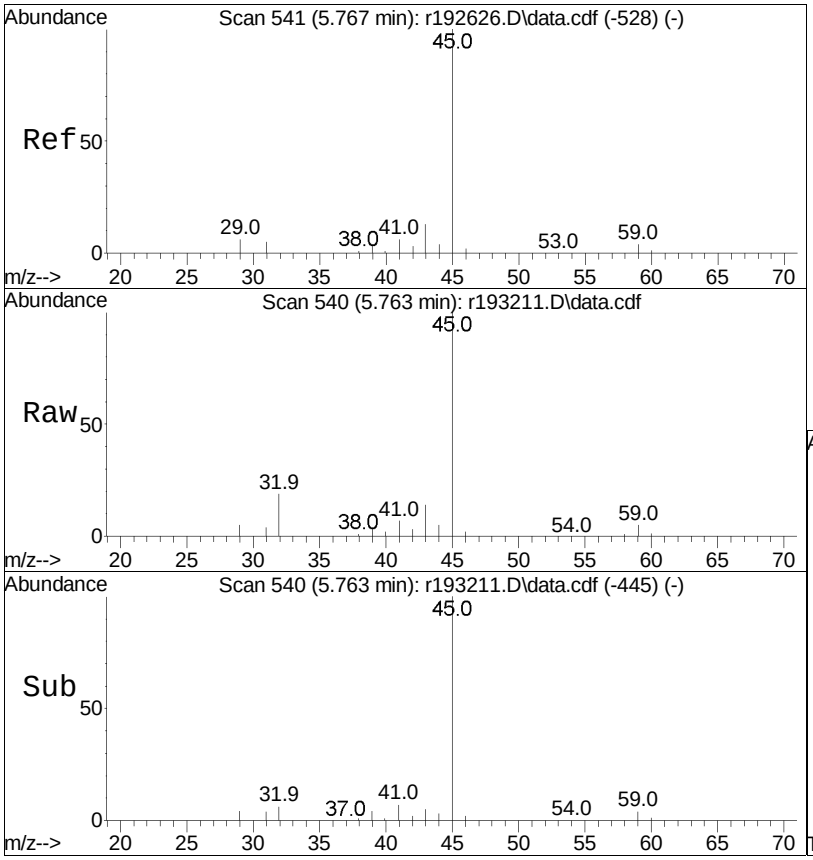



#21
trichlorofluoromethane
Concen: 0.08 ppbV
RT: 5.690 min Scan# 518
Delta R.T. -0.003 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:101 Resp: 1608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 61.2 | 51.4 | 77.2 |

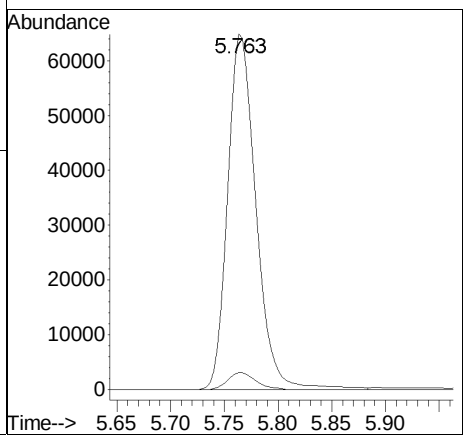


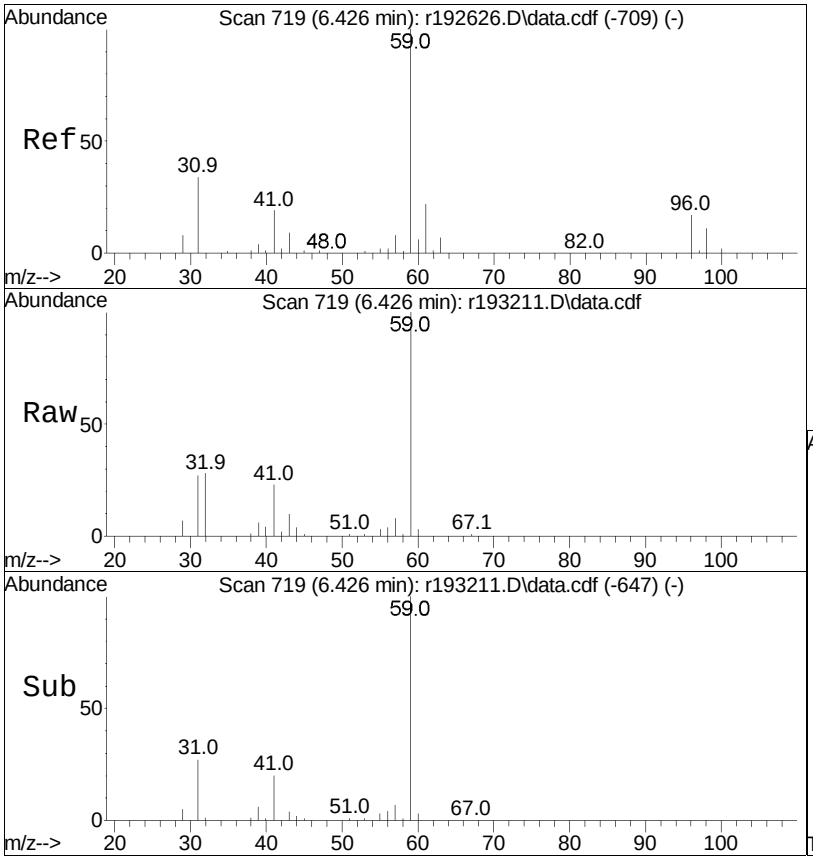



#22
isopropyl alcohol
Concen: 3.60 ppbV
RT: 5.763 min Scan# 540
Delta R.T. -0.013 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 45 Resp: 119124

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 4.7 | 3.7 | 5.5 |

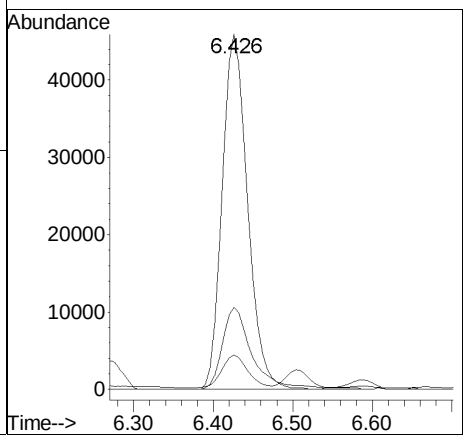


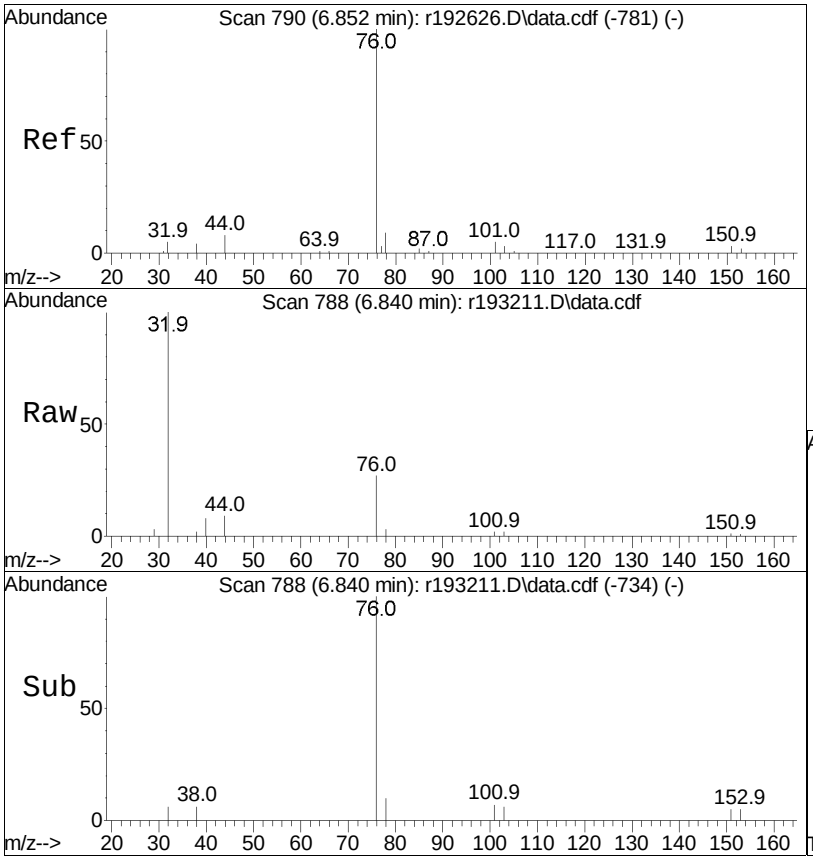



#27
tertiary butyl alcohol
Concen: 3.41 ppbV
RT: 6.426 min Scan# 719
Delta R.T. -0.024 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 59 Resp: 103346

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 23.1 | 18.8 | 28.2 |
| 43 | 9.7 | 9.8 | 14.8# |

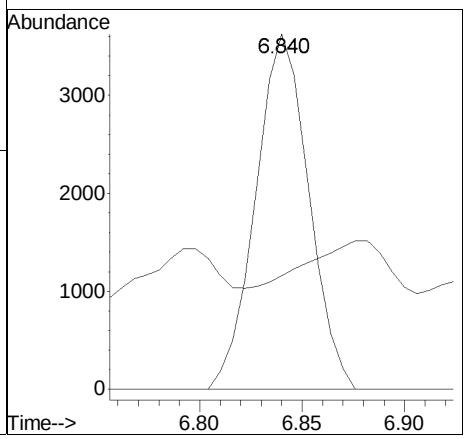


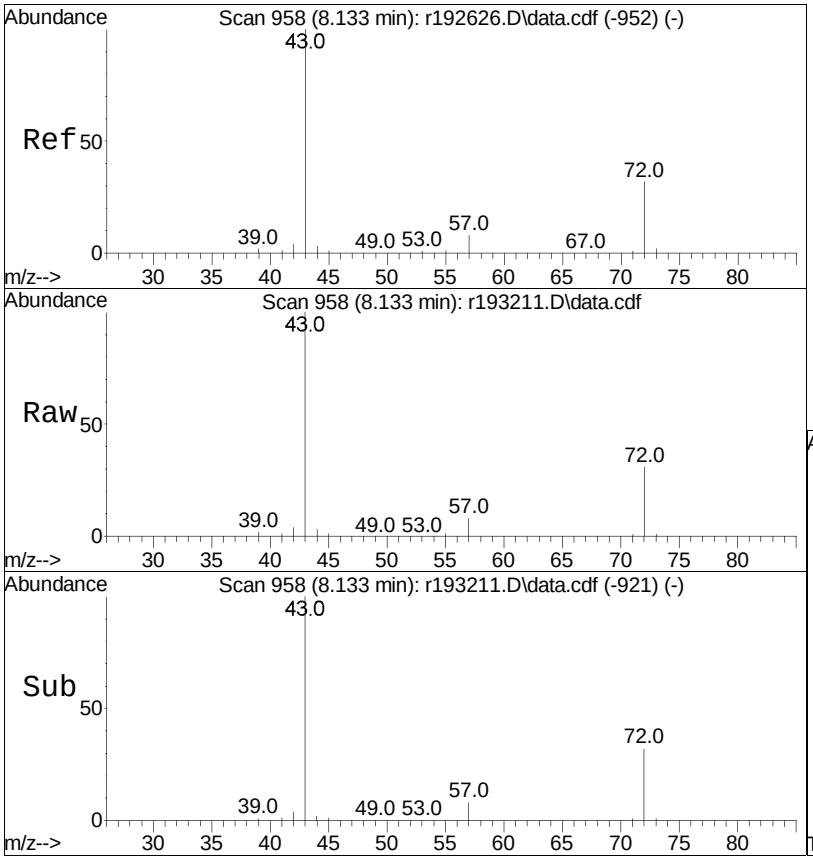



#30
carbon disulfide
Concen: 0.11 ppbV
RT: 6.840 min Scan# 788
Delta R.T. -0.006 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 76 Resp: 6537

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 32.0 | 12.3 | 18.5# |

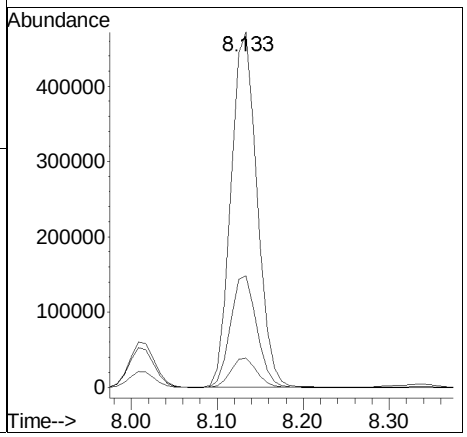


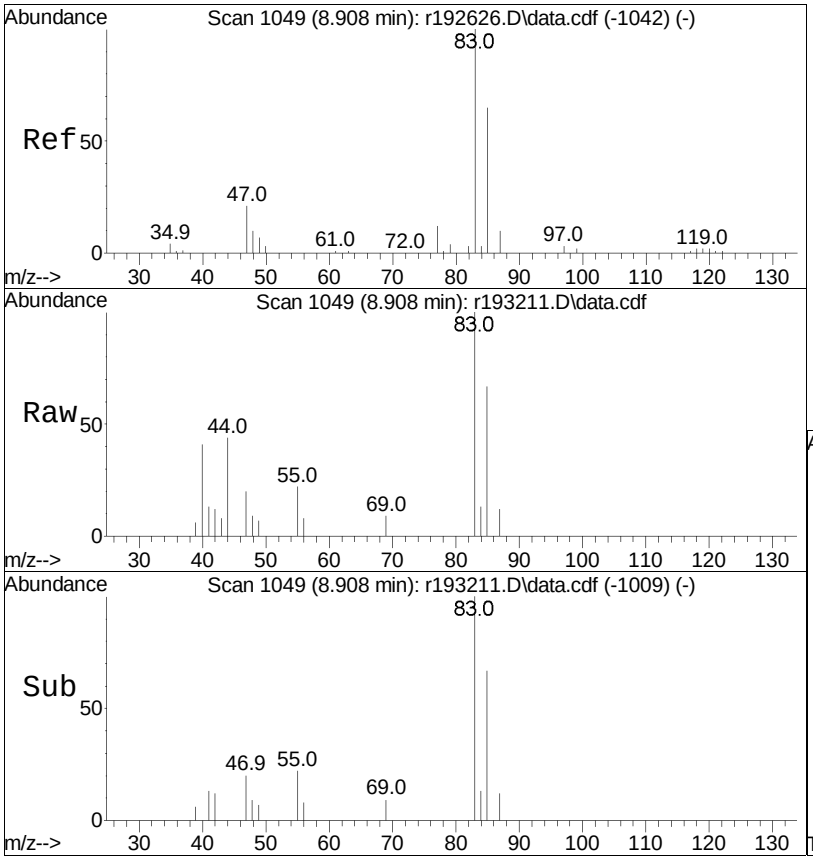



#36
2-butanone
Concen: 25.46 ppbV
RT: 8.133 min Scan# 958
Delta R.T. -0.025 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 43 Resp: 993849

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 31.5 | 27.7 | 41.5 |
| 57 | 8.3 | 6.3 | 9.5 |

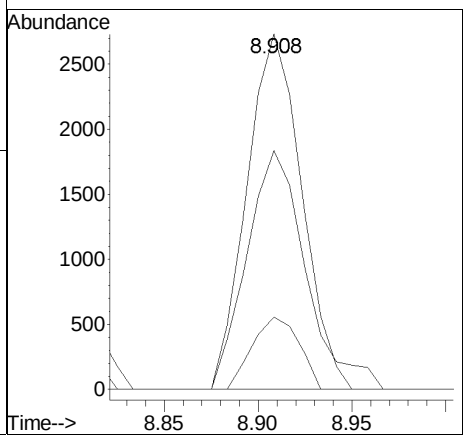


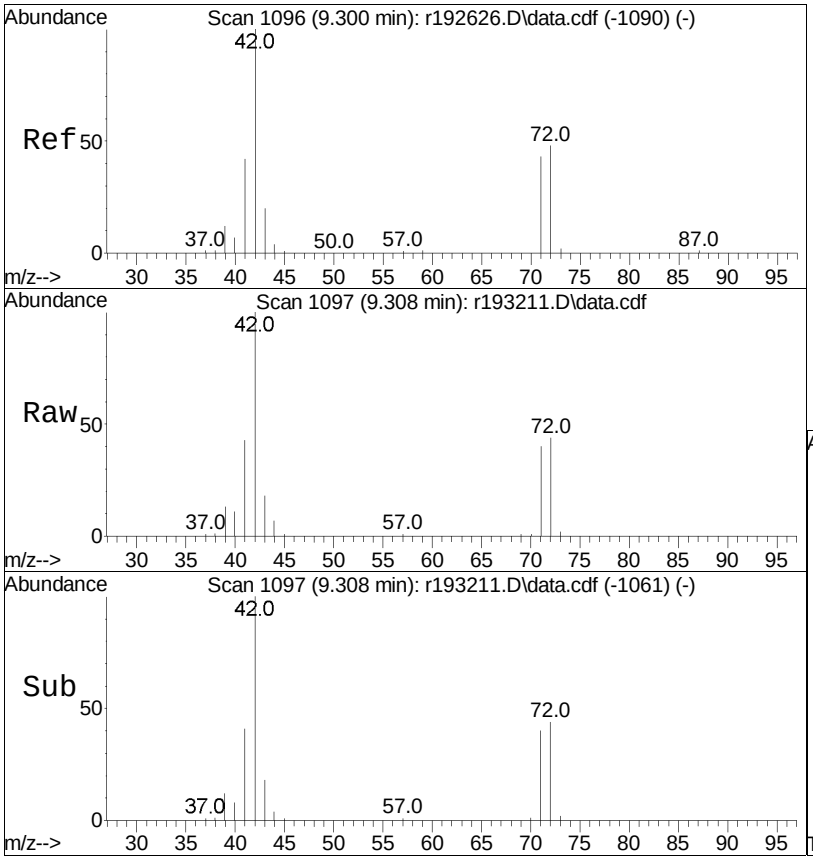



#39
chloroform
Concen: 0.21 ppbV
RT: 8.908 min Scan# 1049
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 83 Resp: 5567

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 67.2 | 50.1 | 75.1 |
| 47 | 20.4 | 17.6 | 26.4 |

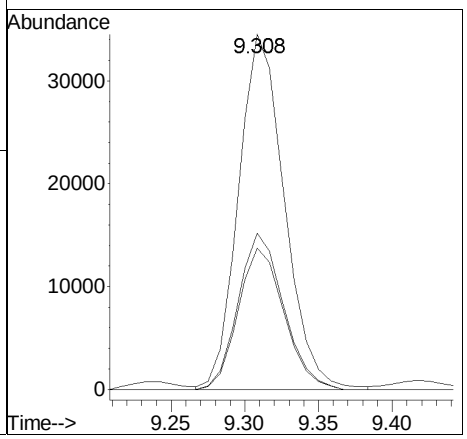


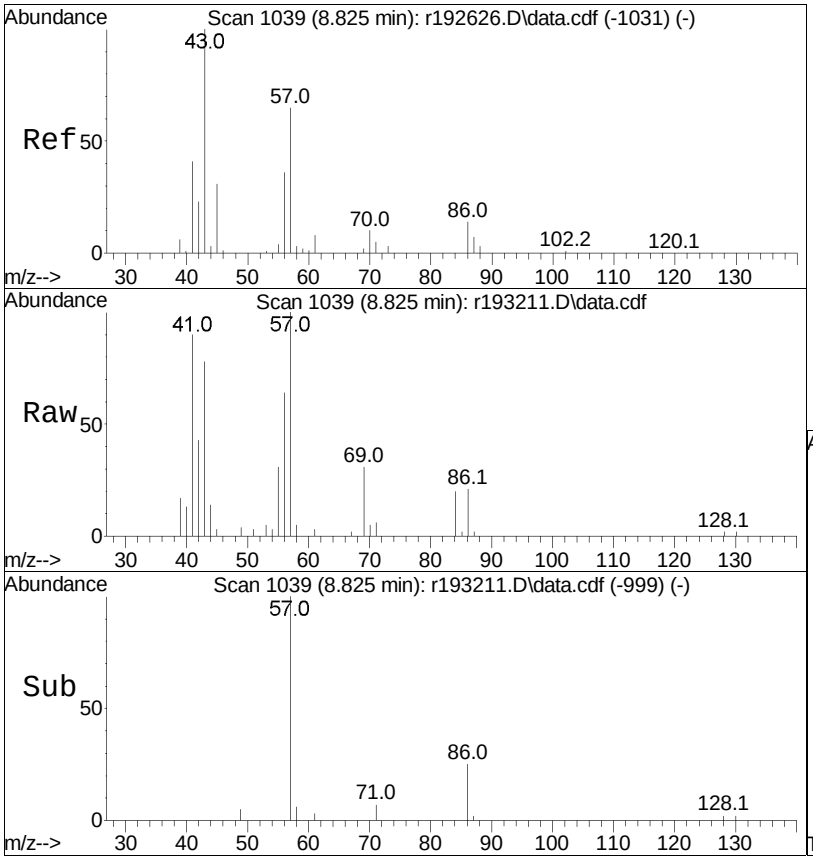



#40
Tetrahydrofuran
Concen: 2.85 ppbV
RT: 9.308 min Scan# 1097
Delta R.T. -0.033 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 42 Resp: 74834

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 39.8 | 32.5 | 48.7 |
| 72 | 44.0 | 33.7 | 50.5 |

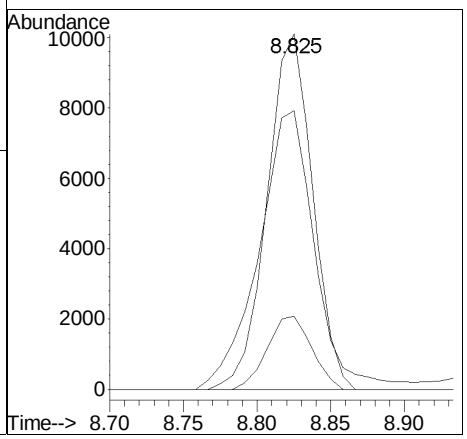


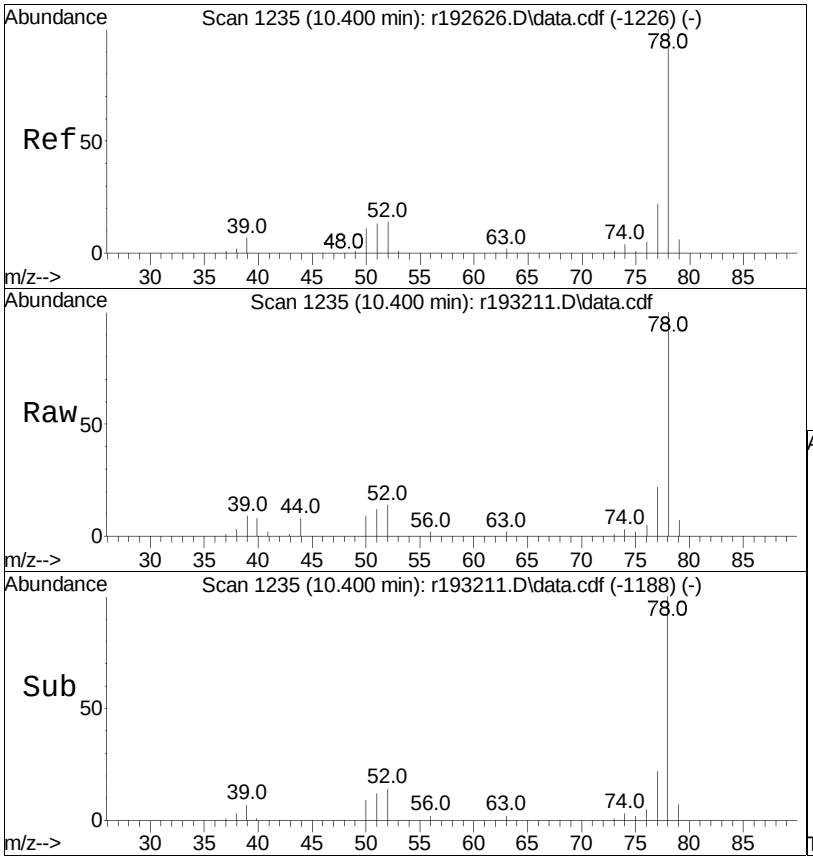



#44
hexane
Concen: 0.60 ppbV
RT: 8.825 min Scan# 1039
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 57 Resp: 21722

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 78.4 | 159.3 | 238.9# |
| 86 | 20.6 | 15.7 | 23.5 |

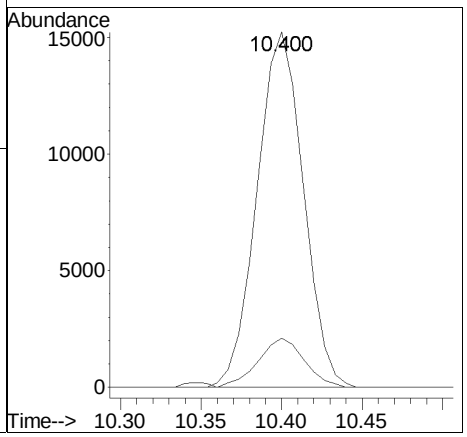


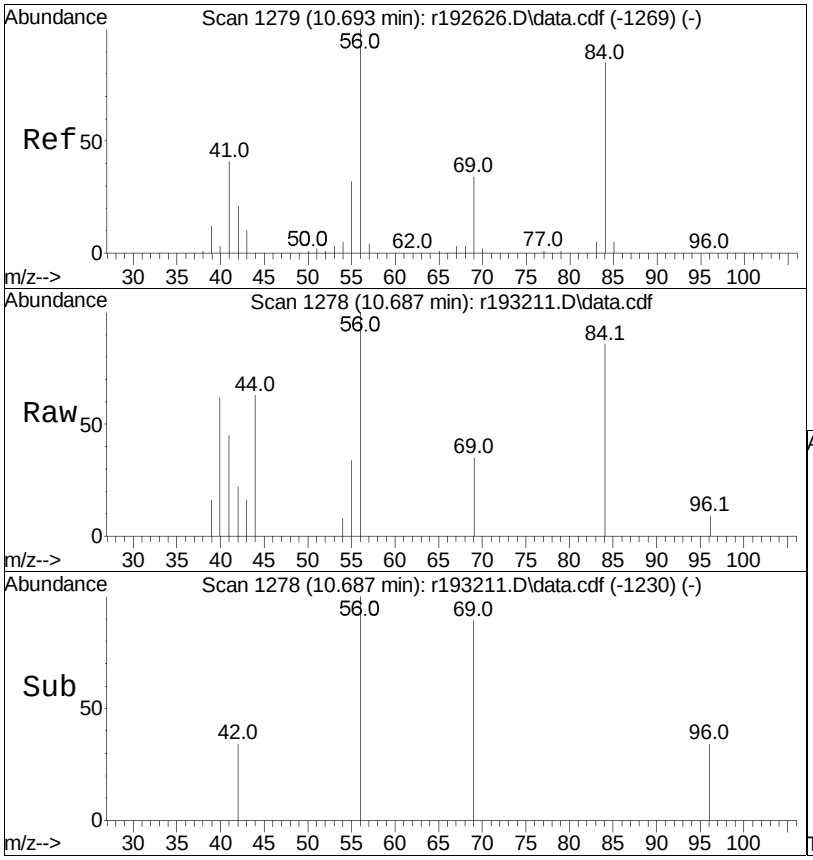



#50
benzene
Concen: 0.42 ppbV
RT: 10.400 min Scan# 1235
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 78 Resp: 30477

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 13.9 | 11.4 | 17.2 |

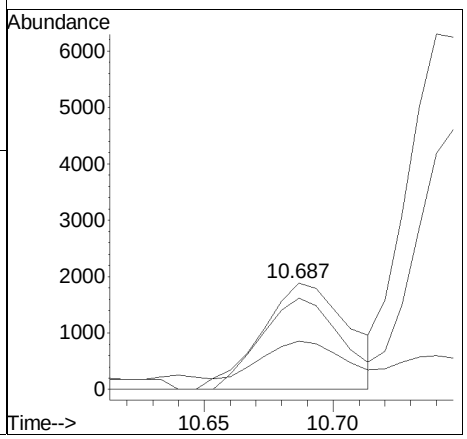


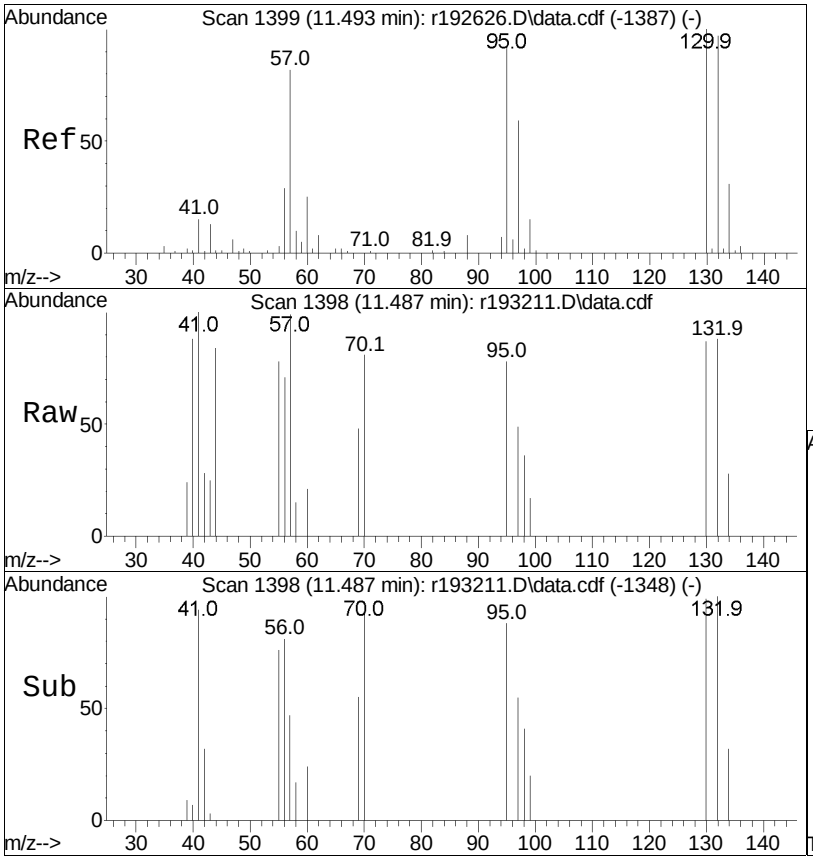



#53
cyclohexane
Concen: 0.11 ppbV
RT: 10.687 min Scan# 1278
Delta R.T. -0.007 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 56 Resp: 4392

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 85.8 | 69.8 | 104.6 |
| 41 | 45.5 | 32.1 | 48.1 |

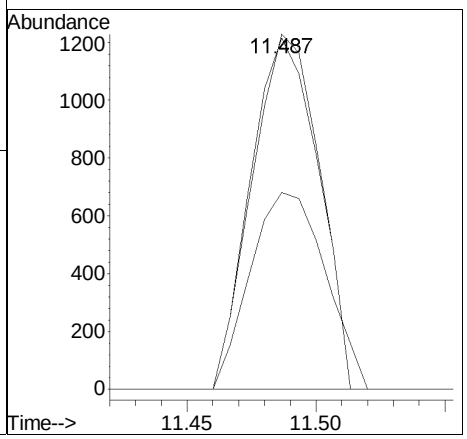


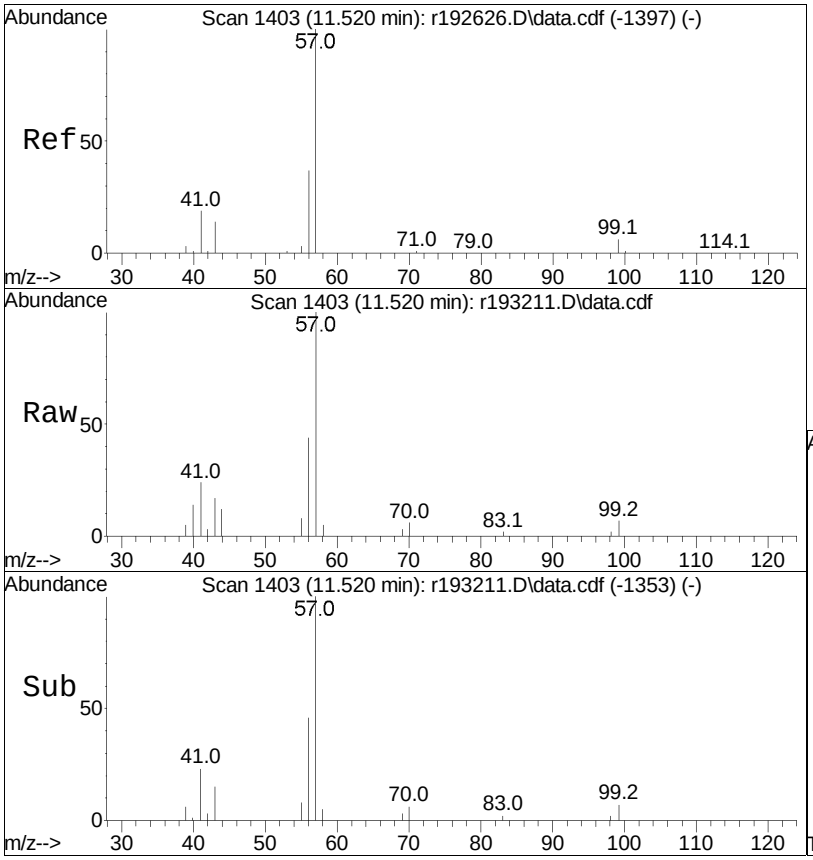



#59
trichloroethene
Concen: 0.09 ppbV
RT: 11.487 min Scan# 1398
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:130 Resp: 2224

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 101.2 | 73.8 | 110.8 |
| 97 | 56.0 | 46.9 | 70.3 |

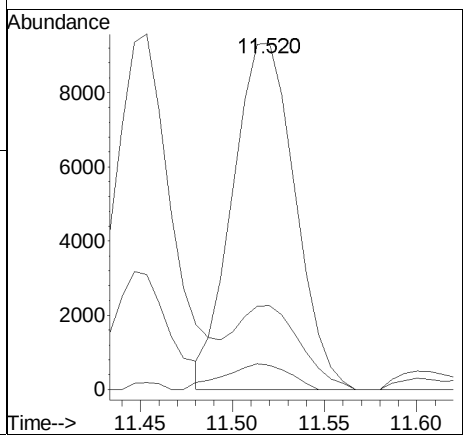


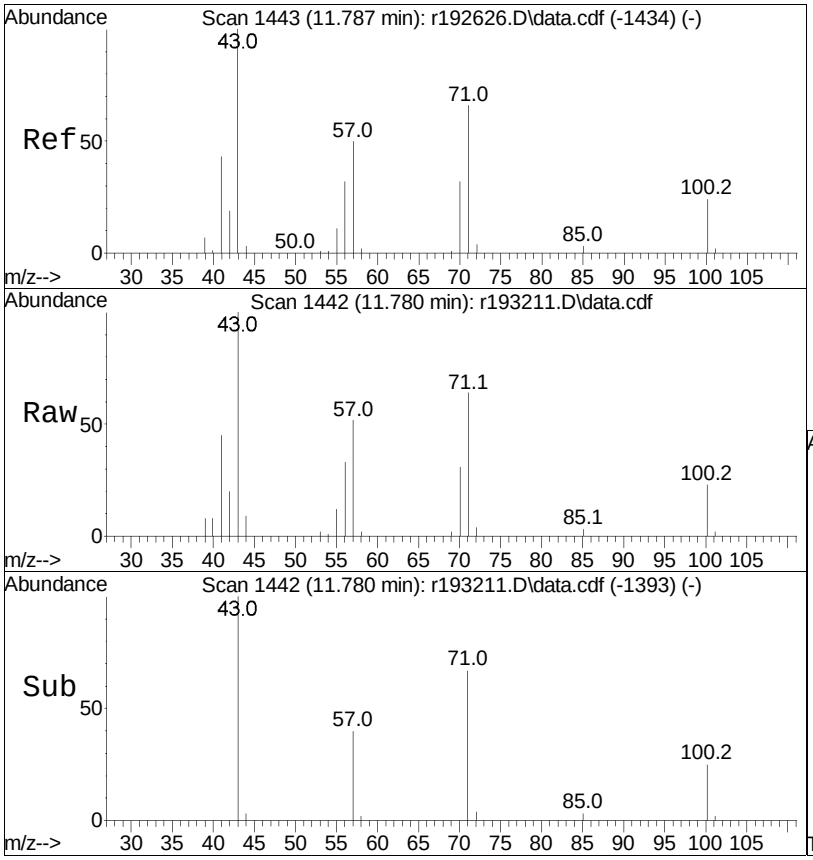



#60
2,2,4-trimethylpentane
Concen: 0.19 ppbV
RT: 11.520 min Scan# 1403
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 57 Resp: 22014

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.0 | 6.0 | 9.0 |
| 41 | 24.2 | 15.6 | 23.4# |

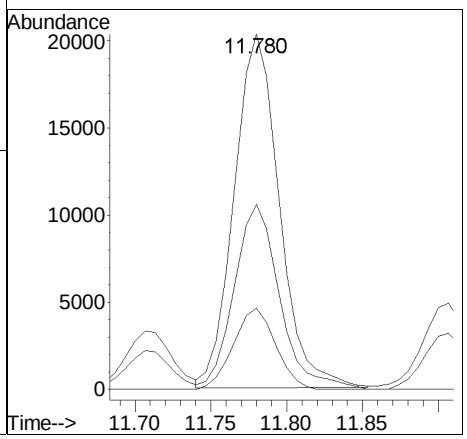


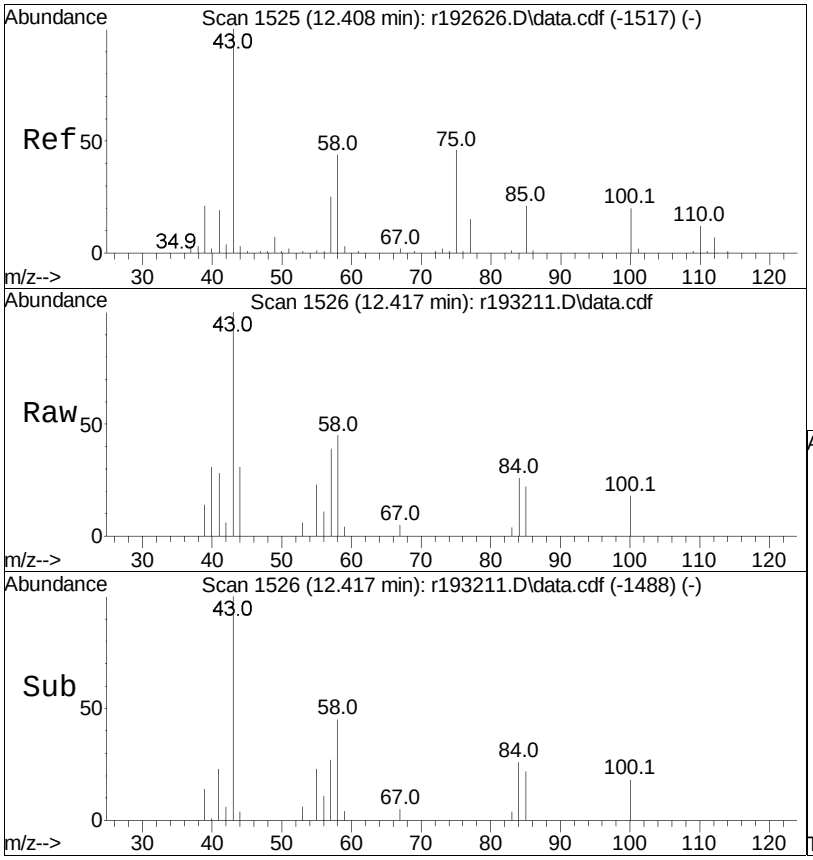



#62
heptane
Concen: 0.94 ppbV
RT: 11.780 min Scan# 1442
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 43 Resp: 41996

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 52.0 | 41.0 | 61.6 |
| 100 | 22.9 | 21.4 | 32.2 |

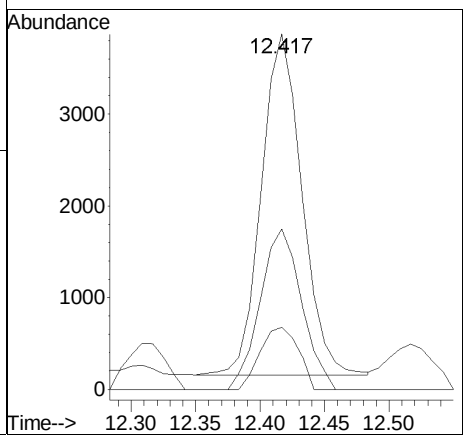


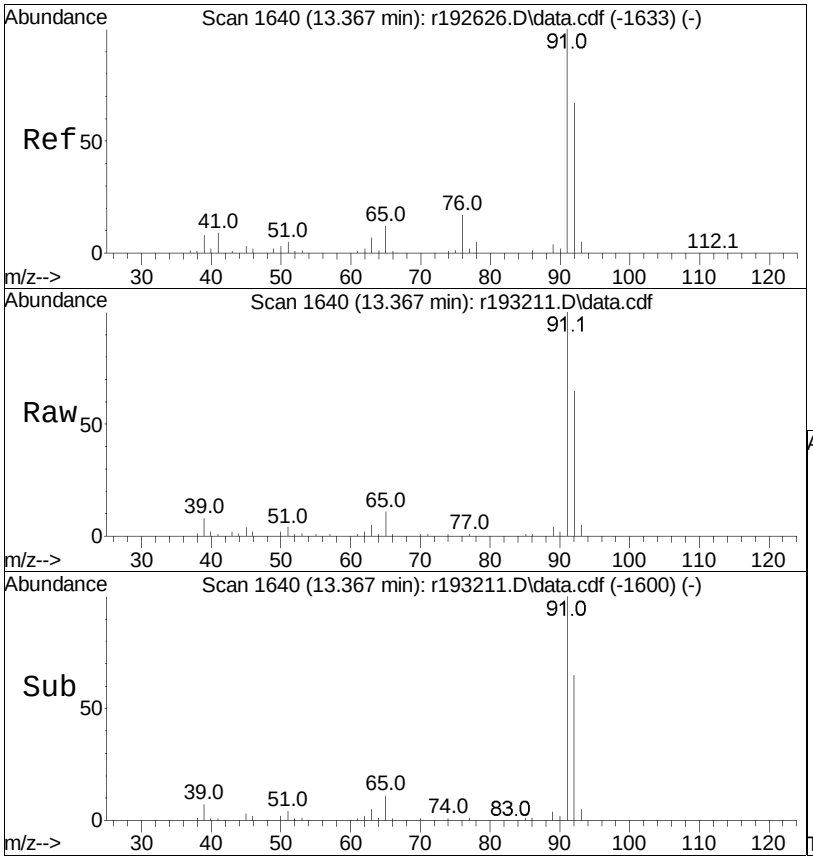



#64
4-methyl-2-pentanone
Concen: 0.17 ppbV
RT: 12.417 min Scan# 1526
Delta R.T. -0.017 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 43 Resp: 8112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 45.2 | 32.9 | 49.3 |
| 100 | 17.5 | 15.4 | 23.2 |

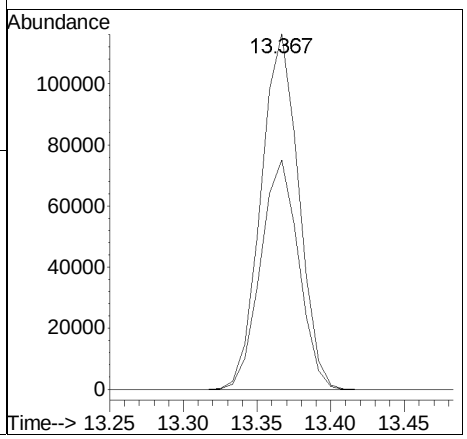


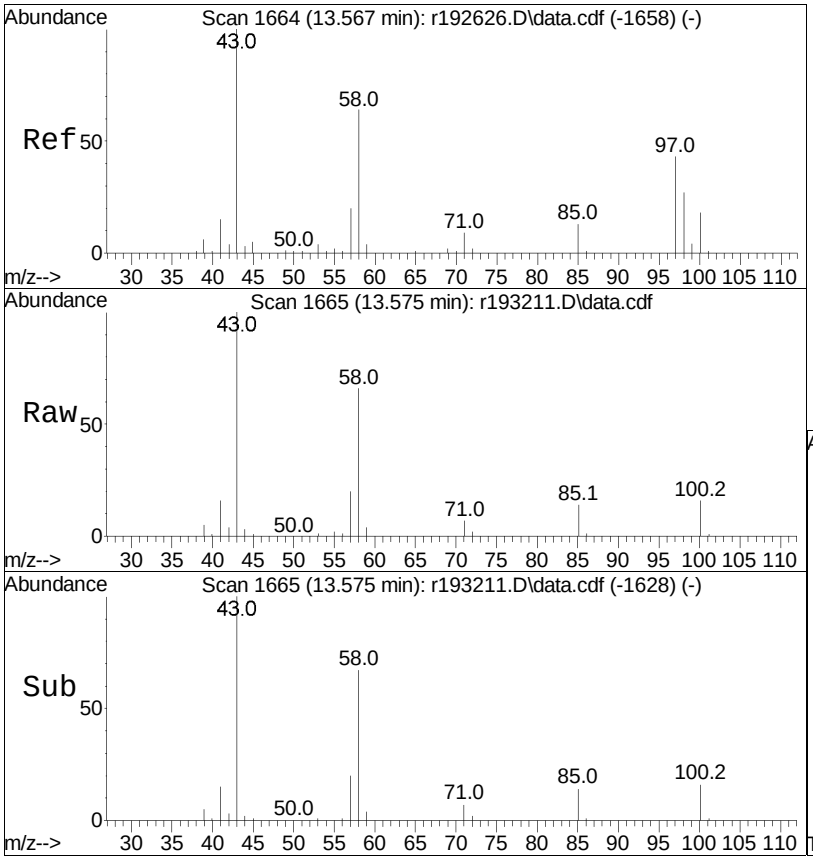



#68
toluene
Concen: 2.78 ppbV
RT: 13.367 min Scan# 1640
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 91 Resp: 207155

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 64.6 | 53.3 | 79.9 |

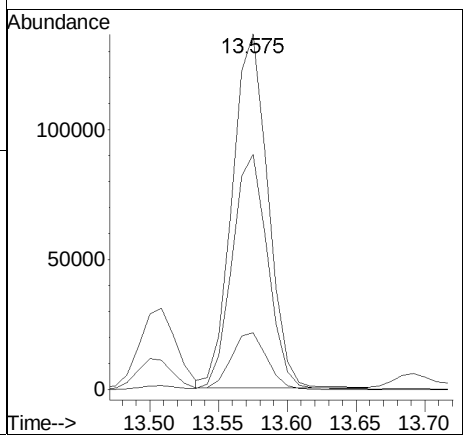


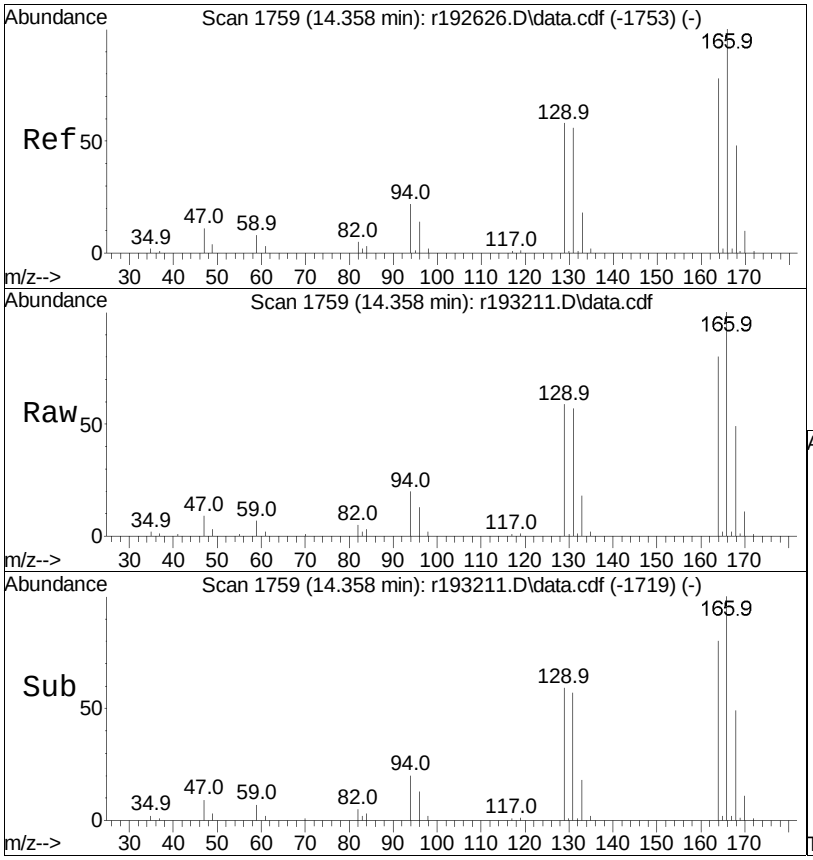



#72
2-hexanone
Concen: 5.70 ppbV
RT: 13.575 min Scan# 1665
Delta R.T. -0.025 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 43 Resp: 246686

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 66.1 | 62.6 | 94.0 |
| 100 | 16.0 | 26.5 | 39.7# |

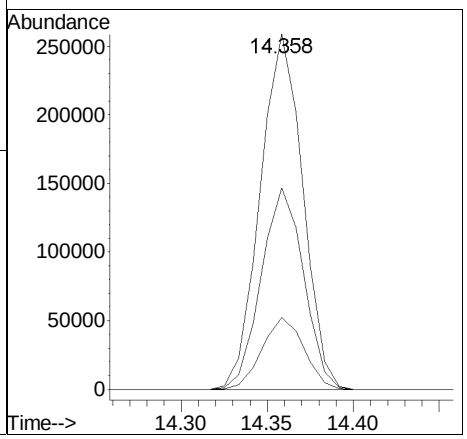


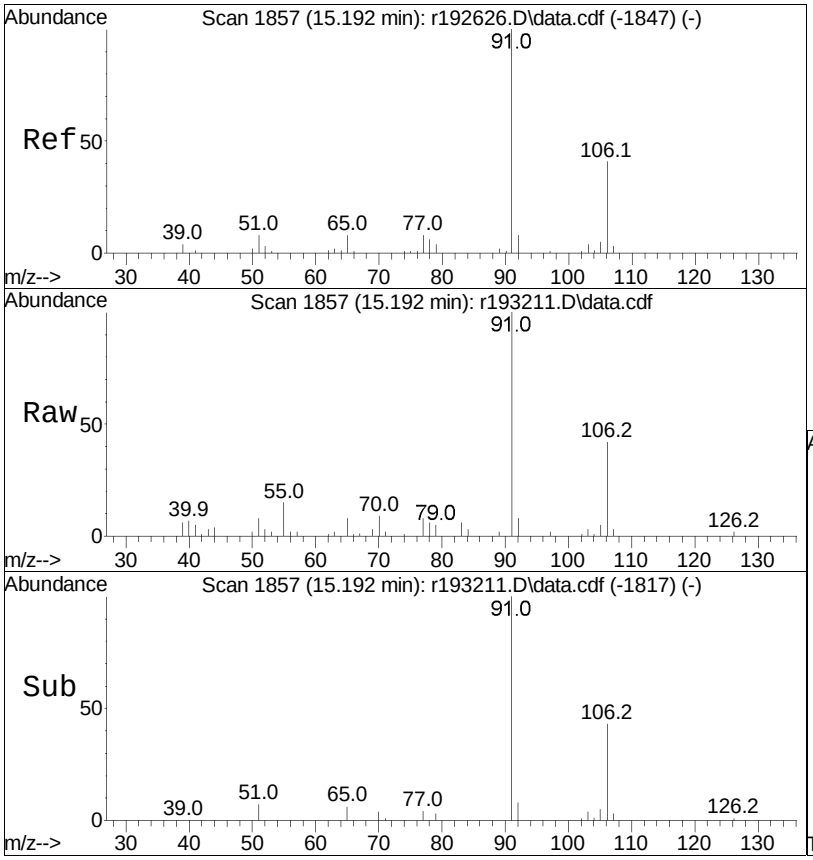



#78
tetrachloroethene
Concen: 13.61 ppbV
RT: 14.358 min Scan# 1759
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:166 Resp: 445228

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 56.7 | 46.4 | 69.6 |
| 94 | 20.2 | 18.5 | 27.7 |

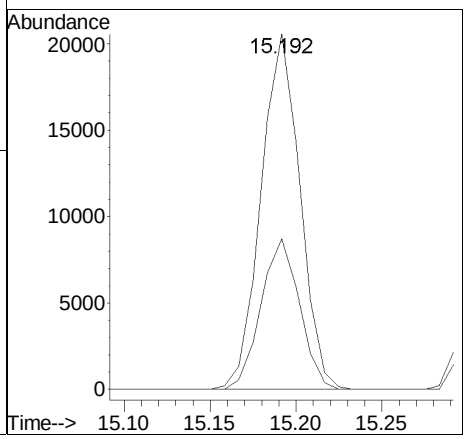


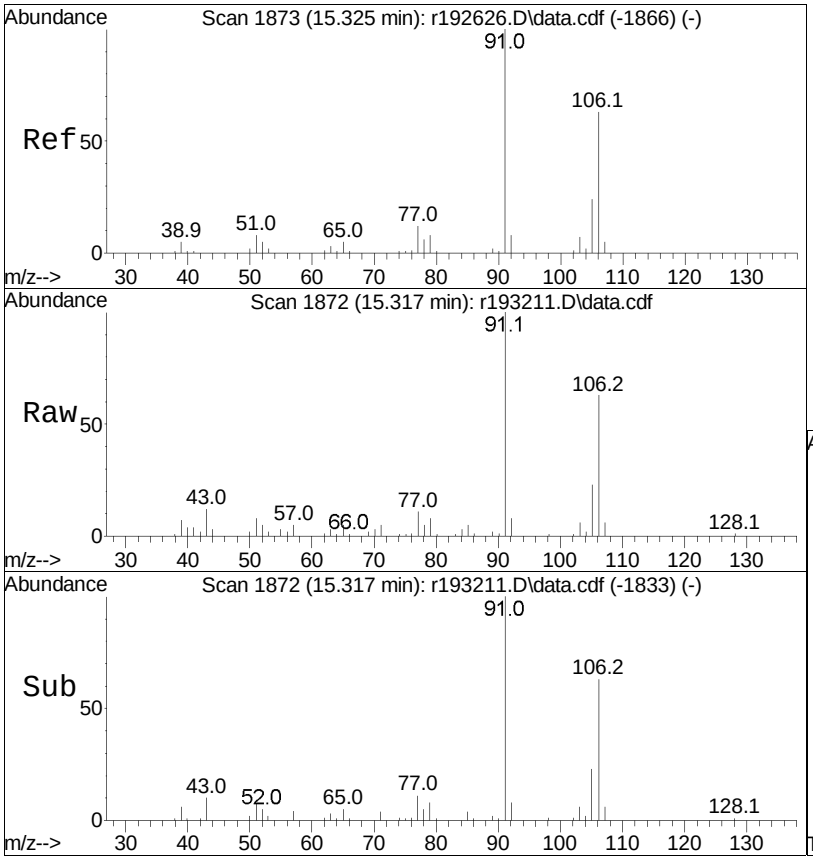



#81
ethylbenzene
Concen: 0.36 ppbV
RT: 15.192 min Scan# 1857
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 91 Resp: 32341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 42.4 | 32.9 | 49.3 |

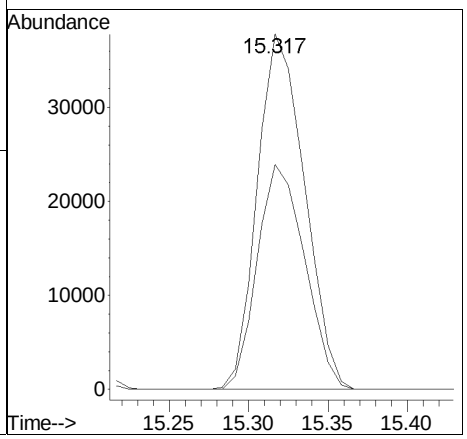


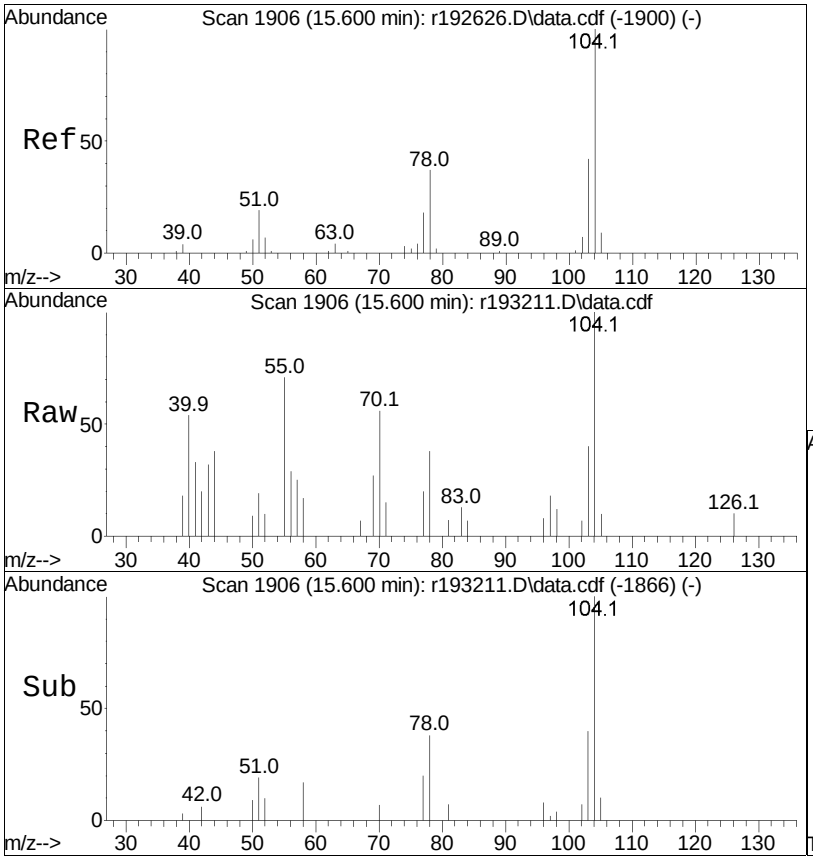



#83
m+p-xylene
Concen: 1.11 ppbV
RT: 15.317 min Scan# 1872
Delta R.T. -0.008 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 91 Resp: 78329

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 63.3 | 51.0 | 76.4 |

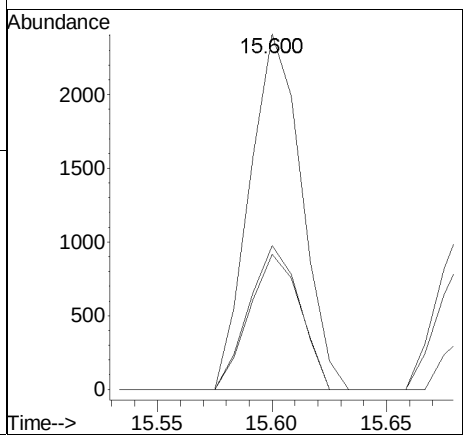


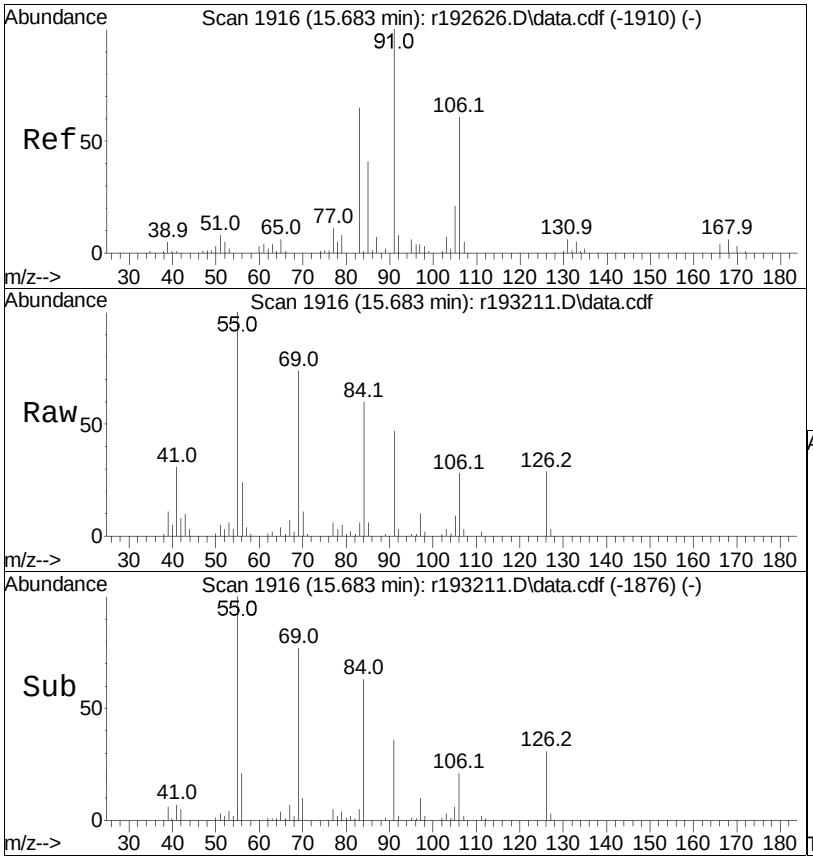



#85
styrene
Concen: 0.06 ppbV
RT: 15.600 min Scan# 1906
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:104 Resp: 3798

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 40.5 | 33.4 | 50.0 |
| 78 | 38.0 | 30.6 | 46.0 |

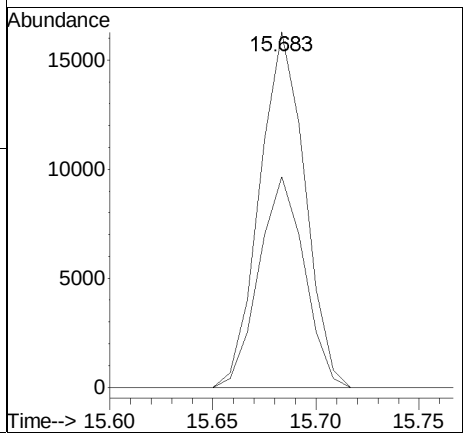


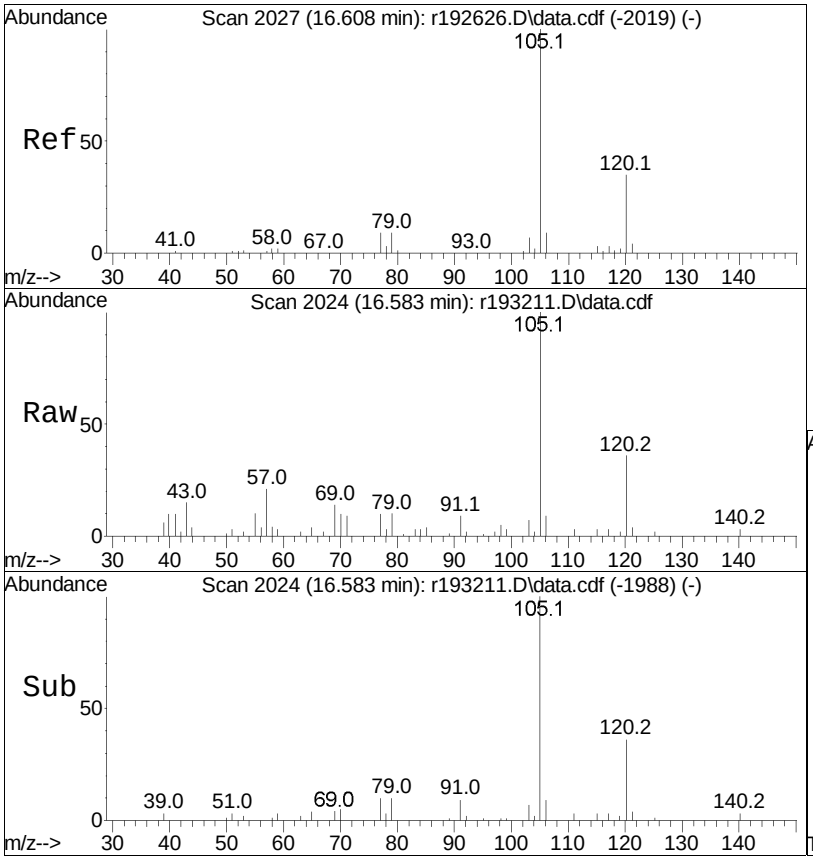



#87
o-xylene
Concen: 0.36 ppbV
RT: 15.683 min Scan# 1916
Delta R.T. 0.000 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion: 91 Resp: 24848

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 59.3 | 47.8 | 71.8 |

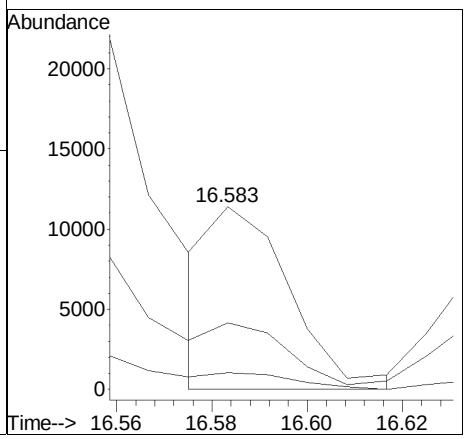


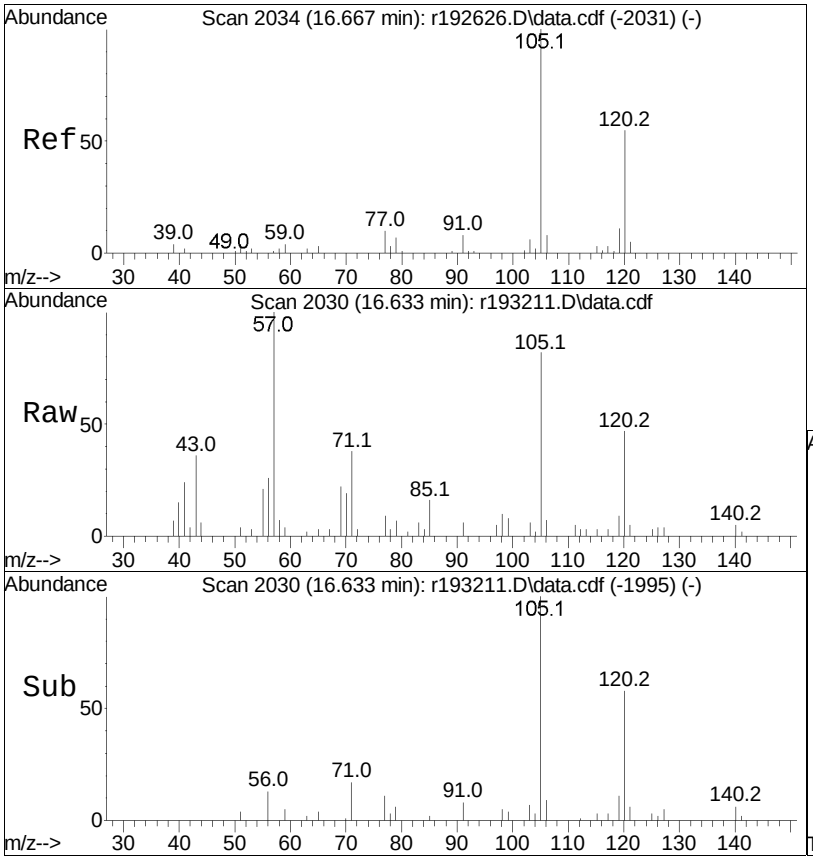



#96
4-ethyl toluene
Concen: 0.11 ppbV m
RT: 16.583 min Scan# 2024
Delta R.T. -0.033 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:105 Resp: 13157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 36.5 | 27.2 | 40.8 |
| 91 | 9.1 | 7.0 | 10.4 |

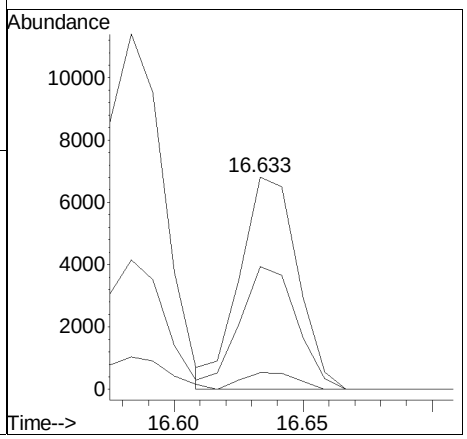


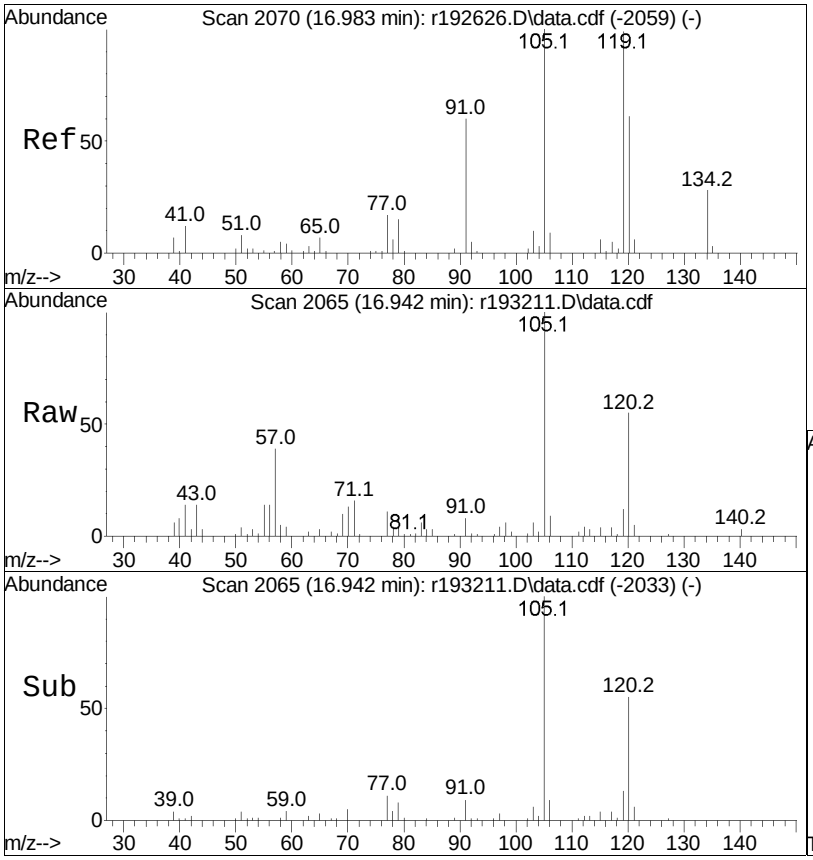



#97
1,3,5-trimethylbenzene
Concen: 0.11 ppbV
RT: 16.633 min Scan# 2030
Delta R.T. -0.042 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:105 Resp: 10609

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 57.9 | 42.6 | 64.0 |
| 91 | 7.9 | 6.6 | 9.8 |

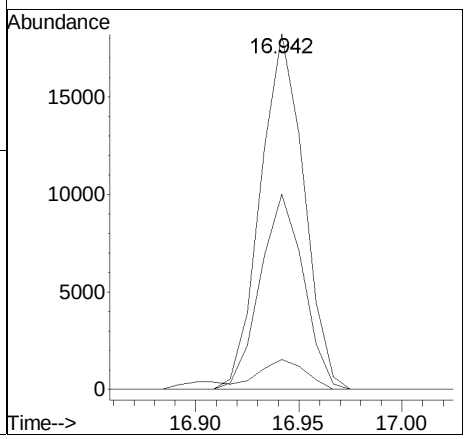





#99
1,2,4-trimethylbenzene
Concen: 0.31 ppbV
RT: 16.942 min Scan# 2065
Delta R.T. -0.050 min
Lab File: r193211.D
Acq: 21 Mar 2020 3:40 AM

Tgt Ion:105 Resp: 26668

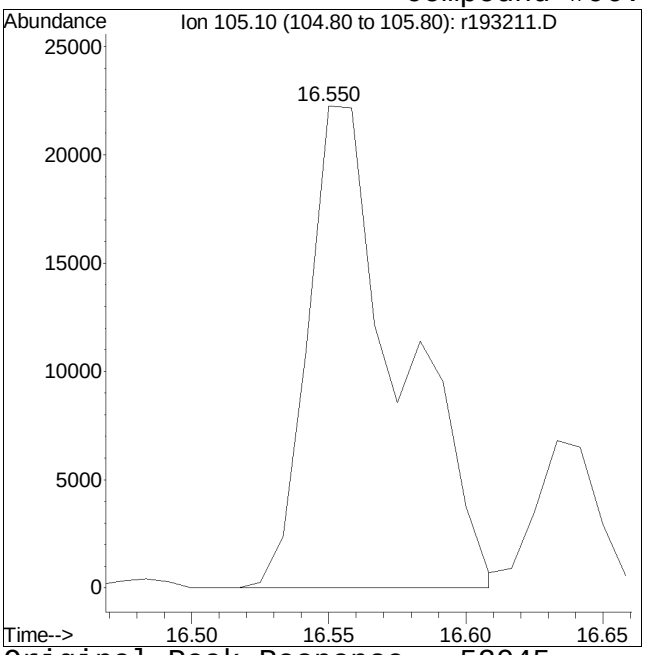
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 54.9 | 49.2 | 73.8 |
| 91 | 8.4 | 49.9 | 74.9# |



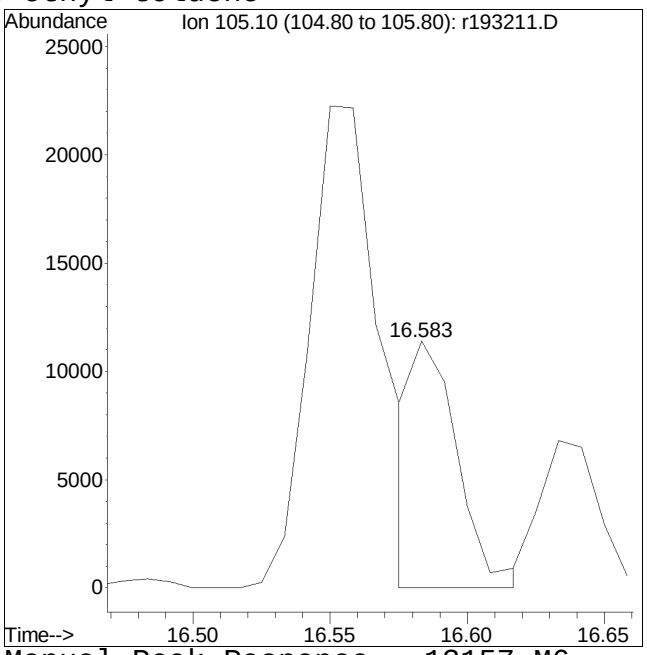
Manual Integration Report

Data Path : O:\Forensics\Data\Airlab19QMethod : TFS19_200224.M
Data File : r193211.D Operator : AIRLAB19:EW
Date Inj'd : 3/21/2020 0:3: 0 Instrument :
Sample : L2011723-04D,3,100,250 Quant Date : 3/21/2020 7:58 am

Compound #96: 4-ethyl toluene




Original Peak Response = 52045




Manual Peak Response = 13157 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Volatiles Standards Data

# Initial Calibration

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRLAB19** | **Ical Ref** | **: ICAL16553** |
| **Calibration dates** | **: 02/25/20 02:44 02/25/20 07:28** | | |

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | |
| 2) | | chlorodifluoromethane | 0.715 | 0.677 | 0.674 | 0.606 | 0.593 | 0.655 | 0.564 | 0.521 | 0.6257 | 10.44 |
| 3) | | propylene | | 0.478 | 0.452 | 0.406 | 0.397 | 0.429 | 0.371 | 0.343 | 0.4107 | 11.32 |
| 4) | | propane | | 0.535 | 0.517 | 0.440 | 0.420 | 0.452 | 0.396 | 0.359 | 0.4458 | 14.10 |
| 5) | | dichlorodifluoromethane | 0.645 | 0.653 | 0.572 | 0.558 | 0.522 | 0.578 | 0.510 | 0.446 | 0.5604 | 12.32 |
| 6) | C | chloromethane | 0.379 | 0.394 | 0.384 | 0.369 | 0.329 | 0.388 | 0.329 | 0.296 | 0.3584 | 9.98 |
| 7) | | Freon-114 | 0.992 | 0.957 | 0.915 | 0.871 | 0.814 | 0.830 | 0.686 | 0.588 | 0.8316 | 16.42 |
| 8) | C | methanol | | | 0.207 | 0.162 | 0.153 | 0.163 | 0.149 | 0.138 | 0.1621 | 14.74 |
| 9) | C | vinyl chloride | 0.511 | 0.500 | 0.492 | 0.442 | 0.411 | 0.430 | 0.401 | 0.371 | 0.4449 | 11.53 |
| 10) | C | 1,3-butadiene | 0.410 | 0.422 | 0.414 | 0.374 | 0.369 | 0.390 | 0.357 | 0.333 | 0.3836 | 8.07 |
| 11) | | butane | 0.759 | 0.710 | 0.679 | 0.614 | 0.581 | 0.608 | 0.560 | 0.519 | 0.6287 | 12.87 |
| 12) | C | acetaldehyde | | 0.222 | 0.209 | 0.205 | 0.187 | 0.178 | 0.147 | 0.128 | 0.1822 | 18.81 |
| 13) | C | bromomethane | 0.397 | 0.399 | 0.403 | 0.348 | 0.341 | 0.337 | 0.311 | 0.280 | 0.3520 | 12.74 |
| 14) | C | chloroethane | 0.252 | 0.262 | 0.248 | 0.233 | 0.220 | 0.226 | 0.220 | 0.205 | 0.2332 | 8.28 |
| 15) | | ethanol | | | 0.346 | 0.307 | 0.284 | 0.302 | 0.271 | 0.244 | 0.2922 | 11.87 |
| 16) | | dichlorofluoromethane | 0.695 | 0.698 | 0.696 | 0.612 | 0.592 | 0.590 | 0.549 | 0.509 | 0.6177 | 11.70 |
| 17) | C | vinyl bromide | 0.430 | 0.438 | 0.410 | 0.376 | 0.367 | 0.364 | 0.342 | 0.317 | 0.3806 | 11.17 |
| 18) | C | acrolein | | 0.225 | 0.228 | 0.201 | 0.199 | 0.198 | 0.194 | 0.184 | 0.2043 | 8.03 |
| 19) | | acetone | 0.620 | 0.584 | 0.565 | 0.547 | 0.515 | 0.646 | 0.428 | 0.391 | 0.5370 | 16.60 |
| 20) | C | acetonitrile | 0.438 | 0.406 | 0.390 | 0.396 | 0.386 | 0.384 | 0.370 | 0.349 | 0.3898 | 6.65 |
| 21) | | trichlorofluoromethane | 0.568 | 0.557 | 0.551 | 0.626 | 0.660 | 0.656 | 0.617 | 0.474 | 0.5887 | 10.70 |
| 22) | | isopropyl alcohol | 1.360 | 1.185 | 1.094 | 1.020 | 0.932 | 0.962 | 0.860 | 0.748 | 1.0202 | 18.84 |
| 23) | C | acrylonitrile | 0.568 | 0.562 | 0.540 | 0.496 | 0.499 | 0.502 | 0.496 | 0.471 | 0.5169 | 6.82 |
| 24) | | pentane | 1.210 | 1.158 | 1.152 | 1.045 | 1.013 | 1.018 | 0.923 | 0.823 | 1.0427 | 12.41 |
| 25) | | ethyl ether | 1.015 | 1.006 | 0.993 | 0.905 | 0.880 | 0.872 | 0.802 | 0.708 | 0.8976 | 11.97 |
| 26) | C | 1,1-dichloroethene | 0.769 | 0.758 | 0.745 | 0.684 | 0.660 | 0.650 | 0.612 | 0.549 | 0.6785 | 11.32 |
| 27) | | tertiary butyl alcohol | | 1.052 | 1.011 | 0.954 | 0.850 | 0.941 | 0.913 | 0.827 | 0.9353 | 8.64 |
| 28) | C | methylene chloride | | 0.751 | 0.726 | 0.654 | 0.644 | 0.652 | 0.612 | 0.557 | 0.6565 | 9.99 |
| 29) | C | 3-chloropropene | 0.873 | 0.859 | 0.846 | 0.782 | 0.765 | 0.773 | 0.744 | 0.687 | 0.7911 | 8.06 |
| 30) | C | carbon disulfide | 2.084 | 2.108 | 2.068 | 1.853 | 1.808 | 1.750 | 1.588 | 1.339 | 1.8247 | 14.73 |
| 31) | | Freon 113 | 1.114 | 1.102 | 1.078 | 0.975 | 0.937 | 0.913 | 0.827 | 0.712 | 0.9571 | 14.77 |
| 32) | | trans-1,2-dichloroethene | 0.877 | 0.866 | 0.850 | 0.772 | 0.753 | 0.745 | 0.715 | 0.644 | 0.7778 | 10.48 |
| 33) | C | 1,1-dichloroethane | 1.040 | 1.049 | 1.020 | 0.946 | 0.923 | 0.911 | 0.884 | 0.808 | 0.9475 | 8.87 |
| 34) | C | MTBE | 1.719 | 1.690 | 1.676 | 1.542 | 1.499 | 1.491 | 1.408 | 1.262 | 1.5360 | 10.20 |
| 35) | C | vinyl acetate | | | 1.453 | 1.318 | 1.311 | 1.311 | 1.269 | 1.169 | 1.3050 | 7.01 |
| 36) | C | 2-butanone | | 1.356 | 1.324 | 1.208 | 1.191 | 1.180 | 1.132 | 1.034 | 1.2036 | 9.13 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRLAB19** | **Ical Ref** | **: ICAL16553** |
| **Calibration dates** | **: 02/25/20 02:44 02/25/20 07:28** | | |

Calibration Files

0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D

50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37) | | cis-1,2-dichloroethene | 0.757 | 0.745 | 0.731 | 0.668 | 0.655 | 0.648 | 0.625 | 0.565 | 0.6741 | 9.79 |
| 38) | | Ethyl Acetate | 0.211 | 0.236 | 0.225 | 0.208 | 0.209 | 0.202 | 0.188 | 0.159 | 0.2048 | 11.52 |
| 39) | C | chloroform | 0.935 | 0.954 | 0.941 | 0.841 | 0.810 | 0.795 | 0.752 | 0.663 | 0.8364 | 12.29 |
| 40) | | Tetrahydrofuran | 0.894 | 0.887 | 0.876 | 0.798 | 0.787 | 0.782 | 0.755 | 0.691 | 0.8088 | 8.87 |
| 41) | | 2,2-dichloropropane | 0.783 | 0.773 | 0.766 | 0.702 | 0.681 | 0.660 | 0.629 | 0.557 | 0.6938 | 11.40 |
| 42) | C | 1,2-dichloroethane | 0.453 | 0.458 | 0.448 | 0.406 | 0.395 | 0.387 | 0.375 | 0.347 | 0.4086 | 9.93 |
| 43) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 44) | C | hexane | 0.434 | 0.423 | 0.421 | 0.379 | 0.364 | 0.358 | 0.304 | 0.249 | 0.3665 | 17.41 |
| 45) | | diisopropyl ether | 0.225 | 0.224 | 0.223 | 0.205 | 0.197 | 0.193 | 0.167 | 0.139 | 0.1966 | 15.55 |
| 46) | | tert-butyl ethyl ether | 0.649 | 0.645 | 0.643 | 0.586 | 0.568 | 0.560 | 0.499 | 0.437 | 0.5734 | 13.22 |
| 47) | s | 1,2-dichloroethane-D4 | 0.128 | 0.129 | 0.129 | 0.130 | 0.128 | 0.130 | 0.121 | 0.114 | 0.1260 | 4.41 |
| 48) | C | 1,1,1-trichloroethane | 0.266 | 0.269 | 0.271 | 0.241 | 0.232 | 0.226 | 0.201 | 0.176 | 0.2353 | 14.60 |
| 49) | | 1,1-dichloropropene | 0.334 | 0.319 | 0.315 | 0.292 | 0.281 | 0.281 | 0.250 | 0.218 | 0.2859 | 13.38 |
| 50) | C | benzene | 0.831 | 0.819 | 0.808 | 0.736 | 0.713 | 0.708 | 0.630 | 0.542 | 0.7231 | 13.82 |
| 51) | | thiophene | 1.721 | 1.707 | 1.682 | 1.489 | 1.402 | 1.318 | 1.007 | 0.796 | 1.3902 | 24.47 |
| 52) | C | carbon tetrachloride | 0.229 | 0.232 | 0.226 | 0.207 | 0.193 | 0.185 | 0.152 | 0.128 | 0.1939 | 19.61 |
| 53) | | cyclohexane | 0.462 | 0.446 | 0.444 | 0.406 | 0.399 | 0.394 | 0.349 | 0.308 | 0.4009 | 12.98 |
| 54) | | tert-amyl methyl ether | 0.675 | 0.695 | 0.694 | 0.635 | 0.616 | 0.613 | 0.544 | 0.474 | 0.6183 | 12.47 |
| 55) | | dibromomethane | 0.219 | 0.209 | 0.207 | 0.185 | 0.174 | 0.168 | 0.144 | 0.119 | 0.1782 | 19.25 |
| 56) | C | 1,2-dichloropropane | 0.263 | 0.262 | 0.261 | 0.236 | 0.230 | 0.226 | 0.200 | 0.172 | 0.2313 | 13.98 |
| 57) | | bromodichloromethane | 0.365 | 0.369 | 0.358 | 0.322 | 0.312 | 0.304 | 0.267 | 0.225 | 0.3153 | 16.03 |
| 58) | C | 1,4-dioxane | 0.186 | 0.180 | 0.186 | 0.168 | 0.158 | 0.165 | 0.146 | 0.120 | 0.1637 | 13.64 |
| 59) | C | trichloroethene | 0.313 | 0.304 | 0.296 | 0.270 | 0.257 | 0.248 | 0.207 | 0.167 | 0.2577 | 19.58 |
| 60) | C | 2,2,4-trimethylpentane | 1.369 | 1.351 | 1.332 | 1.205 | 1.122 | 1.134 | 0.968 | 0.774 | 1.1569 | 17.89 |
| 61) | | methyl methacrylate | | 0.329 | 0.323 | 0.335 | 0.325 | 0.292 | 0.260 | 0.227 | 0.2987 | 13.73 |
| 62) | | heptane | 0.518 | 0.501 | 0.511 | 0.463 | 0.446 | 0.441 | 0.377 | 0.320 | 0.4472 | 15.47 |
| 63) | C | cis-1,3-dichloropropene | 0.399 | 0.389 | 0.392 | 0.358 | 0.348 | 0.335 | 0.287 | 0.244 | 0.3441 | 15.84 |
| 64) | C | 4-methyl-2-pentanone | | 0.553 | 0.563 | 0.521 | 0.497 | 0.484 | 0.409 | 0.341 | 0.4811 | 16.62 |
| 65) | | trans-1,3-dichloropropene | 0.333 | 0.339 | 0.343 | 0.320 | 0.314 | 0.306 | 0.277 | 0.244 | 0.3095 | 10.96 |
| 66) | C | 1,1,2-trichloroethane | 0.281 | 0.286 | 0.285 | 0.263 | 0.250 | 0.246 | 0.219 | 0.184 | 0.2518 | 14.16 |
| 67) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | |
| 68) | C | toluene | 7.251 | 7.097 | 6.908 | 6.288 | 6.056 | 5.799 | 5.061 | 4.253 | 6.0893 | 17.10 |
| 69) | s | toluene-D8 | 5.794 | 5.784 | 5.787 | 5.851 | 5.936 | 5.981 | 6.085 | 6.004 | 5.9027 | 1.95 |
| 70) | | 2-methylthiophene | 2.222 | 2.194 | 2.176 | 1.891 | 1.717 | 1.501 | 1.116 | 0.848 | 1.7081 | 30.39# |
| 71) | | 1,3-dichloropropane | 3.211 | 3.222 | 3.170 | 2.948 | 2.850 | 2.752 | 2.461 | 2.152 | 2.8457 | 13.48 |
| 72) | | 2-hexanone | 3.992 | 3.827 | 3.924 | 3.682 | 3.572 | 3.478 | 3.124 | 2.706 | 3.5382 | 12.31 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRLAB19** | **Ical Ref** | **: ICAL16553** |
| **Calibration dates** | **: 02/25/20 02:44 02/25/20 07:28** | | |

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73) | | 3-methylthiophene | 2.292 | 2.250 | 2.213 | 1.902 | 1.765 | 1.525 | 1.117 | 0.852 | 1.7396 | 31.02# |
| 74) | | dibromochloromethane | 2.724 | 2.697 | 2.660 | 2.464 | 2.382 | 2.258 | 1.934 | 1.607 | 2.3405 | 16.96 |
| 75) | C | 1,2-dibromoethane | 3.145 | 3.223 | 3.137 | 2.904 | 2.824 | 2.726 | 2.399 | 2.041 | 2.8000 | 14.57 |
| 76) | | butyl acetate | | 0.965 | 1.018 | 0.956 | 0.940 | 0.935 | 0.868 | 0.756 | 0.9196 | 9.21 |
| 77) | | octane | 3.017 | 2.813 | 2.829 | 2.598 | 2.516 | 2.431 | 2.149 | 1.814 | 2.5206 | 15.58 |
| 78) | C | tetrachloroethene | 3.218 | 3.148 | 3.116 | 2.852 | 2.743 | 2.529 | 2.099 | 1.697 | 2.6754 | 20.26 |
| 79) | | 1,1,1,2-tetrachloroethane | 2.074 | 1.984 | 2.030 | 1.849 | 1.751 | 1.643 | 1.350 | 1.089 | 1.7214 | 20.24 |
| 80) | C | chlorobenzene | 5.657 | 5.656 | 5.583 | 5.130 | 4.898 | 4.661 | 3.945 | 3.183 | 4.8391 | 18.40 |
| 81) | C | ethylbenzene | 8.473 | 8.419 | 8.319 | 7.736 | 7.477 | 6.938 | 6.072 | 4.993 | 7.3035 | 17.05 |
| 82) | | 2-ethylthiophene | 2.313 | 2.340 | 2.275 | 1.950 | 1.750 | 1.474 | 1.069 | 0.800 | 1.7465 | 33.70# |
| 83) | C | m+p-xylene | 7.034 | 6.878 | 6.802 | 6.197 | 5.840 | 5.408 | 4.392 | 3.513 | 5.7578 | 21.97 |
| 84) | C | bromoform | 3.045 | 3.008 | 3.108 | 2.833 | 2.638 | 2.433 | 2.019 | 1.592 | 2.5844 | 20.98 |
| 85) | C | styrene | 6.332 | 6.369 | 6.384 | 5.835 | 5.656 | 5.437 | 4.675 | 3.892 | 5.5725 | 16.04 |
| 86) | C | 1,1,2,2-tetrachloroethane | 4.794 | 4.658 | 4.704 | 4.375 | 4.143 | 3.730 | 2.984 | 2.389 | 3.9723 | 22.14 |
| 87) | C | o-xylene | 7.250 | 6.837 | 6.807 | 6.138 | 5.730 | 5.150 | 4.049 | 3.234 | 5.6491 | 25.21 |
| 88) | | 1,2,3-trichloropropane | 3.710 | 3.760 | 3.683 | 3.481 | 3.343 | 3.233 | 2.878 | 2.454 | 3.3177 | 13.76 |
| 89) | | nonane | 5.554 | 5.402 | 5.359 | 4.893 | 4.682 | 4.399 | 3.696 | 3.125 | 4.6388 | 18.66 |
| 90) | s | bromofluorobenzene | 3.720 | 3.685 | 3.661 | 3.725 | 3.775 | 3.858 | 4.064 | 4.015 | 3.8131 | 4.01 |
| 91) | C | isopropylbenzene | 9.935 | 9.475 | 9.438 | 8.782 | 8.318 | 7.928 | 6.576 | 5.233 | 8.2108 | 19.55 |
| 92) | | bromobenzene | 5.167 | 5.069 | 4.994 | 4.650 | 4.503 | 4.341 | 3.671 | 3.027 | 4.4278 | 16.80 |
| 93) | | 2-chlorotoluene | 2.556 | 2.663 | 2.714 | 2.480 | 2.410 | 2.208 | 1.738 | 1.441 | 2.2762 | 20.13 |
| 94) | | n-propylbenzene | 3.167 | 3.133 | 3.168 | 3.002 | 2.877 | 2.621 | 2.157 | 1.767 | 2.7364 | 19.08 |
| 95) | | 4-chlorotoluene | 2.489 | 2.618 | 2.554 | 2.473 | 2.362 | 2.252 | 2.014 | 1.672 | 2.3042 | 13.86 |
| 96) | | 4-ethyl toluene | 1.122 | 1.096 | 1.110 | 1.040 | 1.004 | 0.921 | 0.734 | 0.626 | 0.9565 | 19.35 |
| 97) | | 1,3,5-trimethylbenzene | 8.937 | 8.916 | 9.259 | 8.432 | 7.961 | 7.149 | 5.906 | 4.929 | 7.6862 | 20.42 |
| 98) | | tert-butylbenzene | 8.944 | 8.584 | 8.729 | 7.914 | 7.383 | 6.238 | 4.801 | 4.011 | 7.0754 | 26.48 |
| 99) | | 1,2,4-trimethylbenzene | 8.683 | 8.754 | 8.947 | 8.079 | 7.519 | 6.291 | 4.728 | 3.914 | 7.1144 | 27.20 |
| 100) | | decane | 6.490 | 6.422 | 6.583 | 6.325 | 6.132 | 5.695 | 4.677 | 4.061 | 5.7980 | 16.18 |
| 101) | C | Benzyl Chloride | 5.816 | 5.870 | 6.235 | 6.417 | 6.379 | 5.863 | 4.862 | 4.394 | 5.7295 | 12.74 |
| 102) | | 1,3-dichlorobenzene | 5.436 | 5.406 | 5.713 | 5.474 | 5.239 | 4.728 | 3.715 | 3.269 | 4.8724 | 18.57 |
| 103) | C | 1,4-dichlorobenzene | 5.450 | 5.480 | 5.475 | 5.221 | 5.069 | 4.454 | 3.504 | 2.699 | 4.6689 | 22.41 |
| 104) | | sec-butylbenzene | 1.249 | 1.241 | 1.262 | 1.168 | 1.097 | 0.960 | 0.742 | 0.611 | 1.0413 | 23.86 |
| 105) | | 1,2,3-trimethylbenzene | 8.026 | 7.956 | 8.247 | 8.247 | 7.777 | 6.206 | 4.818 | 4.214 | 6.9365 | 23.63 |
| 106) | | p-isopropyltoluene | 1.096 | 1.044 | 1.061 | 0.991 | 0.938 | 0.803 | 0.621 | 0.512 | 0.8833 | 24.61 |
| 107) | | 1,2-dichlorobenzene | 5.038 | 5.123 | 5.207 | 5.164 | 4.998 | 4.490 | 3.635 | 3.306 | 4.6203 | 16.21 |
| 108) | | n-butylbenzene | 8.679 | 8.457 | 8.778 | 8.449 | 8.250 | 7.214 | 5.835 | 5.285 | 7.6183 | 17.92 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRLAB19** | **Ical Ref** | **: ICAL16553** |
| **Calibration dates** | **: 02/25/20 02:44 02/25/20 07:28** | | |

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109) | | indan | 7.790 | 7.898 | 8.062 | 8.549 | 8.141 | 6.775 | 5.387 | 4.698 | 7.1625 | 19.74 |
| 110) | | indene | 6.210 | 6.115 | 6.146 | 6.544 | 6.574 | 5.578 | 4.564 | 4.181 | 5.7392 | 15.73 |
| 111) | C | 1,2-dibromo-3-chloropropane | 2.058 | 1.884 | 1.946 | 1.928 | 1.912 | 1.662 | 1.424 | 1.392 | 1.7758 | 14.21 |
| 112) | | undecane | 7.224 | 6.610 | 7.022 | 7.042 | 7.033 | 6.157 | 4.949 | 4.325 | 6.2951 | 17.30 |
| 113) | | 1,2,4,5-tetramethylbenzene | 8.509 | 7.911 | 8.361 | 8.400 | 8.206 | 6.761 | 5.551 | 4.883 | 7.3227 | 19.44 |
| 114) | | dodecane | 6.360 | 6.364 | 7.176 | 7.854 | 7.805 | 5.382 | 4.450 | 3.548 | 6.1173 | 25.50 |
| 115) | C | 1,2,4-trichlorobenzene | 4.495 | 4.141 | 4.766 | 5.032 | 5.021 | 3.746 | 2.919 | 2.363 | 4.0604 | 24.35 |
| 116) | | naphthalene | 1.276 | 1.073 | 1.175 | 1.109 | 1.172 | 0.940 | 0.844 | 0.726 | 1.0393 | 17.96 |
| 117) | | 1,2,3-trichlorobenzene | 4.074 | 4.135 | 4.811 | 4.995 | 5.221 | 3.917 | 3.709 | 3.141 | 4.2503 | 16.62 |
| 118) | | benzothiophene | 7.697 | 7.827 | 9.294 | 6.056 | 6.620 | 7.669 | 7.428 | 6.451 | 7.3802 | 13.78 |
| 119) | C | hexachlorobutadiene | 4.112 | 3.721 | 4.285 | 4.328 | 4.192 | 3.034 | 2.511 | 2.047 | 3.5287 | 25.13 |
| 120) | | 2-methylnaphthalene | | | 1.907 | 1.328 | 1.635 | 1.405 | 2.359 | 2.691 | 1.8874 | 28.81 |
| 121) | | 1-methylnaphthalene | | | 2.979 | 3.085 | 3.508 | 2.381 | 3.602 | 3.955 | 3.2517 | 17.09 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16594** |
| **Calibration dates** | **: 03/12/20 12:25 03/12/20 17:00** | | |

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | |
| 2) | | chlorodifluoromethane | 0.888 | 0.848 | 0.845 | 0.777 | 0.753 | 0.755 | 0.647 | 0.582 | 0.7618 | 13.70 |
| 3) | | propylene | | 0.525 | 0.516 | 0.473 | 0.445 | 0.444 | 0.401 | 0.371 | 0.4536 | 12.41 |
| 4) | | propane | | 0.720 | 0.695 | 0.615 | 0.598 | 0.602 | 0.520 | 0.464 | 0.6021 | 14.94 |
| 5) | | dichlorodifluoromethane | 1.087 | 1.070 | 1.064 | 0.949 | 0.911 | 0.886 | 0.677 | 0.587 | 0.9039 | 20.56 |
| 6) | C | chloromethane | 0.476 | 0.479 | 0.470 | 0.423 | 0.410 | 0.411 | 0.347 | 0.308 | 0.4153 | 14.95 |
| 7) | | Freon-114 | 1.364 | 1.336 | 1.313 | 1.169 | 1.110 | 1.075 | 0.802 | 0.631 | 1.0997 | 23.94 |
| 8) | C | methanol | | | 0.256 | 0.214 | 0.205 | 0.202 | 0.173 | 0.153 | 0.2005 | 17.72 |
| 9) | C | vinyl chloride | 0.547 | 0.536 | 0.526 | 0.482 | 0.468 | 0.485 | 0.432 | 0.400 | 0.4844 | 10.58 |
| 10) | C | 1,3-butadiene | 0.545 | 0.542 | 0.537 | 0.494 | 0.479 | 0.492 | 0.426 | 0.372 | 0.4857 | 12.58 |
| 11) | | butane | 0.856 | 0.825 | 0.803 | 0.724 | 0.701 | 0.701 | 0.579 | 0.516 | 0.7132 | 16.64 |
| 12) | C | acetaldehyde | | 0.281 | 0.266 | 0.253 | 0.237 | 0.199 | 0.150 | 0.124 | 0.2159 | 27.85 |
| 13) | C | bromomethane | 0.444 | 0.456 | 0.447 | 0.401 | 0.393 | 0.404 | 0.351 | 0.312 | 0.4011 | 12.43 |
| 14) | C | chloroethane | 0.279 | 0.274 | 0.268 | 0.240 | 0.235 | 0.244 | 0.220 | 0.210 | 0.2464 | 10.20 |
| 15) | | ethanol | | | 0.481 | 0.434 | 0.409 | 0.470 | 0.299 | 0.245 | 0.3895 | 24.70 |
| 16) | | dichlorofluoromethane | 0.853 | 0.854 | 0.839 | 0.764 | 0.740 | 0.770 | 0.607 | 0.542 | 0.7461 | 15.51 |
| 17) | C | vinyl bromide | 0.513 | 0.520 | 0.507 | 0.467 | 0.458 | 0.525 | 0.375 | 0.321 | 0.4606 | 16.30 |
| 18) | C | acrolein | | 0.283 | 0.273 | 0.248 | 0.247 | 0.275 | 0.231 | 0.214 | 0.2531 | 10.03 |
| 19) | | acetone | 0.781 | 0.741 | 0.717 | 0.700 | 0.669 | 0.768 | 0.444 | 0.370 | 0.6487 | 23.87 |
| 20) | C | acetonitrile | 0.493 | 0.451 | 0.443 | 0.405 | 0.395 | 0.501 | 0.335 | 0.310 | 0.4165 | 16.57 |
| 21) | | trichlorofluoromethane | 0.807 | 0.791 | 0.790 | 0.715 | 0.691 | 0.866 | 0.534 | 0.448 | 0.7053 | 20.54 |
| 22) | | isopropyl alcohol | 0.992 | 0.914 | 0.869 | 0.865 | 0.832 | 1.001 | 0.627 | 0.537 | 0.8294 | 19.99 |
| 23) | C | acrylonitrile | 0.488 | 0.473 | 0.480 | 0.450 | 0.444 | 0.513 | 0.408 | 0.368 | 0.4528 | 10.34 |
| 24) | | pentane | 0.974 | 0.948 | 0.925 | 0.843 | 1.012 | 1.063 | 1.082 | 0.768 | 0.9516 | 11.22 |
| 25) | | ethyl ether | 1.007 | 0.992 | 0.988 | 0.978 | 0.988 | 1.162 | 1.209 | 0.785 | 1.0136 | 12.67 |
| 26) | C | 1,1-dichloroethene | 0.694 | 0.713 | 0.697 | 0.631 | 0.615 | 0.732 | 0.652 | 0.576 | 0.6638 | 8.13 |
| 27) | | tertiary butyl alcohol | | 1.045 | 1.026 | 0.938 | 1.019 | 1.048 | 0.979 | 0.905 | 0.9940 | 5.57 |
| 28) | C | methylene chloride | | 0.641 | 0.632 | 0.595 | 0.661 | 0.680 | 0.617 | 0.546 | 0.6245 | 7.10 |
| 29) | C | 3-chloropropene | 0.911 | 0.895 | 0.878 | 0.816 | 0.808 | 0.818 | 0.745 | 0.681 | 0.8191 | 9.50 |
| 30) | C | carbon disulfide | 2.016 | 2.024 | 2.020 | 1.869 | 1.838 | 1.839 | 1.617 | 1.378 | 1.8250 | 12.42 |
| 31) | | Freon 113 | 1.089 | 1.082 | 1.063 | 0.972 | 0.959 | 0.969 | 0.845 | 0.719 | 0.9623 | 13.26 |
| 32) | | trans-1,2-dichloroethene | 0.839 | 0.845 | 0.837 | 0.784 | 0.777 | 0.786 | 0.710 | 0.643 | 0.7776 | 9.01 |
| 33) | C | 1,1-dichloroethane | 1.010 | 1.020 | 0.991 | 0.910 | 0.896 | 0.909 | 0.829 | 0.761 | 0.9158 | 9.89 |
| 34) | C | MTBE | 1.763 | 1.763 | 1.752 | 1.632 | 1.613 | 1.608 | 1.393 | 1.160 | 1.5855 | 13.31 |
| 35) | C | vinyl acetate | | | 1.431 | 1.375 | 1.370 | 1.399 | 1.261 | 1.121 | 1.3260 | 8.72 |
| 36) | C | 2-butanone | | 1.401 | 1.375 | 1.262 | 1.231 | 1.243 | 1.113 | 0.985 | 1.2301 | 11.74 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16594** |
| **Calibration dates** | **: 03/12/20 12:25 03/12/20 17:00** | | |

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37) | | cis-1,2-dichloroethene | 0.741 | 0.730 | 0.723 | 0.667 | 0.660 | 0.679 | 0.612 | 0.556 | 0.6710 | 9.43 |
| 38) | | Ethyl Acetate | | 0.217 | 0.225 | 0.201 | 0.199 | 0.208 | 0.196 | 0.191 | 0.2053 | 5.79 |
| 39) | C | chloroform | 1.077 | 1.089 | 1.077 | 0.989 | 0.976 | 1.002 | 0.857 | 0.701 | 0.9710 | 13.67 |
| 40) | | Tetrahydrofuran | 0.846 | 0.834 | 0.824 | 0.769 | 0.760 | 0.773 | 0.708 | 0.642 | 0.7696 | 8.94 |
| 41) | | 2,2-dichloropropane | 0.933 | 0.941 | 0.923 | 0.874 | 0.857 | 0.839 | 0.689 | 0.533 | 0.8237 | 17.29 |
| 42) | C | 1,2-dichloroethane | 0.593 | 0.619 | 0.599 | 0.553 | 0.541 | 0.544 | 0.459 | 0.379 | 0.5359 | 14.96 |
| 43) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 44) | C | hexane | 0.421 | 0.405 | 0.399 | 0.377 | 0.368 | 0.377 | 0.336 | 0.285 | 0.3709 | 11.68 |
| 45) | | diisopropyl ether | 0.239 | 0.230 | 0.226 | 0.213 | 0.209 | 0.216 | 0.196 | 0.164 | 0.2117 | 10.99 |
| 46) | | tert-butyl ethyl ether | 0.661 | 0.656 | 0.653 | 0.622 | 0.608 | 0.621 | 0.552 | 0.481 | 0.6068 | 10.18 |
| 47) | s | 1,2-dichloroethane-D4 | 0.181 | 0.180 | 0.180 | 0.179 | 0.176 | 0.167 | 0.152 | 0.129 | 0.1681 | 11.17 |
| 48) | C | 1,1,1-trichloroethane | 0.323 | 0.321 | 0.321 | 0.294 | 0.286 | 0.287 | 0.239 | 0.192 | 0.2829 | 16.23 |
| 49) | | 1,1-dichloropropene | 0.341 | 0.324 | 0.328 | 0.312 | 0.304 | 0.305 | 0.264 | 0.219 | 0.2996 | 13.29 |
| 50) | C | benzene | 0.837 | 0.796 | 0.790 | 0.722 | 0.710 | 0.735 | 0.649 | 0.554 | 0.7241 | 12.51 |
| 51) | | thiophene | 1.698 | 1.684 | 1.679 | 1.565 | 1.528 | 1.542 | 1.244 | 0.919 | 1.4824 | 18.24 |
| 52) | C | carbon tetrachloride | 0.299 | 0.302 | 0.304 | 0.280 | 0.276 | 0.273 | 0.213 | 0.153 | 0.2627 | 20.16 |
| 53) | | cyclohexane | 0.432 | 0.427 | 0.426 | 0.400 | 0.393 | 0.410 | 0.379 | 0.347 | 0.4018 | 7.14 |
| 54) | | tert-amyl methyl ether | 0.700 | 0.707 | 0.694 | 0.657 | 0.649 | 0.645 | 0.550 | 0.454 | 0.6320 | 13.87 |
| 55) | | dibromomethane | 0.221 | 0.210 | 0.202 | 0.189 | 0.184 | 0.181 | 0.157 | 0.134 | 0.1847 | 15.38 |
| 56) | C | 1,2-dichloropropane | 0.247 | 0.243 | 0.236 | 0.219 | 0.215 | 0.221 | 0.198 | 0.176 | 0.2194 | 10.90 |
| 57) | | bromodichloromethane | 0.430 | 0.426 | 0.421 | 0.400 | 0.394 | 0.399 | 0.344 | 0.277 | 0.3864 | 13.41 |
| 58) | C | 1,4-dioxane | 0.175 | 0.178 | 0.174 | 0.166 | 0.164 | 0.170 | 0.163 | 0.139 | 0.1661 | 7.24 |
| 59) | C | trichloroethene | 0.295 | 0.295 | 0.292 | 0.270 | 0.267 | 0.273 | 0.247 | 0.221 | 0.2698 | 9.63 |
| 60) | C | 2,2,4-trimethylpentane | 1.329 | 1.281 | 1.286 | 1.211 | 1.182 | 1.186 | 1.061 | 0.907 | 1.1805 | 11.71 |
| 61) | | methyl methacrylate | | 0.341 | 0.335 | 0.374 | 0.371 | 0.326 | 0.290 | 0.243 | 0.3256 | 14.18 |
| 62) | | heptane | 0.525 | 0.514 | 0.508 | 0.483 | 0.468 | 0.471 | 0.406 | 0.337 | 0.4639 | 13.66 |
| 63) | C | cis-1,3-dichloropropene | 0.384 | 0.385 | 0.384 | 0.356 | 0.356 | 0.361 | 0.317 | 0.265 | 0.3511 | 11.80 |
| 64) | C | 4-methyl-2-pentanone | | 0.578 | 0.579 | 0.555 | 0.542 | 0.544 | 0.470 | 0.393 | 0.5229 | 13.01 |
| 65) | | trans-1,3-dichloropropene | 0.350 | 0.350 | 0.353 | 0.338 | 0.336 | 0.342 | 0.296 | 0.246 | 0.3265 | 11.35 |
| 66) | C | 1,1,2-trichloroethane | 0.265 | 0.265 | 0.265 | 0.240 | 0.236 | 0.243 | 0.217 | 0.192 | 0.2403 | 10.87 |
| 67) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | |
| 68) | C | toluene | 5.739 | 5.464 | 5.507 | 4.986 | 4.888 | 5.088 | 4.600 | 4.327 | 5.0748 | 9.44 |
| 69) | s | toluene-D8 | 4.773 | 4.761 | 4.751 | 4.774 | 4.737 | 4.659 | 4.701 | 4.988 | 4.7680 | 2.04 |
| 70) | | 2-methylthiophene | 1.725 | 1.731 | 1.717 | 1.555 | 1.487 | 1.429 | 1.088 | 0.815 | 1.4435 | 23.01 |
| 71) | | 1,3-dichloropropane | 2.786 | 2.746 | 2.737 | 2.576 | 2.542 | 2.556 | 2.217 | 1.882 | 2.5051 | 12.36 |
| 72) | | 2-hexanone | 3.323 | 3.368 | 3.419 | 3.281 | 3.207 | 3.087 | 2.331 | 1.812 | 2.9786 | 19.66 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16594** |
| **Calibration dates** | **: 03/12/20 12:25 03/12/20 17:00** | | |

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73) | | 3-methylthiophene | 1.755 | 1.755 | 1.756 | 1.596 | 1.521 | 1.455 | 1.065 | 0.777 | 1.4599 | 24.64 |
| 74) | | dibromochloromethane | 2.297 | 2.290 | 2.305 | 2.230 | 2.252 | 2.287 | 2.022 | 1.836 | 2.1898 | 7.78 |
| 75) | C | 1,2-dibromoethane | 2.562 | 2.586 | 2.590 | 2.397 | 2.390 | 2.519 | 2.240 | 2.045 | 2.4163 | 7.99 |
| 76) | | butyl acetate | | 0.776 | 0.796 | 0.776 | 0.789 | 0.817 | 0.748 | 0.679 | 0.7689 | 5.85 |
| 77) | | octane | 2.245 | 2.269 | 2.236 | 2.173 | 2.158 | 2.292 | 2.123 | 1.916 | 2.1767 | 5.52 |
| 78) | C | tetrachloroethene | 2.428 | 2.443 | 2.454 | 2.229 | 2.193 | 2.323 | 2.024 | 1.746 | 2.2300 | 11.00 |
| 79) | | 1,1,1,2-tetrachloroethane | 1.904 | 1.809 | 1.792 | 1.684 | 1.665 | 1.671 | 1.453 | 1.258 | 1.6545 | 12.60 |
| 80) | C | chlorobenzene | 4.413 | 4.353 | 4.336 | 3.997 | 3.975 | 4.275 | 3.758 | 3.247 | 4.0444 | 9.77 |
| 81) | C | ethylbenzene | 6.599 | 6.599 | 6.591 | 6.027 | 5.941 | 6.192 | 5.480 | 4.924 | 6.0440 | 9.93 |
| 82) | | 2-ethylthiophene | 1.852 | 1.867 | 1.871 | 1.694 | 1.609 | 1.509 | 1.077 | 0.780 | 1.5323 | 26.28 |
| 83) | C | m+p-xylene | 5.593 | 5.503 | 5.510 | 5.035 | 4.964 | 5.125 | 4.297 | 3.556 | 4.9478 | 14.17 |
| 84) | C | bromoform | 1.962 | 2.098 | 2.106 | 2.123 | 2.184 | 2.259 | 1.966 | 1.634 | 2.0414 | 9.43 |
| 85) | C | styrene | 4.497 | 4.551 | 4.593 | 4.421 | 4.457 | 4.720 | 4.254 | 3.833 | 4.4157 | 6.15 |
| 86) | C | 1,1,2,2-tetrachloroethane | 3.769 | 3.877 | 3.849 | 3.566 | 3.539 | 3.706 | 2.991 | 2.330 | 3.4534 | 15.46 |
| 87) | C | o-xylene | 5.513 | 5.519 | 5.507 | 5.052 | 4.943 | 5.031 | 4.052 | 3.169 | 4.8483 | 17.20 |
| 88) | | 1,2,3-trichloropropane | 3.127 | 3.108 | 3.119 | 2.994 | 2.975 | 2.987 | 2.634 | 2.300 | 2.9055 | 10.04 |
| 89) | | nonane | 4.566 | 4.572 | 4.541 | 4.290 | 4.194 | 4.196 | 3.516 | 2.934 | 4.1011 | 14.25 |
| 90) | s | bromofluorobenzene | 2.995 | 3.011 | 3.013 | 3.128 | 3.257 | 2.963 | 3.194 | 3.626 | 3.1483 | 6.97 |
| 91) | C | isopropylbenzene | 7.755 | 7.655 | 7.764 | 7.262 | 7.134 | 7.132 | 6.061 | 5.149 | 6.9890 | 13.24 |
| 92) | | bromobenzene | 3.934 | 4.018 | 4.020 | 3.904 | 3.933 | 3.975 | 3.404 | 2.856 | 3.7555 | 11.05 |
| 93) | | 2-chlorotoluene | 2.070 | 2.038 | 2.045 | 1.973 | 1.964 | 2.013 | 1.876 | 1.734 | 1.9642 | 5.65 |
| 94) | | n-propylbenzene | 2.279 | 2.338 | 2.336 | 2.262 | 2.294 | 2.414 | 2.240 | 1.925 | 2.2610 | 6.46 |
| 95) | | 4-chlorotoluene | 1.927 | 1.932 | 1.980 | 1.895 | 1.913 | 1.962 | 1.858 | 1.764 | 1.9042 | 3.57 |
| 96) | | 4-ethyl toluene | 8.447 | 8.520 | 8.597 | 8.276 | 8.118 | 8.142 | 6.762 | 5.587 | 7.8060 | 13.69 |
| 97) | | 1,3,5-trimethylbenzene | 7.007 | 7.125 | 7.091 | 6.562 | 6.446 | 6.588 | 5.469 | 4.504 | 6.3491 | 14.43 |
| 98) | | tert-butylbenzene | 6.736 | 6.910 | 7.008 | 6.641 | 6.608 | 6.315 | 4.756 | 3.689 | 6.0829 | 19.74 |
| 99) | | 1,2,4-trimethylbenzene | 6.655 | 6.931 | 7.032 | 6.403 | 6.296 | 6.022 | 4.482 | 3.439 | 5.9074 | 21.61 |
| 100) | | decane | 4.940 | 5.048 | 5.154 | 5.023 | 4.941 | 4.905 | 4.128 | 3.486 | 4.7030 | 12.43 |
| 101) | C | Benzyl Chloride | 3.286 | 3.812 | 4.151 | 4.548 | 4.867 | 4.883 | 4.119 | 3.388 | 4.1315 | 14.89 |
| 102) | | 1,3-dichlorobenzene | 3.847 | 3.980 | 4.024 | 3.728 | 3.724 | 3.935 | 3.216 | 2.628 | 3.6353 | 13.20 |
| 103) | C | 1,4-dichlorobenzene | 3.402 | 3.517 | 3.644 | 3.652 | 3.738 | 3.697 | 3.215 | 2.793 | 3.4571 | 9.25 |
| 104) | | sec-butylbenzene | 0.953 | 0.981 | 1.000 | 0.963 | 0.945 | 0.916 | 0.743 | 0.611 | 0.8890 | 15.49 |
| 105) | | 1,2,3-trimethylbenzene | 6.010 | 6.155 | 6.270 | 6.729 | 6.582 | 5.423 | 4.090 | 3.158 | 5.5520 | 23.01 |
| 106) | | p-isopropyltoluene | 7.956 | 8.223 | 8.289 | 8.194 | 8.188 | 7.632 | 5.719 | 4.344 | 7.3183 | 20.13 |
| 107) | | 1,2-dichlorobenzene | 3.562 | 3.696 | 3.735 | 3.524 | 3.543 | 3.649 | 3.195 | 2.822 | 3.4658 | 8.90 |
| 108) | | n-butylbenzene | 6.158 | 6.444 | 6.729 | 6.740 | 6.657 | 6.362 | 5.366 | 4.570 | 6.1281 | 12.61 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16594** |
| **Calibration dates** | **: 03/12/20 12:25 03/12/20 17:00** | | |

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109) | | indan | 5.628 | 5.890 | 6.005 | 6.647 | 6.680 | 6.074 | 5.186 | 4.406 | 5.8144 | 12.95 |
| 110) | | indene | 3.927 | 4.328 | 4.529 | 5.263 | 5.344 | 4.928 | 4.361 | 3.810 | 4.5613 | 12.57 |
| 111) | C | 1,2-dibromo-3-chloropropane | 1.413 | 1.450 | 1.611 | 1.727 | 1.746 | 1.545 | 1.286 | 1.097 | 1.4843 | 14.91 |
| 112) | | undecane | 5.162 | 5.405 | 5.559 | 5.672 | 5.595 | 5.298 | 4.420 | 3.659 | 5.0962 | 13.79 |
| 113) | | 1,2,4,5-tetramethylbenzene | 5.285 | 5.484 | 5.585 | 6.474 | 7.060 | 6.038 | 5.169 | 4.387 | 5.6853 | 14.56 |
| 114) | | dodecane | 4.553 | 5.044 | 5.329 | 6.159 | 6.086 | 5.118 | 4.429 | 3.699 | 5.0520 | 16.46 |
| 115) | C | 1,2,4-trichlorobenzene | 1.385 | 1.742 | 2.159 | 2.347 | 2.574 | 2.409 | 2.425 | 2.248 | 2.1609 | 18.52 |
| 116) | | naphthalene | 5.197 | 5.488 | 6.234 | 7.316 | 7.786 | 6.602 | 6.569 | 6.076 | 6.4086 | 13.50 |
| 117) | | 1,2,3-trichlorobenzene | 1.921 | 2.141 | 2.423 | 2.858 | 3.077 | 2.597 | 2.545 | 2.301 | 2.4830 | 15.08 |
| 118) | | benzothiophene | 2.323 | 2.883 | 3.863 | 3.602 | 4.121 | 4.629 | 5.005 | 4.999 | 3.9279 | 24.75 |
| 119) | C | hexachlorobutadiene | 3.029 | 3.112 | 3.118 | 2.897 | 2.832 | 2.561 | 2.145 | 1.743 | 2.6796 | 18.66 |
| 120) | | 2-methylnaphthalene | | | 0.670 | 0.851 | 1.061 | 1.160 | 1.404 | 1.579 | 1.1208 | 30.16# |
| 121) | | 1-methylnaphthalene | | | 2.328 | 2.406 | 2.669 | 2.710 | 2.911 | 3.001 | 2.6707 | 9.99 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Method File : TFS19_200224.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Tue Feb 25 10:21:39 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ISTD | | | | | | | | | |
| 2) | | chlorodifluoromethane | 0.715 | 0.677 | 0.674 | 0.606 | 0.593 | 0.655 | 0.564 | 0.521 | 0.6257 | 10.44 |
| 3) | | propylene | | 0.478 | 0.452 | 0.406 | 0.397 | 0.429 | 0.371 | 0.343 | 0.4107 | 11.32 |
| 4) | | propane | | 0.535 | 0.517 | 0.440 | 0.420 | 0.452 | 0.396 | 0.359 | 0.4458 | 14.10 |
| 5) | | dichlorodifluoromethane | 0.645 | 0.653 | 0.572 | 0.558 | 0.522 | 0.578 | 0.510 | 0.446 | 0.5604 | 12.32 |
| 6) | C | chloromethane | 0.379 | 0.394 | 0.384 | 0.369 | 0.329 | 0.388 | 0.329 | 0.296 | 0.3584 | 9.98 |
| 7) | | Freon-114 | 0.992 | 0.957 | 0.915 | 0.871 | 0.814 | 0.830 | 0.686 | 0.588 | 0.8316 | 16.42 |
| 8) | C | methanol | | | 0.207 | 0.162 | 0.153 | 0.163 | 0.149 | 0.138 | 0.1621 | 14.74 |
| 9) | C | vinyl chloride | 0.511 | 0.500 | 0.492 | 0.442 | 0.411 | 0.430 | 0.401 | 0.371 | 0.4449 | 11.53 |
| 10) | C | 1,3-butadiene | 0.410 | 0.422 | 0.414 | 0.374 | 0.369 | 0.390 | 0.357 | 0.333 | 0.3836 | 8.07 |
| 11) | | butane | 0.759 | 0.710 | 0.679 | 0.614 | 0.581 | 0.608 | 0.560 | 0.519 | 0.6287 | 12.87 |
| 12) | C | acetaldehyde | | 0.222 | 0.209 | 0.205 | 0.187 | 0.178 | 0.147 | 0.128 | 0.1822 | 18.81 |
| 13) | C | bromomethane | 0.397 | 0.399 | 0.403 | 0.348 | 0.341 | 0.337 | 0.311 | 0.280 | 0.3520 | 12.74 |
| 14) | C | chloroethane | 0.252 | 0.262 | 0.248 | 0.233 | 0.220 | 0.226 | 0.220 | 0.205 | 0.2332 | 8.28 |
| 15) | | ethanol | | | 0.346 | 0.307 | 0.284 | 0.302 | 0.271 | 0.244 | 0.2922 | 11.87 |
| 16) | | dichlorofluoromethane | 0.695 | 0.698 | 0.696 | 0.612 | 0.592 | 0.590 | 0.549 | 0.509 | 0.6177 | 11.70 |
| 17) | C | vinyl bromide | 0.430 | 0.438 | 0.410 | 0.376 | 0.367 | 0.364 | 0.342 | 0.317 | 0.3806 | 11.17 |
| 18) | C | acrolein | | 0.225 | 0.228 | 0.201 | 0.199 | 0.198 | 0.194 | 0.184 | 0.2043 | 8.03 |
| 19) | | acetone | 0.620 | 0.584 | 0.565 | 0.547 | 0.515 | 0.646 | 0.428 | 0.391 | 0.5370 | 16.60 |
| 20) | C | acetonitrile | 0.438 | 0.406 | 0.390 | 0.396 | 0.386 | 0.384 | 0.370 | 0.349 | 0.3898 | 6.65 |
| 21) | | trichlorofluoromethane | 0.568 | 0.557 | 0.551 | 0.626 | 0.660 | 0.656 | 0.617 | 0.474 | 0.5887 | 10.70 |
| 22) | | isopropyl alcohol | 1.360 | 1.185 | 1.094 | 1.020 | 0.932 | 0.962 | 0.860 | 0.748 | 1.0202 | 18.84 |
| 23) | C | acrylonitrile | 0.568 | 0.562 | 0.540 | 0.496 | 0.499 | 0.502 | 0.496 | 0.471 | 0.5169 | 6.82 |
| 24) | | pentane | 1.210 | 1.158 | 1.152 | 1.045 | 1.013 | 1.018 | 0.923 | 0.823 | 1.0427 | 12.41 |
| 25) | | ethyl ether | 1.015 | 1.006 | 0.993 | 0.905 | 0.880 | 0.872 | 0.802 | 0.708 | 0.8976 | 11.97 |
| 26) | C | 1,1-dichloroethene | 0.769 | 0.758 | 0.745 | 0.684 | 0.660 | 0.650 | 0.612 | 0.549 | 0.6785 | 11.32 |
| 27) | | tertiary butyl alcohol | | 1.052 | 1.011 | 0.954 | 0.850 | 0.941 | 0.913 | 0.827 | 0.9353 | 8.64 |
| 28) | C | methylene chloride | | 0.751 | 0.726 | 0.654 | 0.644 | 0.652 | 0.612 | 0.557 | 0.6565 | 9.99 |
| 29) | C | 3-chloropropene | 0.873 | 0.859 | 0.846 | 0.782 | 0.765 | 0.773 | 0.744 | 0.687 | 0.7911 | 8.06 |
| 30) | C | carbon disulfide | 2.084 | 2.108 | 2.068 | 1.853 | 1.808 | 1.750 | 1.588 | 1.339 | 1.8247 | 14.73 |
| 31) | | Freon 113 | 1.114 | 1.102 | 1.078 | 0.975 | 0.937 | 0.913 | 0.827 | 0.712 | 0.9571 | 14.77 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Method File : TFS19_200224.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Tue Feb 25 10:21:39 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32) | | trans-1,2-dichloroethene | 0.877 | 0.866 | 0.850 | 0.772 | 0.753 | 0.745 | 0.715 | 0.644 | 0.7778 | 10.48 |
| 33) | C | 1,1-dichloroethane | 1.040 | 1.049 | 1.020 | 0.946 | 0.923 | 0.911 | 0.884 | 0.808 | 0.9475 | 8.87 |
| 34) | C | MTBE | 1.719 | 1.690 | 1.676 | 1.542 | 1.499 | 1.491 | 1.408 | 1.262 | 1.5360 | 10.20 |
| 35) | C | vinyl acetate | | | 1.453 | 1.318 | 1.311 | 1.311 | 1.269 | 1.169 | 1.3050 | 7.01 |
| 36) | C | 2-butanone | | 1.356 | 1.324 | 1.208 | 1.191 | 1.180 | 1.132 | 1.034 | 1.2036 | 9.13 |
| 37) | | cis-1,2-dichloroethene | 0.757 | 0.745 | 0.731 | 0.668 | 0.655 | 0.648 | 0.625 | 0.565 | 0.6741 | 9.79 |
| 38) | | Ethyl Acetate | 0.211 | 0.236 | 0.225 | 0.208 | 0.209 | 0.202 | 0.188 | 0.159 | 0.2048 | 11.52 |
| 39) | C | chloroform | 0.935 | 0.954 | 0.941 | 0.841 | 0.810 | 0.795 | 0.752 | 0.663 | 0.8364 | 12.29 |
| 40) | | Tetrahydrofuran | 0.894 | 0.887 | 0.876 | 0.798 | 0.787 | 0.782 | 0.755 | 0.691 | 0.8088 | 8.87 |
| 41) | | 2,2-dichloropropane | 0.783 | 0.773 | 0.766 | 0.702 | 0.681 | 0.660 | 0.629 | 0.557 | 0.6938 | 11.40 |
| 42) | C | 1,2-dichloroethane | 0.453 | 0.458 | 0.448 | 0.406 | 0.395 | 0.387 | 0.375 | 0.347 | 0.4086 | 9.93 |
| 43) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 44) | C | hexane | 0.434 | 0.423 | 0.421 | 0.379 | 0.364 | 0.358 | 0.304 | 0.249 | 0.3665 | 17.41 |
| 45) | | diisopropyl ether | 0.225 | 0.224 | 0.223 | 0.205 | 0.197 | 0.193 | 0.167 | 0.139 | 0.1966 | 15.55 |
| 46) | | tert-butyl ethyl ether | 0.649 | 0.645 | 0.643 | 0.586 | 0.568 | 0.560 | 0.499 | 0.437 | 0.5734 | 13.22 |
| 47) | s | 1,2-dichloroethane-D4 | 0.128 | 0.129 | 0.129 | 0.130 | 0.128 | 0.130 | 0.121 | 0.114 | 0.1260 | 4.41 |
| 48) | C | 1,1,1-trichloroethane | 0.266 | 0.269 | 0.271 | 0.241 | 0.232 | 0.226 | 0.201 | 0.176 | 0.2353 | 14.60 |
| 49) | | 1,1-dichloropropene | 0.334 | 0.319 | 0.315 | 0.292 | 0.281 | 0.281 | 0.250 | 0.218 | 0.2859 | 13.38 |
| 50) | C | benzene | 0.831 | 0.819 | 0.808 | 0.736 | 0.713 | 0.708 | 0.630 | 0.542 | 0.7231 | 13.82 |
| 51) | | thiophene | 1.721 | 1.707 | 1.682 | 1.489 | 1.402 | 1.318 | 1.007 | 0.796 | 1.3902 | 24.47 |
| 52) | C | carbon tetrachloride | 0.229 | 0.232 | 0.226 | 0.207 | 0.193 | 0.185 | 0.152 | 0.128 | 0.1939 | 19.61 |
| 53) | | cyclohexane | 0.462 | 0.446 | 0.444 | 0.406 | 0.399 | 0.394 | 0.349 | 0.308 | 0.4009 | 12.98 |
| 54) | | tert-amyl methyl ether | 0.675 | 0.695 | 0.694 | 0.635 | 0.616 | 0.613 | 0.544 | 0.474 | 0.6183 | 12.47 |
| 55) | | dibromomethane | 0.219 | 0.209 | 0.207 | 0.185 | 0.174 | 0.168 | 0.144 | 0.119 | 0.1782 | 19.25 |
| 56) | C | 1,2-dichloropropane | 0.263 | 0.262 | 0.261 | 0.236 | 0.230 | 0.226 | 0.200 | 0.172 | 0.2313 | 13.98 |
| 57) | | bromodichloromethane | 0.365 | 0.369 | 0.358 | 0.322 | 0.312 | 0.304 | 0.267 | 0.225 | 0.3153 | 16.03 |
| 58) | C | 1,4-dioxane | 0.186 | 0.180 | 0.186 | 0.168 | 0.158 | 0.165 | 0.146 | 0.120 | 0.1637 | 13.64 |
| 59) | C | trichloroethene | 0.313 | 0.304 | 0.296 | 0.270 | 0.257 | 0.248 | 0.207 | 0.167 | 0.2577 | 19.58 |
| 60) | C | 2,2,4-trimethylpentane | 1.369 | 1.351 | 1.332 | 1.205 | 1.122 | 1.134 | 0.968 | 0.774 | 1.1569 | 17.89 |
| 61) | | methyl methacrylate | | 0.329 | 0.323 | 0.335 | 0.325 | 0.292 | 0.260 | 0.227 | 0.2987 | 13.73 |
| 62) | | heptane | 0.518 | 0.501 | 0.511 | 0.463 | 0.446 | 0.441 | 0.377 | 0.320 | 0.4472 | 15.47 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Method File : TFS19_200224.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Tue Feb 25 10:21:39 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63) | C | cis-1,3-dichloropropene | 0.399 | 0.389 | 0.392 | 0.358 | 0.348 | 0.335 | 0.287 | 0.244 | 0.3441 | 15.84 |
| 64) | C | 4-methyl-2-pentanone | | 0.553 | 0.563 | 0.521 | 0.497 | 0.484 | 0.409 | 0.341 | 0.4811 | 16.62 |
| 65) | | trans-1,3-dichloropropene | 0.333 | 0.339 | 0.343 | 0.320 | 0.314 | 0.306 | 0.277 | 0.244 | 0.3095 | 10.96 |
| 66) | C | 1,1,2-trichloroethane | 0.281 | 0.286 | 0.285 | 0.263 | 0.250 | 0.246 | 0.219 | 0.184 | 0.2518 | 14.16 |
| 67) | I | chlorobenzene-D5 | ISTD | | | | | | | | | |
| 68) | C | toluene | 7.251 | 7.097 | 6.908 | 6.288 | 6.056 | 5.799 | 5.061 | 4.253 | 6.0893 | 17.10 |
| 69) | s | toluene-D8 | 5.794 | 5.784 | 5.787 | 5.851 | 5.936 | 5.981 | 6.085 | 6.004 | 5.9027 | 1.95 |
| 70) | | 2-methylthiophene | 2.222 | 2.194 | 2.176 | 1.891 | 1.717 | 1.501 | 1.116 | 0.848 | 1.7081 | 30.39# |
| 71) | | 1,3-dichloropropane | 3.211 | 3.222 | 3.170 | 2.948 | 2.850 | 2.752 | 2.461 | 2.152 | 2.8457 | 13.48 |
| 72) | | 2-hexanone | 3.992 | 3.827 | 3.924 | 3.682 | 3.572 | 3.478 | 3.124 | 2.706 | 3.5382 | 12.31 |
| 73) | | 3-methylthiophene | 2.292 | 2.250 | 2.213 | 1.902 | 1.765 | 1.525 | 1.117 | 0.852 | 1.7396 | 31.02# |
| 74) | | dibromochloromethane | 2.724 | 2.697 | 2.660 | 2.464 | 2.382 | 2.258 | 1.934 | 1.607 | 2.3405 | 16.96 |
| 75) | C | 1,2-dibromoethane | 3.145 | 3.223 | 3.137 | 2.904 | 2.824 | 2.726 | 2.399 | 2.041 | 2.8000 | 14.57 |
| 76) | | butyl acetate | | 0.965 | 1.018 | 0.956 | 0.940 | 0.935 | 0.868 | 0.756 | 0.9196 | 9.21 |
| 77) | | octane | 3.017 | 2.813 | 2.829 | 2.598 | 2.516 | 2.431 | 2.149 | 1.814 | 2.5206 | 15.58 |
| 78) | C | tetrachloroethene | 3.218 | 3.148 | 3.116 | 2.852 | 2.743 | 2.529 | 2.099 | 1.697 | 2.6754 | 20.26 |
| 79) | | 1,1,1,2-tetrachloroethane | 2.074 | 1.984 | 2.030 | 1.849 | 1.751 | 1.643 | 1.350 | 1.089 | 1.7214 | 20.24 |
| 80) | C | chlorobenzene | 5.657 | 5.656 | 5.583 | 5.130 | 4.898 | 4.661 | 3.945 | 3.183 | 4.8391 | 18.40 |
| 81) | C | ethylbenzene | 8.473 | 8.419 | 8.319 | 7.736 | 7.477 | 6.938 | 6.072 | 4.993 | 7.3035 | 17.05 |
| 82) | | 2-ethylthiophene | 2.313 | 2.340 | 2.275 | 1.950 | 1.750 | 1.474 | 1.069 | 0.800 | 1.7465 | 33.70# |
| 83) | C | m+p-xylene | 7.034 | 6.878 | 6.802 | 6.197 | 5.840 | 5.408 | 4.392 | 3.513 | 5.7578 | 21.97 |
| 84) | C | bromoform | 3.045 | 3.008 | 3.108 | 2.833 | 2.638 | 2.433 | 2.019 | 1.592 | 2.5844 | 20.98 |
| 85) | C | styrene | 6.332 | 6.369 | 6.384 | 5.835 | 5.656 | 5.437 | 4.675 | 3.892 | 5.5725 | 16.04 |
| 86) | C | 1,1,2,2-tetrachloroethane | 4.794 | 4.658 | 4.704 | 4.375 | 4.143 | 3.730 | 2.984 | 2.389 | 3.9723 | 22.14 |
| 87) | C | o-xylene | 7.250 | 6.837 | 6.807 | 6.138 | 5.730 | 5.150 | 4.049 | 3.234 | 5.6491 | 25.21 |
| 88) | | 1,2,3-trichloropropane | 3.710 | 3.760 | 3.683 | 3.481 | 3.343 | 3.233 | 2.878 | 2.454 | 3.3177 | 13.76 |
| 89) | | nonane | 5.554 | 5.402 | 5.359 | 4.893 | 4.682 | 4.399 | 3.696 | 3.125 | 4.6388 | 18.66 |
| 90) | s | bromofluorobenzene | 3.720 | 3.685 | 3.661 | 3.725 | 3.775 | 3.858 | 4.064 | 4.015 | 3.8131 | 4.01 |
| 91) | C | isopropylbenzene | 9.935 | 9.475 | 9.438 | 8.782 | 8.318 | 7.928 | 6.576 | 5.233 | 8.2108 | 19.55 |
| 92) | | bromobenzene | 5.167 | 5.069 | 4.994 | 4.650 | 4.503 | 4.341 | 3.671 | 3.027 | 4.4278 | 16.80 |
| 93) | | 2-chlorotoluene | 2.556 | 2.663 | 2.714 | 2.480 | 2.410 | 2.208 | 1.738 | 1.441 | 2.2762 | 20.13 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Method File : TFS19_200224.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Tue Feb 25 10:21:39 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r192622.D 0.5 =r192623.D 1.0 =r192624.D 5.0 =r192625.D 10 =r192626.D 20 =r192627.D
50 =r192628.D 100 =r192629.D

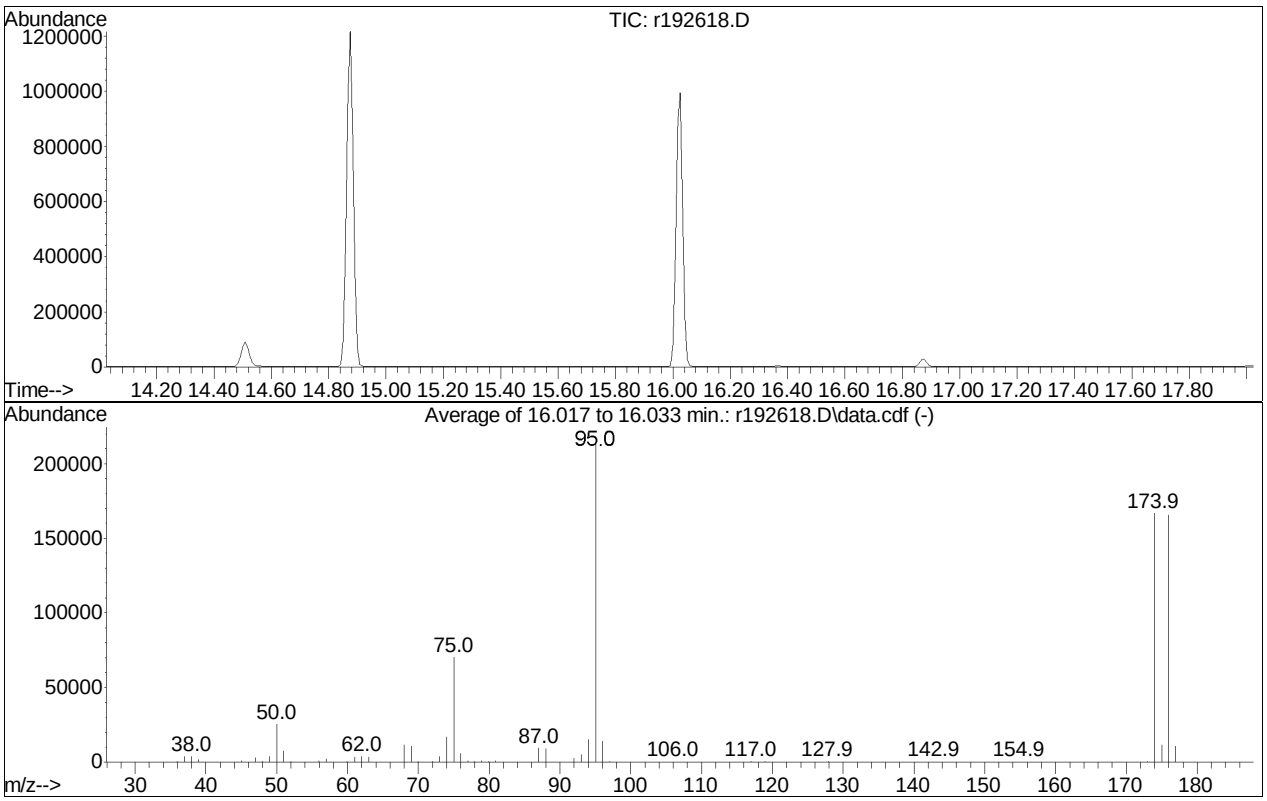
| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 94) | | n-propylbenzene | 3.167 | 3.133 | 3.168 | 3.002 | 2.877 | 2.621 | 2.157 | 1.767 | 2.7364 | 19.08 |
| 95) | | 4-chlorotoluene | 2.489 | 2.618 | 2.554 | 2.473 | 2.362 | 2.252 | 2.014 | 1.672 | 2.3042 | 13.86 |
| 96) | | 4-ethyl toluene | 1.122 | 1.096 | 1.110 | 1.040 | 1.004 | 0.921 | 0.734 | 0.626 | 0.9565 | 19.35 |
| 97) | | 1,3,5-trimethylbenzene | 8.937 | 8.916 | 9.259 | 8.432 | 7.961 | 7.149 | 5.906 | 4.929 | 7.6862 | 20.42 |
| 98) | | tert-butylbenzene | 8.944 | 8.584 | 8.729 | 7.914 | 7.383 | 6.238 | 4.801 | 4.011 | 7.0754 | 26.48 |
| 99) | | 1,2,4-trimethylbenzene | 8.683 | 8.754 | 8.947 | 8.079 | 7.519 | 6.291 | 4.728 | 3.914 | 7.1144 | 27.20 |
| 100) | | decane | 6.490 | 6.422 | 6.583 | 6.325 | 6.132 | 5.695 | 4.677 | 4.061 | 5.7980 | 16.18 |
| 101) | C | Benzyl Chloride | 5.816 | 5.870 | 6.235 | 6.417 | 6.379 | 5.863 | 4.862 | 4.394 | 5.7295 | 12.74 |
| 102) | | 1,3-dichlorobenzene | 5.436 | 5.406 | 5.713 | 5.474 | 5.239 | 4.728 | 3.715 | 3.269 | 4.8724 | 18.57 |
| 103) | C | 1,4-dichlorobenzene | 5.450 | 5.480 | 5.475 | 5.221 | 5.069 | 4.454 | 3.504 | 2.699 | 4.6689 | 22.41 |
| 104) | | sec-butylbenzene | 1.249 | 1.241 | 1.262 | 1.168 | 1.097 | 0.960 | 0.742 | 0.611 | 1.0413 | 23.86 |
| 105) | | 1,2,3-trimethylbenzene | 8.026 | 7.956 | 8.247 | 8.247 | 7.777 | 6.206 | 4.818 | 4.214 | 6.9365 | 23.63 |
| 106) | | p-isopropyltoluene | 1.096 | 1.044 | 1.061 | 0.991 | 0.938 | 0.803 | 0.621 | 0.512 | 0.8833 | 24.61 |
| 107) | | 1,2-dichlorobenzene | 5.038 | 5.123 | 5.207 | 5.164 | 4.998 | 4.490 | 3.635 | 3.306 | 4.6203 | 16.21 |
| 108) | | n-butylbenzene | 8.679 | 8.457 | 8.778 | 8.449 | 8.250 | 7.214 | 5.835 | 5.285 | 7.6183 | 17.92 |
| 109) | | indan | 7.790 | 7.898 | 8.062 | 8.549 | 8.141 | 6.775 | 5.387 | 4.698 | 7.1625 | 19.74 |
| 110) | | indene | 6.210 | 6.115 | 6.146 | 6.544 | 6.574 | 5.578 | 4.564 | 4.181 | 5.7392 | 15.73 |
| 111) | C | 1,2-dibromo-3-chloropropane | 2.058 | 1.884 | 1.946 | 1.928 | 1.912 | 1.662 | 1.424 | 1.392 | 1.7758 | 14.21 |
| 112) | | undecane | 7.224 | 6.610 | 7.022 | 7.042 | 7.033 | 6.157 | 4.949 | 4.325 | 6.2951 | 17.30 |
| 113) | | 1,2,4,5-tetramethylbenzene | 8.509 | 7.911 | 8.361 | 8.400 | 8.206 | 6.761 | 5.551 | 4.883 | 7.3227 | 19.44 |
| 114) | | dodecane | 6.360 | 6.364 | 7.176 | 7.854 | 7.805 | 5.382 | 4.450 | 3.548 | 6.1173 | 25.50 |
| 115) | C | 1,2,4-trichlorobenzene | 4.495 | 4.141 | 4.766 | 5.032 | 5.021 | 3.746 | 2.919 | 2.363 | 4.0604 | 24.35 |
| 116) | | naphthalene | 1.276 | 1.073 | 1.175 | 1.109 | 1.172 | 0.940 | 0.844 | 0.726 | 1.0393 | 17.96 |
| 117) | | 1,2,3-trichlorobenzene | 4.074 | 4.135 | 4.811 | 4.995 | 5.221 | 3.917 | 3.709 | 3.141 | 4.2503 | 16.62 |
| 118) | | benzothiophene | 7.697 | 7.827 | 9.294 | 6.056 | 6.620 | 7.669 | 7.428 | 6.451 | 7.3802 | 13.78 |
| 119) | C | hexachlorobutadiene | 4.112 | 3.721 | 4.285 | 4.328 | 4.192 | 3.034 | 2.511 | 2.047 | 3.5287 | 25.13 |
| 120) | | 2-methylnaphthalene | | | 1.907 | 1.328 | 1.635 | 1.405 | 2.359 | 2.691 | 1.8874 | 28.81 |
| 121) | | 1-methylnaphthalene | | | 2.979 | 3.085 | 3.508 | 2.381 | 3.602 | 3.955 | 3.2517 | 17.09 |

(#) = Out of Range

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192618.D
Acq On : 25 Feb 2020 12:05 AM
Operator : AIRLAB19:RY
Sample : WG1344146-1,3,250,250
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Tue Feb 25 10:21:39 2020




Spectrum Information: Average of 16.017 to 16.033 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 11.8 | 25292 | PASS |
| 75 | 95 | 30 | 66 | 33.0 | 70626 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 214080 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13900 | PASS |
| 173 | 174 | 0.00 | 2 | 0.5 | 791 | PASS |
| 174 | 95 | 50 | 120 | 78.0 | 166925 | PASS |
| 175 | 174 | 4 | 9 | 7.0 | 11666 | PASS |
| 176 | 174 | 93 | 101 | 99.3 | 165677 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 10782 | PASS |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192622.D
Acq On : 25 Feb 2020 2:44 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:09:36 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 309515 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 98.84% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 878467 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 98.46% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 115566 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 99.76% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 112007 | 9.996 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.96% | | | |
| 69) toluene-D8 | 13.28 | 98 | 669639 | 9.762 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.62% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 429960 | 9.854 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.54% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 4426 | 0.241 | ppbV | 98 |
| 3) propylene | 3.48 | 41 | 3215M6 | 0.262 | ppbV | |
| 4) propane | 3.50 | 29 | 4015M4 | 0.309 | ppbV | |
| 5) dichlorodifluoromethane | 3.56 | 85 | 3992 | 0.247 | ppbV | 99 |
| 6) chloromethane | 3.78 | 50 | 2344 | 0.230 | ppbV | 100 |
| 7) Freon-114 | 3.92 | 85 | 6139 | 0.244 | ppbV | 99 |
| 8) methanol | 3.98 | 31 | 7067 | 1.493 | ppbV # | 1 |
| 9) vinyl chloride | 4.07 | 62 | 3163 | 0.248 | ppbV | 99 |
| 10) 1,3-butadiene | 4.24 | 54 | 2536 | 0.222 | ppbV | 94 |
| 11) butane | 4.31 | 43 | 4699 | 0.261 | ppbV | 94 |
| 12) acetaldehyde | 3.93 | 29 | 7510 | 1.299 | ppbV | 97 |
| 13) bromomethane | 4.57 | 94 | 2460 | 0.233 | ppbV | 98 |
| 14) chloroethane | 4.79 | 64 | 1561 | 0.229 | ppbV | 93 |
| 15) ethanol | 4.93 | 31 | 12171 | 1.385 | ppbV | 98 |
| 16) dichlorofluoromethane | 4.92 | 67 | 4302 | 0.235 | ppbV | 97 |
| 17) vinyl bromide | 5.21 | 106 | 2661 | 0.234 | ppbV | 94 |
| 18) acrolein | 5.34 | 56 | 1547 | 0.251 | ppbV # | 41 |
| 19) acetone | 5.50 | 43 | 19196 | 1.204 | ppbV # | 99 |
| 20) acetonitrile | 5.19 | 41 | 2711 | 0.227 | ppbV # | 42 |
| 21) trichlorofluoromethane | 5.69 | 101 | 3518 | 0.172 | ppbV | 99 |
| 22) isopropyl alcohol | 5.78 | 45 | 21042 | 0.729 | ppbV | 99 |
| 23) acrylonitrile | 6.02 | 53 | 3517 | 0.228 | ppbV | 98 |
| 24) pentane | 6.10 | 43 | 7489 | 0.239 | ppbV | 98 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192622.D
Acq On : 25 Feb 2020 2:44 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:09:36 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 6285 | 0.231 | ppbV | | 97 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 4760 | 0.233 | ppbV | | 96 |
| 27) tertiary butyl alcohol | 6.45 | 59 | 6643 | 0.253 | ppbV | # | 91 |
| 28) methylene chloride | 6.53 | 49 | 4943 | 0.248 | ppbV | | 99 |
| 29) 3-chloropropene | 6.67 | 41 | 5405 | 0.228 | ppbV | | 98 |
| 30) carbon disulfide | 6.85 | 76 | 12903 | 0.231 | ppbV | # | 78 |
| 31) Freon 113 | 6.82 | 101 | 6893 | 0.238 | ppbV | | 98 |
| 32) trans-1,2-dichloroethene | 7.53 | 61 | 5430 | 0.233 | ppbV | | 100 |
| 33) 1,1-dichloroethane | 7.74 | 63 | 6436 | 0.225 | ppbV | | 99 |
| 34) MTBE | 7.81 | 73 | 10641 | 0.229 | ppbV | | 98 |
| 35) vinyl acetate | 7.90 | 43 | 9283 | 0.229 | ppbV | | 98 |
| 36) 2-butanone | 8.16 | 43 | 8400 | 0.228 | ppbV | | 95 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 4683 | 0.231 | ppbV | | 99 |
| 38) Ethyl Acetate | 8.83 | 61 | 1309 | 0.203 | ppbV | | 96 |
| 39) chloroform | 8.91 | 83 | 5786 | 0.231 | ppbV | | 97 |
| 40) Tetrahydrofuran | 9.34 | 42 | 5537 | 0.227 | ppbV | | 94 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 4848 | 0.230 | ppbV | | 98 |
| 42) 1,2-dichloroethane | 9.67 | 62 | 2807 | 0.229 | ppbV | | 97 |
| 44) hexane | 8.82 | 57 | 7623 | 0.238 | ppbV | # | 69 |
| 45) diisopropyl ether | 8.81 | 87 | 3961 | 0.229 | ppbV | | 88 |
| 46) tert-butyl ethyl ether | 9.36 | 59 | 11401 | 0.228 | ppbV | | 97 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 4680 | 0.229 | ppbV | | 98 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 5860 | 0.238 | ppbV | | 96 |
| 50) benzene | 10.40 | 78 | 14594 | 0.233 | ppbV | | 100 |
| 51) thiophene | 10.54 | 84 | 30234 | 0.246 | ppbV | | 99 |
| 52) carbon tetrachloride | 10.56 | 117 | 4029 | 0.238 | ppbV | | 93 |
| 53) cyclohexane | 10.69 | 56 | 8120 | 0.232 | ppbV | | 98 |
| 54) tert-amyl methyl ether | 11.00 | 73 | 11863 | 0.219 | ppbV | | 99 |
| 55) dibromomethane | 11.22 | 93 | 3841 | 0.251 | ppbV | | 98 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 4627 | 0.229 | ppbV | | 99 |
| 57) bromodichloromethane | 11.45 | 83 | 6407 | 0.234 | ppbV | | 98 |
| 58) 1,4-dioxane | 11.50 | 88 | 3262 | 0.234 | ppbV | # | 78 |
| 59) trichloroethene | 11.49 | 130 | 5496 | 0.243 | ppbV | | 97 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 24044 | 0.244 | ppbV | | 99 |
| 61) methyl methacrylate | 11.67 | 41 | 5600 | 0.196 | ppbV | | 100 |
| 62) heptane | 11.78 | 43 | 9109 | 0.233 | ppbV | | 97 |
| 63) cis-1,3-dichloropropene | 12.40 | 75 | 7009 | 0.229 | ppbV | | 98 |
| 64) 4-methyl-2-pentanone | 12.43 | 43 | 10003 | 0.229 | ppbV | | 96 |
| 65) trans-1,3-dichloropropene | 12.93 | 75 | 5858 | 0.213 | ppbV | | 94 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 4931 | 0.224 | ppbV | | 98 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192622.D
Acq On : 25 Feb 2020 2:44 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:09:36 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 16760 | 0.239 | ppbV | | 99 |
| 70) 2-methylthiophene | 13.43 | 97 | 51352 | 0.259 | ppbV | | 99 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 7422 | 0.225 | ppbV | | 98 |
| 72) 2-hexanone | 13.60 | 43 | 9226 | 0.223 | ppbV | # | 78 |
| 73) 3-methylthiophene | 13.59 | 97 | 52982 | 0.260 | ppbV | | 99 |
| 74) dibromochloromethane | 13.76 | 129 | 6295 | 0.229 | ppbV | | 98 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 7270 | 0.223 | ppbV | | 98 |
| 76) butyl acetate | 14.13 | 73 | 2439 | 0.225 | ppbV | | 88 |
| 77) octane | 14.21 | 85 | 6974 | 0.240 | ppbV | | 97 |
| 78) tetrachloroethene | 14.36 | 166 | 7438 | 0.235 | ppbV | | 97 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 4794 | 0.237 | ppbV | | 96 |
| 80) chlorobenzene | 14.91 | 112 | 13076 | 0.231 | ppbV | | 98 |
| 81) ethylbenzene | 15.19 | 91 | 19584 | 0.227 | ppbV | | 100 |
| 82) 2-ethylthiophene | 15.23 | 97 | 53459 | 0.264 | ppbV | | 97 |
| 83) m+p-xylene | 15.32 | 91 | 32515 | 0.482 | ppbV | | 100 |
| 84) bromoform | 15.41 | 173 | 7037 | 0.231 | ppbV | | 97 |
| 85) styrene | 15.60 | 104 | 14635 | 0.224 | ppbV | | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 11081 | 0.231 | ppbV | | 99 |
| 87) o-xylene | 15.68 | 91 | 16757 | 0.253 | ppbV | | 98 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 8575 | 0.222 | ppbV | | 98 |
| 89) nonane | 15.82 | 43 | 12838 | 0.237 | ppbV | | 99 |
| 91) isopropylbenzene | 16.12 | 105 | 22964 | 0.239 | ppbV | | 96 |
| 92) bromobenzene | 16.21 | 77 | 11942 | 0.229 | ppbV | | 95 |
| 93) 2-chlorotoluene | 16.50 | 126 | 5907 | 0.212 | ppbV | | 94 |
| 94) n-propylbenzene | 16.51 | 120 | 7321 | 0.220 | ppbV | | 83 |
| 95) 4-chlorotoluene | 16.55 | 126 | 5752 | 0.211 | ppbV | | 96 |
| 96) 4-ethyl toluene | 16.62 | 105 | 25926 | 0.223 | ppbV | | 98 |
| 97) 1,3,5-trimethylbenzene | 16.68 | 105 | 20657 | 0.225 | ppbV | | 98 |
| 98) tert-butylbenzene | 16.99 | 119 | 20673 | 0.242 | ppbV | | 99 |
| 99) 1,2,4-trimethylbenzene | 16.99 | 105 | 20069 | 0.231 | ppbV | | 98 |
| 100) decane | 17.03 | 57 | 15001 | 0.212 | ppbV | | 97 |
| 101) Benzyl Chloride | 17.11 | 91 | 13442 | 0.182 | ppbV | | 99 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 12564 | 0.208 | ppbV | | 99 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 12596 | 0.215 | ppbV | | 99 |
| 104) sec-butylbenzene | 17.19 | 105 | 28879 | 0.228 | ppbV | | 100 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 18551 | 0.206 | ppbV | | 96 |
| 106) p-isopropyltoluene | 17.31 | 119 | 25332 | 0.234 | ppbV | | 99 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 11645 | 0.202 | ppbV | | 99 |
| 108) n-butylbenzene | 17.63 | 91 | 20061 | 0.210 | ppbV | | 99 |
| 109) indan | 17.48 | 117 | 18006 | 0.191 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192622.D
Acq On : 25 Feb 2020 2:44 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:09:36 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 14353 | 0.189 | ppbV | 98 |
| 111) 1,2-dibromo-3-chloropr... | 17.80 | 75 | 4757 | 0.215 | ppbV | 90 |
| 112) undecane | 17.99 | 57 | 16696 | 0.205 | ppbV | 96 |
| 113) 1,2,4,5-tetramethylben... | 18.23 | 119 | 19668 | 0.207 | ppbV | 99 |
| 114) dodecane | 18.84 | 57 | 14701 | 0.163 | ppbV | 93 |
| 115) 1,2,4-trichlorobenzene | 18.83 | 180 | 10389 | 0.179 | ppbV | 98 |
| 116) naphthalene | 18.94 | 128 | 29490 | 0.218 | ppbV | 98 |
| 117) 1,2,3-trichlorobenzene | 19.18 | 180 | 9417 | 0.156 | ppbV | 98 |
| 118) benzothiophene | 19.00 | 134 | 17791 | 0.233 | ppbV | 100 |
| 119) hexachlorobutadiene | 19.22 | 225 | 9504 | 0.196 | ppbV | 99 |
| 120) 2-methylnaphthalene | 19.94 | 142 | 1977 | 0.105 | ppbV | 93 |
| 121) 1-methylnaphthalene | 20.12 | 142 | 3544 | 0.087 | ppbV # | 94 |

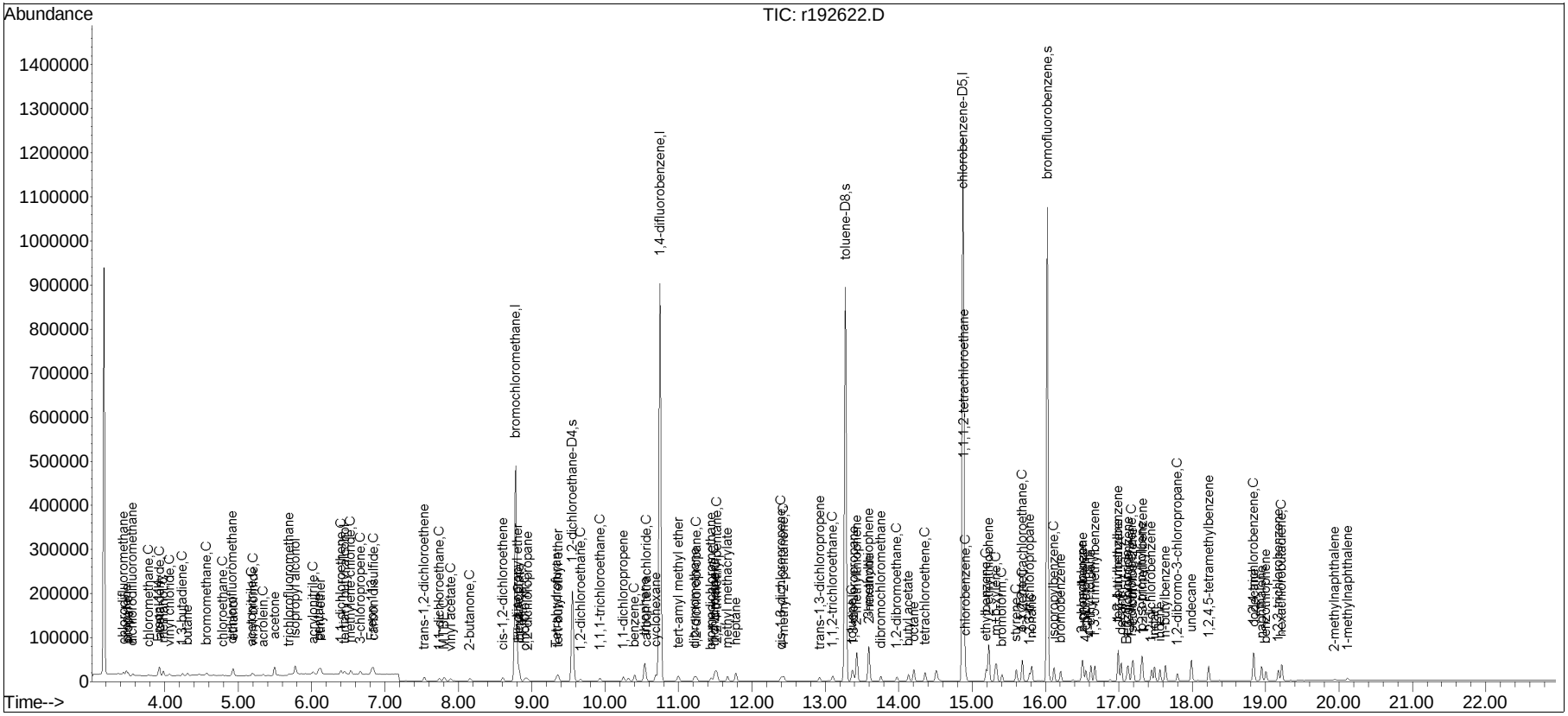
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192622.D
Acq On : 25 Feb 2020 2:44 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:09:36 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

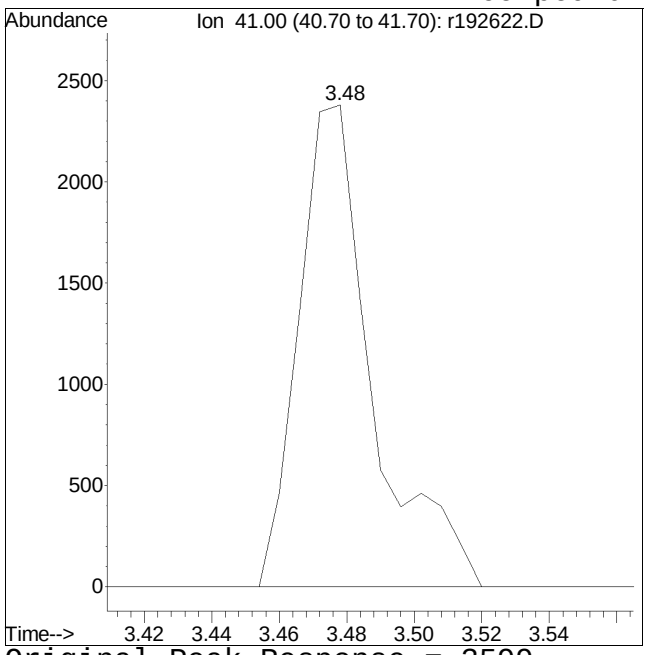
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



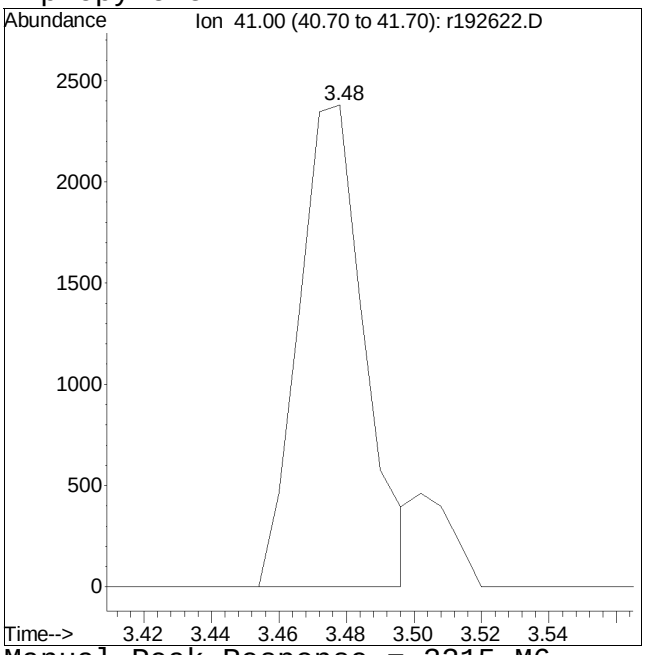
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192622.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:2: 4 Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 3599



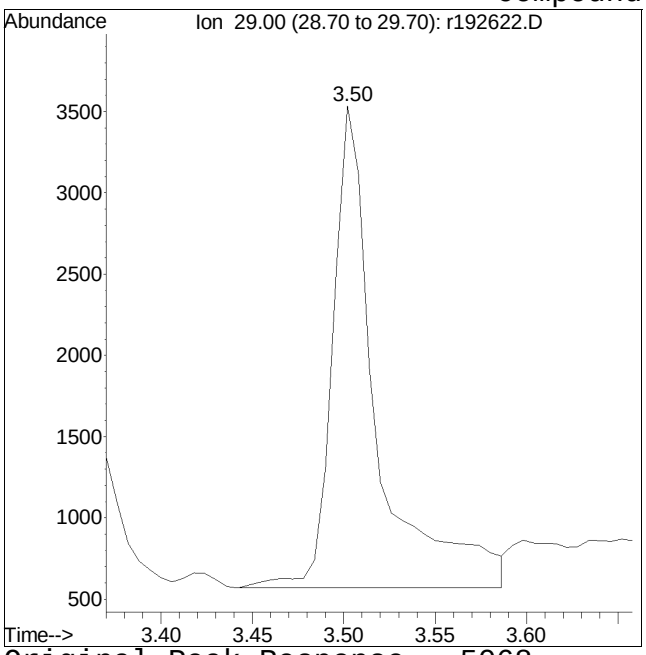

Manual Peak Response = 3215 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

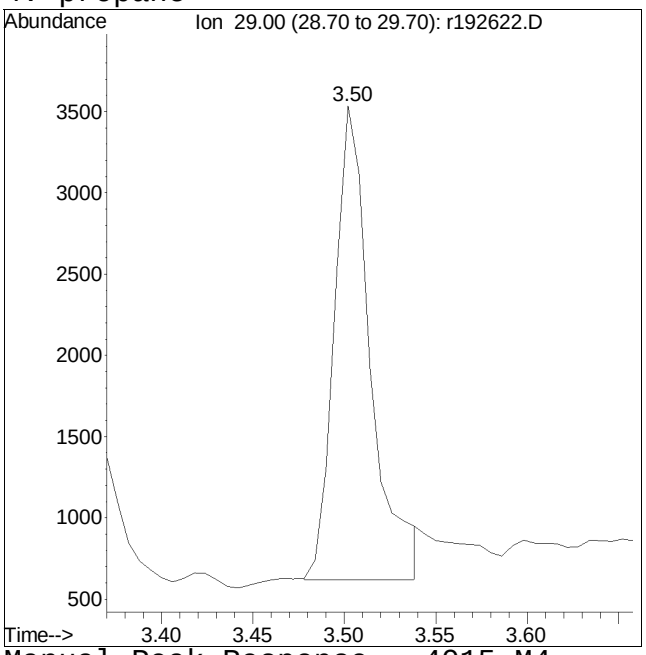
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192622.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:2: 4 Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 2/25/2020 8:57 am

Compound #4: propane




Original Peak Response = 5068




Manual Peak Response = 4015 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192623.D
Acq On : 25 Feb 2020 3:24 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:11:31 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 329018 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 105.06% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 933900 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 104.68% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 122856 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 106.05% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.56 | 65 | 120460 | 10.112 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.12% | | | |
| 69) toluene-D8 | 13.28 | 98 | 710576 | 9.744 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.44% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 452704 | 9.760 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.60% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 11133 | 0.570 | ppbV | 99 |
| 3) propylene | 3.48 | 41 | 7863M6 | 0.603 | ppbV | |
| 4) propane | 3.50 | 29 | 8802 | 0.636 | ppbV | 96 |
| 5) dichlorodifluoromethane | 3.57 | 85 | 10745 | 0.626 | ppbV | 97 |
| 6) chloromethane | 3.78 | 50 | 6479 | 0.599 | ppbV | 99 |
| 7) Freon-114 | 3.92 | 85 | 15736 | 0.588 | ppbV | 99 |
| 8) methanol | 3.98 | 31 | 17077 | 3.395 | ppbV # | 35 |
| 9) vinyl chloride | 4.07 | 62 | 8232 | 0.608 | ppbV | 99 |
| 10) 1,3-butadiene | 4.24 | 54 | 6940 | 0.572 | ppbV | 98 |
| 11) butane | 4.31 | 43 | 11686 | 0.612 | ppbV | 99 |
| 12) acetaldehyde | 3.93 | 29 | 18223 | 2.964 | ppbV | 98 |
| 13) bromomethane | 4.58 | 94 | 6557 | 0.585 | ppbV | 97 |
| 14) chloroethane | 4.79 | 64 | 4315 | 0.595 | ppbV | 97 |
| 15) ethanol | 4.94 | 31 | 29796 | 3.191 | ppbV | 100 |
| 16) dichlorofluoromethane | 4.92 | 67 | 11485 | 0.590 | ppbV | 97 |
| 17) vinyl bromide | 5.21 | 106 | 7212 | 0.597 | ppbV | 96 |
| 18) acrolein | 5.34 | 56 | 3706 | 0.565 | ppbV # | 76 |
| 19) acetone | 5.50 | 43 | 48049 | 2.834 | ppbV | 97 |
| 20) acetonitrile | 5.19 | 41 | 6675 | 0.526 | ppbV | 86 |
| 21) trichlorofluoromethane | 5.70 | 101 | 9160 | 0.422 | ppbV | 99 |
| 22) isopropyl alcohol | 5.78 | 45 | 48718 | 1.588 | ppbV | 99 |
| 23) acrylonitrile | 6.02 | 53 | 9246 | 0.563 | ppbV | 96 |
| 24) pentane | 6.10 | 43 | 19056 | 0.572 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192623.D
Acq On : 25 Feb 2020 3:24 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:11:31 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.13 | 31 | 16545 | 0.571 | ppbV | | 96 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 12473 | 0.574 | ppbV | | 98 |
| 27) tertiary butyl alcohol | 6.44 | 59 | 17307 | 0.619 | ppbV | | 96 |
| 28) methylene chloride | 6.54 | 49 | 12349 | 0.582 | ppbV | | 100 |
| 29) 3-chloropropene | 6.67 | 41 | 14131 | 0.561 | ppbV | | 99 |
| 30) carbon disulfide | 6.85 | 76 | 34672 | 0.583 | ppbV | # | 92 |
| 31) Freon 113 | 6.83 | 101 | 18126 | 0.588 | ppbV | | 99 |
| 32) trans-1,2-dichloroethene | 7.54 | 61 | 14247 | 0.575 | ppbV | | 99 |
| 33) 1,1-dichloroethane | 7.75 | 63 | 17259 | 0.569 | ppbV | | 99 |
| 34) MTBE | 7.80 | 73 | 27805 | 0.564 | ppbV | | 99 |
| 35) vinyl acetate | 7.89 | 43 | 24338 | 0.564 | ppbV | | 98 |
| 36) 2-butanone | 8.15 | 43 | 22310 | 0.569 | ppbV | | 100 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 12248 | 0.569 | ppbV | | 98 |
| 38) Ethyl Acetate | 8.82 | 61 | 3885 | 0.566 | ppbV | | 87 |
| 39) chloroform | 8.91 | 83 | 15699 | 0.589 | ppbV | | 97 |
| 40) Tetrahydrofuran | 9.33 | 42 | 14591 | 0.564 | ppbV | | 97 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 12720 | 0.568 | ppbV | | 99 |
| 42) 1,2-dichloroethane | 9.67 | 62 | 7529 | 0.579 | ppbV | | 97 |
| 44) hexane | 8.82 | 57 | 19733 | 0.581 | ppbV | # | 57 |
| 45) diisopropyl ether | 8.81 | 87 | 10474 | 0.571 | ppbV | | 98 |
| 46) tert-butyl ethyl ether | 9.36 | 59 | 30135 | 0.568 | ppbV | | 99 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 12558 | 0.579 | ppbV | | 98 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 14889 | 0.568 | ppbV | | 98 |
| 50) benzene | 10.40 | 78 | 38222 | 0.574 | ppbV | | 99 |
| 51) thiophene | 10.54 | 84 | 79711 | 0.609 | ppbV | | 99 |
| 52) carbon tetrachloride | 10.56 | 117 | 10816 | 0.600 | ppbV | | 99 |
| 53) cyclohexane | 10.69 | 56 | 20806 | 0.559 | ppbV | | 99 |
| 54) tert-amyl methyl ether | 10.99 | 73 | 32455 | 0.564 | ppbV | | 99 |
| 55) dibromomethane | 11.22 | 93 | 9773 | 0.600 | ppbV | | 99 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 12215 | 0.569 | ppbV | | 98 |
| 57) bromodichloromethane | 11.45 | 83 | 17240 | 0.593 | ppbV | | 98 |
| 58) 1,4-dioxane | 11.49 | 88 | 8425 | 0.570 | ppbV | | 86 |
| 59) trichloroethene | 11.49 | 130 | 14210 | 0.592 | ppbV | | 98 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 63101 | 0.602 | ppbV | | 100 |
| 61) methyl methacrylate | 11.67 | 41 | 15368 | 0.506 | ppbV | | 98 |
| 62) heptane | 11.78 | 43 | 23400 | 0.562 | ppbV | | 98 |
| 63) cis-1,3-dichloropropene | 12.40 | 75 | 18167 | 0.560 | ppbV | | 98 |
| 64) 4-methyl-2-pentanone | 12.43 | 43 | 25836 | 0.557 | ppbV | | 100 |
| 65) trans-1,3-dichloropropene | 12.93 | 75 | 15826 | 0.540 | ppbV | | 96 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 13369 | 0.572 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192623.D
Acq On : 25 Feb 2020 3:24 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:11:31 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 43597 | 0.586 | ppbV | | 98 |
| 70) 2-methylthiophene | 13.43 | 97 | 134783 | 0.639 | ppbV | | 99 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 19791 | 0.565 | ppbV | | 100 |
| 72) 2-hexanone | 13.59 | 43 | 23509 | 0.536 | ppbV | # | 79 |
| 73) 3-methylthiophene | 13.59 | 97 | 138200 | 0.637 | ppbV | | 100 |
| 74) dibromochloromethane | 13.76 | 129 | 16565 | 0.566 | ppbV | | 99 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 19799 | 0.571 | ppbV | | 98 |
| 76) butyl acetate | 14.13 | 73 | 5927 | 0.513 | ppbV | | 97 |
| 77) octane | 14.21 | 85 | 17277 | 0.559 | ppbV | | 97 |
| 78) tetrachloroethene | 14.36 | 166 | 19338 | 0.574 | ppbV | | 99 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 12186 | 0.566 | ppbV | | 97 |
| 80) chlorobenzene | 14.91 | 112 | 34742 | 0.577 | ppbV | | 99 |
| 81) ethylbenzene | 15.19 | 91 | 51718 | 0.563 | ppbV | | 100 |
| 82) 2-ethylthiophene | 15.23 | 97 | 143768 | 0.669 | ppbV | | 96 |
| 83) m+p-xylene | 15.32 | 91 | 84500 | 1.178 | ppbV | | 100 |
| 84) bromoform | 15.41 | 173 | 18476 | 0.570 | ppbV | | 98 |
| 85) styrene | 15.60 | 104 | 39126 | 0.563 | ppbV | | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 28616 | 0.562 | ppbV | | 98 |
| 87) o-xylene | 15.68 | 91 | 41996 | 0.597 | ppbV | | 99 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 23099 | 0.562 | ppbV | | 98 |
| 89) nonane | 15.82 | 43 | 33185 | 0.577 | ppbV | | 99 |
| 91) isopropylbenzene | 16.12 | 105 | 58202 | 0.570 | ppbV | | 99 |
| 92) bromobenzene | 16.21 | 77 | 31135 | 0.563 | ppbV | | 92 |
| 93) 2-chlorotoluene | 16.49 | 126 | 16356 | 0.552 | ppbV | # | 53 |
| 94) n-propylbenzene | 16.51 | 120 | 19247 | 0.545 | ppbV | | 98 |
| 95) 4-chlorotoluene | 16.54 | 126 | 16080 | 0.554 | ppbV | | 97 |
| 96) 4-ethyl toluene | 16.62 | 105 | 67338 | 0.546 | ppbV | | 99 |
| 97) 1,3,5-trimethylbenzene | 16.67 | 105 | 54769 | 0.560 | ppbV | | 99 |
| 98) tert-butylbenzene | 16.99 | 119 | 52729 | 0.581 | ppbV | | 98 |
| 99) 1,2,4-trimethylbenzene | 16.99 | 105 | 53776 | 0.582 | ppbV | | 98 |
| 100) decane | 17.03 | 57 | 39446 | 0.524 | ppbV | | 96 |
| 101) Benzyl Chloride | 17.11 | 91 | 36058 | 0.460 | ppbV | | 99 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 33205 | 0.516 | ppbV | | 99 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 33663 | 0.541 | ppbV | | 99 |
| 104) sec-butylbenzene | 17.19 | 105 | 76251 | 0.566 | ppbV | | 98 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 48874 | 0.512 | ppbV | | 95 |
| 106) p-isopropyltoluene | 17.31 | 119 | 64149 | 0.557 | ppbV | | 100 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 31471 | 0.513 | ppbV | | 99 |
| 108) n-butylbenzene | 17.63 | 91 | 51947 | 0.513 | ppbV | | 99 |
| 109) indan | 17.48 | 117 | 48515 | 0.485 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192623.D
Acq On : 25 Feb 2020 3:24 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:11:31 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 37563 | 0.465 | ppbV | 99 |
| 111) 1,2-dibromo-3-chloropr... | 17.80 | 75 | 11573 | 0.493 | ppbV | 90 |
| 112) undecane | 17.99 | 57 | 40604 | 0.470 | ppbV | 98 |
| 113) 1,2,4,5-tetramethylben... | 18.23 | 119 | 48596 | 0.482 | ppbV | 97 |
| 114) dodecane | 18.84 | 57 | 39090 | 0.408 | ppbV | 93 |
| 115) 1,2,4-trichlorobenzene | 18.83 | 180 | 25436 | 0.412 | ppbV | 96 |
| 116) naphthalene | 18.94 | 128 | 65927 | 0.458 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 19.18 | 180 | 25399 | 0.396 | ppbV | 98 |
| 118) benzothiophene | 19.01 | 134 | 48081 | 0.591 | ppbV | 99 |
| 119) hexachlorobutadiene | 19.22 | 225 | 22857 | 0.444 | ppbV | 100 |
| 120) 2-methylnaphthalene | 19.94 | 142 | 8213 | 0.409 | ppbV | 95 |
| 121) 1-methylnaphthalene | 20.12 | 142 | 13615 | 0.316 | ppbV | 98 |

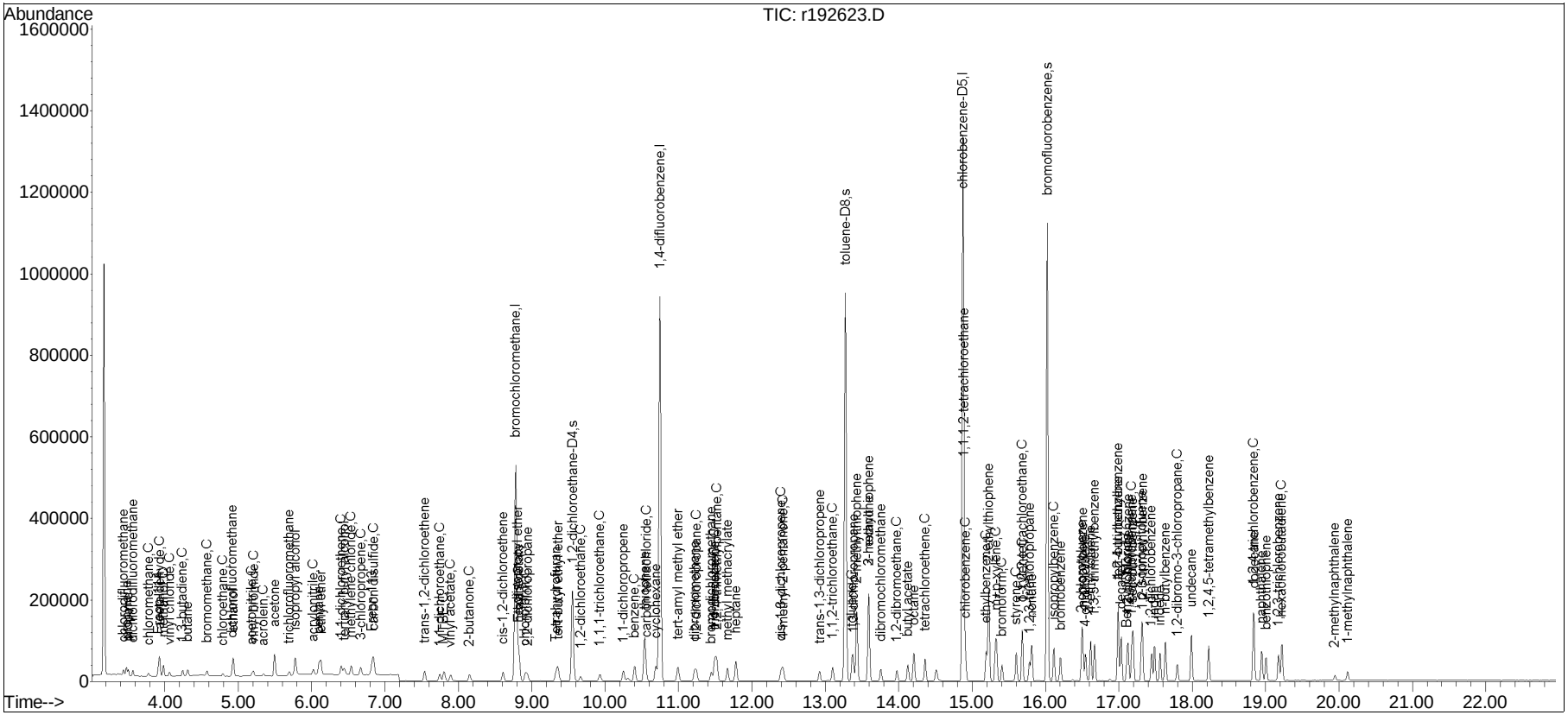
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192623.D
Acq On : 25 Feb 2020 3:24 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:11:31 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

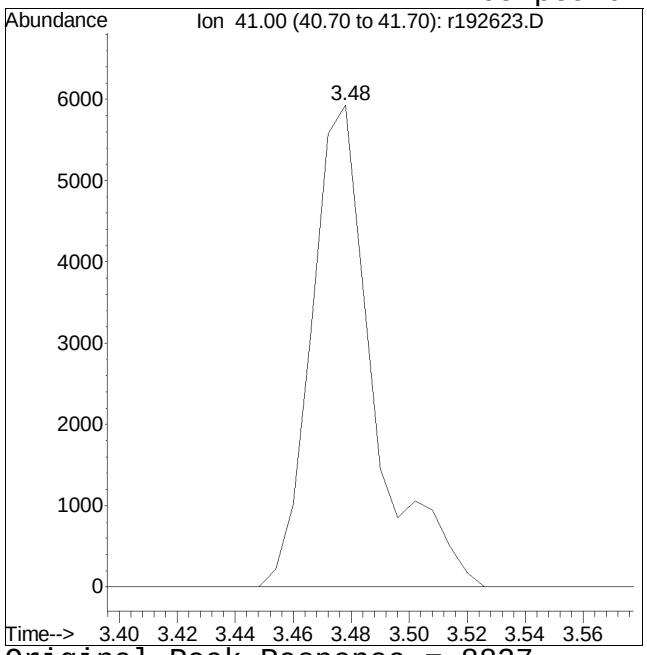
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



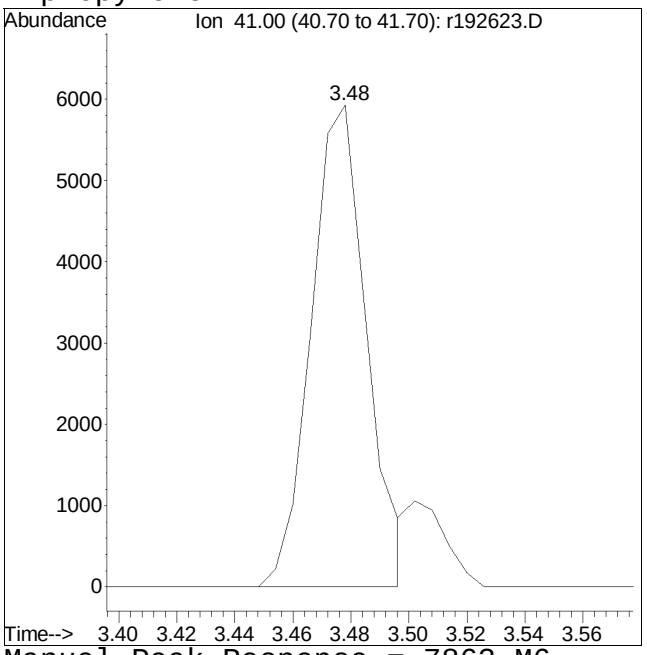
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192623.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:3: 4 Instrument :
Sample : ITO15-SIMSTD0.5 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 8827




Manual Peak Response = 7863 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192624.D
Acq On : 25 Feb 2020 4:06 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:13:28 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 313016 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 99.95% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 883036 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 98.98% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 116619 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 100.67% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.56 | 65 | 114160 | 10.135 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.35% | | | |
| 69) toluene-D8 | 13.28 | 98 | 674831 | 9.749 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.49% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 426954 | 9.697 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.97% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 21101 | 1.136 | ppbV | 99 |
| 3) propylene | 3.48 | 41 | 14142M6 | 1.139 | ppbV | |
| 4) propane | 3.50 | 29 | 16195M4 | 1.231 | ppbV | |
| 5) dichlorodifluoromethane | 3.57 | 85 | 17911 | 1.096 | ppbV | 99 |
| 6) chloromethane | 3.78 | 50 | 12035 | 1.170 | ppbV | 97 |
| 7) Freon-114 | 3.92 | 85 | 28644 | 1.124 | ppbV | 100 |
| 8) methanol | 3.98 | 31 | 32393 | 6.768 | ppbV # | 66 |
| 9) vinyl chloride | 4.07 | 62 | 15407 | 1.196 | ppbV | 99 |
| 10) 1,3-butadiene | 4.25 | 54 | 12968 | 1.123 | ppbV | 99 |
| 11) butane | 4.31 | 43 | 21239 | 1.169 | ppbV | 99 |
| 12) acetaldehyde | 3.93 | 29 | 32703 | 5.591 | ppbV | 97 |
| 13) bromomethane | 4.58 | 94 | 12621 | 1.184 | ppbV | 100 |
| 14) chloroethane | 4.79 | 64 | 7749 | 1.123 | ppbV | 100 |
| 15) ethanol | 4.93 | 31 | 54097 | 6.089 | ppbV | 100 |
| 16) dichlorofluoromethane | 4.92 | 67 | 21792 | 1.177 | ppbV | 100 |
| 17) vinyl bromide | 5.21 | 106 | 12848 | 1.117 | ppbV | 98 |
| 18) acrolein | 5.34 | 56 | 7148 | 1.146 | ppbV # | 88 |
| 19) acetone | 5.49 | 43 | 88422 | 5.482 | ppbV | 99 |
| 20) acetonitrile | 5.19 | 41 | 12215 | 1.011 | ppbV | 87 |
| 21) trichlorofluoromethane | 5.69 | 101 | 17251 | 0.835 | ppbV | 96 |
| 22) isopropyl alcohol | 5.77 | 45 | 85639 | 2.934 | ppbV | 99 |
| 23) acrylonitrile | 6.02 | 53 | 16910 | 1.082 | ppbV | 99 |
| 24) pentane | 6.10 | 43 | 36047 | 1.137 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192624.D
Acq On : 25 Feb 2020 4:06 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:13:28 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 31083 | 1.128 | ppbV | 99 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 23320 | 1.128 | ppbV | 99 |
| 27) tertiary butyl alcohol | 6.43 | 59 | 31635 | 1.190 | ppbV | 98 |
| 28) methylene chloride | 6.54 | 49 | 22712 | 1.126 | ppbV | 100 |
| 29) 3-chloropropene | 6.67 | 41 | 26484 | 1.106 | ppbV | 99 |
| 30) carbon disulfide | 6.85 | 76 | 64739 | 1.144 | ppbV | 97 |
| 31) Freon 113 | 6.82 | 101 | 33746 | 1.151 | ppbV | 99 |
| 32) trans-1,2-dichloroethene | 7.53 | 61 | 26618 | 1.129 | ppbV | 99 |
| 33) 1,1-dichloroethane | 7.74 | 63 | 31912 | 1.105 | ppbV | 99 |
| 34) MTBE | 7.80 | 73 | 52476 | 1.119 | ppbV | 99 |
| 35) vinyl acetate | 7.89 | 43 | 45474 | 1.108 | ppbV | 100 |
| 36) 2-butanone | 8.14 | 43 | 41458 | 1.112 | ppbV | 98 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 22891 | 1.117 | ppbV | 98 |
| 38) Ethyl Acetate | 8.82 | 61 | 7050 | 1.079 | ppbV | 89 |
| 39) chloroform | 8.91 | 83 | 29453 | 1.161 | ppbV | 97 |
| 40) Tetrahydrofuran | 9.32 | 42 | 27428 | 1.114 | ppbV | 96 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 23968 | 1.124 | ppbV | 98 |
| 42) 1,2-dichloroethane | 9.67 | 62 | 14020 | 1.133 | ppbV | 98 |
| 44) hexane | 8.82 | 57 | 37205 | 1.158 | ppbV # | 60 |
| 45) diisopropyl ether | 8.81 | 87 | 19681 | 1.134 | ppbV | 98 |
| 46) tert-butyl ethyl ether | 9.35 | 59 | 56737 | 1.130 | ppbV | 99 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 23972 | 1.169 | ppbV | 100 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 27785 | 1.121 | ppbV | 98 |
| 50) benzene | 10.40 | 78 | 71330 | 1.134 | ppbV | 100 |
| 51) thiophene | 10.54 | 84 | 148522 | 1.200 | ppbV | 99 |
| 52) carbon tetrachloride | 10.56 | 117 | 19977 | 1.172 | ppbV | 98 |
| 53) cyclohexane | 10.69 | 56 | 39191 | 1.114 | ppbV | 98 |
| 54) tert-amyl methyl ether | 10.99 | 73 | 61275 | 1.126 | ppbV | 99 |
| 55) dibromomethane | 11.22 | 93 | 18266 | 1.186 | ppbV | 99 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 23051 | 1.136 | ppbV | 99 |
| 57) bromodichloromethane | 11.45 | 83 | 31646 | 1.150 | ppbV | 99 |
| 58) 1,4-dioxane | 11.48 | 88 | 16382 | 1.171 | ppbV | 99 |
| 59) trichloroethene | 11.49 | 130 | 26162 | 1.153 | ppbV | 98 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 117625 | 1.187 | ppbV | 99 |
| 61) methyl methacrylate | 11.67 | 41 | 28486 | 0.992 | ppbV | 99 |
| 62) heptane | 11.78 | 43 | 45164 | 1.148 | ppbV | 99 |
| 63) cis-1,3-dichloropropene | 12.39 | 75 | 34602 | 1.127 | ppbV | 97 |
| 64) 4-methyl-2-pentanone | 12.42 | 43 | 49689 | 1.132 | ppbV | 98 |
| 65) trans-1,3-dichloropropene | 12.92 | 75 | 30260 | 1.092 | ppbV | 100 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 25181 | 1.139 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192624.D
Acq On : 25 Feb 2020 4:06 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:13:28 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 80566 | 1.141 | ppbV | | 97 |
| 70) 2-methylthiophene | 13.43 | 97 | 253801 | 1.268 | ppbV | | 100 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 36972 | 1.112 | ppbV | | 98 |
| 72) 2-hexanone | 13.58 | 43 | 45759 | 1.098 | ppbV | # | 85 |
| 73) 3-methylthiophene | 13.59 | 97 | 258063 | 1.254 | ppbV | | 99 |
| 74) dibromochloromethane | 13.76 | 129 | 31016 | 1.117 | ppbV | | 100 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 36589 | 1.111 | ppbV | | 99 |
| 76) butyl acetate | 14.12 | 73 | 11867 | 1.083 | ppbV | | 95 |
| 77) octane | 14.21 | 85 | 32993 | 1.125 | ppbV | | 99 |
| 78) tetrachloroethene | 14.36 | 166 | 36337 | 1.136 | ppbV | | 99 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 23679 | 1.160 | ppbV | | 97 |
| 80) chlorobenzene | 14.91 | 112 | 65106 | 1.140 | ppbV | | 99 |
| 81) ethylbenzene | 15.19 | 91 | 97012 | 1.113 | ppbV | | 99 |
| 82) 2-ethylthiophene | 15.23 | 97 | 265337 | 1.300 | ppbV | | 98 |
| 83) m+p-xylene | 15.32 | 91 | 158640 | 2.329 | ppbV | | 98 |
| 84) bromoform | 15.41 | 173 | 36249 | 1.178 | ppbV | | 97 |
| 85) styrene | 15.60 | 104 | 74445 | 1.129 | ppbV | | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 54854 | 1.135 | ppbV | | 100 |
| 87) o-xylene | 15.68 | 91 | 79378 | 1.188 | ppbV | | 99 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 42951 | 1.102 | ppbV | | 99 |
| 89) nonane | 15.82 | 43 | 62494 | 1.145 | ppbV | | 97 |
| 91) isopropylbenzene | 16.11 | 105 | 110067 | 1.135 | ppbV | | 98 |
| 92) bromobenzene | 16.20 | 77 | 58245 | 1.109 | ppbV | | 99 |
| 93) 2-chlorotoluene | 16.48 | 126 | 31650 | 1.126 | ppbV | # | 45 |
| 94) n-propylbenzene | 16.50 | 120 | 36947 | 1.101 | ppbV | | 98 |
| 95) 4-chlorotoluene | 16.54 | 126 | 29788 | 1.081 | ppbV | | 97 |
| 96) 4-ethyl toluene | 16.61 | 105 | 129430 | 1.105 | ppbV | | 99 |
| 97) 1,3,5-trimethylbenzene | 16.67 | 105 | 107979 | 1.163 | ppbV | | 98 |
| 98) tert-butylbenzene | 16.98 | 119 | 101792 | 1.182 | ppbV | | 99 |
| 99) 1,2,4-trimethylbenzene | 16.98 | 105 | 104339 | 1.190 | ppbV | | 98 |
| 100) decane | 17.02 | 57 | 76774 | 1.074 | ppbV | | 96 |
| 101) Benzyl Chloride | 17.11 | 91 | 72713 | 0.977 | ppbV | | 98 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 66620 | 1.090 | ppbV | | 99 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 63844 | 1.080 | ppbV | | 98 |
| 104) sec-butylbenzene | 17.19 | 105 | 147147 | 1.150 | ppbV | | 99 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 96178 | 1.060 | ppbV | | 100 |
| 106) p-isopropyltoluene | 17.31 | 119 | 123790 | 1.131 | ppbV | | 100 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 60726 | 1.042 | ppbV | | 99 |
| 108) n-butylbenzene | 17.63 | 91 | 102364 | 1.064 | ppbV | | 98 |
| 109) indan | 17.48 | 117 | 94016 | 0.990 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192624.D
Acq On : 25 Feb 2020 4:06 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:13:28 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 71678 | 0.935 | ppbV | 99 |
| 111) 1,2-dibromo-3-chloropr... | 17.79 | 75 | 22692 | 1.018 | ppbV | 100 |
| 112) undecane | 17.98 | 57 | 81886 | 0.998 | ppbV | 97 |
| 113) 1,2,4,5-tetramethylben... | 18.23 | 119 | 97504 | 1.019 | ppbV | 98 |
| 114) dodecane | 18.83 | 57 | 83682 | 0.919 | ppbV | 94 |
| 115) 1,2,4-trichlorobenzene | 18.83 | 180 | 55585 | 0.949 | ppbV | 97 |
| 116) naphthalene | 18.94 | 128 | 137026 | 1.003 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 19.18 | 180 | 56109 | 0.922 | ppbV | 98 |
| 118) benzothiophene | 19.00 | 134 | 108382 | 1.404 | ppbV | 100 |
| 119) hexachlorobutadiene | 19.22 | 225 | 49973 | 1.022 | ppbV | 97 |
| 120) 2-methylnaphthalene | 19.94 | 142 | 22243 | 1.167 | ppbV | 99 |
| 121) 1-methylnaphthalene | 20.12 | 142 | 34736 | 0.849 | ppbV | 98 |

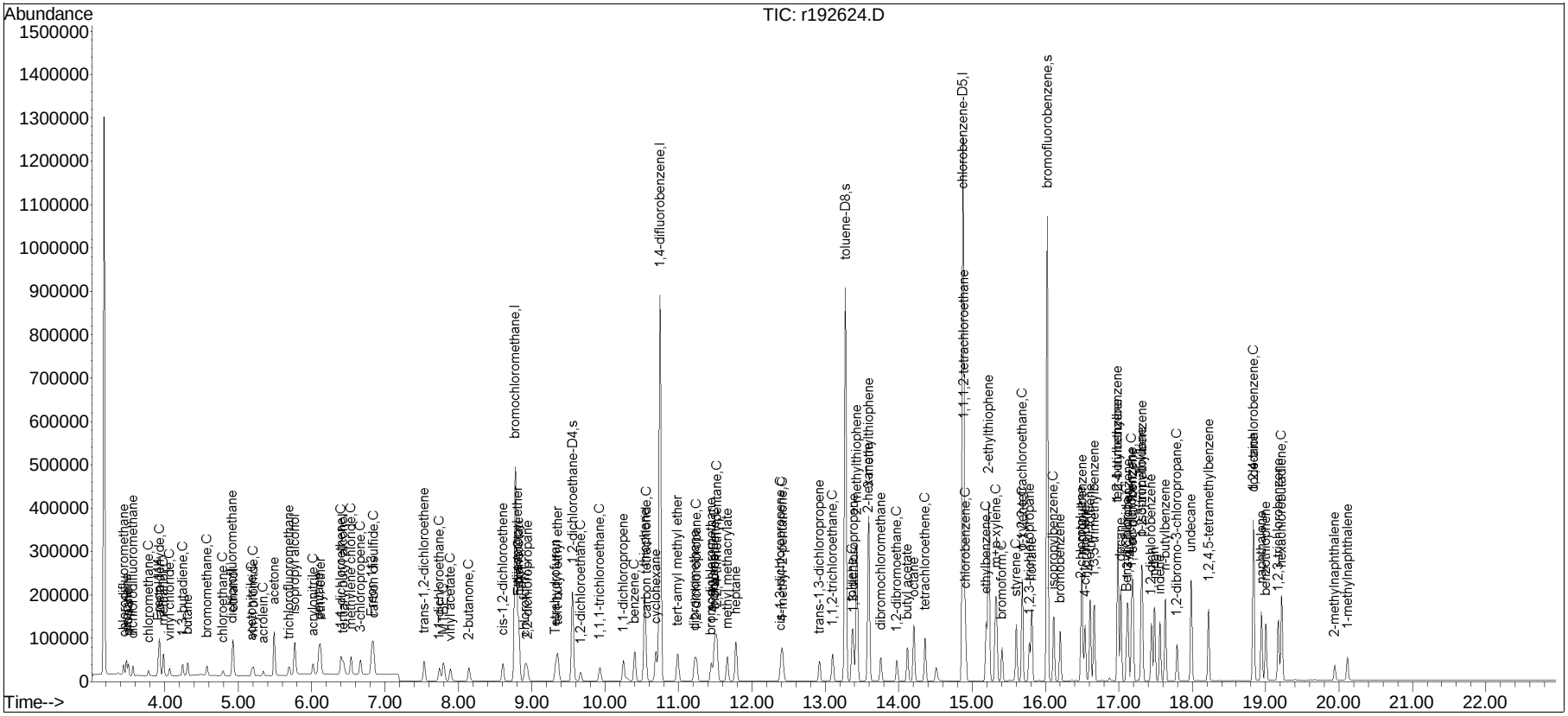
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192624.D
Acq On : 25 Feb 2020 4:06 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:13:28 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

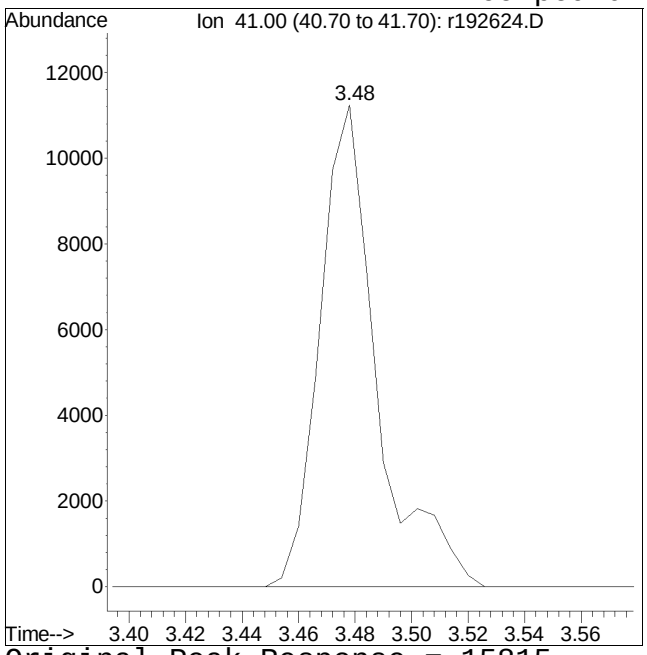
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



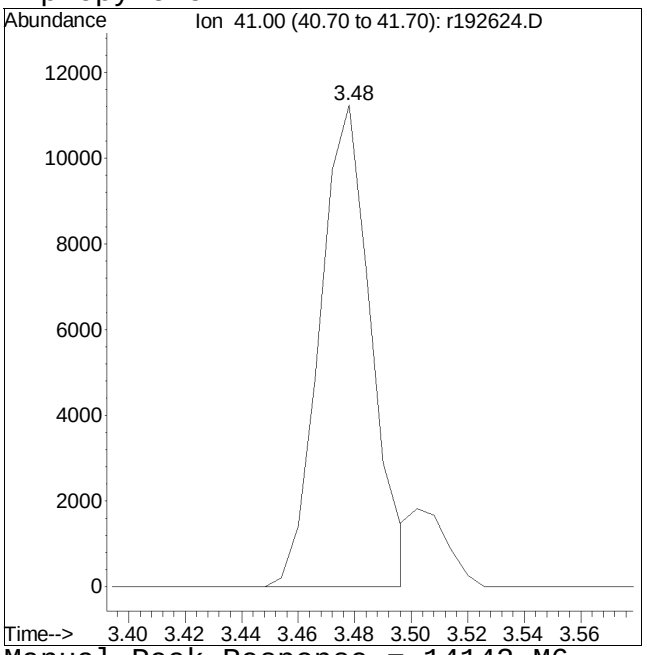
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192624.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:4: 6 Instrument :
Sample : ITO15-SIMSTD1.0 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 15815



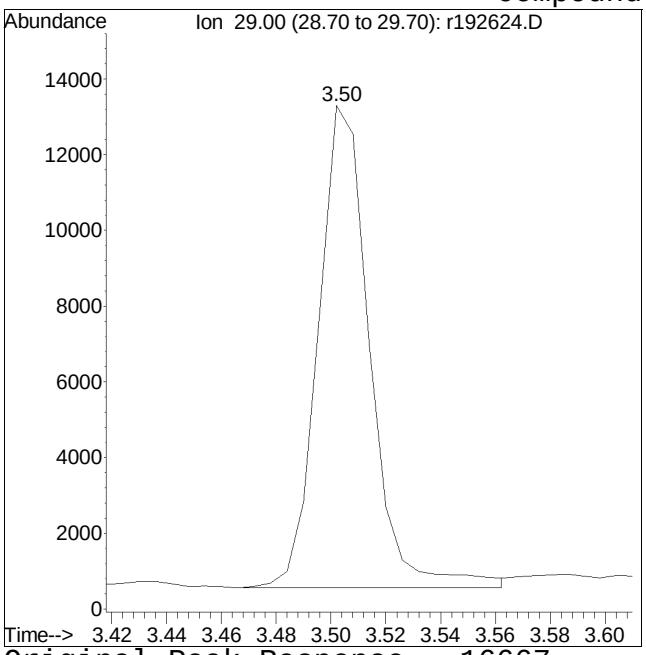

Manual Peak Response = 14142 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

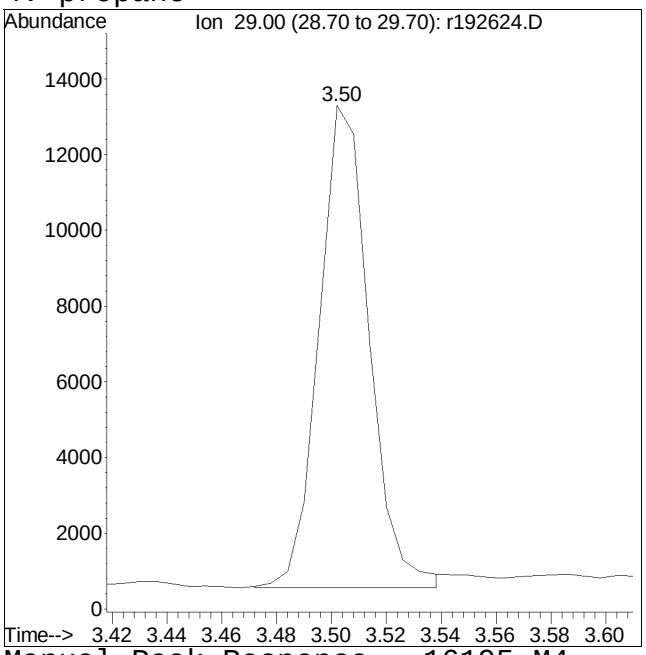
# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192624.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:4: 6 Instrument :
Sample : ITO15-SIMSTD1.0 Quant Date : 2/25/2020 8:57 am

Compound #4: propane




Original Peak Response = 16667




Manual Peak Response = 16195 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192625.D
Acq On : 25 Feb 2020 4:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:14:56 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 323977 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 103.45% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 915938 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 102.66% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 119525 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 103.18% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 118914 | 10.178 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.78% | | | |
| 69) toluene-D8 | 13.28 | 98 | 699321 | 9.857 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.57% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 445208 | 9.866 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.66% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 98191 | 5.108 | ppbV | 100 |
| 3) propylene | 3.48 | 41 | 65702M6 | 5.113 | ppbV | |
| 4) propane | 3.50 | 29 | 71195 | 5.227 | ppbV | 99 |
| 5) dichlorodifluoromethane | 3.57 | 85 | 90376 | 5.344 | ppbV | 99 |
| 6) chloromethane | 3.78 | 50 | 59731 | 5.608 | ppbV | 100 |
| 7) Freon-114 | 3.92 | 85 | 141144 | 5.352 | ppbV | 99 |
| 8) methanol | 3.98 | 31 | 131539 | 26.554 | ppbV | 95 |
| 9) vinyl chloride | 4.07 | 62 | 71605 | 5.372 | ppbV | 100 |
| 10) 1,3-butadiene | 4.25 | 54 | 60551 | 5.064 | ppbV | 99 |
| 11) butane | 4.31 | 43 | 99477 | 5.289 | ppbV | 100 |
| 12) acetaldehyde | 3.93 | 29 | 166146 | 27.445 | ppbV | 99 |
| 13) bromomethane | 4.58 | 94 | 56334 | 5.106 | ppbV | 99 |
| 14) chloroethane | 4.79 | 64 | 37717 | 5.281 | ppbV | 99 |
| 15) ethanol | 4.93 | 31 | 248571 | 27.033 | ppbV | 99 |
| 16) dichlorofluoromethane | 4.92 | 67 | 99190 | 5.176 | ppbV | 99 |
| 17) vinyl bromide | 5.21 | 106 | 60833 | 5.110 | ppbV | 99 |
| 18) acrolein | 5.34 | 56 | 32500 | 5.036 | ppbV | 98 |
| 19) acetone | 5.49 | 43 | 443038 | 26.539 | ppbV | 99 |
| 20) acetonitrile | 5.19 | 41 | 64084 | 5.125 | ppbV | 98 |
| 21) trichlorofluoromethane | 5.70 | 101 | 101377 | 4.738 | ppbV | 99 |
| 22) isopropyl alcohol | 5.77 | 45 | 413142 | 13.676 | ppbV | 100 |
| 23) acrylonitrile | 6.02 | 53 | 80378 | 4.970 | ppbV | 100 |
| 24) pentane | 6.10 | 43 | 169313 | 5.161 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192625.D
Acq On : 25 Feb 2020 4:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:14:56 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 146639 | 5.144 | ppbV | 99 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 110811 | 5.179 | ppbV | 100 |
| 27) tertiary butyl alcohol | 6.43 | 59 | 154464 | 5.612 | ppbV | 99 |
| 28) methylene chloride | 6.54 | 49 | 106010 | 5.078 | ppbV | 100 |
| 29) 3-chloropropene | 6.67 | 41 | 126637 | 5.108 | ppbV | 99 |
| 30) carbon disulfide | 6.85 | 76 | 300188 | 5.125 | ppbV | 99 |
| 31) Freon 113 | 6.83 | 101 | 157941 | 5.205 | ppbV | 99 |
| 32) trans-1,2-dichloroethene | 7.54 | 61 | 125082 | 5.127 | ppbV | 100 |
| 33) 1,1-dichloroethane | 7.75 | 63 | 153171 | 5.125 | ppbV | 99 |
| 34) MTBE | 7.79 | 73 | 249780 | 5.144 | ppbV | 100 |
| 35) vinyl acetate | 7.89 | 43 | 213427 | 5.024 | ppbV | 100 |
| 36) 2-butanone | 8.13 | 43 | 195617 | 5.070 | ppbV | 99 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 108283 | 5.106 | ppbV | 99 |
| 38) Ethyl Acetate | 8.82 | 61 | 33690 | 4.983 | ppbV | 84 |
| 39) chloroform | 8.91 | 83 | 136152 | 5.188 | ppbV | 97 |
| 40) Tetrahydrofuran | 9.31 | 42 | 129249 | 5.071 | ppbV | 99 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 113686 | 5.151 | ppbV | 99 |
| 42) 1,2-dichloroethane | 9.66 | 62 | 65751 | 5.136 | ppbV | 99 |
| 44) hexane | 8.82 | 57 | 173373 | 5.201 | ppbV | 85 |
| 45) diisopropyl ether | 8.80 | 87 | 93709 | 5.205 | ppbV | 96 |
| 46) tert-butyl ethyl ether | 9.35 | 59 | 268405 | 5.156 | ppbV | 98 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 110368 | 5.189 | ppbV | 99 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 133522 | 5.194 | ppbV | 99 |
| 50) benzene | 10.40 | 78 | 337143 | 5.166 | ppbV | 100 |
| 51) thiophene | 10.53 | 84 | 682060 | 5.312 | ppbV | 99 |
| 52) carbon tetrachloride | 10.55 | 117 | 94632 | 5.351 | ppbV | 97 |
| 53) cyclohexane | 10.69 | 56 | 186059 | 5.097 | ppbV | 100 |
| 54) tert-amyl methyl ether | 10.98 | 73 | 290774 | 5.154 | ppbV | 100 |
| 55) dibromomethane | 11.22 | 93 | 84771 | 5.305 | ppbV | 99 |
| 56) 1,2-dichloropropane | 11.24 | 63 | 108061 | 5.133 | ppbV | 100 |
| 57) bromodichloromethane | 11.45 | 83 | 147694 | 5.176 | ppbV | 98 |
| 58) 1,4-dioxane | 11.47 | 88 | 77003 | 5.307 | ppbV | 99 |
| 59) trichloroethene | 11.49 | 130 | 123540 | 5.249 | ppbV | 99 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 551886 | 5.369 | ppbV | 99 |
| 61) methyl methacrylate | 11.66 | 41 | 153252 | 5.146 | ppbV | 100 |
| 62) heptane | 11.78 | 43 | 212154 | 5.197 | ppbV | 99 |
| 63) cis-1,3-dichloropropene | 12.39 | 75 | 164097 | 5.153 | ppbV | 100 |
| 64) 4-methyl-2-pentanone | 12.41 | 43 | 238414 | 5.237 | ppbV | 99 |
| 65) trans-1,3-dichloropropene | 12.92 | 75 | 146541 | 5.098 | ppbV | 99 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 120259 | 5.246 | ppbV | 98 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192625.D
Acq On : 25 Feb 2020 4:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:14:56 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 375815 | 5.192 | ppbV | 99 |
| 70) 2-methylthiophene | 13.43 | 97 | 1130178 | 5.509 | ppbV | 100 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 176151 | 5.171 | ppbV | 99 |
| 72) 2-hexanone | 13.57 | 43 | 220042 | 5.153 | ppbV | 100 |
| 73) 3-methylthiophene | 13.59 | 97 | 1136968 | 5.389 | ppbV | 99 |
| 74) dibromochloromethane | 13.76 | 129 | 147262 | 5.173 | ppbV | 99 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 173541 | 5.141 | ppbV | 98 |
| 76) butyl acetate | 14.11 | 73 | 57160 | 5.088 | ppbV | 98 |
| 77) octane | 14.21 | 85 | 155247 | 5.163 | ppbV | 99 |
| 78) tetrachloroethene | 14.36 | 166 | 170447 | 5.198 | ppbV | 99 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 110530 | 5.281 | ppbV | 99 |
| 80) chlorobenzene | 14.91 | 112 | 306571 | 5.236 | ppbV | 99 |
| 81) ethylbenzene | 15.19 | 91 | 462345 | 5.173 | ppbV | 100 |
| 82) 2-ethylthiophene | 15.23 | 97 | 1165578 | 5.571 | ppbV | 98 |
| 83) m+p-xylene | 15.32 | 91 | 740662 | 10.611 | ppbV | 99 |
| 84) bromoform | 15.41 | 173 | 169294 | 5.369 | ppbV | 97 |
| 85) styrene | 15.60 | 104 | 348722 | 5.158 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 261469 | 5.280 | ppbV | 100 |
| 87) o-xylene | 15.68 | 91 | 366803 | 5.356 | ppbV | 99 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 208032 | 5.206 | ppbV | 100 |
| 89) nonane | 15.81 | 43 | 292417 | 5.225 | ppbV | 98 |
| 91) isopropylbenzene | 16.12 | 105 | 524860 | 5.279 | ppbV | 98 |
| 92) bromobenzene | 16.20 | 77 | 277925 | 5.163 | ppbV | 99 |
| 93) 2-chlorotoluene | 16.49 | 126 | 148218 | 5.145 | ppbV | 71 |
| 94) n-propylbenzene | 16.50 | 120 | 179379 | 5.217 | ppbV | 81 |
| 95) 4-chlorotoluene | 16.54 | 126 | 147773 | 5.233 | ppbV | 99 |
| 96) 4-ethyl toluene | 16.62 | 105 | 621337 | 5.176 | ppbV | 99 |
| 97) 1,3,5-trimethylbenzene | 16.67 | 105 | 503928 | 5.296 | ppbV | 99 |
| 98) tert-butylbenzene | 16.98 | 119 | 472960 | 5.360 | ppbV | 100 |
| 99) 1,2,4-trimethylbenzene | 16.98 | 105 | 482824 | 5.373 | ppbV | 99 |
| 100) decane | 17.02 | 57 | 377972 | 5.157 | ppbV | 99 |
| 101) Benzyl Chloride | 17.11 | 91 | 383493 | 5.030 | ppbV | 99 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 327117 | 5.224 | ppbV | 99 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 311999 | 5.150 | ppbV | 99 |
| 104) sec-butylbenzene | 17.19 | 105 | 697750 | 5.320 | ppbV | 99 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 492841 | 5.302 | ppbV | 98 |
| 106) p-isopropyltoluene | 17.31 | 119 | 591972 | 5.279 | ppbV | 100 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 308608 | 5.166 | ppbV | 100 |
| 108) n-butylbenzene | 17.63 | 91 | 504930 | 5.121 | ppbV | 100 |
| 109) indan | 17.48 | 117 | 510883 | 5.250 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192625.D
Acq On : 25 Feb 2020 4:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:14:56 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 391092 | 4.977 | ppbV | 99 |
| 111) 1,2-dibromo-3-chloropr... | 17.79 | 75 | 115209 | 5.041 | ppbV | 96 |
| 112) undecane | 17.98 | 57 | 420873 | 5.007 | ppbV | 99 |
| 113) 1,2,4,5-tetramethylben... | 18.22 | 119 | 501994 | 5.118 | ppbV | 100 |
| 114) dodecane | 18.83 | 57 | 469392 | 5.032 | ppbV | 98 |
| 115) 1,2,4-trichlorobenzene | 18.82 | 180 | 300743 | 5.011 | ppbV | 99 |
| 116) naphthalene | 18.94 | 128 | 662617 | 4.732 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 19.17 | 180 | 298498 | 4.783 | ppbV | 99 |
| 118) benzothiophene | 19.00 | 134 | 361937 | 4.574 | ppbV | 100 |
| 119) hexachlorobutadiene | 19.22 | 225 | 258676 | 5.163 | ppbV | 99 |
| 120) 2-methylnaphthalene | 19.94 | 142 | 79336 | 4.061 | ppbV | 95 |
| 121) 1-methylnaphthalene | 20.11 | 142 | 184370 | 4.397 | ppbV | 99 |

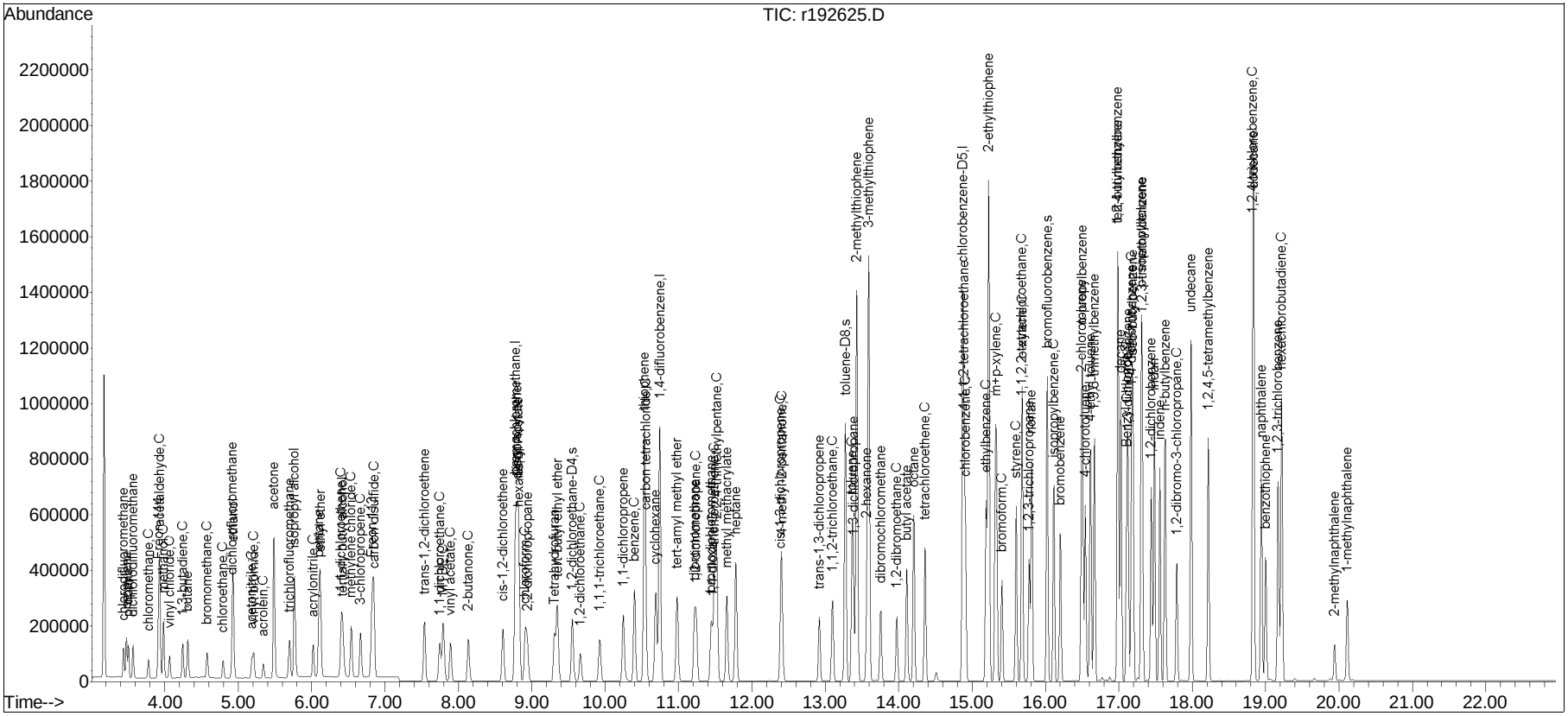
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192625.D
Acq On : 25 Feb 2020 4:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:14:56 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

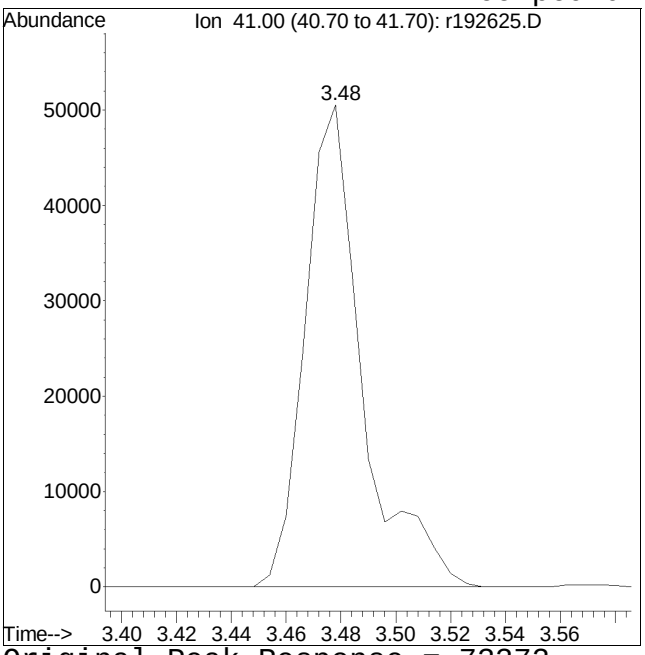
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



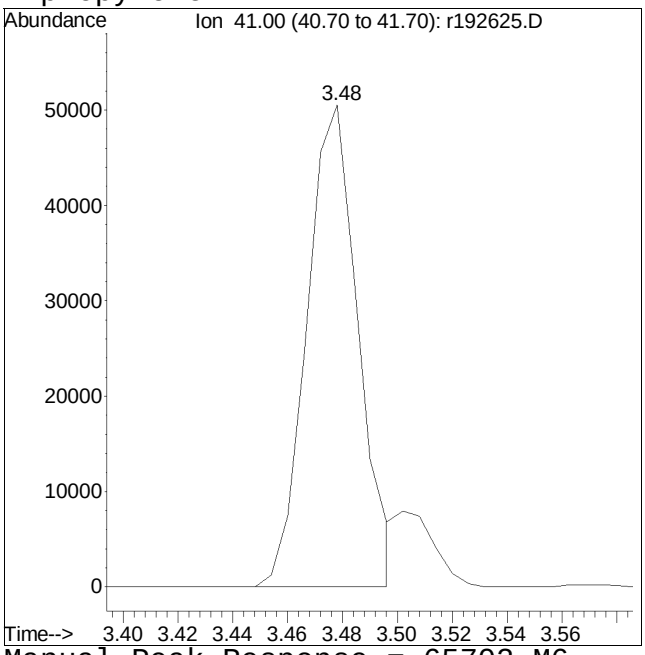
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192625.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:4: 6 Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 73372




Manual Peak Response = 65702 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192626.D
Acq On : 25 Feb 2020 5:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 08:55:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Wed Dec 04 12:54:37 2019
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 313159 | 10.000 | ppbV | | -0.03 |
| Standard Area = 313159 | | | Recovery = 100.00% | | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 892162 | 10.000 | ppbV | | -0.03 |
| Standard Area = 892162 | | | Recovery = 100.00% | | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 115842 | 10.000 | ppbV | | -0.02 |
| Standard Area = 115842 | | | Recovery = 100.00% | | | | |
| System Monitoring Compounds | | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 113798 | 7.660 | ppbV | | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 76.60% | | | | |
| 69) toluene-D8 | 13.28 | 98 | 687587 | 9.233 | ppbV | | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.33% | | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 437358 | 8.862 | ppbV | | -0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 88.62% | | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 185794 | 10.222 | ppbV | # | 92 |
| 3) propylene | 3.48 | 41 | 124215M6 | 8.346 | ppbV | | |
| 4) propane | 3.50 | 29 | 131658 | 11.164 | ppbV | # | 81 |
| 5) dichlorodifluoromethane | 3.57 | 85 | 163456 | 8.519 | ppbV | | 99 |
| 6) chloromethane | 3.78 | 50 | 102951 | 8.715 | ppbV | | 96 |
| 7) Freon-114 | 3.92 | 85 | 254923 | 9.052 | ppbV | | 97 |
| 8) methanol | 3.98 | 31 | 239410 | 51.497 | ppbV | | 95 |
| 9) vinyl chloride | 4.07 | 62 | 128831 | 9.245 | ppbV | | 97 |
| 10) 1,3-butadiene | 4.25 | 54 | 115573 | 9.471 | ppbV | | 90 |
| 11) butane | 4.31 | 43 | 181819 | 7.181 | ppbV | # | 97 |
| 12) acetaldehyde | 3.93 | 29 | 292583 | 54.552 | ppbV | # | 76 |
| 13) bromomethane | 4.58 | 94 | 106646 | 8.748 | ppbV | | 98 |
| 14) chloroethane | 4.80 | 64 | 69029 | 8.587 | ppbV | | 98 |
| 15) ethanol | 4.93 | 31 | 444402 | 52.584 | ppbV | # | 73 |
| 16) dichlorofluoromethane | 4.92 | 67 | 185242 | 7.799 | ppbV | | 99 |
| 17) vinyl bromide | 5.21 | 106 | 115075 | 8.379 | ppbV | | 99 |
| 18) acrolein | 5.34 | 56 | 62382 | 9.143 | ppbV | | 98 |
| 19) acetone | 5.49 | 43 | 806811 | 36.724 | ppbV | # | 83 |
| 20) acetonitrile | 5.19 | 41 | 120878 | 8.570 | ppbV | | 97 |
| 21) trichlorofluoromethane | 5.70 | 101 | 206817 | 8.606 | ppbV | | 100 |
| 22) isopropyl alcohol | 5.77 | 45 | 730026 | 19.071 | ppbV | | 98 |
| 23) acrylonitrile | 6.02 | 53 | 156332 | 9.998 | ppbV | | 99 |
| 24) pentane | 6.10 | 43 | 317115 | 7.455 | ppbV | # | 92 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192626.D
Acq On : 25 Feb 2020 5:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 08:55:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Wed Dec 04 12:54:37 2019
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 275571 | 12.583 | ppbV # | 74 |
| 26) 1,1-dichloroethene | 6.41 | 61 | 206831 | 8.203 | ppbV | 93 |
| 27) tertiary butyl alcohol | 6.43 | 59 | 266071 | 7.593 | ppbV | 93 |
| 28) methylene chloride | 6.54 | 49 | 201786 | 10.209 | ppbV | 90 |
| 29) 3-chloropropene | 6.67 | 41 | 239643 | 7.319 | ppbV # | 89 |
| 30) carbon disulfide | 6.85 | 76 | 566220 | 9.782 | ppbV # | 94 |
| 31) Freon 113 | 6.83 | 101 | 293297 | 9.061 | ppbV | 97 |
| 32) trans-1,2-dichloroethene | 7.54 | 61 | 235798 | 8.321 | ppbV | 95 |
| 33) 1,1-dichloroethane | 7.74 | 63 | 288894 | 8.169 | ppbV | 99 |
| 34) MTBE | 7.79 | 73 | 469368 | 8.703 | ppbV | 95 |
| 35) vinyl acetate | 7.89 | 43 | 410640 | 8.053 | ppbV | 96 |
| 36) 2-butanone | 8.13 | 43 | 372946 | 8.001 | ppbV | 92 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 204983 | 8.317 | ppbV | 93 |
| 38) Ethyl Acetate | 8.81 | 61 | 65358 | 9.205 | ppbV | 70 |
| 39) chloroform | 8.91 | 83 | 253697 | 8.764 | ppbV | 98 |
| 40) Tetrahydrofuran | 9.30 | 42 | 246371 | 7.720 | ppbV # | 87 |
| 41) 2,2-dichloropropane | 8.93 | 77 | 213317 | 8.098 | ppbV | 90 |
| 42) 1,2-dichloroethane | 9.66 | 62 | 123754 | 6.936 | ppbV # | 87 |
| 44) hexane | 8.82 | 57 | 324685 | 10.827 | ppbV # | 72 |
| 45) diisopropyl ether | 8.80 | 87 | 175371 | 9.761 | ppbV | 99 |
| 46) tert-butyl ethyl ether | 9.34 | 59 | 507094 | 9.636 | ppbV | 98 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 207168 | 8.540 | ppbV | 98 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 250391 | 9.907 | ppbV # | 89 |
| 50) benzene | 10.40 | 78 | 635708 | 10.981 | ppbV | 99 |
| 51) thiophene | 10.54 | 84 | 1250600 | 10.493 | ppbV | 99 |
| 52) carbon tetrachloride | 10.55 | 117 | 172271 | 8.690 | ppbV # | 96 |
| 53) cyclohexane | 10.69 | 56 | 355565 | 10.975 | ppbV # | 89 |
| 54) tert-amyl methyl ether | 10.98 | 73 | 549579 | 9.837 | ppbV | 93 |
| 55) dibromomethane | 11.22 | 93 | 155660 | 9.220 | ppbV | 100 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 205044 | 9.664 | ppbV | 97 |
| 57) bromodichloromethane | 11.45 | 83 | 277952 | 9.877 | ppbV | 96 |
| 58) 1,4-dioxane | 11.47 | 88 | 141324 | 9.660 | ppbV | 97 |
| 59) trichloroethene | 11.49 | 130 | 229244 | 9.985 | ppbV | 96 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 1001262M6 | 10.408 | ppbV | |
| 61) methyl methacrylate | 11.66 | 41 | 290093 | 8.978 | ppbV # | 82 |
| 62) heptane | 11.79 | 43 | 397590 | 9.156 | ppbV | 93 |
| 63) cis-1,3-dichloropropene | 12.39 | 75 | 310172 | 10.683 | ppbV # | 86 |
| 64) 4-methyl-2-pentanone | 12.41 | 43 | 443432 | 9.420 | ppbV | 91 |
| 65) trans-1,3-dichloropropene | 12.92 | 75 | 279964 | 10.146 | ppbV # | 91 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 223277 | 10.069 | ppbV | 93 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192626.D
Acq On : 25 Feb 2020 5:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 08:55:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Wed Dec 04 12:54:37 2019
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 701515 | 9.507 | ppbV | | 97 |
| 70) 2-methylthiophene | 13.43 | 97 | 1988447 | 9.782 | ppbV | | 99 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 330184 | 9.866 | ppbV | # | 81 |
| 72) 2-hexanone | 13.57 | 43 | 413836 | 8.563 | ppbV | | 88 |
| 73) 3-methylthiophene | 13.59 | 97 | 2044645 | 9.856 | ppbV | | 98 |
| 74) dibromochloromethane | 13.76 | 129 | 275896 | 9.263 | ppbV | | 98 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 327140 | 10.126 | ppbV | | 99 |
| 76) butyl acetate | 14.11 | 73 | 108889 | 9.811 | ppbV | | 80 |
| 77) octane | 14.21 | 85 | 291410 | 9.373 | ppbV | | 91 |
| 78) tetrachloroethene | 14.36 | 166 | 317798 | 9.480 | ppbV | | 96 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 202833 | 8.925 | ppbV | | 100 |
| 80) chlorobenzene | 14.91 | 112 | 567426 | 9.889 | ppbV | | 100 |
| 81) ethylbenzene | 15.19 | 91 | 866191 | 9.584 | ppbV | | 96 |
| 82) 2-ethylthiophene | 15.23 | 97 | 2027772 | 9.393 | ppbV | | 97 |
| 83) m+p-xylene | 15.32 | 91 | 1352950 | 18.839 | ppbV | | 91 |
| 84) bromoform | 15.41 | 173 | 305601 | 9.491 | ppbV | | 97 |
| 85) styrene | 15.60 | 104 | 655191 | 10.418 | ppbV | | 97 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 479981 | 10.644 | ppbV | | 96 |
| 87) o-xylene | 15.68 | 91 | 663728 | 9.458 | ppbV | | 95 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 387256 | 9.852 | ppbV | # | 95 |
| 89) nonane | 15.82 | 43 | 542372 | 8.748 | ppbV | | 86 |
| 91) isopropylbenzene | 16.11 | 105 | 963584 | 9.985 | ppbV | | 99 |
| 92) bromobenzene | 16.20 | 77 | 521684 | 10.013 | ppbV | | 94 |
| 93) 2-chlorotoluene | 16.49 | 126 | 279205 | 9.846 | ppbV | | 91 |
| 94) n-propylbenzene | 16.50 | 120 | 333229 | 9.816 | ppbV | | 96 |
| 95) 4-chlorotoluene | 16.54 | 126 | 273670 | 9.567 | ppbV | | 91 |
| 96) 4-ethyl toluene | 16.61 | 105 | 1163432 | 10.669 | ppbV | | 98 |
| 97) 1,3,5-trimethylbenzene | 16.67 | 105 | 922248 | 10.372 | ppbV | | 99 |
| 98) tert-butylbenzene | 16.98 | 119 | 855260 | 9.506 | ppbV | | 100 |
| 99) 1,2,4-trimethylbenzene | 16.98 | 105 | 870980 | 10.656 | ppbV | | 95 |
| 100) decane | 17.02 | 57 | 710351 | 10.194 | ppbV | | 90 |
| 101) Benzyl Chloride | 17.11 | 91 | 738978 | 9.770 | ppbV | | 97 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 606906 | 10.720 | ppbV | | 98 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 587198 | 10.680 | ppbV | | 96 |
| 104) sec-butylbenzene | 17.19 | 105 | 1271163 | 10.529 | ppbV | | 99 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 900882 | 11.070 | ppbV | | 99 |
| 106) p-isopropyltoluene | 17.31 | 119 | 1086871 | 9.607 | ppbV | | 98 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 579002 | 10.802 | ppbV | | 97 |
| 108) n-butylbenzene | 17.63 | 91 | 955685 | 9.738 | ppbV | | 96 |
| 109) indan | 17.48 | 117 | 943080 | 10.651 | ppbV | | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192626.D
Acq On : 25 Feb 2020 5:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 08:55:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Wed Dec 04 12:54:37 2019
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 761568 | 10.443 | ppbV | 100 |
| 111) 1,2-dibromo-3-chloropr... | 17.79 | 75 | 221519 | 9.688 | ppbV | 96 |
| 112) undecane | 17.99 | 57 | 814742 | 10.480 | ppbV | 94 |
| 113) 1,2,4,5-tetramethylben... | 18.23 | 119 | 950550 | 7.812 | ppbV | 98 |
| 114) dodecane | 18.84 | 57 | 904153 | 11.894 | ppbV | 89 |
| 115) 1,2,4-trichlorobenzene | 18.83 | 180 | 581624 | 11.690 | ppbV | 98 |
| 116) naphthalene | 18.95 | 128 | 1357250 | 10.601 | ppbV | 98 |
| 117) 1,2,3-trichlorobenzene | 19.18 | 180 | 604812 | 11.452 | ppbV | 99 |
| 118) benzothiophene | 19.01 | 134 | 766863 | 6.768 | ppbV | 99 |
| 119) hexachlorobutadiene | 19.23 | 225 | 485592 | 10.646 | ppbV | 98 |
| 120) 2-methylnaphthalene | 19.95 | 142 | 189361 | 10.862 | ppbV | 97 |
| 121) 1-methylnaphthalene | 20.12 | 142 | 406430 | 17.099 | ppbV | 97 |

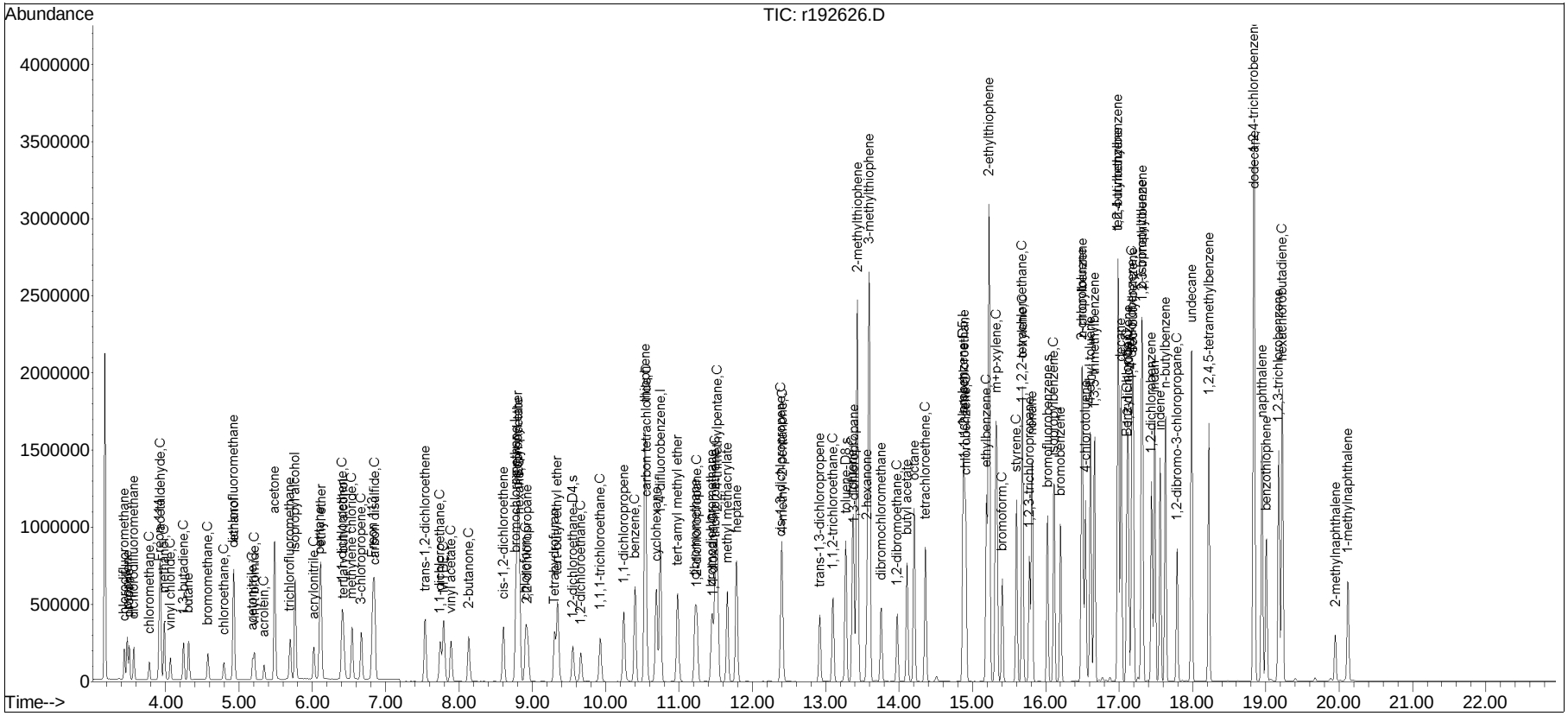
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192626.D
Acq On : 25 Feb 2020 5:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 08:55:41 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Wed Dec 04 12:54:37 2019
Response via : Initial Calibration

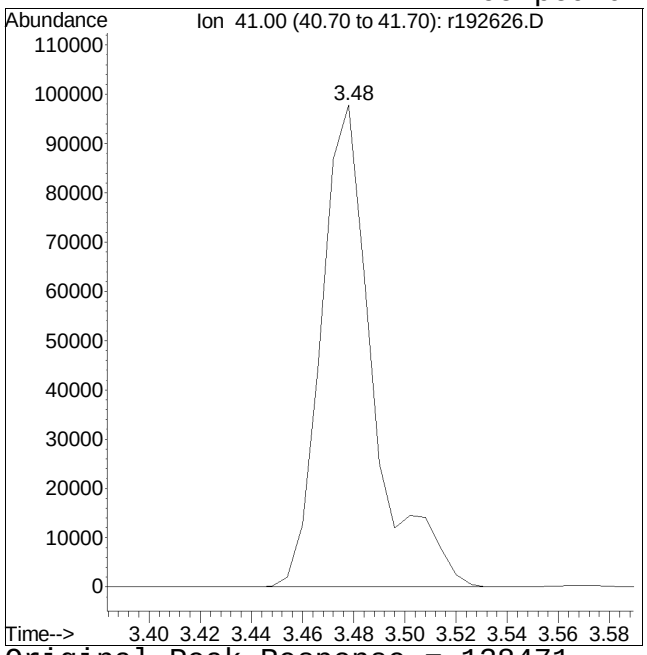
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



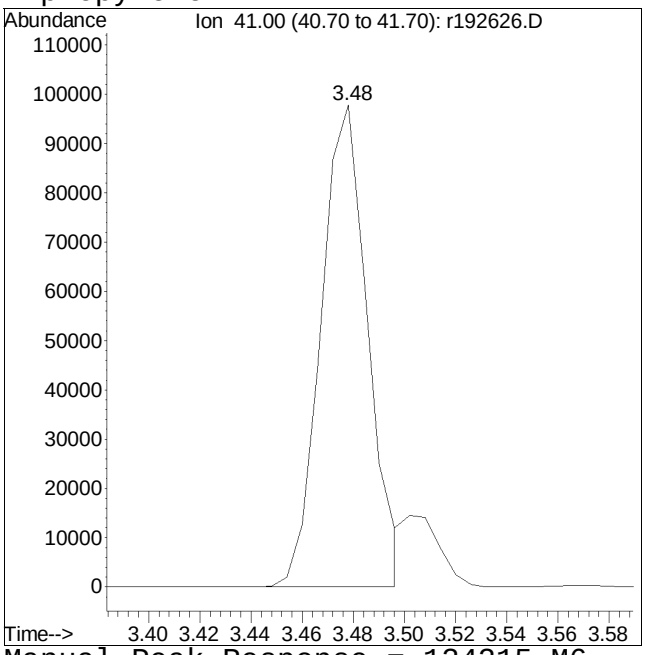
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192626.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:5: 8 Instrument :
Sample : ITO15-SIMSTD010 Quant Date : 2/25/2020 8:54 am

Compound #3: propylene




Original Peak Response = 138471



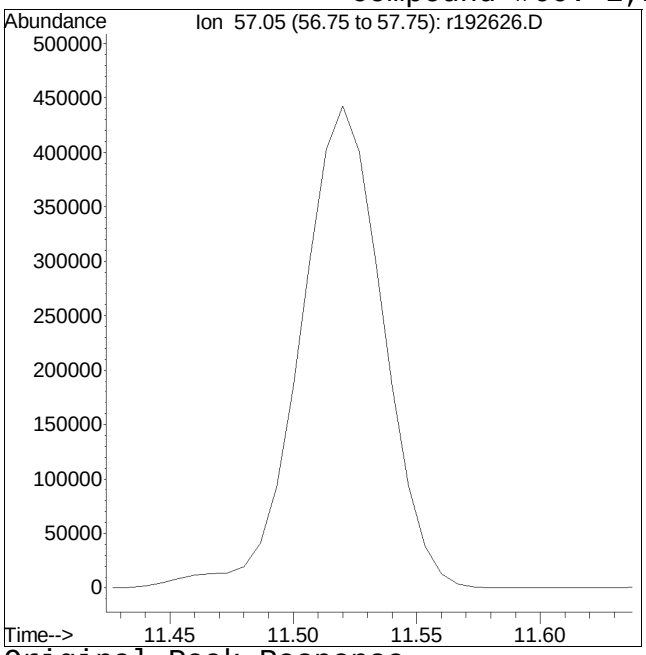

Manual Peak Response = 124215 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

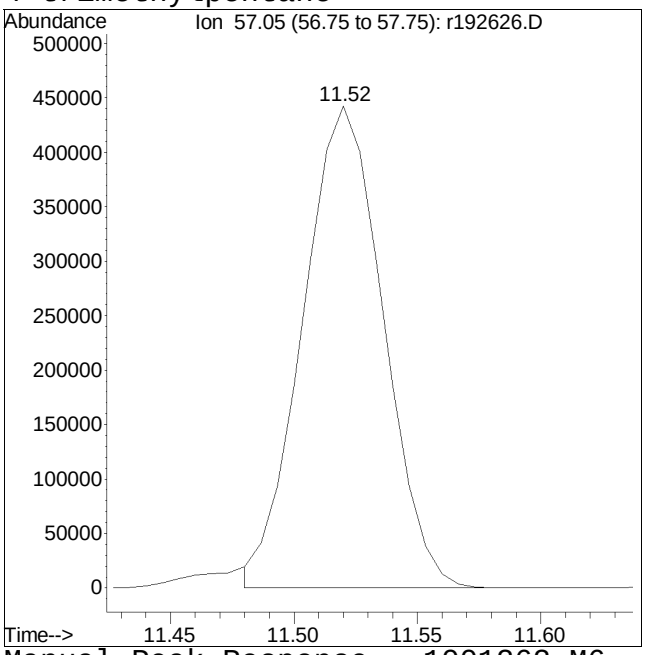
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192626.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:5: 8 Instrument :
Sample : ITO15-SIMSTD010 Quant Date : 2/25/2020 8:54 am

Compound #60: 2,2,4-trimethylpentane




Original Peak Response =




Manual Peak Response = 1001262 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192627.D
Acq On : 25 Feb 2020 6:07 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD020
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:16:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 341458 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 109.04% | | | |
| 43) 1,4-difluorobenzene | 10.74 | 114 | 961114 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 107.73% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 124449 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 107.43% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 124643 | 10.167 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.67% | | | |
| 69) toluene-D8 | 13.28 | 98 | 744343 | 10.077 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.77% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 480119 | 10.218 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.18% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 447261 | 22.078 | ppbV | 99 |
| 3) propylene | 3.47 | 41 | 293021M6 | 21.635 | ppbV | |
| 4) propane | 3.50 | 29 | 308948 | 21.521 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.56 | 85 | 394607 | 22.141 | ppbV | 100 |
| 6) chloromethane | 3.77 | 50 | 264997 | 23.607 | ppbV | 100 |
| 7) Freon-114 | 3.92 | 85 | 567062 | 20.401 | ppbV | 99 |
| 8) methanol | 3.98 | 31 | 558079 | 106.893 | ppbV | 96 |
| 9) vinyl chloride | 4.06 | 62 | 293623 | 20.902 | ppbV | 99 |
| 10) 1,3-butadiene | 4.24 | 54 | 266579 | 21.154 | ppbV | 99 |
| 11) butane | 4.31 | 43 | 415027 | 20.935 | ppbV | 100 |
| 12) acetaldehyde | 3.93 | 29 | 607442 | 95.204 | ppbV | 96 |
| 13) bromomethane | 4.58 | 94 | 230307 | 19.806 | ppbV | 100 |
| 14) chloroethane | 4.79 | 64 | 154452 | 20.521 | ppbV | 99 |
| 15) ethanol | 4.92 | 31 | 1029988 | 106.281 | ppbV | 99 |
| 16) dichlorofluoromethane | 4.92 | 67 | 403257 | 19.965 | ppbV | 99 |
| 17) vinyl bromide | 5.21 | 106 | 248434 | 19.800 | ppbV | 95 |
| 18) acrolein | 5.34 | 56 | 135554 | 19.929 | ppbV | 99 |
| 19) acetone | 5.48 | 43 | 2204914 | 125.319 | ppbV | 99 |
| 20) acetonitrile | 5.18 | 41 | 262185 | 19.892 | ppbV | 99 |
| 21) trichlorofluoromethane | 5.70 | 101 | 447859 | 19.860 | ppbV | 99 |
| 22) isopropyl alcohol | 5.76 | 45 | 1642082 | 51.573 | ppbV | 100 |
| 23) acrylonitrile | 6.02 | 53 | 343034 | 20.124 | ppbV | 99 |
| 24) pentane | 6.10 | 43 | 694909 | 20.097 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192627.D
Acq On : 25 Feb 2020 6:07 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD020
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:16:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 595312 | 19.812 | ppbV | 99 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 443937 | 19.685 | ppbV | 99 |
| 27) tertiary butyl alcohol | 6.42 | 59 | 642568 | 22.149 | ppbV | 100 |
| 28) methylene chloride | 6.54 | 49 | 445554 | 20.251 | ppbV | 99 |
| 29) 3-chloropropene | 6.67 | 41 | 527710 | 20.196 | ppbV | 100 |
| 30) carbon disulfide | 6.85 | 76 | 1195010 | 19.356 | ppbV | 100 |
| 31) Freon 113 | 6.82 | 101 | 623515 | 19.497 | ppbV | 98 |
| 32) trans-1,2-dichloroethene | 7.54 | 61 | 508578 | 19.781 | ppbV | 100 |
| 33) 1,1-dichloroethane | 7.74 | 63 | 622452 | 19.760 | ppbV | 100 |
| 34) MTBE | 7.79 | 73 | 1018432 | 19.900 | ppbV | 100 |
| 35) vinyl acetate | 7.89 | 43 | 895127 | 19.992 | ppbV | 100 |
| 36) 2-butanone | 8.13 | 43 | 805706 | 19.813 | ppbV | 99 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 442665 | 19.805 | ppbV | 100 |
| 38) Ethyl Acetate | 8.81 | 61 | 138192 | 19.392 | ppbV | 90 |
| 39) chloroform | 8.91 | 83 | 542944 | 19.628 | ppbV | 98 |
| 40) Tetrahydrofuran | 9.30 | 42 | 534125 | 19.883 | ppbV | 99 |
| 41) 2,2-dichloropropane | 8.93 | 77 | 450626 | 19.374 | ppbV | 100 |
| 42) 1,2-dichloroethane | 9.66 | 62 | 264202 | 19.580 | ppbV | 99 |
| 44) hexane | 8.82 | 57 | 688586 | 19.686 | ppbV | 91 |
| 45) diisopropyl ether | 8.80 | 87 | 370328 | 19.602 | ppbV | 98 |
| 46) tert-butyl ethyl ether | 9.34 | 59 | 1076494 | 19.706 | ppbV | 100 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 433835 | 19.439 | ppbV | 98 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 540204 | 20.027 | ppbV | 99 |
| 50) benzene | 10.40 | 78 | 1360423 | 19.865 | ppbV | 100 |
| 51) thiophene | 10.54 | 84 | 2533021 | 18.801 | ppbV | 100 |
| 52) carbon tetrachloride | 10.55 | 117 | 354680 | 19.111 | ppbV | 99 |
| 53) cyclohexane | 10.69 | 56 | 757124 | 19.766 | ppbV | 100 |
| 54) tert-amyl methyl ether | 10.98 | 73 | 1179199 | 19.917 | ppbV | 99 |
| 55) dibromomethane | 11.22 | 93 | 323537 | 19.294 | ppbV | 100 |
| 56) 1,2-dichloropropane | 11.24 | 63 | 433667 | 19.633 | ppbV | 99 |
| 57) bromodichloromethane | 11.45 | 83 | 584994 | 19.537 | ppbV | 99 |
| 58) 1,4-dioxane | 11.46 | 88 | 317235 | 20.837 | ppbV | 99 |
| 59) trichloroethene | 11.49 | 130 | 476748 | 19.305 | ppbV | 99 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 2180240 | 20.213 | ppbV | 100 |
| 61) methyl methacrylate | 11.66 | 41 | 560925 | 17.949 | ppbV | 99 |
| 62) heptane | 11.78 | 43 | 847181 | 19.779 | ppbV | 99 |
| 63) cis-1,3-dichloropropene | 12.39 | 75 | 643908 | 19.270 | ppbV | 98 |
| 64) 4-methyl-2-pentanone | 12.40 | 43 | 929778 | 19.464 | ppbV | 99 |
| 65) trans-1,3-dichloropropene | 12.92 | 75 | 588423 | 19.510 | ppbV | 99 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 473238 | 19.675 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192627.D
Acq On : 25 Feb 2020 6:07 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD020
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:16:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 1443273 | 19.151 | ppbV | 99 |
| 70) 2-methylthiophene | 13.43 | 97 | 3735550 | 17.487 | ppbV | 100 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 685064 | 19.313 | ppbV | 99 |
| 72) 2-hexanone | 13.57 | 43 | 865647 | 19.471 | ppbV | 100 |
| 73) 3-methylthiophene | 13.59 | 97 | 3794633 | 17.275 | ppbV | 100 |
| 74) dibromochloromethane | 13.76 | 129 | 561993 | 18.961 | ppbV | 99 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 678569 | 19.308 | ppbV | 99 |
| 76) butyl acetate | 14.11 | 73 | 232629 | 19.886 | ppbV | 99 |
| 77) octane | 14.21 | 85 | 604952 | 19.324 | ppbV | 99 |
| 78) tetrachloroethene | 14.36 | 166 | 629513 | 18.439 | ppbV | 98 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 409013 | 18.770 | ppbV | 99 |
| 80) chlorobenzene | 14.91 | 112 | 1160172 | 19.032 | ppbV | 100 |
| 81) ethylbenzene | 15.19 | 91 | 1726934 | 18.558 | ppbV | 97 |
| 82) 2-ethylthiophene | 15.23 | 97 | 3667928 | 16.837 | ppbV | 98 |
| 83) m+p-xylene | 15.32 | 91 | 2691902 | 37.041 | ppbV | 98 |
| 84) bromoform | 15.41 | 173 | 605494 | 18.443 | ppbV | 98 |
| 85) styrene | 15.60 | 104 | 1353287 | 19.226 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 928417 | 18.005 | ppbV | 100 |
| 87) o-xylene | 15.68 | 91 | 1281753 | 17.976 | ppbV | 99 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 804680 | 19.342 | ppbV | 100 |
| 89) nonane | 15.82 | 43 | 1094852 | 18.790 | ppbV | 98 |
| 91) isopropylbenzene | 16.12 | 105 | 1973305 | 19.062 | ppbV | 98 |
| 92) bromobenzene | 16.21 | 77 | 1080428 | 19.278 | ppbV | 100 |
| 93) 2-chlorotoluene | 16.50 | 126 | 549631 | 18.324 | ppbV | 81 |
| 94) n-propylbenzene | 16.51 | 120 | 652336 | 18.222 | ppbV | 100 |
| 95) 4-chlorotoluene | 16.55 | 126 | 560450 | 19.063 | ppbV | 97 |
| 96) 4-ethyl toluene | 16.62 | 105 | 2291945 | 18.337 | ppbV | 99 |
| 97) 1,3,5-trimethylbenzene | 16.68 | 105 | 1779293 | 17.959 | ppbV | 98 |
| 98) tert-butylbenzene | 16.99 | 119 | 1552507 | 16.897 | ppbV | 100 |
| 99) 1,2,4-trimethylbenzene | 16.99 | 105 | 1565811 | 16.734 | ppbV | 99 |
| 100) decane | 17.03 | 57 | 1417559 | 18.576 | ppbV | 98 |
| 101) Benzyl Chloride | 17.11 | 91 | 1459224 | 18.381 | ppbV | 98 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 1176791 | 18.049 | ppbV | 99 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 1108586 | 17.574 | ppbV | 100 |
| 104) sec-butylbenzene | 17.19 | 105 | 2389211 | 17.496 | ppbV | 99 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 1544673 | 15.960 | ppbV | 98 |
| 106) p-isopropyltoluene | 17.31 | 119 | 1999243 | 17.122 | ppbV | 98 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 1117563 | 17.967 | ppbV | 100 |
| 108) n-butylbenzene | 17.63 | 91 | 1795592 | 17.489 | ppbV | 95 |
| 109) indan | 17.48 | 117 | 1686266 | 16.644 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192627.D
Acq On : 25 Feb 2020 6:07 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD020
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:16:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 1388414 | 16.970 | ppbV | 98 |
| 111) 1,2-dibromo-3-chloropr... | 17.78 | 75 | 413708 | 17.384 | ppbV | 95 |
| 112) undecane | 17.98 | 57 | 1532419 | 17.508 | ppbV | 98 |
| 113) 1,2,4,5-tetramethylben... | 18.22 | 119 | 1682921 | 16.480 | ppbV | 100 |
| 114) dodecane | 18.83 | 57 | 1339652 | 13.792 | ppbV | 98 |
| 115) 1,2,4-trichlorobenzene | 18.82 | 180 | 932390 | 14.922 | ppbV | 99 |
| 116) naphthalene | 18.94 | 128 | 2339532 | 16.045 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 19.17 | 180 | 974870 | 15.004 | ppbV | 100 |
| 118) benzothiophene | 19.00 | 134 | 1908697 | 23.168 | ppbV | 100 |
| 119) hexachlorobutadiene | 19.22 | 225 | 755063 | 14.474 | ppbV | 96 |
| 120) 2-methylnaphthalene | 19.93 | 142 | 349663 | 17.188 | ppbV | 98 |
| 121) 1-methylnaphthalene | 20.11 | 142 | 592552 | 13.571 | ppbV | 99 |

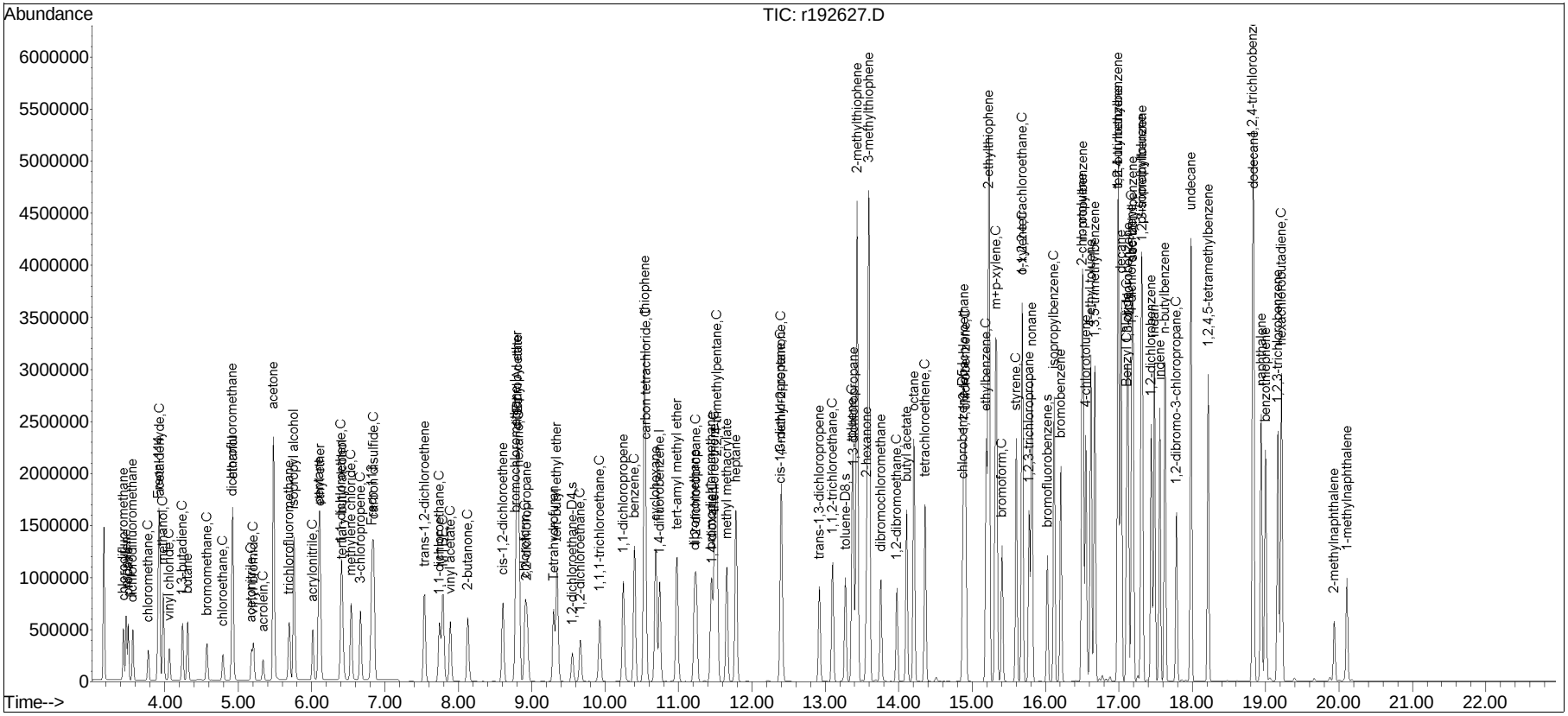
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192627.D
Acq On : 25 Feb 2020 6:07 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD020
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:16:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

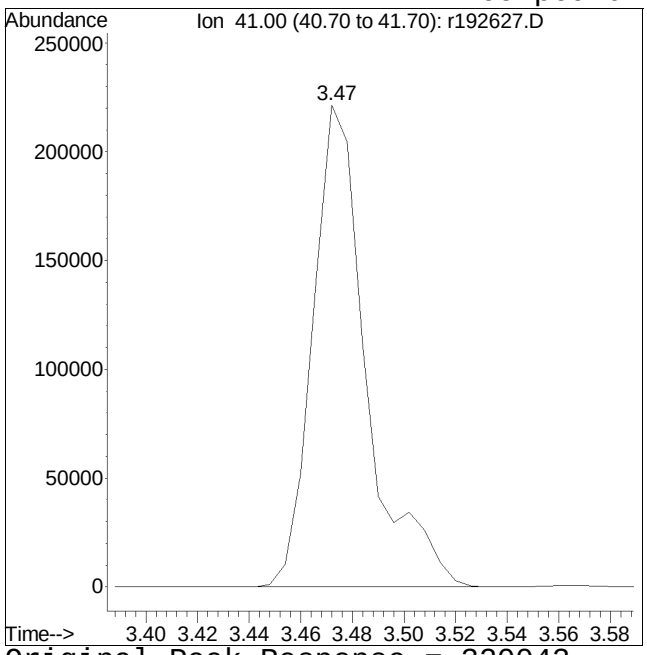
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



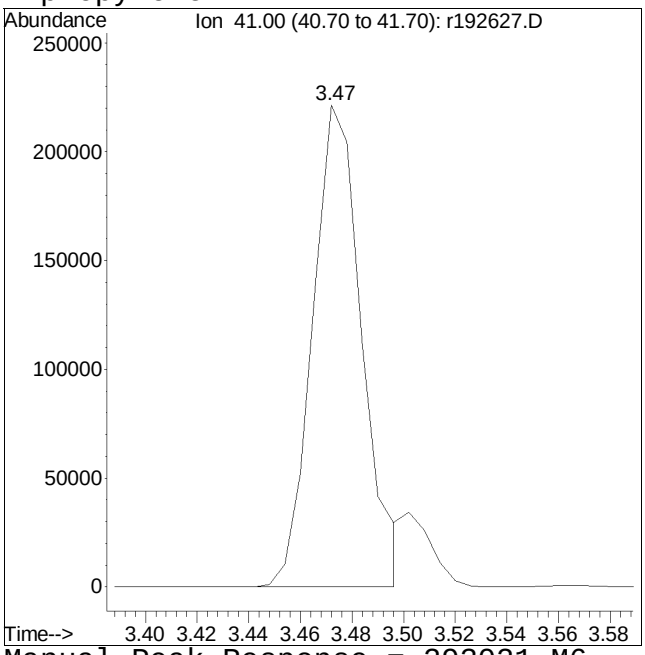
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192627.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:6: 7 Instrument :
Sample : ITO15-SIMSTD020 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 320043




Manual Peak Response = 293021 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192628.D
Acq On : 25 Feb 2020 6:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD050
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:18:44 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 312030 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 99.64% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 941952 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 105.58% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 118440 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 102.24% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 113785 | 9.470 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 94.70% | | | |
| 69) toluene-D8 | 13.28 | 98 | 720661 | 10.251 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.51% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 481396 | 10.765 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 107.65% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 880328 | 47.553 | ppbV | 99 |
| 3) propylene | 3.48 | 41 | 578319M6 | 46.726 | ppbV | |
| 4) propane | 3.50 | 29 | 618260 | 47.129 | ppbV | 99 |
| 5) dichlorodifluoromethane | 3.57 | 85 | 795290 | 48.831 | ppbV | 99 |
| 6) chloromethane | 3.78 | 50 | 513371 | 50.046 | ppbV | 99 |
| 7) Freon-114 | 3.92 | 85 | 1069756 | 42.116 | ppbV | 98 |
| 8) methanol | 3.98 | 31 | 1163706 | 243.916 | ppbV | 96 |
| 9) vinyl chloride | 4.07 | 62 | 625922 | 48.761 | ppbV | 100 |
| 10) 1,3-butadiene | 4.24 | 54 | 557033 | 48.372 | ppbV | 98 |
| 11) butane | 4.31 | 43 | 873725 | 48.229 | ppbV | 100 |
| 12) acetaldehyde | 3.93 | 29 | 1148738 | 197.020 | ppbV | 99 |
| 13) bromomethane | 4.58 | 94 | 484880 | 45.631 | ppbV | 100 |
| 14) chloroethane | 4.79 | 64 | 342722 | 49.829 | ppbV | 99 |
| 15) ethanol | 4.94 | 31 | 2117121 | 239.061 | ppbV | 100 |
| 16) dichlorofluoromethane | 4.92 | 67 | 855832 | 46.368 | ppbV | 99 |
| 17) vinyl bromide | 5.21 | 106 | 533969 | 46.570 | ppbV | 98 |
| 18) acrolein | 5.34 | 56 | 302819 | 48.718 | ppbV | 99 |
| 19) acetone | 5.49 | 43 | 3338531 | 207.645 | ppbV | 97 |
| 20) acetonitrile | 5.19 | 41 | 577833 | 47.976 | ppbV | 99 |
| 21) trichlorofluoromethane | 5.70 | 101 | 962715 | 46.718 | ppbV | 99 |
| 22) isopropyl alcohol | 5.77 | 45 | 3355477 | 115.325 | ppbV | 99 |
| 23) acrylonitrile | 6.02 | 53 | 774450 | 49.718 | ppbV | 99 |
| 24) pentane | 6.10 | 43 | 1440362 | 45.585 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192628.D
Acq On : 25 Feb 2020 6:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD050
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:18:44 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 1250717 | 45.551 | ppbV | 98 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 954602 | 46.321 | ppbV | 99 |
| 27) tertiary butyl alcohol | 6.43 | 59 | 1424410 | 53.729 | ppbV | 99 |
| 28) methylene chloride | 6.54 | 49 | 954137 | 47.456 | ppbV | 99 |
| 29) 3-chloropropene | 6.67 | 41 | 1160436 | 48.599 | ppbV | 100 |
| 30) carbon disulfide | 6.85 | 76 | 2477346 | 43.911 | ppbV | 100 |
| 31) Freon 113 | 6.83 | 101 | 1290086 | 44.145 | ppbV | 99 |
| 32) trans-1,2-dichloroethene | 7.54 | 61 | 1115159 | 47.464 | ppbV | 99 |
| 33) 1,1-dichloroethane | 7.75 | 63 | 1379002 | 47.907 | ppbV | 99 |
| 34) MTBE | 7.79 | 73 | 2196373 | 46.964 | ppbV | 99 |
| 35) vinyl acetate | 7.89 | 43 | 1979150 | 48.371 | ppbV | 99 |
| 36) 2-butanone | 8.13 | 43 | 1766267 | 47.531 | ppbV | 98 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 974603 | 47.718 | ppbV | 99 |
| 38) Ethyl Acetate | 8.81 | 61 | 292871 | 44.972 | ppbV | 78 |
| 39) chloroform | 8.91 | 83 | 1172803 | 46.396 | ppbV | 97 |
| 40) Tetrahydrofuran | 9.29 | 42 | 1177653 | 47.973 | ppbV | 98 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 980818 | 46.146 | ppbV | 99 |
| 42) 1,2-dichloroethane | 9.66 | 62 | 585099 | 47.450 | ppbV | 99 |
| 44) hexane | 8.82 | 57 | 1433972 | 41.831 | ppbV | 91 |
| 45) diisopropyl ether | 8.80 | 87 | 785910 | 42.445 | ppbV | 87 |
| 46) tert-butyl ethyl ether | 9.34 | 59 | 2347918 | 43.854 | ppbV | 100 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 948582 | 43.368 | ppbV | 98 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 1175225 | 44.455 | ppbV | 98 |
| 50) benzene | 10.40 | 78 | 2964880 | 44.174 | ppbV | 100 |
| 51) thiophene | 10.54 | 84 | 4741712 | 35.911 | ppbV | 98 |
| 52) carbon tetrachloride | 10.56 | 117 | 715650 | 39.346 | ppbV | 97 |
| 53) cyclohexane | 10.69 | 56 | 1643417 | 43.777 | ppbV | 99 |
| 54) tert-amyl methyl ether | 10.98 | 73 | 2563416 | 44.178 | ppbV | 100 |
| 55) dibromomethane | 11.22 | 93 | 679842 | 41.366 | ppbV | 99 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 943782 | 43.595 | ppbV | 99 |
| 57) bromodichloromethane | 11.45 | 83 | 1255264 | 42.774 | ppbV | 100 |
| 58) 1,4-dioxane | 11.46 | 88 | 688877 | 46.168 | ppbV | 99 |
| 59) trichloroethene | 11.49 | 130 | 975199 | 40.291 | ppbV | 99 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 4557372 | 43.110 | ppbV | 100 |
| 61) methyl methacrylate | 11.66 | 41 | 1225181 | 40.002 | ppbV | 98 |
| 62) heptane | 11.79 | 43 | 1777451 | 42.343 | ppbV | 97 |
| 63) cis-1,3-dichloropropene | 12.40 | 75 | 1353998 | 41.346 | ppbV | 95 |
| 64) 4-methyl-2-pentanone | 12.41 | 43 | 1927198 | 41.164 | ppbV | 97 |
| 65) trans-1,3-dichloropropene | 12.93 | 75 | 1303850 | 44.110 | ppbV | 97 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 1031241 | 43.745 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192628.D
Acq On : 25 Feb 2020 6:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD050
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:18:44 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 13.37 | 91 | 2997108 | 41.786 | ppbV | | 100 |
| 70) 2-methylthiophene | 13.44 | 97 | 6609247 | 32.509 | ppbV | | 99 |
| 71) 1,3-dichloropropane | 13.39 | 76 | 1457232 | 43.166 | ppbV | | 99 |
| 72) 2-hexanone | 13.57 | 43 | 1850229 | 43.729 | ppbV | | 97 |
| 73) 3-methylthiophene | 13.60 | 97 | 6615551 | 31.646 | ppbV | | 99 |
| 74) dibromochloromethane | 13.76 | 129 | 1145247 | 40.600 | ppbV | | 98 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 1420658 | 42.474 | ppbV | | 100 |
| 76) butyl acetate | 14.11 | 73 | 513999 | 46.169 | ppbV | | 95 |
| 77) octane | 14.21 | 85 | 1272375 | 42.705 | ppbV | | 95 |
| 78) tetrachloroethene | 14.36 | 166 | 1243295 | 38.264 | ppbV | | 99 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 799205 | 38.538 | ppbV | | 99 |
| 80) chlorobenzene | 14.92 | 112 | 2336124 | 40.267 | ppbV | | 99 |
| 81) ethylbenzene | 15.19 | 91 | 3595729 | 40.601 | ppbV | | 96 |
| 82) 2-ethylthiophene | 15.23 | 97 | 6329001 | 30.527 | ppbV | # | 95 |
| 83) m+p-xylene | 15.33 | 91 | 5201701 | 75.208 | ppbV | | 97 |
| 84) bromoform | 15.41 | 173 | 1195648 | 38.266 | ppbV | | 97 |
| 85) styrene | 15.60 | 104 | 2768327 | 41.325 | ppbV | | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 1767241 | 36.011 | ppbV | | 100 |
| 87) o-xylene | 15.69 | 91 | 2397848 | 35.335 | ppbV | | 96 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 1704279 | 43.044 | ppbV | | 98 |
| 89) nonane | 15.82 | 43 | 2188890 | 39.472 | ppbV | | 96 |
| 91) isopropylbenzene | 16.12 | 105 | 3894455 | 39.530 | ppbV | | 98 |
| 92) bromobenzene | 16.21 | 77 | 2174142 | 40.761 | ppbV | | 98 |
| 93) 2-chlorotoluene | 16.49 | 126 | 1029131 | 36.051 | ppbV | # | 34 |
| 94) n-propylbenzene | 16.51 | 120 | 1277348 | 37.492 | ppbV | | 78 |
| 95) 4-chlorotoluene | 16.55 | 126 | 1192602 | 42.622 | ppbV | | 97 |
| 96) 4-ethyl toluene | 16.62 | 105 | 4346102 | 36.536 | ppbV | | 97 |
| 97) 1,3,5-trimethylbenzene | 16.67 | 105 | 3497391 | 37.091 | ppbV | | 94 |
| 98) tert-butylbenzene | 16.99 | 119 | 2842991 | 32.512 | ppbV | | 98 |
| 99) 1,2,4-trimethylbenzene | 16.99 | 105 | 2799795 | 31.440 | ppbV | | 99 |
| 100) decane | 17.03 | 57 | 2769455 | 38.132 | ppbV | | 97 |
| 101) Benzyl Chloride | 17.11 | 91 | 2879059 | 38.105 | ppbV | | 97 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 2200059 | 35.455 | ppbV | | 99 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 2074875 | 34.560 | ppbV | | 99 |
| 104) sec-butylbenzene | 17.19 | 105 | 4395450 | 33.820 | ppbV | | 98 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 2853346 | 30.978 | ppbV | | 98 |
| 106) p-isopropyltoluene | 17.31 | 119 | 3674877 | 33.070 | ppbV | | 98 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 2152519 | 36.361 | ppbV | | 99 |
| 108) n-butylbenzene | 17.63 | 91 | 3455314 | 35.362 | ppbV | | 97 |
| 109) indan | 17.48 | 117 | 3190275 | 33.086 | ppbV | | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192628.D
Acq On : 25 Feb 2020 6:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD050
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:18:44 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 110) indene | 17.56 | 115 | 2703019 | 34.714 | ppbV | | 100 |
| 111) 1,2-dibromo-3-chloropr... | 17.79 | 75 | 843325 | 37.235 | ppbV | | 97 |
| 112) undecane | 17.98 | 57 | 2930634 | 35.181 | ppbV | # | 97 |
| 113) 1,2,4,5-tetramethylben... | 18.23 | 119 | 3287191 | 33.823 | ppbV | | 99 |
| 114) dodecane | 18.84 | 57 | 2635035 | 28.504 | ppbV | | 97 |
| 115) 1,2,4-trichlorobenzene | 18.83 | 180 | 1728492 | 29.066 | ppbV | | 95 |
| 116) naphthalene | 18.95 | 128 | 4996254 | 36.004 | ppbV | | 99 |
| 117) 1,2,3-trichlorobenzene | 19.18 | 180 | 2196260 | 35.517 | ppbV | | 99 |
| 118) benzothiophene | 19.01 | 134 | 4398584 | 56.100 | ppbV | | 99 |
| 119) hexachlorobutadiene | 19.23 | 225 | 1487192 | 29.955 | ppbV | | 96 |
| 120) 2-methylnaphthalene | 19.94 | 142 | 1396985 | 72.155 | ppbV | | 97 |
| 121) 1-methylnaphthalene | 20.12 | 142 | 2133052 | 51.331 | ppbV | | 98 |

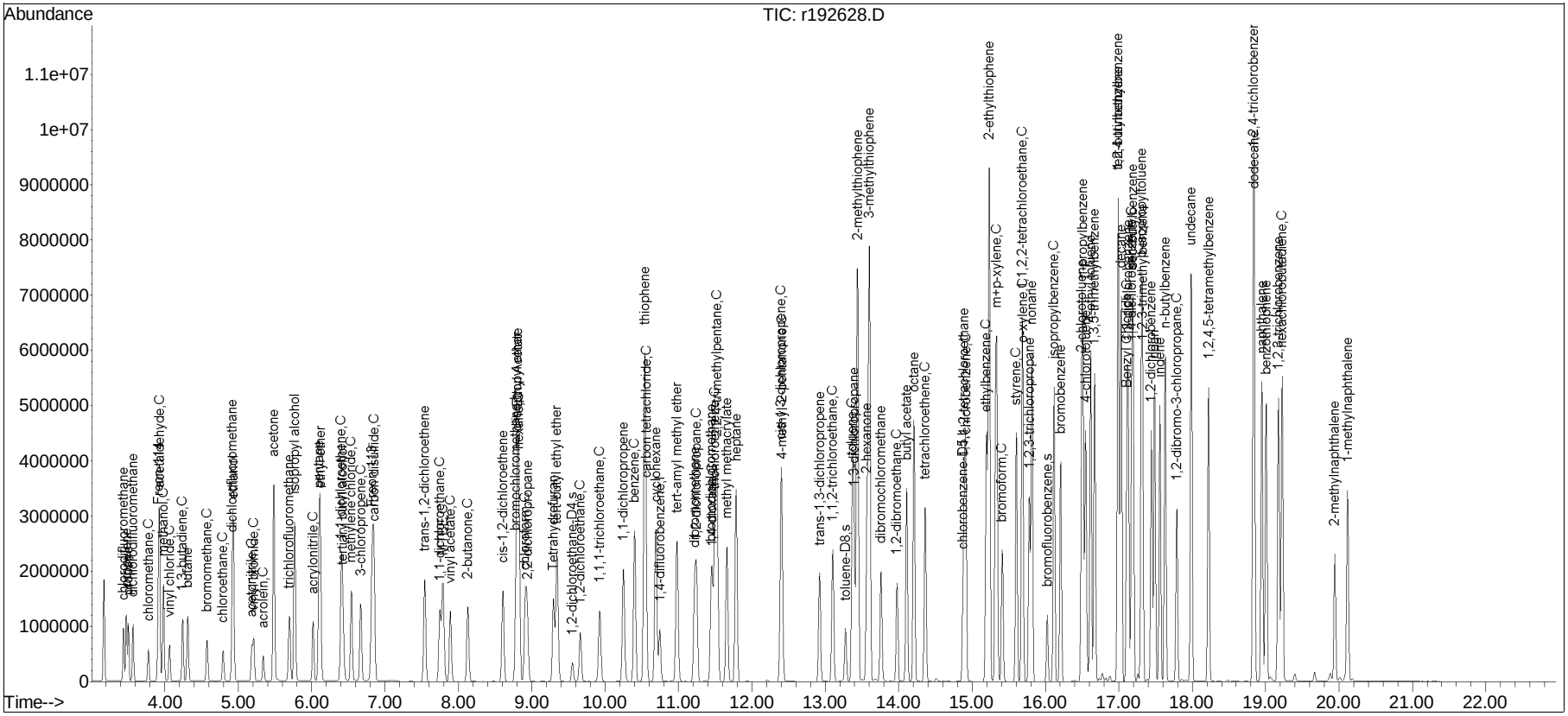
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192628.D
Acq On : 25 Feb 2020 6:46 AM
Operator : AIRLAB19:RY
Sample : ITO15-SIMSTD050
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:18:44 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

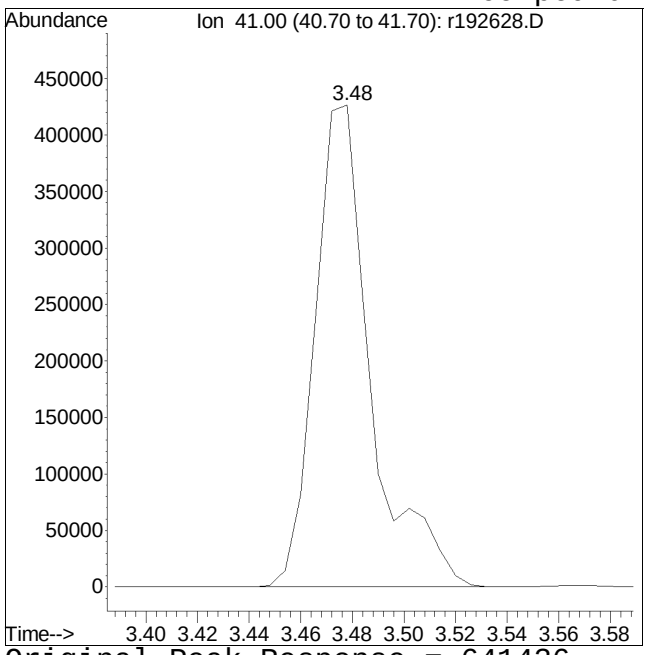
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



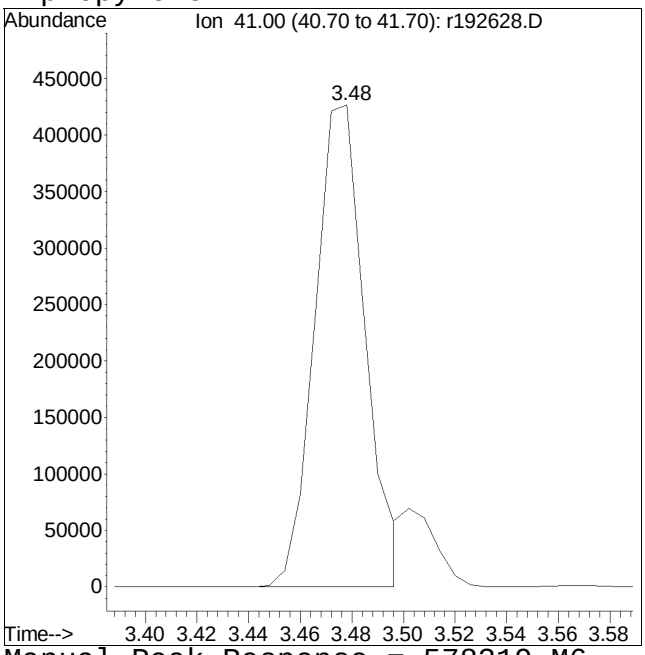
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192628.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:6: 6 Instrument :
Sample : ITO15-SIMSTD050 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 641436




Manual Peak Response = 578319 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192629.D
Acq On : 25 Feb 2020 7:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-LLSTD100
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:20:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 280976 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 89.72% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 868932 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 97.40% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 106304 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 91.77% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 99331 | 8.962 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 89.62% | | | |
| 69) toluene-D8 | 13.28 | 98 | 638294 | 10.116 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.16% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 426847 | 10.635 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 106.35% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 1464962 | 87.880 | ppbV | 99 |
| 3) propylene | 3.47 | 41 | 963788M6 | 86.478 | ppbV | |
| 4) propane | 3.50 | 29 | 1010024 | 85.503 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.56 | 85 | 1252468 | 85.401 | ppbV | 100 |
| 6) chloromethane | 3.77 | 50 | 831725 | 90.042 | ppbV | 98 |
| 7) Freon-114 | 3.91 | 85 | 1653315 | 72.284 | ppbV | 98 |
| 8) methanol | 3.98 | 31 | 1936693 | 450.800 | ppbV | 95 |
| 9) vinyl chloride | 4.06 | 62 | 1042231 | 90.165 | ppbV | 100 |
| 10) 1,3-butadiene | 4.24 | 54 | 935654 | 90.231 | ppbV | 95 |
| 11) butane | 4.31 | 43 | 1458945 | 89.432 | ppbV | 99 |
| 12) acetaldehyde | 3.93 | 29 | 1791391 | 341.198 | ppbV | 98 |
| 13) bromomethane | 4.58 | 94 | 787400 | 82.290 | ppbV | 98 |
| 14) chloroethane | 4.79 | 64 | 575483 | 92.917 | ppbV | 100 |
| 15) ethanol | 4.94 | 31 | 3423732 | 429.328 | ppbV | 99 |
| 16) dichlorofluoromethane | 4.92 | 67 | 1431277 | 86.115 | ppbV | 99 |
| 17) vinyl bromide | 5.21 | 106 | 890815 | 86.278 | ppbV | 97 |
| 18) acrolein | 5.34 | 56 | 516448 | 92.271 | ppbV | 100 |
| 19) acetone | 5.49 | 43 | 5487473 | 379.024 | ppbV | 92 |
| 20) acetonitrile | 5.19 | 41 | 980380 | 90.395 | ppbV | 99 |
| 21) trichlorofluoromethane | 5.70 | 101 | 1332517 | 71.810 | ppbV | 99 |
| 22) isopropyl alcohol | 5.77 | 45 | 5254813 | 200.565 | ppbV | 98 |
| 23) acrylonitrile | 6.02 | 53 | 1323170 | 94.333 | ppbV | 99 |
| 24) pentane | 6.10 | 43 | 2312923 | 81.291 | ppbV | 98 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192629.D
Acq On : 25 Feb 2020 7:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-LLSTD100
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:20:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.12 | 31 | 1989885 | 80.480 | ppbV | 96 |
| 26) 1,1-dichloroethene | 6.40 | 61 | 1543343 | 83.165 | ppbV | 100 |
| 27) tertiary butyl alcohol | 6.43 | 59 | 2324137 | 97.355 | ppbV | 99 |
| 28) methylene chloride | 6.54 | 49 | 1563945 | 86.383 | ppbV | 97 |
| 29) 3-chloropropene | 6.67 | 41 | 1931470 | 89.829 | ppbV | 99 |
| 30) carbon disulfide | 6.85 | 76 | 3761475 | 74.040 | ppbV | 100 |
| 31) Freon 113 | 6.82 | 101 | 1999794 | 75.993 | ppbV | 98 |
| 32) trans-1,2-dichloroethene | 7.53 | 61 | 1810158 | 85.560 | ppbV | 99 |
| 33) 1,1-dichloroethane | 7.74 | 63 | 2270366 | 87.590 | ppbV | 100 |
| 34) MTBE | 7.78 | 73 | 3546617 | 84.216 | ppbV | 98 |
| 35) vinyl acetate | 7.89 | 43 | 3285386 | 89.170 | ppbV | 98 |
| 36) 2-butanone | 8.13 | 43 | 2906303 | 86.854 | ppbV | 97 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 1586949 | 86.286 | ppbV | 99 |
| 38) Ethyl Acetate | 8.82 | 61 | 445768 | 76.016 | ppbV | 78 |
| 39) chloroform | 8.92 | 83 | 1864265 | 81.901 | ppbV | 98 |
| 40) Tetrahydrofuran | 9.29 | 42 | 1942174 | 87.861 | ppbV | 99 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 1565018 | 81.769 | ppbV | 97 |
| 42) 1,2-dichloroethane | 9.67 | 62 | 975549 | 87.859 | ppbV | 99 |
| 44) hexane | 8.82 | 57 | 2166064 | 68.496 | ppbV | 92 |
| 45) diisopropyl ether | 8.80 | 87 | 1210417 | 70.866 | ppbV | 82 |
| 46) tert-butyl ethyl ether | 9.34 | 59 | 3798473 | 76.909 | ppbV | 98 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 1525066 | 75.583 | ppbV | 96 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 1891687 | 77.569 | ppbV | 96 |
| 50) benzene | 10.41 | 78 | 4709545 | 76.064 | ppbV | 99 |
| 51) thiophene | 10.55 | 84 | 6918473 | 56.800 | ppbV | 97 |
| 52) carbon tetrachloride | 10.57 | 117 | 1109245 | 66.111 | ppbV | 98 |
| 53) cyclohexane | 10.69 | 56 | 2678908 | 77.356 | ppbV | 98 |
| 54) tert-amyl methyl ether | 10.98 | 73 | 4114450 | 76.867 | ppbV | 99 |
| 55) dibromomethane | 11.23 | 93 | 1033087 | 68.142 | ppbV | 97 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 1497807 | 75.001 | ppbV | 99 |
| 57) bromodichloromethane | 11.45 | 83 | 1957157 | 72.296 | ppbV | 99 |
| 58) 1,4-dioxane | 11.47 | 88 | 1043762 | 75.830 | ppbV | 97 |
| 59) trichloroethene | 11.49 | 130 | 1446982 | 64.807 | ppbV | 98 |
| 60) 2,2,4-trimethylpentane | 11.53 | 57 | 6724565 | 68.956 | ppbV | 99 |
| 61) methyl methacrylate | 11.67 | 41 | 1976786 | 69.965 | ppbV | 98 |
| 62) heptane | 11.79 | 43 | 2779181 | 71.769 | ppbV | 95 |
| 63) cis-1,3-dichloropropene | 12.40 | 75 | 2122416 | 70.256 | ppbV | 93 |
| 64) 4-methyl-2-pentanone | 12.41 | 43 | 2966885 | 68.696 | ppbV | 96 |
| 65) trans-1,3-dichloropropene | 12.93 | 75 | 2119097 | 77.715 | ppbV | 96 |
| 66) 1,1,2-trichloroethane | 13.11 | 97 | 1603138 | 73.720 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192629.D
Acq On : 25 Feb 2020 7:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-LLSTD100
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:20:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 13.38 | 91 | 4521265 | 70.233 | ppbV | | 100 |
| 70) 2-methylthiophene | 13.44 | 97 | 9014012 | 49.399 | ppbV | # | 99 |
| 71) 1,3-dichloropropane | 13.40 | 76 | 2287177 | 75.485 | ppbV | | 98 |
| 72) 2-hexanone | 13.57 | 43 | 2876654 | 75.749 | ppbV | | 96 |
| 73) 3-methylthiophene | 13.61 | 97 | 9061478M3 | 48.294 | ppbV | | |
| 74) dibromochloromethane | 13.76 | 129 | 1708209 | 67.470 | ppbV | | 97 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 2169871 | 72.280 | ppbV | | 100 |
| 76) butyl acetate | 14.11 | 73 | 803732 | 80.435 | ppbV | | 94 |
| 77) octane | 14.21 | 85 | 1927954 | 72.096 | ppbV | | 96 |
| 78) tetrachloroethene | 14.37 | 166 | 1804450 | 61.874 | ppbV | | 94 |
| 79) 1,1,1,2-tetrachloroethane | 14.90 | 131 | 1158141 | 62.221 | ppbV | | 97 |
| 80) chlorobenzene | 14.92 | 112 | 3383670 | 64.982 | ppbV | | 98 |
| 81) ethylbenzene | 15.20 | 91 | 5307549 | 66.772 | ppbV | | 94 |
| 82) 2-ethylthiophene | 15.24 | 97 | 8502892 | 45.695 | ppbV | # | 93 |
| 83) m+p-xylene | 15.33 | 91 | 7469360 | 120.323 | ppbV | | 97 |
| 84) bromoform | 15.42 | 173 | 1692161 | 60.340 | ppbV | | 98 |
| 85) styrene | 15.61 | 104 | 4137569 | 68.817 | ppbV | | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 2539748 | 57.661 | ppbV | | 99 |
| 87) o-xylene | 15.69 | 91 | 3437459 | 56.437 | ppbV | | 95 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 2608253 | 73.395 | ppbV | # | 97 |
| 89) nonane | 15.82 | 43 | 3322026 | 66.746 | ppbV | | 99 |
| 91) isopropylbenzene | 16.12 | 105 | 5562575 | 62.908 | ppbV | | 96 |
| 92) bromobenzene | 16.21 | 77 | 3217663 | 67.212 | ppbV | | 97 |
| 93) 2-chlorotoluene | 16.48 | 126 | 1532073 | 59.796 | ppbV | # | 14 |
| 94) n-propylbenzene | 16.51 | 120 | 1878037 | 61.415 | ppbV | # | 58 |
| 95) 4-chlorotoluene | 16.54 | 126 | 1777294 | 70.770 | ppbV | | 94 |
| 96) 4-ethyl toluene | 16.61 | 105 | 6651047 | 62.297 | ppbV | | 96 |
| 97) 1,3,5-trimethylbenzene | 16.67 | 105 | 5240001 | 61.916 | ppbV | | 96 |
| 98) tert-butylbenzene | 16.99 | 119 | 4263954 | 54.329 | ppbV | | 95 |
| 99) 1,2,4-trimethylbenzene | 16.99 | 105 | 4161267 | 52.064 | ppbV | | 98 |
| 100) decane | 17.03 | 57 | 4316598 | 66.219 | ppbV | | 98 |
| 101) Benzyl Chloride | 17.11 | 91 | 4671443 | 68.887 | ppbV | | 97 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 3475464 | 62.403 | ppbV | | 96 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 2869524 | 53.253 | ppbV | | 97 |
| 104) sec-butylbenzene | 17.20 | 105 | 6494806 | 55.678 | ppbV | | 99 |
| 105) 1,2,3-trimethylbenzene | 17.32 | 105 | 4479874 | 54.189 | ppbV | | 100 |
| 106) p-isopropyltoluene | 17.31 | 119 | 5441852 | 54.561 | ppbV | | 99 |
| 107) 1,2-dichlorobenzene | 17.45 | 146 | 3514914 | 66.153 | ppbV | | 94 |
| 108) n-butylbenzene | 17.63 | 91 | 5618426 | 64.064 | ppbV | | 97 |
| 109) indan | 17.49 | 117 | 4994055 | 57.706 | ppbV | | 99 |

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192629.D
Acq On : 25 Feb 2020 7:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-LLSTD100
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:20:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 110) indene | 17.57 | 115 | 4444967 | 63.603 | ppbV | | 98 |
| 111) 1,2-dibromo-3-chloropr... | 17.79 | 75 | 1480212 | 72.816 | ppbV | | 94 |
| 112) undecane | 17.99 | 57 | 4597349 | 61.490 | ppbV | | 98 |
| 113) 1,2,4,5-tetramethylben... | 18.23 | 119 | 5190321 | 59.503 | ppbV | | 98 |
| 114) dodecane | 18.83 | 57 | 3771388 | 45.454 | ppbV | | 86 |
| 115) 1,2,4-trichlorobenzene | 18.82 | 180 | 2512011 | 47.065 | ppbV | # | 93 |
| 116) naphthalene | 18.94 | 128 | 7722818 | 62.006 | ppbV | | 97 |
| 117) 1,2,3-trichlorobenzene | 19.17 | 180 | 3338635 | 60.154 | ppbV | | 93 |
| 118) benzothiophene | 19.00 | 134 | 6858122 | 97.455 | ppbV | # | 97 |
| 119) hexachlorobutadiene | 19.22 | 225 | 2175648 | 48.824 | ppbV | # | 94 |
| 120) 2-methylnaphthalene | 19.93 | 142 | 2860554 | 164.618 | ppbV | | 99 |
| 121) 1-methylnaphthalene | 20.10 | 142 | 4204782 | 112.739 | ppbV | | 98 |

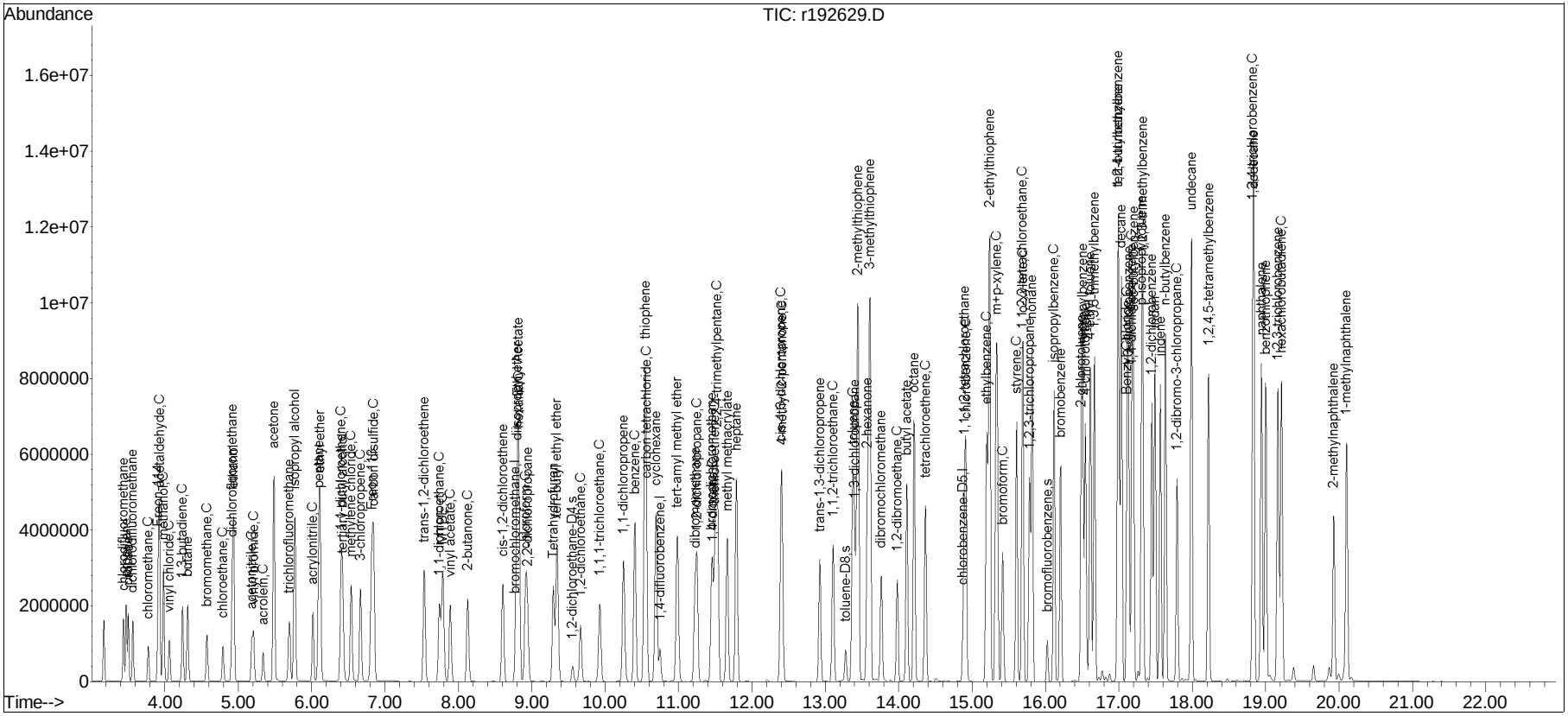
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192629.D
Acq On : 25 Feb 2020 7:28 AM
Operator : AIRLAB19:RY
Sample : ITO15-LLSTD100
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:20:58 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 08:56:41 2020
Response via : Initial Calibration

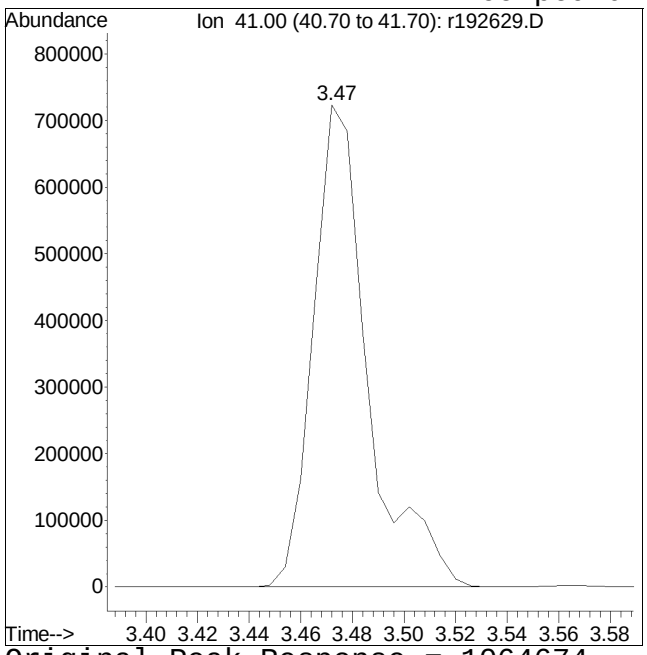
Sub List : Default - All compounds listed0\02\200224T_I\r192626.D



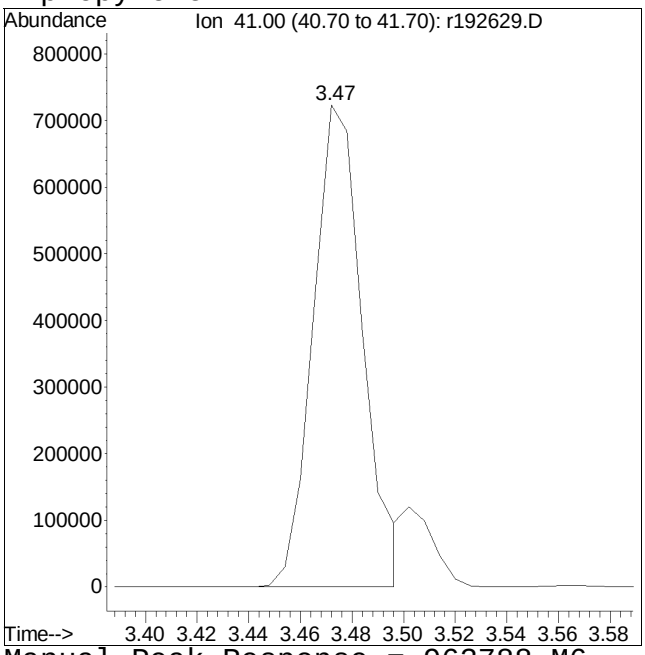
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192629.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:7: 8 Instrument :
Sample : ITO15-LLSTD100 Quant Date : 2/25/2020 8:57 am

Compound #3: propylene




Original Peak Response = 1064674



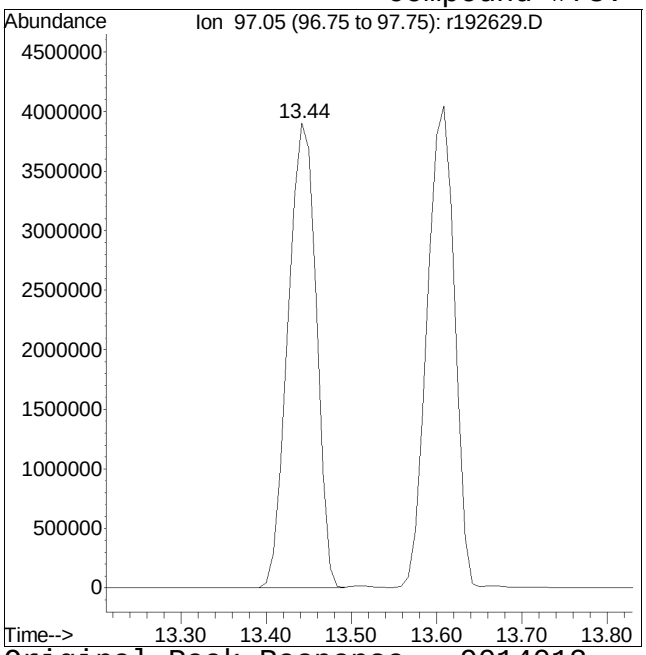

Manual Peak Response = 963788 M6

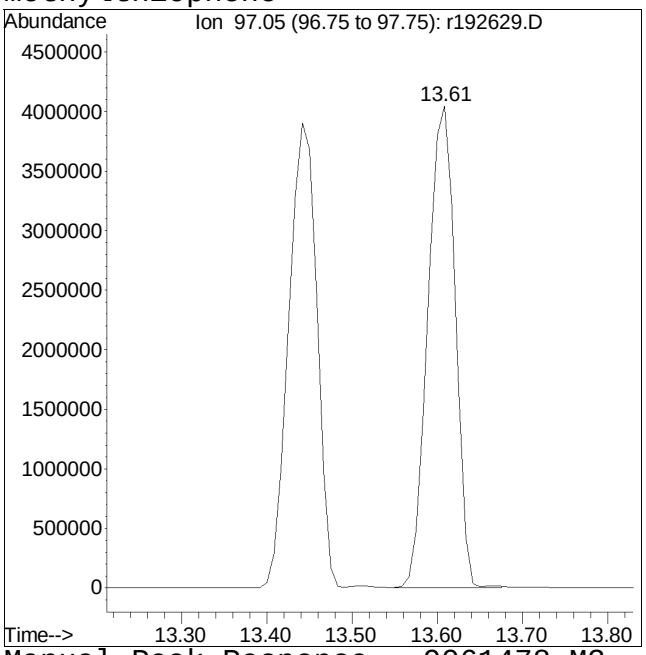
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192629.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:7: 8 Instrument :
Sample : ITO15-LLSTD100 Quant Date : 2/25/2020 8:57 am

Compound #73: 3-methylthiophene




Original Peak Response = 9014012 Manual Peak Response = 9061478 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 2 | | chlorodifluoromethane | 0.626 | 0.535 | 14.5 | 86 | 0.00 |
| 3 | | propylene | 0.411 | 0.428 | -4.1 | 103 | 0.00 |
| 4 | | propane | 0.446 | 0.375 | 15.9 | 85 | 0.00 |
| 5 | | dichlorodifluoromethane | 0.560 | 0.507 | 9.5 | 93 | 0.00 |
| 6 | C | chloromethane | 0.358 | 0.320 | 10.6 | 93 | 0.00 |
| 7 | | Freon-114 | 0.832 | 0.781 | 6.1 | 92 | 0.00 |
| 8 | C | methanol | 0.162 | 0.167 | -3.1 | 104 | 0.00 |
| 9 | C | vinyl chloride | 0.445 | 0.399 | 10.3 | 93 | 0.00 |
| 10 | C | 1,3-butadiene | 0.384 | 0.375 | 2.3 | 97 | 0.00 |
| 11 | | butane | 0.629 | 0.544 | 13.5 | 89 | 0.00 |
| 13 | C | bromomethane | 0.352 | 0.324 | 8.0 | 91 | 0.00 |
| 14 | C | chloroethane | 0.233 | 0.219 | 6.0 | 95 | 0.00 |
| 15 | | ethanol | 0.292 | 0.269 | 7.9 | 91 | 0.00 |
| 16 | | dichlorofluoromethane | 0.618 | 0.534 | 13.6 | 86 | 0.00 |
| 17 | C | vinyl bromide | 0.381 | 0.345 | 9.4 | 90 | 0.00 |
| 18 | C | acrolein | 0.204 | 0.177 | 13.2 | 85 | 0.00 |
| 19 | | acetone | 0.537 | 0.435 | 19.0 | 81 | -0.01 |
| 20 | C | acetonitrile | 0.390 | 0.357 | 8.5 | 88 | 0.00 |
| 21 | | trichlorofluoromethane | 0.589 | 0.637 | -8.1 | 92 | 0.00 |
| 22 | | isopropyl alcohol | 1.020 | 0.807 | 20.9 | 83 | -0.01 |
| 23 | C | acrylonitrile | 0.517 | 0.485 | 6.2 | 93 | 0.00 |
| 24 | | pentane | 1.043 | 0.939 | 10.0 | 89 | 0.00 |
| 25 | | ethyl ether | 0.898 | 0.825 | 8.1 | 90 | 0.00 |
| 26 | C | 1,1-dichloroethene | 0.678 | 0.662 | 2.4 | 96 | 0.00 |
| 27 | | tertiary butyl alcohol | 0.935 | 0.817 | 12.6 | 92 | -0.02 |
| 28 | C | methylene chloride | 0.657 | 0.656 | 0.2 | 97 | 0.00 |
| 29 | C | 3-chloropropene | 0.791 | 0.821 | -3.8 | 103 | 0.00 |
| 30 | C | carbon disulfide | 1.825 | 1.725 | 5.5 | 91 | 0.00 |
| 31 | | Freon 113 | 0.957 | 0.947 | 1.0 | 97 | 0.00 |
| 32 | | trans-1,2-dichloroethene | 0.778 | 0.736 | 5.4 | 93 | 0.00 |
| 33 | C | 1,1-dichloroethane | 0.947 | 0.913 | 3.6 | 95 | 0.00 |
| 34 | C | MTBE | 1.536 | 1.505 | 2.0 | 96 | -0.02 |
| 35 | C | vinyl acetate | 1.305 | 1.256 | 3.8 | 92 | 0.00 |
| 36 | C | 2-butanone | 1.204 | 1.186 | 1.5 | 95 | -0.03 |
| 37 | | cis-1,2-dichloroethene | 0.674 | 0.662 | 1.8 | 97 | 0.00 |
| 38 | | Ethyl Acetate | 0.205 | 0.218 | -6.3 | 100 | -0.02 |
| 39 | C | chloroform | 0.836 | 0.829 | 0.8 | 98 | 0.00 |
| 40 | | Tetrahydrofuran | 0.809 | 0.774 | 4.3 | 94 | -0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 41 | | 2,2-dichloropropane | 0.694 | 0.613 | 11.7 | 86 | 0.00 |
| 42 | C | 1,2-dichloroethane | 0.409 | 0.379 | 7.3 | 92 | 0.00 |
| 43 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 44 | C | hexane | 0.367 | 0.373 | -1.6 | 97 | 0.00 |
| 45 | | diisopropyl ether | 0.197 | 0.187 | 5.1 | 91 | 0.00 |
| 46 | | tert-butyl ethyl ether | 0.573 | 0.526 | 8.2 | 88 | 0.00 |
| 47 | s | 1,2-dichloroethane-D4 | 0.126 | 0.120 | 4.8 | 89 | 0.00 |
| 48 | C | 1,1,1-trichloroethane | 0.235 | 0.227 | 3.4 | 93 | 0.00 |
| 49 | | 1,1-dichloropropene | 0.286 | 0.274 | 4.2 | 93 | 0.00 |
| 50 | C | benzene | 0.723 | 0.723 | 0.0 | 97 | 0.00 |
| 52 | C | carbon tetrachloride | 0.194 | 0.200 | -3.1 | 98 | 0.00 |
| 53 | | cyclohexane | 0.401 | 0.418 | -4.2 | 100 | 0.00 |
| 54 | | tert-amyl methyl ether | 0.618 | 0.586 | 5.2 | 90 | -0.01 |
| 55 | | dibromomethane | 0.178 | 0.166 | 6.7 | 91 | 0.00 |
| 56 | C | 1,2-dichloropropane | 0.231 | 0.235 | -1.7 | 97 | 0.00 |
| 57 | | bromodichloromethane | 0.315 | 0.319 | -1.3 | 98 | 0.00 |
| 58 | C | 1,4-dioxane | 0.164 | 0.167 | -1.8 | 100 | -0.04 |
| 59 | C | trichloroethene | 0.258 | 0.262 | -1.6 | 97 | 0.00 |
| 60 | C | 2,2,4-trimethylpentane | 1.157 | 1.207 | -4.3 | 102 | 0.00 |
| 61 | | methyl methacrylate | 0.299 | 0.227 | 24.1 | 66 | 0.00 |
| 62 | | heptane | 0.447 | 0.456 | -2.0 | 97 | 0.00 |
| 63 | C | cis-1,3-dichloropropene | 0.344 | 0.371 | -7.8 | 101 | 0.00 |
| 64 | C | 4-methyl-2-pentanone | 0.481 | 0.510 | -6.0 | 98 | -0.03 |
| 65 | | trans-1,3-dichloropropene | 0.309 | 0.285 | 7.8 | 87 | 0.00 |
| 66 | C | 1,1,2-trichloroethane | 0.252 | 0.263 | -4.4 | 100 | 0.00 |
| 67 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 94 | 0.00 |
| 68 | C | toluene | 6.089 | 6.177 | -1.4 | 96 | 0.00 |
| 69 | s | toluene-D8 | 5.903 | 5.891 | 0.2 | 94 | 0.00 |
| 71 | | 1,3-dichloropropane | 2.846 | 2.697 | 5.2 | 89 | 0.00 |
| 72 | | 2-hexanone | 3.538 | 3.821 | -8.0 | 101 | -0.03 |
| 74 | | dibromochloromethane | 2.341 | 2.461 | -5.1 | 97 | 0.00 |
| 75 | C | 1,2-dibromoethane | 2.800 | 2.930 | -4.6 | 98 | 0.00 |
| 76 | | butyl acetate | 0.920 | 0.877 | 4.7 | 88 | -0.03 |
| 77 | | octane | 2.521 | 2.415 | 4.2 | 90 | 0.00 |
| 78 | C | tetrachloroethene | 2.675 | 2.784 | -4.1 | 96 | 0.00 |
| 79 | | 1,1,1,2-tetrachloroethane | 1.721 | 1.621 | 5.8 | 87 | 0.00 |
| 80 | C | chlorobenzene | 4.839 | 5.126 | -5.9 | 99 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 81 | C | ethylbenzene | 7.303 | 7.575 | -3.7 | 95 | 0.00 |
| 83 | C | m+p-xylene | 5.758 | 5.982 | -3.9 | 97 | 0.00 |
| 84 | C | bromoform | 2.584 | 2.758 | -6.7 | 99 | 0.00 |
| 85 | C | styrene | 5.572 | 5.864 | -5.2 | 98 | 0.00 |
| 86 | C | 1,1,2,2-tetrachloroethane | 3.972 | 4.303 | -8.3 | 98 | 0.00 |
| 87 | C | o-xylene | 5.649 | 5.828 | -3.2 | 96 | 0.00 |
| 88 | | 1,2,3-trichloropropane | 3.318 | 3.181 | 4.1 | 90 | 0.00 |
| 89 | | nonane | 4.639 | 4.377 | 5.6 | 88 | 0.00 |
| 90 | s | bromofluorobenzene | 3.813 | 3.688 | 3.3 | 92 | 0.00 |
| 91 | C | isopropylbenzene | 8.211 | 8.144 | 0.8 | 92 | 0.00 |
| 92 | | bromobenzene | 4.428 | 4.321 | 2.4 | 90 | 0.00 |
| 93 | | 2-chlorotoluene | 2.276 | 2.227 | 2.2 | 87 | -0.02 |
| 94 | | n-propylbenzene | 2.736 | 2.765 | -1.1 | 91 | 0.00 |
| 95 | | 4-chlorotoluene | 2.304 | 2.296 | 0.3 | 92 | 0.00 |
| 96 | | 4-ethyl toluene | 9.565 | 10.120 | -5.8 | 95 | 0.00 |
| 97 | | 1,3,5-trimethylbenzene | 7.686 | 8.209 | -6.8 | 97 | -0.02 |
| 98 | | tert-butylbenzene | 7.075 | 7.002 | 1.0 | 89 | 0.00 |
| 99 | | 1,2,4-trimethylbenzene | 7.114 | 7.607 | -6.9 | 95 | 0.00 |
| 100 | | decane | 5.798 | 5.805 | -0.1 | 89 | 0.00 |
| 101 | C | Benzyl Chloride | 5.729 | 6.246 | -9.0 | 92 | 0.00 |
| 102 | | 1,3-dichlorobenzene | 4.872 | 5.374 | -10.3 | 97 | 0.00 |
| 103 | C | 1,4-dichlorobenzene | 4.669 | 5.057 | -8.3 | 94 | 0.00 |
| 104 | | sec-butylbenzene | 10.413 | 10.549 | -1.3 | 91 | 0.00 |
| 106 | | p-isopropyltoluene | 8.833 | 8.303 | 6.0 | 83 | 0.00 |
| 107 | | 1,2-dichlorobenzene | 4.620 | 5.095 | -10.3 | 96 | 0.00 |
| 108 | | n-butylbenzene | 7.618 | 7.877 | -3.4 | 90 | 0.00 |
| 111 | C | 1,2-dibromo-3-chloropropane | 1.776 | 1.723 | 3.0 | 85 | 0.00 |
| 112 | | undecane | 6.295 | 6.516 | -3.5 | 87 | 0.00 |
| 114 | | dodecane | 6.117 | 6.450 | -5.4 | 78 | 0.00 |
| 115 | C | 1,2,4-trichlorobenzene | 4.060 | 4.981 | -22.7 | 94 | 0.00 |
| 116 | | naphthalene | 10.393 | 10.404 | -0.1 | 84 | 0.00 |
| 117 | | 1,2,3-trichlorobenzene | 4.250 | 4.669 | -9.9 | 84 | 0.00 |
| 119 | C | hexachlorobutadiene | 3.529 | 3.927 | -11.3 | 88 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default-ICV-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.78 | 49 | 299243 | 10.000 | ppbV | 0.00 |
| Standard Area = 313159 | | | Recovery = 95.56% | | | |
| 43) 1,4-difluorobenzene | 10.75 | 114 | 848827 | 10.000 | ppbV | 0.00 |
| Standard Area = 892162 | | | Recovery = 95.14% | | | |
| 67) chlorobenzene-D5 | 14.88 | 54 | 109184 | 10.000 | ppbV | 0.00 |
| Standard Area = 115842 | | | Recovery = 94.25% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 9.55 | 65 | 101802 | 9.519 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.19% | | | |
| 69) toluene-D8 | 13.28 | 98 | 643252 | 9.981 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.81% | | | |
| 90) bromofluorobenzene | 16.02 | 95 | 402624 | 9.671 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.71% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.44 | 51 | 160220 | 8.557 | ppbV | 97 |
| 3) propylene | 3.48 | 41 | 128203M6 | 10.432 | ppbV | |
| 4) propane | 3.50 | 29 | 112164 | 8.408 | ppbV # | 91 |
| 5) dichlorodifluoromethane | 3.57 | 85 | 151616 | 9.041 | ppbV | 100 |
| 6) chloromethane | 3.78 | 50 | 95707 | 8.923 | ppbV | 100 |
| 7) Freon-114 | 3.92 | 85 | 233732 | 9.392 | ppbV | 98 |
| 8) methanol | 3.98 | 31 | 250054 | 51.542 | ppbV # | 1 |
| 9) vinyl chloride | 4.07 | 62 | 119453 | 8.973 | ppbV | 99 |
| 10) 1,3-butadiene | 4.25 | 54 | 112123 | 9.767 | ppbV | 96 |
| 11) butane | 4.31 | 43 | 162665 | 8.646 | ppbV | 95 |
| 13) bromomethane | 4.58 | 94 | 96973 | 9.207 | ppbV | 100 |
| 14) chloroethane | 4.79 | 64 | 65658 | 9.407 | ppbV | 94 |
| 15) ethanol | 4.93 | 31 | 402905 | 46.081 | ppbV | 99 |
| 16) dichlorofluoromethane | 4.92 | 67 | 159679 | 8.639 | ppbV | 97 |
| 17) vinyl bromide | 5.21 | 106 | 103314 | 9.071 | ppbV | 94 |
| 18) acrolein | 5.34 | 56 | 53048 | 8.679 | ppbV # | 48 |
| 19) acetone | 5.48 | 43 | 651144 | 40.522 | ppbV # | 99 |
| 20) acetonitrile | 5.19 | 41 | 106739 | 9.150 | ppbV # | 58 |
| 21) trichlorofluoromethane | 5.70 | 101 | 190501 | 10.814 | ppbV | 98 |
| 22) isopropyl alcohol | 5.76 | 45 | 603547 | 19.770 | ppbV | 100 |
| 23) acrylonitrile | 6.02 | 53 | 145282 | 9.392 | ppbV | 98 |
| 24) pentane | 6.10 | 43 | 281012 | 9.006 | ppbV | 99 |
| 25) ethyl ether | 6.12 | 31 | 247022 | 9.197 | ppbV | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default-ICV-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 26) 1,1-dichloroethene | 6.40 | 61 | 198033 | 9.754 | ppbV | | 94 |
| 27) tertiary butyl alcohol | 6.43 | 59 | 244580 | 8.739 | ppbV | # | 91 |
| 28) methylene chloride | 6.54 | 49 | 196205 | 9.987 | ppbV | | 99 |
| 29) 3-chloropropene | 6.67 | 41 | 245743 | 10.380 | ppbV | | 97 |
| 30) carbon disulfide | 6.85 | 76 | 516140 | 9.452 | ppbV | # | 81 |
| 31) Freon 113 | 6.83 | 101 | 283441 | 9.897 | ppbV | | 99 |
| 32) trans-1,2-dichloroethene | 7.54 | 61 | 220296 | 9.465 | ppbV | | 99 |
| 33) 1,1-dichloroethane | 7.74 | 63 | 273081 | 9.632 | ppbV | | 99 |
| 34) MTBE | 7.79 | 73 | 450457 | 9.800 | ppbV | | 99 |
| 35) vinyl acetate | 7.89 | 43 | 375759 | 9.622 | ppbV | | 98 |
| 36) 2-butanone | 8.13 | 43 | 354860 | 9.852 | ppbV | | 97 |
| 37) cis-1,2-dichloroethene | 8.61 | 61 | 198070 | 9.819 | ppbV | | 99 |
| 38) Ethyl Acetate | 8.82 | 61 | 65154 | 10.632 | ppbV | | 88 |
| 39) chloroform | 8.91 | 83 | 248156 | 9.915 | ppbV | | 98 |
| 40) Tetrahydrofuran | 9.31 | 42 | 231750 | 9.575 | ppbV | | 93 |
| 41) 2,2-dichloropropane | 8.94 | 77 | 183572 | 8.842 | ppbV | | 97 |
| 42) 1,2-dichloroethane | 9.67 | 62 | 113459 | 9.278 | ppbV | | 96 |
| 44) hexane | 8.82 | 57 | 316422 | 10.170 | ppbV | | 80 |
| 45) diisopropyl ether | 8.80 | 87 | 159139 | 9.537 | ppbV | | 94 |
| 46) tert-butyl ethyl ether | 9.35 | 59 | 446325 | 9.171 | ppbV | | 98 |
| 48) 1,1,1-trichloroethane | 9.93 | 97 | 192487 | 9.636 | ppbV | | 96 |
| 49) 1,1-dichloropropene | 10.25 | 75 | 232673 | 9.586 | ppbV | | 95 |
| 50) benzene | 10.41 | 78 | 613642 | 9.997 | ppbV | | 100 |
| 52) carbon tetrachloride | 10.56 | 117 | 169669 | 10.310 | ppbV | # | 90 |
| 53) cyclohexane | 10.69 | 56 | 354574 | 10.419 | ppbV | | 99 |
| 54) tert-amyl methyl ether | 10.99 | 73 | 497070 | 9.471 | ppbV | | 98 |
| 55) dibromomethane | 11.22 | 93 | 141240 | 9.336 | ppbV | | 97 |
| 56) 1,2-dichloropropane | 11.25 | 63 | 199269 | 10.151 | ppbV | | 99 |
| 57) bromodichloromethane | 11.45 | 83 | 271180 | 10.132 | ppbV | | 99 |
| 58) 1,4-dioxane | 11.46 | 88 | 141566 | 10.188 | ppbV | # | 79 |
| 59) trichloroethene | 11.49 | 130 | 222103 | 10.153 | ppbV | | 98 |
| 60) 2,2,4-trimethylpentane | 11.52 | 57 | 1024677 | 10.435 | ppbV | | 98 |
| 61) methyl methacrylate | 11.66 | 41 | 192636 | 7.598 | ppbV | | 98 |
| 62) heptane | 11.79 | 43 | 387005 | 10.194 | ppbV | | 98 |
| 63) cis-1,3-dichloropropene | 12.39 | 75 | 314575 | 10.771 | ppbV | | 98 |
| 64) 4-methyl-2-pentanone | 12.41 | 43 | 433285 | 10.609 | ppbV | | 94 |
| 65) trans-1,3-dichloropropene | 12.92 | 75 | 242198 | 9.220 | ppbV | | 95 |
| 66) 1,1,2-trichloroethane | 13.10 | 97 | 222971 | 10.431 | ppbV | | 98 |
| 68) toluene | 13.37 | 91 | 674393 | 10.144 | ppbV | | 100 |
| 71) 1,3-dichloropropane | 13.38 | 76 | 294501 | 9.478 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default-ICV-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 72) 2-hexanone | 13.57 | 43 | 417197 | 10.800 | ppbV # | 81 |
| 74) dibromochloromethane | 13.76 | 129 | 268745 | 10.516 | ppbV | 97 |
| 75) 1,2-dibromoethane | 13.98 | 107 | 319880 | 10.463 | ppbV | 97 |
| 76) butyl acetate | 14.11 | 73 | 95718 | 9.533 | ppbV | 88 |
| 77) octane | 14.21 | 85 | 263669 | 9.581 | ppbV | 98 |
| 78) tetrachloroethene | 14.36 | 166 | 303918 | 10.404 | ppbV | 98 |
| 79) 1,1,1,2-tetrachloroethane | 14.89 | 131 | 176971 | 9.416 | ppbV | 96 |
| 80) chlorobenzene | 14.91 | 112 | 559644 | 10.592 | ppbV | 98 |
| 81) ethylbenzene | 15.19 | 91 | 827026 | 10.371 | ppbV | 99 |
| 83) m+p-xylene | 15.32 | 91 | 1306182 | 20.777 | ppbV | 99 |
| 84) bromoform | 15.41 | 173 | 301091 | 10.670 | ppbV | 97 |
| 85) styrene | 15.60 | 104 | 640293 | 10.524 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 15.68 | 83 | 469854 | 10.833 | ppbV | 98 |
| 87) o-xylene | 15.68 | 91 | 636367 | 10.317 | ppbV | 96 |
| 88) 1,2,3-trichloropropane | 15.78 | 75 | 347295 | 9.587 | ppbV | 97 |
| 89) nonane | 15.81 | 43 | 477906 | 9.436 | ppbV | 95 |
| 91) isopropylbenzene | 16.11 | 105 | 889166 | 9.918 | ppbV | 96 |
| 92) bromobenzene | 16.20 | 77 | 471821 | 9.759 | ppbV | 96 |
| 93) 2-chlorotoluene | 16.48 | 126 | 243144 | 9.783 | ppbV # | 39 |
| 94) n-propylbenzene | 16.50 | 120 | 301909 | 10.105 | ppbV | 74 |
| 95) 4-chlorotoluene | 16.54 | 126 | 250666 | 9.964 | ppbV | 97 |
| 96) 4-ethyl toluene | 16.61 | 105 | 1104966 | 10.580 | ppbV | 99 |
| 97) 1,3,5-trimethylbenzene | 16.66 | 105 | 896314 | 10.680 | ppbV | 95 |
| 98) tert-butylbenzene | 16.98 | 119 | 764512 | 9.896 | ppbV | 99 |
| 99) 1,2,4-trimethylbenzene | 16.98 | 105 | 830529 | 10.692 | ppbV | 94 |
| 100) decane | 17.02 | 57 | 633814 | 10.012 | ppbV | 96 |
| 101) Benzyl Chloride | 17.11 | 91 | 681921 | 10.901 | ppbV | 98 |
| 102) 1,3-dichlorobenzene | 17.13 | 146 | 586728 | 11.029 | ppbV | 100 |
| 103) 1,4-dichlorobenzene | 17.18 | 146 | 552133 | 10.831 | ppbV | 98 |
| 104) sec-butylbenzene | 17.19 | 105 | 1151791 | 10.131 | ppbV | 99 |
| 106) p-isopropyltoluene | 17.30 | 119 | 906581 | 9.400 | ppbV | 96 |
| 107) 1,2-dichlorobenzene | 17.44 | 146 | 556254 | 11.027 | ppbV | 99 |
| 108) n-butylbenzene | 17.63 | 91 | 860019 | 10.339 | ppbV | 99 |
| 111) 1,2-dibromo-3-chloropr... | 17.79 | 75 | 188171 | 9.705 | ppbV | 89 |
| 112) undecane | 17.98 | 57 | 711452 | 10.351 | ppbV | 96 |
| 114) dodecane | 18.83 | 57 | 704231 | 10.544 | ppbV | 93 |
| 115) 1,2,4-trichlorobenzene | 18.82 | 180 | 543832 | 12.267 | ppbV | 96 |
| 116) naphthalene | 18.94 | 128 | 1135908 | 10.010 | ppbV | 97 |
| 117) 1,2,3-trichlorobenzene | 19.17 | 180 | 509754 | 10.985 | ppbV | 94 |
| 119) hexachlorobutadiene | 19.22 | 225 | 428804 | 11.130 | ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\02\200224T_I\r192626.D
Sub List : Default-ICV-AP2 - All compounds listed

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

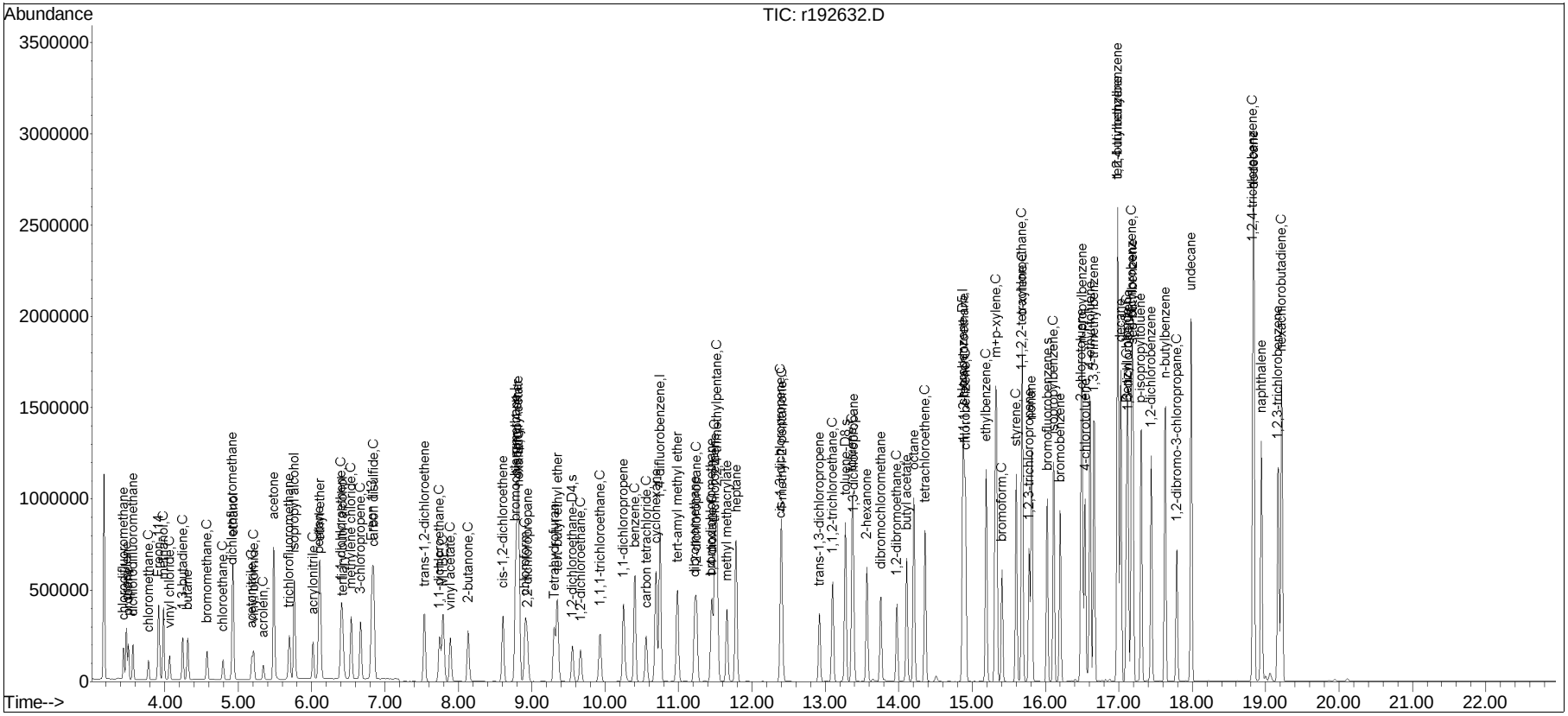
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\02\200224T_I\
Data File : r192632.D
Acq On : 25 Feb 2020 10:32 AM
Operator : AIRLAB19:RY
Sample : CTO15-LLSTD010
Misc : WG1344146
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Feb 25 10:59:57 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\02\200224T_I\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

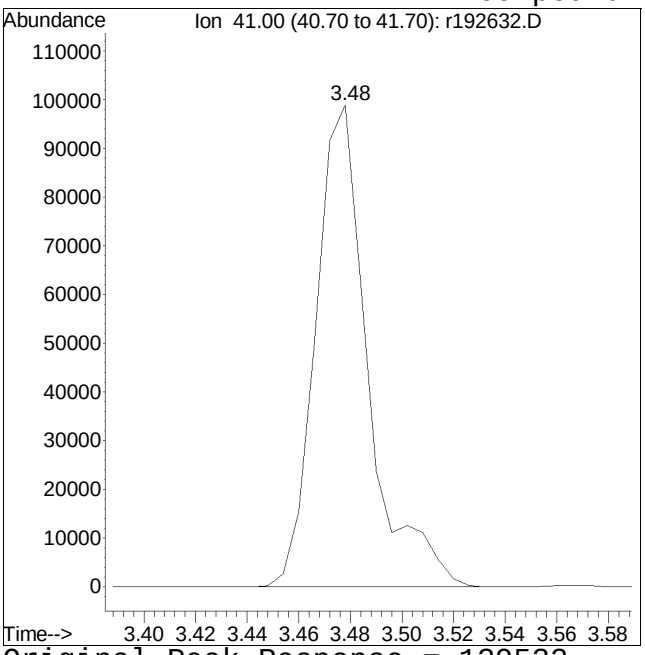
Sub List : Default-ICV-AP2 - All compounds listed224T_I\r192626.D



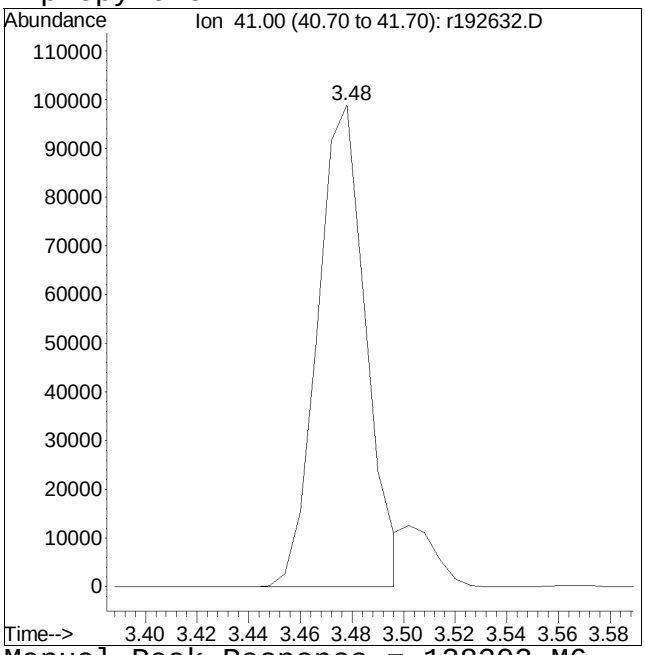
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab19\QMethod : TFS19_200224.M
Data File : r192632.D Operator : AIRLAB19:RY
Date Inj'd : 2/25/2020 0:0: 2 Instrument :
Sample : CTO15-LLSTD010 Quant Date : 2/25/2020 10:59 am

Compound #3: propylene




Original Peak Response = 139532




Manual Peak Response = 128203 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Method File : TFS3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 17:27:58 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ISTD | | | | | | | | | |
| 2) | | chlorodifluoromethane | 0.888 | 0.848 | 0.845 | 0.777 | 0.753 | 0.755 | 0.647 | 0.582 | 0.7618 | 13.70 |
| 3) | | propylene | | 0.525 | 0.516 | 0.473 | 0.445 | 0.444 | 0.401 | 0.371 | 0.4536 | 12.41 |
| 4) | | propane | | 0.720 | 0.695 | 0.615 | 0.598 | 0.602 | 0.520 | 0.464 | 0.6021 | 14.94 |
| 5) | | dichlorodifluoromethane | 1.087 | 1.070 | 1.064 | 0.949 | 0.911 | 0.886 | 0.677 | 0.587 | 0.9039 | 20.56 |
| 6) | C | chloromethane | 0.476 | 0.479 | 0.470 | 0.423 | 0.410 | 0.411 | 0.347 | 0.308 | 0.4153 | 14.95 |
| 7) | | Freon-114 | 1.364 | 1.336 | 1.313 | 1.169 | 1.110 | 1.075 | 0.802 | 0.631 | 1.0997 | 23.94 |
| 8) | C | methanol | | | 0.256 | 0.214 | 0.205 | 0.202 | 0.173 | 0.153 | 0.2005 | 17.72 |
| 9) | C | vinyl chloride | 0.547 | 0.536 | 0.526 | 0.482 | 0.468 | 0.485 | 0.432 | 0.400 | 0.4844 | 10.58 |
| 10) | C | 1,3-butadiene | 0.545 | 0.542 | 0.537 | 0.494 | 0.479 | 0.492 | 0.426 | 0.372 | 0.4857 | 12.58 |
| 11) | | butane | 0.856 | 0.825 | 0.803 | 0.724 | 0.701 | 0.701 | 0.579 | 0.516 | 0.7132 | 16.64 |
| 12) | C | acetaldehyde | | 0.281 | 0.266 | 0.253 | 0.237 | 0.199 | 0.150 | 0.124 | 0.2159 | 27.85 |
| 13) | C | bromomethane | 0.444 | 0.456 | 0.447 | 0.401 | 0.393 | 0.404 | 0.351 | 0.312 | 0.4011 | 12.43 |
| 14) | C | chloroethane | 0.279 | 0.274 | 0.268 | 0.240 | 0.235 | 0.244 | 0.220 | 0.210 | 0.2464 | 10.20 |
| 15) | | ethanol | | | 0.481 | 0.434 | 0.409 | 0.470 | 0.299 | 0.245 | 0.3895 | 24.70 |
| 16) | | dichlorofluoromethane | 0.853 | 0.854 | 0.839 | 0.764 | 0.740 | 0.770 | 0.607 | 0.542 | 0.7461 | 15.51 |
| 17) | C | vinyl bromide | 0.513 | 0.520 | 0.507 | 0.467 | 0.458 | 0.525 | 0.375 | 0.321 | 0.4606 | 16.30 |
| 18) | C | acrolein | | 0.283 | 0.273 | 0.248 | 0.247 | 0.275 | 0.231 | 0.214 | 0.2531 | 10.03 |
| 19) | | acetone | 0.781 | 0.741 | 0.717 | 0.700 | 0.669 | 0.768 | 0.444 | 0.370 | 0.6487 | 23.87 |
| 20) | C | acetonitrile | 0.493 | 0.451 | 0.443 | 0.405 | 0.395 | 0.501 | 0.335 | 0.310 | 0.4165 | 16.57 |
| 21) | | trichlorofluoromethane | 0.807 | 0.791 | 0.790 | 0.715 | 0.691 | 0.866 | 0.534 | 0.448 | 0.7053 | 20.54 |
| 22) | | isopropyl alcohol | 0.992 | 0.914 | 0.869 | 0.865 | 0.832 | 1.001 | 0.627 | 0.537 | 0.8294 | 19.99 |
| 23) | C | acrylonitrile | 0.488 | 0.473 | 0.480 | 0.450 | 0.444 | 0.513 | 0.408 | 0.368 | 0.4528 | 10.34 |
| 24) | | pentane | 0.974 | 0.948 | 0.925 | 0.843 | 1.012 | 1.063 | 1.082 | 0.768 | 0.9516 | 11.22 |
| 25) | | ethyl ether | 1.007 | 0.992 | 0.988 | 0.978 | 0.988 | 1.162 | 1.209 | 0.785 | 1.0136 | 12.67 |
| 26) | C | 1,1-dichloroethene | 0.694 | 0.713 | 0.697 | 0.631 | 0.615 | 0.732 | 0.652 | 0.576 | 0.6638 | 8.13 |
| 27) | | tertiary butyl alcohol | | 1.045 | 1.026 | 0.938 | 1.019 | 1.048 | 0.979 | 0.905 | 0.9940 | 5.57 |
| 28) | C | methylene chloride | | 0.641 | 0.632 | 0.595 | 0.661 | 0.680 | 0.617 | 0.546 | 0.6245 | 7.10 |
| 29) | C | 3-chloropropene | 0.911 | 0.895 | 0.878 | 0.816 | 0.808 | 0.818 | 0.745 | 0.681 | 0.8191 | 9.50 |
| 30) | C | carbon disulfide | 2.016 | 2.024 | 2.020 | 1.869 | 1.838 | 1.839 | 1.617 | 1.378 | 1.8250 | 12.42 |
| 31) | | Freon 113 | 1.089 | 1.082 | 1.063 | 0.972 | 0.959 | 0.969 | 0.845 | 0.719 | 0.9623 | 13.26 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Method File : TFS3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 17:27:58 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32) | | trans-1,2-dichloroethene | 0.839 | 0.845 | 0.837 | 0.784 | 0.777 | 0.786 | 0.710 | 0.643 | 0.7776 | 9.01 |
| 33) | C | 1,1-dichloroethane | 1.010 | 1.020 | 0.991 | 0.910 | 0.896 | 0.909 | 0.829 | 0.761 | 0.9158 | 9.89 |
| 34) | C | MTBE | 1.763 | 1.763 | 1.752 | 1.632 | 1.613 | 1.608 | 1.393 | 1.160 | 1.5855 | 13.31 |
| 35) | C | vinyl acetate | | | 1.431 | 1.375 | 1.370 | 1.399 | 1.261 | 1.121 | 1.3260 | 8.72 |
| 36) | C | 2-butanone | | 1.401 | 1.375 | 1.262 | 1.231 | 1.243 | 1.113 | 0.985 | 1.2301 | 11.74 |
| 37) | | cis-1,2-dichloroethene | 0.741 | 0.730 | 0.723 | 0.667 | 0.660 | 0.679 | 0.612 | 0.556 | 0.6710 | 9.43 |
| 38) | | Ethyl Acetate | | 0.217 | 0.225 | 0.201 | 0.199 | 0.208 | 0.196 | 0.191 | 0.2053 | 5.79 |
| 39) | C | chloroform | 1.077 | 1.089 | 1.077 | 0.989 | 0.976 | 1.002 | 0.857 | 0.701 | 0.9710 | 13.67 |
| 40) | | Tetrahydrofuran | 0.846 | 0.834 | 0.824 | 0.769 | 0.760 | 0.773 | 0.708 | 0.642 | 0.7696 | 8.94 |
| 41) | | 2,2-dichloropropane | 0.933 | 0.941 | 0.923 | 0.874 | 0.857 | 0.839 | 0.689 | 0.533 | 0.8237 | 17.29 |
| 42) | C | 1,2-dichloroethane | 0.593 | 0.619 | 0.599 | 0.553 | 0.541 | 0.544 | 0.459 | 0.379 | 0.5359 | 14.96 |
| 43) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 44) | C | hexane | 0.421 | 0.405 | 0.399 | 0.377 | 0.368 | 0.377 | 0.336 | 0.285 | 0.3709 | 11.68 |
| 45) | | diisopropyl ether | 0.239 | 0.230 | 0.226 | 0.213 | 0.209 | 0.216 | 0.196 | 0.164 | 0.2117 | 10.99 |
| 46) | | tert-butyl ethyl ether | 0.661 | 0.656 | 0.653 | 0.622 | 0.608 | 0.621 | 0.552 | 0.481 | 0.6068 | 10.18 |
| 47) | s | 1,2-dichloroethane-D4 | 0.181 | 0.180 | 0.180 | 0.179 | 0.176 | 0.167 | 0.152 | 0.129 | 0.1681 | 11.17 |
| 48) | C | 1,1,1-trichloroethane | 0.323 | 0.321 | 0.321 | 0.294 | 0.286 | 0.287 | 0.239 | 0.192 | 0.2829 | 16.23 |
| 49) | | 1,1-dichloropropene | 0.341 | 0.324 | 0.328 | 0.312 | 0.304 | 0.305 | 0.264 | 0.219 | 0.2996 | 13.29 |
| 50) | C | benzene | 0.837 | 0.796 | 0.790 | 0.722 | 0.710 | 0.735 | 0.649 | 0.554 | 0.7241 | 12.51 |
| 51) | | thiophene | 1.698 | 1.684 | 1.679 | 1.565 | 1.528 | 1.542 | 1.244 | 0.919 | 1.4824 | 18.24 |
| 52) | C | carbon tetrachloride | 0.299 | 0.302 | 0.304 | 0.280 | 0.276 | 0.273 | 0.213 | 0.153 | 0.2627 | 20.16 |
| 53) | | cyclohexane | 0.432 | 0.427 | 0.426 | 0.400 | 0.393 | 0.410 | 0.379 | 0.347 | 0.4018 | 7.14 |
| 54) | | tert-amyl methyl ether | 0.700 | 0.707 | 0.694 | 0.657 | 0.649 | 0.645 | 0.550 | 0.454 | 0.6320 | 13.87 |
| 55) | | dibromomethane | 0.221 | 0.210 | 0.202 | 0.189 | 0.184 | 0.181 | 0.157 | 0.134 | 0.1847 | 15.38 |
| 56) | C | 1,2-dichloropropane | 0.247 | 0.243 | 0.236 | 0.219 | 0.215 | 0.221 | 0.198 | 0.176 | 0.2194 | 10.90 |
| 57) | | bromodichloromethane | 0.430 | 0.426 | 0.421 | 0.400 | 0.394 | 0.399 | 0.344 | 0.277 | 0.3864 | 13.41 |
| 58) | C | 1,4-dioxane | 0.175 | 0.178 | 0.174 | 0.166 | 0.164 | 0.170 | 0.163 | 0.139 | 0.1661 | 7.24 |
| 59) | C | trichloroethene | 0.295 | 0.295 | 0.292 | 0.270 | 0.267 | 0.273 | 0.247 | 0.221 | 0.2698 | 9.63 |
| 60) | C | 2,2,4-trimethylpentane | 1.329 | 1.281 | 1.286 | 1.211 | 1.182 | 1.186 | 1.061 | 0.907 | 1.1805 | 11.71 |
| 61) | | methyl methacrylate | | 0.341 | 0.335 | 0.374 | 0.371 | 0.326 | 0.290 | 0.243 | 0.3256 | 14.18 |
| 62) | | heptane | 0.525 | 0.514 | 0.508 | 0.483 | 0.468 | 0.471 | 0.406 | 0.337 | 0.4639 | 13.66 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Method File : TFS3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 17:27:58 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63) | C | cis-1,3-dichloropropene | 0.384 | 0.385 | 0.384 | 0.356 | 0.356 | 0.361 | 0.317 | 0.265 | 0.3511 | 11.80 |
| 64) | C | 4-methyl-2-pentanone | | 0.578 | 0.579 | 0.555 | 0.542 | 0.544 | 0.470 | 0.393 | 0.5229 | 13.01 |
| 65) | | trans-1,3-dichloropropene | 0.350 | 0.350 | 0.353 | 0.338 | 0.336 | 0.342 | 0.296 | 0.246 | 0.3265 | 11.35 |
| 66) | C | 1,1,2-trichloroethane | 0.265 | 0.265 | 0.265 | 0.240 | 0.236 | 0.243 | 0.217 | 0.192 | 0.2403 | 10.87 |
| 67) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | |
| 68) | C | toluene | 5.739 | 5.464 | 5.507 | 4.986 | 4.888 | 5.088 | 4.600 | 4.327 | 5.0748 | 9.44 |
| 69) | s | toluene-D8 | 4.773 | 4.761 | 4.751 | 4.774 | 4.737 | 4.659 | 4.701 | 4.988 | 4.7680 | 2.04 |
| 70) | | 2-methylthiophene | 1.725 | 1.731 | 1.717 | 1.555 | 1.487 | 1.429 | 1.088 | 0.815 | 1.4435 | 23.01 |
| 71) | | 1,3-dichloropropane | 2.786 | 2.746 | 2.737 | 2.576 | 2.542 | 2.556 | 2.217 | 1.882 | 2.5051 | 12.36 |
| 72) | | 2-hexanone | 3.323 | 3.368 | 3.419 | 3.281 | 3.207 | 3.087 | 2.331 | 1.812 | 2.9786 | 19.66 |
| 73) | | 3-methylthiophene | 1.755 | 1.755 | 1.756 | 1.596 | 1.521 | 1.455 | 1.065 | 0.777 | 1.4599 | 24.64 |
| 74) | | dibromochloromethane | 2.297 | 2.290 | 2.305 | 2.230 | 2.252 | 2.287 | 2.022 | 1.836 | 2.1898 | 7.78 |
| 75) | C | 1,2-dibromoethane | 2.562 | 2.586 | 2.590 | 2.397 | 2.390 | 2.519 | 2.240 | 2.045 | 2.4163 | 7.99 |
| 76) | | butyl acetate | | 0.776 | 0.796 | 0.776 | 0.789 | 0.817 | 0.748 | 0.679 | 0.7689 | 5.85 |
| 77) | | octane | 2.245 | 2.269 | 2.236 | 2.173 | 2.158 | 2.292 | 2.123 | 1.916 | 2.1767 | 5.52 |
| 78) | C | tetrachloroethene | 2.428 | 2.443 | 2.454 | 2.229 | 2.193 | 2.323 | 2.024 | 1.746 | 2.2300 | 11.00 |
| 79) | | 1,1,1,2-tetrachloroethane | 1.904 | 1.809 | 1.792 | 1.684 | 1.665 | 1.671 | 1.453 | 1.258 | 1.6545 | 12.60 |
| 80) | C | chlorobenzene | 4.413 | 4.353 | 4.336 | 3.997 | 3.975 | 4.275 | 3.758 | 3.247 | 4.0444 | 9.77 |
| 81) | C | ethylbenzene | 6.599 | 6.599 | 6.591 | 6.027 | 5.941 | 6.192 | 5.480 | 4.924 | 6.0440 | 9.93 |
| 82) | | 2-ethylthiophene | 1.852 | 1.867 | 1.871 | 1.694 | 1.609 | 1.509 | 1.077 | 0.780 | 1.5323 | 26.28 |
| 83) | C | m+p-xylene | 5.593 | 5.503 | 5.510 | 5.035 | 4.964 | 5.125 | 4.297 | 3.556 | 4.9478 | 14.17 |
| 84) | C | bromoform | 1.962 | 2.098 | 2.106 | 2.123 | 2.184 | 2.259 | 1.966 | 1.634 | 2.0414 | 9.43 |
| 85) | C | styrene | 4.497 | 4.551 | 4.593 | 4.421 | 4.457 | 4.720 | 4.254 | 3.833 | 4.4157 | 6.15 |
| 86) | C | 1,1,2,2-tetrachloroethane | 3.769 | 3.877 | 3.849 | 3.566 | 3.539 | 3.706 | 2.991 | 2.330 | 3.4534 | 15.46 |
| 87) | C | o-xylene | 5.513 | 5.519 | 5.507 | 5.052 | 4.943 | 5.031 | 4.052 | 3.169 | 4.8483 | 17.20 |
| 88) | | 1,2,3-trichloropropane | 3.127 | 3.108 | 3.119 | 2.994 | 2.975 | 2.987 | 2.634 | 2.300 | 2.9055 | 10.04 |
| 89) | | nonane | 4.566 | 4.572 | 4.541 | 4.290 | 4.194 | 4.196 | 3.516 | 2.934 | 4.1011 | 14.25 |
| 90) | s | bromofluorobenzene | 2.995 | 3.011 | 3.013 | 3.128 | 3.257 | 2.963 | 3.194 | 3.626 | 3.1483 | 6.97 |
| 91) | C | isopropylbenzene | 7.755 | 7.655 | 7.764 | 7.262 | 7.134 | 7.132 | 6.061 | 5.149 | 6.9890 | 13.24 |
| 92) | | bromobenzene | 3.934 | 4.018 | 4.020 | 3.904 | 3.933 | 3.975 | 3.404 | 2.856 | 3.7555 | 11.05 |
| 93) | | 2-chlorotoluene | 2.070 | 2.038 | 2.045 | 1.973 | 1.964 | 2.013 | 1.876 | 1.734 | 1.9642 | 5.65 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Method File : TFS3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 17:27:58 2020
Response Via : Initial Calibration

Calibration Files
0.2 =r38592.D 0.5 =r38593.D 1.0 =r38594.D 5.0 =r38595.D 10 =r38596.D 20 =r38597.D 50 =r38598.D
100 =r38599.D

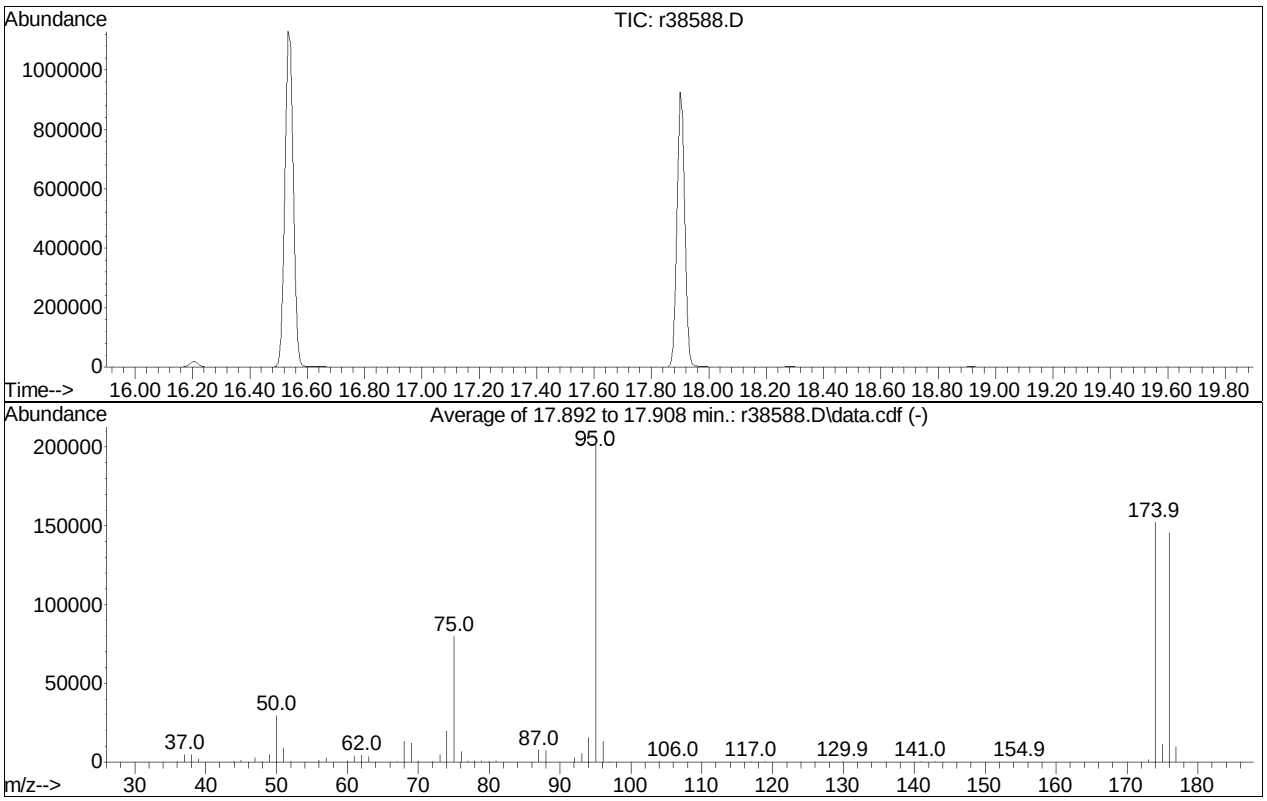
| | | Compound | 0.2 | 0.5 | 1.0 | 5.0 | 10 | 20 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 94) | | n-propylbenzene | 2.279 | 2.338 | 2.336 | 2.262 | 2.294 | 2.414 | 2.240 | 1.925 | 2.2610 | 6.46 |
| 95) | | 4-chlorotoluene | 1.927 | 1.932 | 1.980 | 1.895 | 1.913 | 1.962 | 1.858 | 1.764 | 1.9042 | 3.57 |
| 96) | | 4-ethyl toluene | 8.447 | 8.520 | 8.597 | 8.276 | 8.118 | 8.142 | 6.762 | 5.587 | 7.8060 | 13.69 |
| 97) | | 1,3,5-trimethylbenzene | 7.007 | 7.125 | 7.091 | 6.562 | 6.446 | 6.588 | 5.469 | 4.504 | 6.3491 | 14.43 |
| 98) | | tert-butylbenzene | 6.736 | 6.910 | 7.008 | 6.641 | 6.608 | 6.315 | 4.756 | 3.689 | 6.0829 | 19.74 |
| 99) | | 1,2,4-trimethylbenzene | 6.655 | 6.931 | 7.032 | 6.403 | 6.296 | 6.022 | 4.482 | 3.439 | 5.9074 | 21.61 |
| 100) | | decane | 4.940 | 5.048 | 5.154 | 5.023 | 4.941 | 4.905 | 4.128 | 3.486 | 4.7030 | 12.43 |
| 101) | C | Benzyl Chloride | 3.286 | 3.812 | 4.151 | 4.548 | 4.867 | 4.883 | 4.119 | 3.388 | 4.1315 | 14.89 |
| 102) | | 1,3-dichlorobenzene | 3.847 | 3.980 | 4.024 | 3.728 | 3.724 | 3.935 | 3.216 | 2.628 | 3.6353 | 13.20 |
| 103) | C | 1,4-dichlorobenzene | 3.402 | 3.517 | 3.644 | 3.652 | 3.738 | 3.697 | 3.215 | 2.793 | 3.4571 | 9.25 |
| 104) | | sec-butylbenzene | 0.953 | 0.981 | 1.000 | 0.963 | 0.945 | 0.916 | 0.743 | 0.611 | 0.8890 | 15.49 |
| 105) | | 1,2,3-trimethylbenzene | 6.010 | 6.155 | 6.270 | 6.729 | 6.582 | 5.423 | 4.090 | 3.158 | 5.5520 | 23.01 |
| 106) | | p-isopropyltoluene | 7.956 | 8.223 | 8.289 | 8.194 | 8.188 | 7.632 | 5.719 | 4.344 | 7.3183 | 20.13 |
| 107) | | 1,2-dichlorobenzene | 3.562 | 3.696 | 3.735 | 3.524 | 3.543 | 3.649 | 3.195 | 2.822 | 3.4658 | 8.90 |
| 108) | | n-butylbenzene | 6.158 | 6.444 | 6.729 | 6.740 | 6.657 | 6.362 | 5.366 | 4.570 | 6.1281 | 12.61 |
| 109) | | indan | 5.628 | 5.890 | 6.005 | 6.647 | 6.680 | 6.074 | 5.186 | 4.406 | 5.8144 | 12.95 |
| 110) | | indene | 3.927 | 4.328 | 4.529 | 5.263 | 5.344 | 4.928 | 4.361 | 3.810 | 4.5613 | 12.57 |
| 111) | C | 1,2-dibromo-3-chloropropane | 1.413 | 1.450 | 1.611 | 1.727 | 1.746 | 1.545 | 1.286 | 1.097 | 1.4843 | 14.91 |
| 112) | | undecane | 5.162 | 5.405 | 5.559 | 5.672 | 5.595 | 5.298 | 4.420 | 3.659 | 5.0962 | 13.79 |
| 113) | | 1,2,4,5-tetramethylbenzene | 5.285 | 5.484 | 5.585 | 6.474 | 7.060 | 6.038 | 5.169 | 4.387 | 5.6853 | 14.56 |
| 114) | | dodecane | 4.553 | 5.044 | 5.329 | 6.159 | 6.086 | 5.118 | 4.429 | 3.699 | 5.0520 | 16.46 |
| 115) | C | 1,2,4-trichlorobenzene | 1.385 | 1.742 | 2.159 | 2.347 | 2.574 | 2.409 | 2.425 | 2.248 | 2.1609 | 18.52 |
| 116) | | naphthalene | 5.197 | 5.488 | 6.234 | 7.316 | 7.786 | 6.602 | 6.569 | 6.076 | 6.4086 | 13.50 |
| 117) | | 1,2,3-trichlorobenzene | 1.921 | 2.141 | 2.423 | 2.858 | 3.077 | 2.597 | 2.545 | 2.301 | 2.4830 | 15.08 |
| 118) | | benzothiophene | 2.323 | 2.883 | 3.863 | 3.602 | 4.121 | 4.629 | 5.005 | 4.999 | 3.9279 | 24.75 |
| 119) | C | hexachlorobutadiene | 3.029 | 3.112 | 3.118 | 2.897 | 2.832 | 2.561 | 2.145 | 1.743 | 2.6796 | 18.66 |
| 120) | | 2-methylnaphthalene | | | 0.670 | 0.851 | 1.061 | 1.160 | 1.404 | 1.579 | 1.1208 | 30.16# |
| 121) | | 1-methylnaphthalene | | | 2.328 | 2.406 | 2.669 | 2.710 | 2.911 | 3.001 | 2.6707 | 9.99 |

(#) = Out of Range

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38588.D
Acq On : 12 Mar 2020 9:50 AM
Operator : AIRPIANO3:RY
Sample : WG1350408-1,3,250,250
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 17:27:58 2020




Spectrum Information: Average of 17.892 to 17.908 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 14.5 | 29472 | PASS |
| 75 | 95 | 30 | 66 | 39.3 | 79731 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 202734 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 13477 | PASS |
| 173 | 174 | 0.00 | 2 | 1.1 | 1647 | PASS |
| 174 | 95 | 50 | 120 | 75.2 | 152363 | PASS |
| 175 | 174 | 4 | 9 | 7.4 | 11319 | PASS |
| 176 | 174 | 93 | 101 | 95.4 | 145430 | PASS |
| 177 | 176 | 5 | 9 | 6.8 | 9839 | PASS |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38592.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:16:38 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 349104 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 94.20% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 958347 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 93.00% | | | |
| 67) chlorobenzene-D5 | 16.53 | 54 | 149124 | 10.000 | ppbV | 0.00 |
| Standard Area = 160625 | | | Recovery = 92.84% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 173919 | 10.297 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.97% | | | |
| 69) toluene-D8 | 14.64 | 98 | 711753 | 10.077 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.77% | | | |
| 90) bromofluorobenzene | 17.90 | 95 | 446624 | 9.195 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 91.95% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.86 | 51 | 6201 | 0.236 | ppbV # | 95 |
| 3) propylene | 3.90 | 41 | 3677M4 | 0.237 | ppbV | |
| 4) propane | 3.92 | 29 | 5314 | 0.255 | ppbV | 96 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 7593 | 0.239 | ppbV | 99 |
| 6) chloromethane | 4.16 | 50 | 3320 | 0.232 | ppbV | 97 |
| 7) Freon-114 | 4.28 | 85 | 9524 | 0.246 | ppbV | 97 |
| 8) methanol | 4.36 | 31 | 9994 | 1.396 | ppbV | 86 |
| 9) vinyl chloride | 4.41 | 62 | 3817 | 0.234 | ppbV | 97 |
| 10) 1,3-butadiene | 4.58 | 54 | 3807 | 0.228 | ppbV | 100 |
| 11) butane | 4.64 | 43 | 5980 | 0.244 | ppbV | 98 |
| 12) acetaldehyde | 4.30 | 29 | 10733 | 1.295 | ppbV | 96 |
| 13) bromomethane | 4.89 | 94 | 3101 | 0.226 | ppbV | 94 |
| 14) chloroethane | 5.12 | 64 | 1945 | 0.237 | ppbV | 96 |
| 15) ethanol | 5.30 | 31 | 23643 | 1.656 | ppbV | 98 |
| 16) dichlorofluoromethane | 5.25 | 67 | 5953 | 0.230 | ppbV | 97 |
| 17) vinyl bromide | 5.54 | 106 | 3579 | 0.224 | ppbV | 94 |
| 18) acrolein | 5.70 | 56 | 2089 | 0.242 | ppbV # | 87 |
| 19) acetone | 5.87 | 43 | 27256 | 1.167 | ppbV # | 98 |
| 20) acetonitrile | 5.54 | 41 | 3442 | 0.250 | ppbV | 96 |
| 21) trichlorofluoromethane | 6.06 | 101 | 5637 | 0.234 | ppbV | 100 |
| 22) isopropyl alcohol | 6.20 | 45 | 17310 | 0.596 | ppbV | 99 |
| 23) acrylonitrile | 6.43 | 53 | 3408 | 0.220 | ppbV | 93 |
| 24) pentane | 6.51 | 43 | 6800 | 0.193 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38592.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:16:38 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.56 | 31 | 7031 | 0.204 | ppbV | | 98 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 4848 | 0.226 | ppbV | | 96 |
| 27) tertiary butyl alcohol | 6.94 | 59 | 7577 | 0.213 | ppbV | | 97 |
| 28) methylene chloride | 6.99 | 49 | 4530 | 0.196 | ppbV | | 95 |
| 29) 3-chloropropene | 7.13 | 41 | 6358 | 0.226 | ppbV | | 98 |
| 30) carbon disulfide | 7.28 | 76 | 14073 | 0.219 | ppbV | # | 79 |
| 31) Freon 113 | 7.33 | 101 | 7606 | 0.227 | ppbV | | 98 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 5857 | 0.216 | ppbV | | 99 |
| 33) 1,1-dichloroethane | 8.36 | 63 | 7054 | 0.225 | ppbV | | 100 |
| 34) MTBE | 8.46 | 73 | 12306 | 0.219 | ppbV | | 99 |
| 35) vinyl acetate | 8.58 | 43 | 10371 | 0.217 | ppbV | | 99 |
| 36) 2-butanone | 8.87 | 43 | 9837 | 0.229 | ppbV | | 99 |
| 37) cis-1,2-dichloroethene | 9.35 | 61 | 5175 | 0.225 | ppbV | | 99 |
| 38) Ethyl Acetate | 9.68 | 61 | 1595M4 | 0.230 | ppbV | | |
| 39) chloroform | 9.71 | 83 | 7522 | 0.221 | ppbV | | 98 |
| 40) Tetrahydrofuran | 10.18 | 42 | 5910 | 0.223 | ppbV | | 96 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 6514 | 0.218 | ppbV | | 95 |
| 42) 1,2-dichloroethane | 10.55 | 62 | 4142 | 0.220 | ppbV | | 96 |
| 44) hexane | 9.62 | 57 | 8078 | 0.229 | ppbV | # | 67 |
| 45) diisopropyl ether | 9.63 | 87 | 4573 | 0.228 | ppbV | | 97 |
| 46) tert-butyl ethyl ether | 10.27 | 59 | 12671 | 0.218 | ppbV | | 99 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 6185 | 0.226 | ppbV | | 97 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 6537 | 0.224 | ppbV | | 95 |
| 50) benzene | 11.37 | 78 | 16040 | 0.236 | ppbV | | 99 |
| 51) thiophene | 11.52 | 84 | 32536 | 0.222 | ppbV | | 97 |
| 52) carbon tetrachloride | 11.54 | 117 | 5736 | 0.217 | ppbV | | 98 |
| 53) cyclohexane | 11.69 | 56 | 8286 | 0.220 | ppbV | | 98 |
| 54) tert-amyl methyl ether | 12.09 | 73 | 13422 | 0.216 | ppbV | | 98 |
| 55) dibromomethane | 12.29 | 93 | 4229 | 0.240 | ppbV | | 96 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 4737 | 0.229 | ppbV | | 97 |
| 57) bromodichloromethane | 12.55 | 83 | 8244 | 0.218 | ppbV | | 99 |
| 58) 1,4-dioxane | 12.62 | 88 | 3354 | 0.213 | ppbV | | 96 |
| 59) trichloroethene | 12.61 | 130 | 5656 | 0.221 | ppbV | | 99 |
| 60) 2,2,4-trimethylpentane | 12.65 | 57 | 25476 | 0.225 | ppbV | | 100 |
| 61) methyl methacrylate | 12.87 | 41 | 6563 | 0.185 | ppbV | | 97 |
| 62) heptane | 12.97 | 43 | 10056 | 0.224 | ppbV | | 97 |
| 63) cis-1,3-dichloropropene | 13.62 | 75 | 7361 | 0.216 | ppbV | | 98 |
| 64) 4-methyl-2-pentanone | 13.68 | 43 | 11060 | 0.213 | ppbV | | 99 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 6708 | 0.209 | ppbV | | 98 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 5085 | 0.225 | ppbV | | 98 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38592.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:16:38 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 14.75 | 91 | 17117 | 0.235 | ppbV | 100 |
| 70) 2-methylthiophene | 14.82 | 97 | 51442 | 0.232 | ppbV | 99 |
| 71) 1,3-dichloropropane | 14.78 | 76 | 8308 | 0.219 | ppbV | 98 |
| 72) 2-hexanone | 15.06 | 43 | 9911 | 0.207 | ppbV | 94 |
| 73) 3-methylthiophene | 15.02 | 97 | 52330 | 0.231 | ppbV | 99 |
| 74) dibromochloromethane | 15.20 | 129 | 6851 | 0.204 | ppbV | 94 |
| 75) 1,2-dibromoethane | 15.45 | 107 | 7640 | 0.214 | ppbV | 99 |
| 76) butyl acetate | 15.71 | 73 | 2230 | 0.189 | ppbV | 98 |
| 77) octane | 15.79 | 85 | 6697 | 0.208 | ppbV | 92 |
| 78) tetrachloroethene | 15.92 | 166 | 7242 | 0.221 | ppbV | 99 |
| 79) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 5680 | 0.229 | ppbV | 94 |
| 80) chlorobenzene | 16.57 | 112 | 13161 | 0.222 | ppbV | 98 |
| 81) ethylbenzene | 16.93 | 91 | 19681 | 0.222 | ppbV | 96 |
| 82) 2-ethylthiophene | 16.97 | 97 | 55236 | 0.230 | ppbV | 93 |
| 83) m+p-xylene | 17.09 | 91 | 33364 | 0.451 | ppbV | 97 |
| 84) bromoform | 17.16 | 173 | 5852 | 0.180 | ppbV | 98 |
| 85) styrene | 17.42 | 104 | 13411 | 0.202 | ppbV | 98 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 11241 | 0.213 | ppbV | 98 |
| 87) o-xylene | 17.51 | 91 | 16442 | 0.223 | ppbV | 97 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 9327 | 0.210 | ppbV | 98 |
| 89) nonane | 17.70 | 43 | 13619 | 0.218 | ppbV | 99 |
| 91) isopropylbenzene | 18.02 | 105 | 23129 | 0.217 | ppbV | 97 |
| 92) bromobenzene | 18.09 | 77 | 11734 | 0.200 | ppbV | 99 |
| 93) 2-chlorotoluene | 18.42 | 126 | 6174 | 0.211 | ppbV | 97 |
| 94) n-propylbenzene | 18.45 | 120 | 6796 | 0.199 | ppbV | 90 |
| 95) 4-chlorotoluene | 18.48 | 126 | 5748 | 0.201 | ppbV | 100 |
| 96) 4-ethyl toluene | 18.57 | 105 | 25193 | 0.208 | ppbV | 98 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 20897 | 0.217 | ppbV | 99 |
| 98) tert-butylbenzene | 18.96 | 119 | 20091 | 0.204 | ppbV | 98 |
| 99) 1,2,4-trimethylbenzene | 18.96 | 105 | 19847 | 0.211 | ppbV | 96 |
| 100) decane | 19.03 | 57 | 14734 | 0.200 | ppbV | 96 |
| 101) Benzyl Chloride | 19.07 | 91 | 9800 | 0.135 | ppbV | 96 |
| 102) 1,3-dichlorobenzene | 19.08 | 146 | 11474 | 0.207 | ppbV | 97 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 10145 | 0.182 | ppbV | 99 |
| 104) sec-butylbenzene | 19.18 | 105 | 28416 | 0.202 | ppbV | 98 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 17924 | 0.183 | ppbV | 100 |
| 106) p-isopropyltoluene | 19.29 | 119 | 23730 | 0.194 | ppbV | 97 |
| 107) 1,2-dichlorobenzene | 19.42 | 146 | 10623 | 0.201 | ppbV | 97 |
| 108) n-butylbenzene | 19.63 | 91 | 18365 | 0.185 | ppbV | 98 |
| 109) indan | 19.46 | 117 | 16784 | 0.168 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38592.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:16:38 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 110) indene | 19.54 | 115 | 11713 | 0.147 | ppbV | | 98 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 4213 | 0.162 | ppbV | | 95 |
| 112) undecane | 20.03 | 57 | 15395 | 0.185 | ppbV | | 96 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 15762 | 0.150 | ppbV | | 97 |
| 114) dodecane | 20.93 | 57 | 13579 | 0.150 | ppbV | | 94 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 4130 | 0.108 | ppbV | | 99 |
| 116) naphthalene | 20.99 | 128 | 15500 | 0.133 | ppbV | | 100 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 5728 | 0.125 | ppbV | | 99 |
| 118) benzothiophene | 21.06 | 134 | 6927 | 0.113 | ppbV | | 98 |
| 119) hexachlorobutadiene | 21.31 | 225 | 9035 | 0.214 | ppbV | | 97 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 837 | 0.053 | ppbV | # | 77 |
| 121) 1-methylnaphthalene | 22.30 | 142 | 4049 | 0.102 | ppbV | | 97 |

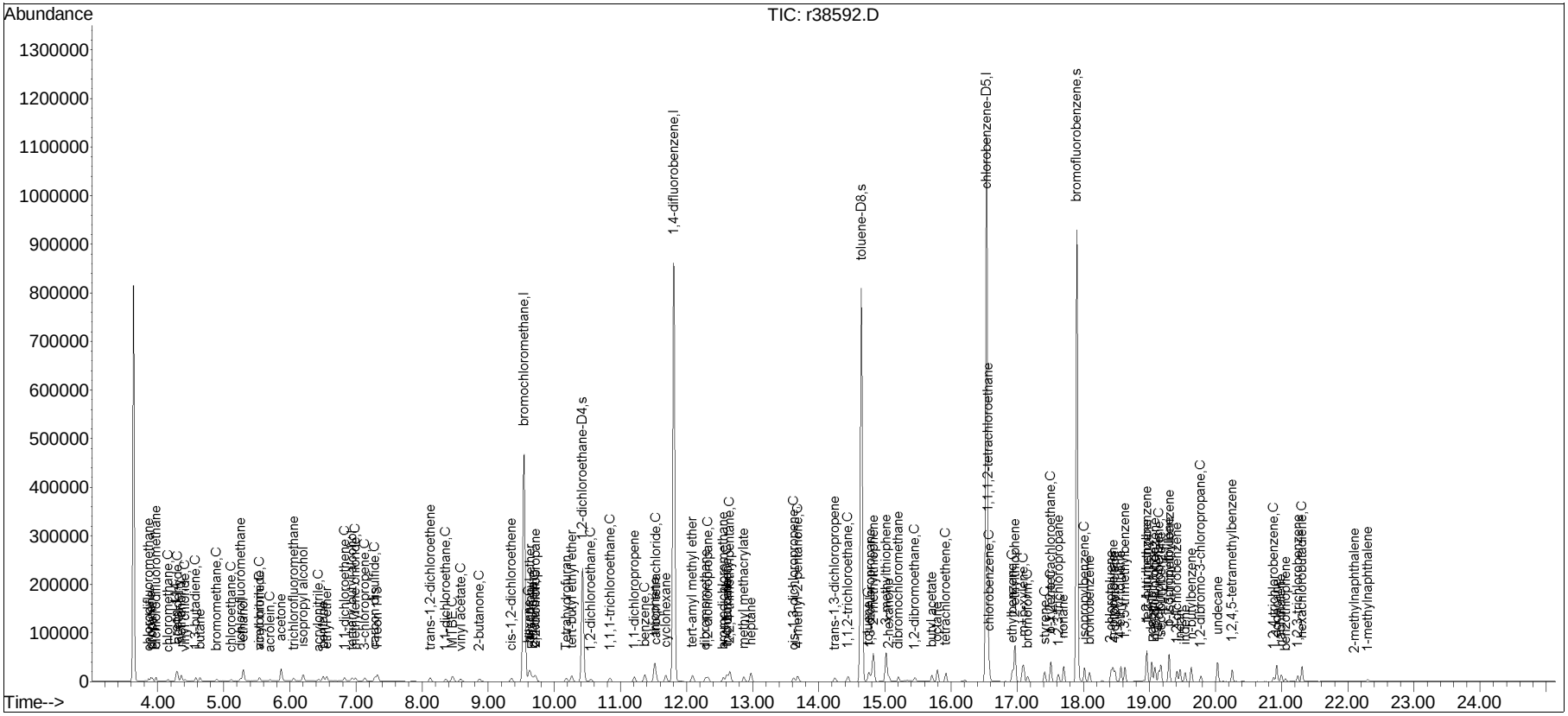
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38592.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:16:38 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

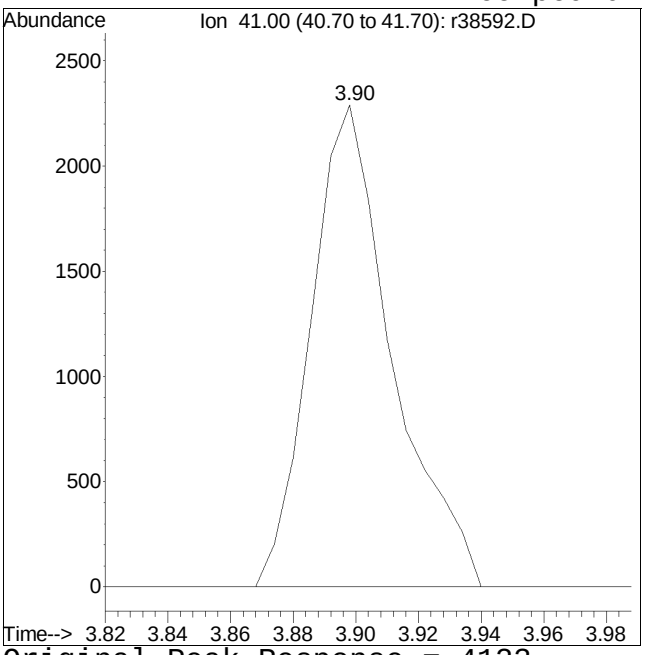
Sub List : Default - All compounds listed20\03\200312T_I\r38596.D



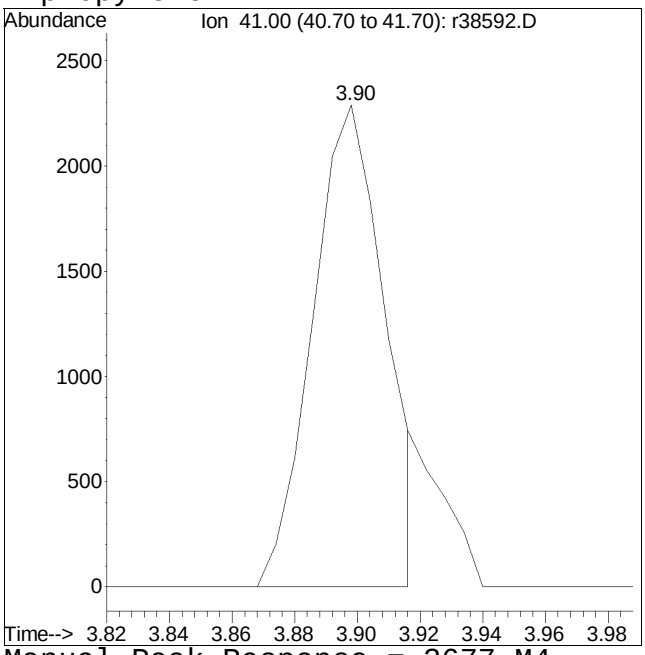
# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38592.D
Date Inj'd : 3/12/2020 0:2: 5
Sample : ITO15-SIMSTD0.2
Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

## Compound #3: propylene




Original Peak Response = 4123




Manual Peak Response = 3677 M4

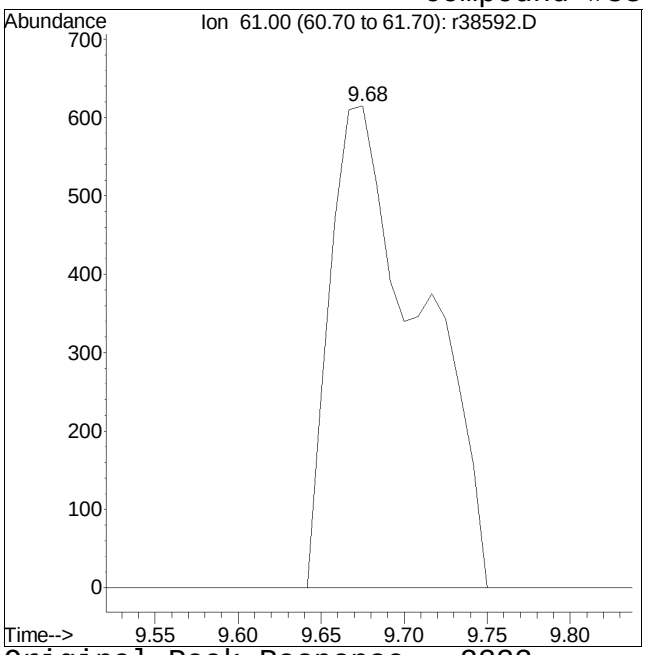
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

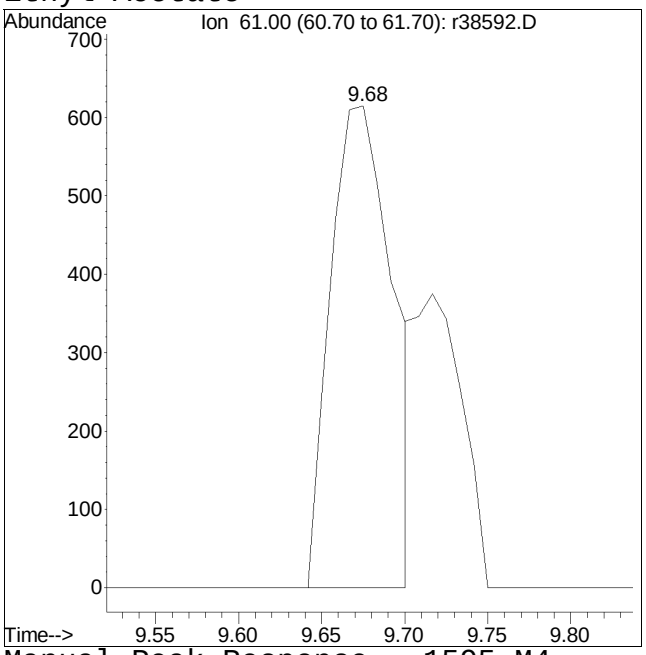
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38592.D
Date Inj'd : 3/12/2020 0:2: 5
Sample : ITO15-SIMSTD0.2

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

Compound #38: Ethyl Acetate




Original Peak Response = 2333




Manual Peak Response = 1595 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38593.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:18:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 348120 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 93.93% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 967742 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 93.91% | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 149594 | 10.000 | ppbV | 0.00 |
| Standard Area = 160625 | | | Recovery = 93.13% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 174592 | 10.237 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.37% | | | |
| 69) toluene-D8 | 14.64 | 98 | 712267 | 10.052 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.52% | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 450364 | 9.242 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.42% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.87 | 51 | 14758 | 0.563 | ppbV | 99 |
| 3) propylene | 3.90 | 41 | 9137M4 | 0.590 | ppbV | |
| 4) propane | 3.92 | 29 | 12536 | 0.602 | ppbV | 97 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 18627 | 0.588 | ppbV | 100 |
| 6) chloromethane | 4.16 | 50 | 8330 | 0.583 | ppbV | 98 |
| 7) Freon-114 | 4.29 | 85 | 23250 | 0.602 | ppbV | 99 |
| 8) methanol | 4.36 | 31 | 23026 | 3.225 | ppbV | 94 |
| 9) vinyl chloride | 4.41 | 62 | 9328 | 0.573 | ppbV | 100 |
| 10) 1,3-butadiene | 4.58 | 54 | 9440 | 0.566 | ppbV | 99 |
| 11) butane | 4.65 | 43 | 14365 | 0.588 | ppbV | 99 |
| 12) acetaldehyde | 4.31 | 29 | 24435 | 2.956 | ppbV | 99 |
| 13) bromomethane | 4.89 | 94 | 7941 | 0.580 | ppbV | 99 |
| 14) chloroethane | 5.12 | 64 | 4767 | 0.583 | ppbV | 100 |
| 15) ethanol | 5.30 | 31 | 47185 | 3.315 | ppbV | 99 |
| 16) dichlorofluoromethane | 5.25 | 67 | 14867 | 0.577 | ppbV | 99 |
| 17) vinyl bromide | 5.54 | 106 | 9051 | 0.567 | ppbV | 99 |
| 18) acrolein | 5.70 | 56 | 4931 | 0.573 | ppbV | 98 |
| 19) acetone | 5.86 | 43 | 64470 | 2.769 | ppbV | 97 |
| 20) acetonitrile | 5.54 | 41 | 7848 | 0.571 | ppbV | 99 |
| 21) trichlorofluoromethane | 6.06 | 101 | 13775 | 0.573 | ppbV | 100 |
| 22) isopropyl alcohol | 6.20 | 45 | 39760 | 1.373 | ppbV | 100 |
| 23) acrylonitrile | 6.44 | 53 | 8235 | 0.533 | ppbV | 98 |
| 24) pentane | 6.51 | 43 | 16494M4 | 0.468 | ppbV | |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38593.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:18:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.56 | 31 | 17268 | 0.502 | ppbV | | 97 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 12414 | 0.580 | ppbV | | 98 |
| 27) tertiary butyl alcohol | 6.94 | 59 | 18184 | 0.513 | ppbV | | 96 |
| 28) methylene chloride | 7.00 | 49 | 11155 | 0.485 | ppbV | | 97 |
| 29) 3-chloropropene | 7.14 | 41 | 15585 | 0.554 | ppbV | | 99 |
| 30) carbon disulfide | 7.29 | 76 | 35231 | 0.551 | ppbV | # | 91 |
| 31) Freon 113 | 7.33 | 101 | 18841 | 0.565 | ppbV | | 96 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 14700 | 0.543 | ppbV | | 100 |
| 33) 1,1-dichloroethane | 8.36 | 63 | 17756 | 0.569 | ppbV | | 99 |
| 34) MTBE | 8.46 | 73 | 30685 | 0.547 | ppbV | | 99 |
| 35) vinyl acetate | 8.58 | 43 | 25460 | 0.534 | ppbV | | 100 |
| 36) 2-butanone | 8.86 | 43 | 24389 | 0.569 | ppbV | | 100 |
| 37) cis-1,2-dichloroethene | 9.35 | 61 | 12702 | 0.553 | ppbV | | 96 |
| 38) Ethyl Acetate | 9.67 | 61 | 3773 | 0.544 | ppbV | | 92 |
| 39) chloroform | 9.71 | 83 | 18955 | 0.558 | ppbV | | 94 |
| 40) Tetrahydrofuran | 10.18 | 42 | 14522 | 0.549 | ppbV | | 100 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 16373 | 0.549 | ppbV | | 97 |
| 42) 1,2-dichloroethane | 10.56 | 62 | 10771 | 0.572 | ppbV | | 99 |
| 44) hexane | 9.62 | 57 | 19587 | 0.550 | ppbV | # | 71 |
| 45) diisopropyl ether | 9.63 | 87 | 11115 | 0.550 | ppbV | | 94 |
| 46) tert-butyl ethyl ether | 10.26 | 59 | 31752 | 0.540 | ppbV | | 100 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 15546 | 0.561 | ppbV | | 98 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 15688 | 0.533 | ppbV | | 96 |
| 50) benzene | 11.37 | 78 | 38530 | 0.561 | ppbV | | 99 |
| 51) thiophene | 11.52 | 84 | 81471 | 0.551 | ppbV | | 98 |
| 52) carbon tetrachloride | 11.55 | 117 | 14632 | 0.547 | ppbV | | 98 |
| 53) cyclohexane | 11.69 | 56 | 20643 | 0.542 | ppbV | | 99 |
| 54) tert-amyl methyl ether | 12.09 | 73 | 34233 | 0.545 | ppbV | | 99 |
| 55) dibromomethane | 12.29 | 93 | 10179 | 0.573 | ppbV | | 98 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 11780 | 0.565 | ppbV | | 98 |
| 57) bromodichloromethane | 12.56 | 83 | 20610 | 0.540 | ppbV | | 100 |
| 58) 1,4-dioxane | 12.61 | 88 | 8594 | 0.541 | ppbV | | 100 |
| 59) trichloroethene | 12.61 | 130 | 14257 | 0.553 | ppbV | | 95 |
| 60) 2,2,4-trimethylpentane | 12.65 | 57 | 61999 | 0.542 | ppbV | | 100 |
| 61) methyl methacrylate | 12.87 | 41 | 16502 | 0.460 | ppbV | | 98 |
| 62) heptane | 12.97 | 43 | 24871 | 0.549 | ppbV | | 99 |
| 63) cis-1,3-dichloropropene | 13.63 | 75 | 18615 | 0.540 | ppbV | | 99 |
| 64) 4-methyl-2-pentanone | 13.68 | 43 | 27948 | 0.532 | ppbV | | 99 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 16941 | 0.522 | ppbV | | 97 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 12844 | 0.562 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38593.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:18:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 14.76 | 91 | 40867 | 0.559 | ppbV | | 100 |
| 70) 2-methylthiophene | 14.82 | 97 | 129499 | 0.582 | ppbV | | 100 |
| 71) 1,3-dichloropropane | 14.78 | 76 | 20536 | 0.540 | ppbV | | 100 |
| 72) 2-hexanone | 15.06 | 43 | 25190 | 0.525 | ppbV | # | 92 |
| 73) 3-methylthiophene | 15.02 | 97 | 131259 | 0.577 | ppbV | | 100 |
| 74) dibromochloromethane | 15.21 | 129 | 17130 | 0.508 | ppbV | | 98 |
| 75) 1,2-dibromoethane | 15.45 | 107 | 19345 | 0.541 | ppbV | | 100 |
| 76) butyl acetate | 15.71 | 73 | 5805 | 0.492 | ppbV | | 99 |
| 77) octane | 15.79 | 85 | 16975 | 0.526 | ppbV | | 94 |
| 78) tetrachloroethene | 15.93 | 166 | 18274 | 0.557 | ppbV | | 97 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 13531 | 0.543 | ppbV | | 99 |
| 80) chlorobenzene | 16.57 | 112 | 32562 | 0.548 | ppbV | | 100 |
| 81) ethylbenzene | 16.93 | 91 | 49356 | 0.555 | ppbV | | 97 |
| 82) 2-ethylthiophene | 16.97 | 97 | 139640 | 0.580 | ppbV | | 94 |
| 83) m+p-xylene | 17.09 | 91 | 82318 | 1.109 | ppbV | | 97 |
| 84) bromoform | 17.16 | 173 | 15689 | 0.480 | ppbV | | 99 |
| 85) styrene | 17.42 | 104 | 34041 | 0.511 | ppbV | | 99 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 28998 | 0.548 | ppbV | | 99 |
| 87) o-xylene | 17.51 | 91 | 41280 | 0.558 | ppbV | | 96 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 23244 | 0.522 | ppbV | | 99 |
| 89) nonane | 17.71 | 43 | 34195 | 0.545 | ppbV | | 99 |
| 91) isopropylbenzene | 18.02 | 105 | 57257 | 0.536 | ppbV | | 98 |
| 92) bromobenzene | 18.09 | 77 | 30056 | 0.511 | ppbV | | 99 |
| 93) 2-chlorotoluene | 18.43 | 126 | 15244M3 | 0.519 | ppbV | | |
| 94) n-propylbenzene | 18.45 | 120 | 17485 | 0.509 | ppbV | | 92 |
| 95) 4-chlorotoluene | 18.48 | 126 | 14452 | 0.505 | ppbV | | 94 |
| 96) 4-ethyl toluene | 18.57 | 105 | 63728 | 0.525 | ppbV | | 98 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 53296 | 0.553 | ppbV | | 97 |
| 98) tert-butylbenzene | 18.96 | 119 | 51681 | 0.523 | ppbV | | 97 |
| 99) 1,2,4-trimethylbenzene | 18.96 | 105 | 51839 | 0.550 | ppbV | | 98 |
| 100) decane | 19.03 | 57 | 37754 | 0.511 | ppbV | | 95 |
| 101) Benzyl Chloride | 19.07 | 91 | 28514 | 0.392 | ppbV | | 99 |
| 102) 1,3-dichlorobenzene | 19.08 | 146 | 29770 | 0.534 | ppbV | | 99 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 26303 | 0.470 | ppbV | | 99 |
| 104) sec-butylbenzene | 19.18 | 105 | 73388 | 0.519 | ppbV | | 99 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 46040 | 0.468 | ppbV | | 98 |
| 106) p-isopropyltoluene | 19.29 | 119 | 61509 | 0.502 | ppbV | | 97 |
| 107) 1,2-dichlorobenzene | 19.41 | 146 | 27644 | 0.522 | ppbV | | 98 |
| 108) n-butylbenzene | 19.63 | 91 | 48198 | 0.484 | ppbV | | 100 |
| 109) indan | 19.46 | 117 | 44053 | 0.441 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38593.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:18:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 19.54 | 115 | 32372 | 0.405 | ppbV | 100 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 10847 | 0.415 | ppbV | 96 |
| 112) undecane | 20.02 | 57 | 40429 | 0.483 | ppbV | 96 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 41019 | 0.388 | ppbV | 95 |
| 114) dodecane | 20.93 | 57 | 37730 | 0.414 | ppbV | 93 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 13029 | 0.338 | ppbV | 99 |
| 116) naphthalene | 20.99 | 128 | 41048 | 0.352 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 16013 | 0.348 | ppbV | 97 |
| 118) benzothiophene | 21.06 | 134 | 21561 | 0.350 | ppbV | 98 |
| 119) hexachlorobutadiene | 21.31 | 225 | 23276 | 0.550 | ppbV | 97 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 3801 | 0.239 | ppbV | 99 |
| 121) 1-methylnaphthalene | 22.30 | 142 | 14748 | 0.369 | ppbV | 100 |

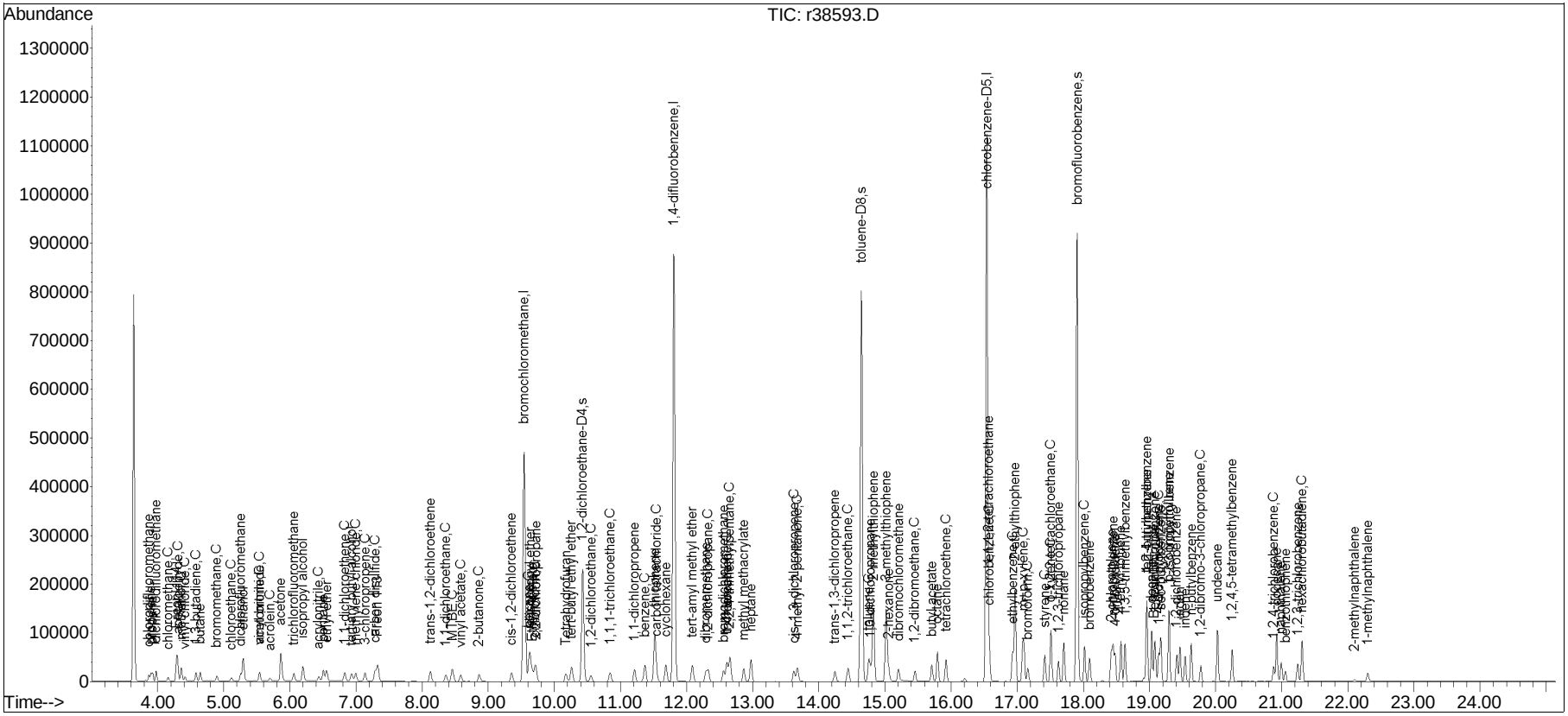
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38593.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:18:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

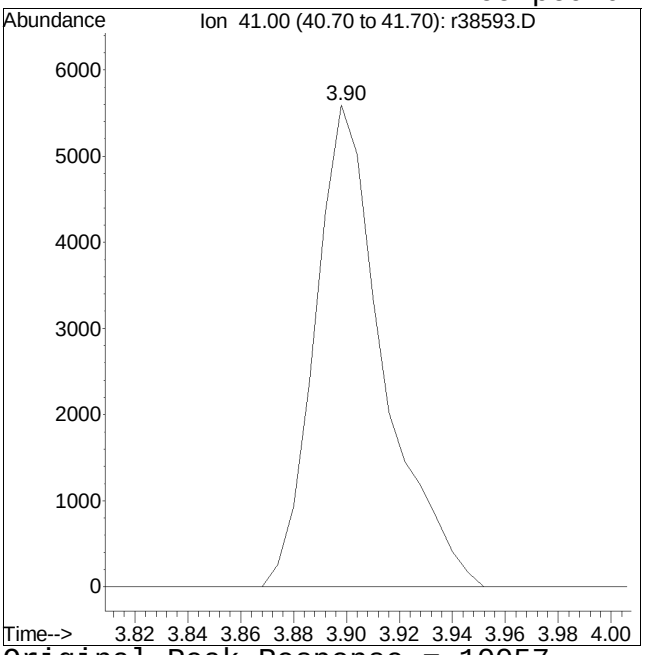
Sub List : Default - All compounds listed20\03\200312T_I\r38596.D

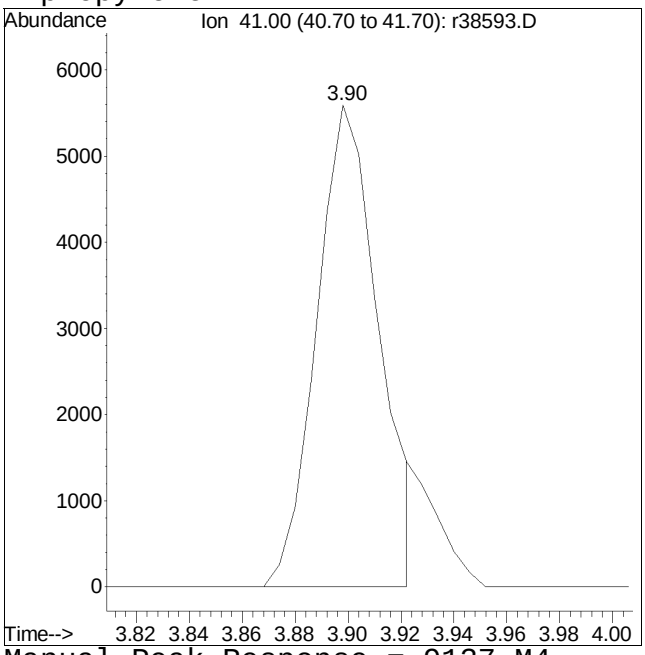


# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38593.D
Date Inj'd : 3/12/2020 0:1: 3
Sample : ITO15-SIMSTD0.5
Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

## Compound #3: propylene



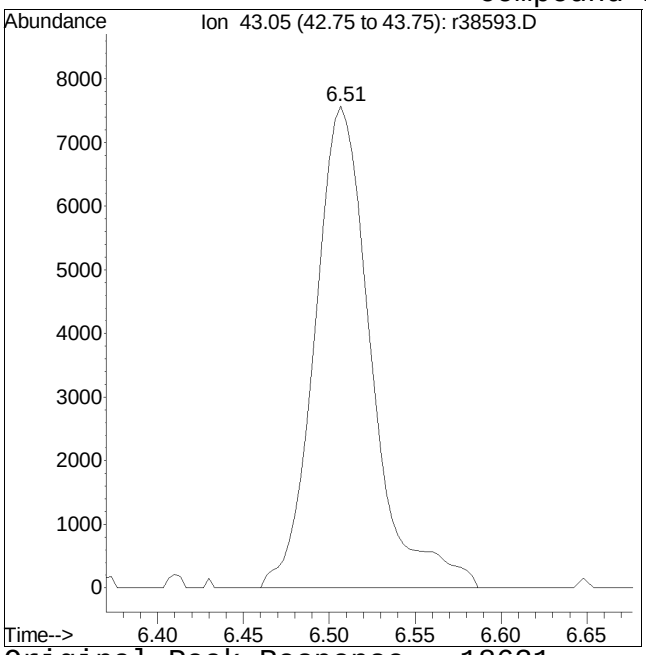

Original Peak Response = 10057 Manual Peak Response = 9137 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

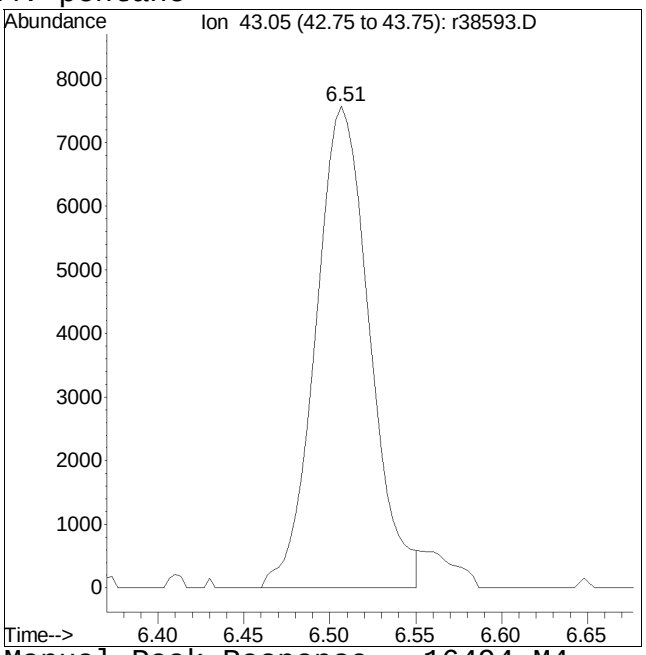
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38593.D
Date Inj'd : 3/12/2020 0:1: 3
Sample : ITO15-SIMSTD0.5

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

Compound #24: pentane




Original Peak Response = 18631




Manual Peak Response = 16494 M4

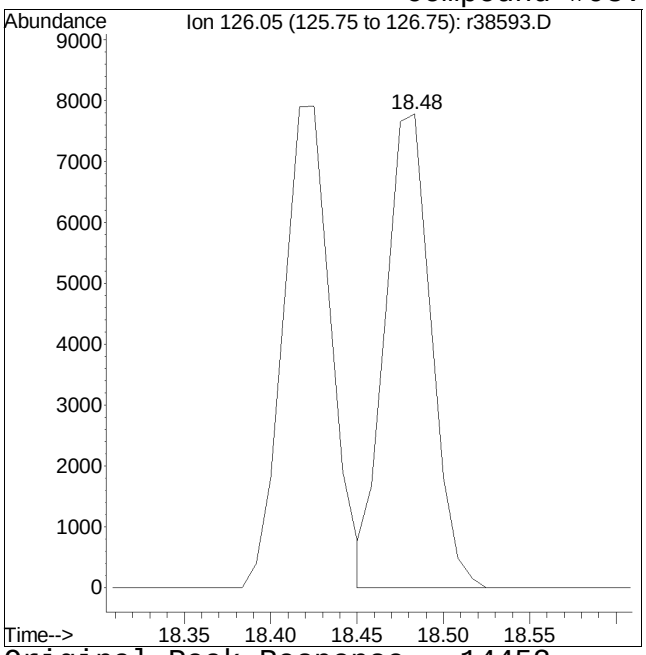
M4 = Poor automated baseline construction.

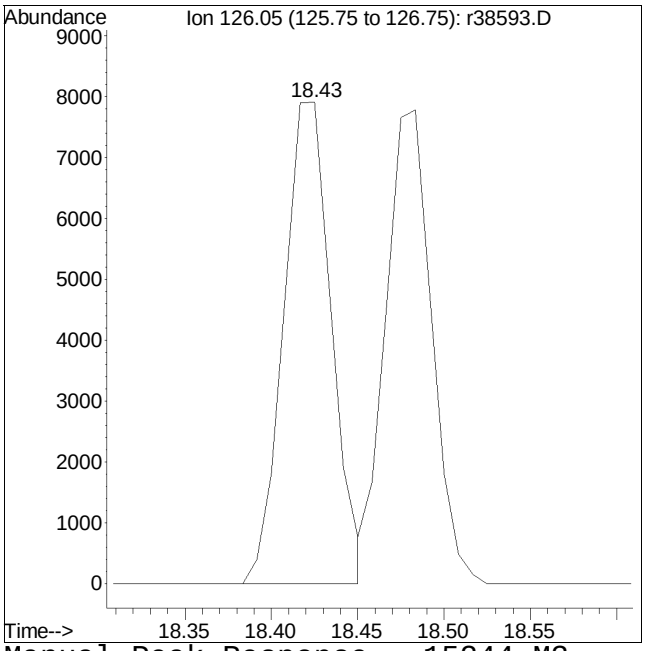
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38593.D
Date Inj'd : 3/12/2020 0:1: 3
Sample : ITO15-SIMSTD0.5

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

Compound #93: 2-chlorotoluene




Original Peak Response = 14452 Manual Peak Response = 15244 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38594.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:19:48 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 351962 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 94.97% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 970385 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 94.16% | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 150304 | 10.000 | ppbV | 0.00 |
| Standard Area = 160625 | | | Recovery = 93.57% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 174426 | 10.199 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.99% | | | |
| 69) toluene-D8 | 14.64 | 98 | 714083 | 10.030 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.30% | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 452813 | 9.249 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.49% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.87 | 51 | 29732 | 1.121 | ppbV | 99 |
| 3) propylene | 3.90 | 41 | 18154M4 | 1.160 | ppbV | |
| 4) propane | 3.92 | 29 | 24461 | 1.162 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 37458 | 1.169 | ppbV | 99 |
| 6) chloromethane | 4.16 | 50 | 16534 | 1.145 | ppbV | 100 |
| 7) Freon-114 | 4.28 | 85 | 46204 | 1.183 | ppbV | 100 |
| 8) methanol | 4.35 | 31 | 45049 | 6.240 | ppbV | 96 |
| 9) vinyl chloride | 4.41 | 62 | 18513 | 1.124 | ppbV | 99 |
| 10) 1,3-butadiene | 4.58 | 54 | 18885 | 1.120 | ppbV | 99 |
| 11) butane | 4.64 | 43 | 28277 | 1.146 | ppbV | 98 |
| 12) acetaldehyde | 4.30 | 29 | 46885 | 5.610 | ppbV | 98 |
| 13) bromomethane | 4.89 | 94 | 15725 | 1.136 | ppbV | 100 |
| 14) chloroethane | 5.12 | 64 | 9436 | 1.141 | ppbV | 100 |
| 15) ethanol | 5.29 | 31 | 84588 | 5.877 | ppbV | 99 |
| 16) dichlorofluoromethane | 5.25 | 67 | 29546 | 1.134 | ppbV | 99 |
| 17) vinyl bromide | 5.54 | 106 | 17849 | 1.107 | ppbV | 99 |
| 18) acrolein | 5.70 | 56 | 9609 | 1.104 | ppbV | 98 |
| 19) acetone | 5.86 | 43 | 126240 | 5.363 | ppbV | 97 |
| 20) acetonitrile | 5.54 | 41 | 15587 | 1.122 | ppbV | 97 |
| 21) trichlorofluoromethane | 6.06 | 101 | 27798 | 1.143 | ppbV | 99 |
| 22) isopropyl alcohol | 6.19 | 45 | 76426 | 2.610 | ppbV | 100 |
| 23) acrylonitrile | 6.43 | 53 | 16891 | 1.082 | ppbV | 98 |
| 24) pentane | 6.51 | 43 | 32561M4 | 0.915 | ppbV | |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38594.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:19:48 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.55 | 31 | 34763 | 1.000 | ppbV | | 99 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 24524 | 1.133 | ppbV | | 100 |
| 27) tertiary butyl alcohol | 6.92 | 59 | 36105 | 1.007 | ppbV | # | 94 |
| 28) methylene chloride | 7.00 | 49 | 22236 | 0.956 | ppbV | | 93 |
| 29) 3-chloropropene | 7.13 | 41 | 30914 | 1.088 | ppbV | | 100 |
| 30) carbon disulfide | 7.28 | 76 | 71085 | 1.099 | ppbV | | 96 |
| 31) Freon 113 | 7.33 | 101 | 37417 | 1.109 | ppbV | | 98 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 29449 | 1.076 | ppbV | | 100 |
| 33) 1,1-dichloroethane | 8.36 | 63 | 34868 | 1.106 | ppbV | | 99 |
| 34) MTBE | 8.45 | 73 | 61669 | 1.086 | ppbV | | 99 |
| 35) vinyl acetate | 8.58 | 43 | 50350 | 1.044 | ppbV | | 99 |
| 36) 2-butanone | 8.86 | 43 | 48401 | 1.117 | ppbV | | 99 |
| 37) cis-1,2-dichloroethene | 9.35 | 61 | 25464 | 1.097 | ppbV | | 99 |
| 38) Ethyl Acetate | 9.66 | 61 | 7904 | 1.128 | ppbV | | 94 |
| 39) chloroform | 9.71 | 83 | 37894 | 1.103 | ppbV | | 98 |
| 40) Tetrahydrofuran | 10.17 | 42 | 28999 | 1.084 | ppbV | | 100 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 32484 | 1.076 | ppbV | | 97 |
| 42) 1,2-dichloroethane | 10.56 | 62 | 21090 | 1.109 | ppbV | | 99 |
| 44) hexane | 9.62 | 57 | 38709 | 1.085 | ppbV | # | 79 |
| 45) diisopropyl ether | 9.63 | 87 | 21947 | 1.082 | ppbV | | 93 |
| 46) tert-butyl ethyl ether | 10.26 | 59 | 63371 | 1.075 | ppbV | | 100 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 31121 | 1.121 | ppbV | | 99 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 31795 | 1.077 | ppbV | | 97 |
| 50) benzene | 11.37 | 78 | 76702 | 1.113 | ppbV | | 99 |
| 51) thiophene | 11.52 | 84 | 162901 | 1.099 | ppbV | | 97 |
| 52) carbon tetrachloride | 11.54 | 117 | 29485 | 1.100 | ppbV | | 98 |
| 53) cyclohexane | 11.69 | 56 | 41305 | 1.082 | ppbV | | 99 |
| 54) tert-amyl methyl ether | 12.08 | 73 | 67368 | 1.070 | ppbV | | 99 |
| 55) dibromomethane | 12.29 | 93 | 19608 | 1.101 | ppbV | | 97 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 22943 | 1.097 | ppbV | | 99 |
| 57) bromodichloromethane | 12.56 | 83 | 40862 | 1.068 | ppbV | | 100 |
| 58) 1,4-dioxane | 12.61 | 88 | 16855 | 1.058 | ppbV | | 98 |
| 59) trichloroethene | 12.61 | 130 | 28360 | 1.096 | ppbV | | 97 |
| 60) 2,2,4-trimethylpentane | 12.65 | 57 | 124824 | 1.088 | ppbV | | 100 |
| 61) methyl methacrylate | 12.86 | 41 | 32481 | 0.902 | ppbV | | 99 |
| 62) heptane | 12.97 | 43 | 49280 | 1.084 | ppbV | | 99 |
| 63) cis-1,3-dichloropropene | 13.63 | 75 | 37300 | 1.080 | ppbV | | 100 |
| 64) 4-methyl-2-pentanone | 13.67 | 43 | 56217 | 1.068 | ppbV | | 99 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 34300 | 1.053 | ppbV | | 98 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 25687 | 1.121 | ppbV | | 98 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38594.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:19:48 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 14.76 | 91 | 82766 | 1.127 | ppbV | 100 |
| 70) 2-methylthiophene | 14.82 | 97 | 258074 | 1.154 | ppbV | 100 |
| 71) 1,3-dichloropropane | 14.78 | 76 | 41141 | 1.077 | ppbV | 100 |
| 72) 2-hexanone | 15.05 | 43 | 51391 | 1.066 | ppbV | 94 |
| 73) 3-methylthiophene | 15.02 | 97 | 263918 | 1.155 | ppbV | 100 |
| 74) dibromochloromethane | 15.21 | 129 | 34640 | 1.023 | ppbV | 99 |
| 75) 1,2-dibromoethane | 15.45 | 107 | 38929 | 1.084 | ppbV | 99 |
| 76) butyl acetate | 15.71 | 73 | 11971 | 1.009 | ppbV | 97 |
| 77) octane | 15.79 | 85 | 33606 | 1.036 | ppbV | 92 |
| 78) tetrachloroethene | 15.93 | 166 | 36884 | 1.119 | ppbV | 99 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 26935 | 1.076 | ppbV | 98 |
| 80) chlorobenzene | 16.58 | 112 | 65165 | 1.091 | ppbV | 99 |
| 81) ethylbenzene | 16.93 | 91 | 99065 | 1.109 | ppbV | 97 |
| 82) 2-ethylthiophene | 16.97 | 97 | 281165 | 1.163 | ppbV | 94 |
| 83) m+p-xylene | 17.09 | 91 | 165625 | 2.220 | ppbV | 98 |
| 84) bromoform | 17.16 | 173 | 31653 | 0.964 | ppbV | 99 |
| 85) styrene | 17.42 | 104 | 69038 | 1.031 | ppbV | 100 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 57859 | 1.088 | ppbV | 100 |
| 87) o-xylene | 17.51 | 91 | 82779 | 1.114 | ppbV | 97 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 46878 | 1.048 | ppbV | 99 |
| 89) nonane | 17.71 | 43 | 68251 | 1.083 | ppbV | 99 |
| 91) isopropylbenzene | 18.02 | 105 | 116699 | 1.088 | ppbV | 97 |
| 92) bromobenzene | 18.09 | 77 | 60423 | 1.022 | ppbV | 100 |
| 93) 2-chlorotoluene | 18.43 | 126 | 30739 | 1.041 | ppbV | 72 |
| 94) n-propylbenzene | 18.45 | 120 | 35113 | 1.018 | ppbV | 89 |
| 95) 4-chlorotoluene | 18.48 | 126 | 29765 | 1.035 | ppbV | 91 |
| 96) 4-ethyl toluene | 18.57 | 105 | 129212 | 1.059 | ppbV | 98 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 106587 | 1.100 | ppbV | 99 |
| 98) tert-butylbenzene | 18.96 | 119 | 105339 | 1.061 | ppbV | 97 |
| 99) 1,2,4-trimethylbenzene | 18.96 | 105 | 105693 | 1.117 | ppbV | 98 |
| 100) decane | 19.03 | 57 | 77474 | 1.043 | ppbV | 96 |
| 101) Benzyl Chloride | 19.07 | 91 | 62385 | 0.853 | ppbV | 99 |
| 102) 1,3-dichlorobenzene | 19.08 | 146 | 60481 | 1.080 | ppbV | 98 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 54768 | 0.975 | ppbV | 99 |
| 104) sec-butylbenzene | 19.18 | 105 | 150309 | 1.058 | ppbV | 100 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 94236 | 0.953 | ppbV | 99 |
| 106) p-isopropyltoluene | 19.29 | 119 | 124587 | 1.012 | ppbV | 96 |
| 107) 1,2-dichlorobenzene | 19.42 | 146 | 56146 | 1.054 | ppbV | 99 |
| 108) n-butylbenzene | 19.63 | 91 | 101140 | 1.011 | ppbV | 99 |
| 109) indan | 19.47 | 117 | 90260 | 0.899 | ppbV | 100 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38594.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:19:48 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 19.54 | 115 | 68067 | 0.847 | ppbV | 98 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 24209 | 0.922 | ppbV | 97 |
| 112) undecane | 20.03 | 57 | 83558 | 0.994 | ppbV | 95 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 83952 | 0.791 | ppbV | 97 |
| 114) dodecane | 20.93 | 57 | 80097 | 0.876 | ppbV | 96 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 32451 | 0.839 | ppbV | 99 |
| 116) naphthalene | 20.99 | 128 | 93706 | 0.801 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 36424 | 0.788 | ppbV | 99 |
| 118) benzothiophene | 21.06 | 134 | 58065 | 0.938 | ppbV | 99 |
| 119) hexachlorobutadiene | 21.31 | 225 | 46871 | 1.101 | ppbV | 98 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 10066 | 0.631 | ppbV | 99 |
| 121) 1-methylnaphthalene | 22.30 | 142 | 34992 | 0.872 | ppbV | 100 |

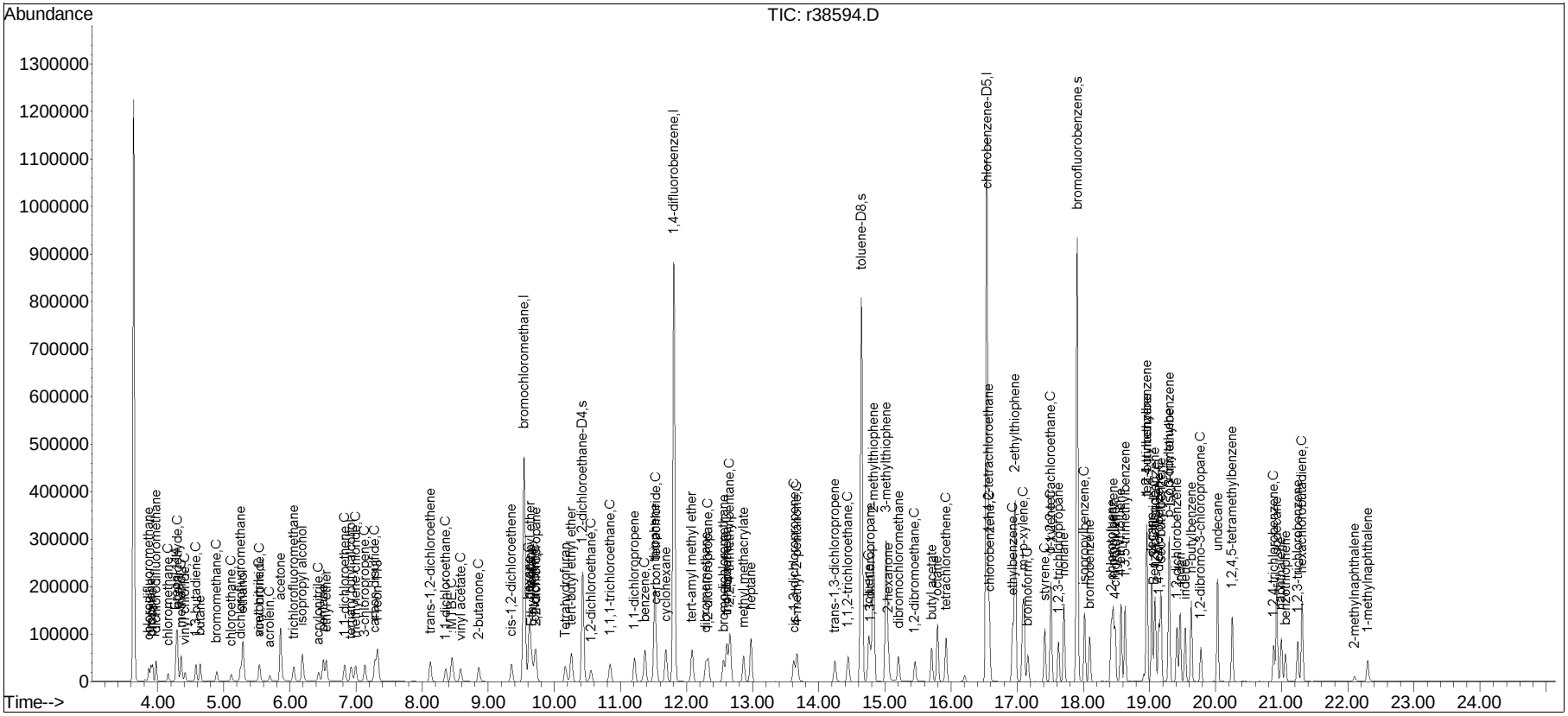
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38594.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:19:48 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

Sub List : Default - All compounds listed20\03\200312T_I\r38596.D

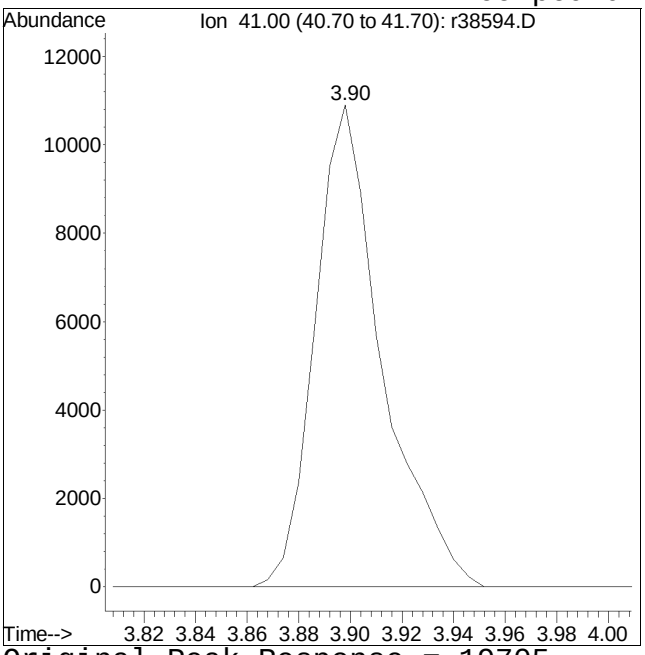


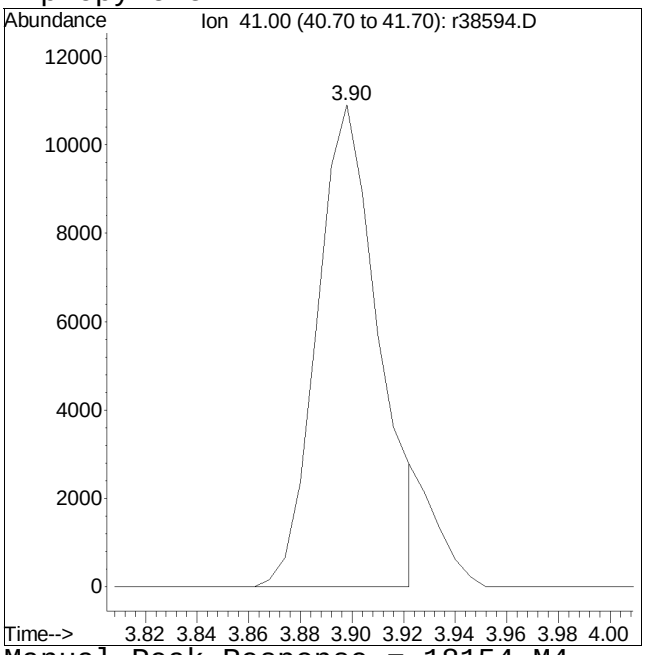
# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38594.D
Date Inj'd : 3/12/2020 0:1: 4
Sample : ITO15-SIMSTD1.0

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

## Compound #3: propylene



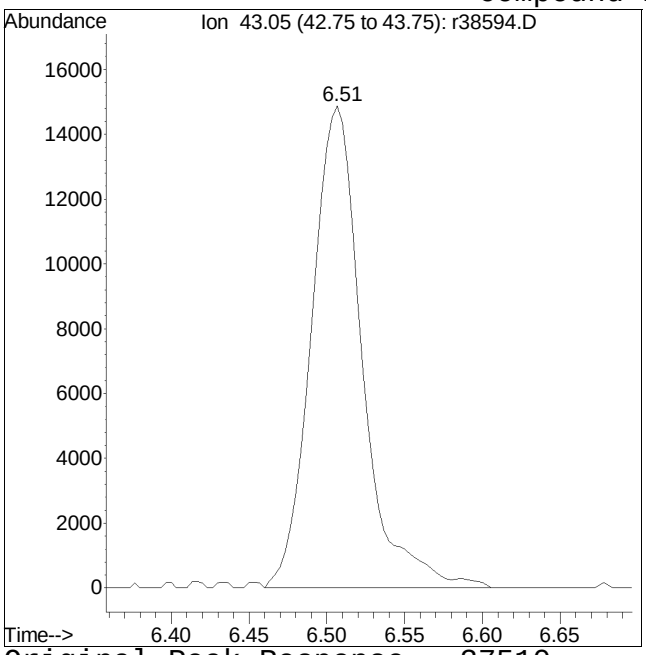

Original Peak Response = 19705 Manual Peak Response = 18154 M4
M4 = Poor automated baseline construction.

# Manual Integration/Negative Proof Report

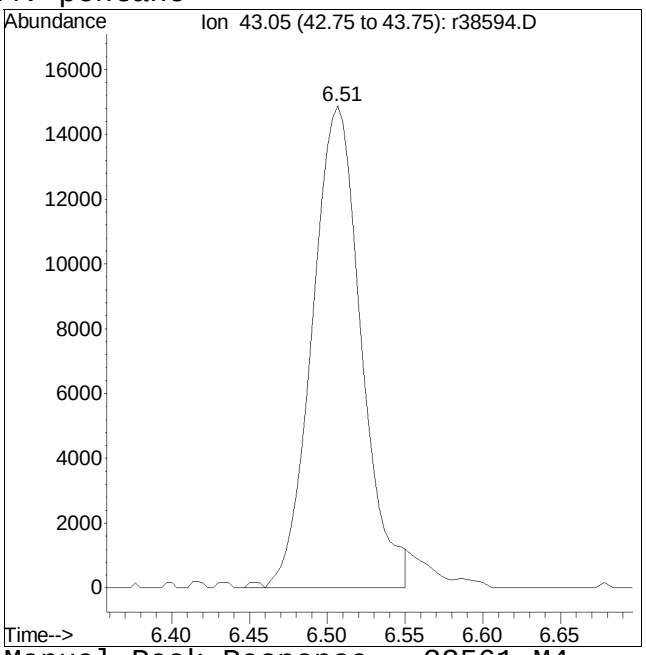
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38594.D
Date Inj'd : 3/12/2020 0:1: 4
Sample : ITO15-SIMSTD1.0

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:13 pm

## Compound #24: pentane




Original Peak Response = 37510




Manual Peak Response = 32561 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38595.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:21:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 359537 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 97.02% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 990503 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 96.12% | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 155000 | 10.000 | ppbV | 0.00 |
| Standard Area = 160625 | | | Recovery = 96.50% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 177778 | 10.184 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.84% | | | |
| 69) toluene-D8 | 14.64 | 98 | 739983 | 10.079 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.79% | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 484818 | 9.603 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.03% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.87 | 51 | 139638 | 5.155 | ppbV | 100 |
| 3) propylene | 3.90 | 41 | 85005M4 | 5.317 | ppbV | |
| 4) propane | 3.92 | 29 | 110625 | 5.145 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 170563 | 5.210 | ppbV | 100 |
| 6) chloromethane | 4.16 | 50 | 76128 | 5.161 | ppbV | 100 |
| 7) Freon-114 | 4.28 | 85 | 210060 | 5.265 | ppbV | 100 |
| 8) methanol | 4.35 | 31 | 192143 | 26.054 | ppbV | 99 |
| 9) vinyl chloride | 4.41 | 62 | 86665 | 5.150 | ppbV | 99 |
| 10) 1,3-butadiene | 4.58 | 54 | 88773 | 5.155 | ppbV | 99 |
| 11) butane | 4.64 | 43 | 130109 | 5.161 | ppbV | 100 |
| 12) acetaldehyde | 4.30 | 29 | 227740 | 26.677 | ppbV | 99 |
| 13) bromomethane | 4.89 | 94 | 72058 | 5.097 | ppbV | 99 |
| 14) chloroethane | 5.12 | 64 | 43208 | 5.113 | ppbV | 100 |
| 15) ethanol | 5.29 | 31 | 390098 | 26.533 | ppbV | 99 |
| 16) dichlorofluoromethane | 5.25 | 67 | 137350 | 5.160 | ppbV | 100 |
| 17) vinyl bromide | 5.54 | 106 | 83872 | 5.092 | ppbV | 100 |
| 18) acrolein | 5.70 | 56 | 44562 | 5.010 | ppbV | 99 |
| 19) acetone | 5.85 | 43 | 629219 | 26.166 | ppbV | 99 |
| 20) acetonitrile | 5.54 | 41 | 72746 | 5.126 | ppbV | 99 |
| 21) trichlorofluoromethane | 6.06 | 101 | 128558 | 5.176 | ppbV | 99 |
| 22) isopropyl alcohol | 6.18 | 45 | 388680 | 12.996 | ppbV | 100 |
| 23) acrylonitrile | 6.44 | 53 | 80886 | 5.073 | ppbV | 99 |
| 24) pentane | 6.51 | 43 | 151459M4 | 4.165 | ppbV | |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38595.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:21:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.55 | 31 | 175875 | 4.952 | ppbV | 99 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 113400 | 5.128 | ppbV | 100 |
| 27) tertiary butyl alcohol | 6.91 | 59 | 168620 | 4.604 | ppbV | 93 |
| 28) methylene chloride | 7.00 | 49 | 107050 | 4.507 | ppbV | 96 |
| 29) 3-chloropropene | 7.13 | 41 | 146704 | 5.053 | ppbV | 100 |
| 30) carbon disulfide | 7.28 | 76 | 335965 | 5.084 | ppbV | 100 |
| 31) Freon 113 | 7.33 | 101 | 174749 | 5.070 | ppbV | 98 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 140958 | 5.043 | ppbV | 100 |
| 33) 1,1-dichloroethane | 8.36 | 63 | 163525 | 5.076 | ppbV | 99 |
| 34) MTBE | 8.44 | 73 | 293302 | 5.058 | ppbV | 100 |
| 35) vinyl acetate | 8.58 | 43 | 247096 | 5.015 | ppbV | 100 |
| 36) 2-butanone | 8.85 | 43 | 226853 | 5.126 | ppbV | 98 |
| 37) cis-1,2-dichloroethene | 9.36 | 61 | 119899 | 5.056 | ppbV | 99 |
| 38) Ethyl Acetate | 9.66 | 61 | 36211 | 5.059 | ppbV | 99 |
| 39) chloroform | 9.71 | 83 | 177821 | 5.067 | ppbV | 100 |
| 40) Tetrahydrofuran | 10.15 | 42 | 138184 | 5.056 | ppbV | 100 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 157125 | 5.097 | ppbV | 99 |
| 42) 1,2-dichloroethane | 10.56 | 62 | 99425 | 5.116 | ppbV | 99 |
| 44) hexane | 9.62 | 57 | 186650 | 5.125 | ppbV | 85 |
| 45) diisopropyl ether | 9.63 | 87 | 105454 | 5.096 | ppbV | 96 |
| 46) tert-butyl ethyl ether | 10.25 | 59 | 308006 | 5.118 | ppbV | 100 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 145744 | 5.143 | ppbV | 100 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 154286 | 5.120 | ppbV | 98 |
| 50) benzene | 11.37 | 78 | 357399 | 5.080 | ppbV | 100 |
| 51) thiophene | 11.52 | 84 | 775248 | 5.123 | ppbV | 99 |
| 52) carbon tetrachloride | 11.55 | 117 | 138747 | 5.071 | ppbV | 99 |
| 53) cyclohexane | 11.69 | 56 | 198194 | 5.087 | ppbV | 100 |
| 54) tert-amyl methyl ether | 12.08 | 73 | 325611 | 5.069 | ppbV | 99 |
| 55) dibromomethane | 12.29 | 93 | 93590 | 5.147 | ppbV | 97 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 108286 | 5.074 | ppbV | 99 |
| 57) bromodichloromethane | 12.56 | 83 | 197916 | 5.067 | ppbV | 99 |
| 58) 1,4-dioxane | 12.60 | 88 | 82241 | 5.059 | ppbV | 100 |
| 59) trichloroethene | 12.61 | 130 | 133495 | 5.056 | ppbV | 98 |
| 60) 2,2,4-trimethylpentane | 12.65 | 57 | 599862 | 5.123 | ppbV | 100 |
| 61) methyl methacrylate | 12.86 | 41 | 185088 | 5.037 | ppbV | 99 |
| 62) heptane | 12.97 | 43 | 239084 | 5.153 | ppbV | 99 |
| 63) cis-1,3-dichloropropene | 13.63 | 75 | 176460 | 5.005 | ppbV | 99 |
| 64) 4-methyl-2-pentanone | 13.66 | 43 | 274821 | 5.116 | ppbV | 99 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 167181 | 5.028 | ppbV | 99 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 118632 | 5.073 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38595.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:21:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 14.76 | 91 | 386396 | 5.100 | ppbV | 100 |
| 70) 2-methylthiophene | 14.82 | 97 | 1204773 | 5.226 | ppbV | 100 |
| 71) 1,3-dichloropropane | 14.78 | 76 | 199652 | 5.068 | ppbV | 99 |
| 72) 2-hexanone | 15.04 | 43 | 254304 | 5.116 | ppbV | 98 |
| 73) 3-methylthiophene | 15.02 | 97 | 1236961 | 5.247 | ppbV | 100 |
| 74) dibromochloromethane | 15.21 | 129 | 172819 | 4.951 | ppbV | 100 |
| 75) 1,2-dibromoethane | 15.45 | 107 | 185772 | 5.014 | ppbV | 100 |
| 76) butyl acetate | 15.70 | 73 | 60105 | 4.913 | ppbV | 98 |
| 77) octane | 15.79 | 85 | 168439 | 5.035 | ppbV | 97 |
| 78) tetrachloroethene | 15.93 | 166 | 172728 | 5.082 | ppbV | 99 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 130531 | 5.058 | ppbV | 99 |
| 80) chlorobenzene | 16.57 | 112 | 309798 | 5.028 | ppbV | 98 |
| 81) ethylbenzene | 16.93 | 91 | 467067 | 5.072 | ppbV | 99 |
| 82) 2-ethylthiophene | 16.97 | 97 | 1313040 | 5.265 | ppbV | 96 |
| 83) m+p-xylene | 17.09 | 91 | 780438 | 10.143 | ppbV | 100 |
| 84) bromoform | 17.16 | 173 | 164537 | 4.861 | ppbV | 100 |
| 85) styrene | 17.42 | 104 | 342608 | 4.959 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 276348 | 5.037 | ppbV | 99 |
| 87) o-xylene | 17.51 | 91 | 391553 | 5.110 | ppbV | 98 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 232016 | 5.031 | ppbV | 99 |
| 89) nonane | 17.71 | 43 | 332469 | 5.115 | ppbV | 99 |
| 91) isopropylbenzene | 18.02 | 105 | 562796 | 5.089 | ppbV | 98 |
| 92) bromobenzene | 18.09 | 77 | 302540 | 4.962 | ppbV | 98 |
| 93) 2-chlorotoluene | 18.42 | 126 | 152897 | 5.022 | ppbV | 95 |
| 94) n-propylbenzene | 18.45 | 120 | 175298 | 4.929 | ppbV | 92 |
| 95) 4-chlorotoluene | 18.48 | 126 | 146888 | 4.954 | ppbV | 100 |
| 96) 4-ethyl toluene | 18.57 | 105 | 641369 | 5.097 | ppbV | 99 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 508545 | 5.090 | ppbV | 99 |
| 98) tert-butylbenzene | 18.96 | 119 | 514659 | 5.025 | ppbV | 99 |
| 99) 1,2,4-trimethylbenzene | 18.96 | 105 | 496240 | 5.085 | ppbV | 99 |
| 100) decane | 19.03 | 57 | 389253 | 5.083 | ppbV | 98 |
| 101) Benzyl Chloride | 19.07 | 91 | 352452 | 4.672 | ppbV | 99 |
| 102) 1,3-dichlorobenzene | 19.08 | 146 | 288914 | 5.005 | ppbV | 99 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 283056 | 4.885 | ppbV | 100 |
| 104) sec-butylbenzene | 19.18 | 105 | 746005 | 5.094 | ppbV | 100 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 521495 | 5.112 | ppbV | 98 |
| 106) p-isopropyltoluene | 19.29 | 119 | 635011 | 5.003 | ppbV | 99 |
| 107) 1,2-dichlorobenzene | 19.41 | 146 | 273092 | 4.972 | ppbV | 100 |
| 108) n-butylbenzene | 19.63 | 91 | 522326 | 5.062 | ppbV | 100 |
| 109) indan | 19.46 | 117 | 515164 | 4.975 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38595.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:21:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 19.53 | 115 | 407856 | 4.924 | ppbV | 100 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 133843 | 4.945 | ppbV | 97 |
| 112) undecane | 20.02 | 57 | 439578 | 5.069 | ppbV | 98 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 501760 | 4.585 | ppbV | 99 |
| 114) dodecane | 20.93 | 57 | 477288 | 5.060 | ppbV | 97 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 181854 | 4.559 | ppbV | 100 |
| 116) naphthalene | 20.99 | 128 | 566994 | 4.698 | ppbV | 100 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 221523 | 4.644 | ppbV | 99 |
| 118) benzothiophene | 21.05 | 134 | 279146 | 4.371 | ppbV | 99 |
| 119) hexachlorobutadiene | 21.31 | 225 | 224551 | 5.116 | ppbV | 98 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 65939 | 4.008 | ppbV | 98 |
| 121) 1-methylnaphthalene | 22.30 | 142 | 186454 | 4.507 | ppbV | 100 |

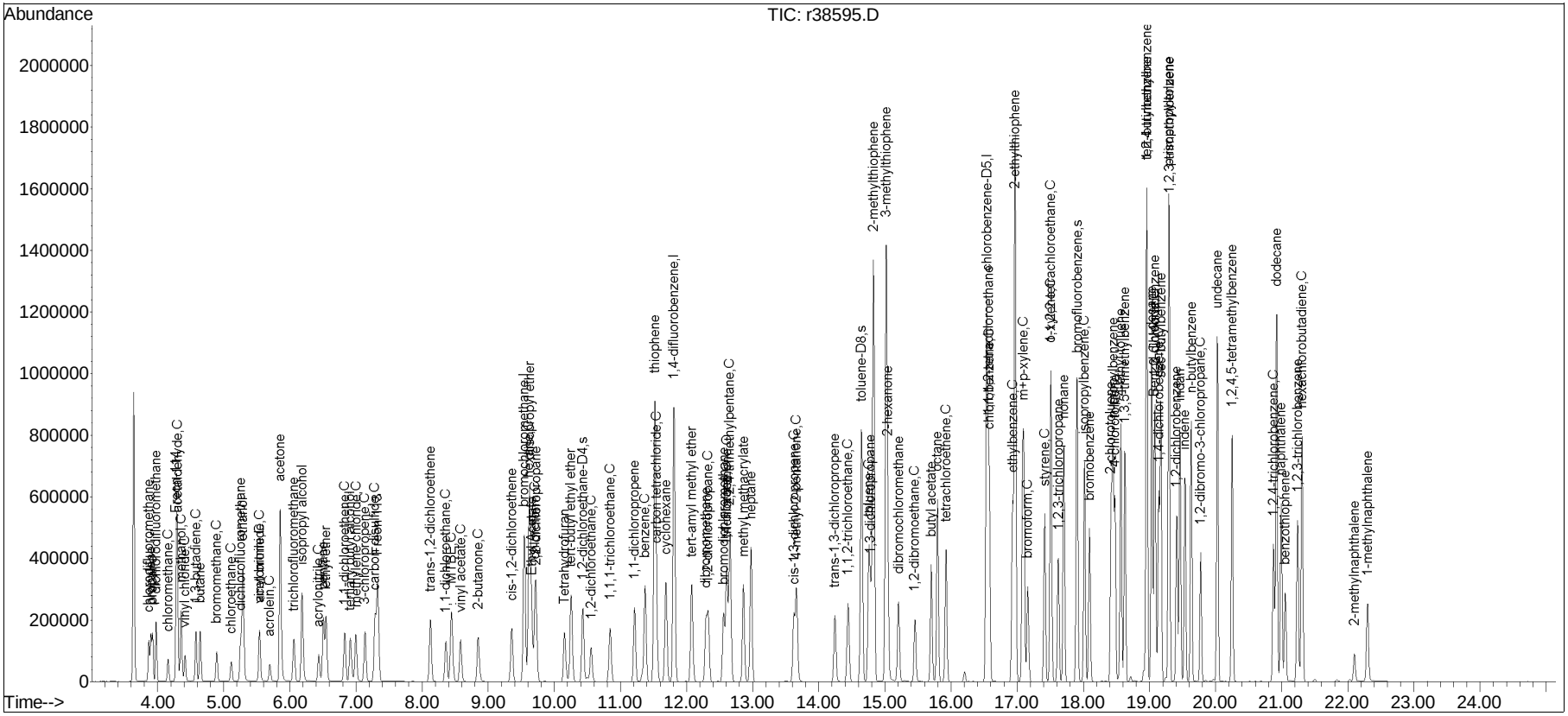
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38595.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:21:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

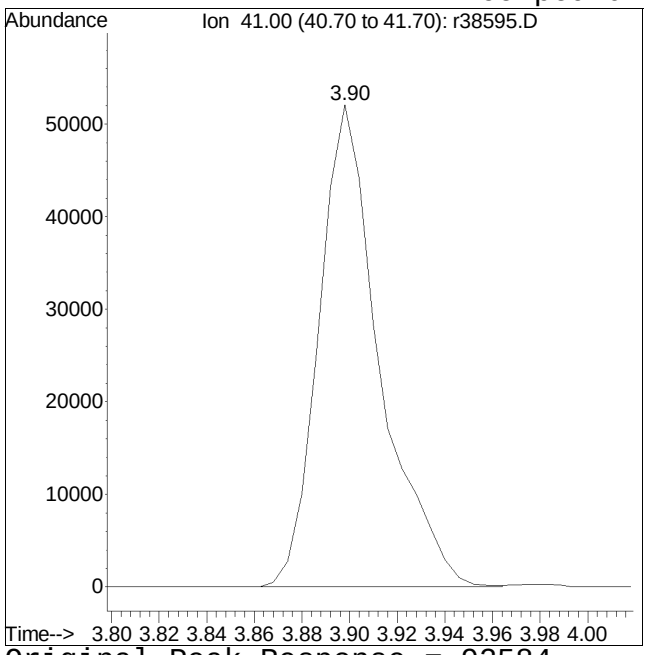
Sub List : Default - All compounds listed20\03\200312T_I\r38596.D

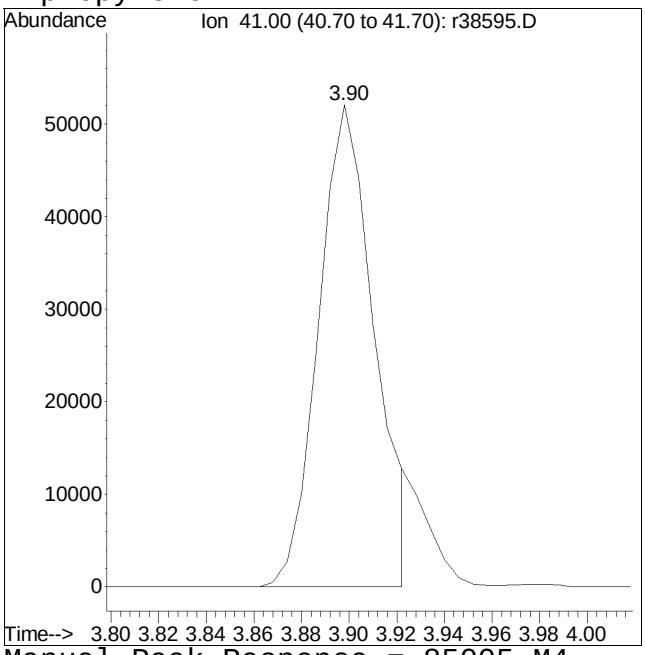


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TFS3_200312.M
Data File : r38595.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:2: 3 Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 3/12/2020 4:14 pm

Compound #3: propylene



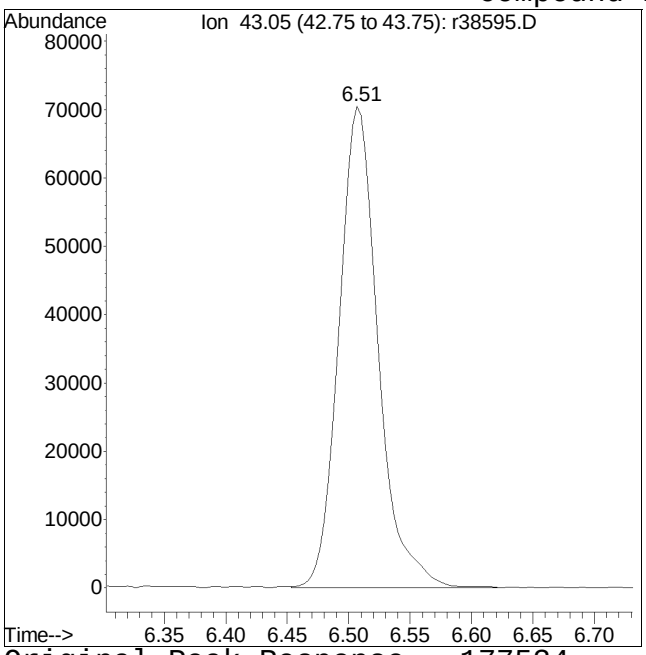

Original Peak Response = 92584 Manual Peak Response = 85005 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

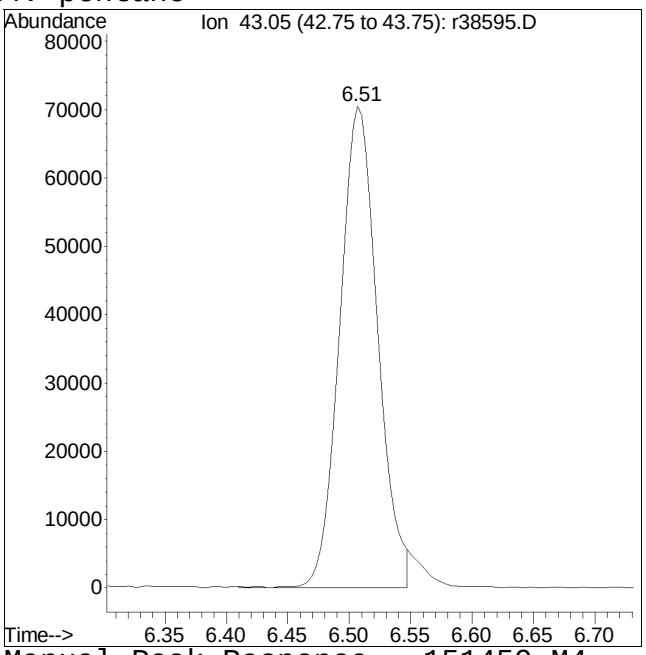
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38595.D
Date Inj'd : 3/12/2020 0:2: 3
Sample : ITO15-SIMSTD5.0

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:14 pm

Compound #24: pentane




Original Peak Response = 177534




Manual Peak Response = 151459 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38596.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:11:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 14:35:02 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.55 | 49 | 370599 | 10.000 | ppbV | -0.03 |
| Standard Area = 370599 | | | Recovery = 100.00% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 1030530 | 10.000 | ppbV | -0.03 |
| Standard Area = 1030530 | | | Recovery = 100.00% | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 160625 | 10.000 | ppbV | -0.02 |
| Standard Area = 160625 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 181617 | 9.885 | ppbV | -0.04 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.85% | | | |
| 69) toluene-D8 | 14.65 | 98 | 760817 | 10.809 | ppbV | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 108.09% | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 523209 | 11.630 | ppbV | -0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 116.30% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.87 | 51 | 279186 | 9.595 | ppbV | 99 |
| 3) propylene | 3.90 | 41 | 164789M4 | 10.479 | ppbV | |
| 4) propane | 3.93 | 29 | 221626 | 9.538 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 337444 | 8.930 | ppbV | 100 |
| 6) chloromethane | 4.16 | 50 | 152059 | 8.662 | ppbV | 100 |
| 7) Freon-114 | 4.29 | 85 | 411225 | 8.677 | ppbV | 99 |
| 8) methanol | 4.36 | 31 | 380089 | 42.187 | ppbV | 96 |
| 9) vinyl chloride | 4.42 | 62 | 173448 | 8.358 | ppbV | 100 |
| 10) 1,3-butadiene | 4.58 | 54 | 177511 | 9.029 | ppbV | 99 |
| 11) butane | 4.65 | 43 | 259861 | 9.125 | ppbV | 97 |
| 12) acetaldehyde | 4.30 | 29 | 439986 | 41.438 | ppbV # | 81 |
| 13) bromomethane | 4.90 | 94 | 145724 | 8.398 | ppbV | 99 |
| 14) chloroethane | 5.12 | 64 | 87098 | 8.164 | ppbV | 98 |
| 15) ethanol | 5.30 | 31 | 757737 | 45.373 | ppbV | 89 |
| 16) dichlorofluoromethane | 5.26 | 67 | 274366 | 8.484 | ppbV | 99 |
| 17) vinyl bromide | 5.55 | 106 | 169791 | 10.024 | ppbV | 98 |
| 18) acrolein | 5.70 | 56 | 91677 | 9.124 | ppbV | 96 |
| 19) acetone | 5.85 | 43 | 1239367 | 46.225 | ppbV | 99 |
| 20) acetonitrile | 5.54 | 41 | 146288 | 8.976 | ppbV | 99 |
| 21) trichlorofluoromethane | 6.06 | 101 | 256013 | 8.488 | ppbV | 100 |
| 22) isopropyl alcohol | 6.19 | 45 | 770674 | 23.003 | ppbV | 99 |
| 23) acrylonitrile | 6.44 | 53 | 164361 | 9.154 | ppbV | 99 |
| 24) pentane | 6.51 | 43 | 374869 | 8.790 | ppbV | 98 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38596.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:11:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 14:35:02 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.55 | 31 | 366090 | 10.476 | ppbV | | 97 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 227939 | 8.192 | ppbV | | 97 |
| 27) tertiary butyl alcohol | 6.92 | 59 | 377536 | 9.294 | ppbV | # | 91 |
| 28) methylene chloride | 7.00 | 49 | 244821 | 10.733 | ppbV | | 90 |
| 29) 3-chloropropene | 7.14 | 41 | 299273 | 10.631 | ppbV | | 98 |
| 30) carbon disulfide | 7.29 | 76 | 681139 | 10.067 | ppbV | | 100 |
| 31) Freon 113 | 7.33 | 101 | 355288 | 10.371 | ppbV | | 96 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 288110 | 10.300 | ppbV | | 97 |
| 33) 1,1-dichloroethane | 8.37 | 63 | 332086 | 10.273 | ppbV | | 100 |
| 34) MTBE | 8.44 | 73 | 597669 | 10.499 | ppbV | | 98 |
| 35) vinyl acetate | 8.58 | 43 | 507895 | 10.607 | ppbV | | 99 |
| 36) 2-butanone | 8.84 | 43 | 456160 | 10.219 | ppbV | | 98 |
| 37) cis-1,2-dichloroethene | 9.36 | 61 | 244416 | 10.237 | ppbV | | 97 |
| 38) Ethyl Acetate | 9.66 | 61 | 73773 | 10.124 | ppbV | | 70 |
| 39) chloroform | 9.71 | 83 | 361740 | 9.999 | ppbV | | 98 |
| 40) Tetrahydrofuran | 10.15 | 42 | 281741 | 10.135 | ppbV | | 99 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 317763 | 10.431 | ppbV | | 96 |
| 42) 1,2-dichloroethane | 10.56 | 62 | 200314 | 10.023 | ppbV | | 98 |
| 44) hexane | 9.63 | 57 | 378902 | 9.600 | ppbV | | 98 |
| 45) diisopropyl ether | 9.63 | 87 | 215310 | 9.603 | ppbV | | 86 |
| 46) tert-butyl ethyl ether | 10.26 | 59 | 626083 | 9.558 | ppbV | | 98 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 294852 | 9.735 | ppbV | | 96 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 313516 | 9.589 | ppbV | | 97 |
| 50) benzene | 11.37 | 78 | 731958 | 9.344 | ppbV | | 99 |
| 51) thiophene | 11.52 | 84 | 1574436 | 9.771 | ppbV | | 99 |
| 52) carbon tetrachloride | 11.55 | 117 | 284638 | 10.098 | ppbV | | 98 |
| 53) cyclohexane | 11.69 | 56 | 405387 | 9.555 | ppbV | | 97 |
| 54) tert-amyl methyl ether | 12.08 | 73 | 668340 | 9.894 | ppbV | | 98 |
| 55) dibromomethane | 12.29 | 93 | 189180 | 9.578 | ppbV | | 98 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 222026 | 9.446 | ppbV | | 97 |
| 57) bromodichloromethane | 12.56 | 83 | 406358 | 9.503 | ppbV | | 99 |
| 58) 1,4-dioxane | 12.60 | 88 | 169136 | 9.434 | ppbV | | 99 |
| 59) trichloroethene | 12.61 | 130 | 274676 | 9.713 | ppbV | | 99 |
| 60) 2,2,4-trimethylpentane | 12.66 | 57 | 1218254 | 9.826 | ppbV | | 98 |
| 61) methyl methacrylate | 12.86 | 41 | 382295 | 10.746 | ppbV | | 97 |
| 62) heptane | 12.98 | 43 | 482730 | 9.480 | ppbV | | 95 |
| 63) cis-1,3-dichloropropene | 13.63 | 75 | 366824 | 9.729 | ppbV | | 99 |
| 64) 4-methyl-2-pentanone | 13.66 | 43 | 558912 | 9.642 | ppbV | | 95 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 345918 | 9.838 | ppbV | | 99 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 243281 | 9.876 | ppbV | | 93 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38596.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:11:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 14:35:02 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 14.76 | 91 | 785072 | 9.998 | ppbV | 99 |
| 70) 2-methylthiophene | 14.82 | 97 | 2389119 | 10.430 | ppbV | 99 |
| 71) 1,3-dichloropropane | 14.79 | 76 | 408236 | 9.843 | ppbV | 100 |
| 72) 2-hexanone | 15.04 | 43 | 515105 | 9.858 | ppbV | 97 |
| 73) 3-methylthiophene | 15.03 | 97 | 2442820 | 10.522 | ppbV | 99 |
| 74) dibromochloromethane | 15.21 | 129 | 361759 | 10.817 | ppbV | 99 |
| 75) 1,2-dibromoethane | 15.46 | 107 | 383958 | 10.441 | ppbV | 99 |
| 76) butyl acetate | 15.70 | 73 | 126783 | 10.411 | ppbV | 95 |
| 77) octane | 15.79 | 85 | 346684 | 10.520 | ppbV | 91 |
| 78) tetrachloroethene | 15.93 | 166 | 352204 | 10.807 | ppbV | 99 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 267416 | 10.615 | ppbV | 98 |
| 80) chlorobenzene | 16.58 | 112 | 638561 | 10.536 | ppbV | 99 |
| 81) ethylbenzene | 16.93 | 91 | 954346 | 10.614 | ppbV | 98 |
| 82) 2-ethylthiophene | 16.97 | 97 | 2584552 | 10.837 | ppbV | 97 |
| 83) m+p-xylene | 17.09 | 91 | 1594664 | 21.418 | ppbV | 97 |
| 84) bromoform | 17.16 | 173 | 350779 | 11.564 | ppbV | 99 |
| 85) styrene | 17.42 | 104 | 715919 | 11.710 | ppbV | 96 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 568523 | 10.457 | ppbV | 98 |
| 87) o-xylene | 17.51 | 91 | 794007 | 10.887 | ppbV | 95 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 477908 | 10.676 | ppbV | 97 |
| 89) nonane | 17.71 | 43 | 673602 | 10.196 | ppbV | 91 |
| 91) isopropylbenzene | 18.02 | 105 | 1145979 | 11.739 | ppbV | 97 |
| 92) bromobenzene | 18.09 | 77 | 631815 | 11.000 | ppbV | 89 |
| 93) 2-chlorotoluene | 18.42 | 126 | 315473M3 | 11.654 | ppbV | |
| 94) n-propylbenzene | 18.45 | 120 | 368534 | 11.276 | ppbV | 96 |
| 95) 4-chlorotoluene | 18.48 | 126 | 307286 | 11.607 | ppbV | 97 |
| 96) 4-ethyl toluene | 18.57 | 105 | 1303917 | 11.905 | ppbV | 99 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 1035403 | 11.704 | ppbV | 98 |
| 98) tert-butylbenzene | 18.96 | 119 | 1061392 | 12.125 | ppbV | 99 |
| 99) 1,2,4-trimethylbenzene | 18.96 | 105 | 1011332 | 12.144 | ppbV | 95 |
| 100) decane | 19.03 | 57 | 793631 | 11.497 | ppbV | 89 |
| 101) Benzyl Chloride | 19.07 | 91 | 781719 | 12.822 | ppbV | 98 |
| 102) 1,3-dichlorobenzene | 19.08 | 146 | 598231 | 11.491 | ppbV | 98 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 600476 | 12.162 | ppbV | 98 |
| 104) sec-butylbenzene | 19.18 | 105 | 1517768 | 12.240 | ppbV | 99 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 1057203 | 13.285 | ppbV | 98 |
| 106) p-isopropyltoluene | 19.29 | 119 | 1315219 | 12.504 | ppbV | 99 |
| 107) 1,2-dichlorobenzene | 19.41 | 146 | 569157 | 11.671 | ppbV | 95 |
| 108) n-butylbenzene | 19.63 | 91 | 1069316 | 11.632 | ppbV | 98 |
| 109) indan | 19.46 | 117 | 1073038 | 13.090 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38596.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:11:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 14:35:02 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 19.53 | 115 | 858390 | 13.388 | ppbV | 99 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 280505 | 12.121 | ppbV | 93 |
| 112) undecane | 20.02 | 57 | 898670 | 11.939 | ppbV | 92 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 1133956 | 14.075 | ppbV | 98 |
| 114) dodecane | 20.93 | 57 | 977549 | 12.896 | ppbV | 91 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 413383 | 13.394 | ppbV | 99 |
| 116) naphthalene | 20.99 | 128 | 1250597 | 13.837 | ppbV | 99 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 494287 | 13.962 | ppbV | 100 |
| 118) benzothiophene | 21.05 | 134 | 661868 | 11.773 | ppbV | 99 |
| 119) hexachlorobutadiene | 21.31 | 225 | 454820 | 11.289 | ppbV | 97 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 170486 | 11.012 | ppbV | 100 |
| 121) 1-methylnaphthalene | 22.29 | 142 | 428680 | 11.131 | ppbV | 99 |

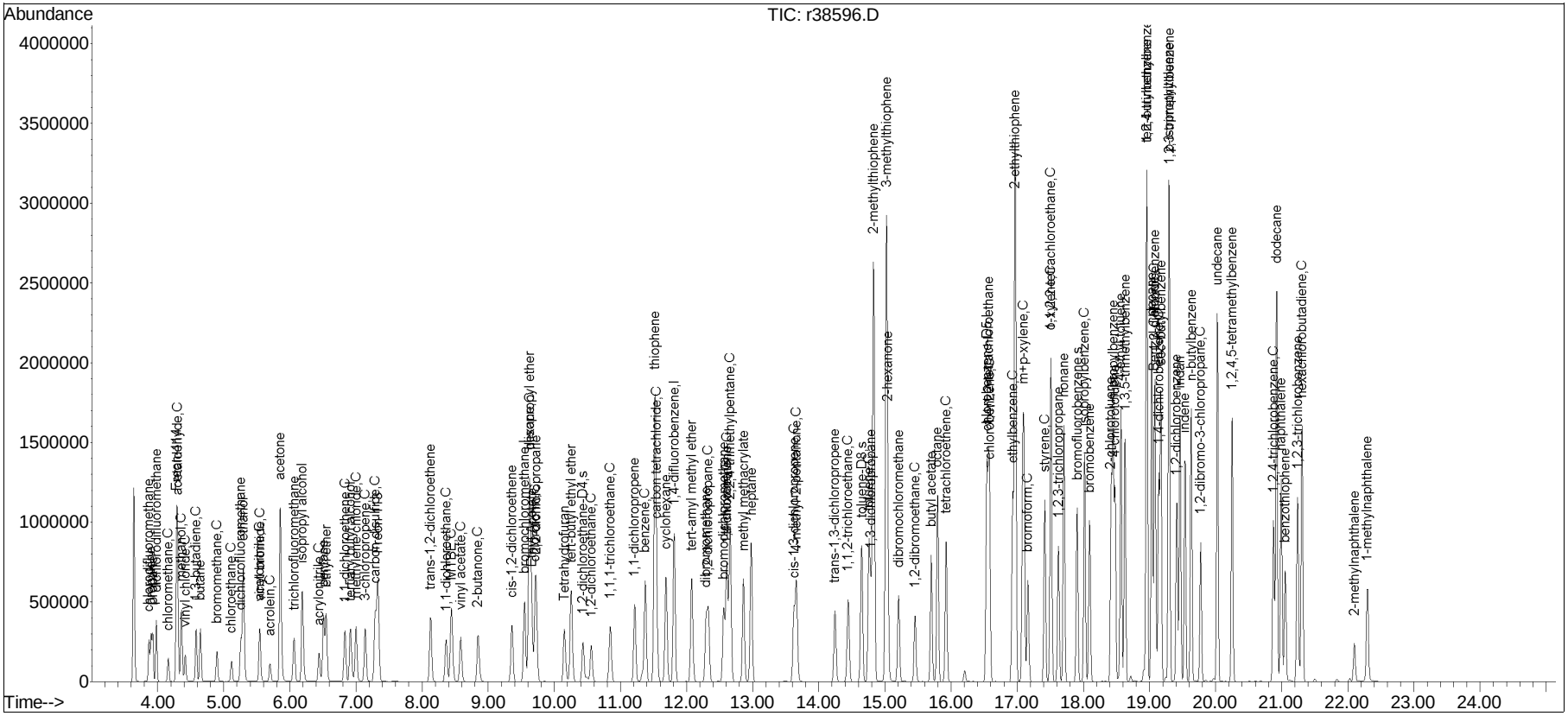
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38596.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:11:29 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 14:35:02 2020
Response via : Initial Calibration

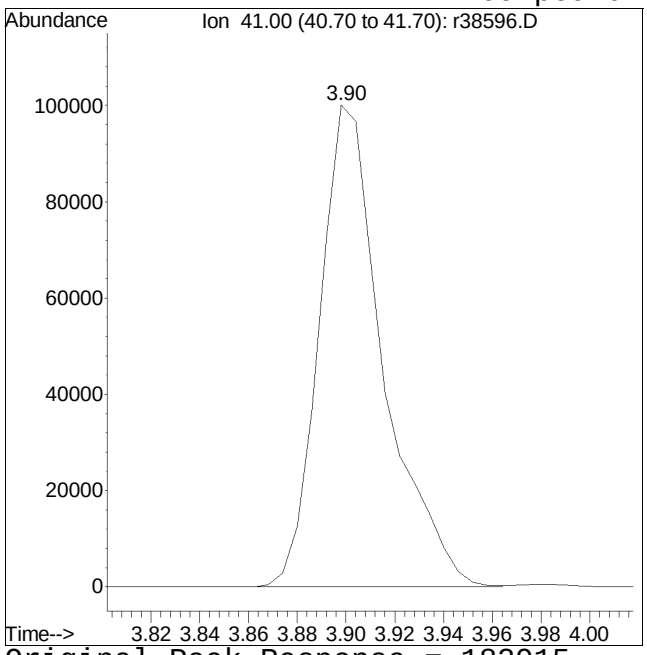
Sub List : Default - All compounds listed20\03\200312T_I\r38596.D

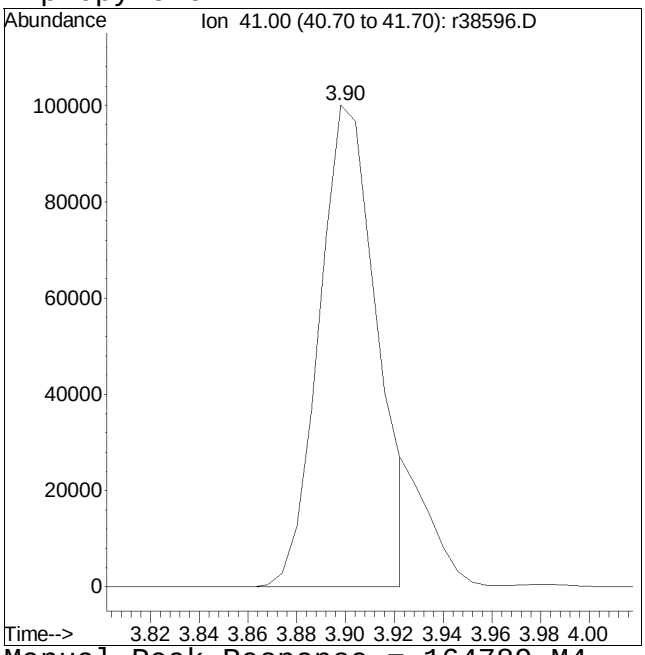


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38596.D
Date Inj'd : 3/12/2020 0:3: 4
Sample : ITO15-SIMSTD010
Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:10 pm

Compound #3: propylene



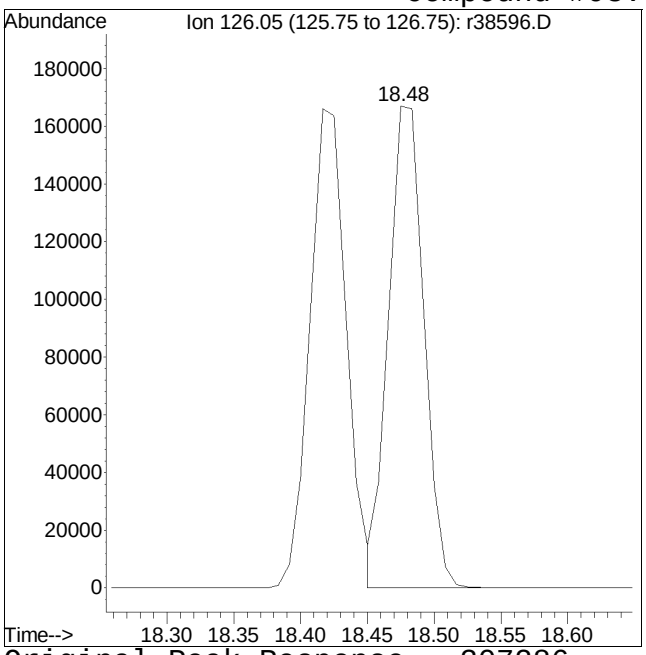

Original Peak Response = 182915 Manual Peak Response = 164789 M4
M4 = Poor automated baseline construction.

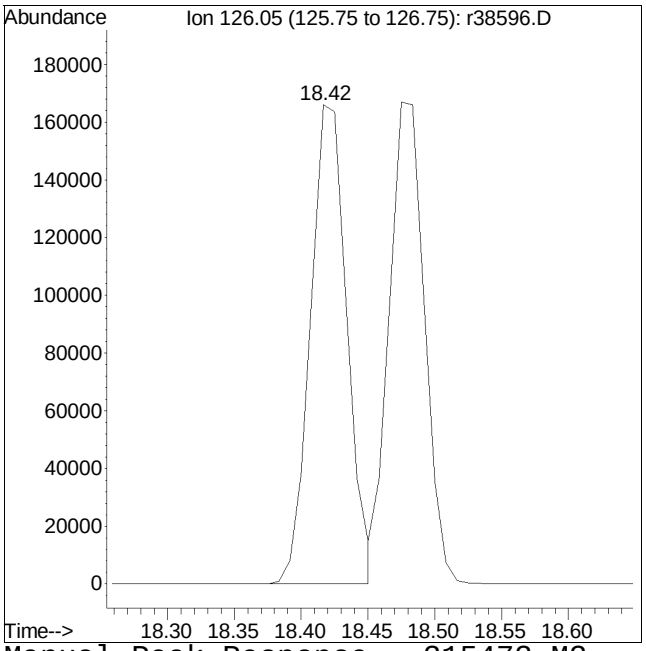
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38596.D
Date Inj'd : 3/12/2020 0:3: 4
Sample : ITO15-SIMSTD010

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:10 pm

Compound #93: 2-chlorotoluene




Original Peak Response = 307286 Manual Peak Response = 315473 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38597.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:23:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.55 | 49 | 386429 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 104.27% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 1078162 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 104.62% | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 164563 | 10.000 | ppbV | 0.00 |
| Standard Area = 160625 | | | Recovery = 102.45% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 179843 | 9.465 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 94.65% | | | |
| 69) toluene-D8 | 14.64 | 98 | 766726 | 9.837 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.37% | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 487677 | 9.098 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 90.98% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.86 | 51 | 583374 | 20.040 | ppbV | 99 |
| 3) propylene | 3.90 | 41 | 343301M4 | 19.979 | ppbV | |
| 4) propane | 3.92 | 29 | 465200 | 20.130 | ppbV | 99 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 684916 | 19.466 | ppbV | 99 |
| 6) chloromethane | 4.16 | 50 | 317415 | 20.019 | ppbV | 99 |
| 7) Freon-114 | 4.28 | 85 | 830655 | 19.372 | ppbV | 96 |
| 8) methanol | 4.36 | 31 | 781152 | 98.550 | ppbV | 99 |
| 9) vinyl chloride | 4.41 | 62 | 374747 | 20.721 | ppbV | 100 |
| 10) 1,3-butadiene | 4.58 | 54 | 379994 | 20.530 | ppbV | 98 |
| 11) butane | 4.64 | 43 | 541534 | 19.986 | ppbV | 100 |
| 12) acetaldehyde | 4.29 | 29 | 768566 | 83.762 | ppbV | 98 |
| 13) bromomethane | 4.89 | 94 | 312102 | 20.540 | ppbV | 100 |
| 14) chloroethane | 5.12 | 64 | 188865 | 20.796 | ppbV | 100 |
| 15) ethanol | 5.30 | 31 | 1815350 | 114.881 | ppbV | 98 |
| 16) dichlorofluoromethane | 5.25 | 67 | 594950 | 20.796 | ppbV | 100 |
| 17) vinyl bromide | 5.54 | 106 | 405433 | 22.900 | ppbV | 100 |
| 18) acrolein | 5.69 | 56 | 212538 | 22.234 | ppbV # | 94 |
| 19) acetone | 5.85 | 43 | 2968859 | 114.867 | ppbV | 91 |
| 20) acetonitrile | 5.54 | 41 | 386891 | 25.364 | ppbV | 98 |
| 21) trichlorofluoromethane | 6.06 | 101 | 669558 | 25.082 | ppbV | 99 |
| 22) isopropyl alcohol | 6.18 | 45 | 1934019 | 60.168 | ppbV | 98 |
| 23) acrylonitrile | 6.44 | 53 | 396159 | 23.116 | ppbV | 94 |
| 24) pentane | 6.51 | 43 | 821379M4 | 21.014 | ppbV | |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38597.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:23:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.54 | 31 | 898169 | 23.529 | ppbV | 94 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 565884 | 23.809 | ppbV | 97 |
| 27) tertiary butyl alcohol | 6.90 | 59 | 809631 | 20.567 | ppbV | 100 |
| 28) methylene chloride | 7.00 | 49 | 525608 | 20.590 | ppbV | 98 |
| 29) 3-chloropropene | 7.14 | 41 | 632395 | 20.265 | ppbV | 99 |
| 30) carbon disulfide | 7.29 | 76 | 1421404 | 20.013 | ppbV | 99 |
| 31) Freon 113 | 7.33 | 101 | 749135 | 20.222 | ppbV | 99 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 607186 | 20.211 | ppbV | 100 |
| 33) 1,1-dichloroethane | 8.36 | 63 | 702745 | 20.295 | ppbV | 100 |
| 34) MTBE | 8.43 | 73 | 1242858 | 19.943 | ppbV | 99 |
| 35) vinyl acetate | 8.57 | 43 | 1081123 | 20.414 | ppbV | 98 |
| 36) 2-butanone | 8.83 | 43 | 960585 | 20.195 | ppbV | 100 |
| 37) cis-1,2-dichloroethene | 9.36 | 61 | 524541 | 20.582 | ppbV | 100 |
| 38) Ethyl Acetate | 9.65 | 61 | 160808 | 20.905 | ppbV | 95 |
| 39) chloroform | 9.71 | 83 | 774091 | 20.522 | ppbV | 100 |
| 40) Tetrahydrofuran | 10.14 | 42 | 597765 | 20.348 | ppbV | 100 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 648675 | 19.578 | ppbV | 99 |
| 42) 1,2-dichloroethane | 10.56 | 62 | 420268 | 20.121 | ppbV | 98 |
| 44) hexane | 9.63 | 57 | 812392 | 20.493 | ppbV | 91 |
| 45) diisopropyl ether | 9.63 | 87 | 466703 | 20.718 | ppbV | 94 |
| 46) tert-butyl ethyl ether | 10.25 | 59 | 1339787 | 20.454 | ppbV | 99 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 618172 | 20.039 | ppbV | 99 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 657747 | 20.053 | ppbV | 99 |
| 50) benzene | 11.37 | 78 | 1584394 | 20.690 | ppbV | 99 |
| 51) thiophene | 11.52 | 84 | 3325766 | 20.190 | ppbV | 98 |
| 52) carbon tetrachloride | 11.55 | 117 | 588824 | 19.773 | ppbV | 99 |
| 53) cyclohexane | 11.69 | 56 | 884569 | 20.856 | ppbV | 98 |
| 54) tert-amyl methyl ether | 12.07 | 73 | 1389759 | 19.876 | ppbV | 99 |
| 55) dibromomethane | 12.29 | 93 | 390854 | 19.748 | ppbV | 99 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 475668 | 20.477 | ppbV | 99 |
| 57) bromodichloromethane | 12.56 | 83 | 861241 | 20.258 | ppbV | 100 |
| 58) 1,4-dioxane | 12.59 | 88 | 366184 | 20.694 | ppbV | 98 |
| 59) trichloroethene | 12.61 | 130 | 588842 | 20.491 | ppbV | 99 |
| 60) 2,2,4-trimethylpentane | 12.66 | 57 | 2558298 | 20.072 | ppbV | 99 |
| 61) methyl methacrylate | 12.85 | 41 | 702145 | 17.555 | ppbV | 99 |
| 62) heptane | 12.98 | 43 | 1015332 | 20.104 | ppbV | 98 |
| 63) cis-1,3-dichloropropene | 13.62 | 75 | 779217 | 20.304 | ppbV | 98 |
| 64) 4-methyl-2-pentanone | 13.66 | 43 | 1172539 | 20.052 | ppbV | 99 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 738494 | 20.406 | ppbV | 99 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 523628 | 20.573 | ppbV | 97 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38597.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:23:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) toluene | 14.76 | 91 | 1674567 | 20.820 | ppbV | 100 |
| 70) 2-methylthiophene | 14.82 | 97 | 4703576 | 19.216 | ppbV | 99 |
| 71) 1,3-dichloropropane | 14.79 | 76 | 841358 | 20.116 | ppbV | 100 |
| 72) 2-hexanone | 15.04 | 43 | 1016055 | 19.253 | ppbV | 97 |
| 73) 3-methylthiophene | 15.03 | 97 | 4790025 | 19.139 | ppbV | 99 |
| 74) dibromochloromethane | 15.21 | 129 | 752593 | 20.306 | ppbV | 99 |
| 75) 1,2-dibromoethane | 15.45 | 107 | 829173 | 21.079 | ppbV | 99 |
| 76) butyl acetate | 15.70 | 73 | 269042 | 20.713 | ppbV | 97 |
| 77) octane | 15.79 | 85 | 754362 | 21.239 | ppbV | 96 |
| 78) tetrachloroethene | 15.93 | 166 | 764542 | 21.188 | ppbV | 98 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 549959 | 20.074 | ppbV | 98 |
| 80) chlorobenzene | 16.58 | 112 | 1407174 | 21.509 | ppbV | 97 |
| 81) ethylbenzene | 16.93 | 91 | 2038028 | 20.844 | ppbV | 98 |
| 82) 2-ethylthiophene | 16.97 | 97 | 4966476 | 18.756 | ppbV | 97 |
| 83) m+p-xylene | 17.09 | 91 | 3373517 | 41.298 | ppbV | 100 |
| 84) bromoform | 17.16 | 173 | 743359 | 20.685 | ppbV | 99 |
| 85) styrene | 17.42 | 104 | 1553435 | 21.179 | ppbV | 100 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 1219682 | 20.940 | ppbV | 100 |
| 87) o-xylene | 17.51 | 91 | 1655953 | 20.357 | ppbV | 97 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 983255 | 20.082 | ppbV | 98 |
| 89) nonane | 17.71 | 43 | 1381089 | 20.012 | ppbV | 95 |
| 91) isopropylbenzene | 18.02 | 105 | 2347265 | 19.992 | ppbV | 97 |
| 92) bromobenzene | 18.09 | 77 | 1308232 | 20.210 | ppbV | 98 |
| 93) 2-chlorotoluene | 18.43 | 126 | 662496 | 20.498 | ppbV | 78 |
| 94) n-propylbenzene | 18.45 | 120 | 794531 | 21.043 | ppbV | 91 |
| 95) 4-chlorotoluene | 18.48 | 126 | 645874 | 20.516 | ppbV | 97 |
| 96) 4-ethyl toluene | 18.57 | 105 | 2679695 | 20.059 | ppbV | 98 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 2168207 | 20.440 | ppbV | 96 |
| 98) tert-butylbenzene | 18.96 | 119 | 2078272 | 19.112 | ppbV | 100 |
| 99) 1,2,4-trimethylbenzene | 18.96 | 105 | 1982017 | 19.129 | ppbV | 94 |
| 100) decane | 19.03 | 57 | 1614312 | 19.854 | ppbV | 95 |
| 101) Benzyl Chloride | 19.07 | 91 | 1607004 | 20.065 | ppbV | 97 |
| 102) 1,3-dichlorobenzene | 19.08 | 146 | 1294947 | 21.128 | ppbV | 98 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 1216666 | 19.777 | ppbV | 97 |
| 104) sec-butylbenzene | 19.18 | 105 | 3015939 | 19.395 | ppbV | 99 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 1784686 | 16.477 | ppbV | 93 |
| 106) p-isopropyltoluene | 19.29 | 119 | 2511907 | 18.642 | ppbV | 99 |
| 107) 1,2-dichlorobenzene | 19.42 | 146 | 1201041 | 20.597 | ppbV | 98 |
| 108) n-butylbenzene | 19.63 | 91 | 2093750 | 19.112 | ppbV | 99 |
| 109) indan | 19.47 | 117 | 1998972 | 18.183 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38597.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:23:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 110) indene | 19.54 | 115 | 1622067 | 18.444 | ppbV | 100 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 508415 | 17.691 | ppbV | 93 |
| 112) undecane | 20.02 | 57 | 1743721 | 18.939 | ppbV | 96 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 1987228 | 17.105 | ppbV | 99 |
| 114) dodecane | 20.93 | 57 | 1684320 | 16.818 | ppbV | 96 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 792964 | 18.723 | ppbV | 97 |
| 116) naphthalene | 20.99 | 128 | 2172923 | 16.959 | ppbV | 99 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 854703 | 16.878 | ppbV | 96 |
| 118) benzothiophene | 21.05 | 134 | 1523541 | 22.468 | ppbV | 99 |
| 119) hexachlorobutadiene | 21.31 | 225 | 842756 | 18.086 | ppbV | 98 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 381887 | 21.864 | ppbV | 99 |
| 121) 1-methylnaphthalene | 22.29 | 142 | 891996 | 20.310 | ppbV | 98 |

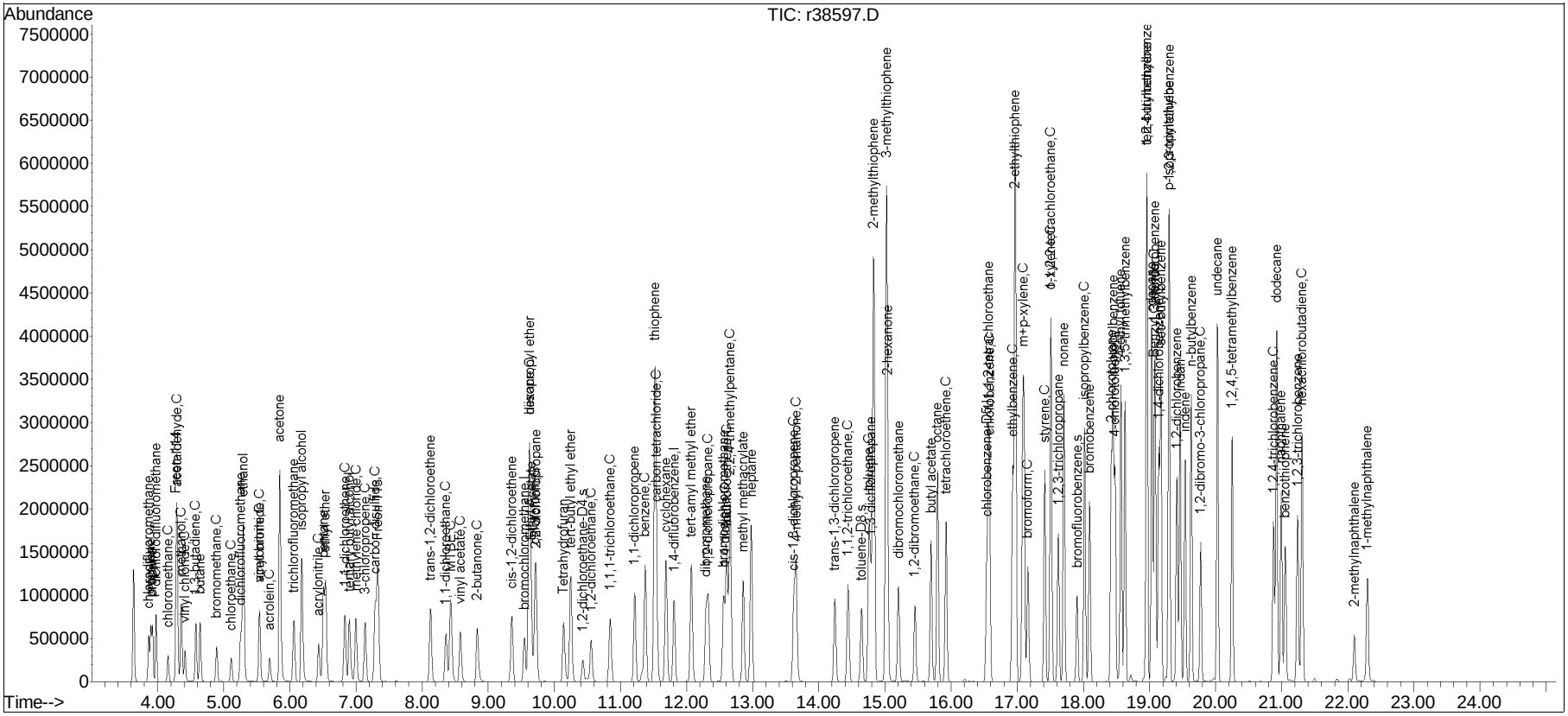
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38597.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:23:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:12:16 2020
Response via : Initial Calibration

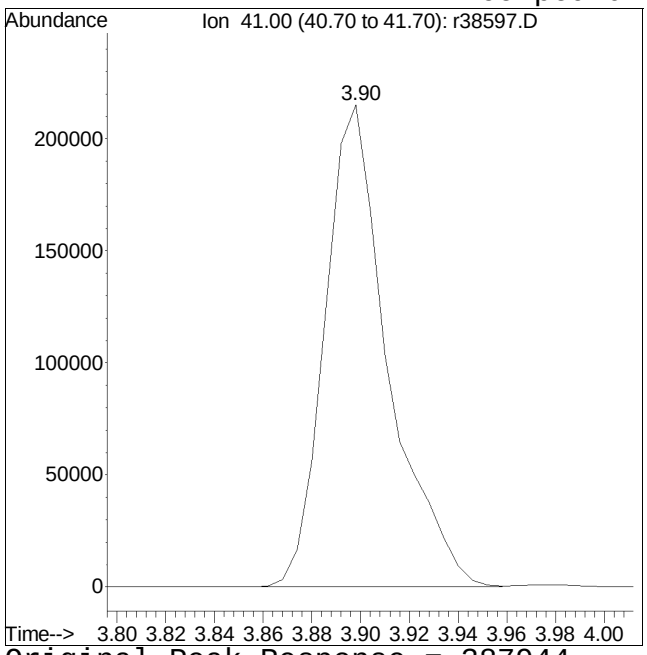
Sub List : Default - All compounds listed20\03\200312T_I\r38596.D



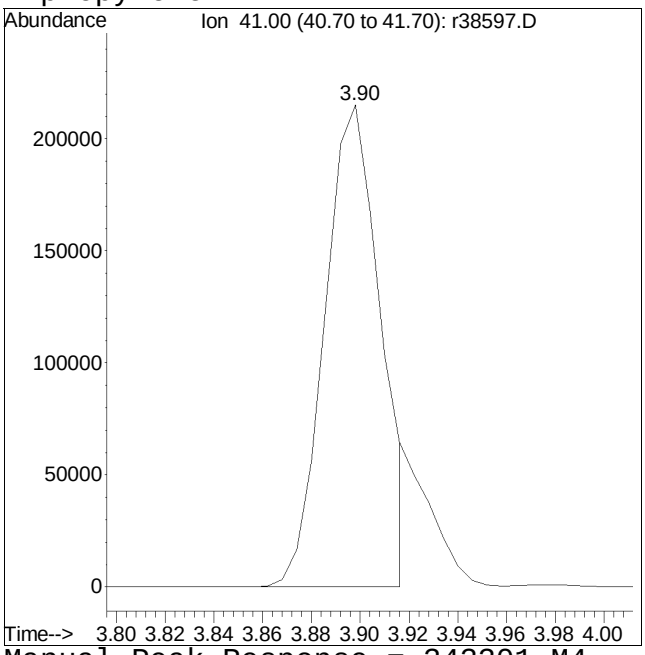
# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38597.D
Date Inj'd : 3/12/2020 0:3: 1
Sample : ITO15-SIMSTD020
Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:15 pm

## Compound #3: propylene




Original Peak Response = 387944




Manual Peak Response = 343301 M4

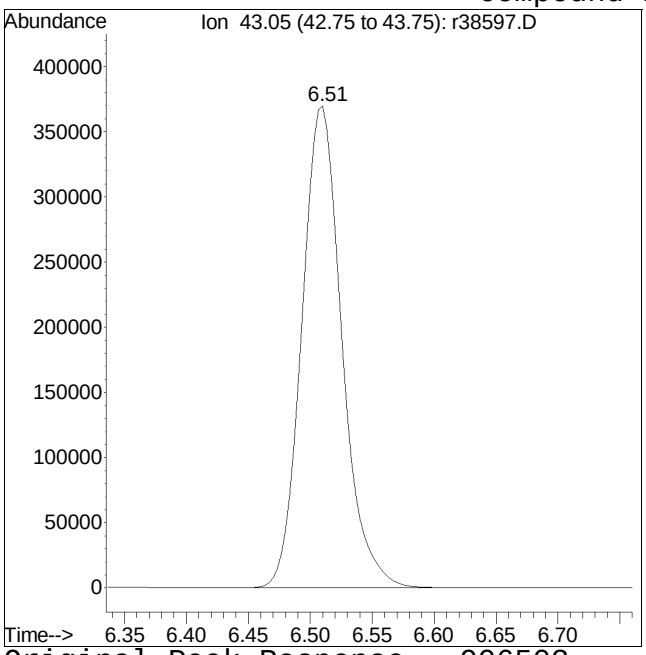
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

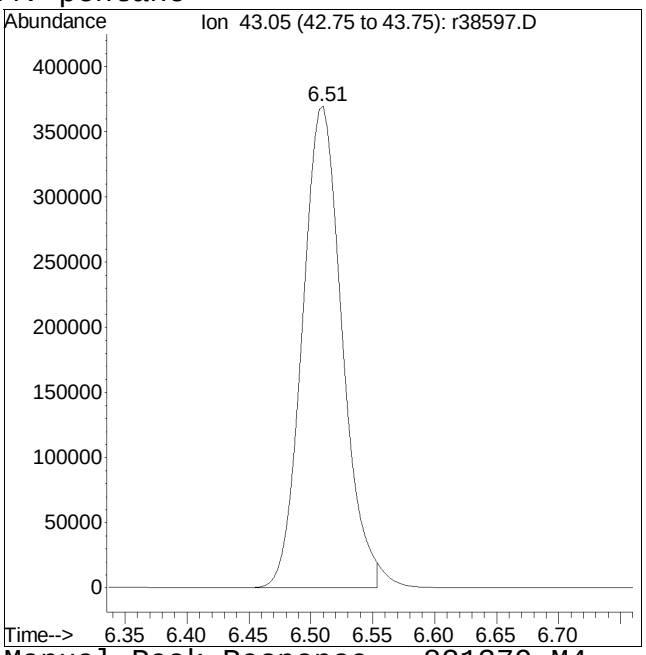
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38597.D
Date Inj'd : 3/12/2020 0:3: 1
Sample : ITO15-SIMSTD020

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:15 pm

Compound #24: pentane




Original Peak Response = 996503




Manual Peak Response = 821379 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38598.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:51:20 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:24:00 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| **Internal Standards** | | | | | | |
| 1) bromochloromethane | 9.55 | 49 | 399060 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 107.68% | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 1122309 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 108.91% | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 167383 | 10.000 | ppbV | # 0.00 |
| Standard Area = 160625 | | | Recovery = 104.21% | | | |
| **System Monitoring Compounds** | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.43 | 65 | 170176 | 8.549 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 85.49% | | | |
| 69) toluene-D8 | 14.65 | 98 | 786785 | 9.911 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.11% | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 534647 | 10.435 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 104.35% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.87 | 51 | 1291300 | 39.902 | ppbV | 96 |
| 3) propylene | 3.90 | 41 | 800449M4 | 41.746 | ppbV | |
| 4) propane | 3.92 | 29 | 1038518 | 40.279 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 1350266 | 34.021 | ppbV | 99 |
| 6) chloromethane | 4.16 | 50 | 691722 | 38.977 | ppbV | 98 |
| 7) Freon-114 | 4.28 | 85 | 1599390 | 32.649 | ppbV | 90 |
| 8) methanol | 4.36 | 31 | 1723159 | 196.941 | ppbV | 96 |
| 9) vinyl chloride | 4.41 | 62 | 861114 | 42.539 | ppbV | 99 |
| 10) 1,3-butadiene | 4.58 | 54 | 849471 | 41.352 | ppbV | 97 |
| 11) butane | 4.65 | 43 | 1154285 | 37.640 | ppbV | 98 |
| 12) acetaldehyde | 4.30 | 29 | 1497293 | 151.673 | ppbV | 95 |
| 13) bromomethane | 4.89 | 94 | 701184 | 41.424 | ppbV | 99 |
| 14) chloroethane | 5.12 | 64 | 439761 | 42.927 | ppbV | 98 |
| 15) ethanol | 5.30 | 31 | 2985173 | 166.848 | ppbV | 100 |
| 16) dichlorofluoromethane | 5.26 | 67 | 1210304 | 37.751 | ppbV | 99 |
| 17) vinyl bromide | 5.54 | 106 | 747538 | 37.603 | ppbV | 99 |
| 18) acrolein | 5.69 | 56 | 460065 | 43.453 | ppbV | 96 |
| 19) acetone | 5.85 | 43 | 4426806 | 152.098 | ppbV | 89 |
| 20) acetonitrile | 5.54 | 41 | 669199 | 37.450 | ppbV | 100 |
| 21) trichlorofluoromethane | 6.06 | 101 | 1066265 | 34.397 | ppbV | 98 |
| 22) isopropyl alcohol | 6.19 | 45 | 3127466 | 85.939 | ppbV | 98 |
| 23) acrylonitrile | 6.44 | 53 | 813651 | 42.967 | ppbV | 98 |
| 24) pentane | 6.51 | 43 | 2158042 | 56.297 | ppbV | 99 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38598.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:51:20 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:24:00 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.54 | 31 | 2411457 | 59.291 | ppbV | | 97 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 1300985 | 47.915 | ppbV | | 99 |
| 27) tertiary butyl alcohol | 6.91 | 59 | 1952792 | 48.214 | ppbV | | 97 |
| 28) methylene chloride | 7.00 | 49 | 1230394 | 48.043 | ppbV | | 93 |
| 29) 3-chloropropene | 7.14 | 41 | 1486826 | 43.609 | ppbV | | 97 |
| 30) carbon disulfide | 7.29 | 76 | 3226333 | 41.799 | ppbV | | 99 |
| 31) Freon 113 | 7.33 | 101 | 1685355 | 41.304 | ppbV | | 97 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 1416872 | 43.768 | ppbV | | 99 |
| 33) 1,1-dichloroethane | 8.37 | 63 | 1654273 | 43.362 | ppbV | | 99 |
| 34) MTBE | 8.43 | 73 | 2780256 | 41.266 | ppbV | | 96 |
| 35) vinyl acetate | 8.58 | 43 | 2515234 | 45.227 | ppbV | | 96 |
| 36) 2-butanone | 8.84 | 43 | 2221399 | 42.741 | ppbV | | 99 |
| 37) cis-1,2-dichloroethene | 9.36 | 61 | 1221512 | 43.732 | ppbV | | 98 |
| 38) Ethyl Acetate | 9.65 | 61 | 391860 | 46.764 | ppbV | | 94 |
| 39) chloroform | 9.72 | 83 | 1710422 | 41.413 | ppbV | | 98 |
| 40) Tetrahydrofuran | 10.14 | 42 | 1411796 | 44.158 | ppbV | | 99 |
| 41) 2,2-dichloropropane | 9.72 | 77 | 1374618 | 38.507 | ppbV | | 96 |
| 42) 1,2-dichloroethane | 10.56 | 62 | 915347 | 39.907 | ppbV | | 96 |
| 44) hexane | 9.62 | 57 | 1884388 | 42.933 | ppbV | # | 75 |
| 45) diisopropyl ether | 9.63 | 87 | 1102049 | 44.207 | ppbV | | 74 |
| 46) tert-butyl ethyl ether | 10.25 | 59 | 3095625 | 43.311 | ppbV | | 96 |
| 48) 1,1,1-trichloroethane | 10.84 | 97 | 1342178 | 39.172 | ppbV | # | 97 |
| 49) 1,1-dichloropropene | 11.21 | 75 | 1481254 | 41.380 | ppbV | | 95 |
| 50) benzene | 11.37 | 78 | 3639691 | 42.390 | ppbV | | 98 |
| 51) thiophene | 11.53 | 84 | 6981664 | 38.497 | ppbV | | 98 |
| 52) carbon tetrachloride | 11.55 | 117 | 1195837 | 36.849 | ppbV | | 99 |
| 53) cyclohexane | 11.69 | 56 | 2127284 | 45.703 | ppbV | | 96 |
| 54) tert-amyl methyl ether | 12.07 | 73 | 3086091 | 40.712 | ppbV | | 98 |
| 55) dibromomethane | 12.30 | 93 | 882556 | 39.753 | ppbV | | 98 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 1110757 | 42.977 | ppbV | | 97 |
| 57) bromodichloromethane | 12.56 | 83 | 1927920 | 41.720 | ppbV | | 100 |
| 58) 1,4-dioxane | 12.59 | 88 | 914671 | 47.647 | ppbV | | 96 |
| 59) trichloroethene | 12.61 | 130 | 1386095 | 43.818 | ppbV | | 97 |
| 60) 2,2,4-trimethylpentane | 12.66 | 57 | 5952089 | 42.560 | ppbV | | 97 |
| 61) methyl methacrylate | 12.86 | 41 | 1625272 | 41.469 | ppbV | | 99 |
| 62) heptane | 12.98 | 43 | 2276024 | 40.990 | ppbV | | 94 |
| 63) cis-1,3-dichloropropene | 13.63 | 75 | 1777546 | 42.676 | ppbV | | 98 |
| 64) 4-methyl-2-pentanone | 13.66 | 43 | 2636333 | 41.978 | ppbV | | 95 |
| 65) trans-1,3-dichloropropene | 14.24 | 75 | 1662587 | 42.954 | ppbV | | 99 |
| 66) 1,1,2-trichloroethane | 14.44 | 97 | 1218161 | 43.018 | ppbV | | 95 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38598.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:51:20 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:24:00 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 14.76 | 91 | 3850178 | 43.577 | ppbV | | 100 |
| 70) 2-methylthiophene | 14.83 | 97 | 9107228 | 33.850 | ppbV | | 99 |
| 71) 1,3-dichloropropane | 14.79 | 76 | 1855139 | 41.712 | ppbV | | 98 |
| 72) 2-hexanone | 15.04 | 43 | 1951168 | 35.530 | ppbV | # | 89 |
| 73) 3-methylthiophene | 15.03 | 97 | 8909419 | 32.464 | ppbV | | 99 |
| 74) dibromochloromethane | 15.21 | 129 | 1692267 | 44.405 | ppbV | | 97 |
| 75) 1,2-dibromoethane | 15.46 | 107 | 1874938 | 44.673 | ppbV | | 100 |
| 76) butyl acetate | 15.70 | 73 | 626429 | 47.315 | ppbV | | 92 |
| 77) octane | 15.80 | 85 | 1776964 | 47.625 | ppbV | | 92 |
| 78) tetrachloroethene | 15.93 | 166 | 1693608 | 43.149 | ppbV | | 97 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 1215736 | 41.403 | ppbV | | 96 |
| 80) chlorobenzene | 16.58 | 112 | 3145408 | 44.477 | ppbV | | 93 |
| 81) ethylbenzene | 16.93 | 91 | 4585962 | 43.318 | ppbV | | 96 |
| 82) 2-ethylthiophene | 16.98 | 97 | 9012200 | 31.057 | ppbV | | 95 |
| 83) m+p-xylene | 17.10 | 91 | 7192700 | 81.258 | ppbV | | 96 |
| 84) bromoform | 17.17 | 173 | 1645518 | 46.332 | ppbV | | 98 |
| 85) styrene | 17.42 | 104 | 3560494 | 46.856 | ppbV | | 97 |
| 86) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 2503064 | 40.224 | ppbV | | 99 |
| 87) o-xylene | 17.51 | 91 | 3390869 | 38.506 | ppbV | | 93 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 2204534 | 43.158 | ppbV | | 96 |
| 89) nonane | 17.71 | 43 | 2942683 | 40.018 | ppbV | # | 90 |
| 91) isopropylbenzene | 18.02 | 105 | 5072251 | 40.673 | ppbV | | 91 |
| 92) bromobenzene | 18.10 | 77 | 2848495 | 42.930 | ppbV | | 98 |
| 93) 2-chlorotoluene | 18.43 | 126 | 1570320 | 46.509 | ppbV | | 97 |
| 94) n-propylbenzene | 18.45 | 120 | 1874997 | 48.274 | ppbV | | 74 |
| 95) 4-chlorotoluene | 18.48 | 126 | 1555400 | 48.021 | ppbV | | 75 |
| 96) 4-ethyl toluene | 18.57 | 105 | 5659025 | 40.490 | ppbV | | 92 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 4576925 | 40.193 | ppbV | | 90 |
| 98) tert-butylbenzene | 18.96 | 119 | 3980603 | 35.479 | ppbV | | 93 |
| 99) 1,2,4-trimethylbenzene | 18.97 | 105 | 3750900 | 34.179 | ppbV | | 90 |
| 100) decane | 19.04 | 57 | 3454532 | 41.262 | ppbV | | 92 |
| 101) Benzyl Chloride | 19.07 | 91 | 3447289 | 48.373 | ppbV | # | 89 |
| 102) 1,3-dichlorobenzene | 19.09 | 146 | 2691666 | 41.521 | ppbV | | 95 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 2690383 | 44.546 | ppbV | | 95 |
| 104) sec-butylbenzene | 19.18 | 105 | 6218111 | 38.712 | ppbV | | 94 |
| 105) 1,2,3-trimethylbenzene | 19.30 | 105 | 3423186 | 33.014 | ppbV | | 91 |
| 106) p-isopropyltoluene | 19.30 | 119 | 4786254 | 35.387 | ppbV | | 92 |
| 107) 1,2-dichlorobenzene | 19.42 | 146 | 2673932 | 44.151 | ppbV | | 96 |
| 108) n-butylbenzene | 19.63 | 91 | 4490773 | 41.182 | ppbV | | 94 |
| 109) indan | 19.47 | 117 | 4339841 | 42.132 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38598.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:51:20 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:24:00 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 110) indene | 19.54 | 115 | 3649994 | 46.201 | ppbV | | 99 |
| 111) 1,2-dibromo-3-chloropr... | 19.77 | 75 | 1076414 | 40.652 | ppbV | # | 83 |
| 112) undecane | 20.03 | 57 | 3698999 | 40.560 | ppbV | | 94 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 4326330 | 43.167 | ppbV | | 95 |
| 114) dodecane | 20.93 | 57 | 3706435 | 41.148 | ppbV | | 92 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 2029103 | 57.657 | ppbV | | 94 |
| 116) naphthalene | 20.99 | 128 | 5498084 | 51.027 | ppbV | | 98 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 2130337 | 50.851 | ppbV | | 94 |
| 118) benzothiophene | 21.06 | 134 | 4188654 | 70.097 | ppbV | | 98 |
| 119) hexachlorobutadiene | 21.31 | 225 | 1794781 | 36.660 | ppbV | | 96 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 1174658 | 75.012 | ppbV | | 99 |
| 121) 1-methylnaphthalene | 22.30 | 142 | 2435879 | 57.561 | ppbV | | 99 |

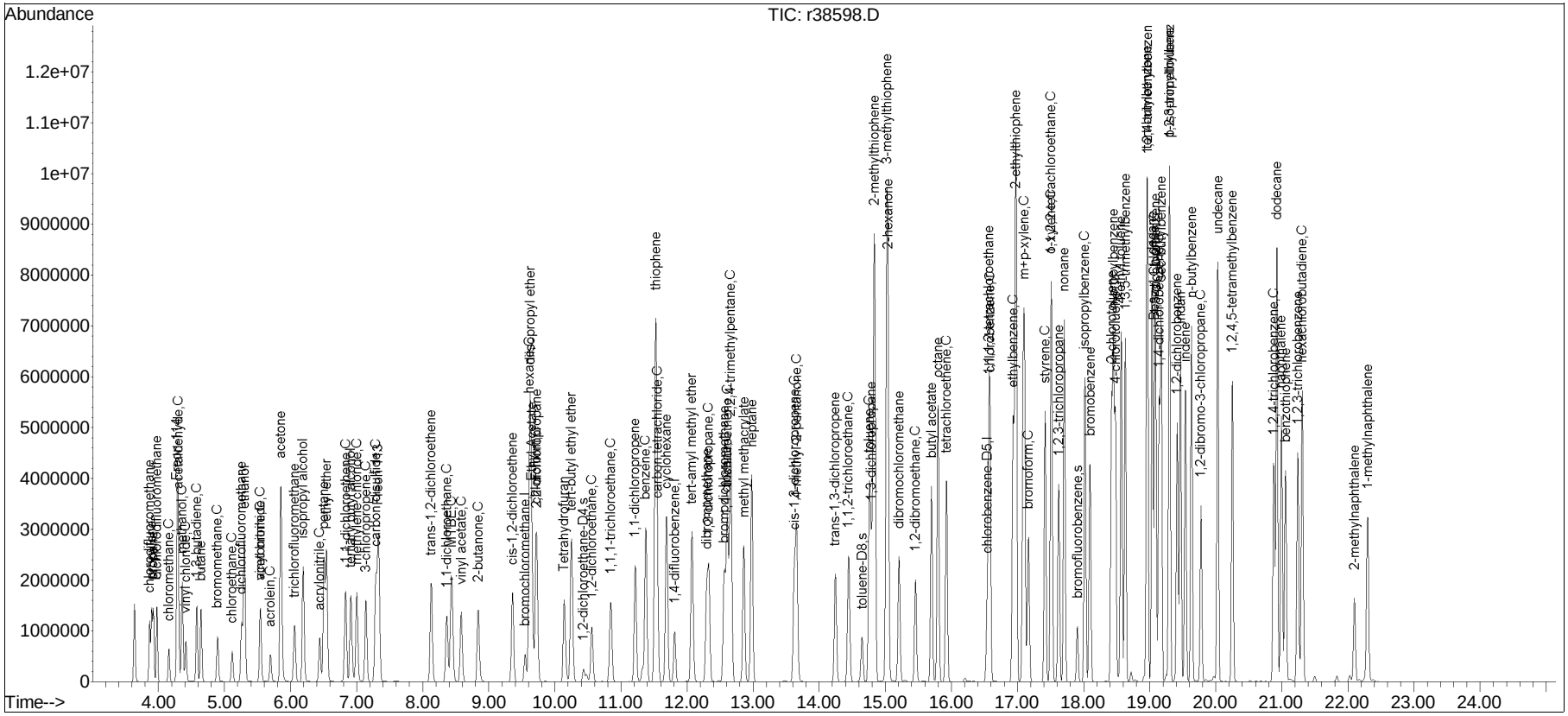
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38598.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:51:20 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:24:00 2020
Response via : Initial Calibration

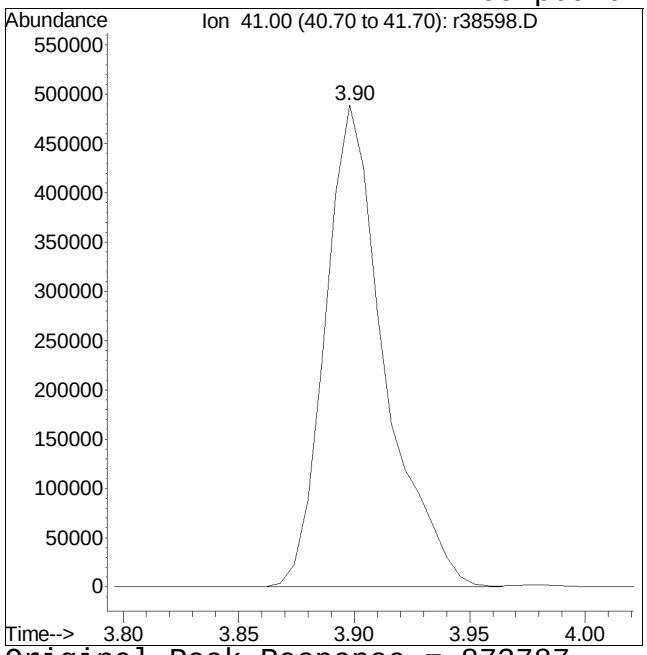
Sub List : Default - All compounds listed20\03\200312T_I\r38596.D

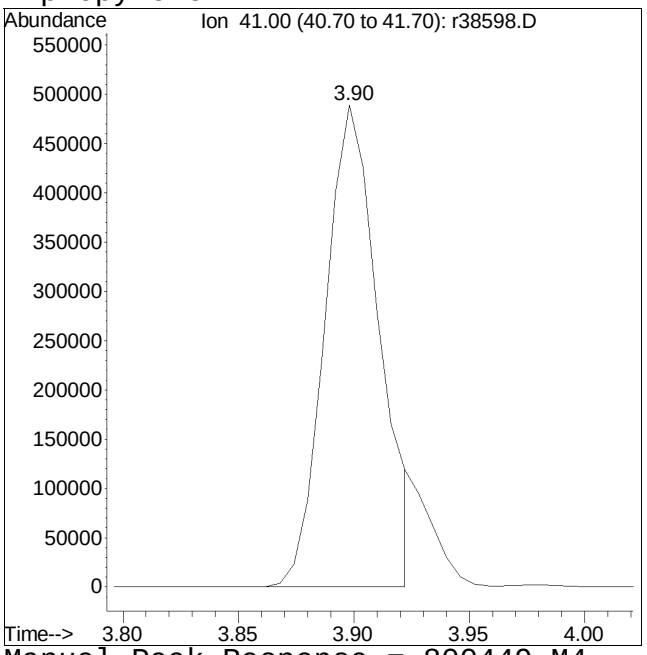


# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38598.D
Date Inj'd : 3/12/2020 0:4: 0
Sample : ITO15-SIMSTD050
Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:51 pm

Compound #3: propylene




Original Peak Response = 873787 Manual Peak Response = 800449 M4
M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38599.D
Acq On : 12 Mar 2020 5:00 PM
Operator : AIRPIANO3:RY
Sample : ITO15-LLSTD100
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 17:26:44 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:52:49 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| **Internal Standards** | | | | | | | |
| 1) bromochloromethane | 9.56 | 49 | 392985 | 10.000 | ppbV | | 0.00 |
| Standard Area = 370599 | | | Recovery = 106.04% | | | | |
| 43) 1,4-difluorobenzene | 11.81 | 114 | 1133202 | 10.000 | ppbV | | 0.00 |
| Standard Area = 1030530 | | | Recovery = 109.96% | | | | |
| 67) chlorobenzene-D5 | 16.54 | 54 | 156109 | 10.000 | ppbV | # | 0.00 |
| Standard Area = 160625 | | | Recovery = 97.19% | | | | |
| **System Monitoring Compounds** | | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.44 | 65 | 146136 | 7.425 | ppbV | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 74.25% | | | | |
| 69) toluene-D8 | 14.65 | 98 | 778693 | 10.531 | ppbV | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 105.31% | | | | |
| 90) bromofluorobenzene | 17.91 | 95 | 565978 | 11.771 | ppbV | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 117.71% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.87 | 51 | 2285538 | 73.847 | ppbV | | 95 |
| 3) propylene | 3.90 | 41 | 1459024M4 | 79.455 | ppbV | | |
| 4) propane | 3.93 | 29 | 1822443 | 74.179 | ppbV | | 98 |
| 5) dichlorodifluoromethane | 3.98 | 85 | 2305372 | 61.805 | ppbV | | 98 |
| 6) chloromethane | 4.16 | 50 | 1209198 | 71.438 | ppbV | | 98 |
| 7) Freon-114 | 4.28 | 85 | 2479139 | 54.070 | ppbV | # | 88 |
| 8) methanol | 4.37 | 31 | 3006021 | 364.336 | ppbV | | 95 |
| 9) vinyl chloride | 4.41 | 62 | 1573531 | 80.653 | ppbV | | 99 |
| 10) 1,3-butadiene | 4.58 | 54 | 1459980 | 73.998 | ppbV | | 100 |
| 11) butane | 4.65 | 43 | 2028685 | 69.635 | ppbV | | 98 |
| 12) acetaldehyde | 4.30 | 29 | 2437240 | 268.291 | ppbV | | 90 |
| 13) bromomethane | 4.89 | 94 | 1227161 | 75.467 | ppbV | | 99 |
| 14) chloroethane | 5.12 | 64 | 825953 | 83.560 | ppbV | | 98 |
| 15) ethanol | 5.31 | 31 | 4805439 | 292.175 | ppbV | | 97 |
| 16) dichlorofluoromethane | 5.26 | 67 | 2129930 | 69.909 | ppbV | | 99 |
| 17) vinyl bromide | 5.55 | 106 | 1261127 | 66.783 | ppbV | | 97 |
| 18) acrolein | 5.70 | 56 | 841908 | 82.549 | ppbV | | 95 |
| 19) acetone | 5.86 | 43 | 7264363 | 268.469 | ppbV | | 92 |
| 20) acetonitrile | 5.55 | 41 | 1218185 | 71.800 | ppbV | | 100 |
| 21) trichlorofluoromethane | 6.06 | 101 | 1758611 | 60.296 | ppbV | | 100 |
| 22) isopropyl alcohol | 6.21 | 45 | 5271895 | 153.979 | ppbV | | 97 |
| 23) acrylonitrile | 6.45 | 53 | 1444522 | 79.050 | ppbV | | 96 |
| 24) pentane | 6.51 | 43 | 3016244 | 78.490 | ppbV | | 98 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38599.D
Acq On : 12 Mar 2020 5:00 PM
Operator : AIRPIANO3:RY
Sample : ITO15-LLSTD100
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 17:26:44 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:52:49 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) ethyl ether | 6.55 | 31 | 3084099 | 75.011 | ppbV | | 94 |
| 26) 1,1-dichloroethene | 6.83 | 61 | 2264848 | 85.211 | ppbV | | 96 |
| 27) tertiary butyl alcohol | 6.92 | 59 | 3555789 | 89.682 | ppbV | # | 94 |
| 28) methylene chloride | 7.01 | 49 | 2145648 | 85.635 | ppbV | | 89 |
| 29) 3-chloropropene | 7.15 | 41 | 2676447 | 81.197 | ppbV | | 95 |
| 30) carbon disulfide | 7.29 | 76 | 5414559 | 72.942 | ppbV | | 97 |
| 31) Freon 113 | 7.33 | 101 | 2824568 | 72.084 | ppbV | | 99 |
| 32) trans-1,2-dichloroethene | 8.13 | 61 | 2528507 | 80.753 | ppbV | | 98 |
| 33) 1,1-dichloroethane | 8.37 | 63 | 2989967 | 81.123 | ppbV | | 98 |
| 34) MTBE | 8.44 | 73 | 4559956 | 70.486 | ppbV | # | 91 |
| 35) vinyl acetate | 8.58 | 43 | 4404990 | 81.998 | ppbV | # | 91 |
| 36) 2-butanone | 8.84 | 43 | 3871714 | 77.521 | ppbV | # | 98 |
| 37) cis-1,2-dichloroethene | 9.37 | 61 | 2185138 | 80.890 | ppbV | | 97 |
| 38) Ethyl Acetate | 9.66 | 61 | 750801 | 91.977 | ppbV | # | 61 |
| 39) chloroform | 9.72 | 83 | 2755905 | 69.462 | ppbV | | 97 |
| 40) Tetrahydrofuran | 10.14 | 42 | 2524563 | 81.544 | ppbV | | 99 |
| 41) 2,2-dichloropropane | 9.73 | 77 | 2094710 | 61.608 | ppbV | # | 96 |
| 42) 1,2-dichloroethane | 10.57 | 62 | 1491297 | 67.983 | ppbV | # | 92 |
| 44) hexane | 9.63 | 57 | 3232660 | 74.447 | ppbV | # | 72 |
| 45) diisopropyl ether | 9.63 | 87 | 1859969 | 75.136 | ppbV | # | 69 |
| 46) tert-butyl ethyl ether | 10.26 | 59 | 5455208 | 77.063 | ppbV | | 95 |
| 48) 1,1,1-trichloroethane | 10.85 | 97 | 2179130 | 64.999 | ppbV | # | 94 |
| 49) 1,1-dichloropropene | 11.22 | 75 | 2480160 | 70.352 | ppbV | | 93 |
| 50) benzene | 11.38 | 78 | 6273737 | 73.974 | ppbV | | 97 |
| 51) thiophene | 11.53 | 84 | 10418332 | 58.828 | ppbV | | 98 |
| 52) carbon tetrachloride | 11.56 | 117 | 1737641 | 55.100 | ppbV | | 99 |
| 53) cyclohexane | 11.69 | 56 | 3933376 | 84.734 | ppbV | | 96 |
| 54) tert-amyl methyl ether | 12.08 | 73 | 5142847 | 69.025 | ppbV | | 96 |
| 55) dibromomethane | 12.30 | 93 | 1513724 | 69.565 | ppbV | | 98 |
| 56) 1,2-dichloropropane | 12.33 | 63 | 1993528 | 77.956 | ppbV | # | 95 |
| 57) bromodichloromethane | 12.57 | 83 | 3142967 | 68.992 | ppbV | | 98 |
| 58) 1,4-dioxane | 12.59 | 88 | 1579071 | 82.017 | ppbV | | 96 |
| 59) trichloroethene | 12.61 | 130 | 2499624 | 79.666 | ppbV | | 94 |
| 60) 2,2,4-trimethylpentane | 12.66 | 57 | 10275344 | 74.347 | ppbV | | 95 |
| 61) methyl methacrylate | 12.86 | 41 | 2756058 | 71.683 | ppbV | | 96 |
| 62) heptane | 12.98 | 43 | 3817424 | 69.887 | ppbV | | 88 |
| 63) cis-1,3-dichloropropene | 13.63 | 75 | 3006777 | 73.022 | ppbV | | 96 |
| 64) 4-methyl-2-pentanone | 13.67 | 43 | 4450307 | 72.108 | ppbV | # | 89 |
| 65) trans-1,3-dichloropropene | 14.25 | 75 | 2793051 | 72.935 | ppbV | | 99 |
| 66) 1,1,2-trichloroethane | 14.45 | 97 | 2172487 | 77.528 | ppbV | | 95 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38599.D
Acq On : 12 Mar 2020 5:00 PM
Operator : AIRPIANO3:RY
Sample : ITO15-LLSTD100
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 17:26:44 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:52:49 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) toluene | 14.77 | 91 | 6755326 | 83.513 | ppbV | | 99 |
| 70) 2-methylthiophene | 14.84 | 97 | 12726115 | 53.170 | ppbV | | 98 |
| 71) 1,3-dichloropropane | 14.80 | 76 | 2937666 | 72.540 | ppbV | | 97 |
| 72) 2-hexanone | 15.05 | 43 | 2828288 | 57.602 | ppbV | | 90 |
| 73) 3-methylthiophene | 15.03 | 97 | 12136075 | 49.915 | ppbV | | 99 |
| 74) dibromochloromethane | 15.22 | 129 | 2865749 | 81.938 | ppbV | | 97 |
| 75) 1,2-dibromoethane | 15.46 | 107 | 3192552 | 82.820 | ppbV | | 98 |
| 76) butyl acetate | 15.70 | 73 | 1059843 | 86.608 | ppbV | | 86 |
| 77) octane | 15.80 | 85 | 2991292 | 86.548 | ppbV | | 87 |
| 78) tetrachloroethene | 15.93 | 166 | 2726279 | 75.962 | ppbV | | 93 |
| 79) 1,1,1,2-tetrachloroethane | 16.57 | 131 | 1963984 | 73.522 | ppbV | | 94 |
| 80) chlorobenzene | 16.59 | 112 | 5069114 | 78.088 | ppbV | | 90 |
| 81) ethylbenzene | 16.94 | 91 | 7686469 | 79.364 | ppbV | | 95 |
| 82) 2-ethylthiophene | 16.98 | 97 | 12169346 | 47.538 | ppbV | | 96 |
| 83) m+p-xylene | 17.11 | 91 | 11101885 | 138.178 | ppbV | | 94 |
| 84) bromoform | 17.18 | 173 | 2550293 | 77.808 | ppbV | | 98 |
| 85) styrene | 17.43 | 104 | 5983185 | 85.190 | ppbV | | 94 |
| 86) 1,1,2,2-tetrachloroethane | 17.52 | 83 | 3637497 | 64.476 | ppbV | | 99 |
| 87) o-xylene | 17.52 | 91 | 4946819 | 62.277 | ppbV | | 89 |
| 88) 1,2,3-trichloropropane | 17.63 | 75 | 3590309 | 76.866 | ppbV | | 93 |
| 89) nonane | 17.71 | 43 | 4579928 | 68.742 | ppbV | # | 85 |
| 91) isopropylbenzene | 18.02 | 105 | 8038564 | 71.007 | ppbV | # | 87 |
| 92) bromobenzene | 18.10 | 77 | 4457824 | 73.521 | ppbV | | 89 |
| 93) 2-chlorotoluene | 18.43 | 126 | 2707014 | 86.831 | ppbV | | 78 |
| 94) n-propylbenzene | 18.45 | 120 | 3005465 | 83.379 | ppbV | # | 66 |
| 95) 4-chlorotoluene | 18.48 | 126 | 2754294 | 91.695 | ppbV | # | 64 |
| 96) 4-ethyl toluene | 18.57 | 105 | 8721765 | 68.780 | ppbV | # | 89 |
| 97) 1,3,5-trimethylbenzene | 18.63 | 105 | 7031887 | 68.120 | ppbV | # | 87 |
| 98) tert-butylbenzene | 18.96 | 119 | 5759549 | 57.425 | ppbV | # | 90 |
| 99) 1,2,4-trimethylbenzene | 18.97 | 105 | 5368101 | 54.931 | ppbV | | 90 |
| 100) decane | 19.04 | 57 | 5441402 | 71.473 | ppbV | | 92 |
| 101) Benzyl Chloride | 19.07 | 91 | 5288261 | 79.936 | ppbV | # | 84 |
| 102) 1,3-dichlorobenzene | 19.09 | 146 | 4102534 | 69.539 | ppbV | # | 94 |
| 103) 1,4-dichlorobenzene | 19.14 | 146 | 4359847 | 78.627 | ppbV | # | 93 |
| 104) sec-butylbenzene | 19.18 | 105 | 9541349 | 65.813 | ppbV | # | 87 |
| 105) 1,2,3-trimethylbenzene | 19.31 | 105 | 4929431 | 53.574 | ppbV | | 93 |
| 106) p-isopropyltoluene | 19.30 | 119 | 6781977 | 56.107 | ppbV | # | 88 |
| 107) 1,2-dichlorobenzene | 19.42 | 146 | 4405659 | 79.324 | ppbV | # | 95 |
| 108) n-butylbenzene | 19.63 | 91 | 7133718 | 71.956 | ppbV | # | 85 |
| 109) indan | 19.47 | 117 | 6878535 | 73.247 | ppbV | | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38599.D
Acq On : 12 Mar 2020 5:00 PM
Operator : AIRPIANO3:RY
Sample : ITO15-LLSTD100
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 17:26:44 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:52:49 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 110) indene | 19.54 | 115 | 5947927 | 81.611 | ppbV | | 99 |
| 111) 1,2-dibromo-3-chloropr... | 19.78 | 75 | 1712085 | 71.231 | ppbV | # | 79 |
| 112) undecane | 20.03 | 57 | 5711928 | 69.016 | ppbV | | 94 |
| 113) 1,2,4,5-tetramethylben... | 20.25 | 119 | 6848414 | 74.725 | ppbV | | 90 |
| 114) dodecane | 20.93 | 57 | 5774305 | 70.519 | ppbV | | 94 |
| 115) 1,2,4-trichlorobenzene | 20.88 | 180 | 3508995 | 104.621 | ppbV | | 95 |
| 116) naphthalene | 21.00 | 128 | 9484653 | 94.107 | ppbV | | 98 |
| 117) 1,2,3-trichlorobenzene | 21.24 | 180 | 3592794 | 91.730 | ppbV | | 94 |
| 118) benzothiophene | 21.06 | 134 | 7803479 | 132.418 | ppbV | | 99 |
| 119) hexachlorobutadiene | 21.31 | 225 | 2721280 | 61.960 | ppbV | | 96 |
| 120) 2-methylnaphthalene | 22.10 | 142 | 2465093 | 153.435 | ppbV | | 99 |
| 121) 1-methylnaphthalene | 22.30 | 142 | 4684604 | 115.209 | ppbV | | 97 |

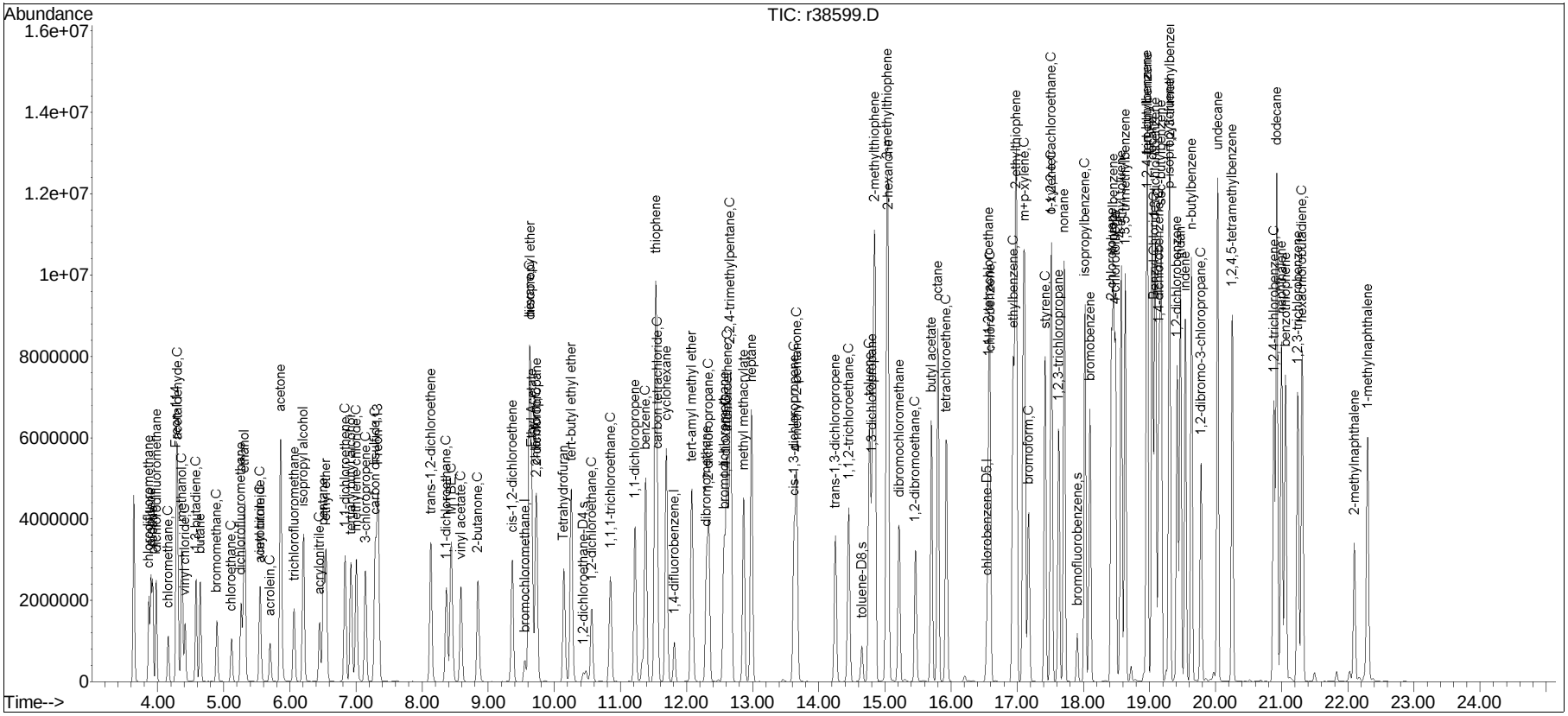
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38599.D
Acq On : 12 Mar 2020 5:00 PM
Operator : AIRPIANO3:RY
Sample : ITO15-LLSTD100
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 17:26:44 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:52:49 2020
Response via : Initial Calibration

Sub List : Default - All compounds listed20\03\200312T_I\r38596.D

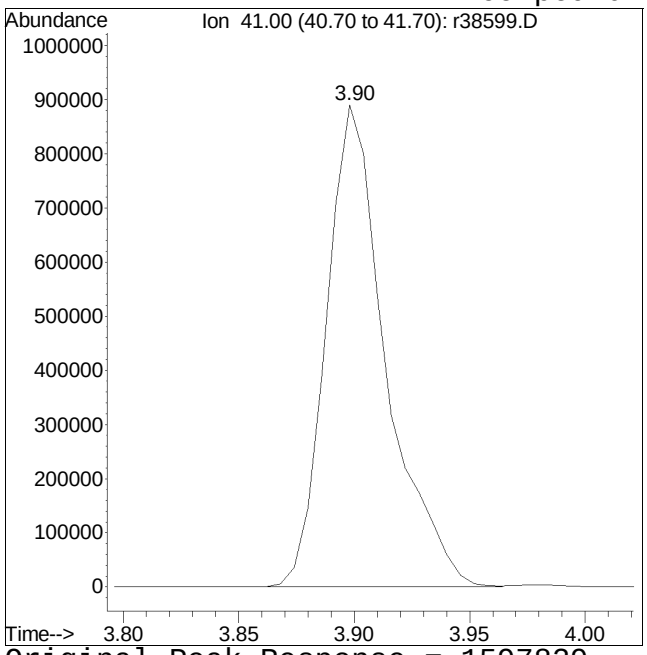


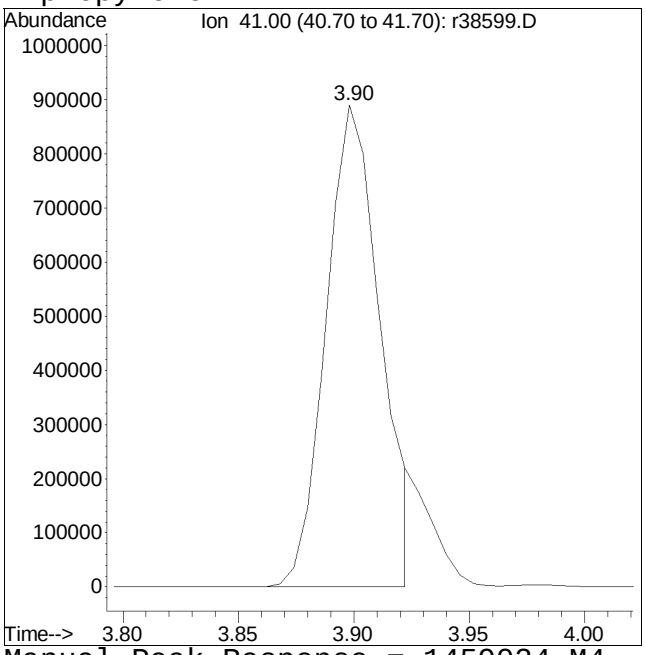
# Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38599.D
Date Inj'd : 3/12/2020 0:5: 0
Sample : ITO15-LLSTD100

Method : TFS3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 5:26 pm

## Compound #3: propylene




Original Peak Response = 1597829 Manual Peak Response = 1459024 M4
M4 = Poor automated baseline construction.

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 93 | 0.00 |
| 2 | | chlorodifluoromethane | 0.762 | 0.639 | 16.1 | 79 | 0.00 |
| 3 | | propylene | 0.454 | 0.468 | -3.1 | 98 | 0.00 |
| 4 | | propane | 0.602 | 0.529 | 12.1 | 83 | 0.00 |
| 5 | | dichlorodifluoromethane | 0.904 | 0.772 | 14.6 | 79 | 0.00 |
| 6 | C | chloromethane | 0.415 | 0.372 | 10.4 | 85 | 0.00 |
| 7 | | Freon-114 | 1.100 | 1.040 | 5.5 | 88 | 0.00 |
| 8 | C | methanol | 0.200 | 0.190 | 5.0 | 87 | 0.00 |
| 9 | C | vinyl chloride | 0.484 | 0.496 | -2.5 | 99 | 0.00 |
| 10 | C | 1,3-butadiene | 0.486 | 0.479 | 1.4 | 94 | 0.00 |
| 11 | | butane | 0.713 | 0.589 | 17.4 | 79 | 0.00 |
| 13 | C | bromomethane | 0.401 | 0.396 | 1.2 | 94 | 0.00 |
| 14 | C | chloroethane | 0.246 | 0.250 | -1.6 | 99 | 0.00 |
| 15 | | ethanol | 0.390 | 0.352 | 9.7 | 81 | 0.00 |
| 16 | | dichlorofluoromethane | 0.746 | 0.607 | 18.6 | 77 | 0.00 |
| 17 | C | vinyl bromide | 0.461 | 0.391 | 15.2 | 80 | 0.00 |
| 18 | C | acrolein | 0.253 | 0.221 | 12.6 | 84 | 0.00 |
| 19 | | acetone | 0.649 | 0.481 | 25.9 | 67 | 0.00 |
| 20 | C | acetonitrile | 0.417 | 0.363 | 12.9 | 86 | 0.00 |
| 21 | | trichlorofluoromethane | 0.705 | 0.553 | 21.6 | 75 | 0.00 |
| 22 | | isopropyl alcohol | 0.829 | 0.661 | 20.3 | 74 | 0.00 |
| 23 | C | acrylonitrile | 0.453 | 0.394 | 13.0 | 83 | 0.00 |
| 24 | | pentane | 0.952 | 0.813 | 14.6 | 75 | 0.00 |
| 25 | | ethyl ether | 1.014 | 0.845 | 16.7 | 80 | 0.00 |
| 26 | C | 1,1-dichloroethene | 0.664 | 0.611 | 8.0 | 93 | 0.00 |
| 27 | | tertiary butyl alcohol | 0.994 | 0.846 | 14.9 | 78 | -0.01 |
| 28 | C | methylene chloride | 0.624 | 0.483 | 22.6 | 68 | 0.00 |
| 29 | C | 3-chloropropene | 0.819 | 0.843 | -2.9 | 98 | 0.00 |
| 30 | C | carbon disulfide | 1.825 | 1.664 | 8.8 | 85 | 0.00 |
| 31 | | Freon 113 | 0.962 | 0.947 | 1.6 | 92 | 0.00 |
| 32 | | trans-1,2-dichloroethene | 0.778 | 0.783 | -0.6 | 94 | 0.00 |
| 33 | C | 1,1-dichloroethane | 0.916 | 0.936 | -2.2 | 98 | 0.00 |
| 34 | C | MTBE | 1.585 | 1.448 | 8.6 | 84 | 0.00 |
| 35 | C | vinyl acetate | 1.326 | 1.301 | 1.9 | 89 | 0.00 |
| 36 | C | 2-butanone | 1.230 | 1.191 | 3.2 | 90 | 0.00 |
| 37 | | cis-1,2-dichloroethene | 0.671 | 0.721 | -7.5 | 102 | 0.00 |
| 38 | | Ethyl Acetate | 0.205 | 0.232 | -13.2 | 109 | 0.00 |
| 39 | C | chloroform | 0.971 | 0.997 | -2.7 | 95 | 0.00 |
| 40 | | Tetrahydrofuran | 0.770 | 0.751 | 2.5 | 92 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 41 | | 2,2-dichloropropane | 0.824 | 0.669 | 18.8 | 73 | 0.00 |
| 42 | C | 1,2-dichloroethane | 0.536 | 0.473 | 11.8 | 82 | 0.00 |
| 43 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 44 | C | hexane | 0.371 | 0.381 | -2.7 | 107 | 0.00 |
| 45 | | diisopropyl ether | 0.212 | 0.196 | 7.5 | 97 | 0.00 |
| 46 | | tert-butyl ethyl ether | 0.607 | 0.547 | 9.9 | 93 | 0.00 |
| 47 | s | 1,2-dichloroethane-D4 | 0.168 | 0.131 | 22.0 | 76 | 0.00 |
| 48 | C | 1,1,1-trichloroethane | 0.283 | 0.235 | 17.0 | 85 | 0.00 |
| 49 | | 1,1-dichloropropene | 0.300 | 0.252 | 16.0 | 85 | 0.00 |
| 50 | C | benzene | 0.724 | 0.669 | 7.6 | 97 | 0.00 |
| 52 | C | carbon tetrachloride | 0.263 | 0.236 | 10.3 | 88 | 0.00 |
| 53 | | cyclohexane | 0.402 | 0.414 | -3.0 | 108 | 0.00 |
| 54 | | tert-amyl methyl ether | 0.632 | 0.513 | 18.8 | 81 | 0.00 |
| 55 | | dibromomethane | 0.185 | 0.158 | 14.6 | 88 | 0.00 |
| 56 | C | 1,2-dichloropropane | 0.219 | 0.215 | 1.8 | 103 | 0.00 |
| 57 | | bromodichloromethane | 0.386 | 0.357 | 7.5 | 93 | 0.00 |
| 58 | C | 1,4-dioxane | 0.166 | 0.176 | -6.0 | 110 | 0.00 |
| 59 | C | trichloroethene | 0.270 | 0.268 | 0.7 | 104 | 0.00 |
| 60 | C | 2,2,4-trimethylpentane | 1.181 | 1.233 | -4.4 | 107 | 0.00 |
| 61 | | methyl methacrylate | 0.326 | 0.226 | 30.7# | 63 | 0.00 |
| 62 | | heptane | 0.464 | 0.414 | 10.8 | 91 | 0.00 |
| 63 | C | cis-1,3-dichloropropene | 0.351 | 0.335 | 4.6 | 97 | 0.00 |
| 64 | C | 4-methyl-2-pentanone | 0.523 | 0.478 | 8.6 | 91 | 0.00 |
| 65 | | trans-1,3-dichloropropene | 0.327 | 0.265 | 19.0 | 81 | 0.00 |
| 66 | C | 1,1,2-trichloroethane | 0.240 | 0.229 | 4.6 | 100 | 0.00 |
| 67 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 68 | C | toluene | 5.075 | 5.300 | -4.4 | 103 | 0.00 |
| 69 | s | toluene-D8 | 4.768 | 4.550 | 4.6 | 91 | 0.00 |
| 71 | | 1,3-dichloropropane | 2.505 | 2.230 | 11.0 | 83 | 0.00 |
| 72 | | 2-hexanone | 2.979 | 3.066 | -2.9 | 91 | 0.00 |
| 74 | | dibromochloromethane | 2.190 | 2.327 | -6.3 | 98 | 0.00 |
| 75 | C | 1,2-dibromoethane | 2.416 | 2.450 | -1.4 | 97 | 0.00 |
| 76 | | butyl acetate | 0.769 | 0.689 | 10.4 | 83 | 0.00 |
| 77 | | octane | 2.177 | 2.176 | 0.0 | 96 | 0.00 |
| 78 | C | tetrachloroethene | 2.230 | 2.391 | -7.2 | 103 | 0.00 |
| 79 | | 1,1,1,2-tetrachloroethane | 1.655 | 1.541 | 6.9 | 88 | 0.00 |
| 80 | C | chlorobenzene | 4.044 | 4.527 | -11.9 | 108 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 81 | C | ethylbenzene | 6.044 | 6.512 | -7.7 | 104 | 0.00 |
| 83 | C | m+p-xylene | 4.948 | 5.282 | -6.8 | 101 | 0.00 |
| 84 | C | bromoform | 2.041 | 2.296 | -12.5 | 100 | 0.00 |
| 85 | C | styrene | 4.416 | 4.708 | -6.6 | 100 | 0.00 |
| 86 | C | 1,1,2,2-tetrachloroethane | 3.453 | 4.111 | -19.1 | 110 | 0.00 |
| 87 | C | o-xylene | 4.848 | 5.307 | -9.5 | 102 | 0.00 |
| 88 | | 1,2,3-trichloropropane | 2.906 | 2.667 | 8.2 | 85 | 0.00 |
| 89 | | nonane | 4.101 | 3.710 | 9.5 | 84 | 0.00 |
| 90 | s | bromofluorobenzene | 3.148 | 2.956 | 6.1 | 86 | 0.00 |
| 91 | C | isopropylbenzene | 6.989 | 6.960 | 0.4 | 93 | 0.00 |
| 92 | | bromobenzene | 3.755 | 3.661 | 2.5 | 88 | 0.00 |
| 93 | | 2-chlorotoluene | 1.964 | 1.931 | 1.7 | 93 | 0.00 |
| 94 | | n-propylbenzene | 2.261 | 2.386 | -5.5 | 99 | 0.00 |
| 95 | | 4-chlorotoluene | 1.904 | 1.871 | 1.7 | 93 | 0.00 |
| 96 | | 4-ethyl toluene | 7.806 | 8.084 | -3.6 | 94 | 0.00 |
| 97 | | 1,3,5-trimethylbenzene | 6.349 | 6.723 | -5.9 | 99 | 0.00 |
| 98 | | tert-butylbenzene | 6.083 | 6.570 | -8.0 | 94 | 0.00 |
| 99 | | 1,2,4-trimethylbenzene | 5.907 | 6.664 | -12.8 | 100 | 0.00 |
| 100 | | decane | 4.703 | 5.074 | -7.9 | 97 | 0.00 |
| 101 | C | Benzyl Chloride | 4.132 | 4.863 | -17.7 | 95 | 0.00 |
| 102 | | 1,3-dichlorobenzene | 3.635 | 4.131 | -13.6 | 105 | 0.00 |
| 103 | C | 1,4-dichlorobenzene | 3.457 | 3.798 | -9.9 | 96 | 0.00 |
| 104 | | sec-butylbenzene | 8.890 | 8.859 | 0.3 | 89 | 0.00 |
| 106 | | p-isopropyltoluene | 7.318 | 7.408 | -1.2 | 86 | 0.00 |
| 107 | | 1,2-dichlorobenzene | 3.466 | 3.850 | -11.1 | 103 | 0.00 |
| 108 | | n-butylbenzene | 6.128 | 6.589 | -7.5 | 94 | 0.00 |
| 111 | C | 1,2-dibromo-3-chloropropane | 1.484 | 1.503 | -1.3 | 82 | 0.00 |
| 112 | | undecane | 5.096 | 5.771 | -13.2 | 98 | 0.00 |
| 114 | | dodecane | 5.052 | 6.149 | -21.7 | 96 | 0.00 |
| 115 | C | 1,2,4-trichlorobenzene | 2.161 | 3.260 | -50.9# | 120 | 0.00 |
| 116 | | naphthalene | 6.409 | 7.553 | -17.8 | 92 | 0.00 |
| 117 | | 1,2,3-trichlorobenzene | 2.483 | 2.998 | -20.7 | 92 | 0.00 |
| 119 | C | hexachlorobutadiene | 2.680 | 3.398 | -26.8 | 114 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default-ICV-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.542 | 49 | 346389 | 10.000 | ppbV | 0.00 |
| Standard Area = 370599 | | | Recovery = 93.47% | | | |
| 43) 1,4-difluorobenzene | 11.807 | 114 | 1060289 | 10.000 | ppbV | 0.00 |
| Standard Area = 1030530 | | | Recovery = 102.89% | | | |
| 67) chlorobenzene-D5 | 16.542 | 54 | 152384 | 10.000 | ppbV | 0.00 |
| Standard Area = 160625 | | | Recovery = 94.87% | | | |
| System Monitoring Compounds | | | | | | |
| 47) 1,2-dichloroethane-D4 | 10.425 | 65 | 138570 | 7.775 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 77.75% | | | |
| 69) toluene-D8 | 14.642 | 98 | 693328 | 9.543 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.43% | | | |
| 90) bromofluorobenzene | 17.908 | 95 | 450423 | 9.389 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.89% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.868 | 51 | 221421 | 8.391 | ppbV | 95 |
| 3) propylene | 3.898 | 41 | 162020M6 | 10.313 | ppbV | |
| 4) propane | 3.922 | 29 | 183286 | 8.788 | ppbV | 98 |
| 5) dichlorodifluoromethane | 3.976 | 85 | 267285 | 8.537 | ppbV | 98 |
| 6) chloromethane | 4.156 | 50 | 128720 | 8.947 | ppbV | 97 |
| 7) Freon-114 | 4.282 | 85 | 360336 | 9.459 | ppbV | 93 |
| 8) methanol | 4.354 | 31 | 329300 | 47.425 | ppbV | 95 |
| 9) vinyl chloride | 4.414 | 62 | 171787 | 10.237 | ppbV | 98 |
| 10) 1,3-butadiene | 4.582 | 54 | 166084 | 9.871 | ppbV | 98 |
| 11) butane | 4.642 | 43 | 204001 | 8.258 | ppbV | 98 |
| 13) bromomethane | 4.894 | 94 | 137099 | 9.868 | ppbV | 99 |
| 14) chloroethane | 5.116 | 64 | 86451 | 10.131 | ppbV | 98 |
| 15) ethanol | 5.290 | 31 | 610412 | 45.240 | ppbV | 95 |
| 16) dichlorofluoromethane | 5.254 | 67 | 210424 | 8.142 | ppbV | 97 |
| 17) vinyl bromide | 5.540 | 106 | 135293 | 8.480 | ppbV | 99 |
| 18) acrolein | 5.693 | 56 | 76623 | 8.741 | ppbV | 95 |
| 19) acetone | 5.847 | 43 | 833014 | 37.073 | ppbV | 87 |
| 20) acetonitrile | 5.537 | 41 | 125827 | 8.721 | ppbV | 100 |
| 21) trichlorofluoromethane | 6.057 | 101 | 191678 | 7.845 | ppbV | 99 |
| 22) isopropyl alcohol | 6.180 | 45 | 572476 | 19.927 | ppbV | 98 |
| 23) acrylonitrile | 6.433 | 53 | 136352 | 8.693 | ppbV | 96 |
| 24) pentane | 6.503 | 43 | 281647 | 8.545 | ppbV | 98 |
| 25) ethyl ether | 6.543 | 31 | 292726 | 8.338 | ppbV | 95 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default-ICV-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 26) 1,1-dichloroethene | 6.828 | 61 | 211747 | 9.208 | ppbV | | 98 |
| 27) tertiary butyl alcohol | 6.906 | 59 | 293109 | 8.513 | ppbV | # | 89 |
| 28) methylene chloride | 6.996 | 49 | 167183 | 7.729 | ppbV | | 86 |
| 29) 3-chloropropene | 7.134 | 41 | 292018 | 10.293 | ppbV | | 96 |
| 30) carbon disulfide | 7.284 | 76 | 576346 | 9.117 | ppbV | | 96 |
| 31) Freon 113 | 7.326 | 101 | 327923 | 9.838 | ppbV | | 99 |
| 32) trans-1,2-dichloroethene | 8.125 | 61 | 271264 | 10.071 | ppbV | | 98 |
| 33) 1,1-dichloroethane | 8.358 | 63 | 324331 | 10.225 | ppbV | | 98 |
| 34) MTBE | 8.442 | 73 | 501666 | 9.135 | ppbV | # | 92 |
| 35) vinyl acetate | 8.575 | 43 | 450582 | 9.810 | ppbV | # | 94 |
| 36) 2-butanone | 8.842 | 43 | 412576 | 9.683 | ppbV | | 99 |
| 37) cis-1,2-dichloroethene | 9.358 | 61 | 249634 | 10.741 | ppbV | | 98 |
| 38) Ethyl Acetate | 9.650 | 61 | 80301 | 11.290 | ppbV | | 78 |
| 39) chloroform | 9.708 | 83 | 345239 | 10.264 | ppbV | | 97 |
| 40) Tetrahydrofuran | 10.150 | 42 | 260110 | 9.757 | ppbV | | 98 |
| 41) 2,2-dichloropropane | 9.717 | 77 | 231569 | 8.116 | ppbV | | 96 |
| 42) 1,2-dichloroethane | 10.550 | 62 | 163926 | 8.832 | ppbV | | 94 |
| 44) hexane | 9.617 | 57 | 404341 | 10.281 | ppbV | # | 71 |
| 45) diisopropyl ether | 9.625 | 87 | 208167 | 9.276 | ppbV | | 80 |
| 46) tert-butyl ethyl ether | 10.250 | 59 | 579709 | 9.011 | ppbV | | 99 |
| 48) 1,1,1-trichloroethane | 10.842 | 97 | 249411 | 8.315 | ppbV | # | 94 |
| 49) 1,1-dichloropropene | 11.213 | 75 | 266994 | 8.406 | ppbV | | 96 |
| 50) benzene | 11.373 | 78 | 709014 | 9.235 | ppbV | | 98 |
| 52) carbon tetrachloride | 11.540 | 117 | 249878 | 8.972 | ppbV | # | 97 |
| 53) cyclohexane | 11.687 | 56 | 438751 | 10.298 | ppbV | | 95 |
| 54) tert-amyl methyl ether | 12.073 | 73 | 543454 | 8.110 | ppbV | | 97 |
| 55) dibromomethane | 12.293 | 93 | 167372 | 8.546 | ppbV | | 99 |
| 56) 1,2-dichloropropane | 12.327 | 63 | 228485 | 9.820 | ppbV | | 96 |
| 57) bromodichloromethane | 12.560 | 83 | 378150 | 9.229 | ppbV | | 99 |
| 58) 1,4-dioxane | 12.593 | 88 | 186460 | 10.589 | ppbV | | 98 |
| 59) trichloroethene | 12.607 | 130 | 284662 | 9.949 | ppbV | | 97 |
| 60) 2,2,4-trimethylpentane | 12.653 | 57 | 1307678 | 10.447 | ppbV | | 93 |
| 61) methyl methacrylate | 12.853 | 41 | 240011M4 | 6.953 | ppbV | | |
| 62) heptane | 12.973 | 43 | 439274 | 8.931 | ppbV | | 91 |
| 63) cis-1,3-dichloropropene | 13.617 | 75 | 355494 | 9.549 | ppbV | | 97 |
| 64) 4-methyl-2-pentanone | 13.658 | 43 | 506304 | 9.132 | ppbV | | 91 |
| 65) trans-1,3-dichloropropene | 14.242 | 75 | 280764 | 8.110 | ppbV | | 99 |
| 66) 1,1,2-trichloroethane | 14.442 | 97 | 243173 | 9.543 | ppbV | | 93 |
| 68) toluene | 14.758 | 91 | 807623 | 10.444 | ppbV | | 99 |
| 71) 1,3-dichloropropane | 14.783 | 76 | 339853 | 8.903 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default-ICV-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 72) 2-hexanone | 15.042 | 43 | 467205 | 10.293 | ppbV | | 92 |
| 74) dibromochloromethane | 15.200 | 129 | 354639 | 10.628 | ppbV | | 98 |
| 75) 1,2-dibromoethane | 15.450 | 107 | 373416 | 10.142 | ppbV | | 98 |
| 76) butyl acetate | 15.700 | 73 | 104928 | 8.955 | ppbV | # | 89 |
| 77) octane | 15.792 | 85 | 331646 | 9.998 | ppbV | | 89 |
| 78) tetrachloroethene | 15.925 | 166 | 364411 | 10.724 | ppbV | | 96 |
| 79) 1,1,1,2-tetrachloroethane | 16.567 | 131 | 234866 | 9.315 | ppbV | | 97 |
| 80) chlorobenzene | 16.575 | 112 | 689902 | 11.194 | ppbV | | 93 |
| 81) ethylbenzene | 16.933 | 91 | 992346 | 10.774 | ppbV | | 98 |
| 83) m+p-xylene | 17.092 | 91 | 1609680 | 21.349 | ppbV | | 100 |
| 84) bromoform | 17.158 | 173 | 349842 | 11.246 | ppbV | | 99 |
| 85) styrene | 17.417 | 104 | 717448 | 10.662 | ppbV | | 98 |
| 86) 1,1,2,2-tetrachloroethane | 17.508 | 83 | 626486 | 11.905 | ppbV | | 99 |
| 87) o-xylene | 17.508 | 91 | 808732 | 10.946 | ppbV | | 100 |
| 88) 1,2,3-trichloropropane | 17.625 | 75 | 406448 | 9.180 | ppbV | | 97 |
| 89) nonane | 17.708 | 43 | 565284 | 9.045 | ppbV | | 85 |
| 91) isopropylbenzene | 18.017 | 105 | 1060550 | 9.958 | ppbV | | 94 |
| 92) bromobenzene | 18.092 | 77 | 557819 | 9.747 | ppbV | | 98 |
| 93) 2-chlorotoluene | 18.417 | 126 | 294303 | 9.833 | ppbV | | 97 |
| 94) n-propylbenzene | 18.450 | 120 | 363605 | 10.553 | ppbV | | 90 |
| 95) 4-chlorotoluene | 18.475 | 126 | 285098 | 9.825 | ppbV | | 96 |
| 96) 4-ethyl toluene | 18.567 | 105 | 1231846 | 10.356 | ppbV | | 95 |
| 97) 1,3,5-trimethylbenzene | 18.633 | 105 | 1024519 | 10.589 | ppbV | | 92 |
| 98) tert-butylbenzene | 18.958 | 119 | 1001095 | 10.800 | ppbV | | 97 |
| 99) 1,2,4-trimethylbenzene | 18.958 | 105 | 1015452 | 11.280 | ppbV | | 91 |
| 100) decane | 19.033 | 57 | 773171 | 10.789 | ppbV | | 89 |
| 101) Benzyl Chloride | 19.075 | 91 | 741045 | 11.770 | ppbV | | 97 |
| 102) 1,3-dichlorobenzene | 19.083 | 146 | 629458 | 11.363 | ppbV | | 97 |
| 103) 1,4-dichlorobenzene | 19.142 | 146 | 578780 | 10.987 | ppbV | | 97 |
| 104) sec-butylbenzene | 19.175 | 105 | 1349895 | 9.965 | ppbV | | 100 |
| 106) p-isopropyltoluene | 19.292 | 119 | 1128850 | 10.123 | ppbV | | 99 |
| 107) 1,2-dichlorobenzene | 19.417 | 146 | 586621 | 11.107 | ppbV | | 97 |
| 108) n-butylbenzene | 19.633 | 91 | 1004129 | 10.753 | ppbV | | 99 |
| 111) 1,2-dibromo-3-chloropr... | 19.775 | 75 | 228977 | 10.123 | ppbV | | 88 |
| 112) undecane | 20.025 | 57 | 879394 | 11.324 | ppbV | | 91 |
| 114) dodecane | 20.925 | 57 | 936981 | 12.171 | ppbV | | 91 |
| 115) 1,2,4-trichlorobenzene | 20.875 | 180 | 496706 | 15.084 | ppbV | | 95 |
| 116) naphthalene | 20.992 | 128 | 1150960 | 11.786 | ppbV | | 98 |
| 117) 1,2,3-trichlorobenzene | 21.242 | 180 | 456864 | 12.074 | ppbV | | 96 |
| 119) hexachlorobutadiene | 21.308 | 225 | 517809 | 12.681 | ppbV | | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\r38596.D
Sub List : Default-ICV-AP2 - All compounds listed

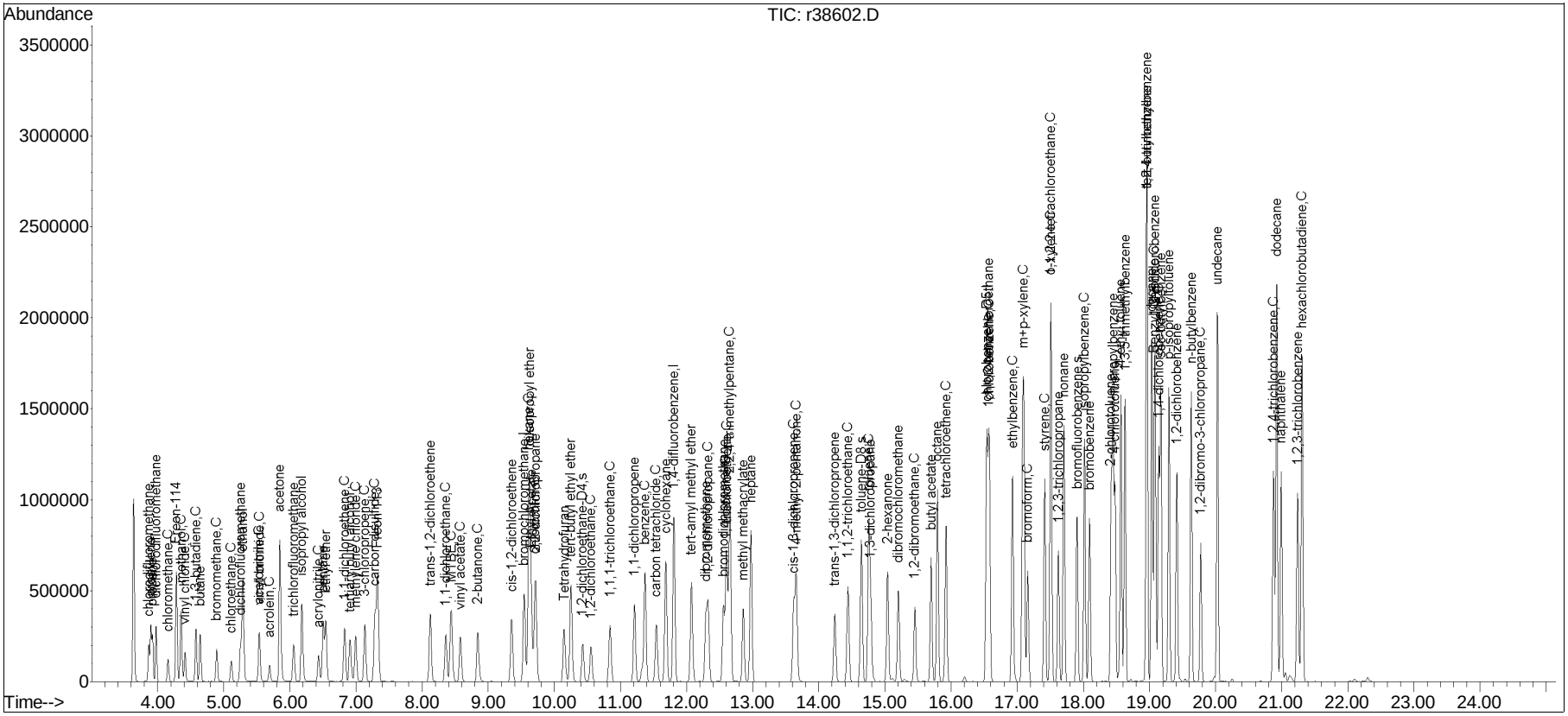
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

Sub List : Default-ICV-AP2 - All compounds listed0312T_I\r38596.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\
Data File : r38602.D
Acq On : 13 Mar 2020 12:06 AM
Operator : AIRPIANO3:AR
Sample : CTO15-LLSTD010
Misc : WG1350408
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:41:55 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312T_I\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

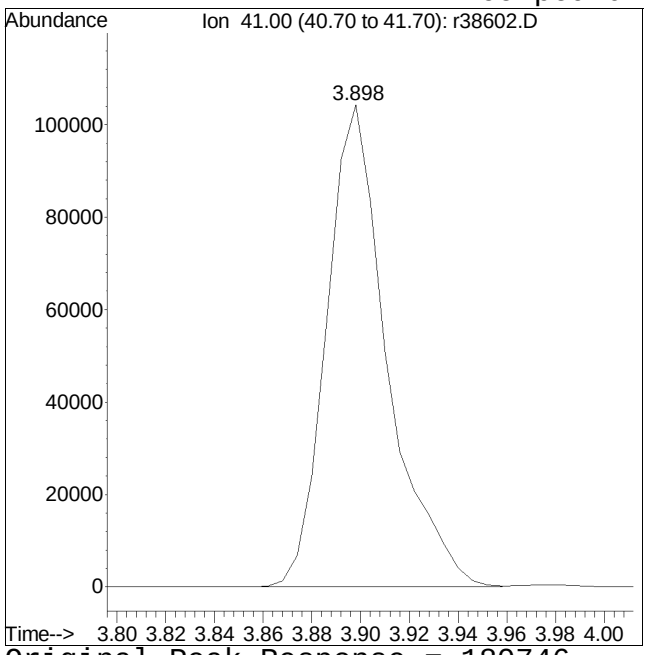


Manual Integration/Negative Proof Report

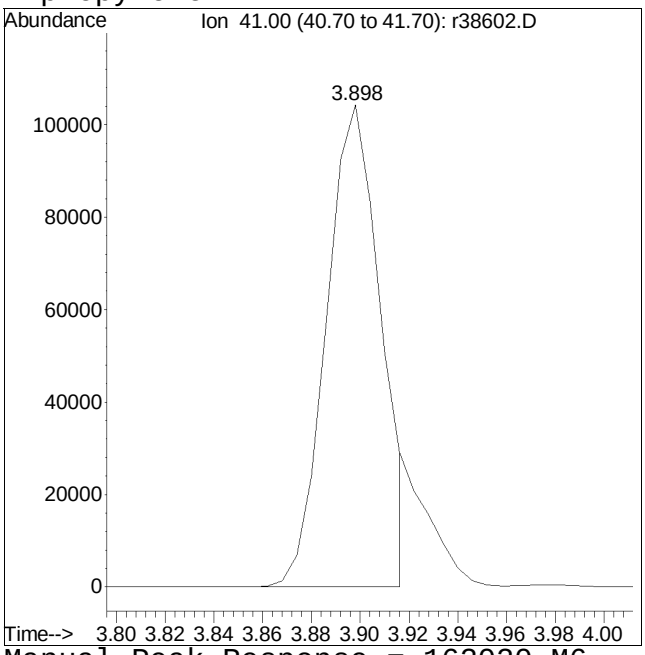
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38602.D
Date Inj'd : 3/13/2020 0:2: 6
Sample : CTO15-LLSTD010

Method : TFS3_200312.M
Operator : AIRPIANO3:AR
Instrument :
Quant Date : 3/13/2020 4:37 am

Compound #3: propylene




Original Peak Response = 180746




Manual Peak Response = 162020 M6

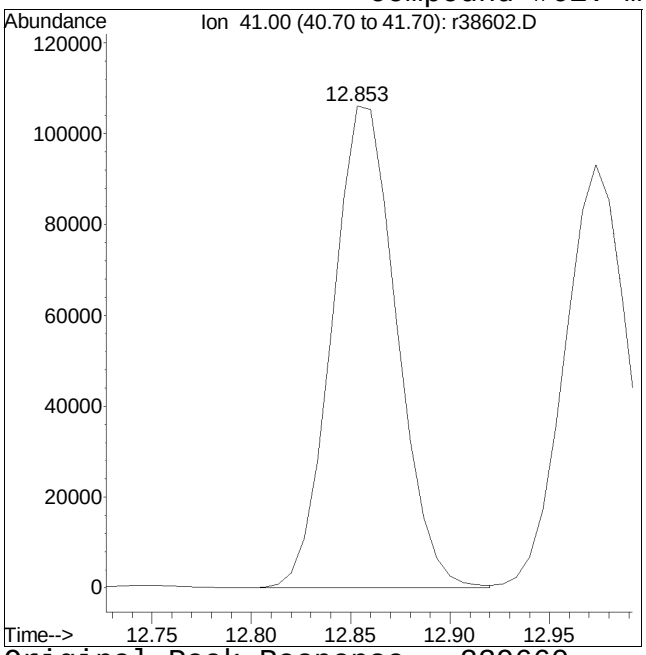
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

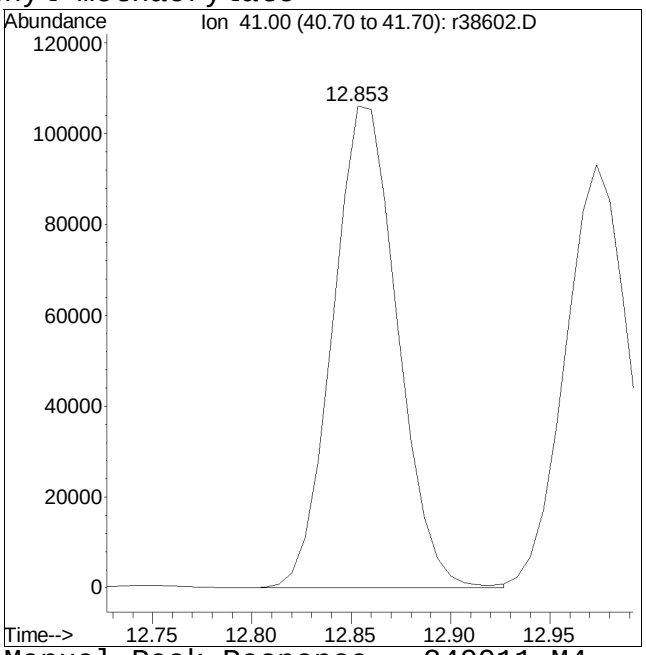
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38602.D
Date Inj'd : 3/13/2020 0:2: 6
Sample : CTO15-LLSTD010

Method : TFS3_200312.M
Operator : AIRPIANO3:AR
Instrument :
Quant Date : 3/13/2020 4:37 am

Compound #61: methyl methacrylate




Original Peak Response = 239660




Manual Peak Response = 240011 M4

M4 = Poor automated baseline construction.

# Continuing Calibration

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | **Lab Number** | : L2011723 | |
| **Project Name** | : MHD1801 | | **Project Number** | : MHD1801 | |
| **Instrument ID** | : AIRLAB19 | | **Calibration Date** | : 03/20/20 12:08 | |
| **Lab File ID** | : R193190 | | **Init. Calib. Date(s)** | : 02/25/20 | 02/25/20 |
| **Sample No** | : WG1353556-2 | | **Init. Calib. Times** | : 02:44 | 07:28 |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| bromochloromethane | 1 | 1 | - | 0 | 30 | 92 | 0 |
| chlorodifluoromethane | 0.626 | 0.534 | - | 14.7 | 30 | 83 | 0 |
| propylene | 0.411 | 0.455 | - | -10.7 | 30 | 106 | 0 |
| propane | 0.446 | 0.319 | - | 28.5 | 30 | 70 | 0 |
| dichlorodifluoromethane | 0.56 | 0.527 | - | 5.9 | 30 | 93 | 0 |
| chloromethane | 0.358 | 0.353 | - | 1.4 | 30 | 99 | 0 |
| Freon-114 | 0.832 | 0.905 | - | -8.8 | 30 | 102 | 0 |
| methanol | 0.162 | 0.13 | - | 19.8 | 30 | 78 | 0 |
| vinyl chloride | 0.445 | 0.44 | - | 1.1 | 30 | 98 | 0 |
| 1,3-butadiene | 0.384 | 0.391 | - | -1.8 | 30 | 98 | 0 |
| butane | 0.629 | 0.663 | - | -5.4 | 30 | 105 | 0 |
| bromomethane | 0.352 | 0.349 | - | 0.9 | 30 | 94 | 0 |
| chloroethane | 0.233 | 0.238 | - | -2.1 | 30 | 99 | 0 |
| ethanol | 0.292 | 0.238 | - | 18.5 | 30 | 77 | 0 |
| dichlorofluoromethane | 0.618 | 0.618 | - | 0 | 30 | 96 | 0 |
| vinyl bromide | 0.381 | 0.357 | - | 6.3 | 30 | 90 | 0 |
| acrolein | 0.204 | 0.199 | - | 2.5 | 30 | 92 | 0 |
| acetone | 0.537 | 0.562 | - | -4.7 | 30 | 100 | -.02 |
| acetonitrile | 0.39 | 0.495 | - | -26.9 | 30 | 118 | 0 |
| trichlorofluoromethane | 0.589 | 0.563 | - | 4.4 | 30 | 78 | 0 |
| isopropyl alcohol | 1.02 | 1.034 | - | -1.4 | 30 | 102 | -.02 |
| acrylonitrile | 0.517 | 0.513 | - | 0.8 | 30 | 95 | 0 |
| pentane | 1.043 | 1.171 | - | -12.3 | 30 | 106 | 0 |
| ethyl ether | 0.898 | 0.681 | - | 24.2 | 30 | 71 | 0 |
| 1,1-dichloroethene | 0.678 | 0.732 | - | -8 | 30 | 102 | 0 |
| tertiary butyl alcohol | 0.935 | 0.926 | - | 1 | 30 | 100 | -.03 |
| methylene chloride | 0.657 | 0.627 | - | 4.6 | 30 | 90 | 0 |
| 3-chloropropene | 0.791 | 0.983 | - | -24.3 | 30 | 118 | 0 |
| carbon disulfide | 1.825 | 1.971 | - | -8 | 30 | 100 | 0 |
| Freon 113 | 0.957 | 0.993 | - | -3.8 | 30 | 98 | 0 |
| trans-1,2-dichloroethene | 0.778 | 0.854 | - | -9.8 | 30 | 104 | 0 |
| 1,1-dichloroethane | 0.947 | 1.037 | - | -9.5 | 30 | 103 | 0 |
| MTBE | 1.536 | 1.441 | - | 6.2 | 30 | 89 | -.02 |
| vinyl acetate | 1.305 | 1.446 | - | -10.8 | 30 | 102 | 0 |
| 2-butanone | 1.204 | 1.334 | - | -10.8 | 30 | 103 | -.03 |
| cis-1,2-dichloroethene | 0.674 | 0.738 | - | -9.5 | 30 | 104 | 0 |
| Ethyl Acetate | 0.205 | 0.248 | - | -21 | 30 | 109 | -.02 |
| chloroform | 0.836 | 0.847 | - | -1.3 | 30 | 96 | 0 |
| Tetrahydrofuran | 0.809 | 0.93 | - | -15 | 30 | 109 | -.03 |
| 2,2-dichloropropane | 0.694 | 0.607 | - | 12.5 | 30 | 82 | 0 |
| 1,2-dichloroethane | 0.409 | 0.384 | - | 6.1 | 30 | 90 | 0 |
| 1,4-difluorobenzene | 1 | 1 | - | 0 | 30 | 105 | 0 |
| hexane | 0.367 | 0.361 | - | 1.6 | 30 | 104 | 0 |

* Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | **Lab Number** | : L2011723 | |
| **Project Name** | : MHD1801 | | **Project Number** | : MHD1801 | |
| **Instrument ID** | : AIRLAB19 | | **Calibration Date** | : 03/20/20 12:08 | |
| **Lab File ID** | : R193190 | | **Init. Calib. Date(s)** | : 02/25/20 | 02/25/20 |
| **Sample No** | : WG1353556-2 | | **Init. Calib. Times** | : 02:44 | 07:28 |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| diisopropyl ether | 0.197 | 0.196 | - | 0.5 | 30 | 105 | 0 |
| tert-butyl ethyl ether | 0.573 | 0.525 | - | 8.4 | 30 | 97 | 0 |
| 1,1,1-trichloroethane | 0.235 | 0.181 | - | 23 | 30 | 82 | 0 |
| 1,1-dichloropropene | 0.286 | 0.247 | - | 13.6 | 30 | 93 | 0 |
| benzene | 0.723 | 0.7 | - | 3.2 | 30 | 104 | 0 |
| carbon tetrachloride | 0.194 | 0.156 | - | 19.6 | 30 | 85 | 0 |
| cyclohexane | 0.401 | 0.396 | - | 1.2 | 30 | 105 | 0 |
| tert-amyl methyl ether | 0.618 | 0.542 | - | 12.3 | 30 | 93 | -.02 |
| dibromomethane | 0.178 | 0.167 | - | 6.2 | 30 | 101 | 0 |
| 1,2-dichloropropane | 0.231 | 0.235 | - | -1.7 | 30 | 108 | 0 |
| bromodichloromethane | 0.315 | 0.284 | - | 9.8 | 30 | 96 | 0 |
| 1,4-dioxane | 0.164 | 0.169 | - | -3 | 30 | 112 | -.03 |
| trichloroethene | 0.258 | 0.242 | - | 6.2 | 30 | 99 | 0 |
| 2,2,4-trimethylpentane | 1.157 | 1.166 | - | -0.8 | 30 | 110 | 0 |
| methyl methacrylate | 0.299 | 0.339 | - | -13.4 | 30 | 110 | 0 |
| heptane | 0.447 | 0.438 | - | 2 | 30 | 104 | 0 |
| cis-1,3-dichloropropene | 0.344 | 0.317 | - | 7.8 | 30 | 96 | 0 |
| 4-methyl-2-pentanone | 0.481 | 0.489 | - | -1.7 | 30 | 104 | -.03 |
| trans-1,3-dichloropropene | 0.309 | 0.267 | - | 13.6 | 30 | 90 | 0 |
| 1,1,2-trichloroethane | 0.252 | 0.237 | - | 6 | 30 | 100 | 0 |
| chlorobenzene-D5 | 1 | 1 | - | 0 | 30 | 94 | 0 |
| toluene | 6.089 | 6.503 | - | -6.8 | 30 | 101 | 0 |
| 1,3-dichloropropane | 2.846 | 2.988 | - | -5 | 30 | 99 | 0 |
| 2-hexanone | 3.538 | 3.952 | - | -11.7 | 30 | 104 | -.03 |
| dibromochloromethane | 2.341 | 2.368 | - | -1.2 | 30 | 93 | 0 |
| 1,2-dibromoethane | 2.8 | 3.001 | - | -7.2 | 30 | 100 | 0 |
| butyl acetate | 0.92 | 1.016 | - | -10.4 | 30 | 102 | -.03 |
| octane | 2.521 | 2.917 | - | -15.7 | 30 | 109 | 0 |
| tetrachloroethene | 2.675 | 2.957 | - | -10.5 | 30 | 101 | 0 |
| 1,1,1,2-tetrachloroethane | 1.721 | 1.835 | - | -6.6 | 30 | 98 | 0 |
| chlorobenzene | 4.839 | 5.569 | - | -15.1 | 30 | 107 | 0 |
| ethylbenzene | 7.303 | 7.736 | - | -5.9 | 30 | 97 | 0 |
| m+p-xylene | 5.758 | 6.014 | - | -4.4 | 30 | 97 | 0 |
| bromoform | 2.584 | 2.73 | - | -5.7 | 30 | 97 | 0 |
| styrene | 5.572 | 5.924 | - | -6.3 | 30 | 98 | 0 |
| 1,1,2,2-tetrachloroethane | 3.972 | 4.768 | - | -20 | 30 | 108 | 0 |
| o-xylene | 5.649 | 5.849 | - | -3.5 | 30 | 96 | 0 |
| 1,2,3-trichloropropane | 3.318 | 3.494 | - | -5.3 | 30 | 98 | 0 |
| nonane | 4.639 | 5.145 | - | -10.9 | 30 | 103 | 0 |
| isopropylbenzene | 8.211 | 8.444 | - | -2.8 | 30 | 95 | 0 |
| bromobenzene | 4.428 | 4.784 | - | -8 | 30 | 100 | 0 |
| 2-chlorotoluene | 2.276 | 2.624 | - | -15.3 | 30 | 102 | -.02 |
| n-propylbenzene | 2.736 | 3.134 | - | -14.5 | 30 | 102 | 0 |

* Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | **Lab Number** | : L2011723 | |
| **Project Name** | : MHD1801 | | **Project Number** | : MHD1801 | |
| **Instrument ID** | : AIRLAB19 | | **Calibration Date** | : 03/20/20 12:08 | |
| **Lab File ID** | : R193190 | | **Init. Calib. Date(s)** | : 02/25/20 | 02/25/20 |
| **Sample No** | : WG1353556-2 | | **Init. Calib. Times** | : 02:44 | 07:28 |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 4-chlorotoluene | 2.304 | 2.517 | - | -9.2 | 30 | 100 | 0 |
| 4-ethyl toluene | 9.565 | 10.154 | - | -6.2 | 30 | 95 | 0 |
| 1,3,5-trimethylbenzene | 7.686 | 8.276 | - | -7.7 | 30 | 98 | 0 |
| tert-butylbenzene | 7.075 | 7.787 | - | -10.1 | 30 | 99 | 0 |
| 1,2,4-trimethylbenzene | 7.114 | 7.505 | - | -5.5 | 30 | 94 | 0 |
| decane | 5.798 | 7.185 | - | -23.9 | 30 | 110 | 0 |
| Benzyl Chloride | 5.729 | 6.447 | - | -12.5 | 30 | 95 | 0 |
| 1,3-dichlorobenzene | 4.872 | 5.744 | - | -17.9 | 30 | 103 | 0 |
| 1,4-dichlorobenzene | 4.669 | 5.259 | - | -12.6 | 30 | 97 | 0 |
| sec-butylbenzene | 10.413 | 11.389 | - | -9.4 | 30 | 98 | 0 |
| p-isopropyltoluene | 8.833 | 9.751 | - | -10.4 | 30 | 98 | 0 |
| 1,2-dichlorobenzene | 4.62 | 5.263 | - | -13.9 | 30 | 99 | 0 |
| n-butylbenzene | 7.618 | 8.544 | - | -12.2 | 30 | 97 | 0 |
| 1,2-dibromo-3-chloropropan | 1.776 | 1.647 | - | 7.3 | 30 | 81 | -.02 |
| undecane | 6.295 | 7.632 | - | -21.2 | 30 | 102 | 0 |
| dodecane | 6.117 | 6.792 | - | -11 | 30 | 82 | 0 |
| 1,2,4-trichlorobenzene | 4.06 | 4.556 | - | -12.2 | 30 | 85 | 0 |
| naphthalene | 10.393 | 10.568 | - | -1.7 | 30 | 85 | 0 |
| 1,2,3-trichlorobenzene | 4.25 | 4.468 | - | -5.1 | 30 | 80 | 0 |
| hexachlorobutadiene | 3.529 | 3.398 | - | 3.7 | 30 | 76 | 0 |

* Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 | | |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 | | |
| **Instrument ID** | : AIRPIANO3 | **Calibration Date** | : 03/20/20 13:32 | | |
| **Lab File ID** | : R38754 | **Init. Calib. Date(s)** | : 03/12/20 | 03/12/20 | |
| **Sample No** | : WG1353541-2 | **Init. Calib. Times** | : 12:25 | 17:00 | |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| bromochloromethane | 1 | 1 | - | 0 | 30 | 95 | .03 |
| chlorodifluoromethane | 0.762 | 0.634 | - | 16.8 | 30 | 80 | .02 |
| propylene | 0.454 | 0.57 | - | -25.6 | 30 | 122 | .02 |
| propane | 0.602 | 0.503 | - | 16.4 | 30 | 80 | .02 |
| dichlorodifluoromethane | 0.904 | 0.962 | - | -6.4 | 30 | 101 | .02 |
| chloromethane | 0.415 | 0.496 | - | -19.5 | 30 | 115 | .02 |
| Freon-114 | 1.1 | 1.3 | - | -18.2 | 30 | 112 | .02 |
| methanol | 0.2 | 0.212 | - | -6 | 30 | 99 | .02 |
| vinyl chloride | 0.484 | 0.558 | - | -15.3 | 30 | 114 | .02 |
| 1,3-butadiene | 0.486 | 0.522 | - | -7.4 | 30 | 104 | .02 |
| butane | 0.713 | 0.901 | - | -26.4 | 30 | 123 | .02 |
| bromomethane | 0.401 | 0.482 | - | -20.2 | 30 | 117 | .02 |
| chloroethane | 0.246 | 0.298 | - | -21.1 | 30 | 121 | .03 |
| ethanol | 0.39 | 0.39 | - | 0 | 30 | 91 | .02 |
| dichlorofluoromethane | 0.746 | 0.898 | - | -20.4 | 30 | 116 | .02 |
| vinyl bromide | 0.461 | 0.544 | - | -18 | 30 | 113 | .02 |
| acrolein | 0.253 | 0.228 | - | 9.9 | 30 | 88 | .02 |
| acetone | 0.649 | 0.751 | - | -15.7 | 30 | 107 | .03 |
| acetonitrile | 0.417 | 0.473 | - | -13.4 | 30 | 114 | .02 |
| trichlorofluoromethane | 0.705 | 0.865 | - | -22.7 | 30 | 120 | .03 |
| isopropyl alcohol | 0.829 | 1.037 | - | -25.1 | 30 | 119 | .03 |
| acrylonitrile | 0.453 | 0.458 | - | -1.1 | 30 | 99 | .03 |
| pentane | 0.952 | 1.323 | - | -39* | 30 | 125 | .03 |
| ethyl ether | 1.014 | 0.907 | - | 10.6 | 30 | 88 | .03 |
| 1,1-dichloroethene | 0.664 | 0.719 | - | -8.3 | 30 | 111 | .03 |
| tertiary butyl alcohol | 0.994 | 0.929 | - | 6.5 | 30 | 87 | .02 |
| methylene chloride | 0.624 | 0.686 | - | -9.9 | 30 | 99 | .03 |
| 3-chloropropene | 0.819 | 1.03 | - | -25.8 | 30 | 122 | .03 |
| carbon disulfide | 1.825 | 1.75 | - | 4.1 | 30 | 91 | .03 |
| Freon 113 | 0.962 | 1.056 | - | -9.8 | 30 | 105 | .02 |
| trans-1,2-dichloroethene | 0.778 | 0.84 | - | -8 | 30 | 103 | .03 |
| 1,1-dichloroethane | 0.916 | 1.058 | - | -15.5 | 30 | 113 | .03 |
| MTBE | 1.585 | 1.675 | - | -5.7 | 30 | 99 | .03 |
| vinyl acetate | 1.326 | 1.625 | - | -22.5 | 30 | 113 | .03 |
| 2-butanone | 1.23 | 1.478 | - | -20.2 | 30 | 115 | .03 |
| cis-1,2-dichloroethene | 0.671 | 0.772 | - | -15.1 | 30 | 112 | .03 |
| Ethyl Acetate | 0.205 | 0.24 | - | -17.1 | 30 | 115 | .03 |
| chloroform | 0.971 | 0.994 | - | -2.4 | 30 | 97 | .03 |
| Tetrahydrofuran | 0.77 | 0.9 | - | -16.9 | 30 | 113 | .03 |
| 2,2-dichloropropane | 0.824 | 0.782 | - | 5.1 | 30 | 87 | .03 |
| 1,2-dichloroethane | 0.536 | 0.599 | - | -11.8 | 30 | 106 | .03 |
| 1,4-difluorobenzene | 1 | 1 | - | 0 | 30 | 94 | .03 |
| hexane | 0.371 | 0.382 | - | -3 | 30 | 98 | .03 |

* Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | **Lab Number** | : L2011723 | |
| **Project Name** | : MHD1801 | | **Project Number** | : MHD1801 | |
| **Instrument ID** | : AIRPIANO3 | | **Calibration Date** | : 03/20/20 13:32 | |
| **Lab File ID** | : R38754 | | **Init. Calib. Date(s)** | : 03/12/20 | 03/12/20 |
| **Sample No** | : WG1353541-2 | | **Init. Calib. Times** | : 12:25 | 17:00 |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| diisopropyl ether | 0.212 | 0.203 | - | 4.2 | 30 | 92 | .03 |
| tert-butyl ethyl ether | 0.607 | 0.596 | - | 1.8 | 30 | 92 | .03 |
| 1,1,1-trichloroethane | 0.283 | 0.321 | - | -13.4 | 30 | 106 | .03 |
| 1,1-dichloropropene | 0.3 | 0.297 | - | 1 | 30 | 92 | .03 |
| benzene | 0.724 | 0.705 | - | 2.6 | 30 | 93 | .03 |
| carbon tetrachloride | 0.263 | 0.283 | - | -7.6 | 30 | 96 | .03 |
| cyclohexane | 0.402 | 0.405 | - | -0.7 | 30 | 97 | .03 |
| tert-amyl methyl ether | 0.632 | 0.628 | - | 0.6 | 30 | 91 | .03 |
| dibromomethane | 0.185 | 0.19 | - | -2.7 | 30 | 97 | .03 |
| 1,2-dichloropropane | 0.219 | 0.269 | - | -22.8 | 30 | 118 | .03 |
| bromodichloromethane | 0.386 | 0.382 | - | 1 | 30 | 91 | .03 |
| 1,4-dioxane | 0.166 | 0.183 | - | -10.2 | 30 | 105 | .03 |
| trichloroethene | 0.27 | 0.324 | - | -20 | 30 | 114 | .03 |
| 2,2,4-trimethylpentane | 1.181 | 1.249 | - | -5.8 | 30 | 100 | .03 |
| methyl methacrylate | 0.326 | 0.31 | - | 4.9 | 30 | 79 | .03 |
| heptane | 0.464 | 0.571 | - | -23.1 | 30 | 115 | .03 |
| cis-1,3-dichloropropene | 0.351 | 0.389 | - | -10.8 | 30 | 103 | .03 |
| 4-methyl-2-pentanone | 0.523 | 0.668 | - | -27.7 | 30 | 116 | .03 |
| trans-1,3-dichloropropene | 0.327 | 0.313 | - | 4.3 | 30 | 88 | .03 |
| 1,1,2-trichloroethane | 0.24 | 0.277 | - | -15.4 | 30 | 111 | .03 |
| chlorobenzene-D5 | 1 | 1 | - | 0 | 30 | 87 | .02 |
| toluene | 5.075 | 6.093 | - | -20.1 | 30 | 109 | .03 |
| 1,3-dichloropropane | 2.505 | 2.594 | - | -3.6 | 30 | 89 | .03 |
| 2-hexanone | 2.979 | 4.179 | - | -40.3* | 30 | 114 | .03 |
| dibromochloromethane | 2.19 | 2.833 | - | -29.4 | 30 | 110 | .02 |
| 1,2-dibromoethane | 2.416 | 2.718 | - | -12.5 | 30 | 99 | .02 |
| butyl acetate | 0.769 | 0.784 | - | -2 | 30 | 87 | .03 |
| octane | 2.177 | 2.211 | - | -1.6 | 30 | 89 | .03 |
| tetrachloroethene | 2.23 | 2.569 | - | -15.2 | 30 | 102 | .02 |
| 1,1,1,2-tetrachloroethane | 1.655 | 1.91 | - | -15.4 | 30 | 100 | .02 |
| chlorobenzene | 4.044 | 4.627 | - | -14.4 | 30 | 101 | .03 |
| ethylbenzene | 6.044 | 7.362 | - | -21.8 | 30 | 108 | .02 |
| m+p-xylene | 4.948 | 6.131 | - | -23.9 | 30 | 108 | .03 |
| bromoform | 2.041 | 2.424 | - | -18.8 | 30 | 97 | .02 |
| styrene | 4.416 | 5.077 | - | -15 | 30 | 99 | .02 |
| 1,1,2,2-tetrachloroethane | 3.453 | 4.279 | - | -23.9 | 30 | 105 | .03 |
| o-xylene | 4.848 | 6.27 | - | -29.3 | 30 | 111 | .03 |
| 1,2,3-trichloropropane | 2.906 | 2.947 | - | -1.4 | 30 | 86 | .02 |
| nonane | 4.101 | 4.921 | - | -20 | 30 | 102 | .03 |
| isopropylbenzene | 6.989 | 7.592 | - | -8.6 | 30 | 93 | .03 |
| bromobenzene | 3.755 | 3.796 | - | -1.1 | 30 | 84 | .03 |
| 2-chlorotoluene | 1.964 | 2.226 | - | -13.3 | 30 | 99 | .02 |
| n-propylbenzene | 2.261 | 2.56 | - | -13.2 | 30 | 97 | .03 |

* Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Calibration Date** | : 03/20/20 13:32 |
| **Lab File ID** | : R38754 | **Init. Calib. Date(s)** | : 03/12/20 03/12/20 |
| **Sample No** | : WG1353541-2 | **Init. Calib. Times** | : 12:25 17:00 |
| **Channel** | : | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 4-chlorotoluene | 1.904 | 2.132 | - | -12 | 30 | 97 | .02 |
| 4-ethyl toluene | 7.806 | 9.008 | - | -15.4 | 30 | 97 | .02 |
| 1,3,5-trimethylbenzene | 6.349 | 7.68 | - | -21 | 30 | 104 | .02 |
| tert-butylbenzene | 6.083 | 7.184 | - | -18.1 | 30 | 95 | .03 |
| 1,2,4-trimethylbenzene | 5.907 | 7.673 | - | -29.9 | 30 | 106 | .03 |
| decane | 4.703 | 5.266 | - | -12 | 30 | 93 | .02 |
| Benzyl Chloride | 4.132 | 5.22 | - | -26.3 | 30 | 93 | .03 |
| 1,3-dichlorobenzene | 3.635 | 4.4 | - | -21 | 30 | 103 | .03 |
| 1,4-dichlorobenzene | 3.457 | 4.188 | - | -21.1 | 30 | 98 | .02 |
| sec-butylbenzene | 8.89 | 9.791 | - | -10.1 | 30 | 90 | .02 |
| p-isopropyltoluene | 7.318 | 8.018 | - | -9.6 | 30 | 85 | .02 |
| 1,2-dichlorobenzene | 3.466 | 4.188 | - | -20.8 | 30 | 103 | .02 |
| n-butylbenzene | 6.128 | 7.37 | - | -20.3 | 30 | 96 | .02 |
| 1,2-dibromo-3-chloropropan | 1.484 | 1.709 | - | -15.2 | 30 | 85 | .03 |
| undecane | 5.096 | 5.922 | - | -16.2 | 30 | 92 | .03 |
| dodecane | 5.052 | 6.014 | - | -19 | 30 | 86 | .02 |
| 1,2,4-trichlorobenzene | 2.161 | 2.986 | - | -38.2* | 30 | 101 | .02 |
| naphthalene | 6.409 | 7.957 | - | -24.2 | 30 | 89 | .02 |
| 1,2,3-trichlorobenzene | 2.483 | 2.9 | - | -16.8 | 30 | 82 | .02 |
| hexachlorobutadiene | 2.68 | 3.915 | - | -46.1* | 30 | 120 | .02 |

* Value outside of QC limits.

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 92 | 0.00 |
| 2 | | chlorodifluoromethane | 0.626 | 0.534 | 14.7 | 83 | 0.00 |
| 3 | | propylene | 0.411 | 0.455 | -10.7 | 106 | 0.00 |
| 4 | | propane | 0.446 | 0.319 | 28.5 | 70 | 0.00 |
| 5 | | dichlorodifluoromethane | 0.560 | 0.527 | 5.9 | 93 | 0.00 |
| 6 | C | chloromethane | 0.358 | 0.353 | 1.4 | 99 | 0.00 |
| 7 | | Freon-114 | 0.832 | 0.905 | -8.8 | 102 | 0.00 |
| 8 | C | methanol | 0.162 | 0.130 | 19.8 | 78 | 0.00 |
| 9 | C | vinyl chloride | 0.445 | 0.440 | 1.1 | 98 | 0.00 |
| 10 | C | 1,3-butadiene | 0.384 | 0.391 | -1.8 | 98 | 0.00 |
| 11 | | butane | 0.629 | 0.663 | -5.4 | 105 | 0.00 |
| 13 | C | bromomethane | 0.352 | 0.349 | 0.9 | 94 | 0.00 |
| 14 | C | chloroethane | 0.233 | 0.238 | -2.1 | 99 | 0.00 |
| 15 | | ethanol | 0.292 | 0.238 | 18.5 | 77 | 0.00 |
| 16 | | dichlorofluoromethane | 0.618 | 0.618 | 0.0 | 96 | 0.00 |
| 17 | C | vinyl bromide | 0.381 | 0.357 | 6.3 | 90 | 0.00 |
| 18 | C | acrolein | 0.204 | 0.199 | 2.5 | 92 | 0.00 |
| 19 | | acetone | 0.537 | 0.562 | -4.7 | 100 | -0.02 |
| 20 | C | acetonitrile | 0.390 | 0.495 | -26.9 | 118 | 0.00 |
| 21 | | trichlorofluoromethane | 0.589 | 0.563 | 4.4 | 78 | 0.00 |
| 22 | | isopropyl alcohol | 1.020 | 1.034 | -1.4 | 102 | -0.02 |
| 23 | C | acrylonitrile | 0.517 | 0.513 | 0.8 | 95 | 0.00 |
| 24 | | pentane | 1.043 | 1.171 | -12.3 | 106 | 0.00 |
| 25 | | ethyl ether | 0.898 | 0.681 | 24.2 | 71 | 0.00 |
| 26 | C | 1,1-dichloroethene | 0.678 | 0.732 | -8.0 | 102 | 0.00 |
| 27 | | tertiary butyl alcohol | 0.935 | 0.926 | 1.0 | 100 | -0.03 |
| 28 | C | methylene chloride | 0.657 | 0.627 | 4.6 | 90 | 0.00 |
| 29 | C | 3-chloropropene | 0.791 | 0.983 | -24.3 | 118 | 0.00 |
| 30 | C | carbon disulfide | 1.825 | 1.971 | -8.0 | 100 | 0.00 |
| 31 | | Freon 113 | 0.957 | 0.993 | -3.8 | 98 | 0.00 |
| 32 | | trans-1,2-dichloroethene | 0.778 | 0.854 | -9.8 | 104 | 0.00 |
| 33 | C | 1,1-dichloroethane | 0.947 | 1.037 | -9.5 | 103 | 0.00 |
| 34 | C | MTBE | 1.536 | 1.441 | 6.2 | 89 | -0.02 |
| 35 | C | vinyl acetate | 1.305 | 1.446 | -10.8 | 102 | 0.00 |
| 36 | C | 2-butanone | 1.204 | 1.334 | -10.8 | 103 | -0.03 |
| 37 | | cis-1,2-dichloroethene | 0.674 | 0.738 | -9.5 | 104 | 0.00 |
| 38 | | Ethyl Acetate | 0.205 | 0.248 | -21.0 | 109 | -0.02 |
| 39 | C | chloroform | 0.836 | 0.847 | -1.3 | 96 | 0.00 |
| 40 | | Tetrahydrofuran | 0.809 | 0.930 | -15.0 | 109 | -0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 41 | | 2,2-dichloropropane | 0.694 | 0.607 | 12.5 | 82 | 0.00 |
| 42 | C | 1,2-dichloroethane | 0.409 | 0.384 | 6.1 | 90 | 0.00 |
| 43 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 105 | 0.00 |
| 44 | C | hexane | 0.367 | 0.361 | 1.6 | 104 | 0.00 |
| 45 | | diisopropyl ether | 0.197 | 0.196 | 0.5 | 105 | 0.00 |
| 46 | | tert-butyl ethyl ether | 0.573 | 0.525 | 8.4 | 97 | 0.00 |
| 48 | C | 1,1,1-trichloroethane | 0.235 | 0.181 | 23.0 | 82 | 0.00 |
| 49 | | 1,1-dichloropropene | 0.286 | 0.247 | 13.6 | 93 | 0.00 |
| 50 | C | benzene | 0.723 | 0.700 | 3.2 | 104 | 0.00 |
| 52 | C | carbon tetrachloride | 0.194 | 0.156 | 19.6 | 85 | 0.00 |
| 53 | | cyclohexane | 0.401 | 0.396 | 1.2 | 105 | 0.00 |
| 54 | | tert-amyl methyl ether | 0.618 | 0.542 | 12.3 | 93 | -0.02 |
| 55 | | dibromomethane | 0.178 | 0.167 | 6.2 | 101 | 0.00 |
| 56 | C | 1,2-dichloropropane | 0.231 | 0.235 | -1.7 | 108 | 0.00 |
| 57 | | bromodichloromethane | 0.315 | 0.284 | 9.8 | 96 | 0.00 |
| 58 | C | 1,4-dioxane | 0.164 | 0.169 | -3.0 | 112 | -0.03 |
| 59 | C | trichloroethene | 0.258 | 0.242 | 6.2 | 99 | 0.00 |
| 60 | C | 2,2,4-trimethylpentane | 1.157 | 1.166 | -0.8 | 110 | 0.00 |
| 61 | | methyl methacrylate | 0.299 | 0.339 | -13.4 | 110 | 0.00 |
| 62 | | heptane | 0.447 | 0.438 | 2.0 | 104 | 0.00 |
| 63 | C | cis-1,3-dichloropropene | 0.344 | 0.317 | 7.8 | 96 | 0.00 |
| 64 | C | 4-methyl-2-pentanone | 0.481 | 0.489 | -1.7 | 104 | -0.03 |
| 65 | | trans-1,3-dichloropropene | 0.309 | 0.267 | 13.6 | 90 | 0.00 |
| 66 | C | 1,1,2-trichloroethane | 0.252 | 0.237 | 6.0 | 100 | 0.00 |
| 67 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 94 | 0.00 |
| 68 | C | toluene | 6.089 | 6.503 | -6.8 | 101 | 0.00 |
| 71 | | 1,3-dichloropropane | 2.846 | 2.988 | -5.0 | 99 | 0.00 |
| 72 | | 2-hexanone | 3.538 | 3.952 | -11.7 | 104 | -0.03 |
| 74 | | dibromochloromethane | 2.341 | 2.368 | -1.2 | 93 | 0.00 |
| 75 | C | 1,2-dibromoethane | 2.800 | 3.001 | -7.2 | 100 | 0.00 |
| 76 | | butyl acetate | 0.920 | 1.016 | -10.4 | 102 | -0.03 |
| 77 | | octane | 2.521 | 2.917 | -15.7 | 109 | 0.00 |
| 78 | C | tetrachloroethene | 2.675 | 2.957 | -10.5 | 101 | 0.00 |
| 79 | | 1,1,1,2-tetrachloroethane | 1.721 | 1.835 | -6.6 | 98 | 0.00 |
| 80 | C | chlorobenzene | 4.839 | 5.569 | -15.1 | 107 | 0.00 |
| 81 | C | ethylbenzene | 7.303 | 7.736 | -5.9 | 97 | 0.00 |
| 83 | C | m+p-xylene | 5.758 | 6.014 | -4.4 | 97 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 84 | C | bromoform | 2.584 | 2.730 | -5.7 | 97 | 0.00 |
| 85 | C | styrene | 5.572 | 5.924 | -6.3 | 98 | 0.00 |
| 86 | C | 1,1,2,2-tetrachloroethane | 3.972 | 4.768 | -20.0 | 108 | 0.00 |
| 87 | C | o-xylene | 5.649 | 5.849 | -3.5 | 96 | 0.00 |
| 88 | | 1,2,3-trichloropropane | 3.318 | 3.494 | -5.3 | 98 | 0.00 |
| 89 | | nonane | 4.639 | 5.145 | -10.9 | 103 | 0.00 |
| 91 | C | isopropylbenzene | 8.211 | 8.444 | -2.8 | 95 | 0.00 |
| 92 | | bromobenzene | 4.428 | 4.784 | -8.0 | 100 | 0.00 |
| 93 | | 2-chlorotoluene | 2.276 | 2.624 | -15.3 | 102 | -0.02 |
| 94 | | n-propylbenzene | 2.736 | 3.134 | -14.5 | 102 | 0.00 |
| 95 | | 4-chlorotoluene | 2.304 | 2.517 | -9.2 | 100 | 0.00 |
| 96 | | 4-ethyl toluene | 9.565 | 10.154 | -6.2 | 95 | 0.00 |
| 97 | | 1,3,5-trimethylbenzene | 7.686 | 8.276 | -7.7 | 98 | 0.00 |
| 98 | | tert-butylbenzene | 7.075 | 7.787 | -10.1 | 99 | 0.00 |
| 99 | | 1,2,4-trimethylbenzene | 7.114 | 7.505 | -5.5 | 94 | 0.00 |
| 100 | | decane | 5.798 | 7.185 | -23.9 | 110 | 0.00 |
| 101 | C | Benzyl Chloride | 5.729 | 6.447 | -12.5 | 95 | 0.00 |
| 102 | | 1,3-dichlorobenzene | 4.872 | 5.744 | -17.9 | 103 | 0.00 |
| 103 | C | 1,4-dichlorobenzene | 4.669 | 5.259 | -12.6 | 97 | 0.00 |
| 104 | | sec-butylbenzene | 10.413 | 11.389 | -9.4 | 98 | 0.00 |
| 106 | | p-isopropyltoluene | 8.833 | 9.751 | -10.4 | 98 | 0.00 |
| 107 | | 1,2-dichlorobenzene | 4.620 | 5.263 | -13.9 | 99 | 0.00 |
| 108 | | n-butylbenzene | 7.618 | 8.544 | -12.2 | 97 | 0.00 |
| 111 | C | 1,2-dibromo-3-chloropropane | 1.776 | 1.647 | 7.3 | 81 | -0.02 |
| 112 | | undecane | 6.295 | 7.632 | -21.2 | 102 | 0.00 |
| 114 | | dodecane | 6.117 | 6.792 | -11.0 | 82 | 0.00 |
| 115 | C | 1,2,4-trichlorobenzene | 4.060 | 4.556 | -12.2 | 85 | 0.00 |
| 116 | | naphthalene | 10.393 | 10.568 | -1.7 | 85 | 0.00 |
| 117 | | 1,2,3-trichlorobenzene | 4.250 | 4.468 | -5.1 | 80 | 0.00 |
| 119 | C | hexachlorobutadiene | 3.529 | 3.398 | 3.7 | 76 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) bromochloromethane | 8.783 | 49 | 288364 | 10.000 | ppbV | | 0.00 |
| 43) 1,4-difluorobenzene | 10.747 | 114 | 940727 | 10.000 | ppbV | | 0.00 |
| 67) chlorobenzene-D5 | 14.875 | 54 | 108860 | 10.000 | ppbV | | 0.00 |
| System Monitoring Compounds | | | | | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.436 | 51 | 153899 | 8.529 | ppbV | | 96 |
| 3) propylene | 3.472 | 41 | 131224M6 | 11.081 | ppbV | | |
| 4) propane | 3.502 | 29 | 92035 | 7.160 | ppbV | # | 65 |
| 5) dichlorodifluoromethane | 3.568 | 85 | 151945 | 9.402 | ppbV | | 100 |
| 6) chloromethane | 3.778 | 50 | 101875 | 9.856 | ppbV | | 98 |
| 7) Freon-114 | 3.916 | 85 | 261065 | 10.886 | ppbV | | 94 |
| 8) methanol | 3.982 | 31 | 187416 | 40.088 | ppbV | # | 1 |
| 9) vinyl chloride | 4.066 | 62 | 126801 | 9.884 | ppbV | | 99 |
| 10) 1,3-butadiene | 4.240 | 54 | 112720 | 10.189 | ppbV | | 98 |
| 11) butane | 4.312 | 43 | 191052 | 10.538 | ppbV | | 92 |
| 13) bromomethane | 4.576 | 94 | 100755 | 9.927 | ppbV | | 99 |
| 14) chloroethane | 4.792 | 64 | 68634 | 10.204 | ppbV | | 94 |
| 15) ethanol | 4.924 | 31 | 342897 | 40.697 | ppbV | # | 64 |
| 16) dichlorofluoromethane | 4.918 | 67 | 178227 | 10.006 | ppbV | | 96 |
| 17) vinyl bromide | 5.210 | 106 | 103011 | 9.386 | ppbV | | 92 |
| 18) acrolein | 5.340 | 56 | 57354 | 9.737 | ppbV | # | 40 |
| 19) acetone | 5.480 | 43 | 810609 | 52.349 | ppbV | # | 99 |
| 20) acetonitrile | 5.183 | 41 | 142722 | 12.696 | ppbV | # | 56 |
| 21) trichlorofluoromethane | 5.693 | 101 | 162268 | 9.559 | ppbV | | 100 |
| 22) isopropyl alcohol | 5.760 | 45 | 745607 | 25.345 | ppbV | | 100 |
| 23) acrylonitrile | 6.013 | 53 | 148058 | 9.933 | ppbV | | 98 |
| 24) pentane | 6.100 | 43 | 337717 | 11.232 | ppbV | | 96 |
| 25) ethyl ether | 6.117 | 31 | 196288 | 7.583 | ppbV | # | 77 |
| 26) 1,1-dichloroethene | 6.402 | 61 | 211161 | 10.793 | ppbV | | 95 |
| 27) tertiary butyl alcohol | 6.420 | 59 | 267000 | 9.900 | ppbV | # | 95 |
| 28) methylene chloride | 6.540 | 49 | 180789 | 9.550 | ppbV | # | 82 |
| 29) 3-chloropropene | 6.666 | 41 | 283438 | 12.424 | ppbV | | 94 |
| 30) carbon disulfide | 6.846 | 76 | 568305 | 10.800 | ppbV | # | 80 |
| 31) Freon 113 | 6.822 | 101 | 286376 | 10.376 | ppbV | | 96 |
| 32) trans-1,2-dichloroethene | 7.533 | 61 | 246338 | 10.983 | ppbV | | 96 |
| 33) 1,1-dichloroethane | 7.742 | 63 | 298953 | 10.942 | ppbV | | 97 |
| 34) MTBE | 7.792 | 73 | 415402 | 9.379 | ppbV | | 95 |
| 35) vinyl acetate | 7.892 | 43 | 416945 | 11.079 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 36) 2-butanone | 8.133 | 43 | 384750 | 11.085 | ppbV | | 95 |
| 37) cis-1,2-dichloroethene | 8.608 | 61 | 212681 | 10.941 | ppbV | | 96 |
| 38) Ethyl Acetate | 8.817 | 61 | 71474 | 12.104 | ppbV | | 84 |
| 39) chloroform | 8.908 | 83 | 244279 | 10.129 | ppbV | # | 94 |
| 40) Tetrahydrofuran | 9.308 | 42 | 268223 | 11.500 | ppbV | | 98 |
| 41) 2,2-dichloropropane | 8.942 | 77 | 175116 | 8.753 | ppbV | | 92 |
| 42) 1,2-dichloroethane | 9.667 | 62 | 110764 | 9.400 | ppbV | | 96 |
| 44) hexane | 8.825 | 57 | 339237 | 9.838 | ppbV | | 84 |
| 45) diisopropyl ether | 8.800 | 87 | 183988 | 9.949 | ppbV | | 91 |
| 46) tert-butyl ethyl ether | 9.350 | 59 | 494062 | 9.160 | ppbV | | 96 |
| 48) 1,1,1-trichloroethane | 9.925 | 97 | 169899 | 7.675 | ppbV | | 90 |
| 49) 1,1-dichloropropene | 10.247 | 75 | 232103 | 8.629 | ppbV | # | 87 |
| 50) benzene | 10.400 | 78 | 658197 | 9.676 | ppbV | | 98 |
| 52) carbon tetrachloride | 10.560 | 117 | 146826 | 8.050 | ppbV | | 89 |
| 53) cyclohexane | 10.693 | 56 | 372504 | 9.876 | ppbV | | 98 |
| 54) tert-amyl methyl ether | 10.980 | 73 | 509898 | 8.767 | ppbV | | 99 |
| 55) dibromomethane | 11.220 | 93 | 157166 | 9.373 | ppbV | | 99 |
| 56) 1,2-dichloropropane | 11.247 | 63 | 221304 | 10.172 | ppbV | | 97 |
| 57) bromodichloromethane | 11.447 | 83 | 266810 | 8.995 | ppbV | | 95 |
| 58) 1,4-dioxane | 11.467 | 88 | 158535 | 10.295 | ppbV | | 83 |
| 59) trichloroethene | 11.493 | 130 | 227809 | 9.397 | ppbV | | 95 |
| 60) 2,2,4-trimethylpentane | 11.520 | 57 | 1096580 | 10.076 | ppbV | | 99 |
| 61) methyl methacrylate | 11.660 | 41 | 318895 | 11.349 | ppbV | | 92 |
| 62) heptane | 11.780 | 43 | 412056 | 9.794 | ppbV | | 97 |
| 63) cis-1,3-dichloropropene | 12.392 | 75 | 298586 | 9.225 | ppbV | | 93 |
| 64) 4-methyl-2-pentanone | 12.408 | 43 | 460276 | 10.169 | ppbV | | 95 |
| 65) trans-1,3-dichloropropene | 12.917 | 75 | 251366 | 8.635 | ppbV | | 98 |
| 66) 1,1,2-trichloroethane | 13.100 | 97 | 223151 | 9.420 | ppbV | | 96 |
| 68) toluene | 13.367 | 91 | 707935 | 10.680 | ppbV | | 98 |
| 71) 1,3-dichloropropane | 13.383 | 76 | 325299 | 10.501 | ppbV | # | 95 |
| 72) 2-hexanone | 13.567 | 43 | 430209 | 11.170 | ppbV | # | 82 |
| 74) dibromochloromethane | 13.758 | 129 | 257829 | 10.119 | ppbV | | 98 |
| 75) 1,2-dibromoethane | 13.975 | 107 | 326675 | 10.717 | ppbV | | 99 |
| 76) butyl acetate | 14.108 | 73 | 110621 | 11.050 | ppbV | | 80 |
| 77) octane | 14.208 | 85 | 317498 | 11.571 | ppbV | | 96 |
| 78) tetrachloroethene | 14.358 | 166 | 321862 | 11.051 | ppbV | | 96 |
| 79) 1,1,1,2-tetrachloroethane | 14.892 | 131 | 199770 | 10.661 | ppbV | | 95 |
| 80) chlorobenzene | 14.908 | 112 | 606187 | 11.507 | ppbV | | 96 |
| 81) ethylbenzene | 15.192 | 91 | 842194 | 10.593 | ppbV | | 99 |
| 83) m+p-xylene | 15.325 | 91 | 1309348 | 20.890 | ppbV | | 98 |
| 84) bromoform | 15.408 | 173 | 297232 | 10.565 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

Sub List : Default-LCS-AP2 - All compounds listed

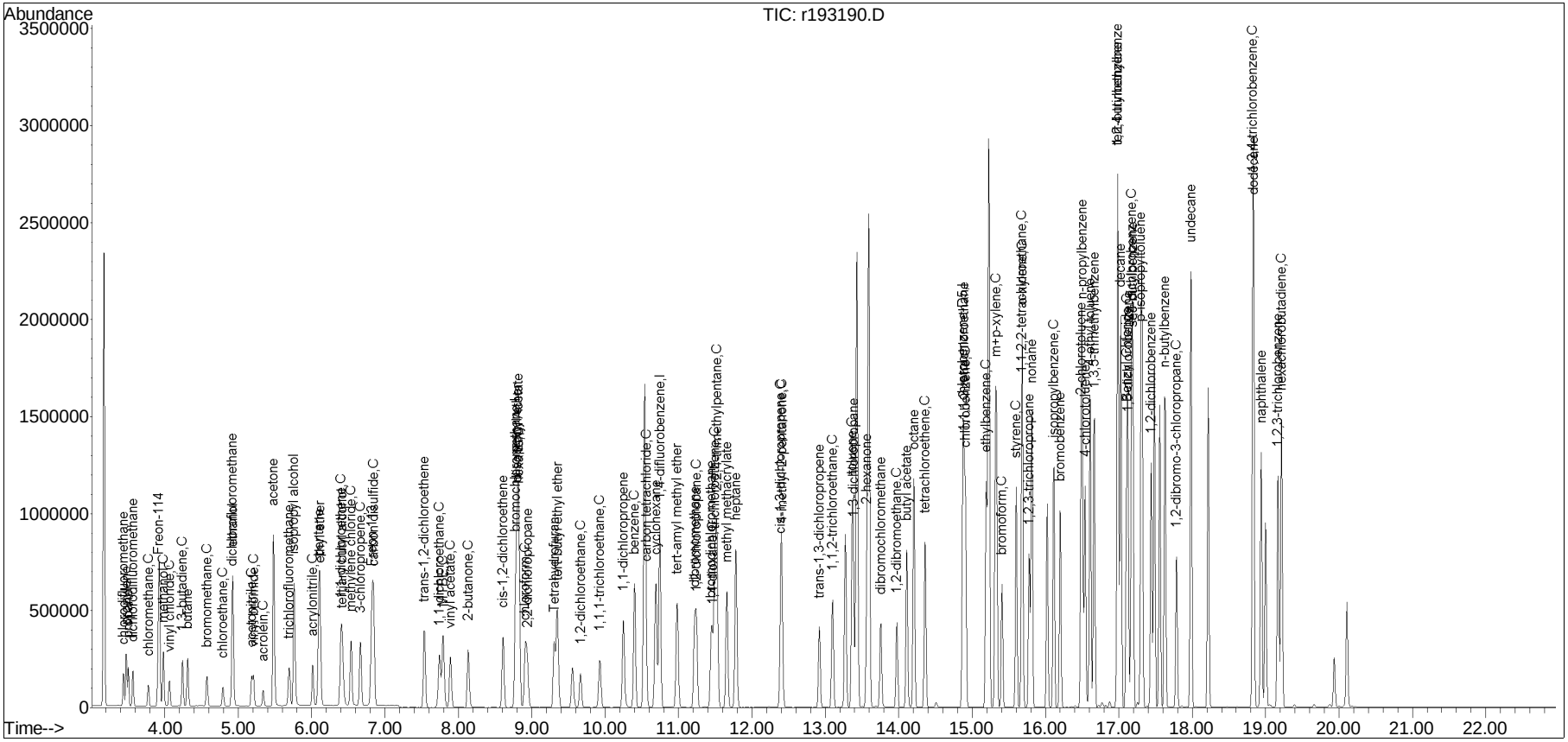
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 85) styrene | 15.600 | 104 | 644931 | 10.632 | ppbV | | 98 |
| 86) 1,1,2,2-tetrachloroethane | 15.675 | 83 | 519017 | 12.002 | ppbV | | 96 |
| 87) o-xylene | 15.683 | 91 | 636697 | 10.353 | ppbV | | 95 |
| 88) 1,2,3-trichloropropane | 15.775 | 75 | 380400 | 10.533 | ppbV | | 99 |
| 89) nonane | 15.817 | 43 | 560107 | 11.092 | ppbV | | 94 |
| 91) isopropylbenzene | 16.117 | 105 | 919173 | 10.284 | ppbV | | 94 |
| 92) bromobenzene | 16.200 | 77 | 520830 | 10.805 | ppbV | | 94 |
| 93) 2-chlorotoluene | 16.483 | 126 | 285624 | 11.527 | ppbV | # | 30 |
| 94) n-propylbenzene | 16.500 | 120 | 341214 | 11.454 | ppbV | | 74 |
| 95) 4-chlorotoluene | 16.542 | 126 | 273987 | 10.923 | ppbV | | 92 |
| 96) 4-ethyl toluene | 16.608 | 105 | 1105350 | 10.615 | ppbV | | 95 |
| 97) 1,3,5-trimethylbenzene | 16.667 | 105 | 900899 | 10.767 | ppbV | | 93 |
| 98) tert-butylbenzene | 16.983 | 119 | 847644 | 11.005 | ppbV | | 96 |
| 99) 1,2,4-trimethylbenzene | 16.983 | 105 | 816949 | 10.548 | ppbV | | 97 |
| 100) decane | 17.025 | 57 | 782120 | 12.392 | ppbV | | 91 |
| 101) Benzyl Chloride | 17.108 | 91 | 701770 | 11.252 | ppbV | | 98 |
| 102) 1,3-dichlorobenzene | 17.125 | 146 | 625271 | 11.788 | ppbV | | 98 |
| 103) 1,4-dichlorobenzene | 17.175 | 146 | 572442 | 11.263 | ppbV | | 97 |
| 104) sec-butylbenzene | 17.192 | 105 | 1239777 | 10.937 | ppbV | | 98 |
| 106) p-isopropyltoluene | 17.300 | 119 | 1061443 | 11.039 | ppbV | | 94 |
| 107) 1,2-dichlorobenzene | 17.442 | 146 | 572901 | 11.391 | ppbV | | 97 |
| 108) n-butylbenzene | 17.625 | 91 | 930070 | 11.215 | ppbV | | 95 |
| 111) 1,2-dibromo-3-chloropr... | 17.783 | 75 | 179301 | 9.275 | ppbV | # | 64 |
| 112) undecane | 17.983 | 57 | 830869 | 12.124 | ppbV | | 90 |
| 114) dodecane | 18.833 | 57 | 739340 | 11.102 | ppbV | | 87 |
| 115) 1,2,4-trichlorobenzene | 18.825 | 180 | 495982 | 11.221 | ppbV | | 98 |
| 116) naphthalene | 18.942 | 128 | 1150418 | 10.168 | ppbV | | 96 |
| 117) 1,2,3-trichlorobenzene | 19.167 | 180 | 486391 | 10.512 | ppbV | | 97 |
| 119) hexachlorobutadiene | 19.217 | 225 | 369895 | 9.629 | ppbV | | 97 |

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

Sub List : Default-LCS-AP2 - All compounds listedd)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193190.D
Acq On : 20 Mar 2020 12:08 PM
Operator : AIRLAB19:EW
Sample : WG1353556-2,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:27:29 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

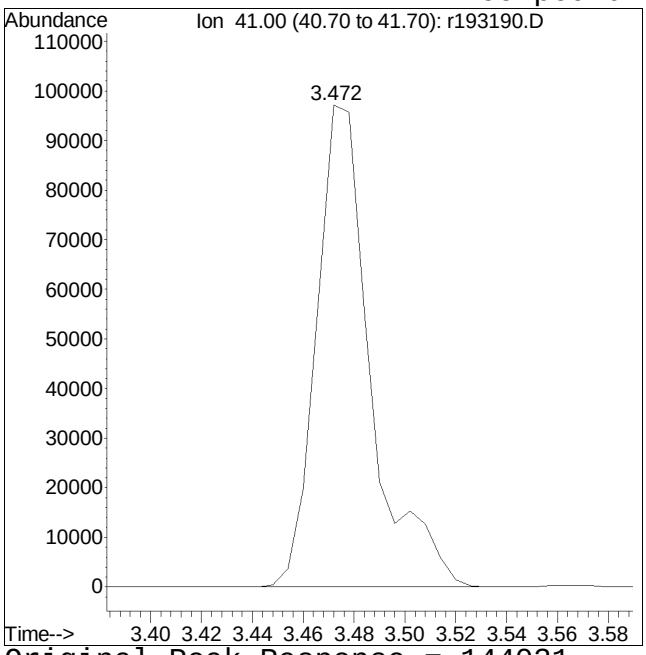


# Manual Integration Report

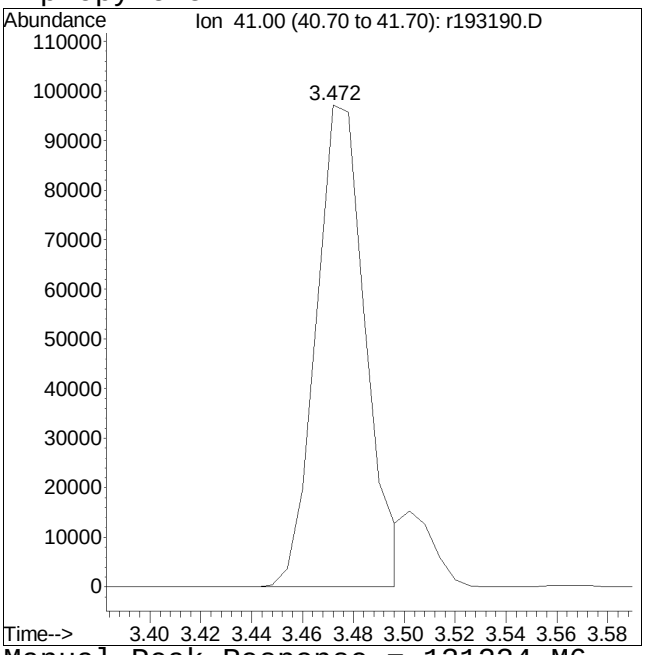
Data Path : O:\Forensics\Data\Airlab19Q
Data File : r193190.D
Date Inj'd : 3/20/2020 0:2: 8
Sample : WG1353556-2,3,250,250

Method : TFS19_200224.M
Operator : AIRLAB19:EW
Instrument :
Quant Date : 3/20/2020 2:26 pm

Compound #3: propylene




Original Peak Response = 144031



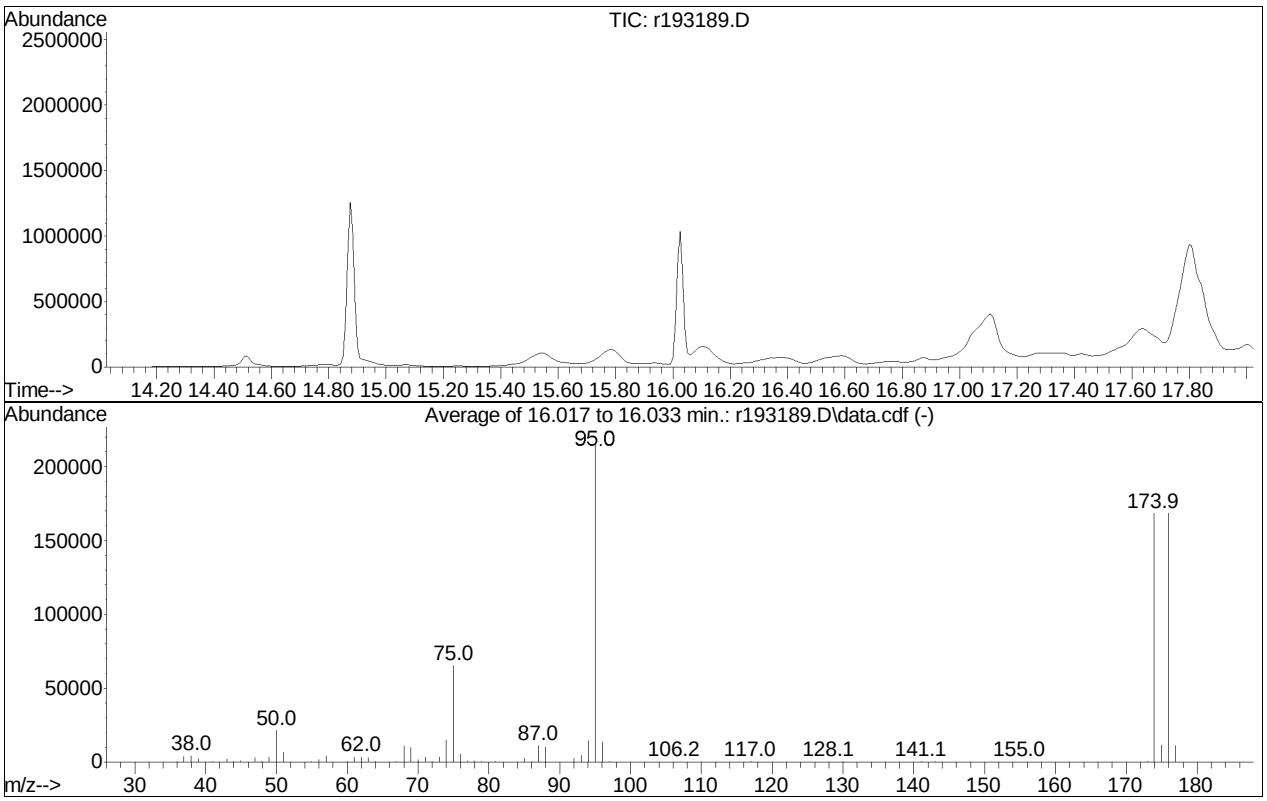

Manual Peak Response = 131224 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193189.D
Acq On : 20 Mar 2020 11:27 AM
Operator : AIRLAB19:EW
Sample : WG1353556-1,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Tue Feb 25 10:21:39 2020




Spectrum Information: Average of 16.017 to 16.033 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 10.0 | 21640 | PASS |
| 75 | 95 | 30 | 66 | 30.2 | 65329 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 216202 | PASS |
| 96 | 95 | 5 | 9 | 6.3 | 13705 | PASS |
| 173 | 174 | 0.00 | 2 | 0.4 | 755 | PASS |
| 174 | 95 | 50 | 120 | 78.1 | 168766 | PASS |
| 175 | 174 | 4 | 9 | 6.9 | 11582 | PASS |
| 176 | 174 | 93 | 101 | 99.7 | 168309 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 11144 | PASS |

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 95 | 0.03 |
| 2 | | chlorodifluoromethane | 0.762 | 0.634 | 16.8 | 80 | 0.02 |
| 3 | | propylene | 0.454 | 0.570 | -25.6 | 122 | 0.02 |
| 4 | | propane | 0.602 | 0.503 | 16.4 | 80 | 0.02 |
| 5 | | dichlorodifluoromethane | 0.904 | 0.962 | -6.4 | 101 | 0.02 |
| 6 | C | chloromethane | 0.415 | 0.496 | -19.5 | 115 | 0.02 |
| 7 | | Freon-114 | 1.100 | 1.300 | -18.2 | 112 | 0.02 |
| 8 | C | methanol | 0.200 | 0.212 | -6.0 | 99 | 0.02 |
| 9 | C | vinyl chloride | 0.484 | 0.558 | -15.3 | 114 | 0.02 |
| 10 | C | 1,3-butadiene | 0.486 | 0.522 | -7.4 | 104 | 0.02 |
| 11 | | butane | 0.713 | 0.901 | -26.4 | 123 | 0.02 |
| 13 | C | bromomethane | 0.401 | 0.482 | -20.2 | 117 | 0.02 |
| 14 | C | chloroethane | 0.246 | 0.298 | -21.1 | 121 | 0.03 |
| 15 | | ethanol | 0.390 | 0.390 | 0.0 | 91 | 0.02 |
| 16 | | dichlorofluoromethane | 0.746 | 0.898 | -20.4 | 116 | 0.02 |
| 17 | C | vinyl bromide | 0.461 | 0.544 | -18.0 | 113 | 0.02 |
| 18 | C | acrolein | 0.253 | 0.228 | 9.9 | 88 | 0.02 |
| 19 | | acetone | 0.649 | 0.751 | -15.7 | 107 | 0.03 |
| 20 | C | acetonitrile | 0.417 | 0.473 | -13.4 | 114 | 0.02 |
| 21 | | trichlorofluoromethane | 0.705 | 0.865 | -22.7 | 120 | 0.03 |
| 22 | | isopropyl alcohol | 0.829 | 1.037 | -25.1 | 119 | 0.03 |
| 23 | C | acrylonitrile | 0.453 | 0.458 | -1.1 | 99 | 0.03 |
| 24 | | pentane | 0.952 | 1.323 | -39.0# | 125 | 0.03 |
| 25 | | ethyl ether | 1.014 | 0.907 | 10.6 | 88 | 0.03 |
| 26 | C | 1,1-dichloroethene | 0.664 | 0.719 | -8.3 | 111 | 0.03 |
| 27 | | tertiary butyl alcohol | 0.994 | 0.929 | 6.5 | 87 | 0.02 |
| 28 | C | methylene chloride | 0.624 | 0.686 | -9.9 | 99 | 0.03 |
| 29 | C | 3-chloropropene | 0.819 | 1.030 | -25.8 | 122 | 0.03 |
| 30 | C | carbon disulfide | 1.825 | 1.750 | 4.1 | 91 | 0.03 |
| 31 | | Freon 113 | 0.962 | 1.056 | -9.8 | 105 | 0.02 |
| 32 | | trans-1,2-dichloroethene | 0.778 | 0.840 | -8.0 | 103 | 0.03 |
| 33 | C | 1,1-dichloroethane | 0.916 | 1.058 | -15.5 | 113 | 0.03 |
| 34 | C | MTBE | 1.585 | 1.675 | -5.7 | 99 | 0.03 |
| 35 | C | vinyl acetate | 1.326 | 1.625 | -22.5 | 113 | 0.03 |
| 36 | C | 2-butanone | 1.230 | 1.478 | -20.2 | 115 | 0.03 |
| 37 | | cis-1,2-dichloroethene | 0.671 | 0.772 | -15.1 | 112 | 0.03 |
| 38 | | Ethyl Acetate | 0.205 | 0.240 | -17.1 | 115 | 0.03 |
| 39 | C | chloroform | 0.971 | 0.994 | -2.4 | 97 | 0.03 |
| 40 | | Tetrahydrofuran | 0.770 | 0.900 | -16.9 | 113 | 0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 41 | | 2,2-dichloropropane | 0.824 | 0.782 | 5.1 | 87 | 0.03 |
| 42 | C | 1,2-dichloroethane | 0.536 | 0.599 | -11.8 | 106 | 0.03 |
| 43 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 94 | 0.03 |
| 44 | C | hexane | 0.371 | 0.382 | -3.0 | 98 | 0.03 |
| 45 | | diisopropyl ether | 0.212 | 0.203 | 4.2 | 92 | 0.03 |
| 46 | | tert-butyl ethyl ether | 0.607 | 0.596 | 1.8 | 92 | 0.03 |
| 48 | C | 1,1,1-trichloroethane | 0.283 | 0.321 | -13.4 | 106 | 0.03 |
| 49 | | 1,1-dichloropropene | 0.300 | 0.297 | 1.0 | 92 | 0.03 |
| 50 | C | benzene | 0.724 | 0.705 | 2.6 | 93 | 0.03 |
| 52 | C | carbon tetrachloride | 0.263 | 0.283 | -7.6 | 96 | 0.03 |
| 53 | | cyclohexane | 0.402 | 0.405 | -0.7 | 97 | 0.03 |
| 54 | | tert-amyl methyl ether | 0.632 | 0.628 | 0.6 | 91 | 0.03 |
| 55 | | dibromomethane | 0.185 | 0.190 | -2.7 | 97 | 0.03 |
| 56 | C | 1,2-dichloropropane | 0.219 | 0.269 | -22.8 | 118 | 0.03 |
| 57 | | bromodichloromethane | 0.386 | 0.382 | 1.0 | 91 | 0.03 |
| 58 | C | 1,4-dioxane | 0.166 | 0.183 | -10.2 | 105 | 0.03 |
| 59 | C | trichloroethene | 0.270 | 0.324 | -20.0 | 114 | 0.03 |
| 60 | C | 2,2,4-trimethylpentane | 1.181 | 1.249 | -5.8 | 100 | 0.03 |
| 61 | | methyl methacrylate | 0.326 | 0.310 | 4.9 | 79 | 0.03 |
| 62 | | heptane | 0.464 | 0.571 | -23.1 | 115 | 0.03 |
| 63 | C | cis-1,3-dichloropropene | 0.351 | 0.389 | -10.8 | 103 | 0.03 |
| 64 | C | 4-methyl-2-pentanone | 0.523 | 0.668 | -27.7 | 116 | 0.03 |
| 65 | | trans-1,3-dichloropropene | 0.327 | 0.313 | 4.3 | 88 | 0.03 |
| 66 | C | 1,1,2-trichloroethane | 0.240 | 0.277 | -15.4 | 111 | 0.03 |
| 67 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 87 | 0.02 |
| 68 | C | toluene | 5.075 | 6.093 | -20.1 | 109 | 0.03 |
| 71 | | 1,3-dichloropropane | 2.505 | 2.594 | -3.6 | 89 | 0.03 |
| 72 | | 2-hexanone | 2.979 | 4.179 | -40.3# | 114 | 0.03 |
| 74 | | dibromochloromethane | 2.190 | 2.833 | -29.4 | 110 | 0.02 |
| 75 | C | 1,2-dibromoethane | 2.416 | 2.718 | -12.5 | 99 | 0.02 |
| 76 | | butyl acetate | 0.769 | 0.784 | -2.0 | 87 | 0.03 |
| 77 | | octane | 2.177 | 2.211 | -1.6 | 89 | 0.03 |
| 78 | C | tetrachloroethene | 2.230 | 2.569 | -15.2 | 102 | 0.02 |
| 79 | | 1,1,1,2-tetrachloroethane | 1.655 | 1.910 | -15.4 | 100 | 0.02 |
| 80 | C | chlorobenzene | 4.044 | 4.627 | -14.4 | 101 | 0.03 |
| 81 | C | ethylbenzene | 6.044 | 7.362 | -21.8 | 108 | 0.02 |
| 83 | C | m+p-xylene | 4.948 | 6.131 | -23.9 | 108 | 0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 84 | C | bromoform | 2.041 | 2.424 | -18.8 | 97 | 0.02 |
| 85 | C | styrene | 4.416 | 5.077 | -15.0 | 99 | 0.02 |
| 86 | C | 1,1,2,2-tetrachloroethane | 3.453 | 4.279 | -23.9 | 105 | 0.03 |
| 87 | C | o-xylene | 4.848 | 6.270 | -29.3 | 111 | 0.03 |
| 88 | | 1,2,3-trichloropropane | 2.906 | 2.947 | -1.4 | 86 | 0.02 |
| 89 | | nonane | 4.101 | 4.921 | -20.0 | 102 | 0.03 |
| 91 | C | isopropylbenzene | 6.989 | 7.592 | -8.6 | 93 | 0.03 |
| 92 | | bromobenzene | 3.755 | 3.796 | -1.1 | 84 | 0.03 |
| 93 | | 2-chlorotoluene | 1.964 | 2.226 | -13.3 | 99 | 0.02 |
| 94 | | n-propylbenzene | 2.261 | 2.560 | -13.2 | 97 | 0.03 |
| 95 | | 4-chlorotoluene | 1.904 | 2.132 | -12.0 | 97 | 0.02 |
| 96 | | 4-ethyl toluene | 7.806 | 9.008 | -15.4 | 97 | 0.02 |
| 97 | | 1,3,5-trimethylbenzene | 6.349 | 7.680 | -21.0 | 104 | 0.02 |
| 98 | | tert-butylbenzene | 6.083 | 7.184 | -18.1 | 95 | 0.03 |
| 99 | | 1,2,4-trimethylbenzene | 5.907 | 7.673 | -29.9 | 106 | 0.03 |
| 100 | | decane | 4.703 | 5.266 | -12.0 | 93 | 0.02 |
| 101 | C | Benzyl Chloride | 4.132 | 5.220 | -26.3 | 93 | 0.03 |
| 102 | | 1,3-dichlorobenzene | 3.635 | 4.400 | -21.0 | 103 | 0.03 |
| 103 | C | 1,4-dichlorobenzene | 3.457 | 4.188 | -21.1 | 98 | 0.02 |
| 104 | | sec-butylbenzene | 8.890 | 9.791 | -10.1 | 90 | 0.02 |
| 106 | | p-isopropyltoluene | 7.318 | 8.018 | -9.6 | 85 | 0.02 |
| 107 | | 1,2-dichlorobenzene | 3.466 | 4.188 | -20.8 | 103 | 0.02 |
| 108 | | n-butylbenzene | 6.128 | 7.370 | -20.3 | 96 | 0.02 |
| 111 | C | 1,2-dibromo-3-chloropropane | 1.484 | 1.709 | -15.2 | 85 | 0.03 |
| 112 | | undecane | 5.096 | 5.922 | -16.2 | 92 | 0.03 |
| 114 | | dodecane | 5.052 | 6.014 | -19.0 | 86 | 0.02 |
| 115 | C | 1,2,4-trichlorobenzene | 2.161 | 2.986 | -38.2# | 101 | 0.02 |
| 116 | | naphthalene | 6.409 | 7.957 | -24.2 | 89 | 0.02 |
| 117 | | 1,2,3-trichlorobenzene | 2.483 | 2.900 | -16.8 | 82 | 0.02 |
| 119 | C | hexachlorobutadiene | 2.680 | 3.915 | -46.1# | 120 | 0.02 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 2

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) bromochloromethane | 9.583 | 49 | 353543 | 10.000 | ppbV | | 0.03 |
| Standard Area = 353543 | | | Recovery = 100.00% | | | | |
| 43) 1,4-difluorobenzene | 11.847 | 114 | 970632 | 10.000 | ppbV | | 0.03 |
| Standard Area = 970632 | | | Recovery = 100.00% | | | | |
| 67) chlorobenzene-D5 | 16.567 | 54 | 139948 | 10.000 | ppbV | | 0.02 |
| Standard Area = 139948 | | | Recovery = 100.00% | | | | |
| System Monitoring Compounds | | | | | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) chlorodifluoromethane | 3.886 | 51 | 224083 | 8.320 | ppbV | # | 94 |
| 3) propylene | 3.916 | 41 | 201526M6 | 12.568 | ppbV | | |
| 4) propane | 3.946 | 29 | 177893 | 8.357 | ppbV | # | 87 |
| 5) dichlorodifluoromethane | 4.000 | 85 | 340013 | 10.640 | ppbV | | 99 |
| 6) chloromethane | 4.180 | 50 | 175228 | 11.933 | ppbV | | 96 |
| 7) Freon-114 | 4.306 | 85 | 459629 | 11.822 | ppbV | | 94 |
| 8) methanol | 4.378 | 31 | 375337 | 52.962 | ppbV | | 98 |
| 9) vinyl chloride | 4.438 | 62 | 197192 | 11.513 | ppbV | | 97 |
| 10) 1,3-butadiene | 4.606 | 54 | 184419 | 10.739 | ppbV | | 87 |
| 11) butane | 4.672 | 43 | 318693 | 12.639 | ppbV | # | 94 |
| 13) bromomethane | 4.924 | 94 | 170280 | 12.008 | ppbV | | 95 |
| 14) chloroethane | 5.146 | 64 | 105516 | 12.115 | ppbV | | 97 |
| 15) ethanol | 5.320 | 31 | 688947 | 50.027 | ppbV | # | 80 |
| 16) dichlorofluoromethane | 5.284 | 67 | 317364 | 12.031 | ppbV | | 98 |
| 17) vinyl bromide | 5.570 | 106 | 192187 | 11.803 | ppbV | | 99 |
| 18) acrolein | 5.723 | 56 | 80597 | 9.009 | ppbV | | 96 |
| 19) acetone | 5.880 | 43 | 1327673 | 57.892 | ppbV | # | 84 |
| 20) acetonitrile | 5.567 | 41 | 167253 | 11.358 | ppbV | | 97 |
| 21) trichlorofluoromethane | 6.090 | 101 | 305977 | 12.270 | ppbV | | 98 |
| 22) isopropyl alcohol | 6.213 | 45 | 916909 | 31.270 | ppbV | # | 96 |
| 23) acrylonitrile | 6.467 | 53 | 162088 | 10.125 | ppbV | | 98 |
| 24) pentane | 6.537 | 43 | 467584 | 13.899 | ppbV | # | 94 |
| 25) ethyl ether | 6.577 | 31 | 320834 | 8.953 | ppbV | # | 92 |
| 26) 1,1-dichloroethene | 6.864 | 61 | 254062 | 10.825 | ppbV | | 92 |
| 27) tertiary butyl alcohol | 6.942 | 59 | 328459 | 9.346 | ppbV | | 98 |
| 28) methylene chloride | 7.032 | 49 | 242639 | 10.990 | ppbV | | 99 |
| 29) 3-chloropropene | 7.170 | 41 | 364211 | 12.578 | ppbV | | 93 |
| 30) carbon disulfide | 7.320 | 76 | 618756 | 9.590 | ppbV | | 97 |
| 31) Freon 113 | 7.356 | 101 | 373192 | 10.969 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) trans-1,2-dichloroethene | 8.158 | 61 | 296925 | 10.801 | ppbV | | 97 |
| 33) 1,1-dichloroethane | 8.392 | 63 | 374044 | 11.553 | ppbV | | 100 |
| 34) MTBE | 8.475 | 73 | 592185 | 10.565 | ppbV | | 97 |
| 35) vinyl acetate | 8.617 | 43 | 574639 | 12.258 | ppbV | | 95 |
| 36) 2-butanone | 8.875 | 43 | 522608 | 12.017 | ppbV | | 96 |
| 37) cis-1,2-dichloroethene | 9.392 | 61 | 272820 | 11.501 | ppbV | | 97 |
| 38) Ethyl Acetate | 9.692 | 61 | 84761 | 11.676 | ppbV | | 99 |
| 39) chloroform | 9.742 | 83 | 351512 | 10.239 | ppbV | | 97 |
| 40) Tetrahydrofuran | 10.183 | 42 | 318057 | 11.689 | ppbV | | 94 |
| 41) 2,2-dichloropropane | 9.758 | 77 | 276579 | 9.498 | ppbV | | 90 |
| 42) 1,2-dichloroethane | 10.592 | 62 | 211882 | 11.184 | ppbV | | 96 |
| 44) hexane | 9.650 | 57 | 371246 | 10.311 | ppbV | | 97 |
| 45) diisopropyl ether | 9.658 | 87 | 197448 | 9.611 | ppbV | | 83 |
| 46) tert-butyl ethyl ether | 10.283 | 59 | 578305 | 9.819 | ppbV | | 98 |
| 48) 1,1,1-trichloroethane | 10.875 | 97 | 311625 | 11.348 | ppbV | | 98 |
| 49) 1,1-dichloropropene | 11.247 | 75 | 287968 | 9.904 | ppbV | | 95 |
| 50) benzene | 11.407 | 78 | 683936 | 9.732 | ppbV | | 99 |
| 52) carbon tetrachloride | 11.580 | 117 | 274453 | 10.765 | ppbV | | 97 |
| 53) cyclohexane | 11.720 | 56 | 393017 | 10.077 | ppbV | | 94 |
| 54) tert-amyl methyl ether | 12.107 | 73 | 609545 | 9.936 | ppbV | | 95 |
| 55) dibromomethane | 12.327 | 93 | 184013 | 10.263 | ppbV | | 96 |
| 56) 1,2-dichloropropane | 12.360 | 63 | 261176 | 12.262 | ppbV | | 99 |
| 57) bromodichloromethane | 12.593 | 83 | 370778 | 9.885 | ppbV | | 98 |
| 58) 1,4-dioxane | 12.627 | 88 | 177883 | 11.035 | ppbV | | 100 |
| 59) trichloroethene | 12.640 | 130 | 314176 | 11.995 | ppbV | | 98 |
| 60) 2,2,4-trimethylpentane | 12.687 | 57 | 1212430 | 10.581 | ppbV | | 95 |
| 61) methyl methacrylate | 12.893 | 41 | 301099 | 9.528 | ppbV | | 96 |
| 62) heptane | 13.007 | 43 | 554356 | 12.312 | ppbV | | 92 |
| 63) cis-1,3-dichloropropene | 13.658 | 75 | 377301 | 11.071 | ppbV | | 96 |
| 64) 4-methyl-2-pentanone | 13.692 | 43 | 648864 | 12.784 | ppbV | | 94 |
| 65) trans-1,3-dichloropropene | 14.275 | 75 | 303555 | 9.578 | ppbV | | 95 |
| 66) 1,1,2-trichloroethane | 14.475 | 97 | 268889 | 11.527 | ppbV | | 94 |
| 68) toluene | 14.792 | 91 | 852731 | 12.007 | ppbV | | 100 |
| 71) 1,3-dichloropropane | 14.817 | 76 | 363045 | 10.355 | ppbV | | 87 |
| 72) 2-hexanone | 15.067 | 43 | 584802 | 14.029 | ppbV | # | 87 |
| 74) dibromochloromethane | 15.233 | 129 | 396414 | 12.935 | ppbV | | 99 |
| 75) 1,2-dibromoethane | 15.483 | 107 | 380331 | 11.247 | ppbV | | 99 |
| 76) butyl acetate | 15.725 | 73 | 109739 | 10.198 | ppbV | | 82 |
| 77) octane | 15.825 | 85 | 309483 | 10.159 | ppbV | | 82 |
| 78) tetrachloroethene | 15.950 | 166 | 359495 | 11.519 | ppbV | | 93 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

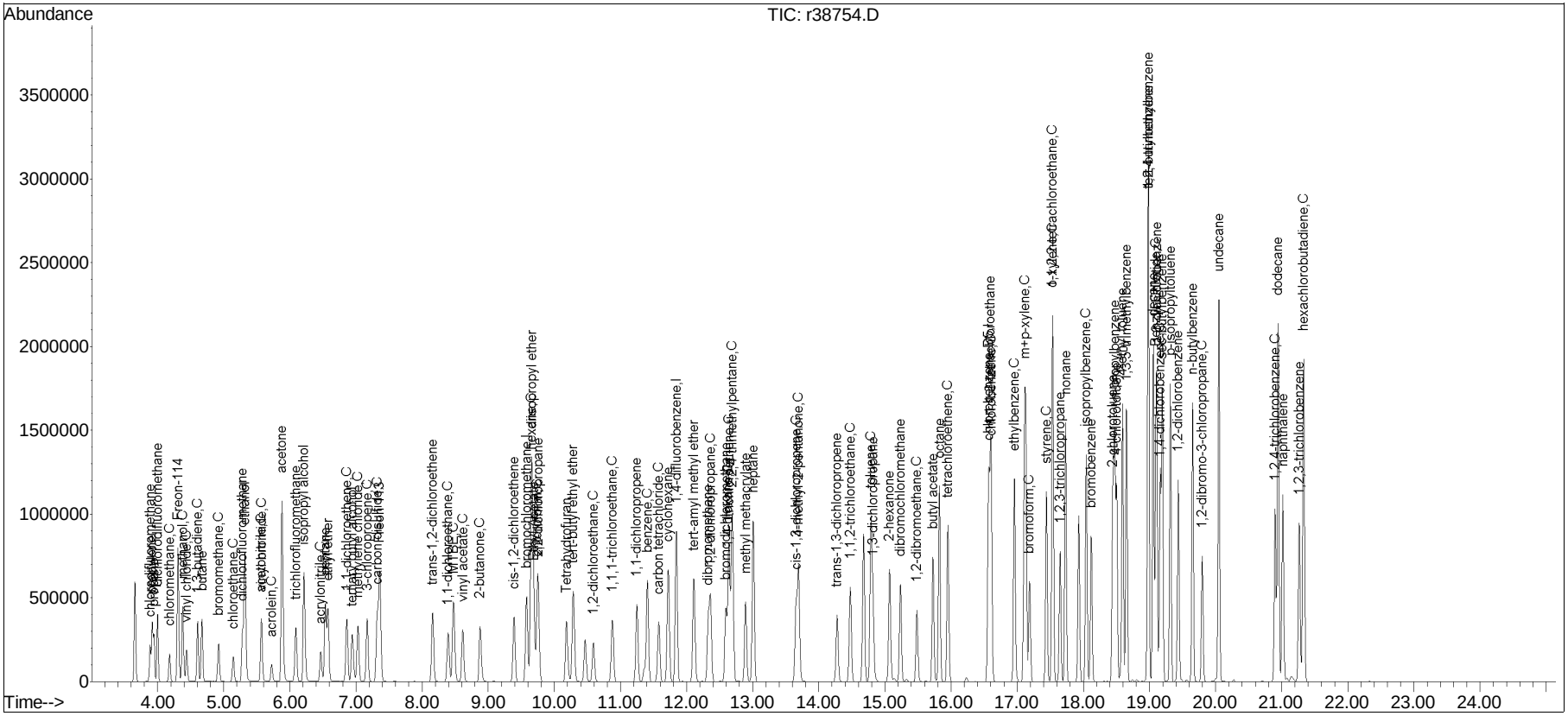
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 79) 1,1,1,2-tetrachloroethane | 16.592 | 131 | 267366 | 11.547 | ppbV | 98 |
| 80) chlorobenzene | 16.608 | 112 | 647553 | 11.441 | ppbV | 97 |
| 81) ethylbenzene | 16.958 | 91 | 1030325 | 12.181 | ppbV | 95 |
| 83) m+p-xylene | 17.117 | 91 | 1716028 | 24.782 | ppbV | 94 |
| 84) bromoform | 17.183 | 173 | 339273 | 11.876 | ppbV | 100 |
| 85) styrene | 17.442 | 104 | 710531 | 11.498 | ppbV | 98 |
| 86) 1,1,2,2-tetrachloroethane | 17.533 | 83 | 598789 | 12.390 | ppbV | 99 |
| 87) o-xylene | 17.533 | 91 | 877460 | 12.932 | ppbV | 95 |
| 88) 1,2,3-trichloropropane | 17.650 | 75 | 412426 | 10.143 | ppbV | 97 |
| 89) nonane | 17.733 | 43 | 688685 | 11.999 | ppbV | 93 |
| 91) isopropylbenzene | 18.042 | 105 | 1062537 | 10.863 | ppbV | 96 |
| 92) bromobenzene | 18.117 | 77 | 531287 | 10.109 | ppbV | 96 |
| 93) 2-chlorotoluene | 18.442 | 126 | 311495 | 11.332 | ppbV | 97 |
| 94) n-propylbenzene | 18.475 | 120 | 358211 | 11.320 | ppbV | 98 |
| 95) 4-chlorotoluene | 18.500 | 126 | 298365 | 11.196 | ppbV | 95 |
| 96) 4-ethyl toluene | 18.592 | 105 | 1260588 | 11.539 | ppbV | 97 |
| 97) 1,3,5-trimethylbenzene | 18.650 | 105 | 1074869 | 12.097 | ppbV | 96 |
| 98) tert-butylbenzene | 18.983 | 119 | 1005358 | 11.810 | ppbV | 97 |
| 99) 1,2,4-trimethylbenzene | 18.983 | 105 | 1073784 | 12.988 | ppbV | 95 |
| 100) decane | 19.058 | 57 | 736961 | 11.197 | ppbV | 89 |
| 101) Benzyl Chloride | 19.100 | 91 | 730511 | 12.634 | ppbV | 98 |
| 102) 1,3-dichlorobenzene | 19.108 | 146 | 615768 | 12.104 | ppbV | 99 |
| 103) 1,4-dichlorobenzene | 19.158 | 146 | 586145 | 12.115 | ppbV | 97 |
| 104) sec-butylbenzene | 19.192 | 105 | 1370219 | 11.013 | ppbV | 94 |
| 106) p-isopropyltoluene | 19.317 | 119 | 1122136 | 10.956 | ppbV | 93 |
| 107) 1,2-dichlorobenzene | 19.433 | 146 | 586153 | 12.085 | ppbV | 100 |
| 108) n-butylbenzene | 19.650 | 91 | 1031459 | 12.027 | ppbV | 96 |
| 111) 1,2-dibromo-3-chloropr... | 19.800 | 75 | 239212 | 11.516 | ppbV | 93 |
| 112) undecane | 20.050 | 57 | 828718 | 11.620 | ppbV | 91 |
| 114) dodecane | 20.942 | 57 | 841582 | 11.903 | ppbV | 88 |
| 115) 1,2,4-trichlorobenzene | 20.900 | 180 | 417816 | 13.816 | ppbV | 100 |
| 116) naphthalene | 21.017 | 128 | 1113601 | 12.417 | ppbV | 99 |
| 117) 1,2,3-trichlorobenzene | 21.267 | 180 | 405826 | 11.679 | ppbV | 99 |
| 119) hexachlorobutadiene | 21.333 | 225 | 547909 | 14.611 | ppbV | 99 |

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

Sub List : Default-LCS-AP2 - All compounds listed0320T\r38754.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-2,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

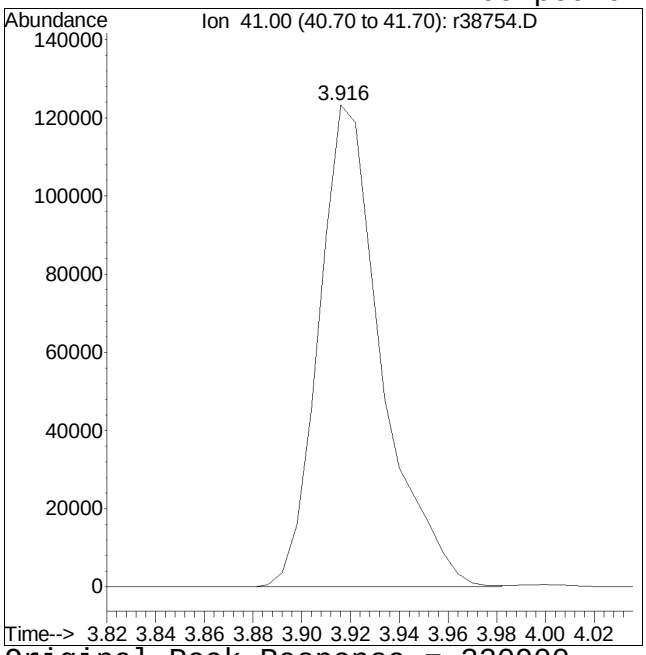
Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration



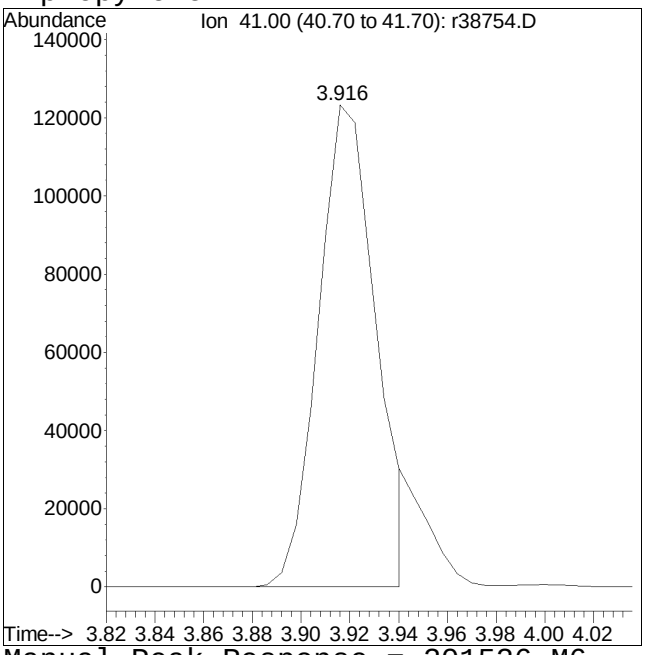
Manual Integration Report

Data Path : O:\Forensics\Data\AirpianoQMethod : TFS3_200312.M
Data File : r38754.D Operator : AIRPIANO3:EW
Date Inj'd : 3/20/2020 0:1: 2 Instrument :
Sample : WG1353541-2,3,250,250 Quant Date : 3/20/2020 2:42 pm

Compound #3: propylene




Original Peak Response = 220900



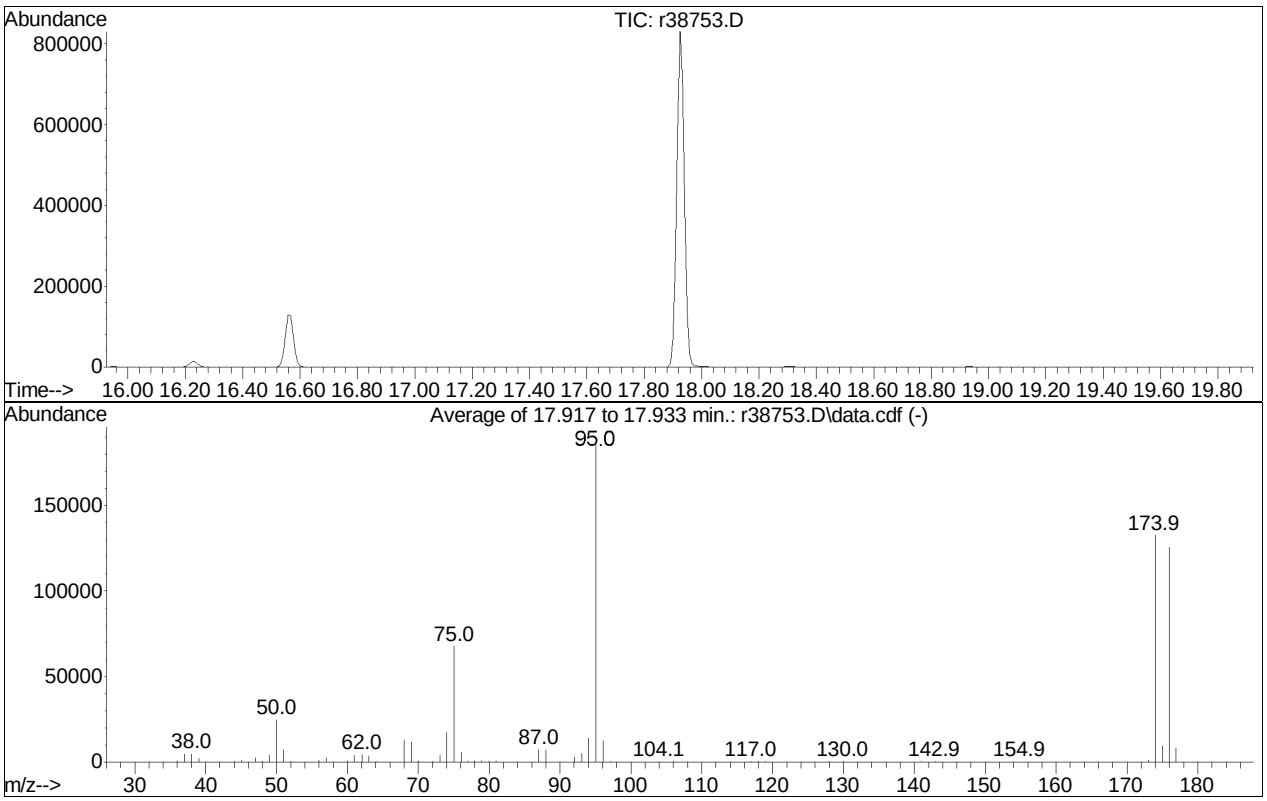

Manual Peak Response = 201526 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38753.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-1,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 17:27:58 2020




Spectrum Information: Average of 17.917 to 17.933 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 13.2 | 24646 | PASS |
| 75 | 95 | 30 | 66 | 36.4 | 67891 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 186762 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 12641 | PASS |
| 173 | 174 | 0.00 | 2 | 0.9 | 1150 | PASS |
| 174 | 95 | 50 | 120 | 71.1 | 132732 | PASS |
| 175 | 174 | 4 | 9 | 7.1 | 9417 | PASS |
| 176 | 174 | 93 | 101 | 94.6 | 125608 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 8448 | PASS |

# Volatiles Raw QC Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193194.D
Acq On : 20 Mar 2020 3:55 PM
Operator : AIRLAB19:EW
Sample : WG1353556-4,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 16:32:01 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.783 | 49 | 293906 | 10.000 | ppbV | 0.00 |
| Standard Area = 288364 | | | Recovery = 101.92% | | | |
| 43) 1,4-difluorobenzene | 10.760 | 114 | 909254 | 10.000 | ppbV | 0.01 |
| Standard Area = 940727 | | | Recovery = 96.65% | | | |
| 67) chlorobenzene-D5 | 14.883 | 54 | 110058 | 10.000 | ppbV | 0.00 |
| Standard Area = 108860 | | | Recovery = 101.10% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 0.000 | | 0 | N.D. | | |
| 6) chloromethane | 0.000 | | 0 | N.D. | | |
| 7) Freon-114 | 0.000 | | 0 | N.D. | | |
| 9) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 0.000 | | 0 | N.D. | | |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 4.948 | 31 | 441 | 0.051 | ppbV # | 60 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.513 | 43 | 857 | 0.054 | ppbV # | 97 |
| 21) trichlorofluoromethane | 0.000 | | 0 | N.D. | | |
| 22) isopropyl alcohol | 5.800 | 45 | 2049 | 0.068 | ppbV # | 86 |
| 26) 1,1-dichloroethene | 0.000 | | 0 | N.D. | | |
| 27) tertiary butyl alcohol | 0.000 | | 0 | N.D. | | |
| 28) methylene chloride | 6.546 | | 0 | N.D. | | |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | | |
| 30) carbon disulfide | 6.852 | | 0 | N.D. | | |
| 31) Freon 113 | 0.000 | | 0 | N.D. | | |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | |
| 34) MTBE | 0.000 | | 0 | N.D. | | |
| 36) 2-butanone | 0.000 | | 0 | N.D. | | |
| 37) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | | |
| 39) chloroform | 0.000 | | 0 | N.D. | | |
| 40) Tetrahydrofuran | 0.000 | | 0 | N.D. | | |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | | |

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193194.D
Acq On : 20 Mar 2020 3:55 PM
Operator : AIRLAB19:EW
Sample : WG1353556-4,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 16:32:01 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 44) hexane | 0.000 | | 0 | N.D. | | |
| 48) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | | |
| 50) benzene | 0.000 | | 0 | N.D. | | |
| 52) carbon tetrachloride | 0.000 | | 0 | N.D. | | |
| 53) cyclohexane | 0.000 | | 0 | N.D. | d | |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 59) trichloroethene | 0.000 | | 0 | N.D. | | |
| 60) 2,2,4-trimethylpentane | 11.527 | | 0 | N.D. | | |
| 62) heptane | 0.000 | | 0 | N.D. | | |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 0.000 | | 0 | N.D. | | |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | | |
| 68) toluene | 13.375 | | 0 | N.D. | | |
| 72) 2-hexanone | 0.000 | | 0 | N.D. | | |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 78) tetrachloroethene | 0.000 | | 0 | N.D. | | |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | | |
| 81) ethylbenzene | 0.000 | | 0 | N.D. | | |
| 83) m+p-xylene | 0.000 | | 0 | N.D. | | |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 0.000 | | 0 | N.D. | | |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | | |
| 87) o-xylene | 0.000 | | 0 | N.D. | | |
| 96) 4-ethyl toluene | 0.000 | | 0 | N.D. | | |
| 97) 1,3,5-trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 99) 1,2,4-trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | | |
| 102) 1,3-dichlorobenzene | 17.083 | | 0 | N.D. | | |
| 103) 1,4-dichlorobenzene | 17.083 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 17.392 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 18.692 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

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

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193194.D
Acq On : 20 Mar 2020 3:55 PM
Operator : AIRLAB19:EW
Sample : WG1353556-4,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 16:32:01 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

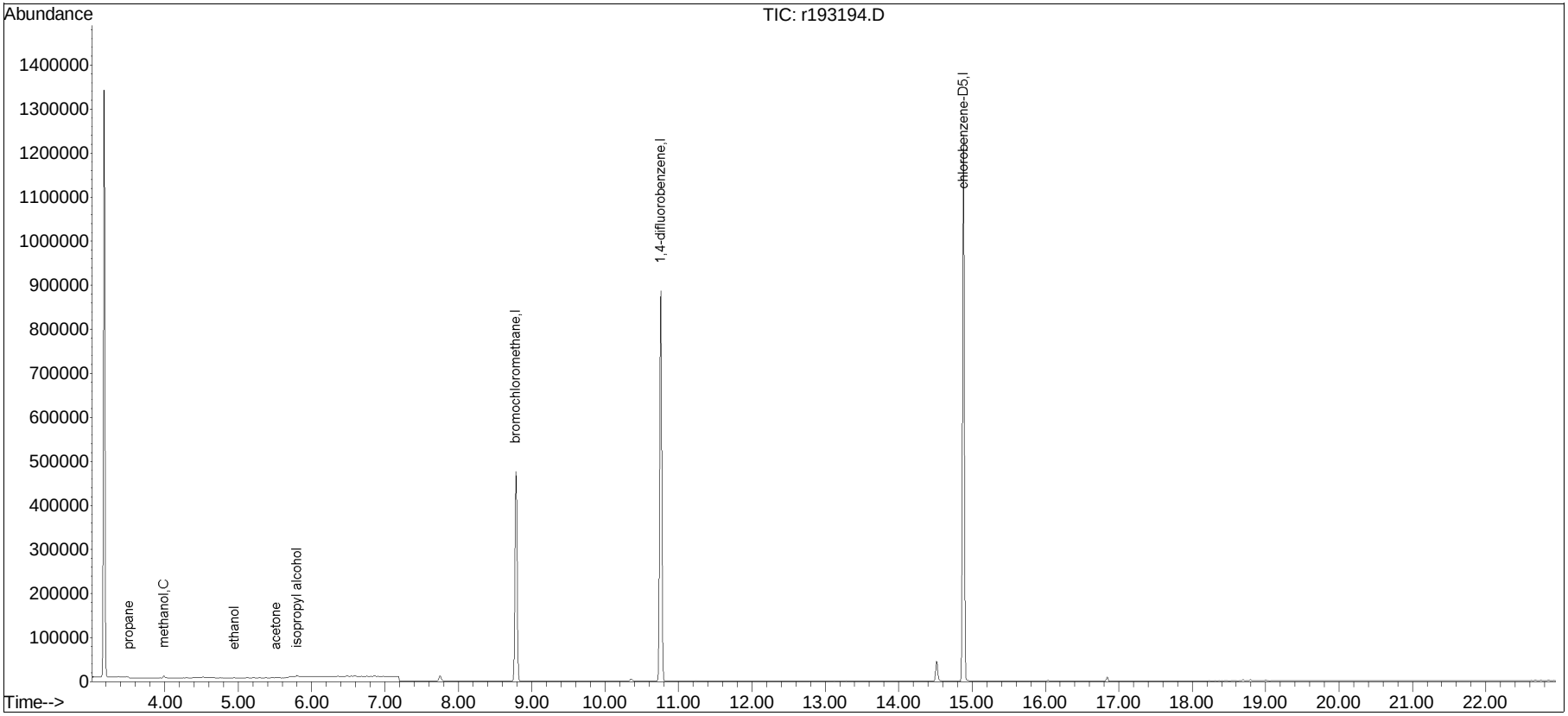
CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : Default-LCS-AP2 - All compounds listed

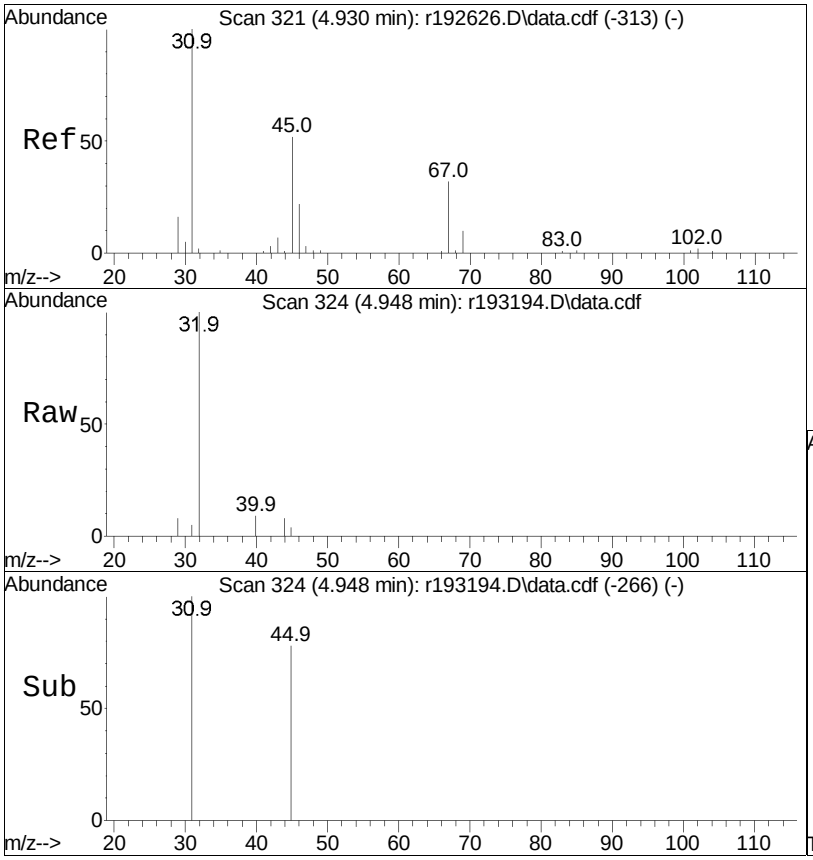
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : Default-LCS-AP2 - All compounds listed320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193194.D
Acq On : 20 Mar 2020 3:55 PM
Operator : AIRLAB19:EW
Sample : WG1353556-4,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 16:32:01 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

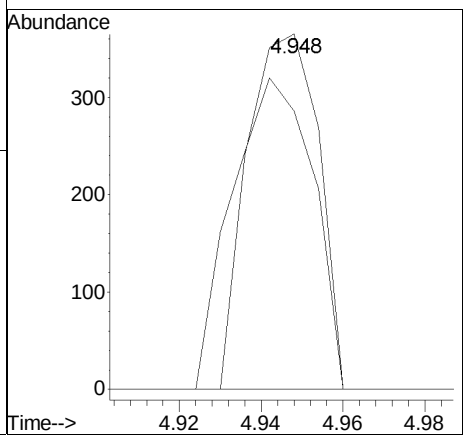


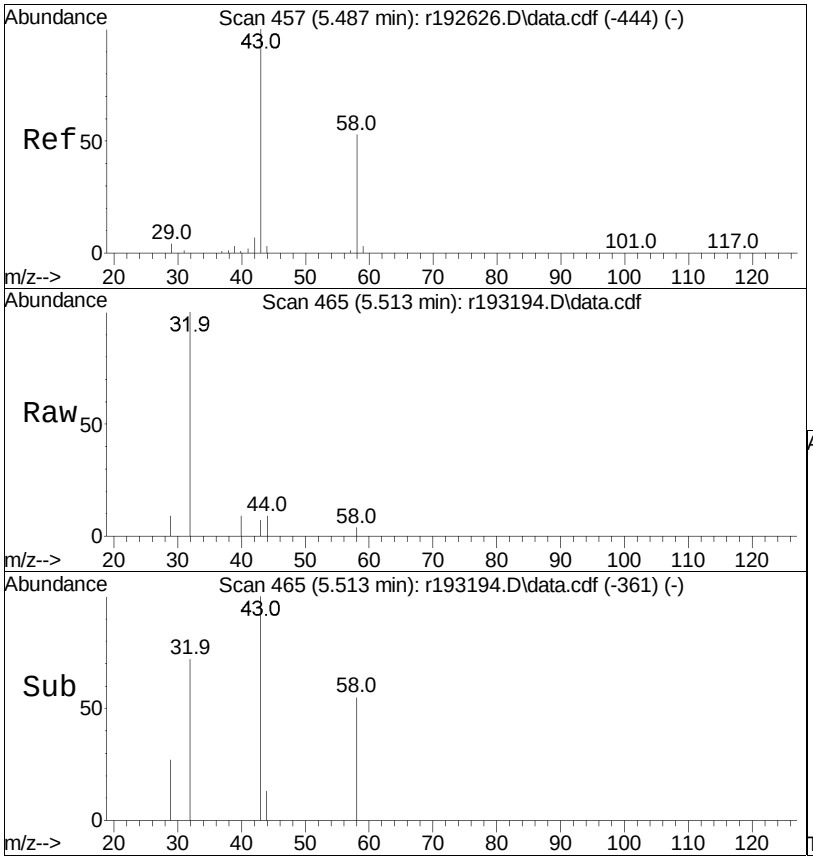



#15
ethanol
Concen: 0.05 ppbV
RT: 4.948 min Scan# 324
Delta R.T. 0.018 min
Lab File: r193194.D
Acq: 20 Mar 2020 3:55 PM

Tgt Ion: 31 Resp: 441

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 78.4 | 40.6 | 60.8# |

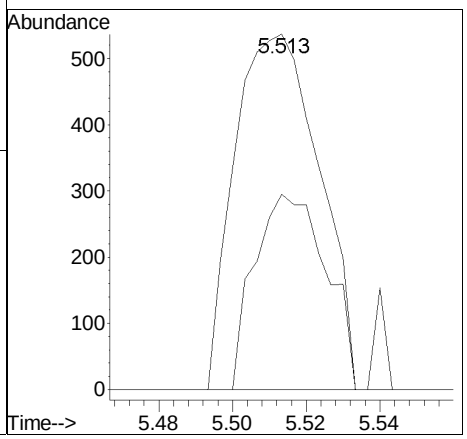


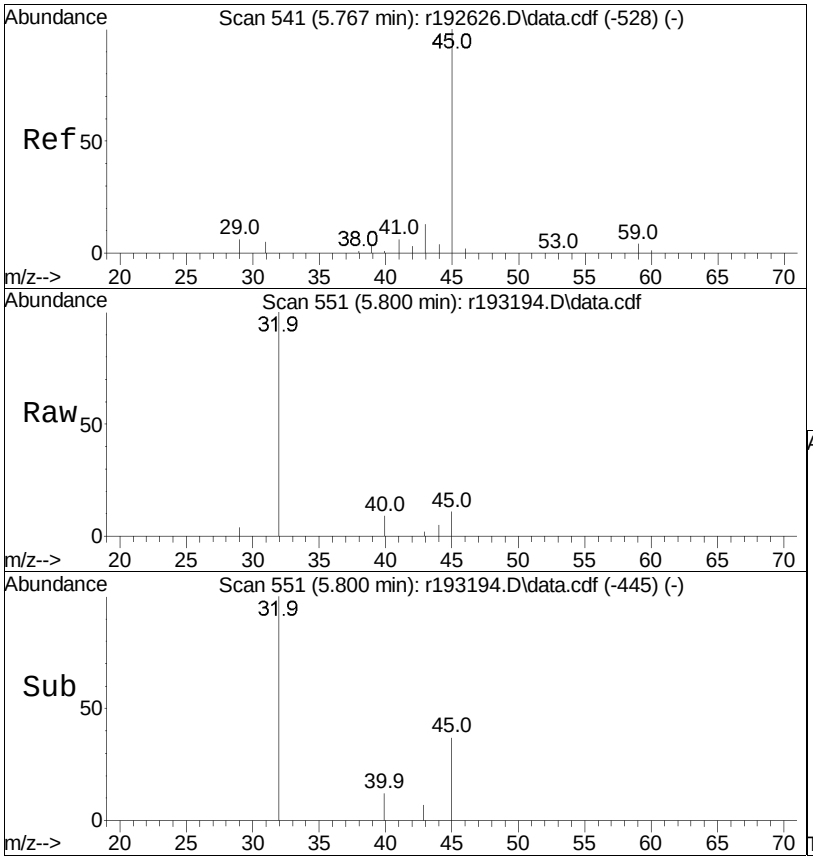



#19
acetone
Concen: 0.05 ppbV
RT: 5.513 min Scan# 465
Delta R.T. 0.017 min
Lab File: r193194.D
Acq: 20 Mar 2020 3:55 PM

Tgt Ion: 43 Resp: 857

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 54.9 | 42.0 | 63.0 |
| 57 | 0.0 | 1.4 | 2.0# |

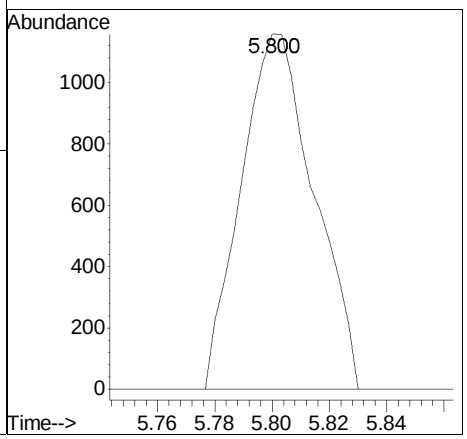





#22
isopropyl alcohol
Concen: 0.07 ppbV
RT: 5.800 min Scan# 551
Delta R.T. 0.023 min
Lab File: r193194.D
Acq: 20 Mar 2020 3:55 PM

Tgt Ion: 45 Resp: 2049

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 0.0 | 3.7 | 5.5# |



# Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airlab19 | QMethod | : TFS19_200224.M |
| Data File | : r193194.D | Operator | : AIRLAB19:EW |
| Date Inj'd | : 3/20/2020 0:3: 5 | Instrument | : |
| Sample | : WG1353556-4,3,250,250 | Quant Date | : 3/20/2020 4:31 pm |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38757.D
Acq On : 20 Mar 2020 4:20 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-4,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 17:01:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.583 | 49 | 347721 | 10.000 | ppbV | 0.03 |
| Standard Area = 353543 | | | Recovery = 98.35% | | | |
| 43) 1,4-difluorobenzene | 11.847 | 114 | 944639 | 10.000 | ppbV | 0.03 |
| Standard Area = 970632 | | | Recovery = 97.32% | | | |
| 67) chlorobenzene-D5 | 16.533 | 54 | 123905 | 10.000 | ppbV | 0.00 |
| Standard Area = 139948 | | | Recovery = 88.54% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 0.000 | | 0 | N.D. | | |
| 6) chloromethane | 0.000 | | 0 | N.D. | | |
| 7) Freon-114 | 0.000 | | 0 | N.D. | | |
| 9) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 0.000 | | 0 | N.D. | | |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 5.344 | 31 | 8335 | 0.615 | ppbV # | 78 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.927 | 43 | 1756 | 0.078 | ppbV # | 81 |
| 21) trichlorofluoromethane | 0.000 | | 0 | N.D. | | |
| 22) isopropyl alcohol | 6.253 | | 0 | N.D. | | |
| 26) 1,1-dichloroethene | 0.000 | | 0 | N.D. | | |
| 27) tertiary butyl alcohol | 0.000 | | 0 | N.D. | | |
| 28) methylene chloride | 7.044 | | 0 | N.D. | | |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | | |
| 30) carbon disulfide | 0.000 | | 0 | N.D. | | |
| 31) Freon 113 | 0.000 | | 0 | N.D. | | |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | |
| 34) MTBE | 0.000 | | 0 | N.D. | | |
| 36) 2-butanone | 8.933 | | 0 | N.D. | | |
| 37) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | | |
| 39) chloroform | 0.000 | | 0 | N.D. | | |
| 40) Tetrahydrofuran | 0.000 | | 0 | N.D. | | |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | | |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38757.D
Acq On : 20 Mar 2020 4:20 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-4,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 17:01:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 44) hexane | 0.000 | | 0 | N.D. | | |
| 48) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | | |
| 50) benzene | 11.413 | | 0 | N.D. | | |
| 52) carbon tetrachloride | 0.000 | | 0 | N.D. | | |
| 53) cyclohexane | 0.000 | | 0 | N.D. | | |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 59) trichloroethene | 0.000 | | 0 | N.D. | | |
| 60) 2,2,4-trimethylpentane | 0.000 | | 0 | N.D. | | |
| 62) heptane | 0.000 | | 0 | N.D. | | |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 0.000 | | 0 | N.D. | | |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | | |
| 68) toluene | 0.000 | | 0 | N.D. | | |
| 72) 2-hexanone | 0.000 | | 0 | N.D. | | |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 78) tetrachloroethene | 0.000 | | 0 | N.D. | | |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | | |
| 81) ethylbenzene | 0.000 | | 0 | N.D. | | |
| 83) m+p-xylene | 0.000 | | 0 | N.D. | | |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 0.000 | | 0 | N.D. | | |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | | |
| 87) o-xylene | 0.000 | | 0 | N.D. | | |
| 96) 4-ethyl toluene | 0.000 | | 0 | N.D. | | |
| 97) 1,3,5-trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 99) 1,2,4-trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 103) 1,4-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 20.858 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

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

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38757.D
Acq On : 20 Mar 2020 4:20 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-4,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 17:01:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

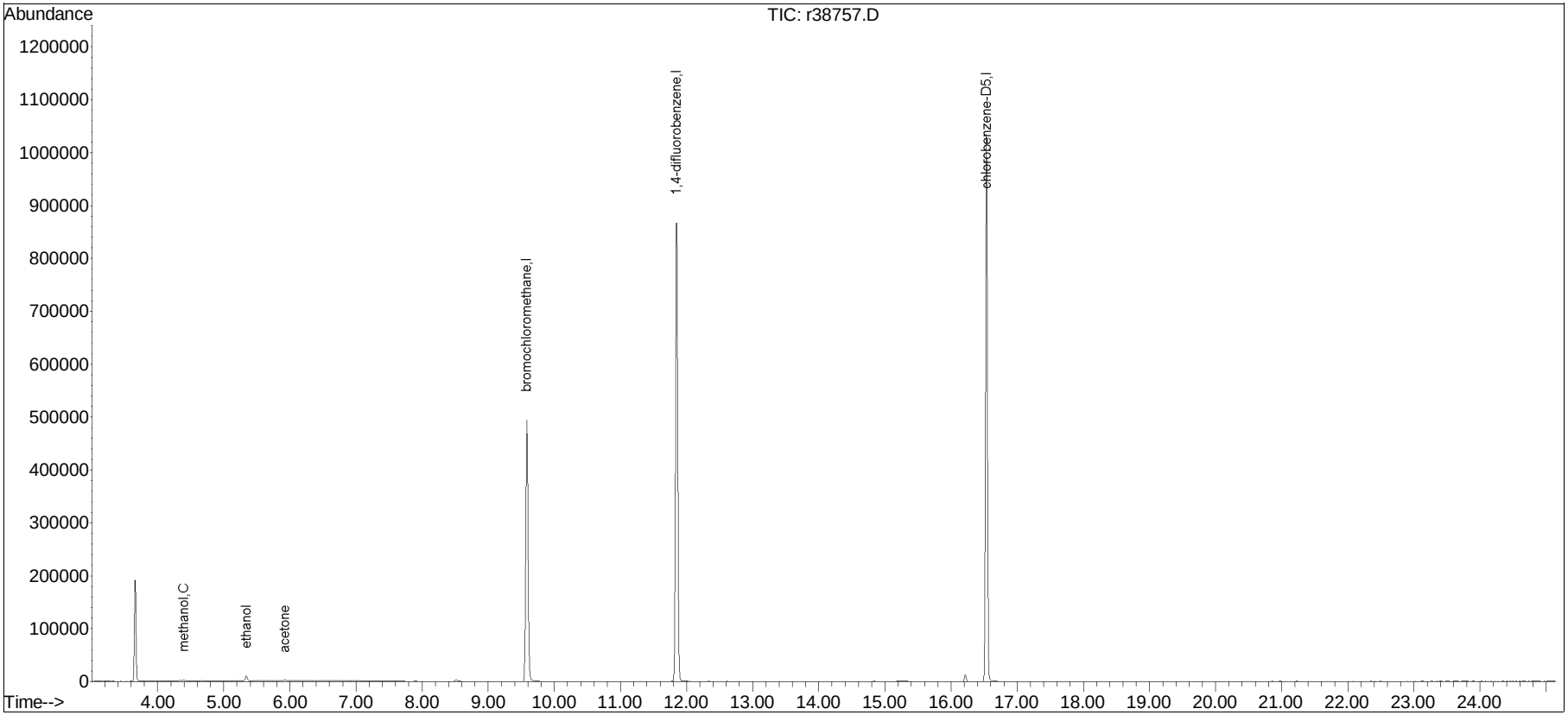
CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

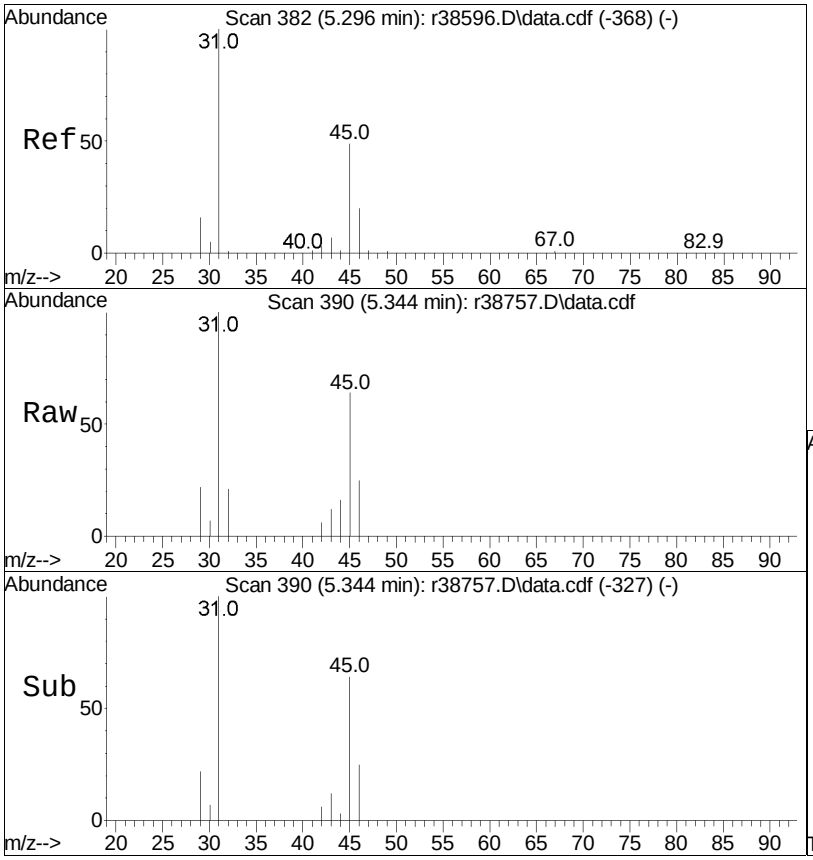
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : Default-LCS-AP2 - All compounds listed0320T\r38754.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38757.D
Acq On : 20 Mar 2020 4:20 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-4,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 17:01:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

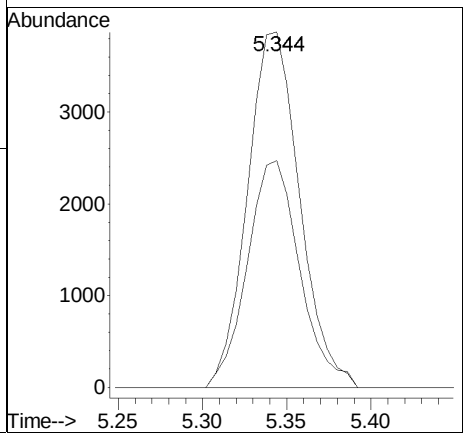


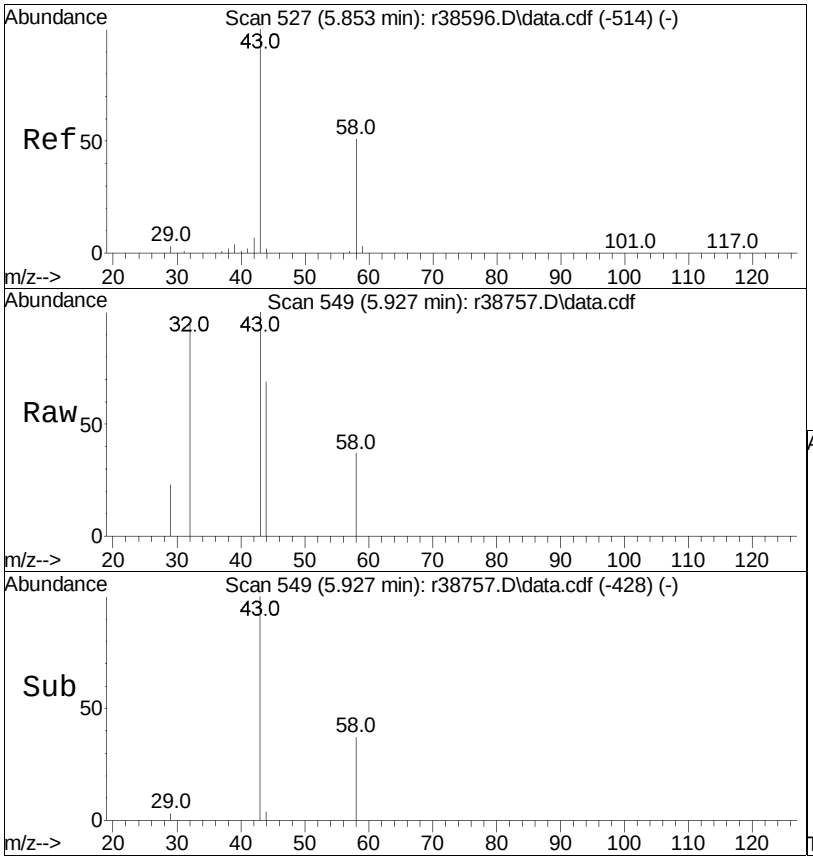



#15
ethanol
Concen: 0.62 ppbV
RT: 5.344 min Scan# 390
Delta R.T. 0.048 min
Lab File: r38757.D
Acq: 20 Mar 2020 4:20 PM

Tgt Ion: 31 Resp: 8335

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 63.9 | 39.0 | 58.4# |

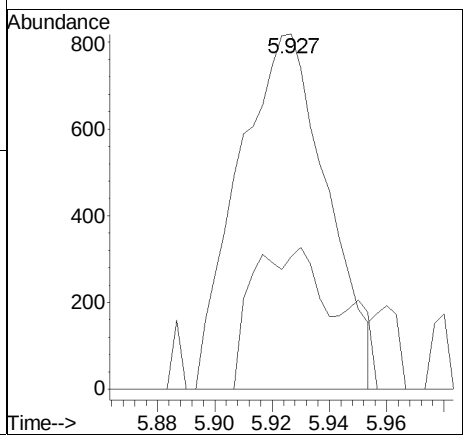





#19
acetone
Concen: 0.08 ppbV
RT: 5.927 min Scan# 549
Delta R.T. 0.073 min
Lab File: r38757.D
Acq: 20 Mar 2020 4:20 PM

Tgt Ion: 43 Resp: 1756

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 37.4 | 40.6 | 60.8# |
| 57 | 0.0 | 1.0 | 1.6# |



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airpiano | QMethod | : TFS3_200312.M |
| Data File | : r38757.D | Operator | : AIRPIANO3:EW |
| Date Inj'd | : 3/20/2020 0:4: 0 | Instrument | : |
| Sample | : WG1353541-4,3,250,250 | Quant Date | : 3/20/2020 5:01 pm |

There are no manual integrations or false positives in this file.

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 10.000 | 10.000 | 0.0 | 93 | 0.00 |
| 2 | | chlorodifluoromethane | 10.000 | 7.509 | 24.9 | 74 | 0.00 |
| 3 | | propylene | 10.000 | 12.005 | -20.1 | 116 | 0.00 |
| 4 | | propane | 10.000 | 6.409 | 35.9# | 63 | 0.00 |
| 5 | | dichlorodifluoromethane | 10.000 | 8.898 | 11.0 | 89 | 0.00 |
| 6 | C | chloromethane | 10.000 | 9.468 | 5.3 | 96 | 0.00 |
| 7 | | Freon-114 | 10.000 | 10.327 | -3.3 | 98 | 0.00 |
| 8 | C | methanol | 50.000 | 42.053 | 15.9 | 83 | 0.00 |
| 9 | C | vinyl chloride | 10.000 | 9.963 | 0.4 | 100 | 0.00 |
| 10 | C | 1,3-butadiene | 10.000 | 9.938 | 0.6 | 96 | 0.00 |
| 11 | | butane | 10.000 | 10.425 | -4.3 | 105 | 0.00 |
| 13 | C | bromomethane | 10.000 | 9.724 | 2.8 | 93 | 0.00 |
| 14 | C | chloroethane | 10.000 | 10.106 | -1.1 | 99 | 0.00 |
| 15 | | ethanol | 50.000 | 37.759 | 24.5 | 72 | 0.00 |
| 16 | | dichlorofluoromethane | 10.000 | 9.303 | 7.0 | 90 | 0.00 |
| 17 | C | vinyl bromide | 10.000 | 9.119 | 8.8 | 88 | 0.00 |
| 18 | C | acrolein | 10.000 | 8.915 | 10.9 | 85 | 0.00 |
| 19 | | acetone | 50.000 | 45.580 | 8.8 | 88 | -0.01 |
| 20 | C | acetonitrile | 10.000 | 11.116 | -11.2 | 104 | 0.00 |
| 21 | | trichlorofluoromethane | 10.000 | 9.614 | 3.9 | 80 | 0.00 |
| 22 | | isopropyl alcohol | 25.000 | 23.256 | 7.0 | 95 | 0.00 |
| 23 | C | acrylonitrile | 10.000 | 9.641 | 3.6 | 93 | 0.00 |
| 24 | | pentane | 10.000 | 10.668 | -6.7 | 102 | 0.00 |
| 25 | | ethyl ether | 10.000 | 7.028 | 29.7 | 67 | 0.00 |
| 26 | C | 1,1-dichloroethene | 10.000 | 10.899 | -9.0 | 104 | 0.00 |
| 27 | | tertiary butyl alcohol | 10.000 | 9.807 | 1.9 | 100 | -0.02 |
| 28 | C | methylene chloride | 10.000 | 9.693 | 3.1 | 92 | 0.01 |
| 29 | C | 3-chloropropene | 10.000 | 13.025 | -30.3# | 125 | 0.00 |
| 30 | C | carbon disulfide | 10.000 | 10.299 | -3.0 | 97 | 0.00 |
| 31 | | Freon 113 | 10.000 | 10.553 | -5.5 | 100 | 0.00 |
| 32 | | trans-1,2-dichloroethene | 10.000 | 10.791 | -7.9 | 104 | 0.00 |
| 33 | C | 1,1-dichloroethane | 10.000 | 11.014 | -10.1 | 105 | 0.00 |
| 34 | C | MTBE | 10.000 | 9.539 | 4.6 | 91 | 0.00 |
| 35 | C | vinyl acetate | 10.000 | 10.457 | -4.6 | 97 | 0.00 |
| 36 | C | 2-butanone | 10.000 | 11.217 | -12.2 | 105 | -0.02 |
| 37 | | cis-1,2-dichloroethene | 10.000 | 11.270 | -12.7 | 108 | 0.00 |
| 38 | | Ethyl Acetate | 10.000 | 12.454 | -24.5 | 114 | -0.02 |
| 39 | C | chloroform | 10.000 | 10.254 | -2.5 | 98 | 0.00 |
| 40 | | Tetrahydrofuran | 10.000 | 11.470 | -14.7 | 110 | -0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | | 2,2-dichloropropane | 10.000 | 8.071 | 19.3 | 76 | 0.00 |
| 42 | C | 1,2-dichloroethane | 10.000 | 9.265 | 7.3 | 89 | 0.00 |
| 43 | I | 1,4-difluorobenzene | 10.000 | 10.000 | 0.0 | 106 | 0.00 |
| 44 | C | hexane | 10.000 | 10.014 | -0.1 | 107 | 0.00 |
| 45 | | diisopropyl ether | 10.000 | 9.350 | 6.5 | 99 | 0.00 |
| 46 | | tert-butyl ethyl ether | 10.000 | 8.587 | 14.1 | 92 | 0.00 |
| 48 | C | 1,1,1-trichloroethane | 10.000 | 7.922 | 20.8 | 85 | 0.00 |
| 49 | | 1,1-dichloropropene | 10.000 | 8.515 | 14.8 | 92 | 0.00 |
| 50 | C | benzene | 10.000 | 9.596 | 4.0 | 103 | 0.00 |
| 52 | C | carbon tetrachloride | 10.000 | 8.656 | 13.4 | 92 | 0.00 |
| 53 | | cyclohexane | 10.000 | 10.293 | -2.9 | 110 | 0.00 |
| 54 | | tert-amyl methyl ether | 10.000 | 8.311 | 16.9 | 88 | -0.01 |
| 55 | | dibromomethane | 10.000 | 8.870 | 11.3 | 96 | 0.00 |
| 56 | C | 1,2-dichloropropane | 10.000 | 10.439 | -4.4 | 111 | 0.00 |
| 57 | | bromodichloromethane | 10.000 | 9.253 | 7.5 | 99 | 0.00 |
| 58 | C | 1,4-dioxane | 10.000 | 10.712 | -7.1 | 117 | -0.03 |
| 59 | C | trichloroethene | 10.000 | 9.604 | 4.0 | 102 | 0.00 |
| 60 | C | 2,2,4-trimethylpentane | 10.000 | 10.372 | -3.7 | 113 | 0.00 |
| 61 | | methyl methacrylate | 10.000 | 7.913 | 20.9 | 77 | 0.00 |
| 62 | | heptane | 10.000 | 10.124 | -1.2 | 108 | 0.00 |
| 63 | C | cis-1,3-dichloropropene | 10.000 | 9.791 | 2.1 | 103 | 0.00 |
| 64 | C | 4-methyl-2-pentanone | 10.000 | 10.406 | -4.1 | 107 | -0.03 |
| 65 | | trans-1,3-dichloropropene | 10.000 | 7.912 | 20.9 | 83 | 0.00 |
| 66 | C | 1,1,2-trichloroethane | 10.000 | 9.744 | 2.6 | 104 | 0.00 |
| 67 | I | chlorobenzene-D5 | 10.000 | 10.000 | 0.0 | 93 | 0.00 |
| 68 | C | toluene | 10.000 | 10.825 | -8.2 | 102 | 0.00 |
| 71 | | 1,3-dichloropropane | 10.000 | 9.883 | 1.2 | 92 | 0.00 |
| 72 | | 2-hexanone | 10.000 | 11.924 | -19.2 | 110 | -0.03 |
| 74 | | dibromochloromethane | 10.000 | 10.808 | -8.1 | 99 | 0.00 |
| 75 | C | 1,2-dibromoethane | 10.000 | 10.794 | -7.9 | 100 | 0.00 |
| 76 | | butyl acetate | 10.000 | 9.718 | 2.8 | 89 | -0.03 |
| 77 | | octane | 10.000 | 10.842 | -8.4 | 101 | 0.00 |
| 78 | C | tetrachloroethene | 10.000 | 11.344 | -13.4 | 103 | 0.00 |
| 79 | | 1,1,1,2-tetrachloroethane | 10.000 | 9.951 | 0.5 | 91 | 0.00 |
| 80 | C | chlorobenzene | 10.000 | 11.813 | -18.1 | 109 | 0.00 |
| 81 | C | ethylbenzene | 10.000 | 10.755 | -7.6 | 98 | 0.00 |
| 83 | C | m+p-xylene | 20.000 | 21.510 | -7.6 | 99 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 84 | C | bromoform | 10.000 | 11.018 | -10.2 | 101 | 0.00 |
| 85 | C | styrene | 10.000 | 10.795 | -7.9 | 99 | 0.00 |
| 86 | C | 1,1,2,2-tetrachloroethane | 10.000 | 12.041 | -20.4 | 108 | 0.00 |
| 87 | C | o-xylene | 10.000 | 10.686 | -6.9 | 98 | 0.00 |
| 88 | | 1,2,3-trichloropropane | 10.000 | 9.903 | 1.0 | 92 | 0.00 |
| 89 | | nonane | 10.000 | 10.322 | -3.2 | 95 | 0.00 |
| 91 | C | isopropylbenzene | 10.000 | 9.924 | 0.8 | 91 | 0.00 |
| 92 | | bromobenzene | 10.000 | 10.210 | -2.1 | 94 | 0.00 |
| 93 | | 2-chlorotoluene | 10.000 | 10.417 | -4.2 | 92 | 0.00 |
| 94 | | n-propylbenzene | 10.000 | 10.459 | -4.6 | 93 | 0.00 |
| 95 | | 4-chlorotoluene | 10.000 | 10.223 | -2.2 | 93 | 0.00 |
| 96 | | 4-ethyl toluene | 10.000 | 10.731 | -7.3 | 95 | 0.00 |
| 97 | | 1,3,5-trimethylbenzene | 10.000 | 10.409 | -4.1 | 94 | 0.00 |
| 98 | | tert-butylbenzene | 10.000 | 10.132 | -1.3 | 91 | 0.00 |
| 99 | | 1,2,4-trimethylbenzene | 10.000 | 10.627 | -6.3 | 94 | 0.00 |
| 100 | | decane | 10.000 | 11.401 | -14.0 | 101 | 0.00 |
| 101 | C | Benzyl Chloride | 10.000 | 10.906 | -9.1 | 91 | 0.00 |
| 102 | | 1,3-dichlorobenzene | 10.000 | 11.603 | -16.0 | 101 | 0.00 |
| 103 | C | 1,4-dichlorobenzene | 10.000 | 11.275 | -12.8 | 97 | 0.00 |
| 104 | | sec-butylbenzene | 10.000 | 10.165 | -1.6 | 90 | 0.00 |
| 106 | | p-isopropyltoluene | 10.000 | 9.624 | 3.8 | 84 | 0.00 |
| 107 | | 1,2-dichlorobenzene | 10.000 | 11.326 | -13.3 | 98 | 0.00 |
| 108 | | n-butylbenzene | 10.000 | 10.910 | -9.1 | 94 | 0.00 |
| 111 | C | 1,2-dibromo-3-chloropropane | 10.000 | 9.096 | 9.0 | 79 | 0.00 |
| 112 | | undecane | 10.000 | 11.978 | -19.8 | 100 | 0.00 |
| 114 | | dodecane | 10.000 | 11.821 | -18.2 | 86 | 0.00 |
| 115 | C | 1,2,4-trichlorobenzene | 10.000 | 12.491 | -24.9 | 94 | 0.00 |
| 116 | | naphthalene | 10.000 | 10.180 | -1.8 | 84 | 0.00 |
| 117 | | 1,2,3-trichlorobenzene | 10.000 | 10.884 | -8.8 | 83 | 0.00 |
| 119 | C | hexachlorobutadiene | 10.000 | 10.651 | -6.5 | 84 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 8.783 | 49 | 291035 | 10.000 | ppbV | 0.00 |
| Standard Area = 288364 | | | Recovery = 100.93% | | | |
| 43) 1,4-difluorobenzene | 10.747 | 114 | 946102 | 10.000 | ppbV | 0.00 |
| Standard Area = 940727 | | | Recovery = 100.57% | | | |
| 67) chlorobenzene-D5 | 14.875 | 54 | 108034 | 10.000 | ppbV | 0.00 |
| Standard Area = 108860 | | | Recovery = 99.24% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 3.568 | 85 | 145123 | 8.898 | ppbV | 100 |
| 6) chloromethane | 3.778 | 50 | 98770 | 9.468 | ppbV | 98 |
| 7) Freon-114 | 3.916 | 85 | 249950 | 10.327 | ppbV | 94 |
| 9) vinyl chloride | 4.066 | 62 | 128997 | 9.963 | ppbV | 99 |
| 10) 1,3-butadiene | 4.246 | 54 | 110964 | 9.938 | ppbV | 98 |
| 13) bromomethane | 4.576 | 94 | 99612 | 9.724 | ppbV | 99 |
| 14) chloroethane | 4.798 | 64 | 68604 | 10.106 | ppbV | 93 |
| 15) ethanol | 4.930 | 31 | 321089 | 37.759 | ppbV # | 65 |
| 17) vinyl bromide | 5.210 | 106 | 101012 | 9.119 | ppbV | 92 |
| 19) acetone | 5.487 | 43 | 712336 | 45.580 | ppbV # | 98 |
| 21) trichlorofluoromethane | 5.697 | 101 | 164720 | 9.614 | ppbV | 98 |
| 22) isopropyl alcohol | 5.767 | 45 | 690492 | 23.256 | ppbV | 100 |
| 26) 1,1-dichloroethene | 6.408 | 61 | 215216 | 10.899 | ppbV | 96 |
| 27) tertiary butyl alcohol | 6.426 | 59 | 266935 | 9.807 | ppbV # | 95 |
| 28) methylene chloride | 6.546 | 49 | 185196 | 9.693 | ppbV | 84 |
| 29) 3-chloropropene | 6.672 | 41 | 299903 | 13.025 | ppbV | 94 |
| 30) carbon disulfide | 6.852 | 76 | 546933 | 10.299 | ppbV # | 80 |
| 31) Freon 113 | 6.828 | 101 | 293948 | 10.553 | ppbV | 97 |
| 32) trans-1,2-dichloroethene | 7.542 | 61 | 244273 | 10.791 | ppbV | 97 |
| 33) 1,1-dichloroethane | 7.750 | 63 | 303714 | 11.014 | ppbV | 98 |
| 34) MTBE | 7.800 | 73 | 426408 | 9.539 | ppbV | 95 |
| 36) 2-butanone | 8.142 | 43 | 392946 | 11.217 | ppbV | 93 |
| 37) cis-1,2-dichloroethene | 8.617 | 61 | 221113 | 11.270 | ppbV | 93 |
| 38) Ethyl Acetate | 8.817 | 61 | 74226 | 12.454 | ppbV | 82 |
| 39) chloroform | 8.917 | 83 | 249600 | 10.254 | ppbV # | 94 |
| 40) Tetrahydrofuran | 9.308 | 42 | 269982 | 11.470 | ppbV | 98 |
| 42) 1,2-dichloroethane | 9.667 | 62 | 110185 | 9.265 | ppbV | 95 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : Default-LCS-AP2 - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 44) | hexane | 8.825 | 57 | 347249 | 10.014 | ppbV | | 97 |
| 48) | 1,1,1-trichloroethane | 9.933 | 97 | 176378 | 7.922 | ppbV | | 90 |
| 50) | benzene | 10.407 | 78 | 656527 | 9.596 | ppbV | | 98 |
| 52) | carbon tetrachloride | 10.560 | 117 | 158780 | 8.656 | ppbV | # | 87 |
| 53) | cyclohexane | 10.693 | 56 | 390430 | 10.293 | ppbV | | 98 |
| 56) | 1,2-dichloropropane | 11.247 | 63 | 228409 | 10.439 | ppbV | | 98 |
| 57) | bromodichloromethane | 11.447 | 83 | 276018 | 9.253 | ppbV | | 95 |
| 58) | 1,4-dioxane | 11.467 | 88 | 165900 | 10.712 | ppbV | | 81 |
| 59) | trichloroethene | 11.493 | 130 | 234179 | 9.604 | ppbV | | 96 |
| 60) | 2,2,4-trimethylpentane | 11.520 | 57 | 1135194 | 10.372 | ppbV | | 99 |
| 62) | heptane | 11.787 | 43 | 428379 | 10.124 | ppbV | | 96 |
| 63) | cis-1,3-dichloropropene | 12.400 | 75 | 318728 | 9.791 | ppbV | # | 91 |
| 64) | 4-methyl-2-pentanone | 12.408 | 43 | 473699 | 10.406 | ppbV | | 95 |
| 65) | trans-1,3-dichloropropene | 12.925 | 75 | 231649 | 7.912 | ppbV | | 97 |
| 66) | 1,1,2-trichloroethane | 13.100 | 97 | 232153 | 9.744 | ppbV | | 96 |
| 68) | toluene | 13.367 | 91 | 712092 | 10.825 | ppbV | | 99 |
| 72) | 2-hexanone | 13.567 | 43 | 455782 | 11.924 | ppbV | # | 82 |
| 74) | dibromochloromethane | 13.758 | 129 | 273299 | 10.808 | ppbV | | 98 |
| 75) | 1,2-dibromoethane | 13.975 | 107 | 326529 | 10.794 | ppbV | | 97 |
| 78) | tetrachloroethene | 14.358 | 166 | 327900 | 11.344 | ppbV | | 96 |
| 80) | chlorobenzene | 14.908 | 112 | 617599 | 11.813 | ppbV | | 94 |
| 81) | ethylbenzene | 15.192 | 91 | 848602 | 10.755 | ppbV | | 98 |
| 83) | m+p-xylene | 15.325 | 91 | 1337977 | 21.510 | ppbV | | 99 |
| 84) | bromoform | 15.408 | 173 | 307610 | 11.018 | ppbV | | 98 |
| 85) | styrene | 15.600 | 104 | 649854 | 10.795 | ppbV | | 97 |
| 86) | 1,1,2,2-tetrachloroethane | 15.683 | 83 | 516728 | 12.041 | ppbV | | 96 |
| 87) | o-xylene | 15.683 | 91 | 652185 | 10.686 | ppbV | | 96 |
| 96) | 4-ethyl toluene | 16.608 | 105 | 1108912 | 10.731 | ppbV | | 95 |
| 97) | 1,3,5-trimethylbenzene | 16.667 | 105 | 864333 | 10.409 | ppbV | | 93 |
| 99) | 1,2,4-trimethylbenzene | 16.983 | 105 | 816769 | 10.627 | ppbV | | 94 |
| 101) | Benzyl Chloride | 17.108 | 91 | 675058 | 10.906 | ppbV | | 99 |
| 102) | 1,3-dichlorobenzene | 17.125 | 146 | 610754 | 11.603 | ppbV | | 98 |
| 103) | 1,4-dichlorobenzene | 17.175 | 146 | 568718 | 11.275 | ppbV | | 97 |
| 107) | 1,2-dichlorobenzene | 17.442 | 146 | 565344 | 11.326 | ppbV | | 98 |
| 115) | 1,2,4-trichlorobenzene | 18.833 | 180 | 547929 | 12.491 | ppbV | | 97 |
| 119) | hexachlorobutadiene | 19.225 | 225 | 406023 | 10.651 | ppbV | | 94 |

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

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

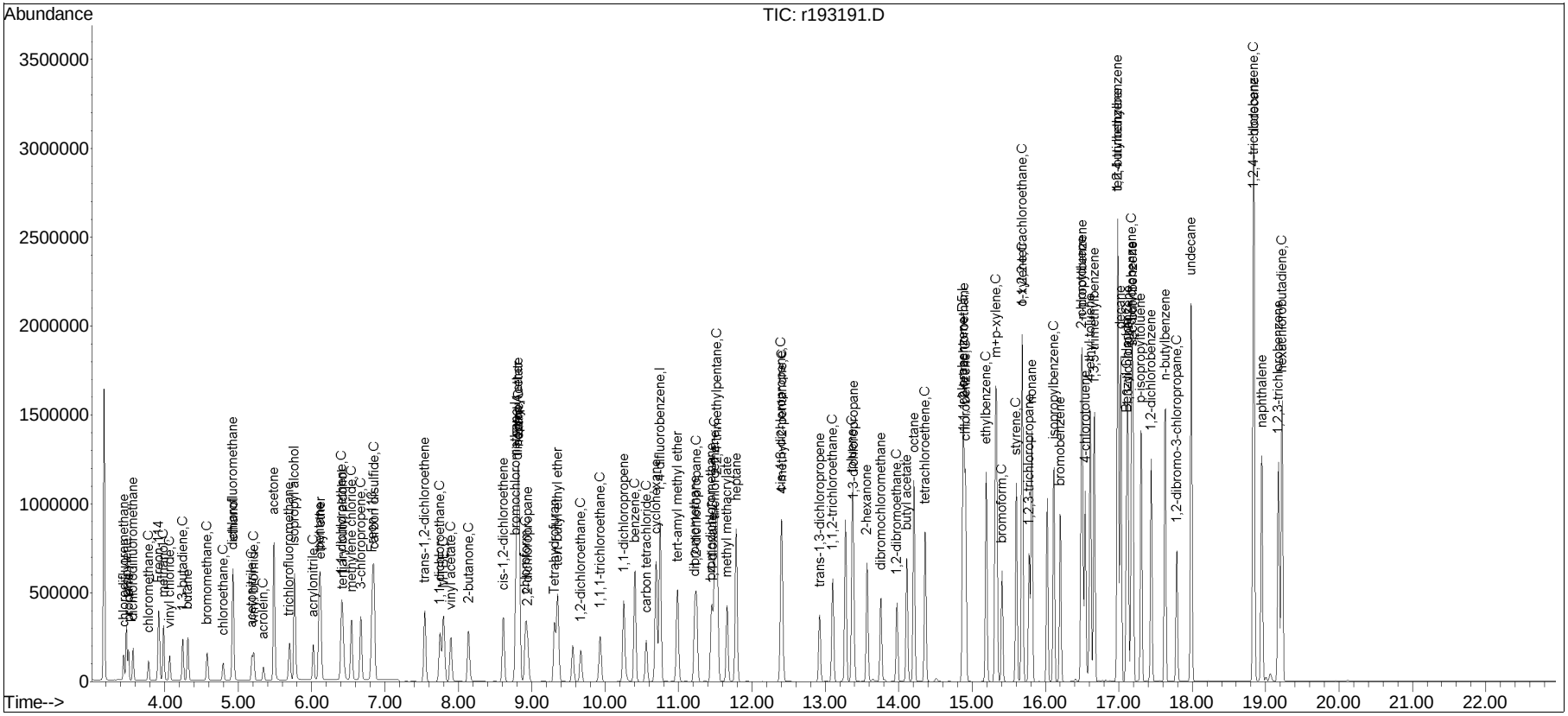
CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : Default-LCS-AP2 - All compounds listed

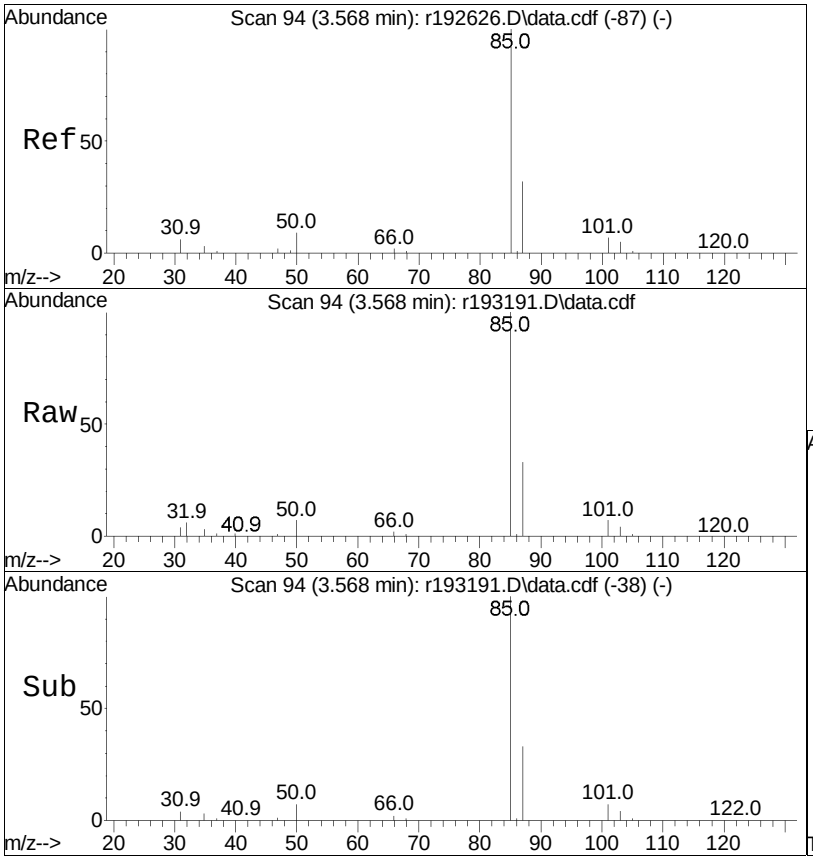
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : Default-LCS-AP2 - All compounds listed320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193191.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRLAB19:EW
Sample : WG1353556-3,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:29:02 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

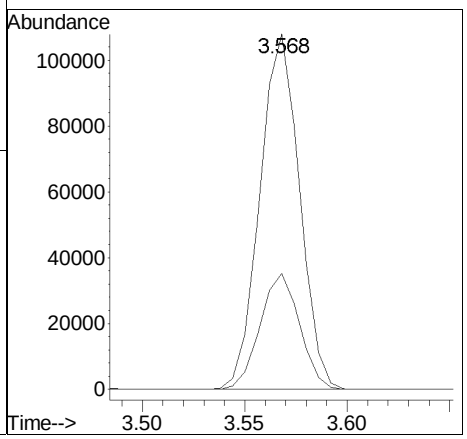


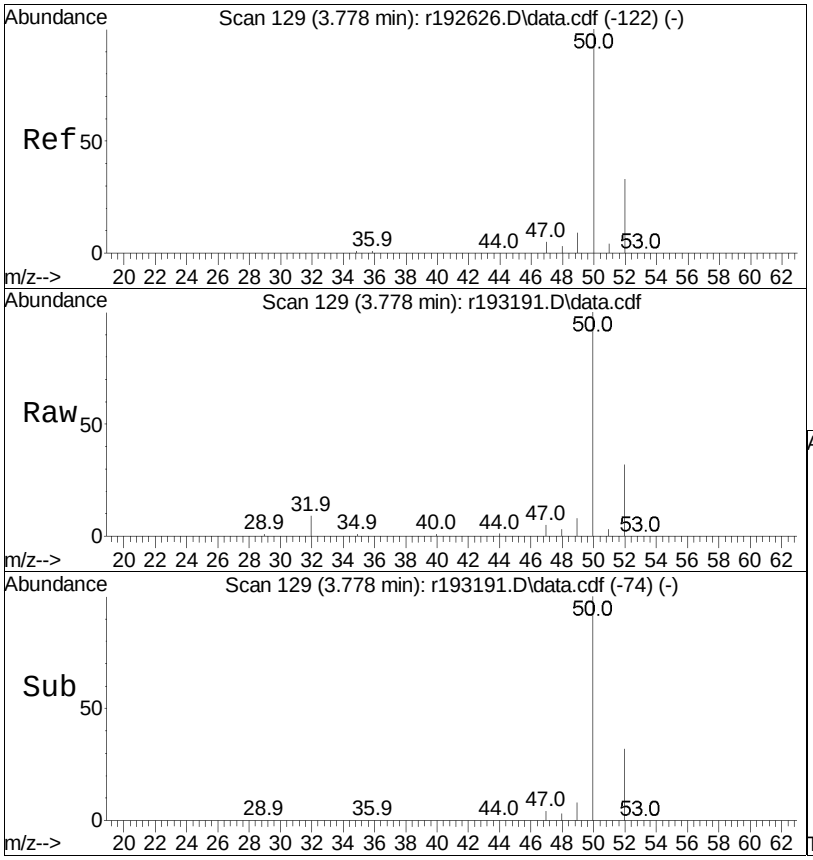



#5
dichlorodifluoromethane
Concen: 8.90 ppbV
RT: 3.568 min Scan# 94
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 85 Resp: 145123

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.6 | 25.9 | 38.9 |

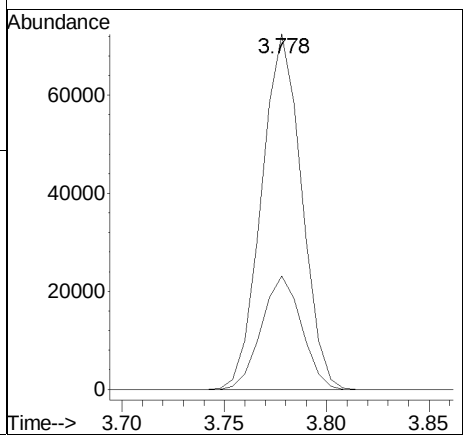


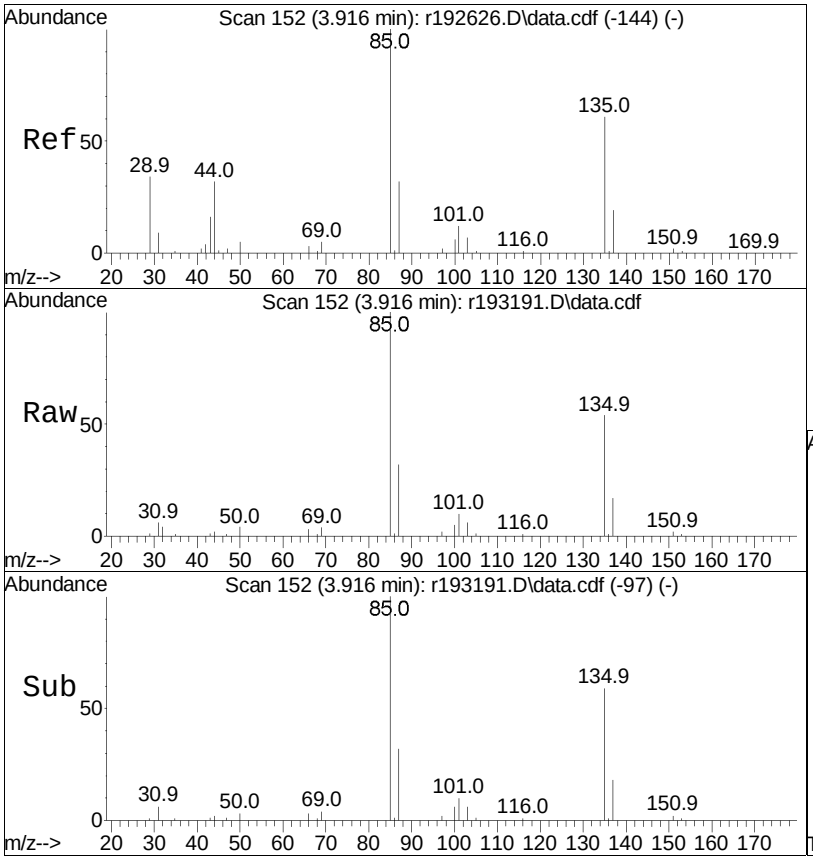



#6
chloromethane
Concen: 9.47 ppbV
RT: 3.778 min Scan# 129
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 50 Resp: 98770

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.9 | 26.3 | 39.5 |

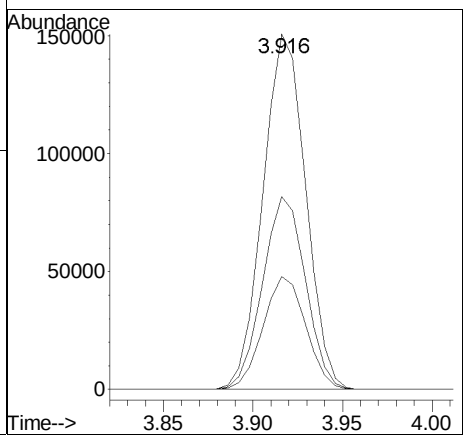


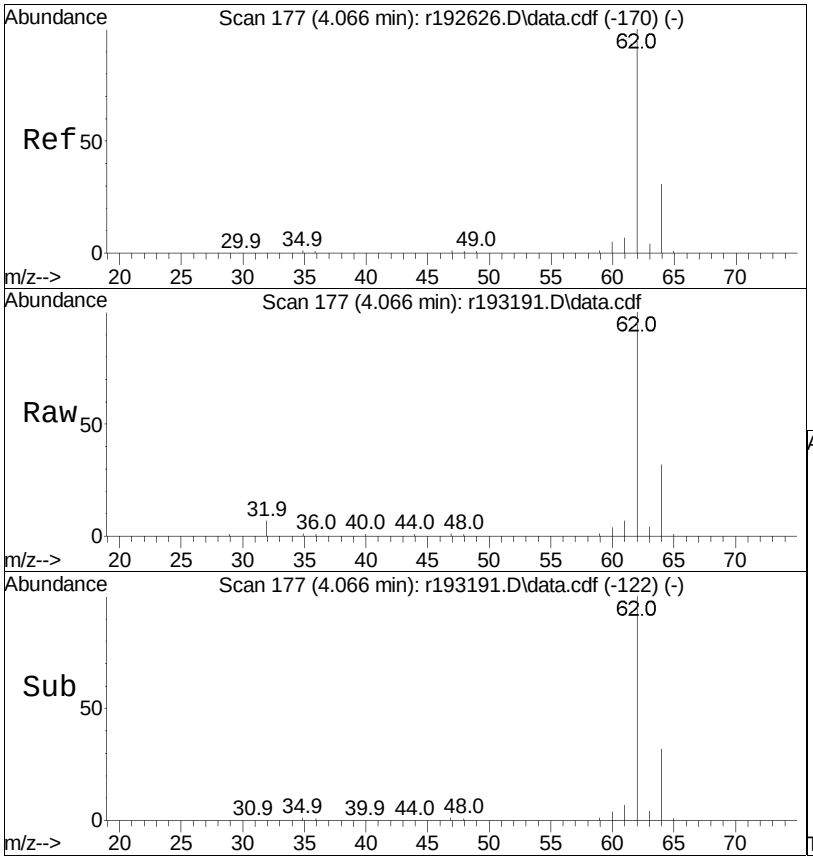



#7
Freon-114
Concen: 10.33 ppbV
RT: 3.916 min Scan# 152
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 85 Resp: 249950

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.8 | 24.6 | 37.0 |
| 135 | 54.3 | 48.5 | 72.7 |

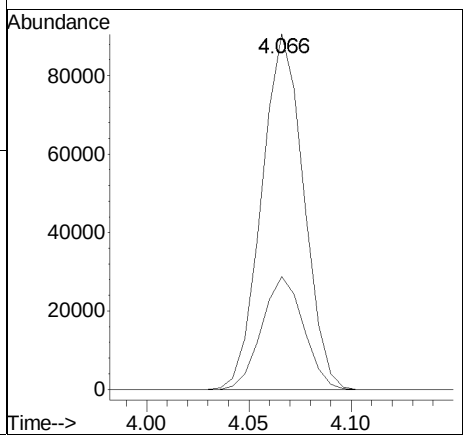


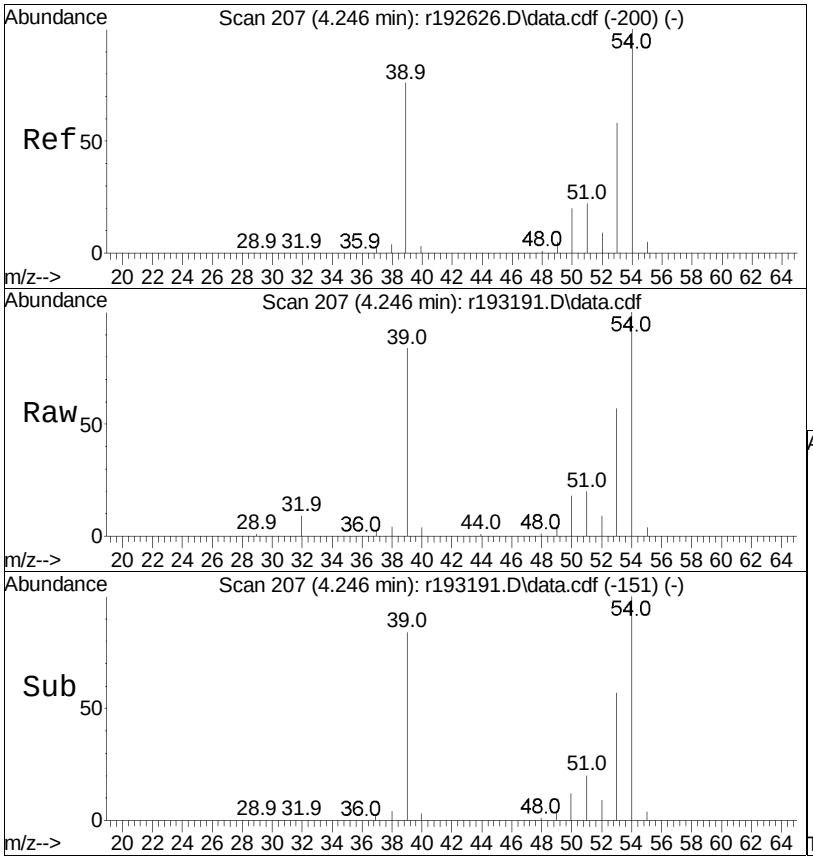



#9
vinyl chloride
Concen: 9.96 ppbV
RT: 4.066 min Scan# 177
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 62 Resp: 128997

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.8 | 25.8 | 38.6 |

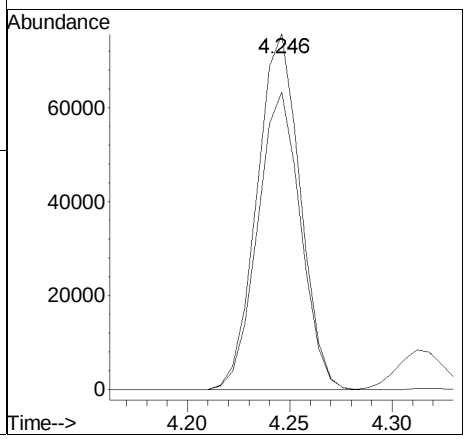


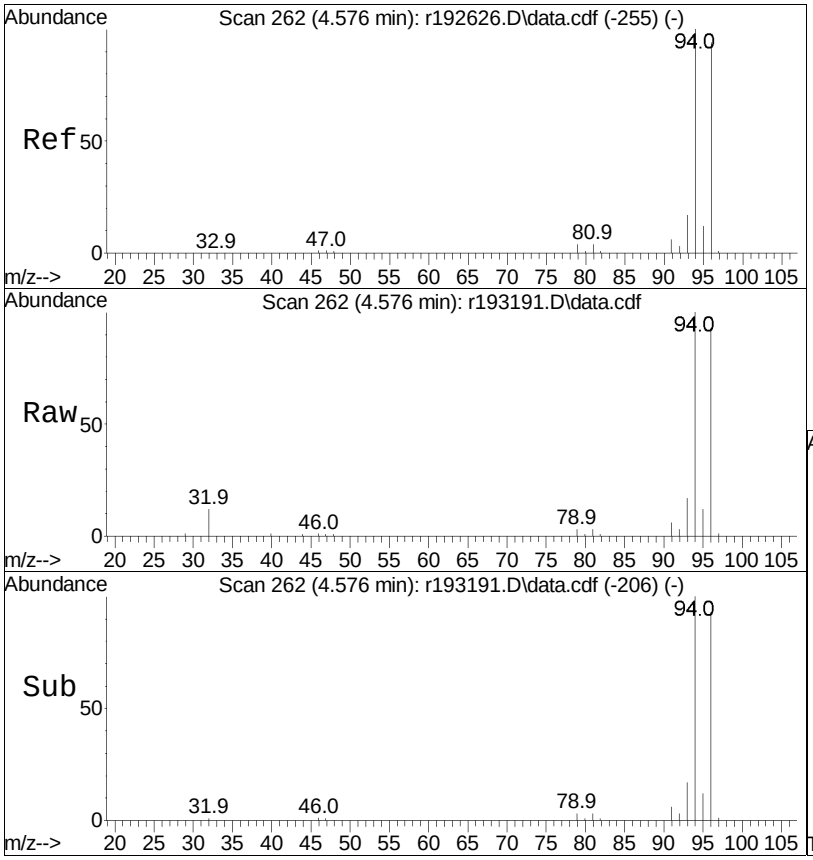



#10
1,3-butadiene
Concen: 9.94 ppbV
RT: 4.246 min Scan# 207
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 54 Resp: 110964

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 83.7 | 65.3 | 97.9 |

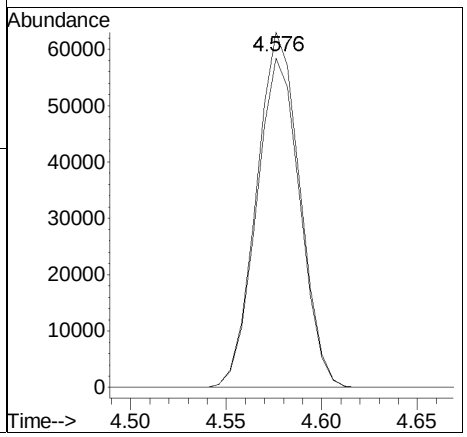


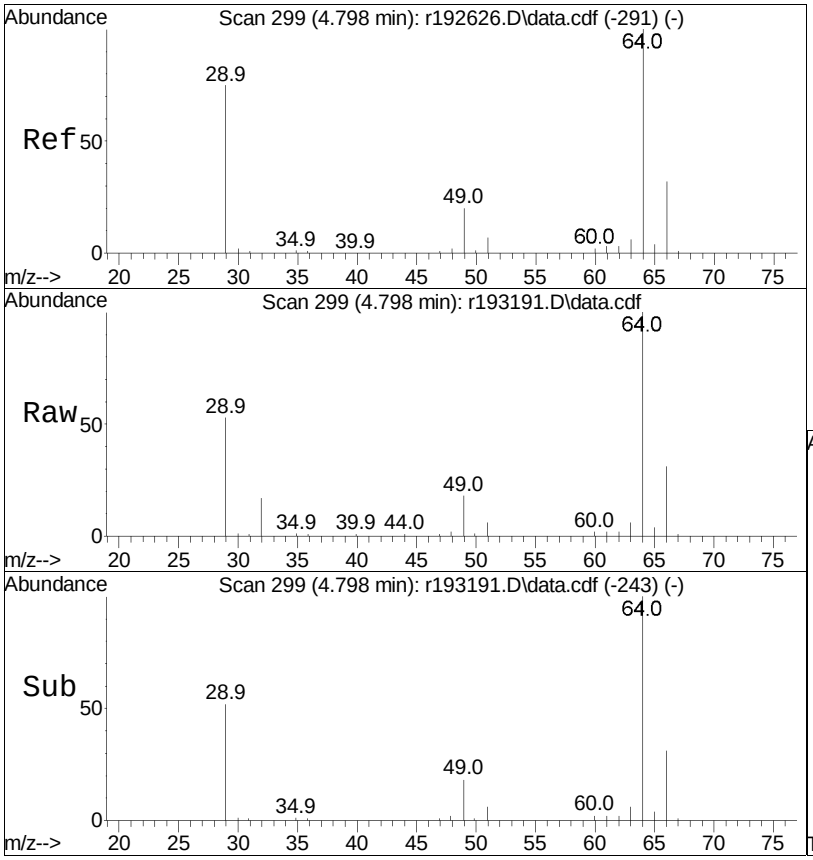



#13
bromomethane
Concen: 9.72 ppbV
RT: 4.576 min Scan# 262
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 94 Resp: 99612

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 92.7 | 73.6 | 110.4 |

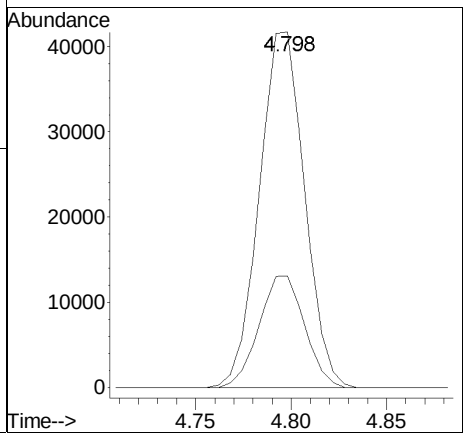


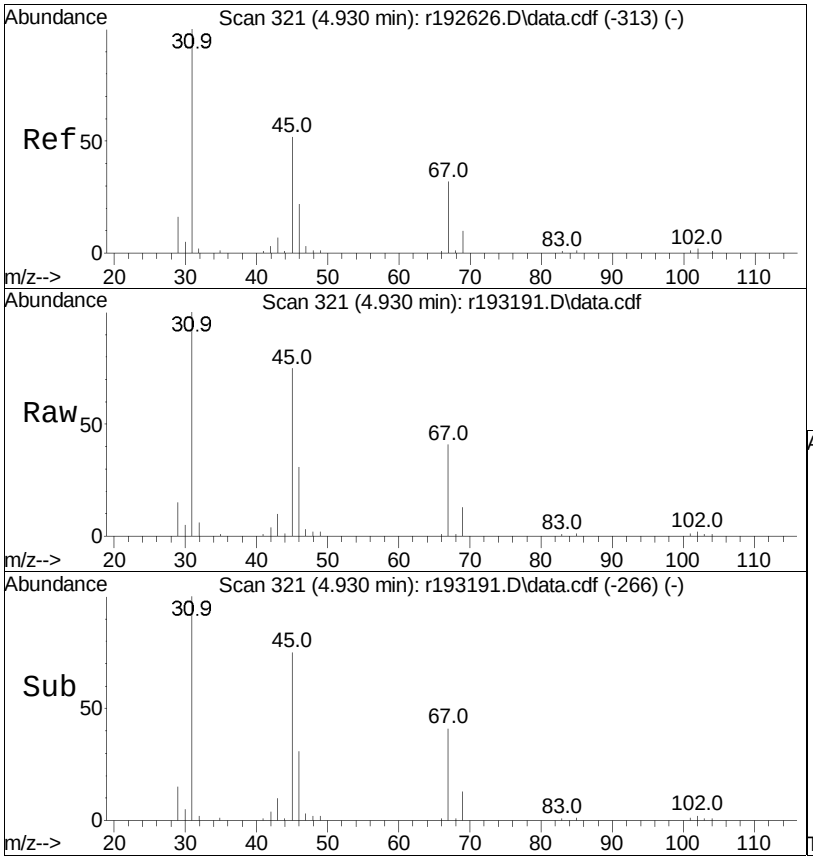



#14
chloroethane
Concen: 10.11 ppbV
RT: 4.798 min Scan# 299
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 64 Resp: 68604

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 31.4 | 28.5 | 42.7 |

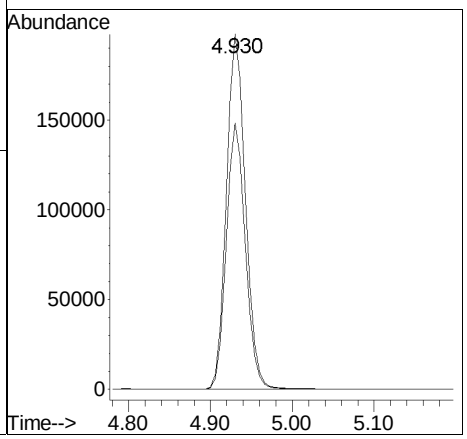


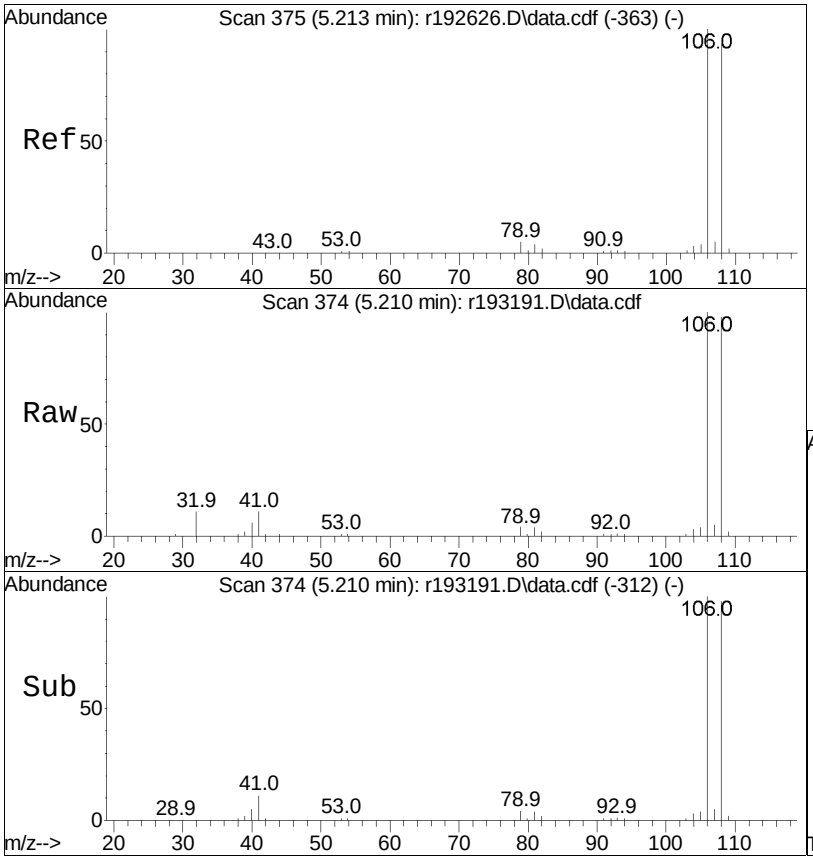



#15
ethanol
Concen: 37.76 ppbV
RT: 4.930 min Scan# 321
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 31 Resp: 321089

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 75.0 | 40.6 | 60.8# |

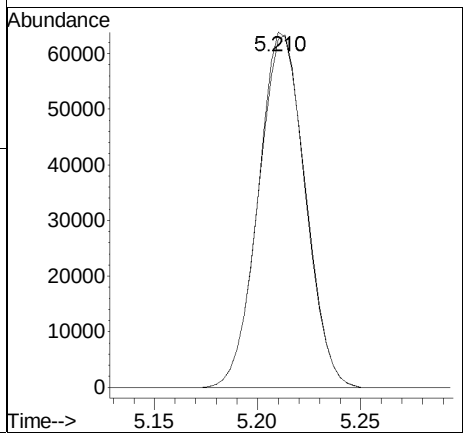


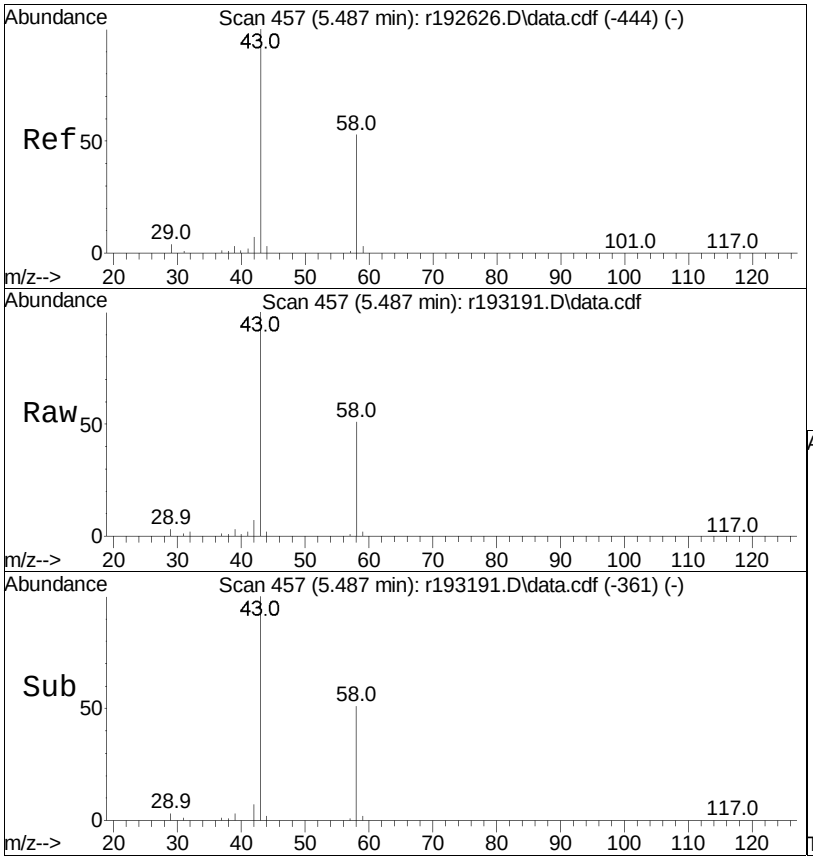



#17
vinyl bromide
Concen:  9.12 ppbV
RT:  5.210 min  Scan# 374
Delta R.T.  0.003 min
Lab File:  r193191.D
Acq: 20 Mar 2020  12:51 PM

Tgt Ion:106 Resp:  101012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 108 | 98.0 | 72.3 | 108.5 |

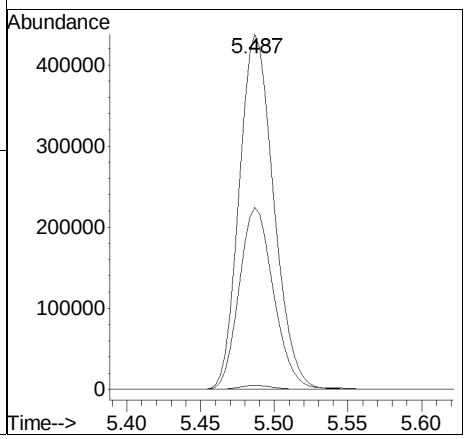


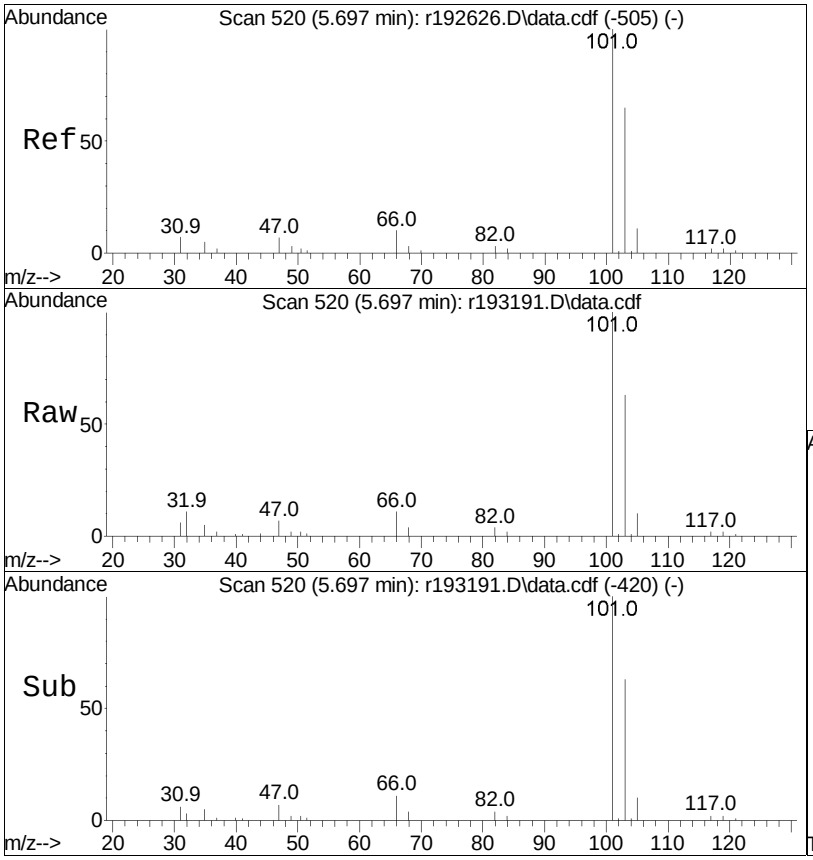



#19
acetone
Concen: 45.58 ppbV
RT: 5.487 min Scan# 457
Delta R.T. -0.010 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 43 Resp: 712336

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 51.2 | 42.0 | 63.0 |
| 57 | 1.2 | 1.4 | 2.0# |

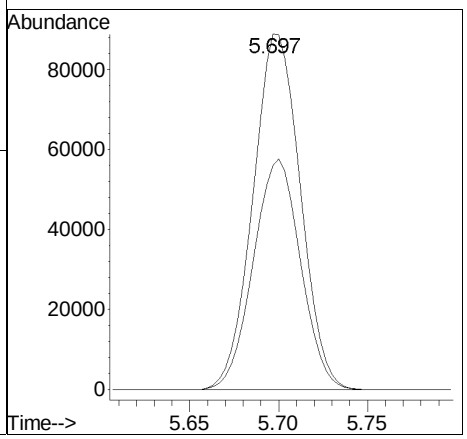


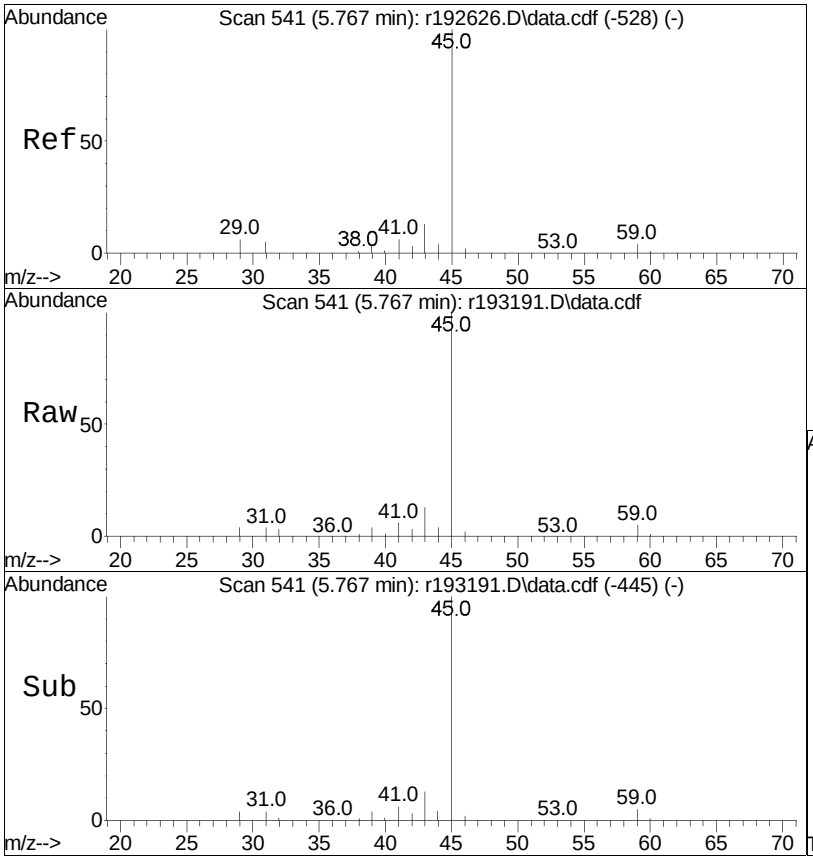



#21
trichlorofluoromethane
Concen: 9.61 ppbV
RT: 5.697 min Scan# 520
Delta R.T. 0.003 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:101 Resp: 164720

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 63.0 | 51.4 | 77.2 |

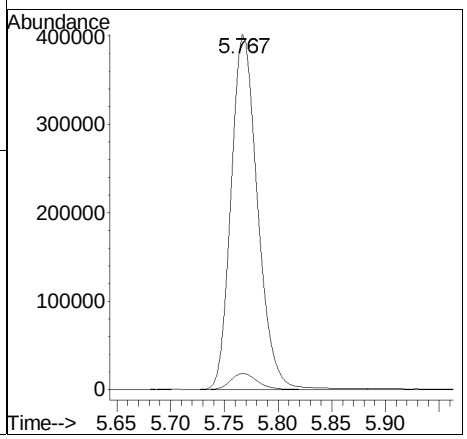


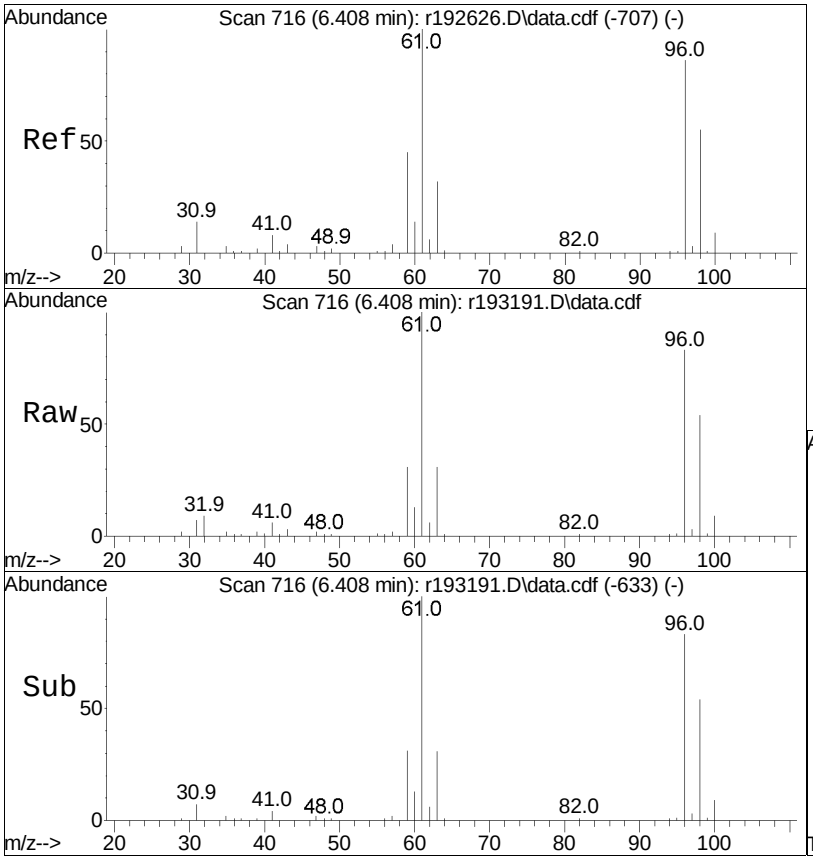



#22
isopropyl alcohol
Concen: 23.26 ppbV
RT: 5.767 min Scan# 541
Delta R.T. -0.010 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 45 Resp: 690492

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 4.5 | 3.7 | 5.5 |

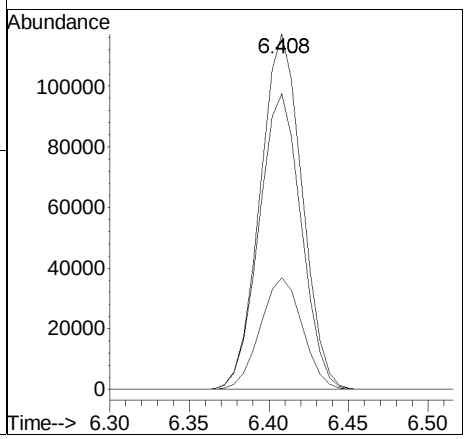


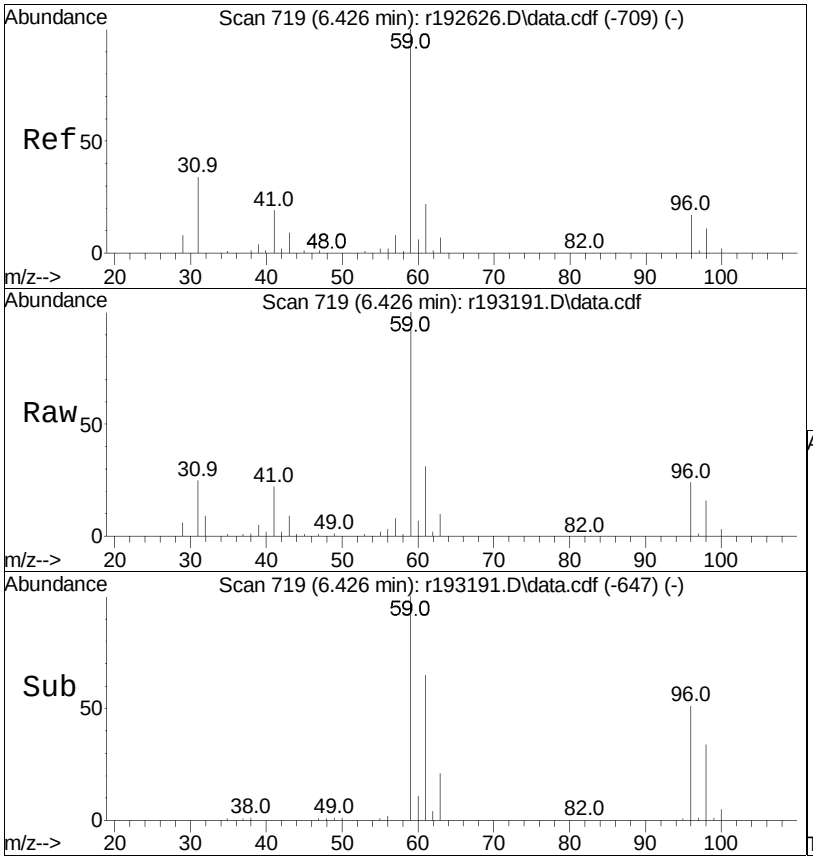



#26
1,1-dichloroethene
Concen: 10.90 ppbV
RT: 6.408 min Scan# 716
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 61 Resp: 215216

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 83.2 | 67.5 | 101.3 |
| 63 | 31.5 | 29.9 | 44.9 |

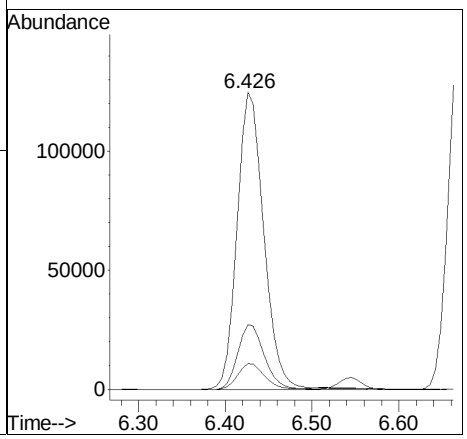


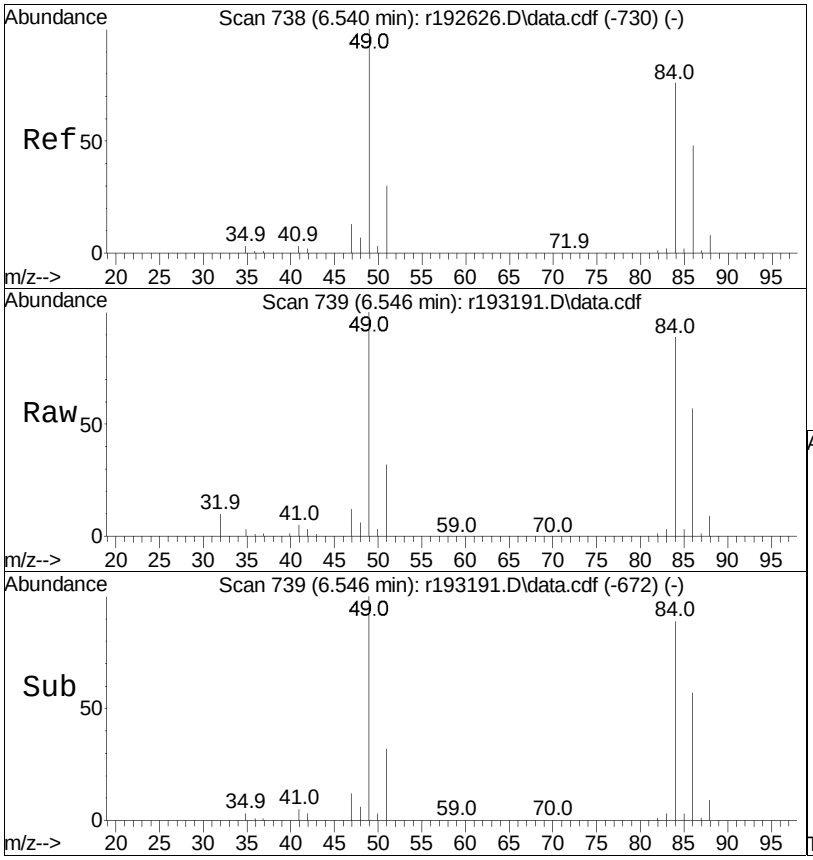



#27
tertiary butyl alcohol
Concen: 9.81 ppbV
RT: 6.426 min Scan# 719
Delta R.T. -0.024 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 59 Resp: 266935

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 21.8 | 18.8 | 28.2 |
| 43 | 8.7 | 9.8 | 14.8# |

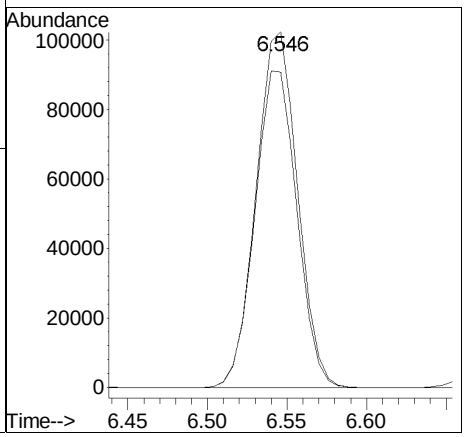


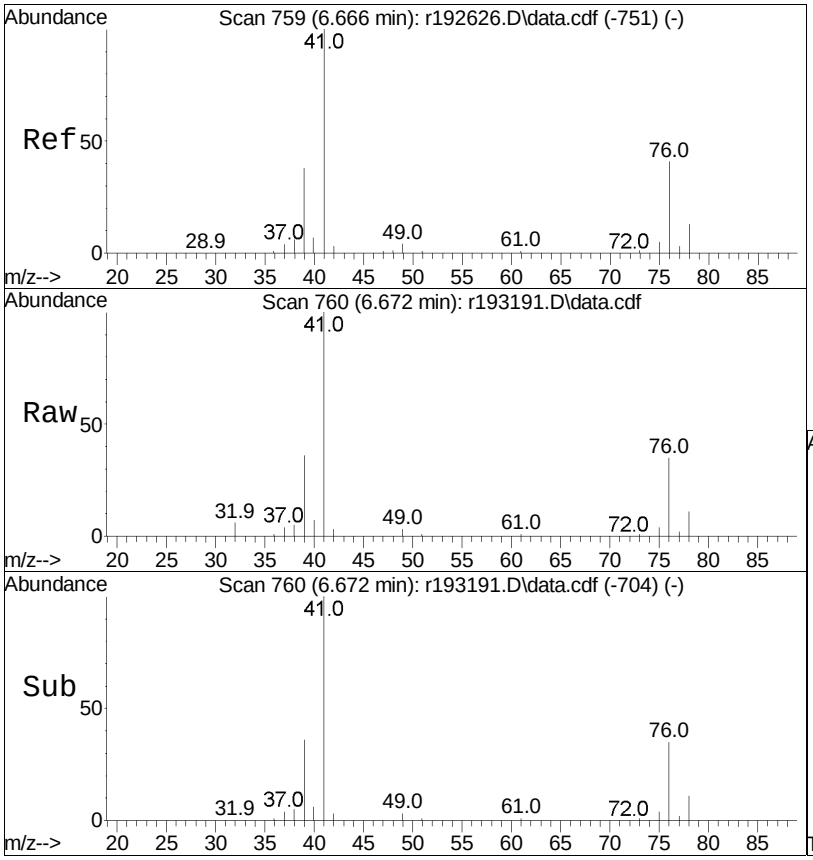



#28
methylene chloride
Concen: 9.69 ppbV
RT: 6.546 min Scan# 739
Delta R.T. 0.012 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 49 Resp: 185196

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 88.7 | 59.8 | 89.6 |

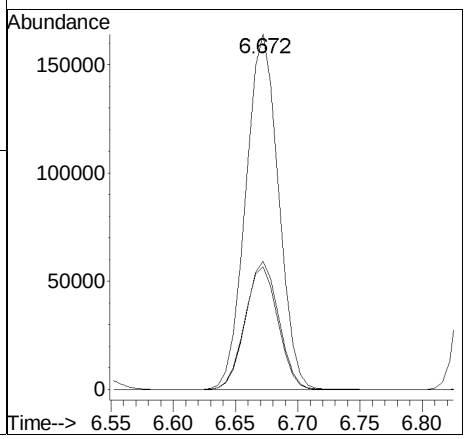


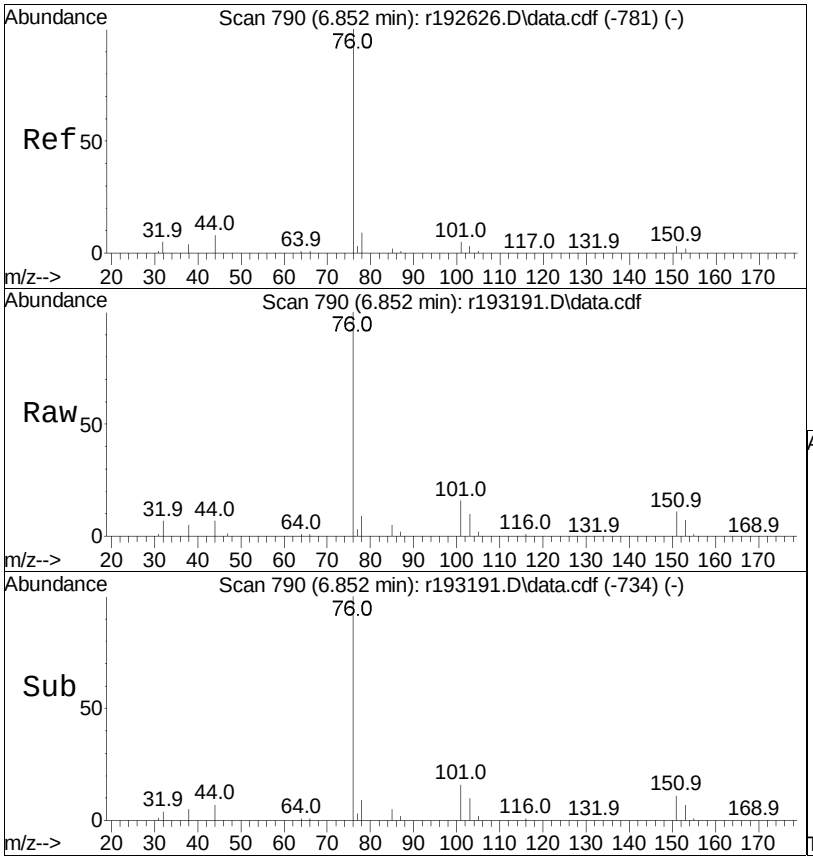



#29
3-chloropropene
Concen: 13.03 ppbV
RT: 6.672 min Scan# 760
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 41 Resp: 299903

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 39 | 36.1 | 31.4 | 47.2 |
| 76 | 34.5 | 31.4 | 47.0 |

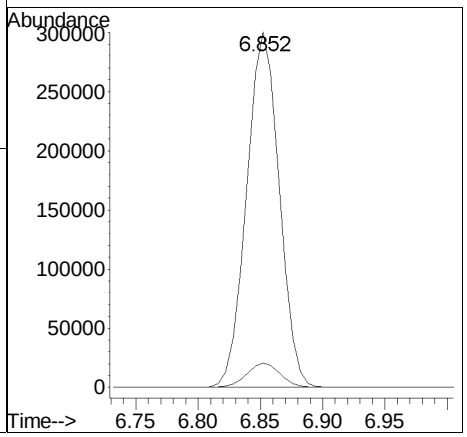


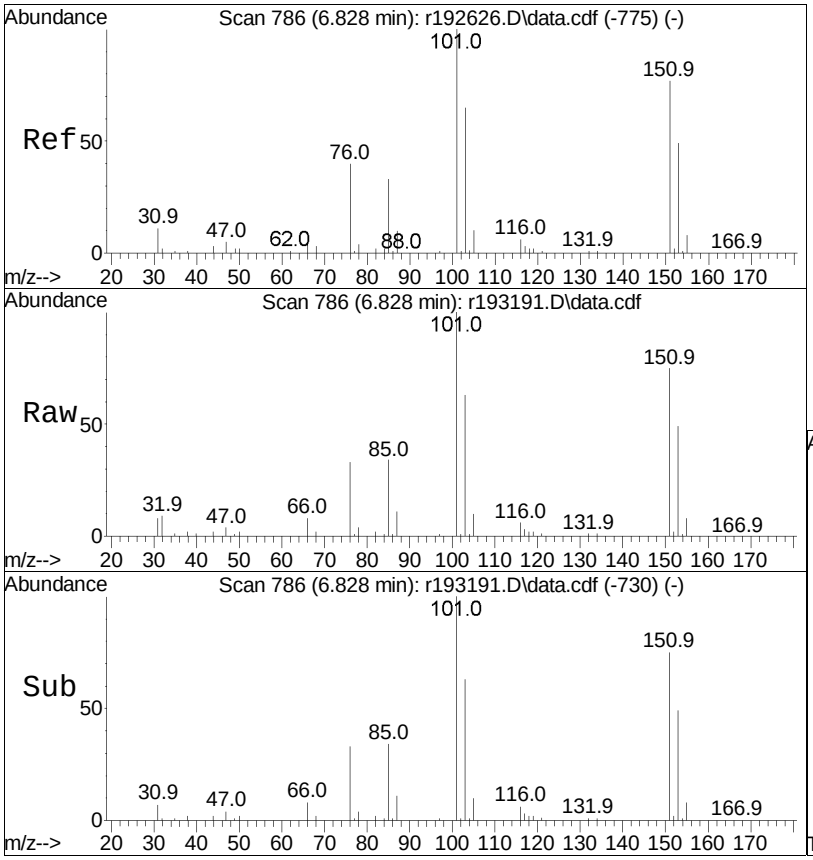



#30
carbon disulfide
Concen: 10.30 ppbV
RT: 6.852 min Scan# 790
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 76 Resp: 546933

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 6.9 | 12.3 | 18.5# |

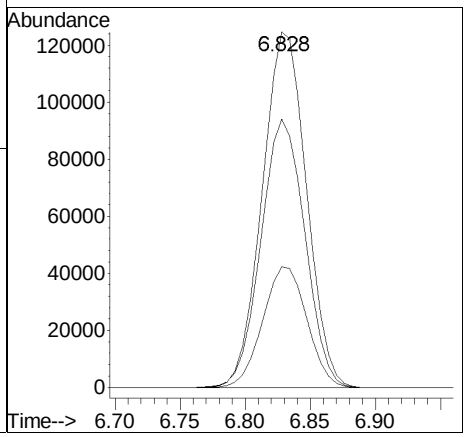


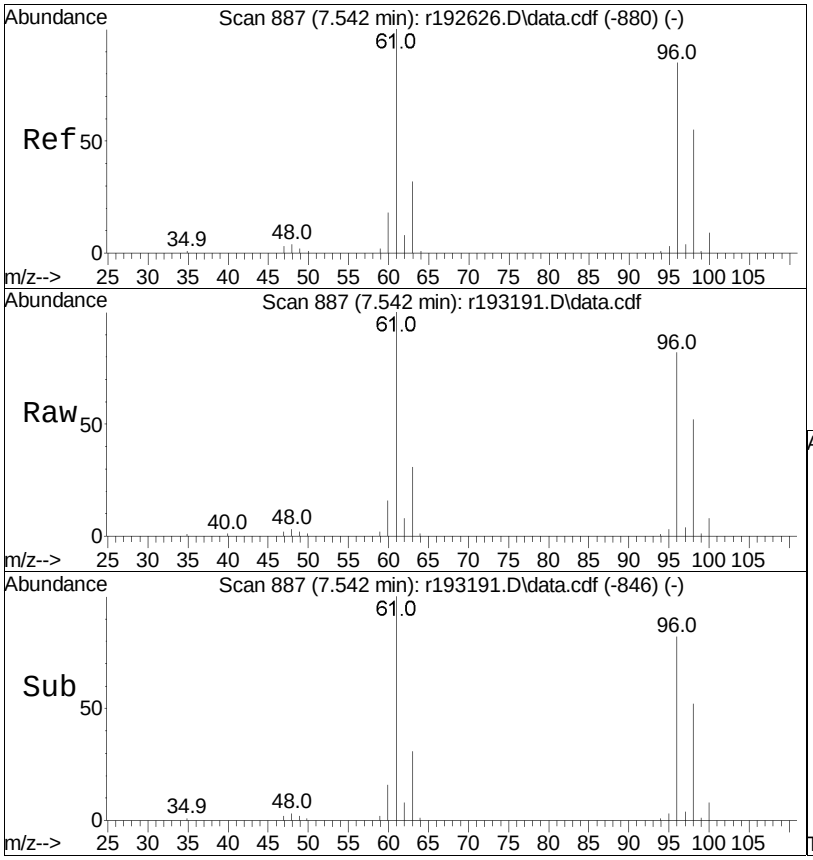



#31
Freon 113
Concen: 10.55 ppbV
RT: 6.828 min Scan# 786
Delta R.T. 0.006 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:101 Resp: 293948

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 33.9 | 26.7 | 40.1 |
| 151 | 75.5 | 63.4 | 95.2 |

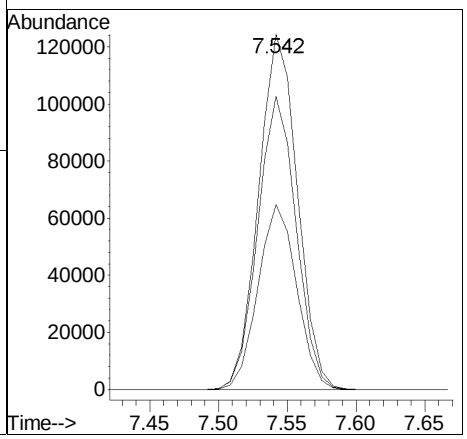


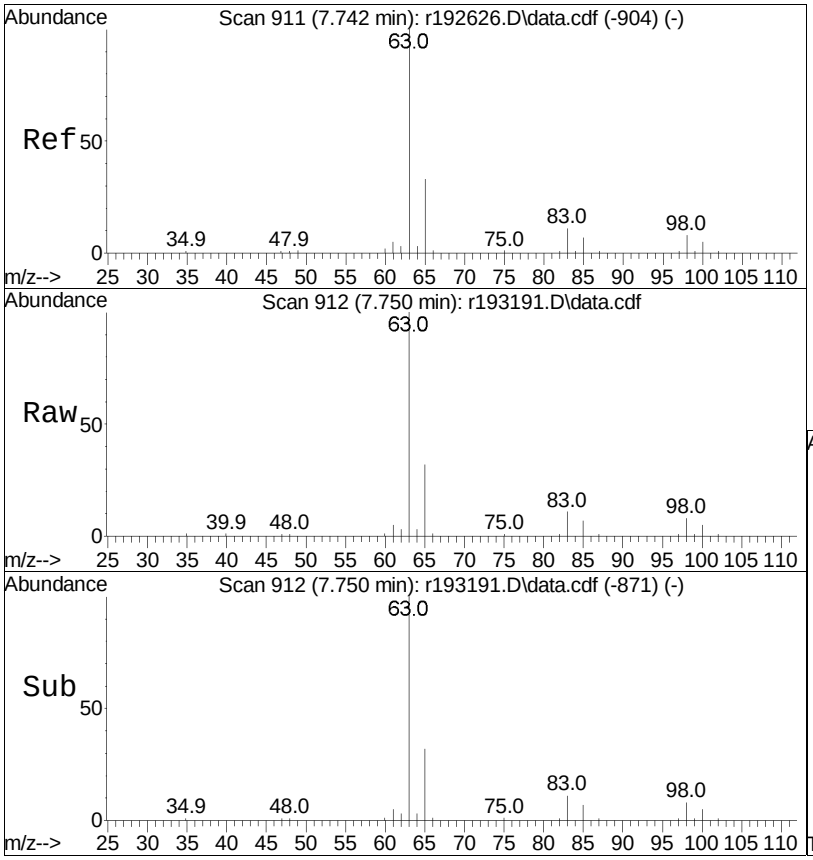



#32
trans-1,2-dichloroethene
Concen: 10.79 ppbV
RT: 7.542 min Scan# 887
Delta R.T. 0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 61 Resp: 244273

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 82.5 | 68.0 | 102.0 |
| 98 | 52.0 | 44.0 | 66.0 |

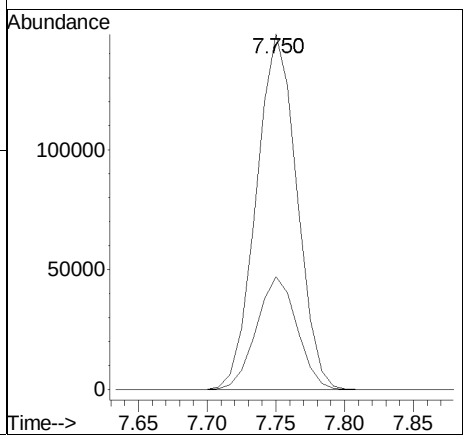


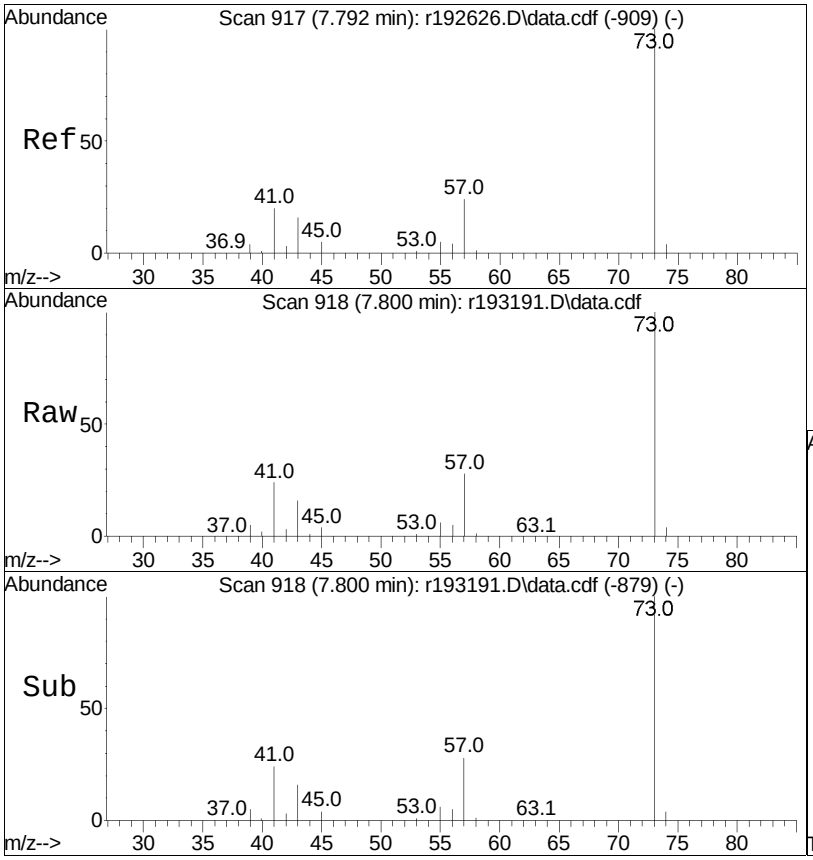



#33
1,1-dichloroethane
Concen: 11.01 ppbV
RT: 7.750 min Scan# 912
Delta R.T. 0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 63 Resp: 303714

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 31.7 | 26.5 | 39.7 |

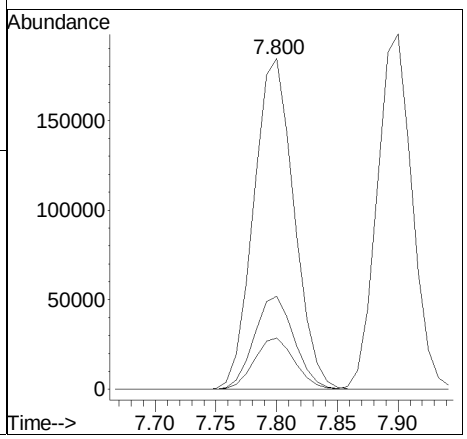


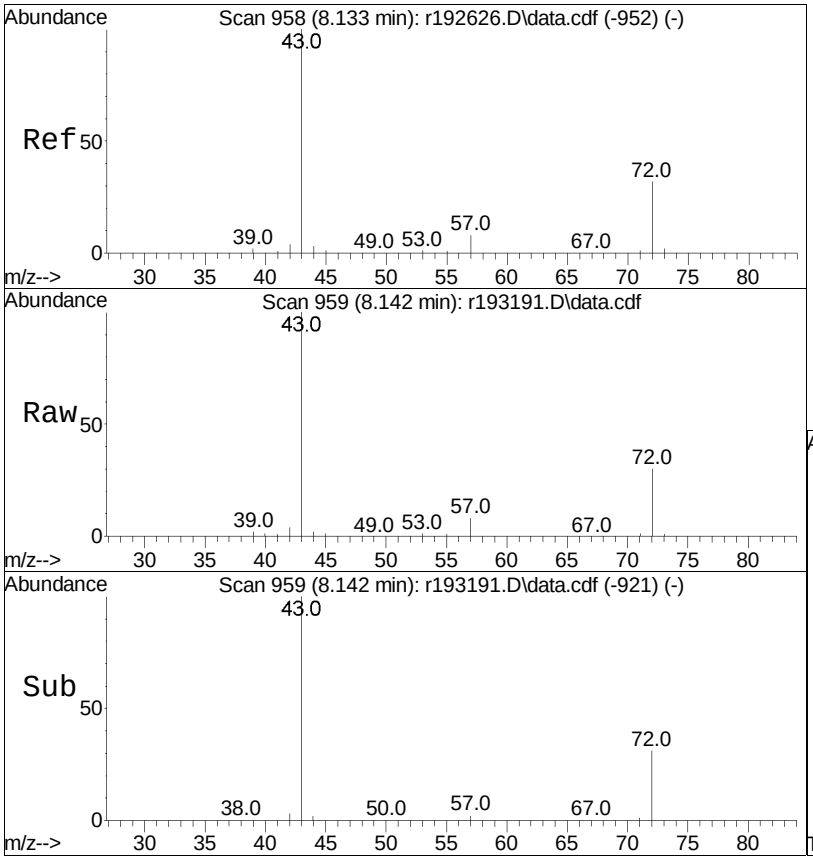



#34
MTBE
Concen: 9.54 ppbV
RT: 7.800 min Scan# 918
Delta R.T. -0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 73 Resp: 426408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 28.2 | 19.8 | 29.6 |
| 43 | 15.6 | 13.2 | 19.8 |

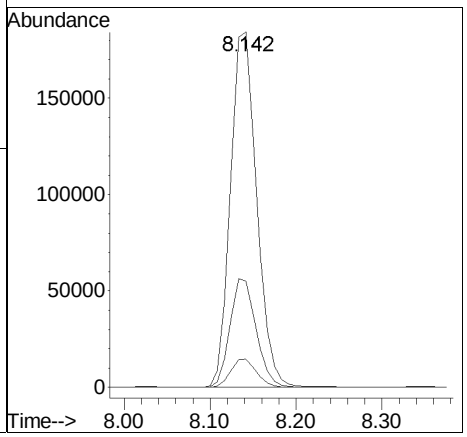


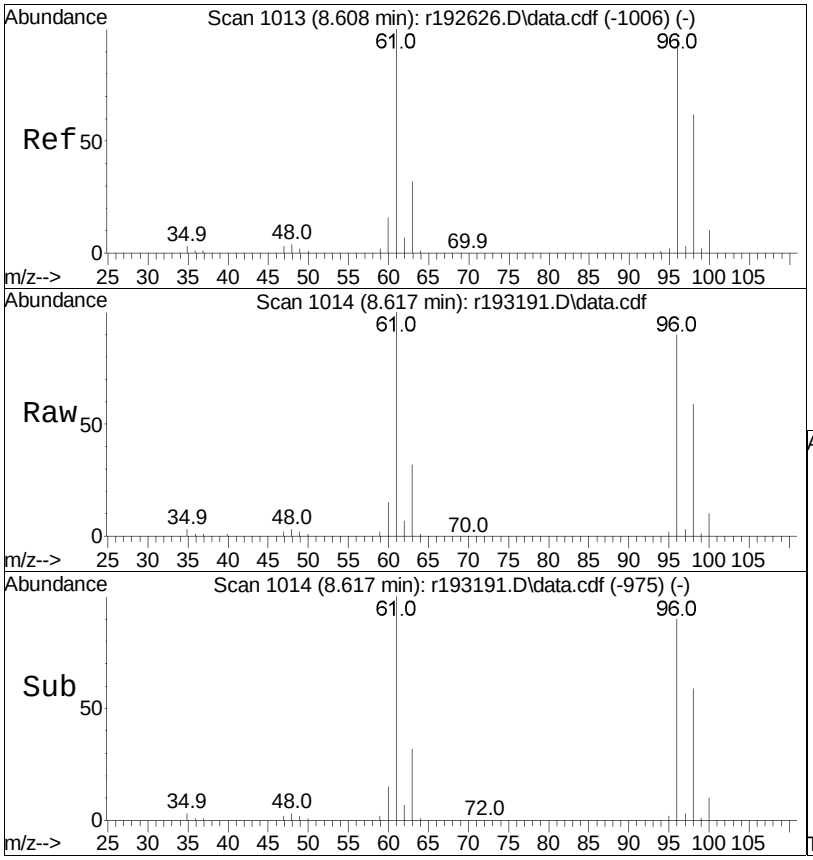



#36
2-butanone
Concen:  11.22 ppbV
RT:  8.142 min  Scan# 959
Delta R.T.  -0.017 min
Lab File:  r193191.D
Acq: 20 Mar 2020  12:51 PM

Tgt Ion: 43 Resp:  392946

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 29.9 | 27.7 | 41.5 |
| 57 | 7.9 | 6.3 | 9.5 |

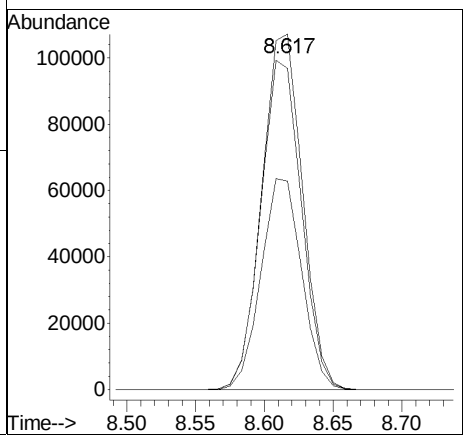


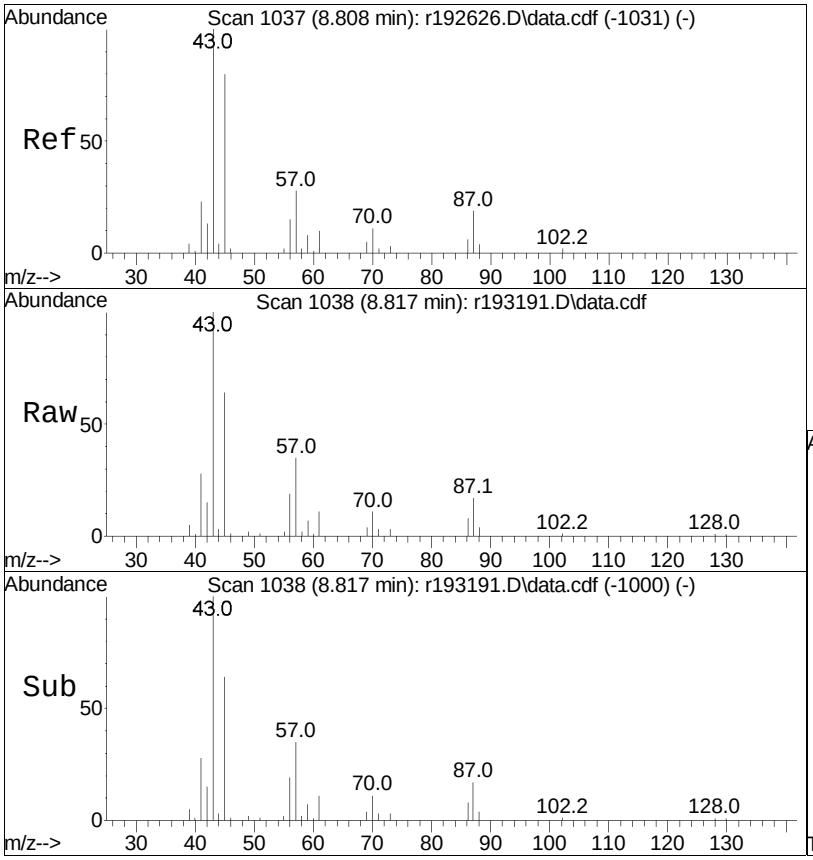



#37
cis-1,2-dichloroethene
Concen: 11.27 ppbV
RT: 8.617 min Scan# 1014
Delta R.T. 0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 61 Resp: 221113

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 90.3 | 77.4 | 116.0 |
| 98 | 58.6 | 51.0 | 76.6 |

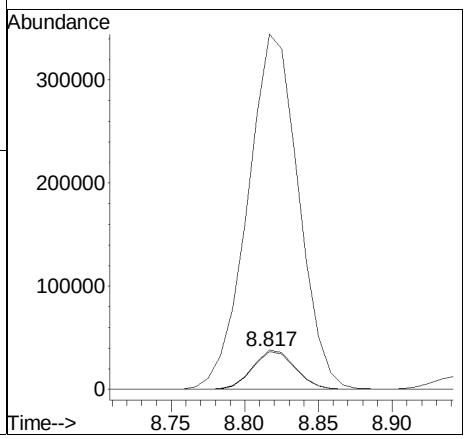


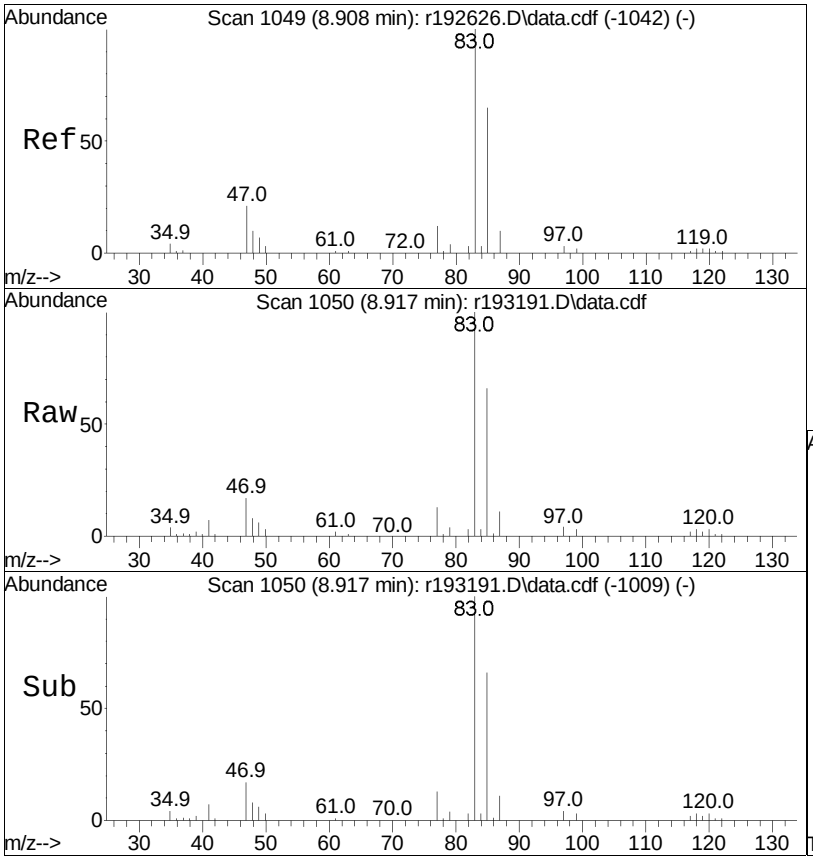



#38
Ethyl Acetate
Concen: 12.45 ppbV
RT: 8.817 min Scan# 1038
Delta R.T. -0.017 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 61 Resp: 74226

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 103.8 | 86.6 | 130.0 |
| 43 | 936.9 | 819.5 | 1229.3 |

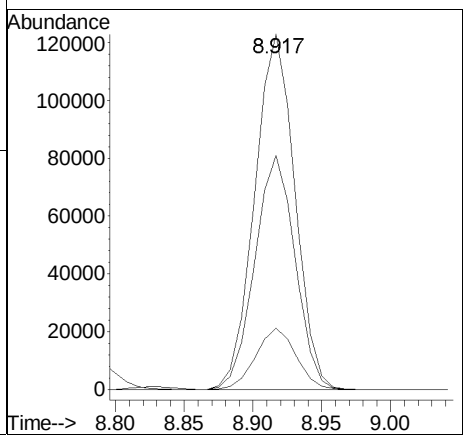


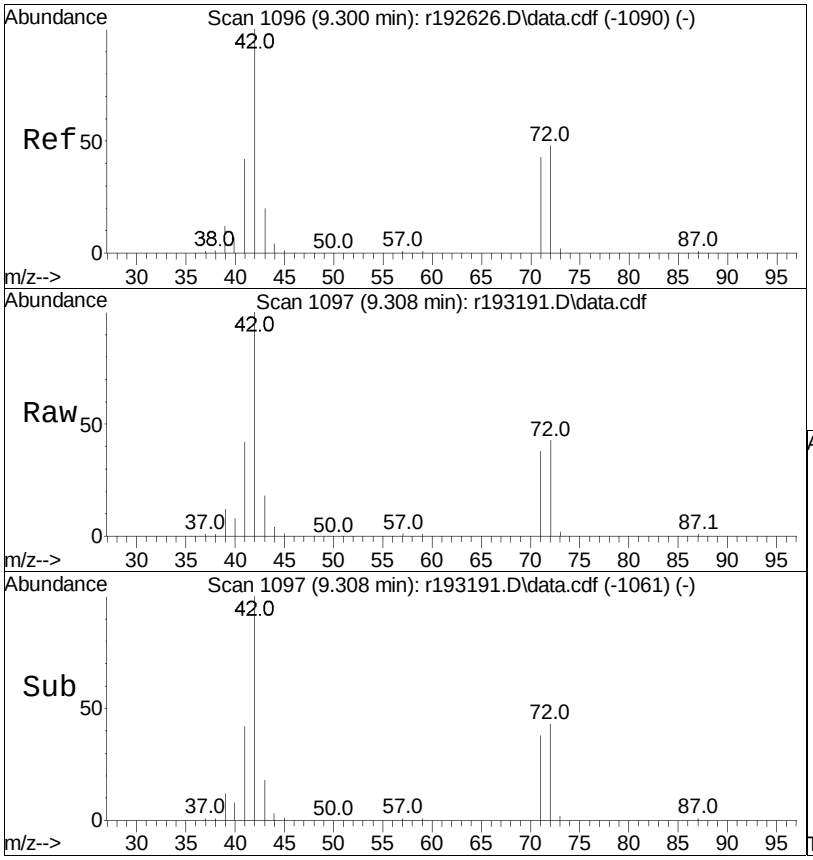



#39
chloroform
Concen: 10.25 ppbV
RT: 8.917 min Scan# 1050
Delta R.T. 0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 83 Resp: 249600

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.8 | 50.1 | 75.1 |
| 47 | 17.3 | 17.6 | 26.4# |

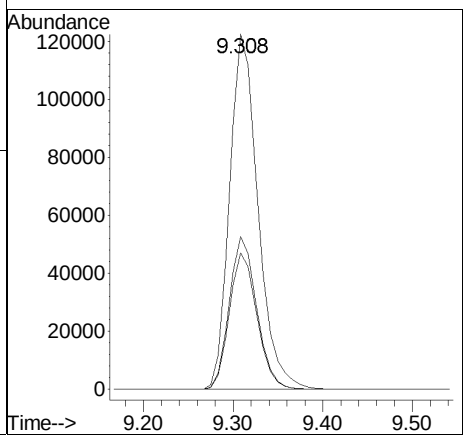


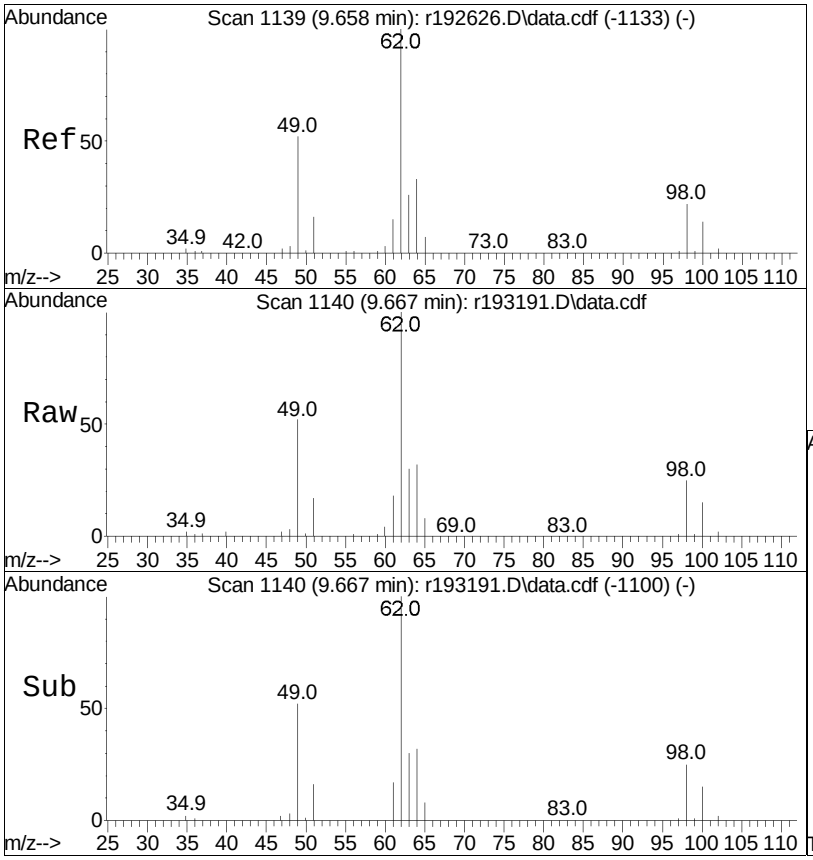



#40
Tetrahydrofuran
Concen: 11.47 ppbV
RT: 9.308 min Scan# 1097
Delta R.T. -0.033 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 42 Resp: 269982

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 38.4 | 32.5 | 48.7 |
| 72 | 43.0 | 33.7 | 50.5 |

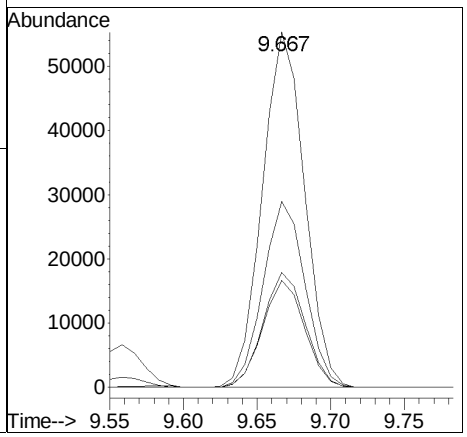


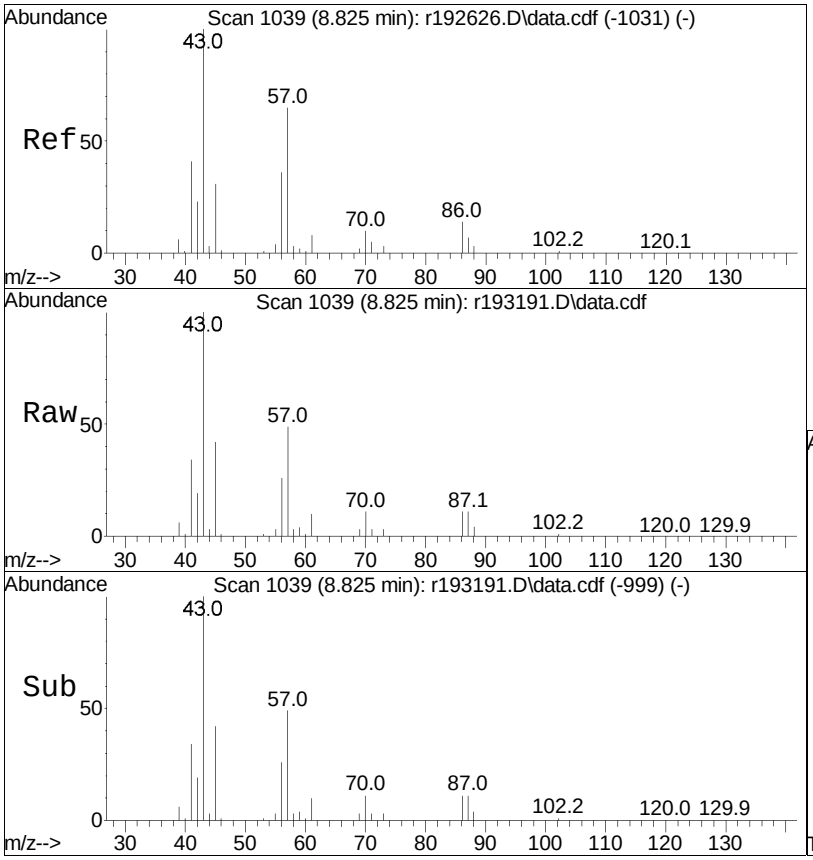



#42
1,2-dichloroethane
Concen: 9.26 ppbV
RT: 9.667 min Scan# 1140
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 62 Resp: 110185

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.4 | 27.9 | 41.9 |
| 49 | 52.3 | 40.5 | 60.7 |
| 63 | 30.1 | 20.3 | 30.5 |

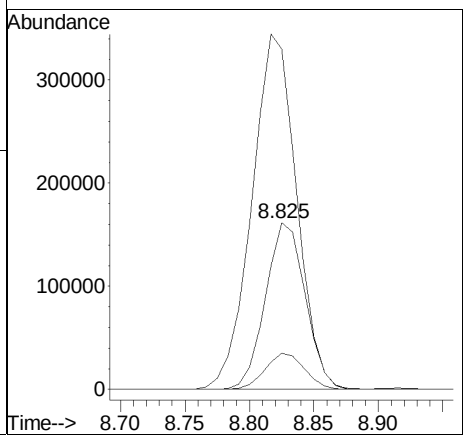


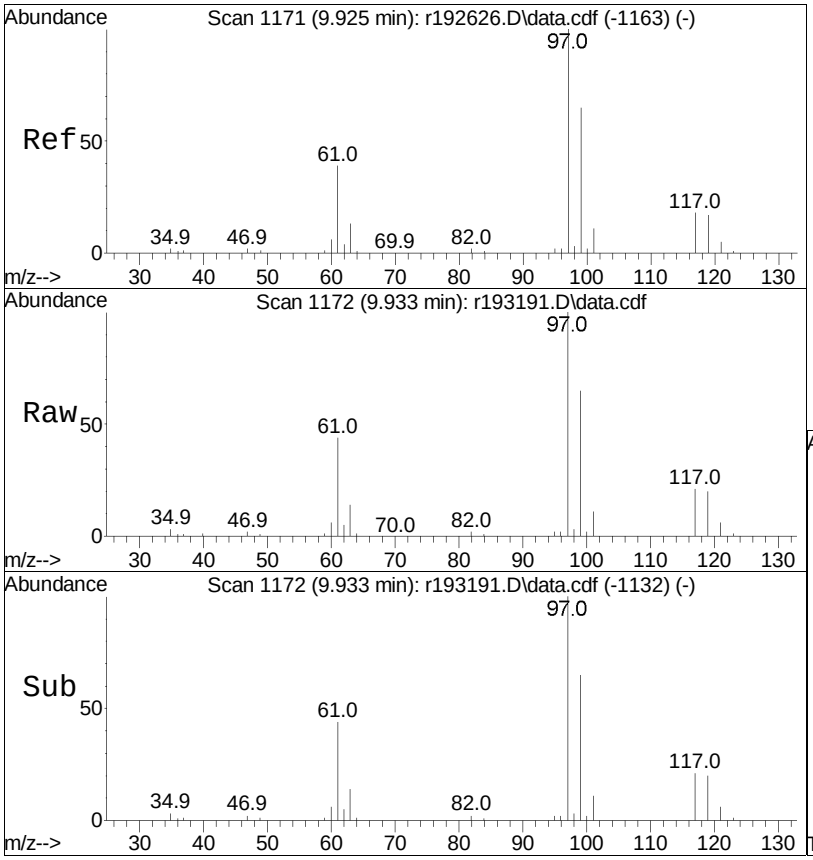



#44
hexane
Concen: 10.01 ppbV
RT: 8.825 min Scan# 1039
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 57 Resp: 347249

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 204.2 | 159.3 | 238.9 |
| 86 | 21.7 | 15.7 | 23.5 |

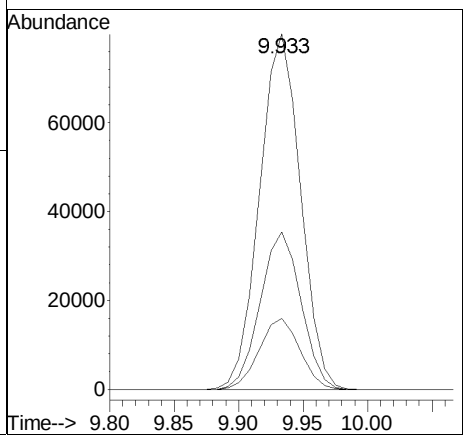


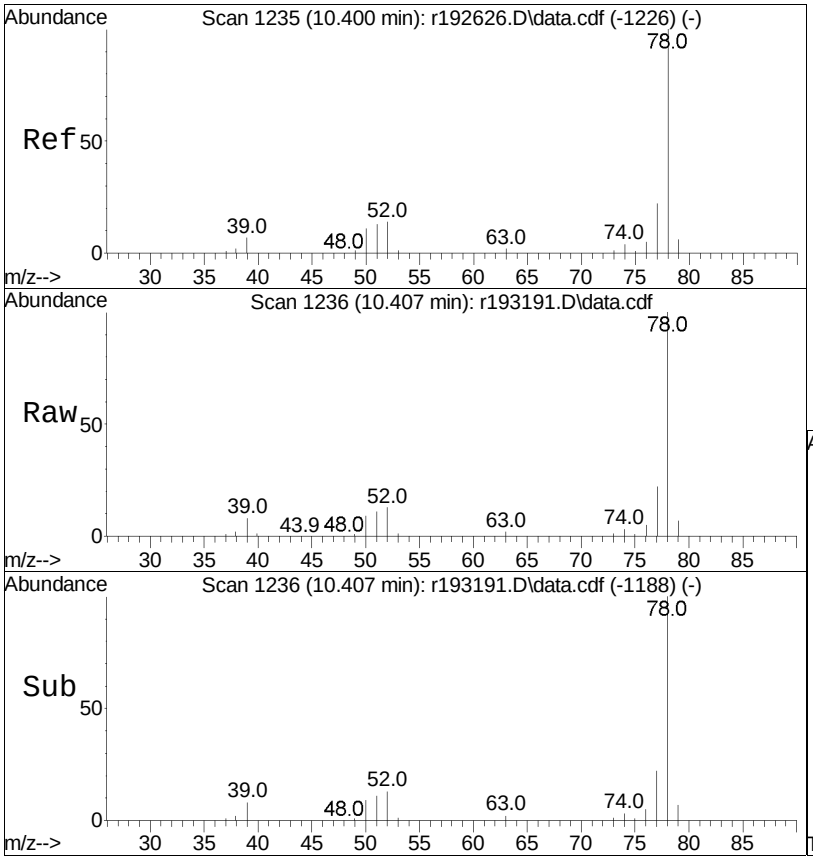



#48
1,1,1-trichloroethane
Concen: 7.92 ppbV
RT: 9.933 min Scan# 1172
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 97 Resp: 176378

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 61 | 44.3 | 30.0 | 45.0 |
| 119 | 20.0 | 14.0 | 21.0 |

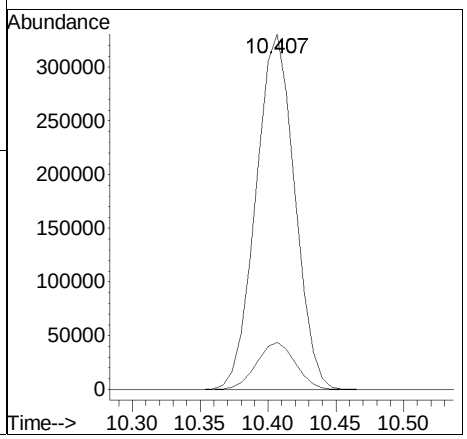


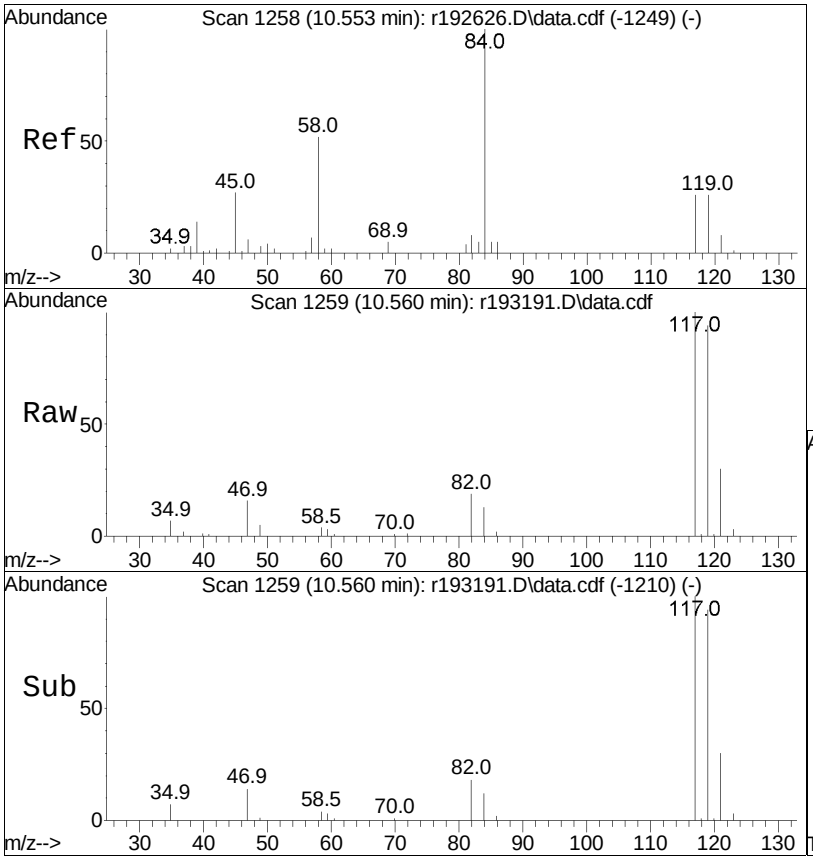



#50
benzene
Concen: 9.60 ppbV
RT: 10.407 min Scan# 1236
Delta R.T. 0.007 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 78 Resp: 656527

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 13.3 | 11.4 | 17.2 |

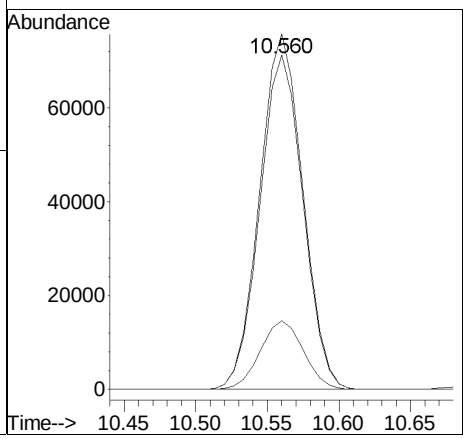


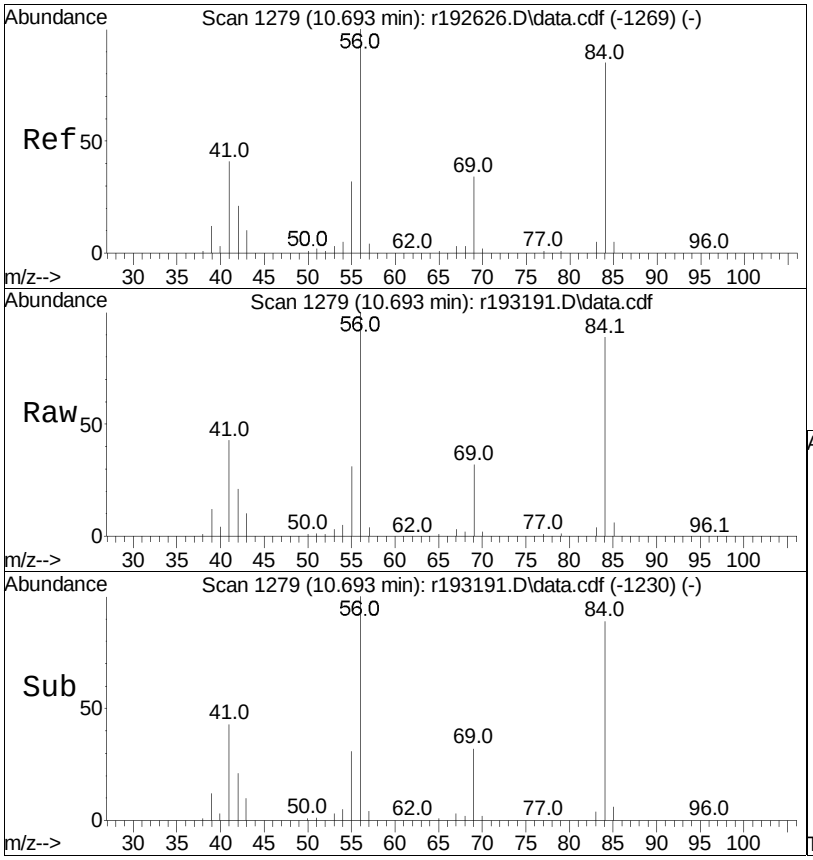



#52
carbon tetrachloride
Concen: 8.66 ppbV
RT: 10.560 min Scan# 1259
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:117 Resp: 158780

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 94.1 | 85.4 | 128.2 |
| 82 | 19.3 | 22.6 | 33.8# |

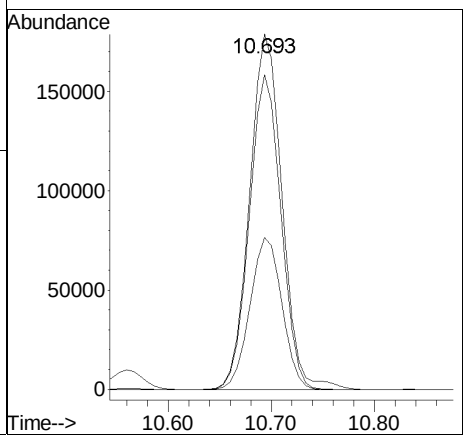


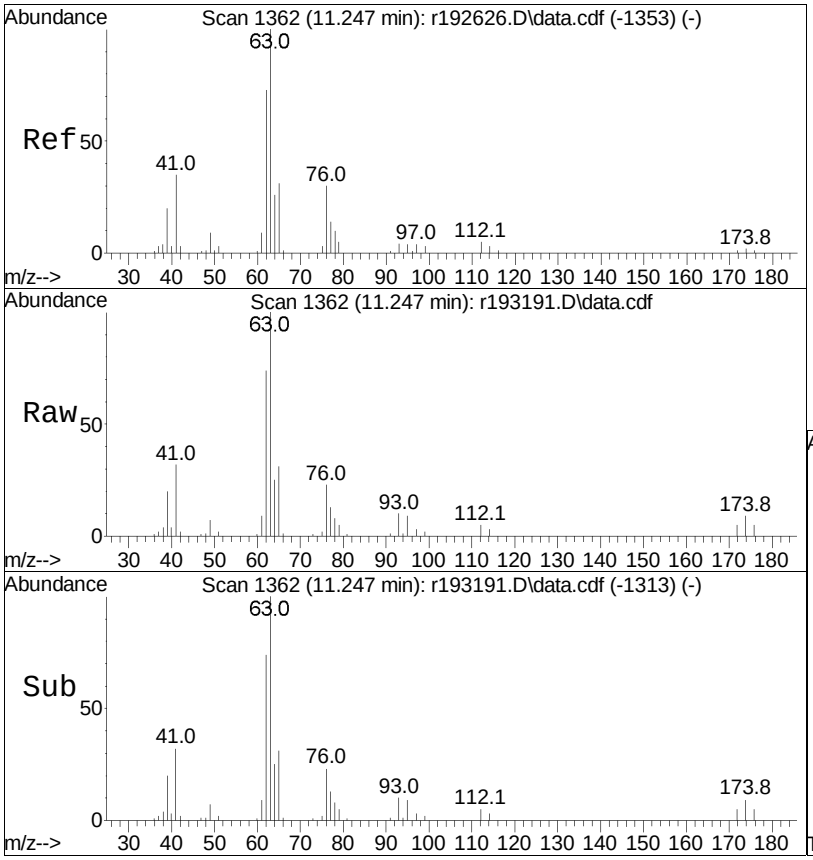



#53
cyclohexane
Concen: 10.29 ppbV
RT: 10.693 min Scan# 1279
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 56 Resp: 390430

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 88.6 | 69.8 | 104.6 |
| 41 | 42.8 | 32.1 | 48.1 |

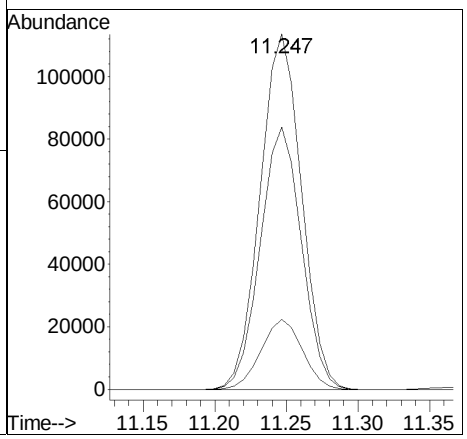


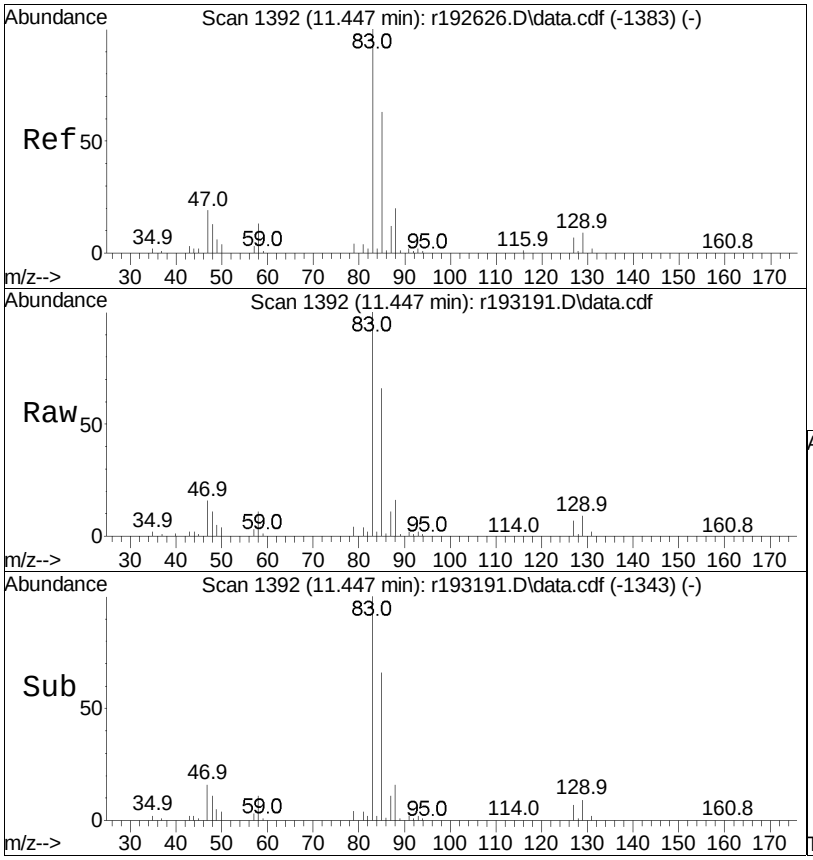



#56
1,2-dichloropropane
Concen: 10.44 ppbV
RT: 11.247 min Scan# 1362
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 63 Resp: 228409

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 73.8 | 58.1 | 87.1 |
| 39 | 19.7 | 17.6 | 26.4 |

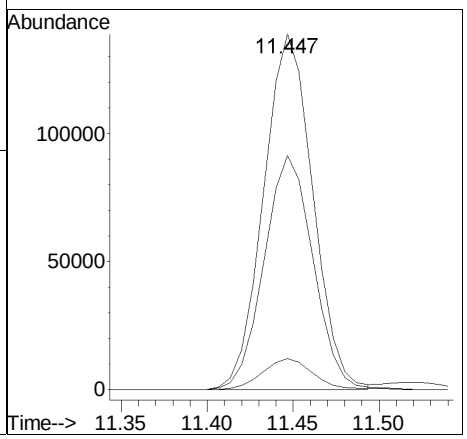


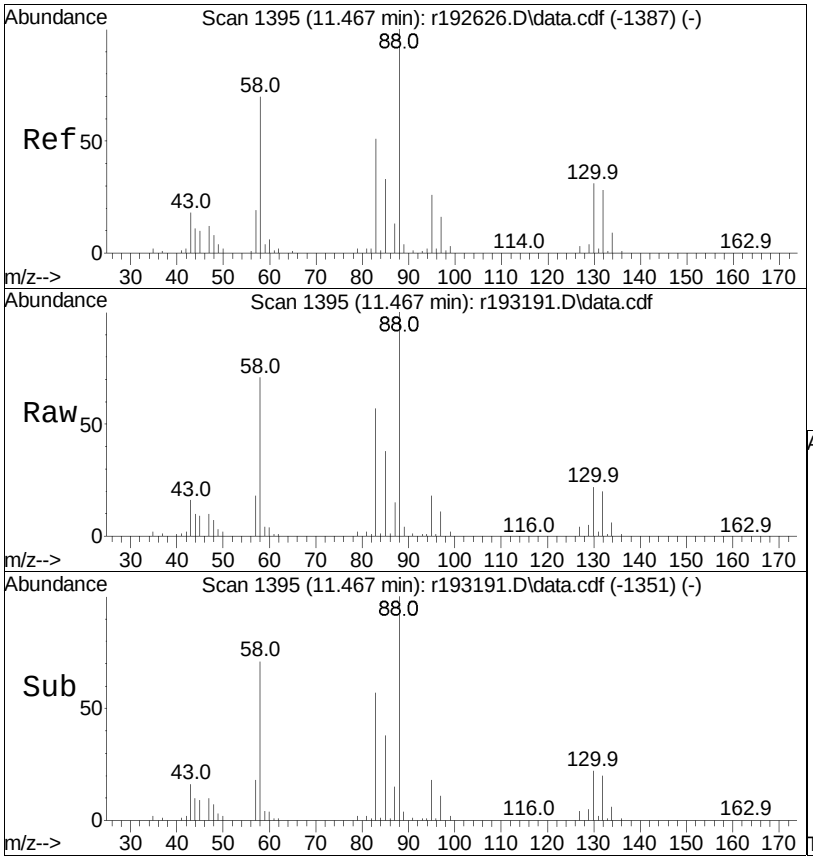



#57
bromodichloromethane
Concen: 9.25 ppbV
RT: 11.447 min Scan# 1392
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 83 Resp: 276018

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.9 | 49.1 | 73.7 |
| 129 | 8.7 | 7.8 | 11.6 |

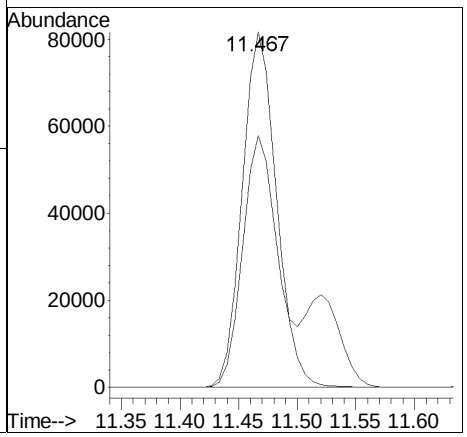


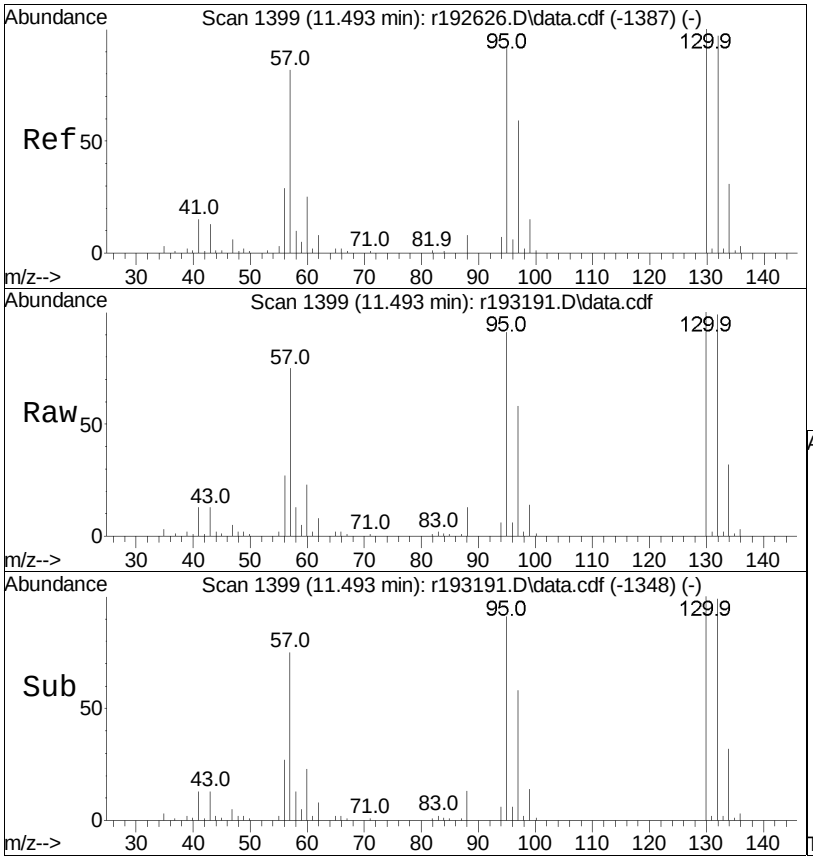



#58
1,4-dioxane
Concen: 10.71 ppbV
RT: 11.467 min Scan# 1395
Delta R.T. -0.033 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 88 Resp: 165900

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 70.9 | 70.5 | 105.7 |

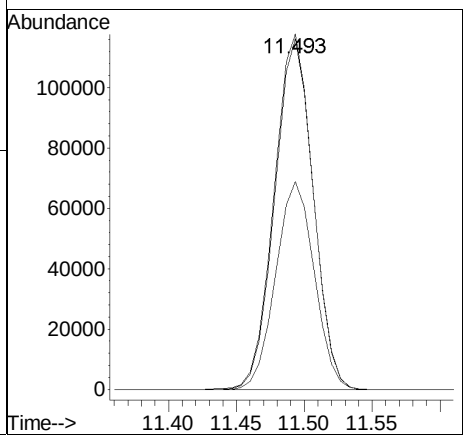


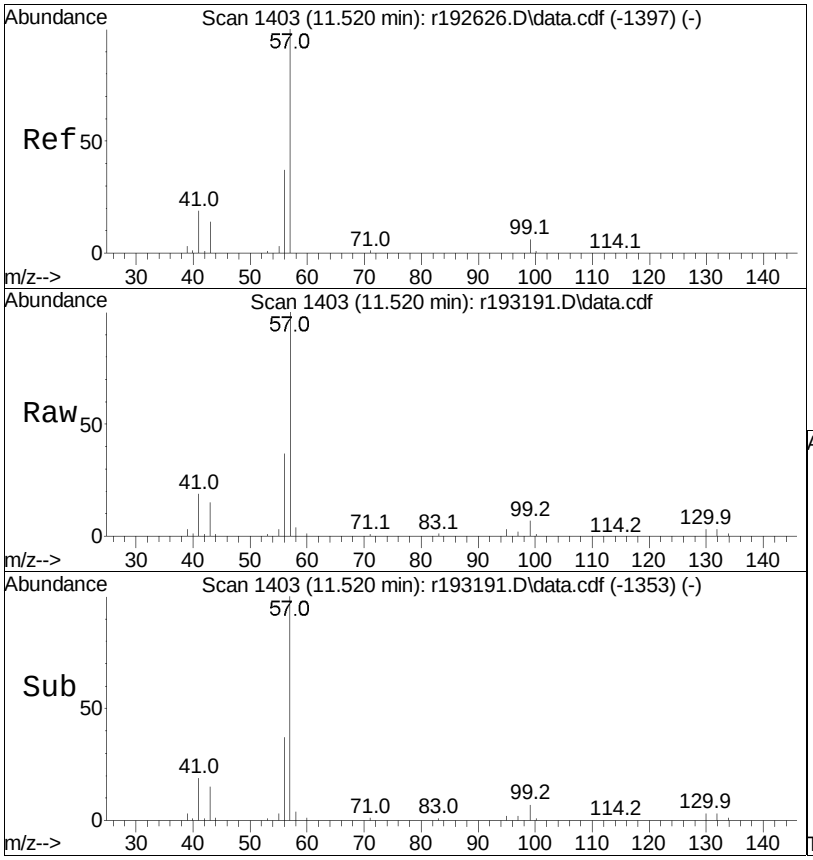



#59
trichloroethene
Concen: 9.60 ppbV
RT: 11.493 min Scan# 1399
Delta R.T. 0.007 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:130 Resp: 234179

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 98.7 | 73.8 | 110.8 |
| 97 | 58.5 | 46.9 | 70.3 |

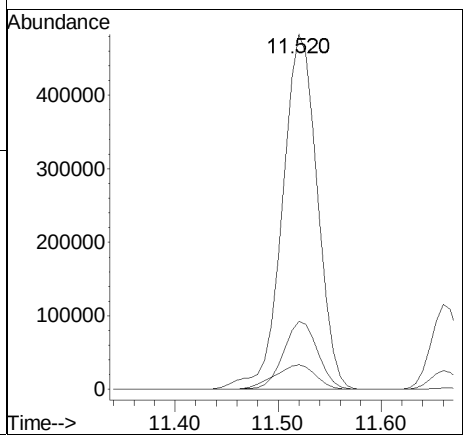


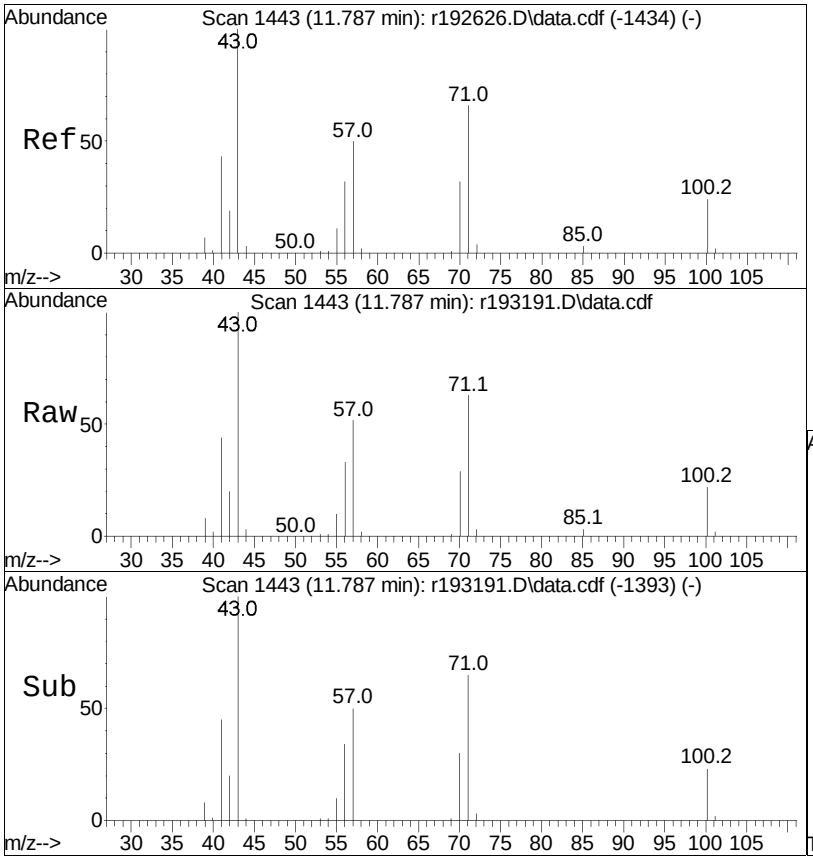



#60
2,2,4-trimethylpentane
Concen: 10.37 ppbV
RT: 11.520 min Scan# 1403
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 57 Resp: 1135194

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 6.9 | 6.0 | 9.0 |
| 41 | 19.2 | 15.6 | 23.4 |

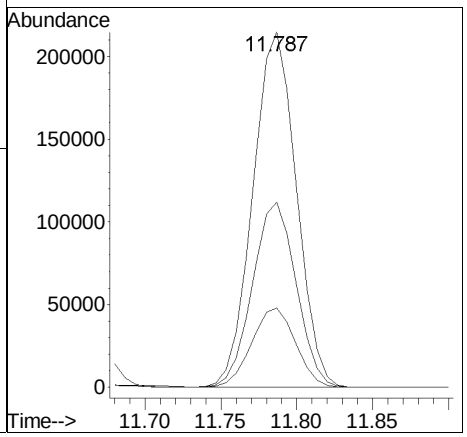


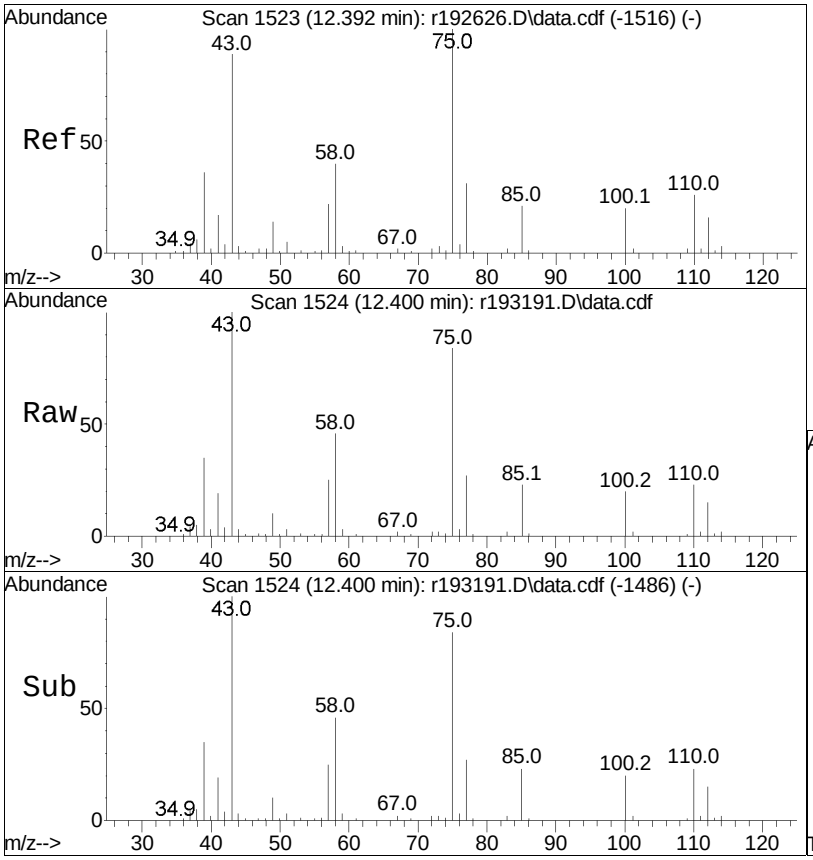



#62
heptane
Concen: 10.12 ppbV
RT: 11.787 min Scan# 1443
Delta R.T. 0.007 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 43 Resp: 428379

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 52.1 | 41.0 | 61.6 |
| 100 | 22.4 | 21.4 | 32.2 |

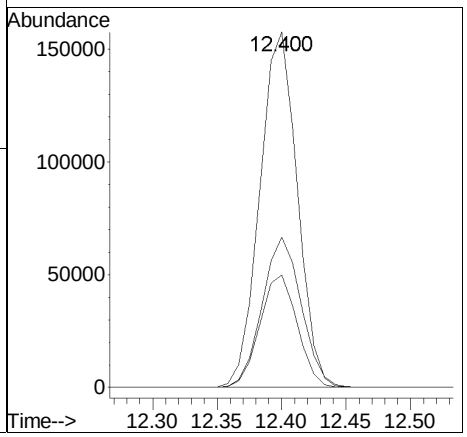


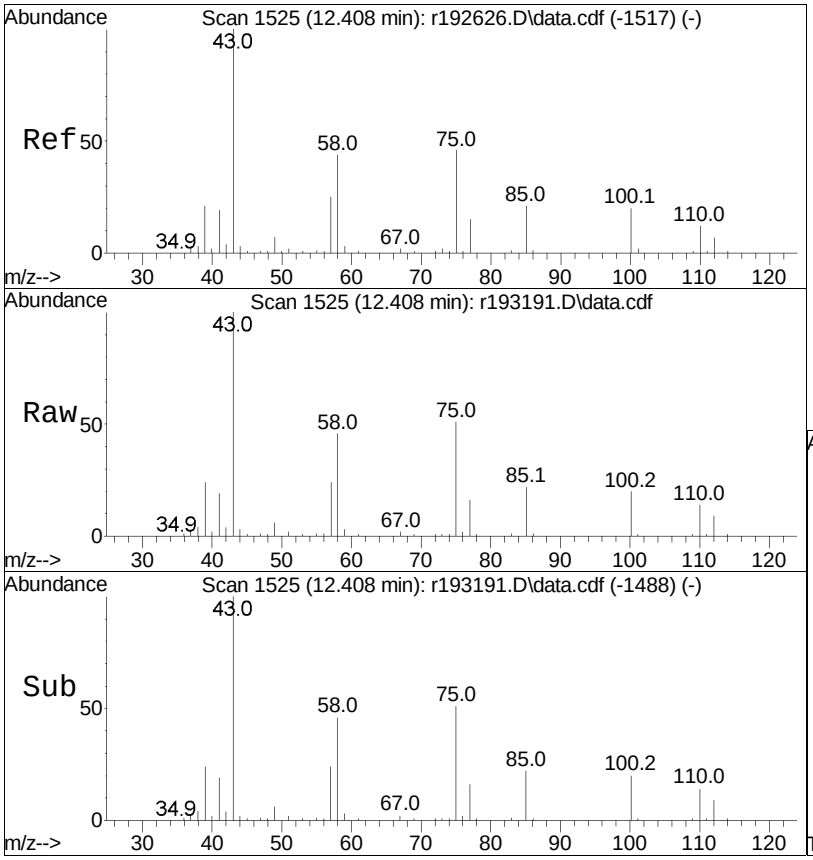



#63
cis-1,3-dichloropropene
Concen: 9.79 ppbV
RT: 12.400 min Scan# 1524
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 75 Resp: 318728

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 39 | 42.3 | 27.2 | 40.8# |
| 77 | 31.6 | 24.5 | 36.7 |

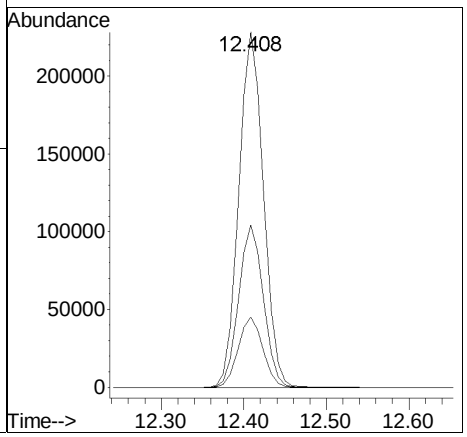


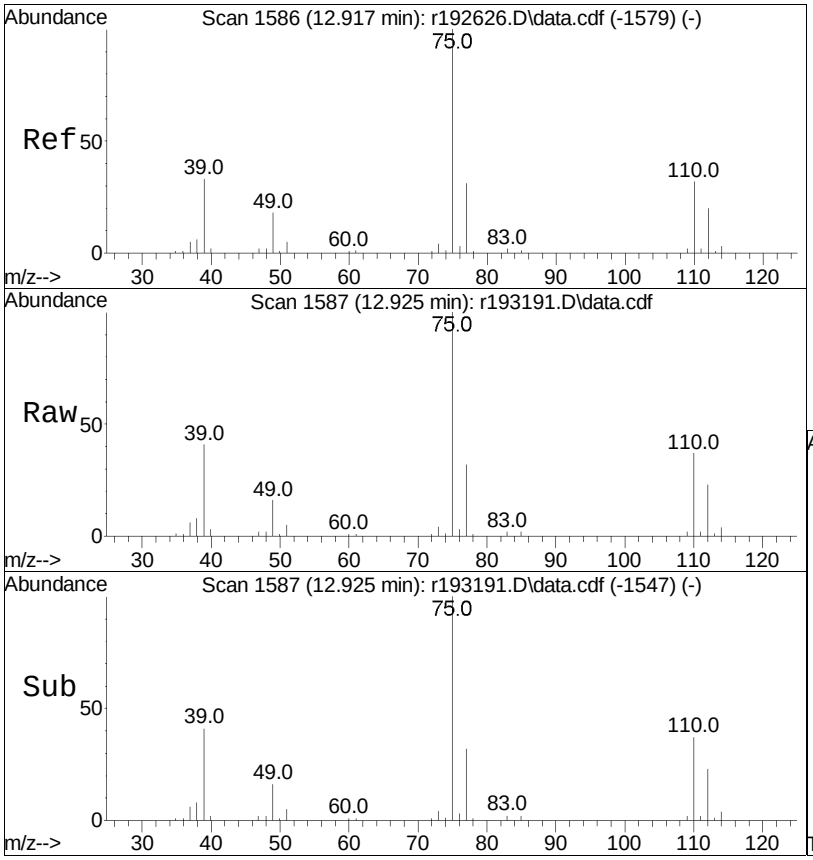



#64
4-methyl-2-pentanone
Concen: 10.41 ppbV
RT: 12.408 min Scan# 1525
Delta R.T. -0.025 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 43 Resp: 473699

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 45.7 | 32.9 | 49.3 |
| 100 | 19.8 | 15.4 | 23.2 |

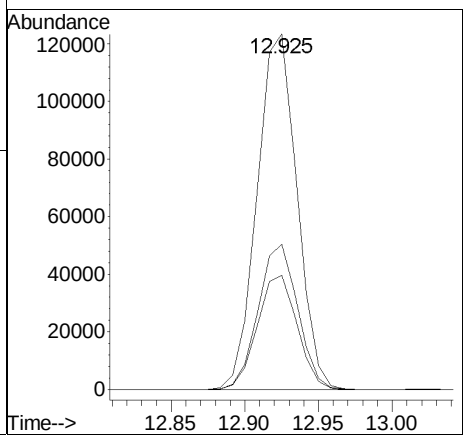


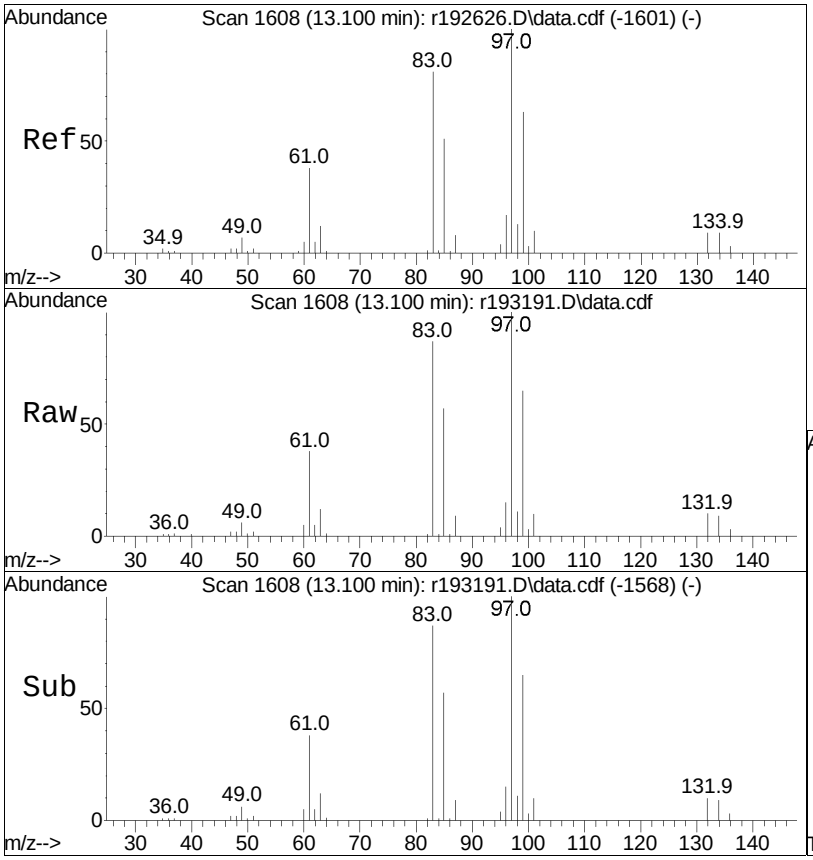



#65
trans-1,3-dichloropropene
Concen: 7.91 ppbV
RT: 12.925 min Scan# 1587
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 75 Resp: 231649

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 32.1 | 25.4 | 38.2 |
| 39 | 40.9 | 30.6 | 46.0 |

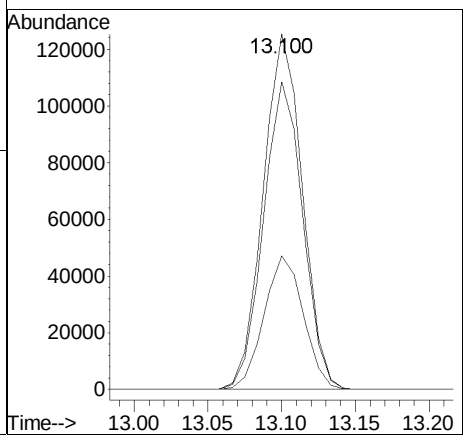


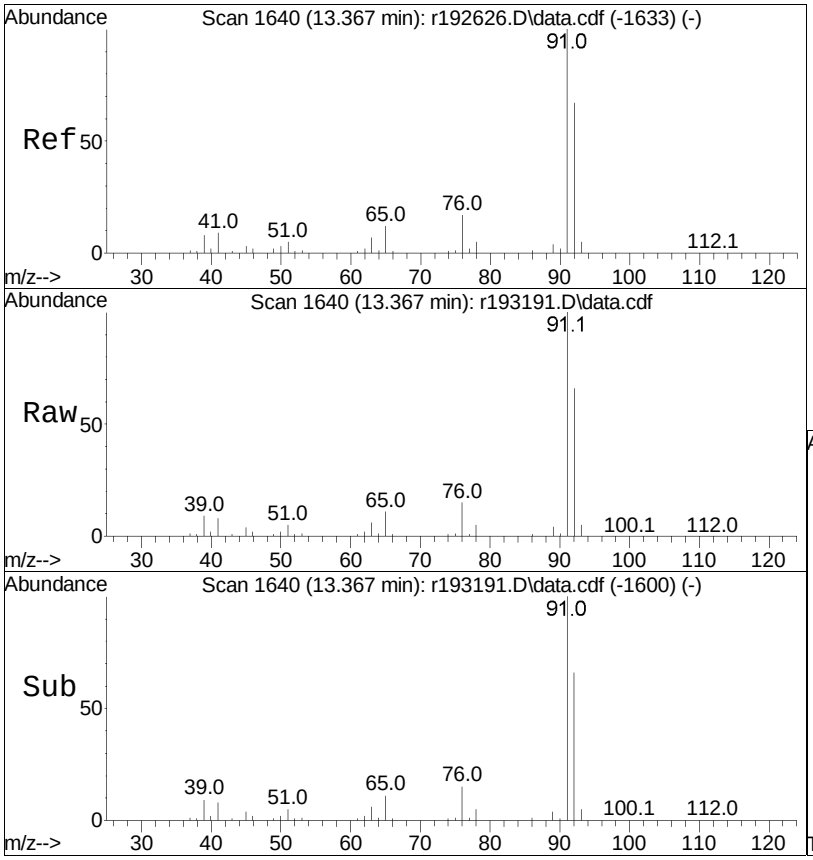



#66
1,1,2-trichloroethane
Concen: 9.74 ppbV
RT: 13.100 min Scan# 1608
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 97 Resp: 232153

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 86.6 | 65.8 | 98.8 |
| 61 | 37.6 | 31.1 | 46.7 |

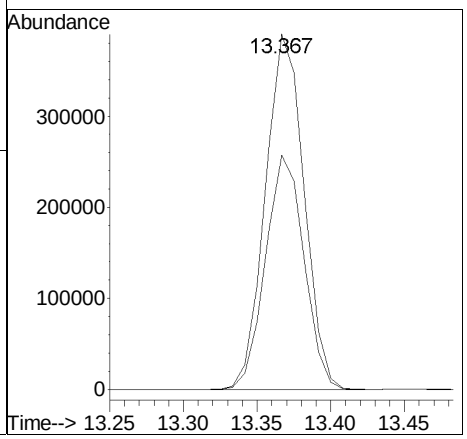


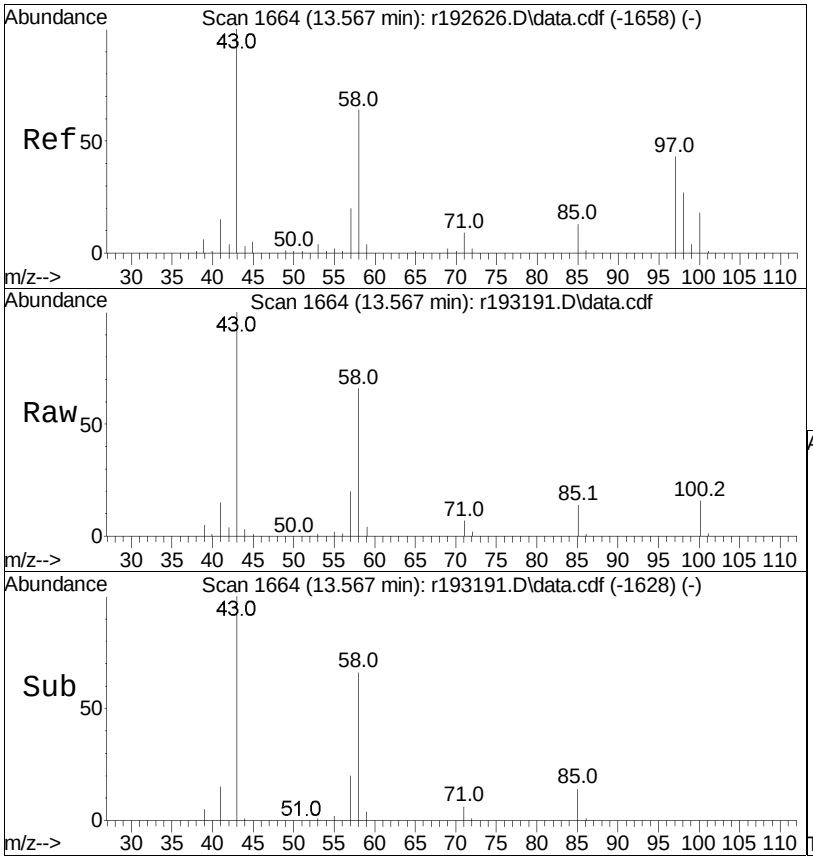



#68
toluene
Concen:  10.82 ppbV
RT:  13.367 min  Scan# 1640
Delta R.T.  0.000 min
Lab File:  r193191.D
Acq: 20 Mar 2020  12:51 PM

Tgt Ion: 91 Resp:  712092

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.9 | 53.3 | 79.9 |

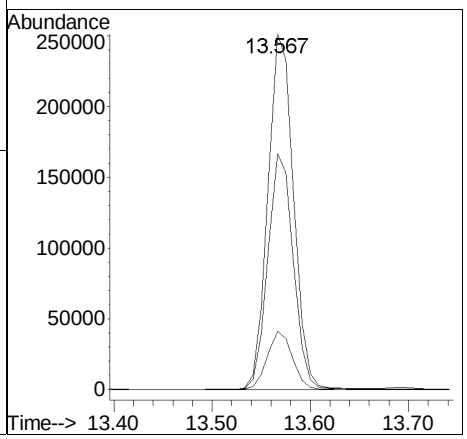


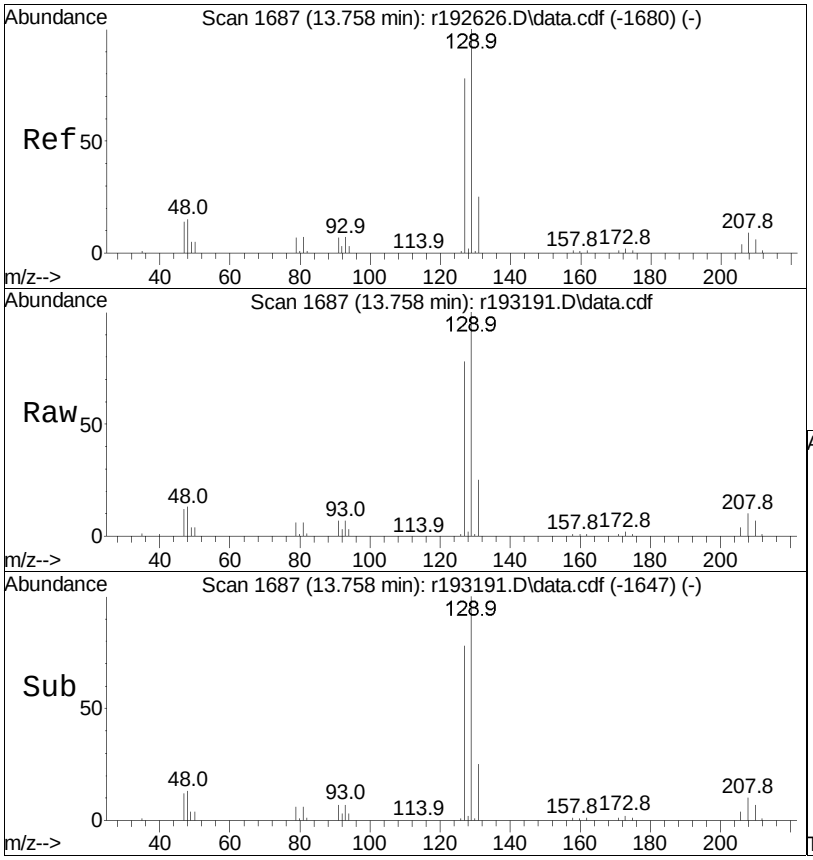



#72
2-hexanone
Concen: 11.92 ppbV
RT: 13.567 min Scan# 1664
Delta R.T. -0.033 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 43 Resp: 455782

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 66.4 | 62.6 | 94.0 |
| 100 | 16.3 | 26.5 | 39.7# |

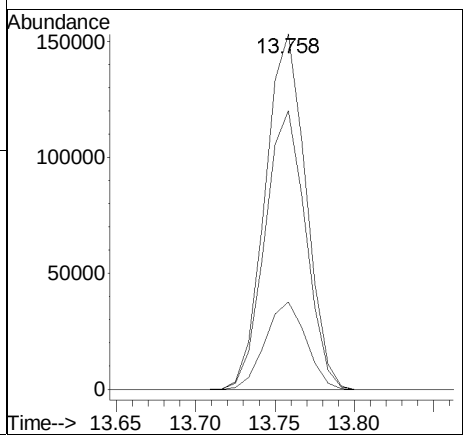


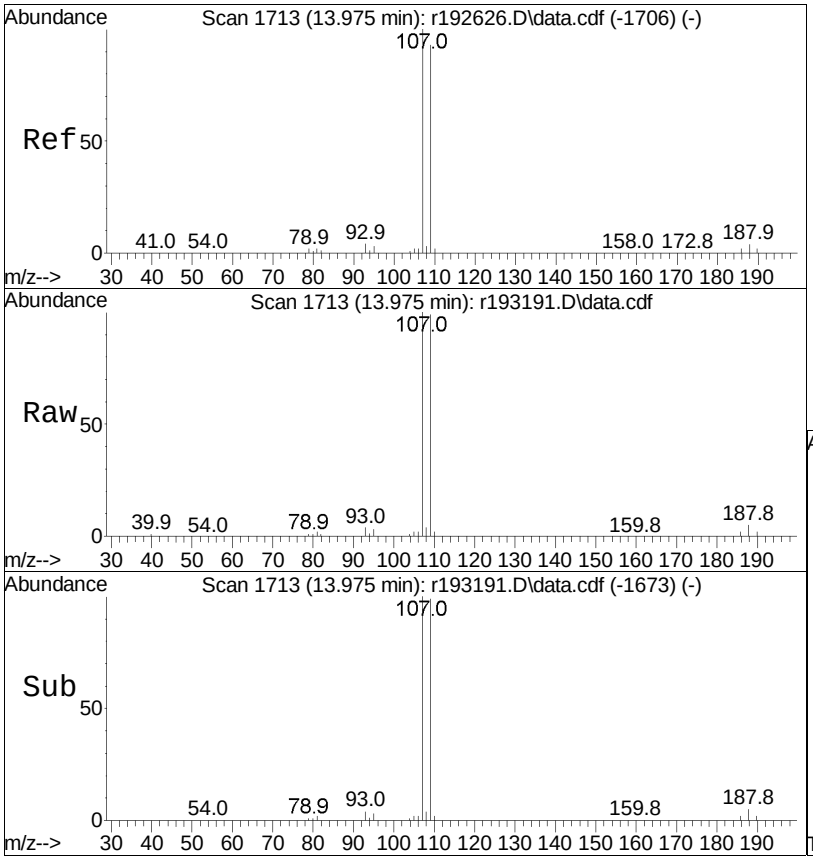



#74
dibromochloromethane
Concen: 10.81 ppbV
RT: 13.758 min Scan# 1687
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:129 Resp: 273299

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 78.4 | 60.9 | 91.3 |
| 131 | 24.6 | 19.7 | 29.5 |

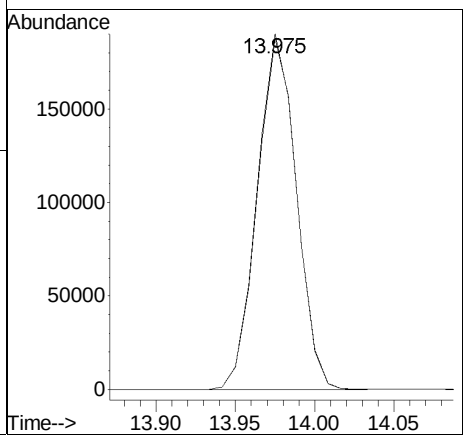


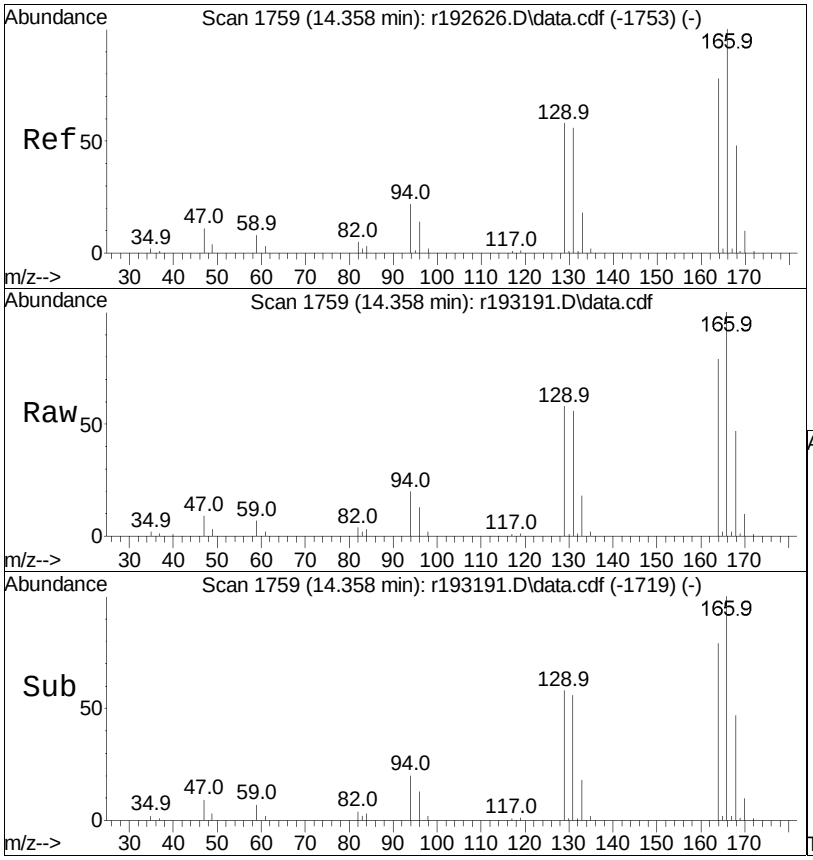



#75
1,2-dibromoethane
Concen: 10.79 ppbV
RT: 13.975 min Scan# 1713
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:107 Resp: 326529

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 98.9 | 76.4 | 114.6 |

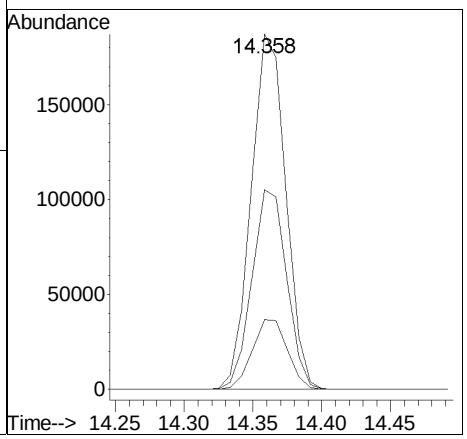


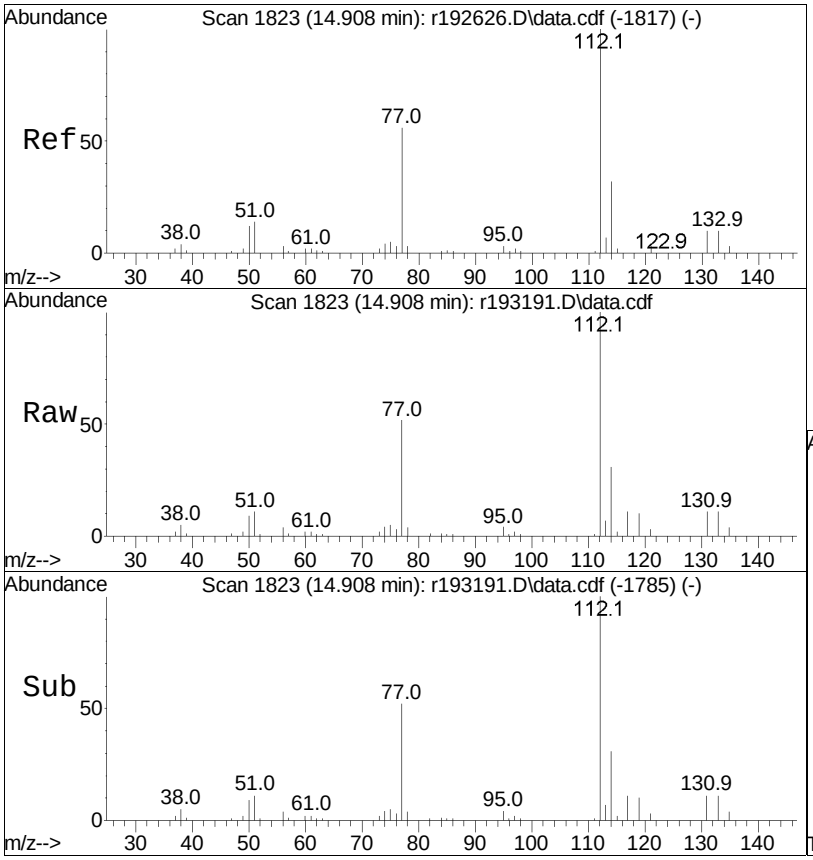



#78
tetrachloroethene
Concen: 11.34 ppbV
RT: 14.358 min Scan# 1759
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:166 Resp: 327900

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 56.2 | 46.4 | 69.6 |
| 94 | 19.6 | 18.5 | 27.7 |

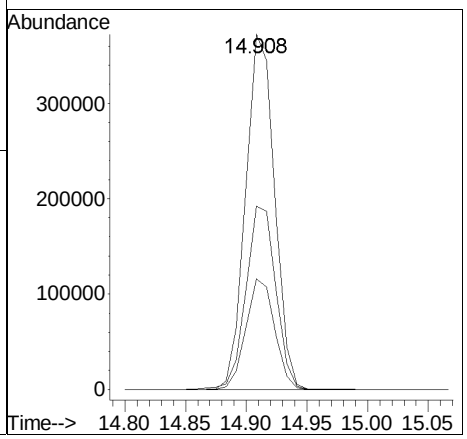


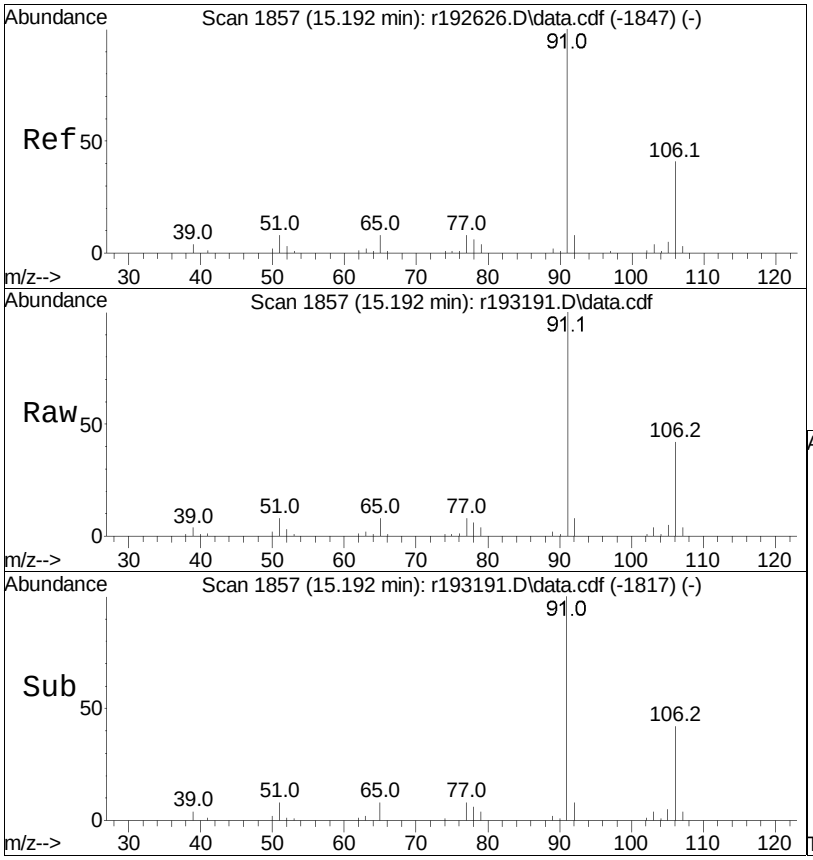



#80
chlorobenzene
Concen: 11.81 ppbV
RT: 14.908 min Scan# 1823
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:112 Resp: 617599

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 114 | 31.1 | 25.1 | 37.7 |
| 77 | 51.5 | 46.2 | 69.2 |

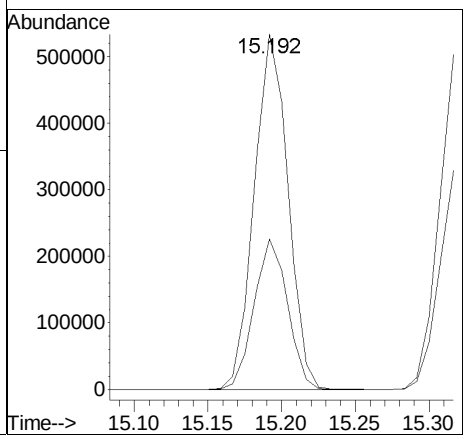


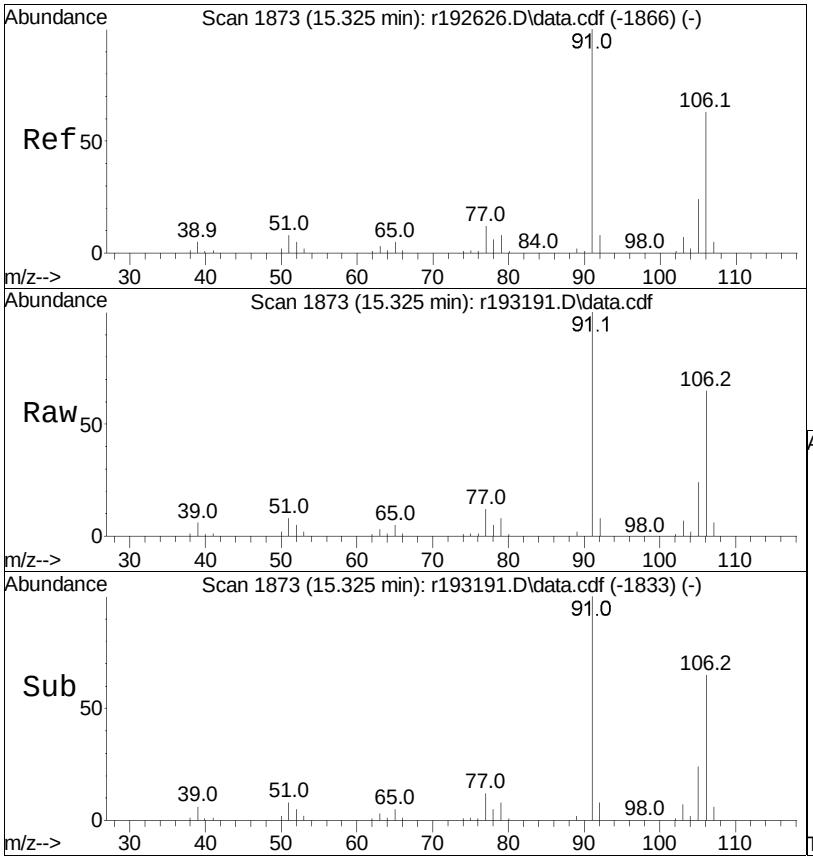



#81
ethylbenzene
Concen: 10.76 ppbV
RT: 15.192 min Scan# 1857
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 91 Resp: 848602

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 42.3 | 32.9 | 49.3 |

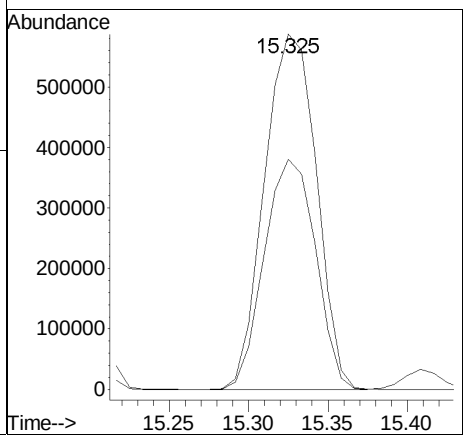


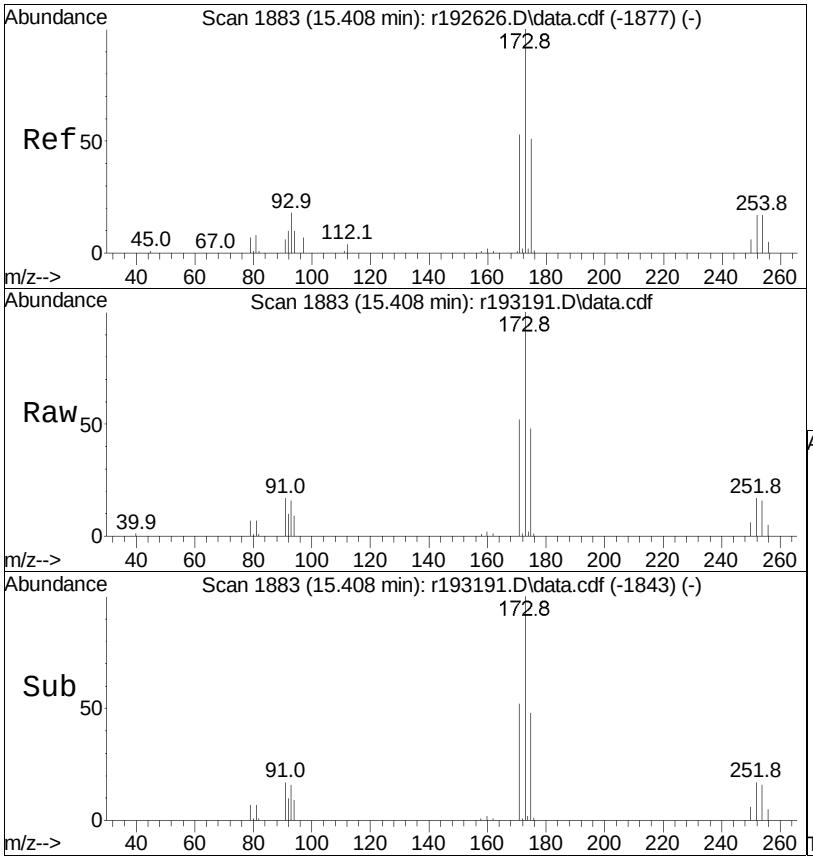



#83
m+p-xylene
Concen: 21.51 ppbV
RT: 15.325 min Scan# 1873
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 91 Resp: 1337977

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 64.8 | 51.0 | 76.4 |

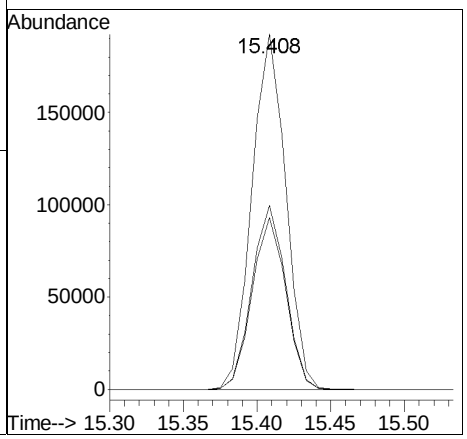


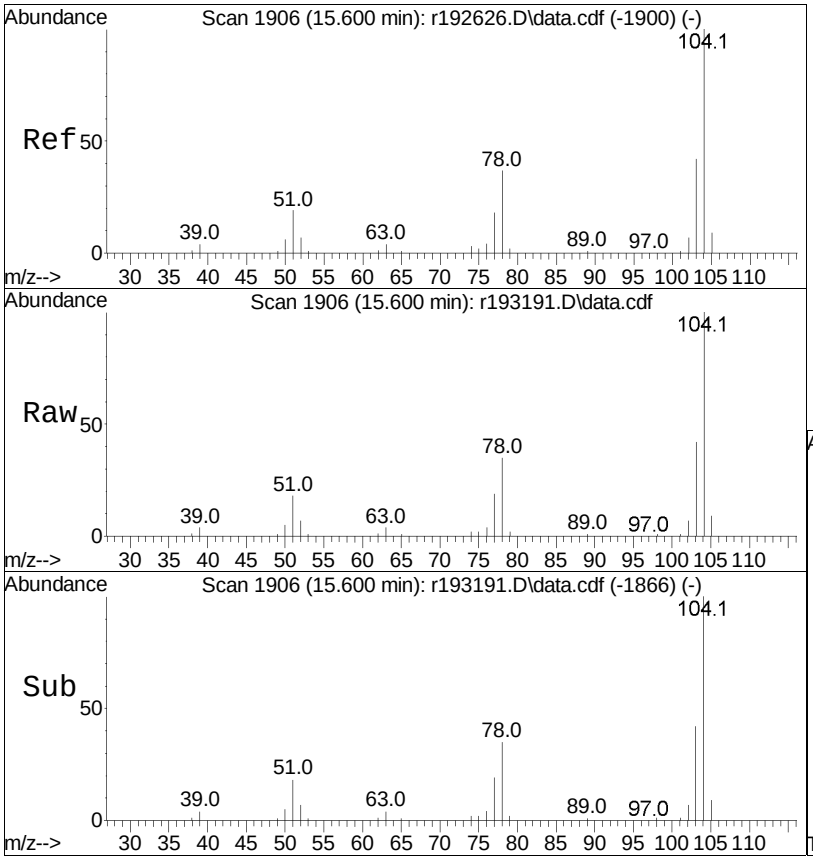



#84
bromoform
Concen: 11.02 ppbV
RT: 15.408 min Scan# 1883
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:173 Resp: 307610

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 48.4 | 38.0 | 57.0 |
| 171 | 51.8 | 43.2 | 64.8 |

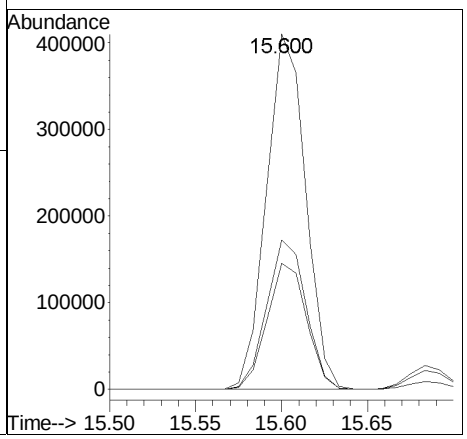


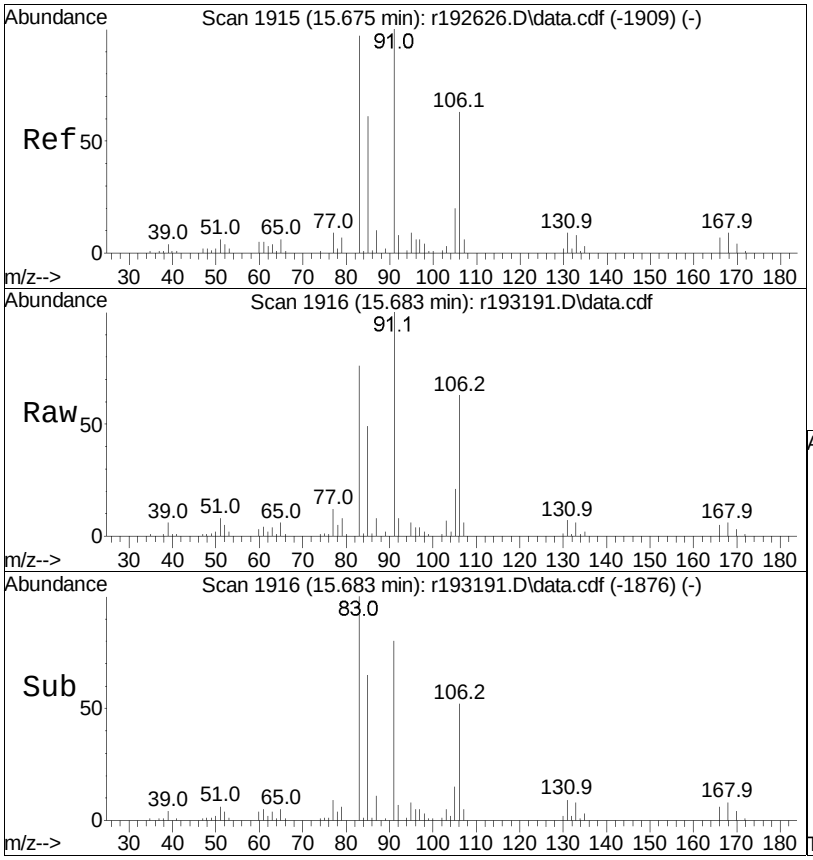



#85
styrene
Concen: 10.79 ppbV
RT: 15.600 min Scan# 1906
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:104 Resp: 649854

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 42.1 | 33.4 | 50.0 |
| 78 | 35.5 | 30.6 | 46.0 |

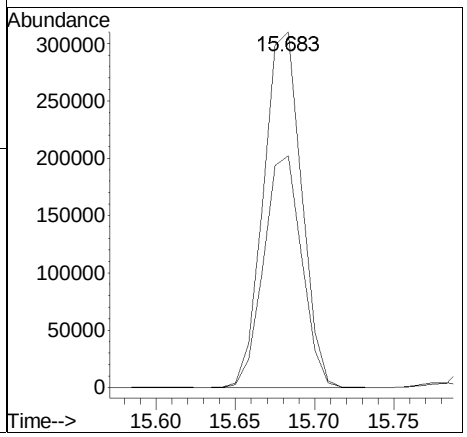


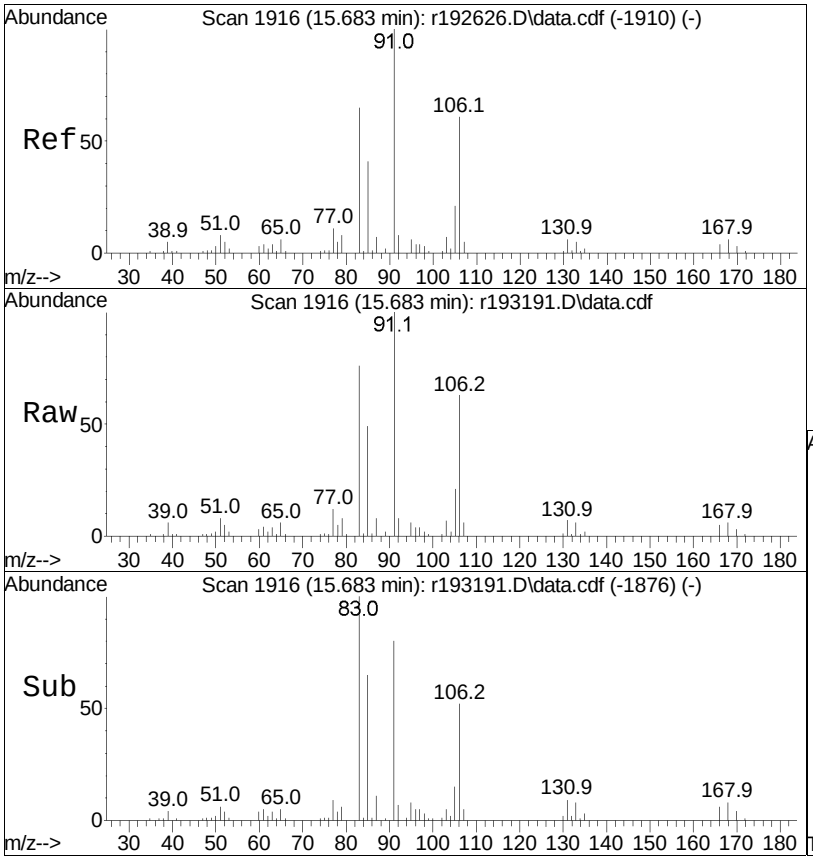



#86
1,1,2,2-tetrachloroethane
Concen: 12.04 ppbV
RT: 15.683 min Scan# 1916
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 83 Resp: 516728

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.2 | 49.4 | 74.2 |

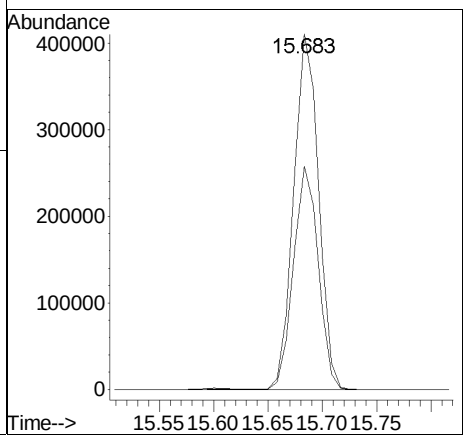


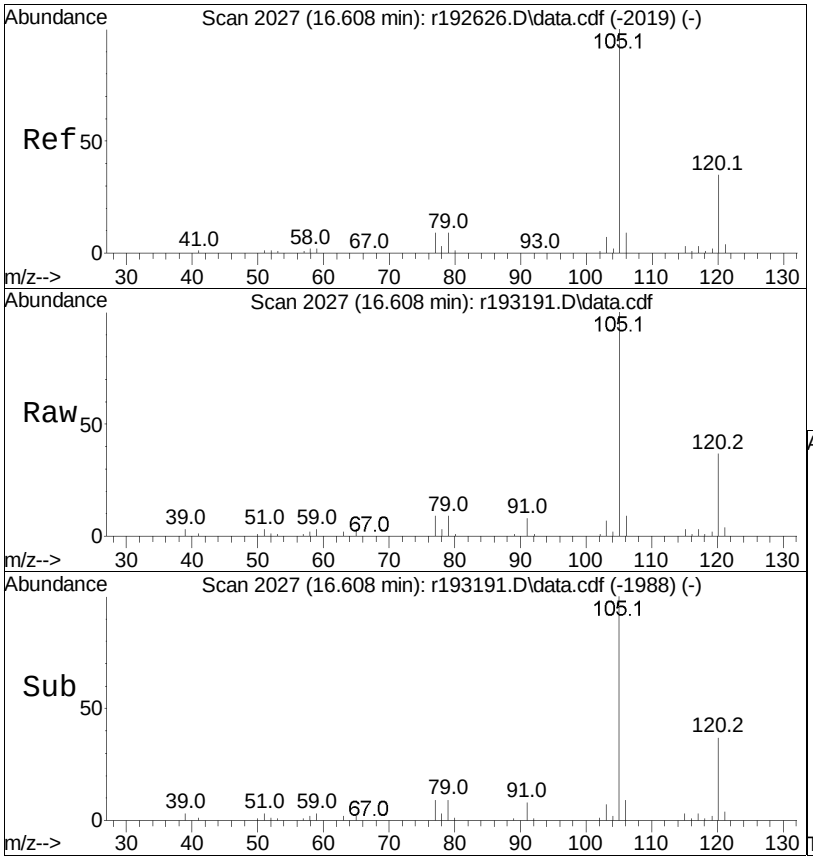



#87
o-xylene
Concen: 10.69 ppbV
RT: 15.683 min Scan# 1916
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 91 Resp: 652185

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 62.8 | 47.8 | 71.8 |

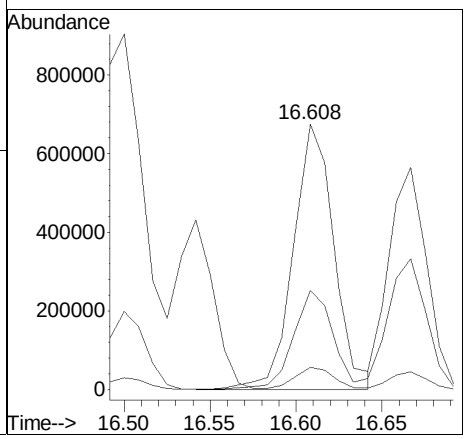


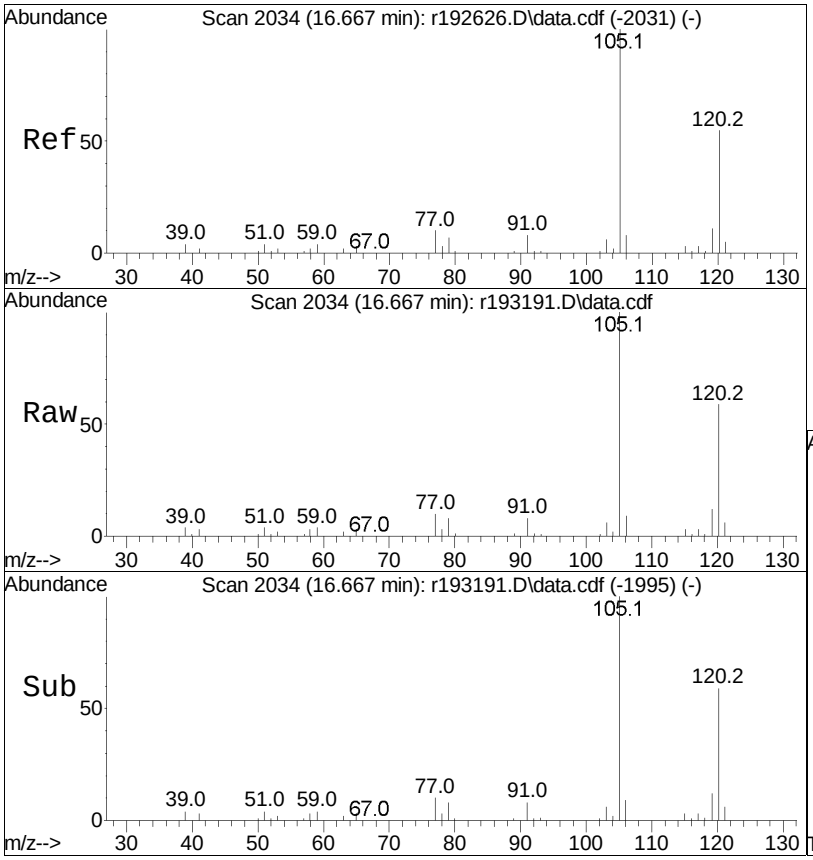



#96
4-ethyl toluene
Concen: 10.73 ppbV
RT: 16.608 min Scan# 2027
Delta R.T. -0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:105 Resp: 1108912

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 37.3 | 27.2 | 40.8 |
| 91 | 8.3 | 7.0 | 10.4 |

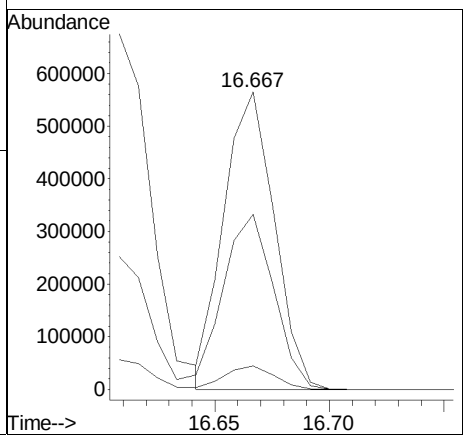


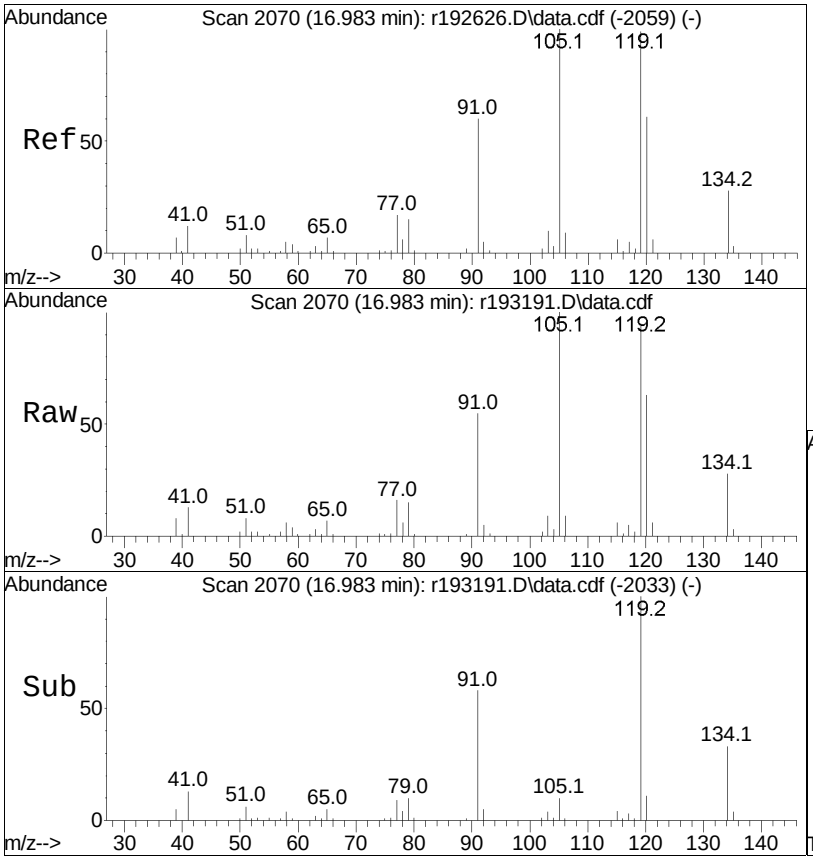



#97
1,3,5-trimethylbenzene
Concen: 10.41 ppbV
RT: 16.667 min Scan# 2034
Delta R.T. -0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:105 Resp: 864333

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 58.8 | 42.6 | 64.0 |
| 91 | 7.9 | 6.6 | 9.8 |

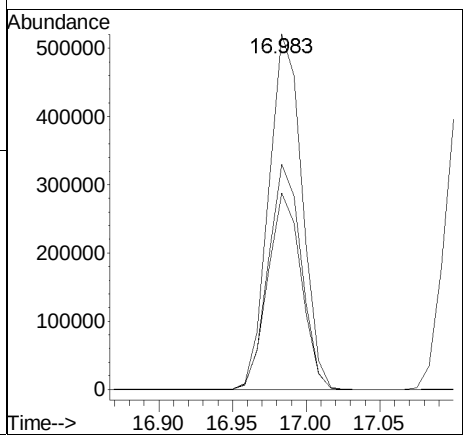


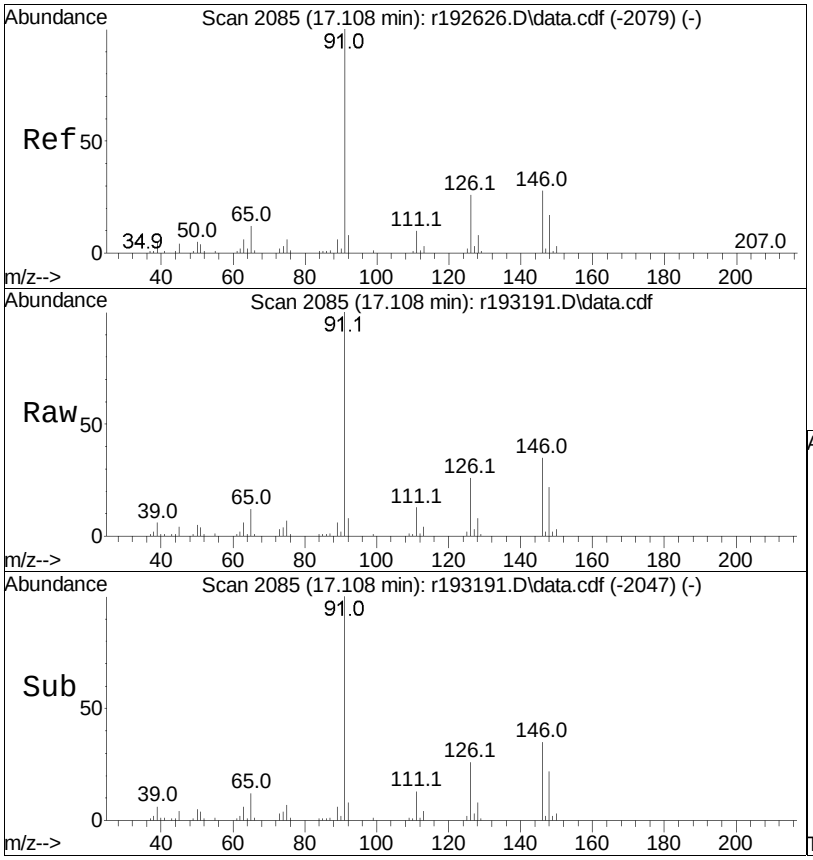



#99
1,2,4-trimethylbenzene
Concen: 10.63 ppbV
RT: 16.983 min Scan# 2070
Delta R.T. -0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:105 Resp: 816769

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 63.3 | 49.2 | 73.8 |
| 91 | 55.2 | 49.9 | 74.9 |

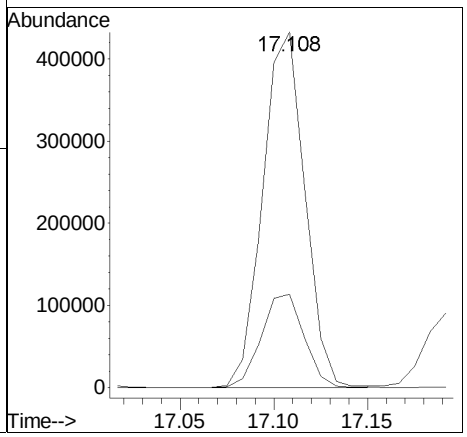


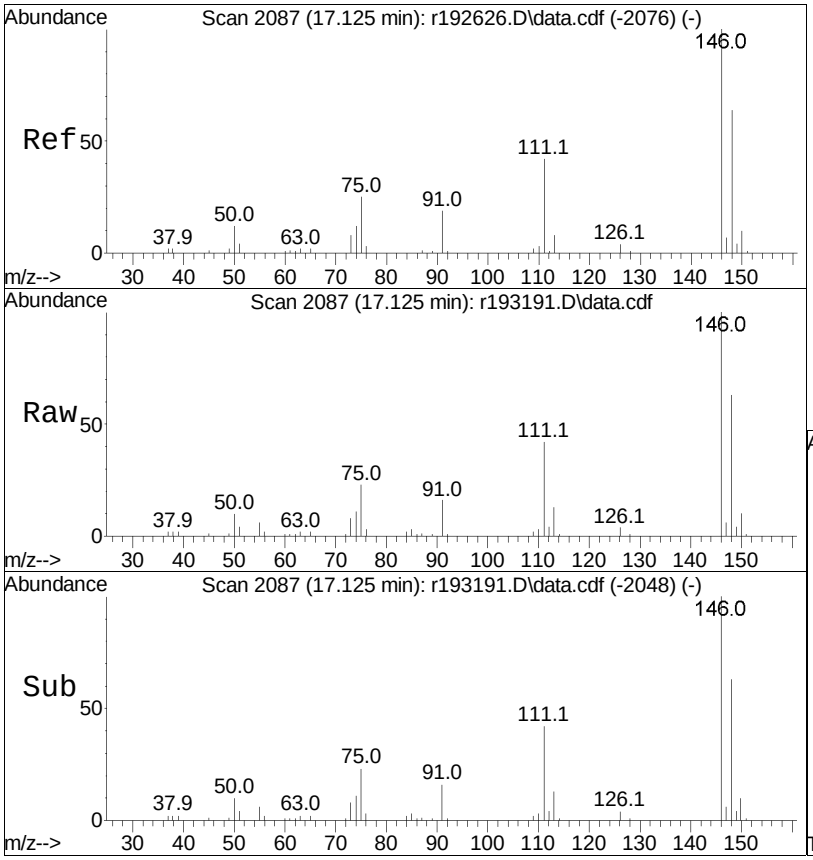



#101
Benzyl Chloride
Concen: 10.91 ppbV
RT: 17.108 min Scan# 2085
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion: 91 Resp: 675058

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 26.2 | 20.5 | 30.7 |

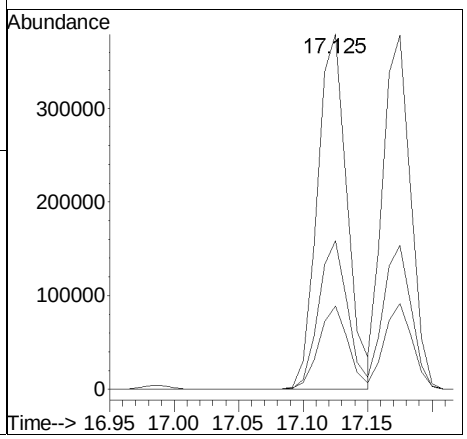


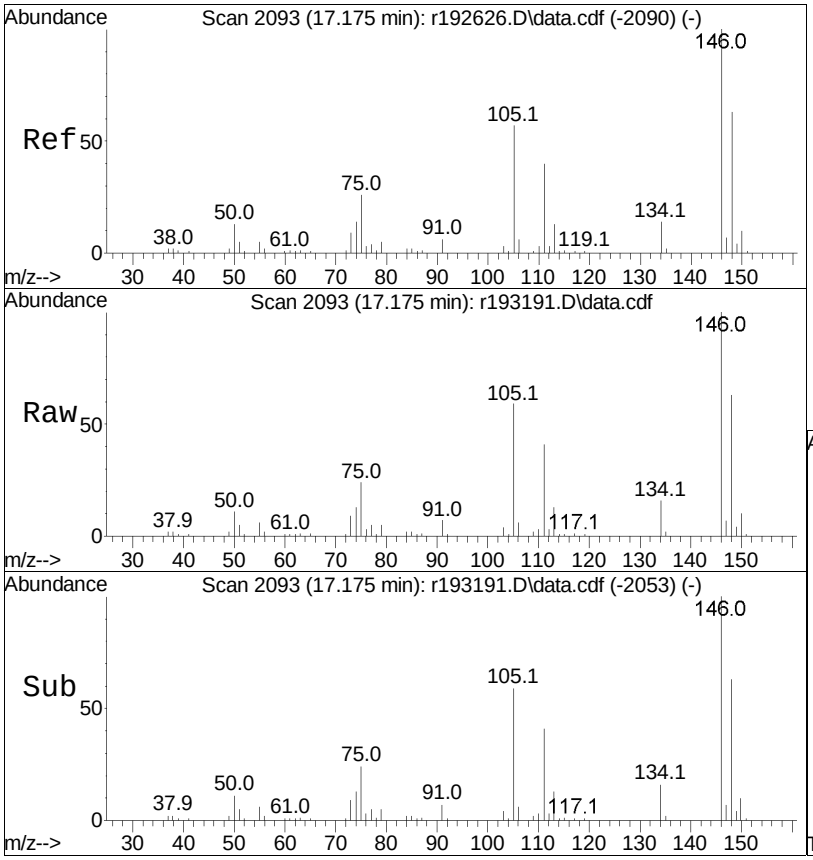



#102
1,3-dichlorobenzene
Concen: 11.60 ppbV
RT: 17.125 min Scan# 2087
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:146 Resp: 610754

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 41.8 | 33.6 | 50.4 |
| 75 | 23.5 | 20.6 | 30.8 |

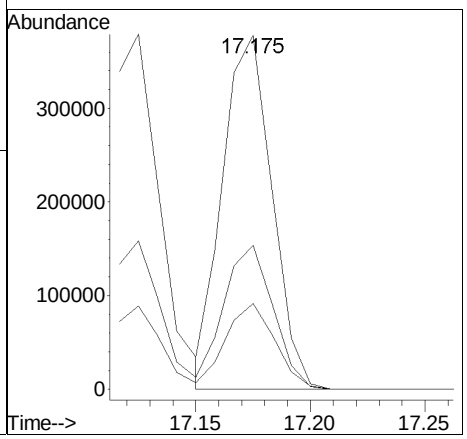


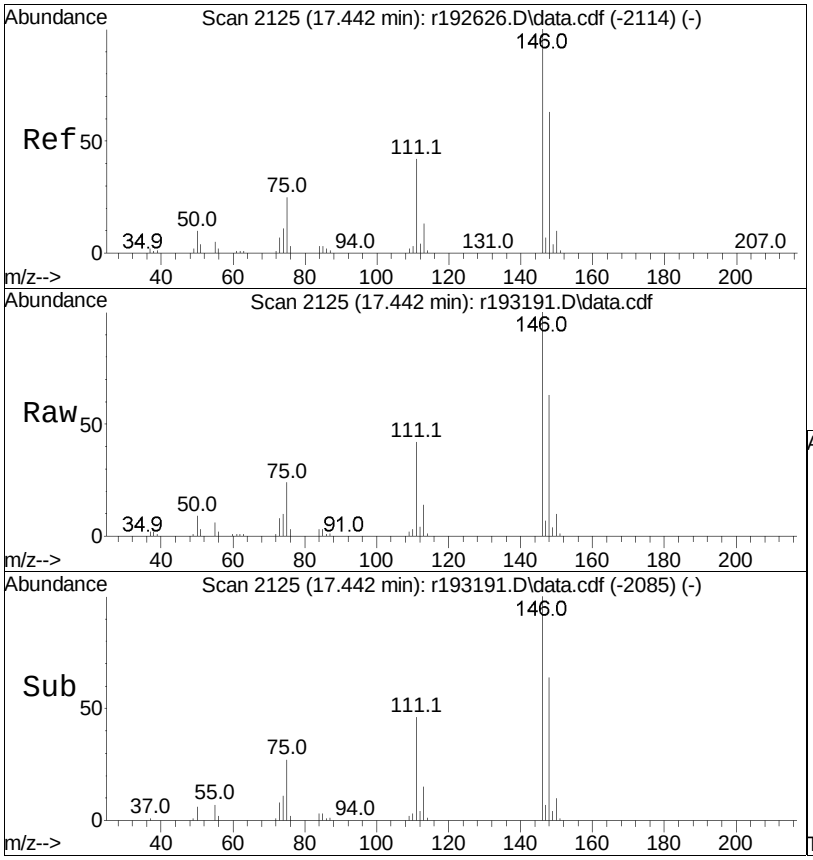



#103
1,4-dichlorobenzene
Concen: 11.28 ppbV
RT: 17.175 min Scan# 2093
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:146 Resp: 568718

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 40.7 | 31.1 | 46.7 |
| 75 | 24.3 | 20.6 | 31.0 |

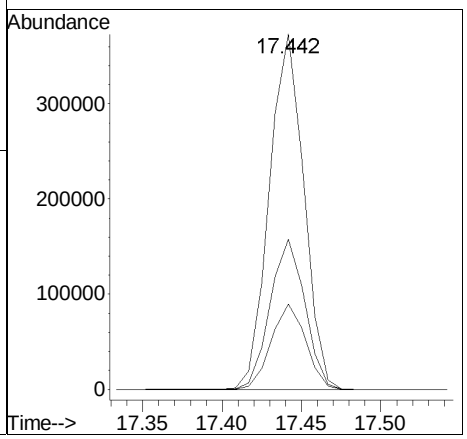


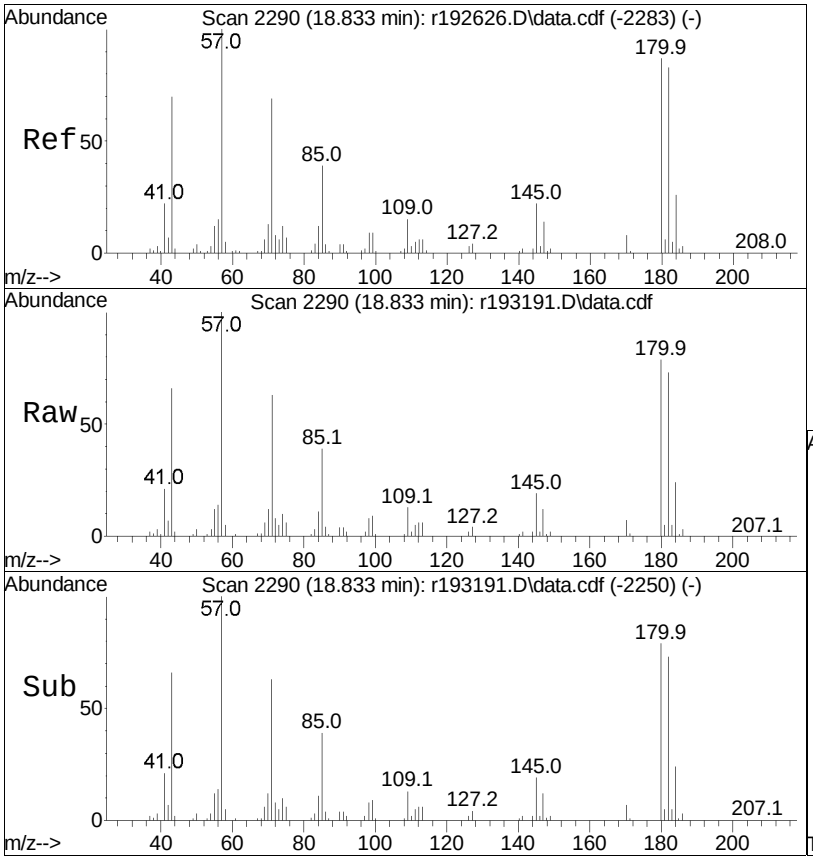



#107
1,2-dichlorobenzene
Concen: 11.33 ppbV
RT: 17.442 min Scan# 2125
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:146 Resp: 565344

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 42.3 | 33.1 | 49.7 |
| 75 | 24.0 | 20.9 | 31.3 |

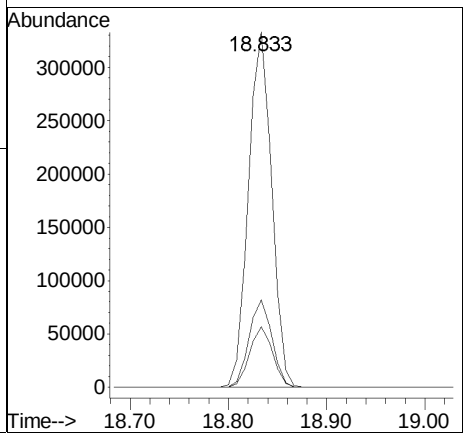


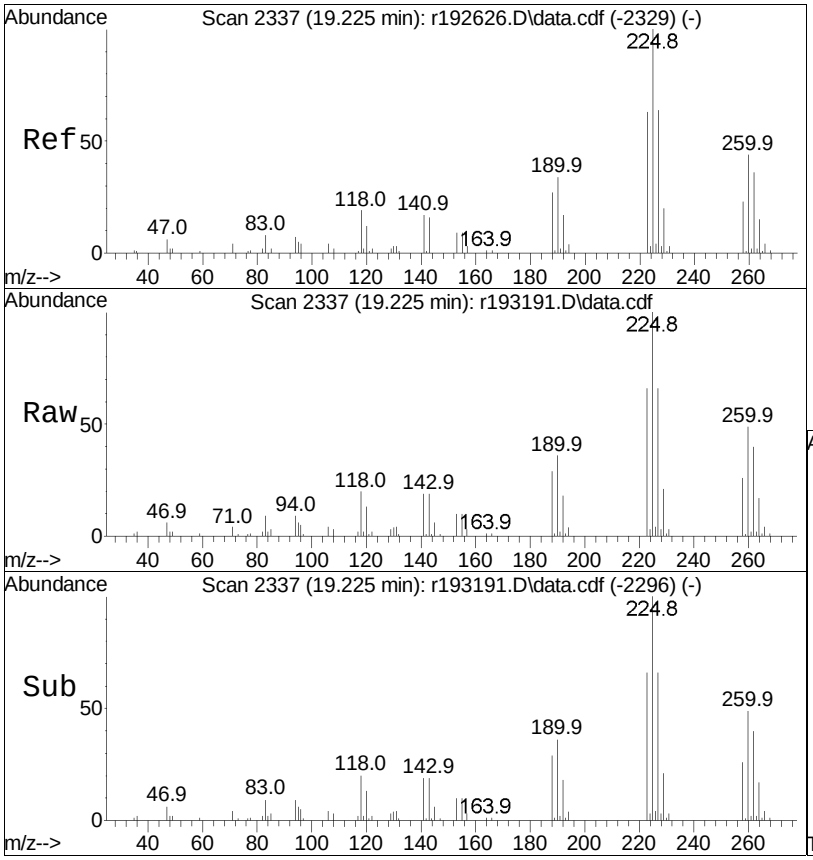



#115
1,2,4-trichlorobenzene
Concen: 12.49 ppbV
RT: 18.833 min Scan# 2290
Delta R.T. 0.000 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:180 Resp: 547929

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 145 | 24.6 | 21.0 | 31.4 |
| 109 | 17.1 | 14.3 | 21.5 |

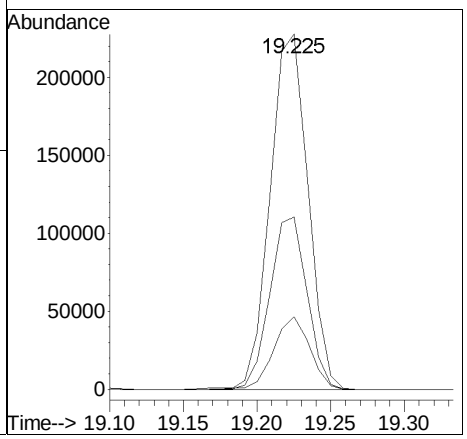





#119
hexachlorobutadiene
Concen: 10.65 ppbV
RT: 19.225 min Scan# 2337
Delta R.T. 0.008 min
Lab File: r193191.D
Acq: 20 Mar 2020 12:51 PM

Tgt Ion:225 Resp: 406023

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 260 | 48.5 | 34.8 | 52.2 |
| 118 | 20.5 | 15.2 | 22.8 |



# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 10.000 | 10.000 | 0.0 | 95 | 0.03 |
| 2 | | chlorodifluoromethane | 10.000 | 8.320 | 16.8 | 80 | 0.02 |
| 3 | | propylene | 10.000 | 12.568 | -25.7 | 122 | 0.02 |
| 4 | | propane | 10.000 | 8.357 | 16.4 | 80 | 0.02 |
| 5 | | dichlorodifluoromethane | 10.000 | 10.640 | -6.4 | 101 | 0.02 |
| 6 | C | chloromethane | 10.000 | 11.933 | -19.3 | 115 | 0.02 |
| 7 | | Freon-114 | 10.000 | 11.822 | -18.2 | 112 | 0.02 |
| 8 | C | methanol | 50.000 | 52.962 | -5.9 | 99 | 0.02 |
| 9 | C | vinyl chloride | 10.000 | 11.513 | -15.1 | 114 | 0.02 |
| 10 | C | 1,3-butadiene | 10.000 | 10.739 | -7.4 | 104 | 0.02 |
| 11 | | butane | 10.000 | 12.639 | -26.4 | 123 | 0.02 |
| 13 | C | bromomethane | 10.000 | 12.008 | -20.1 | 117 | 0.02 |
| 14 | C | chloroethane | 10.000 | 12.115 | -21.2 | 121 | 0.03 |
| 15 | | ethanol | 50.000 | 50.027 | -0.1 | 91 | 0.02 |
| 16 | | dichlorofluoromethane | 10.000 | 12.031 | -20.3 | 116 | 0.02 |
| 17 | C | vinyl bromide | 10.000 | 11.803 | -18.0 | 113 | 0.02 |
| 18 | C | acrolein | 10.000 | 9.009 | 9.9 | 88 | 0.02 |
| 19 | | acetone | 50.000 | 57.892 | -15.8 | 107 | 0.03 |
| 20 | C | acetonitrile | 10.000 | 11.358 | -13.6 | 114 | 0.02 |
| 21 | | trichlorofluoromethane | 10.000 | 12.270 | -22.7 | 120 | 0.03 |
| 22 | | isopropyl alcohol | 25.000 | 31.270 | -25.1 | 119 | 0.03 |
| 23 | C | acrylonitrile | 10.000 | 10.125 | -1.3 | 99 | 0.03 |
| 24 | | pentane | 10.000 | 13.899 | -39.0# | 125 | 0.03 |
| 25 | | ethyl ether | 10.000 | 8.953 | 10.5 | 88 | 0.03 |
| 26 | C | 1,1-dichloroethene | 10.000 | 10.825 | -8.2 | 111 | 0.03 |
| 27 | | tertiary butyl alcohol | 10.000 | 9.346 | 6.5 | 87 | 0.02 |
| 28 | C | methylene chloride | 10.000 | 10.990 | -9.9 | 99 | 0.03 |
| 29 | C | 3-chloropropene | 10.000 | 12.578 | -25.8 | 122 | 0.03 |
| 30 | C | carbon disulfide | 10.000 | 9.590 | 4.1 | 91 | 0.03 |
| 31 | | Freon 113 | 10.000 | 10.969 | -9.7 | 105 | 0.02 |
| 32 | | trans-1,2-dichloroethene | 10.000 | 10.801 | -8.0 | 103 | 0.03 |
| 33 | C | 1,1-dichloroethane | 10.000 | 11.553 | -15.5 | 113 | 0.03 |
| 34 | C | MTBE | 10.000 | 10.565 | -5.6 | 99 | 0.03 |
| 35 | C | vinyl acetate | 10.000 | 12.258 | -22.6 | 113 | 0.03 |
| 36 | C | 2-butanone | 10.000 | 12.017 | -20.2 | 115 | 0.03 |
| 37 | | cis-1,2-dichloroethene | 10.000 | 11.501 | -15.0 | 112 | 0.03 |
| 38 | | Ethyl Acetate | 10.000 | 11.676 | -16.8 | 115 | 0.03 |
| 39 | C | chloroform | 10.000 | 10.239 | -2.4 | 97 | 0.03 |
| 40 | | Tetrahydrofuran | 10.000 | 11.689 | -16.9 | 113 | 0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | | 2,2-dichloropropane | 10.000 | 9.498 | 5.0 | 87 | 0.03 |
| 42 | C | 1,2-dichloroethane | 10.000 | 11.184 | -11.8 | 106 | 0.03 |
| 43 | I | 1,4-difluorobenzene | 10.000 | 10.000 | 0.0 | 94 | 0.03 |
| 44 | C | hexane | 10.000 | 10.311 | -3.1 | 98 | 0.03 |
| 45 | | diisopropyl ether | 10.000 | 9.611 | 3.9 | 92 | 0.03 |
| 46 | | tert-butyl ethyl ether | 10.000 | 9.819 | 1.8 | 92 | 0.03 |
| 48 | C | 1,1,1-trichloroethane | 10.000 | 11.348 | -13.5 | 106 | 0.03 |
| 49 | | 1,1-dichloropropene | 10.000 | 9.904 | 1.0 | 92 | 0.03 |
| 50 | C | benzene | 10.000 | 9.732 | 2.7 | 93 | 0.03 |
| 52 | C | carbon tetrachloride | 10.000 | 10.765 | -7.7 | 96 | 0.03 |
| 53 | | cyclohexane | 10.000 | 10.077 | -0.8 | 97 | 0.03 |
| 54 | | tert-amyl methyl ether | 10.000 | 9.936 | 0.6 | 91 | 0.03 |
| 55 | | dibromomethane | 10.000 | 10.263 | -2.6 | 97 | 0.03 |
| 56 | C | 1,2-dichloropropane | 10.000 | 12.262 | -22.6 | 118 | 0.03 |
| 57 | | bromodichloromethane | 10.000 | 9.885 | 1.2 | 91 | 0.03 |
| 58 | C | 1,4-dioxane | 10.000 | 11.035 | -10.4 | 105 | 0.03 |
| 59 | C | trichloroethene | 10.000 | 11.995 | -19.9 | 114 | 0.03 |
| 60 | C | 2,2,4-trimethylpentane | 10.000 | 10.581 | -5.8 | 100 | 0.03 |
| 61 | | methyl methacrylate | 10.000 | 9.528 | 4.7 | 79 | 0.03 |
| 62 | | heptane | 10.000 | 12.312 | -23.1 | 115 | 0.03 |
| 63 | C | cis-1,3-dichloropropene | 10.000 | 11.071 | -10.7 | 103 | 0.03 |
| 64 | C | 4-methyl-2-pentanone | 10.000 | 12.784 | -27.8 | 116 | 0.03 |
| 65 | | trans-1,3-dichloropropene | 10.000 | 9.578 | 4.2 | 88 | 0.03 |
| 66 | C | 1,1,2-trichloroethane | 10.000 | 11.527 | -15.3 | 111 | 0.03 |
| 67 | I | chlorobenzene-D5 | 10.000 | 10.000 | 0.0 | 87 | 0.02 |
| 68 | C | toluene | 10.000 | 12.007 | -20.1 | 109 | 0.03 |
| 71 | | 1,3-dichloropropane | 10.000 | 10.355 | -3.6 | 89 | 0.03 |
| 72 | | 2-hexanone | 10.000 | 14.029 | -40.3# | 114 | 0.03 |
| 74 | | dibromochloromethane | 10.000 | 12.935 | -29.4 | 110 | 0.02 |
| 75 | C | 1,2-dibromoethane | 10.000 | 11.247 | -12.5 | 99 | 0.02 |
| 76 | | butyl acetate | 10.000 | 10.198 | -2.0 | 87 | 0.03 |
| 77 | | octane | 10.000 | 10.159 | -1.6 | 89 | 0.03 |
| 78 | C | tetrachloroethene | 10.000 | 11.519 | -15.2 | 102 | 0.02 |
| 79 | | 1,1,1,2-tetrachloroethane | 10.000 | 11.547 | -15.5 | 100 | 0.02 |
| 80 | C | chlorobenzene | 10.000 | 11.441 | -14.4 | 101 | 0.03 |
| 81 | C | ethylbenzene | 10.000 | 12.181 | -21.8 | 108 | 0.02 |
| 83 | C | m+p-xylene | 20.000 | 24.782 | -23.9 | 108 | 0.03 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 84 | C | bromoform | 10.000 | 11.876 | -18.8 | 97 | 0.02 |
| 85 | C | styrene | 10.000 | 11.498 | -15.0 | 99 | 0.02 |
| 86 | C | 1,1,2,2-tetrachloroethane | 10.000 | 12.390 | -23.9 | 105 | 0.03 |
| 87 | C | o-xylene | 10.000 | 12.932 | -29.3 | 111 | 0.03 |
| 88 | | 1,2,3-trichloropropane | 10.000 | 10.143 | -1.4 | 86 | 0.02 |
| 89 | | nonane | 10.000 | 11.999 | -20.0 | 102 | 0.03 |
| 91 | C | isopropylbenzene | 10.000 | 10.863 | -8.6 | 93 | 0.03 |
| 92 | | bromobenzene | 10.000 | 10.109 | -1.1 | 84 | 0.03 |
| 93 | | 2-chlorotoluene | 10.000 | 11.332 | -13.3 | 99 | 0.02 |
| 94 | | n-propylbenzene | 10.000 | 11.320 | -13.2 | 97 | 0.03 |
| 95 | | 4-chlorotoluene | 10.000 | 11.196 | -12.0 | 97 | 0.02 |
| 96 | | 4-ethyl toluene | 10.000 | 11.539 | -15.4 | 97 | 0.02 |
| 97 | | 1,3,5-trimethylbenzene | 10.000 | 12.097 | -21.0 | 104 | 0.02 |
| 98 | | tert-butylbenzene | 10.000 | 11.810 | -18.1 | 95 | 0.03 |
| 99 | | 1,2,4-trimethylbenzene | 10.000 | 12.988 | -29.9 | 106 | 0.03 |
| 100 | | decane | 10.000 | 11.197 | -12.0 | 93 | 0.02 |
| 101 | C | Benzyl Chloride | 10.000 | 12.634 | -26.3 | 93 | 0.03 |
| 102 | | 1,3-dichlorobenzene | 10.000 | 12.104 | -21.0 | 103 | 0.03 |
| 103 | C | 1,4-dichlorobenzene | 10.000 | 12.115 | -21.2 | 98 | 0.02 |
| 104 | | sec-butylbenzene | 10.000 | 11.013 | -10.1 | 90 | 0.02 |
| 106 | | p-isopropyltoluene | 10.000 | 10.956 | -9.6 | 85 | 0.02 |
| 107 | | 1,2-dichlorobenzene | 10.000 | 12.085 | -20.9 | 103 | 0.02 |
| 108 | | n-butylbenzene | 10.000 | 12.027 | -20.3 | 96 | 0.02 |
| 111 | C | 1,2-dibromo-3-chloropropane | 10.000 | 11.516 | -15.2 | 85 | 0.03 |
| 112 | | undecane | 10.000 | 11.620 | -16.2 | 92 | 0.03 |
| 114 | | dodecane | 10.000 | 11.903 | -19.0 | 86 | 0.02 |
| 115 | C | 1,2,4-trichlorobenzene | 10.000 | 13.816 | -38.2# | 101 | 0.02 |
| 116 | | naphthalene | 10.000 | 12.417 | -24.2 | 89 | 0.02 |
| 117 | | 1,2,3-trichlorobenzene | 10.000 | 11.679 | -16.8 | 82 | 0.02 |
| 119 | C | hexachlorobutadiene | 10.000 | 14.611 | -46.1# | 120 | 0.02 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 2

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.583 | 49 | 353543 | 10.000 | ppbV | 0.03 |
| Standard Area = 353543 | | | Recovery = 100.00% | | | |
| 43) 1,4-difluorobenzene | 11.847 | 114 | 970632 | 10.000 | ppbV | 0.03 |
| Standard Area = 970632 | | | Recovery = 100.00% | | | |
| 67) chlorobenzene-D5 | 16.567 | 54 | 139948 | 10.000 | ppbV | 0.02 |
| Standard Area = 139948 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 4.000 | 85 | 340013 | 10.640 | ppbV | 99 |
| 6) chloromethane | 4.180 | 50 | 175228 | 11.933 | ppbV | 96 |
| 7) Freon-114 | 4.306 | 85 | 459629 | 11.822 | ppbV | 94 |
| 9) vinyl chloride | 4.438 | 62 | 197192 | 11.513 | ppbV | 97 |
| 10) 1,3-butadiene | 4.606 | 54 | 184419 | 10.739 | ppbV | 87 |
| 13) bromomethane | 4.924 | 94 | 170280 | 12.008 | ppbV | 95 |
| 14) chloroethane | 5.146 | 64 | 105516 | 12.115 | ppbV | 97 |
| 15) ethanol | 5.320 | 31 | 688947 | 50.027 | ppbV # | 80 |
| 17) vinyl bromide | 5.570 | 106 | 192187 | 11.803 | ppbV | 99 |
| 19) acetone | 5.880 | 43 | 1327673 | 57.892 | ppbV # | 84 |
| 21) trichlorofluoromethane | 6.090 | 101 | 305977 | 12.270 | ppbV | 98 |
| 22) isopropyl alcohol | 6.213 | 45 | 916909 | 31.270 | ppbV # | 96 |
| 26) 1,1-dichloroethene | 6.864 | 61 | 254062 | 10.825 | ppbV | 92 |
| 27) tertiary butyl alcohol | 6.942 | 59 | 328459 | 9.346 | ppbV | 98 |
| 28) methylene chloride | 7.032 | 49 | 242639 | 10.990 | ppbV | 99 |
| 29) 3-chloropropene | 7.170 | 41 | 364211 | 12.578 | ppbV | 93 |
| 30) carbon disulfide | 7.320 | 76 | 618756 | 9.590 | ppbV | 97 |
| 31) Freon 113 | 7.356 | 101 | 373192 | 10.969 | ppbV | 99 |
| 32) trans-1,2-dichloroethene | 8.158 | 61 | 296925 | 10.801 | ppbV | 97 |
| 33) 1,1-dichloroethane | 8.392 | 63 | 374044 | 11.553 | ppbV | 100 |
| 34) MTBE | 8.475 | 73 | 592185 | 10.565 | ppbV | 97 |
| 36) 2-butanone | 8.875 | 43 | 522608 | 12.017 | ppbV | 96 |
| 37) cis-1,2-dichloroethene | 9.392 | 61 | 272820 | 11.501 | ppbV | 97 |
| 38) Ethyl Acetate | 9.692 | 61 | 84761 | 11.676 | ppbV | 99 |
| 39) chloroform | 9.742 | 83 | 351512 | 10.239 | ppbV | 97 |
| 40) Tetrahydrofuran | 10.183 | 42 | 318057 | 11.689 | ppbV | 94 |
| 42) 1,2-dichloroethane | 10.592 | 62 | 211882 | 11.184 | ppbV | 96 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 44) hexane | 9.650 | 57 | 371246 | 10.311 | ppbV | | 97 |
| 48) 1,1,1-trichloroethane | 10.875 | 97 | 311625 | 11.348 | ppbV | | 98 |
| 50) benzene | 11.407 | 78 | 683936 | 9.732 | ppbV | | 99 |
| 52) carbon tetrachloride | 11.580 | 117 | 274453 | 10.765 | ppbV | | 97 |
| 53) cyclohexane | 11.720 | 56 | 393017 | 10.077 | ppbV | | 94 |
| 56) 1,2-dichloropropane | 12.360 | 63 | 261176 | 12.262 | ppbV | | 99 |
| 57) bromodichloromethane | 12.593 | 83 | 370778 | 9.885 | ppbV | | 98 |
| 58) 1,4-dioxane | 12.627 | 88 | 177883 | 11.035 | ppbV | | 100 |
| 59) trichloroethene | 12.640 | 130 | 314176 | 11.995 | ppbV | | 98 |
| 60) 2,2,4-trimethylpentane | 12.687 | 57 | 1212430 | 10.581 | ppbV | | 95 |
| 62) heptane | 13.007 | 43 | 554356 | 12.312 | ppbV | | 92 |
| 63) cis-1,3-dichloropropene | 13.658 | 75 | 377301 | 11.071 | ppbV | | 96 |
| 64) 4-methyl-2-pentanone | 13.692 | 43 | 648864 | 12.784 | ppbV | | 94 |
| 65) trans-1,3-dichloropropene | 14.275 | 75 | 303555 | 9.578 | ppbV | | 95 |
| 66) 1,1,2-trichloroethane | 14.475 | 97 | 268889 | 11.527 | ppbV | | 94 |
| 68) toluene | 14.792 | 91 | 852731 | 12.007 | ppbV | | 100 |
| 72) 2-hexanone | 15.067 | 43 | 584802 | 14.029 | ppbV | # | 87 |
| 74) dibromochloromethane | 15.233 | 129 | 396414 | 12.935 | ppbV | | 99 |
| 75) 1,2-dibromoethane | 15.483 | 107 | 380331 | 11.247 | ppbV | | 99 |
| 78) tetrachloroethene | 15.950 | 166 | 359495 | 11.519 | ppbV | | 93 |
| 80) chlorobenzene | 16.608 | 112 | 647553 | 11.441 | ppbV | | 97 |
| 81) ethylbenzene | 16.958 | 91 | 1030325 | 12.181 | ppbV | | 95 |
| 83) m+p-xylene | 17.117 | 91 | 1716028 | 24.782 | ppbV | | 94 |
| 84) bromoform | 17.183 | 173 | 339273 | 11.876 | ppbV | | 100 |
| 85) styrene | 17.442 | 104 | 710531 | 11.498 | ppbV | | 98 |
| 86) 1,1,2,2-tetrachloroethane | 17.533 | 83 | 598789 | 12.390 | ppbV | | 99 |
| 87) o-xylene | 17.533 | 91 | 877460 | 12.932 | ppbV | | 95 |
| 96) 4-ethyl toluene | 18.592 | 105 | 1260588 | 11.539 | ppbV | | 97 |
| 97) 1,3,5-trimethylbenzene | 18.650 | 105 | 1074869 | 12.097 | ppbV | | 96 |
| 99) 1,2,4-trimethylbenzene | 18.983 | 105 | 1073784 | 12.988 | ppbV | | 95 |
| 101) Benzyl Chloride | 19.100 | 91 | 730511 | 12.634 | ppbV | | 98 |
| 102) 1,3-dichlorobenzene | 19.108 | 146 | 615768 | 12.104 | ppbV | | 99 |
| 103) 1,4-dichlorobenzene | 19.158 | 146 | 586145 | 12.115 | ppbV | | 97 |
| 107) 1,2-dichlorobenzene | 19.433 | 146 | 586153 | 12.085 | ppbV | | 100 |
| 115) 1,2,4-trichlorobenzene | 20.900 | 180 | 417816 | 13.816 | ppbV | | 100 |
| 119) hexachlorobutadiene | 21.333 | 225 | 547909 | 14.611 | ppbV | | 99 |

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

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

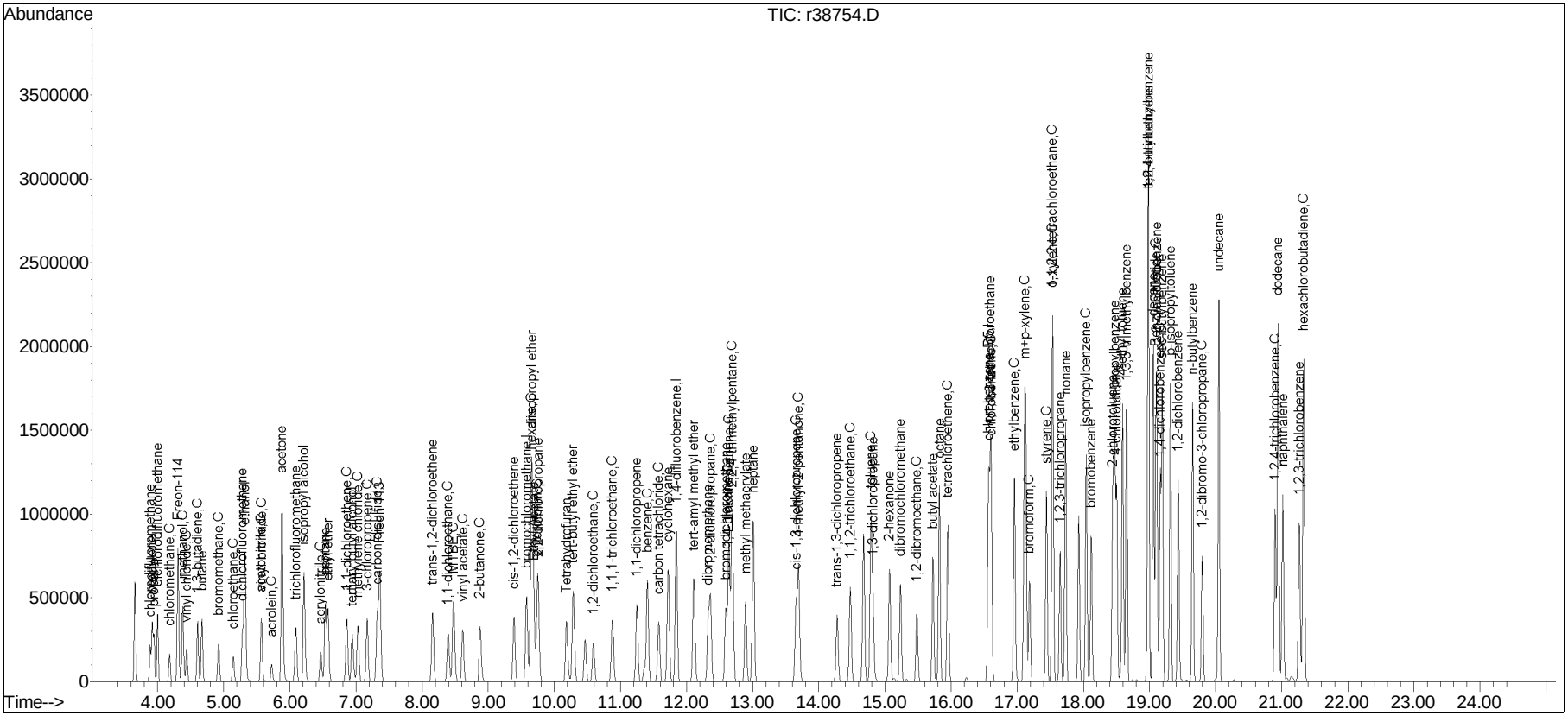
CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : Default-LCS-AP2 - All compounds listed

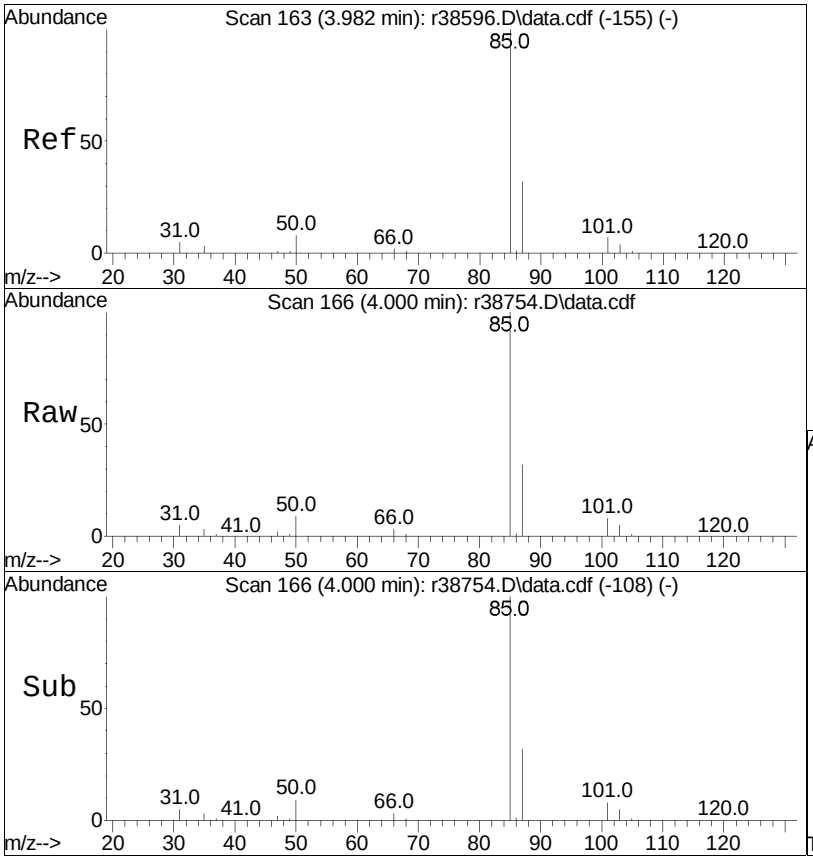
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

Sub List : Default-LCS-AP2 - All compounds listed0320T\r38754.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38754.D
Acq On : 20 Mar 2020 1:32 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-3,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:43:06 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

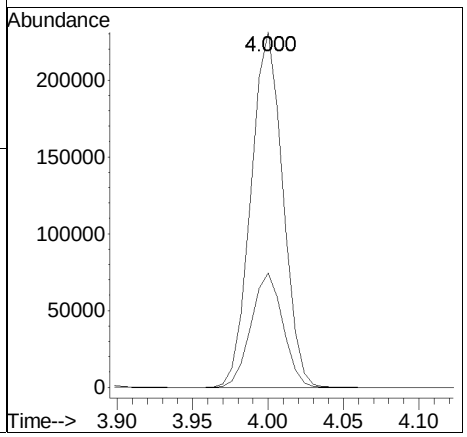


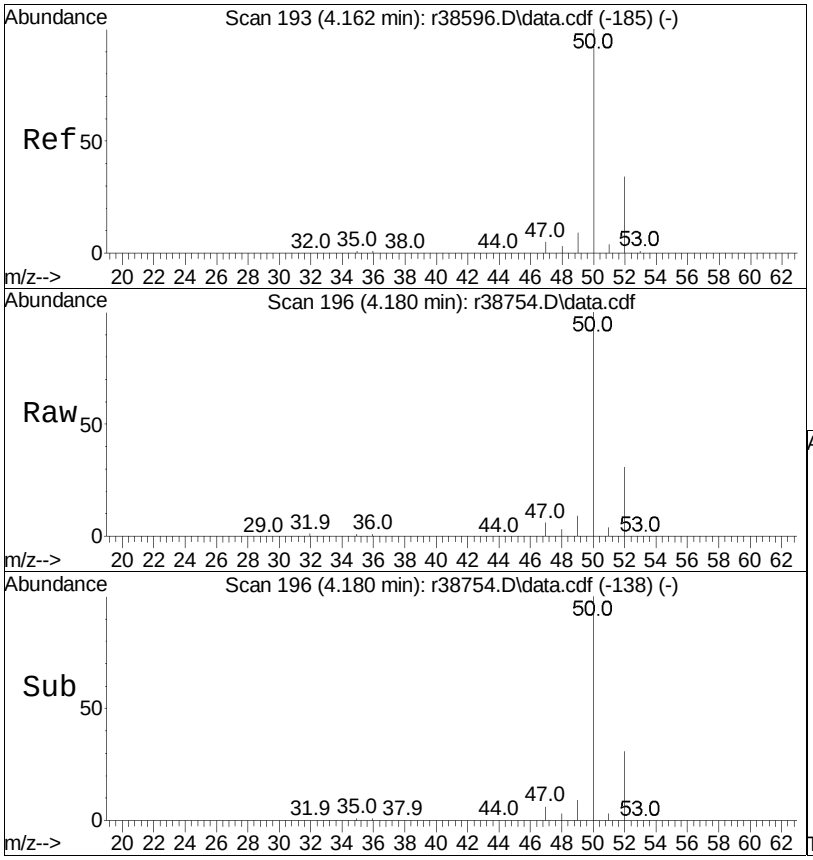



#5
dichlorodifluoromethane
Concen: 10.64 ppbV
RT: 4.000 min Scan# 166
Delta R.T. 0.018 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 85 Resp: 340013

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.2 | 25.4 | 38.0 |

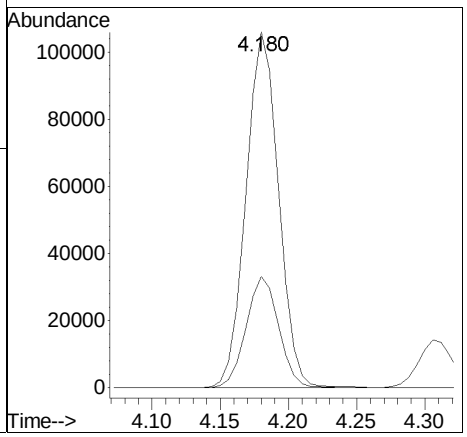


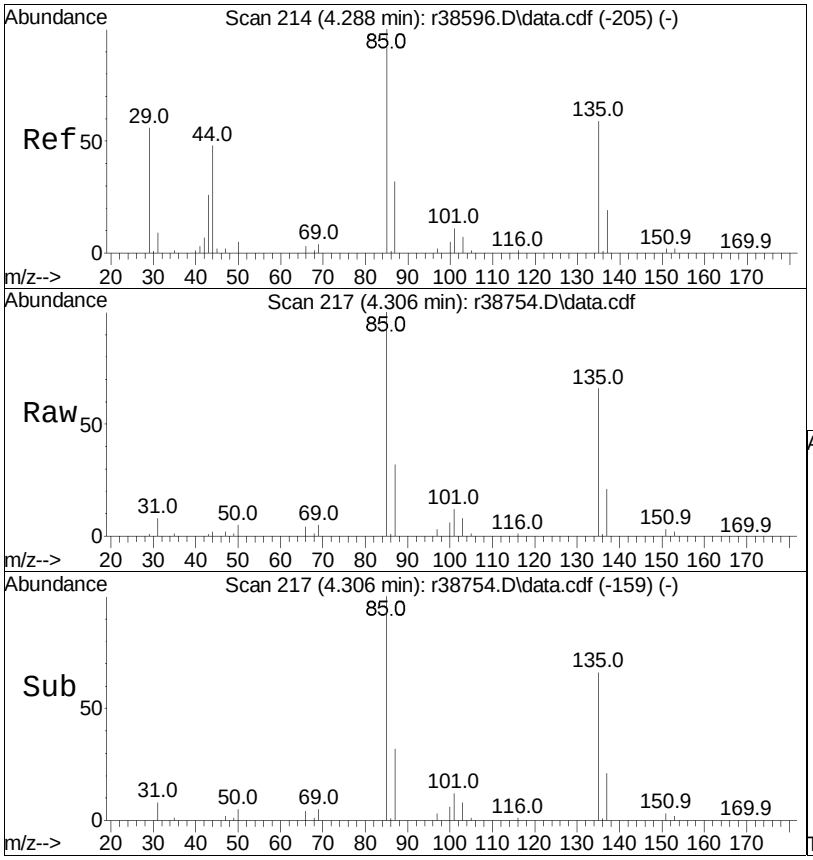



#6
chloromethane
Concen: 11.93 ppbV
RT: 4.180 min Scan# 196
Delta R.T. 0.018 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 50 Resp: 175228

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.3 | 26.9 | 40.3 |

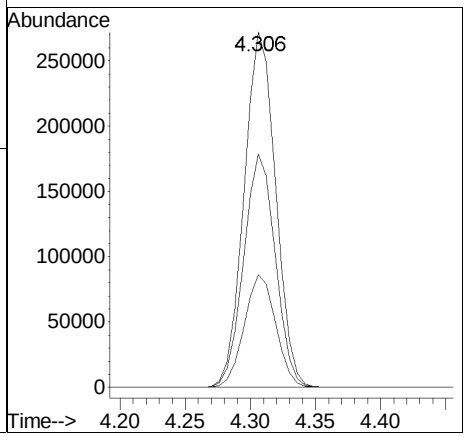


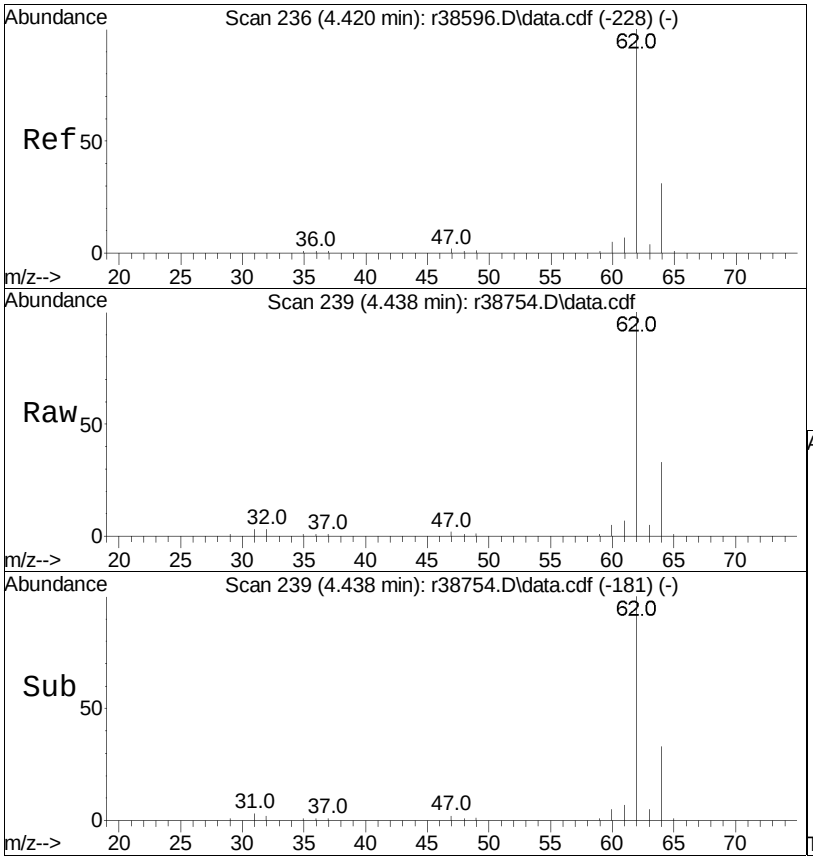



#7
Freon-114
Concen: 11.82 ppbV
RT: 4.306 min Scan# 217
Delta R.T. 0.018 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 85 Resp: 459629

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.7 | 25.4 | 38.0 |
| 135 | 65.6 | 47.1 | 70.7 |

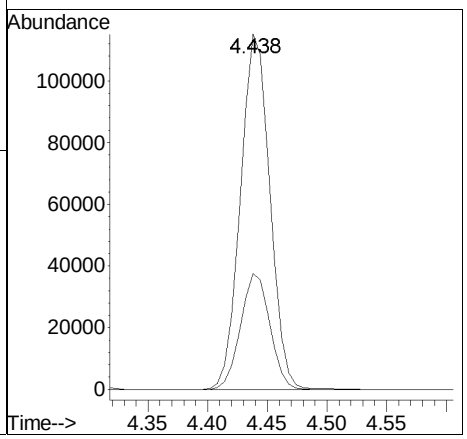


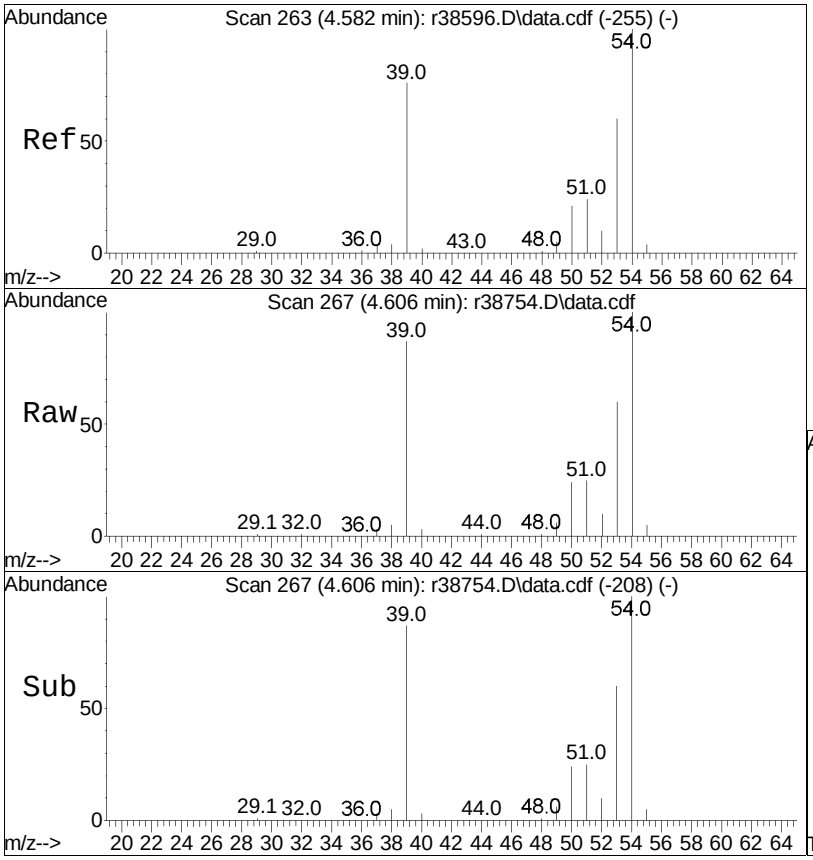



#9
vinyl chloride
Concen: 11.51 ppbV
RT: 4.438 min Scan# 239
Delta R.T. 0.018 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 62 Resp: 197192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.6 | 24.6 | 36.8 |

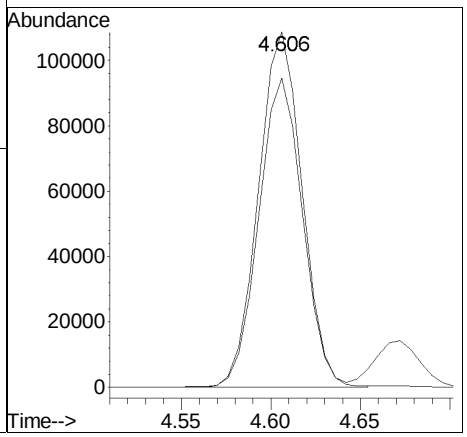


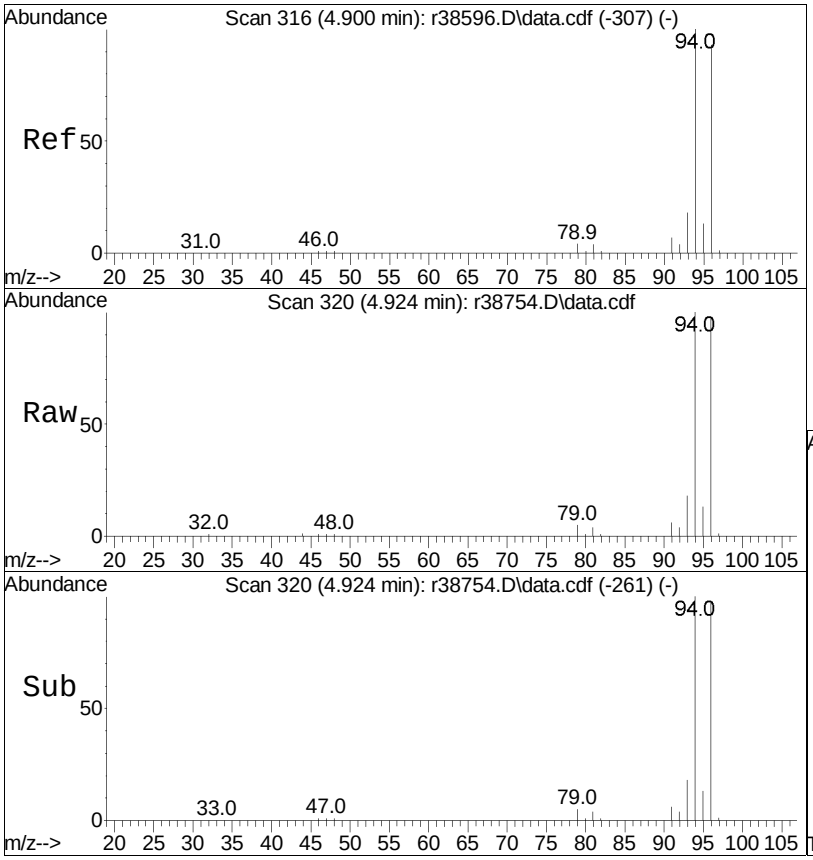



#10
1,3-butadiene
Concen: 10.74 ppbV
RT: 4.606 min Scan# 267
Delta R.T. 0.024 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 54 Resp: 184419

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 87.0 | 60.9 | 91.3 |

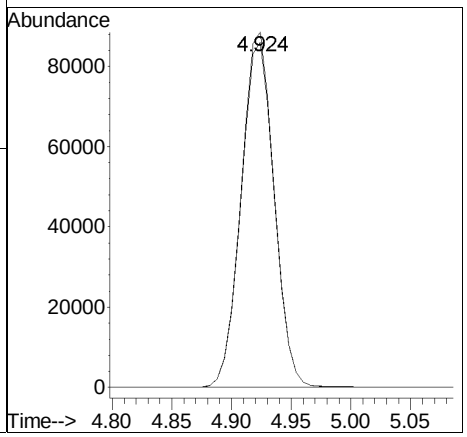


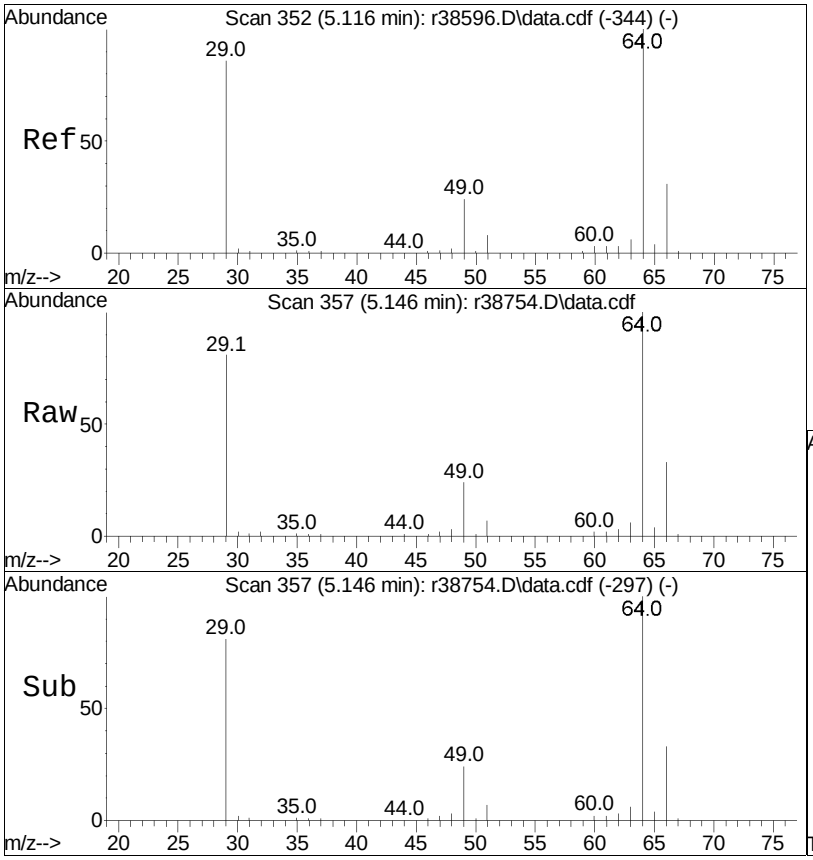



#13
bromomethane
Concen: 12.01 ppbV
RT: 4.924 min Scan# 320
Delta R.T. 0.024 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 94 Resp: 170280

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 97.2 | 74.2 | 111.4 |

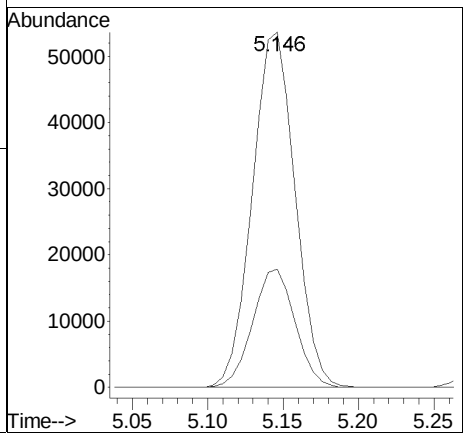


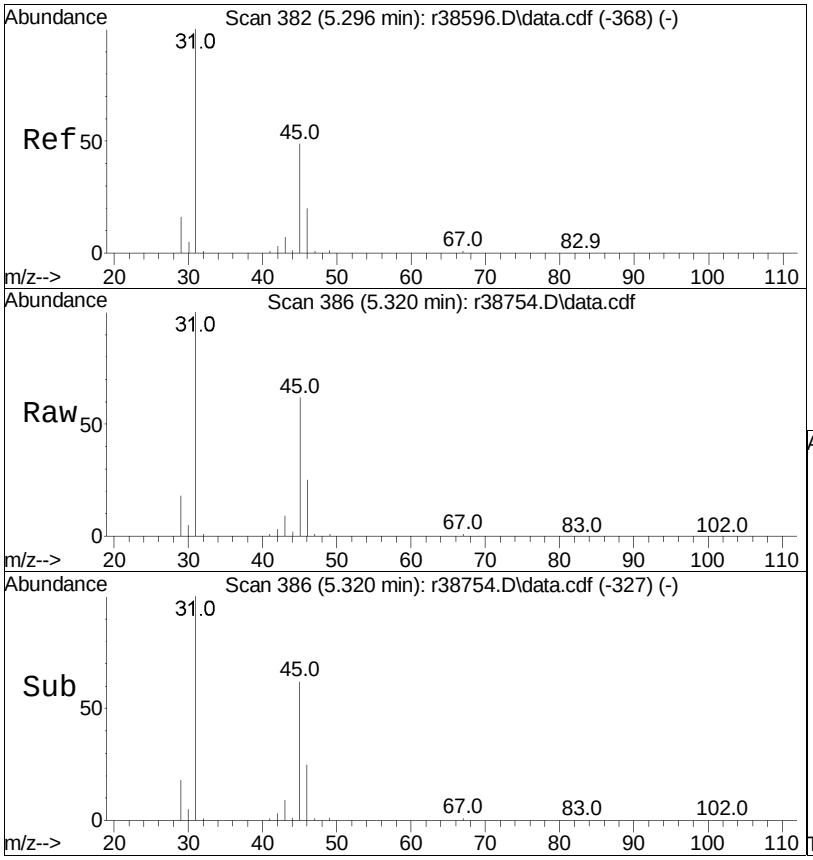



#14
chloroethane
Concen: 12.11 ppbV
RT: 5.146 min Scan# 357
Delta R.T. 0.030 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 64 Resp: 105516

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 33.3 | 25.1 | 37.7 |

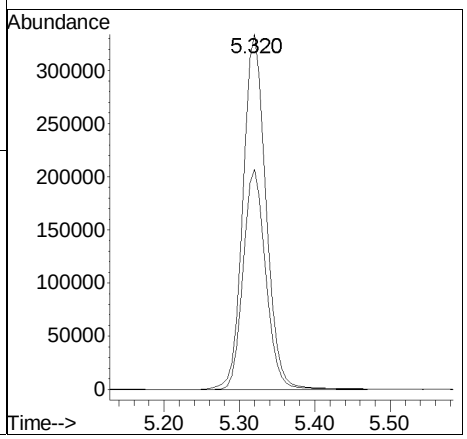


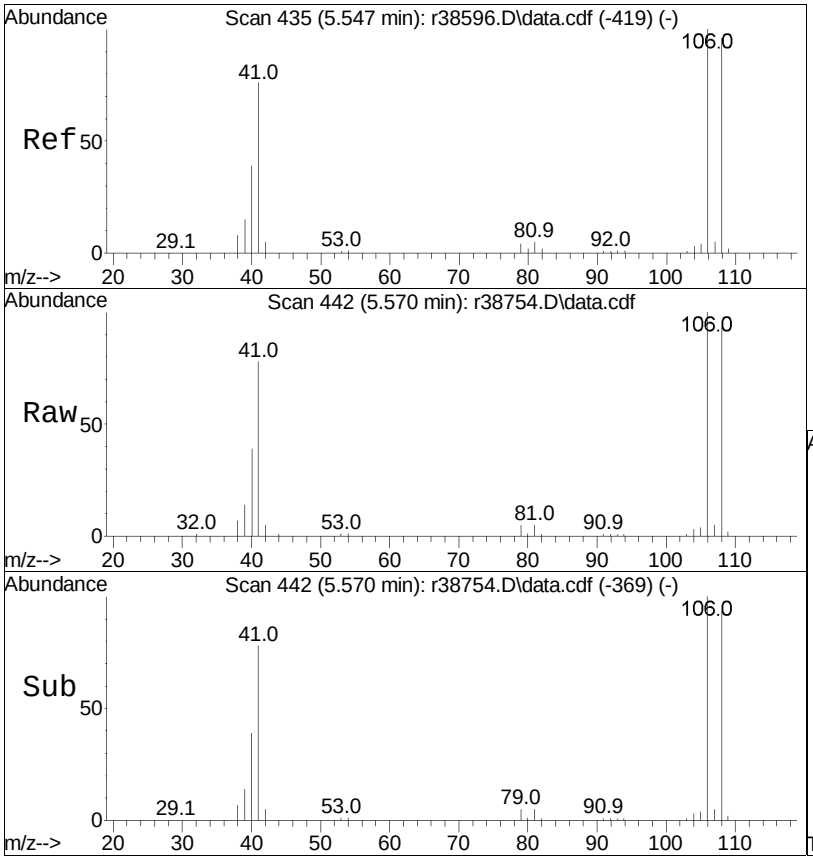



#15
ethanol
Concen: 50.03 ppbV
RT: 5.320 min Scan# 386
Delta R.T. 0.024 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 31 Resp: 688947

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 62.0 | 39.0 | 58.4# |

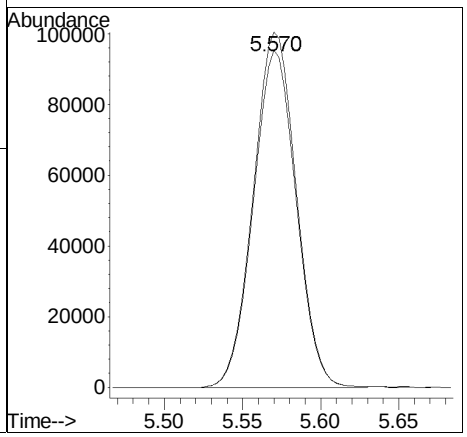


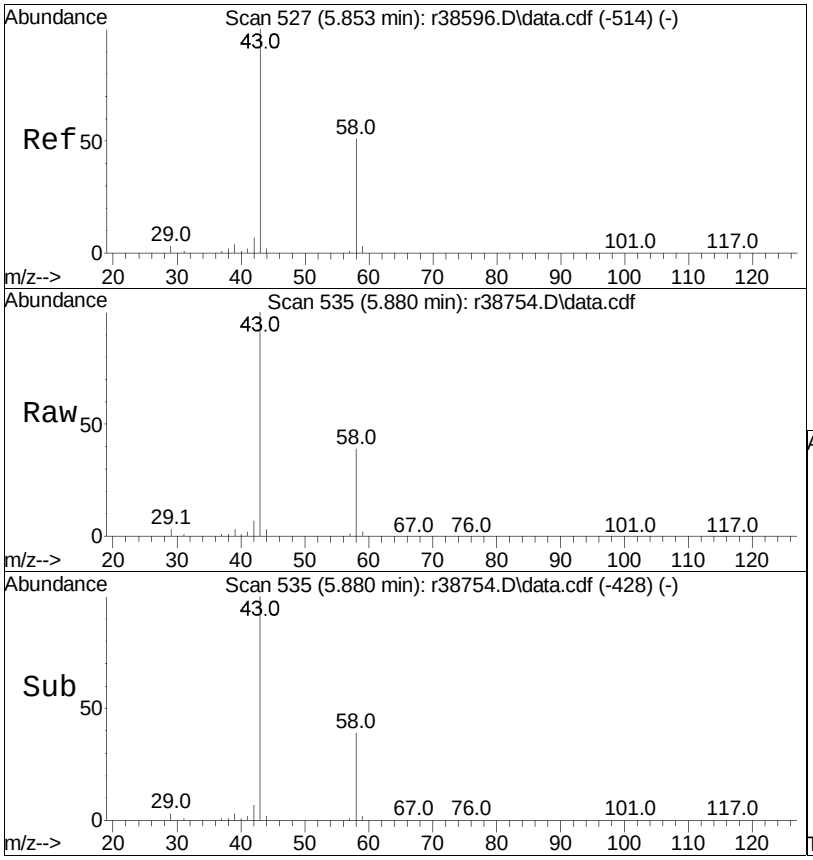



#17
vinyl bromide
Concen: 11.80 ppbV
RT: 5.570 min Scan# 442
Delta R.T. 0.023 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:106 Resp: 192187

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 108 | 95.0 | 76.8 | 115.2 |

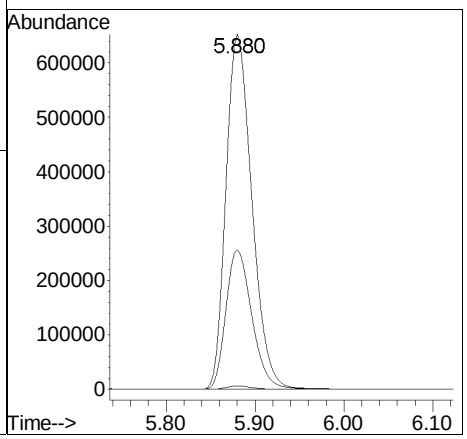


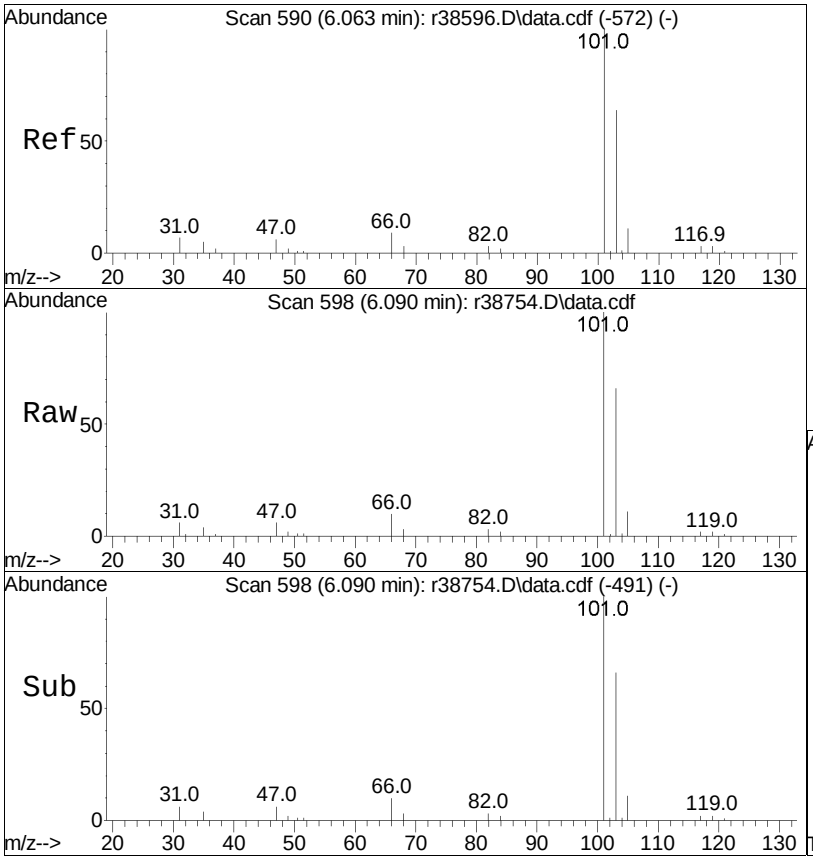



#19
acetone
Concen: 57.89 ppbV
RT: 5.880 min Scan# 535
Delta R.T. 0.027 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 43 Resp: 1327673

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 39.4 | 40.6 | 60.8# |
| 57 | 1.0 | 1.0 | 1.6# |

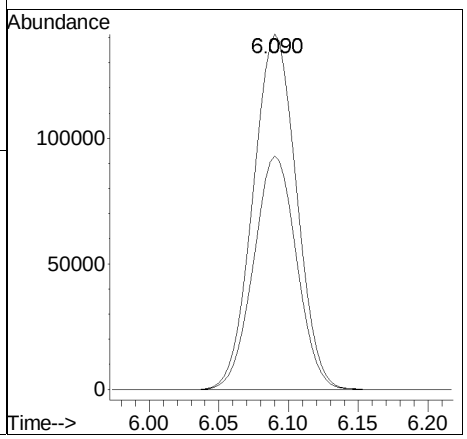


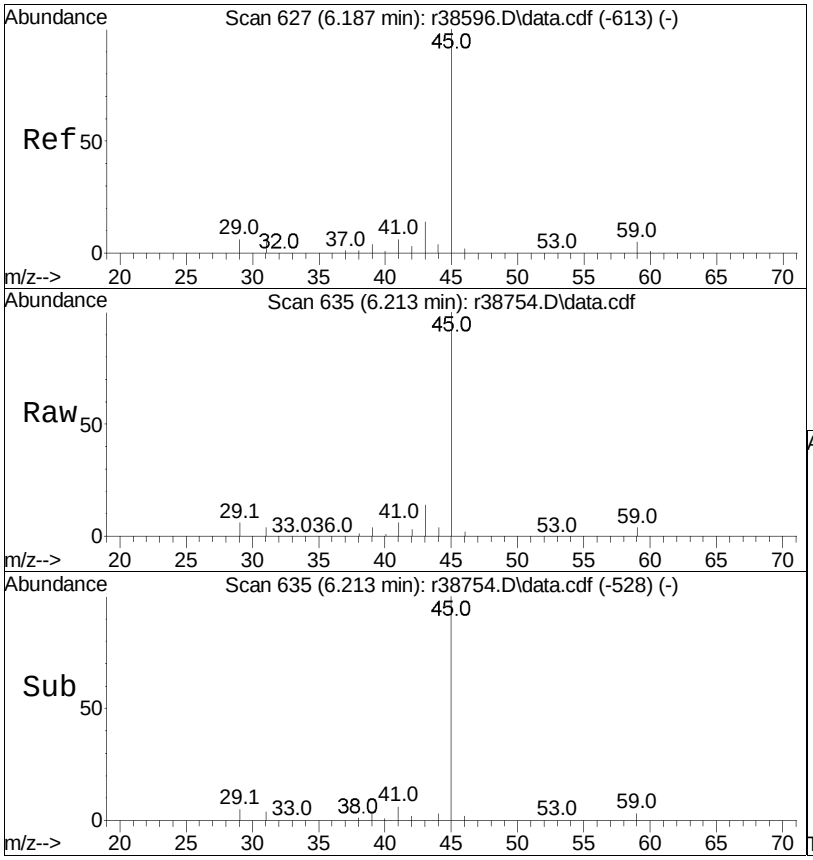



#21
trichlorofluoromethane
Concen: 12.27 ppbV
RT: 6.090 min Scan# 598
Delta R.T. 0.027 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:101 Resp: 305977

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.7 | 51.4 | 77.0 |

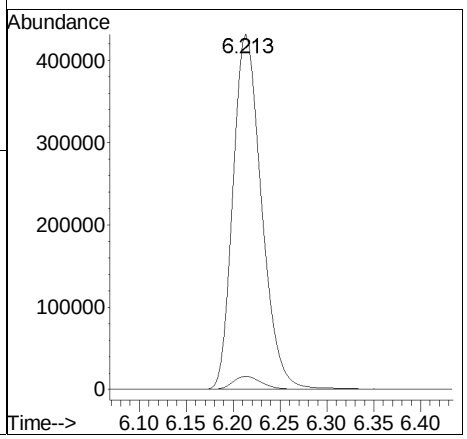


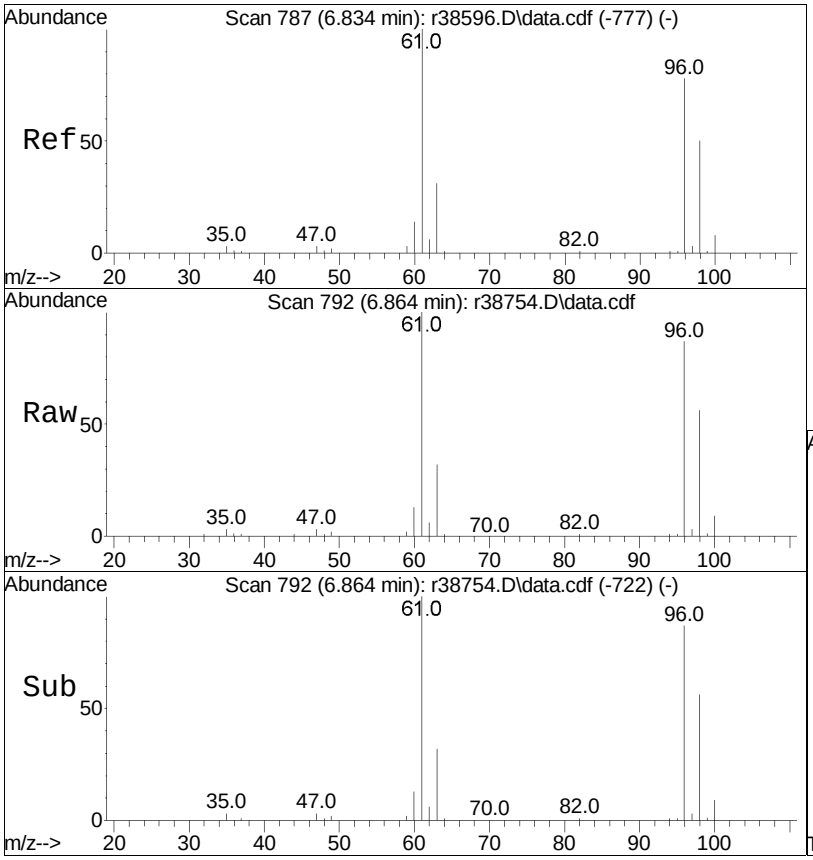



#22
isopropyl alcohol
Concen: 31.27 ppbV
RT: 6.213 min Scan# 635
Delta R.T. 0.027 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 45 Resp: 916909

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 3.7 | 3.9 | 5.9# |

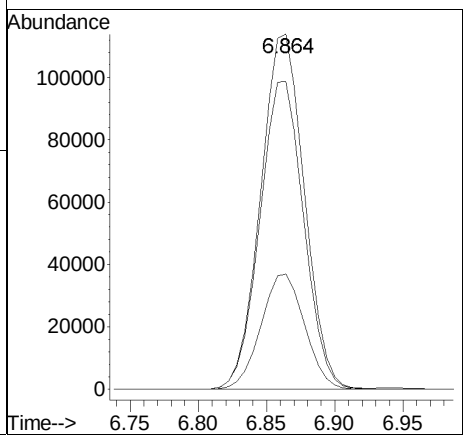


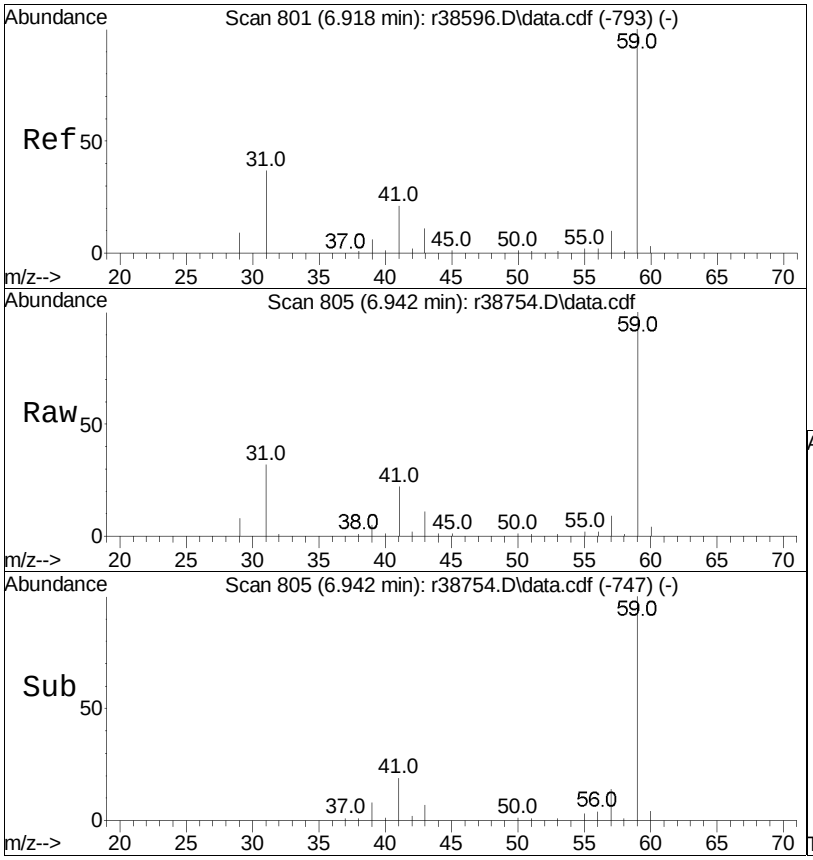



#26
1,1-dichloroethene
Concen: 10.83 ppbV
RT: 6.864 min Scan# 792
Delta R.T. 0.030 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 61 Resp: 254062

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 86.6 | 62.4 | 93.6 |
| 63 | 32.5 | 24.4 | 36.6 |

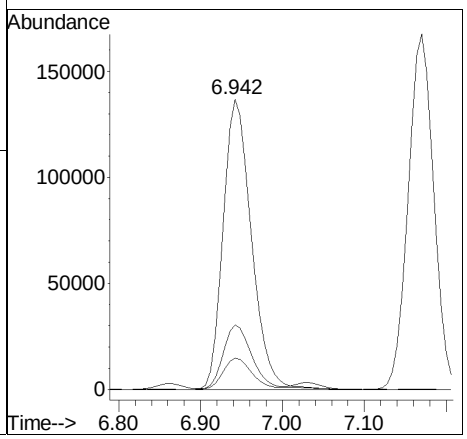


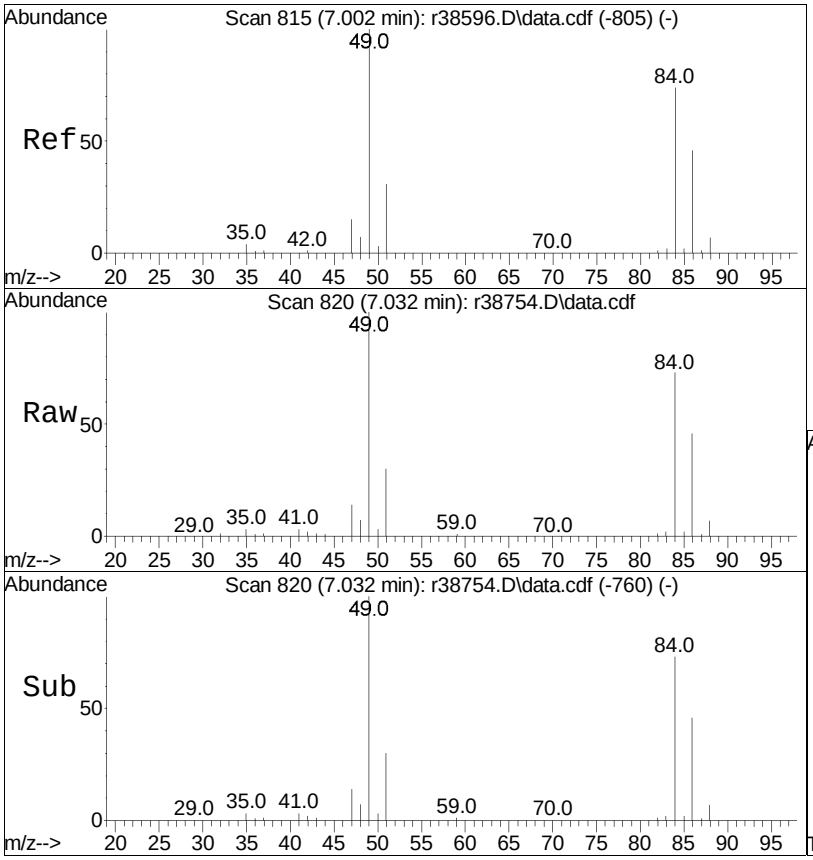



#27
tertiary butyl alcohol
Concen: 9.35 ppbV
RT: 6.942 min Scan# 805
Delta R.T. 0.024 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 59 Resp: 328459

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 22.3 | 16.9 | 25.3 |
| 43 | 10.8 | 8.9 | 13.3 |

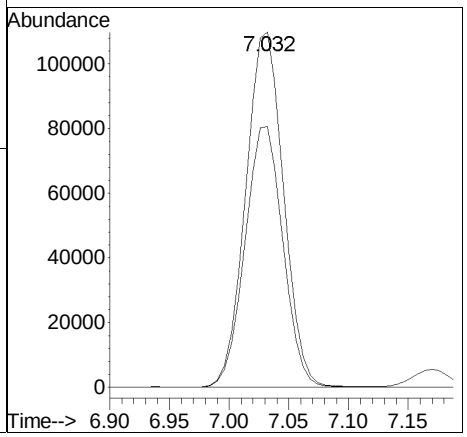


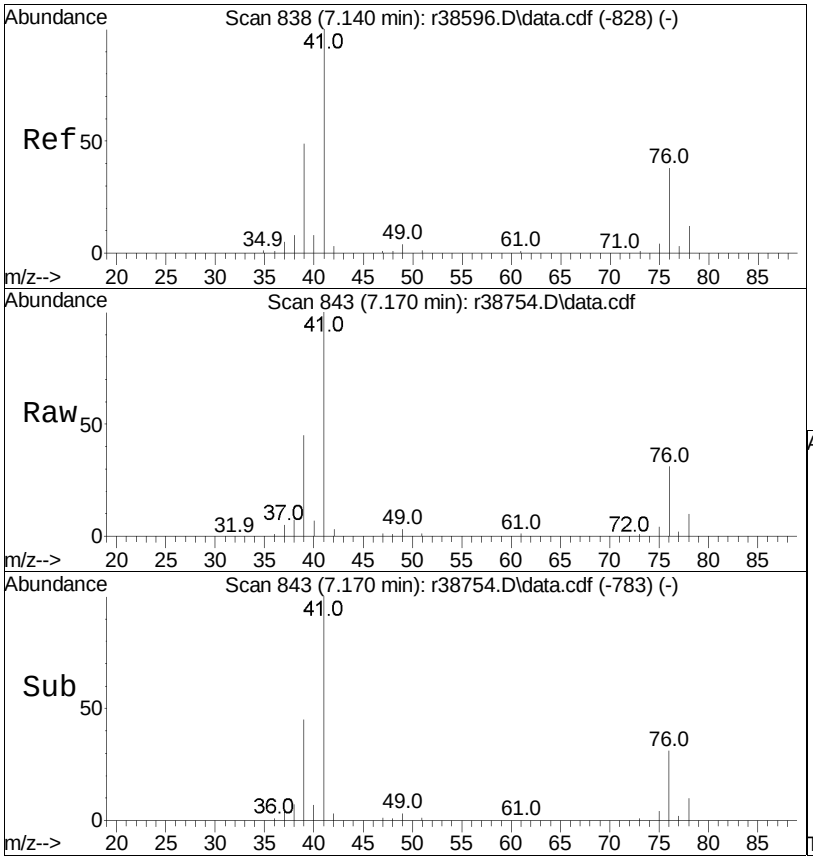



#28
methylene chloride
Concen: 10.99 ppbV
RT: 7.032 min Scan# 820
Delta R.T. 0.030 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 49 Resp: 242639

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 73.4 | 59.3 | 88.9 |

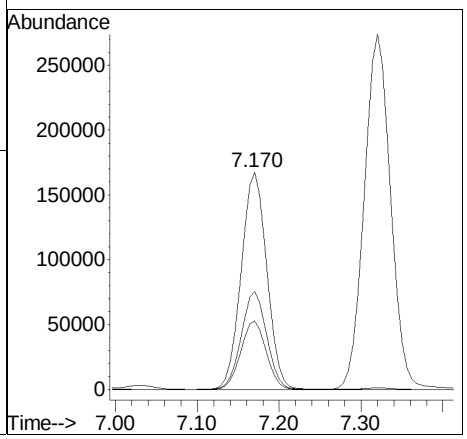


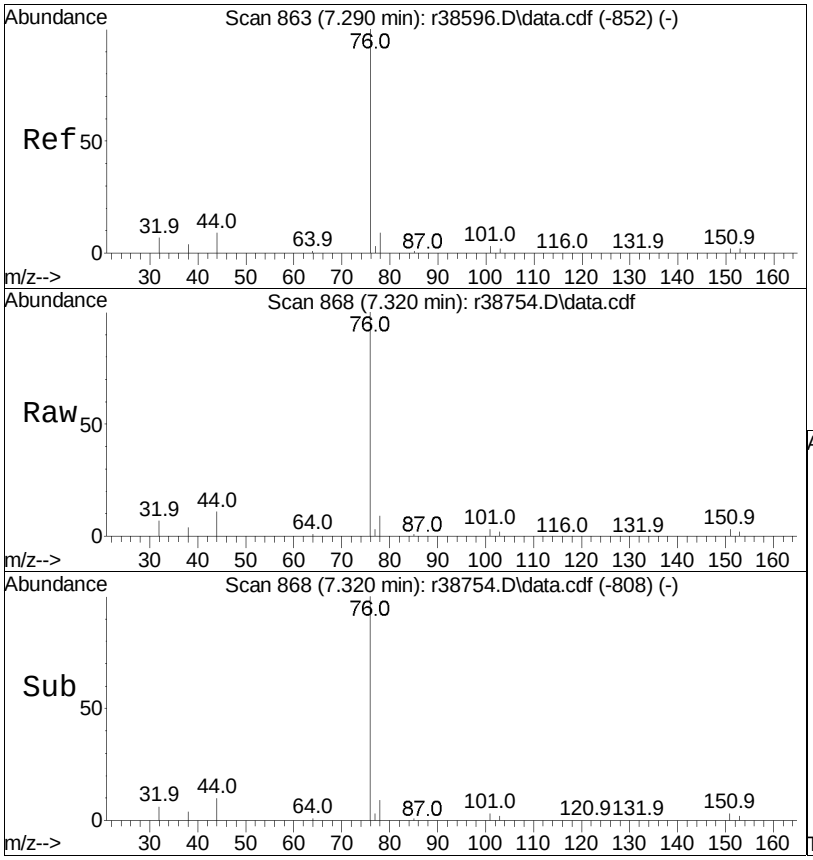



#29
3-chloropropene
Concen: 12.58 ppbV
RT: 7.170 min Scan# 843
Delta R.T. 0.030 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 41 Resp: 364211

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 39 | 45.2 | 38.8 | 58.2 |
| 76 | 31.5 | 30.0 | 45.0 |

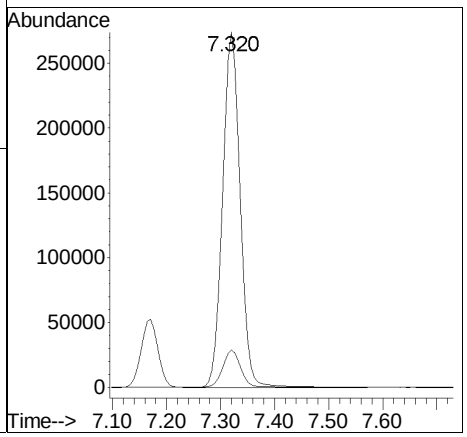


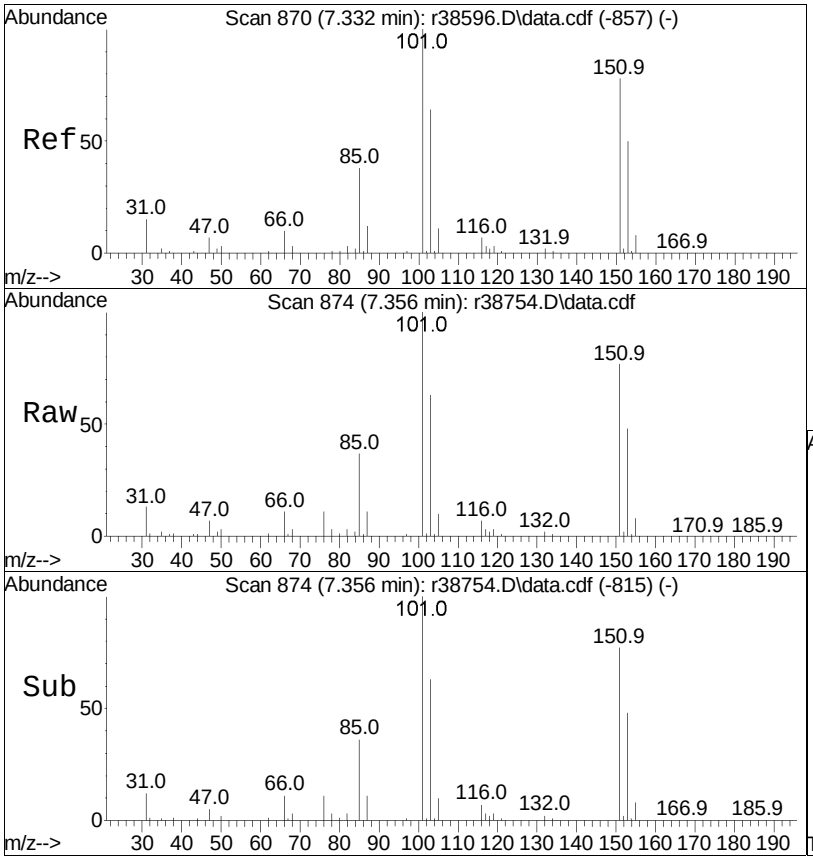



#30
carbon disulfide
Concen: 9.59 ppbV
RT: 7.320 min Scan# 868
Delta R.T. 0.030 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 76 Resp: 618756

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 44 | 10.6 | 7.4 | 11.2 |

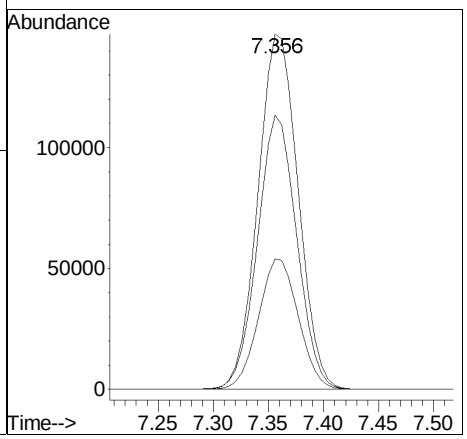


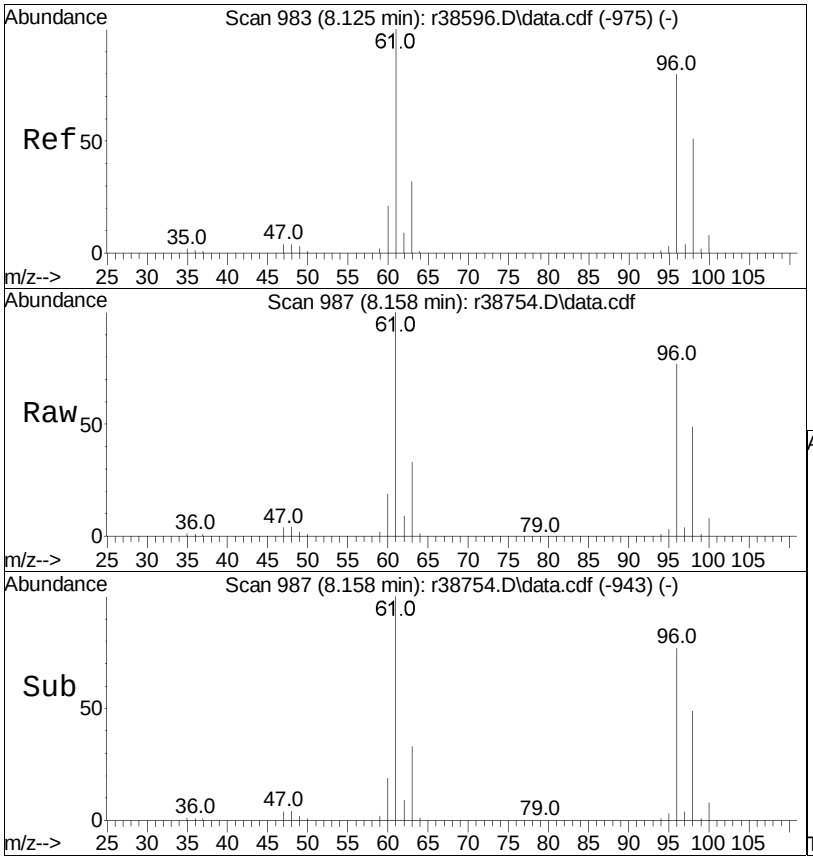



#31
Freon 113
Concen: 10.97 ppbV
RT: 7.356 min Scan# 874
Delta R.T. 0.024 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:101 Resp: 373192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 36.7 | 30.6 | 45.8 |
| 151 | 77.2 | 62.4 | 93.6 |

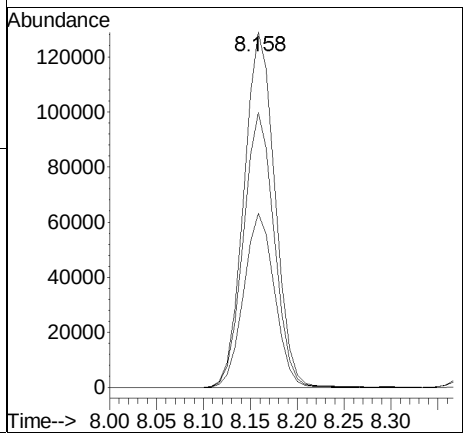


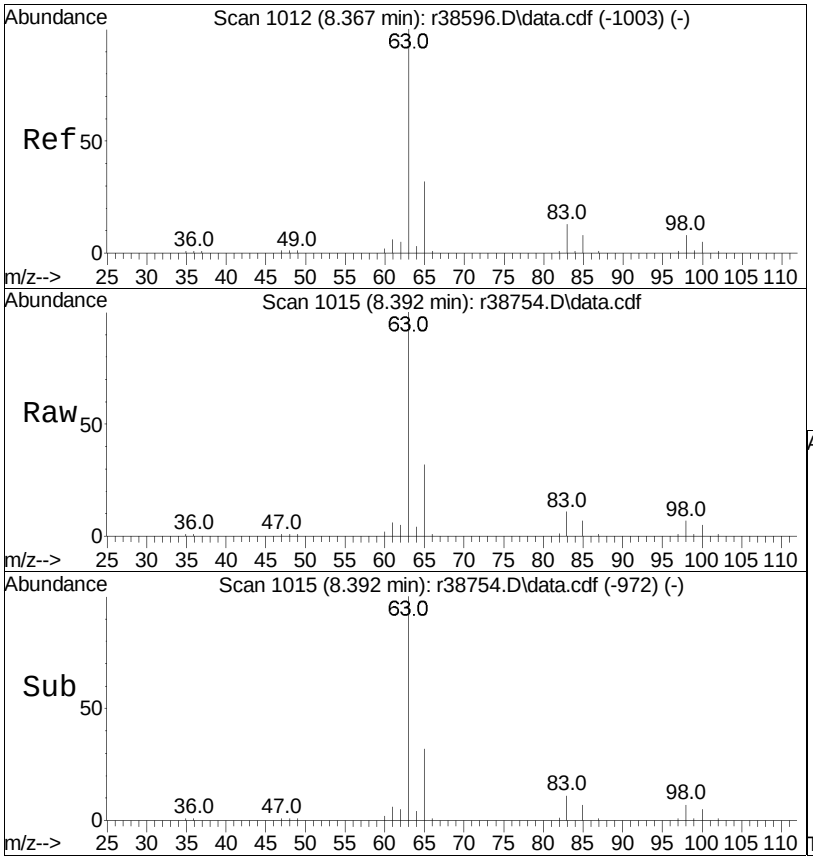



#32
trans-1,2-dichloroethene
Concen: 10.80 ppbV
RT: 8.158 min Scan# 987
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 61 Resp: 296925

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 77.3 | 64.2 | 96.4 |
| 98 | 49.0 | 41.1 | 61.7 |

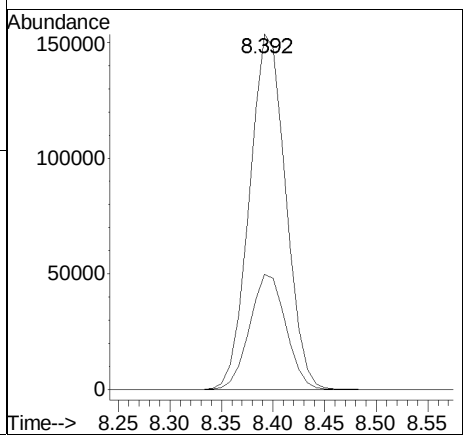


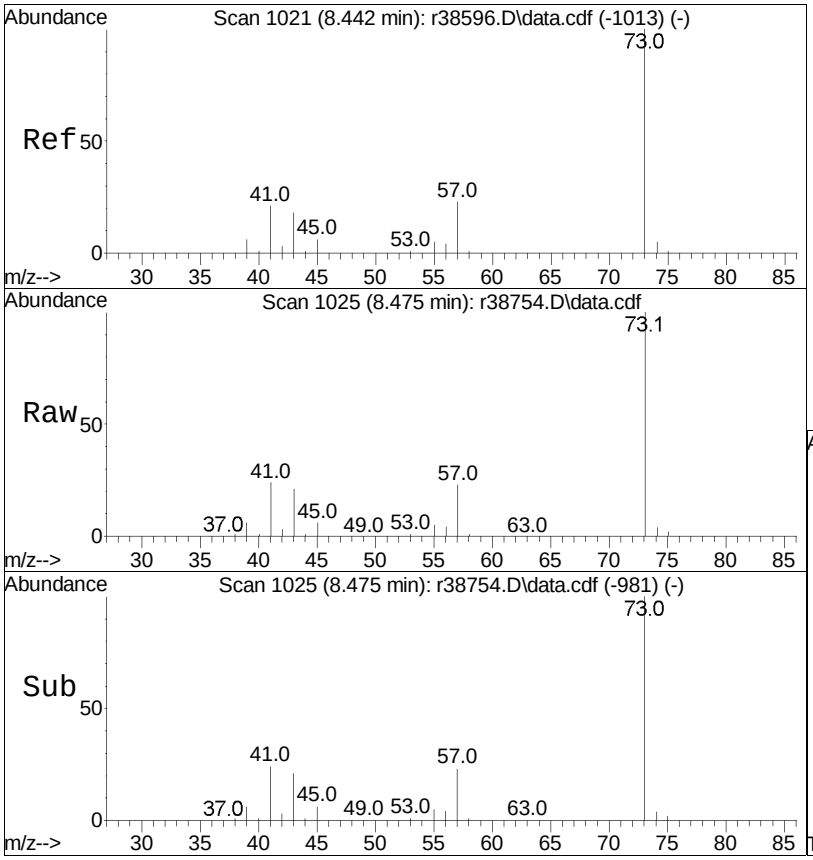



#33
1,1-dichloroethane
Concen: 11.55 ppbV
RT: 8.392 min Scan# 1015
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 63 Resp: 374044

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 32.4 | 25.8 | 38.6 |

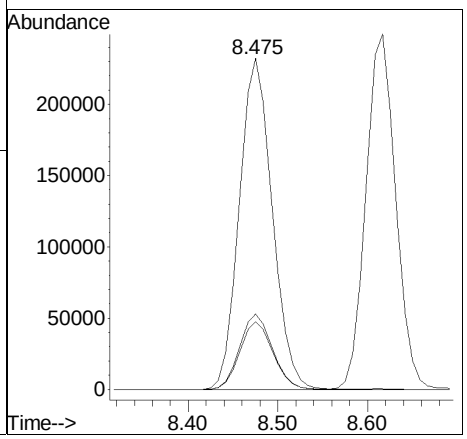


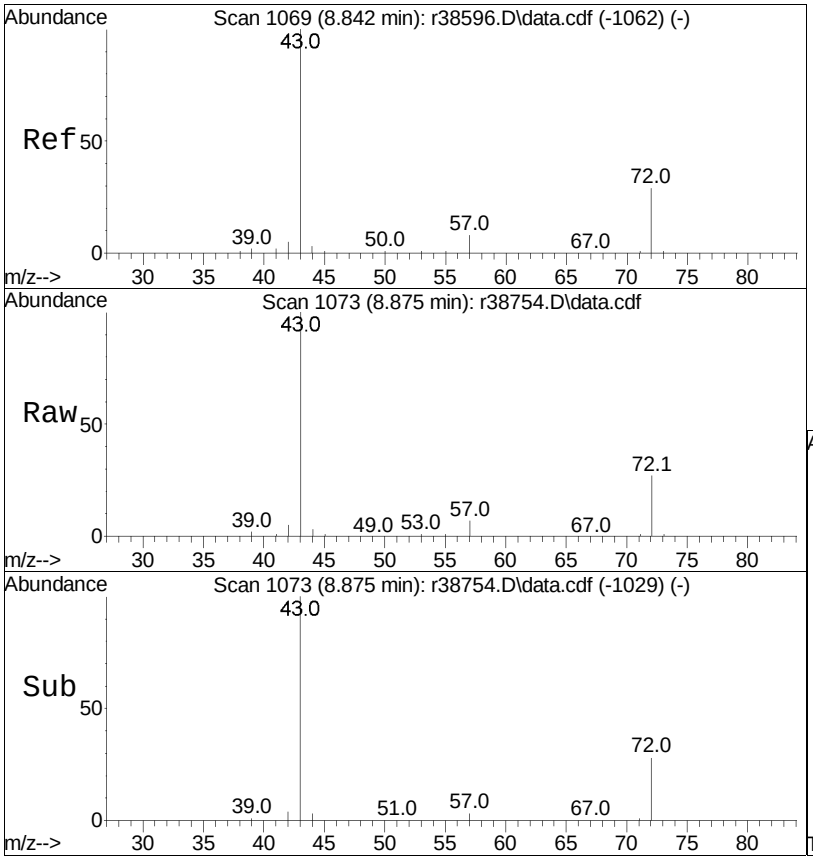



#34
MTBE
Concen: 10.56 ppbV
RT: 8.475 min Scan# 1025
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 73 Resp: 592185

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 22.8 | 18.7 | 28.1 |
| 43 | 20.5 | 14.6 | 21.8 |

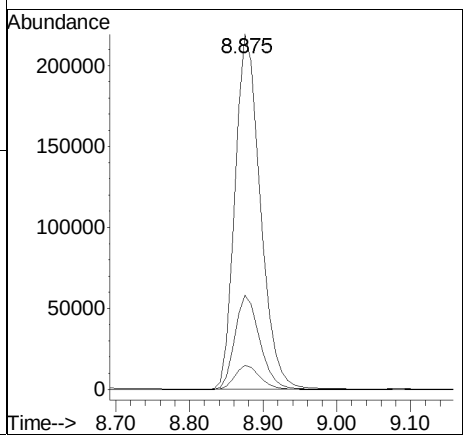


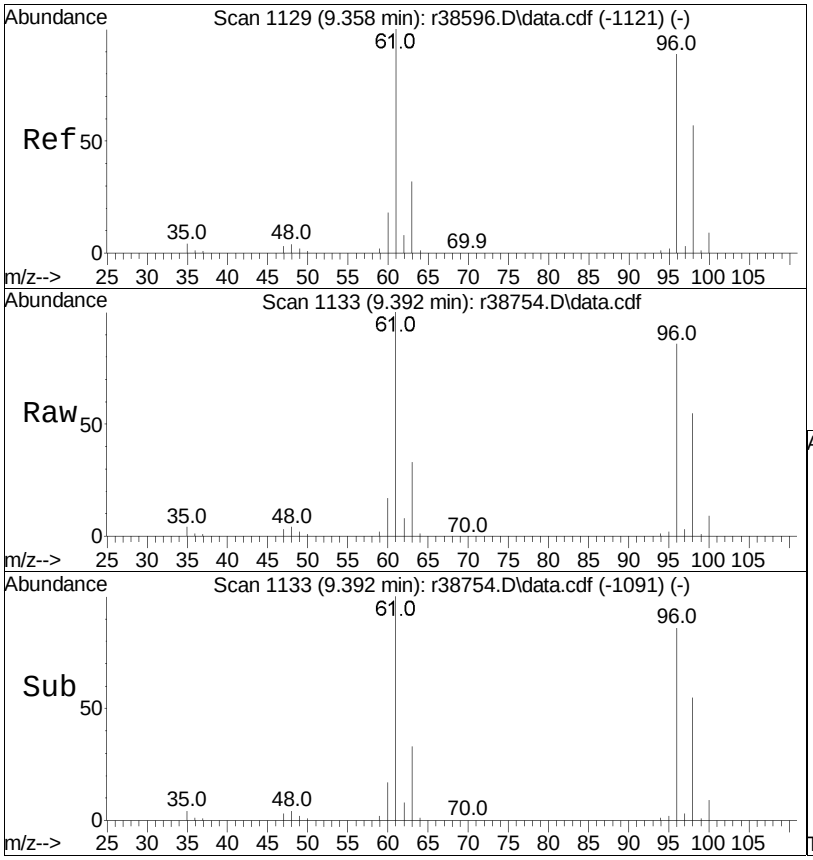



#36
2-butanone
Concen: 12.02 ppbV
RT: 8.875 min Scan# 1073
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 43 Resp: 522608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 26.5 | 23.1 | 34.7 |
| 57 | 6.8 | 6.3 | 9.5 |

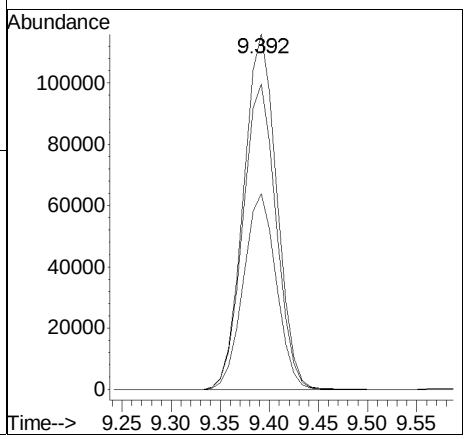


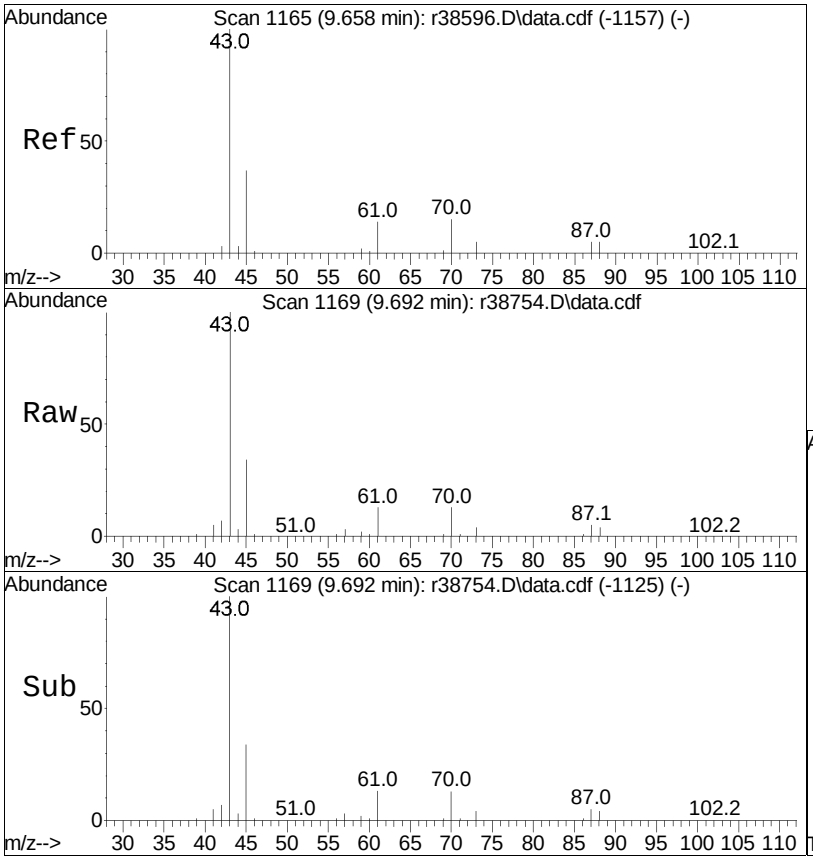



#37
cis-1,2-dichloroethene
Concen: 11.50 ppbV
RT: 9.392 min Scan# 1133
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 61 Resp: 272820

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 85.9 | 71.2 | 106.8 |
| 98 | 55.1 | 45.4 | 68.0 |

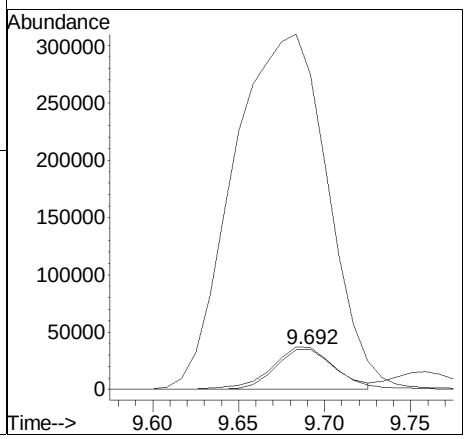


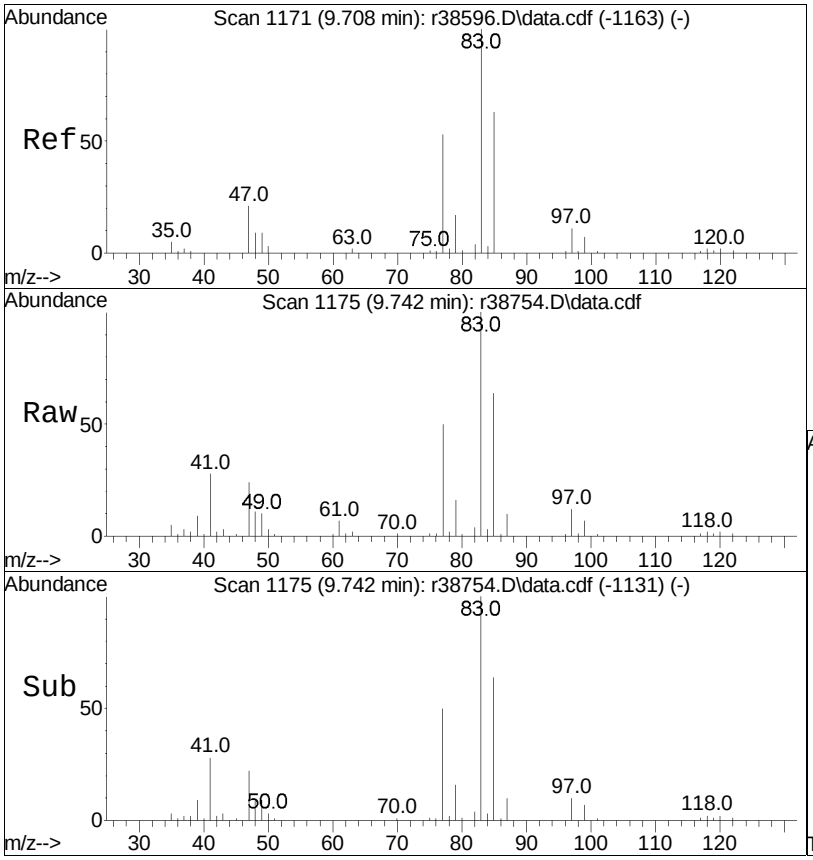



#38
Ethyl Acetate
Concen:  11.68 ppbV
RT:  9.692 min  Scan# 1169
Delta R.T.  0.033 min
Lab File:  r38754.D
Acq: 20 Mar 2020  1:32 PM

Tgt Ion: 61 Resp:  84761

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 104.3 | 85.8 | 128.6 |
| 43 | 785.7 | 631.4 | 947.2 |

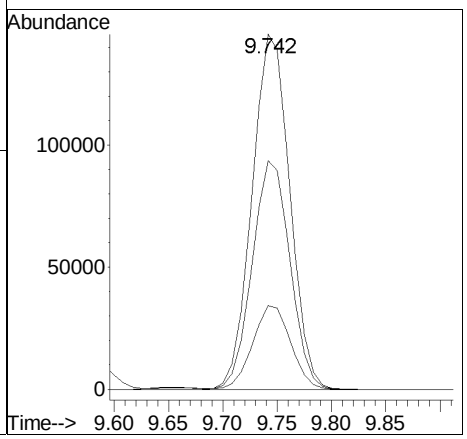


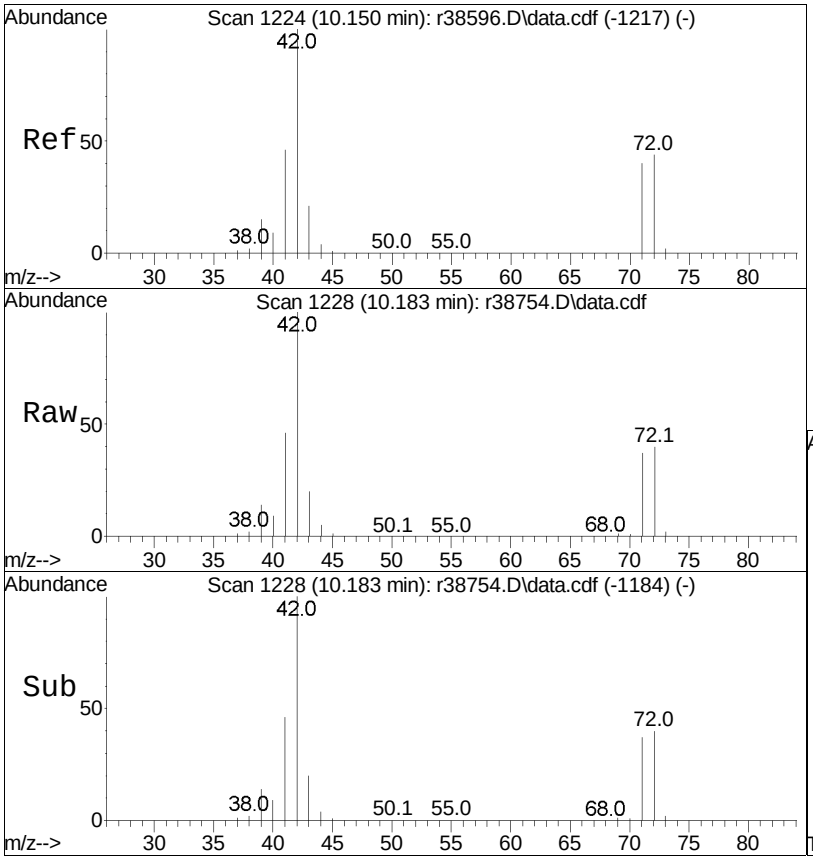



#39
chloroform
Concen: 10.24 ppbV
RT: 9.742 min Scan# 1175
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 83 Resp: 351512

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.4 | 50.4 | 75.6 |
| 47 | 23.6 | 16.9 | 25.3 |

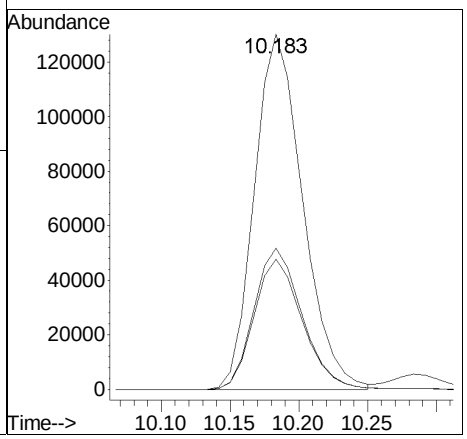


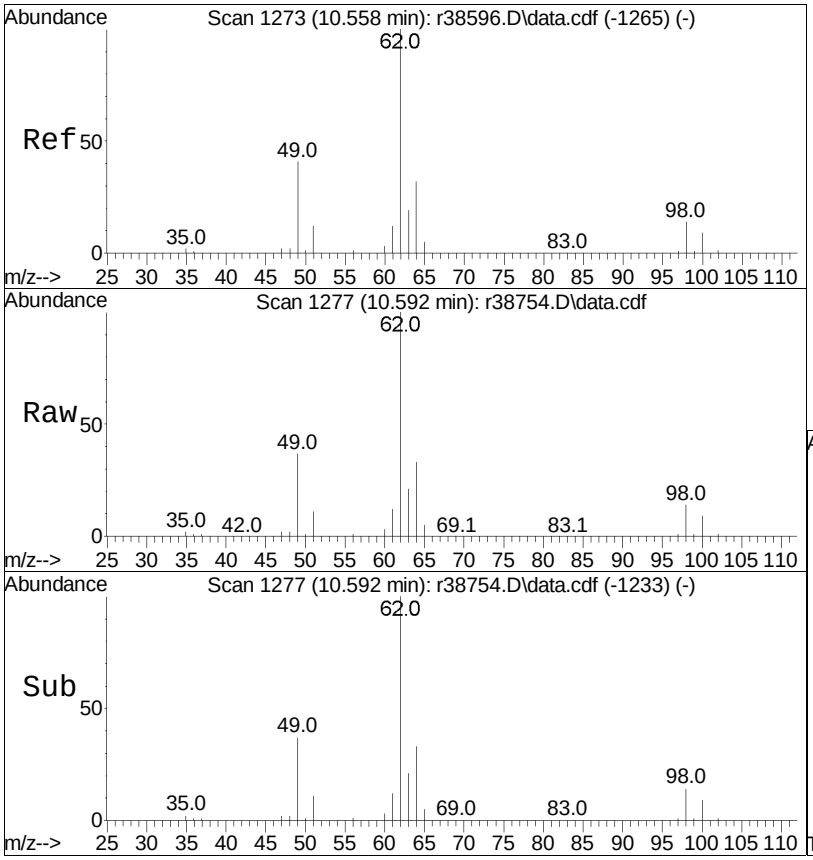



#40
Tetrahydrofuran
Concen: 11.69 ppbV
RT: 10.183 min Scan# 1228
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 42 Resp: 318057

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 36.7 | 31.8 | 47.8 |
| 72 | 39.8 | 35.2 | 52.8 |

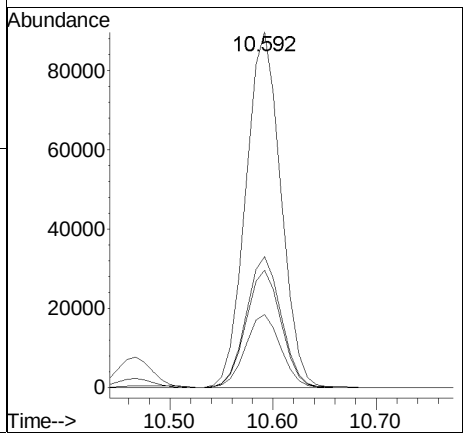


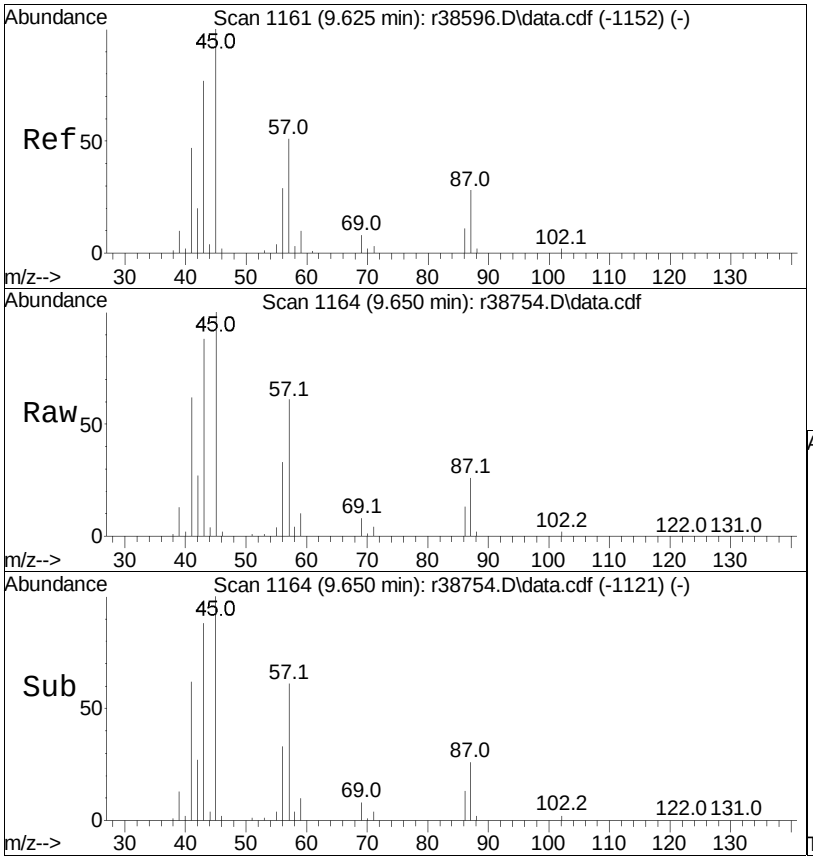



#42
1,2-dichloroethane
Concen: 11.18 ppbV
RT: 10.592 min Scan# 1277
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 62 Resp: 211882

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 33.0 | 25.4 | 38.0 |
| 49 | 36.8 | 32.6 | 48.8 |
| 63 | 20.6 | 15.5 | 23.3 |

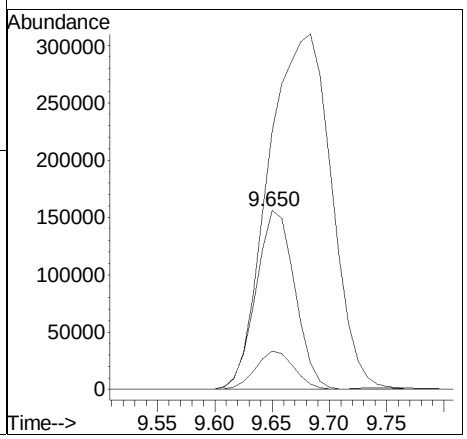


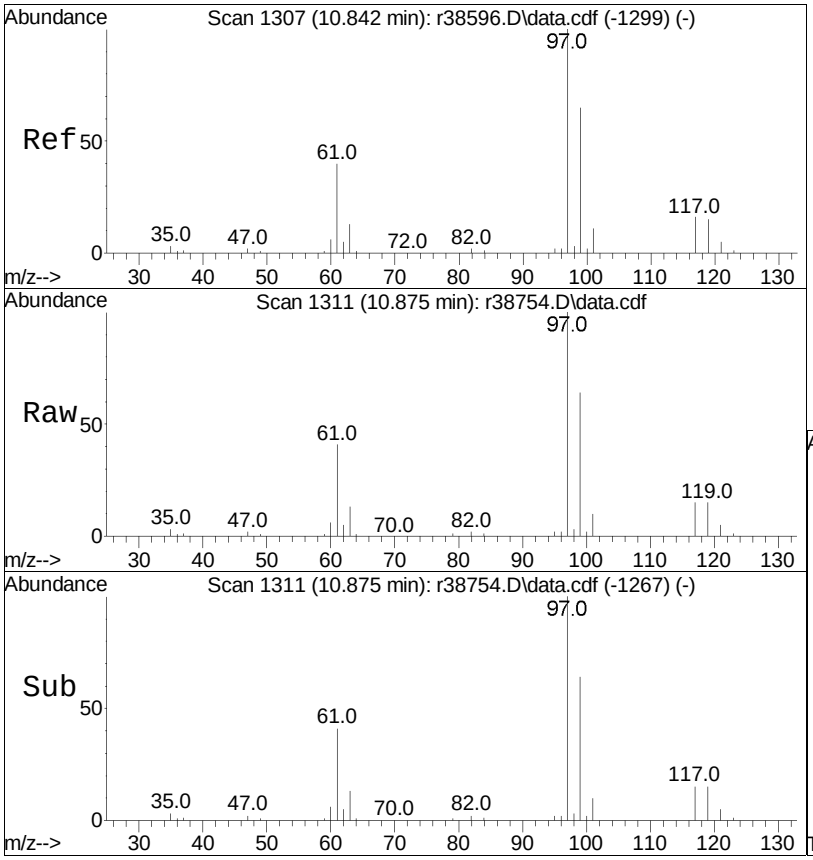



#44
hexane
Concen: 10.31 ppbV
RT: 9.650 min Scan# 1164
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 57 Resp: 371246

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 144.5 | 119.3 | 178.9 |
| 86 | 21.5 | 17.0 | 25.6 |

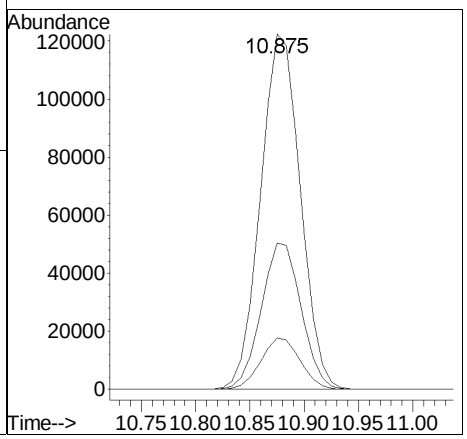


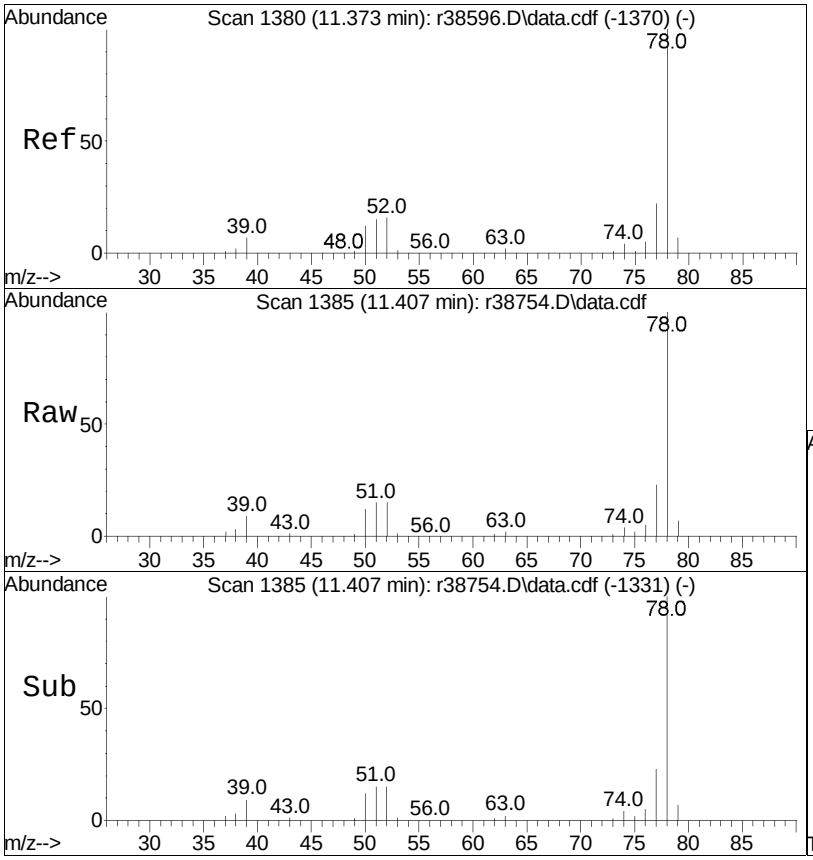



#48
1,1,1-trichloroethane
Concen: 11.35 ppbV
RT: 10.875 min Scan# 1311
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 97 Resp: 311625

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 61 | 41.2 | 31.8 | 47.8 |
| 119 | 14.5 | 11.8 | 17.6 |

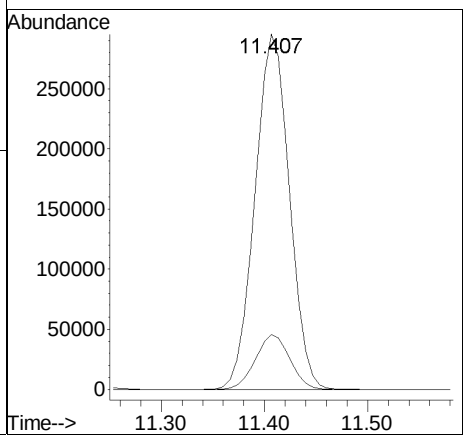


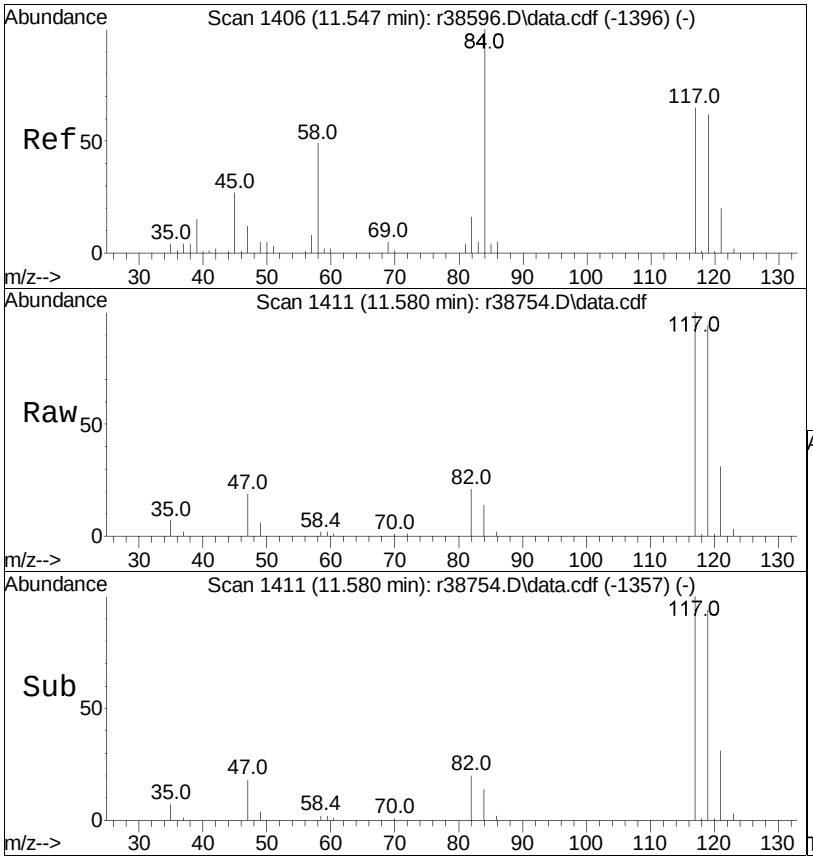



#50
benzene
Concen: 9.73 ppbV
RT: 11.407 min Scan# 1385
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 78 Resp: 683936

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 15.4 | 12.6 | 18.8 |

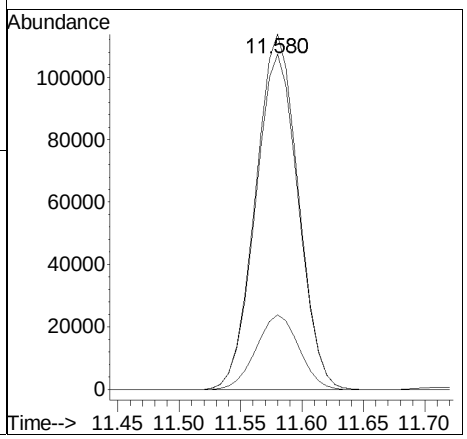


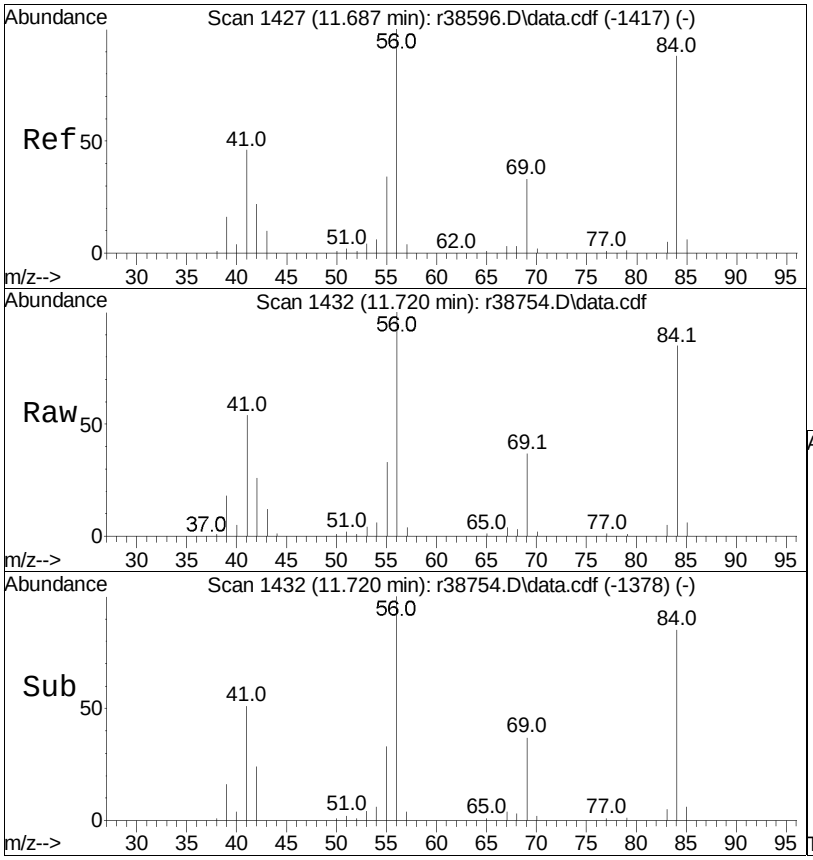



#52
carbon tetrachloride
Concen: 10.76 ppbV
RT: 11.580 min Scan# 1411
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:117 Resp: 274453

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 94.3 | 76.6 | 114.8 |
| 82 | 21.0 | 20.1 | 30.1 |

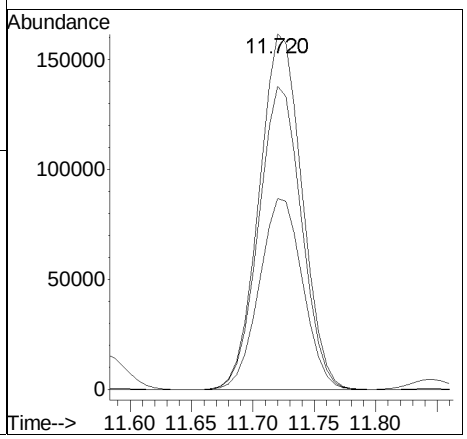


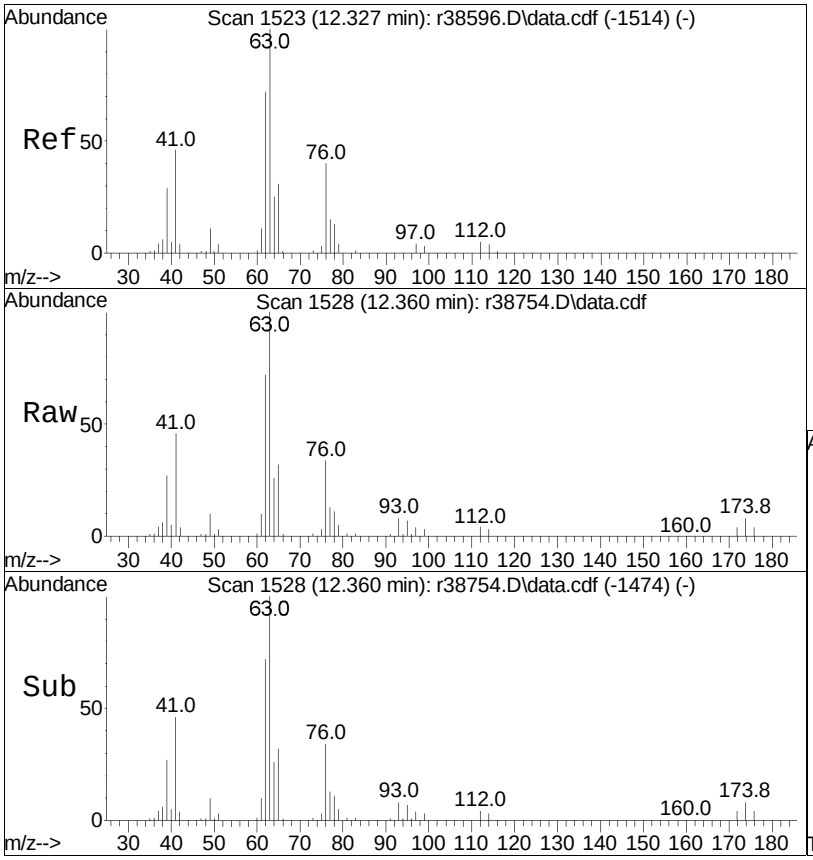



#53
cyclohexane
Concen: 10.08 ppbV
RT: 11.720 min Scan# 1432
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 56 Resp: 393017

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 85.3 | 70.2 | 105.2 |
| 41 | 53.7 | 36.9 | 55.3 |

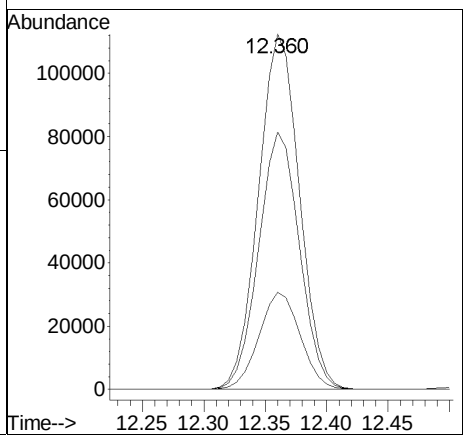


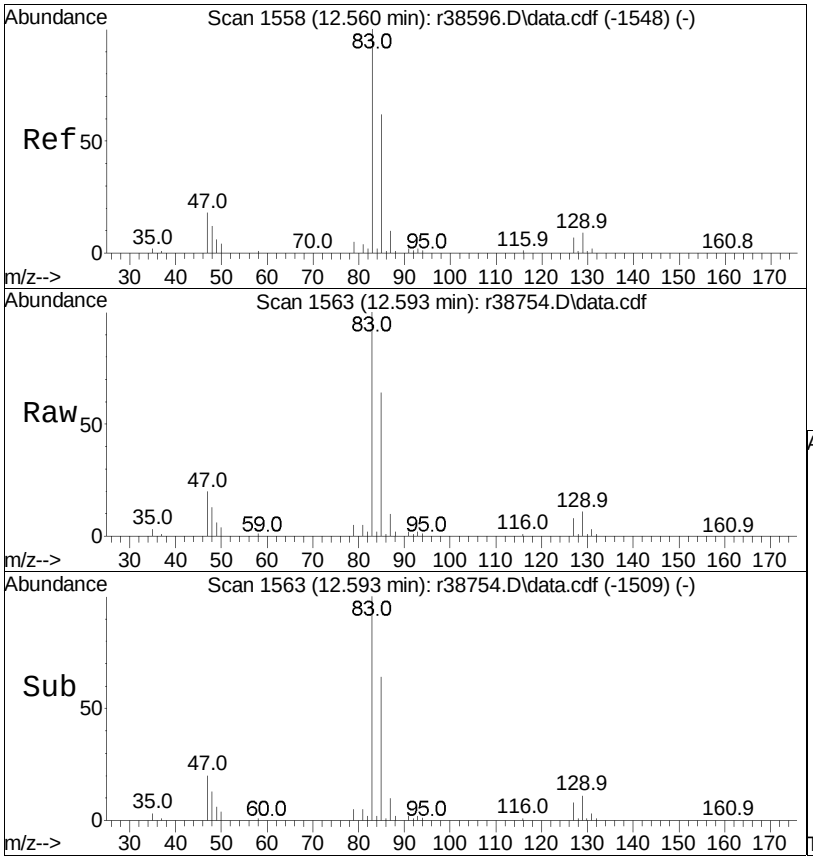



#56
1,2-dichloropropane
Concen: 12.26 ppbV
RT: 12.360 min Scan# 1528
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 63 Resp: 261176

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 72.5 | 57.7 | 86.5 |
| 39 | 27.3 | 23.3 | 34.9 |

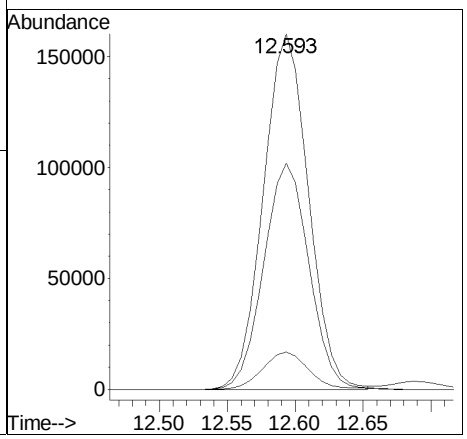


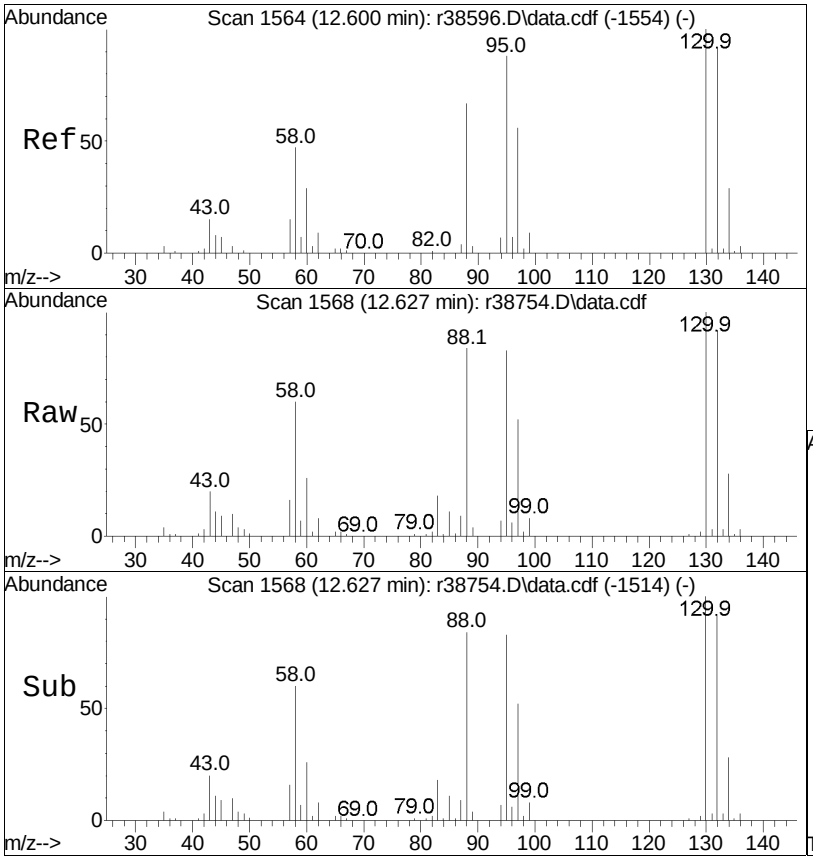



#57
bromodichloromethane
Concen: 9.89 ppbV
RT: 12.593 min Scan# 1563
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 83 Resp: 370778

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 63.7 | 50.0 | 75.0 |
| 129 | 10.5 | 7.2 | 10.8 |

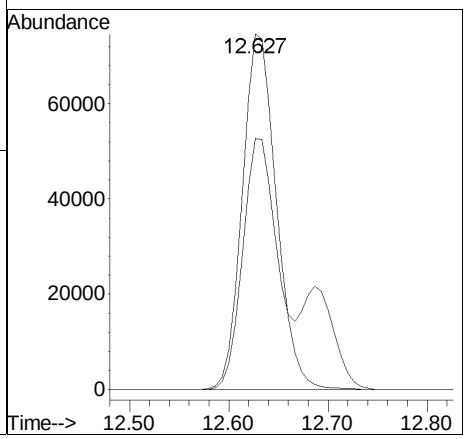


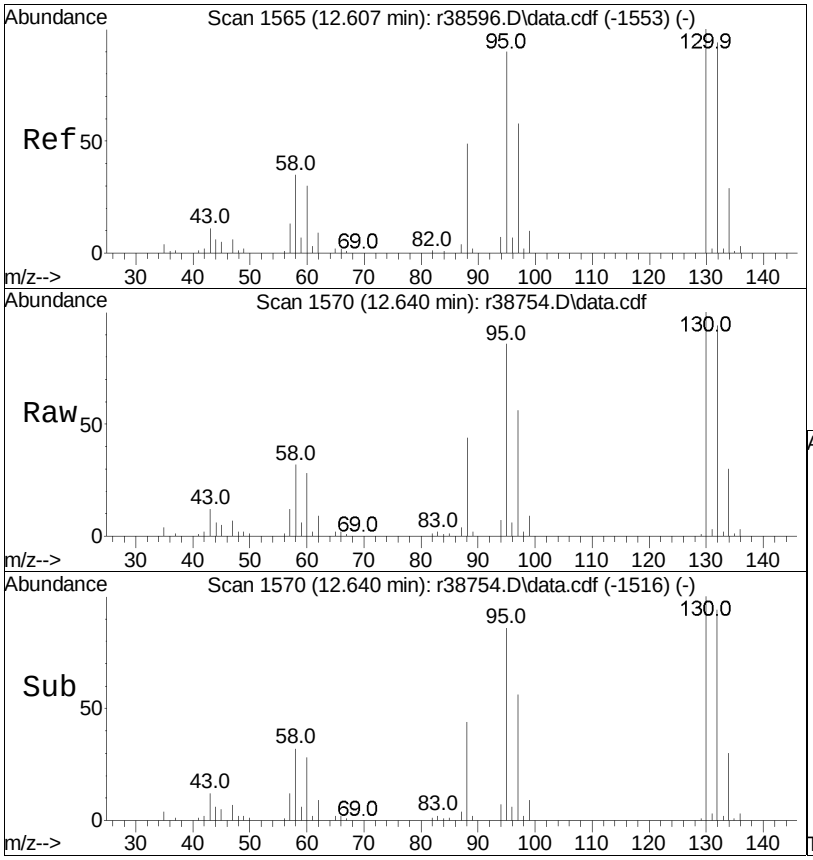



#58
1,4-dioxane
Concen: 11.03 ppbV
RT: 12.627 min Scan# 1568
Delta R.T. 0.027 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 88 Resp: 177883

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 70.6 | 56.6 | 85.0 |

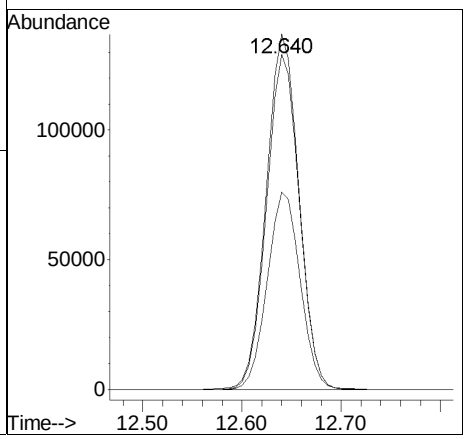


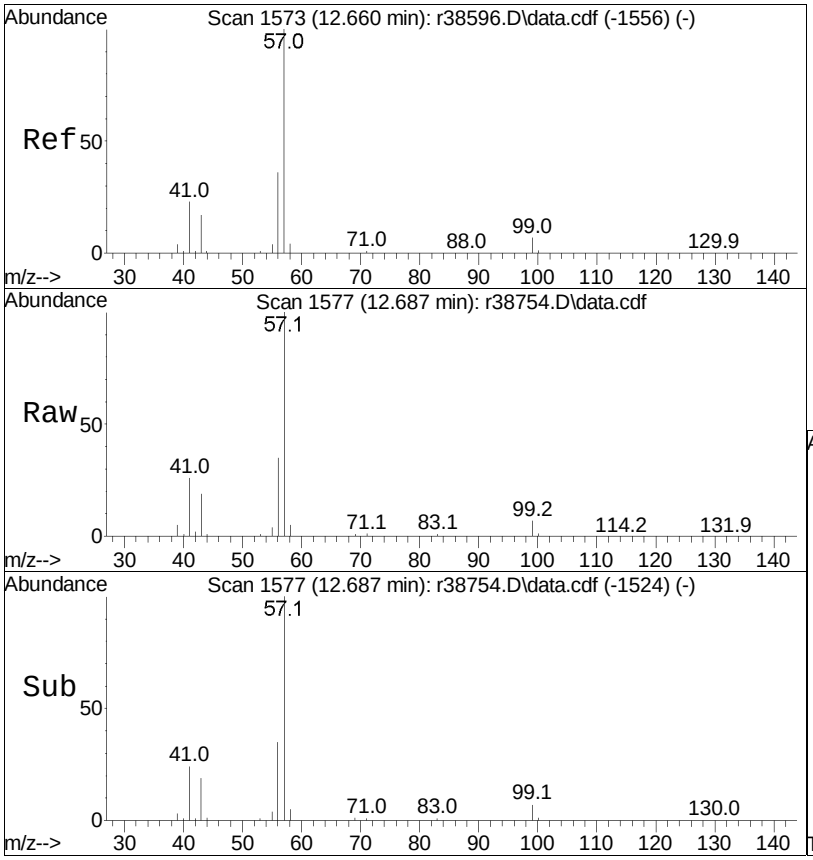



#59
trichloroethene
Concen: 12.00 ppbV
RT: 12.640 min Scan# 1570
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:130 Resp: 314176

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 94.3 | 75.0 | 112.4 |
| 97 | 55.5 | 46.6 | 69.8 |

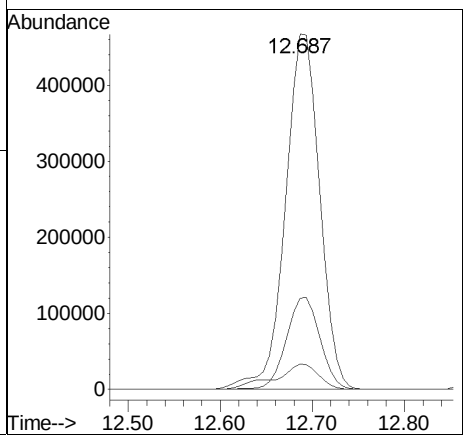


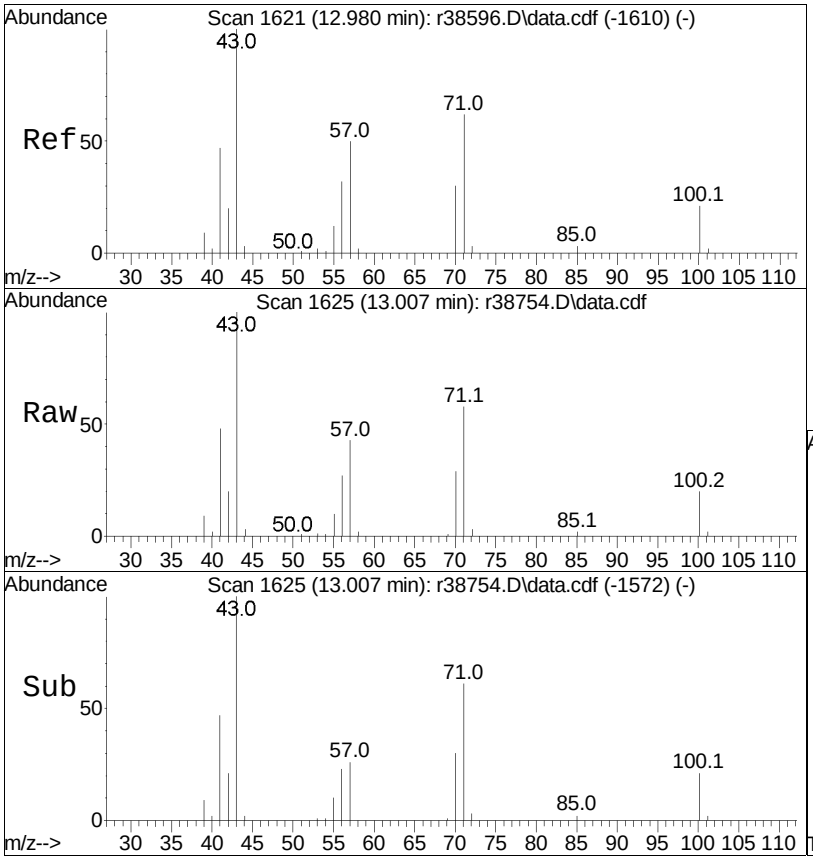



#60
2,2,4-trimethylpentane
Concen: 10.58 ppbV
RT: 12.687 min Scan# 1577
Delta R.T. 0.027 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 57 Resp: 1212430

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.1 | 5.4 | 8.2 |
| 41 | 25.7 | 18.2 | 27.2 |

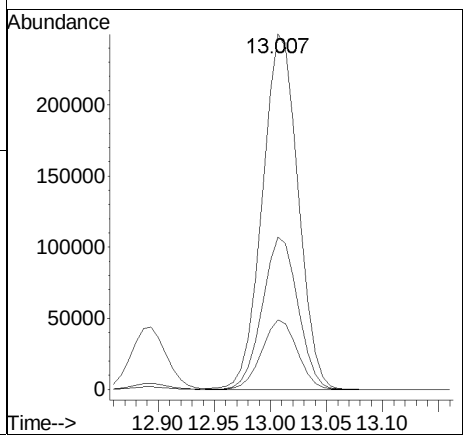


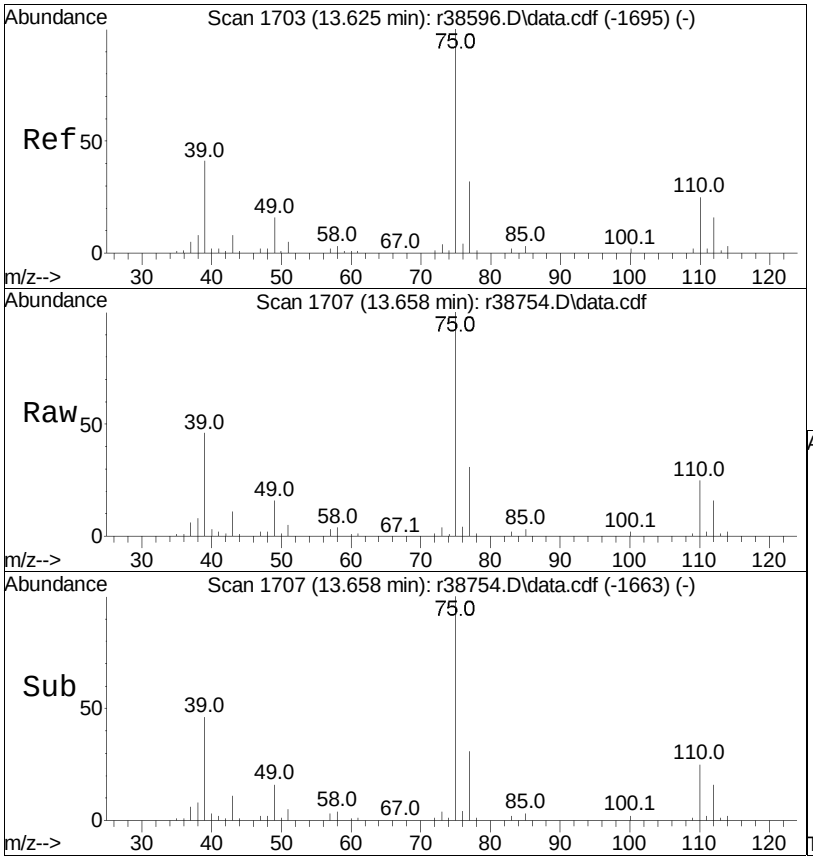



#62
heptane
Concen: 12.31 ppbV
RT: 13.007 min Scan# 1625
Delta R.T. 0.027 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 43 Resp: 554356

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 42.8 | 39.8 | 59.6 |
| 100 | 19.6 | 17.3 | 25.9 |

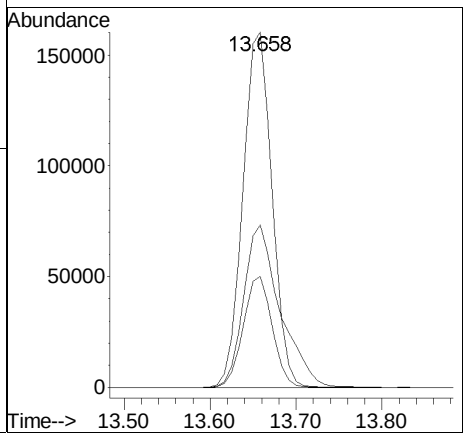


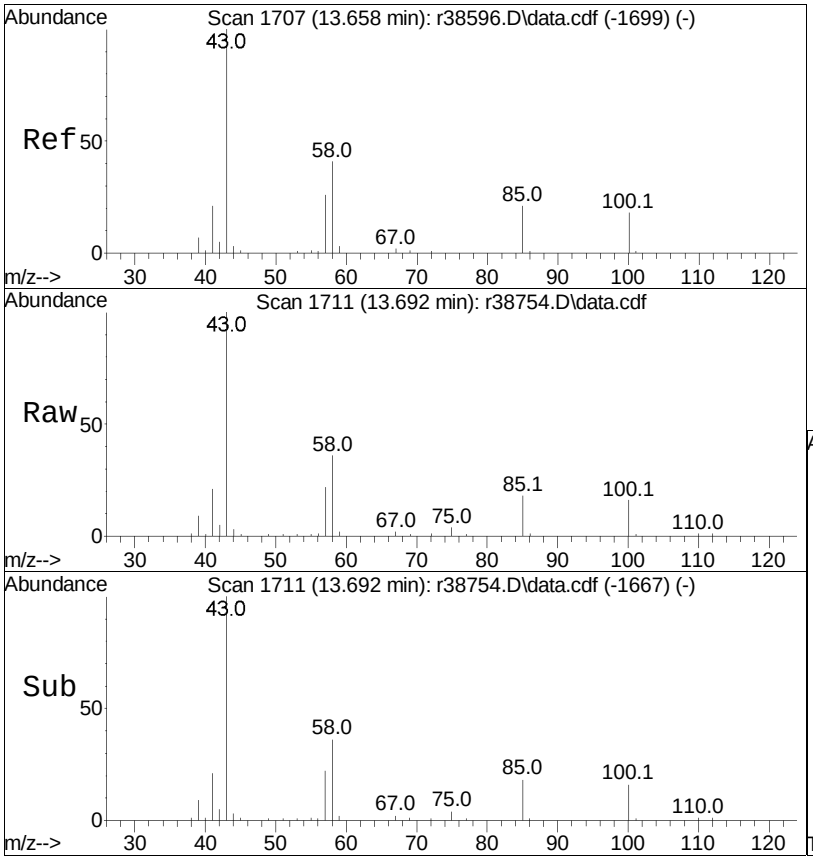



#63
cis-1,3-dichloropropene
Concen: 11.07 ppbV
RT: 13.658 min Scan# 1707
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 75 Resp: 377301

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 39 | 45.7 | 33.0 | 49.6 |
| 77 | 31.3 | 25.4 | 38.0 |

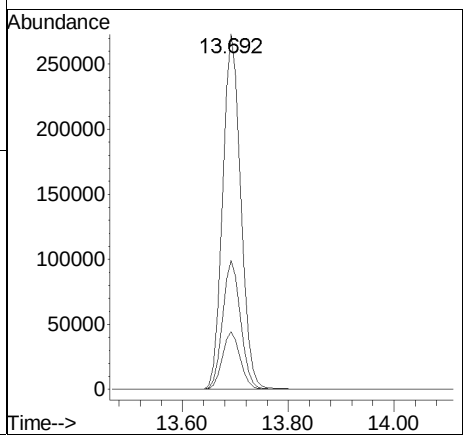


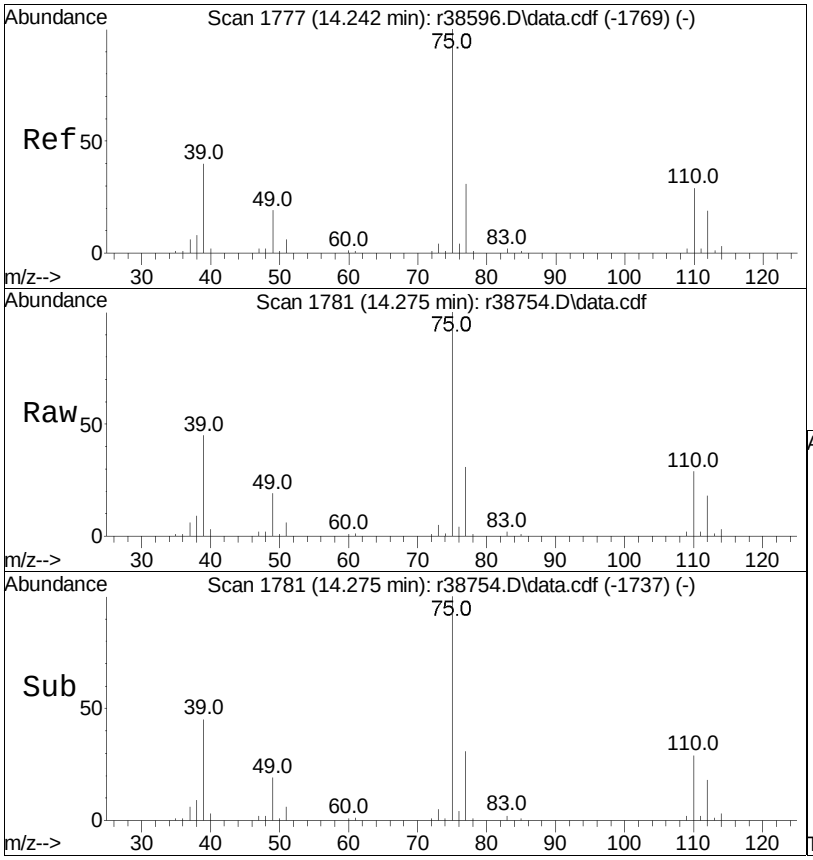



#64
4-methyl-2-pentanone
Concen: 12.78 ppbV
RT: 13.692 min Scan# 1711
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 43 Resp: 648864

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 36.3 | 32.5 | 48.7 |
| 100 | 16.2 | 14.7 | 22.1 |

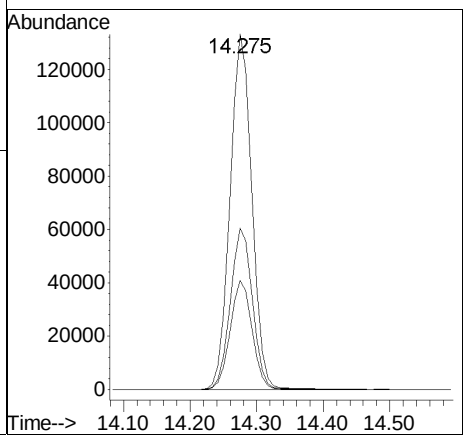


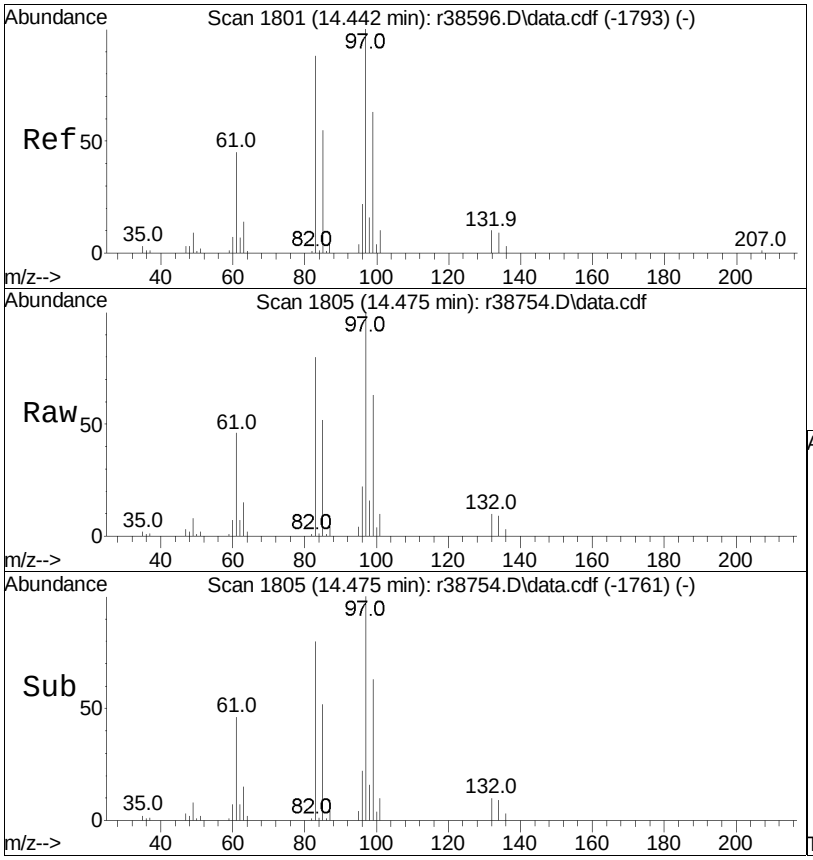



#65
trans-1,3-dichloropropene
Concen: 9.58 ppbV
RT: 14.275 min Scan# 1781
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 75 Resp: 303555

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 30.8 | 25.2 | 37.8 |
| 39 | 45.4 | 32.3 | 48.5 |

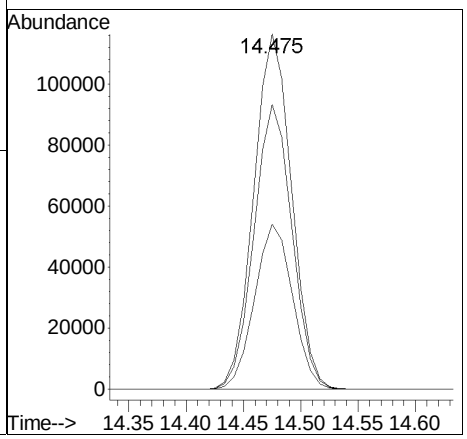


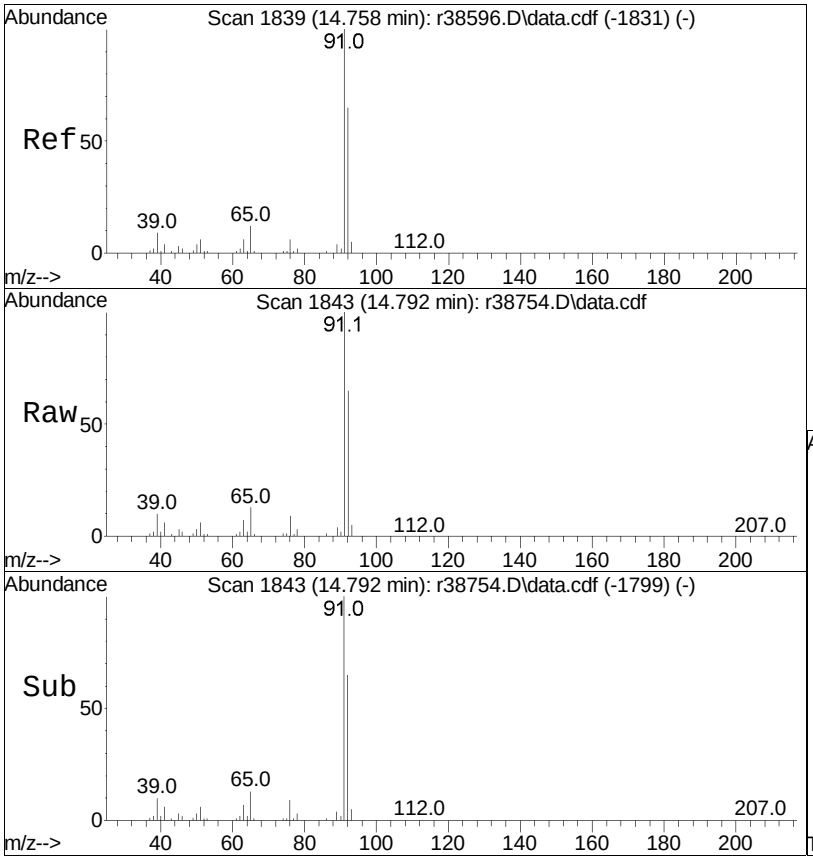



#66
1,1,2-trichloroethane
Concen: 11.53 ppbV
RT: 14.475 min Scan# 1805
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 97 Resp: 268889

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 80.2 | 70.2 | 105.4 |
| 61 | 46.5 | 36.3 | 54.5 |

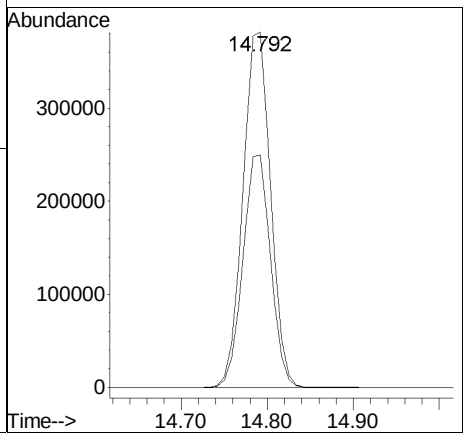


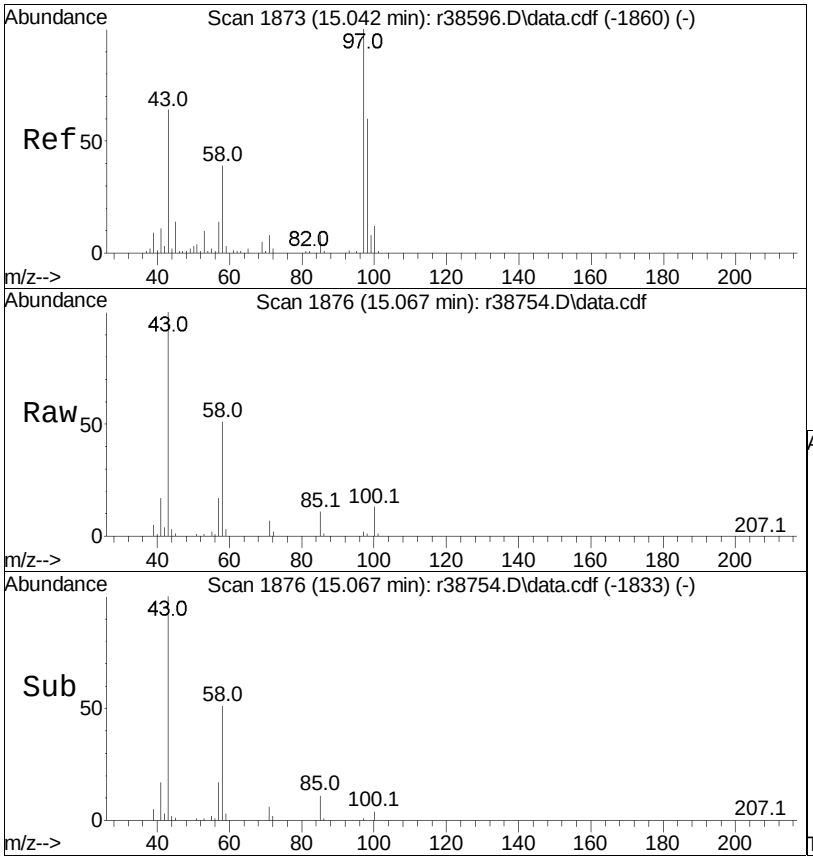



#68
toluene
Concen: 12.01 ppbV
RT: 14.792 min Scan# 1843
Delta R.T. 0.033 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 91 Resp: 852731

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.4 | 52.4 | 78.6 |

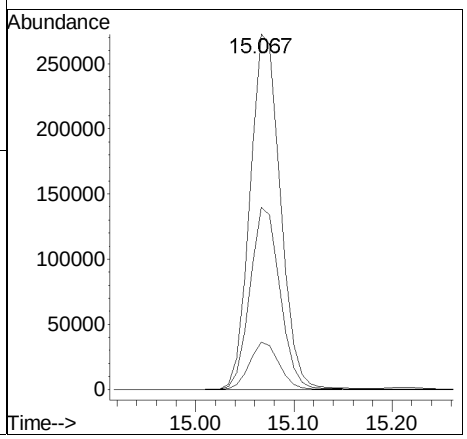


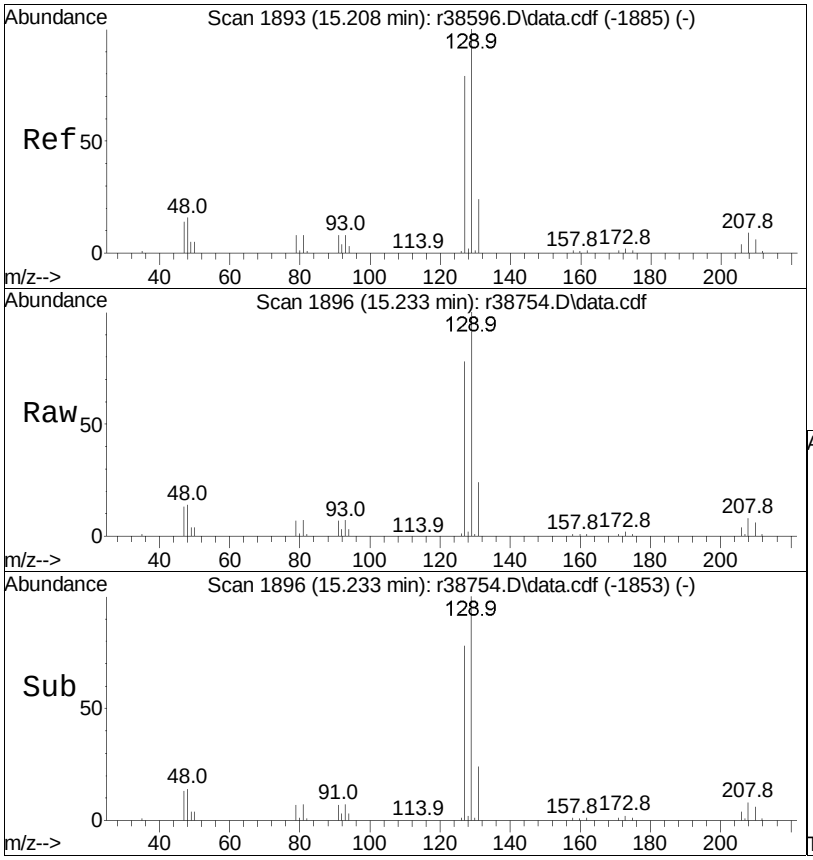



#72
2-hexanone
Concen: 14.03 ppbV
RT: 15.067 min Scan# 1876
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 43 Resp: 584802

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 51.2 | 49.3 | 73.9 |
| 100 | 13.3 | 14.9 | 22.3# |

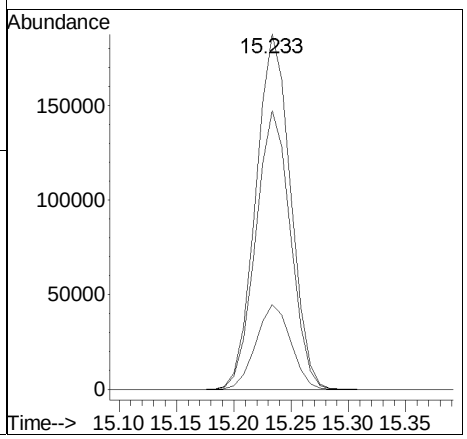


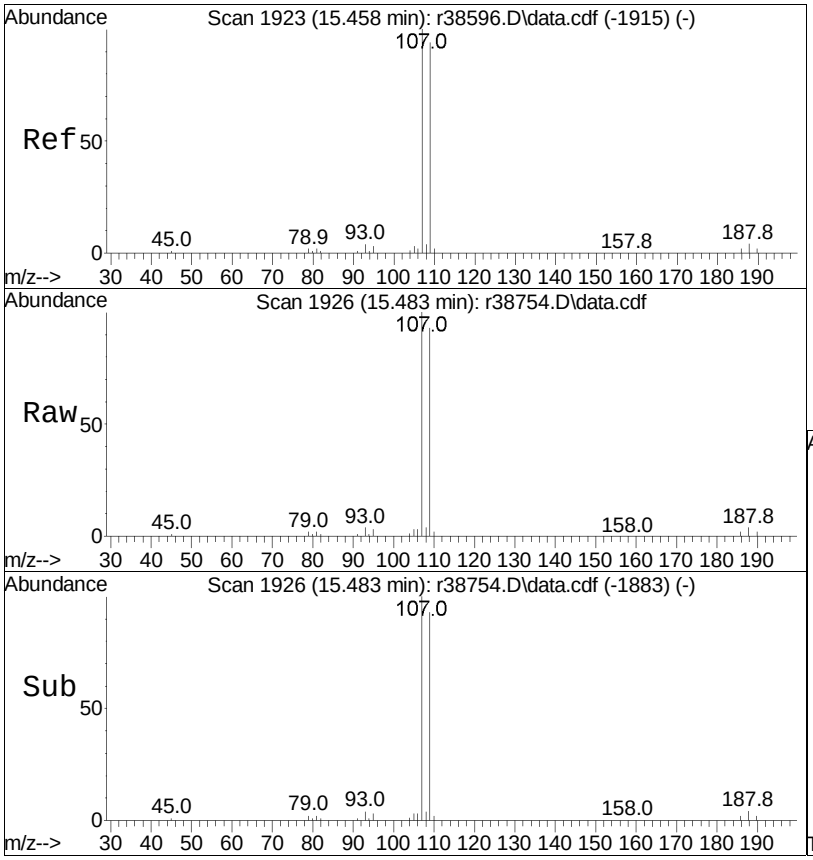



#74
dibromochloromethane
Concen: 12.94 ppbV
RT: 15.233 min Scan# 1896
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:129 Resp: 396414

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 78.5 | 63.5 | 95.3 |
| 131 | 23.9 | 19.3 | 28.9 |

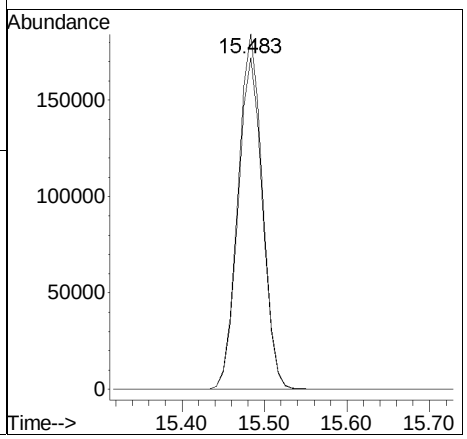


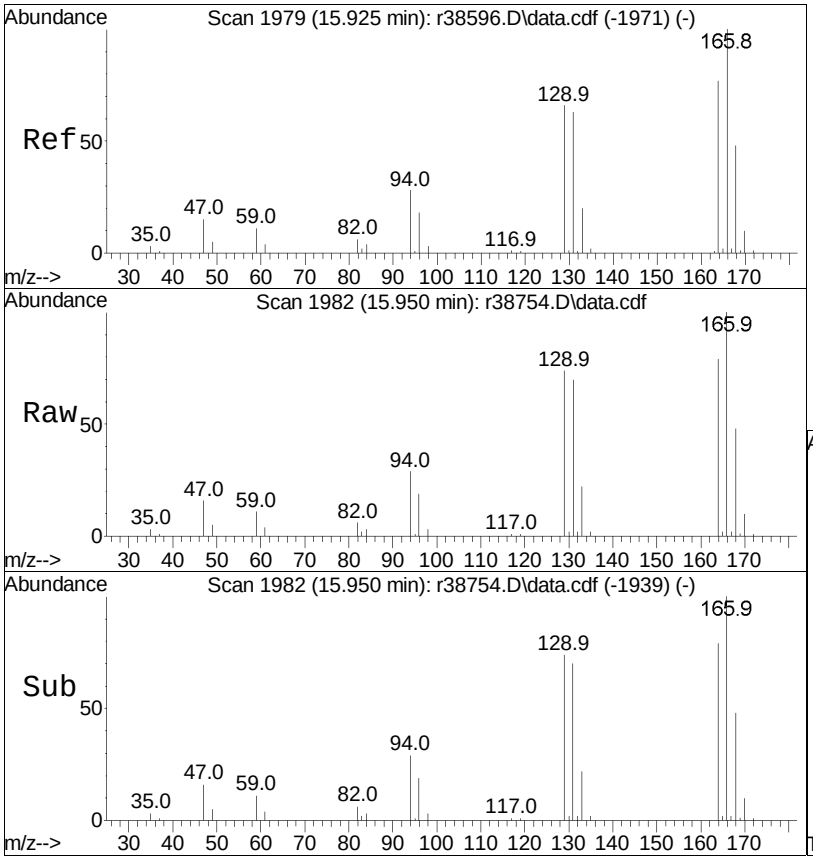



#75
1,2-dibromoethane
Concen: 11.25 ppbV
RT: 15.483 min Scan# 1926
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:107 Resp: 380331

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 93.4 | 75.2 | 112.8 |

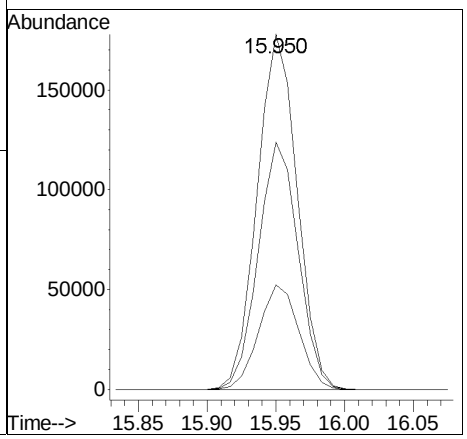


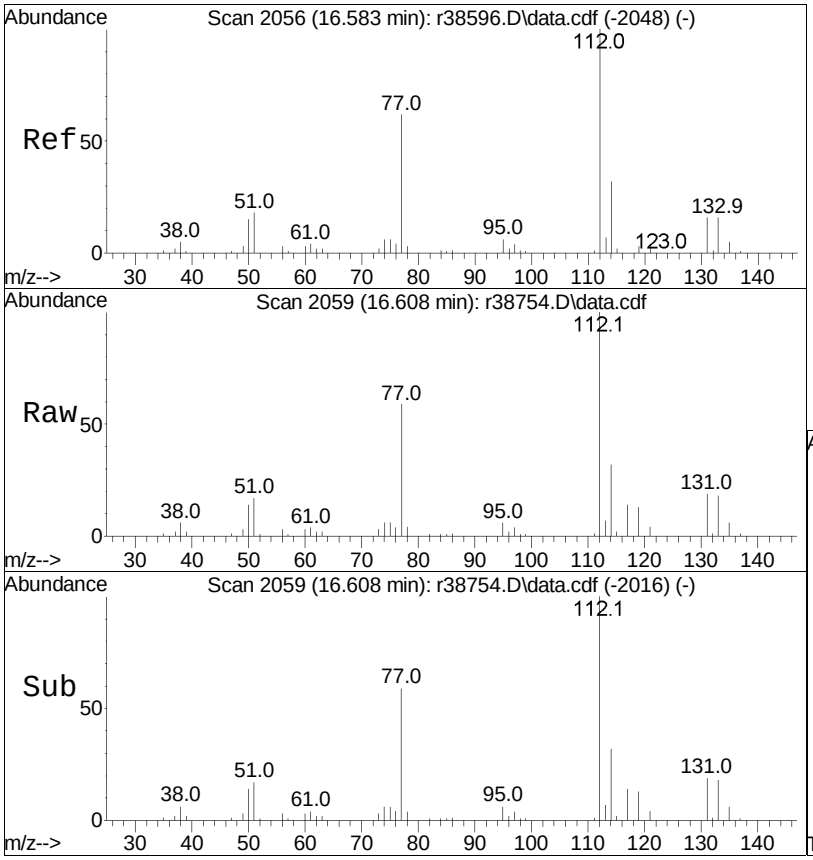



#78
tetrachloroethene
Concen: 11.52 ppbV
RT: 15.950 min Scan# 1982
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:166 Resp: 359495

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 69.5 | 50.3 | 75.5 |
| 94 | 29.4 | 22.5 | 33.7 |

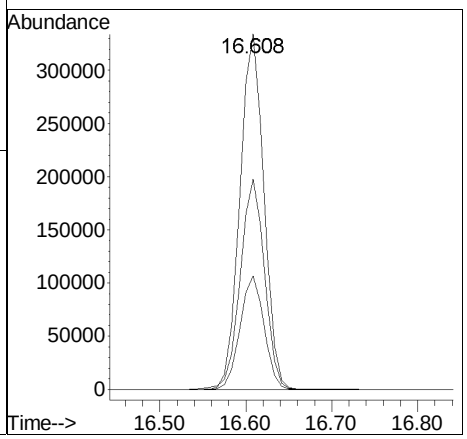


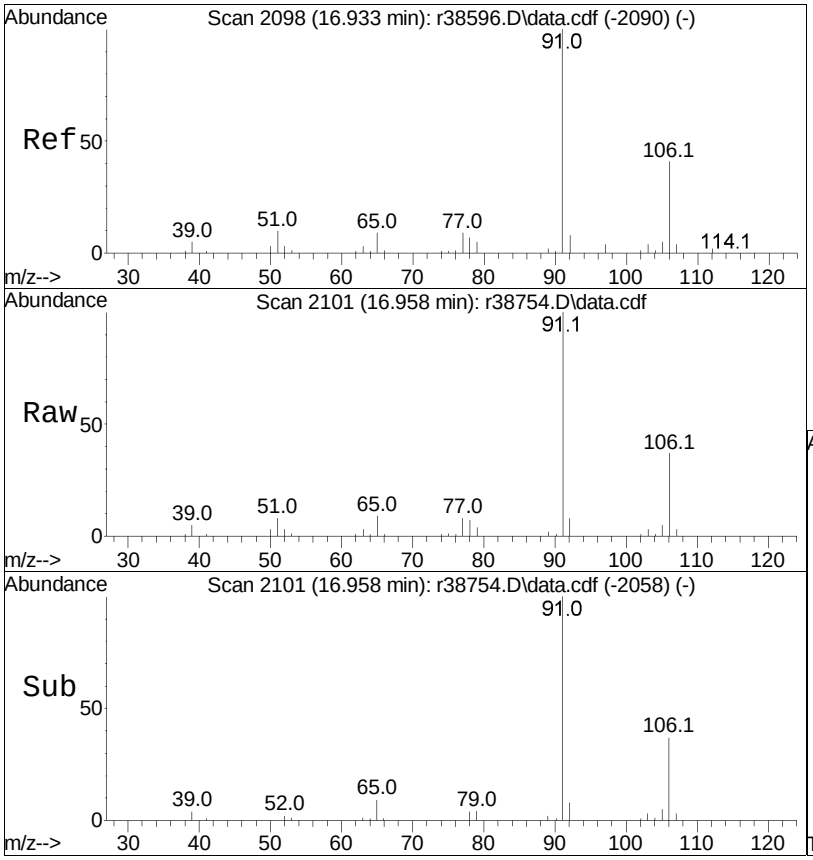



#80
chlorobenzene
Concen: 11.44 ppbV
RT: 16.608 min Scan# 2059
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:112 Resp: 647553

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 114 | 31.9 | 25.7 | 38.5 |
| 77 | 59.1 | 49.9 | 74.9 |

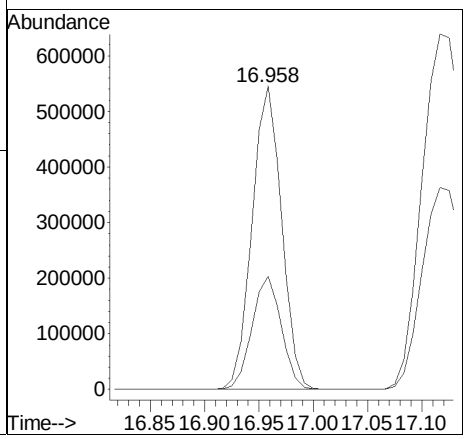


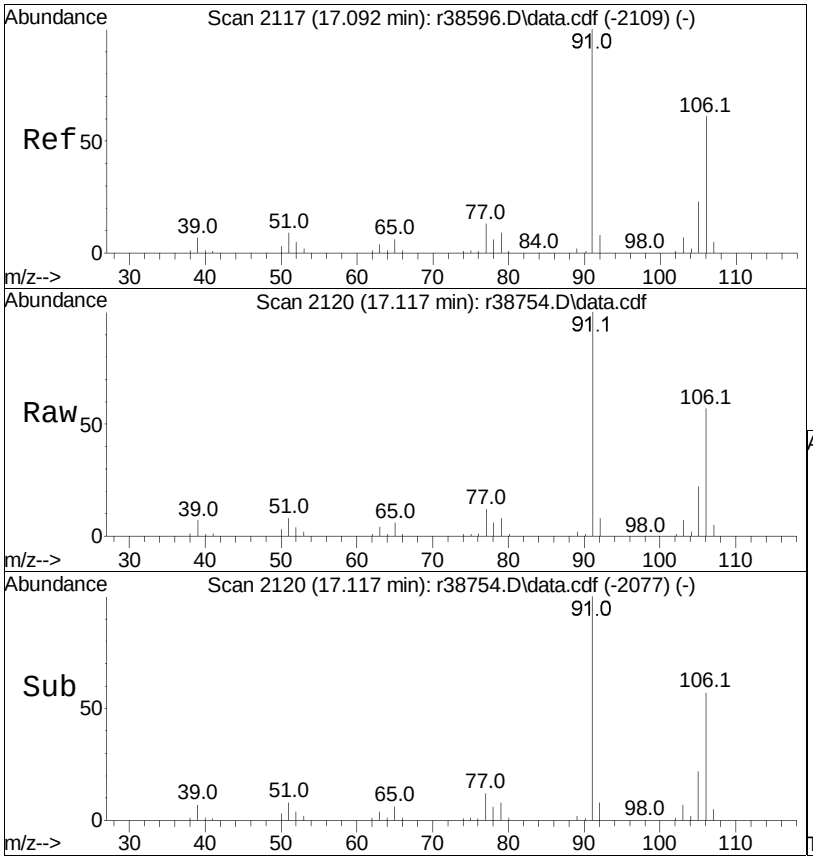



#81
ethylbenzene
Concen: 12.18 ppbV
RT: 16.958 min Scan# 2101
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 91 Resp: 1030325

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 37.3 | 32.6 | 48.8 |

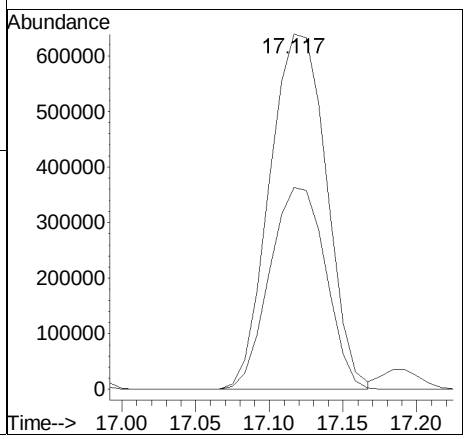


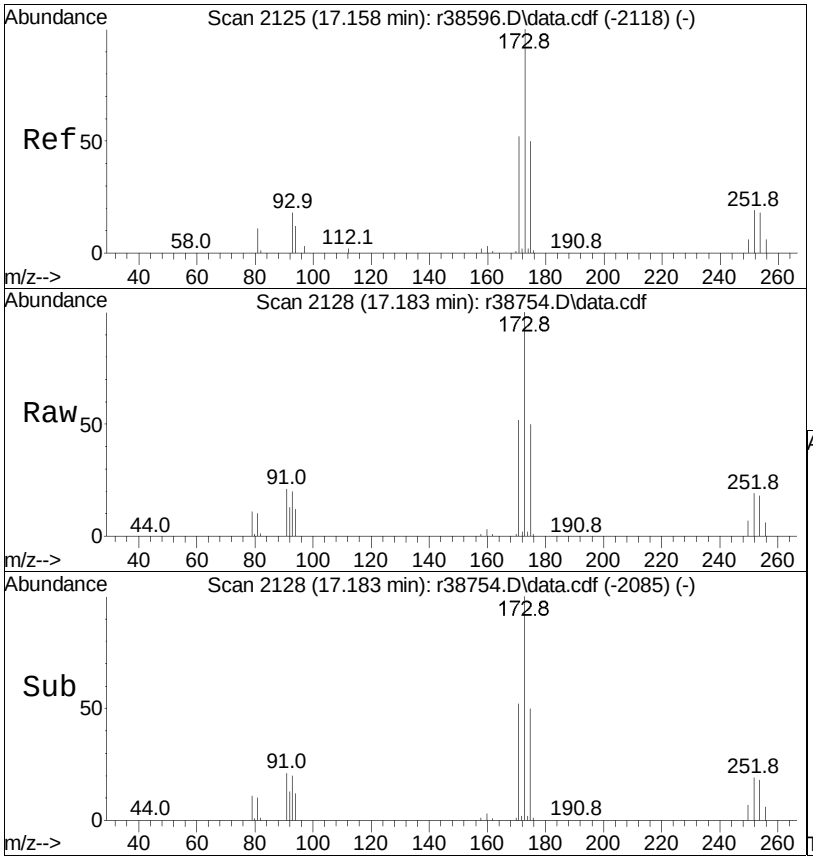



#83
m+p-xylene
Concen: 24.78 ppbV
RT: 17.117 min Scan# 2120
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 91 Resp: 1716028

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 56.8 | 49.0 | 73.6 |

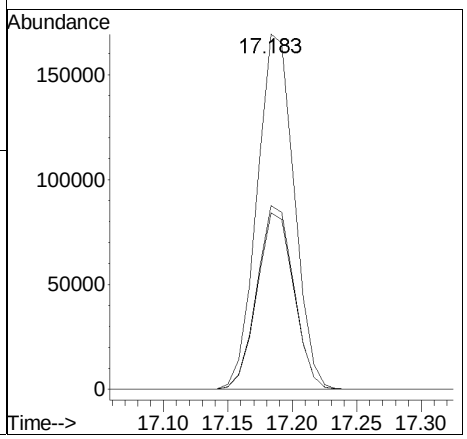


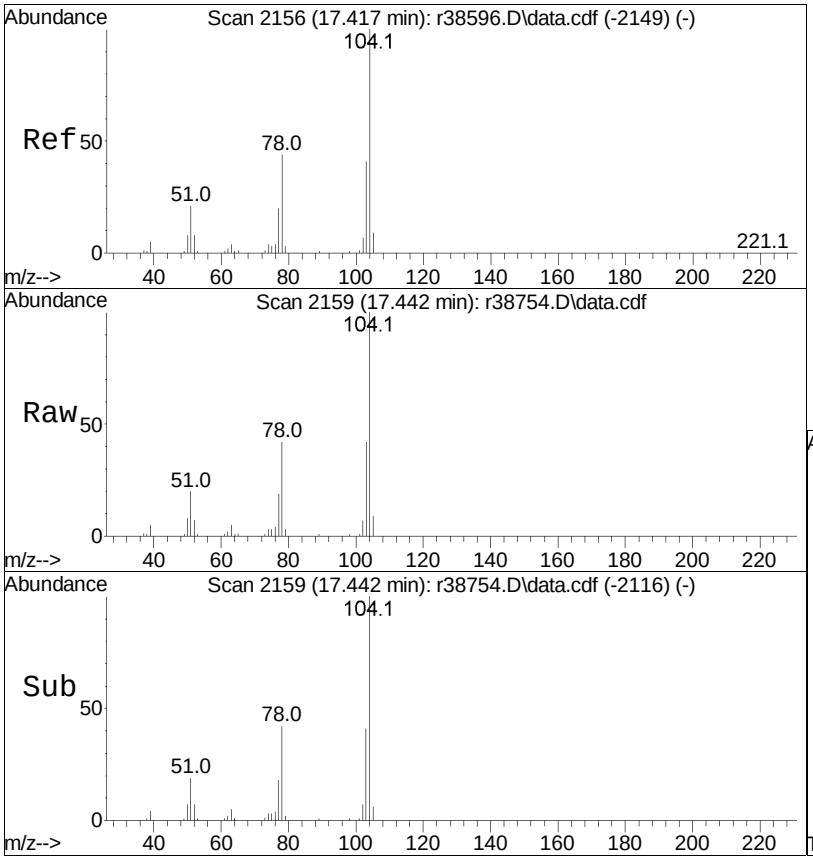



#84
bromoform
Concen: 11.88 ppbV
RT: 17.183 min Scan# 2128
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:173 Resp: 339273

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 49.7 | 39.8 | 59.8 |
| 171 | 51.7 | 41.4 | 62.0 |

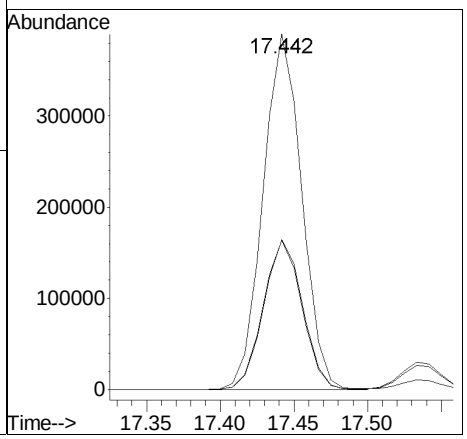


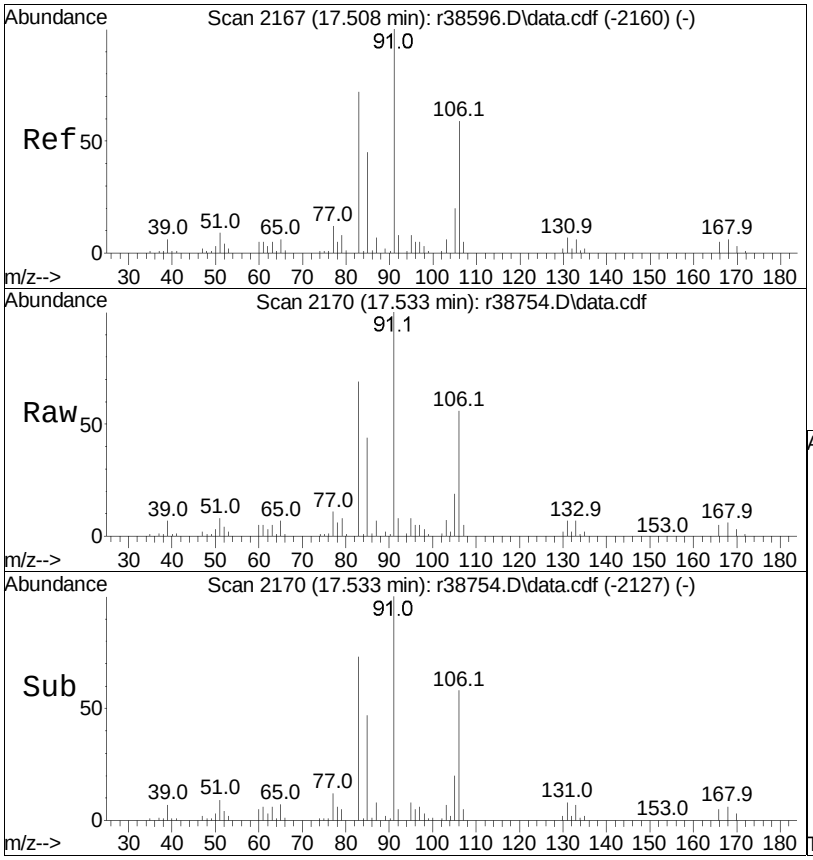



#85
styrene
Concen: 11.50 ppbV
RT: 17.442 min Scan# 2159
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:104 Resp: 710531

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 42.0 | 33.1 | 49.7 |
| 78 | 42.2 | 35.0 | 52.6 |

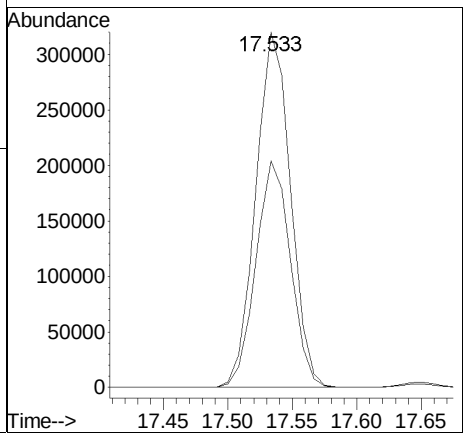


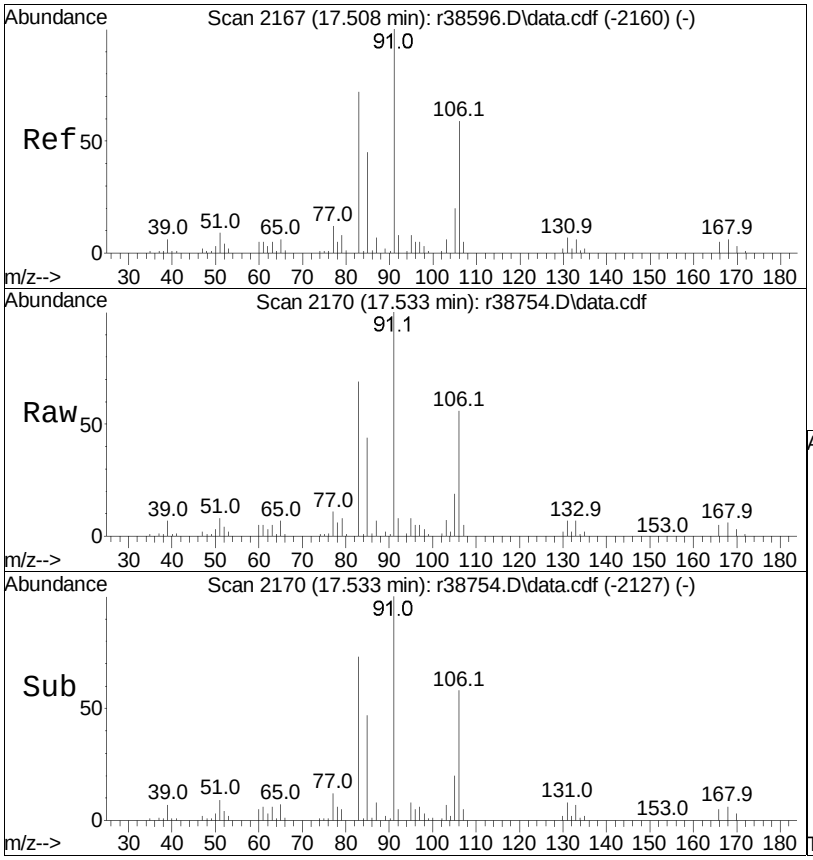



#86
1,1,2,2-tetrachloroethane
Concen: 12.39 ppbV
RT: 17.533 min Scan# 2170
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 83 Resp: 598789

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 63.7 | 50.4 | 75.6 |

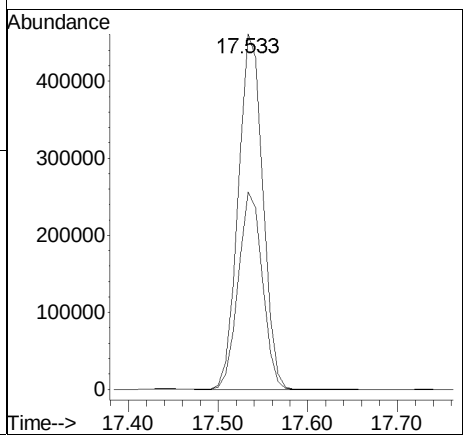


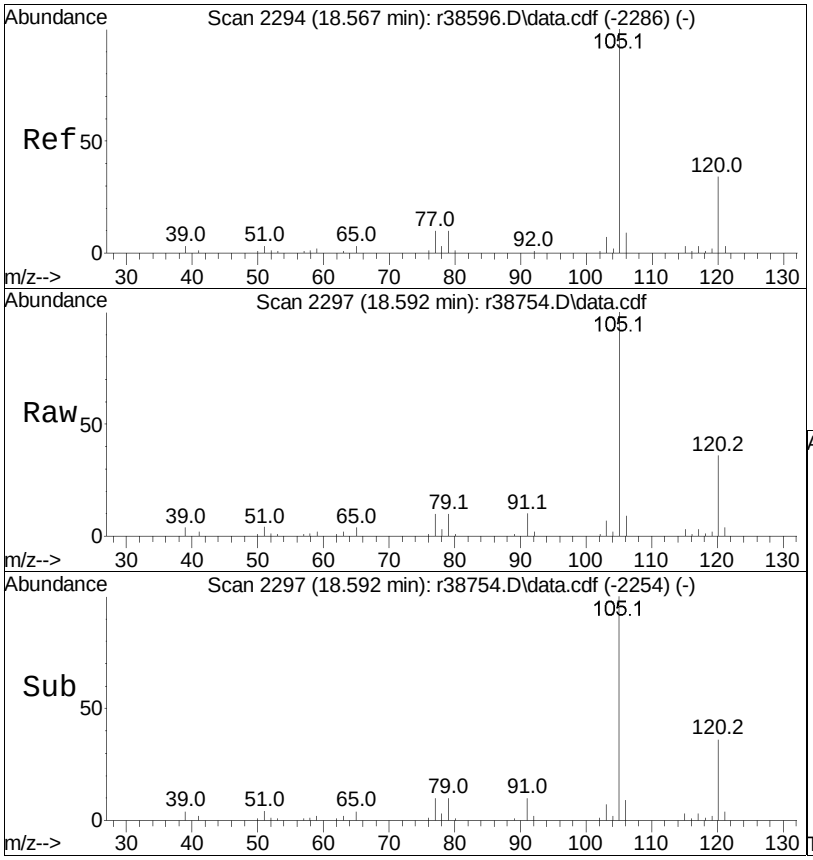



#87
o-xylene
Concen: 12.93 ppbV
RT: 17.533 min Scan# 2170
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 91 Resp: 877460

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 55.6 | 47.4 | 71.0 |

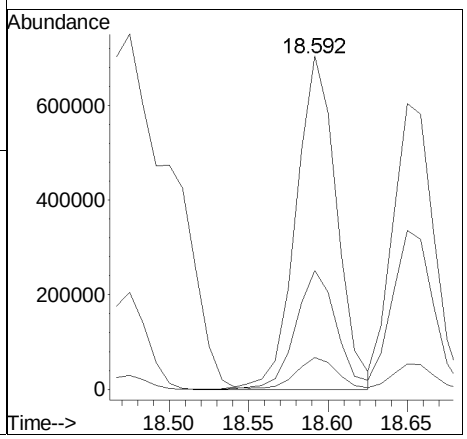


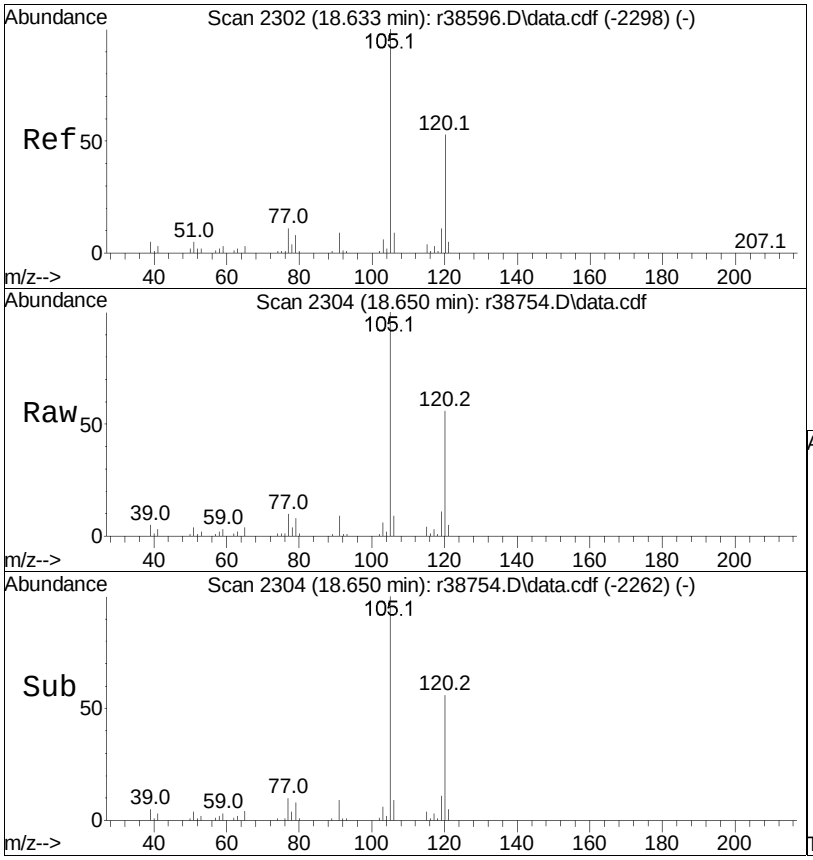



#96
4-ethyl toluene
Concen: 11.54 ppbV
RT: 18.592 min Scan# 2297
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:105 Resp: 1260588

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 35.7 | 27.0 | 40.4 |
| 91 | 9.6 | 7.4 | 11.0 |

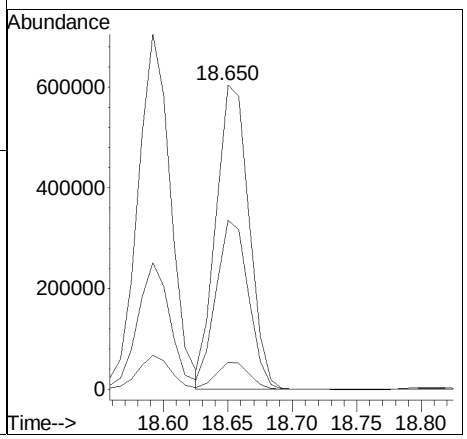


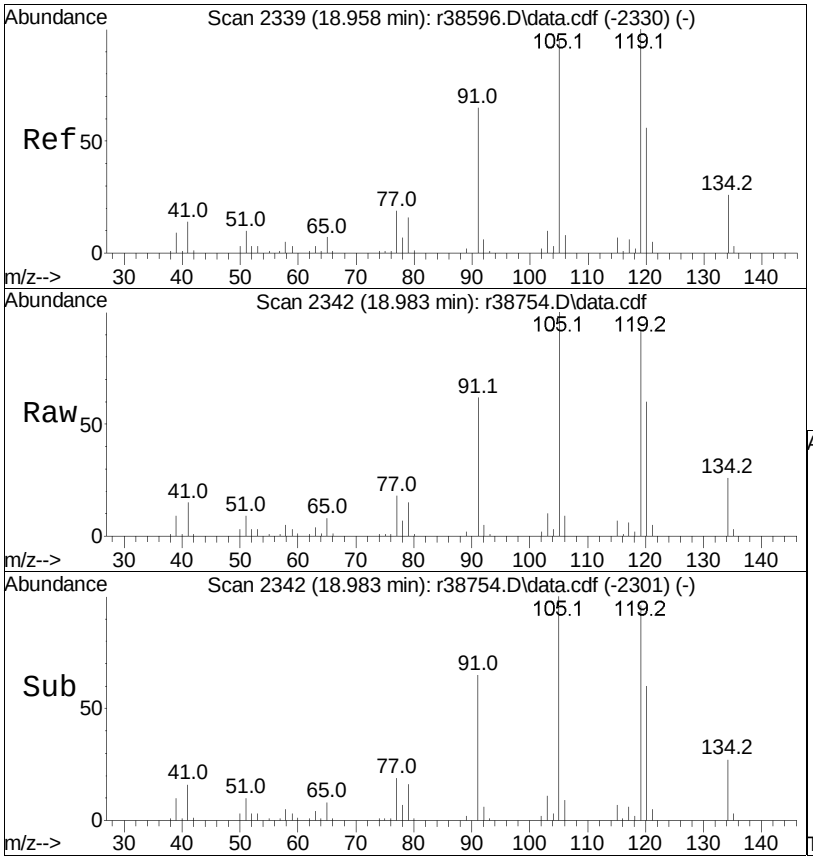



#97
1,3,5-trimethylbenzene
Concen: 12.10 ppbV
RT: 18.650 min Scan# 2304
Delta R.T. 0.017 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:105 Resp: 1074869

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 55.6 | 41.6 | 62.4 |
| 91 | 8.9 | 7.0 | 10.4 |

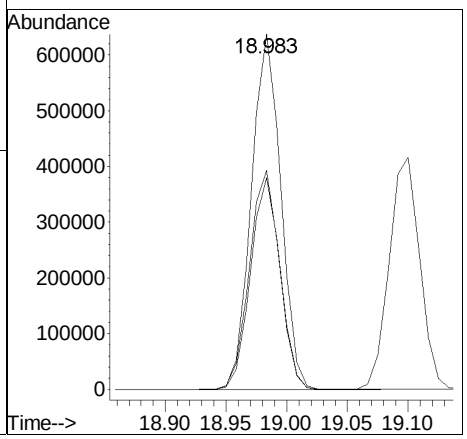


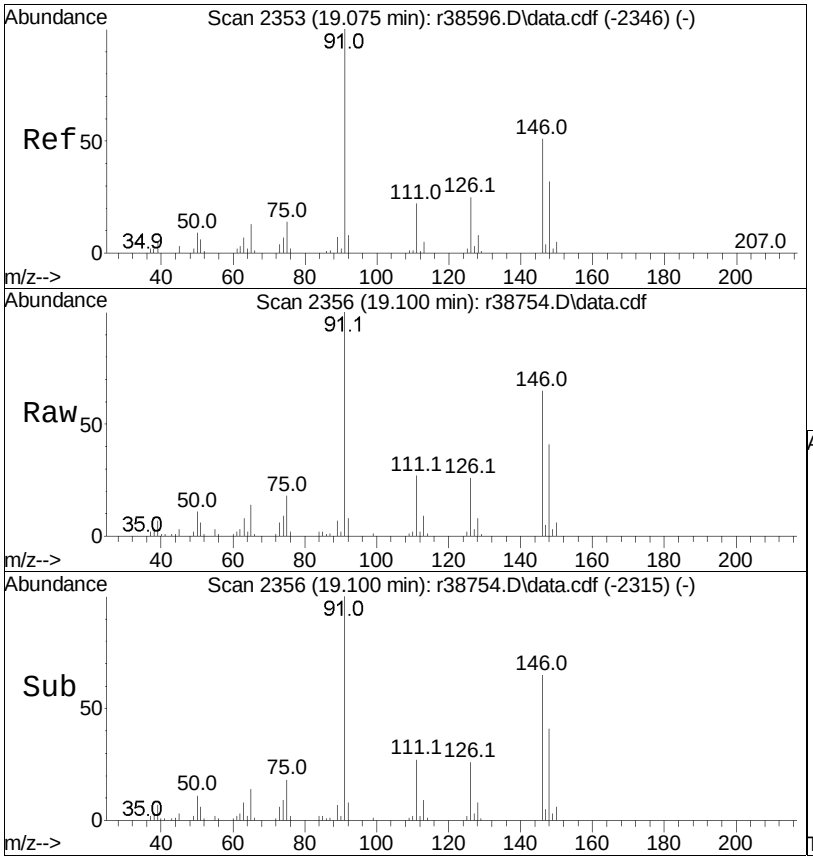



#99
1,2,4-trimethylbenzene
Concen: 12.99 ppbV
RT: 18.983 min Scan# 2342
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:105 Resp: 1073784

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 59.5 | 47.1 | 70.7 |
| 91 | 61.6 | 55.0 | 82.6 |

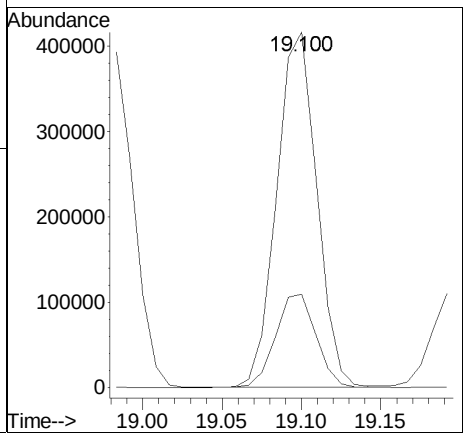


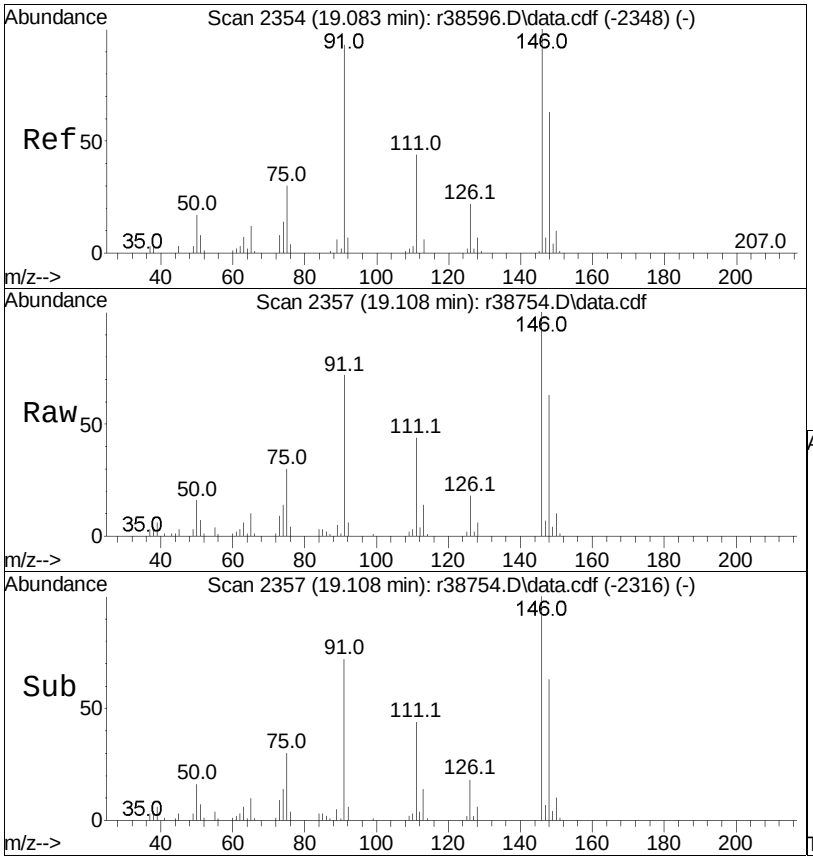



#101
Benzyl Chloride
Concen: 12.63 ppbV
RT: 19.100 min Scan# 2356
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion: 91 Resp: 730511

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 26.2 | 20.1 | 30.1 |

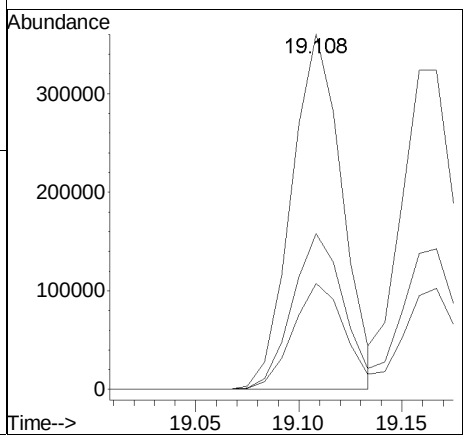


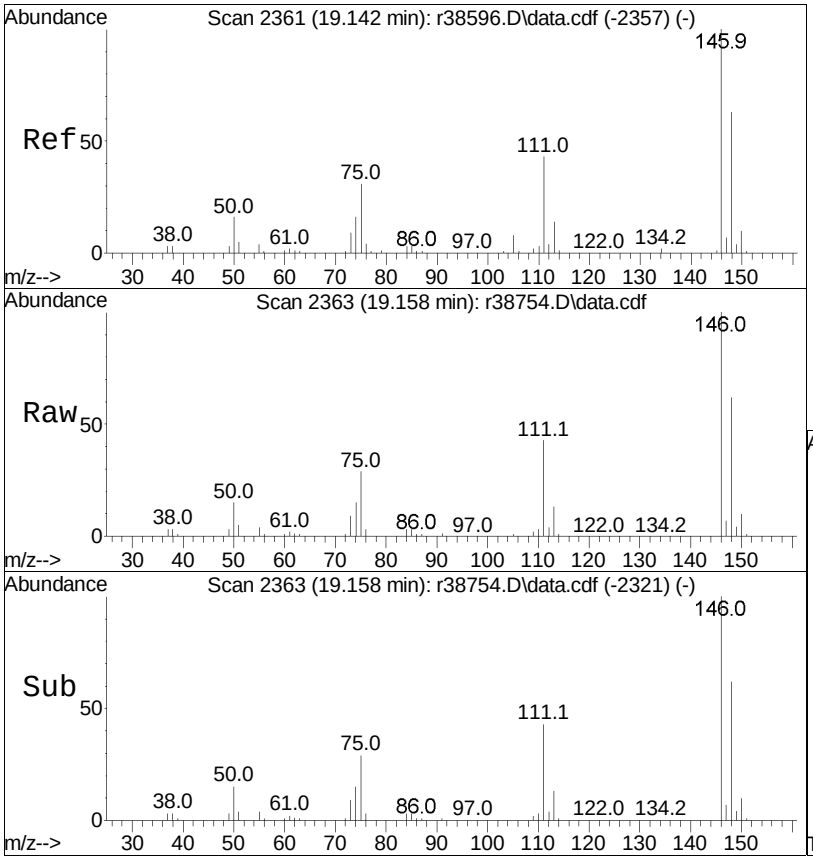



#102
1,3-dichlorobenzene
Concen: 12.10 ppbV
RT: 19.108 min Scan# 2357
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:146 Resp: 615768

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 43.8 | 35.5 | 53.3 |
| 75 | 29.8 | 23.8 | 35.6 |

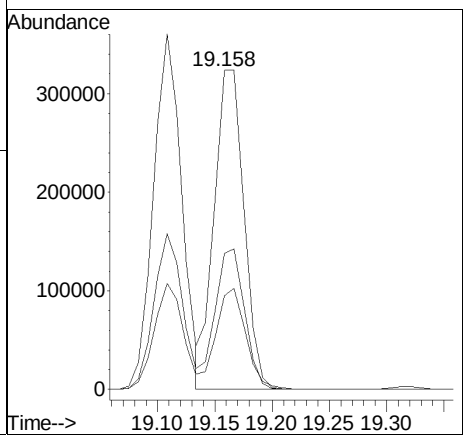


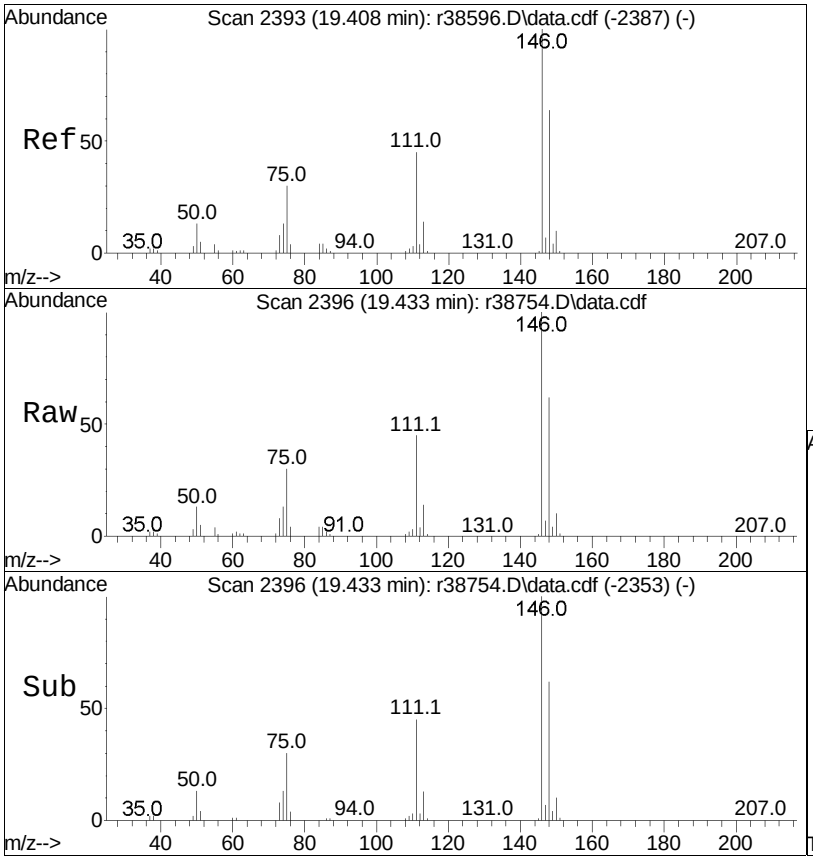



#103
1,4-dichlorobenzene
Concen: 12.12 ppbV
RT: 19.158 min Scan# 2363
Delta R.T. 0.017 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:146 Resp: 586145

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 42.6 | 34.9 | 52.3 |
| 75 | 29.4 | 25.2 | 37.8 |

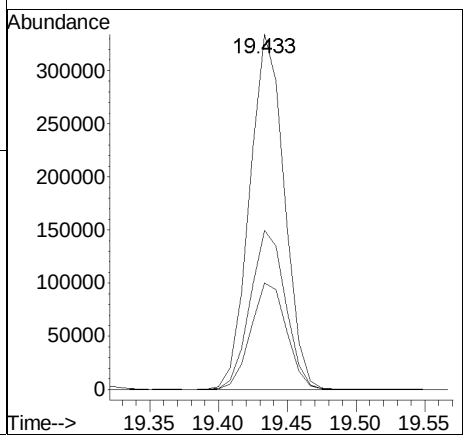


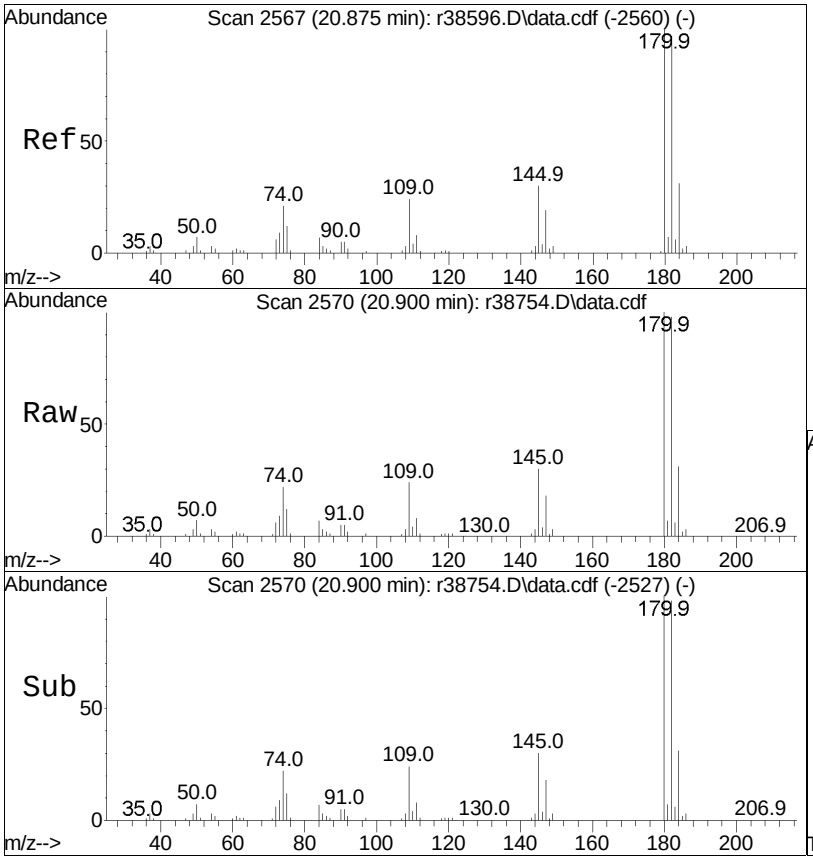



#107
1,2-dichlorobenzene
Concen: 12.08 ppbV
RT: 19.433 min Scan# 2396
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:146 Resp: 586153

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 44.8 | 36.0 | 54.0 |
| 75 | 29.9 | 24.0 | 36.0 |

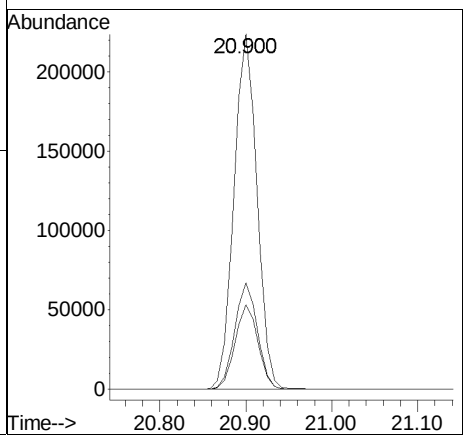


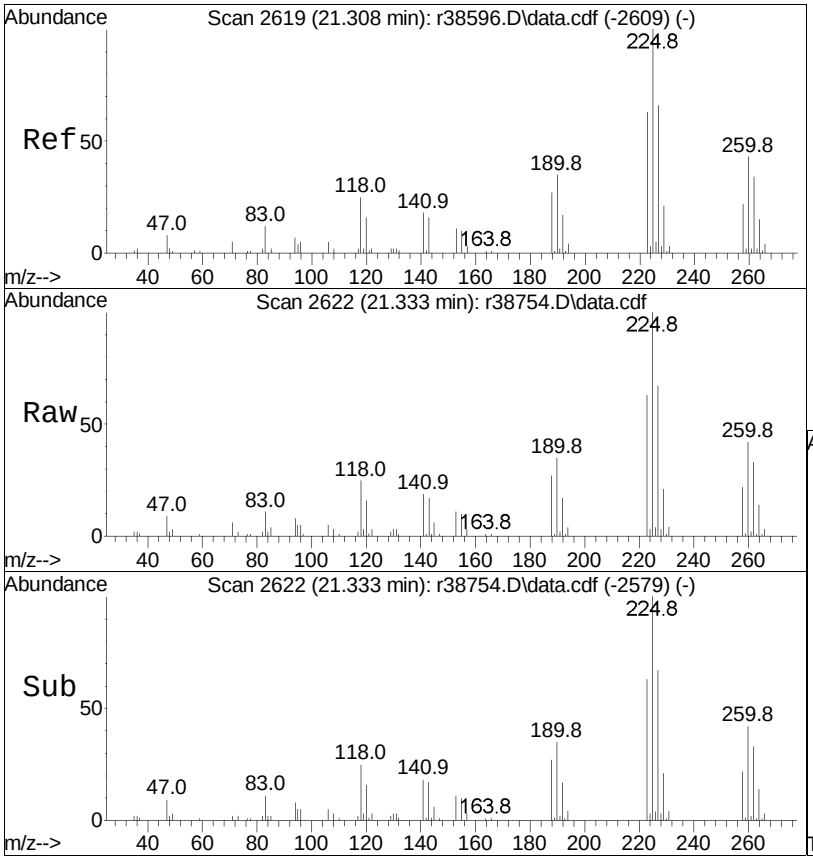



#115
1,2,4-trichlorobenzene
Concen: 13.82 ppbV
RT: 20.900 min Scan# 2570
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:180 Resp: 417816

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 145 | 30.0 | 23.8 | 35.6 |
| 109 | 23.8 | 19.0 | 28.4 |

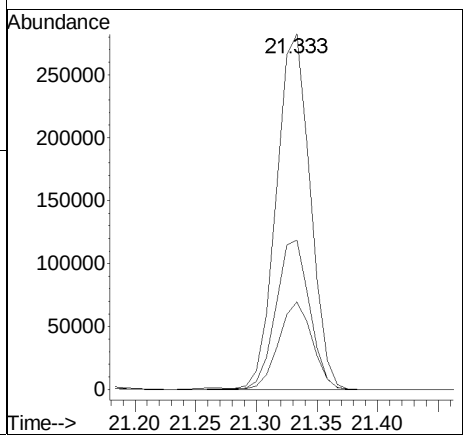





#119
hexachlorobutadiene
Concen: 14.61 ppbV
RT: 21.333 min Scan# 2622
Delta R.T. 0.025 min
Lab File: r38754.D
Acq: 20 Mar 2020 1:32 PM

Tgt Ion:225 Resp: 547909

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 260 | 42.0 | 34.4 | 51.6 |
| 118 | 24.7 | 20.2 | 30.2 |



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38760.D
Acq On : 20 Mar 2020 7:03 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-5,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:26:07 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : TO15-NY-7-SIM - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.583 | 49 | 387385 | 10.000 | ppbV | 0.03 |
| Standard Area = 353543 | | | Recovery = 109.57% | | | |
| 43) 1,4-difluorobenzene | 11.847 | 114 | 1015739 | 10.000 | ppbV | 0.03 |
| Standard Area = 970632 | | | Recovery = 104.65% | | | |
| 67) chlorobenzene-D5 | 16.567 | 54 | 143702 | 10.000 | ppbV | 0.02 |
| Standard Area = 139948 | | | Recovery = 102.68% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 4.000 | 85 | 15396 | 0.440 | ppbV | 99 |
| 6) chloromethane | 4.186 | 50 | 13080 | 0.813 | ppbV | 96 |
| 7) Freon-114 | 4.312 | | 0 | N.D. | | |
| 10) 1,3-butadiene | 4.612 | 54 | 26934 | 1.431 | ppbV | 95 |
| 13) bromomethane | 0.000 | | 0 | N.D. | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | |
| 15) ethanol | 5.326 | 31 | 1691621 | 112.105 | ppbV # | 85 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | |
| 19) acetone | 5.900 | 43 | 368049M6 | 14.646 | ppbV | |
| 21) trichlorofluoromethane | 6.097 | 101 | 5652 | 0.207 | ppbV | 96 |
| 22) isopropyl alcohol | 6.223 | 45 | 501655 | 15.614 | ppbV | 97 |
| 27) tertiary butyl alcohol | 6.972 | 59 | 3327 | 0.086 | ppbV # | 1 |
| 28) methylene chloride | 7.038 | 49 | 3131 | 0.129 | ppbV | 93 |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | |
| 30) carbon disulfide | 7.326 | | 0 | N.D. | | |
| 31) Freon 113 | 7.368 | 101 | 2394 | 0.064 | ppbV | 90 |
| 32) trans-1,2-dichloroethene | 8.100 | | 0 | N.D. | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | d | |
| 34) MTBE | 0.000 | | 0 | N.D. | d | |
| 36) 2-butanone | 8.892 | 43 | 52289 | 1.097 | ppbV | 97 |
| 38) Ethyl Acetate | 0.000 | | 0 | N.D. | d | |
| 39) chloroform | 9.750 | 83 | 2737M4 | 0.073 | ppbV | |
| 40) Tetrahydrofuran | 10.208 | 42 | 12522 | 0.420 | ppbV | 96 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | d | |
| 44) hexane | 9.658 | 57 | 2094813 | 55.598 | ppbV # | 47 |
| 50) benzene | 11.413 | 78 | 491062 | 6.677 | ppbV | 99 |
| 53) cyclohexane | 11.727 | 56 | 977209 | 23.943 | ppbV | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38760.D
Acq On : 20 Mar 2020 7:03 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-5,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:26:07 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320T\r38754.D
Sub List : TO15-NY-7-SIM - .

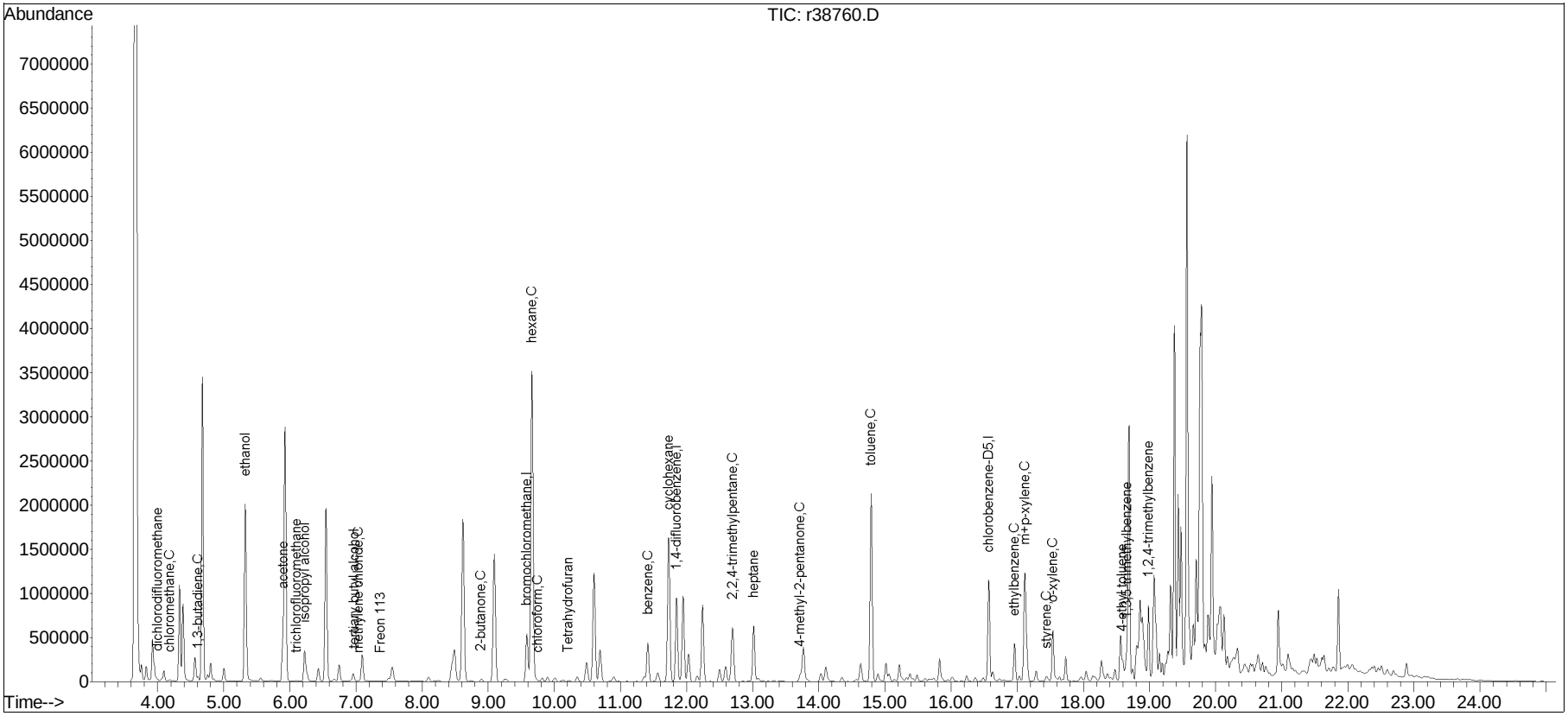
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | d | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | d | |
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 60) 2,2,4-trimethylpentane | 12.693 | 57 | 616199 | 5.139 | ppbV # | 88 |
| 62) heptane | 13.013 | 43 | 363040 | 7.705 | ppbV | 92 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 13.717 | 43 | 35353 | 0.666 | ppbV # | 89 |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | d | |
| 68) toluene | 14.792 | 91 | 1827164 | 25.055 | ppbV | 100 |
| 72) 2-hexanone | 0.000 | | 0 | N.D. | d | |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | |
| 81) ethylbenzene | 16.958 | 91 | 362734 | 4.176 | ppbV | 95 |
| 83) m+p-xylene | 17.117 | 91 | 1056494 | 14.859 | ppbV | 95 |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 17.442 | 104 | 19911 | 0.314 | ppbV | 99 |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | |
| 87) o-xylene | 17.542 | 91 | 404052 | 5.799 | ppbV | 92 |
| 96) 4-ethyl toluene | 18.592 | 105 | 110428M6 | 0.984 | ppbV | |
| 97) 1,3,5-trimethylbenzene | 18.658 | 105 | 122815 | 1.346 | ppbV | 97 |
| 99) 1,2,4-trimethylbenzene | 18.983 | 105 | 442091 | 5.208 | ppbV # | 56 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. | d | |
| 103) 1,4-dichlorobenzene | 19.167 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 20.908 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

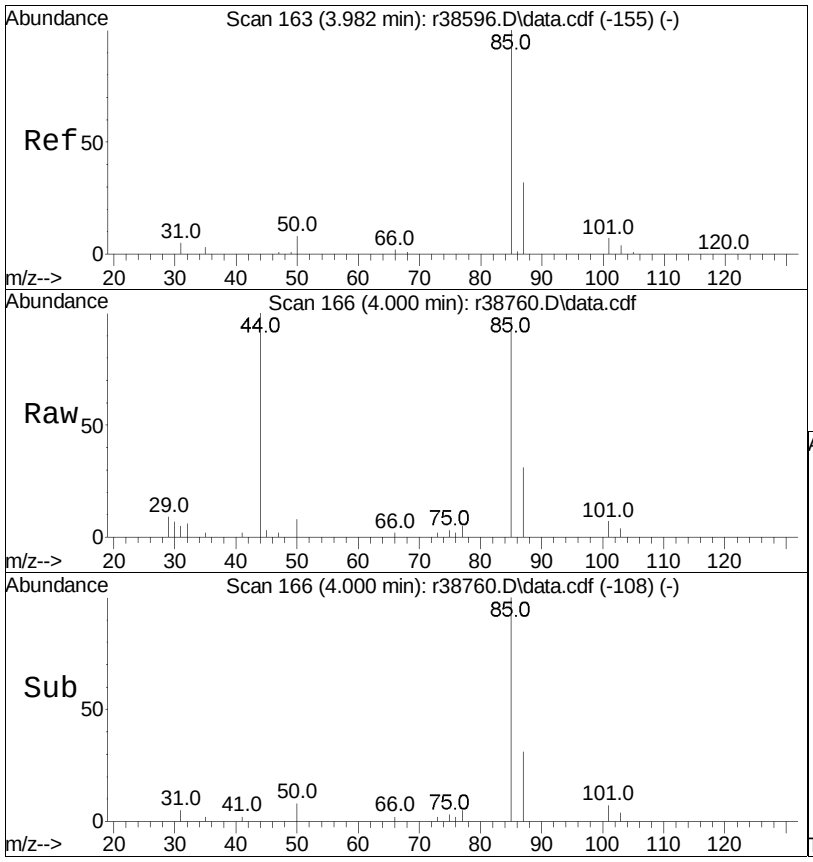
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : TO15-NY-7-SIM - .\Airpiano3\2020\03\200320T\r38754.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320T\
Data File : r38760.D
Acq On : 20 Mar 2020 7:03 PM
Operator : AIRPIANO3:EW
Sample : WG1353541-5,3,250,250
Misc : WG1353541,ICAL16594
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 18:26:07 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320T\TFS3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 17:27:58 2020
Response via : Initial Calibration

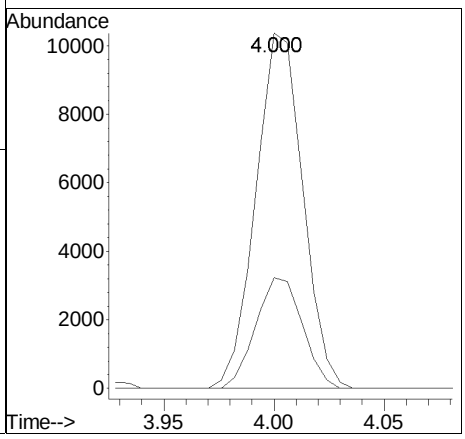


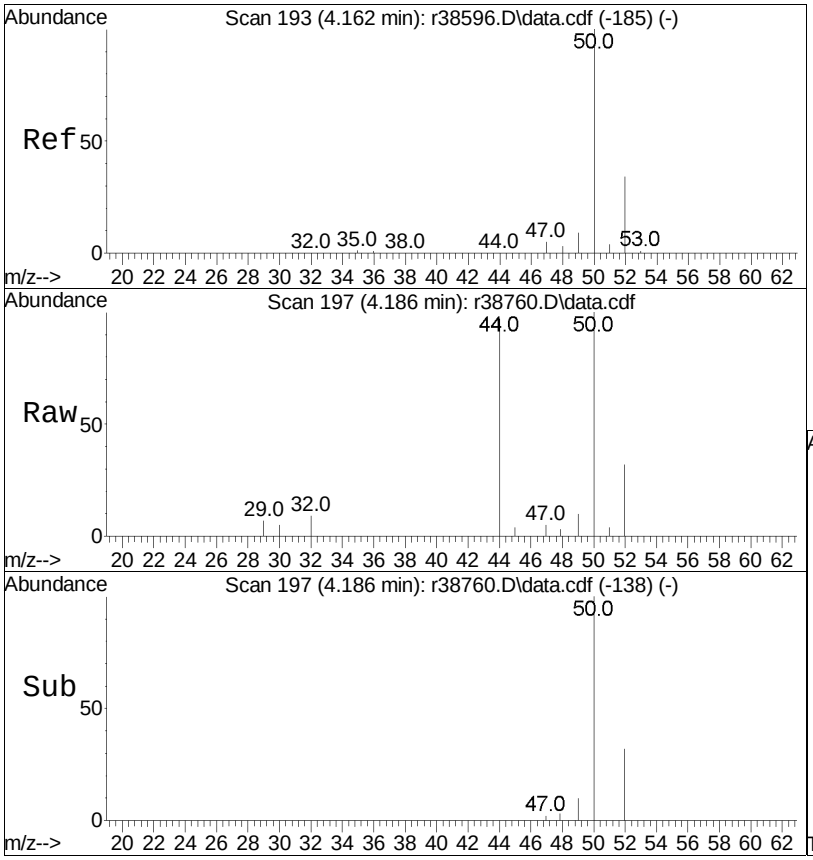



#5
dichlorodifluoromethane
Concen: 0.44 ppbV
RT: 4.000 min Scan# 166
Delta R.T. 0.018 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 85 Resp: 15396

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.2 | 25.4 | 38.0 |

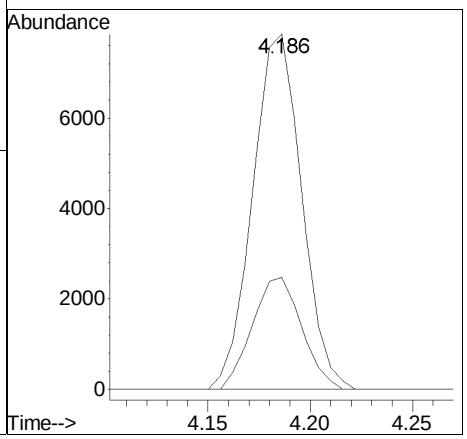


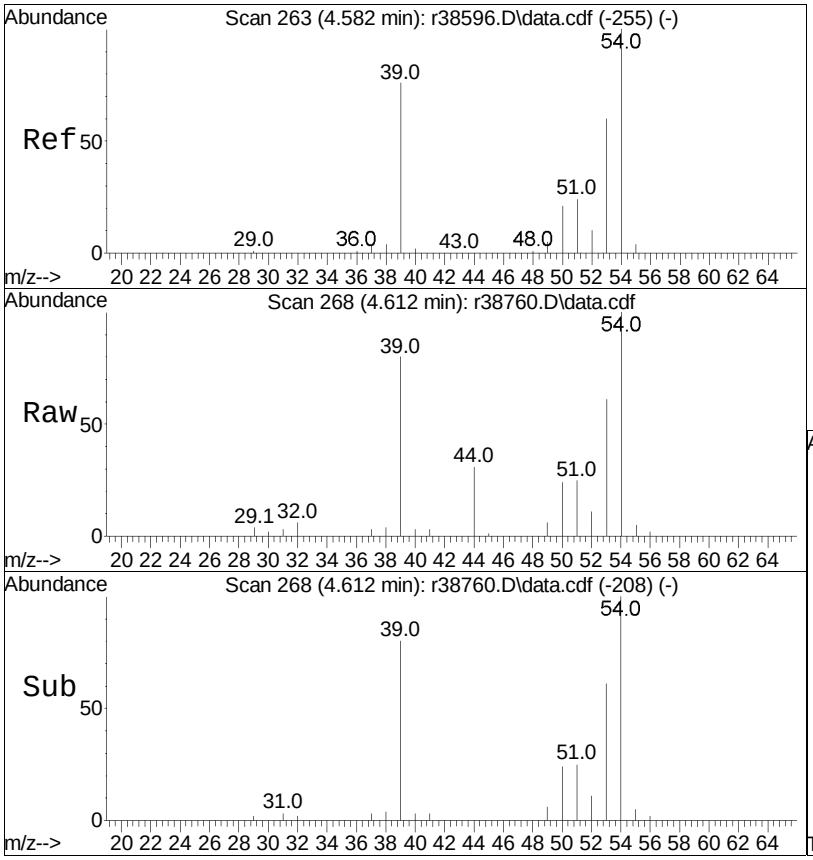



#6
chloromethane
Concen: 0.81 ppbV
RT: 4.186 min Scan# 197
Delta R.T. 0.024 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 50 Resp: 13080

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.5 | 26.9 | 40.3 |

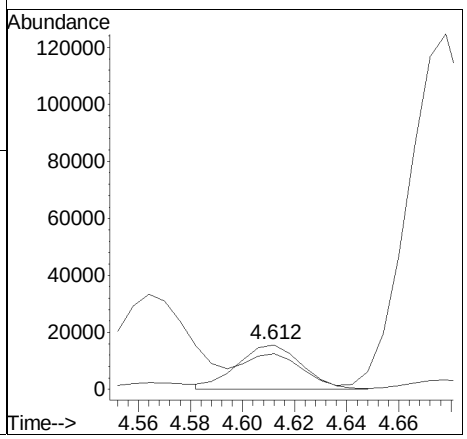


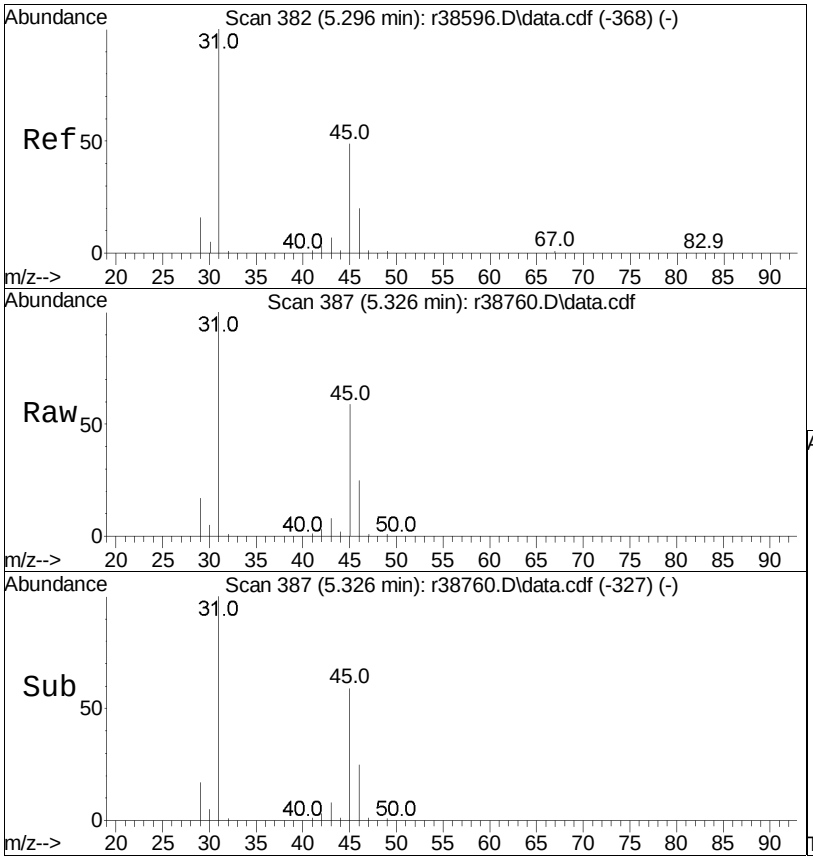



#10
1,3-butadiene
Concen: 1.43 ppbV
RT: 4.612 min Scan# 268
Delta R.T. 0.030 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 54 Resp: 26934

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 80.2 | 60.9 | 91.3 |

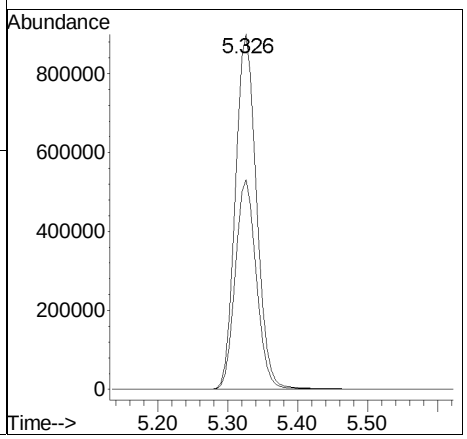


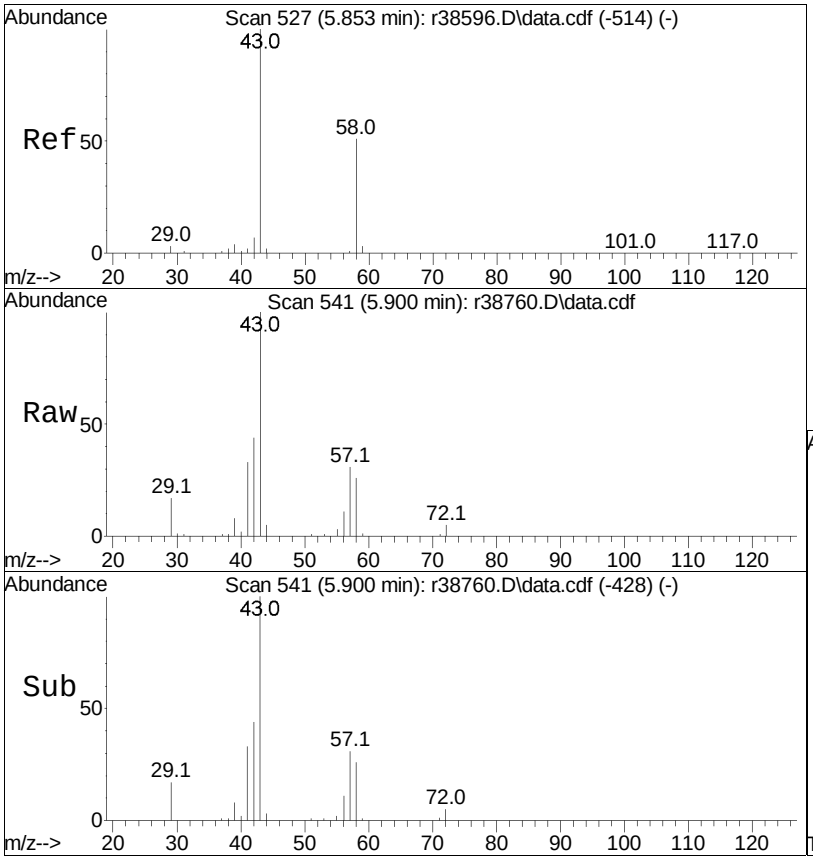



#15
ethanol
Concen:  112.11 ppbV
RT:   5.326 min  Scan# 387
Delta R.T.  0.030 min
Lab File:   r38760.D
Acq: 20 Mar 2020   7:03 PM

Tgt Ion: 31 Resp: 1691621

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 59.1 | 39.0 | 58.4# |

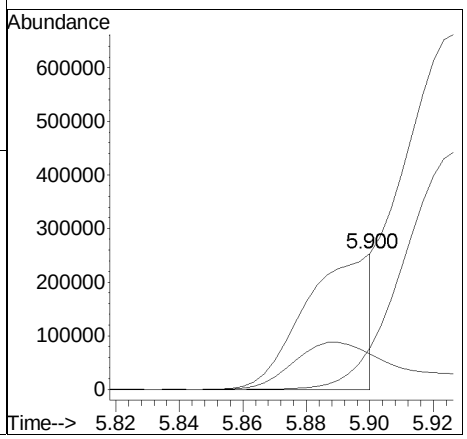


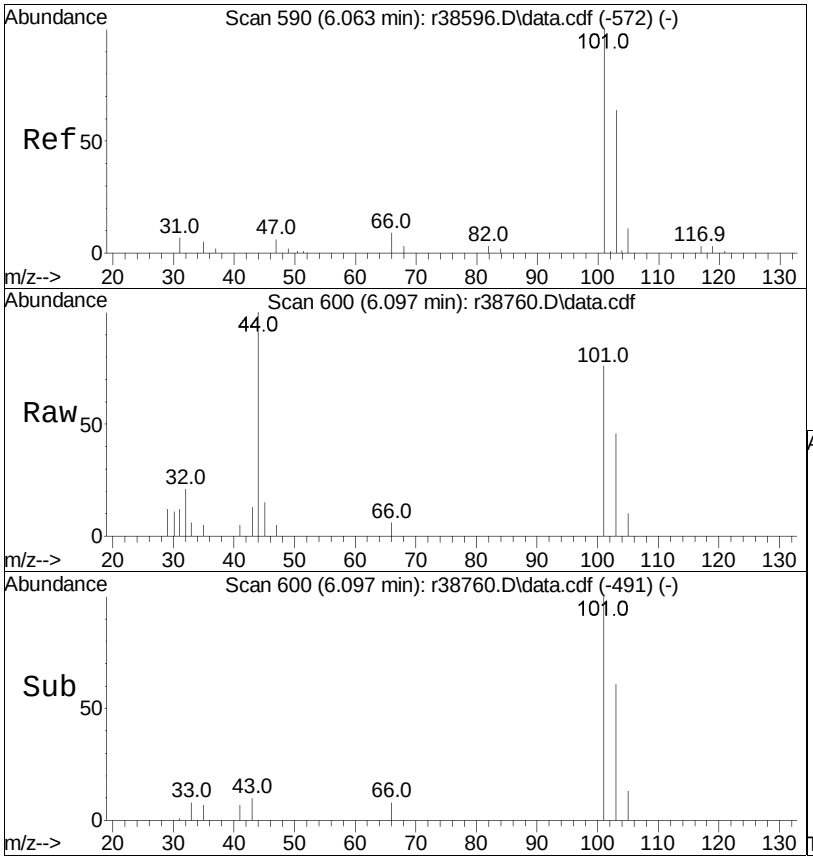



#19
acetone
Concen: 14.65 ppbV m
RT: 5.900 min Scan# 541
Delta R.T. 0.047 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 43 Resp: 368049

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 26.1 | 40.6 | 60.8# |
| 57 | 30.5 | 1.0 | 1.6# |

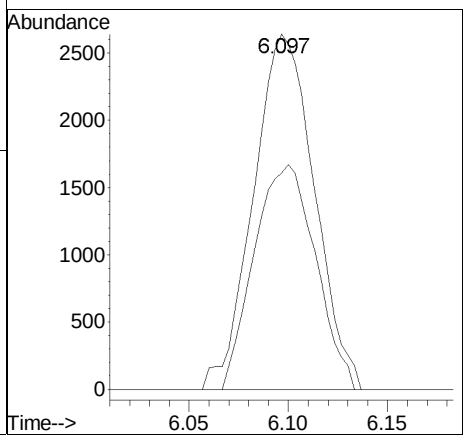


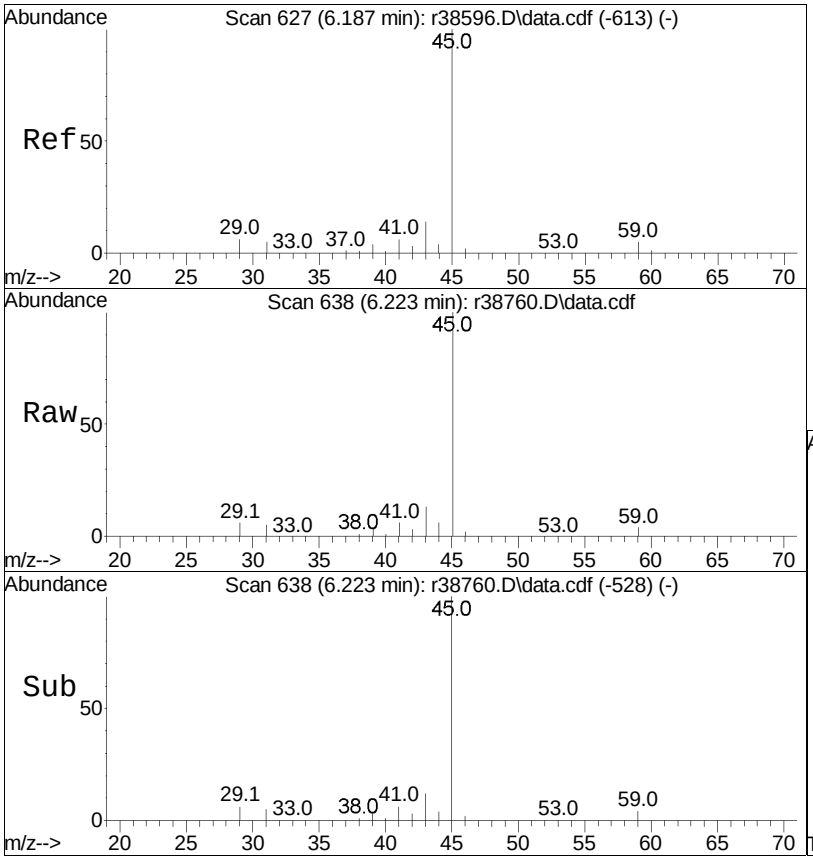



#21
trichlorofluoromethane
Concen: 0.21 ppbV
RT: 6.097 min Scan# 600
Delta R.T. 0.033 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:101 Resp: 5652

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 61.0 | 51.4 | 77.0 |

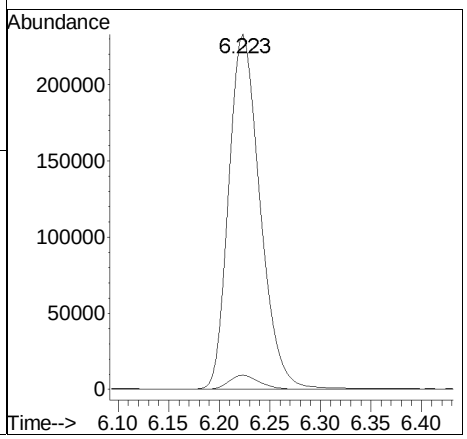


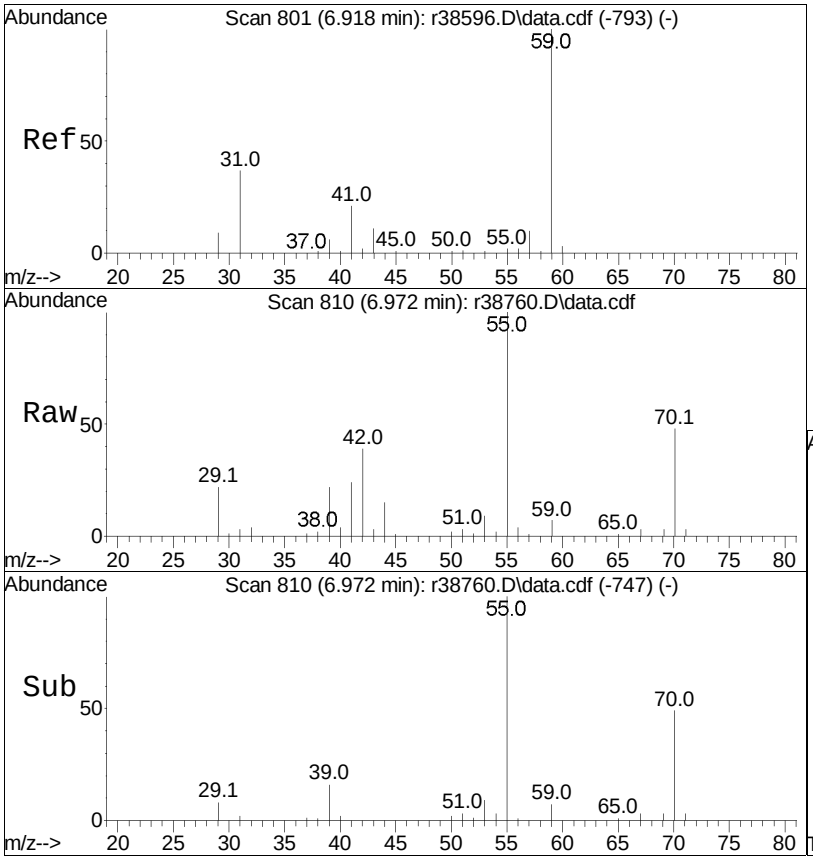



#22
isopropyl alcohol
Concen: 15.61 ppbV
RT: 6.223 min Scan# 638
Delta R.T. 0.037 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 45 Resp: 501655

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 4.0 | 3.9 | 5.9 |

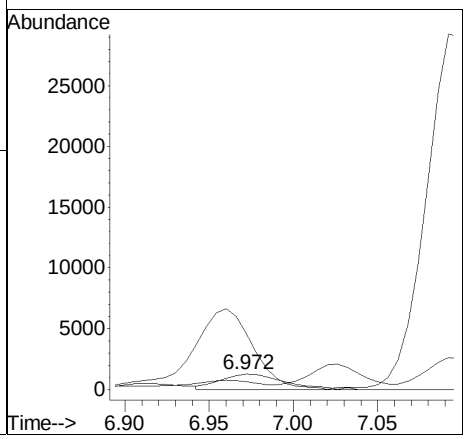


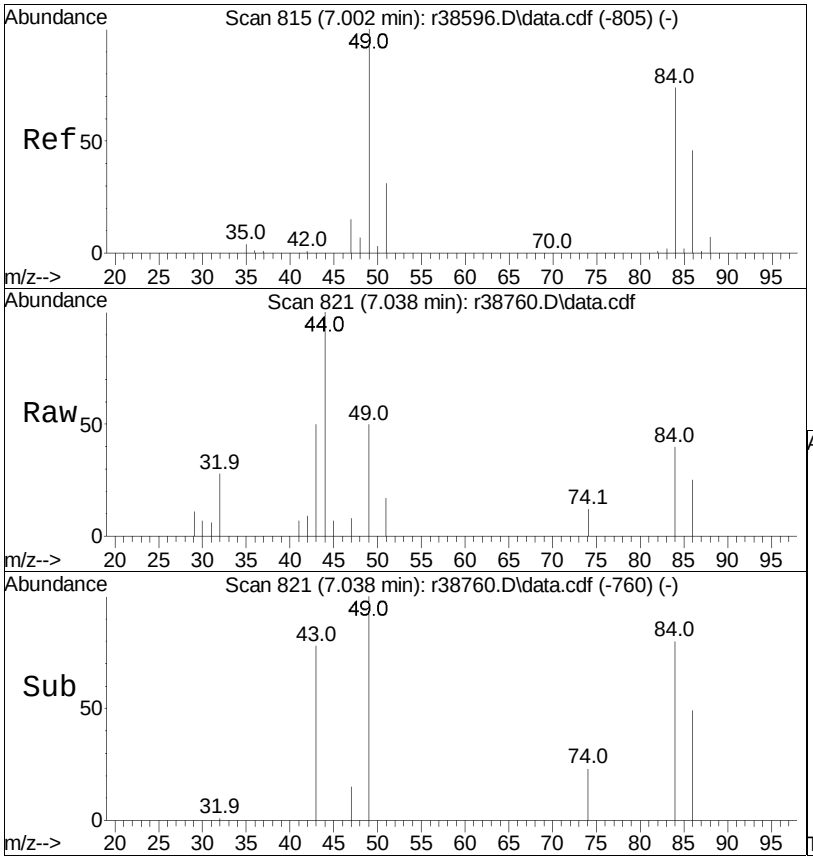



#27
tertiary butyl alcohol
Concen: 0.09 ppbV
RT: 6.972 min Scan# 810
Delta R.T. 0.054 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 59 Resp: 3327

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 362.6 | 16.9 | 25.3# |
| 43 | 49.8 | 8.9 | 13.3# |

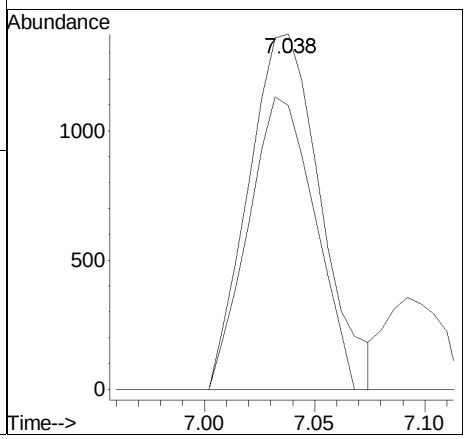


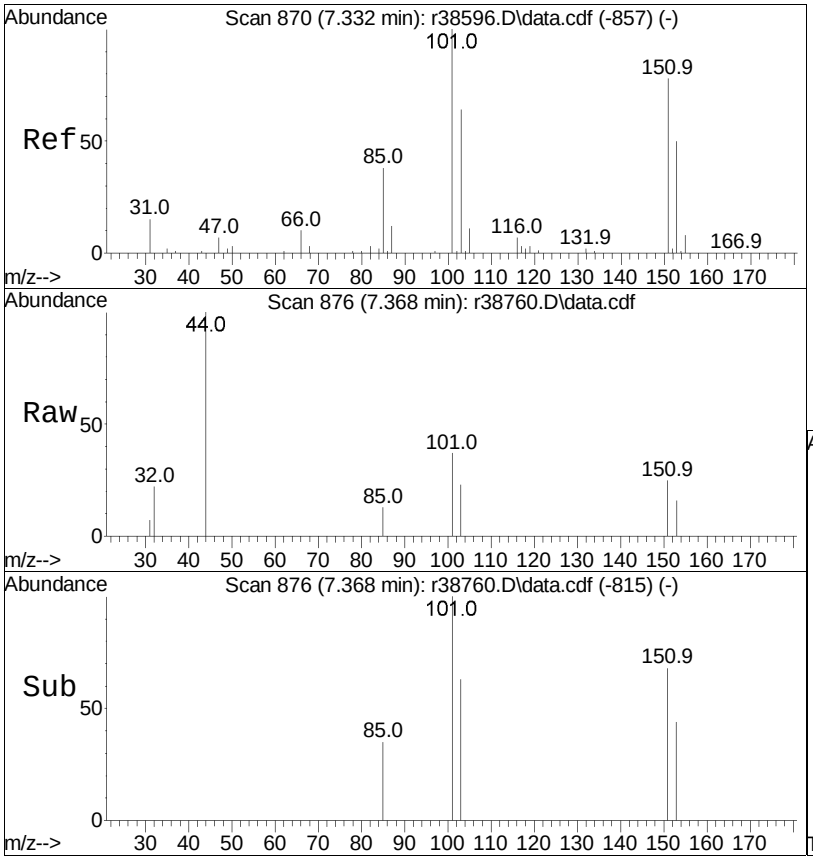



#28
methylene chloride
Concen: 0.13 ppbV
RT: 7.038 min Scan# 821
Delta R.T. 0.036 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 49 Resp: 3131

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 79.9 | 59.3 | 88.9 |

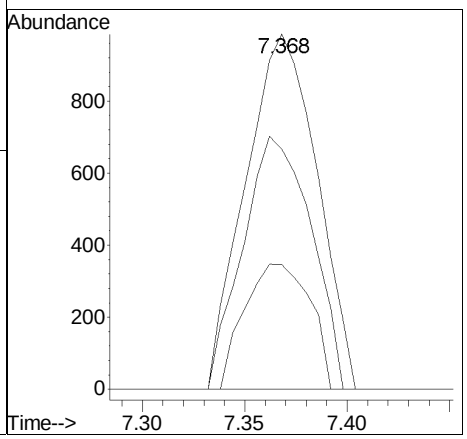


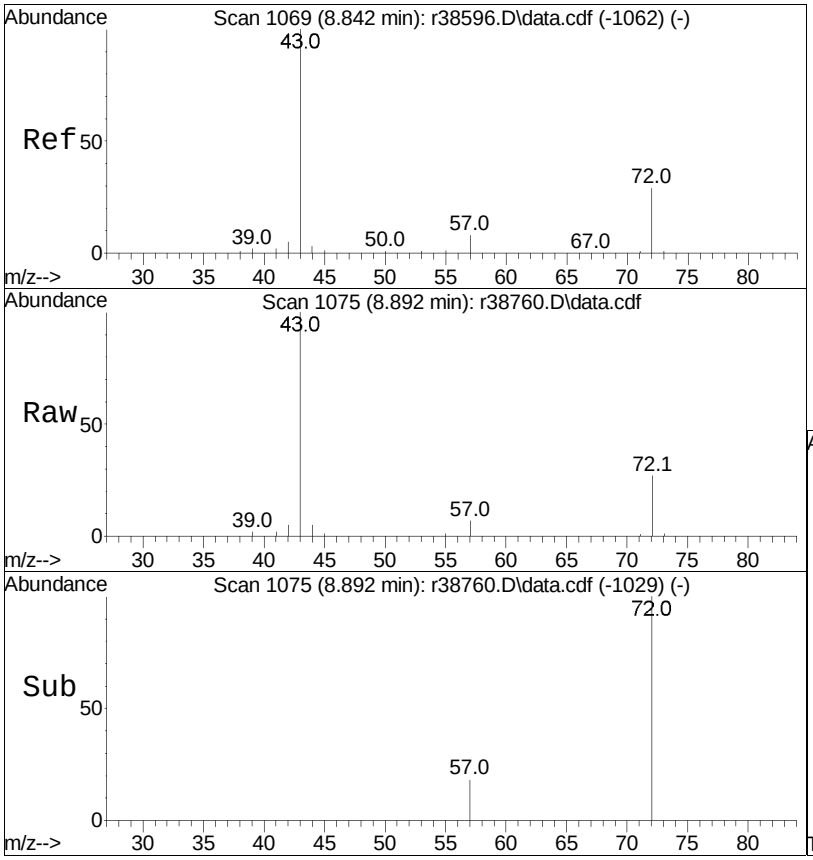



#31
Freon 113
Concen: 0.06 ppbV
RT: 7.368 min Scan# 876
Delta R.T. 0.036 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:101 Resp: 2394

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 35.1 | 30.6 | 45.8 |
| 151 | 67.6 | 62.4 | 93.6 |

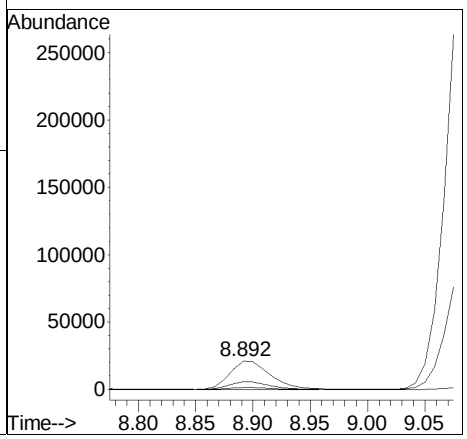


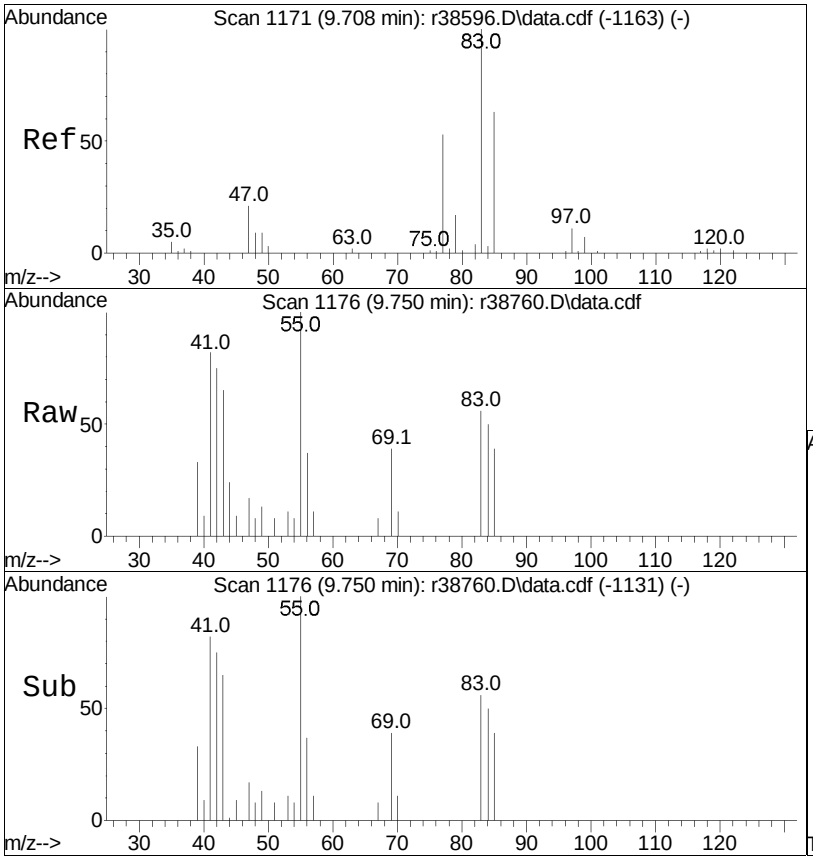



#36
2-butanone
Concen: 1.10 ppbV
RT: 8.892 min Scan# 1075
Delta R.T. 0.050 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 43 Resp: 52289

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 27.1 | 23.1 | 34.7 |
| 57 | 6.8 | 6.3 | 9.5 |

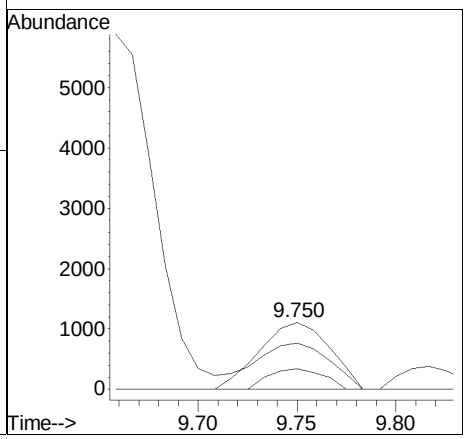


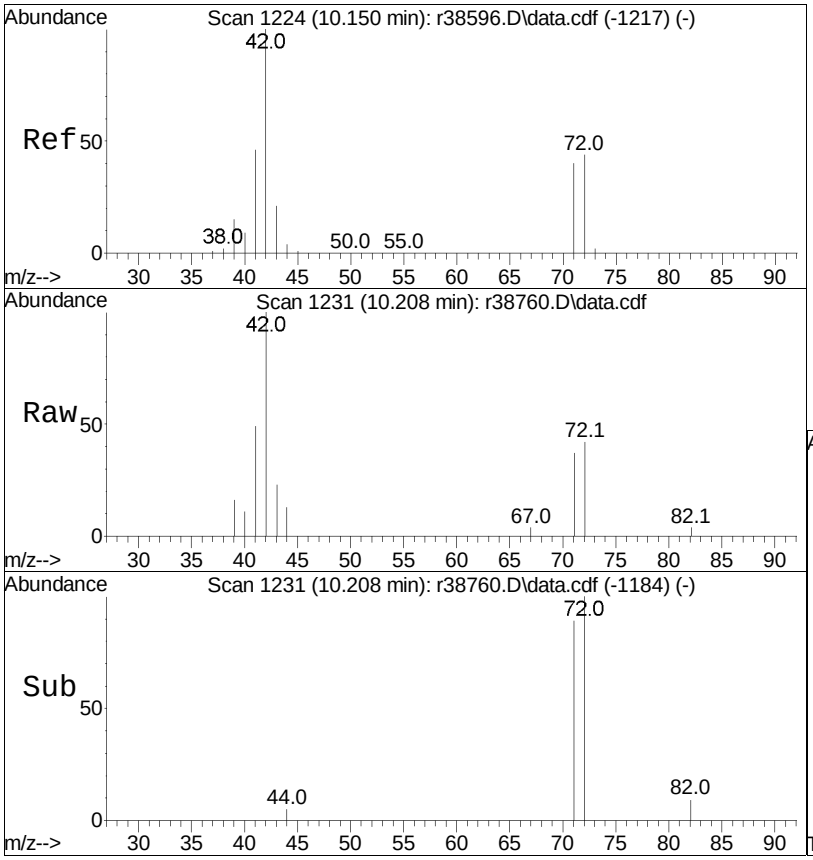



#39
chloroform
Concen: 0.07 ppbV m
RT: 9.750 min Scan# 1176
Delta R.T. 0.042 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 83 Resp: 2737

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 69.2 | 50.4 | 75.6 |
| 47 | 30.9 | 16.9 | 25.3# |

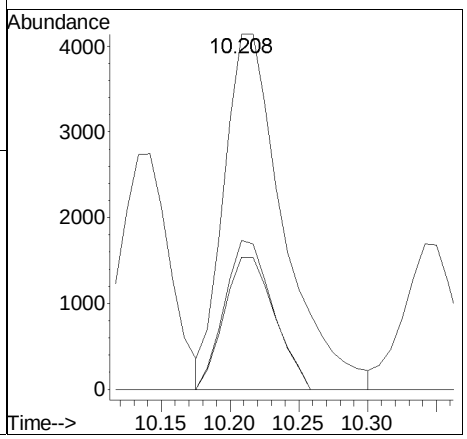


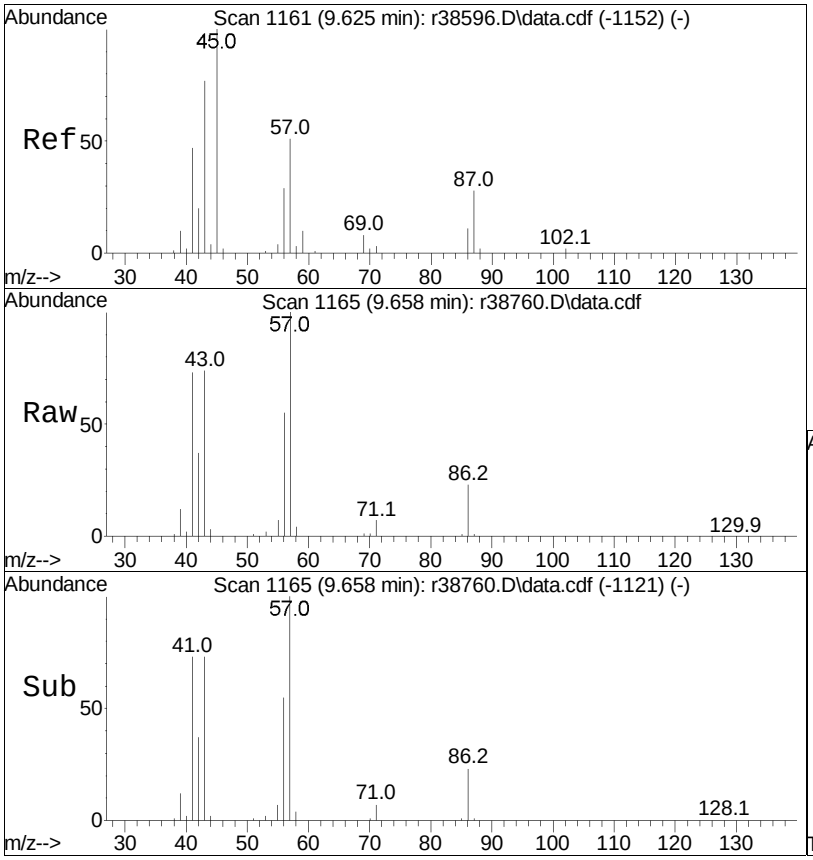



#40
Tetrahydrofuran
Concen: 0.42 ppbV
RT: 10.208 min Scan# 1231
Delta R.T. 0.058 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 42 Resp: 12522

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 37.3 | 31.8 | 47.8 |
| 72 | 42.0 | 35.2 | 52.8 |

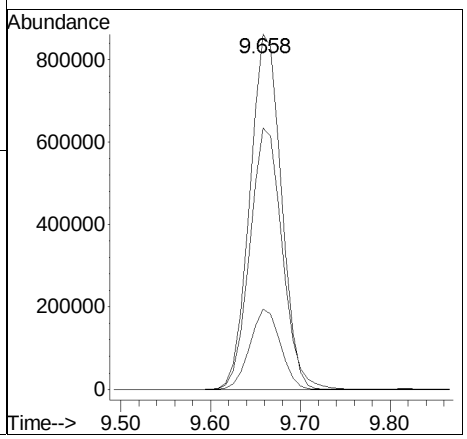


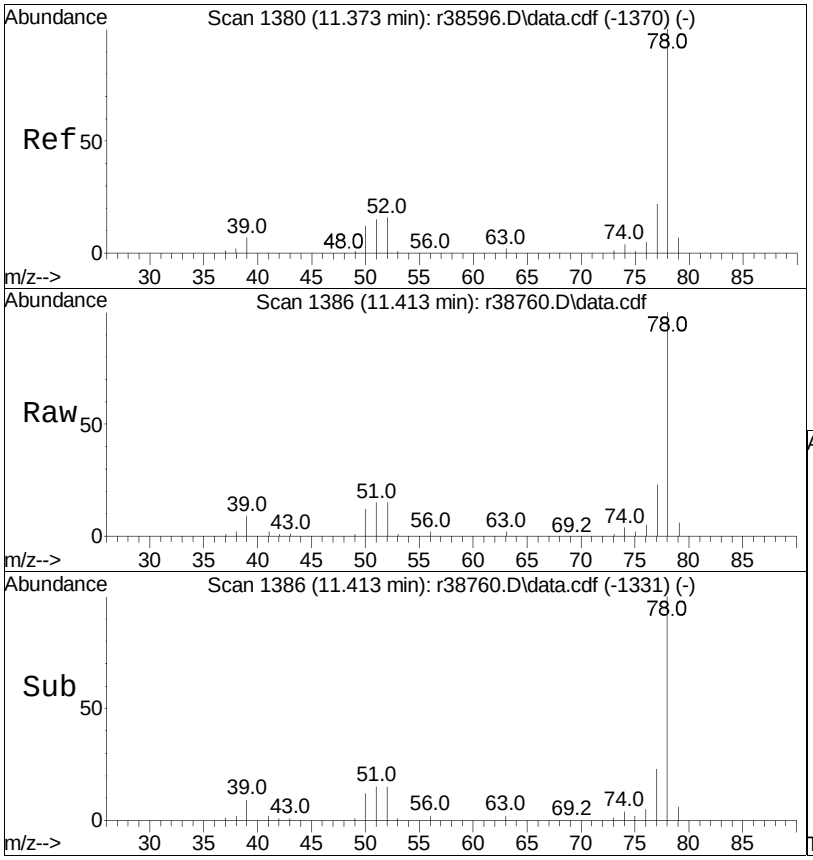



#44
hexane
Concen: 55.60 ppbV
RT: 9.658 min Scan# 1165
Delta R.T. 0.033 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 57 Resp: 2094813

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 73.5 | 119.3 | 178.9# |
| 86 | 22.6 | 17.0 | 25.6 |

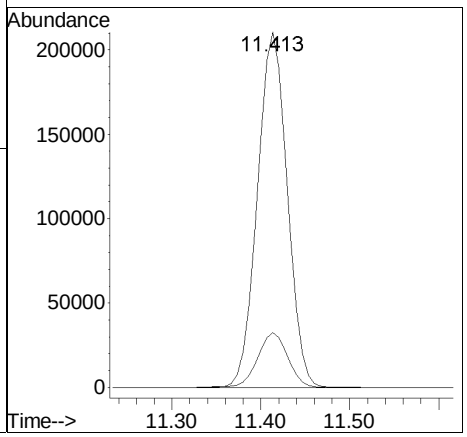


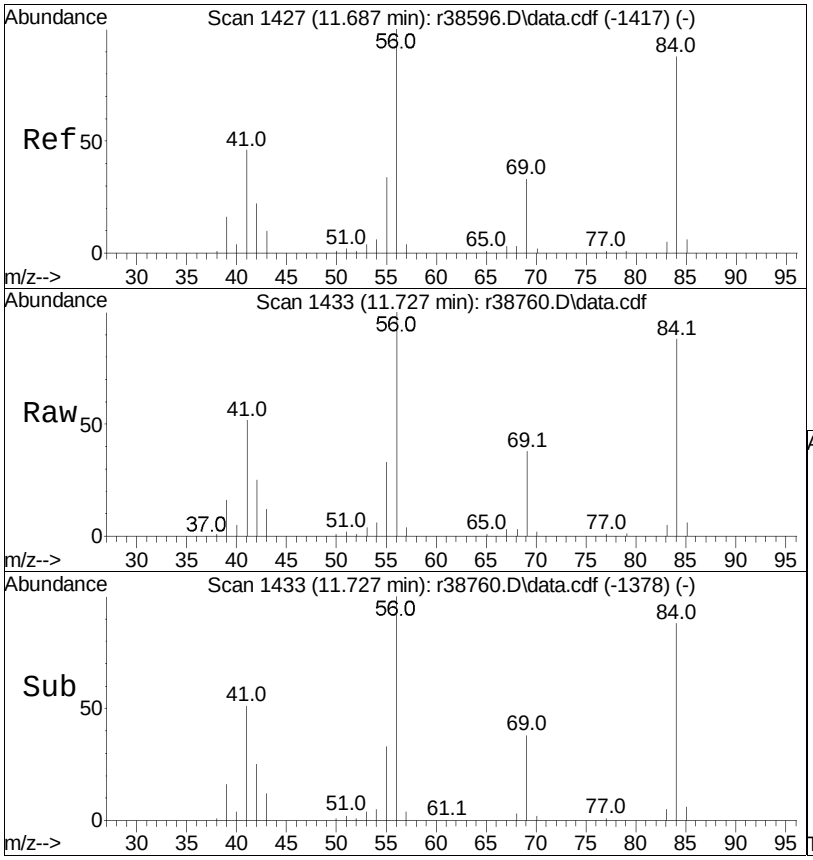



#50
benzene
Concen: 6.68 ppbV
RT: 11.413 min Scan# 1386
Delta R.T. 0.040 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 78 Resp: 491062

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 15.4 | 12.6 | 18.8 |

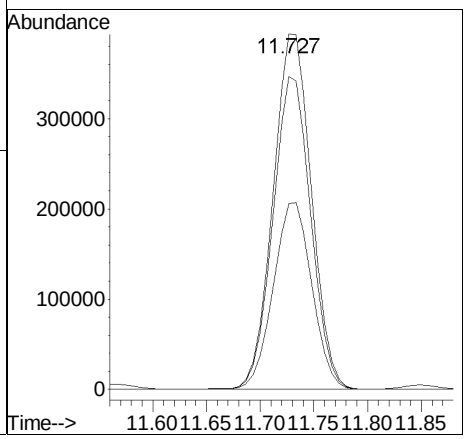


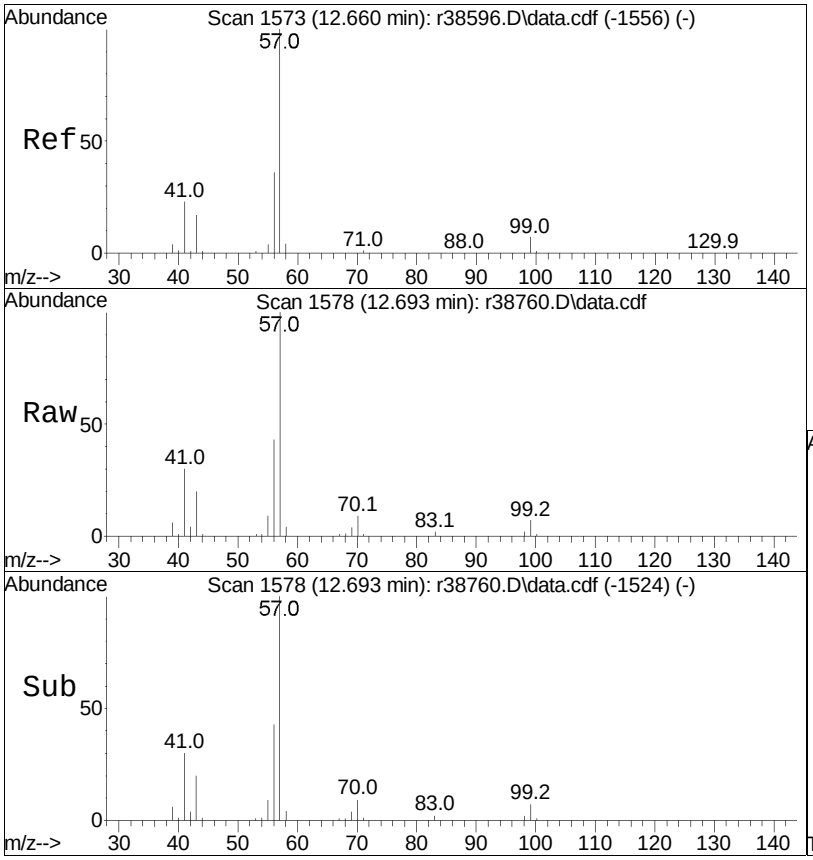



#53
cyclohexane
Concen: 23.94 ppbV
RT: 11.727 min Scan# 1433
Delta R.T. 0.040 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 56 Resp: 977209

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 88.0 | 70.2 | 105.2 |
| 41 | 52.3 | 36.9 | 55.3 |

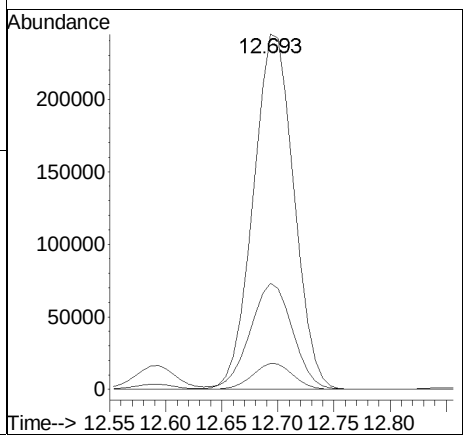


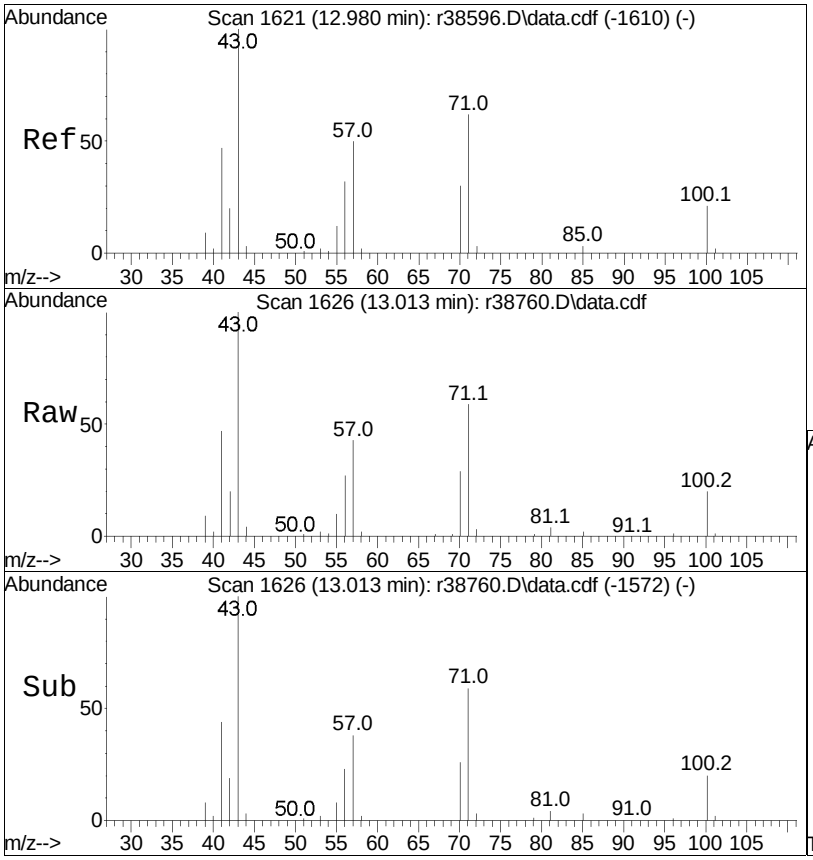



#60
2,2,4-trimethylpentane
Concen: 5.14 ppbV
RT: 12.693 min Scan# 1578
Delta R.T. 0.033 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 57 Resp: 616199

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.4 | 5.4 | 8.2 |
| 41 | 29.9 | 18.2 | 27.2# |

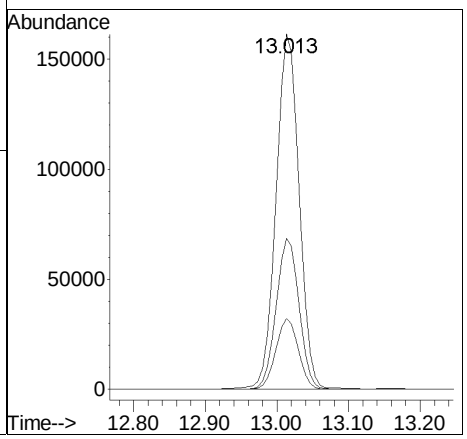


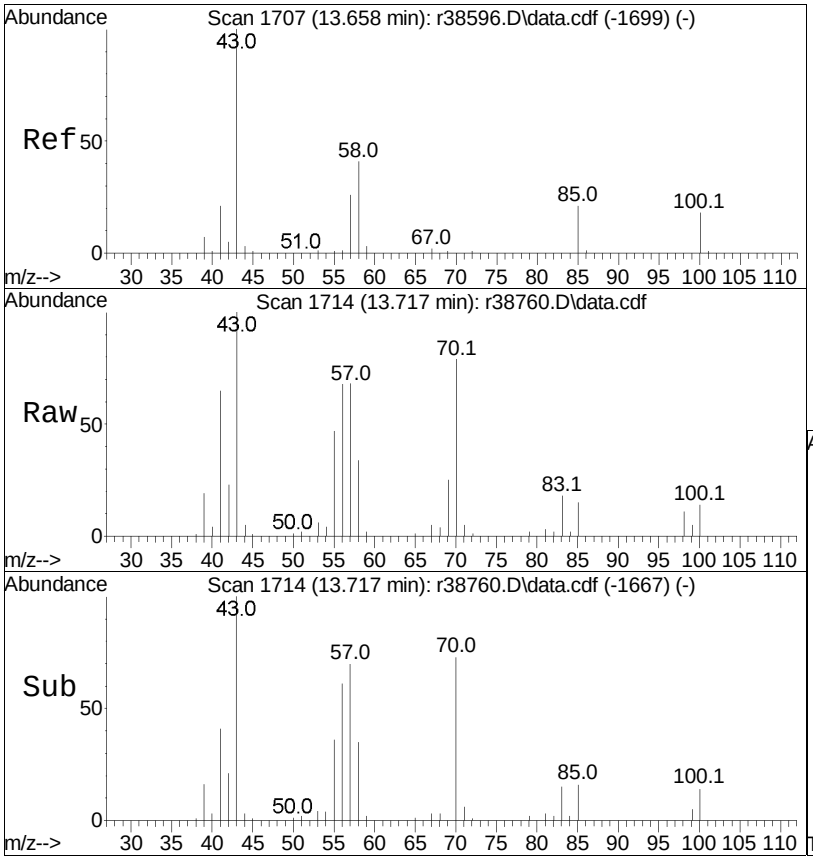



#62
heptane
Concen: 7.70 ppbV
RT: 13.013 min Scan# 1626
Delta R.T. 0.033 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 43 Resp: 363040

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 42.5 | 39.8 | 59.6 |
| 100 | 20.0 | 17.3 | 25.9 |

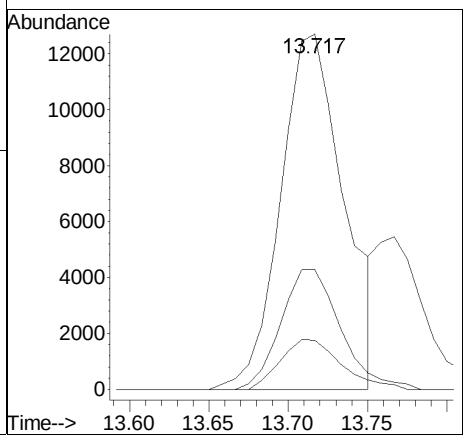


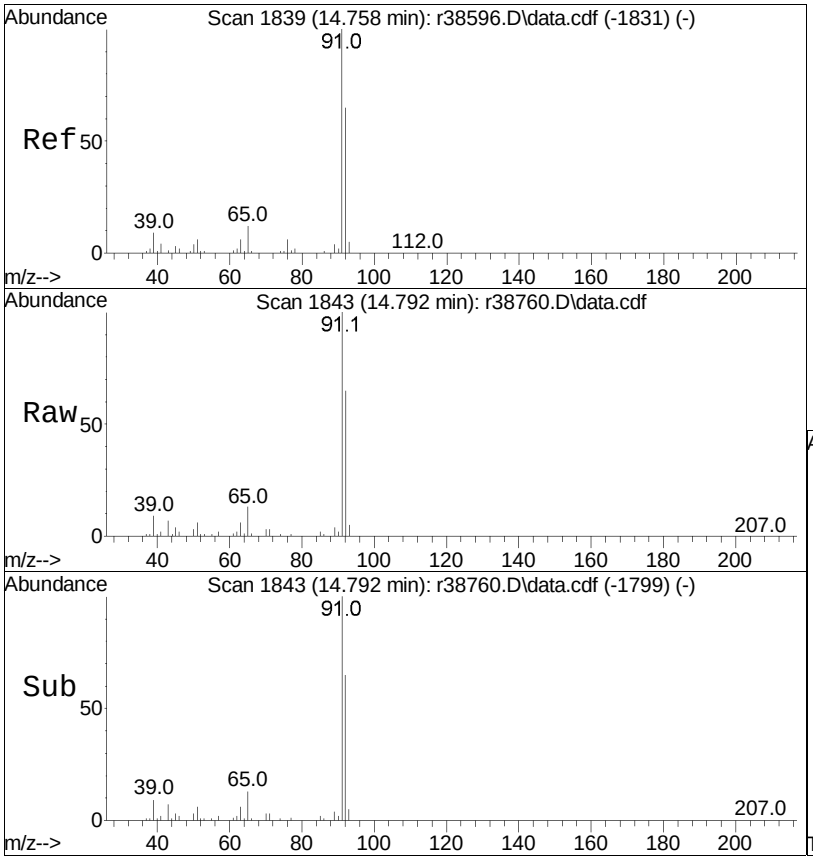



#64
4-methyl-2-pentanone
Concen: 0.67 ppbV
RT: 13.717 min Scan# 1714
Delta R.T. 0.058 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 43 Resp: 35353

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.8 | 32.5 | 48.7 |
| 100 | 13.9 | 14.7 | 22.1# |

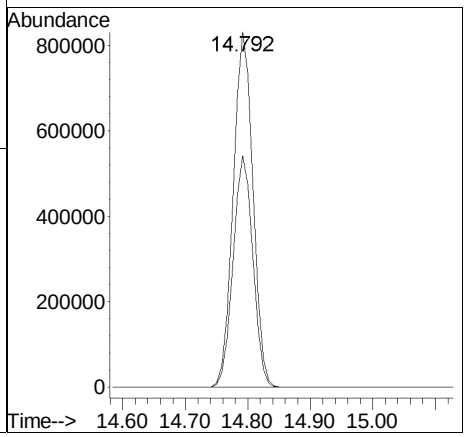


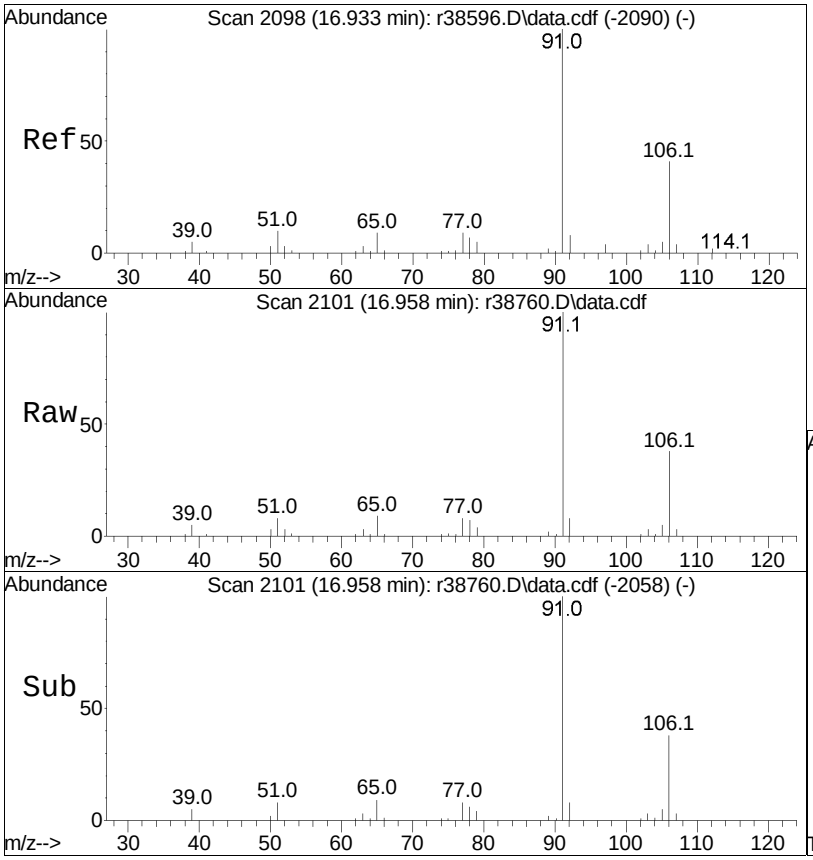



#68
toluene
Concen: 25.06 ppbV
RT: 14.792 min Scan# 1843
Delta R.T. 0.033 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 91 Resp: 1827164

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.2 | 52.4 | 78.6 |

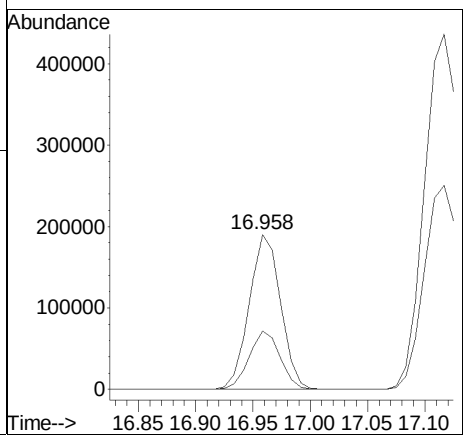


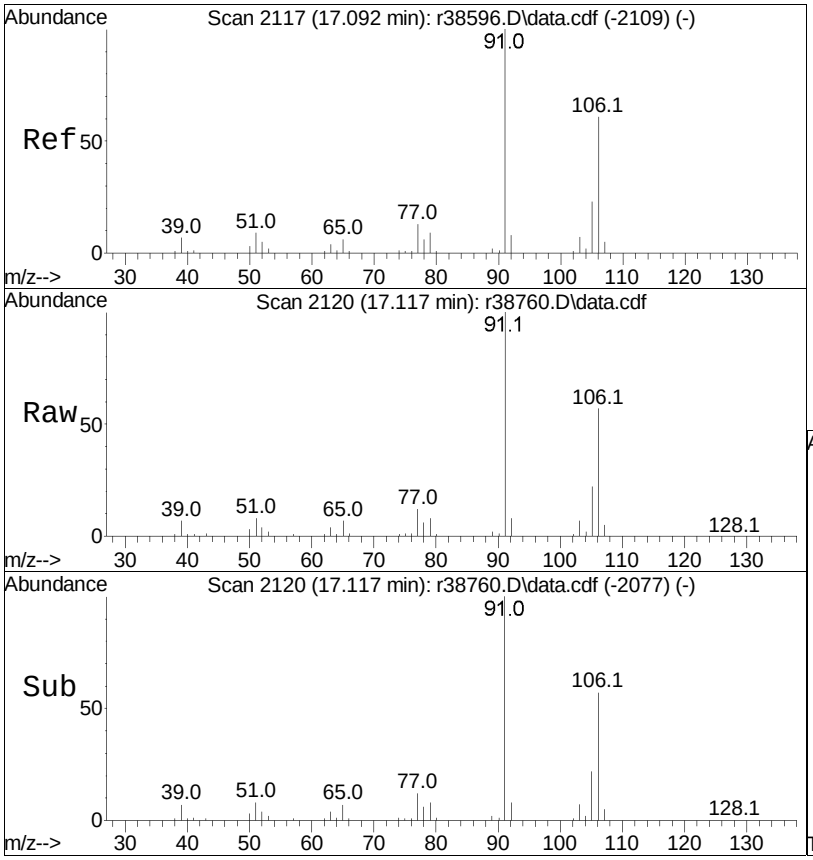



#81
ethylbenzene
Concen: 4.18 ppbV
RT: 16.958 min Scan# 2101
Delta R.T. 0.025 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 91 Resp: 362734

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 37.8 | 32.6 | 48.8 |

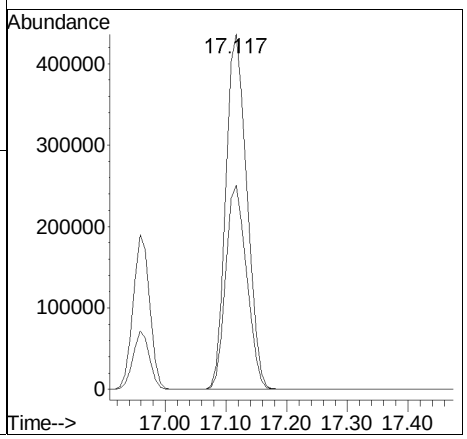


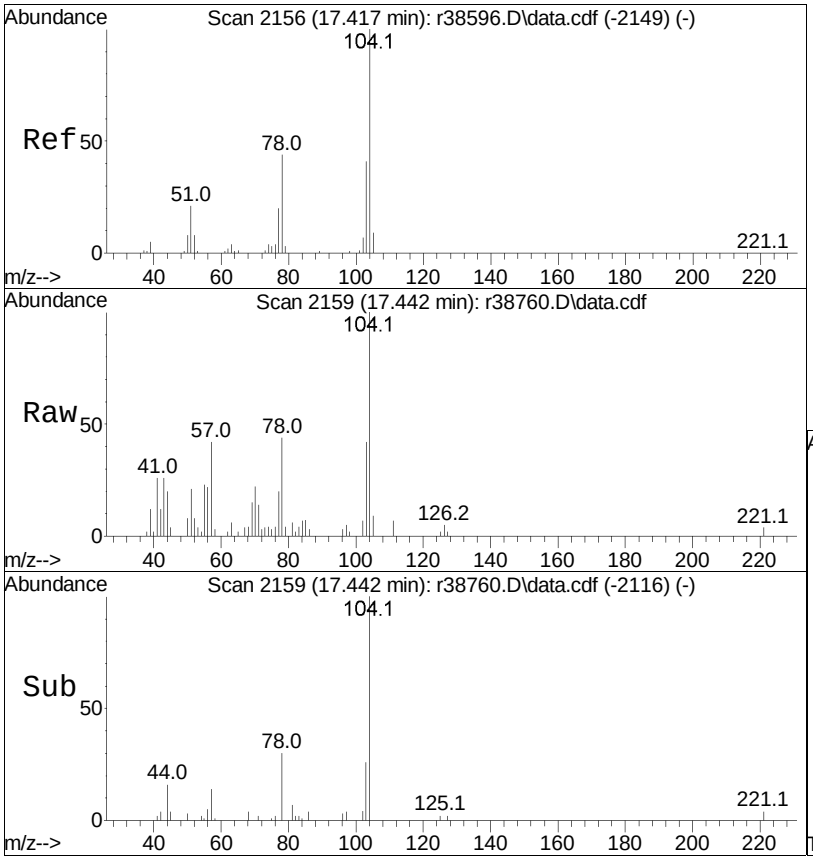



#83
m+p-xylene
Concen: 14.86 ppbV
RT: 17.117 min Scan# 2120
Delta R.T. 0.025 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 91 Resp: 1056494

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 57.4 | 49.0 | 73.6 |

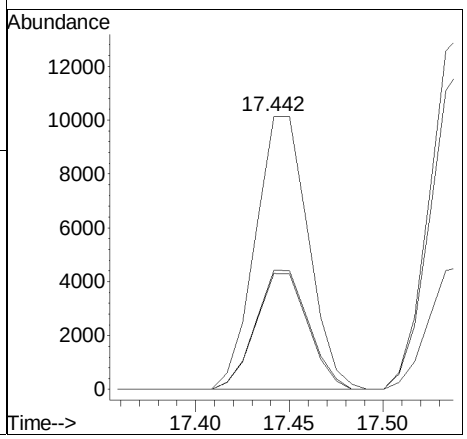


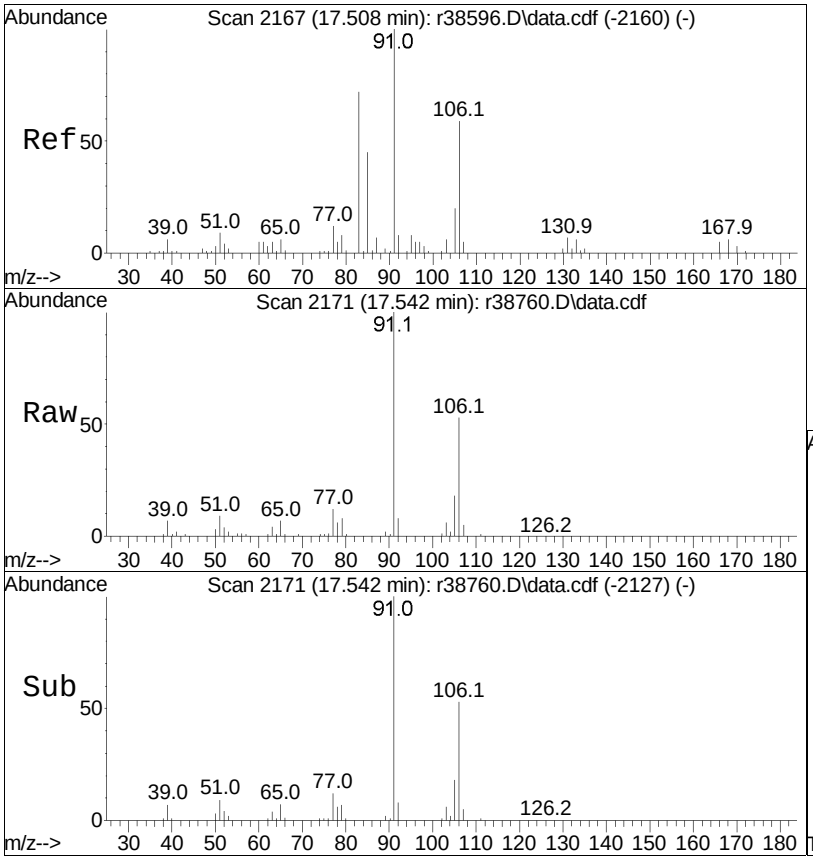



#85
styrene
Concen: 0.31 ppbV
RT: 17.442 min Scan# 2159
Delta R.T. 0.025 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:104 Resp: 19911

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 103 | 42.4 | 33.1 | 49.7 |
| 78 | 43.6 | 35.0 | 52.6 |

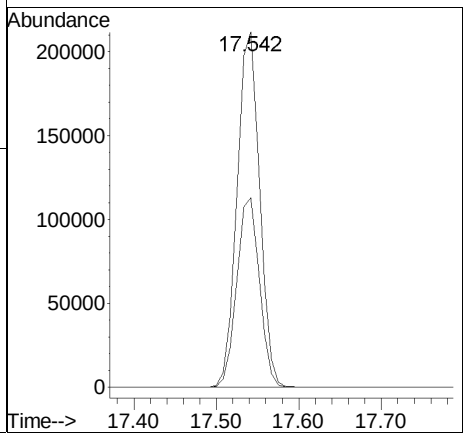


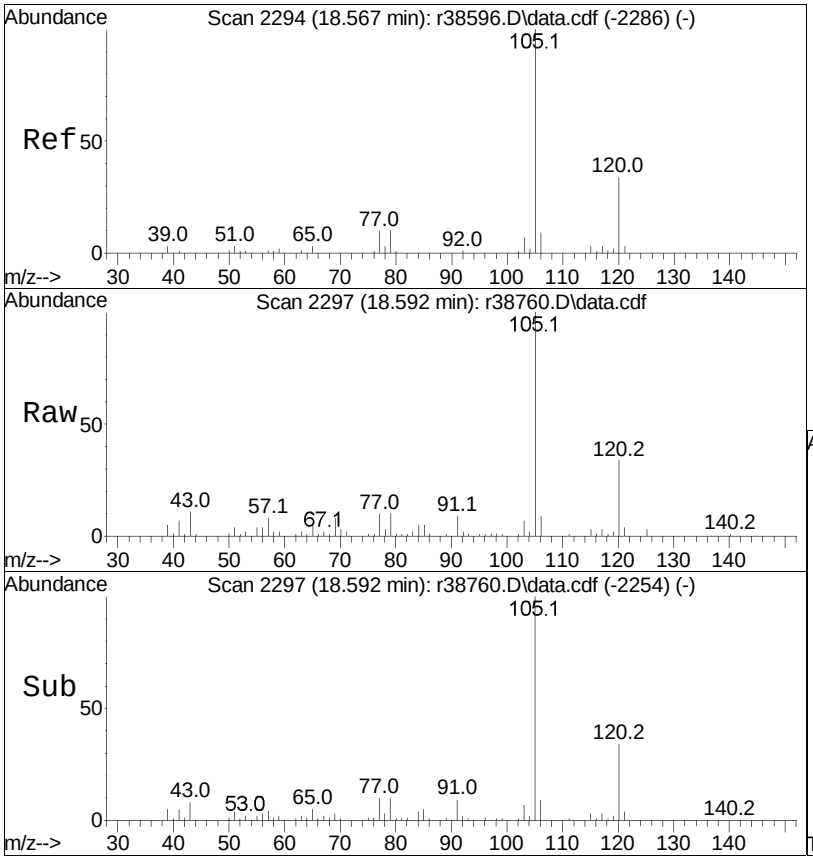



#87
o-xylene
Concen: 5.80 ppbV
RT: 17.542 min Scan# 2171
Delta R.T. 0.033 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion: 91 Resp: 404052

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 53.4 | 47.4 | 71.0 |

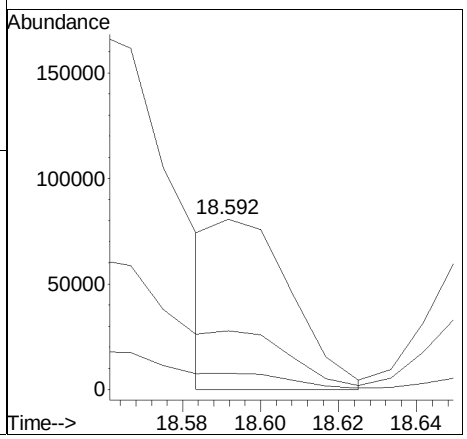


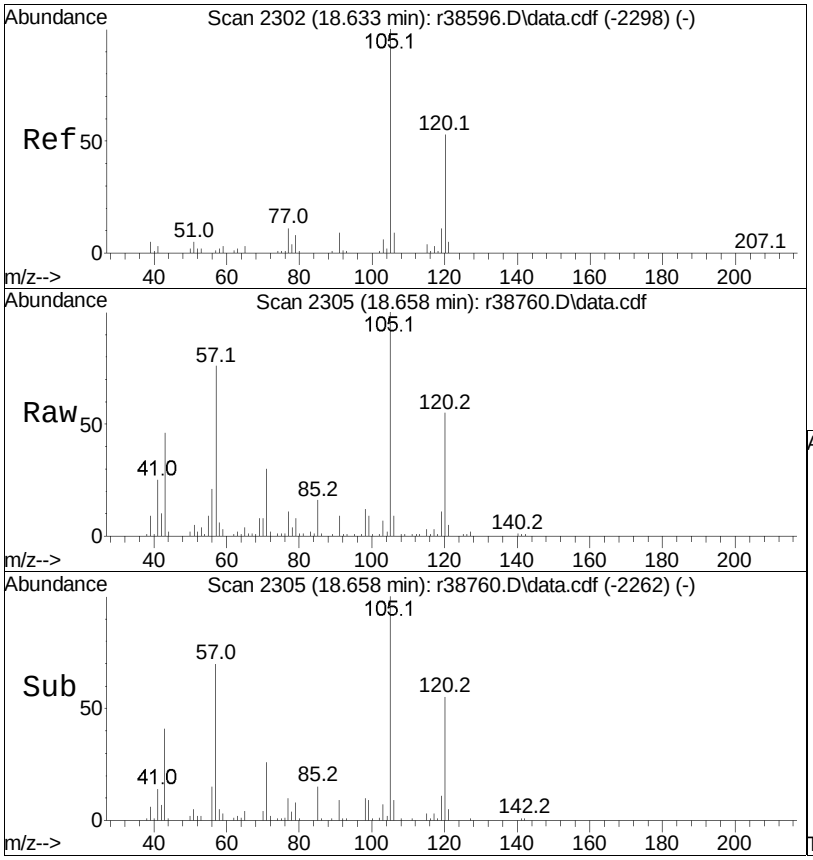



#96
4-ethyl toluene
Concen: 0.98 ppbV m
RT: 18.592 min Scan# 2297
Delta R.T. 0.025 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:105 Resp: 110428

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 34.5 | 27.0 | 40.4 |
| 91 | 9.5 | 7.4 | 11.0 |

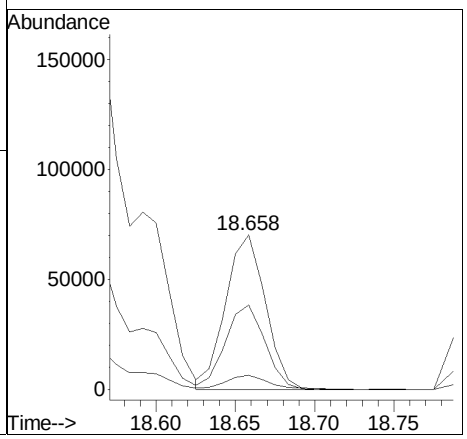


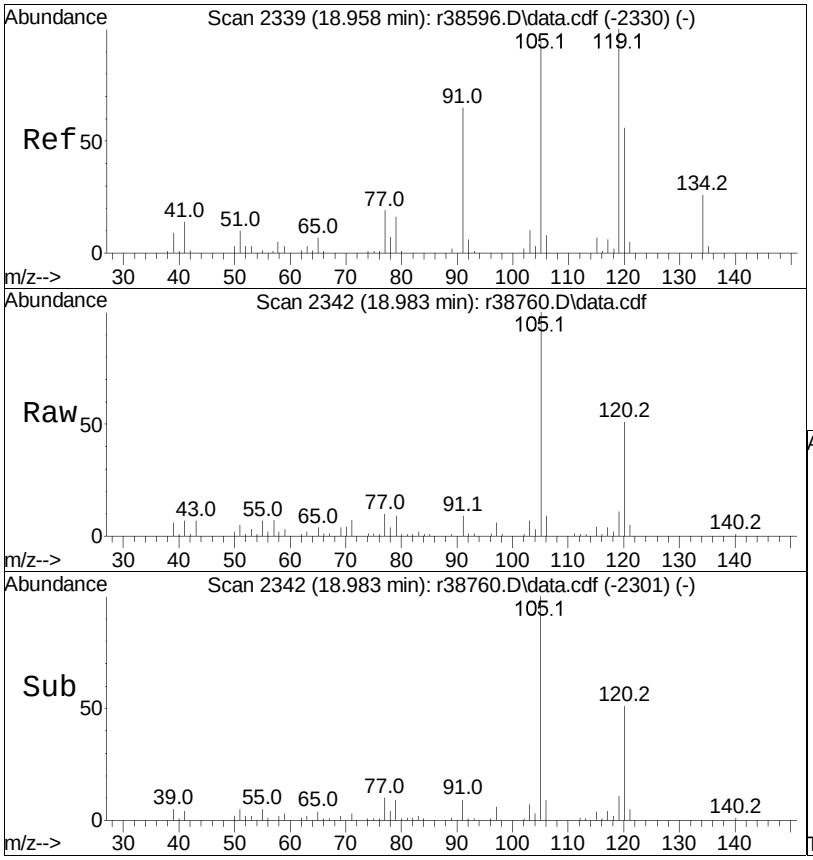



#97
1,3,5-trimethylbenzene
Concen: 1.35 ppbV
RT: 18.658 min Scan# 2305
Delta R.T. 0.025 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:105 Resp: 122815

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 54.6 | 41.6 | 62.4 |
| 91 | 9.1 | 7.0 | 10.4 |

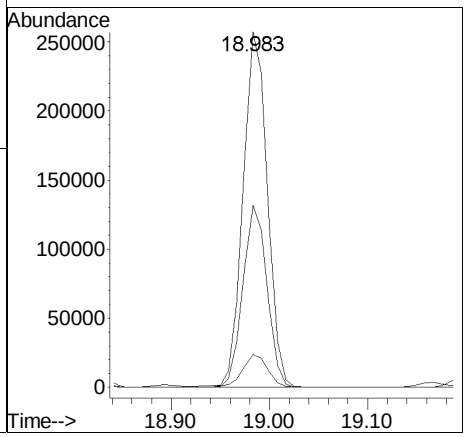





#99
1,2,4-trimethylbenzene
Concen: 5.21 ppbV
RT: 18.983 min Scan# 2342
Delta R.T. 0.025 min
Lab File: r38760.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:105 Resp: 442091

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 51.2 | 47.1 | 70.7 |
| 91 | 9.2 | 55.0 | 82.6# |

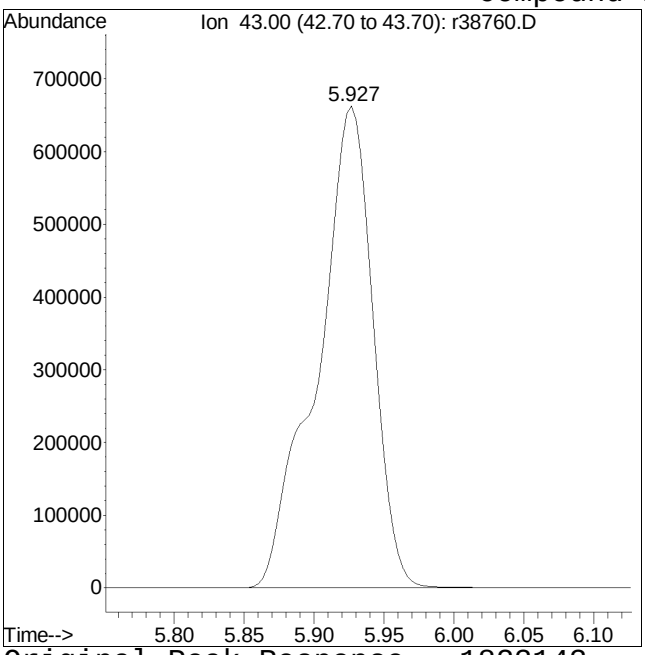


# Manual Integration Report

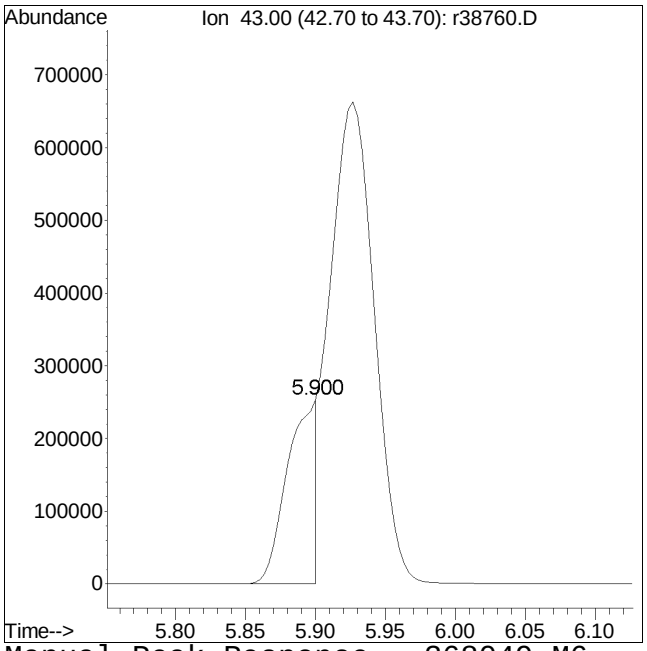
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38760.D
Date Inj'd : 3/20/2020 0:7: 3
Sample : WG1353541-5,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:05 am

## Compound #19: acetone




Original Peak Response = 1823143




Manual Peak Response = 368049 M6

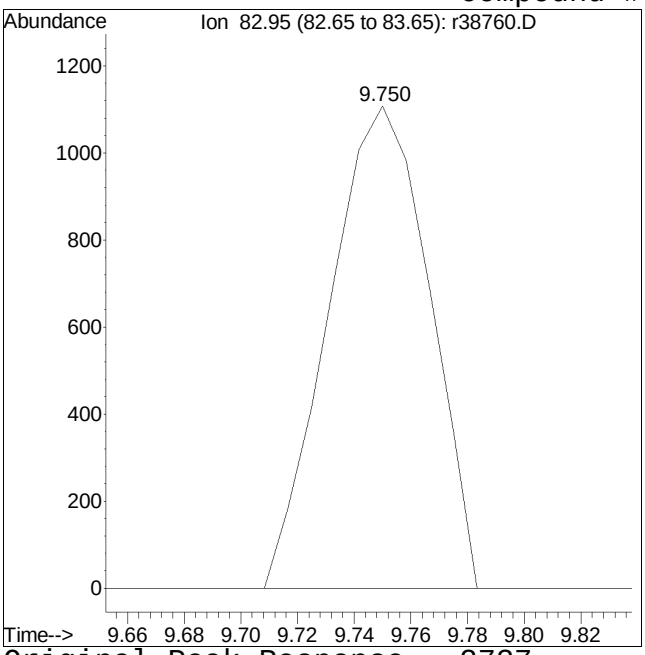
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Manual Integration Report

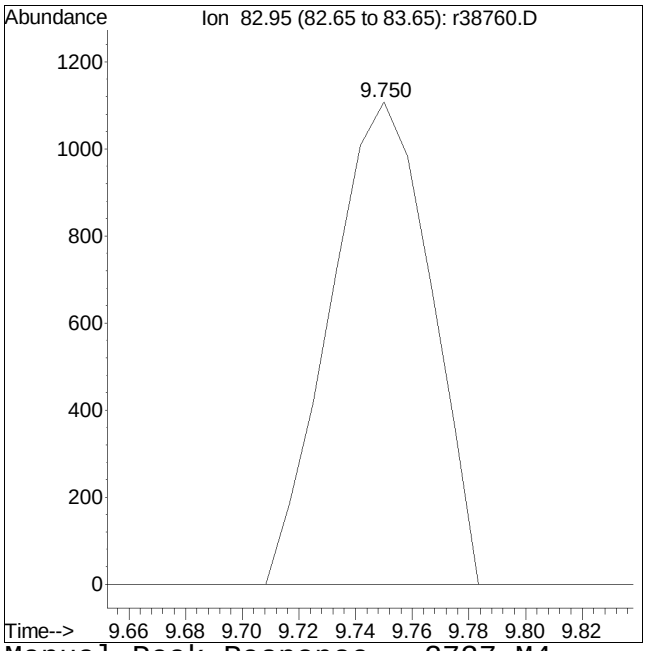
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38760.D
Date Inj'd : 3/20/2020 0:7: 3
Sample : WG1353541-5,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:05 am

## Compound #39: chloroform




Original Peak Response = 2737




Manual Peak Response = 2737 M4

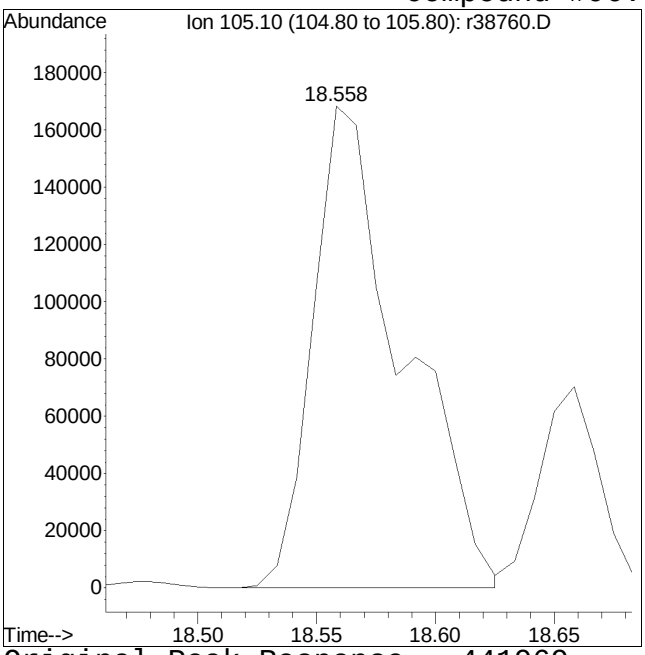
M4 = Poor automated baseline construction.

Manual Integration Report

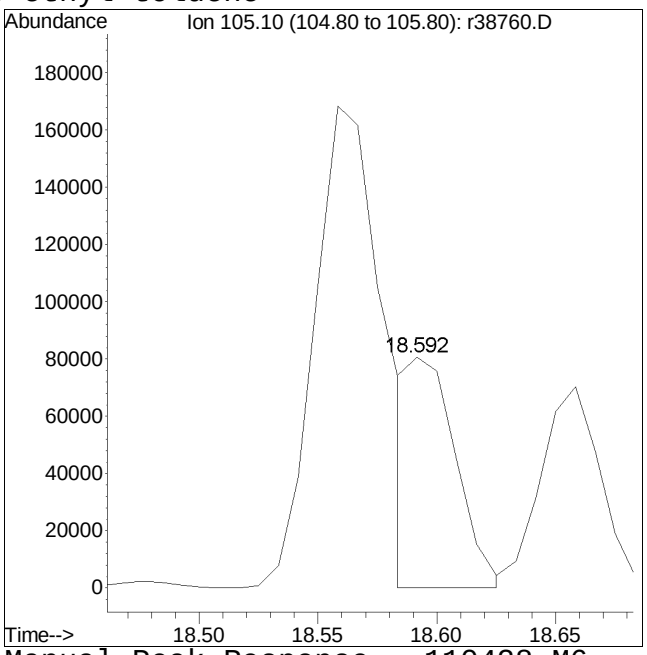
Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38760.D
Date Inj'd : 3/20/2020 0:7: 3
Sample : WG1353541-5,3,250,250

Method : TFS3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/21/2020 8:05 am

Compound #96: 4-ethyl toluene




Original Peak Response = 441969




Manual Peak Response = 110428 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193198.D
Acq On : 20 Mar 2020 7:17 PM
Operator : AIRLAB19:EW
Sample : WG1353556-5,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:12:50 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY-7-SIM - .

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) bromochloromethane | 8.792 | 49 | 350711 | 10.000 | ppbV | | 0.00 |
| Standard Area = 288364 | | | Recovery = 121.62% | | | | |
| 43) 1,4-difluorobenzene | 10.753 | 114 | 1038160 | 10.000 | ppbV | | 0.00 |
| Standard Area = 940727 | | | Recovery = 110.36% | | | | |
| 67) chlorobenzene-D5 | 14.883 | 54 | 131953 | 10.000 | ppbV | | 0.00 |
| Standard Area = 108860 | | | Recovery = 121.21% | | | | |
| System Monitoring Compounds | | | | | | | |
| Target Compounds | | | | | | | Qvalue |
| 5) dichlorodifluoromethane | 3.568 | 85 | 9846 | 0.501 | ppbV | | 100 |
| 6) chloromethane | 3.778 | 50 | 6975 | 0.555 | ppbV | | 99 |
| 7) Freon-114 | 0.000 | | 0 | N.D. | d | | |
| 10) 1,3-butadiene | 4.246 | | 0 | N.D. | | | |
| 13) bromomethane | 0.000 | | 0 | N.D. | | | |
| 14) chloroethane | 0.000 | | 0 | N.D. | | | |
| 15) ethanol | 4.936 | 31 | 146956 | 14.341 | ppbV | # | 67 |
| 17) vinyl bromide | 0.000 | | 0 | N.D. | | | |
| 19) acetone | 5.503 | 43 | 44811 | 2.379 | ppbV | | 97 |
| 21) trichlorofluoromethane | 5.700 | 101 | 4487 | 0.217 | ppbV | | 100 |
| 22) isopropyl alcohol | 5.787 | 45 | 37325 | 1.043 | ppbV | | 99 |
| 27) tertiary butyl alcohol | 0.000 | | 0 | N.D. | d | | |
| 28) methylene chloride | 6.546 | 49 | 5360 | 0.233 | ppbV | | 90 |
| 29) 3-chloropropene | 0.000 | | 0 | N.D. | d | | |
| 30) carbon disulfide | 6.858 | | 0 | N.D. | | | |
| 31) Freon 113 | 6.834 | 101 | 1993 | 0.059 | ppbV | | 95 |
| 32) trans-1,2-dichloroethene | 0.000 | | 0 | N.D. | | | |
| 33) 1,1-dichloroethane | 0.000 | | 0 | N.D. | | | |
| 34) MTBE | 0.000 | | 0 | N.D. | | | |
| 36) 2-butanone | 8.175 | 43 | 13906 | 0.329 | ppbV | | 95 |
| 38) Ethyl Acetate | 8.842 | 61 | 2999 | 0.418 | ppbV | # | 54 |
| 39) chloroform | 8.917 | 83 | 2161 | 0.074 | ppbV | # | 93 |
| 40) Tetrahydrofuran | 9.358 | 42 | 3518 | 0.124 | ppbV | | 100 |
| 42) 1,2-dichloroethane | 0.000 | | 0 | N.D. | | | |
| 44) hexane | 8.833 | 57 | 12564 | 0.330 | ppbV | # | 60 |
| 50) benzene | 10.413 | 78 | 20020 | 0.267 | ppbV | | 99 |
| 53) cyclohexane | 10.700 | 56 | 4222 | 0.101 | ppbV | # | 94 |
| 56) 1,2-dichloropropane | 0.000 | | 0 | N.D. | | | |
| 57) bromodichloromethane | 0.000 | | 0 | N.D. | d | | |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193198.D
Acq On : 20 Mar 2020 7:17 PM
Operator : AIRLAB19:EW
Sample : WG1353556-5,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:12:50 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab19\2020\03\200320T\r193190.D
Sub List : TO15-NY-7-SIM - .

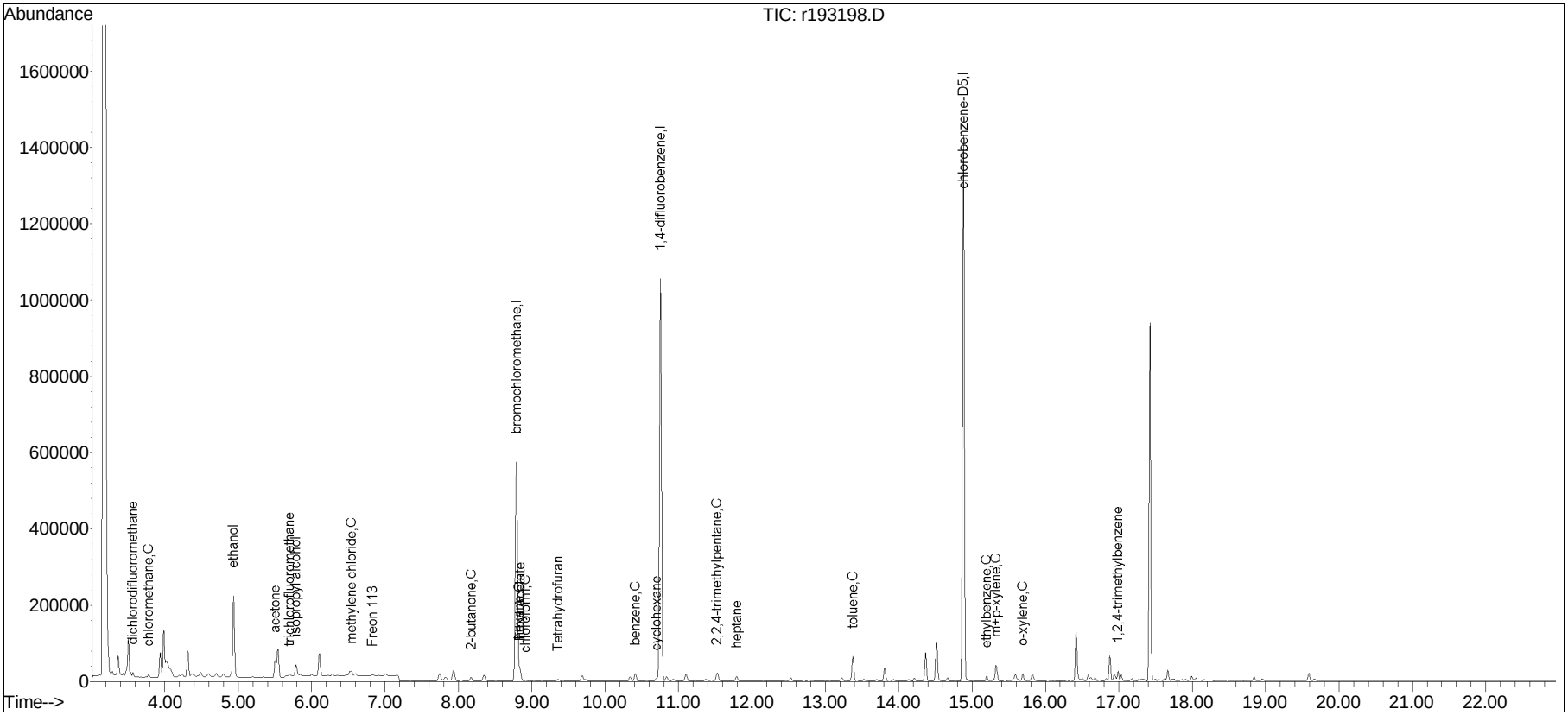
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 58) 1,4-dioxane | 0.000 | | 0 | N.D. | | |
| 60) 2,2,4-trimethylpentane | 11.527 | 57 | 22103 | 0.184 | ppbV | 95 |
| 62) heptane | 11.793 | 43 | 6093 | 0.131 | ppbV | 97 |
| 63) cis-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) 4-methyl-2-pentanone | 0.000 | | 0 | N.D. | d | |
| 65) trans-1,3-dichloropropene | 0.000 | | 0 | N.D. | | |
| 66) 1,1,2-trichloroethane | 0.000 | | 0 | N.D. | | |
| 68) toluene | 13.375 | 91 | 46498 | 0.579 | ppbV | 99 |
| 72) 2-hexanone | 0.000 | | 0 | N.D. | d | |
| 74) dibromochloromethane | 0.000 | | 0 | N.D. | | |
| 75) 1,2-dibromoethane | 0.000 | | 0 | N.D. | | |
| 80) chlorobenzene | 0.000 | | 0 | N.D. | d | |
| 81) ethylbenzene | 15.200 | 91 | 9858 | 0.102 | ppbV | 99 |
| 83) m+p-xylene | 15.325 | 91 | 27002 | 0.355 | ppbV | 98 |
| 84) bromoform | 0.000 | | 0 | N.D. | | |
| 85) styrene | 15.608 | | 0 | N.D. | | |
| 86) 1,1,2,2-tetrachloroethane | 0.000 | | 0 | N.D. | d | |
| 87) o-xylene | 15.692 | 91 | 10622 | 0.142 | ppbV | 96 |
| 96) 4-ethyl toluene | 16.617 | | 0 | N.D. | | |
| 97) 1,3,5-trimethylbenzene | 16.667 | | 0 | N.D. | | |
| 99) 1,2,4-trimethylbenzene | 16.992 | 105 | 13625 | 0.145 | ppbV # | 60 |
| 101) Benzyl Chloride | 0.000 | | 0 | N.D. | d | |
| 102) 1,3-dichlorobenzene | 0.000 | | 0 | N.D. | d | |
| 103) 1,4-dichlorobenzene | 17.183 | | 0 | N.D. | | |
| 107) 1,2-dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 115) 1,2,4-trichlorobenzene | 18.842 | | 0 | N.D. | | |
| 119) hexachlorobutadiene | 0.000 | | 0 | N.D. | | |

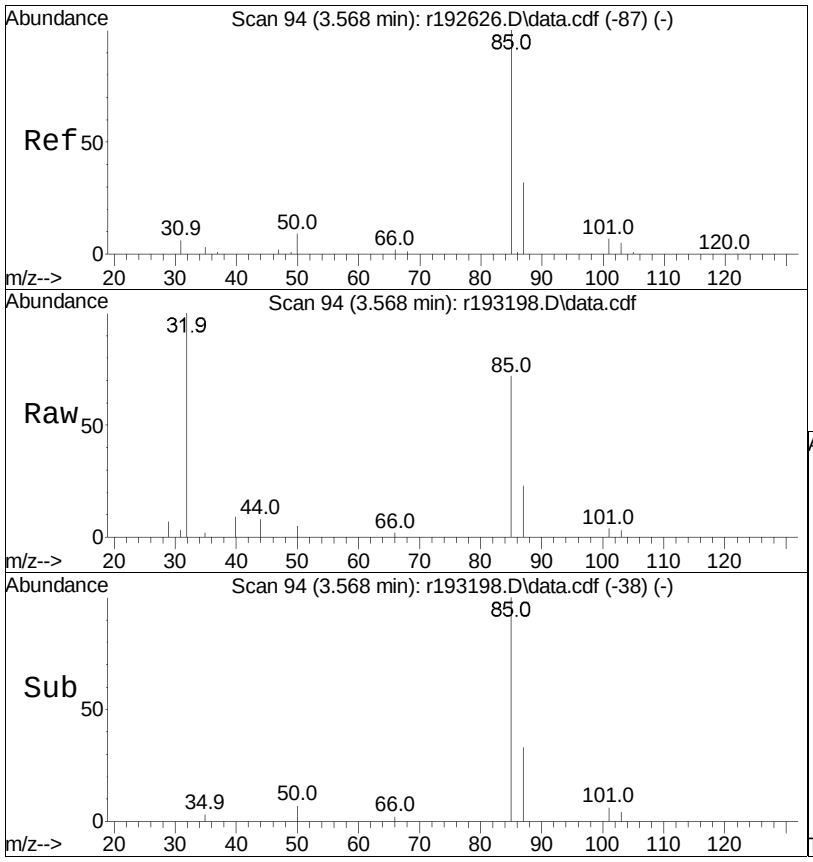
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : TO15-NY-7-SIM - .\Airlab19\2020\03\200320T\r193190.D

Data Path : O:\Forensics\Data\Airlab19\2020\03\200320T\
Data File : r193198.D
Acq On : 20 Mar 2020 7:17 PM
Operator : AIRLAB19:EW
Sample : WG1353556-5,3,250,250
Misc : WG1353556,ICAL16553
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 20:12:50 2020
Quant Method : O:\Forensics\Data\Airlab19\2020\03\200320T\TFS19_200224.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Tue Feb 25 10:21:40 2020
Response via : Initial Calibration

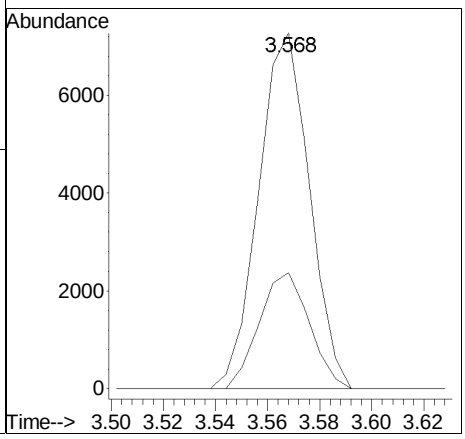


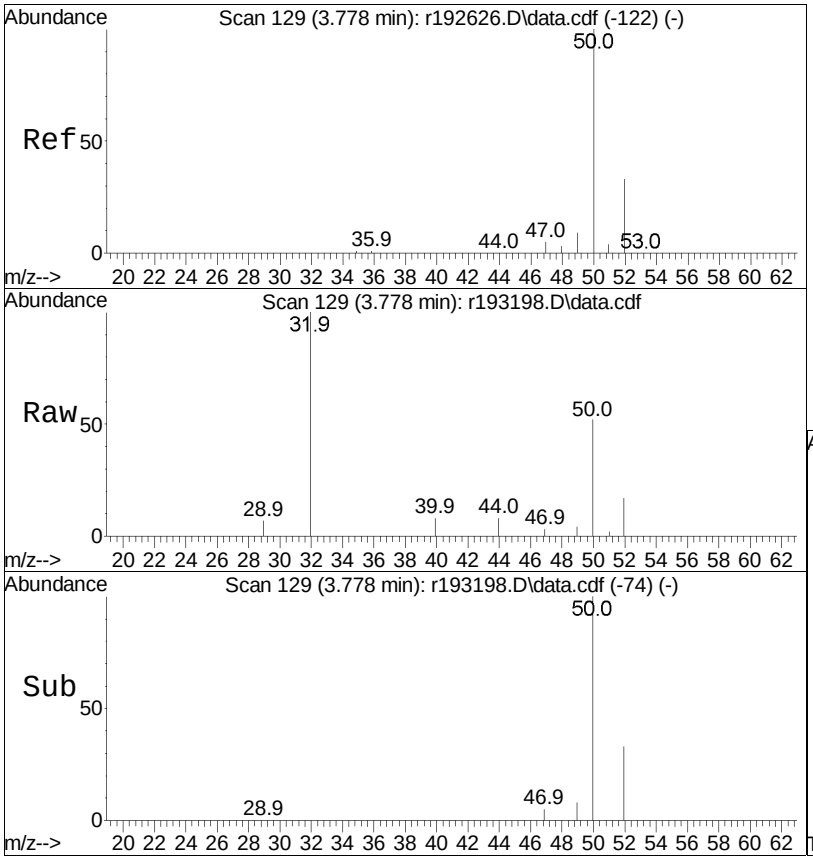



#5
dichlorodifluoromethane
Concen: 0.50 ppbV
RT: 3.568 min Scan# 94
Delta R.T. 0.006 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 85 Resp: 9846

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.6 | 25.9 | 38.9 |

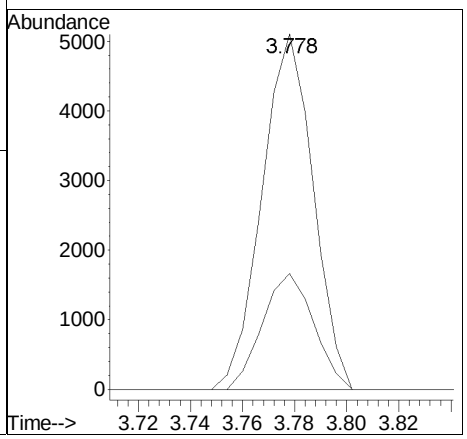


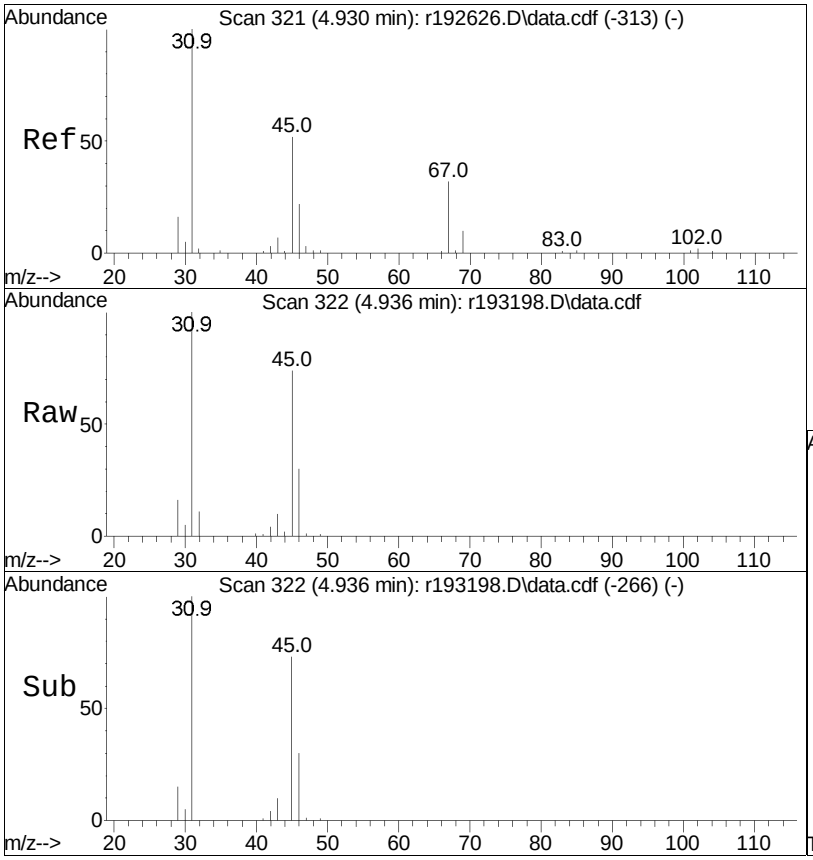



#6
chloromethane
Concen: 0.55 ppbV
RT: 3.778 min Scan# 129
Delta R.T. 0.000 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 50 Resp: 6975

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 32.6 | 26.3 | 39.5 |

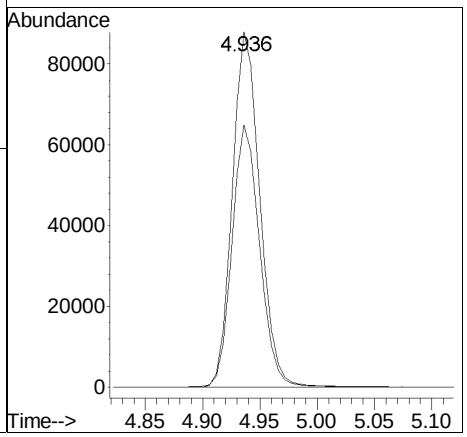


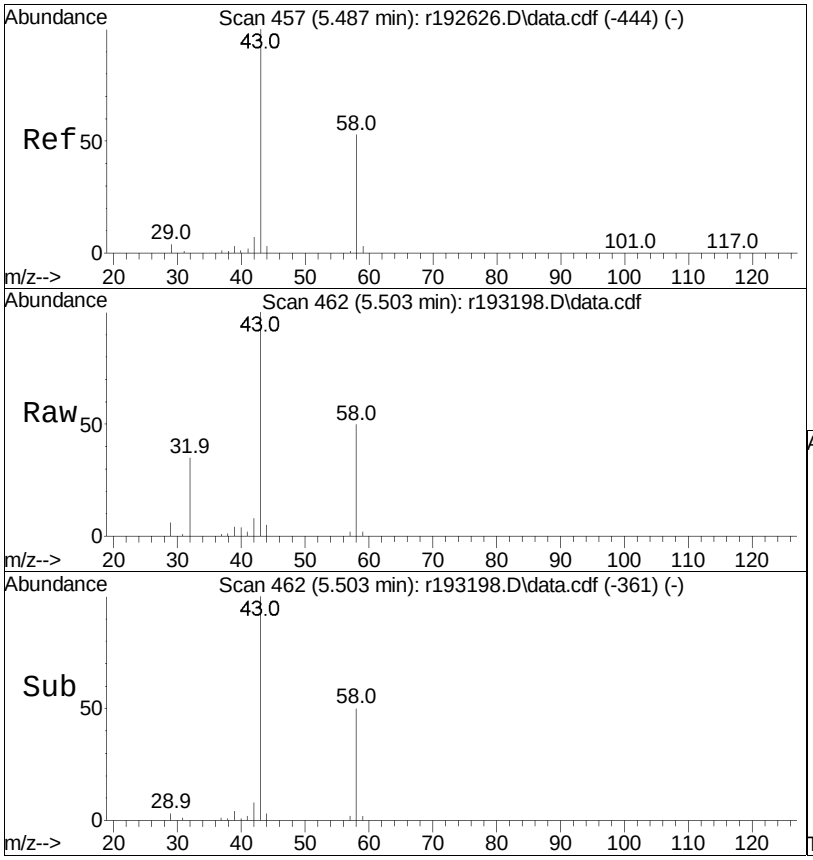



#15
ethanol
Concen:  14.34 ppbV
RT:  4.936 min  Scan# 322
Delta R.T.  0.006 min
Lab File:  r193198.D
Acq: 20 Mar 2020  7:17 PM

Tgt Ion: 31 Resp:  146956

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 31 | 100 | | |
| 45 | 73.8 | 40.6 | 60.8# |

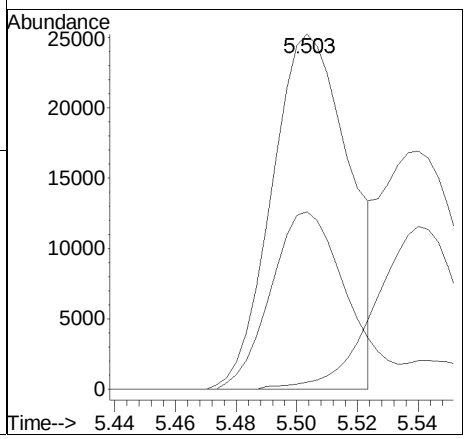


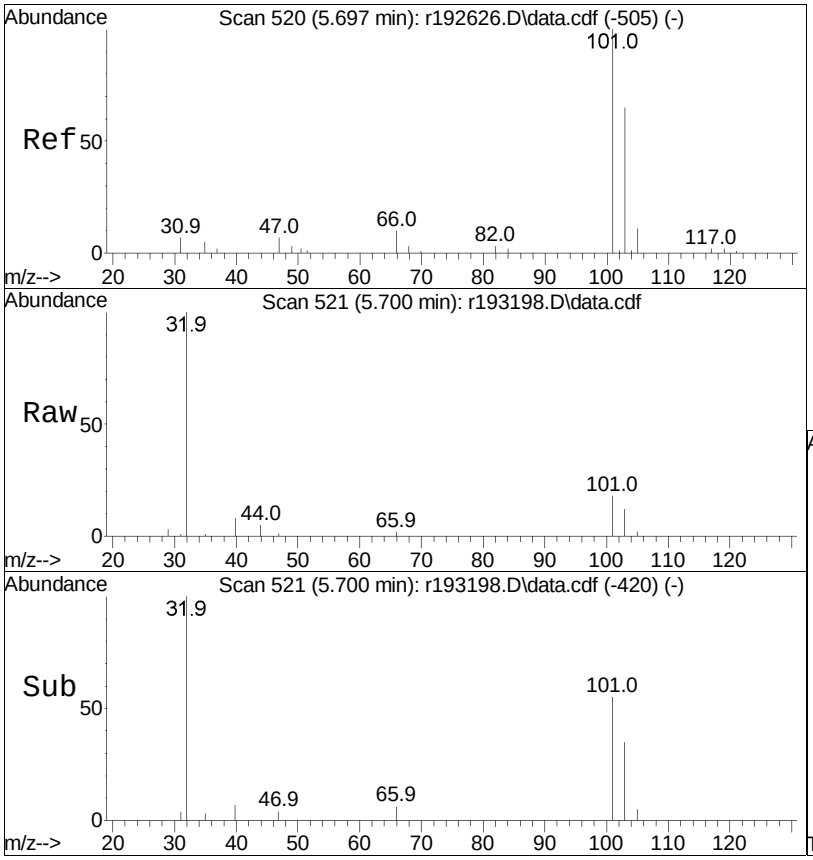



#19
acetone
Concen: 2.38 ppbV
RT: 5.503 min Scan# 462
Delta R.T. 0.007 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 43 Resp: 44811

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 50.0 | 42.0 | 63.0 |
| 57 | 2.0 | 1.4 | 2.0 |

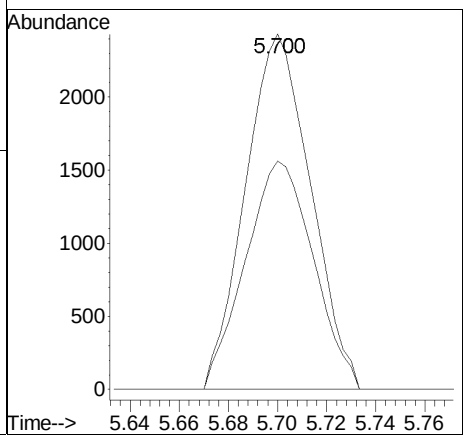


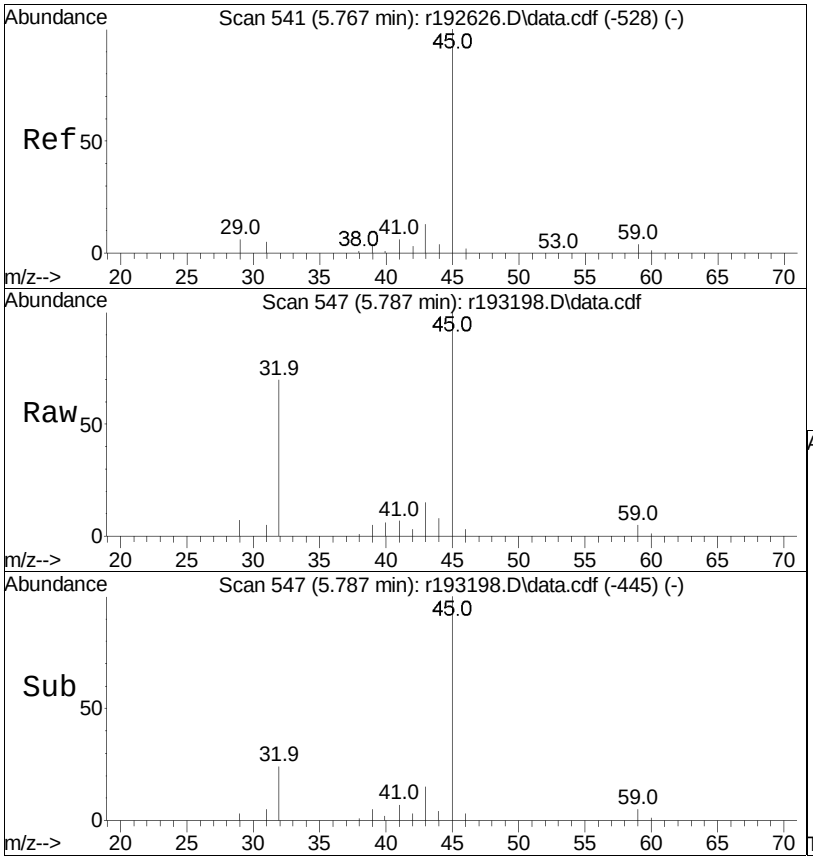



#21
trichlorofluoromethane
Concen: 0.22 ppbV
RT: 5.700 min Scan# 521
Delta R.T. 0.007 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion:101 Resp: 4487

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.3 | 51.4 | 77.2 |

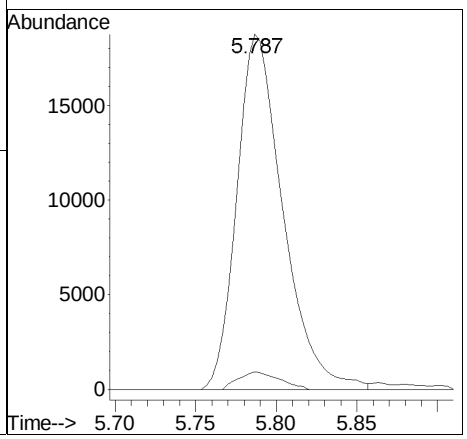


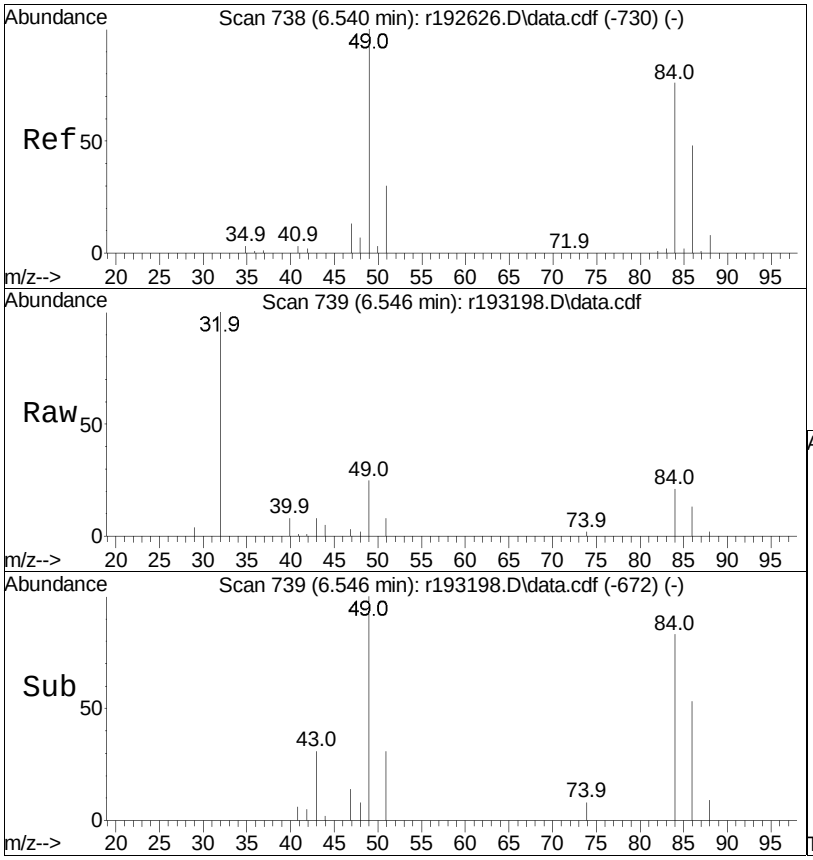



#22
isopropyl alcohol
Concen: 1.04 ppbV
RT: 5.787 min Scan# 547
Delta R.T. 0.010 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 45 Resp: 37325

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 59 | 5.0 | 3.7 | 5.5 |

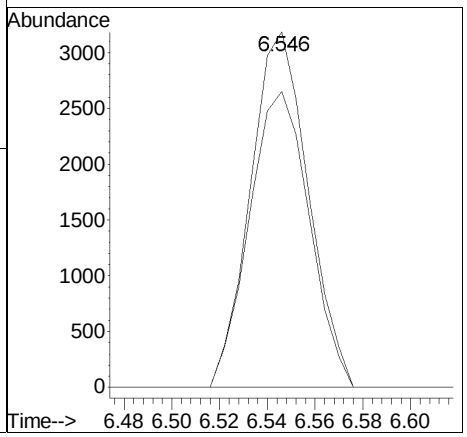


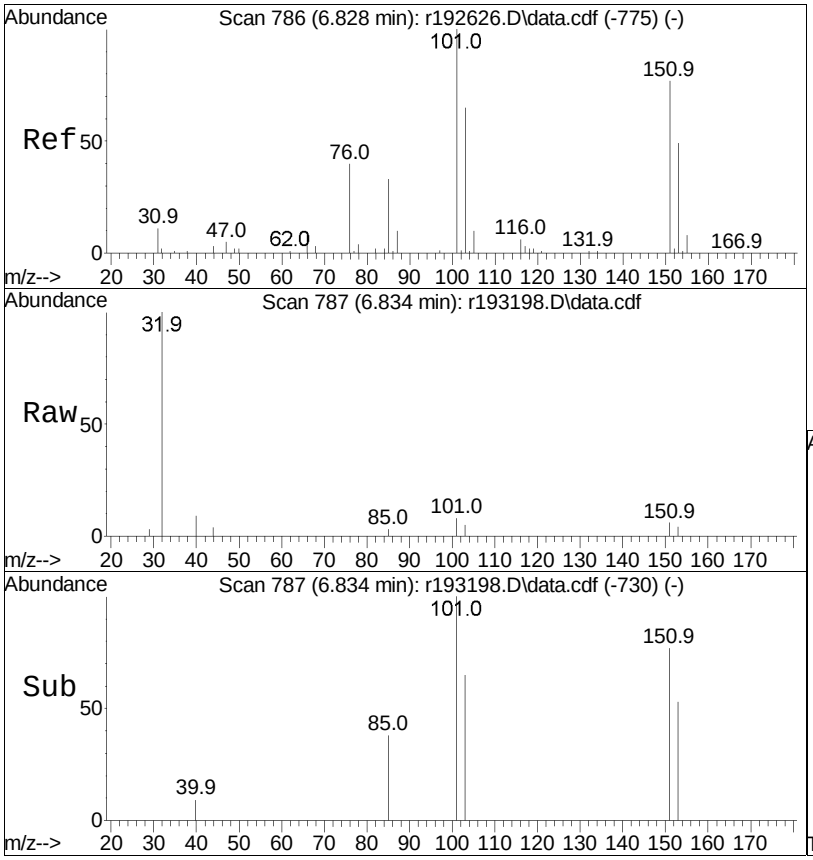



#28
methylene chloride
Concen: 0.23 ppbV
RT: 6.546 min Scan# 739
Delta R.T. 0.012 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 49 Resp: 5360

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 83.3 | 59.8 | 89.6 |

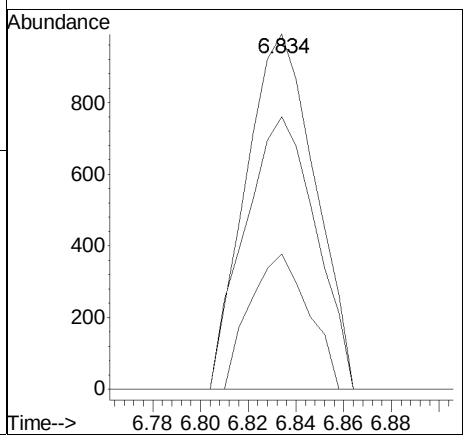


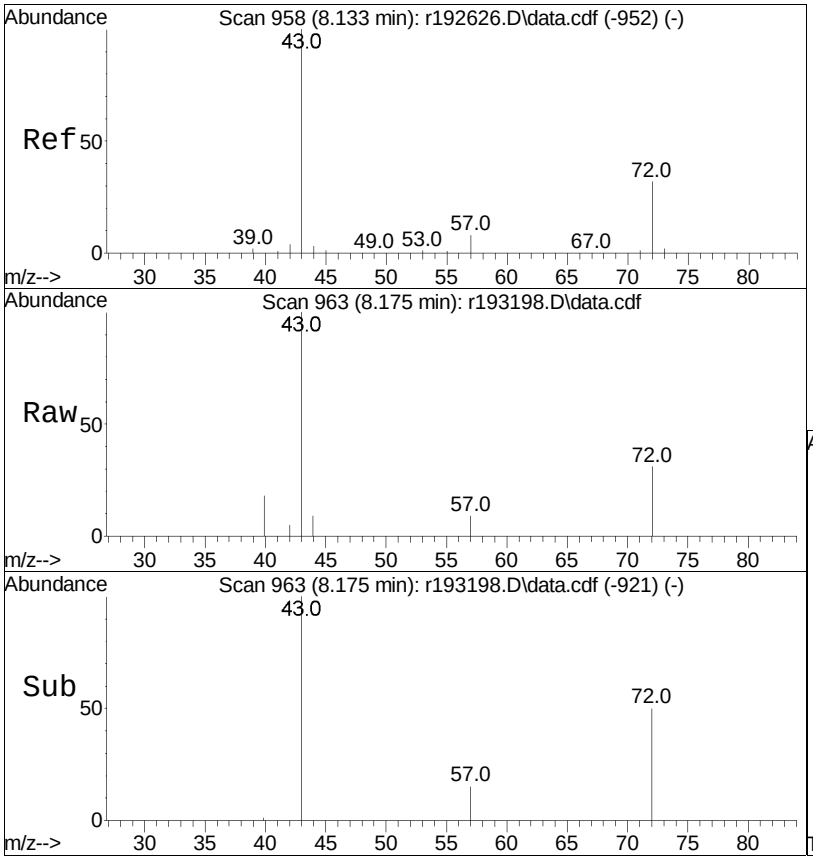



#31
Freon 113
Concen: 0.06 ppbV
RT: 6.834 min Scan# 787
Delta R.T. 0.012 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion:101 Resp: 1993

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 85 | 38.0 | 26.7 | 40.1 |
| 151 | 76.7 | 63.4 | 95.2 |

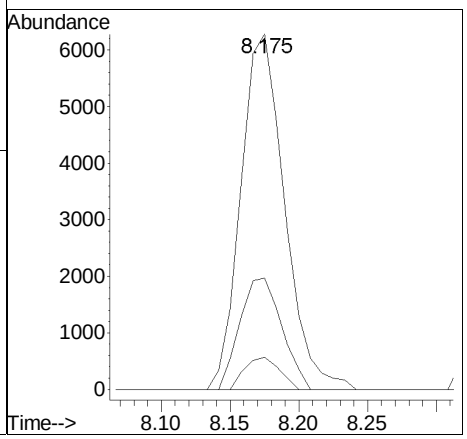


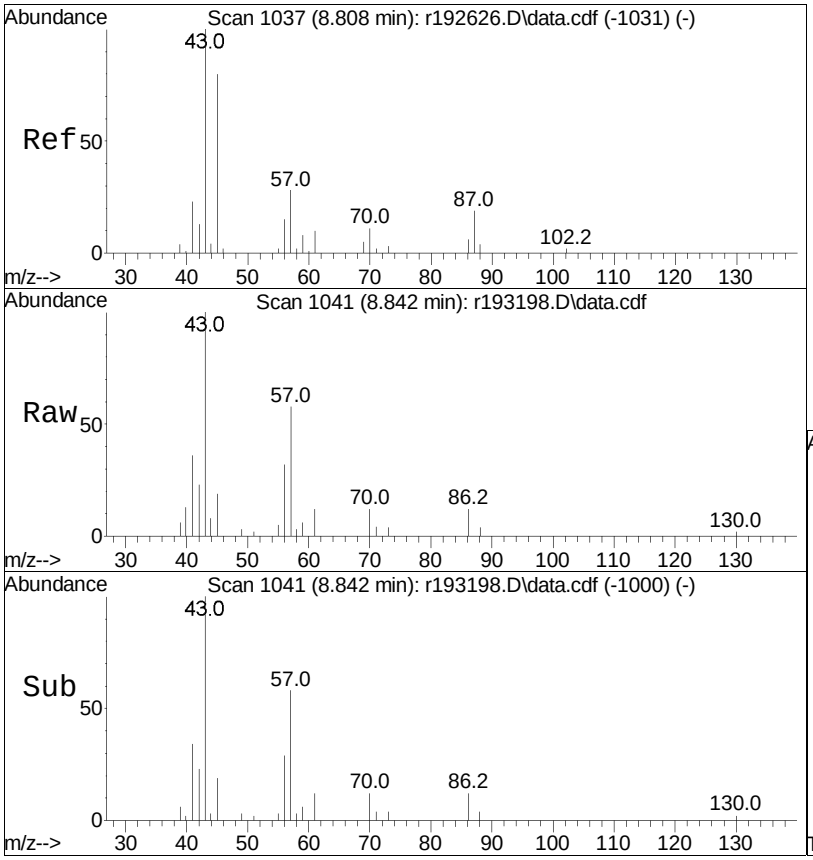



#36
2-butanone
Concen: 0.33 ppbV
RT: 8.175 min Scan# 963
Delta R.T. 0.017 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 43 Resp: 13906

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 31.3 | 27.7 | 41.5 |
| 57 | 9.1 | 6.3 | 9.5 |

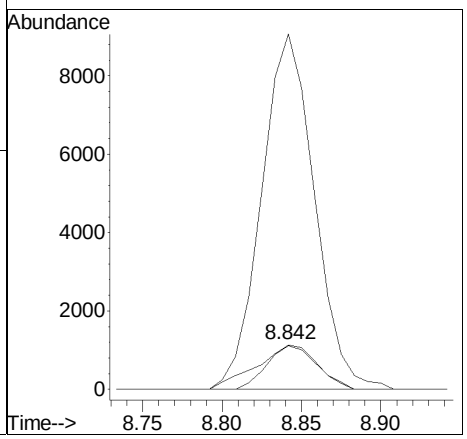


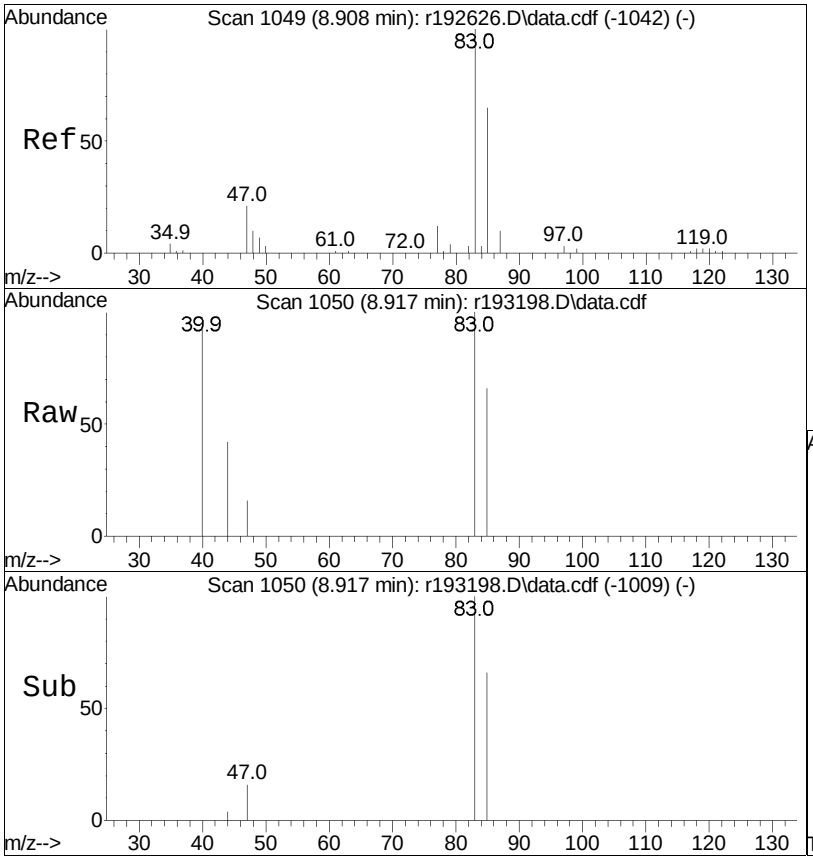



#38
Ethyl Acetate
Concen: 0.42 ppbV
RT: 8.842 min Scan# 1041
Delta R.T. 0.008 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 61 Resp: 2999

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 98.3 | 86.6 | 130.0 |
| 43 | 800.5 | 819.5 | 1229.3# |

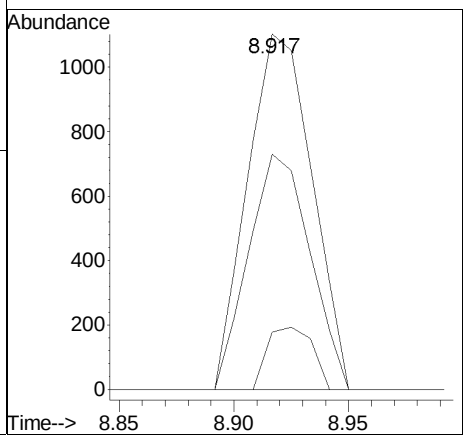


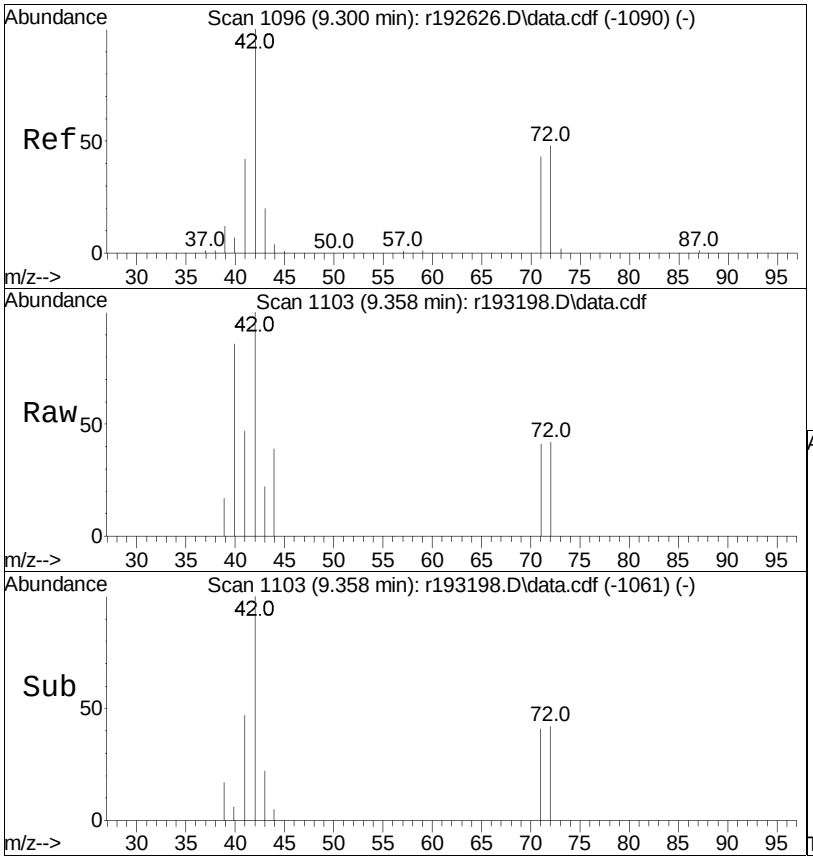



#39
chloroform
Concen: 0.07 ppbV
RT: 8.917 min Scan# 1050
Delta R.T. 0.008 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 83 Resp: 2161

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 66.2 | 50.1 | 75.1 |
| 47 | 16.1 | 17.6 | 26.4# |

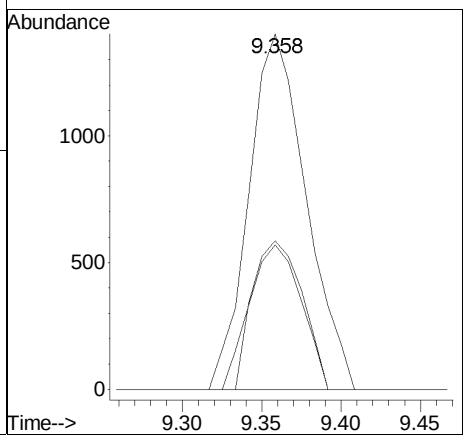


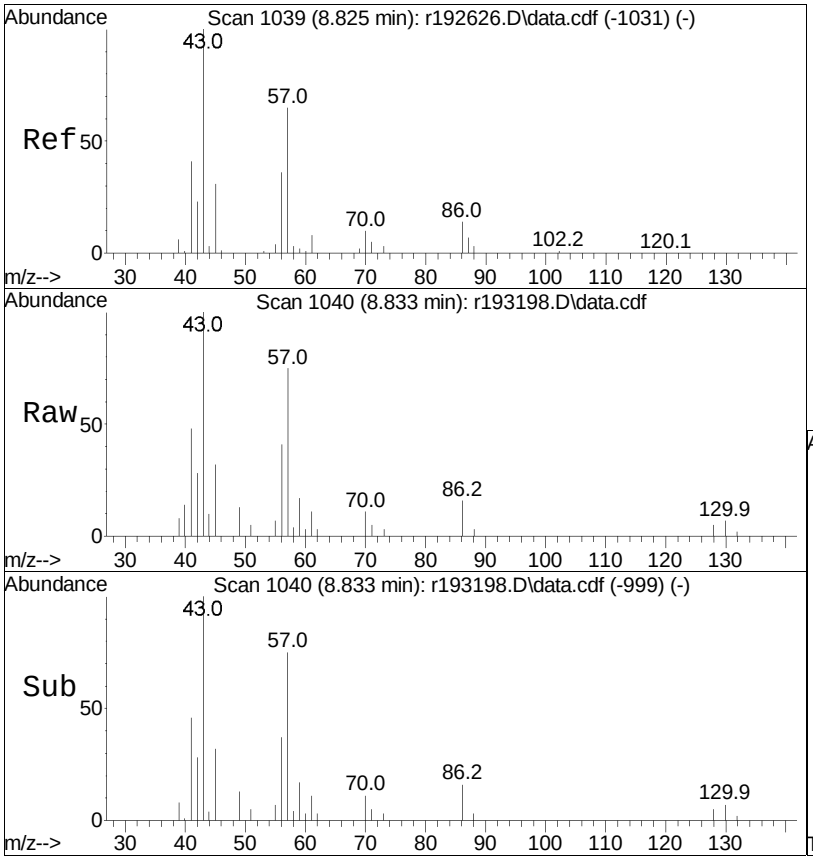



#40
Tetrahydrofuran
Concen: 0.12 ppbV
RT: 9.358 min Scan# 1103
Delta R.T. 0.017 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 42 Resp: 3518

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 71 | 40.7 | 32.5 | 48.7 |
| 72 | 41.8 | 33.7 | 50.5 |

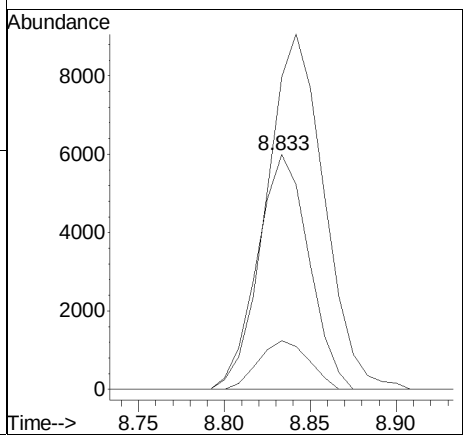


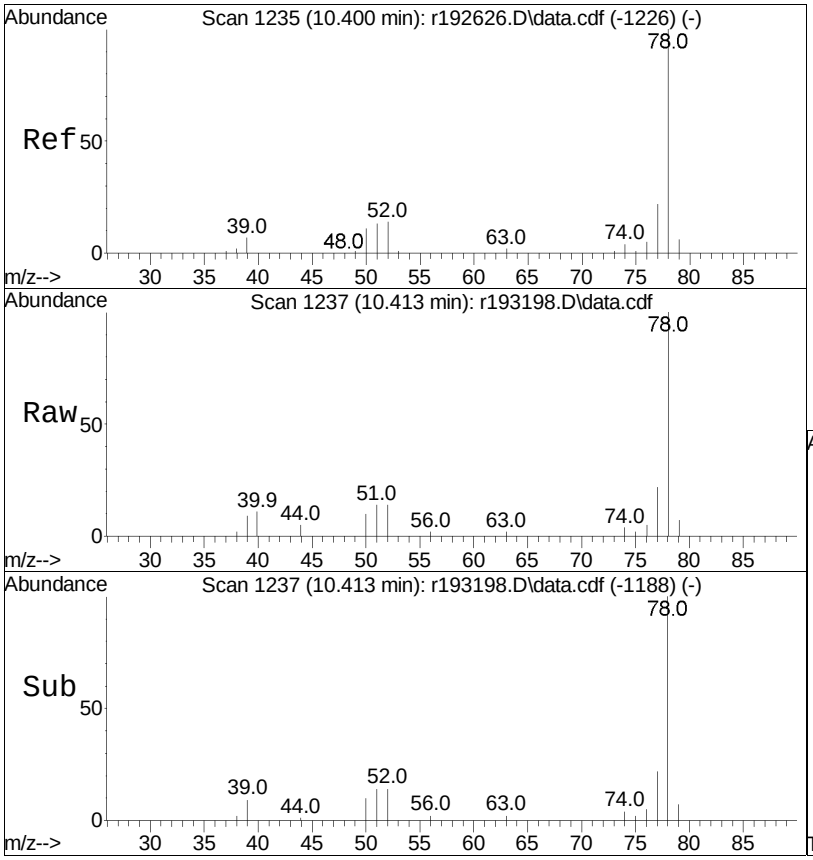



#44
hexane
Concen: 0.33 ppbV
RT: 8.833 min Scan# 1040
Delta R.T. 0.008 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 57 Resp: 12564

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 133.0 | 159.3 | 238.9# |
| 86 | 20.8 | 15.7 | 23.5 |

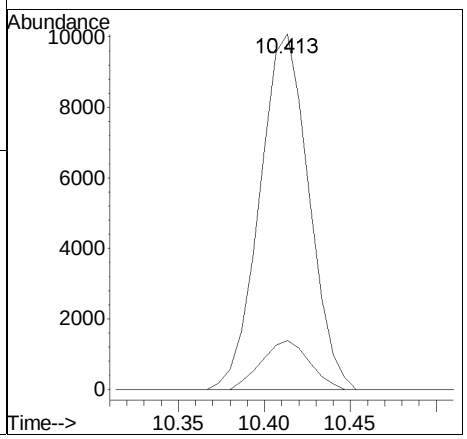


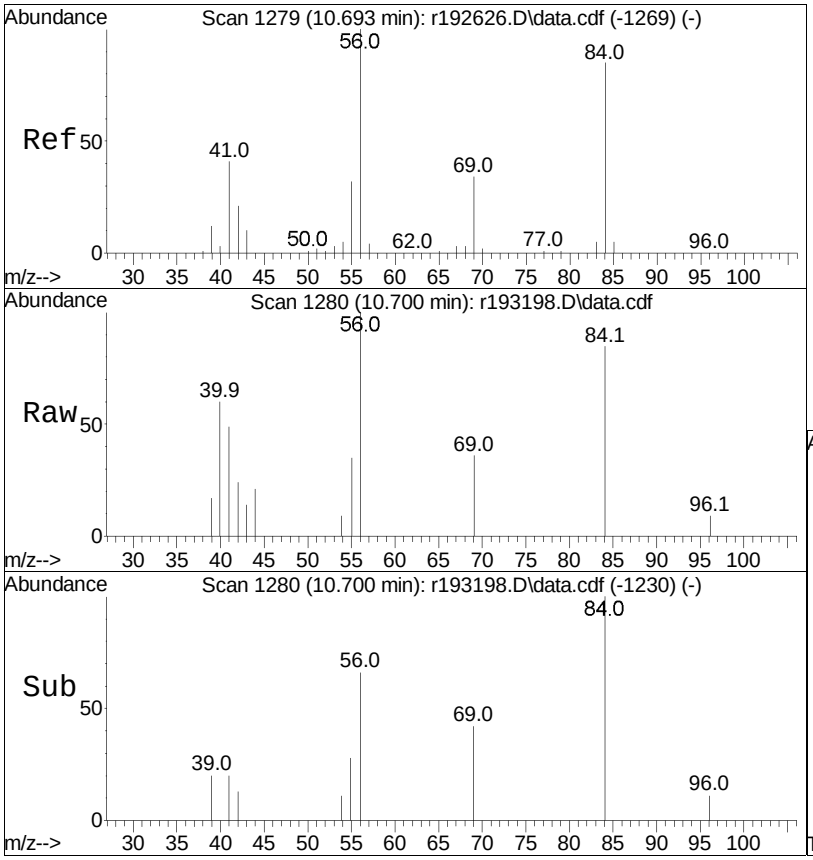



#50
benzene
Concen: 0.27 ppbV
RT: 10.413 min Scan# 1237
Delta R.T. 0.013 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 78 Resp: 20020

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 52 | 13.8 | 11.4 | 17.2 |

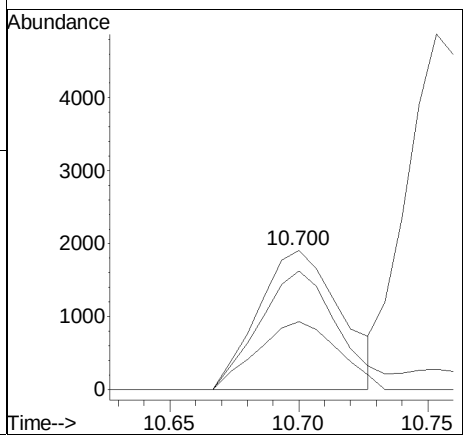


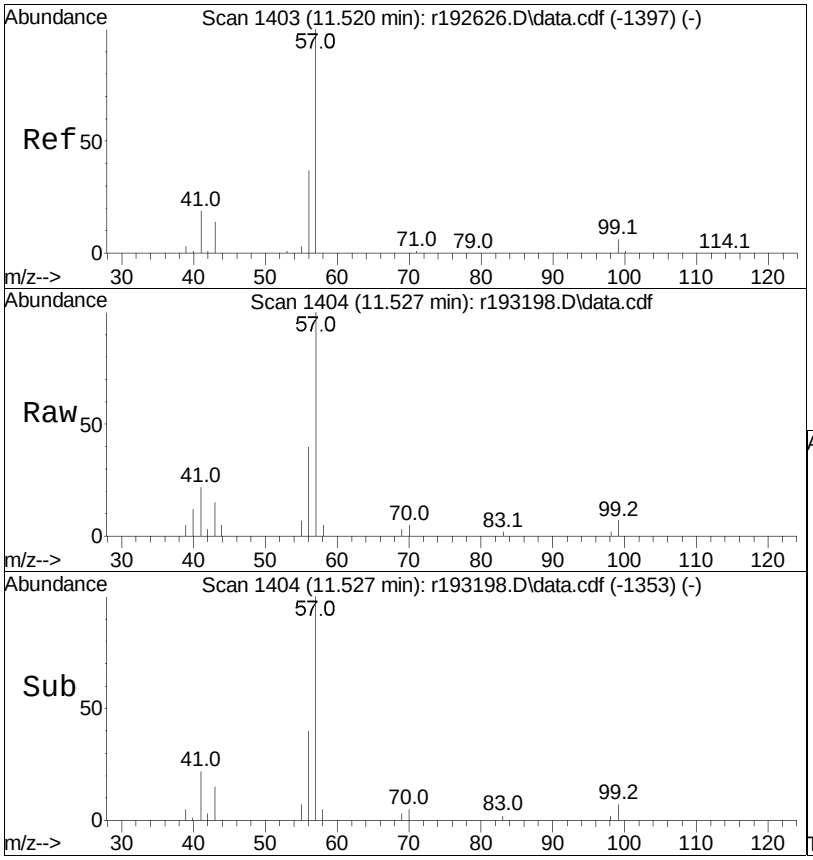



#53
cyclohexane
Concen: 0.10 ppbV
RT: 10.700 min Scan# 1280
Delta R.T. 0.007 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 56 Resp: 4222

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 84 | 85.3 | 69.8 | 104.6 |
| 41 | 48.8 | 32.1 | 48.1# |

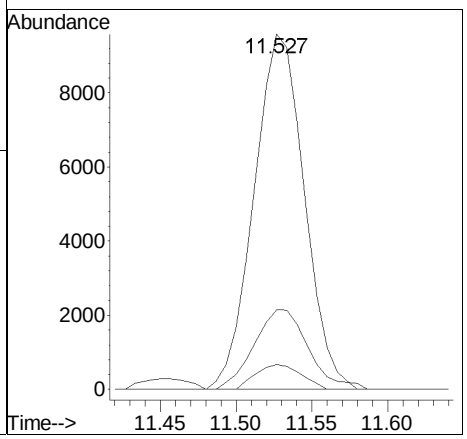


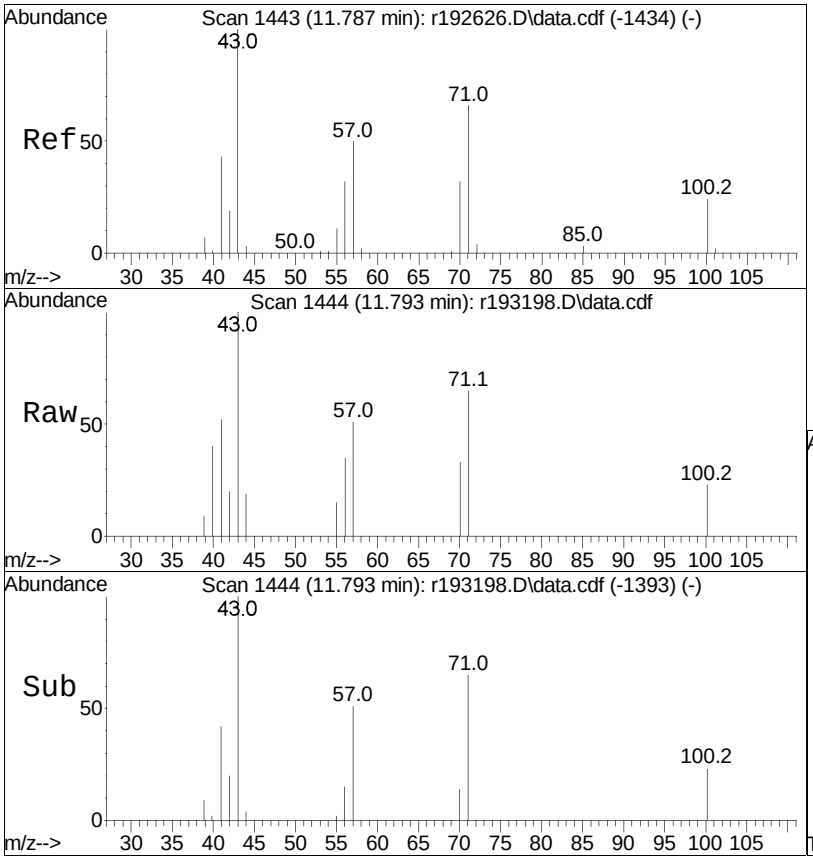



#60
2,2,4-trimethylpentane
Concen: 0.18 ppbV
RT: 11.527 min Scan# 1404
Delta R.T. 0.007 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 57 Resp: 22103

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 99 | 7.0 | 6.0 | 9.0 |
| 41 | 22.4 | 15.6 | 23.4 |

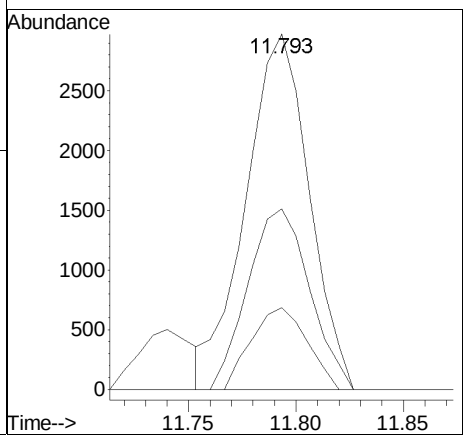


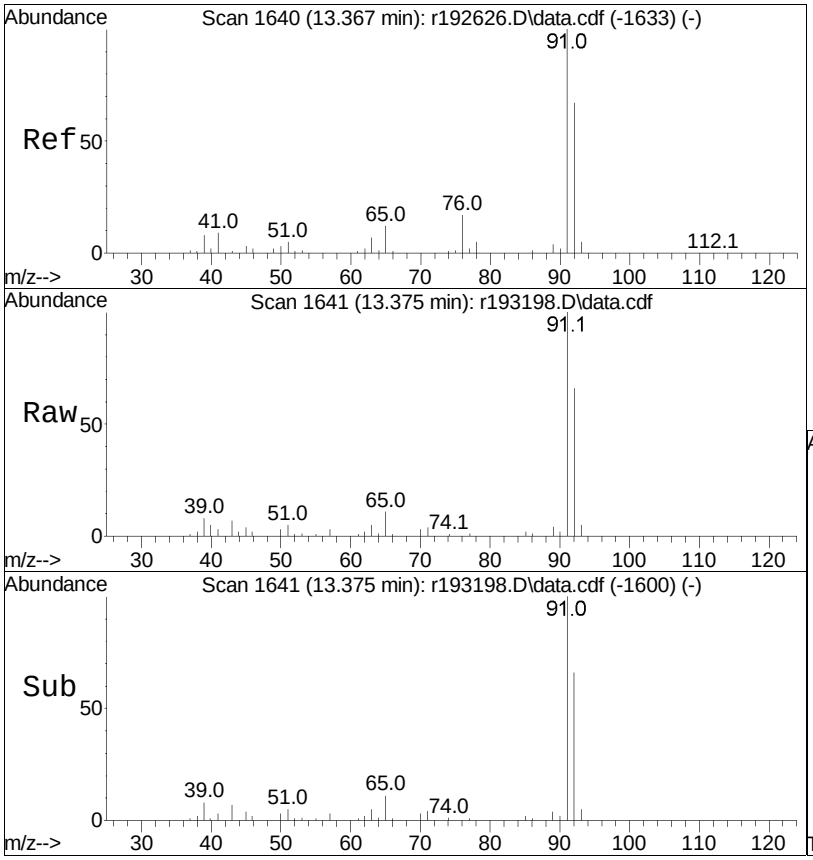



#62
heptane
Concen: 0.13 ppbV
RT: 11.793 min Scan# 1444
Delta R.T. 0.013 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 43 Resp: 6093

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 50.8 | 41.0 | 61.6 |
| 100 | 23.1 | 21.4 | 32.2 |

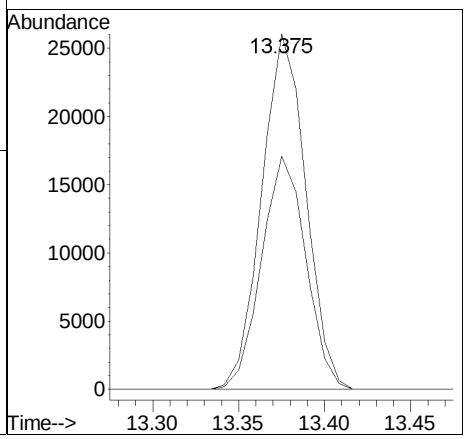


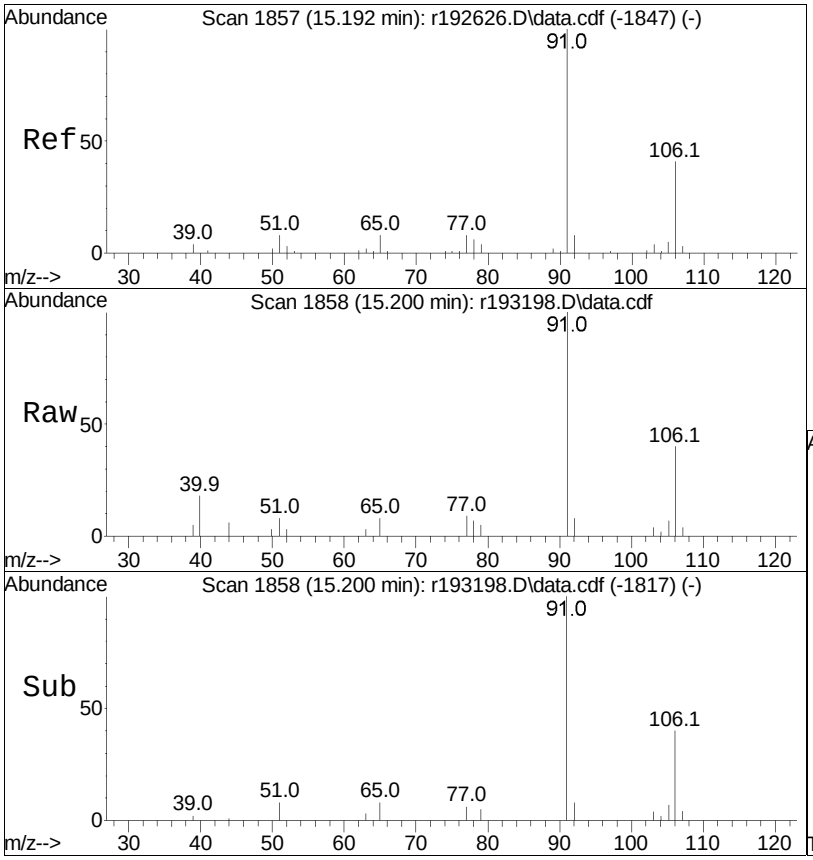



#68
toluene
Concen: 0.58 ppbV
RT: 13.375 min Scan# 1641
Delta R.T. 0.008 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 91 Resp: 46498

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 65.6 | 53.3 | 79.9 |

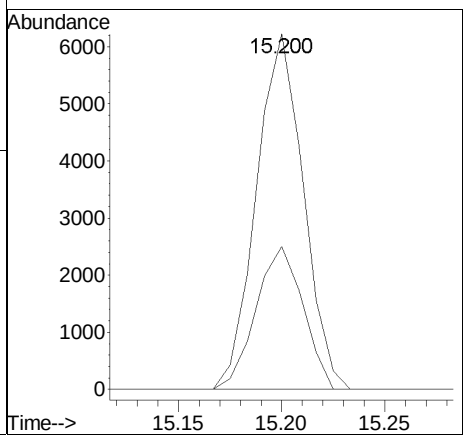


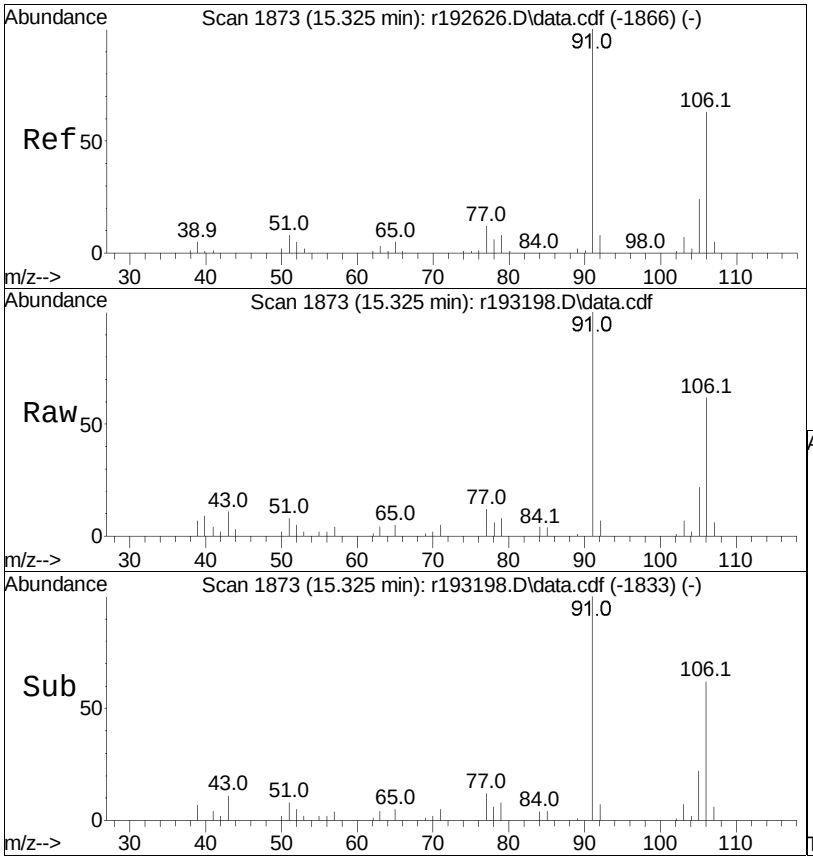



#81
ethylbenzene
Concen: 0.10 ppbV
RT: 15.200 min Scan# 1858
Delta R.T. 0.008 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 91 Resp: 9858

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 40.2 | 32.9 | 49.3 |

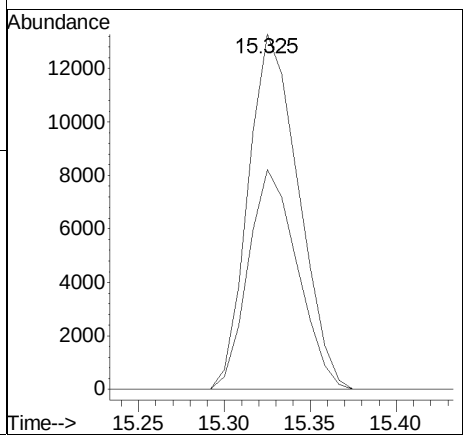


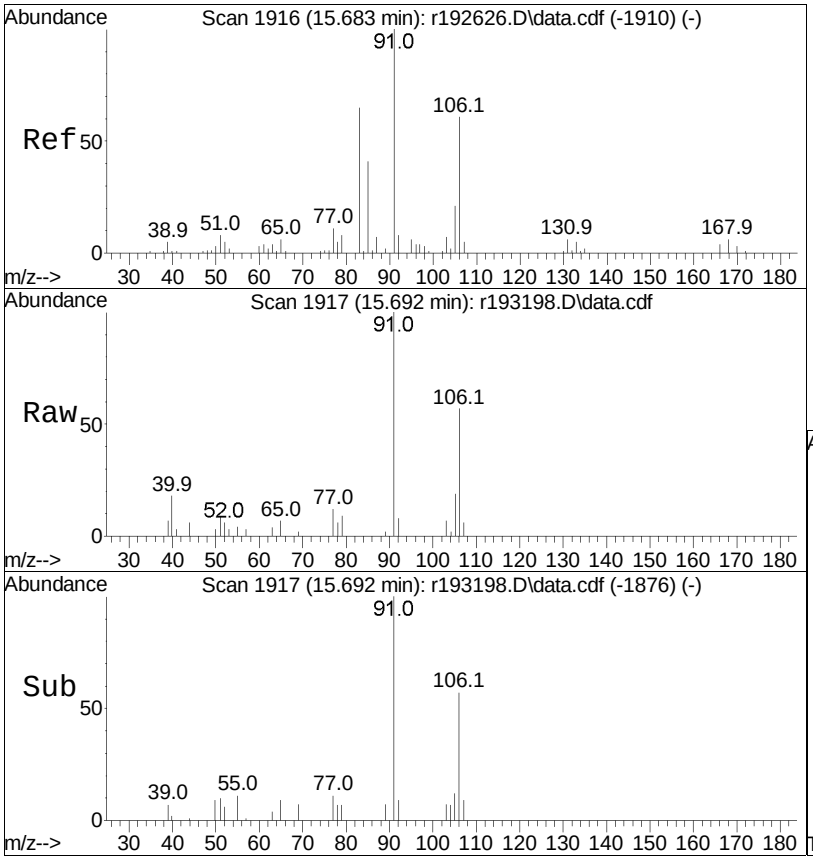



#83
m+p-xylene
Concen: 0.36 ppbV
RT: 15.325 min Scan# 1873
Delta R.T. 0.000 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 91 Resp: 27002

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 61.9 | 51.0 | 76.4 |

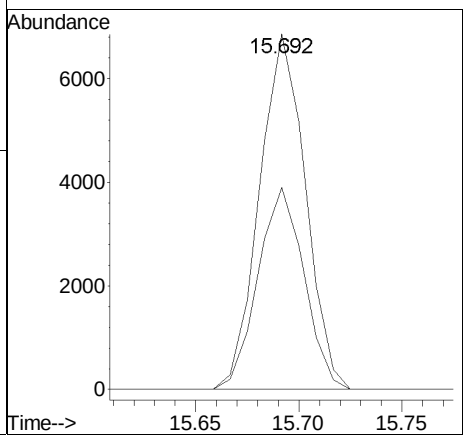


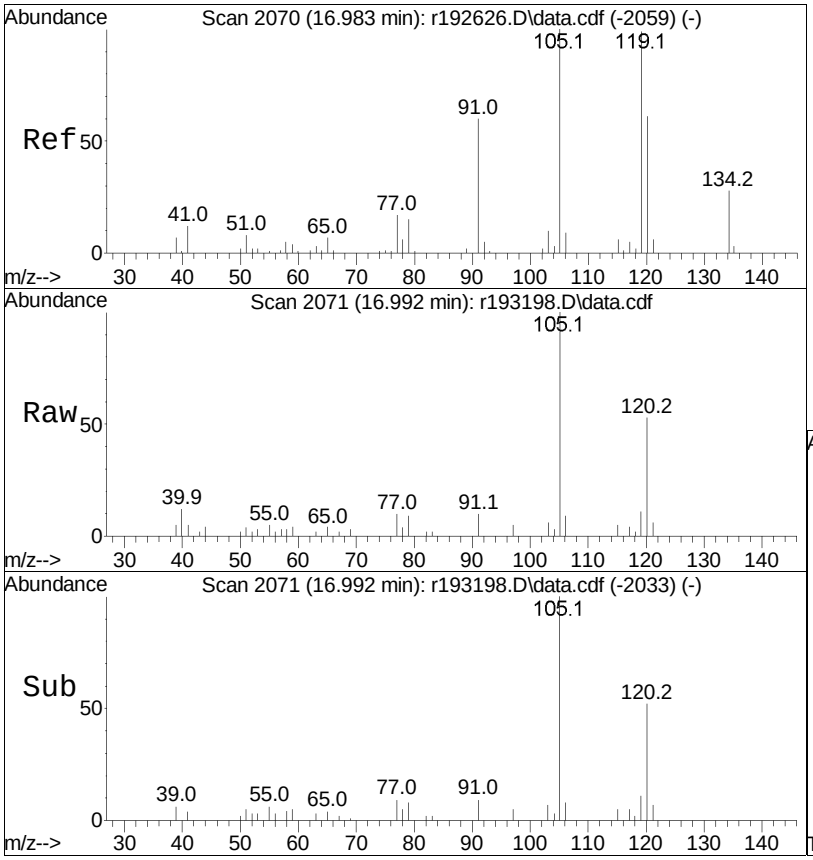



#87
o-xylene
Concen: 0.14 ppbV
RT: 15.692 min Scan# 1917
Delta R.T. 0.008 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion: 91 Resp: 10622

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 56.8 | 47.8 | 71.8 |

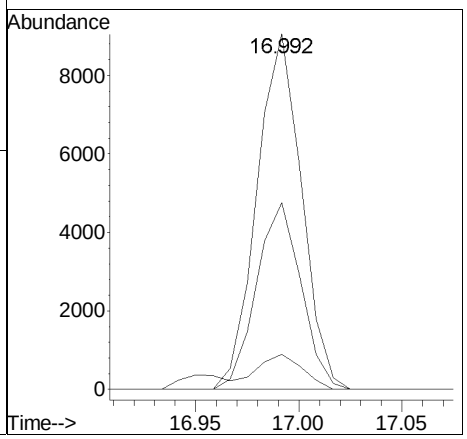





#99
1,2,4-trimethylbenzene
Concen: 0.15 ppbV
RT: 16.992 min Scan# 2071
Delta R.T. 0.000 min
Lab File: r193198.D
Acq: 20 Mar 2020 7:17 PM

Tgt Ion:105 Resp: 13625

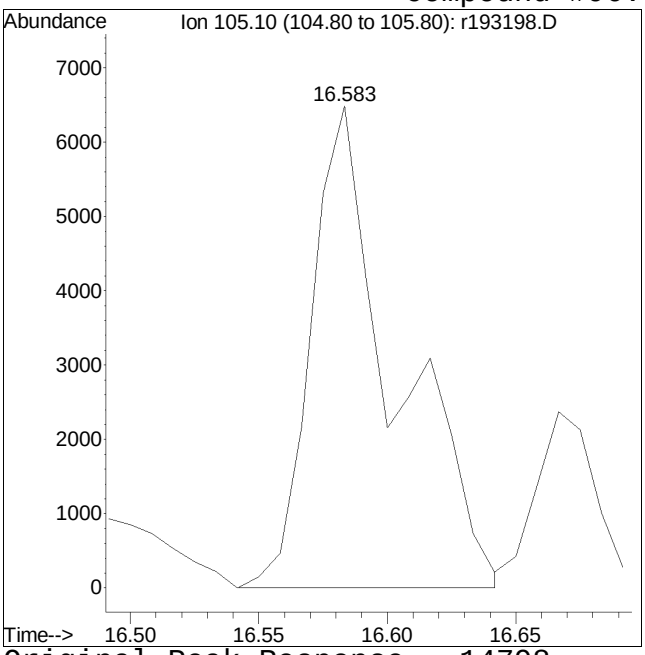
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 52.6 | 49.2 | 73.8 |
| 91 | 9.9 | 49.9 | 74.9# |

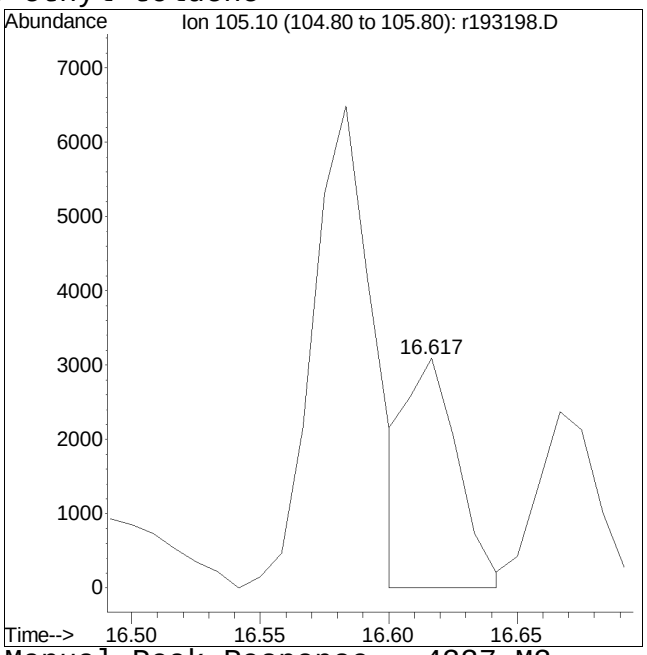


Manual Integration Report

Data Path : O:\Forensics\Data\Airlab19QMethod : TFS19_200224.M
Data File : r193198.D Operator : AIRLAB19:EW
Date Inj'd : 3/20/2020 0:7: 7 Instrument :
Sample : WG1353556-5,3,250,250 Quant Date : 3/21/2020 7:53 am

Compound #96: 4-ethyl toluene




Original Peak Response = 14798 Manual Peak Response = 4337 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

# Calculation of Volatile Organic Compounds in Air

The instrument will calculate the concentration (ppbv). If the sample is diluted (DF), the result is multiplied by the DF to generate the final result.

Result, ppbv = $C_s$ x DF
Where:
$C_s$ = Concentration of sample (ppbv)
DF = Dilution Factor

Calculation of Instrument Dilution Factor

For dilutions, smaller sample volumes (< 250mL) are analyzed. The smallest volume that can be analyzed with accuracy is 10 mL.

Samples that arrive at the laboratory with pressures below -15 inches Hg must be pressurized with zero air to greater than -15 inches Hg. This pressurization results in a dilution factor.

Calculation of Dilution Factor
$DF = V_{cf} / V_{ci}$
Where:
$V_{ci}$ = volume of air in canister prior to pressurization, L
P =

Conversion of ppbv to $ug/m^3$
$ug/m^3$ = (ppbv) * MW / 24.47
Where:
24.47 = molar gas constant (g/g-mole)
MW = molecular weight of the compound of interest

Dilution Factor for Pressurization of Subatmospheric Samples: Three Steps

Step 1: Calculate the volume in the canister prior to pressurization (Assume a 2.7 liter canister is used).

Dilution Factor for Pressurization of Subatmospheric Samples: Three Steps

Step 1: Calculate the volume in the canister prior to pressurization (Assume a 2.7 liter canister is used).

$V_{ci} = 2.7 * Pl/14.696$

Step 2: Calculate the volume in the canister after pressurization.

$V_{cf} = 2.7 * PF/14.696$

Step 3: Calculate the dilution factor.

$DF = V_{cf} / V_{ci}$

Where:

$V_{ci}$ = volume of air in canister prior to pressurization, L
PI = pressure reading of canister prior to pressurization (psia)
$V_{cf}$ = volume of air in canister after pressurization, L
PF = pressure reading of canister after pressurization (psia)
DF = dilution factor
14.696 = atmospheric pressure (psia)

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Mar 27 2020, 03:50 pm

Work Group: WG1353541  for Department: 3 GC/MS

Created: 20-MAR-20  Due:  Operator: EW

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L2011723-05 | OA001 | S | TO15-LL | AIR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2011723-06 | IA001 | S | TO15-LL | AIR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2011818-01 | SVE-INF1 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2011818-02 | SVE-INF2 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2011818-03 | SVE-INF3 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2011818-04 | GAC-INF | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2011818-05 | GAC-EFF | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2011818-06 | SSDS-INF | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2011818-07 | DUP-3-16-20 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0415 | 0323 | S0 | Can-6 |
| L2012074-01 | IA-8 | S | TO15-LL | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-02 | IA-7 | S | TO15-LL | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-03 | IA-10 | S | TO15-LL | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-04 | IA-6 | S | TO15-LL | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-05 | IA-9 | S | TO15-LL | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| WG1353541-1 | MS BFB Tune Standard | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353541-1 | MS BFB Tune Standard | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353541-2 | Continuing Calibrati | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353541-2 | Continuing Calibrati | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353541-3 | Laboratory Control S | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353541-3 | Laboratory Control S | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353541-4 | Laboratory Method Bl | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353541-4 | Laboratory Method Bl | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353541-5 | Duplicate Sample | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353541-5 | Duplicate Sample | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |

Comments:

WG1353541-5  L2011723-06

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Mar 27 2020, 03:50 pm

Work Group: WG1353556  for Department: 3 GC/MS

Created: 20-MAR-20  Due:  Operator: EW

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L2011420-01 | 25P-IAN-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-02 | 25P-IA-BASEMENT-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-03 | 25P-IAS-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-04 | 25P-IF-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-05 | 25P-2B-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-06 | 25P-1STHW-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-07 | 25P-3G-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011420-08 | 25P-4G-20200312 | S | TO15-LL | AIR | DONE | U | 0412 | 0320 | S0 | Can-6 |
| L2011676-01 | SS-1(031320) | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0320 | S0 | Can-2.7 |
| L2011676-02 | SS-2(031320) | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0320 | S0 | Can-2.7 |
| L2011676-03 | SS-3(031320) | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0320 | S0 | Can-2.7 |
| L2011676-04 | SS-4(031320) | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0320 | S0 | Can-2.7 |
| L2011723-01 | SS001 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2011723-02 | SV001 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2011723-03 | SV002 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2011723-04 | SV003 | S | TO15-LL | SOIL_VAPOR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| WG1353556-1 | MS BFB Tune Standard | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353556-1 | MS BFB Tune Standard | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353556-2 | Continuing Calibrati | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353556-2 | Continuing Calibrati | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353556-3 | Laboratory Control S | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353556-3 | Laboratory Control S | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353556-4 | Laboratory Method Bl | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |
| WG1353556-4 | Laboratory Method Bl | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353556-5 | Duplicate Sample | S | TO15-LL | AIR | DONE | U | | | | |
| WG1353556-5 | Duplicate Sample | S | TO15-LL | SOIL_VAPOR | DONE | U | | | | |

Comments:

WG1353556-5  L2011420-03

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: AIRLAB19

Internal Standard/Surrogate IDs: SS19-030 / SS19-022

Date: 02/24/2020

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: AR

Sequence File Name: 200224.S

SIM ICAL# Full Scan ICAL# APH ICAL#

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/ N |
|---|---|---|---|---|---|---|---|
| 1 | BA19022401 | TO15_SFS.qgm | R192615.qgd | 250 mL | | | NA |
| 1 | BA19022402 | TO15_SFS.qgm | R192616.qgd | 250 mL | | | NA |
| 1 | BA19022303 | TO15_SFS.qgm | R192617.qgd | 250 mL | | | NA |
| 1 | TA19022401 | TO15_SFS.qgm | R192618.qgd | 250 mL | TUNE | | NA |
| 5 | ITO15-SIMSTD0.02 | TO15_SFS.qgm | R192619.qgd | 50 mL SS20-004D | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.05 | TO15_SFS.qgm | R192620.qgd | 125 mL SS20-004D | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.1 | TO15_SFS.qgm | R192621.qgd | 250 mL SS20-004D | SIM ONLY | | NA |
| 6 | ITO15-SIMSTD0.2 | TO15_SFS.qgm | R192622.qgd | 50 mL SS20-004C | | | NA |
| 6 | ITO15-SIMSTD0.5 | TO15_SFS.qgm | R192623.qgd | 125 mL SS20-004C | | | NA |
| 6 | ITO15-SIMSTD1.0 | TO15_SFS.qgm | R192624.qgd | 250 mL SS20-004C | | | NA |
| 7 | ITO15-SIMSTD5.0 | TO15_SFS.qgm | R192625.qgd | 125 mL SS20-004B1 | | | NA |
| 7 | ITO15-SIMSTD010 | TO15_SFS.qgm | R192626.qgd | 250 mL SS20-004B1 | | | NA |
| 8 | ITO15-SIMSTD020 | TO15_SFS.qgm | R192627.qgd | 50 mL SS20-004A | | | NA |
| 8 | ITO15-SIMSTD050 | TO15_SFS.qgm | R192628.qgd | 125 mL SS20-004A | | | NA |
| 8 | ITO15-LLSTD100 | TO15_SFS.qgm | R192629.qgd | 250 mL SS20-004A | NOT USED FOR SIM | | NA |
| 1 | BA19022401 | TO15_SFS.qgm | R192630.qgd | 250 mL | | | NA |
| 1 | BA19022402 | TO15_SFS.qgm | R192631.qgd | 250 mL | | | NA |
| 2 | CTO15-LLSTD010 | TO15_SFS.qgm | R192632.qgd | 250 mL SS20-006A | FULL SCAN ICV | | NA |
| 2 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R192633.qgd | 125 mL SS20-006A | SIM ICV | | NA |
| | | | | | | | |

# Alpha Analytical Air Lab
# Instrument Run Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: Airpiano3

Internal Standard/Surrogate IDs: SS20-009 / SS19-022

Date: 03/12/20

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: TS

Sequence File Name: 200312.S

SIM ICAL# Full Scan ICAL# APH ICAL#

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/ N |
|---|---|---|---|---|---|---|---|
| 1 | BA3031201 | TO15_SFS.qgm | R38585.qgd | 250 mL | | | NA |
| 1 | BA3031202 | TO15_SFS.qgm | R38586.qgd | 250 mL | | | NA |
| 1 | BA3031203 | TO15_SFS.qgm | R38587.qgd | 250 mL | | | NA |
| 1 | TA3031201 | TO15_SFS.qgm | R38588.qgd | 250 mL | TUNE | | NA |
| 5 | ITO15-SIMSTD0.02 | TO15_SFS.qgm | R38589.qgd | 50 mL SS20-003D | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.05 | TO15_SFS.qgm | R38590.qgd | 125 mL SS20-003D | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.1 | TO15_SFS.qgm | R38591.qgd | 250 mL SS20-003D | SIM ONLY | | NA |
| 6 | ITO15-SIMSTD0.2 | TO15_SFS.qgm | R38592.qgd | 50 mL SS20-003C | | | NA |
| 6 | ITO15-SIMSTD0.5 | TO15_SFS.qgm | R38593.qgd | 125 mL SS20-003C | | | NA |
| 6 | ITO15-SIMSTD1.0 | TO15_SFS.qgm | R38594.qgd | 250 mL SS20-003C | | | NA |
| 7 | ITO15-SIMSTD5.0 | TO15_SFS.qgm | R38595.qgd | 125 mL SS20-003B1 | | | NA |
| 7 | ITO15-SIMSTD010 | TO15_SFS.qgm | R38596.qgd | 250 mL SS20-003B1 | | | NA |
| 8 | ITO15-SIMSTD020 | TO15_SFS.qgm | R38597.qgd | 50 mL SS20-003A | | | NA |
| 8 | ITO15-SIMSTD050 | TO15_SFS.qgm | R38598.qgd | 125 mL SS20-003A | | | NA |
| 8 | ITO15-LLSTD100 | TO15_SFS.qgm | R38599.qgd | 250 mL SS20-003A | LL ONLY | | NA |
| 1 | BA3031201 | TO15_SFS.qgm | R38600.qgd | 250 mL | | | NA |
| 1 | BA3031202 | TO15_SFS.qgm | R38601.qgd | 250 mL | | | NA |
| 2 | CTO15-LLSTD010 | TO15_SFS.qgm | R38602.qgd | 250 mL SS20-006B | LL ICV | | NA |
| 2 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R38603.qgd | 125 mL SS20-006B | SIM ICV | | NA |
| | | | | | | | |

# Alpha Analytical Air Lab
# Instrument Run Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: Airpiano3

Internal Standard/Surrogate IDs: SS20-009 / SS19-022

Date: 03/20/20

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: EW

Sequence File Name: 200320.S

SIM ICAL# 16593 Full Scan ICAL# 16594 APH ICAL#16592

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/N |
|---|---|---|---|---|---|---|---|
| 1 | TA3032001 | TO15_SFS.qgm | R38753.qgd | 250 mL | TUNE | | NA |
| 3 | CTO15-LLSTD010 | TO15_SFS.qgm | R38754.qgd | 250 mL SS20-006B | LL LCS | | NA |
| 3 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R38755.qgd | 125 mL SS20-006B | SIM LCS | | NA |
| 1 | BA3032001 | TO15_SFS.qgm | R38756.qgd | 250 mL | BLANK FAILED | | NA |
| 1 | BA3032002 | TO15_SFS.qgm | R38757.qgd | 250 mL | BLANK | | NA |
| 1 | L2011723-05,3,250,250 | TO15_SFS.qgm | R38758.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 2 | L2011723-06,3,250,250 | TO15_SFS.qgm | R38759.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 2 | L2011723-06DUP,3,250,250 | TO15_SFS.qgm | R38760.qgd | WG1353541,ICAL16594 | LL / SIM DUP | NY / 7-SIM | Y |
| 3 | L2012074-01,3,250,250 | TO15_SFS.qgm | R38761.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 4 | L2012074-02,3,250,250 | TO15_SFS.qgm | R38762.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 5 | L2012074-03,3,250,250 | TO15_SFS.qgm | R38763.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 6 | L2012074-04,3,250,250 | TO15_SFS.qgm | R38764.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 7 | L2012074-05,3,250,250 | TO15_SFS.qgm | R38765.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 8 | L2011818-01,3,250,250 | TO15_SFS.qgm | R38766.qgd | WG1353541,ICAL16594 | | NY | Y |
| 9 | L2011818-02,3,250,250 | TO15_SFS.qgm | R38767.qgd | WG1353541,ICAL16594 | | NY | Y |
| 10 | L2011818-03,3,250,250 | TO15_SFS.qgm | R38768.qgd | WG1353541,ICAL16594 | | NY | Y |
| 11 | L2011818-04,3,250,250 | TO15_SFS.qgm | R38769.qgd | WG1353541,ICAL16594 | | NY | Y |
| 12 | L2011818-05,3,250,250 | TO15_SFS.qgm | R38770.qgd | WG1353541,ICAL16594 | | NY | Y |
| 13 | L2011818-06,3,250,250 | TO15_SFS.qgm | R38771.qgd | WG1353541,ICAL16594 | IPA OVERCAL | NY | Y |
| 14 | L2011818-07D,3,215,250 | TO15_SFS.qgm | R38772.qgd | WG1353541,ICAL16594 | | NY | Y |
| 15 | L2011546-02,3,250,250 | TO15_SFS.qgm | R38773.qgd | WG1353539,ICAL16594 | | MCP | Y |

# Alpha Analytical Air Lab
# Instrument Run Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | L2011546-02DUP,3,250,250 | TO15_SFS.qgm | R38774.qgd | WG1353539,ICAL16594 | MCP DUP | MCP | Y |
| 13 | L2011818-06D,3,75,250 | TO15_SFS.qgm | R38775.qgd | WG1353541,ICAL16594 | IPA ONLY | NY | Y |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: AIRLAB19

Internal Standard/Surrogate IDs: SS19-030 / SS19-022

Date: 03/20/2020

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: EW

Sequence File Name: 200320.S

SIM ICAL# 16555 Full Scan ICAL# 16553 APH ICAL# 16556

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/N |
|---|---|---|---|---|---|---|---|
| 1 | TA19032001 | TO15_SFS.qgm | R193189.qgd | 250 mL | TUNE | | NA |
| 2 | CA19032001 | TO15_SFS.qgm | R193190.qgd | 250 mL SS20-004B2 | LL CC | | NA |
| 3 | CTO15-LLSTD010 | TO15_SFS.qgm | R193191.qgd | 250 mL SS20-006G | LL LCS | | NA |
| 3 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R193192.qgd | 125 mL SS20-006G | SIM LCS | | NA |
| 1 | BA19032001 | TO15_SFS.qgm | R193193.qgd | 250 mL | BLANK FAILED | | NA |
| 1 | BA19032002 | TO15_SFS.qgm | R193194.qgd | 250 mL | BLANK | | NA |
| 1 | L2011420-01,3,250,250 | TO15_SFS.qgm | R193195.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 2 | L2011420-02,3,250,250 | TO15_SFS.qgm | R193196.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 3 | L2011420-03,3,250,250 | TO15_SFS.qgm | R193197.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 3 | L2011420-03DUP,3,250,250 | TO15_SFS.qgm | R193198.qgd | WG1353556,ICAL16553 | LL / SIM DUP | NY / 7-SIM | Y |
| 4 | L2011420-04,3,250,250 | TO15_SFS.qgm | R193199.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 5 | L2011420-05,3,250,250 | TO15_SFS.qgm | R193200.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 6 | L2011420-06,3,250,250 | TO15_SFS.qgm | R193201.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 7 | L2011420-07,3,250,250 | TO15_SFS.qgm | R193202.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 8 | L2011420-08,3,250,250 | TO15_SFS.qgm | R193203.qgd | WG1353556,ICAL16553 | | NY / 7-SIM | Y |
| 9 | L2011676-01D,3,80,250 | TO15_SFS.qgm | R193204.qgd | WG1353556,ICAL16553 | | NY | Y |
| 10 | L2011676-02,3,250,250 | TO15_SFS.qgm | R193205.qgd | WG1353556,ICAL16553 | | NY | Y |
| 11 | L2011676-03,3,250,250 | TO15_SFS.qgm | R193206.qgd | WG1353556,ICAL16553 | | NY | Y |
| 12 | L2011676-04,3,250,250 | TO15_SFS.qgm | R193207.qgd | WG1353556,ICAL16553 | | NY | Y |
| 13 | L2011723-01,3,250,250 | TO15_SFS.qgm | R193208.qgd | WG1353556,ICAL16553 | | NY | Y |
| 14 | L2011723-02D,3,75,250 | TO15_SFS.qgm | R193209.qgd | WG1353556,ICAL16553 | | NY | Y |

# Alpha Analytical Air Lab
# Instrument Run Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | L2011723-03D,3,40,250 | TO15_SFS.qgm | R193210.qgd | WG1353556,ICAL16553 | | NY | Y |
| 16 | L2011723-04D,3,100,250 | TO15_SFS.qgm | R193211.qgd | WG1353556,ICAL16553 | | NY | Y |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# GC/MS VOA
# Air Analysis
# Selective Ion Monitoring

# Volatiles QC Summary

# Lab Duplicate Sample Summary
# Form 3
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Client Sample ID** | : IA001 | **Matrix** | : AIR |
| **Lab Sample ID** | : L2011723-06 | **Analysis Date** | : 03/20/20 18:16 |
| **Lab File ID** | : R38759_EV2 | **DUP File ID** | : r38760_Ev2 |
| **Dup Sample ID** | : WG1353543-5 | **DUP Analysis Date** | : 03/20/20 19:03 |

| Parameter | Sample Concentration (ppbV) | Duplicate Concentration (ppbV) | RPD | RPD Limit |
|---|---|---|---|---|
| Vinyl chloride | ND | ND | NC | 25 |
| 1,1-Dichloroethene | ND | ND | NC | 25 |
| cis-1,2-Dichloroethene | ND | ND | NC | 25 |
| 1,1,1-Trichloroethane | ND | ND | NC | 25 |
| Carbon tetrachloride | 0.061 | 0.054 | 12 | 25 |
| Trichloroethene | ND | ND | NC | 25 |
| Tetrachloroethene | 0.239 | 0.236 | 1 | 25 |

# Laboratory Control Sample Summary
# Form 3
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | | | **Project Number** | : MHD1801 |
| **Matrix** | : AIR | | | | |
| **LCS Sample ID** | : WG1353543-3 | **Analysis Date** : | 03/20/20 14:11 | **File ID** | : r38755_Ev2 |
| **LCSD Sample ID** | : | **Analysis Date** : | | **File ID** | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **True (ppbV)** | **Found (ppbV)** | **%R** | **True (ppbV)** | **Found (ppbV)** | **%R** | **RPD** | **Recovery Limits** | **RPD Limit** |
| Vinyl chloride | 5 | 5.29 | 106 | | | | - | 70-130 | 25 |
| 1,1-Dichloroethene | 5 | 5.23 | 105 | | | | - | 70-130 | 25 |
| cis-1,2-Dichloroethene | 5 | 5.31 | 106 | | | | - | 70-130 | 25 |
| 1,1,1-Trichloroethane | 5 | 5.11 | 102 | | | | - | 70-130 | 25 |
| Carbon tetrachloride | 5 | 4.69 | 94 | | | | - | 70-130 | 25 |
| Trichloroethene | 5 | 5.56 | 111 | | | | - | 70-130 | 25 |
| Tetrachloroethene | 5 | 5.38 | 108 | | | | - | 70-130 | 25 |

# Method Blank Summary
# Form 4
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab Sample ID** | : WG1353543-4 | **Lab File ID** | : r38757_Ev2 |
| **Instrument ID** | : AIRPIANO3 | | |
| **Matrix** | : AIR | **Analysis Date** | : 03/20/20 16:20 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1353543-3LCS | WG1353543-3 | 03/20/20 14:11 |
| OA001 | L2011723-05 | 03/20/20 17:35 |
| IA001 | L2011723-06 | 03/20/20 18:16 |
| IA001DUP | WG1353543-5 | 03/20/20 19:03 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Air Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Analysis Date** | : 03/12/20 09:50 |
| **Tune Standard** | : WG1350409-1 | **Tune File ID** | : r38588_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 14.5 |
| 75 | 30.0 - 66.0% of mass 95 | 39.3 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.8 (1.1 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 75.2 |
| 175 | 4.0 - 9.0% of mass 174 | 5.6 (7.4 )1 |
| 176 | 93.0 - 101% of mass 174 | 71.7 (95.4)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 (6.8 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STD0.02 | R1293581-1 | R38589_EV2 | 03/12/20 10:28 |
| STD0.05 | R1293581-2 | R38590_EV2 | 03/12/20 11:06 |
| STD0.1 | R1293581-3 | R38591_EV2 | 03/12/20 11:47 |
| STD0.2 | R1293581-4 | R38592_EV2 | 03/12/20 12:25 |
| STD0.5 | R1293581-5 | R38593_EV2 | 03/12/20 13:03 |
| STD1.0 | R1293581-6 | R38594_EV2 | 03/12/20 13:44 |
| STD5.0 | R1293581-7 | R38595_EV2 | 03/12/20 14:23 |
| STD010 | R1293581-8 | R38596_EV2 | 03/12/20 15:04 |
| STD020 | R1293581-9 | R38597_EV2 | 03/12/20 15:41 |
| STD050 | R1293581-10 | R38598_EV2 | 03/12/20 16:20 |
| ICV Quant | R1293581-11 | R38603_EV2 | 03/13/20 00:45 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Air Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Analysis Date** | : 03/20/20 12:51 |
| **Tune Standard** | : WG1353543-1 | **Tune File ID** | : r38753_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 13.2 |
| 75 | 30.0 - 66.0% of mass 95 | 36.4 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.6 (.9 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 71.1 |
| 175 | 4.0 - 9.0% of mass 174 | 5 (7.1 )1 |
| 176 | 93.0 - 101% of mass 174 | 67.3 (94.6)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.5 (6.7 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1353543-2CCAL | WG1353543-2 | R38755_EV2 | 03/20/20 14:11 |
| WG1353543-3LCS | WG1353543-3 | R38755_EV2 | 03/20/20 14:11 |
| WG1353543-4BLANK | WG1353543-4 | R38757_EV2 | 03/20/20 16:20 |
| OA001 | L2011723-05 | R38758_EV2 | 03/20/20 17:35 |
| IA001 | L2011723-06 | R38759_EV2 | 03/20/20 18:16 |
| WG1353543-5DUP | WG1353543-5 | R38760_EV2 | 03/20/20 19:03 |

# Internal Standard Area and RT Summary
# Form 8a
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Instrument ID** | : AIRPIANO3 | **Analysis Date** | : 03/20/20 14:11 |
| **Sample No** | : WG1353543-2 | **Lab File ID** | : R38755_EV2 |

| | Bromochloromethane | | 1,4-Difluorobenzene | | Chlorobenzene-d5 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1353543-2 | 225089 | 9.58 | 642201 | 11.84 | 90362 | 16.56 |
| Upper Limit | 315125 | 9.91 | 899081 | 12.17 | 126507 | 16.89 |
| Lower Limit | 135053 | 9.25 | 385321 | 11.51 | 54217 | 16.23 |
| Sample ID | | | | | | |
| WG1353543-3 LCS | 225089 | 9.58 | 642201 | 11.84 | 90362 | 16.56 |
| WG1353543-4 BLANK | 211260 | 9.58 | 605199 | 11.85 | 75324 | 16.53 |
| OA001 | 210440 | 9.58 | 596473 | 11.85 | 80231 | 16.57 |
| IA001 | 217760 | 9.58 | 617296 | 11.85 | 83178 | 16.57 |
| IA001 DUP | 238534 | 9.58 | 652384 | 11.85 | 86728 | 16.57 |

Area Upper Limit = +40% of internal standard area
Area Lower Limit = - 40% of internal standard area

RT Upper Limit = +0.33 minutes of internal standard RT
RT Lower Limit = -0.33 minutes of internal standard RT

* Values outside of QC limits

**Date Created:** 11/22/19
**Created By:** Jason Hebert
**File:** PM7756-1
**Page:** 1

## Volatile Organics in Air by TO-15 SIM (AIR)

**Holding Time:** 30 days
**Container/Sample Preservation:** 1 - Canister - 2.7 Liter

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | 0.02 | 0.0083 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.02 | 0.0053 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.02 | 0.0056 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,1,2-Trichloroethane | 79-00-5 | 0.02 | 0.0058 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,1-Dichloroethane | 75-34-3 | 0.02 | 0.0073 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,1-Dichloroethene | 75-35-4 | 0.02 | 0.0084 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.02 | 0.0043 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2-Dibromoethane | 106-93-4 | 0.02 | 0.008 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2-Dichlorobenzene | 95-50-1 | 0.02 | 0.016 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2-Dichloroethane | 107-06-2 | 0.02 | 0.0097 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2-Dichloropropane | 78-87-5 | 0.02 | 0.0054 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.02 | 0.0056 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,3-Butadiene | 106-99-0 | 0.02 | 0.0097 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,3-Dichlorobenzene | 541-73-1 | 0.02 | 0.011 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,4-Dichlorobenzene | 106-46-7 | 0.02 | 0.012 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,4-Dioxane | 123-91-1 | 0.1 | 0.032 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.2 | 0.0063 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 2-Hexanone | 591-78-6 | 0.2 | 0.015 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 3-Chloropropene | 107-05-1 | 0.2 | 0.0067 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 4-Ethyltoluene | 622-96-8 | 0.02 | 0.0042 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Benzene | 71-43-2 | 0.1 | 0.005 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Benzyl chloride | 100-44-7 | 0.2 | 0.0072 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Bromodichloromethane | 75-27-4 | 0.02 | 0.0067 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Bromoform | 75-25-2 | 0.02 | 0.0065 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Bromomethane | 74-83-9 | 0.02 | 0.0085 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Carbon disulfide | 75-15-0 | 0.2 | 0.043 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Carbon tetrachloride | 56-23-5 | 0.02 | 0.0105 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Chlorobenzene | 108-90-7 | 0.1 | 0.0064 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Chloroethane | 75-00-3 | 0.1 | 0.0135 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Chloroform | 67-66-3 | 0.02 | 0.0089 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Chloromethane | 74-87-3 | 0.2 | 0.024 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| cis-1,2-Dichloroethene | 156-59-2 | 0.02 | 0.0096 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| trans-1,2-Dichloroethene | 156-60-5 | 0.02 | 0.0076 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 0.02 | 0.0076 | ppbV | | | | 25 | 25 | | | |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.02 | 0.007 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 0.02 | 0.007 | ppbV | | | | 25 | 25 | | | |
| Cyclohexane | 110-82-7 | 0.2 | 0.0064 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Dibromochloromethane | 124-48-1 | 0.02 | 0.0086 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Dichlorodifluoromethane | 75-71-8 | 0.2 | 0.018 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Ethyl Alcohol | 64-17-5 | 5 | 0.666 | ppbV | 40-160 | 25 | | 25 | 25 | | | |
| Ethyl Acetate | 141-78-6 | 0.5 | 0.0307 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Ethylbenzene | 100-41-4 | 0.02 | 0.0049 | ppbV | 70-130 | 25 | | 25 | 25 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Date Created:** 11/22/19
**Created By:** Jason Hebert
**File:** PM7756-1
**Page:** 2

**Volatile Organics in Air by TO-15 SIM (AIR)**

**Holding Time:** 30 days
**Container/Sample Preservation:** 1 - Canister - 2.7 Liter

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | 0.05 | 0.0088 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 76-14-2 | 0.05 | 0.0072 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Methylene chloride | 75-09-2 | 0.5 | 0.273 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Methyl tert butyl ether | 1634-04-4 | 0.2 | 0.0083 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Naphthalene | 91-20-3 | 0.05 | 0.035 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| p/m-Xylene | 179601-23-1 | 0.04 | 0.019 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| o-Xylene | 95-47-6 | 0.02 | 0.0067 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Heptane | 142-82-5 | 0.2 | 0.0041 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| n-Hexane | 110-54-3 | 0.2 | 0.0048 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Propylene | 115-07-1 | 0.5 | 0.0465 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Styrene | 100-42-5 | 0.02 | 0.0049 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Tetrachloroethene | 127-18-4 | 0.02 | 0.0078 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Tetrahydrofuran | 109-99-9 | 0.5 | 0.0066 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Toluene | 108-88-3 | 0.05 | 0.014 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.02 | 0.007 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Trichloroethene | 79-01-6 | 0.02 | 0.0062 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.05 | 0.03 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Trichlorofluoromethane | 75-69-4 | 0.05 | 0.0095 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Vinyl acetate | 108-05-4 | 1 | 0.0111 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Vinyl bromide | 593-60-2 | 0.2 | 0.0099 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Hexachlorobutadiene | 87-68-3 | 0.05 | 0.017 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| iso-Propyl Alcohol | 67-63-0 | 0.5 | 0.179 | ppbV | 40-160 | 25 | | 25 | 25 | | | |
| Vinyl chloride | 75-01-4 | 0.02 | 0.0072 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Acrylonitrile | 107-13-1 | 0.5 | 0.0245 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| n-Butylbenzene | 104-51-8 | 0.2 | 0.0048 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| sec-Butylbenzene | 135-98-8 | 0.2 | 0.0032 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Isopropylbenzene | 98-82-8 | 0.2 | 0.0053 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Xylene (Total) | 1330-20-7 | 0.02 | 0.0067 | ppbV | | | | 25 | 25 | | | |
| p-Isopropyltoluene | 99-87-6 | 0.2 | 0.0045 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| Acetone | 67-64-1 | 1 | 0.299 | ppbV | 40-160 | 25 | | 25 | 25 | | | |
| 2-Butanone | 78-93-3 | 0.5 | 0.027 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 4-Methyl-2-pentanone | 108-10-1 | 0.5 | 0.012 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 0.05 | 0.037 | ppbV | 70-130 | 25 | | 25 | 25 | | | |
| *1,2-Dichloroethane-d4* | *17060-07-0* | | | | | | | | | *70-130* | | |
| *Toluene-d8* | *2037-26-5* | | | | | | | | | *70-130* | | |
| *Bromofluorobenzene* | *460-00-4* | | | | | | | | | *70-130* | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

# Volatiles Sample Data

# Results Summary
# Form 1
# Volatile Organics in Air by SIM

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-05 | **Date Collected** | : 03/13/20 16:29 |
| **Client ID** | : OA001 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/20/20 17:35 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15-SIM | **Analyst** | : EW |
| **Lab File ID** | : R38758_EV2 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | U |
| 56-23-5 | Carbon tetrachloride | 0.062 | 0.020 | -- | 0.390 | 0.126 | -- | |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | 0.041 | 0.020 | -- | 0.278 | 0.136 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air by SIM

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : L2011723-06 | **Date Collected** | : 03/13/20 16:30 |
| **Client ID** | : IA001 | **Date Received** | : 03/16/20 |
| **Sample Location** | : 223-20 BRADDOCK AVE, JAMAICA, NY | **Date Analyzed** | : 03/20/20 18:16 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15-SIM | **Analyst** | : EW |
| **Lab File ID** | : R38759_EV2 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | U |
| 56-23-5 | Carbon tetrachloride | 0.061 | 0.020 | -- | 0.384 | 0.126 | -- | |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | 0.239 | 0.020 | -- | 1.62 | 0.136 | -- | |

# Results Summary
# Form 1
# Volatile Organics in Air by SIM

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : WG1353543-4 | **Date Collected** | : NA |
| **Client ID** | : WG1353543-4BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/20/20 16:20 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15-SIM | **Analyst** | : EW |
| **Lab File ID** | : R38757_EV2 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | U |

# Results Summary
# Form 1
# Volatile Organics in Air by SIM

| | | | |
|---|---|---|---|
| **Client** | : P. W. Grosser | **Lab Number** | : L2011723 |
| **Project Name** | : MHD1801 | **Project Number** | : MHD1801 |
| **Lab ID** | : WG1353543-5 | **Date Collected** | : 03/13/20 16:30 |
| **Client ID** | : IA001DUP | **Date Received** | : 03/16/20 |
| **Sample Location** | : | **Date Analyzed** | : 03/20/20 19:03 |
| **Sample Matrix** | : AIR | **Dilution Factor** | : 1 |
| **Analytical Method** | : 48,TO-15-SIM | **Analyst** | : EW |
| **Lab File ID** | : R38760_EV2 | **Instrument ID** | : AIRPIANO3 |
| **Sample Amount** | : 250 ml | **GC Column** | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | U |
| 56-23-5 | Carbon tetrachloride | 0.054 | 0.020 | -- | 0.340 | 0.126 | -- | |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | 0.236 | 0.020 | -- | 1.60 | 0.136 | -- | |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38758_Ev2.D
Acq On : 20 Mar 2020 5:35 PM
Operator : AIRPIANO3:EW
Sample : L2011723-05,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 19:10:27 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : 7-NY-SIM - .

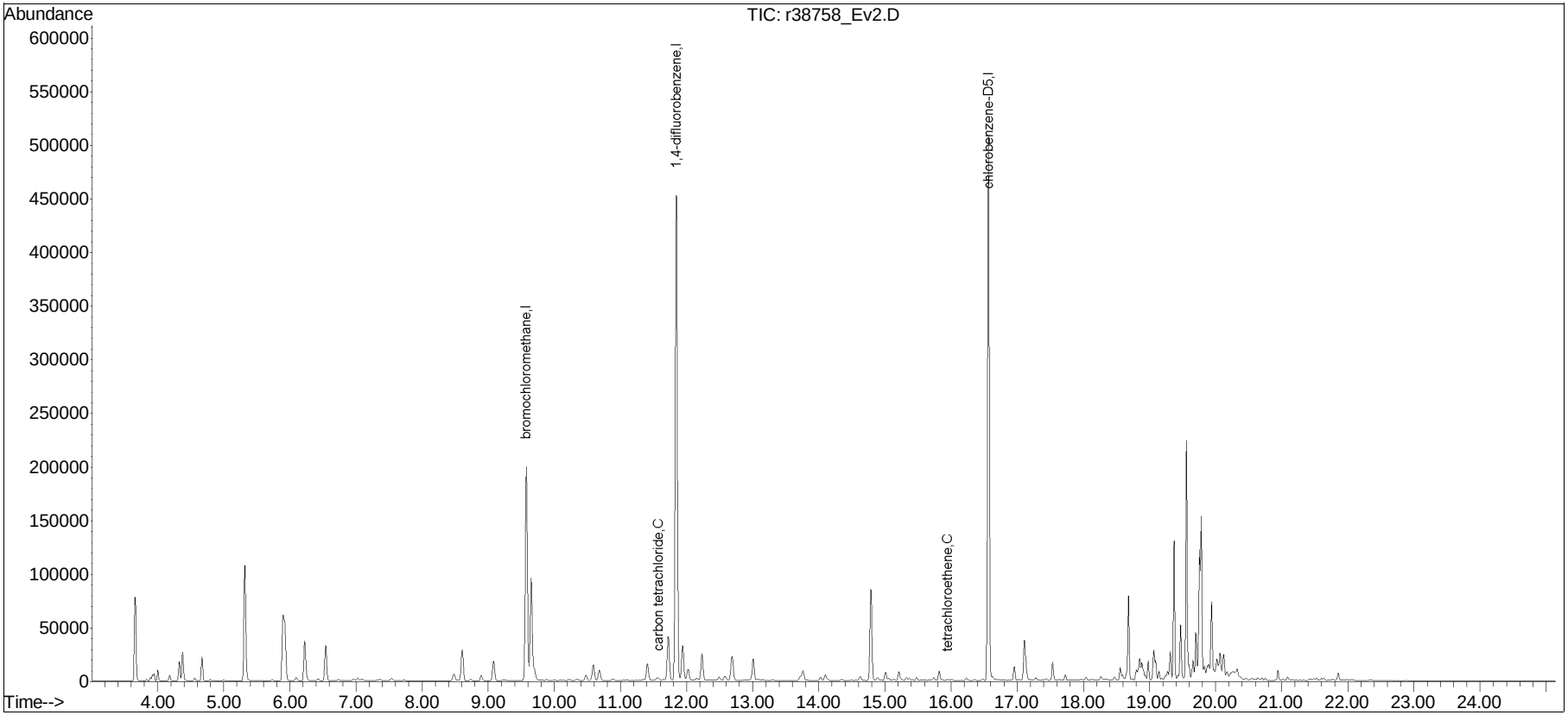
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.575 | 49 | 210440 | 10.000 | ppbV | # 0.03 |
| Standard Area = 225089 | | | Recovery = | | 93.49% | |
| 33) 1,4-difluorobenzene | 11.847 | 114 | 596473 | 10.000 | ppbV | 0.04 |
| Standard Area = 642201 | | | Recovery = | | 92.88% | |
| 51) chlorobenzene-D5 | 16.567 | 54 | 80231 | 10.000 | ppbV | 0.03 |
| Standard Area = 90362 | | | Recovery = | | 88.79% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.000 | | 0 | N.D. | d | |
| 28) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 36) 1,1,1-trichloroethane | 10.867 | | 0 | N.D. | | |
| 38) carbon tetrachloride | 11.580 | 117 | 1085 | 0.062 | ppbV | 98 |
| 44) trichloroethene | 0.000 | | 0 | N.D. | d | |
| 57) tetrachloroethene | 15.950 | 166 | 749 | 0.041 | ppbV # | 87 |

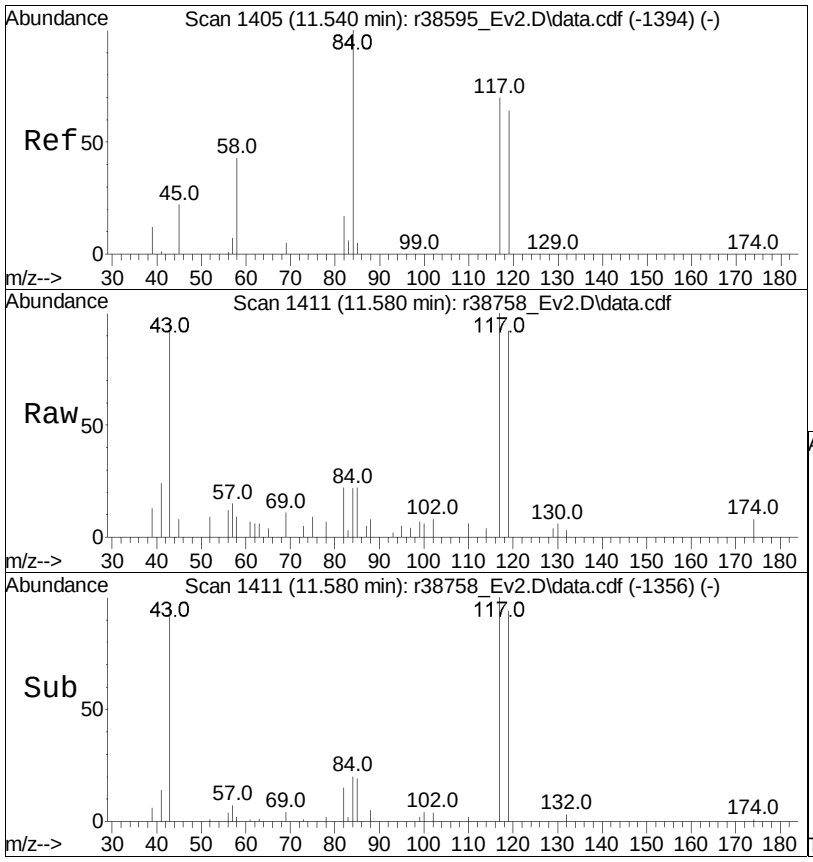
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : 7-NY-SIM - .\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38758_Ev2.D
Acq On : 20 Mar 2020 5:35 PM
Operator : AIRPIANO3:EW
Sample : L2011723-05,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 19:10:27 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

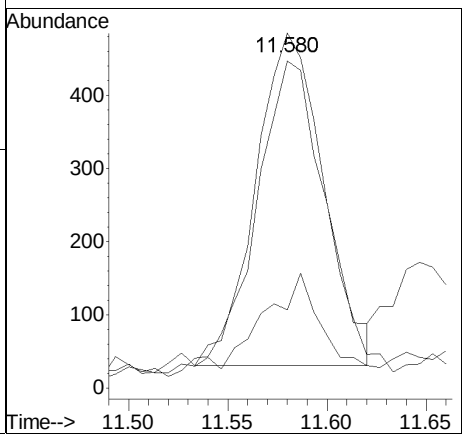


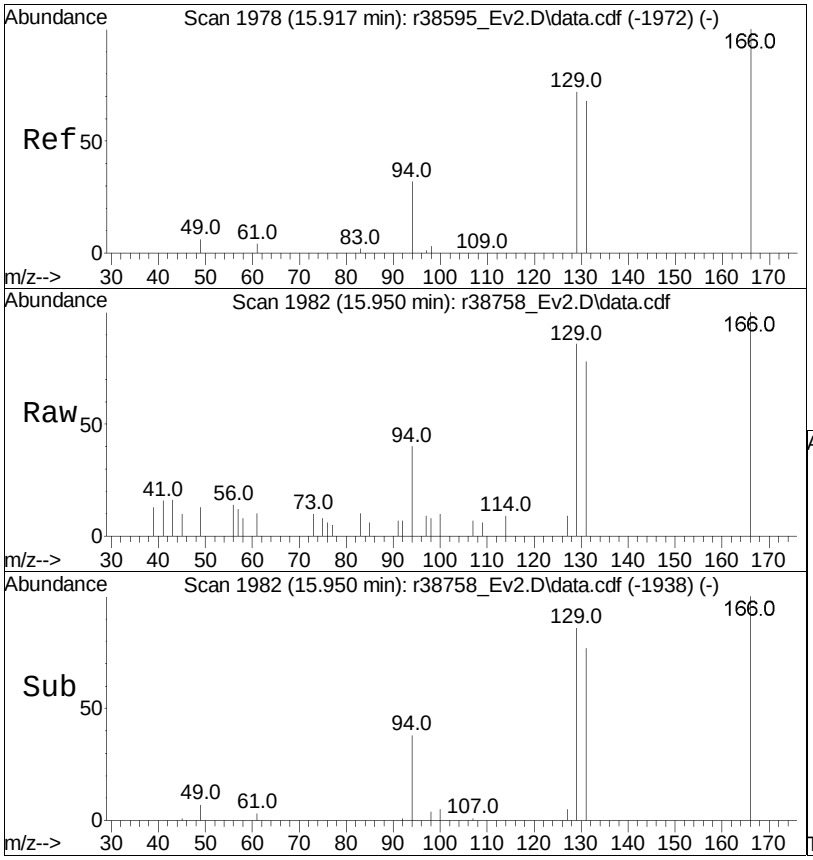



#38
carbon tetrachloride
Concen: 0.06 ppbV
RT: 11.580 min Scan# 1411
Delta R.T. 0.040 min
Lab File: r38758_Ev2.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion:117 Resp: 1085

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 92.2 | 73.0 | 109.4 |
| 82 | 22.1 | 19.1 | 28.7 |

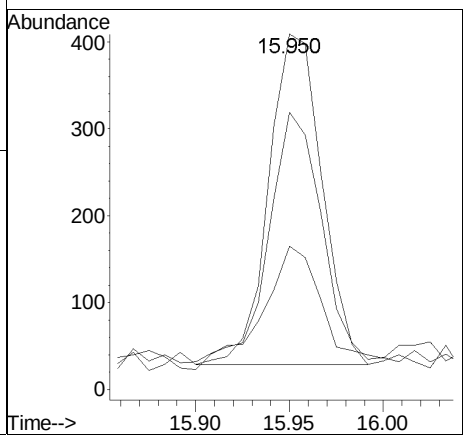





#57
tetrachloroethene
Concen: 0.04 ppbV
RT: 15.950 min Scan# 1982
Delta R.T. 0.033 min
Lab File: r38758_Ev2.D
Acq: 20 Mar 2020 5:35 PM

Tgt Ion:166 Resp: 749

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 78.0 | 54.6 | 82.0 |
| 94 | 40.3 | 25.7 | 38.5# |



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airpiano | QMethod | : TSIM3_200312.M |
| Data File | : r38758_Ev2.D | Operator | : AIRPIANO3:EW |
| Date Inj'd | : 3/20/2020 0:5: 5 | Instrument | : |
| Sample | : L2011723-05,3,250,250 | Quant Date | : 3/21/2020 7:09 pm |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38759_Ev2.D
Acq On : 20 Mar 2020 6:16 PM
Operator : AIRPIANO3:EW
Sample : L2011723-06,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 19:10:46 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : 7-NY-SIM - .

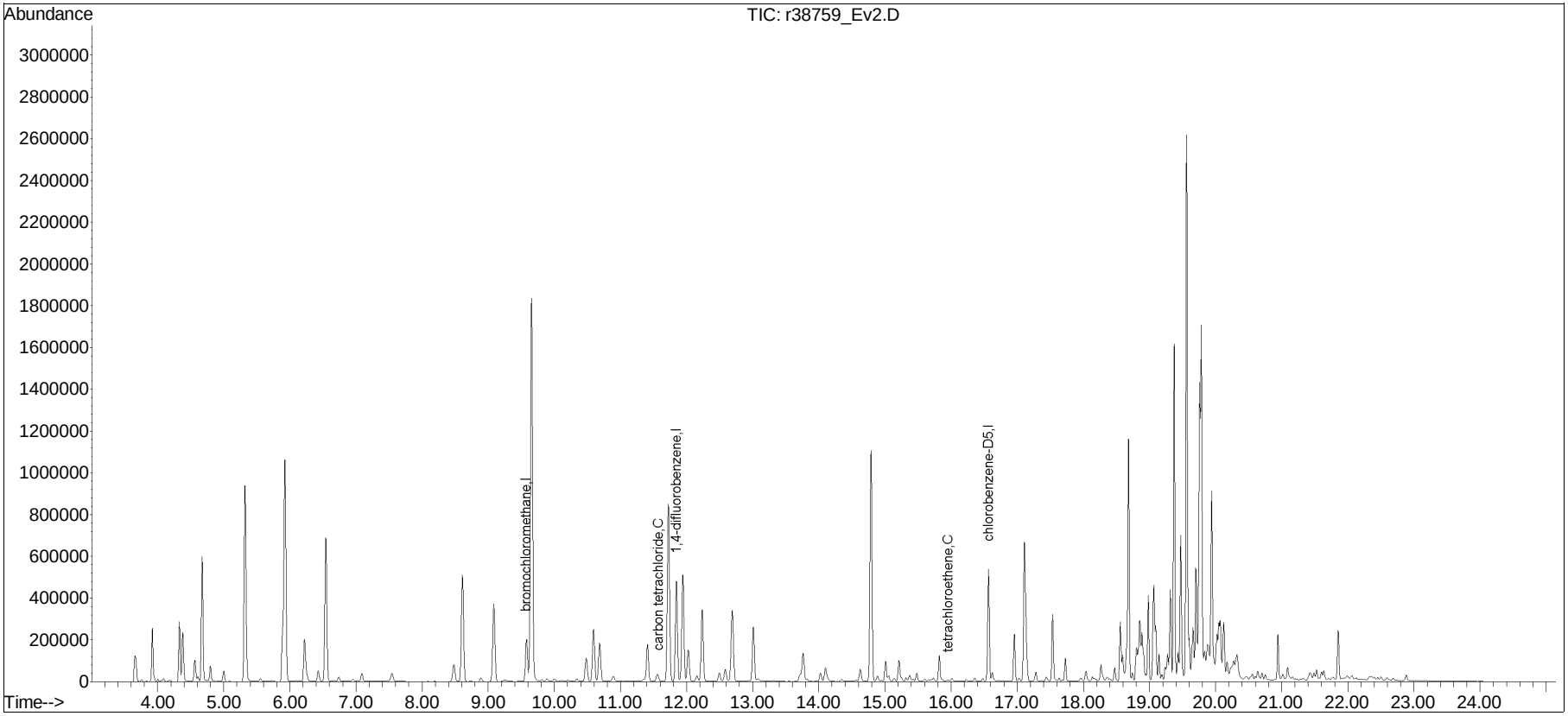
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.575 | 49 | 217760 | 10.000 | ppbV | 0.03 |
| Standard Area = 225089 | | | Recovery = | | 96.74% | |
| 33) 1,4-difluorobenzene | 11.847 | 114 | 617296 | 10.000 | ppbV | 0.04 |
| Standard Area = 642201 | | | Recovery = | | 96.12% | |
| 51) chlorobenzene-D5 | 16.567 | 54 | 83178 | 10.000 | ppbV | 0.03 |
| Standard Area = 90362 | | | Recovery = | | 92.05% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.000 | | 0 | N.D. | d | |
| 28) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 36) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | | |
| 38) carbon tetrachloride | 11.580 | 117 | 1118 | 0.061 | ppbV | 96 |
| 44) trichloroethene | 12.647 | | 0 | N.D. | | |
| 57) tetrachloroethene | 15.958 | 166 | 4506 | 0.239 | ppbV | 98 |

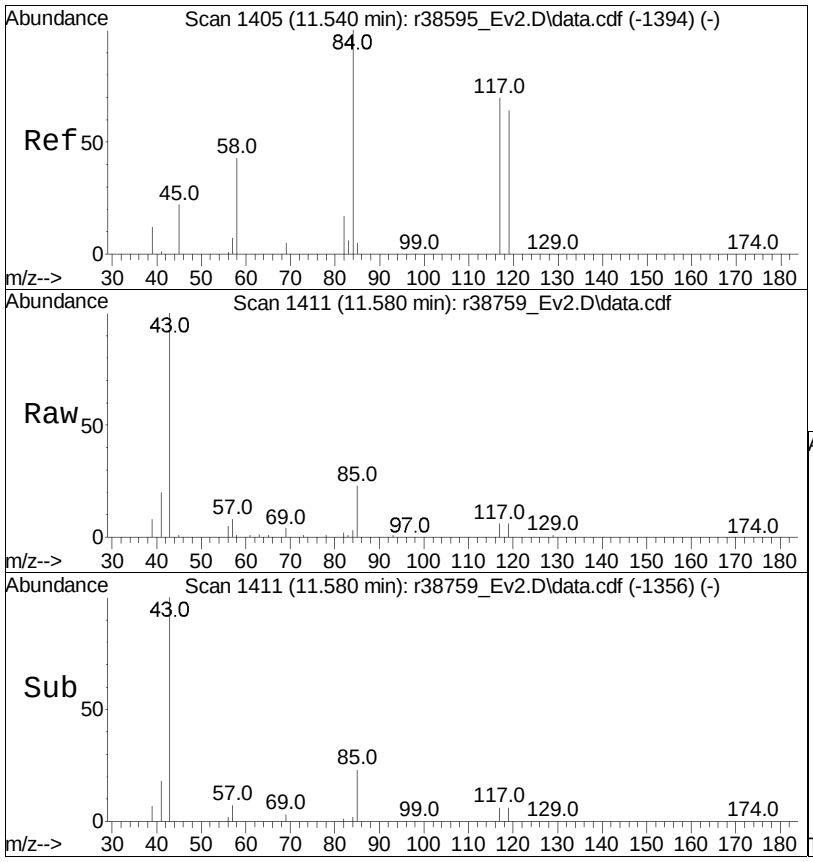
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : 7-NY-SIM - .\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38759_Ev2.D
Acq On : 20 Mar 2020 6:16 PM
Operator : AIRPIANO3:EW
Sample : L2011723-06,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 19:10:46 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

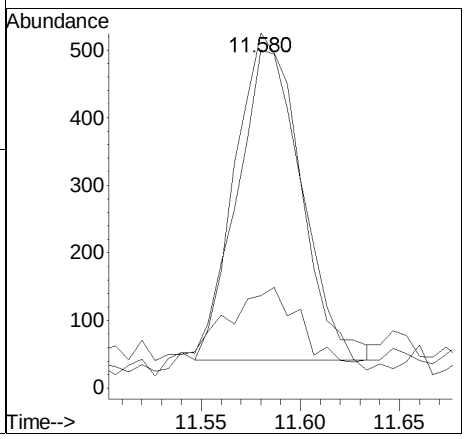


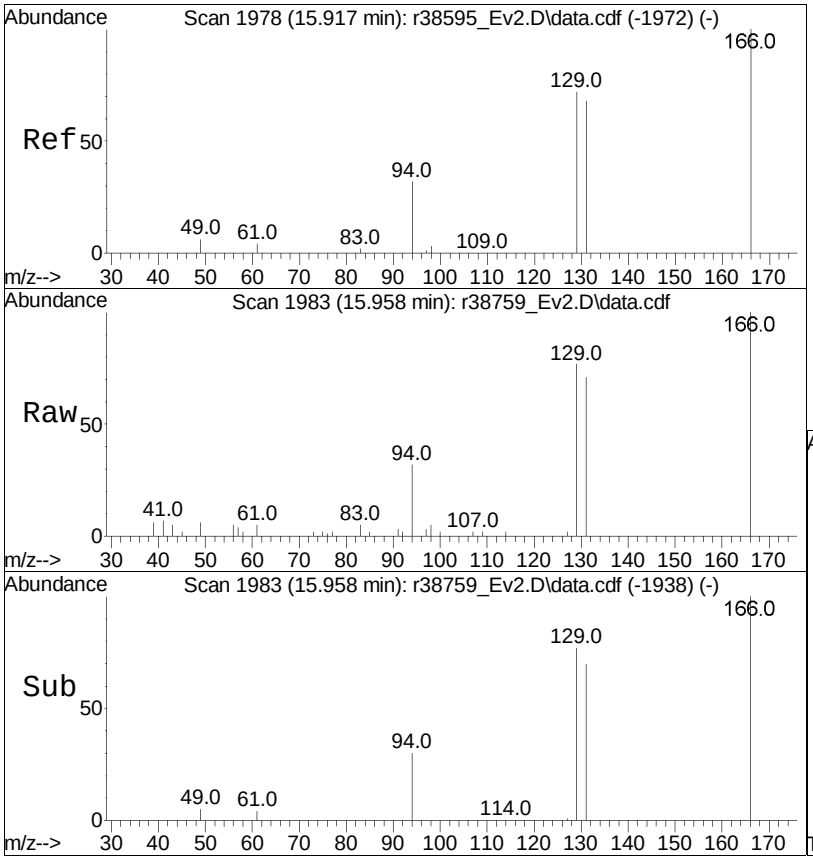



#38
carbon tetrachloride
Concen: 0.06 ppbV
RT: 11.580 min Scan# 1411
Delta R.T. 0.040 min
Lab File: r38759_Ev2.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:117 Resp: 1118

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 95.2 | 73.0 | 109.4 |
| 82 | 26.1 | 19.1 | 28.7 |

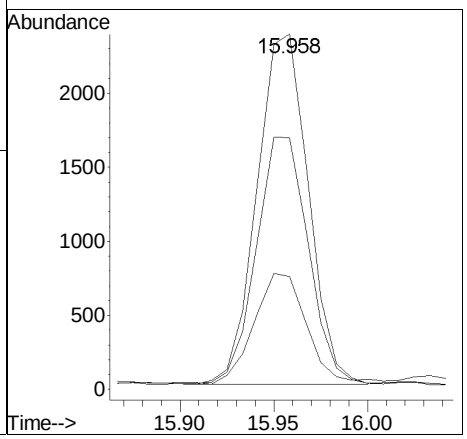





#57
tetrachloroethene
Concen: 0.24 ppbV
RT: 15.958 min Scan# 1983
Delta R.T. 0.042 min
Lab File: r38759_Ev2.D
Acq: 20 Mar 2020 6:16 PM

Tgt Ion:166 Resp: 4506

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 70.8 | 54.6 | 82.0 |
| 94 | 31.8 | 25.7 | 38.5 |



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airpiano | QMethod | : TSIM3_200312.M |
| Data File | : r38759_Ev2.D | Operator | : AIRPIANO3:EW |
| Date Inj'd | : 3/20/2020 0:6: 6 | Instrument | : |
| Sample | : L2011723-06,3,250,250 | Quant Date | : 3/21/2020 7:09 pm |

There are no manual integrations or false positives in this file.

# Volatiles Standards Data

# Initial Calibration

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16593** |
| **Calibration dates** | **: 03/12/20 10:28 03/12/20 16:20** | | |

Calibration Files
0.02=r38589_Ev2.D 0.05=r38590_Ev2.D 0.1 =r38591_Ev2.D 0.2 =r38592_Ev2.D 0.5 =r38593_Ev2.D
1.0 =r38594_Ev2.D 5.0 =r38595_Ev2.D 10.0=r38596_Ev2.D 20.0=r38597_Ev2.D 50.0=r38598_Ev2.D

| | | Compound | 0.02 | 0.05 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | | | |
| 2) | | propylene | | | | 0.507 | 0.519 | 0.520 | 0.469 | 0.444 | 0.440 | 0.395 | 0.4706 | 10.06 |
| 3) | | dichlorodifluoromethane | | | | 1.113 | 1.096 | 1.085 | 0.970 | 0.930 | 0.911 | 0.693 | 0.9710 | 15.26 |
| 4) | C | chloromethane | | | | 0.484 | 0.477 | 0.474 | 0.425 | 0.410 | 0.413 | 0.347 | 0.4327 | 11.39 |
| 5) | | Freon-114 | | 1.402 | 1.383 | 1.393 | 1.369 | 1.354 | 1.209 | 1.151 | 1.114 | 0.836 | 1.2457 | 15.23 |
| 6) | C | vinyl chloride | 0.679 | 0.561 | 0.556 | 0.559 | 0.544 | 0.541 | 0.487 | 0.477 | 0.491 | 0.435 | 0.5328 | 12.52 |
| 7) | C | 1,3-butadiene | 0.591 | 0.563 | 0.527 | 0.542 | 0.523 | 0.529 | 0.491 | 0.479 | 0.489 | 0.423 | 0.5155 | 9.18 |
| 8) | C | bromomethane | 0.536 | 0.500 | 0.465 | 0.484 | 0.473 | 0.464 | 0.417 | 0.407 | 0.417 | 0.361 | 0.4524 | 11.41 |
| 9) | C | chloroethane | 0.292 | 0.292 | 0.274 | 0.278 | 0.276 | 0.274 | 0.244 | 0.239 | 0.248 | 0.221 | 0.2639 | 9.14 |
| 10) | | ethanol | | | | | 0.523 | 0.467 | 0.409 | 0.398 | 0.445 | 0.283 | 0.4208 | 19.28 |
| 11) | C | vinyl bromide | | | | 0.566 | 0.542 | 0.545 | 0.498 | 0.486 | 0.563 | 0.394 | 0.5131 | 11.87 |
| 12) | C | acrolein | | 0.242 | 0.287 | 0.273 | 0.268 | 0.260 | 0.241 | 0.239 | 0.266 | 0.225 | 0.2555 | 7.82 |
| 13) | | acetone | | | | 0.767 | 0.727 | 0.708 | 0.701 | 0.667 | 0.769 | 0.432 | 0.6815 | 17.04 |
| 14) | | trichlorofluoromethane | | 0.845 | 0.835 | 0.823 | 0.834 | 0.817 | 0.740 | 0.715 | 0.906 | 0.543 | 0.7843 | 13.62 |
| 15) | | isopropyl alcohol | | | | 1.018 | 0.922 | 0.886 | 0.885 | 0.849 | 1.018 | 0.628 | 0.8864 | 14.84 |
| 16) | C | acrylonitrile | | | 0.443 | 0.458 | 0.468 | 0.472 | 0.443 | 0.437 | 0.497 | 0.406 | 0.4532 | 6.00 |
| 17) | C | 1,1-dichloroethene | 0.860 | 0.664 | 0.708 | 0.742 | 0.705 | 0.697 | 0.636 | 0.618 | 0.731 | 0.648 | 0.7010 | 9.88 |
| 18) | | tertiary butyl alcohol | | | | 1.071 | 1.052 | 1.003 | 0.923 | 1.012 | 1.037 | 0.958 | 1.0080 | 5.20 |
| 19) | C | methylene chloride | | | | | 0.640 | 0.641 | 0.600 | 0.656 | 0.678 | 0.616 | 0.6385 | 4.35 |
| 20) | C | 3-chloropropene | | | | 0.908 | 0.871 | 0.873 | 0.809 | 0.803 | 0.814 | 0.735 | 0.8304 | 6.99 |
| 21) | C | carbon disulfide | | | | 2.051 | 2.022 | 2.005 | 1.869 | 1.847 | 1.858 | 1.632 | 1.8978 | 7.63 |
| 22) | | Freon 113 | | 1.131 | 1.109 | 1.141 | 1.104 | 1.098 | 1.002 | 0.983 | 0.993 | 0.862 | 1.0469 | 8.84 |
| 23) | | trans-1,2-dichloroethene | 0.930 | 0.857 | 0.823 | 0.889 | 0.865 | 0.853 | 0.795 | 0.784 | 0.790 | 0.708 | 0.8294 | 7.60 |
| 24) | C | 1,1-dichloroethane | 0.969 | 1.006 | 0.996 | 1.038 | 1.006 | 0.996 | 0.910 | 0.898 | 0.915 | 0.824 | 0.9558 | 6.95 |
| 25) | C | MTBE | 1.806 | 1.770 | 1.692 | 1.806 | 1.764 | 1.760 | 1.653 | 1.632 | 1.621 | 1.404 | 1.6909 | 7.24 |
| 26) | C | vinyl acetate | | | | | 1.451 | 1.435 | 1.379 | 1.375 | 1.392 | 1.243 | 1.3794 | 5.33 |
| 27) | C | 2-butanone | | | | 1.404 | 1.358 | 1.349 | 1.257 | 1.242 | 1.243 | 1.107 | 1.2800 | 7.78 |
| 28) | | cis-1,2-dichloroethene | 0.892 | 0.773 | 0.723 | 0.761 | 0.745 | 0.731 | 0.677 | 0.668 | 0.687 | 0.615 | 0.7271 | 10.35 |
| 29) | | Ethyl Acetate | | | | 0.213 | 0.222 | 0.219 | 0.201 | 0.206 | 0.206 | 0.194 | 0.2089 | 4.71 |
| 30) | C | chloroform | 1.138 | 1.119 | 1.080 | 1.117 | 1.095 | 1.090 | 0.997 | 0.990 | 1.013 | 0.868 | 1.0506 | 7.93 |
| 31) | | Tetrahydrofuran | | | | 0.817 | 0.817 | 0.822 | 0.772 | 0.768 | 0.776 | 0.705 | 0.7824 | 5.30 |
| 32) | C | 1,2-dichloroethane | 0.776 | 0.611 | 0.666 | 0.643 | 0.617 | 0.607 | 0.556 | 0.548 | 0.547 | 0.458 | 0.6030 | 14.10 |
| 33) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | | | |
| 34) | C | hexane | | | | 0.388 | 0.383 | 0.378 | 0.356 | 0.346 | 0.353 | 0.314 | 0.3599 | 7.17 |
| 35) | s | 1,2-dichloroethane-D4 | 0.168 | 0.170 | 0.170 | 0.174 | 0.172 | 0.172 | 0.172 | 0.168 | 0.159 | 0.145 | 0.1672 | 5.25 |
| 36) | C | 1,1,1-trichloroethane | 0.336 | 0.336 | 0.321 | 0.323 | 0.317 | 0.315 | 0.288 | 0.281 | 0.280 | 0.251 | 0.3048 | 9.30 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16593** |
| **Calibration dates** | **: 03/12/20 10:28 03/12/20 16:20** | | |

Calibration Files

0.02=r38589_Ev2.D 0.05=r38590_Ev2.D 0.1 =r38591_Ev2.D 0.2 =r38592_Ev2.D 0.5 =r38593_Ev2.D

1.0 =r38594_Ev2.D 5.0 =r38595_Ev2.D 10.0=r38596_Ev2.D 20.0=r38597_Ev2.D 50.0=r38598_Ev2.D

| | | Compound | 0.02 | 0.05 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37) | C | benzene | | 0.898 | 0.810 | 0.822 | 0.775 | 0.761 | 0.701 | 0.685 | 0.711 | 0.637 | 0.7554 | 10.70 |
| 38) | C | carbon tetrachloride | 0.336 | 0.310 | 0.308 | 0.317 | 0.309 | 0.306 | 0.285 | 0.281 | 0.277 | 0.217 | 0.2946 | 11.08 |
| 39) | | cyclohexane | | | | 0.420 | 0.413 | 0.403 | 0.386 | 0.376 | 0.390 | 0.361 | 0.3929 | 5.23 |
| 40) | | Dibromomethane | | 0.275 | 0.239 | 0.221 | 0.207 | 0.203 | 0.189 | 0.184 | 0.181 | 0.156 | 0.2061 | 17.18 |
| 41) | C | 1,2-dichloropropane | 0.282 | 0.253 | 0.239 | 0.248 | 0.239 | 0.232 | 0.217 | 0.211 | 0.217 | 0.195 | 0.2332 | 10.65 |
| 42) | | bromodichloromethane | 0.475 | 0.429 | 0.407 | 0.419 | 0.417 | 0.413 | 0.393 | 0.388 | 0.390 | 0.339 | 0.4071 | 8.52 |
| 43) | C | 1,4-dioxane | | | 0.175 | 0.184 | 0.170 | 0.169 | 0.165 | 0.163 | 0.167 | 0.160 | 0.1692 | 4.41 |
| 44) | C | trichloroethene | 0.286 | 0.305 | 0.291 | 0.309 | 0.301 | 0.290 | 0.276 | 0.271 | 0.276 | 0.249 | 0.2854 | 6.29 |
| 45) | C | 2,2,4-trimethylpentane | | | | 1.265 | 1.244 | 1.237 | 1.165 | 1.109 | 1.133 | 1.006 | 1.1657 | 7.90 |
| 46) | | heptane | | | | 0.498 | 0.495 | 0.493 | 0.468 | 0.454 | 0.456 | 0.393 | 0.4653 | 7.88 |
| 47) | C | cis-1,3-dichloropropene | 0.321 | 0.321 | 0.322 | 0.341 | 0.340 | 0.340 | 0.324 | 0.324 | 0.330 | 0.287 | 0.3249 | 4.82 |
| 48) | C | 4-methyl-2-pentanone | | | | | 0.546 | 0.553 | 0.531 | 0.520 | 0.520 | 0.451 | 0.5200 | 7.02 |
| 49) | | trans-1,3-dichloropropene | 0.327 | 0.354 | 0.339 | 0.373 | 0.369 | 0.367 | 0.346 | 0.342 | 0.351 | 0.308 | 0.3477 | 5.77 |
| 50) | C | 1,1,2-trichloroethane | 0.328 | 0.261 | 0.246 | 0.263 | 0.256 | 0.258 | 0.238 | 0.234 | 0.239 | 0.213 | 0.2536 | 11.93 |
| 51) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | | | |
| 52) | C | toluene | | 6.305 | 5.753 | 5.960 | 5.858 | 5.747 | 5.131 | 5.121 | 5.306 | 4.758 | 5.5487 | 8.92 |
| 53) | s | toluene-D8 | 4.741 | 4.861 | 4.872 | 5.013 | 5.025 | 5.000 | 4.946 | 4.989 | 4.861 | 4.917 | 4.9225 | 1.83 |
| 54) | | 2-hexanone | | | | 3.219 | 3.340 | 3.469 | 3.299 | 3.254 | 3.133 | 2.342 | 3.1508 | 11.79 |
| 55) | | dibromochloromethane | 2.152 | 2.206 | 2.225 | 2.383 | 2.385 | 2.421 | 2.340 | 2.372 | 2.403 | 2.138 | 2.3025 | 4.78 |
| 56) | C | 1,2-dibromoethane | 3.112 | 2.666 | 2.563 | 2.786 | 2.766 | 2.766 | 2.504 | 2.542 | 2.655 | 2.362 | 2.6720 | 7.66 |
| 57) | C | tetrachloroethene | 2.544 | 2.269 | 2.228 | 2.378 | 2.385 | 2.352 | 2.124 | 2.118 | 2.238 | 2.006 | 2.2644 | 6.96 |
| 58) | | 1,1,1,2-tetrachloroethane | 1.866 | 1.889 | 1.774 | 1.892 | 1.894 | 1.888 | 1.748 | 1.742 | 1.754 | 1.505 | 1.7954 | 6.77 |
| 59) | C | chlorobenzene | 4.410 | 4.376 | 4.383 | 4.621 | 4.623 | 4.619 | 4.175 | 4.227 | 4.545 | 3.987 | 4.3966 | 4.91 |
| 60) | C | ethylbenzene | 7.352 | 6.512 | 6.398 | 6.855 | 6.848 | 6.844 | 6.217 | 6.192 | 6.411 | 5.618 | 6.5249 | 7.33 |
| 61) | C | m+p-xylene | 6.443 | 5.621 | 5.360 | 5.729 | 5.741 | 5.743 | 5.178 | 5.165 | 5.274 | 4.430 | 5.4684 | 9.63 |
| 62) | C | bromoform | 2.173 | 1.758 | 1.790 | 1.948 | 2.002 | 2.060 | 2.059 | 2.111 | 2.188 | 1.903 | 1.9992 | 7.45 |
| 63) | C | styrene | 5.078 | 4.841 | 4.683 | 4.614 | 4.753 | 4.822 | 4.597 | 4.648 | 4.946 | 4.462 | 4.7443 | 3.84 |
| 64) | C | 1,1,2,2-tetrachloroethane | 3.811 | 3.509 | 3.523 | 3.931 | 3.960 | 3.985 | 3.593 | 3.635 | 3.823 | 3.105 | 3.6875 | 7.37 |
| 65) | C | o-xylene | 6.107 | 5.597 | 5.360 | 5.765 | 5.791 | 5.786 | 5.207 | 5.167 | 5.188 | 4.198 | 5.4165 | 9.83 |
| 66) | | 1,2,3-Trichloropropane | 3.149 | 2.861 | 2.911 | 3.141 | 3.194 | 3.174 | 3.012 | 3.037 | 3.052 | 2.700 | 3.0230 | 5.25 |
| 67) | s | bromofluorobenzene | 3.019 | 3.012 | 2.995 | 3.106 | 3.143 | 3.146 | 3.239 | 3.414 | 3.074 | 3.309 | 3.1456 | 4.38 |
| 68) | C | isopropylbenzene | | | | 8.064 | 8.142 | 8.091 | 7.607 | 7.503 | 7.548 | 6.394 | 7.6214 | 7.97 |
| 69) | | Bromobenzene | | | | 3.998 | 4.109 | 4.084 | 3.950 | 3.989 | 4.069 | 3.497 | 3.9566 | 5.32 |
| 70) | | 4-ethyl toluene | 7.760 | 7.695 | 7.768 | 8.650 | 8.932 | 9.040 | 8.553 | 8.534 | 8.480 | 7.180 | 8.2592 | 7.44 |
| 71) | | 1,3,5-trimethylbenzene | 7.469 | 6.387 | 6.632 | 7.287 | 7.468 | 7.413 | 6.899 | 6.844 | 6.978 | 5.731 | 6.9108 | 8.02 |
| 72) | | tert-butylbenzene | | | | 6.911 | 7.084 | 7.067 | 6.712 | 6.737 | 6.519 | 4.919 | 6.5641 | 11.48 |

# Initial Calibration Summary
# Form 6
# Air Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: P. W. Grosser** | **Lab Number** | **: L2011723** |
| **Project Name** | **: MHD1801** | **Project Number** | **: MHD1801** |
| **Instrument ID** | **: AIRPIANO3** | **Ical Ref** | **: ICAL16593** |
| **Calibration dates** | **: 03/12/20 10:28 03/12/20 16:20** | | |

Calibration Files

0.02=r38589_Ev2.D 0.05=r38590_Ev2.D 0.1 =r38591_Ev2.D 0.2 =r38592_Ev2.D 0.5 =r38593_Ev2.D

1.0 =r38594_Ev2.D 5.0 =r38595_Ev2.D 10.0=r38596_Ev2.D 20.0=r38597_Ev2.D 50.0=r38598_Ev2.D

| | Compound | 0.02 | 0.05 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73) | 1,2,4-trimethylbenzene | 6.621 | 6.134 | 6.176 | 6.929 | 7.226 | 7.318 | 6.694 | 6.607 | 6.350 | 4.739 | 6.4792 | 11.27 |
| 74) C | Benzyl Chloride | | | | 3.336 | 3.915 | 4.320 | 4.698 | 5.039 | 5.019 | 4.248 | 4.3678 | 14.08 |
| 75) | 1,3-dichlorobenzene | 3.461 | 3.366 | 3.509 | 3.776 | 3.888 | 3.992 | 3.787 | 3.862 | 3.919 | 3.375 | 3.6936 | 6.50 |
| 76) C | 1,4-dichlorobenzene | 3.748 | 3.214 | 3.568 | 3.564 | 3.737 | 3.818 | 3.651 | 3.784 | 3.947 | 3.380 | 3.6411 | 5.99 |
| 77) | sec-butylbenzene | | | | 1.008 | 1.039 | 1.047 | 1.007 | 0.996 | 0.962 | 0.779 | 0.9769 | 9.40 |
| 78) | p-isopropyltoluene | | | | 7.942 | 8.207 | 8.333 | 8.211 | 8.220 | 7.737 | 5.822 | 7.7817 | 11.41 |
| 79) | 1,2-dichlorobenzene | 3.340 | 3.085 | 3.301 | 3.589 | 3.735 | 3.827 | 3.582 | 3.636 | 3.780 | 3.348 | 3.5223 | 6.89 |
| 80) | n-butylbenzene | | | | 6.248 | 6.722 | 6.990 | 6.927 | 6.973 | 6.596 | 5.552 | 6.5728 | 7.93 |
| 81) C | 1,2,4-trichlorobenzene | | 1.534 | 1.536 | 1.454 | 1.736 | 2.137 | 2.292 | 2.536 | 2.367 | 2.442 | 2.0039 | 21.76 |
| 82) | naphthalene | | 7.760 | 6.706 | 5.403 | 5.752 | 6.434 | 7.583 | 8.217 | 6.921 | 6.809 | 6.8428 | 13.41 |
| 83) | 1,2,3-trichlorobenzene | | 1.817 | 1.878 | 1.896 | 2.078 | 2.335 | 2.757 | 3.022 | 2.546 | 2.538 | 2.3186 | 18.48 |
| 84) C | hexachlorobutadiene | | 2.527 | 2.529 | 2.893 | 3.009 | 3.026 | 2.775 | 2.750 | 2.488 | 2.091 | 2.6763 | 11.19 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Method File : TSIM3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 16:48:11 2020
Response Via : Initial Calibration

Calibration Files
0.02=r38589_Ev2.D 0.05=r38590_Ev2.D 0.1 =r38591_Ev2.D 0.2 =r38592_Ev2.D 0.5 =r38593_Ev2.D
1.0 =r38594_Ev2.D 5.0 =r38595_Ev2.D 10.0=r38596_Ev2.D 20.0=r38597_Ev2.D 50.0=r38598_Ev2.D

| | | Compound | 0.02 | 0.05 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ISTD | | | | | | | | | | | |
| 2) | | propylene | | | | 0.507 | 0.519 | 0.520 | 0.469 | 0.444 | 0.440 | 0.395 | 0.4706 | 10.06 |
| 3) | | dichlorodifluorome... | | | | 1.113 | 1.096 | 1.085 | 0.970 | 0.930 | 0.911 | 0.693 | 0.9710 | 15.26 |
| 4) | C | chloromethane | | | | 0.484 | 0.477 | 0.474 | 0.425 | 0.410 | 0.413 | 0.347 | 0.4327 | 11.39 |
| 5) | | Freon-114 | | 1.402 | 1.383 | 1.393 | 1.369 | 1.354 | 1.209 | 1.151 | 1.114 | 0.836 | 1.2457 | 15.23 |
| 6) | C | vinyl chloride | 0.679 | 0.561 | 0.556 | 0.559 | 0.544 | 0.541 | 0.487 | 0.477 | 0.491 | 0.435 | 0.5328 | 12.52 |
| 7) | C | 1,3-butadiene | 0.591 | 0.563 | 0.527 | 0.542 | 0.523 | 0.529 | 0.491 | 0.479 | 0.489 | 0.423 | 0.5155 | 9.18 |
| 8) | C | bromomethane | 0.536 | 0.500 | 0.465 | 0.484 | 0.473 | 0.464 | 0.417 | 0.407 | 0.417 | 0.361 | 0.4524 | 11.41 |
| 9) | C | chloroethane | 0.292 | 0.292 | 0.274 | 0.278 | 0.276 | 0.274 | 0.244 | 0.239 | 0.248 | 0.221 | 0.2639 | 9.14 |
| 10) | | ethanol | | | | | 0.523 | 0.467 | 0.409 | 0.398 | 0.445 | 0.283 | 0.4208 | 19.28 |
| 11) | C | vinyl bromide | | | | 0.566 | 0.542 | 0.545 | 0.498 | 0.486 | 0.563 | 0.394 | 0.5131 | 11.87 |
| 12) | C | acrolein | | 0.242 | 0.287 | 0.273 | 0.268 | 0.260 | 0.241 | 0.239 | 0.266 | 0.225 | 0.2555 | 7.82 |
| 13) | | acetone | | | | 0.767 | 0.727 | 0.708 | 0.701 | 0.667 | 0.769 | 0.432 | 0.6815 | 17.04 |
| 14) | | trichlorofluoromet... | | 0.845 | 0.835 | 0.823 | 0.834 | 0.817 | 0.740 | 0.715 | 0.906 | 0.543 | 0.7843 | 13.62 |
| 15) | | isopropyl alcohol | | | | 1.018 | 0.922 | 0.886 | 0.885 | 0.849 | 1.018 | 0.628 | 0.8864 | 14.84 |
| 16) | C | acrylonitrile | | | 0.443 | 0.458 | 0.468 | 0.472 | 0.443 | 0.437 | 0.497 | 0.406 | 0.4532 | 6.00 |
| 17) | C | 1,1-dichloroethene | 0.860 | 0.664 | 0.708 | 0.742 | 0.705 | 0.697 | 0.636 | 0.618 | 0.731 | 0.648 | 0.7010 | 9.88 |
| 18) | | tertiary butyl alc... | | | | 1.071 | 1.052 | 1.003 | 0.923 | 1.012 | 1.037 | 0.958 | 1.0080 | 5.20 |
| 19) | C | methylene chloride | | | | | 0.640 | 0.641 | 0.600 | 0.656 | 0.678 | 0.616 | 0.6385 | 4.35 |
| 20) | C | 3-chloropropene | | | | 0.908 | 0.871 | 0.873 | 0.809 | 0.803 | 0.814 | 0.735 | 0.8304 | 6.99 |
| 21) | C | carbon disulfide | | | | 2.051 | 2.022 | 2.005 | 1.869 | 1.847 | 1.858 | 1.632 | 1.8978 | 7.63 |
| 22) | | Freon 113 | | 1.131 | 1.109 | 1.141 | 1.104 | 1.098 | 1.002 | 0.983 | 0.993 | 0.862 | 1.0469 | 8.84 |
| 23) | | trans-1,2-dichloro... | 0.930 | 0.857 | 0.823 | 0.889 | 0.865 | 0.853 | 0.795 | 0.784 | 0.790 | 0.708 | 0.8294 | 7.60 |
| 24) | C | 1,1-dichloroethane | 0.969 | 1.006 | 0.996 | 1.038 | 1.006 | 0.996 | 0.910 | 0.898 | 0.915 | 0.824 | 0.9558 | 6.95 |
| 25) | C | MTBE | 1.806 | 1.770 | 1.692 | 1.806 | 1.764 | 1.760 | 1.653 | 1.632 | 1.621 | 1.404 | 1.6909 | 7.24 |
| 26) | C | vinyl acetate | | | | | 1.451 | 1.435 | 1.379 | 1.375 | 1.392 | 1.243 | 1.3794 | 5.33 |
| 27) | C | 2-butanone | | | | 1.404 | 1.358 | 1.349 | 1.257 | 1.242 | 1.243 | 1.107 | 1.2800 | 7.78 |
| 28) | | cis-1,2-dichloroet... | 0.892 | 0.773 | 0.723 | 0.761 | 0.745 | 0.731 | 0.677 | 0.668 | 0.687 | 0.615 | 0.7271 | 10.35 |
| 29) | | Ethyl Acetate | | | | 0.213 | 0.222 | 0.219 | 0.201 | 0.206 | 0.206 | 0.194 | 0.2089 | 4.71 |
| 30) | C | chloroform | 1.138 | 1.119 | 1.080 | 1.117 | 1.095 | 1.090 | 0.997 | 0.990 | 1.013 | 0.868 | 1.0506 | 7.93 |
| 31) | | Tetrahydrofuran | | | | 0.817 | 0.817 | 0.822 | 0.772 | 0.768 | 0.776 | 0.705 | 0.7824 | 5.30 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Method File : TSIM3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 16:48:11 2020
Response Via : Initial Calibration

Calibration Files
0.02=r38589_Ev2.D 0.05=r38590_Ev2.D 0.1 =r38591_Ev2.D 0.2 =r38592_Ev2.D 0.5 =r38593_Ev2.D
1.0 =r38594_Ev2.D 5.0 =r38595_Ev2.D 10.0=r38596_Ev2.D 20.0=r38597_Ev2.D 50.0=r38598_Ev2.D

| | | Compound | 0.02 | 0.05 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32) | C | 1,2-dichloroethane | 0.776 | 0.611 | 0.666 | 0.643 | 0.617 | 0.607 | 0.556 | 0.548 | 0.547 | 0.458 | 0.6030 | 14.10 |
| 33) | I | 1,4-difluorobenzene | ISTD | | | | | | | | | | | |
| 34) | C | hexane | | | | 0.388 | 0.383 | 0.378 | 0.356 | 0.346 | 0.353 | 0.314 | 0.3599 | 7.17 |
| 35) | s | 1,2-dichloroethane-D4 | 0.168 | 0.170 | 0.170 | 0.174 | 0.172 | 0.172 | 0.172 | 0.168 | 0.159 | 0.145 | 0.1672 | 5.25 |
| 36) | C | 1,1,1-trichloroethane | 0.336 | 0.336 | 0.321 | 0.323 | 0.317 | 0.315 | 0.288 | 0.281 | 0.280 | 0.251 | 0.3048 | 9.30 |
| 37) | C | benzene | | 0.898 | 0.810 | 0.822 | 0.775 | 0.761 | 0.701 | 0.685 | 0.711 | 0.637 | 0.7554 | 10.70 |
| 38) | C | carbon tetrachloride | 0.336 | 0.310 | 0.308 | 0.317 | 0.309 | 0.306 | 0.285 | 0.281 | 0.277 | 0.217 | 0.2946 | 11.08 |
| 39) | | cyclohexane | | | | 0.420 | 0.413 | 0.403 | 0.386 | 0.376 | 0.390 | 0.361 | 0.3929 | 5.23 |
| 40) | | Dibromomethane | | 0.275 | 0.239 | 0.221 | 0.207 | 0.203 | 0.189 | 0.184 | 0.181 | 0.156 | 0.2061 | 17.18 |
| 41) | C | 1,2-dichloropropane | 0.282 | 0.253 | 0.239 | 0.248 | 0.239 | 0.232 | 0.217 | 0.211 | 0.217 | 0.195 | 0.2332 | 10.65 |
| 42) | | bromodichloromethane | 0.475 | 0.429 | 0.407 | 0.419 | 0.417 | 0.413 | 0.393 | 0.388 | 0.390 | 0.339 | 0.4071 | 8.52 |
| 43) | C | 1,4-dioxane | | | 0.175 | 0.184 | 0.170 | 0.169 | 0.165 | 0.163 | 0.167 | 0.160 | 0.1692 | 4.41 |
| 44) | C | trichloroethene | 0.286 | 0.305 | 0.291 | 0.309 | 0.301 | 0.290 | 0.276 | 0.271 | 0.276 | 0.249 | 0.2854 | 6.29 |
| 45) | C | 2,2,4-trimethylpen... | | | | 1.265 | 1.244 | 1.237 | 1.165 | 1.109 | 1.133 | 1.006 | 1.1657 | 7.90 |
| 46) | | heptane | | | | 0.498 | 0.495 | 0.493 | 0.468 | 0.454 | 0.456 | 0.393 | 0.4653 | 7.88 |
| 47) | C | cis-1,3-dichloropr... | 0.321 | 0.321 | 0.322 | 0.341 | 0.340 | 0.340 | 0.324 | 0.324 | 0.330 | 0.287 | 0.3249 | 4.82 |
| 48) | C | 4-methyl-2-pentanone | | | | | 0.546 | 0.553 | 0.531 | 0.520 | 0.520 | 0.451 | 0.5200 | 7.02 |
| 49) | | trans-1,3-dichloro... | 0.327 | 0.354 | 0.339 | 0.373 | 0.369 | 0.367 | 0.346 | 0.342 | 0.351 | 0.308 | 0.3477 | 5.77 |
| 50) | C | 1,1,2-trichloroethane | 0.328 | 0.261 | 0.246 | 0.263 | 0.256 | 0.258 | 0.238 | 0.234 | 0.239 | 0.213 | 0.2536 | 11.93 |
| 51) | I | chlorobenzene-D5 | ISTD | | | | | | | | | | | |
| 52) | C | toluene | | 6.305 | 5.753 | 5.960 | 5.858 | 5.747 | 5.131 | 5.121 | 5.306 | 4.758 | 5.5487 | 8.92 |
| 53) | s | toluene-D8 | 4.741 | 4.861 | 4.872 | 5.013 | 5.025 | 5.000 | 4.946 | 4.989 | 4.861 | 4.917 | 4.9225 | 1.83 |
| 54) | | 2-hexanone | | | | 3.219 | 3.340 | 3.469 | 3.299 | 3.254 | 3.133 | 2.342 | 3.1508 | 11.79 |
| 55) | | dibromochloromethane | 2.152 | 2.206 | 2.225 | 2.383 | 2.385 | 2.421 | 2.340 | 2.372 | 2.403 | 2.138 | 2.3025 | 4.78 |
| 56) | C | 1,2-dibromoethane | 3.112 | 2.666 | 2.563 | 2.786 | 2.766 | 2.766 | 2.504 | 2.542 | 2.655 | 2.362 | 2.6720 | 7.66 |
| 57) | C | tetrachloroethene | 2.544 | 2.269 | 2.228 | 2.378 | 2.385 | 2.352 | 2.124 | 2.118 | 2.238 | 2.006 | 2.2644 | 6.96 |
| 58) | | 1,1,1,2-tetrachlor... | 1.866 | 1.889 | 1.774 | 1.892 | 1.894 | 1.888 | 1.748 | 1.742 | 1.754 | 1.505 | 1.7954 | 6.77 |
| 59) | C | chlorobenzene | 4.410 | 4.376 | 4.383 | 4.621 | 4.623 | 4.619 | 4.175 | 4.227 | 4.545 | 3.987 | 4.3966 | 4.91 |
| 60) | C | ethylbenzene | 7.352 | 6.512 | 6.398 | 6.855 | 6.848 | 6.844 | 6.217 | 6.192 | 6.411 | 5.618 | 6.5249 | 7.33 |
| 61) | C | m+p-xylene | 6.443 | 5.621 | 5.360 | 5.729 | 5.741 | 5.743 | 5.178 | 5.165 | 5.274 | 4.430 | 5.4684 | 9.63 |

# Response Factor Report

Method Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Method File : TSIM3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 16:48:11 2020
Response Via : Initial Calibration

Calibration Files
0.02=r38589_Ev2.D 0.05=r38590_Ev2.D 0.1 =r38591_Ev2.D 0.2 =r38592_Ev2.D 0.5 =r38593_Ev2.D
1.0 =r38594_Ev2.D 5.0 =r38595_Ev2.D 10.0=r38596_Ev2.D 20.0=r38597_Ev2.D 50.0=r38598_Ev2.D

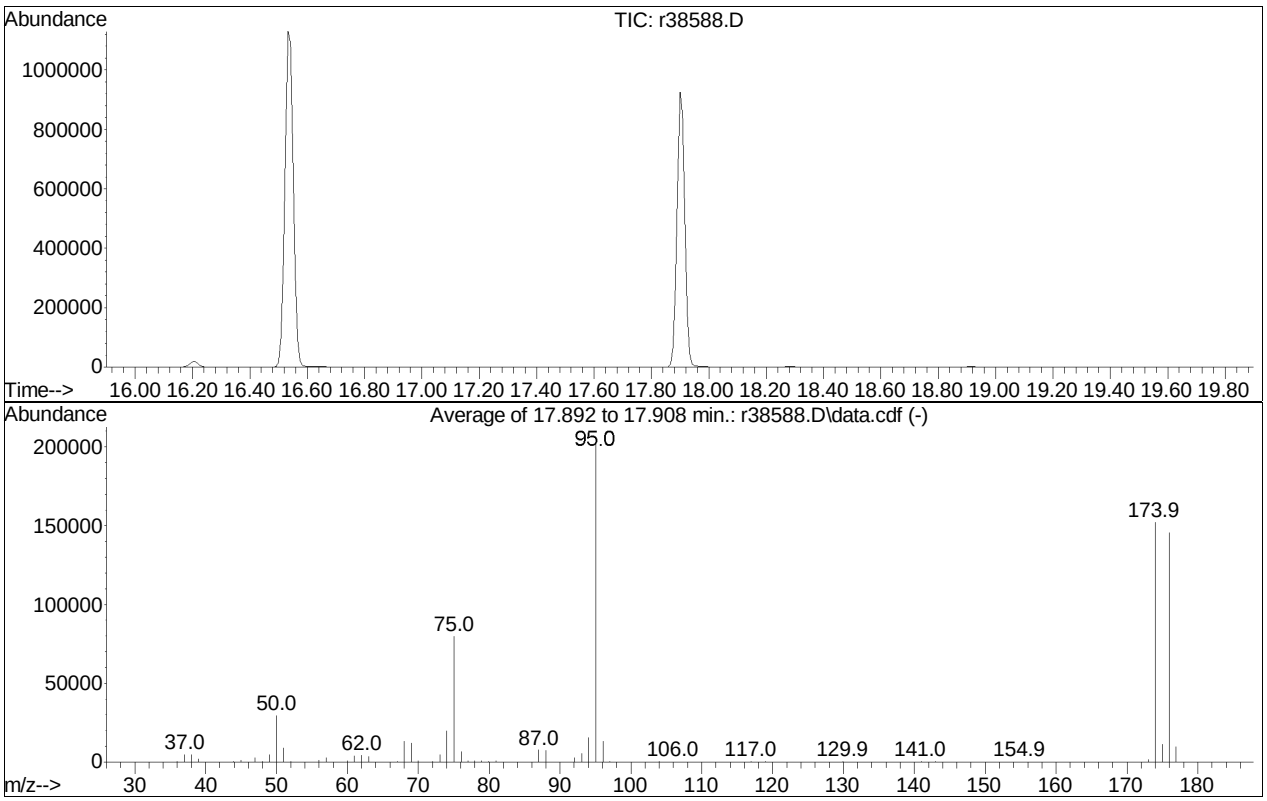
| | | Compound | 0.02 | 0.05 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62) | C | bromoform | 2.173 | 1.758 | 1.790 | 1.948 | 2.002 | 2.060 | 2.059 | 2.111 | 2.188 | 1.903 | 1.9992 | 7.45 |
| 63) | C | styrene | 5.078 | 4.841 | 4.683 | 4.614 | 4.753 | 4.822 | 4.597 | 4.648 | 4.946 | 4.462 | 4.7443 | 3.84 |
| 64) | C | 1,1,2,2-tetrachlor... | 3.811 | 3.509 | 3.523 | 3.931 | 3.960 | 3.985 | 3.593 | 3.635 | 3.823 | 3.105 | 3.6875 | 7.37 |
| 65) | C | o-xylene | 6.107 | 5.597 | 5.360 | 5.765 | 5.791 | 5.786 | 5.207 | 5.167 | 5.188 | 4.198 | 5.4165 | 9.83 |
| 66) | | 1,2,3-Trichloropro... | 3.149 | 2.861 | 2.911 | 3.141 | 3.194 | 3.174 | 3.012 | 3.037 | 3.052 | 2.700 | 3.0230 | 5.25 |
| 67) | s | bromofluorobenzene | 3.019 | 3.012 | 2.995 | 3.106 | 3.143 | 3.146 | 3.239 | 3.414 | 3.074 | 3.309 | 3.1456 | 4.38 |
| 68) | C | isopropylbenzene | | | | 8.064 | 8.142 | 8.091 | 7.607 | 7.503 | 7.548 | 6.394 | 7.6214 | 7.97 |
| 69) | | Bromobenzene | | | | 3.998 | 4.109 | 4.084 | 3.950 | 3.989 | 4.069 | 3.497 | 3.9566 | 5.32 |
| 70) | | 4-ethyl toluene | 7.760 | 7.695 | 7.768 | 8.650 | 8.932 | 9.040 | 8.553 | 8.534 | 8.480 | 7.180 | 8.2592 | 7.44 |
| 71) | | 1,3,5-trimethylben... | 7.469 | 6.387 | 6.632 | 7.287 | 7.468 | 7.413 | 6.899 | 6.844 | 6.978 | 5.731 | 6.9108 | 8.02 |
| 72) | | tert-butylbenzene | | | | 6.911 | 7.084 | 7.067 | 6.712 | 6.737 | 6.519 | 4.919 | 6.5641 | 11.48 |
| 73) | | 1,2,4-trimethylben... | 6.621 | 6.134 | 6.176 | 6.929 | 7.226 | 7.318 | 6.694 | 6.607 | 6.350 | 4.739 | 6.4792 | 11.27 |
| 74) | C | Benzyl Chloride | | | | 3.336 | 3.915 | 4.320 | 4.698 | 5.039 | 5.019 | 4.248 | 4.3678 | 14.08 |
| 75) | | 1,3-dichlorobenzene | 3.461 | 3.366 | 3.509 | 3.776 | 3.888 | 3.992 | 3.787 | 3.862 | 3.919 | 3.375 | 3.6936 | 6.50 |
| 76) | C | 1,4-dichlorobenzene | 3.748 | 3.214 | 3.568 | 3.564 | 3.737 | 3.818 | 3.651 | 3.784 | 3.947 | 3.380 | 3.6411 | 5.99 |
| 77) | | sec-butylbenzene | | | | 1.008 | 1.039 | 1.047 | 1.007 | 0.996 | 0.962 | 0.779 | 0.9769 | 9.40 |
| 78) | | p-isopropyltoluene | | | | 7.942 | 8.207 | 8.333 | 8.211 | 8.220 | 7.737 | 5.822 | 7.7817 | 11.41 |
| 79) | | 1,2-dichlorobenzene | 3.340 | 3.085 | 3.301 | 3.589 | 3.735 | 3.827 | 3.582 | 3.636 | 3.780 | 3.348 | 3.5223 | 6.89 |
| 80) | | n-butylbenzene | | | | 6.248 | 6.722 | 6.990 | 6.927 | 6.973 | 6.596 | 5.552 | 6.5728 | 7.93 |
| 81) | C | 1,2,4-trichloroben... | | 1.534 | 1.536 | 1.454 | 1.736 | 2.137 | 2.292 | 2.536 | 2.367 | 2.442 | 2.0039 | 21.76 |
| 82) | | naphthalene | | 7.760 | 6.706 | 5.403 | 5.752 | 6.434 | 7.583 | 8.217 | 6.921 | 6.809 | 6.8428 | 13.41 |
| 83) | | 1,2,3-trichloroben... | | 1.817 | 1.878 | 1.896 | 2.078 | 2.335 | 2.757 | 3.022 | 2.546 | 2.538 | 2.3186 | 18.48 |
| 84) | C | hexachlorobutadiene | | 2.527 | 2.529 | 2.893 | 3.009 | 3.026 | 2.775 | 2.750 | 2.488 | 2.091 | 2.6763 | 11.19 |

(#) = Out of Range

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38588.D
Acq On : 12 Mar 2020 9:50 AM
Operator : AIRPIANO3:RY
Sample : WG1350409-1,3,250,250
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 16:48:11 2020




Spectrum Information: Average of 17.892 to 17.908 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 14.5 | 29472 | PASS |
| 75 | 95 | 30 | 66 | 39.3 | 79731 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 202734 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 13477 | PASS |
| 173 | 174 | 0.00 | 2 | 1.1 | 1647 | PASS |
| 174 | 95 | 50 | 120 | 75.2 | 152363 | PASS |
| 175 | 174 | 4 | 9 | 7.4 | 11319 | PASS |
| 176 | 174 | 93 | 101 | 95.4 | 145430 | PASS |
| 177 | 176 | 5 | 9 | 6.8 | 9839 | PASS |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38589_Ev2.D
Acq On : 12 Mar 2020 10:28 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:32:39 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.53 | 49 | 220953 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = | | 96.82% | |
| 33) 1,4-difluorobenzene | 11.80 | 114 | 640498 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = | | 97.16% | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 94324 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = | | 96.21% | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 107832 | 9.777 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | | 97.77% | |
| 53) toluene-D8 | 14.64 | 98 | 447216 | 9.586 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | | 95.86% | |
| 67) bromofluorobenzene | 17.90 | 95 | 284732 | 9.320 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | | 93.20% | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 296 | 0.029 | ppbV | 98 |
| 3) dichlorodifluoromethane | 3.98 | 85 | 541 | 0.025 | ppbV | 94 |
| 4) chloromethane | 4.16 | 50 | 279 | 0.030 | ppbV # | 87 |
| 5) Freon-114 | 4.28 | 85 | 667 | 0.025 | ppbV | 95 |
| 6) vinyl chloride | 4.41 | 62 | 300 | 0.028 | ppbV # | 84 |
| 7) 1,3-butadiene | 4.58 | 54 | 261 | 0.024 | ppbV | 94 |
| 8) bromomethane | 4.89 | 94 | 237 | 0.026 | ppbV | 93 |
| 9) chloroethane | 5.11 | 64 | 129 | 0.024 | ppbV # | 68 |
| 10) ethanol | 5.30 | 31 | 6140 | 0.679 | ppbV | 98 |
| 11) vinyl bromide | 5.55 | 106 | 175 | 0.016 | ppbV | 98 |
| 12) acrolein | 5.70 | 56 | 172M4 | 0.032 | ppbV | |
| 13) acetone | 5.88 | 43 | 3248 | 0.210 | ppbV # | 96 |
| 14) trichlorofluoromethane | 6.06 | 101 | 319 | 0.020 | ppbV | 88 |
| 15) isopropyl alcohol | 6.21 | 45 | 2323 | 0.119 | ppbV # | 92 |
| 16) acrylonitrile | 6.44 | 53 | 252M4 | 0.026 | ppbV | |
| 17) 1,1-dichloroethene | 6.82 | 61 | 380 | 0.027 | ppbV # | 90 |
| 18) tertiary butyl alcohol | 6.95 | 59 | 667 | 0.033 | ppbV # | 92 |
| 19) methylene chloride | 6.99 | 49 | 409 | 0.031 | ppbV | 93 |
| 20) 3-chloropropene | 7.13 | 41 | 371 | 0.021 | ppbV # | 89 |
| 21) carbon disulfide | 7.28 | 76 | 918 | 0.022 | ppbV # | 1 |
| 22) Freon 113 | 7.33 | 101 | 584 | 0.026 | ppbV | 95 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 411 | 0.023 | ppbV | 92 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38589_Ev2.D
Acq On : 12 Mar 2020 10:28 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:32:39 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.35 | 63 | 428 | 0.021 | ppbV | # | 83 |
| 25) MTBE | 8.47 | 73 | 798 | 0.022 | ppbV | # | 68 |
| 26) vinyl acetate | 8.58 | 43 | 750 | 0.025 | ppbV | # | 78 |
| 27) 2-butanone | 8.88 | 43 | 730 | 0.026 | ppbV | # | 86 |
| 28) cis-1,2-dichloroethene | 9.35 | 61 | 394 | 0.026 | ppbV | | 95 |
| 29) Ethyl Acetate | 9.68 | 61 | 123 | 0.028 | ppbV | # | 9 |
| 30) chloroform | 9.70 | 83 | 503 | 0.023 | ppbV | # | 89 |
| 31) Tetrahydrofuran | 10.19 | 42 | 443 | 0.026 | ppbV | # | 81 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 343 | 0.028 | ppbV | # | 75 |
| 34) hexane | 9.61 | 57 | 556 | 0.024 | ppbV | # | 65 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 431 | 0.023 | ppbV | # | 76 |
| 37) benzene | 11.36 | 78 | 1504 | 0.034 | ppbV | | 95 |
| 38) carbon tetrachloride | 11.54 | 117 | 430 | 0.024 | ppbV | # | 74 |
| 39) cyclohexane | 11.68 | 56 | 564 | 0.023 | ppbV | | 89 |
| 40) Dibromomethane | 12.29 | 93 | 528 | 0.044 | ppbV | # | 96 |
| 41) 1,2-dichloropropane | 12.33 | 63 | 361 | 0.026 | ppbV | # | 83 |
| 42) bromodichloromethane | 12.55 | 83 | 608 | 0.024 | ppbV | # | 90 |
| 43) 1,4-dioxane | 12.64 | 88 | 348M3 | 0.033 | ppbV | | |
| 44) trichloroethene | 12.61 | 130 | 367 | 0.021 | ppbV | | 94 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 1755 | 0.024 | ppbV | # | 90 |
| 46) heptane | 12.97 | 43 | 768 | 0.026 | ppbV | # | 92 |
| 47) cis-1,3-dichloropropene | 14.24 | 75 | 411 | 0.020 | ppbV | # | 80 |
| 48) 4-methyl-2-pentanone | 13.68 | 43 | 687 | 0.020 | ppbV | | 91 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 419 | 0.019 | ppbV | # | 77 |
| 50) 1,1,2-trichloroethane | 14.43 | 97 | 420 | 0.028 | ppbV | # | 80 |
| 52) toluene | 14.75 | 91 | 1491 | 0.031 | ppbV | | 95 |
| 54) 2-hexanone | 15.07 | 43 | 536 | 0.017 | ppbV | # | 88 |
| 55) dibromochloromethane | 15.20 | 129 | 406 | 0.018 | ppbV | # | 92 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 587 | 0.025 | ppbV | | 94 |
| 57) tetrachloroethene | 15.92 | 166 | 480 | 0.024 | ppbV | # | 89 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 352 | 0.021 | ppbV | | 93 |
| 59) chlorobenzene | 16.57 | 112 | 832 | 0.021 | ppbV | | 95 |
| 60) ethylbenzene | 16.93 | 91 | 1387 | 0.024 | ppbV | | 95 |
| 61) m+p-xylene | 17.08 | 91 | 2431 | 0.050 | ppbV | | 98 |
| 62) bromoform | 17.16 | 173 | 410 | 0.021 | ppbV | | 94 |
| 63) styrene | 17.41 | 104 | 958 | 0.022 | ppbV | | 94 |
| 64) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 719 | 0.021 | ppbV | | 100 |
| 65) o-xylene | 17.50 | 91 | 1152 | 0.023 | ppbV | | 100 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 594 | 0.021 | ppbV | # | 91 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38589_Ev2.D
Acq On : 12 Mar 2020 10:28 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:32:39 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.01 | 105 | 1543 | 0.022 | ppbV | 99 |
| 69) Bromobenzene | 18.08 | 77 | 718 | 0.019 | ppbV | 90 |
| 70) 4-ethyl toluene | 18.57 | 105 | 1464 | 0.018 | ppbV # | 94 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 1409 | 0.022 | ppbV # | 98 |
| 72) tert-butylbenzene | 18.95 | 119 | 1175 | 0.019 | ppbV | 96 |
| 73) 1,2,4-trimethylbenzene | 18.95 | 105 | 1249 | 0.020 | ppbV | 95 |
| 74) Benzyl Chloride | 19.07 | 91 | 585M3 | 0.013 | ppbV | |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 653 | 0.018 | ppbV # | 91 |
| 76) 1,4-dichlorobenzene | 19.13 | 146 | 707M3 | 0.021 | ppbV | |
| 77) sec-butylbenzene | 19.17 | 105 | 1654 | 0.017 | ppbV | 92 |
| 78) p-isopropyltoluene | 19.29 | 119 | 1524 | 0.020 | ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 630 | 0.019 | ppbV # | 86 |
| 80) n-butylbenzene | 19.63 | 91 | 980 | 0.015 | ppbV | 95 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 311 | 0.014 | ppbV | 92 |
| 82) naphthalene | 20.99 | 128 | 2682 | 0.037 | ppbV # | 93 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 464 | 0.018 | ppbV # | 88 |
| 84) hexachlorobutadiene | 21.31 | 225 | 487 | 0.019 | ppbV # | 90 |

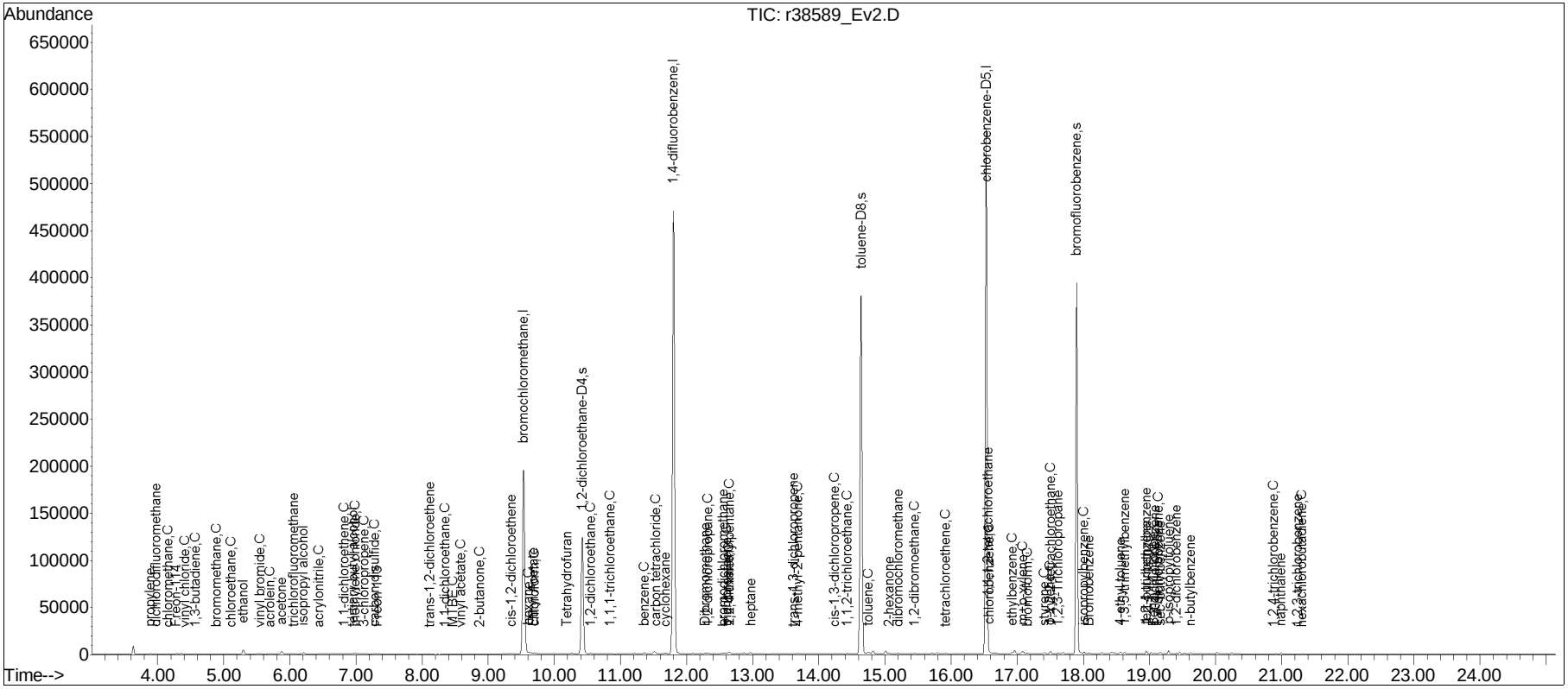
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38589_Ev2.D
Acq On : 12 Mar 2020 10:28 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:32:39 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D

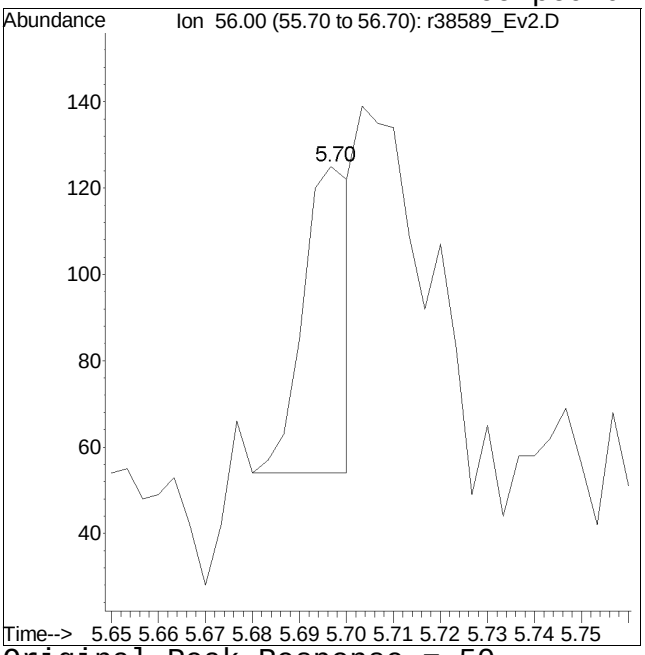


Manual Integration/Negative Proof Report

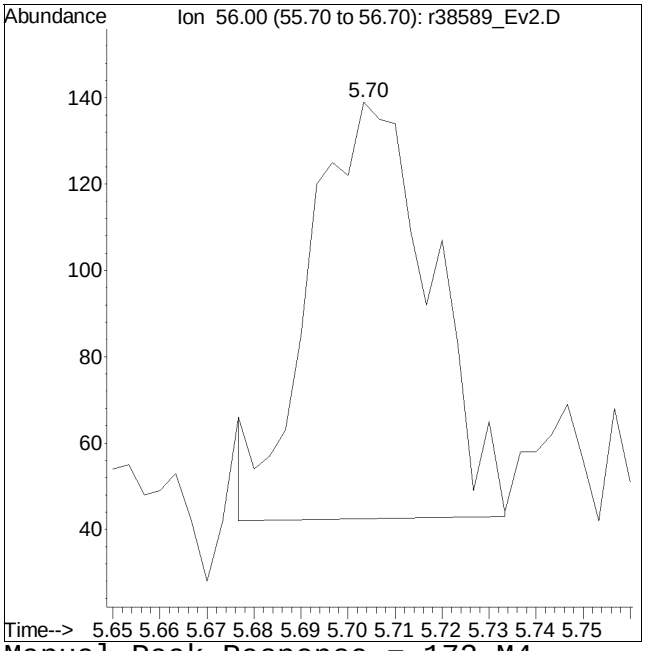
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38589_Ev2.D
Date Inj'd : 3/12/2020 0:0: 8
Sample : ITO15-SIMSTD0.02

Method : TSIM3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:27 pm

Compound #12: acrolein




Original Peak Response = 50




Manual Peak Response = 172 M4

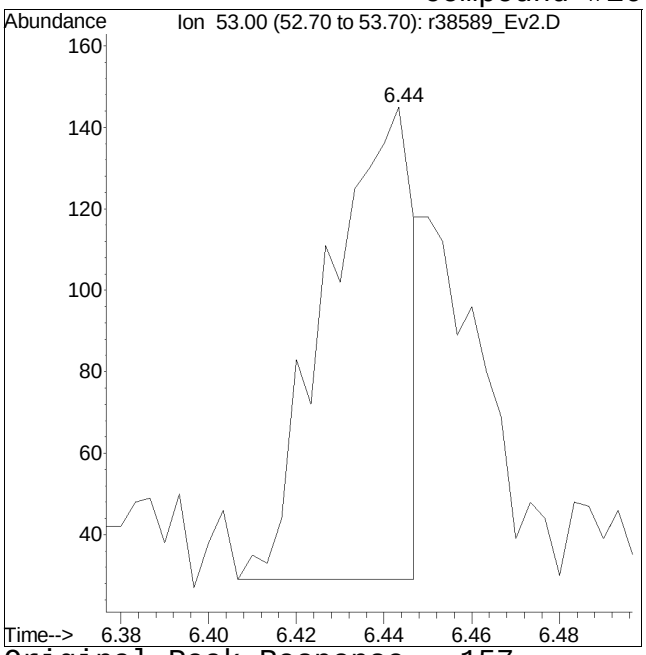
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

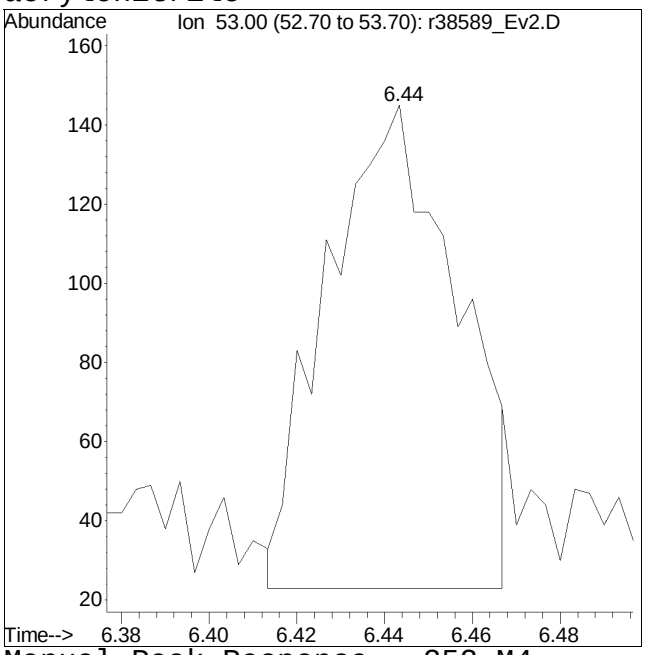
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38589_Ev2.D
Date Inj'd : 3/12/2020 0:0: 8
Sample : ITO15-SIMSTD0.02

Method : TSIM3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:27 pm

Compound #16: acrylonitrile




Original Peak Response = 157



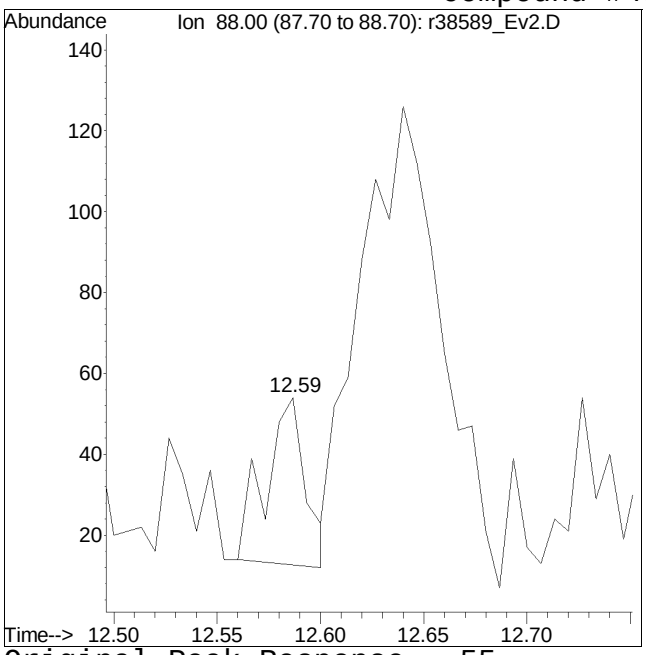

Manual Peak Response = 252 M4

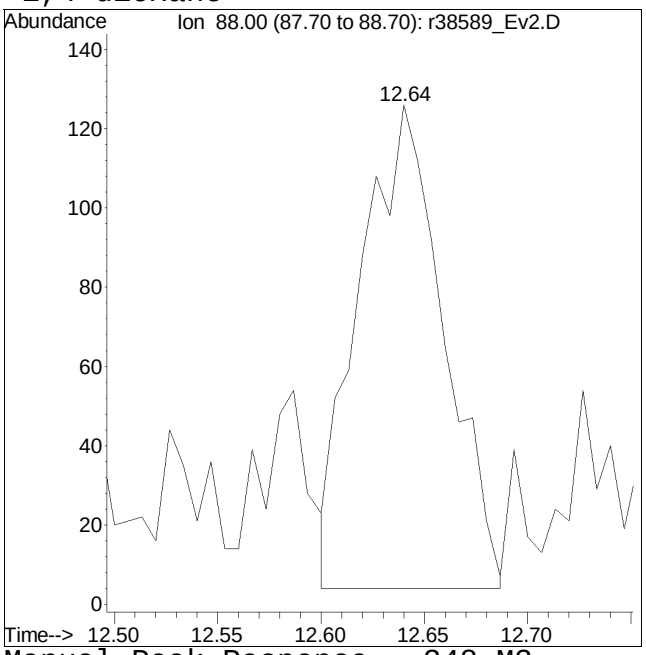
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38589_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:0: 8 Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 3/12/2020 4:27 pm

Compound #43: 1,4-dioxane



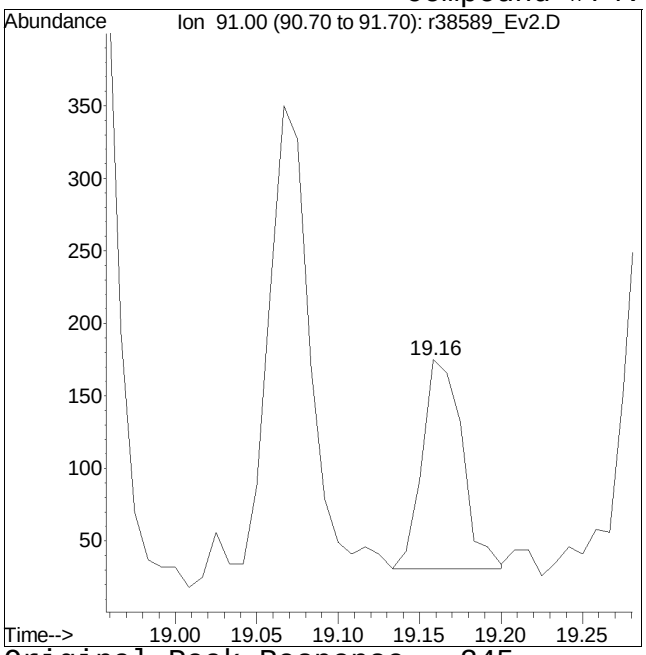

Original Peak Response = 55 Manual Peak Response = 348 M3

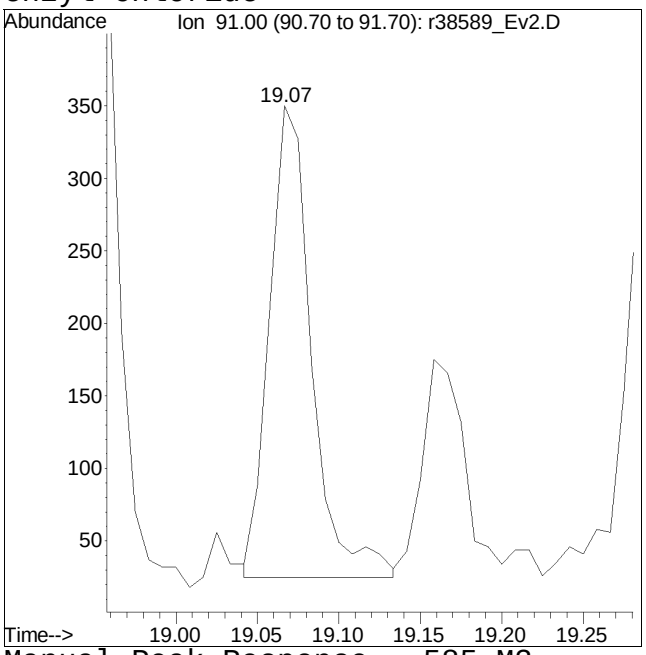
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38589_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:0: 8 Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 3/12/2020 4:27 pm

Compound #74: Benzyl Chloride



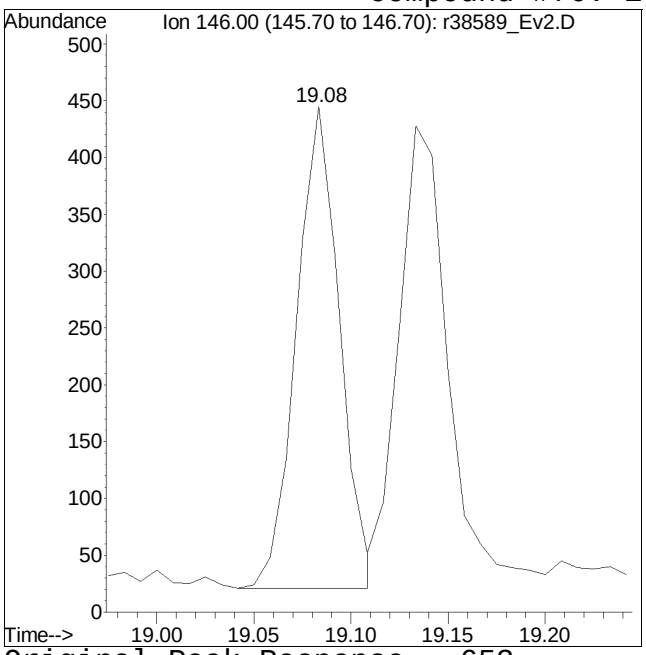

Original Peak Response = 245 Manual Peak Response = 585 M3

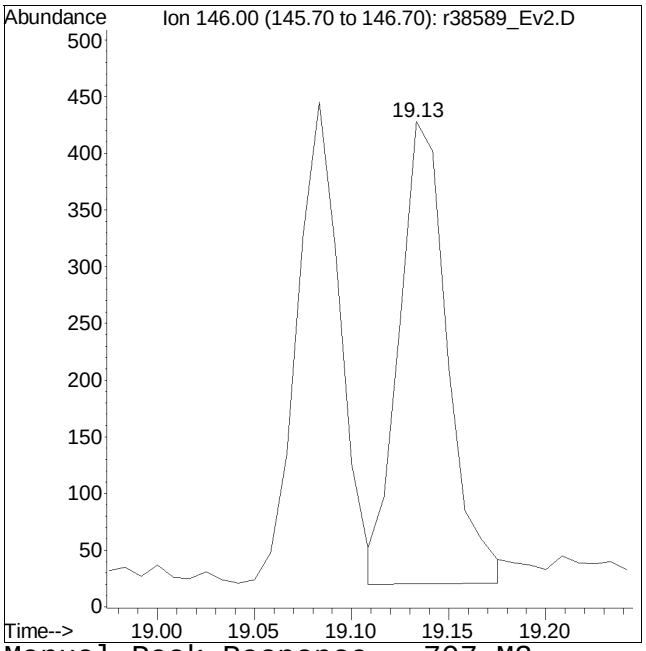
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38589_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:0: 8 Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 3/12/2020 4:27 pm

Compound #76: 1,4-dichlorobenzene




Original Peak Response = 653 Manual Peak Response = 707 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38590_Ev2.D
Acq On : 12 Mar 2020 11:06 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.05
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:34:43 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.53 | 49 | 221079 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = | | 96.88% | |
| 33) 1,4-difluorobenzene | 11.80 | 114 | 643361 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = | | 97.59% | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 94659 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = | | 96.55% | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.42 | 65 | 109626 | 9.895 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | | 98.95% | |
| 53) toluene-D8 | 14.64 | 98 | 460092 | 9.827 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | | 98.27% | |
| 67) bromofluorobenzene | 17.90 | 95 | 285090 | 9.298 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | | 92.98% | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 620M4 | 0.060 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 1234 | 0.058 | ppbV | 98 |
| 4) chloromethane | 4.16 | 50 | 591 | 0.063 | ppbV | 92 |
| 5) Freon-114 | 4.28 | 85 | 1550 | 0.058 | ppbV | 97 |
| 6) vinyl chloride | 4.41 | 62 | 620 | 0.058 | ppbV | 95 |
| 7) 1,3-butadiene | 4.58 | 54 | 622 | 0.057 | ppbV | 91 |
| 8) bromomethane | 4.89 | 94 | 553 | 0.060 | ppbV | 98 |
| 9) chloroethane | 5.11 | 64 | 323 | 0.060 | ppbV | 96 |
| 10) ethanol | 5.29 | 31 | 7146 | 0.789 | ppbV | 99 |
| 11) vinyl bromide | 5.54 | 106 | 585 | 0.053 | ppbV | 98 |
| 12) acrolein | 5.70 | 56 | 267 | 0.050 | ppbV # | 76 |
| 13) acetone | 5.87 | 43 | 5682 | 0.367 | ppbV # | 98 |
| 14) trichlorofluoromethane | 6.06 | 101 | 934 | 0.057 | ppbV | 99 |
| 15) isopropyl alcohol | 6.20 | 45 | 3842 | 0.196 | ppbV | 97 |
| 16) acrylonitrile | 6.43 | 53 | 487 | 0.050 | ppbV | 98 |
| 17) 1,1-dichloroethene | 6.82 | 61 | 734 | 0.052 | ppbV | 96 |
| 18) tertiary butyl alcohol | 6.94 | 59 | 1408 | 0.069 | ppbV | 96 |
| 19) methylene chloride | 6.99 | 49 | 972 | 0.073 | ppbV | 97 |
| 20) 3-chloropropene | 7.13 | 41 | 945 | 0.053 | ppbV | 95 |
| 21) carbon disulfide | 7.28 | 76 | 2188 | 0.053 | ppbV # | 17 |
| 22) Freon 113 | 7.32 | 101 | 1250 | 0.056 | ppbV | 96 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 947 | 0.054 | ppbV | 93 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38590_Ev2.D
Acq On : 12 Mar 2020 11:06 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.05
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:34:43 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.35 | 63 | 1112 | 0.055 | ppbV | | 92 |
| 25) MTBE | 8.46 | 73 | 1956 | 0.054 | ppbV | # | 89 |
| 26) vinyl acetate | 8.57 | 43 | 1636 | 0.054 | ppbV | | 96 |
| 27) 2-butanone | 8.87 | 43 | 1580 | 0.057 | ppbV | # | 97 |
| 28) cis-1,2-dichloroethene | 9.34 | 61 | 855 | 0.057 | ppbV | | 95 |
| 29) Ethyl Acetate | 9.68 | 61 | 295 | 0.066 | ppbV | # | 55 |
| 30) chloroform | 9.70 | 83 | 1237 | 0.056 | ppbV | # | 93 |
| 31) Tetrahydrofuran | 10.18 | 42 | 890 | 0.052 | ppbV | | 97 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 675 | 0.055 | ppbV | # | 90 |
| 34) hexane | 9.61 | 57 | 1253 | 0.055 | ppbV | # | 67 |
| 36) 1,1,1-trichloroethane | 10.83 | 97 | 1081 | 0.058 | ppbV | | 96 |
| 37) benzene | 11.36 | 78 | 2890 | 0.064 | ppbV | | 97 |
| 38) carbon tetrachloride | 11.54 | 117 | 997 | 0.054 | ppbV | | 98 |
| 39) cyclohexane | 11.69 | 56 | 1346 | 0.054 | ppbV | | 98 |
| 40) Dibromomethane | 12.29 | 93 | 885 | 0.073 | ppbV | # | 97 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 814 | 0.058 | ppbV | | 93 |
| 42) bromodichloromethane | 12.55 | 83 | 1381 | 0.055 | ppbV | # | 90 |
| 43) 1,4-dioxane | 12.63 | 88 | 667 | 0.063 | ppbV | | 89 |
| 44) trichloroethene | 12.59 | 130 | 981M4 | 0.055 | ppbV | | |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 3898 | 0.052 | ppbV | | 98 |
| 46) heptane | 12.97 | 43 | 1596 | 0.053 | ppbV | | 95 |
| 47) cis-1,3-dichloropropene | 14.23 | 75 | 1033 | 0.050 | ppbV | | 94 |
| 48) 4-methyl-2-pentanone | 13.68 | 43 | 1714 | 0.050 | ppbV | | 97 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 1140 | 0.051 | ppbV | | 95 |
| 50) 1,1,2-trichloroethane | 14.43 | 97 | 840 | 0.055 | ppbV | | 95 |
| 52) toluene | 14.75 | 91 | 2984 | 0.061 | ppbV | | 97 |
| 54) 2-hexanone | 15.07 | 43 | 1297 | 0.042 | ppbV | | 96 |
| 55) dibromochloromethane | 15.20 | 129 | 1044 | 0.047 | ppbV | | 97 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 1262 | 0.053 | ppbV | | 99 |
| 57) tetrachloroethene | 15.92 | 166 | 1074M4 | 0.053 | ppbV | | |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 894 | 0.054 | ppbV | | 95 |
| 59) chlorobenzene | 16.57 | 112 | 2071 | 0.052 | ppbV | | 99 |
| 60) ethylbenzene | 16.93 | 91 | 3082 | 0.052 | ppbV | | 100 |
| 61) m+p-xylene | 17.08 | 91 | 5321 | 0.109 | ppbV | | 100 |
| 62) bromoform | 17.16 | 173 | 832 | 0.043 | ppbV | | 98 |
| 63) styrene | 17.41 | 104 | 2291 | 0.053 | ppbV | | 97 |
| 64) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 1661 | 0.049 | ppbV | | 98 |
| 65) o-xylene | 17.50 | 91 | 2649 | 0.054 | ppbV | | 100 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 1354 | 0.047 | ppbV | # | 89 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38590_Ev2.D
Acq On : 12 Mar 2020 11:06 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.05
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:34:43 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 3486 | 0.048 | ppbV | 99 |
| 69) Bromobenzene | 18.09 | 77 | 1836 | 0.049 | ppbV | 97 |
| 70) 4-ethyl toluene | 18.57 | 105 | 3642 | 0.045 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 3023 | 0.046 | ppbV | 98 |
| 72) tert-butylbenzene | 18.96 | 119 | 2826 | 0.044 | ppbV | 94 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 2903 | 0.046 | ppbV | 96 |
| 74) Benzyl Chloride | 19.07 | 91 | 1387 | 0.031 | ppbV | 93 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 1593M4 | 0.044 | ppbV | |
| 76) 1,4-dichlorobenzene | 19.14 | 146 | 1521 | 0.044 | ppbV | 95 |
| 77) sec-butylbenzene | 19.17 | 105 | 4067 | 0.043 | ppbV | 100 |
| 78) p-isopropyltoluene | 19.29 | 119 | 3266 | 0.042 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 1460 | 0.043 | ppbV | 96 |
| 80) n-butylbenzene | 19.63 | 91 | 2503 | 0.038 | ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 726 | 0.033 | ppbV # | 91 |
| 82) naphthalene | 20.99 | 128 | 3673 | 0.051 | ppbV | 97 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 860 | 0.033 | ppbV | 93 |
| 84) hexachlorobutadiene | 21.31 | 225 | 1196 | 0.046 | ppbV | 97 |

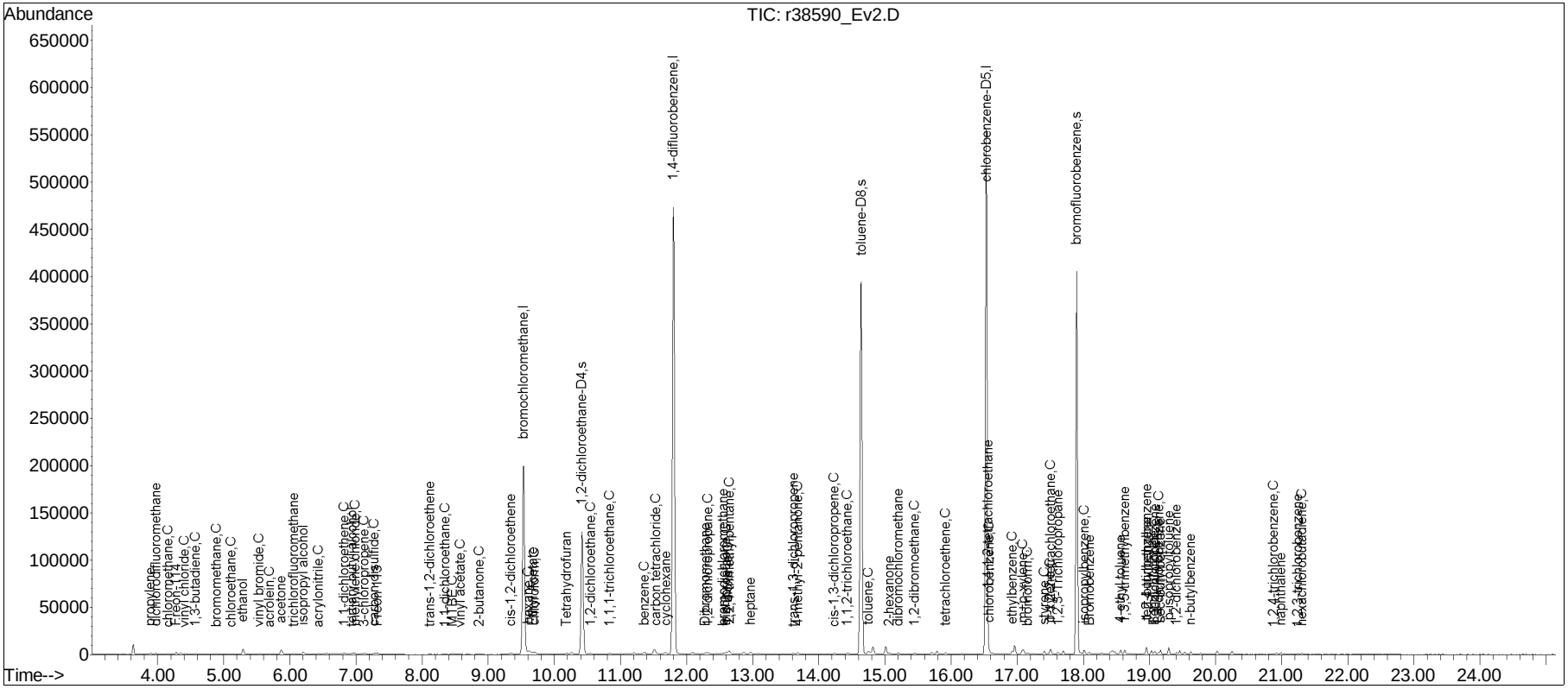
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38590_Ev2.D
Acq On : 12 Mar 2020 11:06 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.05
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:34:43 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

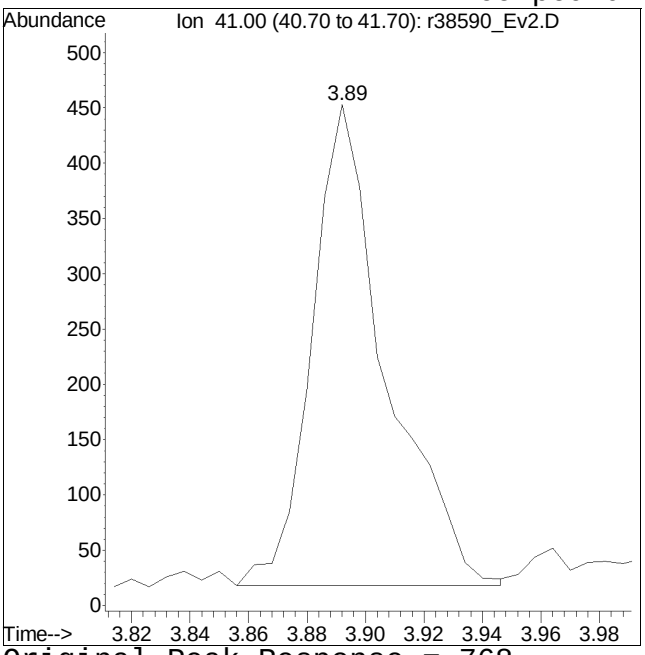
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D

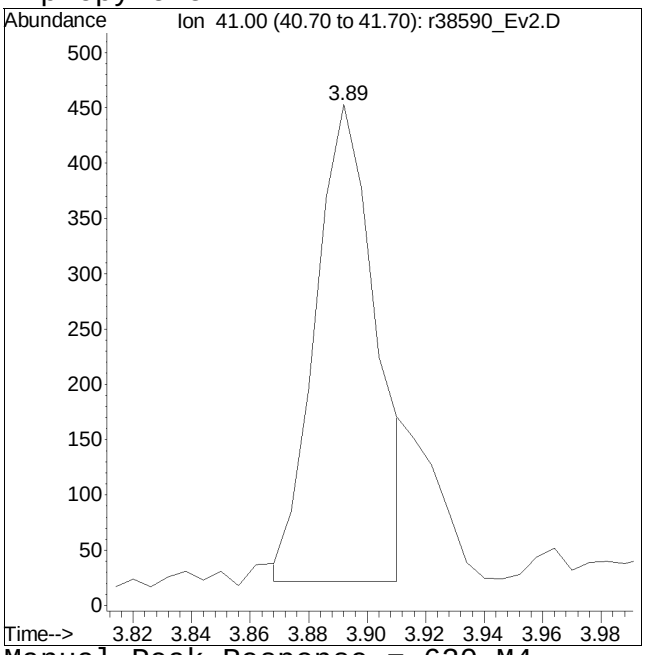


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38590_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:1: 6 Instrument :
Sample : ITO15-SIMSTD0.05 Quant Date : 3/12/2020 4:27 pm

Compound #2: propylene



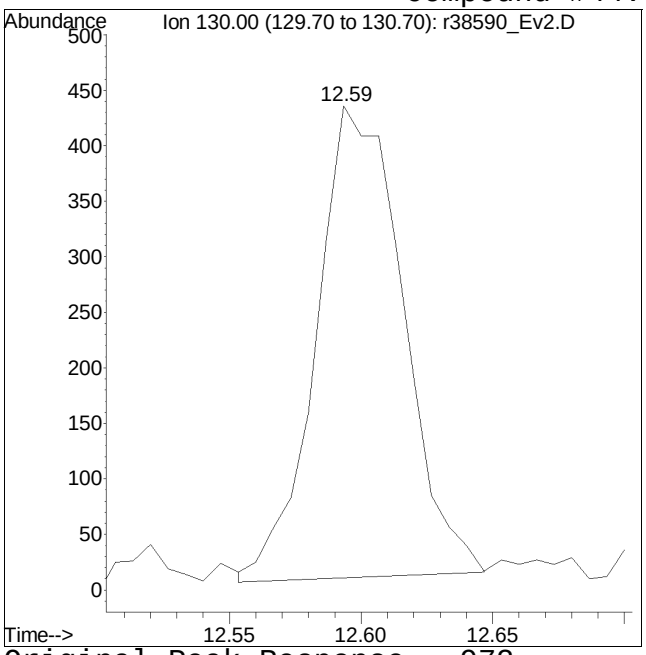

Original Peak Response = 768 Manual Peak Response = 620 M4
M4 = Poor automated baseline construction.

# Manual Integration/Negative Proof Report

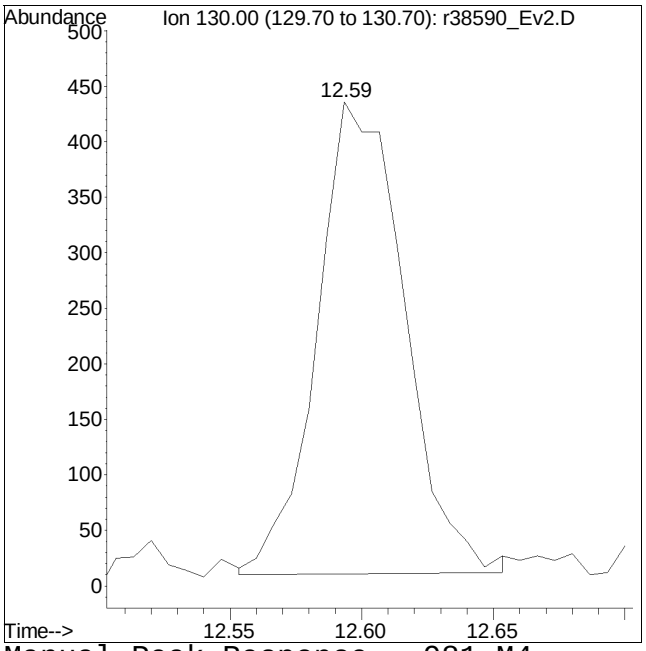
Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38590_Ev2.D
Date Inj'd : 3/12/2020 0:1: 6
Sample : ITO15-SIMSTD0.05

Method : TSIM3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:27 pm

## Compound #44: trichloroethene




Original Peak Response = 972



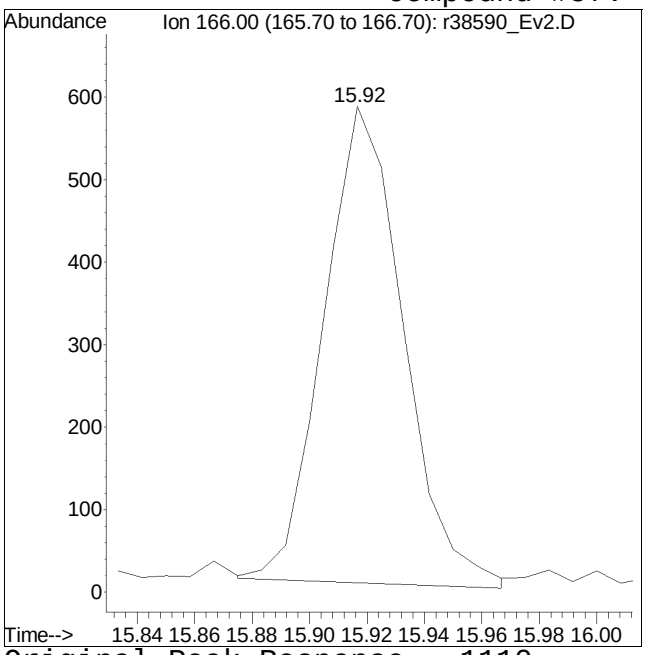

Manual Peak Response = 981 M4

M4 = Poor automated baseline construction.

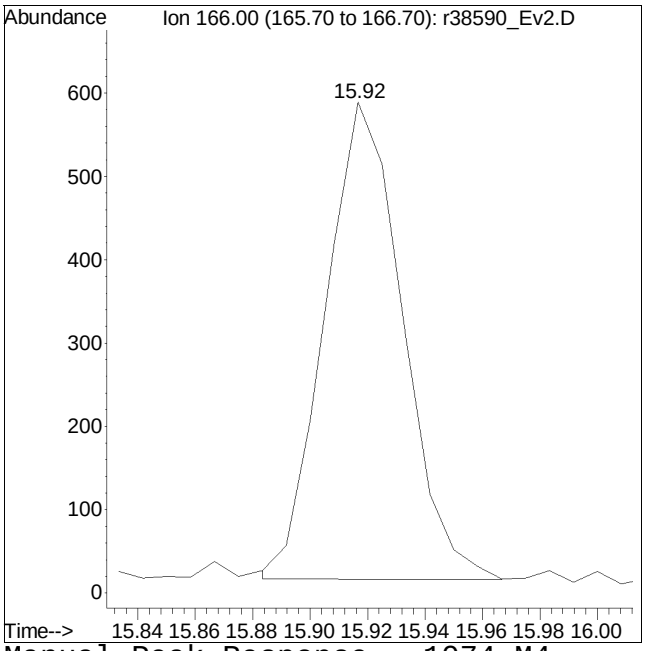
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38590_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:1: 6 Instrument :
Sample : ITO15-SIMSTD0.05 Quant Date : 3/12/2020 4:27 pm

Compound #57: tetrachloroethene




Original Peak Response = 1110



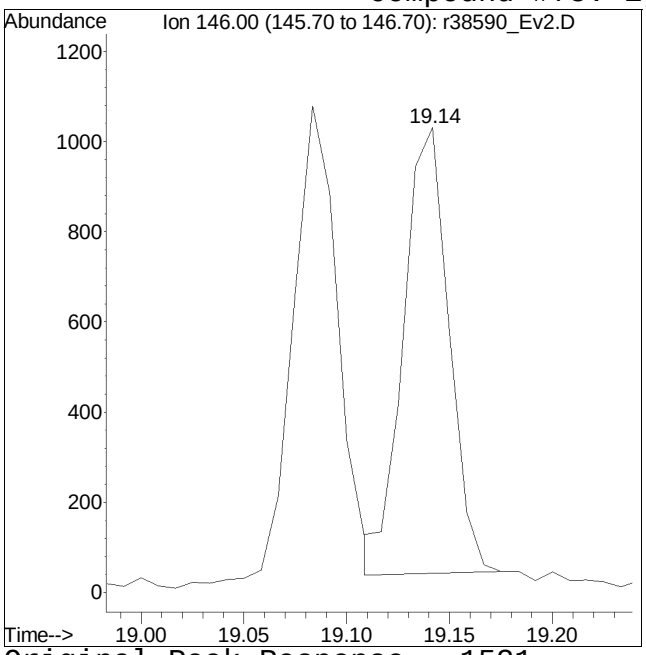

Manual Peak Response = 1074 M4

M4 = Poor automated baseline construction.

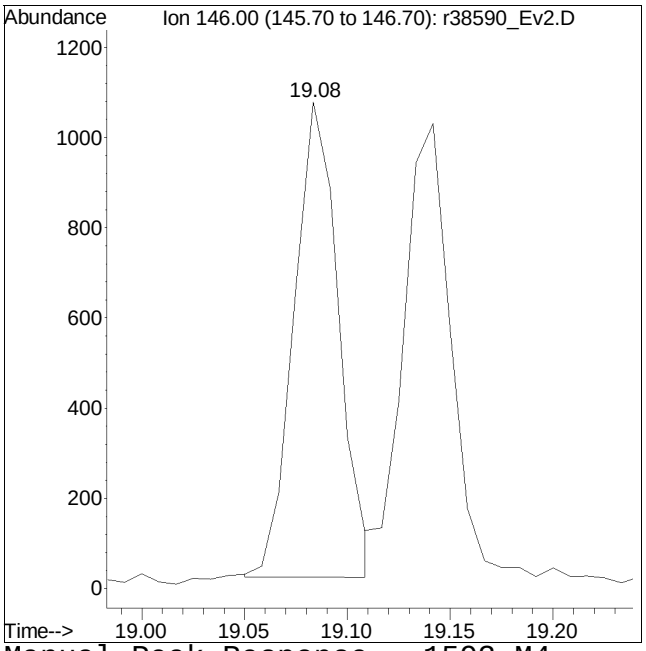
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38590_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:1: 6 Instrument :
Sample : ITO15-SIMSTD0.05 Quant Date : 3/12/2020 4:27 pm

Compound #75: 1,3-dichlorobenzene




Original Peak Response = 1521




Manual Peak Response = 1593 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38591_Ev2.D
Acq On : 12 Mar 2020 11:47 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:35:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.53 | 49 | 222774 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = | 97.62% | | |
| 33) 1,4-difluorobenzene | 11.80 | 114 | 644735 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = | 97.80% | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 94868 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = | 96.76% | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 109787 | 9.889 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | 98.89% | | |
| 53) toluene-D8 | 14.64 | 98 | 462181 | 9.849 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | 98.49% | | |
| 67) bromofluorobenzene | 17.90 | 95 | 284121 | 9.246 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = | 92.46% | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 1144M4 | 0.110 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 2447 | 0.113 | ppbV | 99 |
| 4) chloromethane | 4.16 | 50 | 1188 | 0.126 | ppbV | 96 |
| 5) Freon-114 | 4.28 | 85 | 3081 | 0.114 | ppbV | 100 |
| 6) vinyl chloride | 4.41 | 62 | 1238 | 0.114 | ppbV | 96 |
| 7) 1,3-butadiene | 4.58 | 54 | 1173 | 0.107 | ppbV | 94 |
| 8) bromomethane | 4.89 | 94 | 1036 | 0.112 | ppbV | 97 |
| 9) chloroethane | 5.11 | 64 | 610 | 0.112 | ppbV | 96 |
| 10) ethanol | 5.30 | 31 | 9555 | 1.048 | ppbV | 100 |
| 11) vinyl bromide | 5.54 | 106 | 1149 | 0.104 | ppbV | 100 |
| 12) acrolein | 5.70 | 56 | 639 | 0.119 | ppbV # | 88 |
| 13) acetone | 5.87 | 43 | 9429 | 0.604 | ppbV # | 99 |
| 14) trichlorofluoromethane | 6.06 | 101 | 1860 | 0.113 | ppbV | 93 |
| 15) isopropyl alcohol | 6.20 | 45 | 6158 | 0.312 | ppbV # | 95 |
| 16) acrylonitrile | 6.44 | 53 | 986 | 0.100 | ppbV | 98 |
| 17) 1,1-dichloroethene | 6.82 | 61 | 1578 | 0.111 | ppbV | 98 |
| 18) tertiary butyl alcohol | 6.94 | 59 | 2542 | 0.124 | ppbV | 98 |
| 19) methylene chloride | 6.99 | 49 | 1537 | 0.115 | ppbV | 93 |
| 20) 3-chloropropene | 7.13 | 41 | 1896 | 0.105 | ppbV | 96 |
| 21) carbon disulfide | 7.28 | 76 | 4241 | 0.102 | ppbV # | 56 |
| 22) Freon 113 | 7.33 | 101 | 2470 | 0.111 | ppbV | 97 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 1834 | 0.104 | ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38591_Ev2.D
Acq On : 12 Mar 2020 11:47 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:35:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.35 | 63 | 2218 | 0.109 | ppbV | | 96 |
| 25) MTBE | 8.46 | 73 | 3770 | 0.102 | ppbV | # | 90 |
| 26) vinyl acetate | 8.57 | 43 | 3231 | 0.105 | ppbV | | 97 |
| 27) 2-butanone | 8.87 | 43 | 3014 | 0.108 | ppbV | # | 98 |
| 28) cis-1,2-dichloroethene | 9.34 | 61 | 1611 | 0.107 | ppbV | | 99 |
| 29) Ethyl Acetate | 9.67 | 61 | 485 | 0.108 | ppbV | | 84 |
| 30) chloroform | 9.70 | 83 | 2406 | 0.108 | ppbV | | 96 |
| 31) Tetrahydrofuran | 10.18 | 42 | 1833 | 0.107 | ppbV | | 97 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 1483 | 0.120 | ppbV | | 95 |
| 34) hexane | 9.61 | 57 | 2453 | 0.107 | ppbV | # | 72 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 2070 | 0.112 | ppbV | | 98 |
| 37) benzene | 11.37 | 78 | 5220 | 0.116 | ppbV | | 100 |
| 38) carbon tetrachloride | 11.54 | 117 | 1988 | 0.108 | ppbV | | 98 |
| 39) cyclohexane | 11.68 | 56 | 2491 | 0.100 | ppbV | | 97 |
| 40) Dibromomethane | 12.29 | 93 | 1542 | 0.126 | ppbV | # | 89 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 1539 | 0.110 | ppbV | | 96 |
| 42) bromodichloromethane | 12.55 | 83 | 2627 | 0.104 | ppbV | # | 99 |
| 43) 1,4-dioxane | 12.62 | 88 | 1130 | 0.106 | ppbV | | 88 |
| 44) trichloroethene | 12.60 | 130 | 1876 | 0.105 | ppbV | | 96 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 7652 | 0.102 | ppbV | | 98 |
| 46) heptane | 12.97 | 43 | 3036 | 0.101 | ppbV | | 96 |
| 47) cis-1,3-dichloropropene | 14.23 | 75 | 2073 | 0.099 | ppbV | | 96 |
| 48) 4-methyl-2-pentanone | 13.68 | 43 | 3279 | 0.096 | ppbV | | 98 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 2188 | 0.098 | ppbV | | 99 |
| 50) 1,1,2-trichloroethane | 14.43 | 97 | 1588 | 0.104 | ppbV | | 97 |
| 52) toluene | 14.75 | 91 | 5458 | 0.112 | ppbV | | 100 |
| 54) 2-hexanone | 15.06 | 43 | 2801 | 0.089 | ppbV | | 96 |
| 55) dibromochloromethane | 15.20 | 129 | 2111 | 0.095 | ppbV | | 98 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 2431 | 0.102 | ppbV | | 98 |
| 57) tetrachloroethene | 15.92 | 166 | 2114 | 0.105 | ppbV | | 99 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 1683 | 0.101 | ppbV | | 98 |
| 59) chlorobenzene | 16.57 | 112 | 4158 | 0.105 | ppbV | | 99 |
| 60) ethylbenzene | 16.93 | 91 | 6070 | 0.103 | ppbV | | 99 |
| 61) m+p-xylene | 17.08 | 91 | 10169 | 0.207 | ppbV | | 99 |
| 62) bromoform | 17.16 | 173 | 1698 | 0.087 | ppbV | | 99 |
| 63) styrene | 17.41 | 104 | 4443 | 0.102 | ppbV | | 99 |
| 64) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 3342 | 0.098 | ppbV | | 98 |
| 65) o-xylene | 17.50 | 91 | 5085 | 0.103 | ppbV | | 99 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 2762 | 0.097 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38591_Ev2.D
Acq On : 12 Mar 2020 11:47 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:35:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 6988 | 0.097 | ppbV | 97 |
| 69) Bromobenzene | 18.09 | 77 | 3619 | 0.097 | ppbV | 100 |
| 70) 4-ethyl toluene | 18.57 | 105 | 7369 | 0.091 | ppbV | 98 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 6292 | 0.096 | ppbV | 98 |
| 72) tert-butylbenzene | 18.95 | 119 | 5769 | 0.091 | ppbV | 98 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 5859 | 0.092 | ppbV | 95 |
| 74) Benzyl Chloride | 19.07 | 91 | 2961 | 0.066 | ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 3329 | 0.093 | ppbV | 95 |
| 76) 1,4-dichlorobenzene | 19.14 | 146 | 3385 | 0.098 | ppbV | 94 |
| 77) sec-butylbenzene | 19.17 | 105 | 8392 | 0.088 | ppbV | 100 |
| 78) p-isopropyltoluene | 19.29 | 119 | 6539 | 0.084 | ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 3132 | 0.092 | ppbV | 97 |
| 80) n-butylbenzene | 19.63 | 91 | 5087 | 0.077 | ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 1457 | 0.067 | ppbV | 95 |
| 82) naphthalene | 20.99 | 128 | 6362 | 0.088 | ppbV | 100 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 1782 | 0.068 | ppbV | 97 |
| 84) hexachlorobutadiene | 21.31 | 225 | 2399 | 0.091 | ppbV | 98 |

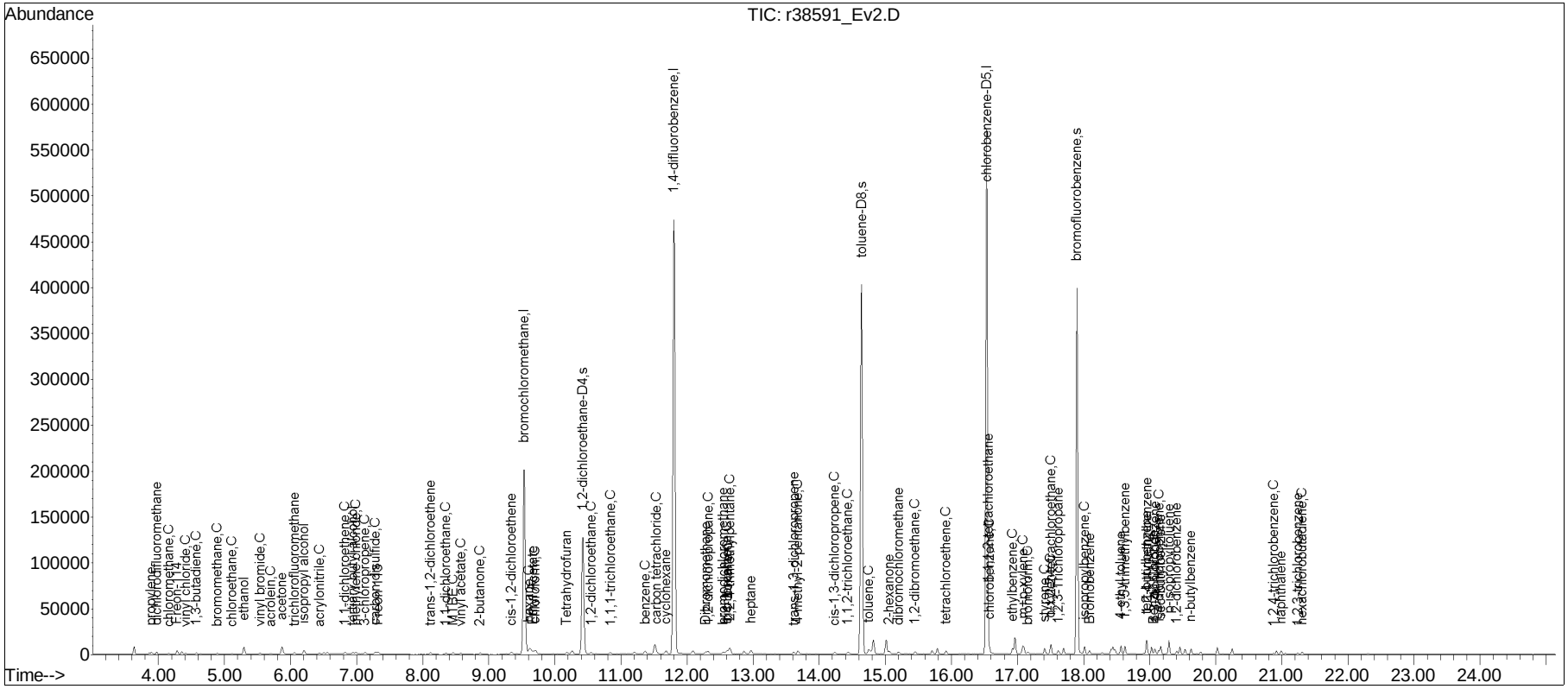
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38591_Ev2.D
Acq On : 12 Mar 2020 11:47 AM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:35:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

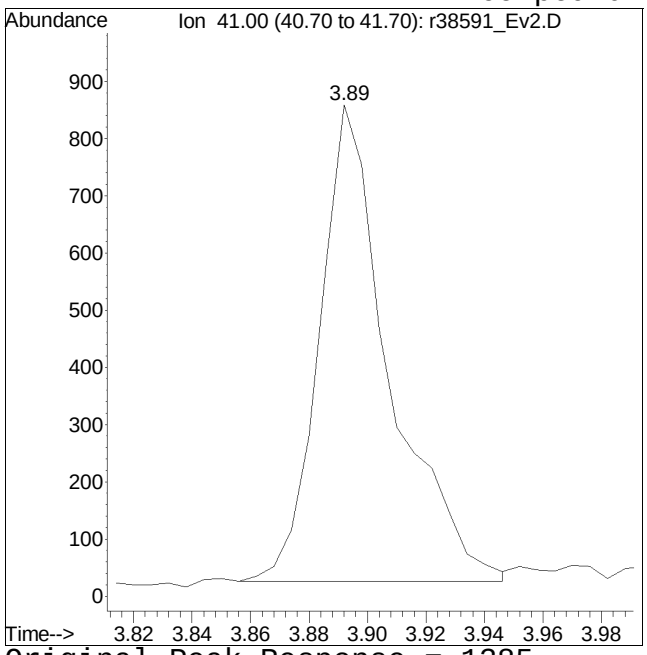
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D



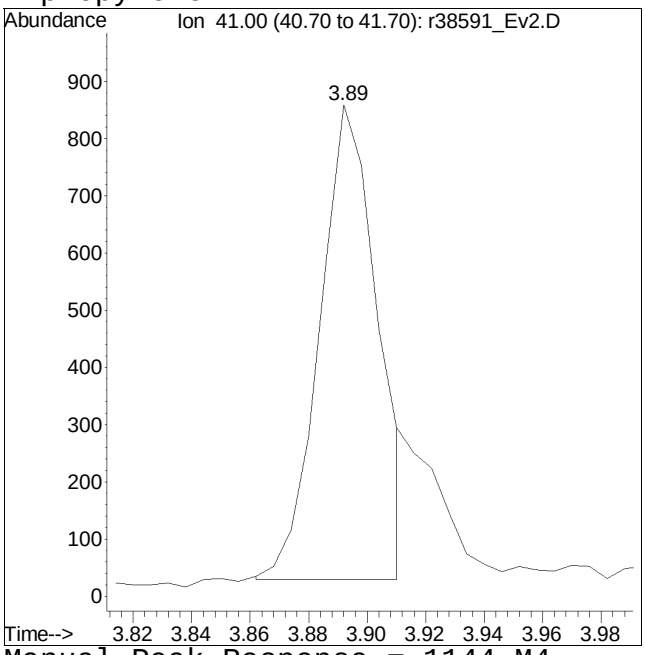
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38591_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:1: 7 Instrument :
Sample : ITO15-SIMSTD0.1 Quant Date : 3/12/2020 4:28 pm

Compound #2: propylene




Original Peak Response = 1385




Manual Peak Response = 1144 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38592_Ev2.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:37:05 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.53 | 49 | 221092 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 96.88% | | | |
| 33) 1,4-difluorobenzene | 11.80 | 114 | 640756 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 97.19% | | | |
| 51) chlorobenzene-D5 | 16.52 | 54 | 93877 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 95.75% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.42 | 65 | 111360 | 10.093 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.93% | | | |
| 53) toluene-D8 | 14.64 | 98 | 470589 | 10.135 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.35% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 291607 | 9.590 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.90% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 2241M4 | 0.216 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 4923 | 0.230 | ppbV | 100 |
| 4) chloromethane | 4.15 | 50 | 2141 | 0.228 | ppbV | 99 |
| 5) Freon-114 | 4.28 | 85 | 6160 | 0.230 | ppbV | 99 |
| 6) vinyl chloride | 4.41 | 62 | 2472 | 0.230 | ppbV | 100 |
| 7) 1,3-butadiene | 4.58 | 54 | 2395 | 0.221 | ppbV | 99 |
| 8) bromomethane | 4.89 | 94 | 2138 | 0.232 | ppbV | 99 |
| 9) chloroethane | 5.11 | 64 | 1231 | 0.228 | ppbV | 99 |
| 10) ethanol | 5.29 | 31 | 14725 | 1.627 | ppbV | 99 |
| 11) vinyl bromide | 5.54 | 106 | 2501 | 0.227 | ppbV | 99 |
| 12) acrolein | 5.70 | 56 | 1206 | 0.227 | ppbV | 95 |
| 13) acetone | 5.87 | 43 | 16964 | 1.094 | ppbV # | 99 |
| 14) trichlorofluoromethane | 6.05 | 101 | 3641 | 0.222 | ppbV | 99 |
| 15) isopropyl alcohol | 6.20 | 45 | 11251 | 0.575 | ppbV | 97 |
| 16) acrylonitrile | 6.44 | 53 | 2026 | 0.207 | ppbV | 99 |
| 17) 1,1-dichloroethene | 6.82 | 61 | 3282 | 0.233 | ppbV | 100 |
| 18) tertiary butyl alcohol | 6.94 | 59 | 4735 | 0.232 | ppbV # | 90 |
| 19) methylene chloride | 6.99 | 49 | 3006 | 0.227 | ppbV | 97 |
| 20) 3-chloropropene | 7.13 | 41 | 4015 | 0.225 | ppbV | 100 |
| 21) carbon disulfide | 7.28 | 76 | 9068 | 0.219 | ppbV # | 80 |
| 22) Freon 113 | 7.32 | 101 | 5044 | 0.228 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 3930 | 0.224 | ppbV | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38592_Ev2.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:37:05 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.35 | 63 | 4591 | 0.228 | ppbV | | 98 |
| 25) MTBE | 8.45 | 73 | 7987 | 0.219 | ppbV | | 94 |
| 26) vinyl acetate | 8.57 | 43 | 6520 | 0.214 | ppbV | | 99 |
| 27) 2-butanone | 8.86 | 43 | 6210 | 0.224 | ppbV | | 99 |
| 28) cis-1,2-dichloroethene | 9.34 | 61 | 3366 | 0.225 | ppbV | | 96 |
| 29) Ethyl Acetate | 9.67 | 61 | 942 | 0.212 | ppbV | | 83 |
| 30) chloroform | 9.70 | 83 | 4937 | 0.224 | ppbV | | 98 |
| 31) Tetrahydrofuran | 10.18 | 42 | 3611 | 0.212 | ppbV | | 94 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 2845 | 0.231 | ppbV | | 97 |
| 34) hexane | 9.61 | 57 | 4973 | 0.218 | ppbV | # | 79 |
| 36) 1,1,1-trichloroethane | 10.83 | 97 | 4144 | 0.225 | ppbV | | 93 |
| 37) benzene | 11.37 | 78 | 10532 | 0.235 | ppbV | | 100 |
| 38) carbon tetrachloride | 11.54 | 117 | 4061 | 0.222 | ppbV | | 97 |
| 39) cyclohexane | 11.68 | 56 | 5382 | 0.217 | ppbV | | 98 |
| 40) Dibromomethane | 12.29 | 93 | 2834 | 0.234 | ppbV | # | 99 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 3176 | 0.229 | ppbV | | 98 |
| 42) bromodichloromethane | 12.55 | 83 | 5370 | 0.213 | ppbV | | 99 |
| 43) 1,4-dioxane | 12.61 | 88 | 2354 | 0.222 | ppbV | | 93 |
| 44) trichloroethene | 12.60 | 130 | 3954 | 0.224 | ppbV | | 95 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 16210 | 0.217 | ppbV | | 98 |
| 46) heptane | 12.97 | 43 | 6377 | 0.213 | ppbV | | 98 |
| 47) cis-1,3-dichloropropene | 14.24 | 75 | 4365 | 0.211 | ppbV | | 99 |
| 48) 4-methyl-2-pentanone | 13.68 | 43 | 7035 | 0.207 | ppbV | | 99 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 4786 | 0.216 | ppbV | | 100 |
| 50) 1,1,2-trichloroethane | 14.43 | 97 | 3364 | 0.221 | ppbV | | 98 |
| 52) toluene | 14.75 | 91 | 11191 | 0.232 | ppbV | | 100 |
| 54) 2-hexanone | 15.05 | 43 | 6043 | 0.195 | ppbV | # | 92 |
| 55) dibromochloromethane | 15.20 | 129 | 4474 | 0.204 | ppbV | | 99 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 5230 | 0.222 | ppbV | | 99 |
| 57) tetrachloroethene | 15.92 | 166 | 4465 | 0.224 | ppbV | | 99 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 3553 | 0.217 | ppbV | | 98 |
| 59) chlorobenzene | 16.57 | 112 | 8676 | 0.221 | ppbV | | 99 |
| 60) ethylbenzene | 16.93 | 91 | 12871 | 0.221 | ppbV | | 100 |
| 61) m+p-xylene | 17.08 | 91 | 21511 | 0.443 | ppbV | | 98 |
| 62) bromoform | 17.16 | 173 | 3658 | 0.189 | ppbV | | 100 |
| 63) styrene | 17.41 | 104 | 8663 | 0.201 | ppbV | | 99 |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 7380 | 0.219 | ppbV | | 99 |
| 65) o-xylene | 17.50 | 91 | 10824 | 0.221 | ppbV | | 98 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 5897 | 0.209 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38592_Ev2.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:37:05 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.01 | 105 | 15141 | 0.212 | ppbV | 97 |
| 69) Bromobenzene | 18.08 | 77 | 7507 | 0.202 | ppbV | 99 |
| 70) 4-ethyl toluene | 18.57 | 105 | 16241 | 0.202 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 13681 | 0.211 | ppbV | 99 |
| 72) tert-butylbenzene | 18.95 | 119 | 12976 | 0.206 | ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 13009 | 0.207 | ppbV | 94 |
| 74) Benzyl Chloride | 19.07 | 91 | 6263 | 0.142 | ppbV | 97 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 7090 | 0.199 | ppbV | 98 |
| 76) 1,4-dichlorobenzene | 19.13 | 146 | 6691 | 0.195 | ppbV | 98 |
| 77) sec-butylbenzene | 19.17 | 105 | 18930 | 0.200 | ppbV | 100 |
| 78) p-isopropyltoluene | 19.29 | 119 | 14912 | 0.193 | ppbV | 98 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 6739 | 0.200 | ppbV | 98 |
| 80) n-butylbenzene | 19.63 | 91 | 11731 | 0.180 | ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 2730 | 0.127 | ppbV | 95 |
| 82) naphthalene | 20.99 | 128 | 10144 | 0.142 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 3559 | 0.138 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.31 | 225 | 5432 | 0.209 | ppbV | 98 |

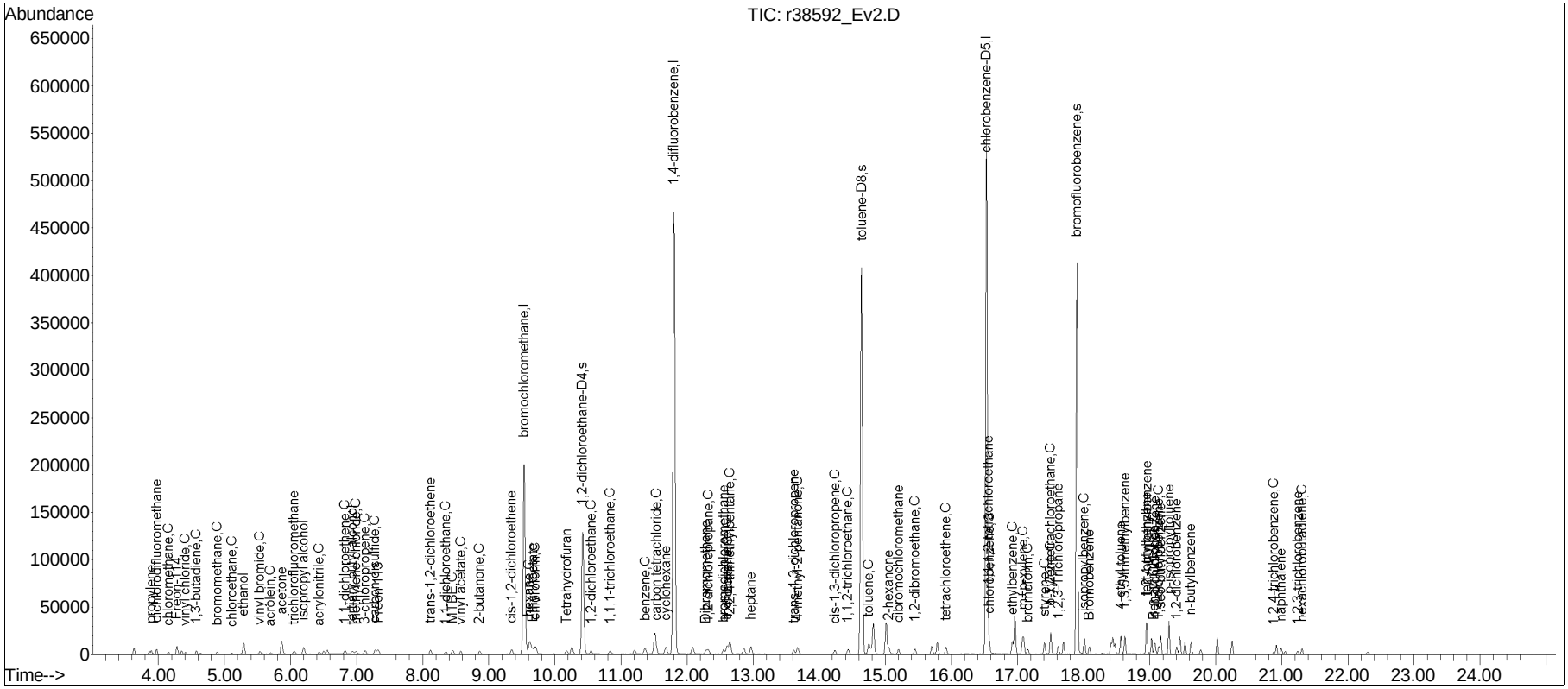
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38592_Ev2.D
Acq On : 12 Mar 2020 12:25 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:37:05 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

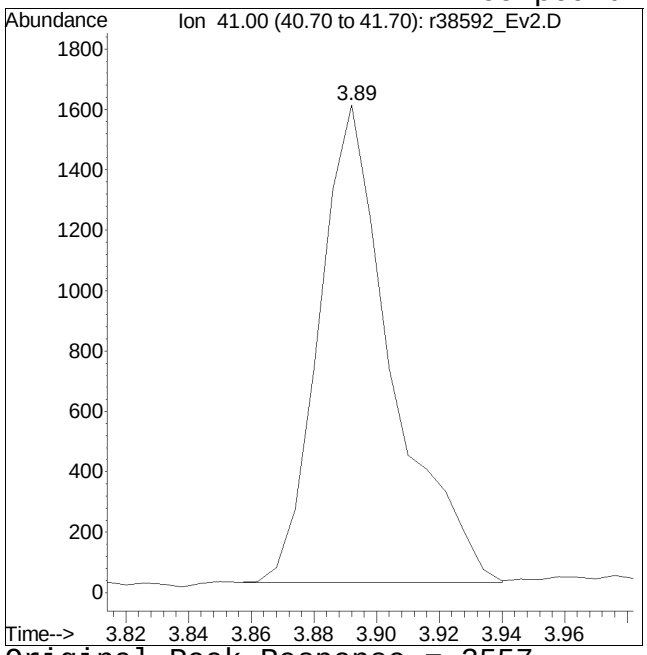
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D



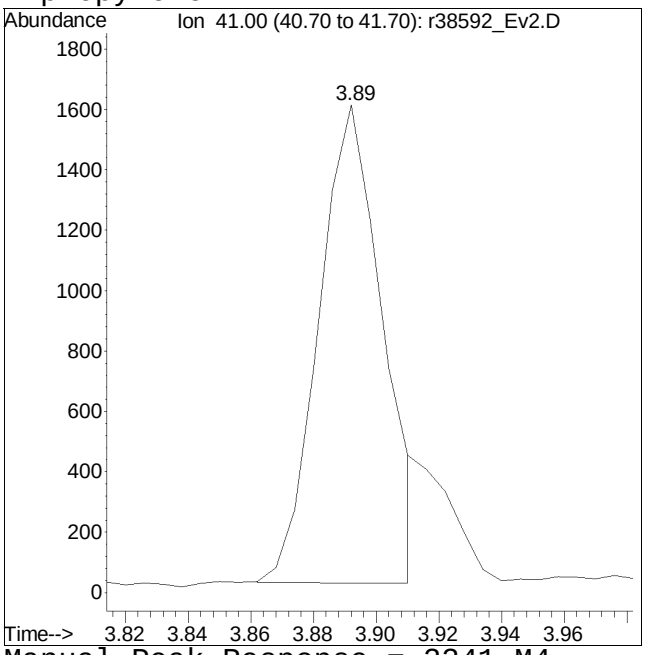
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38592_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:2: 5 Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 3/12/2020 4:28 pm

Compound #2: propylene




Original Peak Response = 2557




Manual Peak Response = 2241 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38593_Ev2.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:38:54 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.53 | 49 | 222336 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 97.43% | | | |
| 33) 1,4-difluorobenzene | 11.81 | 114 | 645804 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 97.96% | | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 93675 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 95.55% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 111359 | 10.014 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.14% | | | |
| 53) toluene-D8 | 14.64 | 98 | 470745 | 10.160 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.60% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 294407 | 9.703 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.03% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 5774M4 | 0.554 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 12183 | 0.565 | ppbV | 100 |
| 4) chloromethane | 4.16 | 50 | 5299 | 0.561 | ppbV | 98 |
| 5) Freon-114 | 4.28 | 85 | 15218 | 0.566 | ppbV | 99 |
| 6) vinyl chloride | 4.41 | 62 | 6042 | 0.558 | ppbV | 98 |
| 7) 1,3-butadiene | 4.58 | 54 | 5813 | 0.533 | ppbV | 96 |
| 8) bromomethane | 4.89 | 94 | 5261 | 0.567 | ppbV | 98 |
| 9) chloroethane | 5.11 | 64 | 3071 | 0.566 | ppbV | 97 |
| 10) ethanol | 5.29 | 31 | 29067 | 3.193 | ppbV | 100 |
| 11) vinyl bromide | 5.54 | 106 | 6026 | 0.545 | ppbV | 99 |
| 12) acrolein | 5.70 | 56 | 2984 | 0.558 | ppbV | 98 |
| 13) acetone | 5.86 | 43 | 40421 | 2.593 | ppbV | 99 |
| 14) trichlorofluoromethane | 6.06 | 101 | 9275 | 0.564 | ppbV | 99 |
| 15) isopropyl alcohol | 6.20 | 45 | 25618 | 1.302 | ppbV | 100 |
| 16) acrylonitrile | 6.43 | 53 | 5205 | 0.528 | ppbV | 99 |
| 17) 1,1-dichloroethene | 6.83 | 61 | 7842 | 0.555 | ppbV | 99 |
| 18) tertiary butyl alcohol | 6.93 | 59 | 11697 | 0.570 | ppbV | 99 |
| 19) methylene chloride | 6.99 | 49 | 7116 | 0.533 | ppbV | 100 |
| 20) 3-chloropropene | 7.13 | 41 | 9687 | 0.539 | ppbV | 99 |
| 21) carbon disulfide | 7.28 | 76 | 22474 | 0.541 | ppbV # | 93 |
| 22) Freon 113 | 7.33 | 101 | 12274 | 0.551 | ppbV | 100 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 9616 | 0.544 | ppbV | 100 |

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38593_Ev2.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:38:54 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 24) | 1,1-dichloroethane | 8.35 | 63 | 11188 | 0.553 | ppbV | | 98 |
| 25) | MTBE | 8.45 | 73 | 19615 | 0.534 | ppbV | | 98 |
| 26) | vinyl acetate | 8.57 | 43 | 16135 | 0.526 | ppbV | | 100 |
| 27) | 2-butanone | 8.85 | 43 | 15093 | 0.540 | ppbV | | 97 |
| 28) | cis-1,2-dichloroethene | 9.35 | 61 | 8278 | 0.550 | ppbV | | 99 |
| 29) | Ethyl Acetate | 9.66 | 61 | 2472 | 0.553 | ppbV | | 91 |
| 30) | chloroform | 9.70 | 83 | 12178 | 0.549 | ppbV | | 98 |
| 31) | Tetrahydrofuran | 10.17 | 42 | 9082 | 0.529 | ppbV | | 96 |
| 32) | 1,2-dichloroethane | 10.55 | 62 | 6864 | 0.555 | ppbV | | 98 |
| 34) | hexane | 9.61 | 57 | 12369 | 0.538 | ppbV | | 83 |
| 36) | 1,1,1-trichloroethane | 10.84 | 97 | 10234 | 0.551 | ppbV | | 99 |
| 37) | benzene | 11.37 | 78 | 25009 | 0.553 | ppbV | | 99 |
| 38) | carbon tetrachloride | 11.54 | 117 | 9973 | 0.541 | ppbV | | 99 |
| 39) | cyclohexane | 11.68 | 56 | 13322 | 0.534 | ppbV | | 99 |
| 40) | Dibromomethane | 12.29 | 93 | 6674 | 0.546 | ppbV | # | 99 |
| 41) | 1,2-dichloropropane | 12.32 | 63 | 7725 | 0.552 | ppbV | | 99 |
| 42) | bromodichloromethane | 12.55 | 83 | 13464 | 0.530 | ppbV | | 98 |
| 43) | 1,4-dioxane | 12.61 | 88 | 5505 | 0.516 | ppbV | | 97 |
| 44) | trichloroethene | 12.61 | 130 | 9715 | 0.545 | ppbV | | 98 |
| 45) | 2,2,4-trimethylpentane | 12.65 | 57 | 40184 | 0.534 | ppbV | | 98 |
| 46) | heptane | 12.97 | 43 | 15970 | 0.528 | ppbV | | 99 |
| 47) | cis-1,3-dichloropropene | 14.24 | 75 | 10973 | 0.525 | ppbV | | 99 |
| 48) | 4-methyl-2-pentanone | 13.67 | 43 | 17621 | 0.513 | ppbV | | 99 |
| 49) | trans-1,3-dichloropropene | 13.62 | 75 | 11910 | 0.534 | ppbV | | 99 |
| 50) | 1,1,2-trichloroethane | 14.44 | 97 | 8264 | 0.538 | ppbV | | 98 |
| 52) | toluene | 14.75 | 91 | 27436 | 0.571 | ppbV | | 100 |
| 54) | 2-hexanone | 15.05 | 43 | 15643 | 0.506 | ppbV | | 94 |
| 55) | dibromochloromethane | 15.20 | 129 | 11171 | 0.510 | ppbV | | 98 |
| 56) | 1,2-dibromoethane | 15.45 | 107 | 12955 | 0.552 | ppbV | | 100 |
| 57) | tetrachloroethene | 15.92 | 166 | 11170 | 0.561 | ppbV | | 100 |
| 58) | 1,1,1,2-tetrachloroethane | 16.56 | 131 | 8873 | 0.542 | ppbV | | 99 |
| 59) | chlorobenzene | 16.57 | 112 | 21652 | 0.554 | ppbV | | 99 |
| 60) | ethylbenzene | 16.93 | 91 | 32075 | 0.551 | ppbV | | 99 |
| 61) | m+p-xylene | 17.08 | 91 | 53780 | 1.109 | ppbV | | 98 |
| 62) | bromoform | 17.16 | 173 | 9378 | 0.486 | ppbV | | 99 |
| 63) | styrene | 17.41 | 104 | 22261 | 0.517 | ppbV | | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.51 | 83 | 18546 | 0.551 | ppbV | | 99 |
| 65) | o-xylene | 17.50 | 91 | 27123 | 0.556 | ppbV | | 96 |
| 66) | 1,2,3-Trichloropropane | 17.62 | 75 | 14961 | 0.530 | ppbV | | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38593_Ev2.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:38:54 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 38134 | 0.535 | ppbV | 99 |
| 69) Bromobenzene | 18.09 | 77 | 19244 | 0.520 | ppbV | 99 |
| 70) 4-ethyl toluene | 18.57 | 105 | 41835 | 0.522 | ppbV | 98 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 34976 | 0.541 | ppbV | 98 |
| 72) tert-butylbenzene | 18.95 | 119 | 33180 | 0.528 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 18.95 | 105 | 33843 | 0.540 | ppbV | 97 |
| 74) Benzyl Chloride | 19.07 | 91 | 18338 | 0.417 | ppbV | 99 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 18211 | 0.513 | ppbV | 99 |
| 76) 1,4-dichlorobenzene | 19.13 | 146 | 17501 | 0.512 | ppbV | 99 |
| 77) sec-butylbenzene | 19.17 | 105 | 48686 | 0.516 | ppbV | 100 |
| 78) p-isopropyltoluene | 19.29 | 119 | 38438 | 0.500 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 17496 | 0.521 | ppbV | 99 |
| 80) n-butylbenzene | 19.63 | 91 | 31485 | 0.485 | ppbV | 100 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 8133 | 0.379 | ppbV | 98 |
| 82) naphthalene | 20.99 | 128 | 26939 | 0.379 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 9735 | 0.377 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.31 | 225 | 14093 | 0.542 | ppbV | 98 |

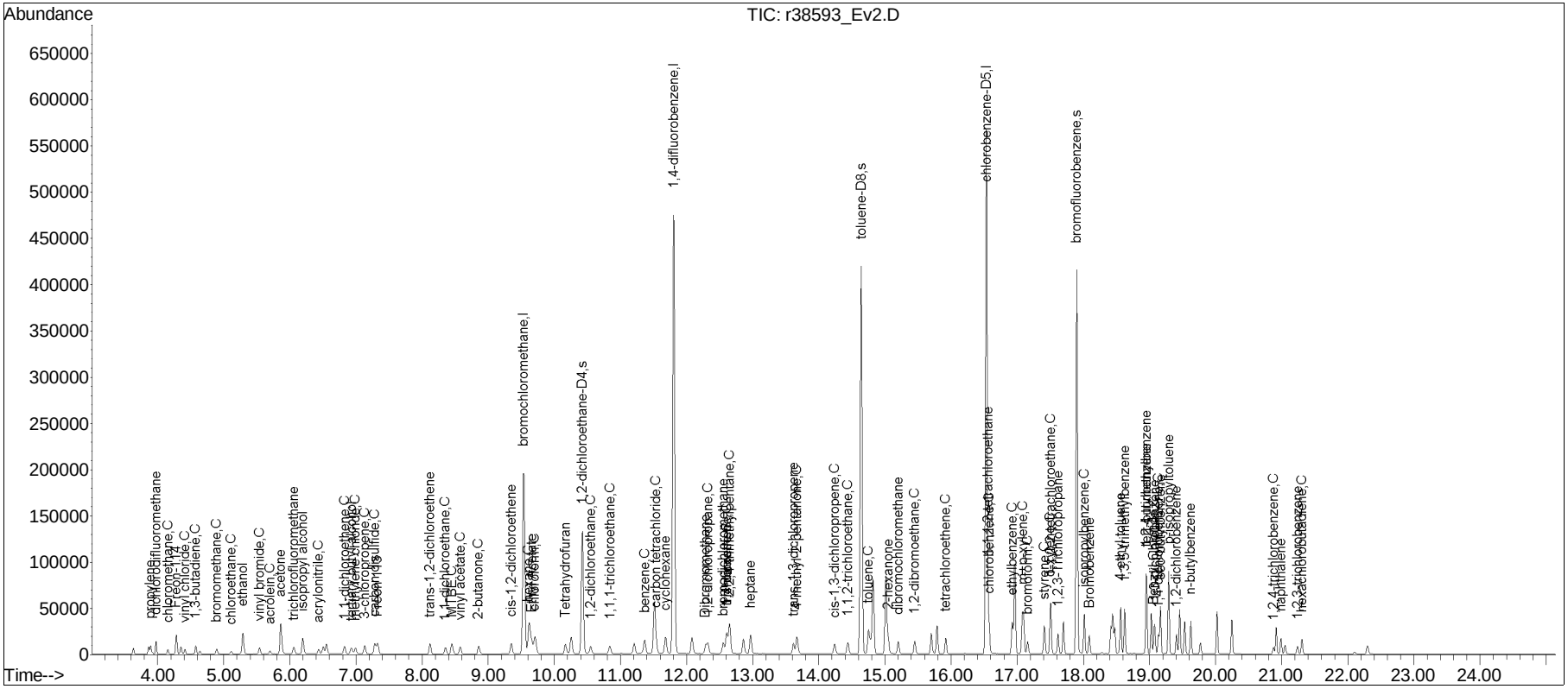
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38593_Ev2.D
Acq On : 12 Mar 2020 1:03 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:38:54 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

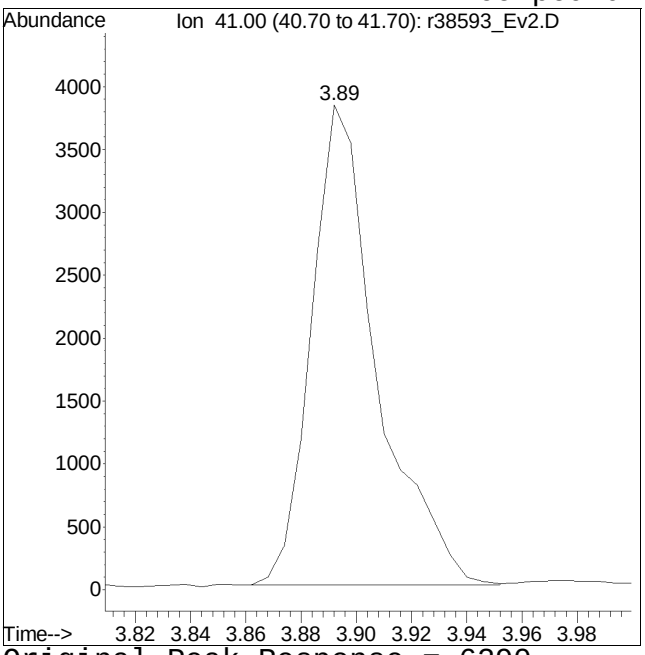
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D



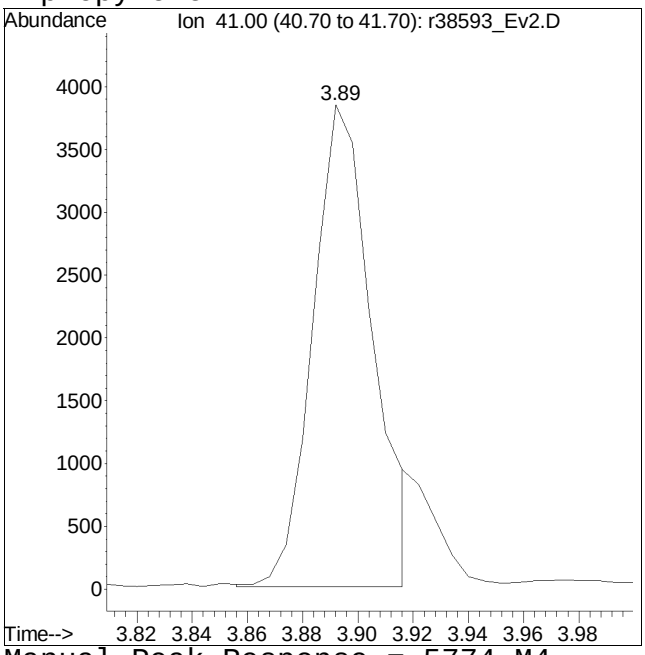
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38593_Ev2.D
Date Inj'd : 3/12/2020 0:1: 3
Sample : ITO15-SIMSTD0.5
Method : TSIM3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:28 pm

Compound #2: propylene




Original Peak Response = 6290




Manual Peak Response = 5774 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38594_Ev2.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:40:28 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.53 | 49 | 223760 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 98.05% | | | |
| 33) 1,4-difluorobenzene | 11.81 | 114 | 647135 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 98.16% | | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 93972 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 95.85% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 111208 | 9.980 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.80% | | | |
| 53) toluene-D8 | 14.64 | 98 | 469864 | 10.109 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.09% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 295653 | 9.713 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.13% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 11632M4 | 1.109 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 24277 | 1.119 | ppbV | 100 |
| 4) chloromethane | 4.16 | 50 | 10602 | 1.116 | ppbV | 99 |
| 5) Freon-114 | 4.28 | 85 | 30304 | 1.120 | ppbV | 99 |
| 6) vinyl chloride | 4.41 | 62 | 12100 | 1.110 | ppbV | 100 |
| 7) 1,3-butadiene | 4.58 | 54 | 11845 | 1.079 | ppbV | 99 |
| 8) bromomethane | 4.89 | 94 | 10377 | 1.112 | ppbV | 100 |
| 9) chloroethane | 5.11 | 64 | 6122 | 1.120 | ppbV | 98 |
| 10) ethanol | 5.28 | 31 | 52257 | 5.704 | ppbV | 99 |
| 11) vinyl bromide | 5.54 | 106 | 12184 | 1.094 | ppbV | 98 |
| 12) acrolein | 5.70 | 56 | 5808 | 1.079 | ppbV | 99 |
| 13) acetone | 5.86 | 43 | 79182 | 5.047 | ppbV | 100 |
| 14) trichlorofluoromethane | 6.06 | 101 | 18283 | 1.104 | ppbV | 100 |
| 15) isopropyl alcohol | 6.19 | 45 | 49548 | 2.502 | ppbV | 100 |
| 16) acrylonitrile | 6.43 | 53 | 10571 | 1.066 | ppbV | 98 |
| 17) 1,1-dichloroethene | 6.82 | 61 | 15600 | 1.097 | ppbV | 99 |
| 18) tertiary butyl alcohol | 6.92 | 59 | 22447 | 1.086 | ppbV | 99 |
| 19) methylene chloride | 6.99 | 49 | 14341 | 1.068 | ppbV | 99 |
| 20) 3-chloropropene | 7.13 | 41 | 19540 | 1.080 | ppbV | 99 |
| 21) carbon disulfide | 7.28 | 76 | 44870 | 1.073 | ppbV | 97 |
| 22) Freon 113 | 7.33 | 101 | 24561 | 1.096 | ppbV | 100 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 19081 | 1.073 | ppbV | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38594_Ev2.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:40:28 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.35 | 63 | 22285 | 1.095 | ppbV | | 100 |
| 25) MTBE | 8.44 | 73 | 39388 | 1.065 | ppbV | | 97 |
| 26) vinyl acetate | 8.57 | 43 | 32118 | 1.041 | ppbV | | 100 |
| 27) 2-butanone | 8.85 | 43 | 30196 | 1.074 | ppbV | | 100 |
| 28) cis-1,2-dichloroethene | 9.35 | 61 | 16361 | 1.081 | ppbV | | 98 |
| 29) Ethyl Acetate | 9.66 | 61 | 4898 | 1.088 | ppbV | | 87 |
| 30) chloroform | 9.70 | 83 | 24381 | 1.092 | ppbV | | 99 |
| 31) Tetrahydrofuran | 10.16 | 42 | 18400 | 1.065 | ppbV | | 97 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 13584 | 1.091 | ppbV | | 99 |
| 34) hexane | 9.61 | 57 | 24486 | 1.062 | ppbV | | 91 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 20360 | 1.093 | ppbV | | 100 |
| 37) benzene | 11.37 | 78 | 49241 | 1.086 | ppbV | | 99 |
| 38) carbon tetrachloride | 11.54 | 117 | 19795 | 1.072 | ppbV | | 99 |
| 39) cyclohexane | 11.68 | 56 | 26083 | 1.044 | ppbV | | 99 |
| 40) Dibromomethane | 12.29 | 93 | 13131 | 1.072 | ppbV | # | 98 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 15002 | 1.070 | ppbV | | 99 |
| 42) bromodichloromethane | 12.55 | 83 | 26747 | 1.051 | ppbV | | 100 |
| 43) 1,4-dioxane | 12.61 | 88 | 10946 | 1.023 | ppbV | | 97 |
| 44) trichloroethene | 12.60 | 130 | 18763 | 1.051 | ppbV | | 98 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 80062 | 1.062 | ppbV | | 99 |
| 46) heptane | 12.97 | 43 | 31914 | 1.053 | ppbV | | 100 |
| 47) cis-1,3-dichloropropene | 14.23 | 75 | 22028 | 1.052 | ppbV | | 97 |
| 48) 4-methyl-2-pentanone | 13.66 | 43 | 35760 | 1.040 | ppbV | | 100 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 23760 | 1.062 | ppbV | | 100 |
| 50) 1,1,2-trichloroethane | 14.44 | 97 | 16719 | 1.086 | ppbV | | 99 |
| 52) toluene | 14.75 | 91 | 54007 | 1.120 | ppbV | | 100 |
| 54) 2-hexanone | 15.04 | 43 | 32597 | 1.051 | ppbV | | 93 |
| 55) dibromochloromethane | 15.20 | 129 | 22755 | 1.035 | ppbV | | 99 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 25992 | 1.105 | ppbV | | 99 |
| 57) tetrachloroethene | 15.92 | 166 | 22106 | 1.108 | ppbV | | 99 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 17746 | 1.080 | ppbV | | 99 |
| 59) chlorobenzene | 16.57 | 112 | 43405 | 1.106 | ppbV | | 100 |
| 60) ethylbenzene | 16.93 | 91 | 64318 | 1.101 | ppbV | | 99 |
| 61) m+p-xylene | 17.09 | 91 | 107927 | 2.218 | ppbV | | 98 |
| 62) bromoform | 17.16 | 173 | 19354 | 1.000 | ppbV | | 100 |
| 63) styrene | 17.41 | 104 | 45309 | 1.049 | ppbV | | 99 |
| 64) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 37448 | 1.109 | ppbV | | 99 |
| 65) o-xylene | 17.51 | 91 | 54368 | 1.111 | ppbV | | 98 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 29827 | 1.054 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38594_Ev2.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:40:28 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 76030 | 1.064 | ppbV | 99 |
| 69) Bromobenzene | 18.09 | 77 | 38377 | 1.034 | ppbV | 100 |
| 70) 4-ethyl toluene | 18.57 | 105 | 84953 | 1.057 | ppbV | 98 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 69665 | 1.075 | ppbV | 98 |
| 72) tert-butylbenzene | 18.96 | 119 | 66412 | 1.053 | ppbV | 97 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 68765 | 1.093 | ppbV | 95 |
| 74) Benzyl Chloride | 19.07 | 91 | 40600 | 0.920 | ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 37509 | 1.054 | ppbV | 98 |
| 76) 1,4-dichlorobenzene | 19.14 | 146 | 35881 | 1.046 | ppbV | 92 |
| 77) sec-butylbenzene | 19.17 | 105 | 98421 | 1.040 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.29 | 119 | 78303 | 1.015 | ppbV | 98 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 35960 | 1.068 | ppbV | 98 |
| 80) n-butylbenzene | 19.63 | 91 | 65688 | 1.009 | ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 20086 | 0.933 | ppbV | 99 |
| 82) naphthalene | 20.99 | 128 | 60461 | 0.848 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 21942 | 0.847 | ppbV | 97 |
| 84) hexachlorobutadiene | 21.31 | 225 | 28437 | 1.090 | ppbV | 99 |

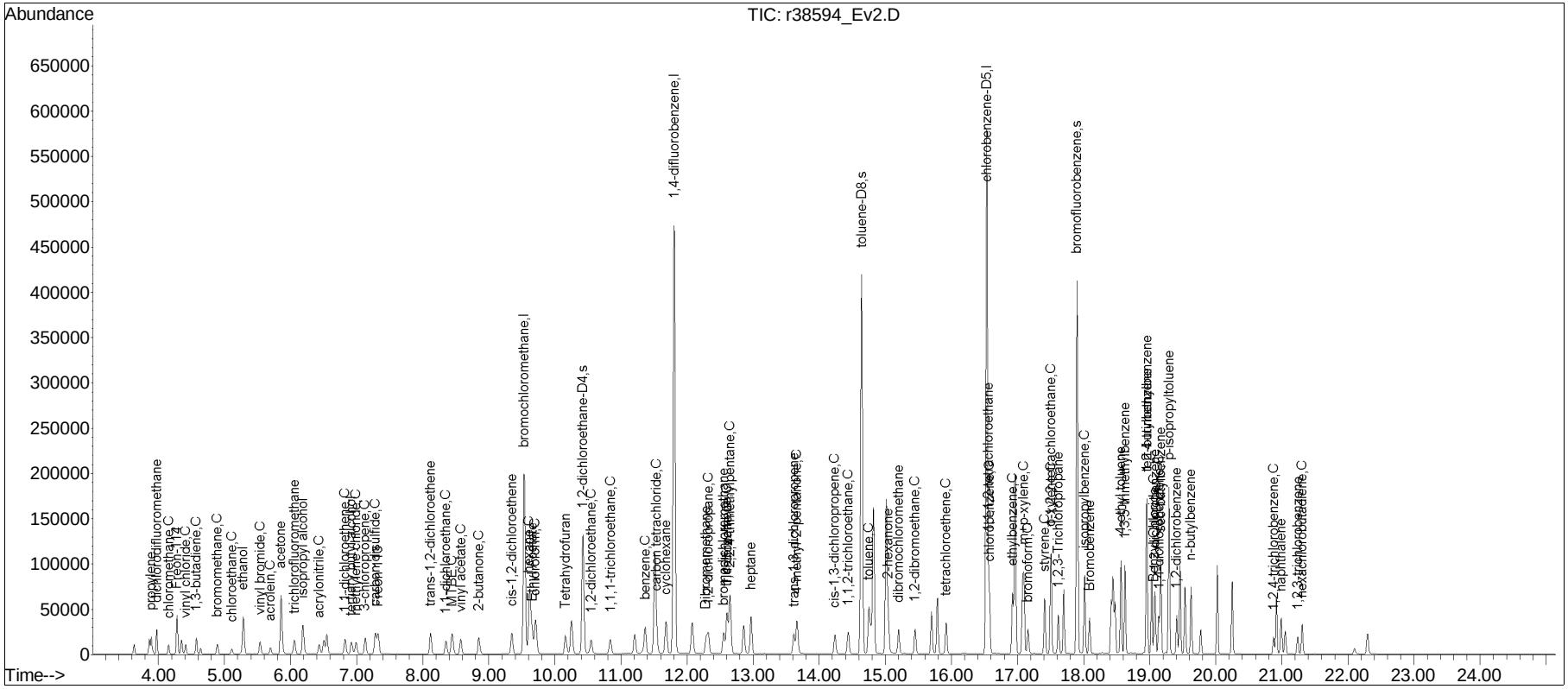
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38594_Ev2.D
Acq On : 12 Mar 2020 1:44 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:40:28 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

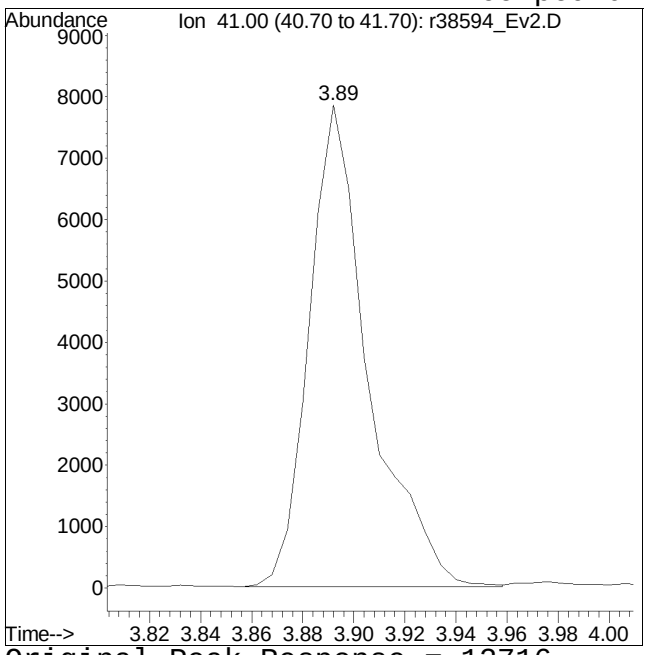
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D

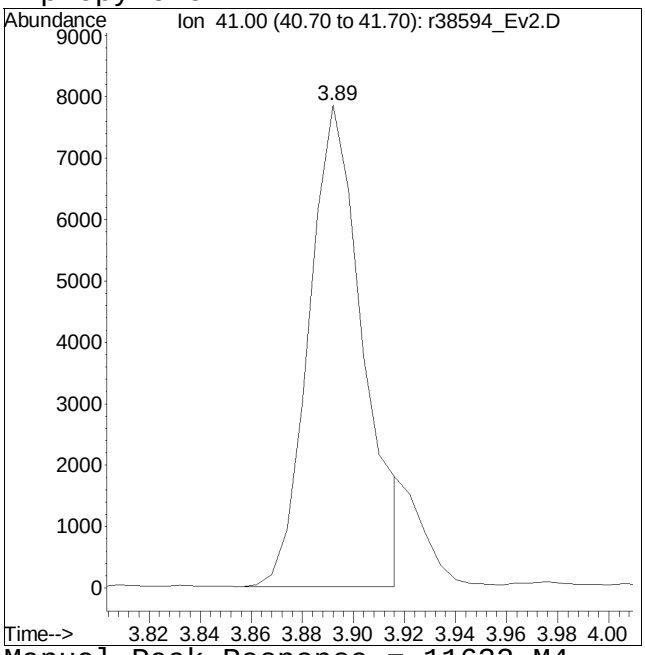


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38594_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:1: 4 Instrument :
Sample : ITO15-SIMSTD1.0 Quant Date : 3/12/2020 4:28 pm

Compound #2: propylene




Original Peak Response = 12716 Manual Peak Response = 11632 M4
M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38595_Ev2.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:26:27 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 15:18:57 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 228204 | 10.000 | ppbV | -0.03 |
| Standard Area = 228204 | | | Recovery = 100.00% | | | |
| 33) 1,4-difluorobenzene | 11.81 | 114 | 659248 | 10.000 | ppbV | -0.04 |
| Standard Area = 659248 | | | Recovery = 100.00% | | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 98040 | 10.000 | ppbV | -0.03 |
| Standard Area = 98040 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 113521 | 9.815 | ppbV | -0.04 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.15% | | | |
| 53) toluene-D8 | 14.64 | 98 | 484933 | 10.447 | ppbV | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 104.47% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 317559 | 11.127 | ppbV | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 111.27% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 53501M4 | 5.291 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 110627 | 4.414 | ppbV | 100 |
| 4) chloromethane | 4.16 | 50 | 48451 | 4.219 | ppbV | 99 |
| 5) Freon-114 | 4.28 | 85 | 137985 | 4.194 | ppbV | 98 |
| 6) vinyl chloride | 4.41 | 62 | 55584 | 4.090 | ppbV | 98 |
| 7) 1,3-butadiene | 4.58 | 54 | 55983 | 4.301 | ppbV | 96 |
| 8) bromomethane | 4.89 | 94 | 47587 | 4.035 | ppbV | 99 |
| 9) chloroethane | 5.11 | 64 | 27866 | 3.883 | ppbV | 96 |
| 10) ethanol | 5.28 | 31 | 233594 | 20.806 | ppbV | 90 |
| 11) vinyl bromide | 5.54 | 106 | 56774 | 4.935 | ppbV | 99 |
| 12) acrolein | 5.69 | 56 | 27446 | 4.181 | ppbV | 96 |
| 13) acetone | 5.85 | 43 | 399998 | 22.779 | ppbV | 97 |
| 14) trichlorofluoromethane | 6.06 | 101 | 84453 | 4.122 | ppbV | 98 |
| 15) isopropyl alcohol | 6.18 | 45 | 252412 | 11.372 | ppbV | 99 |
| 16) acrylonitrile | 6.43 | 53 | 50589 | 4.399 | ppbV | 99 |
| 17) 1,1-dichloroethene | 6.83 | 61 | 72540 | 3.963 | ppbV | 96 |
| 18) tertiary butyl alcohol | 6.91 | 59 | 105362 | 4.011 | ppbV | 98 |
| 19) methylene chloride | 7.00 | 49 | 68457 | 4.605 | ppbV | 95 |
| 20) 3-chloropropene | 7.13 | 41 | 92255 | 5.300 | ppbV | 98 |
| 21) carbon disulfide | 7.28 | 76 | 213237 | 4.901 | ppbV | 100 |
| 22) Freon 113 | 7.33 | 101 | 114276 | 5.076 | ppbV | 97 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 90704 | 5.305 | ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38595_Ev2.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:26:27 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 15:18:57 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.35 | 63 | 103826 | 5.042 | ppbV | | 99 |
| 25) MTBE | 8.44 | 73 | 188611 | 5.074 | ppbV | | 98 |
| 26) vinyl acetate | 8.57 | 43 | 157393 | 5.068 | ppbV | | 96 |
| 27) 2-butanone | 8.84 | 43 | 143386 | 4.891 | ppbV | | 96 |
| 28) cis-1,2-dichloroethene | 9.35 | 61 | 77213 | 5.161 | ppbV | | 99 |
| 29) Ethyl Acetate | 9.65 | 61 | 22961 | 5.209 | ppbV | | 86 |
| 30) chloroform | 9.71 | 83 | 113800 | 4.759 | ppbV | | 97 |
| 31) Tetrahydrofuran | 10.14 | 42 | 88111 | 4.967 | ppbV | | 100 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 63478 | 4.813 | ppbV | | 99 |
| 34) hexane | 9.61 | 57 | 117410 | 4.901 | ppbV | | 83 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 94871 | 4.786 | ppbV | | 98 |
| 37) benzene | 11.37 | 78 | 230976 | 4.449 | ppbV | | 98 |
| 38) carbon tetrachloride | 11.54 | 117 | 94060 | 4.870 | ppbV | | 99 |
| 39) cyclohexane | 11.68 | 56 | 127302 | 4.984 | ppbV | | 94 |
| 40) Dibromomethane | 12.29 | 93 | 62392 | 4.594 | ppbV | # | 96 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 71391 | 4.744 | ppbV | | 97 |
| 42) bromodichloromethane | 12.55 | 83 | 129613 | 4.733 | ppbV | | 99 |
| 43) 1,4-dioxane | 12.59 | 88 | 54495 | 4.948 | ppbV | | 96 |
| 44) trichloroethene | 12.61 | 130 | 90945 | 4.899 | ppbV | | 100 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 383967 | 5.048 | ppbV | | 96 |
| 46) heptane | 12.97 | 43 | 154368 | 4.737 | ppbV | | 94 |
| 47) cis-1,3-dichloropropene | 14.24 | 75 | 106654 | 4.827 | ppbV | | 98 |
| 48) 4-methyl-2-pentanone | 13.65 | 43 | 175175 | 4.754 | ppbV | | 95 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 113914 | 4.762 | ppbV | | 99 |
| 50) 1,1,2-trichloroethane | 14.44 | 97 | 78404 | 4.898 | ppbV | | 93 |
| 52) toluene | 14.75 | 91 | 251536 | 4.775 | ppbV | | 99 |
| 54) 2-hexanone | 15.03 | 43 | 161727 | 4.640 | ppbV | | 94 |
| 55) dibromochloromethane | 15.20 | 129 | 114704 | 5.289 | ppbV | | 99 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 122752 | 4.868 | ppbV | | 99 |
| 57) tetrachloroethene | 15.92 | 166 | 104101 | 5.006 | ppbV | | 99 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 85688 | 5.132 | ppbV | | 99 |
| 59) chlorobenzene | 16.57 | 112 | 204665 | 5.061 | ppbV | | 99 |
| 60) ethylbenzene | 16.93 | 91 | 304769 | 5.186 | ppbV | | 96 |
| 61) m+p-xylene | 17.08 | 91 | 507675 | 10.237 | ppbV | | 98 |
| 62) bromoform | 17.16 | 173 | 100941 | 5.430 | ppbV | | 99 |
| 63) styrene | 17.41 | 104 | 225330 | 5.689 | ppbV | | 98 |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 176133 | 4.964 | ppbV | | 100 |
| 65) o-xylene | 17.50 | 91 | 255230 | 5.182 | ppbV | | 99 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 147626 | 5.078 | ppbV | | 96 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38595_Ev2.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:26:27 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 15:18:57 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 372895 | 5.762 | ppbV | 99 |
| 69) Bromobenzene | 18.08 | 77 | 193647 | 5.248 | ppbV | 98 |
| 70) 4-ethyl toluene | 18.57 | 105 | 419251 | 6.038 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 338175 | 5.825 | ppbV | 98 |
| 72) tert-butylbenzene | 18.95 | 119 | 329006 | 5.611 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 18.95 | 105 | 328145 | 6.084 | ppbV | 94 |
| 74) Benzyl Chloride | 19.07 | 91 | 230274 | 5.909 | ppbV | 96 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 185632 | 5.781 | ppbV | 97 |
| 76) 1,4-dichlorobenzene | 19.13 | 146 | 178993 | 5.774 | ppbV | 96 |
| 77) sec-butylbenzene | 19.17 | 105 | 493680 | 5.974 | ppbV | 100 |
| 78) p-isopropyltoluene | 19.29 | 119 | 402517 | 5.743 | ppbV | 99 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 175598 | 5.863 | ppbV | 96 |
| 80) n-butylbenzene | 19.63 | 91 | 339581 | 5.662 | ppbV | 97 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 112341 | 6.224 | ppbV | 99 |
| 82) naphthalene | 20.98 | 128 | 371725 | 6.117 | ppbV | 100 |
| 83) 1,2,3-trichlorobenzene | 21.23 | 180 | 135153 | 6.204 | ppbV | 96 |
| 84) hexachlorobutadiene | 21.31 | 225 | 136030 | 5.433 | ppbV | 96 |

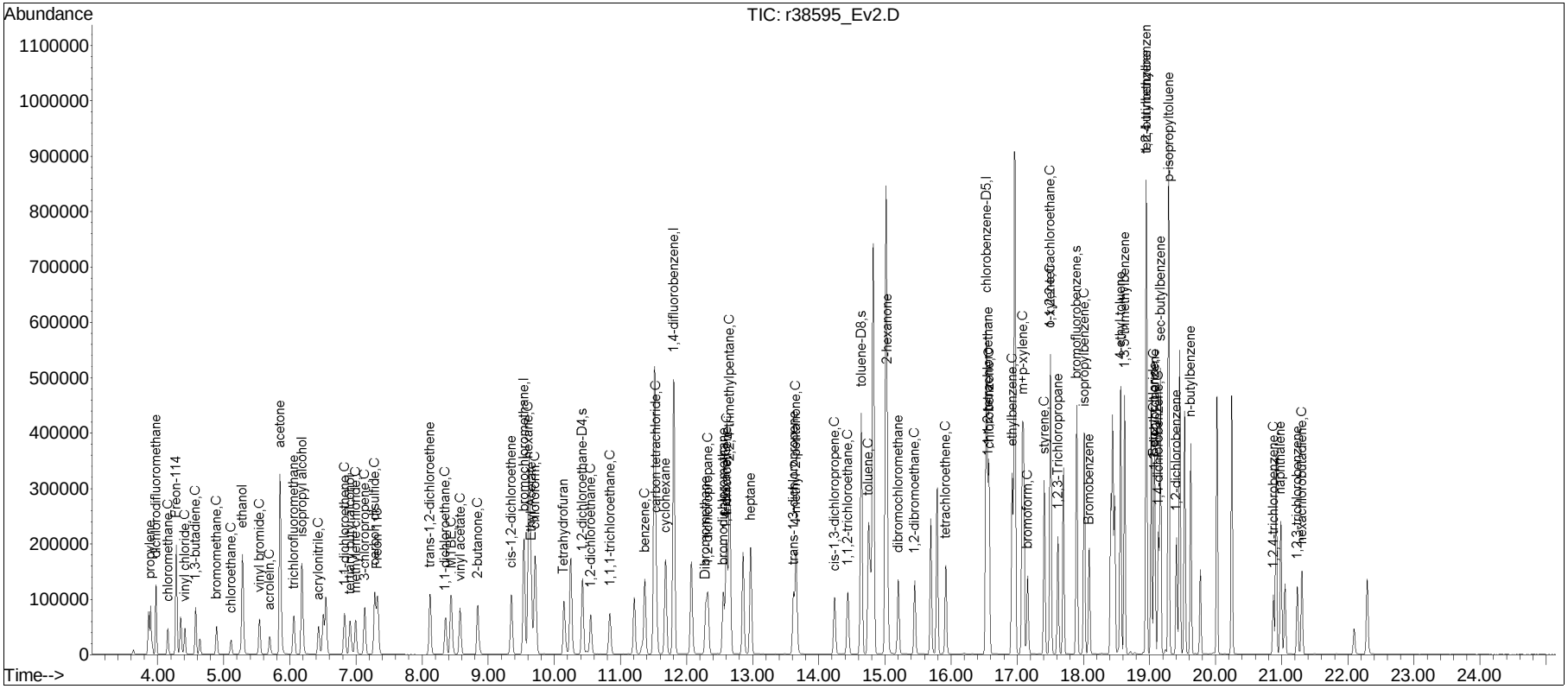
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38595_Ev2.D
Acq On : 12 Mar 2020 2:23 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:26:27 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 14 15:18:57 2020
Response via : Initial Calibration

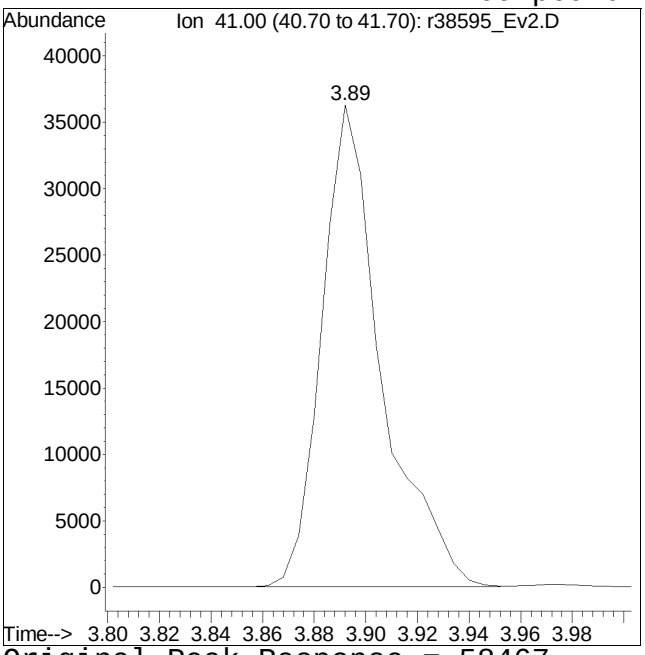
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D

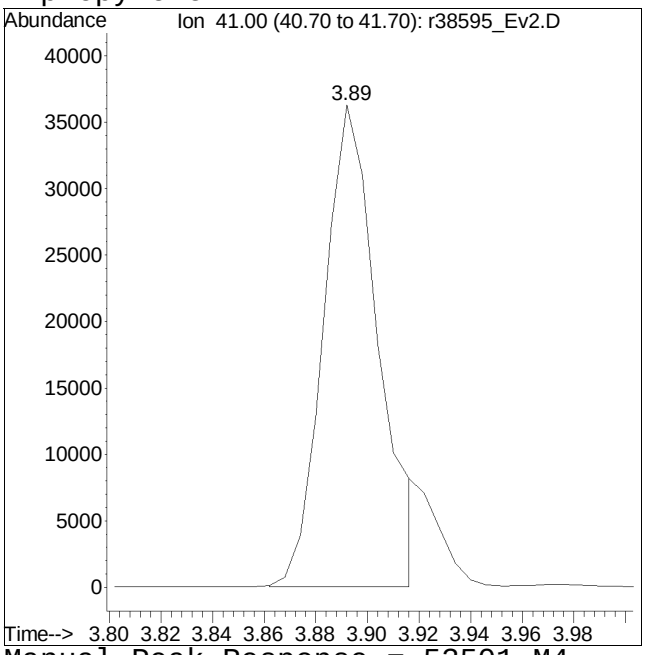


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38595_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:2: 3 Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 3/12/2020 4:26 pm

Compound #2: propylene




Original Peak Response = 58467 Manual Peak Response = 53501 M4
M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38596_Ev2.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:42:23 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 235905 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 103.37% | | | |
| 33) 1,4-difluorobenzene | 11.81 | 114 | 688971 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 104.51% | | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 100980 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 103.00% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 115889 | 9.768 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.68% | | | |
| 53) toluene-D8 | 14.64 | 98 | 503813 | 10.087 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.87% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 344719 | 10.539 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 105.39% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.90 | 41 | 104724M4 | 9.468 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 219346 | 9.590 | ppbV | 99 |
| 4) chloromethane | 4.16 | 50 | 96747 | 9.658 | ppbV | 100 |
| 5) Freon-114 | 4.28 | 85 | 271489 | 9.516 | ppbV | 99 |
| 6) vinyl chloride | 4.41 | 62 | 112430 | 9.783 | ppbV | 99 |
| 7) 1,3-butadiene | 4.58 | 54 | 113004 | 9.763 | ppbV | 98 |
| 8) bromomethane | 4.89 | 94 | 95947 | 9.752 | ppbV | 98 |
| 9) chloroethane | 5.12 | 64 | 56306 | 9.773 | ppbV | 98 |
| 10) ethanol | 5.29 | 31 | 468944 | 48.550 | ppbV | 99 |
| 11) vinyl bromide | 5.54 | 106 | 114633 | 9.766 | ppbV | 100 |
| 12) acrolein | 5.70 | 56 | 56374 | 9.935 | ppbV | 99 |
| 13) acetone | 5.85 | 43 | 786245 | 47.536 | ppbV | 98 |
| 14) trichlorofluoromethane | 6.06 | 101 | 168588 | 9.655 | ppbV | 99 |
| 15) isopropyl alcohol | 6.19 | 45 | 500832 | 23.993 | ppbV | 100 |
| 16) acrylonitrile | 6.44 | 53 | 103159 | 9.863 | ppbV | 100 |
| 17) 1,1-dichloroethene | 6.83 | 61 | 145886 | 9.727 | ppbV | 99 |
| 18) tertiary butyl alcohol | 6.91 | 59 | 238758 | 10.960 | ppbV # | 94 |
| 19) methylene chloride | 7.00 | 49 | 154834 | 10.940 | ppbV | 95 |
| 20) 3-chloropropene | 7.13 | 41 | 189500 | 9.935 | ppbV | 99 |
| 21) carbon disulfide | 7.28 | 76 | 435769 | 9.884 | ppbV | 100 |
| 22) Freon 113 | 7.33 | 101 | 231987 | 9.819 | ppbV | 100 |
| 23) trans-1,2-dichloroethene | 8.13 | 61 | 185017 | 9.866 | ppbV | 94 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38596_Ev2.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:42:23 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.36 | 63 | 211785 | 9.866 | ppbV | | 99 |
| 25) MTBE | 8.43 | 73 | 385107 | 9.876 | ppbV | | 98 |
| 26) vinyl acetate | 8.57 | 43 | 324337 | 9.967 | ppbV | | 100 |
| 27) 2-butanone | 8.83 | 43 | 292925 | 9.881 | ppbV | | 97 |
| 28) cis-1,2-dichloroethene | 9.35 | 61 | 157575 | 9.871 | ppbV | | 98 |
| 29) Ethyl Acetate | 9.65 | 61 | 48676 | 10.254 | ppbV | | 98 |
| 30) chloroform | 9.71 | 83 | 233429 | 9.921 | ppbV | | 99 |
| 31) Tetrahydrofuran | 10.14 | 42 | 181102 | 9.941 | ppbV | | 98 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 129294 | 9.852 | ppbV | | 99 |
| 34) hexane | 9.62 | 57 | 238133 | 9.704 | ppbV | | 87 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 193739 | 9.770 | ppbV | | 99 |
| 37) benzene | 11.37 | 78 | 472180 | 9.780 | ppbV | | 100 |
| 38) carbon tetrachloride | 11.55 | 117 | 193442 | 9.839 | ppbV | | 99 |
| 39) cyclohexane | 11.68 | 56 | 259395 | 9.749 | ppbV | | 99 |
| 40) Dibromomethane | 12.29 | 93 | 126740 | 9.719 | ppbV | # | 99 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 145500 | 9.751 | ppbV | | 99 |
| 42) bromodichloromethane | 12.56 | 83 | 267378 | 9.869 | ppbV | | 98 |
| 43) 1,4-dioxane | 12.59 | 88 | 112079 | 9.840 | ppbV | | 100 |
| 44) trichloroethene | 12.61 | 130 | 186412 | 9.806 | ppbV | | 99 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 764287 | 9.523 | ppbV | | 100 |
| 46) heptane | 12.97 | 43 | 312867 | 9.697 | ppbV | | 98 |
| 47) cis-1,3-dichloropropene | 14.24 | 75 | 222944 | 10.001 | ppbV | | 99 |
| 48) 4-methyl-2-pentanone | 13.65 | 43 | 358448 | 9.790 | ppbV | | 99 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 235616 | 9.896 | ppbV | | 100 |
| 50) 1,1,2-trichloroethane | 14.44 | 97 | 161139 | 9.833 | ppbV | | 100 |
| 52) toluene | 14.75 | 91 | 517094 | 9.979 | ppbV | | 100 |
| 54) 2-hexanone | 15.03 | 43 | 328570 | 9.862 | ppbV | | 98 |
| 55) dibromochloromethane | 15.20 | 129 | 239495 | 10.136 | ppbV | | 100 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 256662 | 10.150 | ppbV | | 99 |
| 57) tetrachloroethene | 15.93 | 166 | 213897 | 9.974 | ppbV | | 98 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 175943 | 9.968 | ppbV | | 100 |
| 59) chlorobenzene | 16.57 | 112 | 426884 | 10.125 | ppbV | | 100 |
| 60) ethylbenzene | 16.93 | 91 | 625265 | 9.959 | ppbV | | 100 |
| 61) m+p-xylene | 17.09 | 91 | 1043096 | 19.948 | ppbV | | 99 |
| 62) bromoform | 17.16 | 173 | 213174 | 10.252 | ppbV | | 99 |
| 63) styrene | 17.41 | 104 | 469368 | 10.112 | ppbV | | 99 |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 367051 | 10.116 | ppbV | | 100 |
| 65) o-xylene | 17.51 | 91 | 521746 | 9.924 | ppbV | | 96 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 306646 | 10.084 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38596_Ev2.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:42:23 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 757649 | 9.863 | ppbV | 98 |
| 69) Bromobenzene | 18.09 | 77 | 402821 | 10.098 | ppbV | 100 |
| 70) 4-ethyl toluene | 18.57 | 105 | 861782 | 9.978 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 691080 | 9.920 | ppbV | 98 |
| 72) tert-butylbenzene | 18.95 | 119 | 680282 | 10.037 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 667129 | 9.869 | ppbV | 90 |
| 74) Benzyl Chloride | 19.07 | 91 | 508868 | 10.727 | ppbV | 99 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 390028 | 10.200 | ppbV | 99 |
| 76) 1,4-dichlorobenzene | 19.13 | 146 | 382121 | 10.363 | ppbV | 99 |
| 77) sec-butylbenzene | 19.17 | 105 | 1005860 | 9.891 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.29 | 119 | 830046 | 10.011 | ppbV | 100 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 367113 | 10.149 | ppbV | 99 |
| 80) n-butylbenzene | 19.63 | 91 | 704184 | 10.067 | ppbV | 99 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 256061 | 11.065 | ppbV | 99 |
| 82) naphthalene | 20.99 | 128 | 829709 | 10.835 | ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.23 | 180 | 305188 | 10.962 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.31 | 225 | 277658 | 9.909 | ppbV | 99 |

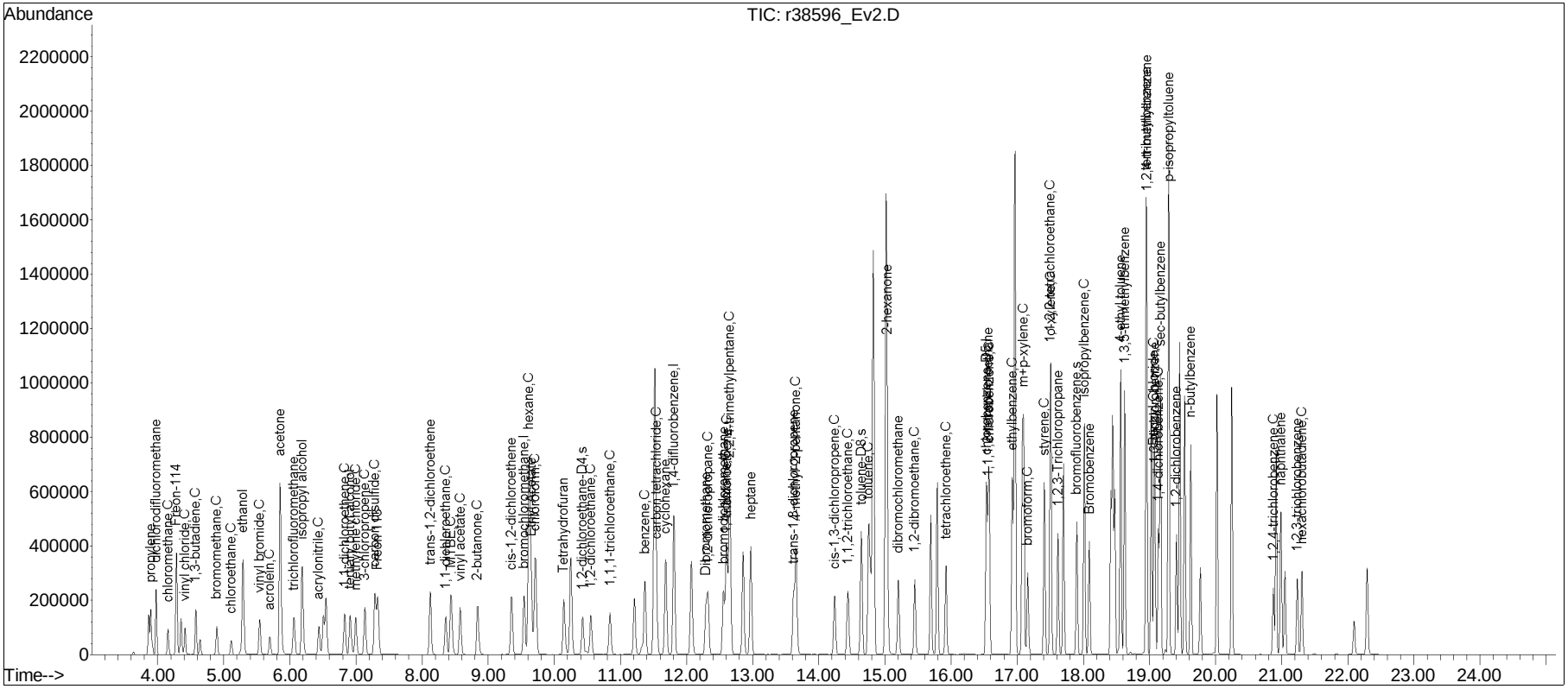
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38596_Ev2.D
Acq On : 12 Mar 2020 3:04 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD010
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:42:23 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

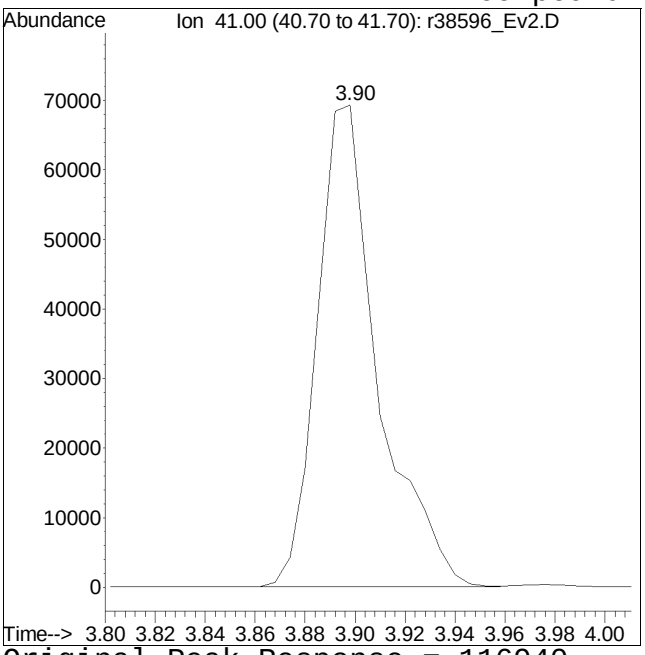
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D

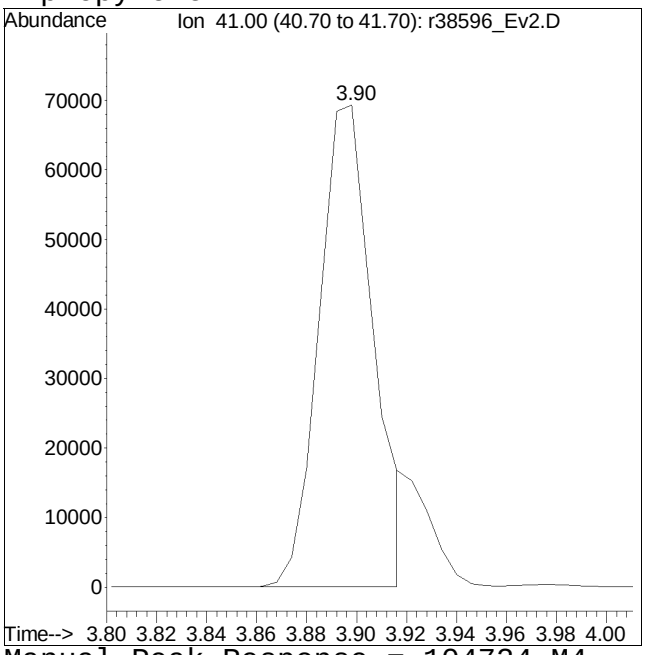


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3Q
Data File : r38596_Ev2.D
Date Inj'd : 3/12/2020 0:3: 4
Sample : ITO15-SIMSTD010
Method : TSIM3_200312.M
Operator : AIRPIANO3:RY
Instrument :
Quant Date : 3/12/2020 4:28 pm

Compound #2: propylene




Original Peak Response = 116940 Manual Peak Response = 104724 M4
M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38597_Ev2.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:44:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 246704 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 108.11% | | | |
| 33) 1,4-difluorobenzene | 11.81 | 114 | 721734 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 109.48% | | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 103484 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 105.55% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 115087 | 9.260 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.60% | | | |
| 53) toluene-D8 | 14.64 | 98 | 503079 | 9.828 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.28% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 318110 | 9.490 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 94.90% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 216963M4 | 18.756 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 449454 | 18.791 | ppbV | 99 |
| 4) chloromethane | 4.15 | 50 | 203565 | 19.432 | ppbV | 99 |
| 5) Freon-114 | 4.28 | 85 | 549846 | 18.430 | ppbV | 96 |
| 6) vinyl chloride | 4.41 | 62 | 242106 | 20.145 | ppbV | 99 |
| 7) 1,3-butadiene | 4.58 | 54 | 241130 | 19.921 | ppbV | 96 |
| 8) bromomethane | 4.89 | 94 | 205927 | 20.014 | ppbV | 99 |
| 9) chloroethane | 5.11 | 64 | 122477 | 20.328 | ppbV | 98 |
| 10) ethanol | 5.29 | 31 | 1097895 | 108.689 | ppbV | 97 |
| 11) vinyl bromide | 5.54 | 106 | 277552 | 22.611 | ppbV | 97 |
| 12) acrolein | 5.69 | 56 | 131028 | 22.080 | ppbV # | 94 |
| 13) acetone | 5.84 | 43 | 1897263 | 109.687 | ppbV | 93 |
| 14) trichlorofluoromethane | 6.06 | 101 | 447033 | 24.482 | ppbV | 99 |
| 15) isopropyl alcohol | 6.18 | 45 | 1255311 | 57.504 | ppbV | 98 |
| 16) acrylonitrile | 6.43 | 53 | 245194 | 22.417 | ppbV | 95 |
| 17) 1,1-dichloroethene | 6.83 | 61 | 360502 | 22.985 | ppbV | 98 |
| 18) tertiary butyl alcohol | 6.89 | 59 | 511510 | 22.454 | ppbV # | 93 |
| 19) methylene chloride | 7.00 | 49 | 334373 | 22.591 | ppbV | 97 |
| 20) 3-chloropropene | 7.13 | 41 | 401426 | 20.125 | ppbV | 99 |
| 21) carbon disulfide | 7.28 | 76 | 916982 | 19.889 | ppbV | 99 |
| 22) Freon 113 | 7.33 | 101 | 490045 | 19.833 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 8.12 | 61 | 389696 | 19.871 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38597_Ev2.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:44:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.36 | 63 | 451572 | 20.116 | ppbV | | 99 |
| 25) MTBE | 8.43 | 73 | 799751 | 19.611 | ppbV | | 98 |
| 26) vinyl acetate | 8.57 | 43 | 686815 | 20.182 | ppbV | | 100 |
| 27) 2-butanone | 8.82 | 43 | 613199 | 19.779 | ppbV | | 99 |
| 28) cis-1,2-dichloroethene | 9.35 | 61 | 338896 | 20.300 | ppbV | | 99 |
| 29) Ethyl Acetate | 9.64 | 61 | 101729 | 20.491 | ppbV | | 95 |
| 30) chloroform | 9.71 | 83 | 499582 | 20.304 | ppbV | | 99 |
| 31) Tetrahydrofuran | 10.13 | 42 | 382843 | 20.096 | ppbV | | 96 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 269952 | 19.669 | ppbV | | 98 |
| 34) hexane | 9.62 | 57 | 510000 | 19.838 | ppbV | # | 79 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 403711 | 19.435 | ppbV | | 99 |
| 37) benzene | 11.37 | 78 | 1025695 | 20.281 | ppbV | | 99 |
| 38) carbon tetrachloride | 11.55 | 117 | 400212 | 19.432 | ppbV | | 99 |
| 39) cyclohexane | 11.69 | 56 | 563268 | 20.208 | ppbV | | 97 |
| 40) Dibromomethane | 12.29 | 93 | 261334 | 19.130 | ppbV | # | 97 |
| 41) 1,2-dichloropropane | 12.32 | 63 | 313483 | 20.055 | ppbV | | 99 |
| 42) bromodichloromethane | 12.55 | 83 | 563398 | 19.852 | ppbV | | 99 |
| 43) 1,4-dioxane | 12.59 | 88 | 240507 | 20.156 | ppbV | | 99 |
| 44) trichloroethene | 12.61 | 130 | 398534 | 20.014 | ppbV | | 99 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 1635346 | 19.452 | ppbV | | 99 |
| 46) heptane | 12.97 | 43 | 657671 | 19.458 | ppbV | | 95 |
| 47) cis-1,3-dichloropropene | 14.23 | 75 | 477040 | 20.428 | ppbV | | 99 |
| 48) 4-methyl-2-pentanone | 13.65 | 43 | 750051 | 19.555 | ppbV | | 95 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 506110 | 20.291 | ppbV | | 99 |
| 50) 1,1,2-trichloroethane | 14.44 | 97 | 344538 | 20.070 | ppbV | | 98 |
| 52) toluene | 14.75 | 91 | 1098080 | 20.679 | ppbV | | 100 |
| 54) 2-hexanone | 15.03 | 43 | 648427 | 18.992 | ppbV | | 95 |
| 55) dibromochloromethane | 15.20 | 129 | 497362 | 20.540 | ppbV | | 98 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 549442 | 21.203 | ppbV | | 100 |
| 57) tetrachloroethene | 15.93 | 166 | 463280 | 21.081 | ppbV | | 96 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 362977 | 20.066 | ppbV | | 99 |
| 59) chlorobenzene | 16.57 | 112 | 940620 | 21.771 | ppbV | | 98 |
| 60) ethylbenzene | 16.93 | 91 | 1326925 | 20.624 | ppbV | | 97 |
| 61) m+p-xylene | 17.09 | 91 | 2183262 | 40.743 | ppbV | | 96 |
| 62) bromoform | 17.16 | 173 | 452748 | 21.247 | ppbV | | 99 |
| 63) styrene | 17.41 | 104 | 1023569 | 21.518 | ppbV | | 99 |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 791244 | 21.280 | ppbV | | 99 |
| 65) o-xylene | 17.51 | 91 | 1073776 | 19.929 | ppbV | | 92 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 631656 | 20.268 | ppbV | | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38597_Ev2.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:44:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 1562275 | 19.846 | ppbV | 95 |
| 69) Bromobenzene | 18.09 | 77 | 842063 | 20.598 | ppbV | 98 |
| 70) 4-ethyl toluene | 18.57 | 105 | 1755086 | 19.830 | ppbV | 95 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 1444302 | 20.231 | ppbV | 93 |
| 72) tert-butylbenzene | 18.96 | 119 | 1349200 | 19.426 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 1314264 | 18.972 | ppbV | 86 |
| 74) Benzyl Chloride | 19.07 | 91 | 1038715 | 21.367 | ppbV | 96 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 811137 | 20.699 | ppbV | 96 |
| 76) 1,4-dichlorobenzene | 19.13 | 146 | 816915 | 21.619 | ppbV | 97 |
| 77) sec-butylbenzene | 19.17 | 105 | 1990310 | 19.097 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.29 | 119 | 1601301 | 18.845 | ppbV | 99 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 782372 | 21.105 | ppbV | 97 |
| 80) n-butylbenzene | 19.63 | 91 | 1365197 | 19.044 | ppbV | 99 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 489973 | 20.660 | ppbV | 97 |
| 82) naphthalene | 20.99 | 128 | 1432486 | 18.254 | ppbV | 97 |
| 83) 1,2,3-trichlorobenzene | 21.23 | 180 | 526898 | 18.467 | ppbV | 96 |
| 84) hexachlorobutadiene | 21.31 | 225 | 514846 | 17.928 | ppbV | 97 |

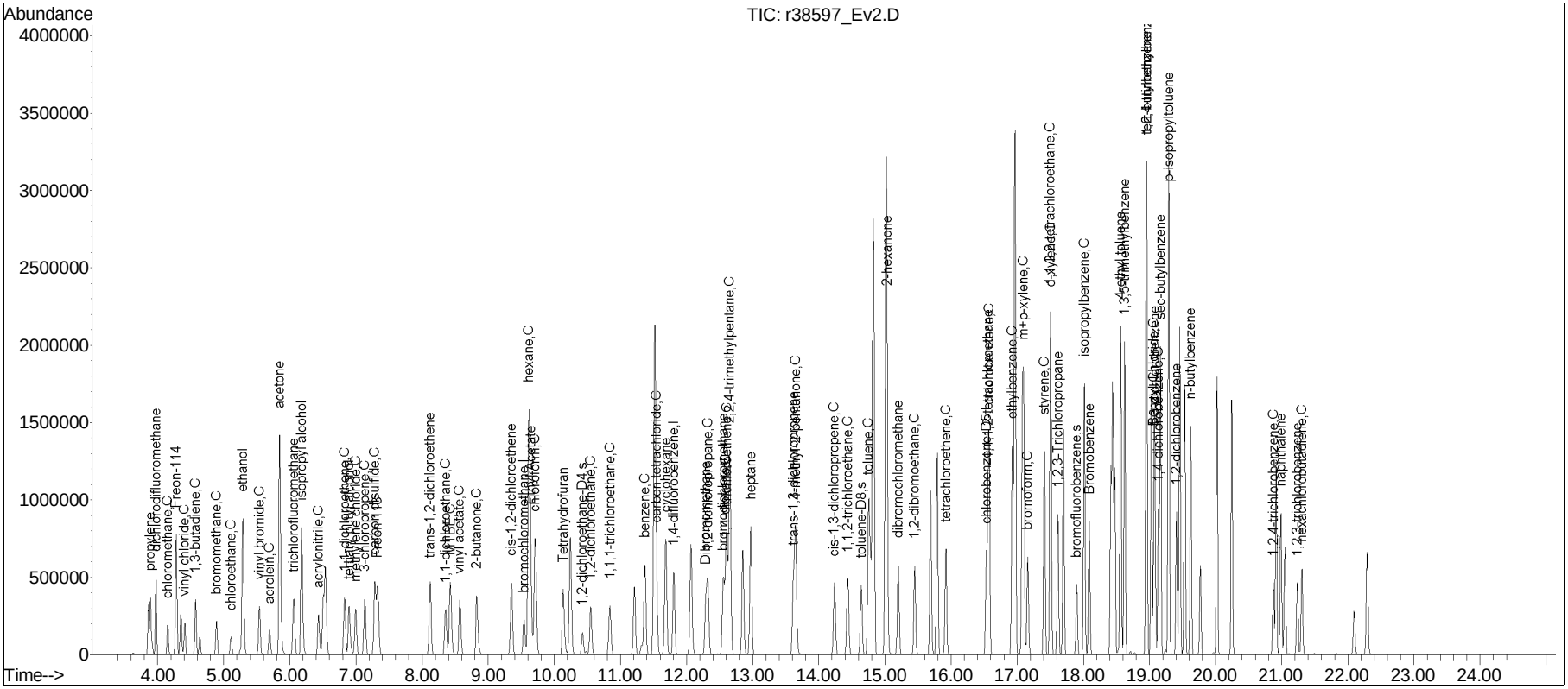
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38597_Ev2.D
Acq On : 12 Mar 2020 3:41 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD020
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:44:37 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:27:33 2020
Response via : Initial Calibration

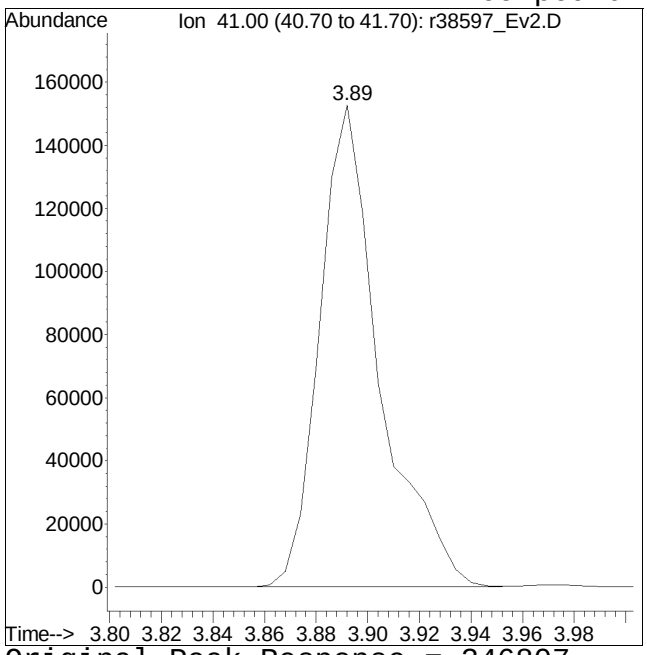
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D



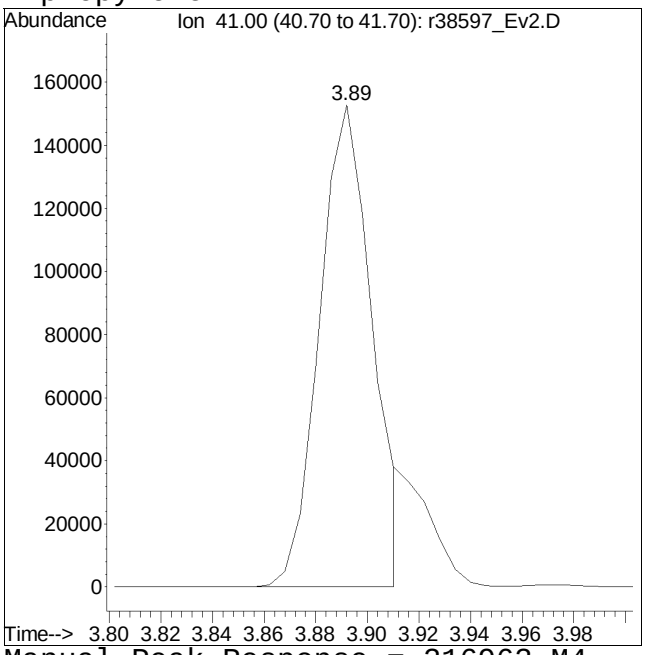
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38597_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:3: 1 Instrument :
Sample : ITO15-SIMSTD020 Quant Date : 3/12/2020 4:29 pm

Compound #2: propylene




Original Peak Response = 246807




Manual Peak Response = 216963 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38598_Ev2.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:47:49 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:45:29 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.54 | 49 | 255770 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 112.08% | | | |
| 33) 1,4-difluorobenzene | 11.81 | 114 | 749542 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 113.70% | | | |
| 51) chlorobenzene-D5 | 16.53 | 54 | 105079 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 107.18% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.43 | 65 | 108644 | 8.543 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 85.43% | | | |
| 53) toluene-D8 | 14.64 | 98 | 516638 | 9.987 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.87% | | | |
| 67) bromofluorobenzene | 17.90 | 95 | 347673 | 10.579 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 105.79% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 505517M4 | 40.912 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 885663 | 34.035 | ppbV | 99 |
| 4) chloromethane | 4.16 | 50 | 443879 | 38.825 | ppbV | 97 |
| 5) Freon-114 | 4.28 | 85 | 1068621 | 32.213 | ppbV | 91 |
| 6) vinyl chloride | 4.41 | 62 | 556445 | 40.015 | ppbV | 99 |
| 7) 1,3-butadiene | 4.58 | 54 | 540784 | 40.212 | ppbV | 96 |
| 8) bromomethane | 4.89 | 94 | 461504 | 39.006 | ppbV | 98 |
| 9) chloroethane | 5.12 | 64 | 282883 | 41.178 | ppbV | 93 |
| 10) ethanol | 5.30 | 31 | 1807135 | 157.566 | ppbV | 99 |
| 11) vinyl bromide | 5.54 | 106 | 503448 | 36.928 | ppbV | 98 |
| 12) acrolein | 5.69 | 56 | 287635 | 43.375 | ppbV | 97 |
| 13) acetone | 5.85 | 43 | 2759399 | 149.186 | ppbV # | 84 |
| 14) trichlorofluoromethane | 6.06 | 101 | 694126 | 33.322 | ppbV | 100 |
| 15) isopropyl alcohol | 6.19 | 45 | 2008048 | 84.464 | ppbV | 98 |
| 16) acrylonitrile | 6.44 | 53 | 519757 | 44.190 | ppbV | 97 |
| 17) 1,1-dichloroethene | 6.83 | 61 | 828787 | 45.841 | ppbV | 99 |
| 18) tertiary butyl alcohol | 6.91 | 59 | 1224661 | 47.109 | ppbV | 96 |
| 19) methylene chloride | 7.00 | 49 | 787704 | 47.896 | ppbV | 99 |
| 20) 3-chloropropene | 7.13 | 41 | 939556 | 43.404 | ppbV | 97 |
| 21) carbon disulfide | 7.28 | 76 | 2087384 | 42.024 | ppbV | 98 |
| 22) Freon 113 | 7.33 | 101 | 1102711 | 40.292 | ppbV | 97 |
| 23) trans-1,2-dichloroethene | 8.13 | 61 | 905392 | 41.999 | ppbV | 93 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38598_Ev2.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:47:49 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:45:29 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.36 | 63 | 1053759 | 42.456 | ppbV | | 100 |
| 25) MTBE | 8.43 | 73 | 1795417 | 40.746 | ppbV | | 95 |
| 26) vinyl acetate | 8.57 | 43 | 1590127 | 44.199 | ppbV | | 95 |
| 27) 2-butanone | 8.83 | 43 | 1416093 | 42.303 | ppbV | | 98 |
| 28) cis-1,2-dichloroethene | 9.35 | 61 | 786066 | 41.552 | ppbV | | 99 |
| 29) Ethyl Acetate | 9.65 | 61 | 248596 | 45.990 | ppbV | | 73 |
| 30) chloroform | 9.71 | 83 | 1110027 | 40.525 | ppbV | | 99 |
| 31) Tetrahydrofuran | 10.13 | 42 | 901647 | 44.326 | ppbV | | 97 |
| 32) 1,2-dichloroethane | 10.55 | 62 | 586268 | 37.024 | ppbV | | 95 |
| 34) hexane | 9.62 | 57 | 1178457 | 42.789 | ppbV | | 98 |
| 36) 1,1,1-trichloroethane | 10.84 | 97 | 939792 | 40.342 | ppbV | # | 97 |
| 37) benzene | 11.37 | 78 | 2385430 | 41.318 | ppbV | | 99 |
| 38) carbon tetrachloride | 11.55 | 117 | 812118 | 35.733 | ppbV | | 98 |
| 39) cyclohexane | 11.69 | 56 | 1354739 | 45.403 | ppbV | | 94 |
| 40) Dibromomethane | 12.29 | 93 | 583469 | 36.647 | ppbV | # | 93 |
| 41) 1,2-dichloropropane | 12.33 | 63 | 729155 | 40.962 | ppbV | | 97 |
| 42) bromodichloromethane | 12.55 | 83 | 1269550 | 40.843 | ppbV | | 99 |
| 43) 1,4-dioxane | 12.59 | 88 | 601180 | 47.053 | ppbV | | 97 |
| 44) trichloroethene | 12.61 | 130 | 934900 | 43.104 | ppbV | | 95 |
| 45) 2,2,4-trimethylpentane | 12.65 | 57 | 3770336 | 42.190 | ppbV | | 97 |
| 46) heptane | 12.97 | 43 | 1474685 | 41.226 | ppbV | | 92 |
| 47) cis-1,3-dichloropropene | 14.24 | 75 | 1076197 | 43.627 | ppbV | | 98 |
| 48) 4-methyl-2-pentanone | 13.65 | 43 | 1688946 | 42.203 | ppbV | | 92 |
| 49) trans-1,3-dichloropropene | 13.62 | 75 | 1155540 | 43.790 | ppbV | | 97 |
| 50) 1,1,2-trichloroethane | 14.44 | 97 | 798761 | 41.296 | ppbV | | 93 |
| 52) toluene | 14.76 | 91 | 2499706 | 42.122 | ppbV | | 99 |
| 54) 2-hexanone | 15.03 | 43 | 1230734 | 35.649 | ppbV | # | 87 |
| 55) dibromochloromethane | 15.21 | 129 | 1123105 | 46.054 | ppbV | | 98 |
| 56) 1,2-dibromoethane | 15.45 | 107 | 1240862 | 43.631 | ppbV | | 100 |
| 57) tetrachloroethene | 15.93 | 166 | 1054030 | 43.744 | ppbV | # | 94 |
| 58) 1,1,1,2-tetrachloroethane | 16.56 | 131 | 790971 | 41.188 | ppbV | | 97 |
| 59) chlorobenzene | 16.57 | 112 | 2094649 | 44.875 | ppbV | | 95 |
| 60) ethylbenzene | 16.93 | 91 | 2951613 | 42.395 | ppbV | | 95 |
| 61) m+p-xylene | 17.09 | 91 | 4655228 | 79.341 | ppbV | | 95 |
| 62) bromoform | 17.16 | 173 | 999735 | 47.337 | ppbV | | 98 |
| 63) styrene | 17.41 | 104 | 2344403 | 46.718 | ppbV | | 97 |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 1631342 | 41.375 | ppbV | | 99 |
| 65) o-xylene | 17.51 | 91 | 2205760 | 37.810 | ppbV | | 89 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 1418399 | 44.128 | ppbV | | 96 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38598_Ev2.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:47:49 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:45:29 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.02 | 105 | 3359591M3 | 40.854 | ppbV | |
| 69) Bromobenzene | 18.09 | 77 | 1837525 | 43.358 | ppbV | 92 |
| 70) 4-ethyl toluene | 18.57 | 105 | 3772270 | 42.844 | ppbV | 91 |
| 71) 1,3,5-trimethylbenzene | 18.63 | 105 | 3011283 | 40.696 | ppbV | 88 |
| 72) tert-butylbenzene | 18.96 | 119 | 2584189 | 35.963 | ppbV | 92 |
| 73) 1,2,4-trimethylbenzene | 18.96 | 105 | 2489876 | 35.512 | ppbV | 86 |
| 74) Benzyl Chloride | 19.07 | 91 | 2231707 | 48.403 | ppbV | 92 |
| 75) 1,3-dichlorobenzene | 19.08 | 146 | 1773393 | 45.259 | ppbV | 94 |
| 76) 1,4-dichlorobenzene | 19.14 | 146 | 1775868 | 46.049 | ppbV # | 90 |
| 77) sec-butylbenzene | 19.17 | 105 | 4091429 | 38.552 | ppbV | 94 |
| 78) p-isopropyltoluene | 19.29 | 119 | 3059021 | 35.904 | ppbV | 92 |
| 79) 1,2-dichlorobenzene | 19.41 | 146 | 1759210 | 47.271 | ppbV | 95 |
| 80) n-butylbenzene | 19.63 | 91 | 2916924 | 41.168 | ppbV | 96 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 1283098 | 62.649 | ppbV | 94 |
| 82) naphthalene | 20.99 | 128 | 3577367 | 49.722 | ppbV | 96 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 1333359 | 55.382 | ppbV # | 90 |
| 84) hexachlorobutadiene | 21.31 | 225 | 1098403 | 38.018 | ppbV | 96 |

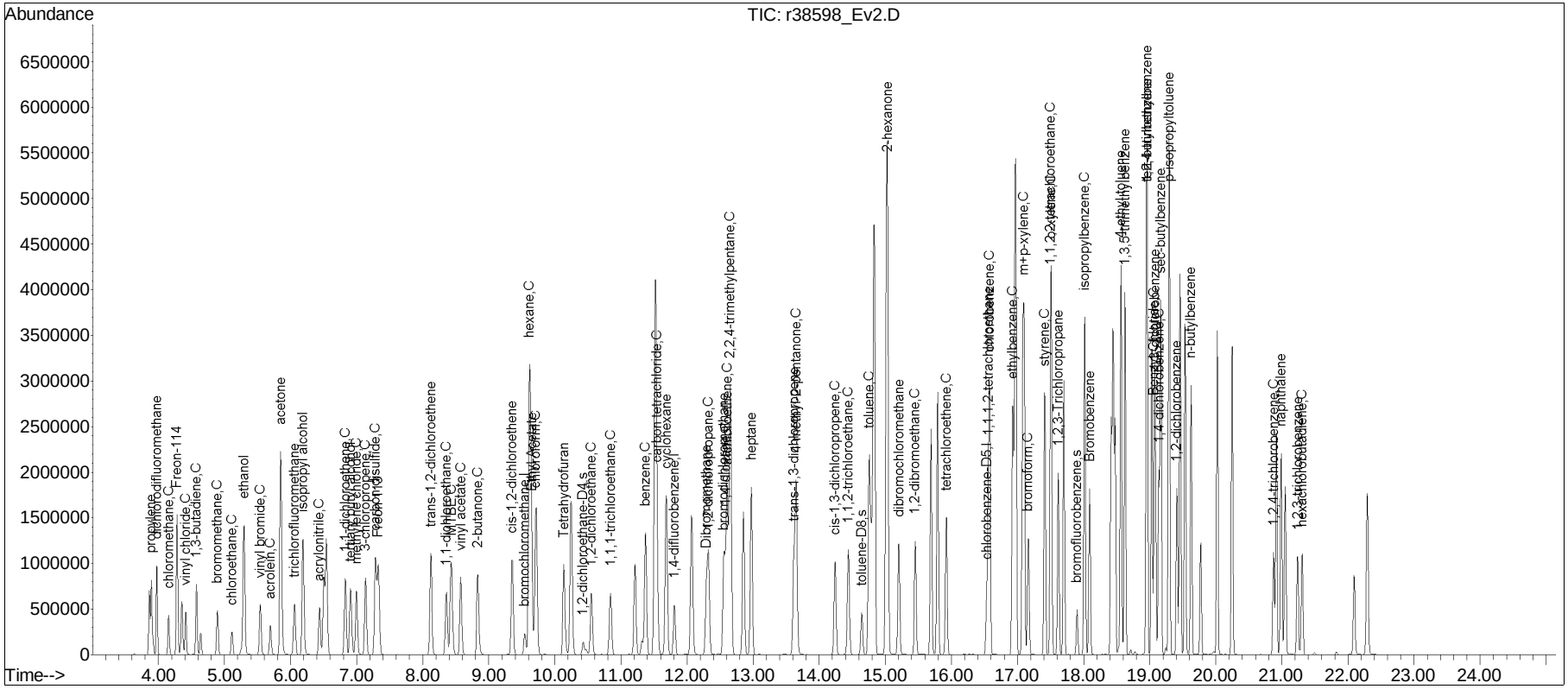
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38598_Ev2.D
Acq On : 12 Mar 2020 4:20 PM
Operator : AIRPIANO3:RY
Sample : ITO15-SIMSTD050
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 12 16:47:49 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:45:29 2020
Response via : Initial Calibration

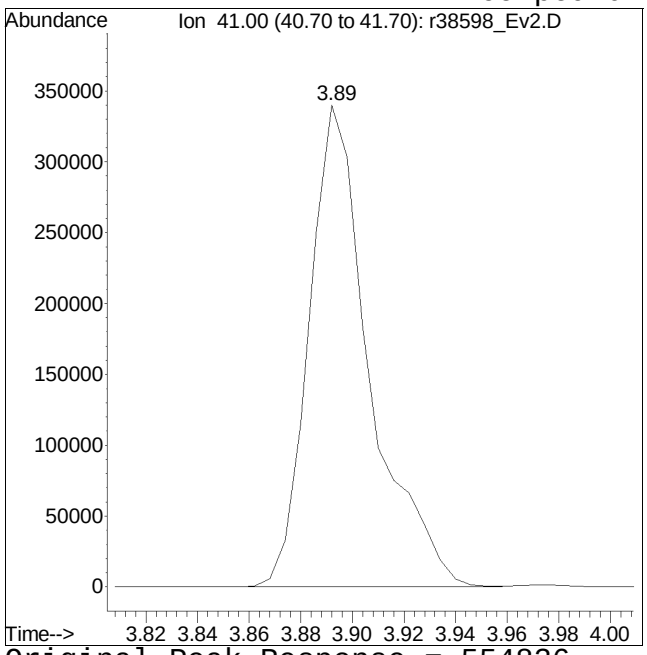
Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D



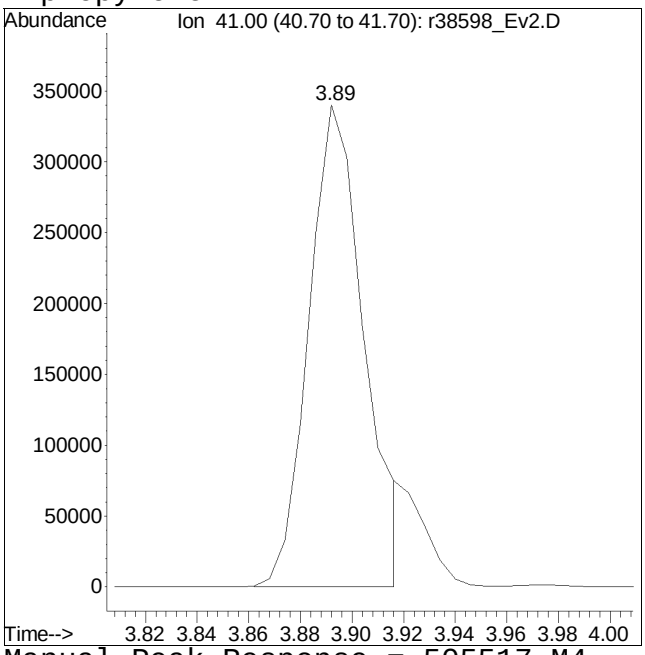
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38598_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:4: 0 Instrument :
Sample : ITO15-SIMSTD050 Quant Date : 3/12/2020 4:46 pm

Compound #2: propylene




Original Peak Response = 554836



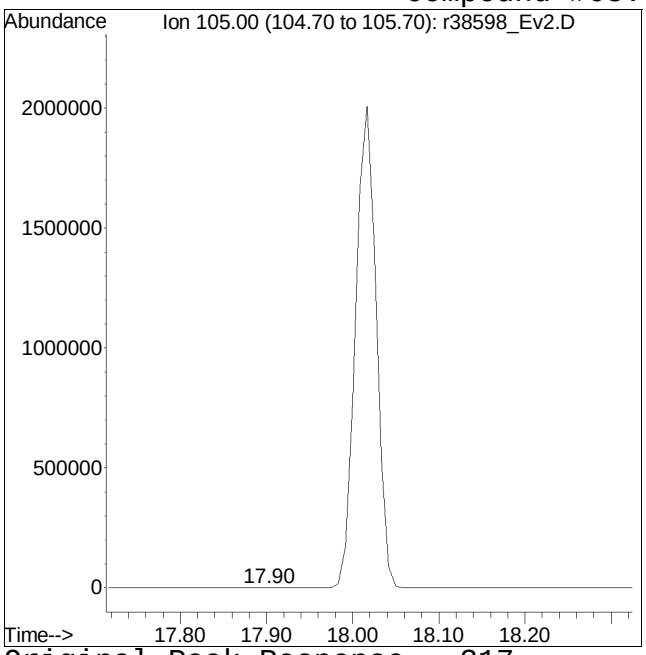

Manual Peak Response = 505517 M4

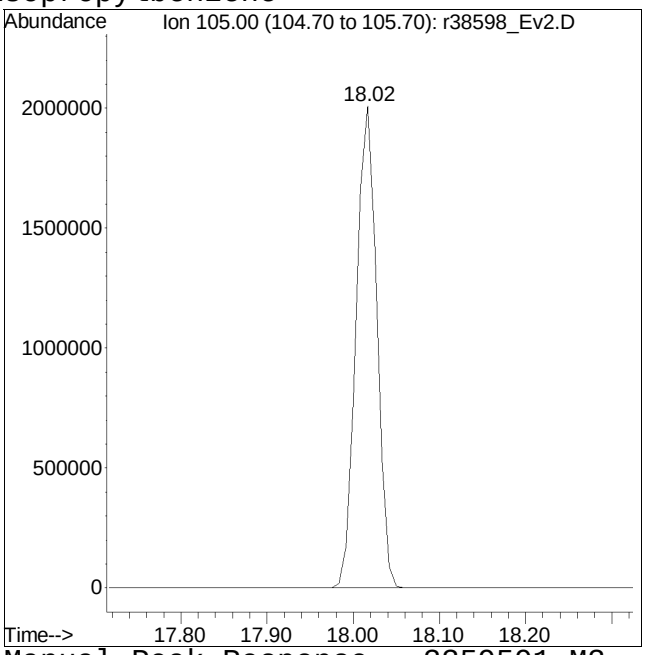
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38598_Ev2.D Operator : AIRPIANO3:RY
Date Inj'd : 3/12/2020 0:4: 0 Instrument :
Sample : ITO15-SIMSTD050 Quant Date : 3/12/2020 4:46 pm

Compound #68: isopropylbenzene




Original Peak Response = 317 Manual Peak Response = 3359591 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 99 | 0.00 |
| 2 | | propylene | 0.471 | 0.481 | -2.1 | 102 | 0.00 |
| 3 | | dichlorodifluoromethane | 0.971 | 0.808 | 16.8 | 83 | 0.00 |
| 4 | C | chloromethane | 0.433 | 0.385 | 11.1 | 90 | 0.00 |
| 5 | | Freon-114 | 1.246 | 1.095 | 12.1 | 90 | 0.00 |
| 6 | C | vinyl chloride | 0.533 | 0.499 | 6.4 | 102 | 0.00 |
| 7 | C | 1,3-butadiene | 0.515 | 0.492 | 4.5 | 99 | 0.00 |
| 8 | C | bromomethane | 0.452 | 0.413 | 8.6 | 98 | 0.00 |
| 9 | C | chloroethane | 0.264 | 0.251 | 4.9 | 102 | 0.00 |
| 10 | | ethanol | 0.421 | 0.356 | 15.4 | 86 | 0.00 |
| 11 | C | vinyl bromide | 0.513 | 0.419 | 18.3 | 84 | 0.00 |
| 12 | C | acrolein | 0.255 | 0.219 | 14.1 | 90 | 0.00 |
| 13 | | acetone | 0.682 | 0.483 | 29.2 | 68 | 0.00 |
| 14 | | trichlorofluoromethane | 0.784 | 0.570 | 27.3 | 76 | 0.00 |
| 15 | | isopropyl alcohol | 0.886 | 0.690 | 22.1 | 77 | 0.00 |
| 16 | C | acrylonitrile | 0.453 | 0.406 | 10.4 | 91 | 0.00 |
| 17 | C | 1,1-dichloroethene | 0.701 | 0.618 | 11.8 | 96 | 0.00 |
| 18 | | tertiary butyl alcohol | 1.008 | 0.855 | 15.2 | 92 | 0.00 |
| 19 | C | methylene chloride | 0.638 | 0.500 | 21.6 | 83 | 0.00 |
| 20 | C | 3-chloropropene | 0.830 | 0.835 | -0.6 | 102 | 0.00 |
| 21 | C | carbon disulfide | 1.898 | 1.704 | 10.2 | 90 | 0.00 |
| 22 | | Freon 113 | 1.047 | 0.976 | 6.8 | 97 | 0.00 |
| 23 | | trans-1,2-dichloroethene | 0.829 | 0.786 | 5.2 | 98 | 0.00 |
| 24 | C | 1,1-dichloroethane | 0.956 | 0.928 | 2.9 | 101 | 0.00 |
| 25 | C | MTBE | 1.691 | 1.494 | 11.6 | 90 | 0.00 |
| 26 | C | vinyl acetate | 1.379 | 1.301 | 5.7 | 93 | 0.00 |
| 27 | C | 2-butanone | 1.280 | 1.196 | 6.6 | 94 | 0.00 |
| 28 | | cis-1,2-dichloroethene | 0.727 | 0.724 | 0.4 | 106 | 0.00 |
| 29 | | Ethyl Acetate | 0.209 | 0.224 | -7.2 | 110 | 0.00 |
| 30 | C | chloroform | 1.051 | 1.026 | 2.4 | 102 | 0.00 |
| 31 | | Tetrahydrofuran | 0.782 | 0.750 | 4.1 | 96 | 0.00 |
| 32 | C | 1,2-dichloroethane | 0.603 | 0.479 | 20.6 | 85 | 0.00 |
| 33 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 108 | 0.00 |
| 34 | C | hexane | 0.360 | 0.367 | -1.9 | 111 | 0.00 |
| 35 | s | 1,2-dichloroethane-D4 | 0.167 | 0.125 | 25.1 | 78 | 0.00 |
| 36 | C | 1,1,1-trichloroethane | 0.305 | 0.236 | 22.6 | 88 | 0.00 |
| 37 | C | benzene | 0.755 | 0.672 | 11.0 | 103 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 38 | C | carbon tetrachloride | 0.295 | 0.246 | 16.6 | 93 | 0.00 |
| 39 | | cyclohexane | 0.393 | 0.401 | -2.0 | 112 | 0.00 |
| 40 | | Dibromomethane | 0.206 | 0.160 | 22.3 | 91 | 0.00 |
| 41 | C | 1,2-dichloropropane | 0.233 | 0.213 | 8.6 | 106 | 0.00 |
| 42 | | bromodichloromethane | 0.407 | 0.360 | 11.5 | 99 | 0.00 |
| 43 | C | 1,4-dioxane | 0.169 | 0.177 | -4.7 | 115 | 0.00 |
| 44 | C | trichloroethene | 0.285 | 0.273 | 4.2 | 107 | 0.00 |
| 45 | C | 2,2,4-trimethylpentane | 1.166 | 1.205 | -3.3 | 111 | 0.00 |
| 46 | | heptane | 0.465 | 0.412 | 11.4 | 95 | 0.00 |
| 47 | C | cis-1,3-dichloropropene | 0.325 | 0.260 | 20.0 | 87 | 0.00 |
| 48 | C | 4-methyl-2-pentanone | 0.520 | 0.472 | 9.2 | 96 | 0.00 |
| 49 | | trans-1,3-dichloropropene | 0.348 | 0.332 | 4.6 | 104 | 0.00 |
| 50 | C | 1,1,2-trichloroethane | 0.254 | 0.229 | 9.8 | 104 | 0.00 |
| 51 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 52 | C | toluene | 5.549 | 5.576 | -0.5 | 107 | 0.00 |
| 53 | s | toluene-D8 | 4.923 | 4.713 | 4.3 | 94 | 0.00 |
| 54 | | 2-hexanone | 3.151 | 3.169 | -0.6 | 94 | 0.00 |
| 55 | | dibromochloromethane | 2.302 | 2.434 | -5.7 | 102 | 0.00 |
| 56 | C | 1,2-dibromoethane | 2.672 | 2.637 | 1.3 | 103 | 0.00 |
| 57 | C | tetrachloroethene | 2.264 | 2.353 | -3.9 | 109 | 0.00 |
| 58 | | 1,1,1,2-tetrachloroethane | 1.795 | 1.635 | 8.9 | 92 | 0.00 |
| 59 | C | chlorobenzene | 4.397 | 4.907 | -11.6 | 115 | 0.00 |
| 60 | C | ethylbenzene | 6.525 | 6.797 | -4.2 | 107 | 0.00 |
| 61 | C | m+p-xylene | 5.468 | 5.547 | -1.4 | 105 | 0.00 |
| 62 | C | bromoform | 1.999 | 2.221 | -11.1 | 106 | 0.00 |
| 63 | C | styrene | 4.744 | 5.036 | -6.2 | 108 | 0.00 |
| 64 | C | 1,1,2,2-tetrachloroethane | 3.687 | 4.369 | -18.5 | 119 | 0.00 |
| 65 | C | o-xylene | 5.416 | 5.635 | -4.0 | 106 | 0.00 |
| 66 | | 1,2,3-Trichloropropane | 3.023 | 2.785 | 7.9 | 91 | 0.00 |
| 67 | s | bromofluorobenzene | 3.146 | 3.051 | 3.0 | 93 | 0.00 |
| 68 | C | isopropylbenzene | 7.621 | 7.563 | 0.8 | 98 | 0.00 |
| 69 | | Bromobenzene | 3.957 | 3.786 | 4.3 | 94 | 0.00 |
| 70 | | 4-ethyl toluene | 8.259 | 8.778 | -6.3 | 101 | 0.00 |
| 71 | | 1,3,5-trimethylbenzene | 6.911 | 7.396 | -7.0 | 105 | 0.00 |
| 72 | | tert-butylbenzene | 6.564 | 6.911 | -5.3 | 101 | 0.02 |
| 73 | | 1,2,4-trimethylbenzene | 6.479 | 7.410 | -14.4 | 109 | 0.03 |
| 74 | C | Benzyl Chloride | 4.368 | 4.970 | -13.8 | 104 | 0.02 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|
| 75 | 1,3-dichlorobenzene | 3.694 | 4.185 | -13.3 | 109 | 0.03 |
| 76 C | 1,4-dichlorobenzene | 3.641 | 4.057 | -11.4 | 109 | 0.03 |
| 77 | sec-butylbenzene | 9.769 | 9.676 | 1.0 | 94 | 0.02 |
| 78 | p-isopropyltoluene | 7.782 | 7.738 | 0.6 | 93 | 0.03 |
| 79 | 1,2-dichlorobenzene | 3.522 | 4.026 | -14.3 | 110 | 0.04 |
| 80 | n-butylbenzene | 6.573 | 6.836 | -4.0 | 97 | 0.05 |
| 81 C | 1,2,4-trichlorobenzene | 2.004 | 3.073 | -53.3# | 132 | 0.05 |
| 82 | naphthalene | 6.843 | 7.666 | -12.0 | 99 | 0.06 |
| 83 | 1,2,3-trichlorobenzene | 2.319 | 2.850 | -22.9 | 102 | 0.06 |
| 84 C | hexachlorobutadiene | 2.676 | 3.404 | -27.2 | 121 | 0.05 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.542 | 49 | 226183 | 10.000 | ppbV | 0.00 |
| Standard Area = 228204 | | | Recovery = 99.11% | | | |
| 33) 1,4-difluorobenzene | 11.807 | 114 | 710328 | 10.000 | ppbV | 0.00 |
| Standard Area = 659248 | | | Recovery = 107.75% | | | |
| 51) chlorobenzene-D5 | 16.533 | 54 | 96331 | 10.000 | ppbV | 0.00 |
| Standard Area = 98040 | | | Recovery = 98.26% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.425 | 65 | 89067 | 7.500 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 75.00% | | | |
| 53) toluene-D8 | 14.642 | 98 | 453969 | 9.574 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.74% | | | |
| 67) bromofluorobenzene | 17.900 | 95 | 293866 | 9.698 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.98% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.898 | 41 | 54443M4 | 5.115 | ppbV | |
| 3) dichlorodifluoromethane | 3.976 | 85 | 91407 | 4.162 | ppbV | 99 |
| 4) chloromethane | 4.156 | 50 | 43541 | 4.449 | ppbV | 98 |
| 5) Freon-114 | 4.282 | 85 | 123783 | 4.393 | ppbV | 97 |
| 6) vinyl chloride | 4.414 | 62 | 56457 | 4.685 | ppbV | 99 |
| 7) 1,3-butadiene | 4.582 | 54 | 55638 | 4.772 | ppbV | 92 |
| 8) bromomethane | 4.894 | 94 | 46760 | 4.570 | ppbV | 97 |
| 9) chloroethane | 5.116 | 64 | 28389 | 4.757 | ppbV | 91 |
| 10) ethanol | 5.284 | 31 | 201108 | 21.131 | ppbV | 95 |
| 11) vinyl bromide | 5.543 | 106 | 47434 | 4.087 | ppbV | 99 |
| 12) acrolein | 5.697 | 56 | 24791 | 4.291 | ppbV | 95 |
| 13) acetone | 5.850 | 43 | 272875 | 17.703 | ppbV # | 83 |
| 14) trichlorofluoromethane | 6.060 | 101 | 64497 | 3.636 | ppbV | 99 |
| 15) isopropyl alcohol | 6.183 | 45 | 195002 | 9.726 | ppbV # | 97 |
| 16) acrylonitrile | 6.433 | 53 | 45870 | 4.475 | ppbV | 96 |
| 17) 1,1-dichloroethene | 6.828 | 61 | 69880 | 4.407 | ppbV | 98 |
| 18) tertiary butyl alcohol | 6.912 | 59 | 96645 | 4.239 | ppbV | 95 |
| 19) methylene chloride | 6.996 | 49 | 56587 | 3.918 | ppbV | 92 |
| 20) 3-chloropropene | 7.134 | 41 | 94429 | 5.028 | ppbV | 96 |
| 21) carbon disulfide | 7.284 | 76 | 192720 | 4.490 | ppbV | 96 |
| 22) Freon 113 | 7.326 | 101 | 110341 | 4.660 | ppbV | 98 |
| 23) trans-1,2-dichloroethene | 8.117 | 61 | 88877 | 4.738 | ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) 1,1-dichloroethane | 8.350 | 63 | 104927 | 4.854 | ppbV | | 98 |
| 25) MTBE | 8.442 | 73 | 168903 | 4.416 | ppbV | # | 93 |
| 26) vinyl acetate | 8.575 | 43 | 147076 | 4.714 | ppbV | # | 93 |
| 27) 2-butanone | 8.842 | 43 | 135292 | 4.673 | ppbV | | 99 |
| 28) cis-1,2-dichloroethene | 9.350 | 61 | 81824 | 4.975 | ppbV | | 98 |
| 29) Ethyl Acetate | 9.650 | 61 | 25324 | 5.359 | ppbV | | 72 |
| 30) chloroform | 9.708 | 83 | 116067 | 4.884 | ppbV | | 97 |
| 31) Tetrahydrofuran | 10.142 | 42 | 84862 | 4.795 | ppbV | | 98 |
| 32) 1,2-dichloroethane | 10.550 | 62 | 54167 | 3.971 | ppbV | | 94 |
| 34) hexane | 9.608 | 57 | 130255 | 5.096 | ppbV | | 82 |
| 36) 1,1,1-trichloroethane | 10.842 | 97 | 83700 | 3.866 | ppbV | # | 95 |
| 37) benzene | 11.367 | 78 | 238839 | 4.451 | ppbV | | 98 |
| 38) carbon tetrachloride | 11.540 | 117 | 87427 | 4.178 | ppbV | # | 98 |
| 39) cyclohexane | 11.680 | 56 | 142254 | 5.098 | ppbV | | 95 |
| 40) Dibromomethane | 12.287 | 93 | 56726 | 3.875 | ppbV | # | 96 |
| 41) 1,2-dichloropropane | 12.320 | 63 | 75735 | 4.572 | ppbV | | 95 |
| 42) bromodichloromethane | 12.553 | 83 | 127773 | 4.418 | ppbV | | 97 |
| 43) 1,4-dioxane | 12.593 | 88 | 62743 | 5.220 | ppbV | | 98 |
| 44) trichloroethene | 12.607 | 130 | 97045 | 4.787 | ppbV | | 95 |
| 45) 2,2,4-trimethylpentane | 12.653 | 57 | 427876 | 5.168 | ppbV | | 93 |
| 46) heptane | 12.967 | 43 | 146170 | 4.423 | ppbV | | 91 |
| 47) cis-1,3-dichloropropene | 14.233 | 75 | 92378 | 4.003 | ppbV | | 99 |
| 48) 4-methyl-2-pentanone | 13.658 | 43 | 167552 | 4.536 | ppbV | # | 89 |
| 49) trans-1,3-dichloropropene | 13.617 | 75 | 118020 | 4.779 | ppbV | | 97 |
| 50) 1,1,2-trichloroethane | 14.442 | 97 | 81161 | 4.506 | ppbV | | 92 |
| 52) toluene | 14.750 | 91 | 268549 | 5.024 | ppbV | | 100 |
| 54) 2-hexanone | 15.033 | 43 | 152655 | 5.029 | ppbV | # | 92 |
| 55) dibromochloromethane | 15.200 | 129 | 117218 | 5.285 | ppbV | | 98 |
| 56) 1,2-dibromoethane | 15.450 | 107 | 127035 | 4.935 | ppbV | | 98 |
| 57) tetrachloroethene | 15.917 | 166 | 113336 | 5.196 | ppbV | | 93 |
| 58) 1,1,1,2-tetrachloroethane | 16.558 | 131 | 78743 | 4.553 | ppbV | | 98 |
| 59) chlorobenzene | 16.575 | 112 | 236344 | 5.580 | ppbV | | 96 |
| 60) ethylbenzene | 16.925 | 91 | 327397 | 5.209 | ppbV | | 100 |
| 61) m+p-xylene | 17.092 | 91 | 534396 | 10.145 | ppbV | | 98 |
| 62) bromoform | 17.158 | 173 | 106991 | 5.556 | ppbV | | 99 |
| 63) styrene | 17.408 | 104 | 242553 | 5.307 | ppbV | | 98 |
| 64) 1,1,2,2-tetrachloroethane | 17.500 | 83 | 210439 | 5.924 | ppbV | | 99 |
| 65) o-xylene | 17.508 | 91 | 271414 | 5.202 | ppbV | | 95 |
| 66) 1,2,3-Trichloropropane | 17.617 | 75 | 134118 | 4.606 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\r38595_Ev2.D
Sub List : Default - All compounds listed

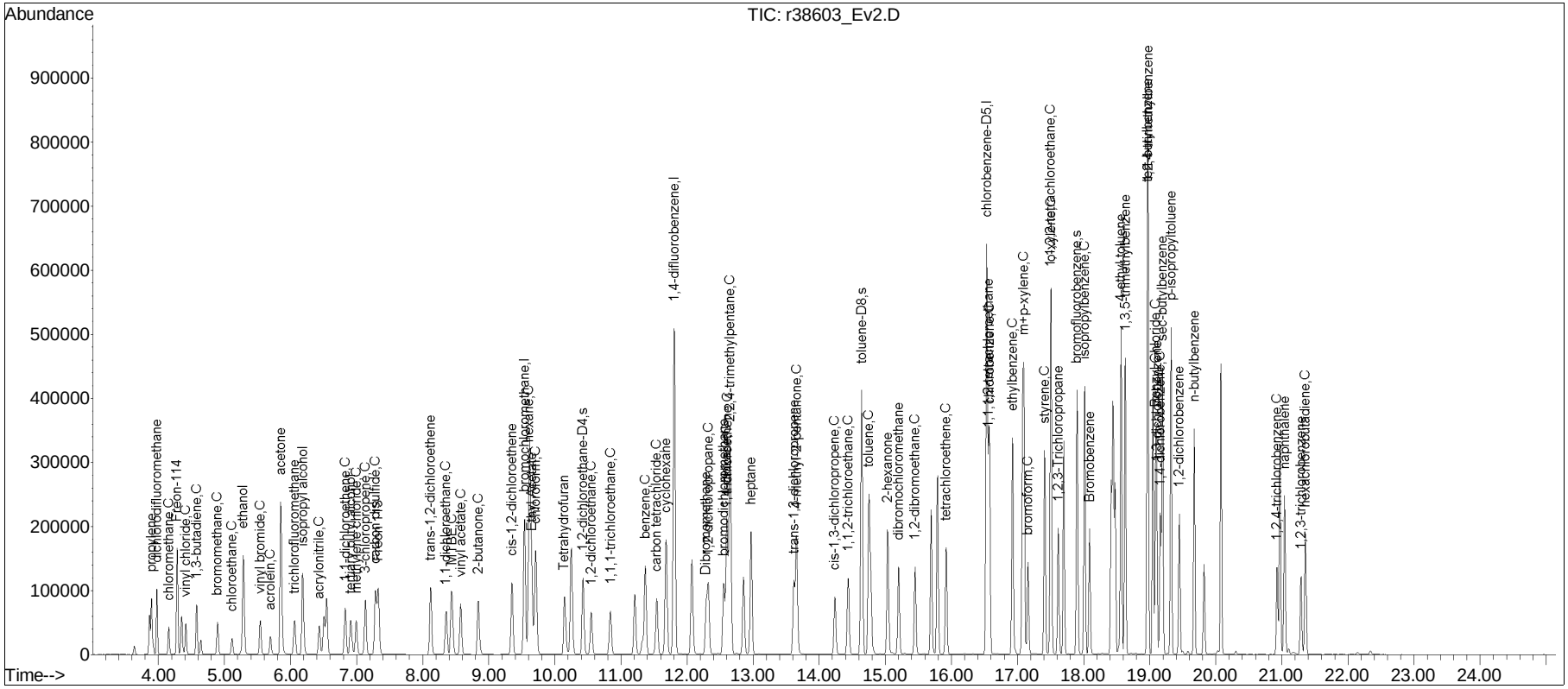
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 68) isopropylbenzene | 18.017 | 105 | 364274 | 4.962 | ppbV | | 95 |
| 69) Bromobenzene | 18.092 | 77 | 182354 | 4.784 | ppbV | | 95 |
| 70) 4-ethyl toluene | 18.567 | 105 | 422803 | 5.314 | ppbV | | 97 |
| 71) 1,3,5-trimethylbenzene | 18.633 | 105 | 356217 | 5.351 | ppbV | | 91 |
| 72) tert-butylbenzene | 18.967 | 119 | 332849 | 5.264 | ppbV | | 94 |
| 73) 1,2,4-trimethylbenzene | 18.975 | 105 | 356919 | 5.718 | ppbV | # | 84 |
| 74) Benzyl Chloride | 19.092 | 91 | 239385 | 5.689 | ppbV | | 96 |
| 75) 1,3-dichlorobenzene | 19.108 | 146 | 201583 | 5.666 | ppbV | | 97 |
| 76) 1,4-dichlorobenzene | 19.158 | 146 | 195425M3 | 5.572 | ppbV | | |
| 77) sec-butylbenzene | 19.192 | 105 | 466031 | 4.952 | ppbV | | 97 |
| 78) p-isopropyltoluene | 19.325 | 119 | 372727M3 | 4.972 | ppbV | | |
| 79) 1,2-dichlorobenzene | 19.450 | 146 | 193923 | 5.715 | ppbV | | 98 |
| 80) n-butylbenzene | 19.675 | 91 | 329248 | 5.200 | ppbV | | 98 |
| 81) 1,2,4-trichlorobenzene | 20.925 | 180 | 148018 | 7.668 | ppbV | | 98 |
| 82) naphthalene | 21.042 | 128 | 369222 | 5.601 | ppbV | | 97 |
| 83) 1,2,3-trichlorobenzene | 21.292 | 180 | 137269 | 6.146 | ppbV | | 95 |
| 84) hexachlorobutadiene | 21.358 | 225 | 163935 | 6.359 | ppbV | | 98 |

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

Sub List : Default - All compounds listed20\03\200312SIM_I\r38595_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\
Data File : r38603_Ev2.D
Acq On : 13 Mar 2020 12:45 AM
Operator : AIRPIANO3:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1350409
ALS Vial : 0 Sample Multiplier: 1

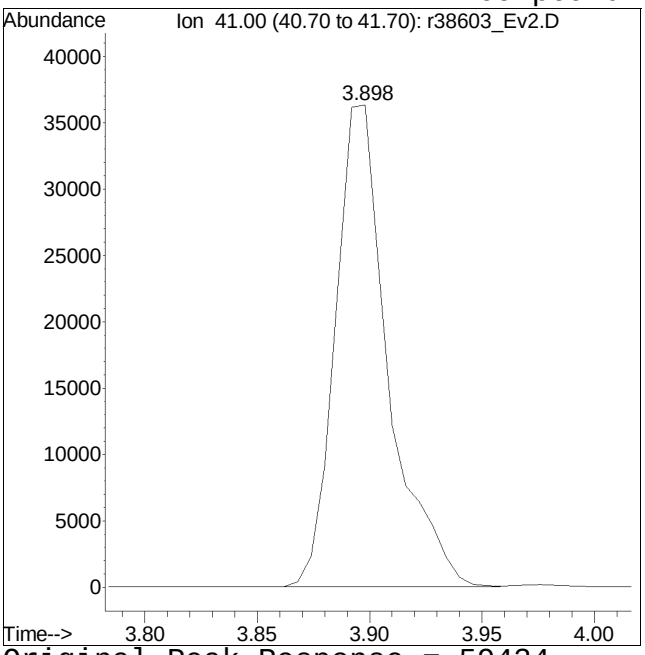
Quant Time: Mar 13 04:55:58 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200312SIM_I\TSIM3_200312
... .M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

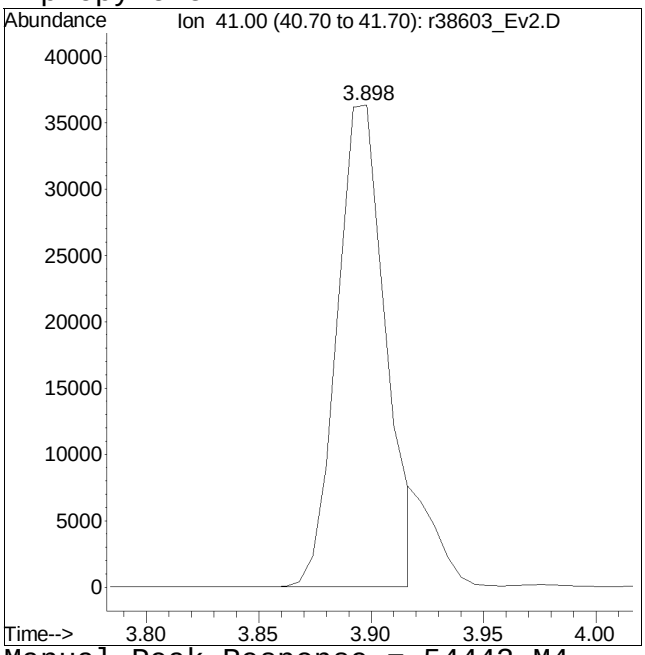


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38603_Ev2.D Operator : AIRPIANO3:AR
Date Inj'd : 3/13/2020 0:2: 5 Instrument :
Sample : CTO15-SIMSTD5.0 Quant Date : 3/13/2020 4:43 am

Compound #2: propylene



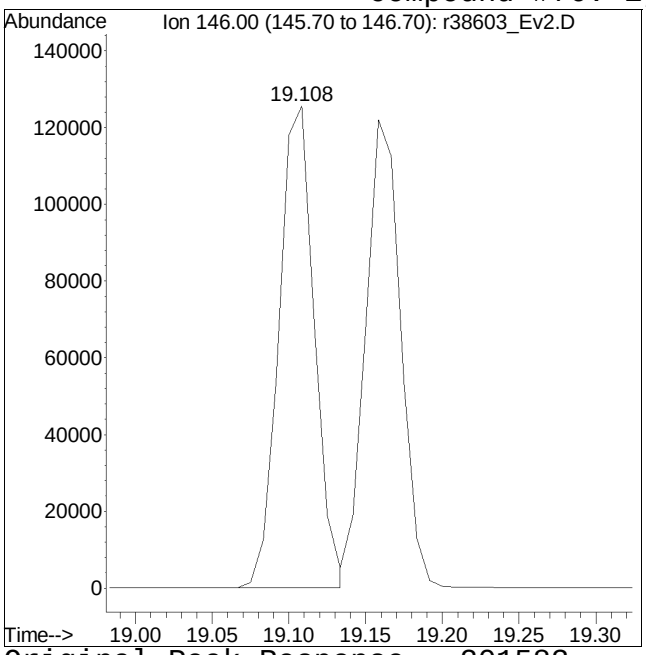




Original Peak Response = 59434 Manual Peak Response = 54443 M4
M4 = Poor automated baseline construction.

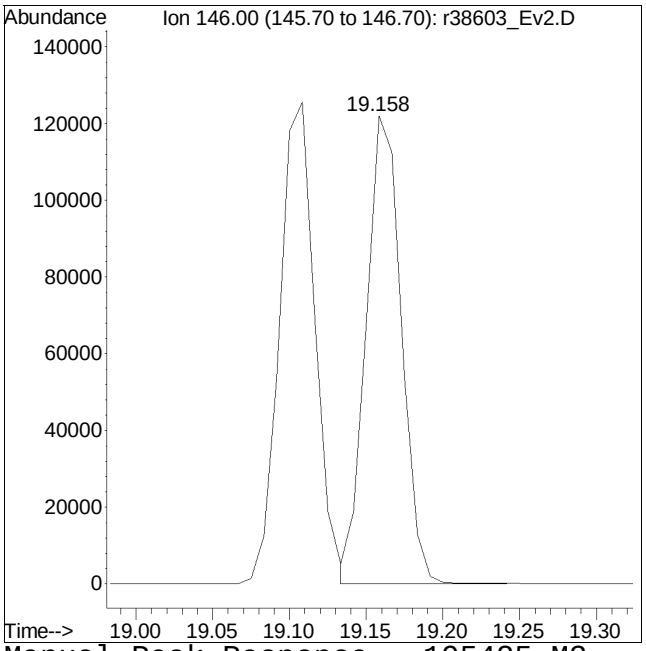
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38603_Ev2.D Operator : AIRPIANO3:AR
Date Inj'd : 3/13/2020 0:2: 5 Instrument :
Sample : CTO15-SIMSTD5.0 Quant Date : 3/13/2020 4:43 am

Compound #76: 1,4-dichlorobenzene




Original Peak Response = 201583



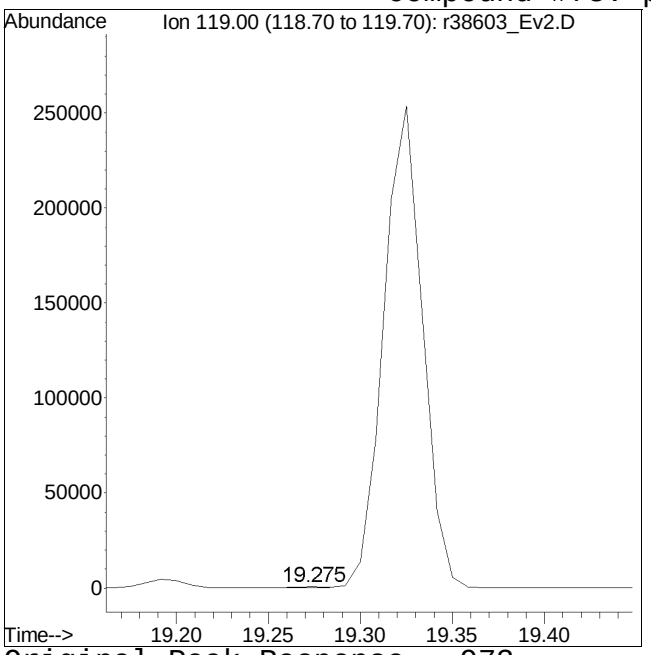

Manual Peak Response = 195425 M3

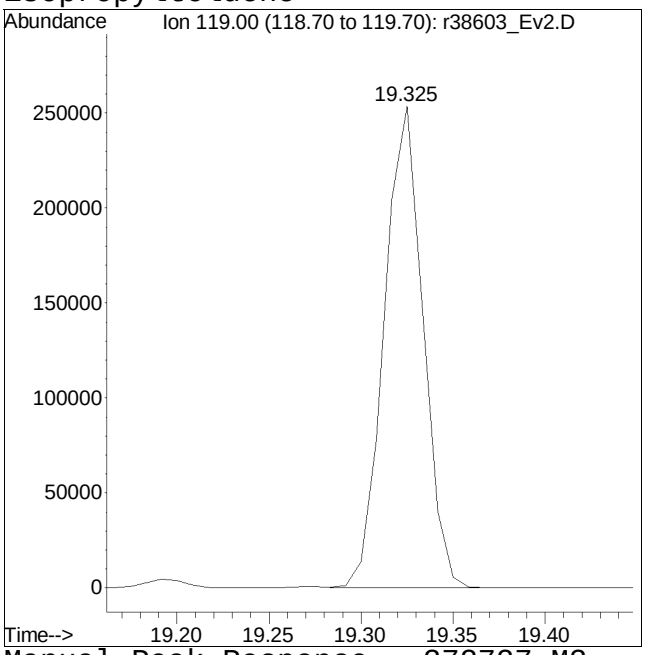
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airpiano3QMethod : TSIM3_200312.M
Data File : r38603_Ev2.D Operator : AIRPIANO3:AR
Date Inj'd : 3/13/2020 0:2: 5 Instrument :
Sample : CTO15-SIMSTD5.0 Quant Date : 3/13/2020 4:43 am

Compound #78: p-isopropyltoluene




Original Peak Response = 973 Manual Peak Response = 372727 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

# Continuing Calibration

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | **Lab Number** | : L2011723 | |
| **Project Name** | : MHD1801 | | **Project Number** | : MHD1801 | |
| **Instrument ID** | : AIRPIANO3 | | **Calibration Date** | : 03/20/20 14:11 | |
| **Lab File ID** | : R38755_EV2 | | **Init. Calib. Date(s)** | : 03/12/20 | 03/12/20 |
| **Sample No** | : WG1353543-2 | | **Init. Calib. Times** | : 10:28 | 16:20 |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| bromochloromethane | 1 | 1 | - | 0 | 30 | 99 | .03 |
| propylene | 0.471 | 0.565 | - | -20 | 30 | 119 | .02 |
| dichlorodifluoromethane | 0.971 | 0.985 | - | -1.4 | 30 | 100 | .02 |
| chloromethane | 0.433 | 0.5 | - | -15.5 | 30 | 116 | .02 |
| Freon-114 | 1.246 | 1.347 | - | -8.1 | 30 | 110 | .02 |
| vinyl chloride | 0.533 | 0.564 | - | -5.8 | 30 | 114 | .02 |
| 1,3-butadiene | 0.515 | 0.522 | - | -1.4 | 30 | 105 | .03 |
| bromomethane | 0.452 | 0.512 | - | -13.3 | 30 | 121 | .03 |
| chloroethane | 0.264 | 0.303 | - | -14.8 | 30 | 122 | .03 |
| ethanol | 0.421 | 0.41 | - | 2.6 | 30 | 99 | .03 |
| vinyl bromide | 0.513 | 0.603 | - | -17.5 | 30 | 120 | .03 |
| acrolein | 0.255 | 0.225 | - | 11.8 | 30 | 92 | .03 |
| acetone | 0.682 | 0.79 | - | -15.8 | 30 | 111 | .03 |
| trichlorofluoromethane | 0.784 | 0.929 | - | -18.5 | 30 | 124 | .03 |
| isopropyl alcohol | 0.886 | 1.093 | - | -23.4 | 30 | 122 | .03 |
| acrylonitrile | 0.453 | 0.447 | - | 1.3 | 30 | 99 | .03 |
| 1,1-dichloroethene | 0.701 | 0.734 | - | -4.7 | 30 | 114 | .03 |
| tertiary butyl alcohol | 1.008 | 0.945 | - | 6.3 | 30 | 101 | .03 |
| methylene chloride | 0.638 | 0.696 | - | -9.1 | 30 | 114 | .03 |
| 3-chloropropene | 0.83 | 1.024 | - | -23.4 | 30 | 125 | .03 |
| carbon disulfide | 1.898 | 1.741 | - | 8.3 | 30 | 92 | .04 |
| Freon 113 | 1.047 | 1.08 | - | -3.2 | 30 | 106 | .03 |
| trans-1,2-dichloroethene | 0.829 | 0.845 | - | -1.9 | 30 | 105 | .03 |
| 1,1-dichloroethane | 0.956 | 1.065 | - | -11.4 | 30 | 115 | .04 |
| MTBE | 1.691 | 1.678 | - | 0.8 | 30 | 100 | .03 |
| vinyl acetate | 1.379 | 1.584 | - | -14.9 | 30 | 113 | .03 |
| 2-butanone | 1.28 | 1.462 | - | -14.2 | 30 | 115 | .03 |
| cis-1,2-dichloroethene | 0.727 | 0.772 | - | -6.2 | 30 | 112 | .03 |
| Ethyl Acetate | 0.209 | 0.241 | - | -15.3 | 30 | 118 | .03 |
| chloroform | 1.051 | 0.998 | - | 5 | 30 | 99 | .03 |
| Tetrahydrofuran | 0.782 | 0.886 | - | -13.3 | 30 | 113 | .04 |
| 1,2-dichloroethane | 0.603 | 0.598 | - | 0.8 | 30 | 106 | .03 |
| 1,4-difluorobenzene | 1 | 1 | - | 0 | 30 | 97 | .03 |
| hexane | 0.36 | 0.364 | - | -1.1 | 30 | 100 | .04 |
| 1,1,1-trichloroethane | 0.305 | 0.311 | - | -2 | 30 | 105 | .03 |
| benzene | 0.755 | 0.674 | - | 10.7 | 30 | 94 | .04 |
| carbon tetrachloride | 0.295 | 0.276 | - | 6.4 | 30 | 94 | .04 |
| cyclohexane | 0.393 | 0.378 | - | 3.8 | 30 | 95 | .04 |
| Dibromomethane | 0.206 | 0.188 | - | 8.7 | 30 | 97 | .04 |
| 1,2-dichloropropane | 0.233 | 0.257 | - | -10.3 | 30 | 116 | .04 |
| bromodichloromethane | 0.407 | 0.372 | - | 8.6 | 30 | 92 | .03 |
| 1,4-dioxane | 0.169 | 0.179 | - | -5.9 | 30 | 105 | .04 |
| trichloroethene | 0.285 | 0.317 | - | -11.2 | 30 | 112 | .03 |

* Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Air Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : P. W. Grosser | | **Lab Number** | : L2011723 | |
| **Project Name** | : MHD1801 | | **Project Number** | : MHD1801 | |
| **Instrument ID** | : AIRPIANO3 | | **Calibration Date** | : 03/20/20 14:11 | |
| **Lab File ID** | : R38755_EV2 | | **Init. Calib. Date(s)** | : 03/12/20 | 03/12/20 |
| **Sample No** | : WG1353543-2 | | **Init. Calib. Times** | : 10:28 | 16:20 |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 2,2,4-trimethylpentane | 1.166 | 1.184 | - | -1.5 | 30 | 99 | .03 |
| heptane | 0.465 | 0.54 | - | -16.1 | 30 | 112 | .04 |
| cis-1,3-dichloropropene | 0.325 | 0.293 | - | 9.8 | 30 | 88 | .03 |
| 4-methyl-2-pentanone | 0.52 | 0.629 | - | -21 | 30 | 115 | .04 |
| trans-1,3-dichloropropene | 0.348 | 0.366 | - | -5.2 | 30 | 103 | .03 |
| 1,1,2-trichloroethane | 0.254 | 0.267 | - | -5.1 | 30 | 109 | .03 |
| chlorobenzene-D5 | 1 | 1 | - | 0 | 30 | 92 | .02 |
| toluene | 5.549 | 6.047 | - | -9 | 30 | 109 | .03 |
| 2-hexanone | 3.151 | 3.9 | - | -23.8 | 30 | 109 | .03 |
| dibromochloromethane | 2.302 | 2.814 | - | -22.2 | 30 | 111 | .03 |
| 1,2-dibromoethane | 2.672 | 2.65 | - | 0.8 | 30 | 98 | .03 |
| tetrachloroethene | 2.264 | 2.436 | - | -7.6 | 30 | 106 | .03 |
| 1,1,1,2-tetrachloroethane | 1.795 | 1.881 | - | -4.8 | 30 | 99 | .03 |
| chlorobenzene | 4.397 | 4.541 | - | -3.3 | 30 | 100 | .03 |
| ethylbenzene | 6.525 | 7.218 | - | -10.6 | 30 | 107 | .02 |
| m+p-xylene | 5.468 | 6.022 | - | -10.1 | 30 | 107 | .03 |
| bromoform | 1.999 | 2.249 | - | -12.5 | 30 | 101 | .02 |
| styrene | 4.744 | 4.852 | - | -2.3 | 30 | 97 | .03 |
| 1,1,2,2-tetrachloroethane | 3.687 | 4.148 | - | -12.5 | 30 | 106 | .03 |
| o-xylene | 5.416 | 6.171 | - | -13.9 | 30 | 109 | .03 |
| 1,2,3-Trichloropropane | 3.023 | 2.824 | - | 6.6 | 30 | 86 | .02 |
| isopropylbenzene | 7.621 | 7.346 | - | 3.6 | 30 | 89 | .03 |
| Bromobenzene | 3.957 | 3.613 | - | 8.7 | 30 | 84 | .03 |
| 4-ethyl toluene | 8.259 | 8.605 | - | -4.2 | 30 | 93 | .02 |
| 1,3,5-trimethylbenzene | 6.911 | 7.442 | - | -7.7 | 30 | 99 | .02 |
| tert-butylbenzene | 6.564 | 6.792 | - | -3.5 | 30 | 93 | .04 |
| 1,2,4-trimethylbenzene | 6.479 | 7.228 | - | -11.6 | 30 | 100 | .04 |
| Benzyl Chloride | 4.368 | 4.689 | - | -7.3 | 30 | 92 | .05 |
| 1,3-dichlorobenzene | 3.694 | 3.963 | - | -7.3 | 30 | 96 | .04 |
| 1,4-dichlorobenzene | 3.641 | 3.707 | - | -1.8 | 30 | 94 | .05 |
| sec-butylbenzene | 9.769 | 9.185 | - | 6 | 30 | 84 | .05 |
| p-isopropyltoluene | 7.782 | 7.467 | - | 4 | 30 | 84 | .06 |
| 1,2-dichlorobenzene | 3.522 | 3.781 | - | -7.4 | 30 | 97 | .07 |
| n-butylbenzene | 6.573 | 7.026 | - | -6.9 | 30 | 93 | .07 |
| 1,2,4-trichlorobenzene | 2.004 | 2.44 | - | -21.8 | 30 | 98 | .07 |
| naphthalene | 6.843 | 7.119 | - | -4 | 30 | 87 | .08 |
| 1,2,3-trichlorobenzene | 2.319 | 2.489 | - | -7.3 | 30 | 83 | .08 |
| hexachlorobutadiene | 2.676 | 3.69 | - | -37.9* | 30 | 123 | .07 |

* Value outside of QC limits.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 99 | 0.03 |
| 2 | | propylene | 0.471 | 0.565 | -20.0 | 119 | 0.02 |
| 3 | | dichlorodifluoromethane | 0.971 | 0.985 | -1.4 | 100 | 0.02 |
| 4 | C | chloromethane | 0.433 | 0.500 | -15.5 | 116 | 0.02 |
| 5 | | Freon-114 | 1.246 | 1.347 | -8.1 | 110 | 0.02 |
| 6 | C | vinyl chloride | 0.533 | 0.564 | -5.8 | 114 | 0.02 |
| 7 | C | 1,3-butadiene | 0.515 | 0.522 | -1.4 | 105 | 0.03 |
| 8 | C | bromomethane | 0.452 | 0.512 | -13.3 | 121 | 0.03 |
| 9 | C | chloroethane | 0.264 | 0.303 | -14.8 | 122 | 0.03 |
| 10 | | ethanol | 0.421 | 0.410 | 2.6 | 99 | 0.03 |
| 11 | C | vinyl bromide | 0.513 | 0.603 | -17.5 | 120 | 0.03 |
| 12 | C | acrolein | 0.255 | 0.225 | 11.8 | 92 | 0.03 |
| 13 | | acetone | 0.682 | 0.790 | -15.8 | 111 | 0.03 |
| 14 | | trichlorofluoromethane | 0.784 | 0.929 | -18.5 | 124 | 0.03 |
| 15 | | isopropyl alcohol | 0.886 | 1.093 | -23.4 | 122 | 0.03 |
| 16 | C | acrylonitrile | 0.453 | 0.447 | 1.3 | 99 | 0.03 |
| 17 | C | 1,1-dichloroethene | 0.701 | 0.734 | -4.7 | 114 | 0.03 |
| 18 | | tertiary butyl alcohol | 1.008 | 0.945 | 6.3 | 101 | 0.03 |
| 19 | C | methylene chloride | 0.638 | 0.696 | -9.1 | 114 | 0.03 |
| 20 | C | 3-chloropropene | 0.830 | 1.024 | -23.4 | 125 | 0.03 |
| 21 | C | carbon disulfide | 1.898 | 1.741 | 8.3 | 92 | 0.04 |
| 22 | | Freon 113 | 1.047 | 1.080 | -3.2 | 106 | 0.03 |
| 23 | | trans-1,2-dichloroethene | 0.829 | 0.845 | -1.9 | 105 | 0.03 |
| 24 | C | 1,1-dichloroethane | 0.956 | 1.065 | -11.4 | 115 | 0.04 |
| 25 | C | MTBE | 1.691 | 1.678 | 0.8 | 100 | 0.03 |
| 26 | C | vinyl acetate | 1.379 | 1.584 | -14.9 | 113 | 0.03 |
| 27 | C | 2-butanone | 1.280 | 1.462 | -14.2 | 115 | 0.03 |
| 28 | | cis-1,2-dichloroethene | 0.727 | 0.772 | -6.2 | 112 | 0.03 |
| 29 | | Ethyl Acetate | 0.209 | 0.241 | -15.3 | 118 | 0.03 |
| 30 | C | chloroform | 1.051 | 0.998 | 5.0 | 99 | 0.03 |
| 31 | | Tetrahydrofuran | 0.782 | 0.886 | -13.3 | 113 | 0.04 |
| 32 | C | 1,2-dichloroethane | 0.603 | 0.598 | 0.8 | 106 | 0.03 |
| 33 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 97 | 0.03 |
| 34 | C | hexane | 0.360 | 0.364 | -1.1 | 100 | 0.04 |
| 36 | C | 1,1,1-trichloroethane | 0.305 | 0.311 | -2.0 | 105 | 0.03 |
| 37 | C | benzene | 0.755 | 0.674 | 10.7 | 94 | 0.04 |
| 38 | C | carbon tetrachloride | 0.295 | 0.276 | 6.4 | 94 | 0.04 |
| 39 | | cyclohexane | 0.393 | 0.378 | 3.8 | 95 | 0.04 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|---|
| 40 | | Dibromomethane | 0.206 | 0.188 | 8.7 | 97 | 0.04 |
| 41 | C | 1,2-dichloropropane | 0.233 | 0.257 | -10.3 | 116 | 0.04 |
| 42 | | bromodichloromethane | 0.407 | 0.372 | 8.6 | 92 | 0.03 |
| 43 | C | 1,4-dioxane | 0.169 | 0.179 | -5.9 | 105 | 0.04 |
| 44 | C | trichloroethene | 0.285 | 0.317 | -11.2 | 112 | 0.03 |
| 45 | C | 2,2,4-trimethylpentane | 1.166 | 1.184 | -1.5 | 99 | 0.03 |
| 46 | | heptane | 0.465 | 0.540 | -16.1 | 112 | 0.04 |
| 47 | C | cis-1,3-dichloropropene | 0.325 | 0.293 | 9.8 | 88 | 0.03 |
| 48 | C | 4-methyl-2-pentanone | 0.520 | 0.629 | -21.0 | 115 | 0.04 |
| 49 | | trans-1,3-dichloropropene | 0.348 | 0.366 | -5.2 | 103 | 0.03 |
| 50 | C | 1,1,2-trichloroethane | 0.254 | 0.267 | -5.1 | 109 | 0.03 |
| 51 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 92 | 0.02 |
| 52 | C | toluene | 5.549 | 6.047 | -9.0 | 109 | 0.03 |
| 54 | | 2-hexanone | 3.151 | 3.900 | -23.8 | 109 | 0.03 |
| 55 | | dibromochloromethane | 2.302 | 2.814 | -22.2 | 111 | 0.03 |
| 56 | C | 1,2-dibromoethane | 2.672 | 2.650 | 0.8 | 98 | 0.03 |
| 57 | C | tetrachloroethene | 2.264 | 2.436 | -7.6 | 106 | 0.03 |
| 58 | | 1,1,1,2-tetrachloroethane | 1.795 | 1.881 | -4.8 | 99 | 0.03 |
| 59 | C | chlorobenzene | 4.397 | 4.541 | -3.3 | 100 | 0.03 |
| 60 | C | ethylbenzene | 6.525 | 7.218 | -10.6 | 107 | 0.02 |
| 61 | C | m+p-xylene | 5.468 | 6.022 | -10.1 | 107 | 0.03 |
| 62 | C | bromoform | 1.999 | 2.249 | -12.5 | 101 | 0.02 |
| 63 | C | styrene | 4.744 | 4.852 | -2.3 | 97 | 0.03 |
| 64 | C | 1,1,2,2-tetrachloroethane | 3.687 | 4.148 | -12.5 | 106 | 0.03 |
| 65 | C | o-xylene | 5.416 | 6.171 | -13.9 | 109 | 0.03 |
| 66 | | 1,2,3-Trichloropropane | 3.023 | 2.824 | 6.6 | 86 | 0.02 |
| 68 | C | isopropylbenzene | 7.621 | 7.346 | 3.6 | 89 | 0.03 |
| 69 | | Bromobenzene | 3.957 | 3.613 | 8.7 | 84 | 0.03 |
| 70 | | 4-ethyl toluene | 8.259 | 8.605 | -4.2 | 93 | 0.02 |
| 71 | | 1,3,5-trimethylbenzene | 6.911 | 7.442 | -7.7 | 99 | 0.02 |
| 72 | | tert-butylbenzene | 6.564 | 6.792 | -3.5 | 93 | 0.04 |
| 73 | | 1,2,4-trimethylbenzene | 6.479 | 7.228 | -11.6 | 100 | 0.04 |
| 74 | C | Benzyl Chloride | 4.368 | 4.689 | -7.3 | 92 | 0.05 |
| 75 | | 1,3-dichlorobenzene | 3.694 | 3.963 | -7.3 | 96 | 0.04 |
| 76 | C | 1,4-dichlorobenzene | 3.641 | 3.707 | -1.8 | 94 | 0.05 |
| 77 | | sec-butylbenzene | 9.769 | 9.185 | 6.0 | 84 | 0.05 |
| 78 | | p-isopropyltoluene | 7.782 | 7.467 | 4.0 | 84 | 0.06 |
| 79 | | 1,2-dichlorobenzene | 3.522 | 3.781 | -7.4 | 97 | 0.07 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial 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) |
|---|---|---|---|---|---|---|
| 80 | n-butylbenzene | 6.573 | 7.026 | -6.9 | 93 | 0.07 |
| 81 C | 1,2,4-trichlorobenzene | 2.004 | 2.440 | -21.8 | 98 | 0.07 |
| 82 | naphthalene | 6.843 | 7.119 | -4.0 | 87 | 0.08 |
| 83 | 1,2,3-trichlorobenzene | 2.319 | 2.489 | -7.3 | 83 | 0.08 |
| 84 C | hexachlorobutadiene | 2.676 | 3.690 | -37.9# | 123 | 0.07 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.575 | 49 | 225089 | 10.000 | ppbV | 0.03 |
| Standard Area = 225089 | | | Recovery = 100.00% | | | |
| 33) 1,4-difluorobenzene | 11.840 | 114 | 642201 | 10.000 | ppbV | 0.03 |
| Standard Area = 642201 | | | Recovery = 100.00% | | | |
| 51) chlorobenzene-D5 | 16.558 | 54 | 90362 | 10.000 | ppbV | 0.02 |
| Standard Area = 90362 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.916 | 41 | 63642M3 | 6.009 | ppbV | |
| 3) dichlorodifluoromethane | 4.000 | 85 | 110906 | 5.074 | ppbV | 100 |
| 4) chloromethane | 4.180 | 50 | 56254 | 5.775 | ppbV | 97 |
| 5) Freon-114 | 4.306 | 85 | 151546 | 5.405 | ppbV | 96 |
| 6) vinyl chloride | 4.438 | 62 | 63452 | 5.291 | ppbV | 97 |
| 7) 1,3-butadiene | 4.606 | 54 | 58756 | 5.064 | ppbV | 89 |
| 8) bromomethane | 4.924 | 94 | 57609 | 5.657 | ppbV | 97 |
| 9) chloroethane | 5.140 | 64 | 34089 | 5.740 | ppbV | 99 |
| 10) ethanol | 5.314 | 31 | 230943 | 24.383 | ppbV # | 80 |
| 11) vinyl bromide | 5.570 | 106 | 67920 | 5.881 | ppbV | 96 |
| 12) acrolein | 5.723 | 56 | 25321 | 4.404 | ppbV | 98 |
| 13) acetone | 5.880 | 43 | 444584 | 28.982 | ppbV # | 86 |
| 14) trichlorofluoromethane | 6.090 | 101 | 104542 | 5.922 | ppbV | 99 |
| 15) isopropyl alcohol | 6.213 | 45 | 307571 | 15.415 | ppbV # | 97 |
| 16) acrylonitrile | 6.463 | 53 | 50299 | 4.931 | ppbV | 99 |
| 17) 1,1-dichloroethene | 6.858 | 61 | 82575 | 5.233 | ppbV | 92 |
| 18) tertiary butyl alcohol | 6.942 | 59 | 106381 | 4.689 | ppbV # | 91 |
| 19) methylene chloride | 7.026 | 49 | 78289 | 5.447 | ppbV | 95 |
| 20) 3-chloropropene | 7.164 | 41 | 115197 | 6.163 | ppbV | 93 |
| 21) carbon disulfide | 7.320 | 76 | 195931 | 4.587 | ppbV | 97 |
| 22) Freon 113 | 7.356 | 101 | 121565 | 5.159 | ppbV | 97 |
| 23) trans-1,2-dichloroethene | 8.150 | 61 | 95125 | 5.096 | ppbV | 96 |
| 24) 1,1-dichloroethane | 8.392 | 63 | 119835 | 5.570 | ppbV | 99 |
| 25) MTBE | 8.475 | 73 | 188897 | 4.963 | ppbV | 98 |
| 26) vinyl acetate | 8.608 | 43 | 178232 | 5.740 | ppbV | 97 |
| 27) 2-butanone | 8.875 | 43 | 164588 | 5.713 | ppbV | 95 |
| 28) cis-1,2-dichloroethene | 9.383 | 61 | 86846 | 5.306 | ppbV | 95 |
| 29) Ethyl Acetate | 9.683 | 61 | 27170 | 5.778 | ppbV | 96 |
| 30) chloroform | 9.742 | 83 | 112286 | 4.748 | ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 10.183 | 42 | 99666 | 5.659 | ppbV | | 97 |
| 32) 1,2-dichloroethane | 10.583 | 62 | 67285 | 4.957 | ppbV | | 96 |
| 34) hexane | 9.650 | 57 | 116903 | 5.058 | ppbV | # | 75 |
| 36) 1,1,1-trichloroethane | 10.875 | 97 | 99987 | 5.108 | ppbV | | 98 |
| 37) benzene | 11.407 | 78 | 216404 | 4.461 | ppbV | | 99 |
| 38) carbon tetrachloride | 11.580 | 117 | 88773 | 4.693 | ppbV | | 96 |
| 39) cyclohexane | 11.720 | 56 | 121299 | 4.808 | ppbV | | 94 |
| 40) Dibromomethane | 12.327 | 93 | 60448 | 4.567 | ppbV | # | 99 |
| 41) 1,2-dichloropropane | 12.360 | 63 | 82656 | 5.519 | ppbV | | 98 |
| 42) bromodichloromethane | 12.587 | 83 | 119289 | 4.563 | ppbV | | 97 |
| 43) 1,4-dioxane | 12.633 | 88 | 57429 | 5.285 | ppbV | | 99 |
| 44) trichloroethene | 12.640 | 130 | 101823 | 5.556 | ppbV | | 97 |
| 45) 2,2,4-trimethylpentane | 12.687 | 57 | 380326 | 5.081 | ppbV | | 95 |
| 46) heptane | 13.007 | 43 | 173322 | 5.801 | ppbV | | 95 |
| 47) cis-1,3-dichloropropene | 14.275 | 75 | 94097 | 4.510 | ppbV | | 94 |
| 48) 4-methyl-2-pentanone | 13.692 | 43 | 202120 | 6.052 | ppbV | | 96 |
| 49) trans-1,3-dichloropropene | 13.650 | 75 | 117462 | 5.261 | ppbV | | 95 |
| 50) 1,1,2-trichloroethane | 14.475 | 97 | 85676 | 5.261 | ppbV | | 95 |
| 52) toluene | 14.783 | 91 | 273195 | 5.449 | ppbV | | 99 |
| 54) 2-hexanone | 15.067 | 43 | 176211M3 | 6.189 | ppbV | | |
| 55) dibromochloromethane | 15.233 | 129 | 127132 | 6.110 | ppbV | | 99 |
| 56) 1,2-dibromoethane | 15.483 | 107 | 119726 | 4.959 | ppbV | | 99 |
| 57) tetrachloroethene | 15.950 | 166 | 110055 | 5.379 | ppbV | | 96 |
| 58) 1,1,1,2-tetrachloroethane | 16.592 | 131 | 84972 | 5.238 | ppbV | | 98 |
| 59) chlorobenzene | 16.600 | 112 | 205179 | 5.165 | ppbV | | 99 |
| 60) ethylbenzene | 16.950 | 91 | 326127 | 5.531 | ppbV | | 93 |
| 61) m+p-xylene | 17.117 | 91 | 544182 | 11.013 | ppbV | | 92 |
| 62) bromoform | 17.183 | 173 | 101633 | 5.626 | ppbV | | 99 |
| 63) styrene | 17.442 | 104 | 219225 | 5.114 | ppbV | | 97 |
| 64) 1,1,2,2-tetrachloroethane | 17.533 | 83 | 187395 | 5.624 | ppbV | | 96 |
| 65) o-xylene | 17.533 | 91 | 278826 | 5.697 | ppbV | | 96 |
| 66) 1,2,3-Trichloropropane | 17.642 | 75 | 127598 | 4.671 | ppbV | | 98 |
| 68) isopropylbenzene | 18.042 | 105 | 331890 | 4.819 | ppbV | | 94 |
| 69) Bromobenzene | 18.117 | 77 | 163260 | 4.566 | ppbV | | 95 |
| 70) 4-ethyl toluene | 18.592 | 105 | 388797 | 5.210 | ppbV | | 97 |
| 71) 1,3,5-trimethylbenzene | 18.650 | 105 | 336219 | 5.384 | ppbV | | 96 |
| 72) tert-butylbenzene | 18.992 | 119 | 306891 | 5.174 | ppbV | | 99 |
| 73) 1,2,4-trimethylbenzene | 18.992 | 105 | 326577 | 5.578 | ppbV | | 95 |
| 74) Benzyl Chloride | 19.117 | 91 | 211852 | 5.368 | ppbV | | 95 |
| 75) 1,3-dichlorobenzene | 19.125 | 146 | 179072 | 5.365 | ppbV | | 93 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

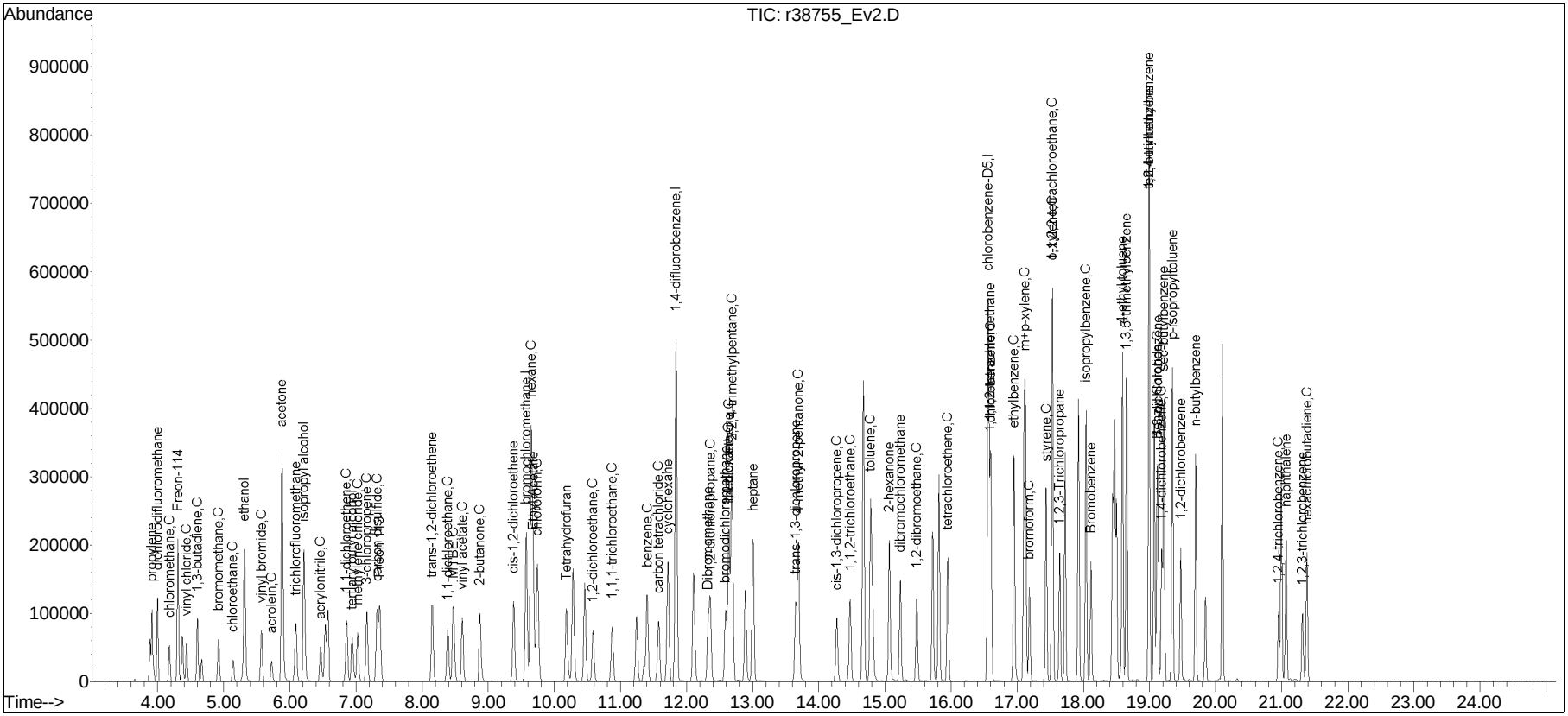
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 76) 1,4-dichlorobenzene | 19.183 | 146 | 167502M3 | 5.091 | ppbV | |
| 77) sec-butylbenzene | 19.217 | 105 | 414986 | 4.701 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.350 | 119 | 337362 | 4.798 | ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.475 | 146 | 170811 | 5.367 | ppbV | 99 |
| 80) n-butylbenzene | 19.700 | 91 | 317462 | 5.345 | ppbV | 99 |
| 81) 1,2,4-trichlorobenzene | 20.950 | 180 | 110259M4 | 6.089 | ppbV | |
| 82) naphthalene | 21.067 | 128 | 321628 | 5.202 | ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.317 | 180 | 112457 | 5.368 | ppbV | 94 |
| 84) hexachlorobutadiene | 21.383 | 225 | 166698M4 | 6.893 | ppbV | |

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

Sub List : Default-LCS-AP2 - All compounds listed0320SIM\r38755_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-2,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

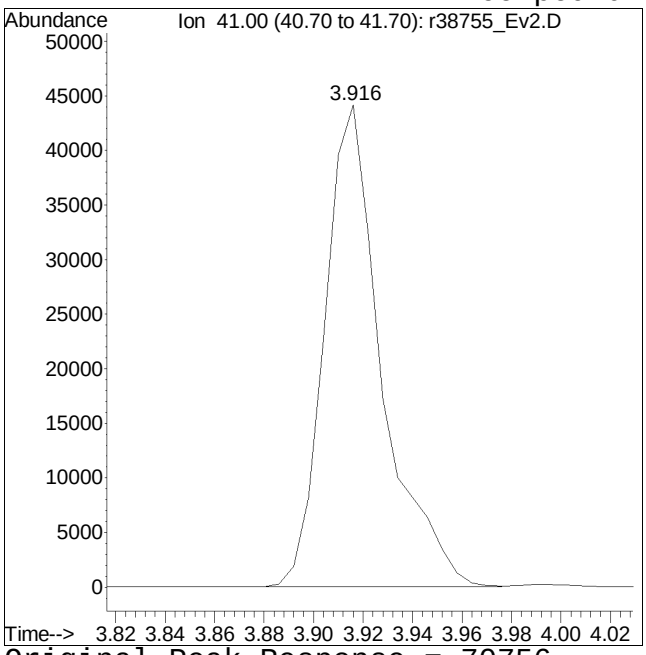
Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

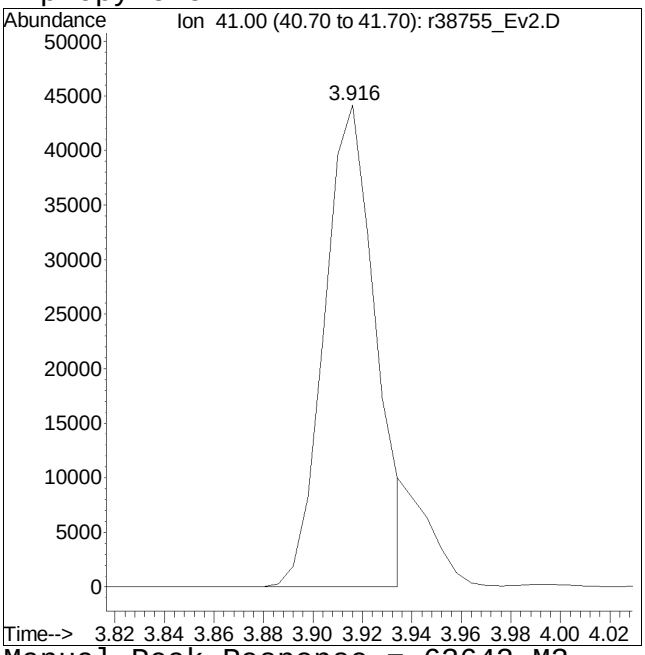


Manual Integration Report

Data Path : O:\Forensics\Data\AirpianoQMethod : TSIM3_200312.M
Data File : r38755_Ev2.D Operator : AIRPIANO3:EW
Date Inj'd : 3/20/2020 0:2: 1 Instrument :
Sample : WG1353543-2,3,250,250 Quant Date : 3/20/2020 2:44 pm

Compound #2: propylene



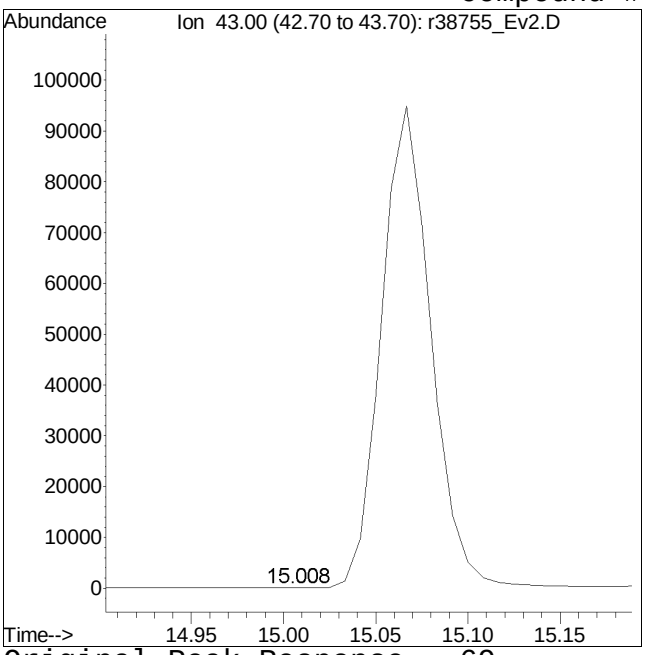

Original Peak Response = 70756 Manual Peak Response = 63642 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

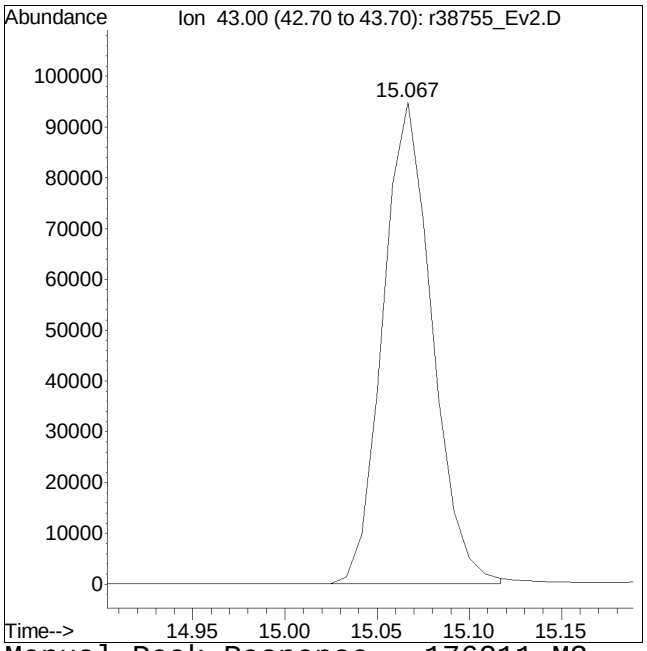
Manual Integration Report

Data Path : O:\Forensics\Data\AirpianoQ
Data File : r38755_Ev2.D
Date Inj'd : 3/20/2020 0:2: 1
Sample : WG1353543-2,3,250,250

Method : TSIM3_200312.M
Operator : AIRPIANO3:EW
Instrument :
Quant Date : 3/20/2020 2:44 pm

Compound #54: 2-hexanone



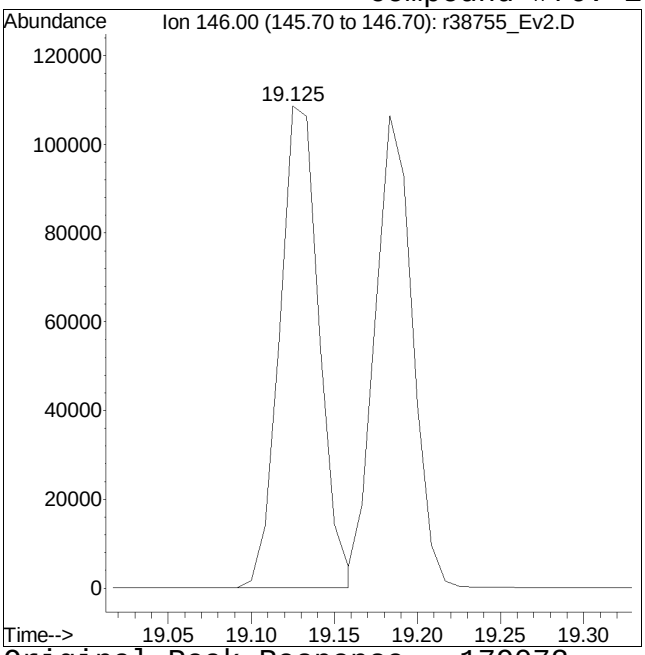

Original Peak Response = 69 Manual Peak Response = 176211 M3

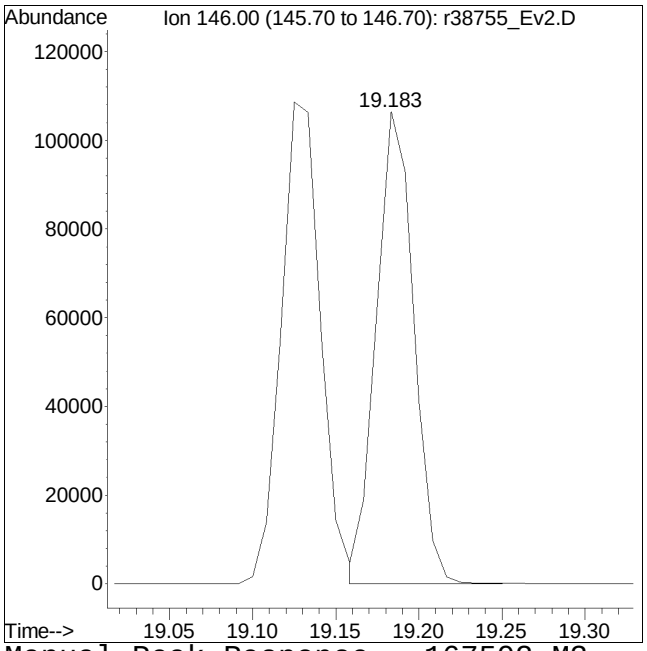
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

Data Path : O:\Forensics\Data\AirpianoQMethod : TSIM3_200312.M
Data File : r38755_Ev2.D Operator : AIRPIANO3:EW
Date Inj'd : 3/20/2020 0:2: 1 Instrument :
Sample : WG1353543-2,3,250,250 Quant Date : 3/20/2020 2:44 pm

Compound #76: 1,4-dichlorobenzene



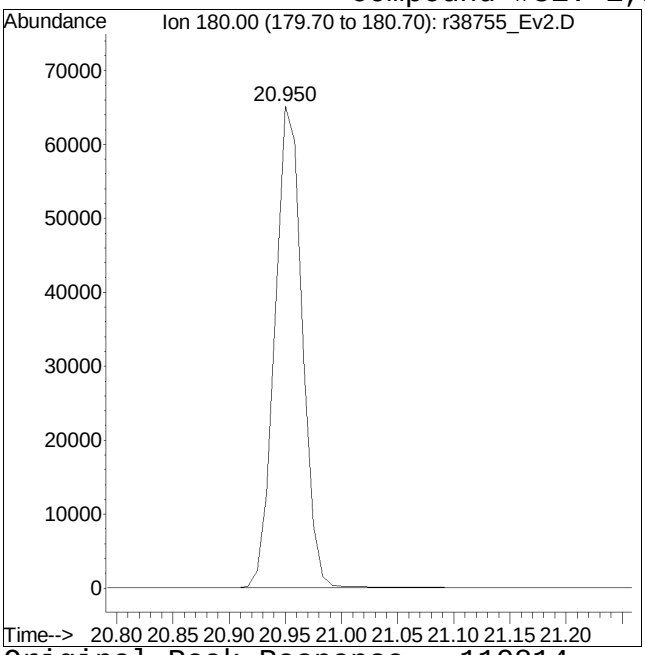




Original Peak Response = 179072 Manual Peak Response = 167502 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

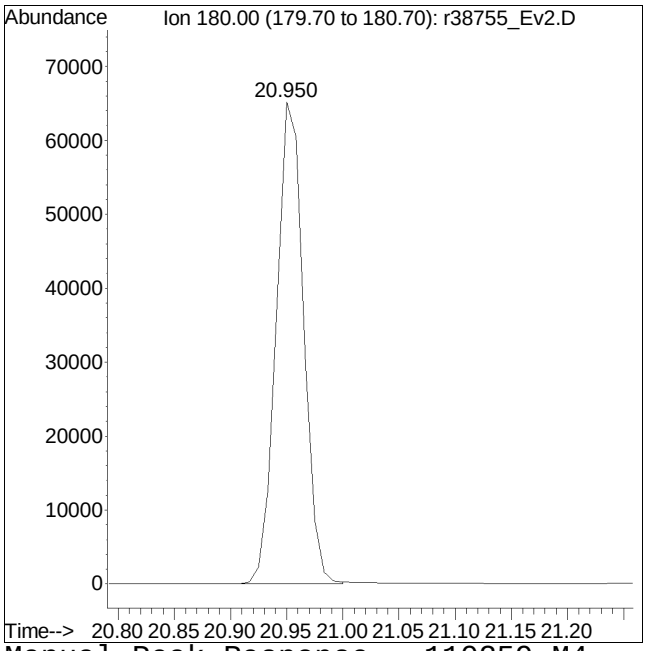
Manual Integration Report

Data Path : O:\Forensics\Data\AirpianoQMethod : TSIM3_200312.M
Data File : r38755_Ev2.D Operator : AIRPIANO3:EW
Date Inj'd : 3/20/2020 0:2: 1 Instrument :
Sample : WG1353543-2,3,250,250 Quant Date : 3/20/2020 2:44 pm

Compound #81: 1,2,4-trichlorobenzene




Original Peak Response = 110814



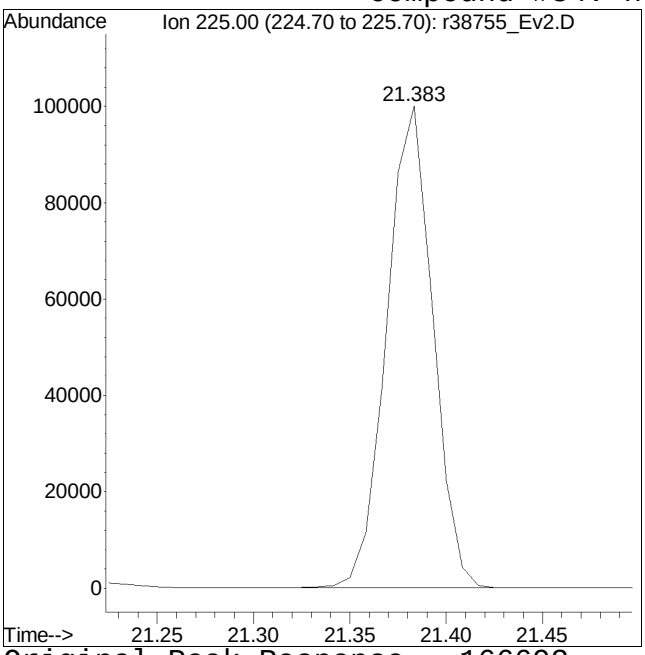

Manual Peak Response = 110259 M4

M4 = Poor automated baseline construction.

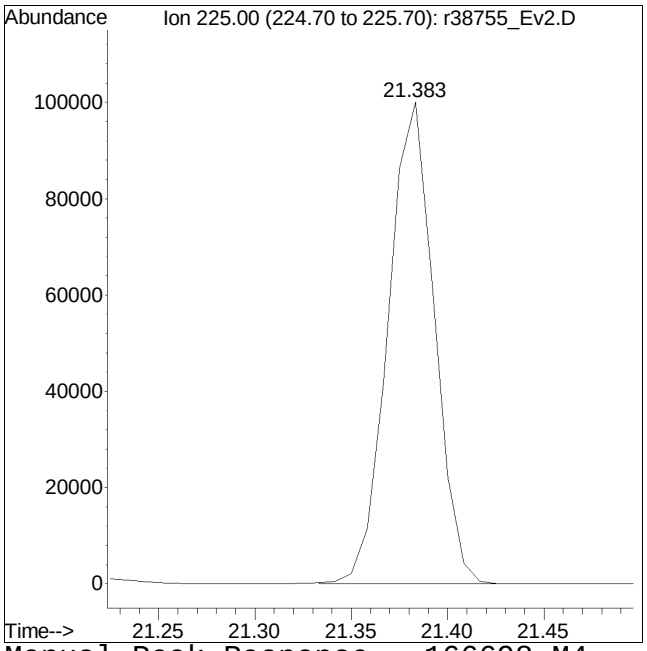
Manual Integration Report

Data Path : O:\Forensics\Data\AirpianoQMethod : TSIM3_200312.M
Data File : r38755_Ev2.D Operator : AIRPIANO3:EW
Date Inj'd : 3/20/2020 0:2: 1 Instrument :
Sample : WG1353543-2,3,250,250 Quant Date : 3/20/2020 2:44 pm

Compound #84: hexachlorobutadiene




Original Peak Response = 166692



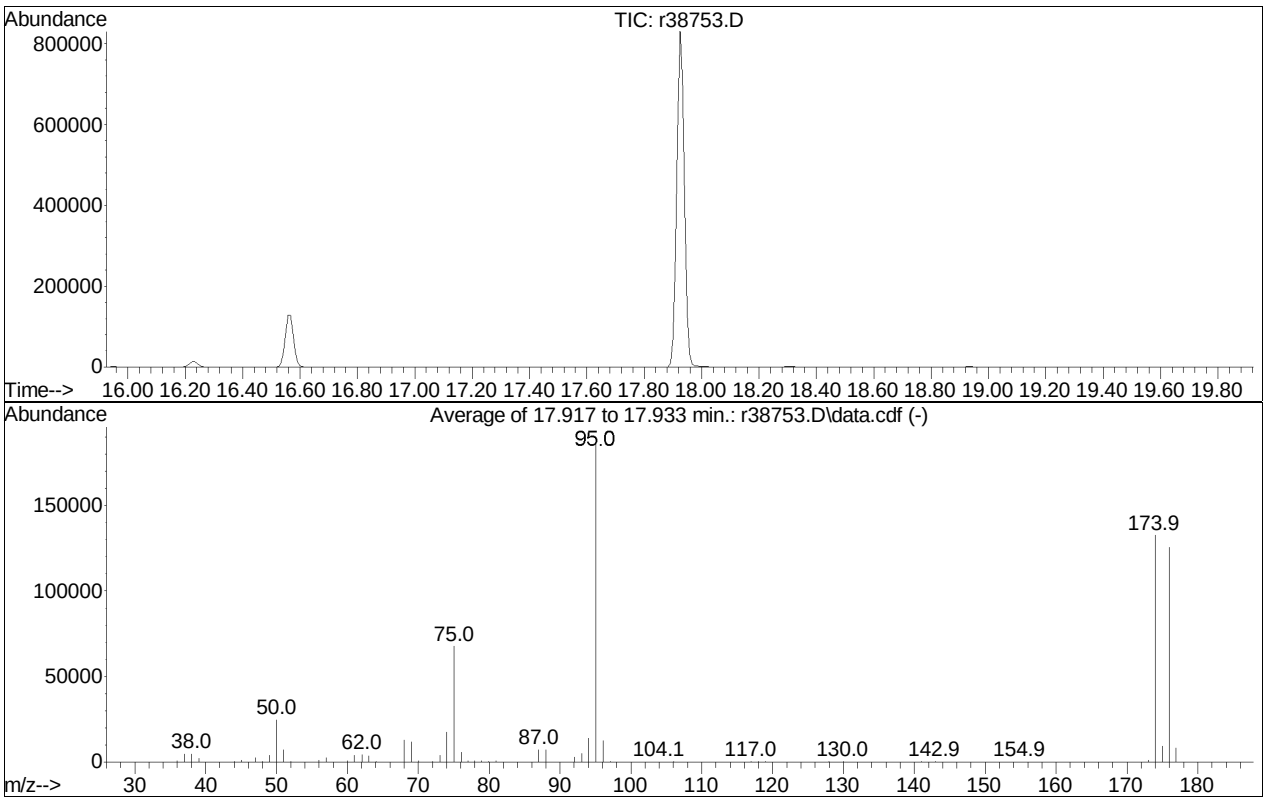

Manual Peak Response = 166698 M4

M4 = Poor automated baseline construction.

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38753.D
Acq On : 20 Mar 2020 12:51 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-1,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Mar 12 16:48:11 2020




AutoFind: Scans 2216, 2217, 2218; Background Corrected with Scan 2210

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 13.2 | 24646 | PASS |
| 75 | 95 | 30 | 66 | 36.4 | 67891 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 186762 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 12641 | PASS |
| 173 | 174 | 0.00 | 2 | 0.9 | 1150 | PASS |
| 174 | 95 | 50 | 120 | 71.1 | 132732 | PASS |
| 175 | 174 | 4 | 9 | 7.1 | 9417 | PASS |
| 176 | 174 | 93 | 101 | 94.6 | 125608 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 8448 | PASS |

# Volatiles Raw QC Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38757_Ev2.D
Acq On : 20 Mar 2020 4:20 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-4,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 17:02:13 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

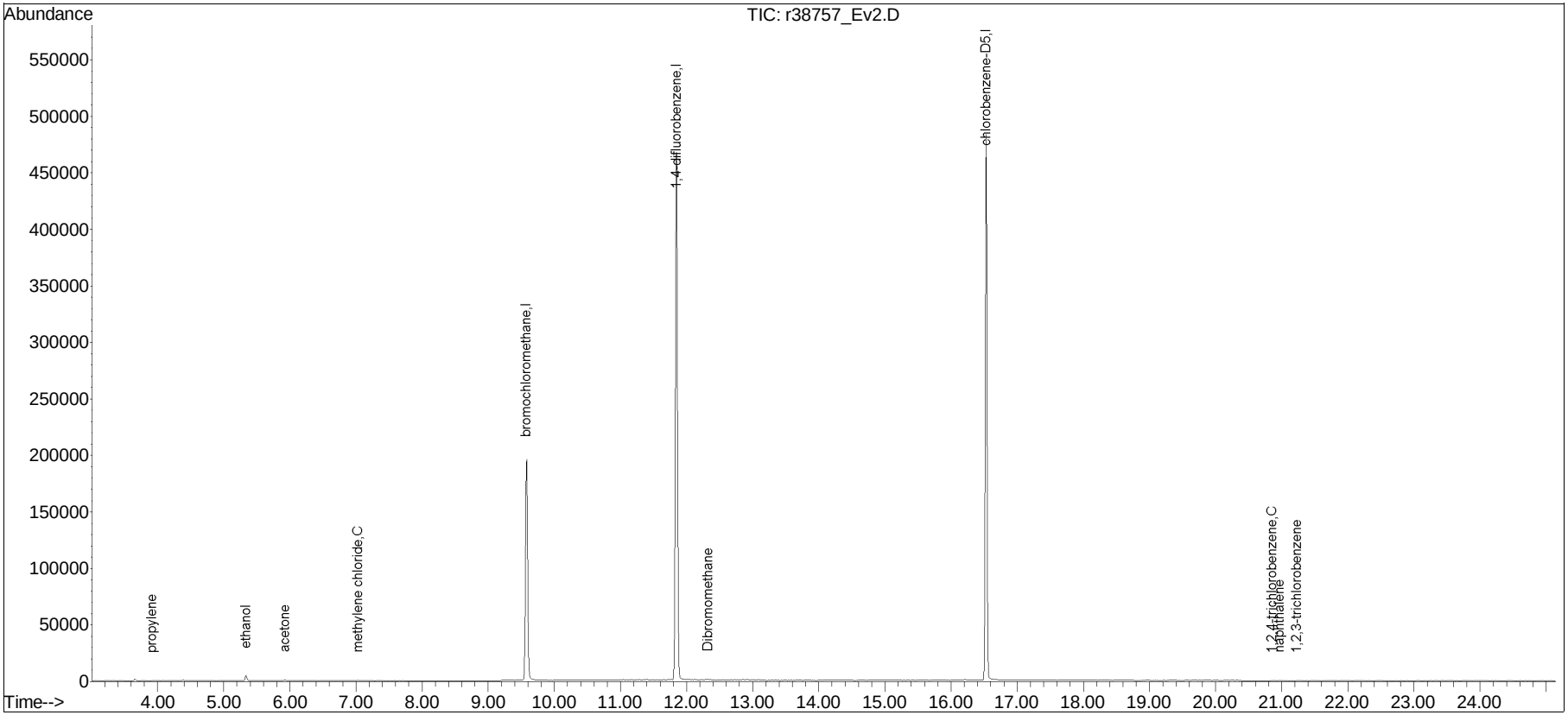
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.575 | 49 | 211260 | 10.000 | ppbV | 0.03 |
| Standard Area = 225089 | | | Recovery = 93.86% | | | |
| 33) 1,4-difluorobenzene | 11.847 | 114 | 605199 | 10.000 | ppbV | 0.04 |
| Standard Area = 642201 | | | Recovery = 94.24% | | | |
| 51) chlorobenzene-D5 | 16.525 | 54 | 75324 | 10.000 | ppbV | 0.00 |
| Standard Area = 90362 | | | Recovery = 83.36% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.000 | | 0 | | N.D. | |
| 17) 1,1-dichloroethene | 0.000 | | 0 | | N.D. | |
| 28) cis-1,2-dichloroethene | 0.000 | | 0 | | N.D. | |
| 36) 1,1,1-trichloroethane | 0.000 | | 0 | | N.D. | |
| 38) carbon tetrachloride | 11.553 | | 0 | | N.D. | |
| 44) trichloroethene | 12.640 | | 0 | | N.D. | |
| 57) tetrachloroethene | 15.792 | | 0 | | N.D. | |

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

Sub List : Default-LCS-AP2 - All compounds listed0320SIM\r38755_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38757_Ev2.D
Acq On : 20 Mar 2020 4:20 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-4,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 17:02:13 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airpiano | QMethod | : TSIM3_200312.M |
| Data File | : r38757_Ev2.D | Operator | : AIRPIANO3:EW |
| Date Inj'd | : 3/20/2020 0:4: 0 | Instrument | : |
| Sample | : WG1353543-4,3,250,250 | Quant Date | : 3/20/2020 5:01 pm |

There are no manual integrations or false positives in this file.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-3,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 10.000 | 10.000 | 0.0 | 99 | 0.03 |
| 2 | | propylene | 5.000 | 6.009 | -20.2 | 119 | 0.02 |
| 3 | | dichlorodifluoromethane | 5.000 | 5.074 | -1.5 | 100 | 0.02 |
| 4 | C | chloromethane | 5.000 | 5.775 | -15.5 | 116 | 0.02 |
| 5 | | Freon-114 | 5.000 | 5.405 | -8.1 | 110 | 0.02 |
| 6 | C | vinyl chloride | 5.000 | 5.291 | -5.8 | 114 | 0.02 |
| 7 | C | 1,3-butadiene | 5.000 | 5.064 | -1.3 | 105 | 0.03 |
| 8 | C | bromomethane | 5.000 | 5.657 | -13.1 | 121 | 0.03 |
| 9 | C | chloroethane | 5.000 | 5.740 | -14.8 | 122 | 0.03 |
| 10 | | ethanol | 25.000 | 24.383 | 2.5 | 99 | 0.03 |
| 11 | C | vinyl bromide | 5.000 | 5.881 | -17.6 | 120 | 0.03 |
| 12 | C | acrolein | 5.000 | 4.404 | 11.9 | 92 | 0.03 |
| 13 | | acetone | 25.000 | 28.982 | -15.9 | 111 | 0.03 |
| 14 | | trichlorofluoromethane | 5.000 | 5.922 | -18.4 | 124 | 0.03 |
| 15 | | isopropyl alcohol | 12.500 | 15.415 | -23.3 | 122 | 0.03 |
| 16 | C | acrylonitrile | 5.000 | 4.931 | 1.4 | 99 | 0.03 |
| 17 | C | 1,1-dichloroethene | 5.000 | 5.233 | -4.7 | 114 | 0.03 |
| 18 | | tertiary butyl alcohol | 5.000 | 4.689 | 6.2 | 101 | 0.03 |
| 19 | C | methylene chloride | 5.000 | 5.447 | -8.9 | 114 | 0.03 |
| 20 | C | 3-chloropropene | 5.000 | 6.163 | -23.3 | 125 | 0.03 |
| 21 | C | carbon disulfide | 5.000 | 4.587 | 8.3 | 92 | 0.04 |
| 22 | | Freon 113 | 5.000 | 5.159 | -3.2 | 106 | 0.03 |
| 23 | | trans-1,2-dichloroethene | 5.000 | 5.096 | -1.9 | 105 | 0.03 |
| 24 | C | 1,1-dichloroethane | 5.000 | 5.570 | -11.4 | 115 | 0.04 |
| 25 | C | MTBE | 5.000 | 4.963 | 0.7 | 100 | 0.03 |
| 26 | C | vinyl acetate | 5.000 | 5.740 | -14.8 | 113 | 0.03 |
| 27 | C | 2-butanone | 5.000 | 5.713 | -14.3 | 115 | 0.03 |
| 28 | | cis-1,2-dichloroethene | 5.000 | 5.306 | -6.1 | 112 | 0.03 |
| 29 | | Ethyl Acetate | 5.000 | 5.778 | -15.6 | 118 | 0.03 |
| 30 | C | chloroform | 5.000 | 4.748 | 5.0 | 99 | 0.03 |
| 31 | | Tetrahydrofuran | 5.000 | 5.659 | -13.2 | 113 | 0.04 |
| 32 | C | 1,2-dichloroethane | 5.000 | 4.957 | 0.9 | 106 | 0.03 |
| 33 | I | 1,4-difluorobenzene | 10.000 | 10.000 | 0.0 | 97 | 0.03 |
| 34 | C | hexane | 5.000 | 5.058 | -1.2 | 100 | 0.04 |
| 36 | C | 1,1,1-trichloroethane | 5.000 | 5.108 | -2.2 | 105 | 0.03 |
| 37 | C | benzene | 5.000 | 4.461 | 10.8 | 94 | 0.04 |
| 38 | C | carbon tetrachloride | 5.000 | 4.693 | 6.1 | 94 | 0.04 |
| 39 | | cyclohexane | 5.000 | 4.808 | 3.8 | 95 | 0.04 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-3,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

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

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 40 | | Dibromomethane | 5.000 | 4.567 | 8.7 | 97 | 0.04 |
| 41 | C | 1,2-dichloropropane | 5.000 | 5.519 | -10.4 | 116 | 0.04 |
| 42 | | bromodichloromethane | 5.000 | 4.563 | 8.7 | 92 | 0.03 |
| 43 | C | 1,4-dioxane | 5.000 | 5.285 | -5.7 | 105 | 0.04 |
| 44 | C | trichloroethene | 5.000 | 5.556 | -11.1 | 112 | 0.03 |
| 45 | C | 2,2,4-trimethylpentane | 5.000 | 5.081 | -1.6 | 99 | 0.03 |
| 46 | | heptane | 5.000 | 5.801 | -16.0 | 112 | 0.04 |
| 47 | C | cis-1,3-dichloropropene | 5.000 | 4.510 | 9.8 | 88 | 0.03 |
| 48 | C | 4-methyl-2-pentanone | 5.000 | 6.052 | -21.0 | 115 | 0.04 |
| 49 | | trans-1,3-dichloropropene | 5.000 | 5.261 | -5.2 | 103 | 0.03 |
| 50 | C | 1,1,2-trichloroethane | 5.000 | 5.261 | -5.2 | 109 | 0.03 |
| 51 | I | chlorobenzene-D5 | 10.000 | 10.000 | 0.0 | 92 | 0.02 |
| 52 | C | toluene | 5.000 | 5.449 | -9.0 | 109 | 0.03 |
| 54 | | 2-hexanone | 5.000 | 6.189 | -23.8 | 109 | 0.03 |
| 55 | | dibromochloromethane | 5.000 | 6.110 | -22.2 | 111 | 0.03 |
| 56 | C | 1,2-dibromoethane | 5.000 | 4.959 | 0.8 | 98 | 0.03 |
| 57 | C | tetrachloroethene | 5.000 | 5.379 | -7.6 | 106 | 0.03 |
| 58 | | 1,1,1,2-tetrachloroethane | 5.000 | 5.238 | -4.8 | 99 | 0.03 |
| 59 | C | chlorobenzene | 5.000 | 5.165 | -3.3 | 100 | 0.03 |
| 60 | C | ethylbenzene | 5.000 | 5.531 | -10.6 | 107 | 0.02 |
| 61 | C | m+p-xylene | 10.000 | 11.013 | -10.1 | 107 | 0.03 |
| 62 | C | bromoform | 5.000 | 5.626 | -12.5 | 101 | 0.02 |
| 63 | C | styrene | 5.000 | 5.114 | -2.3 | 97 | 0.03 |
| 64 | C | 1,1,2,2-tetrachloroethane | 5.000 | 5.624 | -12.5 | 106 | 0.03 |
| 65 | C | o-xylene | 5.000 | 5.697 | -13.9 | 109 | 0.03 |
| 66 | | 1,2,3-Trichloropropane | 5.000 | 4.671 | 6.6 | 86 | 0.02 |
| 68 | C | isopropylbenzene | 5.000 | 4.819 | 3.6 | 89 | 0.03 |
| 69 | | Bromobenzene | 5.000 | 4.566 | 8.7 | 84 | 0.03 |
| 70 | | 4-ethyl toluene | 5.000 | 5.210 | -4.2 | 93 | 0.02 |
| 71 | | 1,3,5-trimethylbenzene | 5.000 | 5.384 | -7.7 | 99 | 0.02 |
| 72 | | tert-butylbenzene | 5.000 | 5.174 | -3.5 | 93 | 0.04 |
| 73 | | 1,2,4-trimethylbenzene | 5.000 | 5.578 | -11.6 | 100 | 0.04 |
| 74 | C | Benzyl Chloride | 5.000 | 5.368 | -7.4 | 92 | 0.05 |
| 75 | | 1,3-dichlorobenzene | 5.000 | 5.365 | -7.3 | 96 | 0.04 |
| 76 | C | 1,4-dichlorobenzene | 5.000 | 5.091 | -1.8 | 94 | 0.05 |
| 77 | | sec-butylbenzene | 5.000 | 4.701 | 6.0 | 84 | 0.05 |
| 78 | | p-isopropyltoluene | 5.000 | 4.798 | 4.0 | 84 | 0.06 |
| 79 | | 1,2-dichlorobenzene | 5.000 | 5.367 | -7.3 | 97 | 0.07 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-3,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

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

| | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 80 | n-butylbenzene | 5.000 | 5.345 | -6.9 | 93 | 0.07 |
| 81 C | 1,2,4-trichlorobenzene | 5.000 | 6.089 | -21.8 | 98 | 0.07 |
| 82 | naphthalene | 5.000 | 5.202 | -4.0 | 87 | 0.08 |
| 83 | 1,2,3-trichlorobenzene | 5.000 | 5.368 | -7.4 | 83 | 0.08 |
| 84 C | hexachlorobutadiene | 5.000 | 6.893 | -37.9# | 123 | 0.07 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-3,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

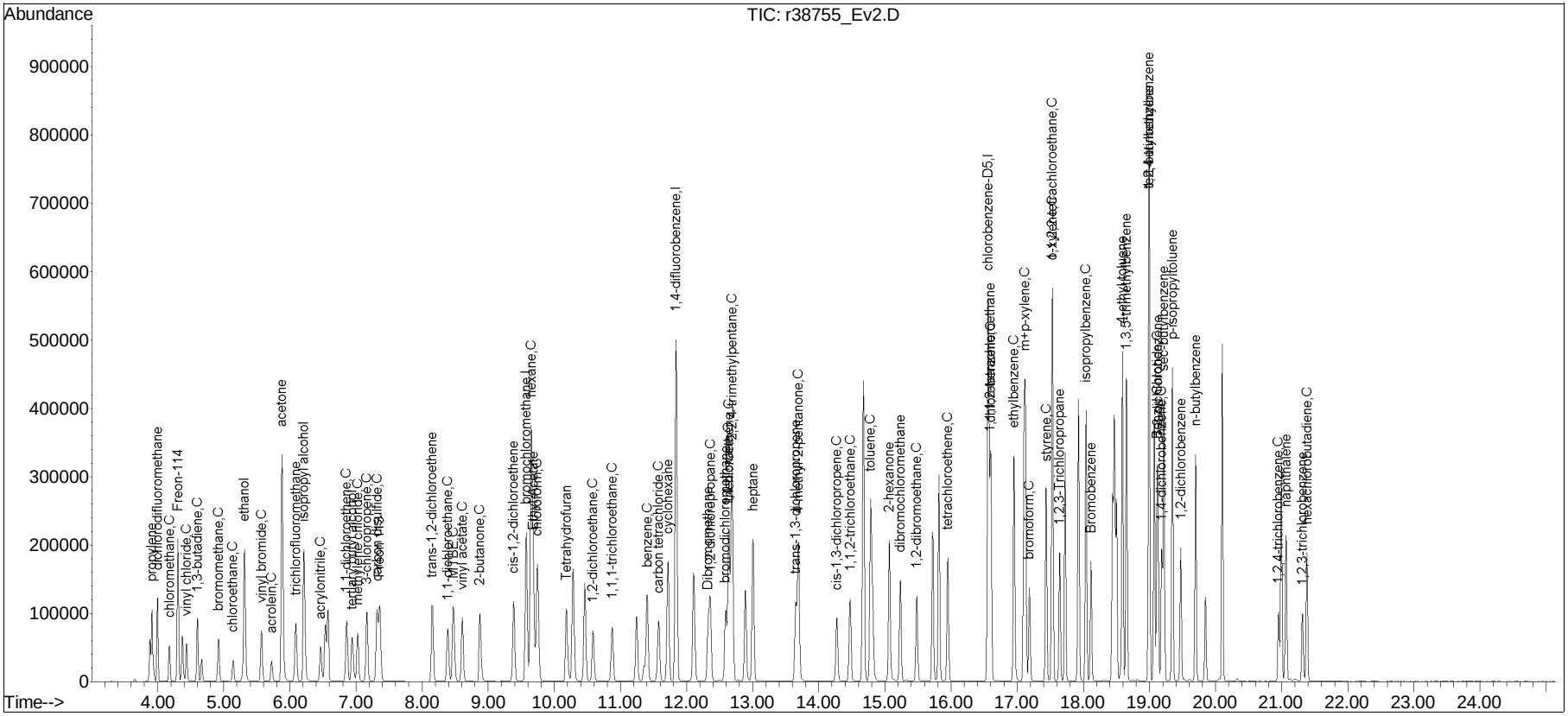
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.575 | 49 | 225089 | 10.000 | ppbV | 0.03 |
| Standard Area = 225089 | | | Recovery = 100.00% | | | |
| 33) 1,4-difluorobenzene | 11.840 | 114 | 642201 | 10.000 | ppbV | 0.03 |
| Standard Area = 642201 | | | Recovery = 100.00% | | | |
| 51) chlorobenzene-D5 | 16.558 | 54 | 90362 | 10.000 | ppbV | 0.02 |
| Standard Area = 90362 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 4.438 | 62 | 63452 | 5.291 | ppbV | 97 |
| 17) 1,1-dichloroethene | 6.858 | 61 | 82575 | 5.233 | ppbV | 92 |
| 28) cis-1,2-dichloroethene | 9.383 | 61 | 86846 | 5.306 | ppbV | 95 |
| 36) 1,1,1-trichloroethane | 10.875 | 97 | 99987 | 5.108 | ppbV | 98 |
| 38) carbon tetrachloride | 11.580 | 117 | 88773 | 4.693 | ppbV | 96 |
| 44) trichloroethene | 12.640 | 130 | 101823 | 5.556 | ppbV | 97 |
| 57) tetrachloroethene | 15.950 | 166 | 110055 | 5.379 | ppbV | 96 |

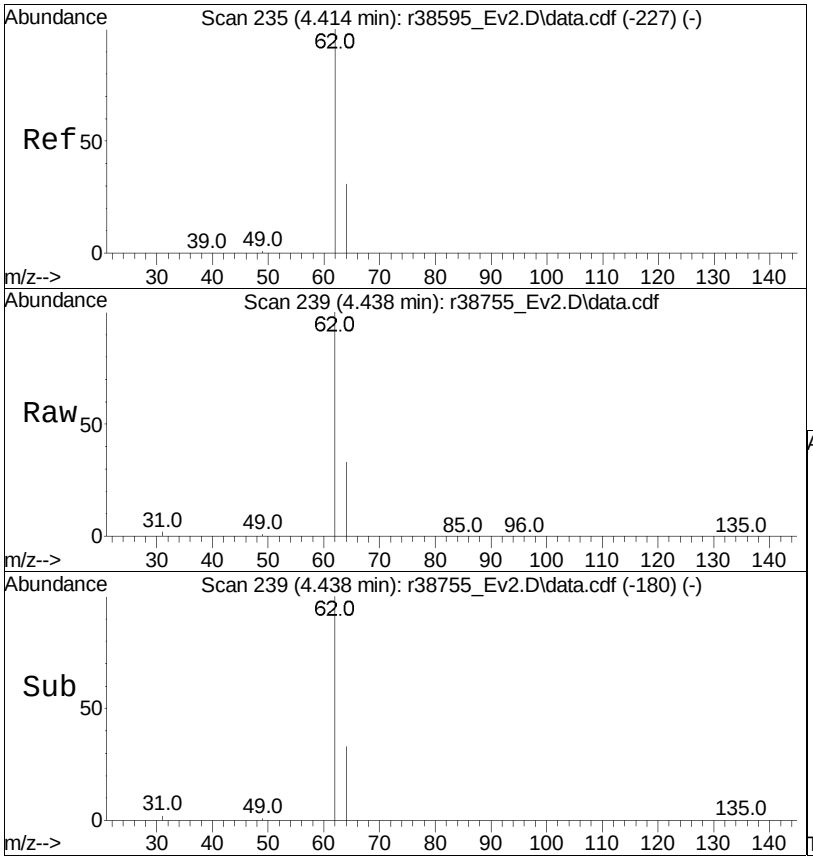
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : Default-LCS-AP2 - All compounds listed0320SIM\r38755_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38755_Ev2.D
Acq On : 20 Mar 2020 2:11 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-3,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 20 14:47:03 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

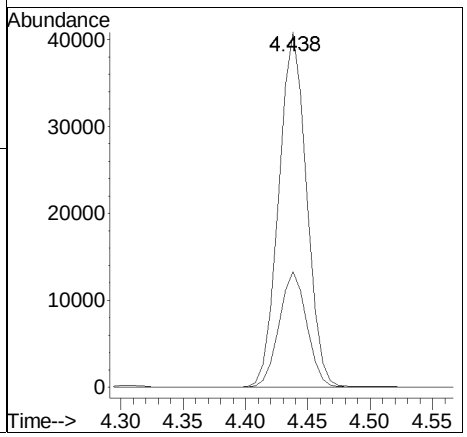


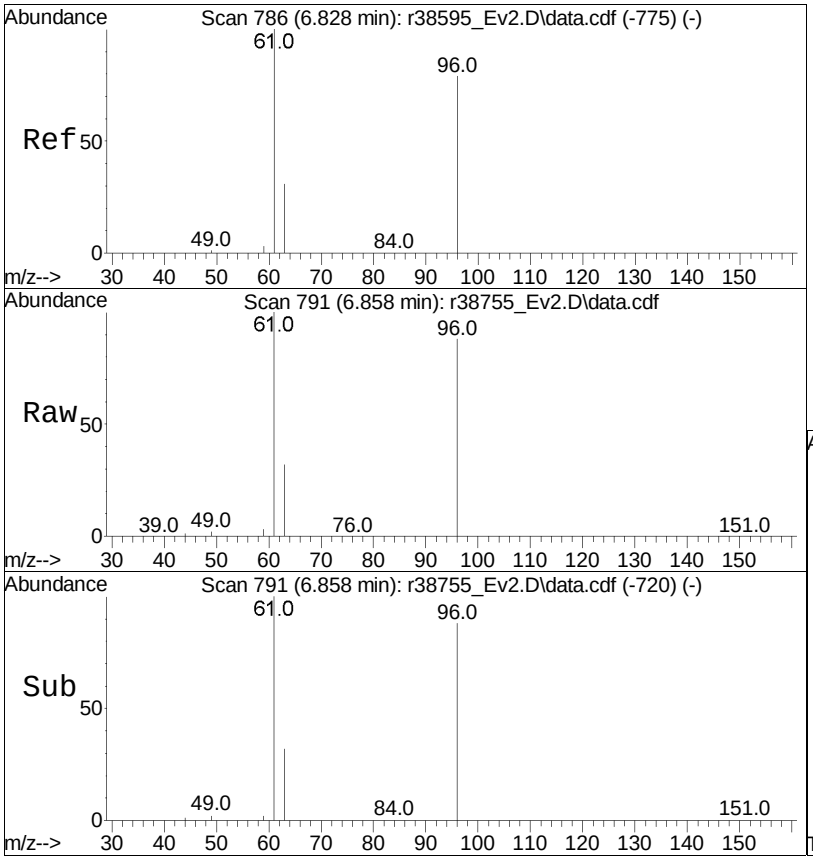



#6
vinyl chloride
Concen: 5.29 ppbV
RT: 4.438 min Scan# 239
Delta R.T. 0.024 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion: 62 Resp: 63452

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.6 | 24.7 | 37.1 |

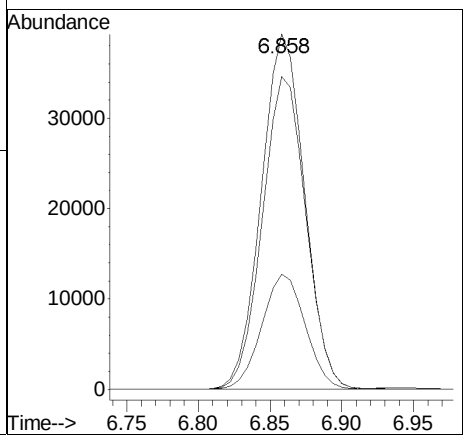


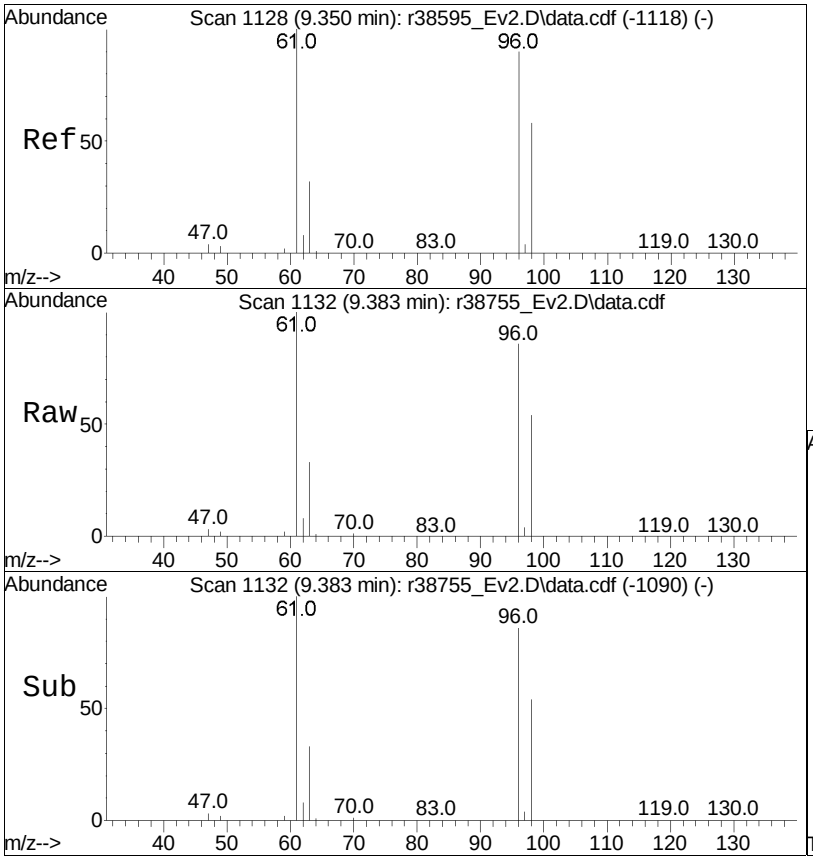



#17
1,1-dichloroethene
Concen: 5.23 ppbV
RT: 6.858 min Scan# 791
Delta R.T. 0.030 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion: 61 Resp: 82575

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 88.0 | 63.5 | 95.3 |
| 63 | 32.5 | 24.6 | 36.8 |

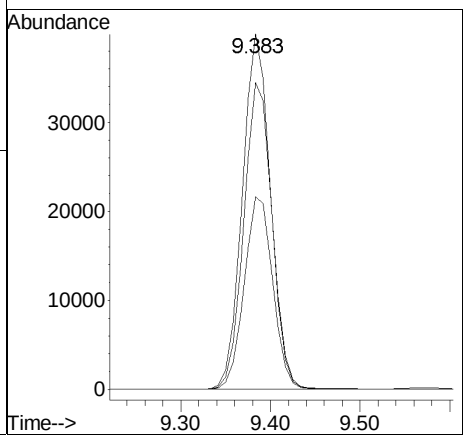


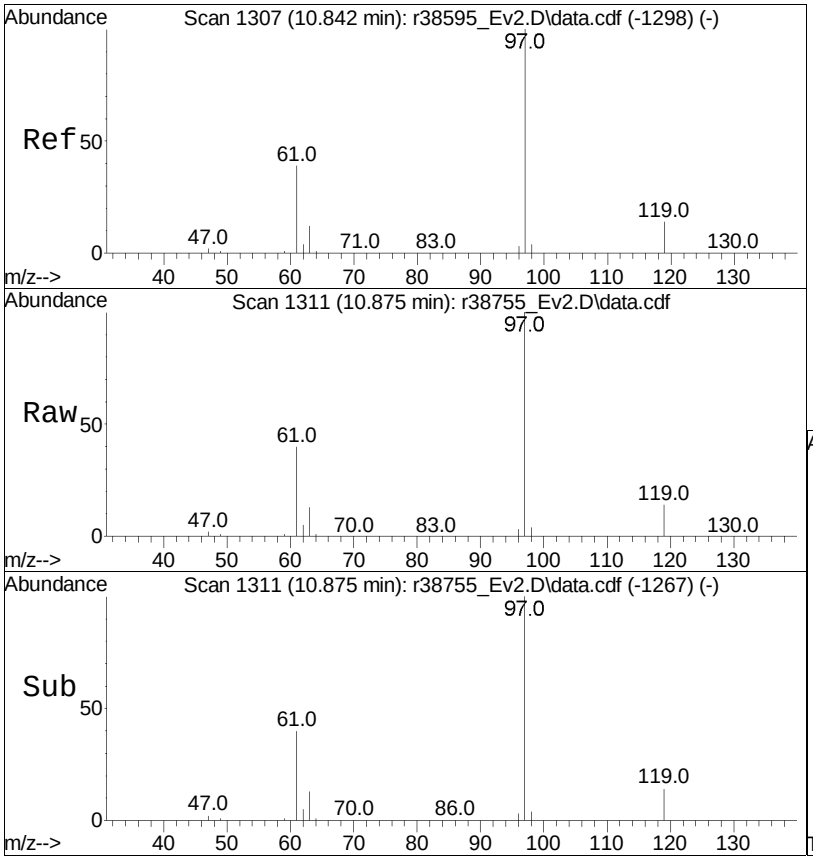



#28
cis-1,2-dichloroethene
Concen: 5.31 ppbV
RT: 9.383 min Scan# 1132
Delta R.T. 0.033 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion: 61 Resp: 86846

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 86.3 | 72.2 | 108.4 |
| 98 | 54.2 | 46.3 | 69.5 |

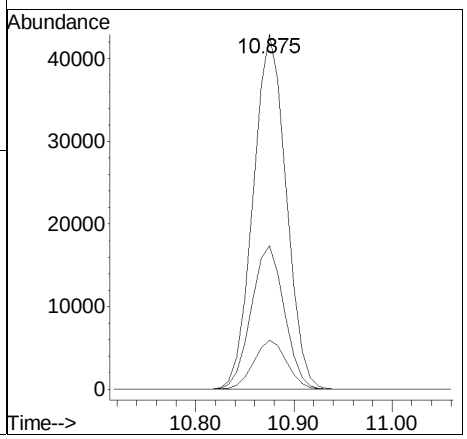


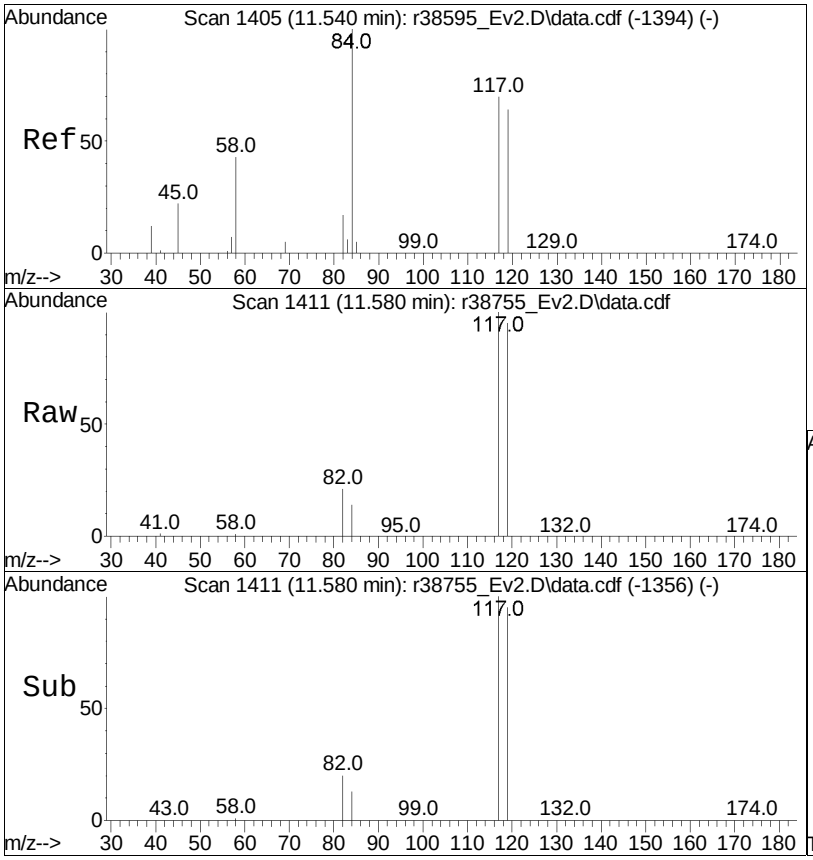



#36
1,1,1-trichloroethane
Concen: 5.11 ppbV
RT: 10.875 min Scan# 1311
Delta R.T. 0.033 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion: 97 Resp: 99987

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 61 | 40.4 | 31.0 | 46.4 |
| 119 | 13.9 | 11.7 | 17.5 |

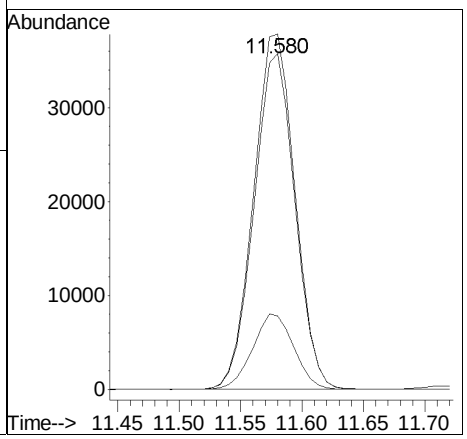


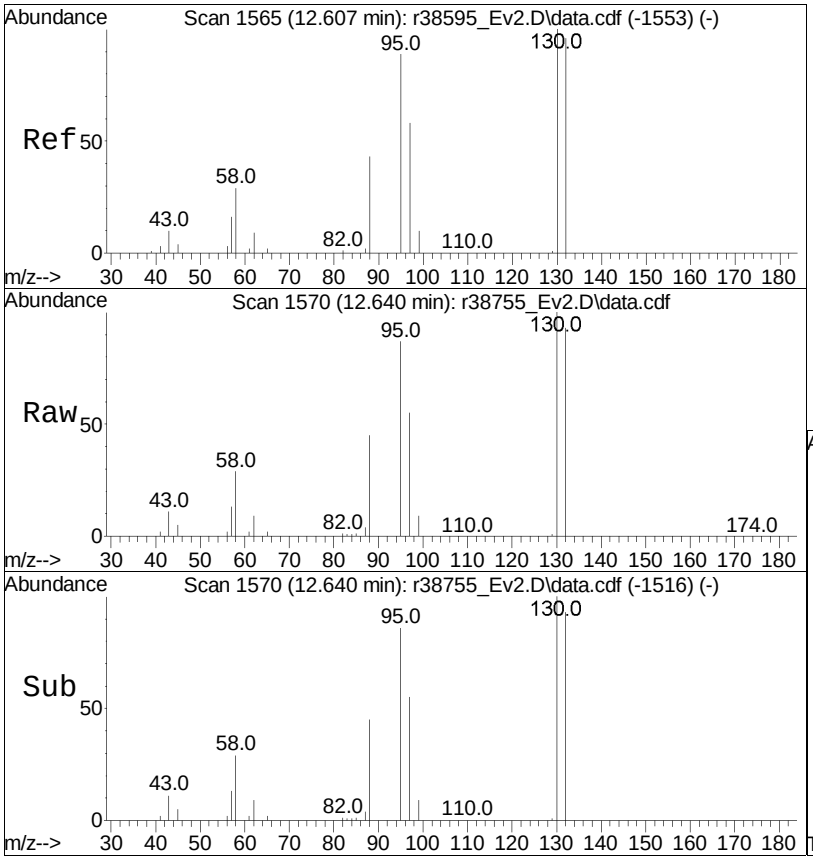



#38
carbon tetrachloride
Concen: 4.69 ppbV
RT: 11.580 min Scan# 1411
Delta R.T. 0.040 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion:117 Resp: 88773

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 94.5 | 73.0 | 109.4 |
| 82 | 20.7 | 19.1 | 28.7 |

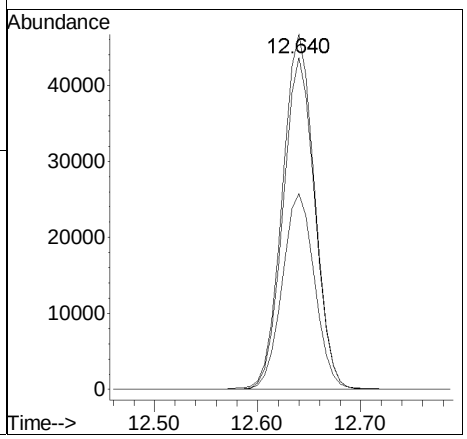


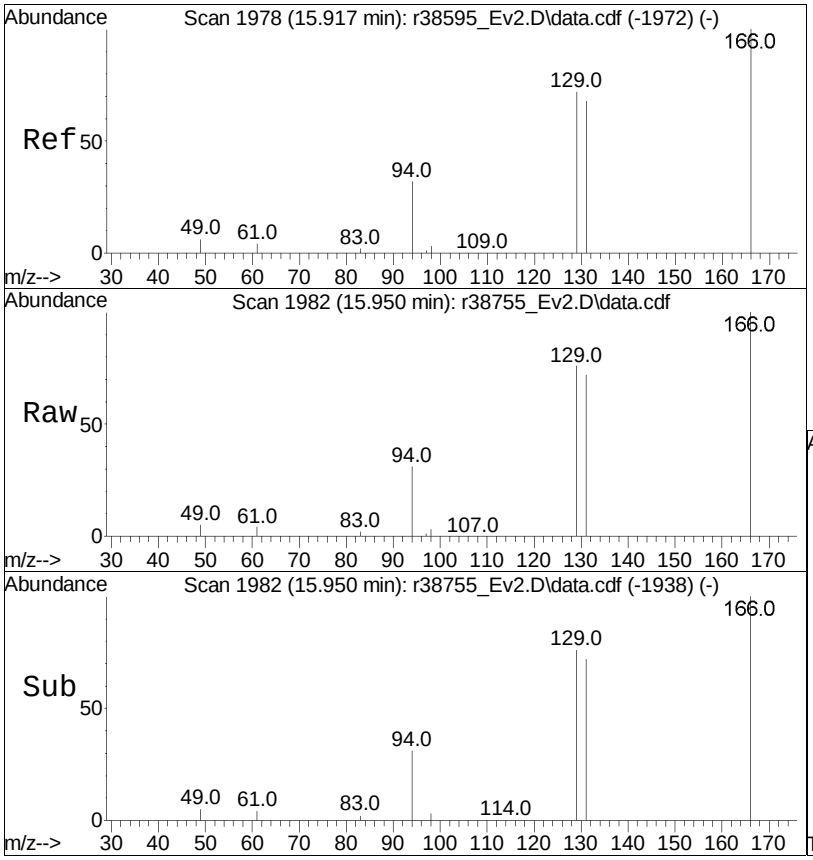



#44
trichloroethene
Concen: 5.56 ppbV
RT: 12.640 min Scan# 1570
Delta R.T. 0.033 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion:130 Resp: 101823

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 93.4 | 76.5 | 114.7 |
| 97 | 55.1 | 46.2 | 69.4 |

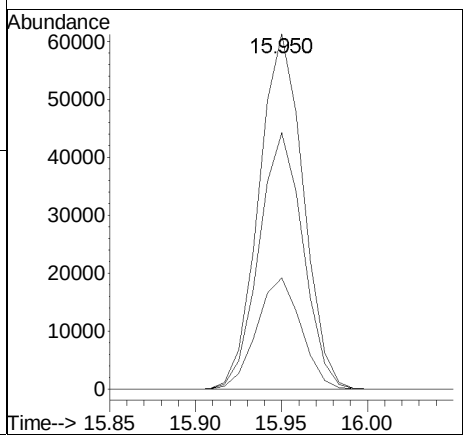





#57
tetrachloroethene
Concen: 5.38 ppbV
RT: 15.950 min Scan# 1982
Delta R.T. 0.033 min
Lab File: r38755_Ev2.D
Acq: 20 Mar 2020 2:11 PM

Tgt Ion:166 Resp: 110055

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 72.2 | 54.6 | 82.0 |
| 94 | 31.4 | 25.7 | 38.5 |



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38760_Ev2.D
Acq On : 20 Mar 2020 7:03 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-5,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 19:11:23 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D
Sub List : 7-NY-SIM - .

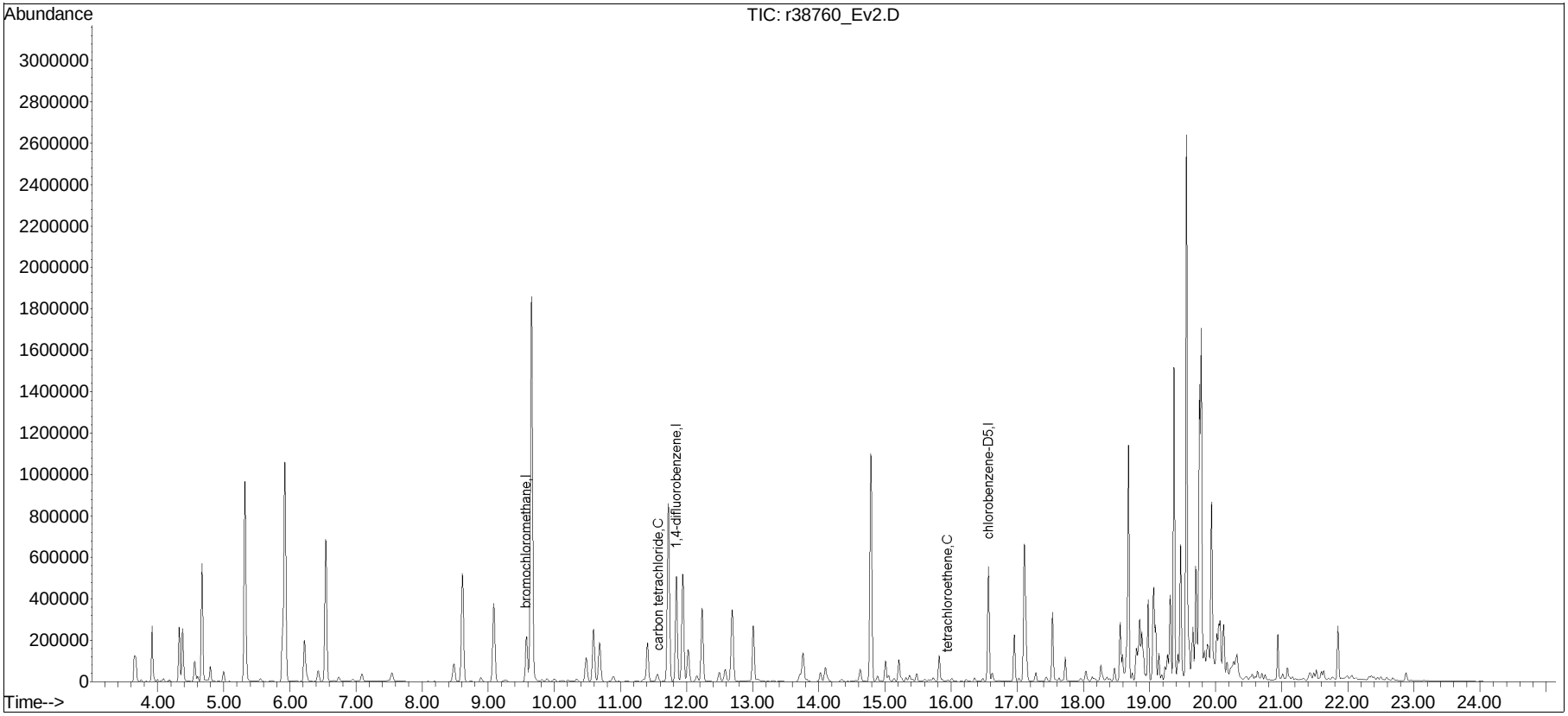
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.575 | 49 | 238534 | 10.000 | ppbV | 0.03 |
| Standard Area = 225089 | | | Recovery = 105.97% | | | |
| 33) 1,4-difluorobenzene | 11.847 | 114 | 652384 | 10.000 | ppbV | 0.04 |
| Standard Area = 642201 | | | Recovery = 101.59% | | | |
| 51) chlorobenzene-D5 | 16.567 | 54 | 86728 | 10.000 | ppbV | 0.03 |
| Standard Area = 90362 | | | Recovery = 95.98% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.000 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.000 | | 0 | N.D. | d | |
| 28) cis-1,2-dichloroethene | 0.000 | | 0 | N.D. | | |
| 36) 1,1,1-trichloroethane | 0.000 | | 0 | N.D. | d | |
| 38) carbon tetrachloride | 11.580 | 117 | 1044 | 0.054 | ppbV | 96 |
| 44) trichloroethene | 0.000 | | 0 | N.D. | d | |
| 57) tetrachloroethene | 15.950 | 166 | 4639 | 0.236 | ppbV | 97 |

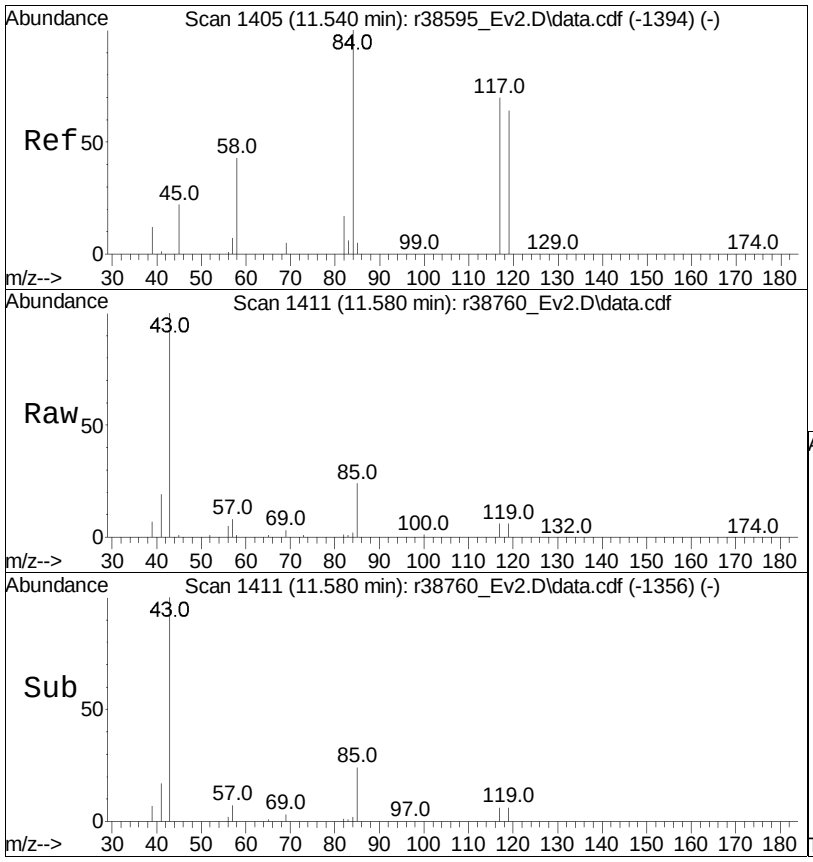
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : 7-NY-SIM - .\Data\Airpiano3\2020\03\200320SIM\r38755_Ev2.D

Data Path : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\
Data File : r38760_Ev2.D
Acq On : 20 Mar 2020 7:03 PM
Operator : AIRPIANO3:EW
Sample : WG1353543-5,3,250,250
Misc : WG1353543,ICAL16593
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Mar 21 19:11:23 2020
Quant Method : O:\Forensics\Data\Airpiano3\2020\03\200320SIM\TSIM3_200312.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Mar 12 16:48:11 2020
Response via : Initial Calibration

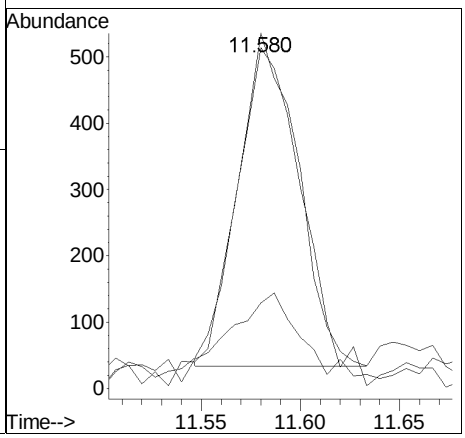


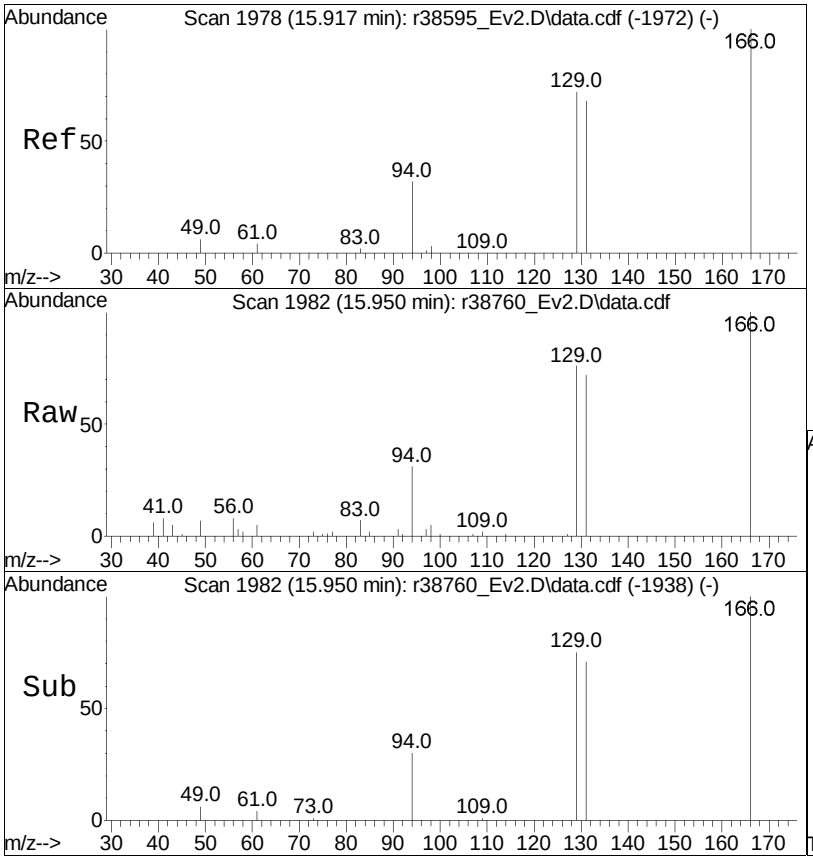



#38
carbon tetrachloride
Concen: 0.05 ppbV
RT: 11.580 min Scan# 1411
Delta R.T. 0.040 min
Lab File: r38760_Ev2.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:117 Resp: 1044

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 95.9 | 73.0 | 109.4 |
| 82 | 24.1 | 19.1 | 28.7 |

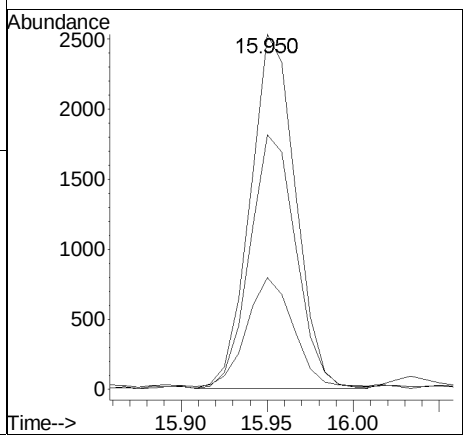





#57
tetrachloroethene
Concen: 0.24 ppbV
RT: 15.950 min Scan# 1982
Delta R.T. 0.033 min
Lab File: r38760_Ev2.D
Acq: 20 Mar 2020 7:03 PM

Tgt Ion:166 Resp: 4639

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 71.6 | 54.6 | 82.0 |
| 94 | 31.5 | 25.7 | 38.5 |



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airpiano | QMethod | : TSIM3_200312.M |
| Data File | : r38760_Ev2.D | Operator | : AIRPIANO3:EW |
| Date Inj'd | : 3/20/2020 0:7: 3 | Instrument | : |
| Sample | : WG1353543-5,3,250,250 | Quant Date | : 3/21/2020 7:09 pm |

There are no manual integrations or false positives in this file.

# Calculation of Volatile Organic Compounds in Air

The instrument will calculate the concentration (ppbv). If the sample is diluted (DF), the result is multiplied by the DF to generate the final result.

Result, ppbv = $C_s$ x DF
Where:
$C_s$ = Concentration of sample (ppbv)
DF = Dilution Factor

Calculation of Instrument Dilution Factor

For dilutions, smaller sample volumes (< 250mL) are analyzed. The smallest volume that can be analyzed with accuracy is 10 mL.

Samples that arrive at the laboratory with pressures below -15 inches Hg must be pressurized with zero air to greater than -15 inches Hg. This pressurization results in a dilution factor.

Calculation of Dilution Factor
$DF = V_{cf} / V_{ci}$
Where:
$V_{ci}$ = volume of air in canister prior to pressurization, L
P =

Conversion of ppbv to ug/$m^3$
ug/$m^3$ = (ppbv) * MW / 24.47
Where:
24.47 = molar gas constant (g/g-mole)
MW = molecular weight of the compound of interest

Dilution Factor for Pressurization of Subatmospheric Samples: Three Steps

Step 1: Calculate the volume in the canister prior to pressurization (Assume a 2.7 liter canister is used).

Dilution Factor for Pressurization of Subatmospheric Samples: Three Steps

Step 1: Calculate the volume in the canister prior to pressurization (Assume a 2.7 liter canister is used).

$V_{ci} = 2.7 * Pl/14.696$

Step 2: Calculate the volume in the canister after pressurization.

$V_{cf} = 2.7 * PF/14.696$

Step 3: Calculate the dilution factor.

$DF = V_{cf} / V_{ci}$

Where:

$V_{ci}$ = volume of air in canister prior to pressurization, L
PI = pressure reading of canister prior to pressurization (psia)
$V_{cf}$ = volume of air in canister after pressurization, L
PF = pressure reading of canister after pressurization (psia)
DF = dilution factor
14.696 = atmospheric pressure (psia)

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Mar 27 2020, 03:40 pm

Work Group: WG1353543  for Department: 3 GC/MS

Created: 20-MAR-20  Due:  Operator: EW

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L2011723-05 | OA001 | S | TO15-SIM | AIR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2011723-06 | IA001 | S | TO15-SIM | AIR | DONE | U | 0412 | 0323 | S0 | Can-2.7 |
| L2012074-01 | IA-8 | S | TO15-SIM | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-02 | IA-7 | S | TO15-SIM | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-03 | IA-10 | S | TO15-SIM | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-04 | IA-6 | S | TO15-SIM | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| L2012074-05 | IA-9 | S | TO15-SIM | AIR | DONE | U | 0416 | 0323 | S0 | Can-2.7 |
| WG1353543-1 | MS BFB Tune Standard | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1353543-2 | Continuing Calibrati | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1353543-3 | Laboratory Control S | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1353543-4 | Laboratory Method Bl | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1353543-5 | Duplicate Sample | S | TO15-SIM | AIR | DONE | U | | | | |

Comments:

WG1353543-5  L2011723-06

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: Airpiano3

Internal Standard/Surrogate IDs: SS20-009 / SS19-022

Date: 03/12/20

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: TS

Sequence File Name: 200312.S

SIM ICAL# Full Scan ICAL# APH ICAL#

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/ N |
|---|---|---|---|---|---|---|---|
| 1 | BA3031201 | TO15_SFS.qgm | R38585.qgd | 250 mL | | | NA |
| 1 | BA3031202 | TO15_SFS.qgm | R38586.qgd | 250 mL | | | NA |
| 1 | BA3031203 | TO15_SFS.qgm | R38587.qgd | 250 mL | | | NA |
| 1 | TA3031201 | TO15_SFS.qgm | R38588.qgd | 250 mL | TUNE | | NA |
| 5 | ITO15-SIMSTD0.02 | TO15_SFS.qgm | R38589.qgd | 50 mL SS20-003D | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.05 | TO15_SFS.qgm | R38590.qgd | 125 mL SS20-003D | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.1 | TO15_SFS.qgm | R38591.qgd | 250 mL SS20-003D | SIM ONLY | | NA |
| 6 | ITO15-SIMSTD0.2 | TO15_SFS.qgm | R38592.qgd | 50 mL SS20-003C | | | NA |
| 6 | ITO15-SIMSTD0.5 | TO15_SFS.qgm | R38593.qgd | 125 mL SS20-003C | | | NA |
| 6 | ITO15-SIMSTD1.0 | TO15_SFS.qgm | R38594.qgd | 250 mL SS20-003C | | | NA |
| 7 | ITO15-SIMSTD5.0 | TO15_SFS.qgm | R38595.qgd | 125 mL SS20-003B1 | | | NA |
| 7 | ITO15-SIMSTD010 | TO15_SFS.qgm | R38596.qgd | 250 mL SS20-003B1 | | | NA |
| 8 | ITO15-SIMSTD020 | TO15_SFS.qgm | R38597.qgd | 50 mL SS20-003A | | | NA |
| 8 | ITO15-SIMSTD050 | TO15_SFS.qgm | R38598.qgd | 125 mL SS20-003A | | | NA |
| 8 | ITO15-LLSTD100 | TO15_SFS.qgm | R38599.qgd | 250 mL SS20-003A | LL ONLY | | NA |
| 1 | BA3031201 | TO15_SFS.qgm | R38600.qgd | 250 mL | | | NA |
| 1 | BA3031202 | TO15_SFS.qgm | R38601.qgd | 250 mL | | | NA |
| 2 | CTO15-LLSTD010 | TO15_SFS.qgm | R38602.qgd | 250 mL SS20-006B | LL ICV | | NA |
| 2 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R38603.qgd | 125 mL SS20-006B | SIM ICV | | NA |
| | | | | | | | |

# Alpha Analytical Air Lab
# Instrument Run Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: Airpiano3

Internal Standard/Surrogate IDs: SS20-009 / SS19-022

Date: 03/20/20

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: EW

Sequence File Name: 200320.S

SIM ICAL# 16593 Full Scan ICAL# 16594 APH ICAL#16592

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/N |
|---|---|---|---|---|---|---|---|
| 1 | TA3032001 | TO15_SFS.qgm | R38753.qgd | 250 mL | TUNE | | NA |
| 3 | CTO15-LLSTD010 | TO15_SFS.qgm | R38754.qgd | 250 mL SS20-006B | LL LCS | | NA |
| 3 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R38755.qgd | 125 mL SS20-006B | SIM LCS | | NA |
| 1 | BA3032001 | TO15_SFS.qgm | R38756.qgd | 250 mL | BLANK FAILED | | NA |
| 1 | BA3032002 | TO15_SFS.qgm | R38757.qgd | 250 mL | BLANK | | NA |
| 1 | L2011723-05,3,250,250 | TO15_SFS.qgm | R38758.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 2 | L2011723-06,3,250,250 | TO15_SFS.qgm | R38759.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 2 | L2011723-06DUP,3,250,250 | TO15_SFS.qgm | R38760.qgd | WG1353541,ICAL16594 | LL / SIM DUP | NY / 7-SIM | Y |
| 3 | L2012074-01,3,250,250 | TO15_SFS.qgm | R38761.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 4 | L2012074-02,3,250,250 | TO15_SFS.qgm | R38762.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 5 | L2012074-03,3,250,250 | TO15_SFS.qgm | R38763.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 6 | L2012074-04,3,250,250 | TO15_SFS.qgm | R38764.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 7 | L2012074-05,3,250,250 | TO15_SFS.qgm | R38765.qgd | WG1353541,ICAL16594 | | NY / 7-SIM | Y |
| 8 | L2011818-01,3,250,250 | TO15_SFS.qgm | R38766.qgd | WG1353541,ICAL16594 | | NY | Y |
| 9 | L2011818-02,3,250,250 | TO15_SFS.qgm | R38767.qgd | WG1353541,ICAL16594 | | NY | Y |
| 10 | L2011818-03,3,250,250 | TO15_SFS.qgm | R38768.qgd | WG1353541,ICAL16594 | | NY | Y |
| 11 | L2011818-04,3,250,250 | TO15_SFS.qgm | R38769.qgd | WG1353541,ICAL16594 | | NY | Y |
| 12 | L2011818-05,3,250,250 | TO15_SFS.qgm | R38770.qgd | WG1353541,ICAL16594 | | NY | Y |
| 13 | L2011818-06,3,250,250 | TO15_SFS.qgm | R38771.qgd | WG1353541,ICAL16594 | IPA OVERCAL | NY | Y |
| 14 | L2011818-07D,3,215,250 | TO15_SFS.qgm | R38772.qgd | WG1353541,ICAL16594 | | NY | Y |
| 15 | L2011546-02,3,250,250 | TO15_SFS.qgm | R38773.qgd | WG1353539,ICAL16594 | | MCP | Y |

# Alpha Analytical Air Lab
# Instrument Run Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | L2011546-02DUP,3,250,250 | TO15_SFS.qgm | R38774.qgd | WG1353539,ICAL16594 | MCP DUP | MCP | Y |
| 13 | L2011818-06D,3,75,250 | TO15_SFS.qgm | R38775.qgd | WG1353541,ICAL16594 | IPA ONLY | NY | Y |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

PWGC
CLIENT DRIVEN SOLUTIONS

# APPENDIX D
# Data Usability Summary Report

P.W. GROSSER CONSULTING, INC.
P.W. GROSSER CONSULTING ENGINEER & HYDROGEOLOGIST, P.C.
PHONE: 631.589.6353
PWGROSSER.COM
630 JOHNSON AVENUE, STE 7
BOHEMIA, NY 11716
LONG ISLAND • MANHATTAN • SARATOGA SPRINGS • SYRACUSE • SEATTLE • SHELTON

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

P.W. Grosser Consulting
630 Johnson Ave, Suite 7
Bohemia, NY 11716
ATTN: Ms. Jennifer Lewis
jenniferl@pwgrosser.com

April 27, 2020

SUBJECT: 233-20 Braddock Ave, Jamaica, NY, Data Usability Summary Report

Dear Ms. Lewis,

Enclosed is the final validation report for the fraction listed below. This SDG was received on April 2, 2020. Attachment 1 is a summary of the samples that were reviewed for analysis.

**LDC Project #47705:**

| SDG # | Fraction |
|---|---|
| L2011723 | Volatiles |

The data validation was performed under Category B guidelines using quality control summaries provided by the laboratory. The analyses were validated using the following documents, as applicable to each method:

- USEPA Region 2 Analysis of Volatile Organic Compounds in Air Contained Canisters, SOP HW-31, Revision 6; September 2016
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA 540-R-2017-002; January 2017

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink

Christina Rink
crink@lab-data.com
Project Manager/Senior Chemist

**Category B**

# LDC #47705 (P.W. Grosser Consulting - Bohemia, NY / 233-20 Braddock Ave, Jamaica, NY)

| LDC | SDG# | DATE REC'D | (3) DATE DUE | VOA (TO-15) | | VOA (TO-15 -SIM) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Matrix: | Air/Water/Soil | | | A | S | A | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S | W | S |
| A | L2011723 | 04/02/20 | 04/23/20 | 6 | 0 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | T/CR | | | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |

Shaded cells indicate Category B validation (all other cells are Category A validation). These sample counts do not include MS, MSD, or DUP's.

**Site:** 233-20 Braddock Ave, Jamaica, NY
**Laboratory:** Alpha Analytical, Inc.
**Report No.:** L2011723
**Reviewer:** Felomina Tanguilig and Christina Rink/Laboratory Data Consultants for P.W. Grosser Consulting
**Date:** April 24, 2020

**Samples Reviewed and Evaluation Summary**

| FIELD ID | LAB ID | FRACTIONS VALIDATED |
|---|---|---|
| SS001 | L2011723-01 | VOC |
| SV001 | L2011723-02 | VOC |
| SV002 | L2011723-03 | VOC |
| SV003 | L2011723-04 | VOC |
| OA001 | L2011723-05 | VOC, VOC-SIM |
| IA001 | L2011723-06 | VOC, VOC-SIM |
| IA001DUP | L2011723-06DUP | VOC, VOC-SIM |

Associated QC Samples(s):
Field/Trip Blanks: None Associated
Field Duplicate pair: None Associated

The above-listed air samples were collected on March 13, 2020 and were analyzed for volatile organic compounds (VOCs) by TO-15 and TO15 in selected ion monitoring (SIM) mode. The data validation was performed in accordance with the USEPA Region 2 *Analysis of Volatile Organic Compounds in Air Contained Canisters*, SOP HW-31, Revision 6 (September 2016) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review,* EPA 540-R-2017-002 (January 2017), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
- Initial and Continuing Calibrations
- Blanks
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

## Overall Evaluation of Data and Potential Usability Issues

All results are usable as reported or usable with minor qualification due to laboratory quality control outliers.

The validation findings were based on the following information.

## Data Completeness

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

## Holding Times and Sample Preservation

All criteria were met.

## GC/MS Tunes

All criteria were met.

## Initial and Continuing Calibrations

VOC

Initial calibration:

Compounds that did not meet criteria are summarized in the following table.

| Date | Instrument ID | Compound | ICV %D | Associated Samples | | Validation Action |
|---|---|---|---|---|---|---|
| 03/13/20 | ICV | 1,2,4-Trichlorobenzene | 50.9 | OA001<br>IA001 | SS | UJ nondetects |

X = Initial calibration (IC) relative standard deviation (%RSD) > 20; estimate (J/UJ) positive and nondetect results.
XX = Continuing calibration (CC) percent difference (%D) > 20; estimate (J/UJ) positive and nondetect results.
SS = Second source verification percent difference (%D) > 30; estimate (J/UJ) positive and nondetect results.
+ = Response factor (RRF) < validation criteria; estimate (J/UJ) positive and nondetect results.

The 1,2,4-trichlorobenzene results were estimated due to second source calibration exceedance. The bias cannot be determined. The results can be used for project objectives as nondetects with estimated quantitation limits (UJ) which may have a minor impact on the data usability.

Continuing calibration:

Compounds that did not meet criteria are summarized in the following table.

| Date | Instrument ID | Compound | CC %D | Associated Samples | | Validation Action |
|---|---|---|---|---|---|---|
| 03/20/20 | CCV | 2-Hexanone | 40.3 | OA001<br>IA001 | XX | UJ nondetects |

X = Initial calibration (IC) relative standard deviation (%RSD) > 20; estimate (J/UJ) positive and nondetect results.
XX = Continuing calibration (CC) percent difference (%D) > 20; estimate (J/UJ) positive and nondetect results.
SS = Second source verification percent difference (%D) > 30; estimate (J/UJ) positive and nondetect results.
+ = Response factor (RRF) < validation criteria; estimate (J/UJ) positive and nondetect results.

The 2-hexanone results were estimated due to continuing calibration exceedance. The bias cannot be determined. The results can be used for project objectives as nondetects with estimated quantitation limits (UJ) which may have a minor impact on the data usability.

VOC-SIM

All criteria were met.

## Blanks

Contamination was not detected in the method blanks.

A field blank was not associated with this sample set. Validation action was not required on this basis.

## Laboratory Duplicate Results

Laboratory duplicates were performed on sample IA001 for VOC and VOC-SIM analyses. All criteria were met.

## LCS Results

VOC

The following table lists the LCS percent recoveries (%R) outside of control limits in the VOC analysis and the resulting validation actions.

| LCS ID | Compound | LCS %R (Limits) | Affected Sample | Validation Action |
|---|---|---|---|---|
| WG1353541-3LCS | 2-Hexanone | 140 (70-130) | OA001 | None |
| | 1,2,4-Trichlorobenzene | 138 (70-130) | IA001 | None |
| | Hexachlorobutadiene | 146 (70-130) | | None |

Validation action was not required for 2-hexanone, 1,2,4-trichlorobenzene, and hexachlorobutadiene due to high LCS/LCSD percent recoveries as positive results only are affected and these compounds were not detected in the associated samples.

VOC-SIM

All criteria were met.

## Internal Standards

All criteria were met.

## Field Duplicate Results

A field duplicate pair was not associated with this sample set. Validation action was not required on this basis.

## Quantitation Limits and Data Assessment

No results were reported below the reporting limit (RL) and above the method detection limit (MDL) in the VOC and VOC-SIM analyses.

Due to high target compound levels or difficult sample matrix, select samples were analyzed at dilutions. The following table lists the sample dilutions which were performed and the results reported. RLs were elevated accordingly.

| Sample | VOC Analysis Reported |
|---|---|
| SV001 | 3.333-fold dilution due to nature of sample matrix |
| SV002 | 6.25-fold dilution due to nature of sample matrix |
| SV003 | 2.5-fold dilution due to nature of sample matrix |

Dilutions were not required for VOC-SIManalysis.

## Sample Quantitation and Compound Identification

Calculations were spot-checked; no discrepancies were noted.

## DATA VALIDATION QUALIFIERS

U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The 'J' data may be biased high or low or the direction of the bias may be indeterminable.

UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The 'UJ' data may be biased low.

JN - The analysis indicates the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-01 | Date Collected | : 03/13/20 16:25 |
| Client ID | : SS001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 01:52 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193208 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier | |
| 75-71-8 | Dichlorodifluoromethane | 0.409 | 0.200 | -- | 2.02 | 0.989 | -- | | |
| 74-87-3 | Chloromethane | 0.259 | 0.200 | -- | 0.535 | 0.413 | -- | | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U | U |
| 75-01-4 | Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | U | U |
| 106-99-0 | 1,3-Butadiene | 0.830 | 0.200 | -- | 1.84 | 0.442 | -- | | |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U | U |
| 64-17-5 | Ethanol | 10.8 | 5.00 | -- | 20.3 | 9.42 | -- | | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U | U |
| 67-64-1 | Acetone | 39.9 | 1.00 | -- | 94.8 | 2.38 | -- | | |
| 75-69-4 | Trichlorofluoromethane | 0.208 | 0.200 | -- | 1.17 | 1.12 | -- | | |
| 67-63-0 | Isopropanol | 1.64 | 0.500 | -- | 4.03 | 1.23 | -- | | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U | U |
| 75-65-0 | Tertiary butyl Alcohol | 2.04 | 0.500 | -- | 6.18 | 1.52 | -- | | |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U | U |
| 75-15-0 | Carbon disulfide | 1.44 | 0.200 | -- | 4.48 | 0.623 | -- | | |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U | |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U | |
| 78-93-3 | 2-Butanone | 5.11 | 0.500 | -- | 15.1 | 1.47 | -- | | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U | U |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U | U |
| 67-66-3 | Chloroform | 69.2 | 0.200 | -- | 338 | 0.977 | -- | | |
| 109-99-9 | Tetrahydrofuran | 3.06 | 0.500 | -- | 9.02 | 1.47 | -- | | |

APR 2 7 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-01 | Date Collected | : 03/13/20 16:25 |
| Client ID | : SS001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 01:52 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193208 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 32.4 | 0.200 | -- | 114 | 0.705 | -- | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 71-43-2 | Benzene | 3.34 | 0.200 | -- | 10.7 | 0.639 | -- | |
| 56-23-5 | Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | U |
| 110-82-7 | Cyclohexane | 14.5 | 0.200 | -- | 49.9 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | 5.24 | 0.200 | -- | 35.1 | 1.34 | -- | |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 5.24 | 0.200 | -- | 24.5 | 0.934 | -- | |
| 142-82-5 | Heptane | 5.29 | 0.200 | -- | 21.7 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.590 | 0.500 | -- | 2.42 | 2.05 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 18.7 | 0.200 | -- | 70.5 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | 2.89 | 0.200 | -- | 11.8 | 0.820 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 127-18-4 | Tetrachloroethene | 45.3 | 0.200 | -- | 307 | 1.36 | -- | |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 3.82 | 0.200 | -- | 16.6 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 10.2 | 0.400 | -- | 44.3 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | 0.203 | 0.200 | -- | 0.864 | 0.852 | -- | |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-01 | Date Collected | : 03/13/20 16:25 |
| Client ID | : SS001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 01:52 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193208 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 4.43 | 0.200 | -- | 19.2 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | 0.737 | 0.200 | -- | 3.62 | 0.983 | -- | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.770 | 0.200 | -- | 3.79 | 0.983 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 2.23 | 0.200 | -- | 11.0 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-02D | Date Collected | : 03/13/20 16:26 |
| Client ID | : SV001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 02:28 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 3.333 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193209 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 75.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 0.667 | -- | ND | 3.30 | -- | U |
| 74-87-3 | Chloromethane | ND | 0.667 | -- | ND | 1.38 | -- | U |
| 76-14-2 | Freon-114 | ND | 0.667 | -- | ND | 4.66 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.667 | -- | ND | 1.71 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 0.667 | -- | ND | 1.48 | -- | U |
| 74-83-9 | Bromomethane | ND | 0.667 | -- | ND | 2.59 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.667 | -- | ND | 1.76 | -- | U |
| 64-17-5 | Ethanol | ND | 16.7 | -- | ND | 31.5 | -- | U |
| 593-60-2 | Vinyl bromide | ND | 0.667 | -- | ND | 2.92 | -- | U |
| 67-64-1 | Acetone | 793 | 3.33 | -- | 1880 | 7.91 | -- | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.667 | -- | ND | 3.75 | -- | U |
| 67-63-0 | Isopropanol | 13.4 | 1.67 | -- | 32.9 | 4.10 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.667 | -- | ND | 2.64 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 8.96 | 1.67 | -- | 27.2 | 5.06 | -- | |
| 75-09-2 | Methylene chloride | ND | 1.67 | -- | ND | 5.80 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.667 | -- | ND | 2.09 | -- | U |
| 75-15-0 | Carbon disulfide | 0.820 | 0.667 | -- | 2.55 | 2.08 | -- | |
| 76-13-1 | Freon-113 | ND | 0.667 | -- | ND | 5.11 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.667 | -- | ND | 2.64 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.667 | -- | ND | 2.70 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.667 | -- | ND | 2.40 | -- | U |
| 78-93-3 | 2-Butanone | 47.1 | 1.67 | -- | 139 | 4.93 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.667 | -- | ND | 2.64 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 1.67 | -- | ND | 6.02 | -- | U |
| 67-66-3 | Chloroform | ND | 0.667 | -- | ND | 3.26 | -- | U |
| 109-99-9 | Tetrahydrofuran | 7.82 | 1.67 | -- | 23.1 | 4.93 | -- | |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-02D | Date Collected | : 03/13/20 16:26 |
| Client ID | : SV001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 02:28 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 3.333 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193209 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 75.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.667 | -- | ND | 2.70 | -- | U |
| 110-54-3 | n-Hexane | 3.20 | 0.667 | -- | 11.3 | 2.35 | -- | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.667 | -- | ND | 3.64 | -- | U |
| 71-43-2 | Benzene | 1.26 | 0.667 | -- | 4.03 | 2.13 | -- | |
| 56-23-5 | Carbon tetrachloride | ND | 0.667 | -- | ND | 4.20 | -- | U |
| 110-82-7 | Cyclohexane | 1.71 | 0.667 | -- | 5.89 | 2.30 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.667 | -- | ND | 3.08 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.667 | -- | ND | 4.47 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.667 | -- | ND | 2.40 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.667 | -- | ND | 3.58 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 0.667 | -- | ND | 3.12 | -- | U |
| 142-82-5 | Heptane | 11.0 | 0.667 | -- | 45.1 | 2.73 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.667 | -- | ND | 3.03 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 2.26 | 1.67 | -- | 9.26 | 6.84 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.667 | -- | ND | 3.03 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.667 | -- | ND | 3.64 | -- | U |
| 108-88-3 | Toluene | 13.6 | 0.667 | -- | 51.3 | 2.51 | -- | |
| 591-78-6 | 2-Hexanone | 8.08 | 0.667 | -- | 33.1 | 2.73 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 0.667 | -- | ND | 5.68 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.667 | -- | ND | 5.13 | -- | U |
| 127-18-4 | Tetrachloroethene | 11.6 | 0.667 | -- | 78.7 | 4.52 | -- | |
| 108-90-7 | Chlorobenzene | ND | 0.667 | -- | ND | 3.07 | -- | U |
| 100-41-4 | Ethylbenzene | 1.66 | 0.667 | -- | 7.21 | 2.90 | -- | |
| 179601-23-1 | p/m-Xylene | 6.72 | 1.33 | -- | 29.2 | 5.78 | -- | |
| 75-25-2 | Bromoform | ND | 0.667 | -- | ND | 6.90 | -- | U |
| 100-42-5 | Styrene | ND | 0.667 | -- | ND | 2.84 | -- | U |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-02D | Date Collected | : 03/13/20 16:26 |
| Client ID | : SV001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 02:28 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 3.333 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193209 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 75.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.667 | -- | ND | 4.58 | -- | U |
| 95-47-6 | o-Xylene | 2.44 | 0.667 | -- | 10.6 | 2.90 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.667 | -- | ND | 3.28 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.783 | 0.667 | -- | 3.85 | 3.28 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 2.97 | 0.667 | -- | 14.6 | 3.28 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.667 | -- | ND | 3.45 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.667 | -- | ND | 4.01 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.667 | -- | ND | 4.01 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.667 | -- | ND | 4.01 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.667 | -- | ND | 4.95 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.667 | -- | ND | 7.11 | -- | U |

APR 2 7 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-03D | Date Collected | : 03/13/20 16:27 |
| Client ID | : SV002 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:04 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 6.25 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193210 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 40.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 1.25 | -- | ND | 6.18 | -- | U |
| 74-87-3 | Chloromethane | ND | 1.25 | -- | ND | 2.58 | -- | U |
| 76-14-2 | Freon-114 | ND | 1.25 | -- | ND | 8.74 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 1.25 | -- | ND | 3.20 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 1.25 | -- | ND | 2.77 | -- | U |
| 74-83-9 | Bromomethane | ND | 1.25 | -- | ND | 4.85 | -- | U |
| 75-00-3 | Chloroethane | ND | 1.25 | -- | ND | 3.30 | -- | U |
| 64-17-5 | Ethanol | ND | 31.2 | -- | ND | 58.8 | -- | U |
| 593-60-2 | Vinyl bromide | ND | 1.25 | -- | ND | 5.47 | -- | U |
| 67-64-1 | Acetone | 428 | 6.25 | -- | 1020 | 14.8 | -- | |
| 75-69-4 | Trichlorofluoromethane | ND | 1.25 | -- | ND | 7.02 | -- | U |
| 67-63-0 | Isopropanol | 6.52 | 3.12 | -- | 16.0 | 7.67 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.25 | -- | ND | 4.96 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 4.80 | 3.12 | -- | 14.6 | 9.46 | -- | |
| 75-09-2 | Methylene chloride | ND | 3.12 | -- | ND | 10.8 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 1.25 | -- | ND | 3.91 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 1.25 | -- | ND | 3.89 | -- | U |
| 76-13-1 | Freon-113 | ND | 1.25 | -- | ND | 9.58 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.25 | -- | ND | 4.96 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.25 | -- | ND | 5.06 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 1.25 | -- | ND | 4.51 | -- | U |
| 78-93-3 | 2-Butanone | 28.0 | 3.12 | -- | 82.6 | 9.20 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | 60.0 | 1.25 | -- | 238 | 4.96 | -- | |
| 141-78-6 | Ethyl Acetate | ND | 3.12 | -- | ND | 11.2 | -- | U |
| 67-66-3 | Chloroform | 10.4 | 1.25 | -- | 50.8 | 6.10 | -- | |
| 109-99-9 | Tetrahydrofuran | 4.63 | 3.12 | -- | 13.7 | 9.20 | -- | |

APR 27 2020



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-03D | Date Collected | : 03/13/20 16:27 |
| Client ID | : SV002 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:04 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 6.25 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193210 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 40.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.25 | -- | ND | 5.06 | -- | U |
| 110-54-3 | n-Hexane | ND | 1.25 | -- | ND | 4.41 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.25 | -- | ND | 6.82 | -- | U |
| 71-43-2 | Benzene | ND | 1.25 | -- | ND | 3.99 | -- | U |
| 56-23-5 | Carbon tetrachloride | ND | 1.25 | -- | ND | 7.86 | -- | U |
| 110-82-7 | Cyclohexane | ND | 1.25 | -- | ND | 4.30 | -- | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.25 | -- | ND | 5.78 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 1.25 | -- | ND | 8.37 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 1.25 | -- | ND | 4.50 | -- | U |
| 79-01-6 | Trichloroethene | 13.5 | 1.25 | -- | 72.6 | 6.72 | -- | |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 1.25 | -- | ND | 5.84 | -- | U |
| 142-82-5 | Heptane | 2.52 | 1.25 | -- | 10.3 | 5.12 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.25 | -- | ND | 5.67 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 3.12 | -- | ND | 12.8 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.25 | -- | ND | 5.67 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.25 | -- | ND | 6.82 | -- | U |
| 108-88-3 | Toluene | 9.82 | 1.25 | -- | 37.0 | 4.71 | -- | |
| 591-78-6 | 2-Hexanone | 8.93 | 1.25 | -- | 36.6 | 5.12 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 1.25 | -- | ND | 10.6 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 1.25 | -- | ND | 9.61 | -- | U |
| 127-18-4 | Tetrachloroethene | 320 | 1.25 | -- | 2170 | 8.48 | -- | |
| 108-90-7 | Chlorobenzene | ND | 1.25 | -- | ND | 5.76 | -- | U |
| 100-41-4 | Ethylbenzene | 2.88 | 1.25 | -- | 12.5 | 5.43 | -- | |
| 179601-23-1 | p/m-Xylene | 9.51 | 2.50 | -- | 41.3 | 10.9 | -- | |
| 75-25-2 | Bromoform | ND | 1.25 | -- | ND | 12.9 | -- | U |
| 100-42-5 | Styrene | ND | 1.25 | -- | ND | 5.32 | -- | U |

APR 2 7 2020

ALPHA ANALYTICAL



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-03D | Date Collected | : 03/13/20 16:27 |
| Client ID | : SV002 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:04 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 6.25 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193210 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 40.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.25 | -- | ND | 8.58 | -- | U |
| 95-47-6 | o-Xylene | 3.24 | 1.25 | -- | 14.1 | 5.43 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 1.25 | -- | ND | 6.15 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 1.25 | -- | ND | 6.15 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.81 | 1.25 | -- | 8.90 | 6.15 | -- | |
| 100-44-7 | Benzyl chloride | ND | 1.25 | -- | ND | 6.47 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.25 | -- | ND | 7.52 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.25 | -- | ND | 7.52 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.25 | -- | ND | 7.52 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 1.25 | -- | ND | 9.28 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 1.25 | -- | ND | 13.3 | -- | U |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-04D | Date Collected | : 03/13/20 16:28 |
| Client ID | : SV003 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:40 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 2.5 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193211 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 100 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | ND | 0.500 | -- | ND | 2.47 | -- | U |
| 74-87-3 | Chloromethane | ND | 0.500 | -- | ND | 1.03 | -- | U |
| 76-14-2 | Freon-114 | ND | 0.500 | -- | ND | 3.49 | -- | U |
| 75-01-4 | Vinyl chloride | ND | 0.500 | -- | ND | 1.28 | -- | U |
| 106-99-0 | 1,3-Butadiene | 4.51 | 0.500 | -- | 9.98 | 1.11 | -- | |
| 74-83-9 | Bromomethane | ND | 0.500 | -- | ND | 1.94 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.500 | -- | ND | 1.32 | -- | U |
| 64-17-5 | Ethanol | 15.3 | 12.5 | -- | 28.8 | 23.6 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.500 | -- | ND | 2.19 | -- | U |
| 67-64-1 | Acetone | 745 | 2.50 | -- | 1770 | 5.94 | -- | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.500 | -- | ND | 2.81 | -- | U |
| 67-63-0 | Isopropanol | 9.00 | 1.25 | -- | 22.1 | 3.07 | -- | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.500 | -- | ND | 1.98 | -- | U |
| 75-65-0 | Tertiary butyl Alcohol | 8.52 | 1.25 | -- | 25.8 | 3.79 | -- | |
| 75-09-2 | Methylene chloride | ND | 1.25 | -- | ND | 4.34 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.500 | -- | ND | 1.57 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.500 | -- | ND | 1.56 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.500 | -- | ND | 3.83 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.500 | -- | ND | 1.98 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.500 | -- | ND | 2.02 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 78-93-3 | 2-Butanone | 63.6 | 1.25 | -- | 188 | 3.69 | -- | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.500 | -- | ND | 1.98 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 1.25 | -- | ND | 4.50 | -- | U |
| 67-66-3 | Chloroform | 0.512 | 0.500 | -- | 2.50 | 2.44 | -- | |
| 109-99-9 | Tetrahydrofuran | 7.13 | 1.25 | -- | 21.0 | 3.69 | -- | |

APR 27 2020

ALPHA ANALYTICAL



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-04D | Date Collected | : 03/13/20 16:28 |
| Client ID | : SV003 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:40 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 2.5 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193211 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 100 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.500 | -- | ND | 2.02 | -- | U |
| 110-54-3 | n-Hexane | 1.49 | 0.500 | -- | 5.25 | 1.76 | -- | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.500 | -- | ND | 2.73 | -- | U |
| 71-43-2 | Benzene | 1.06 | 0.500 | -- | 3.39 | 1.60 | -- | |
| 56-23-5 | Carbon tetrachloride | ND | 0.500 | -- | ND | 3.15 | -- | U |
| 110-82-7 | Cyclohexane | ND | 0.500 | -- | ND | 1.72 | -- | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.500 | -- | ND | 2.31 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.500 | -- | ND | 3.35 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.500 | -- | ND | 2.69 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | ND | 0.500 | -- | ND | 2.34 | -- | U |
| 142-82-5 | Heptane | 2.36 | 0.500 | -- | 9.67 | 2.05 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.500 | -- | ND | 2.27 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 1.25 | -- | ND | 5.12 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.500 | -- | ND | 2.27 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.500 | -- | ND | 2.73 | -- | U |
| 108-88-3 | Toluene | 6.96 | 0.500 | -- | 26.2 | 1.88 | -- | |
| 591-78-6 | 2-Hexanone | 14.3 | 0.500 | -- | 58.6 | 2.05 | -- | |
| 124-48-1 | Dibromochloromethane | ND | 0.500 | -- | ND | 4.26 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.500 | -- | ND | 3.84 | -- | U |
| 127-18-4 | Tetrachloroethene | 34.0 | 0.500 | -- | 231 | 3.39 | -- | |
| 108-90-7 | Chlorobenzene | ND | 0.500 | -- | ND | 2.30 | -- | U |
| 100-41-4 | Ethylbenzene | 0.905 | 0.500 | -- | 3.93 | 2.17 | -- | |
| 179601-23-1 | p/m-Xylene | 2.78 | 1.00 | -- | 12.1 | 4.34 | -- | |
| 75-25-2 | Bromoform | ND | 0.500 | -- | ND | 5.17 | -- | U |
| 100-42-5 | Styrene | ND | 0.500 | -- | ND | 2.13 | -- | U |

APR 27 2020

ALPHA ANALYTICAL



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-04D | Date Collected | : 03/13/20 16:28 |
| Client ID | : SV003 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/21/20 03:40 |
| Sample Matrix | : SOIL_VAPOR | Dilution Factor | : 2.5 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R193211 | Instrument ID | : AIRLAB19 |
| Sample Amount | : 100 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.500 | -- | ND | 3.43 | -- | U |
| 95-47-6 | o-Xylene | 0.900 | 0.500 | -- | 3.91 | 2.17 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.500 | -- | ND | 2.46 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.500 | -- | ND | 2.46 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.768 | 0.500 | -- | 3.78 | 2.46 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.500 | -- | ND | 2.59 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.500 | -- | ND | 3.01 | -- | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.500 | -- | ND | 3.01 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.500 | -- | ND | 3.01 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.500 | -- | ND | 3.71 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.500 | -- | ND | 5.33 | -- | U |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-05 | Date Collected | : 03/13/20 16:29 |
| Client ID | : OA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 17:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38758 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | 0.467 | 0.200 | -- | 2.31 | 0.989 | -- | |
| 74-87-3 | Chloromethane | 0.648 | 0.200 | -- | 1.34 | 0.413 | -- | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 106-99-0 | 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | U |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | 16.5 | 5.00 | -- | 31.1 | 9.42 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | 5.09 | 1.00 | -- | 12.1 | 2.38 | -- | |
| 75-69-4 | Trichlorofluoromethane | 0.238 | 0.200 | -- | 1.34 | 1.12 | -- | |
| 67-63-0 | Isopropanol | 3.28 | 0.500 | -- | 8.06 | 1.23 | -- | |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 2.89 | 0.200 | -- | 10.2 | 0.705 | -- | |
| 71-43-2 | Benzene | 0.421 | 0.200 | -- | 1.34 | 0.639 | -- | |

APR 2 7 2020

ALPHA ANALYTICAL



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-05 | Date Collected | : 03/13/20 16:29 |
| Client ID | : OA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 17:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38758 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 110-82-7 | Cyclohexane | 1.24 | 0.200 | -- | 4.27 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 0.368 | 0.200 | -- | 1.72 | 0.934 | -- | |
| 142-82-5 | Heptane | 0.619 | 0.200 | -- | 2.54 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 2.16 | 0.200 | -- | 8.14 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 0.269 | 0.200 | -- | 1.17 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 0.974 | 0.400 | -- | 4.23 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | ND | 0.200 | -- | ND | 0.852 | -- | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 0.345 | 0.200 | -- | 1.50 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.249 | 0.200 | -- | 1.22 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |

APR 27 2020



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-05 | Date Collected | : 03/13/20 16:29 |
| Client ID | : OA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 17:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38758 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U |

APR 27 2020

ALPHA ANALYTICAL

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-06 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 18:16 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38759 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-71-8 | Dichlorodifluoromethane | 0.469 | 0.200 | -- | 2.32 | 0.989 | -- | |
| 74-87-3 | Chloromethane | 0.808 | 0.200 | -- | 1.67 | 0.413 | -- | |
| 76-14-2 | Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | U |
| 106-99-0 | 1,3-Butadiene | 1.48 | 0.200 | -- | 3.27 | 0.442 | -- | |
| 74-83-9 | Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | U |
| 75-00-3 | Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | U |
| 64-17-5 | Ethanol | 121 | 5.00 | -- | 228 | 9.42 | -- | |
| 593-60-2 | Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | U |
| 67-64-1 | Acetone | 15.8 | 1.00 | -- | 37.5 | 2.38 | -- | |
| 75-69-4 | Trichlorofluoromethane | 0.237 | 0.200 | -- | 1.33 | 1.12 | -- | |
| 67-63-0 | Isopropanol | 17.3 | 0.500 | -- | 42.5 | 1.23 | -- | |
| 75-65-0 | Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | U |
| 75-09-2 | Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | U |
| 107-05-1 | 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | U |
| 75-15-0 | Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | U |
| 76-13-1 | Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 78-93-3 | 2-Butanone | 1.12 | 0.500 | -- | 3.30 | 1.47 | -- | |
| 141-78-6 | Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | U |
| 67-66-3 | Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | U |
| 109-99-9 | Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | U |
| 110-54-3 | n-Hexane | 57.7 | 0.200 | -- | 203 | 0.705 | -- | |
| 71-43-2 | Benzene | 6.72 | 0.200 | -- | 21.5 | 0.639 | -- | |

APR 27 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-06 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 18:16 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38759 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 110-82-7 | Cyclohexane | 24.8 | 0.200 | -- | 85.4 | 0.688 | -- | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | U |
| 75-27-4 | Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | U |
| 123-91-1 | 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | U |
| 540-84-1 | 2,2,4-Trimethylpentane | 5.34 | 0.200 | -- | 24.9 | 0.934 | -- | |
| 142-82-5 | Heptane | 7.98 | 0.200 | -- | 32.7 | 0.820 | -- | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 108-10-1 | 4-Methyl-2-pentanone | 0.686 | 0.500 | -- | 2.81 | 2.05 | -- | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | U |
| 108-88-3 | Toluene | 26.1 | 0.200 | -- | 98.4 | 0.754 | -- | |
| 591-78-6 | 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | U |
| 124-48-1 | Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | U |
| 108-90-7 | Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | U |
| 100-41-4 | Ethylbenzene | 4.35 | 0.200 | -- | 18.9 | 0.869 | -- | |
| 179601-23-1 | p/m-Xylene | 15.7 | 0.400 | -- | 68.2 | 1.74 | -- | |
| 75-25-2 | Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | U |
| 100-42-5 | Styrene | 0.315 | 0.200 | -- | 1.34 | 0.852 | -- | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | U |
| 95-47-6 | o-Xylene | 6.09 | 0.200 | -- | 26.5 | 0.869 | -- | |
| 622-96-8 | 4-Ethyltoluene | 1.06 | 0.200 | -- | 5.21 | 0.983 | -- | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.40 | 0.200 | -- | 6.88 | 0.983 | -- | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.34 | 0.200 | -- | 26.3 | 0.983 | -- | |
| 100-44-7 | Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U |

APR 27 2020



Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-06 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 18:16 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15 | Analyst | : EW |
| Lab File ID | : R38759 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U V |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | U V |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | U UJ |
| 87-68-3 | Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | U V |

APR 2 7 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air by SIM

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-05 | Date Collected | : 03/13/20 16:29 |
| Client ID | : OA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 17:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : EW |
| Lab File ID | : R38758_EV2 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | U |
| 56-23-5 | Carbon tetrachloride | 0.062 | 0.020 | -- | 0.390 | 0.126 | -- | |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | 0.041 | 0.020 | -- | 0.278 | 0.136 | -- | |

APR 2 7 2020

Initials: CR

# Results Summary
# Form 1
# Volatile Organics in Air by SIM

| | | | |
|---|---|---|---|
| Client | : P. W. Grosser | Lab Number | : L2011723 |
| Project Name | : MHD1801 | Project Number | : MHD1801 |
| Lab ID | : L2011723-06 | Date Collected | : 03/13/20 16:30 |
| Client ID | : IA001 | Date Received | : 03/16/20 |
| Sample Location | : 223-20 BRADDOCK AVE, JAMAICA, NY | Date Analyzed | : 03/20/20 18:16 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : EW |
| Lab File ID | : R38759_EV2 | Instrument ID | : AIRPIANO3 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | U |
| 56-23-5 | Carbon tetrachloride | 0.061 | 0.020 | -- | 0.384 | 0.126 | -- | |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | 0.239 | 0.020 | -- | 1.62 | 0.136 | -- | |

APR 2 7 2020

Initials: CR

LDC #: 47705A48a
SDG #: L2011723
Laboratory: Alpha Analytical, Inc.

# VALIDATION COMPLETENESS WORKSHEET
Category B

Date: 4/22/20
Page: 1 of 1
Reviewer: EJ
2nd Reviewer:

**METHOD:** GC/MS Volatiles (EPA Method TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Sample receipt/Technical holding times | A / A | |
| II. | GC/MS Instrument performance check | A | |
| III. | Initial calibration/ICV | A / SW | %RSD/ICV ≤ 30 |
| IV. | Continuing calibration | SW | CCV ≤ 30 |
| V. | Laboratory Blanks / canister check per Batch | A | |
| VI. | Field blanks | N | |
| VII. | Surrogate spikes | N | |
| VIII. | Matrix spike/Matrix spike duplicates / DUP | N / A | |
| IX. | Laboratory control samples | SW | LCS |
| X. | Field duplicates | N | |
| XI. | Internal standards | A | |
| XII. | Compound quantitation RL/LOQ/LODs | A | No Results < RL > MDL |
| XIII. | Target compound identification | A | |
| XIV. | System performance | A | |
| XV. | Leak Check Compounds | N | not performed |
| XVI. | Overall assessment of data | A | |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

| | | Client ID | | Lab ID | Matrix | Date |
|---|---|---|---|---|---|---|
| 1 | 1 | SS001 | | L2011723-01 | Air | 03/13/20 |
| 2 | 1 | SV001 | 3.333X | L2011723-02 | Air | 03/13/20 |
| 3 | 1 | SV002 | 6.25X | L2011723-03 | Air | 03/13/20 |
| 4 | 1 | SV003 | 2.5X | L2011723-04 | Air | 03/13/20 |
| 5 | 2 | OA001 | | L2011723-05 | Air | 03/13/20 |
| 6 | 2 | IA001 | | L2011723-06 | Air | 03/13/20 |
| 7 | 2 | IA001DUP | | L2011723-06DUP | Air | 03/13/20 |
| 8 | | | | | | |
| 9 | | | | | | |

Notes:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | WG1353556-4 MB | | | | | | |
| 2 | WG1353541-4 MB | | | | | | |
| | | | | | | | |

LDC #: 47705A48a

**VALIDATION FINDINGS CHECKLIST**


Reviewer: FT
2nd Reviewer:

**Method:** Volatiles (EPA Method TO-15)

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| ***I. Technical holding times*** | | | | |
| Were all technical holding times met? | ✓ | | | |
| Was canister pressure criteria met? | ✓ | | | |
| ***II. GC/MS Instrument performance check*** | | | | |
| Were the BFB performance results reviewed and found to be within the specified criteria? | ✓ | | | |
| Were all samples analyzed within the 24 hour clock criteria? | ✓ | | | |
| ***IIIa. Initial calibration*** | | | | |
| Did the laboratory perform a 5 point calibration prior to sample analysis? | ✓ | | | |
| Were all percent relative standard deviations (%RSD) ≤ 30%? | ✓ | | | |
| IIIb. Initial calibration verification | | | | |
| Was an initial calibration verification standard analyzed after every ICAL for each instrument? | ✓ | | | |
| Were all percent differences (%D) ≤ 30%? | | ✓ | | |
| ***IV. Continuing calibration*** | | | | |
| Was a continuing calibration standard analyzed at least once every 24 hours for each instrument? | ✓ | | | |
| Were all percent differences (%D) ≤ 30%? | | ✓ | | |
| ***V. Laboratory Blanks/Canister Blanks*** | | | | |
| Was a laboratory blank associated with every sample in this SDG? | ✓ | | | |
| Was a laboratory blank analyzed at least once every 24 hours for each matrix and concentration? | ✓ | | | |
| Was there contamination in the laboratory blanks? | | ✓ | | |
| Was a canister blank analyzed for every canister? | ✓ | | | |
| Was there contamination in the canister blanks? | | ✓ | | |
| ***VI. Field Blanks*** | | | | |
| Were field blanks identified in this SDG? | | ✓ | | |
| Were target compounds detected in the field blanks? | | | ✓ | |
| ***VII. Surrogate spikes (Optional)*** | | | | |
| Were all surrogate percent recoveries (%R) within QC limits? | | | ✓ | |
| If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria? | | | ✓ | |
| ***VIII. Laboratory Duplicate*** | | | | |
| Was a laboratory duplicate analyzed for this SDG? | ✓ | | | |
| Were the relative percent differences (RPD) within the QC limits? | ✓ | | | |

LDC #: 47705 A48a

**VALIDATION FINDINGS CHECKLIST**


Reviewer: FT
2nd Reviewer:

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| ***IX. Laboratory control samples*** | | | | |
| Was an LCS analyzed per analytical batch for this SDG? | ✓ | | | |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits? | | ✓ | | |
| ***X. Field duplicates*** | | | | |
| Were field duplicate pairs identified in this SDG? | | ✓ | | |
| Were target compounds detected in the field duplicates? | | | ✓ | |
| ***XI. Internal standards*** | | | | |
| Were internal standard area counts within ± 40% from the associated calibration standard? | ✓ | | | |
| Were retention times within ± 20.0 seconds from the associated calibration standard? | ✓ | | | |
| ***XII. Compound quantitation*** | | | | |
| Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs? | ✓ | | | |
| Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound? | ✓ | | | |
| Were compound quantitation and RLs adjusted to reflect all sample dilutions applicable to level IV validation? | ✓ | | | |
| ***XIII. Target compound identification*** | | | | |
| Were relative retention times (RRT's) within ± 0.06 RRT units of the standard? | ✓ | | | |
| Did compound spectra meet specified EPA "Functional Guidelines" criteria? | ✓ | | | |
| Were chromatogram peaks verified and accounted for? | ✓ | | | |
| ***XIV. System performance*** | | | | |
| System performance was found to be acceptable. | ✓ | | | |
| ***XV. Leak check compounds*** | | | | |
| Was a leak check compound used to evaluate sample integrity and included in the laboratory analyte list? | ✓ | | | |
| Was the leak check compound detected in the samples? If yes, please see leak check validation findings worksheet. | ✓ | | | |
| ***XV. Overall assessment of data*** | | | | |
| Overall assessment of data was found to be acceptable. | ✓ | | | |

# TARGET COMPOUND WORKSHEET

**METHOD: VOA**

| | | | | |
|---|---|---|---|---|
| A. Chloromethane | AA. Tetrachloroethene | AAA. 1,3,5-Trimethylbenzene | AAAA. Ethyl tert-butyl ether | A1. 1,3-Butadiene |
| B. Bromomethane | BB. 1,1,2,2-Tetrachloroethane | BBB. 4-Chlorotoluene | BBBB. tert-Amyl methyl ether | B1. Hexane |
| C. Vinyl choride | CC. Toluene | CCC. tert-Butylbenzene | CCCC. 1-Chlorohexane | C1. Heptane |
| D. Chloroethane | DD. Chlorobenzene | DDD. 1,2,4-Trimethylbenzene | DDDD. Isopropyl alcohol | D1. Propylene |
| E. Methylene chloride | EE. Ethylbenzene | EEE. sec-Butylbenzene | EEEE. Acetonitrile | E1. Freon 11 |
| F. Acetone | FF. Styrene | FFF. 1,3-Dichlorobenzene | FFFF. Acrolein | F1. Freon 12 |
| G. Carbon disulfide | GG. Xylenes, total | GGG. p-Isopropyltoluene | GGGG. Acrylonitrile | G1. Freon 113 |
| H. 1,1-Dichloroethene | HH. Vinyl acetate | HHH. 1,4-Dichlorobenzene | HHHH. 1,4-Dioxane | H1. Freon 114 |
| I. 1,1-Dichloroethane | II. 2-Chloroethylvinyl ether | III. n-Butylbenzene | IIII. Isobutyl alcohol | I1. 2-Nitropropane |
| J. 1,2-Dichloroethene, total | JJ. Dichlorodifluoromethane | JJJ. 1,2-Dichlorobenzene | JJJJ. Methacrylonitrile | J1. Dimethyl disulfide |
| K. Chloroform | KK. Trichlorofluoromethane | KKK. 1,2,4-Trichlorobenzene | KKKK. Propionitrile | K1. 2,3-Dimethyl pentane |
| L. 1,2-Dichloroethane | LL. Methyl-tert-butyl ether | LLL. Hexachlorobutadiene | LLLL. Ethyl ether | L1. 2,4-Dimethyl pentane |
| M. 2-Butanone | MM. 1,2-Dibromo-3-chloropropane | MMM. Naphthalene | MMMM. Benzyl chloride | M1. 3,3-Dimethyl pentane |
| N. 1,1,1-Trichloroethane | NN. Methyl ethyl ketone | NNN. 1,2,3-Trichlorobenzene | NNNN. Iodomethane | N1. 2-Methylpentane |
| O. Carbon tetrachloride | OO. 2,2-Dichloropropane | OOO. 1,3,5-Trichlorobenzene | OOOO.1,1-Difluoroethane | O1. 3-Methylpentane |
| P. Bromodichloromethane | PP. Bromochloromethane | PPP. trans-1,2-Dichloroethene | PPPP. Tetrahydrofuran | P1. 3-Ethylpentane |
| Q. 1,2-Dichloropropane | QQ. 1,1-Dichloropropene | QQQ. cis-1,2-Dichloroethene | QQQQ. Methyl acetate | Q1. 2,2-Dimethylpentane |
| R. cis-1,3-Dichloropropene | RR. Dibromomethane | RRR. m,p-Xylenes | RRRR. Ethyl acetate | R1. 2,2,3- Trimethylbutane |
| S. Trichloroethene | SS. 1,3-Dichloropropane | SSS. o-Xylene | SSSS. Cyclohexane | S1. 2,2,4-Trimethylpentane |
| T. Dibromochloromethane | TT. 1,2-Dibromoethane | TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane | TTTT. Methylcyclohexane | T1. 2-Methylhexane |
| U. 1,1,2-Trichloroethane | UU. 1,1,1,2-Tetrachloroethane | UUU. 1,2-Dichlorotetrafluoroethane | UUUU. Allyl chloride | U1. Nonanal |
| V. Benzene | VV. Isopropylbenzene | VVV. 4-Ethyltoluene | VVVV. Methyl methacrylate | V1. 2-Methylnaphthalene |
| W. trans-1,3-Dichloropropene | WW. Bromobenzene | WWW. Ethanol | WWWW. Ethyl methacrylate | W1. Methanol |
| X. Bromoform | XX. 1,2,3-Trichloropropane | XXX. Di-isopropyl ether | XXXX. cis-1,4-Dichloro-2-butene | X1. 1,2,3-Trimethylbenzene |
| Y. 4-Methyl-2-pentanone | YY. n-Propylbenzene | YYY. tert-Butanol | YYYY. trans-1,4-Dichloro-2-butene | Y1. 2-Propanol |
| Z. 2-Hexanone | ZZ. 2-Chlorotoluene | ZZZ. tert-Butyl alcohol | ZZZZ. Pentachloroethane | Z1. |

LDC #: 47705A48

# VALIDATION FINDINGS WORKSHEET
## Initial Calibration Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

**METHOD:** GC/MS VOA (EPA SW 846 Method ~~8260C~~) TO 15

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was an initial calibration verification standard analyzed after each ICAL for each instrument?

Y (N) N/A Were all %D within the validation criteria of ≤20 %D?

| # | Date | Standard ID | Compound | Finding %D (Limit: <30.0%) | Associated Samples | Qualifications |
|---|---|---|---|---|---|---|
| | 3/13/20 1206 | ICV- | KKK | 50.9 | 5→7, WG135354-4 MB | J\|UJ\|P (ND) |

ICVvoa.wpd

LDC #: 47705A48a

# VALIDATION FINDINGS WORKSHEET
## Continuing Calibration


Reviewer: FT
2nd Reviewer: O

**METHOD:** GC/MS VOA (EPA SW 846 Method ~~8260C~~) TO 15

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤20 %D and ≥0.05 RRF ?

| # | Date | Standard ID | Compound | Finding %D (Limit: ~~≤20.0%~~ 30%) | Finding RRF (Limit: ≥0.05) | Associated Samples | Qualifications |
|---|---|---|---|---|---|---|---|
| | 3/20/20 | CCV | ~~X~~ Z | 40.3 | | 5 → 7, | J/UJ/P (ND) |
| | 0132PM | | | | | WG135354-4MD | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

LDC #: 47705A48a

# VALIDATION FINDINGS WORKSHEET
## Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

TO15

**METHOD:** GC/MS VOA (EPA ~~SW-846~~ Method ~~8260C~~)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

| # | LCS/LCSD ID | Compound | LCS %R (Limits) | LCSD %R (Limits) | RPD (Limits) | Associated Samples | Qualifications |
|---|---|---|---|---|---|---|---|
| | WG1353541-3 | Z | 140 (70-130) | ( ) | ( ) | 5, 6, WG1353541-4 MB | J (all P) (ND) |
| | LCS | KKK | 138 ( ↓ ) | ( ) | ( ) | ↓ | ↓ |
| | | LLL | 146 ( ↓ ) | ( ) | ( ) | ↓ | ↓ |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |

LDC #: 47705A48a

# VALIDATION FINDINGS WORKSHEET
## Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

**METHOD:** GC/MS VOA (TO15)
The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

$A_x$ = Area of compound,
$C_x$ = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

$A_{is}$ = Area of associated internal standard
$C_{is}$ = Concentration of internal standard

| # | Standard ID | Calibration Date | Compound (Reference Internal Standard) | Reported RRF ( 10 std) | Recalculated RRF ( 10 std) | Reported Average RRF (initial) | Recalculated Average RRF (initial) | Reported %RSD | Recalculated %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ICAL AIRLAB19 | 2/25/20 | C | 0.411 | 0.411 | 0.4449 | 0.4449 | 11.53 | 11.53 |
| | | | V | 0.713 | 0.713 | 0.7231 | 0.7231 | 13.82 | 13.82 |
| | | | AA | 4.143 | 4.143 | 3.9723 | 3.9723 | 22.14 | 22.14 |
| 2 | ICAL AIRPIAN03 | 3/12/20 | C | 0.468 | 0.468 | 0.4844 | 0.4844 | 10.58 | 10.58 |
| | | | V | 0.710 | 0.710 | 0.7241 | 0.7241 | 12.51 | 12.51 |
| | | | AA | 2.193 | 2.193 | 2.2300 | 2.2300 | 11.00 | 11.00 |
| 3 | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 4 | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 47705A48a

# VALIDATION FINDINGS WORKSHEET
## Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FI
2nd Reviewer:

**METHOD:** GC/MS VOA (TO15)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
$A_x$ = Area of compound, $A_{is}$ = Area of associated internal standard
$C_x$ = Concentration of compound, $C_{is}$ = Concentration of internal standard

| # | Standard ID | Calibration Date | Compound (Reference internal Standard) | Average RRF (initial) | Reported RRF (CC) | Recalculated RRF (CC) | Reported %D | Recalculated %D |
|---|---|---|---|---|---|---|---|---|
| 1 | CCV | 3/20/20 | C | 0.4449 | 0.440 | 0.440 | 1.1 | 1.1 |
| | AIRLAB19 | | V | 0.7231 | 0.700 | 0.700 | 3.2 | 3.2 |
| | 1208 | | AA | 3.9723 | 2.957 | 2.957 | 10.5 | 10.5 |
| 2 | CCV | 3/20/20 | C | 0.4844 | 0.558 | 0.558 | 15.3 | 15.3 |
| | AIR81ANU | | V | 0.7241 | 0.705 | 0.705 | 2.6 | 2.6 |
| | 0132 | | AA | 2.230U | 2.569 | 2.569 | 15.2 | 15.2 |
| 3 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 4 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 5 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 47705A48a

# VALIDATION FINDINGS WORKSHEET
## Laboratory Control Sample Results Verification


Reviewer: F7
2nd Reviewer:

**METHOD:** GC/MS VOA (EPA Method TO-15)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA  Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC)  LCSC = Laboraotry control sample concentration  LCSDC = Laboratory control sample duplicate concentration

LCS ID: WG135355 6-3 (LCS)

| Compound | Spike Added (ppbv) | | Spiked Sample Concentration (ppbv) | | LCS Percent Recovery | | LCSD Percent Recovery | | LCS/LCSD RPD | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LCS | LCSD | LCS | LCSD | Reported | Recalc. | Reported | Recalc. | Reported | Recalc. |
| 1,1-Dichloroethene | 10 | NA | 10.9 | NA | 109 | 109 | | | | |
| Trichloroethene | " | | 9.60 | | 96 | 96 | | | | |
| Benzene | " | | 9.60 | | 96 | 96 | | | | |
| Toluene | " | | 10.8 | | 108 | 108 | | | | |
| Chlorobenzene | " | | 11.8 | | 118 | 118 | | | | |

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 47705A48a

# VALIDATION FINDINGS WORKSHEET
## Sample Calculation Verification


Reviewer: FT
2nd reviewer:

**METHOD:** GC/MS VOA (EPA Method TO-15)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

$A_x$ = Area of the characteristic ion (EICP) for the compound to be measured

$A_{is}$ = Area of the characteristic ion (EICP) for the specific internal standard

$I_s$ = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

$V_o$ = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, V:

Conc. = $\frac{(257634)(10.0)}{(1066245)(6.7231)}$

=

3.34 ppbV

| # | Sample ID | Compound | Reported Concentration (ppbV) | Calculated Concentration (ppbV) | Qualification |
|---|---|---|---|---|---|
| | #1 | V | 3.34 | 3.34 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

LDC #: 47705A48b
SDG #: L2011723
Laboratory: Alpha Analytical, Inc.

# VALIDATION COMPLETENESS WORKSHEET
Category B

Date: 4/22/20
Page: 1 of 1
Reviewer: FT
2nd Reviewer:

**METHOD:** GC/MS Volatiles (EPA Method TO-15-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Sample receipt/Technical holding times | A / A | |
| II. | GC/MS Instrument performance check | A | |
| III. | Initial calibration/ICV | A / A | %RSD / ICV ≤ 30 |
| IV. | Continuing calibration | A | CCV ≤ 30 |
| V. | Laboratory Blanks / canister check per batch | A / A | |
| VI. | Field blanks | N | |
| VII. | Surrogate spikes | N | |
| VIII. | Matrix spike/Matrix spike duplicates / DUP | N / A | |
| IX. | Laboratory control samples | A | LCS |
| X. | Field duplicates | N | |
| XI. | Internal standards | A | |
| XII. | Compound quantitation RL/LOQ/LODs | A | No Results < RL > MDL |
| XIII. | Target compound identification | A | |
| XIV. | System performance | A | |
| XV. | Leak Check Compounds | N | not performed |
| XVI. | Overall assessment of data | A | |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

| | Client ID | Lab ID | Matrix | Date |
|---|---|---|---|---|
| 1 | OA001 | L2011723-05 | Air | 03/13/20 |
| 2 | IA001 | L2011723-06 | Air | 03/13/20 |
| 3 | IA001DUP | L2011723-06DUP | Air | 03/13/20 |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |

Notes:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | WG1353543-1 MB | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

LDC #: 47705A48b

**VALIDATION FINDINGS CHECKLIST**


Reviewer: FT
2nd Reviewer:

**Method:** Volatiles (EPA Method TO-15)

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| ***I. Technical holding times*** | | | | |
| Were all technical holding times met? | ✓ | | | |
| Was canister pressure criteria met? | ✓ | | | |
| ***II. GC/MS Instrument performance check*** | | | | |
| Were the BFB performance results reviewed and found to be within the specified criteria? | ✓ | | | |
| Were all samples analyzed within the 24 hour clock criteria? | ✓ | | | |
| ***IIIa. Initial calibration*** | | | | |
| Did the laboratory perform a 5 point calibration prior to sample analysis? | ✓ | | | |
| Were all percent relative standard deviations (%RSD) ≤ 30%? | ✓ | | | |
| IIIb. Initial calibration verification | | | | |
| Was an initial calibration verification standard analyzed after every ICAL for each instrument? | ✓ | | | |
| Were all percent differences (%D) < 30%? | ✓ | | | |
| ***IV. Continuing calibration*** | | | | |
| Was a continuing calibration standard analyzed at least once every 24 hours for each instrument? | ✓ | | | |
| Were all percent differences (%D) < 30%? | ✓ | | | |
| ***V. Laboratory Blanks/Canister Blanks*** | | | | |
| Was a laboratory blank associated with every sample in this SDG? | ✓ | | | |
| Was a laboratory blank analyzed at least once every 24 hours for each matrix and concentration? | ✓ | | | |
| Was there contamination in the laboratory blanks? | | ✓ | | |
| Was a canister blank analyzed for every canister? | ✓ | | | |
| Was there contamination in the canister blanks? | | ✓ | | |
| ***VI. Field Blanks*** | | | | |
| Were field blanks identified in this SDG? | | ✓ | | |
| Were target compounds detected in the field blanks? | | | ✓ | |
| ***VII. Surrogate spikes (Optional)*** | | | | |
| Were all surrogate percent recoveries (%R) within QC limits? | | | ✓ | |
| If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria? | | | ✓ | |
| ***VIII. Laboratory Duplicate*** | | | | |
| Was a laboratory duplicate analyzed for this SDG? | ✓ | | | |
| Were the relative percent differences (RPD) within the QC limits? | ✓ | | | |

LDC #: 47705A48b

**VALIDATION FINDINGS CHECKLIST**


Reviewer: FT
2nd Reviewer:

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| ***IX. Laboratory control samples*** | | | | |
| Was an LCS analyzed per analytical batch for this SDG? | ✓ | | | |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits? | ✓ | | | |
| ***X. Field duplicates*** | | | | |
| Were field duplicate pairs identified in this SDG? | | ✓ | | |
| Were target compounds detected in the field duplicates? | | | ✓ | |
| ***XI. Internal standards*** | | | | |
| Were internal standard area counts within ± 40% from the associated calibration standard? | ✓ | | | |
| Were retention times within ± 20.0 seconds from the associated calibration standard? | ✓ | | | |
| ***XII. Compound quantitation*** | | | | |
| Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs? | ✓ | | | |
| Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound? | ✓ | | | |
| Were compound quantitation and RLs adjusted to reflect all sample dilutions applicable to level IV validation? | ✓ | | | |
| ***XIII. Target compound identification*** | | | | |
| Were relative retention times (RRT's) within ± 0.06 RRT units of the standard? | ✓ | | | |
| Did compound spectra meet specified EPA "Functional Guidelines" criteria? | ✓ | | | |
| Were chromatogram peaks verified and accounted for? | ✓ | | | |
| ***XIV. System performance*** | | | | |
| System performance was found to be acceptable. | ✓ | | | |
| ***XV. Leak check compounds*** | | | | |
| Was a leak check compound used to evaluate sample integrity and included in the laboratory analyte list? | ✓ | | | |
| Was the leak check compound detected in the samples? If yes, please see leak check validation findings worksheet. | ✓ | | | |
| ***XV. Overall assessment of data*** | | | | |
| Overall assessment of data was found to be acceptable. | ✓ | | | |

# TARGET COMPOUND WORKSHEET

**METHOD: VOA**

| | | | | |
|---|---|---|---|---|
| A. Chloromethane | AA. Tetrachloroethene | AAA. 1,3,5-Trimethylbenzene | AAAA. Ethyl tert-butyl ether | A1. 1,3-Butadiene |
| B. Bromomethane | BB. 1,1,2,2-Tetrachloroethane | BBB. 4-Chlorotoluene | BBBB. tert-Amyl methyl ether | B1. Hexane |
| C. Vinyl choride | CC. Toluene | CCC. tert-Butylbenzene | CCCC. 1-Chlorohexane | C1. Heptane |
| D. Chloroethane | DD. Chlorobenzene | DDD. 1,2,4-Trimethylbenzene | DDDD. Isopropyl alcohol | D1. Propylene |
| E. Methylene chloride | EE. Ethylbenzene | EEE. sec-Butylbenzene | EEEE. Acetonitrile | E1. Freon 11 |
| F. Acetone | FF. Styrene | FFF. 1,3-Dichlorobenzene | FFFF. Acrolein | F1. Freon 12 |
| G. Carbon disulfide | GG. Xylenes, total | GGG. p-Isopropyltoluene | GGGG. Acrylonitrile | G1. Freon 113 |
| H. 1,1-Dichloroethene | HH. Vinyl acetate | HHH. 1,4-Dichlorobenzene | HHHH. 1,4-Dioxane | H1. Freon 114 |
| I. 1,1-Dichloroethane | II. 2-Chloroethylvinyl ether | III. n-Butylbenzene | IIII. Isobutyl alcohol | I1. 2-Nitropropane |
| J. 1,2-Dichloroethene, total | JJ. Dichlorodifluoromethane | JJJ. 1,2-Dichlorobenzene | JJJJ. Methacrylonitrile | J1. Dimethyl disulfide |
| K. Chloroform | KK. Trichlorofluoromethane | KKK. 1,2,4-Trichlorobenzene | KKKK. Propionitrile | K1. 2,3-Dimethyl pentane |
| L. 1,2-Dichloroethane | LL. Methyl-tert-butyl ether | LLL. Hexachlorobutadiene | LLLL. Ethyl ether | L1. 2,4-Dimethyl pentane |
| M. 2-Butanone | MM. 1,2-Dibromo-3-chloropropane | MMM. Naphthalene | MMMM. Benzyl chloride | M1. 3,3-Dimethyl pentane |
| N. 1,1,1-Trichloroethane | NN. Methyl ethyl ketone | NNN. 1,2,3-Trichlorobenzene | NNNN. Iodomethane | N1. 2-Methylpentane |
| O. Carbon tetrachloride | OO. 2,2-Dichloropropane | OOO. 1,3,5-Trichlorobenzene | OOOO.1,1-Difluoroethane | O1. 3-Methylpentane |
| P. Bromodichloromethane | PP. Bromochloromethane | PPP. trans-1,2-Dichloroethene | PPPP. Tetrahydrofuran | P1. 3-Ethylpentane |
| Q. 1,2-Dichloropropane | QQ. 1,1-Dichloropropene | QQQ. cis-1,2-Dichloroethene | QQQQ. Methyl acetate | Q1. 2,2-Dimethylpentane |
| R. cis-1,3-Dichloropropene | RR. Dibromomethane | RRR. m,p-Xylenes | RRRR. Ethyl acetate | R1. 2,2,3- Trimethylbutane |
| S. Trichloroethene | SS. 1,3-Dichloropropane | SSS. o-Xylene | SSSS. Cyclohexane | S1. 2,2,4-Trimethylpentane |
| T. Dibromochloromethane | TT. 1,2-Dibromoethane | TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane | TTTT. Methylcyclohexane | T1. 2-Methylhexane |
| U. 1,1,2-Trichloroethane | UU. 1,1,1,2-Tetrachloroethane | UUU. 1,2-Dichlorotetrafluoroethane | UUUU. Allyl chloride | U1. Nonanal |
| V. Benzene | VV. Isopropylbenzene | VVV. 4-Ethyltoluene | VVVV. Methyl methacrylate | V1. 2-Methylnaphthalene |
| W. trans-1,3-Dichloropropene | WW. Bromobenzene | WWW. Ethanol | WWWW. Ethyl methacrylate | W1. Methanol |
| X. Bromoform | XX. 1,2,3-Trichloropropane | XXX. Di-isopropyl ether | XXXX. cis-1,4-Dichloro-2-butene | X1. 1,2,3-Trimethylbenzene |
| Y. 4-Methyl-2-pentanone | YY. n-Propylbenzene | YYY. tert-Butanol | YYYY. trans-1,4-Dichloro-2-butene | Y1. 2-Propanol |
| Z. 2-Hexanone | ZZ. 2-Chlorotoluene | ZZZ. tert-Butyl alcohol | ZZZZ. Pentachloroethane | Z1. |

LDC #: 47705A486

# VALIDATION FINDINGS WORKSHEET
## Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

**METHOD:** GC/MS VOA (EPA Method TO-15)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

$A_x$ = Area of compound,
$C_x$ = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

$A_{is}$ = Area of associated internal standard
$C_{is}$ = Concentration of internal standard

| # | Standard ID | Calibration Date | Compound (Reference Internal Standard) | Reported | Recalculated | Reported | Recalculated | Reported | Recalculated |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RRF ( std) 1.0 ppb | RRF ( std) 1.0 ppb | Average RRF (initial) | Average RRF (initial) | %RSD | %RSD |
| 1 | ICAL AIR PIANO | 3/12/20 | C | 0.541 | 0.541 | 0.5328 | 0.5328 | 12.52 | 12.52 |
| | | | B | 0.306 | 0.306 | 0.2946 | 0.2946 | 11.0 | 11.0 |
| | | | AA | 2.352 | 2.352 | 2.2644 | 2.2644 | 6.9 | 6.9 |
| | | | | | | | | | |
| 2 | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 3 | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 47705A48b

# VALIDATION FINDINGS WORKSHEET
## Continuing Calibration Results Verification


Reviewer: [illegible]
2nd Reviewer: [illegible]

**METHOD:** GC/MS VOA (EPA TO-15)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
$A_x$ = Area of compound, $A_{is}$ = Area of associated internal standard
$C_x$ = Concentration of compound, $C_{is}$ = Concentration of internal standard

| # | Standard ID | Calibration Date | Compound (Reference internal Standard) | Average RRF (initial) | Reported RRF (CC) | Recalculated RRF (CC) | Reported %D | Recalculated %D |
|---|---|---|---|---|---|---|---|---|
| 1 | CCV 1411 | 3/20/20 | C | 0.5328 | 0.564 | 0.564 | 5.8 | 5.8 |
| | | | D | 0.2946 | 0.276 | 0.276 | 6.4 | 6.4 |
| | | | AD | 2.2644 | 2.436 | 2.436 | 7.6 | 7.6 |
| | | | | | | | | |
| 2 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 3 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 47705A48b

# VALIDATION FINDINGS WORKSHEET
## Laboratory Control Sample Results Verification


Reviewer:
2nd Reviewer:

**METHOD:** GC/MS VOA (EPA Method TO-15)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA  Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC)  LCSC = Laboraotry control sample concentration  LCSDC = Laboratory control sample duplicate concentration

LCS ID: WG135354 3-3 LCS

| Compound | Spike Added (ppbv) | | Spiked Sample Concentration (ppbv) | | LCS Percent Recovery | | LCSD Percent Recovery | | LCS/LCSD RPD | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LCS | LCSD | LCS | LCSD | Reported | Recalc. | Reported | Recalc. | Reported | Recalc. |
| 1,1-Dichloroethene | 5.0 | NA | 5.23 | NA | 105 | 105 | | | | |
| Trichloroethene | 5.0 | ↓ | 5.56 | ↓ | 111 | 111 | NA | | | |
| Benzene | | | | | | | | | | |
| Toluene | | | | | | | | | | |
| Chlorobenzene | | | | | | | | | | |

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 47705A48b

# VALIDATION FINDINGS WORKSHEET
## Sample Calculation Verification


Reviewer: F7
2nd reviewer:

**METHOD:** GC/MS VOA (EPA Method TO-15)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

$A_x$ = Area of the characteristic ion (EICP) for the compound to be measured

$A_{is}$ = Area of the characteristic ion (EICP) for the specific internal standard

$I_s$ = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

$V_o$ = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, θ:

Conc. = $\frac{(1085)(10)}{(5964731)(02946)}$

=

0.0617 ppbv

| # | Sample ID | Compound | Reported Concentration (ppbv) | Calculated Concentration (ppbv) | Qualification |
|---|---|---|---|---|---|
| | #1 | θ | 0.062 | 0.0617 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

ISLAND Pump & Tank CORP.

LI Office
40 Doyle Court
East Northport, NY 11731-6405
(631) 462-2226
FAX (631) 462-6434
www.islandpumpandtank.com

NY City Office
1381 Utica Avenue
Brooklyn, NY 11203
(718) 526-6525

April 27, 2018

New York State Department of Environmental Conservation
Region 2
47-40 21st Street
Long Island City, New York 11101

Attn: Mr. Hiralkumar Patel

**Re: Subsurface Investigation Report**
**NYSDEC Spill # 1604577**
**223-20 Braddock Avenue**
**Queens, New York 11428**

Dear Mr. Patel,

Island Pump and Tank Corp. (IPT) has prepared this *Subsurface Investigation Report* (SIR), for the property located 223-20 Braddock Avenue, in Queens, New York (Site). The SIR documents the boring and sampling activities conducted at the Site in March 2018, summarizes the findings, and makes recommendations based on the results of the investigation.

If you have any questions, please contact the undersigned at 631-462-2226.

Sincerely,
**Island Pump & Tank Corp.**

Matthew K. Abbott
Sr. Project Manager

Cc: Mr. Anthony Genduso, 223-20 Braddock Avenue Corp.
Mr. Robert Dooley, Esq., McGiff Halverson (via e-mail)
Mr. Matthew Schieferstein, Island Pump and Tank Corp (via e-mail)

# SUBSURFACE INVESTIGATION REPORT

**223-20 Braddock Avenue**
**Queens, New York 11428**

**NYSDEC Spill No. 1604577**

April 27, 2018

*Prepared For:*

New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, New York 11101
Attn: Mr. Hiralkumar Patel

*On Behalf Of:*

223-20 Braddock Avenue Corp.
C/O McGiff Halverson, LLP
96 South Ocean Avenue
Patchogue, NY 11772

*Prepared by:*

Island Pump & Tank Corp.
40 Doyle Court
East Northport, NY 11731

# TABLE OF CONTENTS

**1.0 INTRODUCTION ..... 4**
**2.0 BACKGROUND ..... 4**
2.1 Site Description ..... 4
2.2 Site History ..... 4
2.3 Site Geology and Hydrogeology ..... 5
**3.0 SOIL INVESTIGATION ACTIVITIES ..... 5**
3.1 Soil Boring Installation and Soil Sampling ..... 5
**4.0 SOIL SAMPLING ANALYTICAL RESULTS ..... 6**
4.1 Volatile Organic Compounds ..... 6
4.2 Semi-Volatile Organic Compounds ..... 6
**5.0 CONCLUSIONS AND RECOMMENDATIONS ..... 7**

**LIST OF FIGURES**

Figure 1 Site Location Map
Figure 2 Site Map
Figure 3 Soil Analytical Data Map: Soil Borings (Volatile Organic Compounds)
Figure 4 Soil Analytical Data Map: Soil Borings (Semi-Volatile Organic Compounds)

**LIST OF TABLES**

Table 1 Summary of PID Readings
Table 2 Soil Analytical Data – VOCs, EPA 8260, Part 375 List (Detected Compounds)
Table 3 Soil Analytical Data – SVOCs, EPA 8270, CP-51 List

**LIST OF APPENDICES**

Appendix A Photo Log
Appendix B Soil Boring Logs
Appendix C Laboratory Analytical Reports

## 1.0 INTRODUCTION

223-20 Braddock Avenue Corp. has retained Island Pump & Tank Corp. (IPT) to prepare this Subsurface Investigation Report (SIR) for the property located at 223-20 Braddock Avenue, in Queens, New York (Site). A Site Location Map has been provided as **Figure 1.** In addition, plans depicting site features and boring locations/analytical results has been provided as **Figures 2 and 3**. The purpose of this subsurface investigation was to delineate soil contamination previously encountered during the underground storage tank (UST) removal project in August 2016. Activities and results associated with the subsurface investigation have been summarized below.

## 2.0 BACKGROUND

The following subsections provide background information for the site.

### 2.1 Site Description

The Site is located at 223-20 Braddock Avenue, in Queens Village, New York and is situated at the intersections of Braddock Avenue, Moline Street, and 91st Road (see Figure 1 – Site Location Map). The Site is currently being utilized as an automobile repair facility. Site features are depicted in **Figure 2.**

### 2.2 Site History

The following is a recent history of events and activities associated with the Site.

- On August 5, 2016, IPT personnel were on-site to provide environmental oversight and to document the UST system closure activities. The UST system closure activities included the removal of one 285-gallon, waste oil, single-walled fiberglass UST.

- Following the removal of the former UST, observed petroleum impacts and olfactory odors were present within the soil at the bottom of the excavation. Elevated PID readings, greater than 500 ppm, were also encountered within the entire base of the excavation. At this time, IPT notified the NYSDEC Spills Hotline, Spill Number 16-04577 and Spill Case Manager, Mr. Hiralkumar Patel were assigned to the site, respectively. Due to the observed petroleum impacts and elevated PID readings, all materials were excavated from the base of the former UST excavation as best feasible. Excavated materials were stockpiled on-site, placed on, and covered with polyethylene sheeting for future offsite disposal. Excavation activities ensued until the structural integrity of the surrounding building and sidewalk were threatened and deemed unsafe to continue.

- IPT collected a total of five (5) soil samples, labeled B, N, S, E, & W, collected at various depths from within the excavation, ranging from 5.5-6 feet below ground surface (bgs) to 10 feet bgs. One (1) detected VOC compound was detected significantly above its respective SCO for three (3) of the collected soil samples. All remaining VOC compounds were below their respective SCO's for that sample and all remaining collected samples.

### 2.3 Site Geology and Hydrogeology

Regionally, groundwater flows north-northwest toward Little Neck Bay. The depth to groundwater beneath the site is currently unknown as groundwater was not encountered during the former UST removal. The approximate ground surface elevation is about 90 feet above mean sea level. Estimated depth to the Upper-Glacial Aquifer is 50 to 75 feet below grade.

## 3.0 SOIL INVESTIGATION ACTIVITIES

Based upon the endpoint soil sampling results from the UST excavation, IPT performed a subsurface investigation to further delineate existing soil contamination present onsite. The soil boring locations are depicted in **Figure 3**.

### 3.1 Soil Boring Installation and Soil Sampling

On March 26 and 27, 2018, direct-push sampling technology was utilized to advance the soil borings from grade surface to terminal depths ranging from of 20 to 40 feet below grade surface (ft bgs). Each boring was pre-cleared to approximately five (5) feet below grade surface (bgs). IPT utilized a direct-push sampling system equipped with disposable acetate liners to collect continuous samples, at 5-foot intervals, from approximately 5 feet bgs to the terminal depth of the boring. The sampling device was decontaminated prior to each sample interval using a cleaning solution followed by a tap water rinse.

Eight (8) soil samples were collected and soil boring logs are included in **Appendix B**. Soil samples were placed into re-sealable plastic bags and classified based on ASTM standards for observations of color, composition, and relative moisture content. A photo-ionization detector (PID), equipped with a 10.6 electron-volt (eV) lamp and calibrated utilizing ambient air and 100 parts per million (ppm) isobutylene span gas, was utilized to field screen the samples for volatile organic compounds (VOCs). The complete list of PID results is listed in **Table 1**. Soil sample locations are depicted on **Figure 3**.

Based on field classifications, soils encountered were primarily comprised of non-native fill materials to approximately 5 to 10 ft bgs, underlain by fine to coarse grained sands and some fine gravel to terminal depths of borings (maximum depth was 40 ft bgs). Groundwater was not encountered.

The samples were placed into laboratory-supplied glassware, properly labeled, and placed in a cooler with ice until they were shipped via chain of custody procedures to York Analytical Laboratories, Inc. of Stratford, CT. All samples were analyzed for the NYSDEC Part 375 list of VOCs via EPA Method 8260 and NYSDEC CP-51 list of SVOCs via EPA 8270. A discussion of the soil sampling laboratory results is presented in **Section 4.0**.

## 4.0 SOIL SAMPLING ANALYTICAL RESULTS

The following subsections describe the soil boring soil sample laboratory analytical results of the investigation. Analytical results for the soil samples collected on November 1, 2017, were compared to the NYSDEC Part 375 Soil Cleanup Objectives for the Protection of Groundwater (SCOs).

### 4.1 Volatile Organic Compounds

Soil analytical results indicated that the sample collected at B-1 (15-20) exhibited compounds above their respective SCOs. In specific detail:

- B-1 (15 - 20)
  - 1,2,4-Trimethylbenzene @ 32,000 micrograms per kilogram (µg/kg) - SCO level of 3,600 µg/kg
  - 1,3,5-Trimethylbenzene @ 9,000 µg/kg – SCO level of 8,400 µg/kg
  - Acetone @ 5,700 µg/kg – SCO level of 50 µg/kg
  - cis-1,2-Dichloroethylene @ 690 µg/kg – SCO level of 250 µg/kg
  - Ethyl Benzene @ 8,600 µg/kg – SCO level of 1,000 µg/kg
  - n-Propylbenzene @ 4,400 µg/kg – SCO level of 3,900 µg/kg
  - Toluene @ 15,000 µg/kg – SCO level of 700 µg/kg
  - Tetrachloroethylene @ 72,000 µg/kg – SCO level of 1,300 µg/kg
  - Trichloroethylene @ 520 µg/kg – SCO level of 470 µg/kg
  - Total Xylenes @ 46,000 µg/kg - SCO level of 1,600 µg/kg

All other target compounds were either below their respective SCOs or below the laboratory detection limits for the remainder of the samples analyzed. Soil boring analytical results are summarized in **Table 2** and are depicted on **Figure 3**. Laboratory analytical reports are included as **Appendix C**.

### 4.2 Semi-Volatile Organic Compounds

Soil analytical results indicated that all target SVOCs exhibited concentrations either below their respective SCOs or below the laboratory detection limits within all soil samples analyzed. Soil boring analytical results are summarized in **Table 3** and are depicted on **Figure 3**. Laboratory analytical reports are included as **Appendix C**.

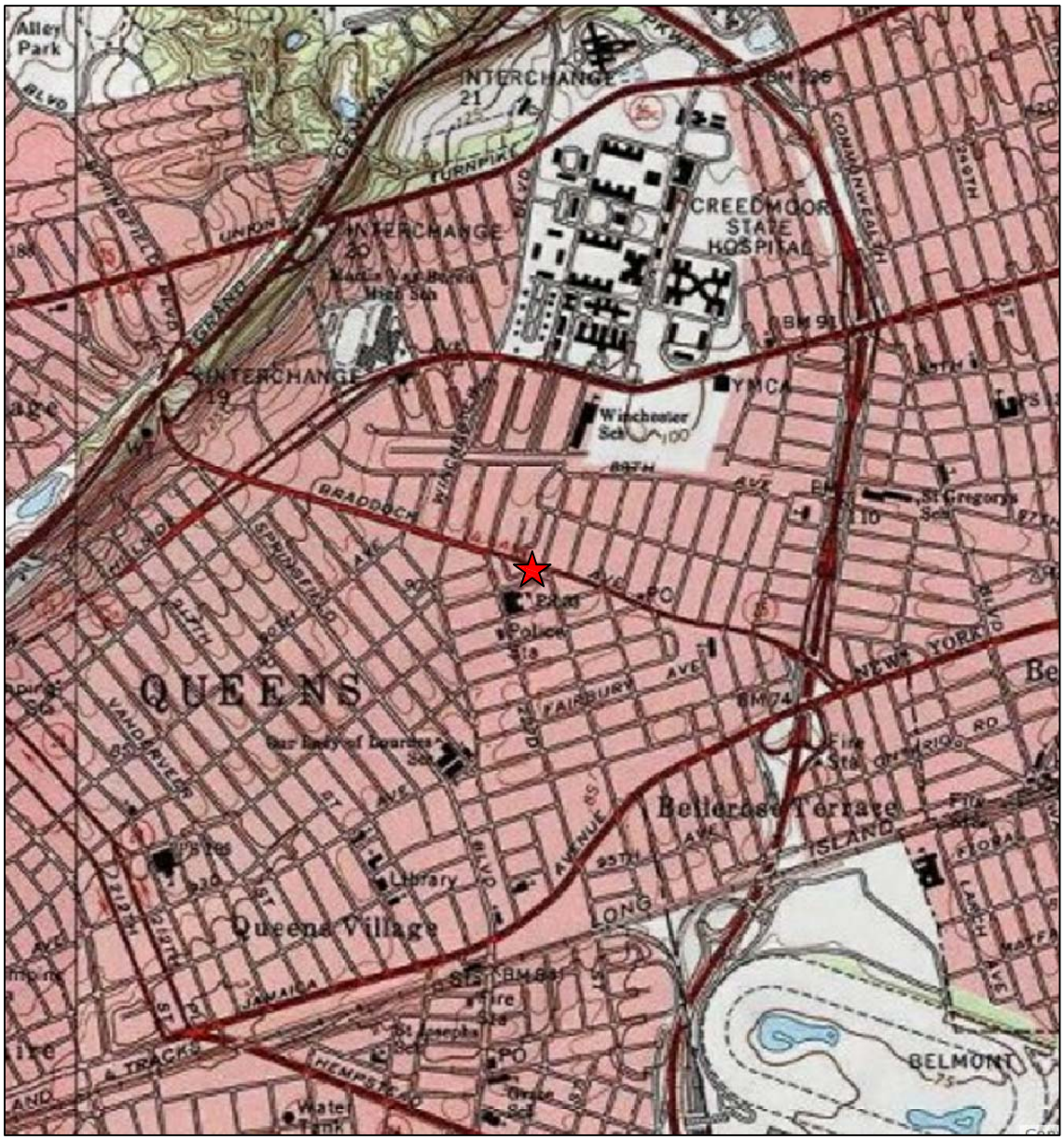
## 5.0 CONCLUSIONS AND RECOMMENDATIONS

At the request of 223-20 Braddock Ave Corp, IPT performed a subsurface investigation at the property located at 223-20 Braddock Avenue, Queens, New York. The following results of this subsurface investigation are summarized below:

- On March 26 and 27, 2018, IPT utilized direct-push technology to advance each soil boring from grade surface to terminal depths ranging from 20 to 40 ft bgs. Total of eight (8) soil samples were collected and analyzed for the NYSDEC Part List of VOCs and CP-51 List of SVOCs.
    - Soil analytical results indicated that the sample collected at B-1 (15-20) exhibited several VOCs above their respective SCOs. However, the soil sample taken from B-1 (35-40) indicated all target VOCs were below detection limits of laboratory equipment. In addition, all other target compounds were either below their respective SCOs or below the laboratory detection limits for the remainder of the samples analyzed.
    - Soil analytical results indicated that all target SVOCs exhibited concentrations either below their respective SCOs or below the laboratory detection limits within all soil samples analyzed.
    - Groundwater was not encountered during the subsurface investigation.

Based on the results of the subsurface investigation, residual soil contamination around the former used oil UST has been delineated vertically and horizontally. The deepest soil impact observed above SCOs during this investigation was in the interval of 15 to 20 feet below grade at location B-1, in the footprint of the former used oil UST. As estimated depth to the Upper-Glacial Aquifer is 50 to 75 feet below grade, an estimated minimum 30 feet of soil thickness exists between the deepest impacted soil sample observed and the estimated depth to the groundwater existing within the Upper-Glacial Aquifer. Due to these factors, no further action and closure of NYSDEC spill # 1604577 is requested.

# Figures




★ = SITE LOCATION

ISLAND Pump & Tank CORP.

**LI OFFICE**
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

**NYC OFFICE**
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

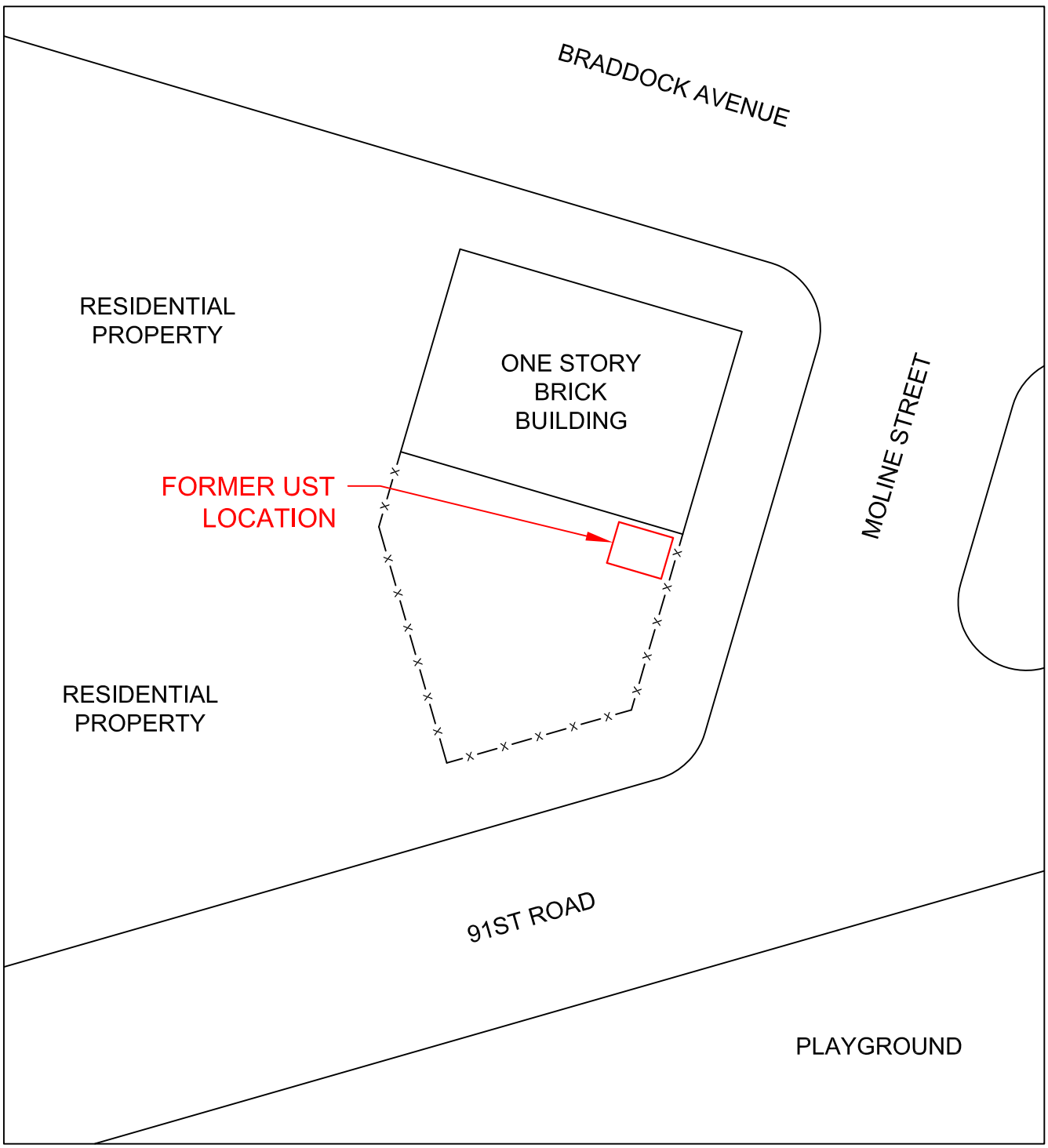
www.IslandPumpandTank.com

| | | | | | |
|---|---|---|---|---|---|
| SCALE: | N.T.S. | PROJECT MGR: | M.S. | JOB #: | |
| DATE: | 9/15/16 | DRAWN BY: | Z.B. | FILE NAME: | |

# FIGURE 1

SITE LOCATION MAP

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428




ISLAND Pump & Tank CORP.

**LI OFFICE**
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

**NYC OFFICE**
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

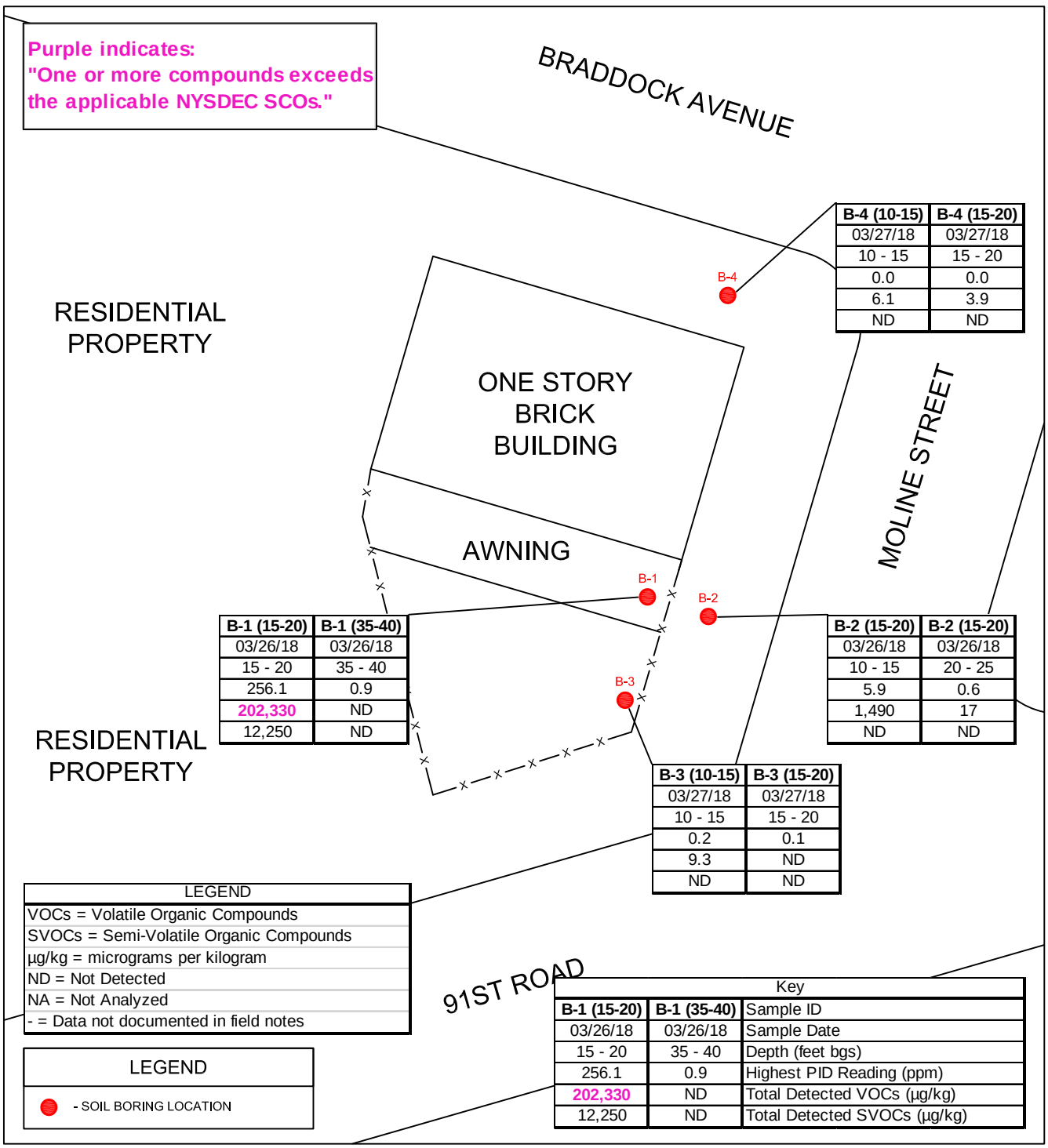
www.IslandPumpandTank.com

| | | | | | |
|---|---|---|---|---|---|
| SCALE: | N.T.S. | PROJECT MGR: | M.S. | JOB #: | |
| DATE: | 9/15/16 | DRAWN BY: | Z.B. | FILE NAME: | |

# FIGURE 2

SITE PLAN

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428




| B-4 (10-15) | B-4 (15-20) |
|---|---|
| 03/27/18 | 03/27/18 |
| 10 - 15 | 15 - 20 |
| 0.0 | 0.0 |
| 6.1 | 3.9 |
| ND | ND |

| B-1 (15-20) | B-1 (35-40) |
|---|---|
| 03/26/18 | 03/26/18 |
| 15 - 20 | 35 - 40 |
| 256.1 | 0.9 |
| 202,330 | ND |
| 12,250 | ND |

| B-2 (15-20) | B-2 (15-20) |
|---|---|
| 03/26/18 | 03/26/18 |
| 10 - 15 | 20 - 25 |
| 5.9 | 0.6 |
| 1,490 | 17 |
| ND | ND |

| B-3 (10-15) | B-3 (15-20) |
|---|---|
| 03/27/18 | 03/27/18 |
| 10 - 15 | 15 - 20 |
| 0.2 | 0.1 |
| 9.3 | ND |
| ND | ND |

| LEGEND |
|---|
| VOCs = Volatile Organic Compounds |
| SVOCs = Semi-Volatile Organic Compounds |
| µg/kg = micrograms per kilogram |
| ND = Not Detected |
| NA = Not Analyzed |
| - = Data not documented in field notes |

| LEGEND |
|---|
| - SOIL BORING LOCATION |

| Key | | |
|---|---|---|
| B-1 (15-20) | B-1 (35-40) | Sample ID |
| 03/26/18 | 03/26/18 | Sample Date |
| 15 - 20 | 35 - 40 | Depth (feet bgs) |
| 256.1 | 0.9 | Highest PID Reading (ppm) |
| 202,330 | ND | Total Detected VOCs (µg/kg) |
| 12,250 | ND | Total Detected SVOCs (µg/kg) |

ISLAND Pump & Tank CORP.

LI OFFICE
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

NYC OFFICE
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

www.IslandPumpandTank.com

# FIGURE 3

## SOIL ANALYTICAL DATA MAP

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428

| SCALE: | 1 : 20 | PROJECT MGR: | M.A. | JOB #: | |
|---|---|---|---|---|---|
| DATE: | 4/19/18 | DRAWN BY: | Z.B. | FILE NAME: | |

# Tables

*Table 1*

## SUMMARY OF PID READINGS

Automobile Repair Facility
223-20 Braddock Avenue
Queens Village, New York

| Soil Sample ID # | Sampling/Screening Date | Sample Depth (ft bgs) | PID Reading (ppm) | Submitted for Laboratory Analysis |
|---|---|---|---|---|
| B-1 | 03/26/18 | 0 - 5 | - | No |
| | | 5 - 10 | 10.2 | No |
| | | 10 - 15 | 29.7 | No |
| | | 15 - 20 | 256.1 | **Yes** |
| | | 20 - 25 | 108.0 | No |
| | | 25 - 30 | 0.7 | No |
| | | 30 - 35 | 7.7 | No |
| | | 35 - 40 | 0.9 | **Yes** |
| B-2 | 03/26/18 | 0 - 5 | 0.3 | No |
| | | 5 - 10 | 0.4 | No |
| | | 10 - 15 | 5.9 | **Yes** |
| | | 15 - 20 | 2.8 | No |
| | | 20 - 25 | 0.6 | **Yes** |
| B-3 | 03/27/18 | 0 - 5 | 0.0 | No |
| | | 5 - 10 | 0.0 | No |
| | | 10 - 15 | 0.2 | **Yes** |
| | | 15 - 20 | 0.1 | **Yes** |
| B-4 | 03/27/18 | 0 - 5 | 0.2 | No |
| | | 5 - 10 | 0.0 | No |
| | | 10 - 15 | 0.0 | **Yes** |
| | | 15 - 20 | 0.0 | **Yes** |

Notes:

bgs = Below ground surface

PID = Photoionization detector

ppm = Parts per million

*Table 2*

**SOIL ANALYTICAL DATA - VOCs, EPA 8260, NYSDEC PART 375 LIST (DETECTED COMPOUNDS)**

223-20 Braddock Avenue
Queens Village, New York

| Detected Compounds | NYSDEC Soil Cleanup Objectives for Protection of Groundwater* | B-1 | B-1 | B-2 | B-2 | B-3 | B-3 | B-4 | B-4 |
|---|---|---|---|---|---|---|---|---|---|
| | | 15-20 ft bgs | 35-40 ft bgs | 10-15 ft bgs | 20-25 ft bgs | 10-15 ft bgs | 15-20 ft bgs | 10-15 ft bgs | 15-20 ft bgs |
| | | 03/26/18 | | | | 03/27/18 | | | |
| 1,2,4-Trimethylbenzene (µg/kg) | 3,600 | **32,000** | ND<2.2 | 710 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| 1,3,5-Trimethylbenzene (µg/kg) | 8,400 | **9,000** | ND<2.2 | 430 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Acetone (µg/kg) | 50 | **5,700** | ND<4.4 | ND<220 | 8.7 | 5.1 | ND<5.7 | 6.1 | 3.9 |
| cis-1,2-Dichloroethylene | 250 | **690** | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Ethyl Benzene (µg/kg) | 1,000 | **8,600** | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Methylene Chloride (µg/kg) | 50 | ND<580 | ND<4.4 | ND<430 | 7.9 | 4.2 | ND<5.7 | ND<6.0 | ND<3.8 |
| Naphthalene (µg/kg) | 12,000 | 5,900 | ND<2.2 | 390 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| n-Butylbenzene (µg/kg) | 12,000 | 2,000 | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| n-Propylbenzene (µg/kg) | 3,900 | **4,400** | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| sec-Butylbenzene (µg/kg) | 11,000 | 520 | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Toluene (µg/kg) | 700 | **15,000** | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Tetrachloroethylene (µg/kg) | 1,300 | **72,000** | ND<2.2 | 1,100 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Trichloroethylene (µg/kg) | 470 | **520** | ND<2.2 | ND<220 | ND<2.5 | ND<2.0 | ND<2.8 | ND<3.0 | ND<1.9 |
| Total Xylenes (µg/kg) | 1,600 | **46,000** | ND<6.6 | ND<650 | ND<7.4 | ND<6.0 | ND<8.5 | ND<9.0 | ND<5.6 |
| Total VOCs (µg/kg) | NS | **202,330** | ND | 1,490 | 17 | 9.3 | ND | 6.1 | 3.9 |

Notes:

| | |
|---|---|
| * | = NYSDEC Soil Cleanup Standards taken from New York Codes, Rules and Regulations (NYCRR) 375-6.8 and Final Commissioner Policy, CP-51 |
| VOCs | = Volatile Organic Compounds |
| <# | = Less than the method detection limit of # |
| µg/kg | = Micrograms/kilogram |
| ND | = Not detected |
| NS | = No Standard |
| bgs | = Below ground surface |
| **Bold** | = Numbers in **Bold** exceed the NYSDEC Soil Cleanup Objectives |

*Table 3*

**SOIL ANALYTICAL DATA - SVOCs, EPA 8270, CP-51 LIST**

223-20 Braddock Avenue
Queens Village, New York

| Compounds of Concern | NYSDEC Soil Cleanup Objectives for Protection of Groundwater* | B-1 | B-1 | B-2 | B-2 | B-3 | B-3 | B-4 | B-4 |
|---|---|---|---|---|---|---|---|---|---|
| | | 15-20 ft bgs | 35-40 ft bgs | 10-15 ft bgs | 20-25 ft bgs | 10-15 ft bgs | 15-20 ft bgs | 10-15 ft bgs | 15-20 ft bgs |
| | | 03/26/18 | | | | 03/27/18 | | | |
| Acenaphthene | 20,000 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Acenaphthlylene | 100,000 | 300 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Anthracene (µg/kg) | 100,000 | 500 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Benzo(a)anthracene (µg/kg) | 1,000 | 480 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Benzo(a)pyrene (µg/kg) | 1,000 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Benzo(b)fluoranthene (µg/kg) | 1,000 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Benzo(g,h,i)perylene (µg/kg) | 100,000 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Benzo(k)fluoranthene (µg/kg) | 800 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Chrysene (µg/kg) | 1,000 | 320 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Dibenzo(a,h)anthracene | 330 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Fluoranthene (µg/kg) | 100,000 | 440 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Fluorene (µg/kg) | 30,000 | 480 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Ideno(1,2,3)pyrene (µg/kg) | 500 | ND<260 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Naphthalene (µg/kg) | 12,000 | 7,300 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Phenanthrene (µg/kg) | 100,000 | 1,300 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Pyrene (µg/kg) | 100,000 | 1,400 | ND<65 | ND<160 | ND<67 | ND<44 | ND<44 | ND<44 | ND<44 |
| Total SVOCs (µg/kg) | NS | 12,520 | ND | ND | ND | ND | ND | ND | ND |

Notes:

SCOs = NYSDEC Soil Cleanup Standards taken from New York Codes, Rules and Regulations (NYCRR) 375-6.8 and Final Commissioner Policy, CP-51
SVOCs =Semi-Volatile Organic Compounds
<# = Less than the method detection limit of #
µg/kg = Micrograms/kilogram
ND = Not detected
NS = No Standard
bgs = Below ground surface
**Bold** = Numbers in **Bold** exceed the NYSDEC Soil Cleanup Objectives

## Appendix A: Photo Log




Above: Geoprobe 7720 setup at B-1

Below: B-2 location patched with concrete (sidewalk adjacent to Moline St)





Above: B-3 location patched with concrete

Below: B-4 location patched with concrete (sidewalk adjacent to Braddock Ave)



## Appendix B: Soil Boring Logs

# Soil Boring Log



PROJECT:
ADDRESS: **223-20 Braddock Avenue**
**Queens Village, New York**
JOB #: **297326**

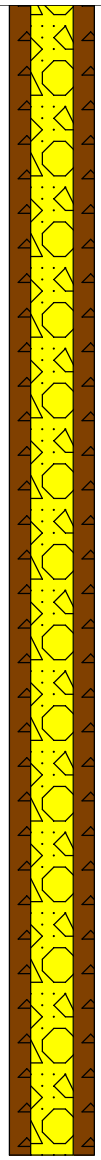
TOTAL DEPTH: **40**
WATER DEPTH: -
BOREHOLE DIA.: **2"**

LOCATION ID: **B-1**
WELL USE.: -
WELL DIA.: -

Logged By: **Michele Biase**
Dates Drilled: **3/26/18**
Driller: **Mike Mede**
Drill Rig Type: **Geoprobe Model #7720**

Drilling Method: **Direct Push**
Sampling Method: **Macrocore**
Soil Class. System: **USCS or Burmister**
Finish: -

| Depth (feet) | Sample Interval | PID (PPM) | Sample Lithology | Boring Completion Details |
|---|---|---|---|---|
| 0 | | | Fill: Fill Material, Brown Medium to Fine Sand, Dry, No Odor. | |
| -5 | (0-5') | 0.3 | Fill: Fill Material, Brown Medium to Fine Sand, Some Coarse to Fine Gravel, Trace Cobbles, Moist, No Odor. | |
| -10 | (5-10') | 10.2 | SW: Brown to Tan (SW), Medium to Fine Grained Sands, with Some Coarse Gravel, Trace Cobbles, Dry, Slight Odor. | |
| -15 | (10-15') | 29.7 | SW: Brown to Tan (SW), Medium to Fine Grained Sands, with Some Fine Gravel, Dry, Odor.<br><br>Soil Sample (B-1 15-20) was collected at 15 to 20 feet below ground surface. | |
| -20 | (15-20') | 256.1 | SW: Brown to Tan (SW), Coarse to Fine Grained Sands, with Some Fine Gravel, Moist, Odor. | |
| | (20-23') | 246.7 | | |
| -25 | (23-25') | 108.0 | SW: Brown to Tan (SW), Coarse to Fine Grained Sands, with Some Fine Gravel, Dry, Odor. | |
| | | | SW: Tan (SW), Coarse to Fine Grained Sands, with Trace Fine Gravel, Dry, Slight Odor. | |
| -30 | (25-30') | 0.7 | SW: Tan (SW), Medium to Fine Grained Sands, with Trace Fine Gravel, Dry, No Odor. | |
| -35 | (30-35') | 7.7 | SW: Tan (SW), Coarse to Fine Grained Sands, with Trace Coarse to Fine Gravel, Dry, No Odor.<br><br>Soil Sample (B-1 35-40) was collected at 35 to 40 feet below ground surface. | |
| -40 | (35-40') | 0.7 | Boring B-1 was terminated at 40 feet below ground surface. | |
| -45 | | | | |



Borehole Backfilled with Fill Materials

# Soil Boring Log



PROJECT:
ADDRESS: **223-20 Braddock Avenue Queens Village, New York**
JOB #: **297326**

TOTAL DEPTH: **25**
WATER DEPTH: -
BOREHOLE DIA.: **2"**

LOCATION ID: **B-2**
WELL USE.: -
WELL DIA.: -

Logged By: **Michele Biase**
Dates Drilled: **3/26/18**
Driller: **Mike Mede**
Drill Rig Type: **Geoprobe Model #7720**

Drilling Method: **Direct Push**
Sampling Method: **Macrocore**
Soil Class. System: **USCS or Burmister**
Finish: -

| Depth (feet) | Sample Interval | PID (PPM) | Sample Lithology | Boring Completion Details |
|---|---|---|---|---|
| 0 | | | | |
| | (0-2') | 0.0 | Cement<br>Fill: Fill Material, Dark Brown Medium to Fine Sand, Dry, No Odor. | |
| -5 | (2-5') | 0.3 | Fill: Fill Material, Brown Medium to Fine Sand, Dry, No Odor.<br>SW: Light Brown (SW), Medium to Fine Grained Sands, Some Coarse to Fine Gravel, Dry, No Odor. | |
| -10 | (5-10') | 0.4 | SW: Tan to Brown (SW), Medium to Fine Grained Sands, with Some Fine Gravel, Dry, Slight Odor.<br>Soil Sample (B-2 10-15) was collected at 10 to 15 feet below ground surface. | |
| -15 | (10-15') | 5.9 | SW: Tan (SW), Medium to Fine Grained Sands, with Some Fine Gravel,Trace Cobbles, No Odor. | |
| -20 | (15-20') | 2.8 | SW: Tan (SW), Coarse to Fine Grained Sands, with Some Fine Gravel, Trace Cobbles, Dry, No Odor.<br>Soil Sample (B-2 20-25) was collected at 20 to 25 feet below ground surface. | |
| -25 | (20-25') | 0.6 | Boring B-2 was terminated at 25 feet below ground surface. | Borehole Backfilled with Fill Materials |
| -30 | | | | |

# Soil Boring Log



PROJECT:
ADDRESS: **223-20 Braddock Avenue Queens Village, New York**
JOB #: **297326**

TOTAL DEPTH: **20**
WATER DEPTH: -
BOREHOLE DIA.: **2"**

LOCATION ID: **B-3**
WELL USE.: -
WELL DIA.: -

Logged By: **Michele Biase**
Dates Drilled: **3/27/18**
Driller: **Mike Mede**
Drill Rig Type: **Geoprobe Model #7720**

Drilling Method: **Direct Push**
Sampling Method: **Macrocore**
Soil Class. System: **USCS or Burmister**
Finish: -

| Depth (feet) | Sample Interval | PID (PPM) | Sample Lithology | Boring Completion Details |
|---|---|---|---|---|
| 0 | (0-2') | | Concrete<br>Fill: Fill Material, Dark Brown Medium to Fine Grained Sand, Some Coarse Gravel, Dry, No Odor. | |
| -5 | (2-5') | 0.0 | SW: Tan (SW), Medium to Fine Grained Sands, Trace Coarse Gravel, Dry, No Odor. | |
| -10 | (5-10') | 0.0 | SW: Tan to Yellow (SW), Coarse to Fine Grained Sands, Some Fine Gravel, Dry, Noi Odor.<br>Soil Sample (B-3 10-15) was collected at 10 to 15 feet below ground surface. | |
| -15 | (10-15') | 0.2 | SW: Tan (SW), Medium to Fine Grained Sands, Little Fine Gravel,Trace Cobbles, No Odor.<br>Soil Sample (B-3 15-20) was collected at 15-20 feet below ground surface. | |
| -20 | (15-20') | 0.1 | Boring B-3 was terminated at 20 feet below ground surface. | Borehole Backfilled with Fill Materials |
| -25 | (20-25') | | | |

# Soil Boring Log



PROJECT:
ADDRESS: **223-20 Braddock Avenue**
**Queens Village, New York**
JOB #: **297326**

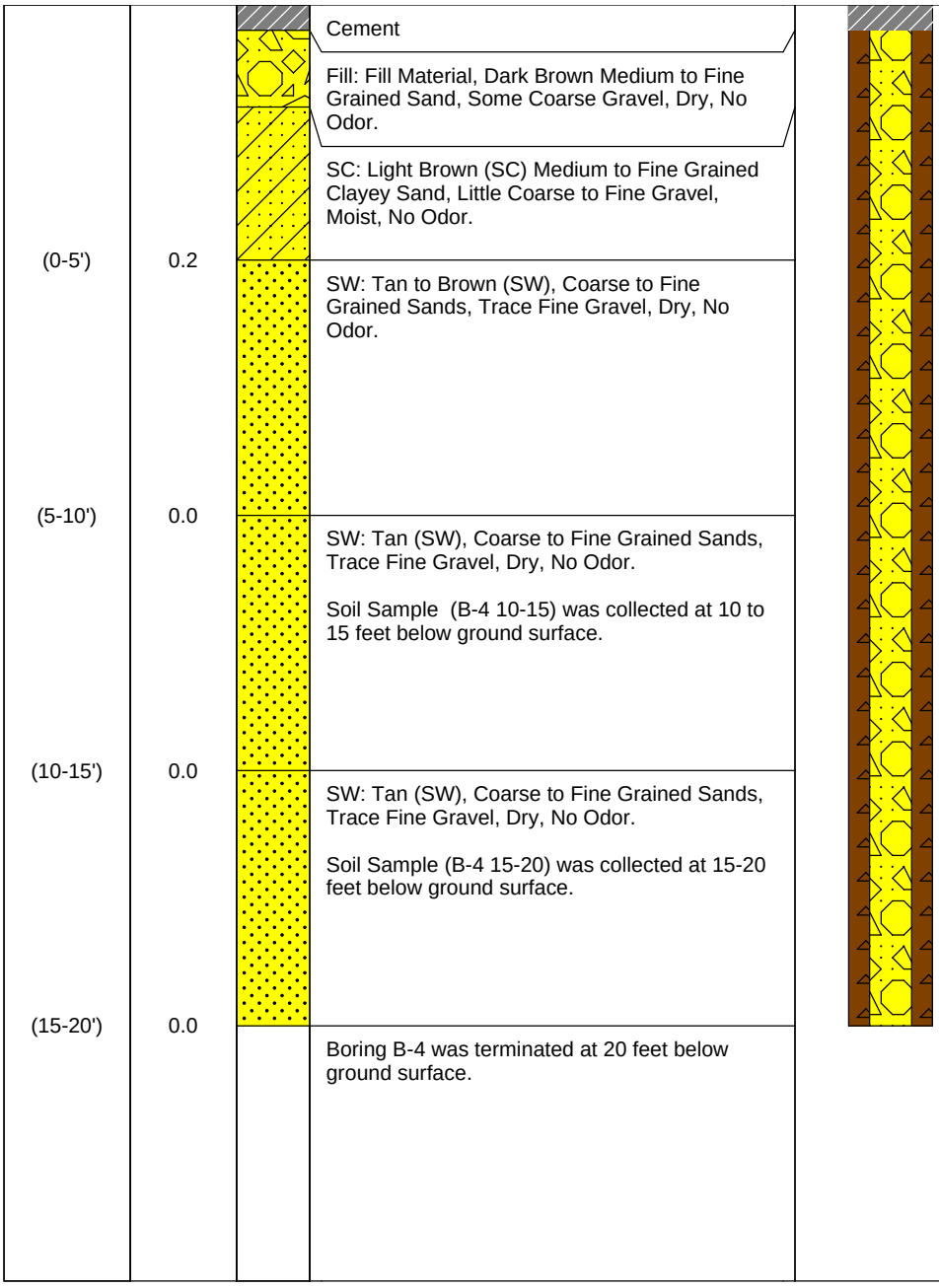
TOTAL DEPTH: **20**
WATER DEPTH: -
BOREHOLE DIA.: **2"**

LOCATION ID: **B-4**
WELL USE.: -
WELL DIA.: -

Logged By: **Michele Biase**
Dates Drilled: **3/27/18**
Driller: **Mike Mede**
Drill Rig Type: **Geoprobe Model #7720**

Drilling Method: **Direct Push**
Sampling Method: **Macrocore**
Soil Class. System: **USCS or Burmister**
Finish: -

| Depth (feet) | Sample Interval | PID (PPM) | Sample Lithology | Boring Completion Details |
|---|---|---|---|---|
| 0 | | | Cement | |
| | | | Fill: Fill Material, Dark Brown Medium to Fine Grained Sand, Some Coarse Gravel, Dry, No Odor. | |
| -5 | (0-5') | 0.2 | SC: Light Brown (SC) Medium to Fine Grained Clayey Sand, Little Coarse to Fine Gravel, Moist, No Odor. | |
| | | | SW: Tan to Brown (SW), Coarse to Fine Grained Sands, Trace Fine Gravel, Dry, No Odor. | |
| -10 | (5-10') | 0.0 | SW: Tan (SW), Coarse to Fine Grained Sands, Trace Fine Gravel, Dry, No Odor.<br><br>Soil Sample (B-4 10-15) was collected at 10 to 15 feet below ground surface. | |
| -15 | (10-15') | 0.0 | SW: Tan (SW), Coarse to Fine Grained Sands, Trace Fine Gravel, Dry, No Odor.<br><br>Soil Sample (B-4 15-20) was collected at 15-20 feet below ground surface. | |
| -20 | (15-20') | 0.0 | Boring B-4 was terminated at 20 feet below ground surface. | |
| -25 | | | | |



Borehole Backfilled with Fill Materials

## Appendix C: Laboratory Analytical Report

# Technical Report

prepared for:

**Island Pump & Tank**
40 Doyle Court
East Northport NY, 11731
**Attention: Matthew Schieferstein**

Report Date: 04/09/2018
**Client Project ID: 233-20 Braddockk Ave.**
York Project (SDG) No.: 18C0974

**Revision No. 1.0**


CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 04/09/2018
Client Project ID: 233-20 Braddockk Ave.
York Project (SDG) No.: 18C0974

**Island Pump & Tank**
40 Doyle Court
East Northport NY, 11731
Attention: Matthew Schieferstein

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on March 27, 2018 and listed below. The project was identified as your project: **233-20 Braddockk Ave.**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 18C0974-01 | B-1 35-40 | Soil | 03/26/2018 | 03/27/2018 |
| 18C0974-02 | B-1 15-20 | Soil | 03/26/2018 | 03/27/2018 |
| 18C0974-03 | B-2 10-15 | Soil | 03/26/2018 | 03/27/2018 |
| 18C0974-04 | B-2 20-25 | Soil | 03/26/2018 | 03/27/2018 |

## General Notes for York Project (SDG) No.: 18C0974

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

**Date:** 04/09/2018

Benjamin Gulizia
Laboratory Director

## Sample Information

**Client Sample ID:** B-1 35-40 **York Sample ID:** 18C0974-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 44 | 88 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | Acetone | ND | | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |

## Sample Information

**Client Sample ID:** B-1 35-40 **York Sample ID:** 18C0974-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 2.2 | 8.8 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.6 | 13 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:28 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *101 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *100 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *99.9 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-1 35-40 **York Sample ID:** 18C0974-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 65 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 09:03 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *67.8 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *66.9 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *56.6 %* | *24-116* |

### Total Solids

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **96.6** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 11:06 | 04/03/2018 15:34 | TAJ |
| | | | | | | | Certifications: | CTDOH | | |

## Sample Information

**Client Sample ID:** **B-1 15-20** **York Sample ID:** **18C0974-02**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **32000** | | ug/kg dry | 1500 | 2900 | 500 | EPA 8260C | 03/30/2018 07:30 | 03/30/2018 16:29 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **9000** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 5800 | 12000 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | **Acetone** | **5700** | | ug/kg dry | 580 | 1200 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | **cis-1,2-Dichloroethylene** | **690** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | **Ethyl Benzene** | **8600** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 580 | 1200 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | **Naphthalene** | **5900** | | ug/kg dry | 290 | 1200 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-1 15-20 **York Sample ID:** 18C0974-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | **n-Butylbenzene** | **2000** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | **n-Propylbenzene** | **4400** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | **o-Xylene** | **16000** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | **p- & m- Xylenes** | **30000** | | ug/kg dry | 580 | 1200 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | **sec-Butylbenzene** | **520** | J | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | **Tetrachloroethylene** | **72000** | | ug/kg dry | 1500 | 2900 | 500 | EPA 8260C | 03/30/2018 07:30 | 03/30/2018 16:29 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | **Toluene** | **15000** | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | **Trichloroethylene** | **520** | J | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 290 | 580 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | **Xylenes, Total** | **46000** | | ug/kg dry | 870 | 1700 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 19:57 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *99.0 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *95.5 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *102 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | **Acenaphthylene** | **300** | J | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | **Anthracene** | **500** | J | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | **Benzo(a)anthracene** | **480** | J | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-1 15-20 **York Sample ID:** 18C0974-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | IS-LO | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | **Chrysene** | **320** | J | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | IS-LO | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | **Fluoranthene** | **440** | J | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | **Fluorene** | **480** | J | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | IS-LO | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | **Naphthalene** | **7300** | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | **Phenanthrene** | **1300** | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | **Pyrene** | **1400** | | ug/kg dry | 260 | 510 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 16:20 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *90.8 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *96.7 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *101 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **91.5** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 11:06 | 04/03/2018 15:34 | TAJ |
| | | | | | | | Certifications: | CTDOH | | |

## Sample Information

**Client Sample ID:** B-2 10-15 **York Sample ID:** 18C0974-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

## Sample Information

**Client Sample ID:** **B-2 10-15** **York Sample ID:** **18C0974-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **710** | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **430** | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 4300 | 8600 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | Acetone | ND | | ug/kg dry | 430 | 860 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 430 | 860 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | **Naphthalene** | **390** | J | ug/kg dry | 220 | 860 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-2 10-15 **York Sample ID:** 18C0974-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 430 | 860 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | **Tetrachloroethylene** | **1100** | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 220 | 430 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 650 | 1300 | 100 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:26 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *100 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *100 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *98.1 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-2 10-15 **York Sample ID:** 18C0974-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | IS-LO | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | IS-LO | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | IS-LO | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 160 | 320 | 5 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 17:09 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *71.3 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *81.7 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *79.0 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **96.3** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 11:06 | 04/03/2018 15:34 | TAJ |
| | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** **B-2 20-25** **York Sample ID:** **18C0974-04**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 50 | 99 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | **Acetone** | **8.7** | J | ug/kg dry | 5.0 | 9.9 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | **Methylene chloride** | **7.9** | SCAL-E, J, B | ug/kg dry | 5.0 | 9.9 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 2.5 | 9.9 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-2 20-25 **York Sample ID:** 18C0974-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 5.0 | 9.9 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.5 | 5.0 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 7.4 | 15 | 1 | EPA 8260C | 03/29/2018 07:30 | 03/29/2018 20:55 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *100 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *101 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *102 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-2 20-25 **York Sample ID:** 18C0974-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C0974 | 233-20 Braddockk Ave. | Soil | March 26, 2018 3:00 pm | 03/27/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3545A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 67 | 130 | 2 | EPA 8270D | 03/28/2018 06:34 | 03/29/2018 11:28 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *64.1 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *66.6 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *57.0 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **93.4** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 11:06 | 04/03/2018 15:34 | TAJ |
| | | | | | | | Certifications: CTDOH | | | |

## Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|---|---|---|
| 18C0974-01 | B-1 35-40 | 40mL Vial with Stir Bar-Cool 4° C |
| 18C0974-02 | B-1 15-20 | 40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C |
| 18C0974-03 | B-2 10-15 | 40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C |
| 18C0974-04 | B-2 20-25 | 40mL Vial with Stir Bar-Cool 4° C |

## Sample and Data Qualifiers Relating to This Work Order

| | |
|---|---|
| SCAL-E | The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%). |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| IS-LO | The internal std associated with this target compound did not meet acceptance criteria (area <50% CCV) at the stated dilution due to matrix effects. Sample was rerun to confirm matrix effects. |
| CCV-E | The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit). |
| B | Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. |

## Definitions and Other Explanations

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

---

Revision Description: This report has been revised to switch Sample ID's for -01 and -02 due to suspected field sampling error.

YORK ANALYTICAL LABORATORIES INC
YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

# Field Chain-of-Custody Record



**NOTE:** York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

**York Project No.** 18C0974

| YOUR Information | Report to: | Invoice To: | Your Project ID | Turn-Around Time |
|---|---|---|---|---|
| Company: Island Pump & Tank | SAME [X] | SAME [X] | 223-20 Braddock Rd | RUSH-Same Day ____ |
| Address: 40 Doyle Court | Name: | Name: | | RUSH-Next Day ____ |
| East North | Company: | Company: | **Purchase Order #** | RUSH-Two Day ____ |
| Phone.: (631) 462-2226 | Address: | Address: | | RUSH-Three Day ____ |
| Contact: Matt S | | | | RUSH-Four Day ____ |
| E-mail: MattS@Islandpumpandtank.com | E-mail: | E-mail | Samples from CT__ NY X NJ__ | Standard (5-7day) X |

**Report/Deliverable Type**

| | |
|---|---|
| Summary Report | |
| QA Report | |
| CT RCP | |
| CT RCP DQA/DUE Pkg | |
| NY ASP A Package | |
| NY ASP B Package | |
| NJDEP Reduced Deliv | |
| Excel | |
| NYSDEC EQuIS | |
| NJDEP SRP HazSite | |
| EQuIS | |
| GIS/KEY (std) | |

**YORK Regulatory Comp Excel** *compared to:*

OTHER:

***Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.***

Samples Collected/Authorized By (Signature)

Michele Biase
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

| Volatiles | | Semi-Vols. | Pest/PCB/Herb | Metals | Misc. Org. | Full Lists |
|---|---|---|---|---|---|---|
| 8260 full | TICs | 8270 or 625 | 8082PCB | RCRA8 | TPH GRO | Pri.Poll. |
| 624 | Site Spec. | STARS list | 8081Pest | PP13 list | TPH DRO | TCL Organics |
| STARS list | Nassau Co. | BN Only | 8151Herb | TAL | CT ETPH | TAL Met/CN |
| BTEX | Suffolk Co. | Acids Only | CT RCP | CT15 list | NY 310-13 | Full TCLP |
| MTBE | Ketones | PAH list | App. IX | TAGM list | TPH 1664 | Full App. IX |
| TCL list | Oxygenates | TAGM list | Site Spec. | NJDEP list | Air TO14A | Part360-Routine |
| TAGM list | TCLP list | CT RCP list | SPLP or TCLP | Total | Air TO15 | Part360-Baseline |
| CT RCP list | 524.2 | TCL list | TCLP Pest | Dissolved | Air STARS | Part360-Expanded No Dioxins/Furans |
| Arom. only | 502.2 | NJDEP list | TCLP Herb | SPLP or TCLP | Air VPH | Part360-Expanded Full List |
| Halog.only | NJDEP list | App. IX | Chlordane | Indiv. Metals | Air TICs | NYCDEP Sewer |
| App.IX list | SPLP or TCLP | TCLP BNA | 608 Pest | LIST Below | Methane | NYSDEC Sewer |
| 8021B list | | SPLP or TCLP | 608 PCB | | Helium | TAGM |

| Sample Identification | Date+Time Sampled | Matrix | Analysis Requested (List above includes common analysis) | Container Description |
|---|---|---|---|---|
| B-1 15-20 | 3/26/18 | S | VOC 8260 NYSDEC Part375 list, SVOC 8270 CP-51 list | 1-4oz, 1-5035 kit |
| B-1 35-40 | ↓ | ↓ | ↓ | ↓ |
| B-2 10-15 | | | | |
| B-2 20-25 | | | | |

**Comments:**

**Preservation** (check all applicable): 4°C ✓ Frozen ____ HCl ____ MeOH ✓ $HNO_3$ ____ $H_2SO_4$ ____ NaOH ____ ZnAc ____ Ascorbic Acid ____ Other ____

Special Instructions
Field Filtered ☐
Lab to Filter ☐

| | | | |
|---|---|---|---|
| MB | 3/26/18 | KSoch 3/27/18 1235pm | Temperature on Receipt 1.8 °C |
| Samples Relinquished By | Date/Time | Samples Received By | Date/Time |
| | | Lyle 3/27/18 1836 | |
| Samples Relinquished By | Date/Time | Samples Received in LAB by | Date/Time |

# Technical Report

prepared for:

**Island Pump & Tank**
40 Doyle Court
East Northport NY, 11731
**Attention: Matthew Schieferstein**

Report Date: 04/04/2018
**Client Project ID: 223-20 Braddock Ave.**
York Project (SDG) No.: 18C1032

Report Date: 04/04/2018
Client Project ID: 223-20 Braddock Ave.
York Project (SDG) No.: 18C1032

**Island Pump & Tank**
40 Doyle Court
East Northport NY, 11731
Attention: Matthew Schieferstein

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on March 28, 2018 and listed below. The project was identified as your project: **223-20 Braddock Ave.**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 18C1032-01 | B-3 10-15 | Soil | 03/27/2018 | 03/28/2018 |
| 18C1032-02 | B-3 15-20 | Soil | 03/27/2018 | 03/28/2018 |
| 18C1032-03 | B-4 10-15 | Soil | 03/27/2018 | 03/28/2018 |
| 18C1032-04 | B-4 15-20 | Soil | 03/27/2018 | 03/28/2018 |

## General Notes for York Project (SDG) No.: 18C1032

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

**Date:** 04/04/2018

Benjamin Gulizia
Laboratory Director

## Sample Information

**Client Sample ID:** B-3 10-15 **York Sample ID:** 18C1032-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 10:00 am | 03/28/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 40 | 160 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.0 | 8.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | **Acetone** | **5.1** | SCAL-E, J | ug/kg dry | 4.0 | 8.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | **Methylene chloride** | **4.2** | J | ug/kg dry | 4.0 | 8.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 2.0 | 8.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-3 10-15 **York Sample ID:** 18C1032-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 10:00 am | 03/28/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.0 | 8.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.0 | 4.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.0 | 12 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 11:49 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *86.8 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *106 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *89.0 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-3 10-15 **York Sample ID:** 18C1032-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 10:00 am | 03/28/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 19:57 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *74.5 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *70.9 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *70.5 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **94.6** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 19:20 | 04/04/2018 15:24 | TAJ |
| | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** B-3 15-20 **York Sample ID:** 18C1032-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 10:30 am | 03/28/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 57 | 230 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.8 | 11 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | Acetone | ND | | ug/kg dry | 5.7 | 11 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 5.7 | 11 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 2.8 | 11 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-3 15-20 **York Sample ID:** 18C1032-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 10:30 am | 03/28/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 5.7 | 11 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.8 | 5.7 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 8.5 | 17 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:17 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *92.3 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *107 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *92.4 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-3 15-20 **York Sample ID:** 18C1032-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 10:30 am | 03/28/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:28 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *81.6 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *77.9 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *68.4 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **95.5** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 19:20 | 04/04/2018 15:24 | TAJ |
| | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** **B-4 10-15** **York Sample ID:** **18C1032-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 11:00 am | 03/28/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 60 | 240 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 3.0 | 12 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | **Acetone** | **6.1** | SCAL-E, J | ug/kg dry | 6.0 | 12 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 6.0 | 12 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 3.0 | 12 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-4 10-15 **York Sample ID:** 18C1032-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 11:00 am | 03/28/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 6.0 | 12 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 3.0 | 6.0 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 9.0 | 18 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 12:44 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *88.5 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *107 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *92.2 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-4 10-15 **York Sample ID:** 18C1032-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 11:00 am | 03/28/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 44 | 88 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 20:59 | KH |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *69.5 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *68.6 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *71.2 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **95.1** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 19:20 | 04/04/2018 15:24 | TAJ |
| | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** **B-4 15-20** **York Sample ID:** **18C1032-04**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 11:30 am | 03/28/2018 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 38 | 150 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 1.9 | 7.5 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-64-1 | **Acetone** | **3.9** | SCAL-E, J | ug/kg dry | 3.8 | 7.5 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 3.8 | 7.5 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 1.9 | 7.5 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,PADEP,NJI | | |

## Sample Information

**Client Sample ID:** B-4 15-20 **York Sample ID:** 18C1032-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 11:30 am | 03/28/2018 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 3.8 | 7.5 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 1.9 | 3.8 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,PA | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 5.6 | 11 | 1 | EPA 8260C | 04/02/2018 07:30 | 04/02/2018 13:11 | RDS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *92.9 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *102 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *87.9 %* | *76-130* |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B-4 15-20 **York Sample ID:** 18C1032-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 18C1032 | 223-20 Braddock Ave. | Soil | March 27, 2018 11:30 am | 03/28/2018 |

### Semi-Volatiles, CP-51 (formerly STARS) List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 44 | 87 | 2 | EPA 8270D | 03/30/2018 03:58 | 03/30/2018 21:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *71.8 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *67.8 %* | *21-113* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *62.7 %* | *24-116* |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **95.9** | | % | 0.100 | 1 | SM 2540G | 04/03/2018 19:20 | 04/04/2018 15:24 | TAJ |
| | | | | | | | Certifications: CTDOH | | | |

## Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|---|---|---|
| 18C1032-01 | B-3 10-15 | 40mL Vial with Stir Bar-Cool 4° C |
| 18C1032-02 | B-3 15-20 | 40mL Vial with Stir Bar-Cool 4° C |
| 18C1032-03 | B-4 10-15 | 40mL Vial with Stir Bar-Cool 4° C |
| 18C1032-04 | B-4 15-20 | 40mL Vial with Stir Bar-Cool 4° C |

## Sample and Data Qualifiers Relating to This Work Order

| | |
|---|---|
| SCAL-E | The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%). |
| QL-02 | This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature. |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| CCV-E | The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit). |

## Definitions and Other Explanations

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

---

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

# Field Chain-of-Custody Record



NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

**York Project No.** 18C1037

| YOUR Information | Report to: | Invoice To: | Your Project ID | Turn-Around Time | Report/Deliverable Type |
|---|---|---|---|---|---|
| Company: Island Pump & Tank | SAME [X] | SAME [X] | 223-20 Braddock Avenue | RUSH-Same Day | Summary Report |
| Address: 40 Doyle Court | Name: | Name: | | RUSH-Next Day | QA Report |
| East Northport NY 11731 | Company: | Company: | Purchase Order # | RUSH-Two Day | CT RCP |
| Phone.: (631) 462-2226 | Address: | Address: | | RUSH-Three Day | CT RCP DQA/DUE Pkg |
| Contact: Matt S | | | | RUSH-Four Day | NY ASP A Package |
| E-mail: MattS@Islandpumpandtank.com | E-mail: | E-mail | Samples from CT__NY_X_NJ__ | Standard (5-7day) X | NY ASP B Package |
| | | | | | NJDEP Reduced Deliv |
| | | | | | Excel |
| | | | | | NYSDEC EQuIS |
| | | | | | NJDEP SRP HazSite |
| | | | | | EQuIS |
| | | | | | GIS/KEY (std) |
| | | | | | YORK Regulatory Comp Excel compared to: |
| | | | | | OTHER: |

*Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.*

Samples Collected/Authorized By (Signature)

Michele Bice

Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

| Volatiles | | Semi-Vols. | Pest/PCB/Herb | Metals | Misc. Org. | Full Lists |
|---|---|---|---|---|---|---|
| 8260 full | TICs | 8270 or 625 | 8082PCB | RCRA8 | TPH GRO | Pri.Poll. |
| 624 | Site Spec. | STARS list | 8081Pest | PP13 list | TPH DRO | TCL Organics |
| STARS list | Nassau Co. | BN Only | 8151Herb | TAL | CT ETPH | TAL Met/CN |
| BTEX | Suffolk Co. | Acids Only | CT RCP | CT15 list | NY 310-13 | Full TCLP |
| MTBE | Ketones | PAH list | App. IX | TAGM list | TPH 1664 | Full App. IX |
| TCL list | Oxygenates | TAGM list | Site Spec. | NJDEP list | Air TO14A | Part360-Routine |
| TAGM list | TCLP list | CT RCP list | SPLP or TCLP | Total | Air TO15 | Part360-Baseline |
| CT RCP list | 524.2 | TCL list | TCLP Pest | Dissolved | Air STARS | Part360-Expanded No Dioxins/Furans |
| Arom. only | 502.2 | NJDEP list | TCLP Herb | SPLP or TCLP | Air VPH | Part360-Expanded Full List |
| Halog.only | NJDEP list | App. IX | Chlordane | Indiv. Metals | Air TICs | NYCDEP Sewer |
| App.IX list | SPLP or TCLP | TCLP BNA | 608 Pest | LIST Below | Methane | NYSDEC Sewer |
| 8021B list | | SPLP or TCLP | 608 PCB | | Helium | TAGM |

| Sample Identification | Date+Time Sampled | Matrix | Analysis Requested (List above includes common analysis) | Container Description |
|---|---|---|---|---|
| B-3 10-15 | 3/27/18 10:00 | S | VOC 8260 NYSDEC Part 375 list, SVOC 8260 CP51 list | 1-4oz, 1-500ml |
| B-3 15-20 | 10:30 | | | |
| B-4 10-18 | 11:00 | | | |
| B-4 15-20 | 11:30 | | | |

**Preservation** (check all applicable): 4°C ✓ Frozen ___ HCl ___ MeOH ✓ $HNO_3$ ___ $H_2SO_4$ ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other ___

**Comments:**

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Samples Relinquished By — Date/Time: 3/27/18 1500

Samples Relinquished By — Date/Time:

Samples Received By — Date/Time: 3/28/18 1837

Samples Received in LAB by — Date/Time:

Temperature on Receipt: 2.6°C

ISLAND Pump & Tank CORP.

LI Office
40 Doyle Court
East Northport, NY 11731-6405
(631) 462-2226
FAX (631) 462-6434
www.islandpumpandtank.com

NY City Office
1381 Utica Avenue
Brooklyn, NY 11203
(718) 526-6525

October 4, 2016

New York State Department of Environmental Conservation
Region II Long Island City Office
1 Hunter's Point Plaza
47-40 21st Street
Long Island City, NY 11101-5401

Attn: Mr. Kumar Patel

**Re: Tank Excavation Assessment Report**
**223-20 Braddock Avenue**
**Queens Village, New York**
**Spill No. 16-04579**

Dear Mr. Patel,

Please find the enclosed *Tank Excavation Assessment Report* for the location identified as 223-20 Braddock Avenue, in Queens Village, New York. The attached report discusses the permanent removal of one 285-gallon waste oil underground storage tank (UST) conducted in August 2016.

Should you have any questions or comments regarding this report, please contact either of the undersigned at (631) 462-2226, Extension 22 or 23, respectively.

Sincerely,

**Island Pump & Tank**

Matthew F. Schieferstein
Environmental Services Manager

M Leard For
Kristin Guzzardo
Sr. Project Geologist

Enclosures

Cc: Mr. Anthony Genduso, Property, Owner
Mr. Robert Duoley, ESQ, McGiff Halverson (via e-mail)

# Tank Excavation Assessment Report

**223-20 Braddock Avenue**
**Queens Village, New York**
**NYSDEC Spill No. 16-04579**

**September 2016**

*Prepared for:*

**Mr. Anthony Genduso**
**316 Herricks Road**
**Mineola, NY 11501**

*Prepared by:*

**Island Pump & Tank Corp.**
**40 Doyle Court**
**East Northport, New York 11731**

# TABLE OF CONTENTS

**1.0 INTRODUCTION ..... 2**
**2.0 UNDERGROUND STORAGE TANK REMOVAL ..... 2**
2.1 Tank Excavation and Removal ..... 2
2.2 Tank Excavation Sampling Activities ..... 3
2.3 Tank Excavation Analytical Results ..... 3
2.3.1 Soil Samples ..... 3
2.3.1.1 Volatile Organic Compounds ..... 4
2.3.1.2 Semi-Volatile Organic Compounds ..... 4
2.3.1.3 Metals ..... 4
**3.0 SUMMARY ..... 5**

## LIST OF FIGURES

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 UST Removal Soil Analytical Data Map : VOC's
Figure 4 UST Removal Soil Analytical Data Map : SVOC's

## LIST OF TABLES

Table 1 Summary of Removed Tanks
Table 2 Summary of PID Readings
Table 3 Soil Analytical Data - VOCs
Table 4 Soil Analytical Data - SVOCs
Table 5 Soil Analytical Data - RCRA Metals List

## LIST OF APPENDICES

Appendix A Photographs
Appendix B UST Removal Disposal Affidavit
Appendix C Laboratory Analytical Report

# 1.0 INTRODUCTION

Island Pump & Tank Corp. (IPT), on behalf of Mr. Anthony Genduso, has prepared this report summarizing environmental services provided during the permanent removal of one 285-gallon, waste oil underground storage tank (UST), located at 223-20 Braddock Avenue, in Queens Village, New York. A Site Location Map has been provided as **Figure 1** and a Site Map depicting the location of the former UST system has been provided as **Figure 2**. All activities associated with the UST removal were conducted by IPT's Construction Department with oversight by IPT's Environmental Services Department personnel. All activities were conducted in general accordance with the New York State Department of Environmental Conservation (NYSDEC) DER-10 Technical Guidance for Site Investigation & Remediation dated, May 3, 2010.

# 2.0 UNDERGROUND STORAGE TANK REMOVAL

On August 05, 2016, IPT personnel were on-site to provide environmental oversight and to document the UST system closure activities. The UST system closure activities included the removal of one 285-gallon, waste oil, single-walled fiberglass UST. Select photographs taken during the UST removal activities are provided in **Appendix A.**

## 2.1 Tank Excavation and Removal

Prior to the tank removal, IPT removed the materials covering the UST. The UST was then cleaned and one 55-gallon drum of residual tank sludges was generated, labelled, and placed aside for future off-site disposal. Upon the disposal of such drum, IPT will forward all copies of the Waste Manifests under separate cover.

Following the tank cleaning activities, the UST was vented and the atmospheric condition inside the UST was monitored with a combustible gas indicator (CGI) meter. Once acceptable LEL levels were reached, the fill materials covering the UST were removed and set aside to facilitate the removal of the UST.

Following the removal of the UST, a visual inspection was conducted and documented by IPT personnel. The UST was in poor condition with a large crack evident on the bottom of the UST (**Table 1**). Select photographs depicting the UST removal are included in **Appendix A**. Upon completion of visual inspection, the UST was crushed into a truck for transport to an off-site disposal facility. A UST Removal Disposal Affidavit has been provided in **Appendix B**.

## 2.2 Tank Excavation Sampling Activities

Following the removal of the former UST, observed petroleum impacts and olfactory odors were present within the soil at the bottom of the excavation. Elevated PID readings, greater than 500 ppm, were also encountered within the entire base of the excavation. At this time, IPT notified the NYSDEC Spills Hotline, Spill Number 16-04579 and Spill Case Manager, Mr. Kumar Patel were assigned to the site, respectively. Due to the observed petroleum impacts and elevated PID readings, all materials were excavated from the base of the former UST excavation as best feasible. Excavated materials were stockpiled onsite, placed on, and covered with polyethylene sheeting for future offsite disposal. Excavation activities ensued until the structural integrity of the surrounding building and sidewalk were threatened and deemed unsafe to continue.

Upon completion of the slight over-excavation, samples were collected in general accordance with the NYSDEC DER-10 Technical Guidance for Site Investigation & Remediation. Based upon the length of the UST and the perimeter of the immediate excavation cavity, a total of five (5) soil samples were collected from the entire excavation. Four (4) samples were collected along the sidewalls of the excavation at approximately 5.5 to 6 feet below grade surface (bgs) and were labeled as such: N, E, S, and W. Additionally, one (1) soil sample (B) was collected from the bottom of the excavation at approximately 10 feet bgs. The soil sample locations have been depicted on **Figure 3**.

A portion of each collected soil sample was temporarily placed into a re-sealable plastic bag. After allowing proper time for headspace to gather, the samples were field screened for the presence of total volatile organic vapors (VOCs) utilizing a photo-ionization detector (PID). The PID was equipped with a 10.6 eV lamp and is calibrated daily utilizing ambient air and a 100 parts per million (ppm) isobutylene span gas. PID concentrations ranged from 0.7 ppm at soil sample location S to 592.4 ppm at soil sample location B. PID results have been summarized for all soil samples collected in **Table 2** and have been depicted on **Figure 3.**

## 2.3 Tank Excavation Analytical Results

### 2.3.1 Soil Samples

The five (5) soil samples collected during the UST removal activities were placed in laboratory-supplied glassware and submitted under chain of custody procedures to York Analytical Laboratories, Inc. (York) in Stratford, CT for analysis of VOCs Part 375 List via EPA Method 8260C, Semi-Volatile Organic Compounds (SVOCs) Part 375 List via EPA Method 8270D, and RCRA Metals. Upon receipt, the analytical data was compared to the NYSDEC Part 375 6.8(b) Restricted Use Residential Soil Cleanup Objectives (SCOs).

#### 2.3.1.1 Volatile Organic Compounds

Based upon the laboratory analytical results, total detected VOC concentrations ranged from 2.6 micrograms per kilogram (µg/kg) at soil sample location W to 400,160 µg/kg at soil sample location E. One (1) particular targeted compound (tetrachloroethylene) was detected above its respective SCO level for three (3) of the soil samples collected. All remaining targeted VOC compounds were detected below their respective SCO levels for these samples and all remaining soil samples. Laboratory analytical results have been summarized in **Table 3.** VOC concentrations have been depicted on the UST Removal Soil Analytical Data Map provided on **Figure 3**. Copies of the chain of custody and laboratory analytical report have been provided in **Appendix C**.

#### 2.3.1.2 Semi-Volatile Organic Compounds

Based upon the laboratory analytical results, total detected SVOC concentrations ranged from below their respective laboratory method detection limits (ND) to 5,867.4 µg/kg at soil sample location B. All detected SVOC compounds were below their respective SCO levels. Laboratory analytical results have been summarized in **Table 4.** SVOC concentrations have been depicted on the UST Removal Soil Analytical Data Map provided on **Figure 4**. Copies of the chain of custody and laboratory analytical report have been provided in **Appendix C**.

#### 2.3.1.3 Metals

Based upon the laboratory analytical results, all RCRA Metal concentrations for the each of the collected samples were below their respective SCO levels. Laboratory analytical results have been summarized in **Table 5.** Copies of the chain of custody and laboratory analytical report have been provided in **Appendix C**.

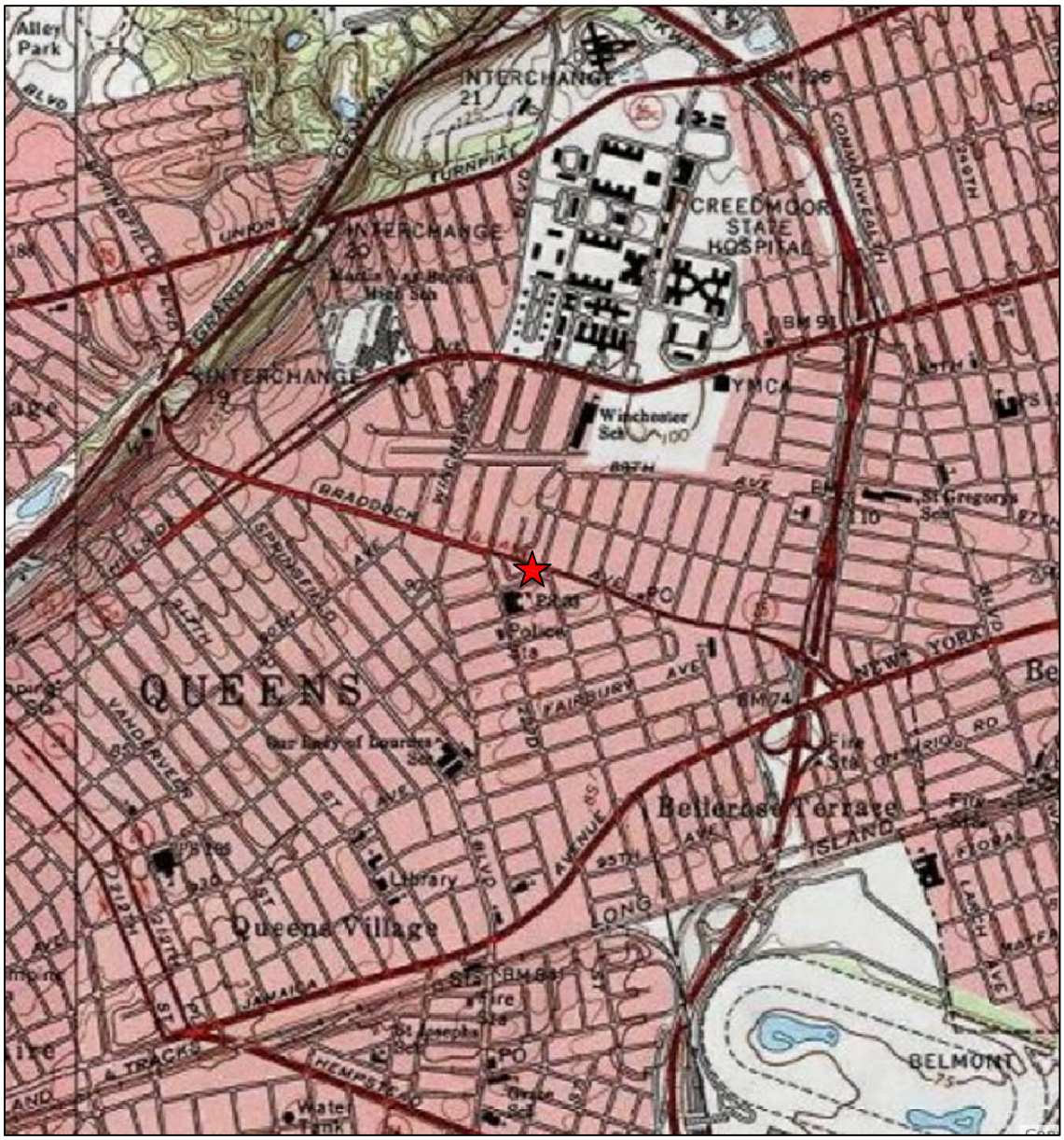
## 3.0 SUMMARY

On August 5, 2016, IPT, on behalf of the Mr. Anthony Genduso, provided environmental oversight during the permanent removal of the UST system located at the property identified as 223-20 Braddock Avenue, in Queens Village, New York. A summary of the UST removal activities are summarized below:

- One 285-gallon waste oil, single-walled, fiberglass UST was removed from the above referenced property. One 55-gallon drum of residual tank sludges were generated during the removal and cleaning of the UST.
- Following the removal of the former UST, observed petroleum impacts and olfactory odors were present within the soil at the bottom of the excavation. At this time, IPT notified the NYSDEC Spills Hotline, Spill Number 16-04579 and Spill Case Manager, Mr. Kumar Patel were assigned to the site, respectively.
- Following the UST removal activities, five (5) soil samples were collected from within the former UST excavation cavity. One (1) detected VOC compound was detected significantly above its respective SCO for three (3) of the collected soil samples. All remaining VOC compounds were below their respective SCO's for that sample and all remaining collected samples.
- In addition, all SVOC and Metal concentrations were below their respective SCOs for all samples collected.

Based on the review of the laboratory analytical data and associated elevated PID readings encountered within the field, Mr. Kumar Patel, of the NYSDEC, instructed that upon his receipt and respective review of the completed comprehensive Tank Excavation Assessment report, he will then determine if further requirements are required regarding this former UST system.

# FIGURES




★ = SITE LOCATION

ISLAND Pump & Tank CORP.

**LI OFFICE**
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

**NYC OFFICE**
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

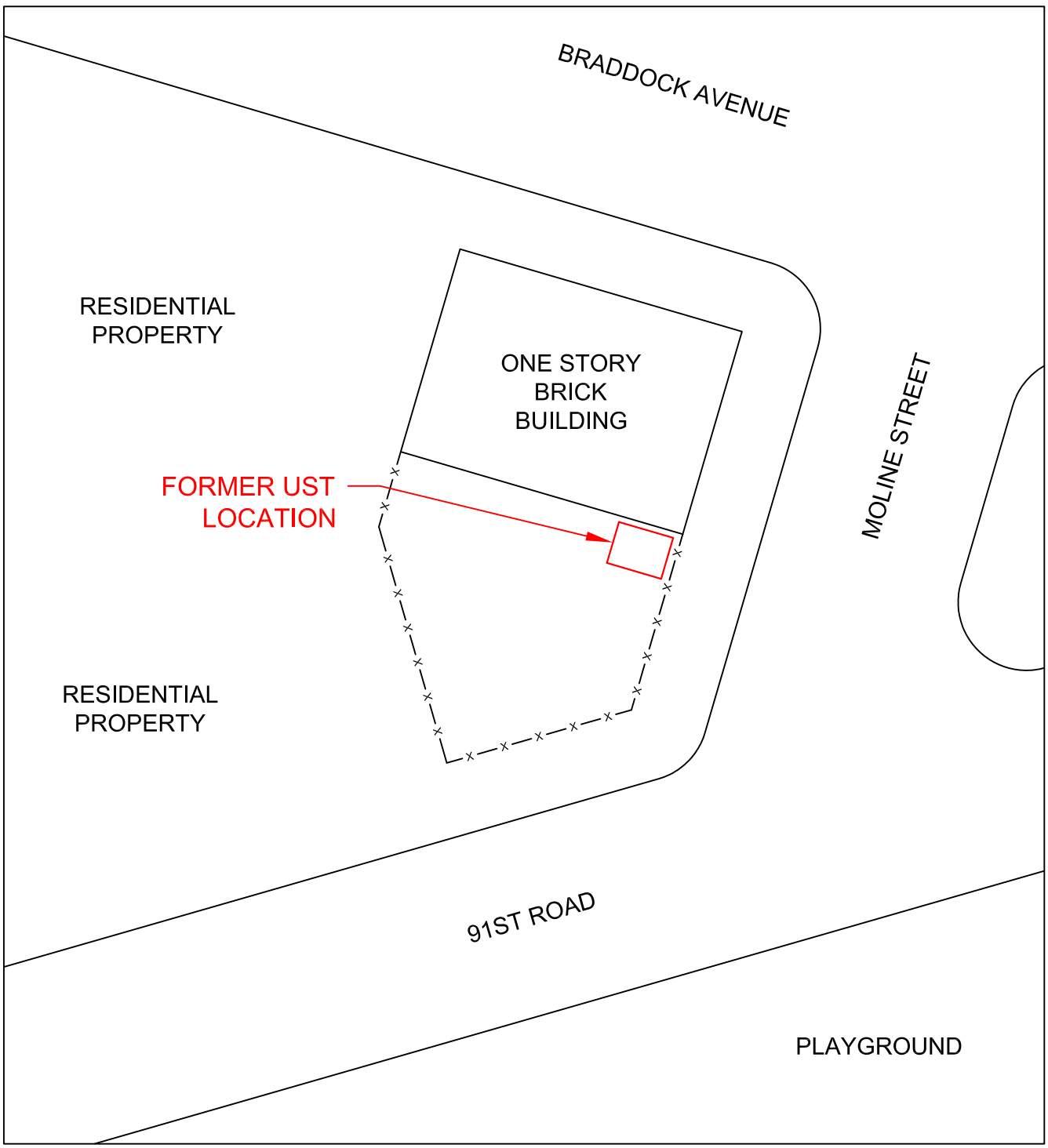
www.IslandPumpandTank.com

| | | | | | |
|---|---|---|---|---|---|
| SCALE: | N.T.S. | PROJECT MGR: | M.S. | JOB #: | |
| DATE: | 9/15/16 | DRAWN BY: | Z.B. | FILE NAME: | |

# FIGURE 1

SITE LOCATION MAP

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428




ISLAND Pump & Tank CORP.

**LI OFFICE**
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

**NYC OFFICE**
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

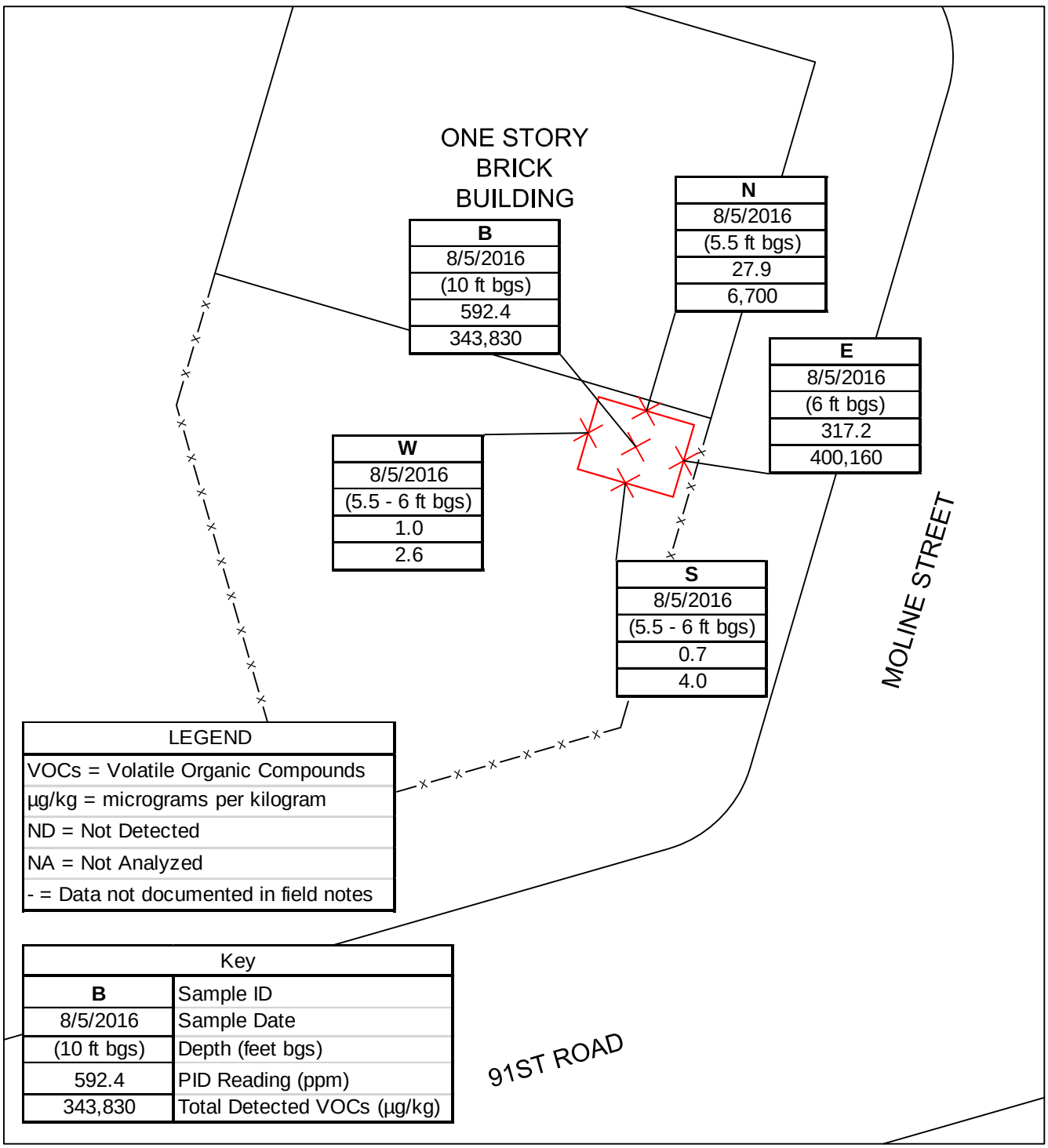
www.IslandPumpandTank.com

| | | | | | |
|---|---|---|---|---|---|
| SCALE: | N.T.S. | PROJECT MGR: | M.S. | JOB #: | |
| DATE: | 9/15/16 | DRAWN BY: | Z.B. | FILE NAME: | |

# FIGURE 2

SITE PLAN

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428




ISLAND Pump & Tank CORP.

LI OFFICE
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

NYC OFFICE
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

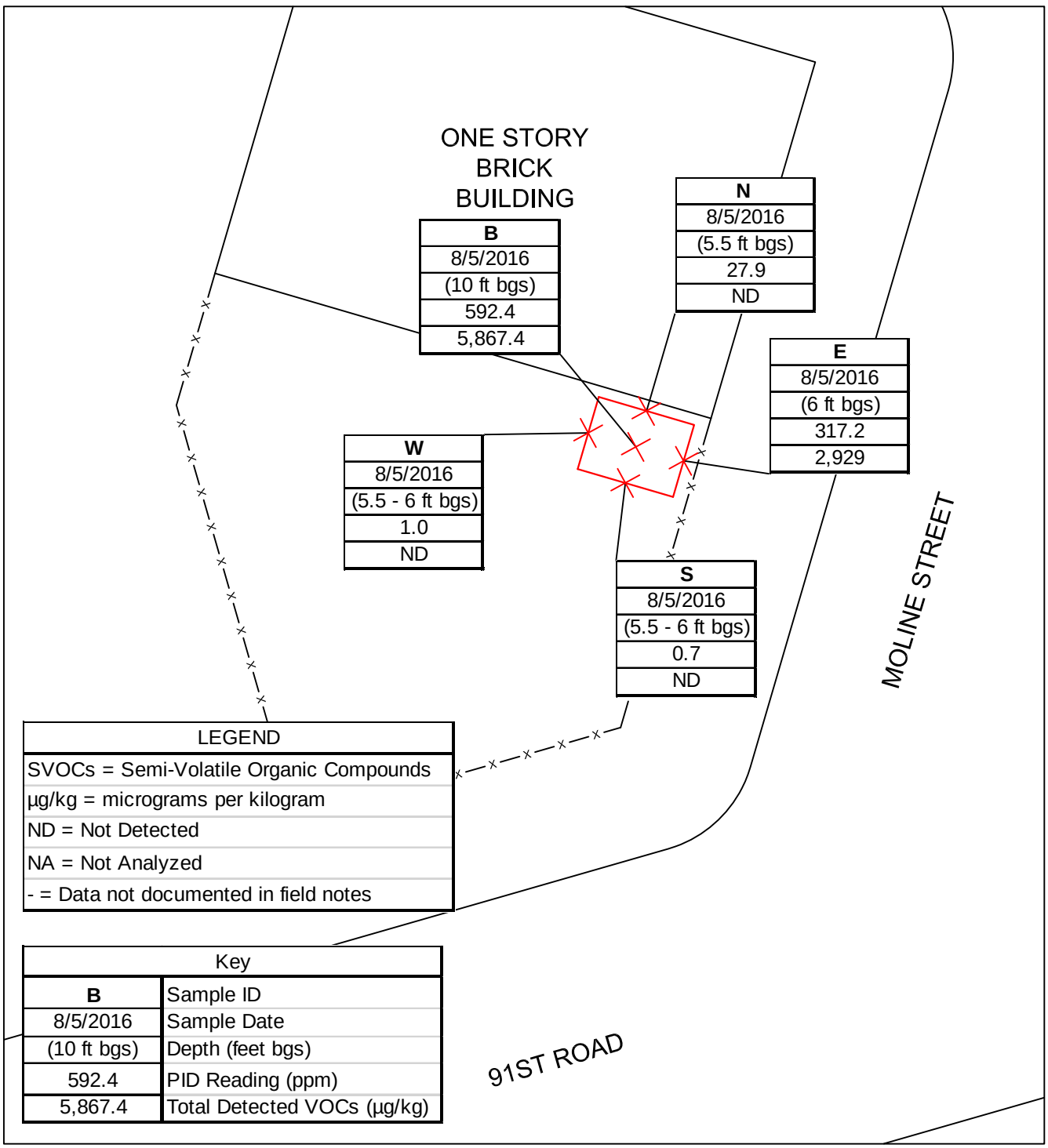
www.IslandPumpandTank.com

# FIGURE 3

SOIL ANALYTICAL DATA MAP: VOCS

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428

| | | | | | |
|---|---|---|---|---|---|
| SCALE: | N.T.S. | PROJECT MGR: | M.S. | JOB #: | |
| DATE: | 9/15/16 | DRAWN BY: | Z.B. | FILE NAME: | |




ISLAND Pump & Tank CORP.

LI OFFICE
40 Doyle Court
East Northport, NY 11731
(631) 462 2226

NYC OFFICE
1381 Utica Ave.
Brooklyn, NY 11203
(718) 526-6525

www.IslandPumpandTank.com

# FIGURE 4

SOIL ANALYTICAL DATA MAP: SVOCS

223-20 BRADDOCK AVENUE
QUEENS VILLAGE, NY 11428

| | | | | | |
|---|---|---|---|---|---|
| SCALE: | N.T.S. | PROJECT MGR: | M.S. | JOB #: | |
| DATE: | 9/15/16 | DRAWN BY: | Z.B. | FILE NAME: | |

# TABLES

*Table 1*

## SUMMARY OF REMOVED TANKS

223-20 Braddock Avenue
Queens Village, New York

| Tank # | Size (Gallons) | Construction | Product | Condition |
|---|---|---|---|---|
| 1 | 285 | Single-Walled Fiberglass | Waste Oil | Evidence of erosion and cracks. |

*Table 2*

# SUMMARY OF PID READINGS

223-20 Braddock Avenue
Queens Village, New York

| Soil Sample ID # | Sampling/Screening Date | Sample Location (Depth) | PID Reading (ppm) | Submitted for Laboratory Analysis |
|---|---|---|---|---|
| B | 8/5/2016 | Bottom of UST Cavity (6 feet bgs) | 374.0 | No |
| B | | Bottom of UST Cavity (7 feet bgs) | 172.8 | No |
| B | | Bottom of UST Cavity (8 feet bgs) | 441.6 | No |
| B | | Bottom of UST Cavity (9 feet bgs) | 702.2 | No |
| B | | Bottom of UST Cavity (10 feet bgs) | 592.4 | **Yes** |
| N | | North Wall of UST Cavity (4 feet bgs) | 77.6 | No |
| N | | North Wall of UST Cavity (5.5 feet bgs) | 27.9 | **Yes** |
| E | | East Wall of UST Cavity ( 4 feet bgs) | 12.8 | No |
| E | | East Wall of UST Cavity ( 6 feet bgs) | 317.2 | **Yes** |
| S | | South Wall of UST Cavity (4 feet bgs) | 6.8 | No |
| S | | South Wall of UST Cavity (5.5 - 6 feet bgs) | 0.7 | **Yes** |
| W | | West Wall of UST Cavity (4 feet bgs) | 150.1 | No |
| W | | West Wall of UST Cavity (5.5 - 6 feet bgs) | 1.0 | **Yes** |

Notes:

bgs = Below ground surface

PID = Photoionization detector

ppm = Parts per million

*Table 3*

## SOIL ANALYTICAL DATA - VOCs (DETECTED COMPOUNDS)

223-20 Braddock Avenue
Queens Village, New York

| Compounds of Concern | NYSDEC PART 375-6.8(b) RESTRICTED USE RESIDENTIAL SCOs | Laboratory Analytical Method | | | | |
|---|---|---|---|---|---|---|
| | | EPA Method 8260C | | | | |
| | | Sample ID | | | | |
| | | Sample Depth | | | | |
| | | Sample Date | | | | |
| | | B (10 feet bgs) | N (5.5 feet bgs) | E (6 feet bgs) | S (5.5 -6 feet bgs) | W (5.5 -6 feet bgs) |
| | | 08/05/2016 | | | | |
| **Ethylbenzene (µg/kg)** | **30,000** | 10,000 | ND<240 | ND<260 | ND<1.9 | ND<2.6 |
| **Toluene (µg/kg)** | **100,000** | 30,000 | ND<240 | 1,500 | ND<1.9 | ND<2.6 |
| **o-Xylene (µg/kg)** | **NS** | 18,000 | ND<240 | 11,000 | ND<1.9 | ND<2.6 |
| **p & m Xylenes (µg/kg)** | **NS** | 39,000 | ND<480 | 2,400 | ND<3.7 | ND<5.1 |
| **Total Xylenes (µg/kg)** | **100,000** | 56,000 | ND<720 | 13,000 | ND<5.6 | ND<7.7 |
| **Acetone (µg/kg)** | **100,000** | 45,000 | ND<480 | 800 | ND<3.7 | ND<5.1 |
| **Tetrachloroethylene (µg/kg)** | **5,500** | **97,000** | **6,700** | **360,000** | 4.0 | 2.6 |
| **1,2,4-Trimethylbenzene (µg/kg)** | **47,000** | 27,000 | ND<240 | 1,400 | ND<1.9 | ND<2.6 |
| **1,3,5-Trimethylbenzene (µg/kg)** | **47,000** | 8,100 | ND<240 | 7,300 | ND<1.9 | ND<2.6 |
| **MTBE (µg/kg)** | **62,000** | 380 | ND<240 | 460 | ND<1.9 | ND<2.6 |
| **Methylene Chloride (µg/kg)** | **51,000** | 3,000 | ND<480 | 1,900 | ND<3.7 | ND<5.1 |
| **Naphthalene (µg/kg)** | **100,000** | 5,200 | ND<240 | 400 | ND<1.9 | ND<2.6 |
| **2-Butanone (µg/kg)** | **NS** | 620 | ND<240 | ND<260 | ND<1.9 | ND<2.6 |
| **n-Propylbenzene (µg/kg)** | **100,000** | 4,100 | ND<240 | ND<260 | ND<1.9 | ND<2.6 |
| **sec-Butylbenzene (µg/kg)** | **100,000** | 430 | ND<240 | ND<260 | ND<1.9 | ND<2.6 |
| **Total VOCs (µg/kg)** | **NS** | **343,830** | **6,700** | **400,160** | 4.0 | 2.6 |

Notes:

SCOs = Soil Cleanup Objectives
VOCs = Volatile Organic Compounds
<# = Less than the method detection limit of #
µg/kg = Micrograms/kilogram
ND = Not detected
NS = No Standard
bgs = Below ground surface
**Bold** = Numbers in **Bold** exceed the NYSDEC Part 375 SCOs

*Table 4*

## SOIL ANALYTICAL DATA - SVOCs (DETECTED COMPOUNDS)

223-20 Braddock Avenue
Queens Village, New York

| Compounds of Concern | NYSDEC PART 375-6.8(b) RESTRICTED USE RESIDENTIAL SCOs | Laboratory Analytical Method | | | | |
|---|---|---|---|---|---|---|
| | | EPA Method 8270D | | | | |
| | | Sample ID | | | | |
| | | Sample Depth | | | | |
| | | Sample Date | | | | |
| | | B (10 feet bgs) | N (5.5 feet bgs) | E (6 feet bgs) | S (5.5 -6 feet bgs) | W (5.5 -6 feet bgs) |
| | | 08/05/2016 | | | | |
| **Anthracene (µg/kg)** | **100,000** | 110 | ND<21.7 | ND<110 | ND<42.6 | ND<42.7 |
| **Benzo(a)anthracene (µg/kg)** | **1,000** | 178 | ND<21.7 | ND<110 | ND<42.6 | ND<42.7 |
| **Benzo(a)pyrene (µg/kg)** | **1,000** | 85.8 | ND<21.7 | 303 | ND<42.6 | ND<42.7 |
| **Benzo(b)fluoranthene (µg/kg)** | **1,000** | 97.8 | ND<21.7 | 210 | ND<42.6 | ND<42.7 |
| **Benzo(g,h,i)perylene (µg/kg)** | **100,000** | ND<46.8 | ND<21.7 | 212 | ND<42.6 | ND<42.7 |
| **Benzo(k)fluoranthene (µg/kg)** | **1,000** | ND<46.8 | ND<21.7 | 124 | ND<42.6 | ND<42.7 |
| **Chrysene (µg/kg)** | **1,000** | 171 | ND<21.7 | ND<110 | ND<42.6 | ND<42.7 |
| **Fluoranthene (µg/kg)** | **100,000** | 97.8 | ND<21.7 | ND<110 | ND<42.6 | ND<42.7 |
| **Naphthalene (µg/kg)** | **100,000** | 2,310 | ND<21.7 | ND<110 | ND<42.6 | ND<42.7 |
| **Phenanthrene (µg/kg)** | **100,000** | 537 | ND<21.7 | ND<110 | ND<42.6 | ND<42.7 |
| **Pyrene (µg/kg)** | **100,000** | 2,280 | ND<21.7 | 2,080 | ND<42.6 | ND<42.7 |
| **Total SVOCs (µg/kg)** | **NS** | 5,867.4 | ND | 2,929 | ND | ND |

Notes:
SCOs = Soil Cleanup Objectives
SVOCs =Semi-Volatile Organic Compounds
<# = Less than the method detection limit of #
µg/kg = Micrograms/kilogram
ND = Not detected
NS = No Standard
bgs = Below ground surface
**Bold** = Numbers in **Bold** exceed the NYSDEC Part 375 SCOs

*Table 5*

## SOIL ANALYTICAL DATA - RCRA METALS

223-20 Braddock Avenue
Queens Village, New York

| Compounds of Concern | NYSDEC PART 375-6.8(b) RESTRICTED USE RESIDENTIAL SCOs | Laboratory Analytical Method | | | | |
|---|---|---|---|---|---|---|
| | | EPA Methods 6010C & 7473C | | | | |
| | | Sample ID | | | | |
| | | Sample Depth | | | | |
| | | Sample Date | | | | |
| | | B (10 feet bgs) | N (5.5 feet bgs) | E (6 feet bgs) | S (5.5 -6 feet bgs) | W (5.5 -6 feet bgs) |
| | | 08/05/2016 | | | | |
| **Arsenic (mg/kg)** | **16** | 4.37 | 2.53 | 3.14 | 1.73 | 1.32 |
| **Barium (mg/kg)** | **350** | 44.2 | 30.8 | 54.5 | 14.9 | 24.8 |
| **Cadmium (mg/kg)** | **2.5** | ND<0.336 | ND<0.312 | ND<0.315 | ND<0.306 | ND<0.306 |
| **Chromium (mg/kg)** | **36** | 19.7 | 20.0 | 13 | 11.4 | 17.8 |
| **Lead (mg/kg)** | **400** | 30.1 | 5.79 | 25.6 | 2.79 | 2.19 |
| **Selenium (mg/kg)** | **36** | 1.67 | 2.60 | 2.29 | 1.40 | 1.76 |
| **Silver (mg/kg)** | **36** | ND<0.560 | ND<0.520 | ND<0.525 | ND<0.510 | ND<0.511 |
| **Mercury (mg/kg)** | **0.81** | ND<0.0336 | ND<0.0312 | ND<0.0315 | ND<0.0306 | ND<0.0306 |

Notes:
SCOs = Soil Cleanup Objectives
<# = Less than the method detection limit of #
mg/kg = Milligrams/kilogram
ND = Not detected
NS = No Standard
bgs = Below ground surface
**Bold** = Numbers in **Bold** exceed the NYSDEC Part 375 SCOs

# APPENDIX A

Photographs



View of Former UST



View of crack in Former UST



View of Excavation



View of Excavation after Over-Excavation actives.



View of plastic placed in Excavation.



View of Stock pile of impacted soil.

# APPENDIX B

UST Removal Disposal Affidavit

ISLAND Pump & Tank CORP.

LI Office
40 Doyle Court
East Northport, NY 11731-6405
(631) 462-2226
FAX (631) 462-6434
www.islandpumpandtank.com

NY City Office
1381 Utica Avenue
Brooklyn, NY 11203
(718) 526-6525

September 28, 2016

DCI Mr. Frank Cifuentes
New York City Fire Department
9 Metro Tech Center
3rd Floor
Brooklyn, NY 11201-5884

Re: Tank Removal
223-20 Braddock Ave
Queens, NY 11428

Dear DCI Mr. Frank Cifuentes,

Please be advised that Island Pump and Tank Corp. removed One (1) 285gallon single-wall fiberglass underground waste oil tank on August 05, 2016 at the above referenced location. The tank was purged and cleaned before being crushed and disposed of at a lined landfill. This removal complies with Sections 3404.2.13.1 & 3404.2.13.2 of the New York City Fire Code

Please contact me if you have any questions.

Sincerely,

Island Pump & Tank Corp.

Frank DiAndrea
CEO
COF # 86389483 Exp. 04/29/2019
FD/jc

Sworn before me this 28th day of September 2016

Jennifer Caccioppoli
Notary Public State Of New York
No.01CA6096440
Qualified In Suffolk County
Commission Expires July 28, 2019

# APPENDIX C

Laboratory Analytical Reports

# Technical Report

prepared for:

**Island Pump & Tank**
40 Doyle Court
East Northport NY, 11731
**Attention: Matthew Schieferstein**

Report Date: 08/15/2016
**Client Project ID: 223-20 Braddock Ave**
York Project (SDG) No.: 16H0402

Report Date: 08/15/2016
Client Project ID: 223-20 Braddock Ave
York Project (SDG) No.: 16H0402

**Island Pump & Tank**
40 Doyle Court
East Northport NY, 11731
Attention: Matthew Schieferstein

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on August 08, 2016 and listed below. The project was identified as your project: **223-20 Braddock Ave**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 16H0402-01 | N | Soil | 08/05/2016 | 08/08/2016 |
| 16H0402-02 | S | Soil | 08/05/2016 | 08/08/2016 |
| 16H0402-03 | E | Soil | 08/05/2016 | 08/08/2016 |
| 16H0402-04 | W | Soil | 08/05/2016 | 08/08/2016 |
| 16H0402-05 | B | Soil | 08/05/2016 | 08/08/2016 |

## General Notes for York Project (SDG) No.: 16H0402

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

**Approved By:** 

**Date:** 08/15/2016

Benjamin Gulizia
Laboratory Director

## Sample Information

**Client Sample ID:** N

**York Sample ID:** 16H0402-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 4800 | 9600 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 67-64-1 | Acetone | ND | | ug/kg dry | 480 | 960 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 480 | 960 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 240 | 960 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |

## Sample Information

**Client Sample ID:** N **York Sample ID:** 16H0402-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 480 | 960 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 127-18-4 | **Tetrachloroethylene** | **6700** | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 240 | 480 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 720 | 1400 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 16:15 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *102 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *96.2 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *92.0 %* | *76-130* |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** N

**York Sample ID:** 16H0402-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

**Semi-Volatiles, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 56-55-3 | Benzo(a)anthracene | ND | IS-01 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | Benzo(a)pyrene | ND | IS-01 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | IS-01 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | IS-06 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | IS-01 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | IS-01 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | IS-06 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | IS-06 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-95-2 | Phenol | ND | | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | Pyrene | ND | IS-01 | ug/kg dry | 21.7 | 43.4 | 1 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 15:29 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 367-12-4 | *Surrogate: 2-Fluorophenol* | *29.7 %* | *20-108* |
| 4165-62-2 | *Surrogate: Phenol-d5* | *35.2 %* | *23-114* |
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *34.6 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *37.2 %* | *21-113* |
| 118-79-6 | *Surrogate: 2,4,6-Tribromophenol* | *33.2 %* | *19-110* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *50.4 %* | *24-116* |

## Sample Information

**Client Sample ID:** N **York Sample ID:** 16H0402-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | **Arsenic** | **2.53** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-39-3 | **Barium** | **30.8** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.312 | 0.312 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-47-3 | **Chromium** | **20.0** | | mg/kg dry | 0.520 | 0.520 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-92-1 | **Lead** | **5.79** | | mg/kg dry | 0.312 | 0.312 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7782-49-2 | **Selenium** | **2.60** | | mg/kg dry | 1.04 | 1.04 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.520 | 0.520 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:30 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0312 | 0.0312 | 1 | EPA 7473 | 08/10/2016 06:29 | 08/10/2016 10:25 | KV |
| | | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **96.2** | | % | 0.100 | 0.100 | 1 | SM 2540G | 08/09/2016 14:56 | 08/09/2016 20:11 | TJM |
| | | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** S **York Sample ID:** 16H0402-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|

## Sample Information

**Client Sample ID:** S **York Sample ID:** 16H0402-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 37 | 75 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 67-64-1 | Acetone | ND | | ug/kg dry | 3.7 | 7.5 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 3.7 | 7.5 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 1.9 | 7.5 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |

## Sample Information

**Client Sample ID:** S **York Sample ID:** 16H0402-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 3.7 | 7.5 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 127-18-4 | **Tetrachloroethylene** | **4.0** | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 1.9 | 3.7 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 5.6 | 11 | 1 | EPA 8260C | 08/12/2016 08:35 | 08/12/2016 15:58 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *99.3 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *103 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *95.2 %* | *76-130* |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** S **York Sample ID:** 16H0402-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

**Semi-Volatiles, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-95-2 | Phenol | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 42.6 | 85.0 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:02 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 367-12-4 | *Surrogate: 2-Fluorophenol* | *55.0 %* | *20-108* |
| 4165-62-2 | *Surrogate: Phenol-d5* | *67.2 %* | *23-114* |
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *61.4 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *69.6 %* | *21-113* |
| 118-79-6 | *Surrogate: 2,4,6-Tribromophenol* | *82.7 %* | *19-110* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *68.0 %* | *24-116* |

## Sample Information

**Client Sample ID:** S **York Sample ID:** 16H0402-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | **Arsenic** | **1.73** | | mg/kg dry | 1.02 | 1.02 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-39-3 | **Barium** | **14.9** | | mg/kg dry | 1.02 | 1.02 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.306 | 0.306 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-47-3 | **Chromium** | **11.4** | | mg/kg dry | 0.510 | 0.510 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-92-1 | **Lead** | **2.79** | | mg/kg dry | 0.306 | 0.306 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7782-49-2 | **Selenium** | **1.40** | | mg/kg dry | 1.02 | 1.02 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.510 | 0.510 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:35 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0306 | 0.0306 | 1 | EPA 7473 | 08/10/2016 06:29 | 08/10/2016 10:34 | KV |
| | | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **98.1** | | % | 0.100 | 0.100 | 1 | SM 2540G | 08/09/2016 14:56 | 08/09/2016 20:11 | TJM |
| | | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** E **York Sample ID:** 16H0402-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|

## Sample Information

**Client Sample ID:** **E** **York Sample ID:** **16H0402-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **1400** | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **7300** | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 5200 | 10000 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>NELAC-NY10854,NJDEP | SS |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |
| 67-64-1 | **Acetone** | **800** | J, CCV-E | ug/kg dry | 520 | 1000 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |
| 71-43-2 | Benzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 1634-04-4 | **Methyl tert-butyl ether (MTBE)** | **460** | J | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |
| 75-09-2 | **Methylene chloride** | **1900** | | ug/kg dry | 520 | 1000 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | SS |
| 91-20-3 | **Naphthalene** | **400** | J, CCV-E | ug/kg dry | 260 | 1000 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>NELAC-NY10854,NJDEP | SS |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: | 08/12/2016 08:00 | 08/12/2016 16:49<br>CTDOH,NELAC-NY10854,NJDEP | SS |

## Sample Information

**Client Sample ID:** E **York Sample ID:** 16H0402-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 95-47-6 | **o-Xylene** | **11000** | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854 | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 179601-23-1 | **p- & m- Xylenes** | **2400** | | ug/kg dry | 520 | 1000 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854 | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 127-18-4 | **Tetrachloroethylene** | **360000** | | ug/kg dry | 13000 | 26000 | 5000 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 08:00 | 08/15/2016 14:52 | BK |
| 108-88-3 | **Toluene** | **1500** | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 260 | 520 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |
| 1330-20-7 | **Xylenes, Total** | **13000** | | ug/kg dry | 780 | 1600 | 100 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 08:00 | 08/12/2016 16:49 | SS |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *103 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *107 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *98.8 %* | *76-130* |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | IS-01 | ug/kg dry | 110 | 219 | 5 | EPA 8270D<br>Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |

## Sample Information

**Client Sample ID:** E **York Sample ID:** 16H0402-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | **Benzo(a)pyrene** | **303** | IS-01 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | **Benzo(b)fluoranthene** | **210** | J, IS-01 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | **Benzo(g,h,i)perylene** | **212** | J, CCV-E, IS-06 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | **Benzo(k)fluoranthene** | **124** | J, IS-01 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | IS-01 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | IS-06 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | IS-06 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-95-2 | Phenol | ND | | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | **Pyrene** | **2080** | IS-01 | ug/kg dry | 110 | 219 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/14/2016 08:19 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | | Acceptance Range |
|---|---|---|---|---|
| 367-12-4 | *Surrogate: 2-Fluorophenol* | *16.2 %* | S-01 | *20-108* |
| 4165-62-2 | *Surrogate: Phenol-d5* | *21.9 %* | S-01 | *23-114* |
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *26.0 %* | | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *38.0 %* | | *21-113* |
| 118-79-6 | *Surrogate: 2,4,6-Tribromophenol* | *48.1 %* | | *19-110* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *79.7 %* | | *24-116* |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

## Sample Information

**Client Sample ID:** E **York Sample ID:** 16H0402-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | **Arsenic** | **3.14** | | mg/kg dry | 1.05 | 1.05 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-39-3 | **Barium** | **54.5** | | mg/kg dry | 1.05 | 1.05 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.315 | 0.315 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-47-3 | **Chromium** | **13.0** | | mg/kg dry | 0.525 | 0.525 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-92-1 | **Lead** | **25.6** | | mg/kg dry | 0.315 | 0.315 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7782-49-2 | **Selenium** | **2.29** | | mg/kg dry | 1.05 | 1.05 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.525 | 0.525 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:52 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | **Mercury** | **0.0370** | | mg/kg dry | 0.0315 | 0.0315 | 1 | EPA 7473 | 08/10/2016 06:29 | 08/10/2016 10:42 | KV |
| | | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **95.2** | | % | 0.100 | 0.100 | 1 | SM 2540G | 08/09/2016 14:56 | 08/09/2016 20:11 | TJM |
| | | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** W **York Sample ID:** 16H0402-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** W **York Sample ID:** 16H0402-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

**Volatile Organics, NYSDEC Part 375 List**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 51 | 100 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 67-64-1 | Acetone | ND | | ug/kg dry | 5.1 | 10 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 5.1 | 10 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 2.6 | 10 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |

## Sample Information

**Client Sample ID:** W **York Sample ID:** 16H0402-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 5.1 | 10 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 127-18-4 | **Tetrachloroethylene** | **2.6** | J | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.6 | 5.1 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 7.7 | 15 | 1 | EPA 8260C | 08/11/2016 17:00 | 08/11/2016 21:23 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *102 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *100 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *97.7 %* | *76-130* |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** W **York Sample ID:** 16H0402-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-95-2 | Phenol | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 42.7 | 85.2 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 16:35 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 367-12-4 | *Surrogate: 2-Fluorophenol* | *63.6 %* | *20-108* |
| 4165-62-2 | *Surrogate: Phenol-d5* | *72.1 %* | *23-114* |
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *65.9 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *73.4 %* | *21-113* |
| 118-79-6 | *Surrogate: 2,4,6-Tribromophenol* | *62.3 %* | *19-110* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *59.0 %* | *24-116* |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|

## Sample Information

**Client Sample ID:** W **York Sample ID:** 16H0402-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | **Arsenic** | **1.32** | | mg/kg dry | 1.02 | 1.02 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-39-3 | **Barium** | **24.8** | | mg/kg dry | 1.02 | 1.02 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.306 | 0.306 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-47-3 | **Chromium** | **17.8** | | mg/kg dry | 0.511 | 0.511 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-92-1 | **Lead** | **2.19** | | mg/kg dry | 0.306 | 0.306 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7782-49-2 | **Selenium** | **1.76** | | mg/kg dry | 1.02 | 1.02 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.511 | 0.511 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 04:57 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0306 | 0.0306 | 1 | EPA 7473 | 08/10/2016 06:29 | 08/10/2016 10:51 | KV |
| | | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **97.9** | | % | 0.100 | 0.100 | 1 | SM 2540G | 08/09/2016 14:56 | 08/09/2016 20:11 | TJM |
| | | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** B **York Sample ID:** 16H0402-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|

## Sample Information

**Client Sample ID:** B **York Sample ID:** 16H0402-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **27000** | | ug/kg dry | 1200 | 2500 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **8100** | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 4900 | 9800 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 78-93-3 | **2-Butanone** | **620** | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 67-64-1 | **Acetone** | **45000** | | ug/kg dry | 2500 | 4900 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 100-41-4 | **Ethyl Benzene** | **10000** | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1634-04-4 | **Methyl tert-butyl ether (MTBE)** | **380** | J | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 75-09-2 | **Methylene chloride** | **3000** | | ug/kg dry | 490 | 980 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | **Naphthalene** | **5200** | CCV-E | ug/kg dry | 250 | 980 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |

## Sample Information

**Client Sample ID:** B **York Sample ID:** 16H0402-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Volatile Organics, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 103-65-1 | **n-Propylbenzene** | **4100** | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 95-47-6 | **o-Xylene** | **18000** | | ug/kg dry | 1200 | 2500 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 179601-23-1 | **p- & m- Xylenes** | **39000** | | ug/kg dry | 2500 | 4900 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |
| 135-98-8 | **sec-Butylbenzene** | **430** | J | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 127-18-4 | **Tetrachloroethylene** | **97000** | | ug/kg dry | 1200 | 2500 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-88-3 | **Toluene** | **30000** | | ug/kg dry | 1200 | 2500 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 250 | 490 | 100 | EPA 8260C | 08/12/2016 08:00 | 08/12/2016 17:23 | SS |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1330-20-7 | **Xylenes, Total** | **56000** | | ug/kg dry | 3700 | 7400 | 500 | EPA 8260C | 08/12/2016 08:00 | 08/15/2016 12:53 | BK |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | *77-125* |
| 2037-26-5 | *Surrogate: Toluene-d8* | *102 %* | *85-120* |
| 460-00-4 | *Surrogate: p-Bromofluorobenzene* | *96.3 %* | *76-130* |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | **Anthracene** | **110** | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 56-55-3 | **Benzo(a)anthracene** | **178** | IS-01 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** B **York Sample ID:** 16H0402-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Semi-Volatiles, NYSDEC Part 375 List

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-32-8 | **Benzo(a)pyrene** | **85.8** | J, IS-01 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | **Benzo(b)fluoranthene** | **97.8** | IS-01 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | IS-06 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | Benzo(k)fluoranthene | ND | IS-01 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | **Chrysene** | **171** | IS-01 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | IS-06 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | **Fluoranthene** | **97.8** | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | IS-06 | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | **Naphthalene** | **2310** | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | **Phenanthrene** | **537** | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-95-2 | Phenol | ND | | ug/kg dry | 46.8 | 93.3 | 2 | EPA 8270D | 08/12/2016 07:08 | 08/12/2016 17:09 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | **Pyrene** | **2280** | IS-01 | ug/kg dry | 117 | 233 | 5 | EPA 8270D | 08/12/2016 07:08 | 08/15/2016 11:22 | KH |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 367-12-4 | *Surrogate: 2-Fluorophenol* | *45.1 %* | *20-108* |
| 4165-62-2 | *Surrogate: Phenol-d5* | *65.4 %* | *23-114* |
| 4165-60-0 | *Surrogate: Nitrobenzene-d5* | *71.7 %* | *22-108* |
| 321-60-8 | *Surrogate: 2-Fluorobiphenyl* | *98.6 %* | *21-113* |
| 118-79-6 | *Surrogate: 2,4,6-Tribromophenol* | *74.1 %* | *19-110* |
| 1718-51-0 | *Surrogate: Terphenyl-d14* | *68.9 %* | *24-116* |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|

## Sample Information

**Client Sample ID:** B **York Sample ID:** 16H0402-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 16H0402 | 223-20 Braddock Ave | Soil | August 5, 2016 3:00 pm | 08/08/2016 |

### Metals, RCRA

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | **Arsenic** | **4.37** | | mg/kg dry | 1.12 | 1.12 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-39-3 | **Barium** | **44.2** | | mg/kg dry | 1.12 | 1.12 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.336 | 0.336 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-47-3 | **Chromium** | **19.7** | | mg/kg dry | 0.560 | 0.560 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7439-92-1 | **Lead** | **30.1** | | mg/kg dry | 0.336 | 0.336 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7782-49-2 | **Selenium** | **1.67** | | mg/kg dry | 1.12 | 1.12 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.560 | 0.560 | 1 | EPA 6010C | 08/09/2016 12:05 | 08/10/2016 05:02 | KV |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0336 | 0.0336 | 1 | EPA 7473 | 08/10/2016 06:29 | 08/10/2016 11:00 | KV |
| | | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **89.3** | | % | 0.100 | 0.100 | 1 | SM 2540G | 08/09/2016 14:56 | 08/09/2016 20:11 | TJM |
| | | | | | | | | Certifications: CTDOH | | | |

## Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|---|---|---|
| 16H0402-01 | N | 40mL Vial with Stir Bar-Cool 4° C |
| 16H0402-02 | S | 40mL Vial with Stir Bar-Cool 4° C |
| 16H0402-03 | E | 40mL Vial with Stir Bar-Cool 4° C |
| 16H0402-04 | W | 40mL Vial with Stir Bar-Cool 4° C |
| 16H0402-05 | B | 40mL Vial with Stir Bar-Cool 4° C |

## Notes and Definitions

| | |
|---|---|
| S-01 | The surrogate recovery for this sample may not be available due to sample dilution required from high analyte concentration and/or matrix interferences. |
| QR-04 | The RPD exceeded control limits for the LCS/LCSD QC. |
| QL-02 | This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature. |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| IS-06 | Internal standard perylene-d12 did not meet acceptance criteria. The sample was reanalyzed to confirm matrix interference. Compounds affected are: Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene. |
| IS-01 | This internal standard did not meet acceptance criteria. The sample was reanalyzed to confirm matrix interference. |
| CCV-E | The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit). |
| B | Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. |

---

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

---

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

# Field Chain-of-Custody Record



3

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

**York Project No.** 16H0402

## YOUR Information

Company: Island Pump & Tank
Address: 40 Doyle Court East Northport NY
Phone No. (631) 462-2226
Contact Person: Mark S
E-Mail Address:

## Report To:

Company: Same
Address:
Phone No.
Attention:
E-Mail Address:

## Invoice To:

Company: Same
Address:
Phone No.
Attention:
E-Mail Address:

## YOUR Project ID

2655

## Purchase Order No.

223-20 Braddock Ave

Samples from: CT ___ NY ✓ NJ ___

## Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☑

## Report Type

- Summary Report ___
- Summary w/ QA Summary ___
- CT RCP Package ___
- CTRCP DQA/DUE Pkg ___
- NY ASP A Package ___
- NY ASP B Package ___
- NJDEP Red. Deliv. ___

*Electronic Data Deliverables (EDD)*

- Simple Excel ___
- NYSDEC EQuIS ___
- EQuIS (std) ___
- EZ-EDD (EQuIS) ___
- NJDEP SRP HazSite EDD ___
- GIS/KEY (std) ___
- Other ___
- **York Regulatory Comparison**
- **Excel Spreadsheet** ___

Compare to the following Regs. (please fill in):

***Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.***

Samples Collected/Authorized By (Signature)
Michele Brasl
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

| Volatiles | | Semi-Vols. | Pest/PCB/Herb | Metals | Misc. Org. | Full Lists | Misc. |
|---|---|---|---|---|---|---|---|
| 8260 full | TICs | 8270 or 625 | 8082PCB | RCRA8 | TPH GRO | Pri.Poll. | Corrosivity |
| 624 | Site Spec. | STARS list | 8081Pest | PP13 list | TPH DRO | TCL Organics | Reactivity |
| STARS list | Nassau Co. | BN Only | 8151Herb | TAL | CT ETPH | TAL Met/CN | Ignitability |
| BTEX | Suffolk Co. | Acids Only | CT RCP | CT15 list | NY 310-13 | Full TCLP | Flash Point |
| MTBE | Ketones | PAH list | App. IX | TAGM list | TPH 1664 | Full App. IX | Sieve Anal. |
| TCL list | Oxygenates | TAGM list | Site Spec. | NJDEP list | Air TO14A | Part 360-Routine | Heterotrophs |
| TAGM list | TCLP list | CT RCP list | SPLP or TCLP | Total | Air TO15 | Part 360-Baseline | TOX |
| CT RCP list | 524.2 | TCL list | TCLP Pest | Dissolved | Air STARS | Part 360-Expanded No Dioxins/Furans | BTU/lb. |
| Arom. only | 502.2 | NJDEP list | TCLP Herb | SPLP or TCLP | Air VPH | Part 360-Expanded Full List | Aquatic Tox. |
| Halog.only | NJDEP list | App. IX | Chlordane | Indiv. Metals | Air TICs | NYCDEP Sewer | TOC |
| App.IX list | SPLP or TCLP | TCLP BNA | 608 Pest | LIST Below | Methane | NYSDEC Sewer | Asbestos |
| 8021B list | | SPLP or TCLP | 608 PCB | | Helium | TAGM | Silica |

| Sample Identification | Date/Time Sampled | Sample Matrix | Choose Analyses Needed from the Menu Above and Enter Below | Container Description(s) |
|---|---|---|---|---|
| DUP | 8/5/16 | S | 8260 VOCs 375 list, 8260 SVOC 35 list, RCRA 8 metals | 1-8oz, 1-4oz, 1-5035kit |
| SED | | | | |
| BLK | | | | |

Comments

**Preservation** Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ✓ Frozen ___ HCl ___ MeOH ✓ $HNO_3$ ___ $H_2SO_4$ ___ NaOH ___
ZnAc Ascorbic Acid Other

Samples Relinquished By — Date/Time: 8/5/16
Samples Relinquished By — Date/Time:

Samples Received By — Date/Time: 8/8/16 1859
Samples Received in LAB by — Date/Time:

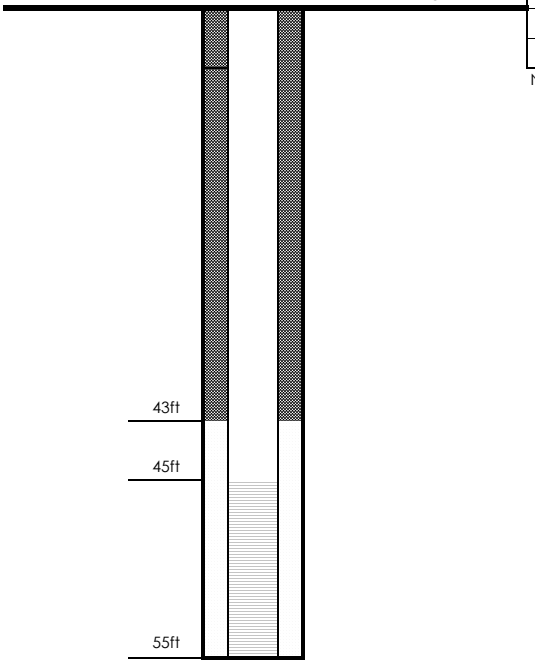
**Temperature on Receipt** 4.3 °C

# APPENDIX B

P.W. GROSSER CONSULTING

## Well Construction Log

| | | | |
|---|---|---|---|
| **MW Designation:** | **MW001** | **Logged By:** | Matthew Sanchez |
| **Site Address:** | 233-20 Braddock Ave | **Project Manager:** | Jennifer Lewis |
| **Project Name:** | MHD1801 | **PWGC Project Number:** | MHD1801 |
| **Drilling Contractor:** | Island Pump and Tank | **Driller Name:** | Micheal Mede |
| **Drilling Method:** | Hollow Stem Auger | **Borehole Diameter:** | 4.5in |
| **Soil Sampling Method:** | N/A | **Total Borehole Depth (bls):** | 55ft |
| **Drilling Fluid:** | N/A | **Fluid Loss During Drilling:** | N/A |
| **Start Time:** | 10:40 | **Completion Time:** | 12:31 |
| **Start Date:** | 3/21/2023 | **Completion Date:** | 3/21/2023 |
| **Surveyor:** | PWGC | **Survey Date:** | 3/31/2023 |




| **MW001** | | | |
|---|---|---|---|
| Well Purpose: | Monitoring | Well Material: | Schedule 40 PVC |
| Well Diameter: | 2in | Reference Elevation: | NM |
| Screen Slot: | 0.010in | Development Date: | 3/23/2023 |
| Static DTP (bmp): | N/A | Development Method: | Surge and Pump |
| Static DTW (bmp): | ~48ft | Pumping Duration: | |
| Static DTB (bmp): | ~55ft | Water Removed: | |

Notes:

Legend:

- #2 sand filter pack
- bentonite pellets
- native fill
- bentonite / cement grout
- well screen
- well riser

Notes:

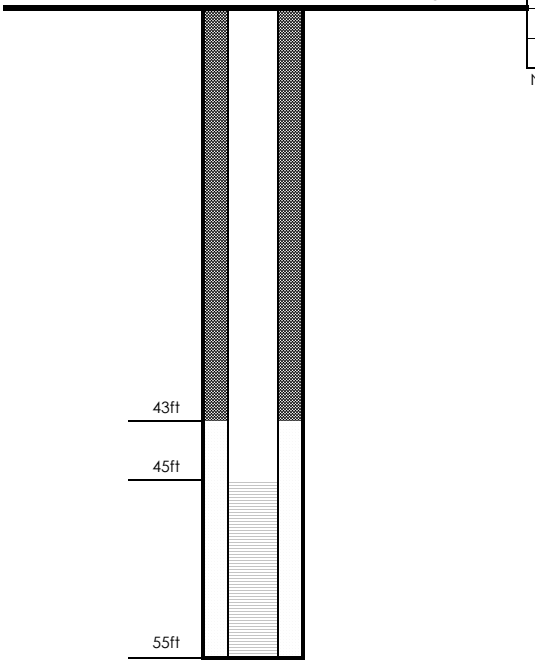
bls = below level surface

bmp = below measuring point

P.W. GROSSER CONSULTING

## Well Construction Log

| | | | |
|---|---|---|---|
| **MW Designation:** | **MW002** | **Logged By:** | Matthew Sanchez |
| **Site Address:** | 233-20 Braddock Ave | **Project Manager:** | Jennifer Lewis |
| **Project Name:** | MHD1801 | **PWGC Project Number:** | MHD1801 |
| **Drilling Contractor:** | Island Pump and Tank | **Driller Name:** | Micheal Mede |
| **Drilling Method:** | Hollow Stem Auger | **Borehole Diameter:** | 4.5in |
| **Soil Sampling Method:** | N/A | **Total Borehole Depth (bls):** | 55ft |
| **Drilling Fluid:** | N/A | **Fluid Loss During Drilling:** | N/A |
| **Start Time:** | 9:46 | **Completion Time:** | 13:00 |
| **Start Date:** | 3/22/2023 | **Completion Date:** | 3/22/2023 |
| **Surveyor:** | PWGC | **Survey Date:** | 3/31/2023 |




| **MW002** | | | |
|---|---|---|---|
| Well Purpose: | Monitoring | Well Material: | Schedule 40 PVC |
| Well Diameter: | 2in | Reference Elevation: | NM |
| Screen Slot: | 0.010in | Development Date: | 3/23/2023 |
| Static DTP (bmp): | N/A | Development Method: | Surge and Pump |
| Static DTW (bmp): | ~48ft | Pumping Duration: | |
| Static DTB (bmp): | ~55ft | Water Removed: | |

Notes:

Legend:

- #2 sand filter pack
- bentonite pellets
- native fill
- bentonite / cement grout
- well screen
- well riser

Notes:

bls = below level surface

bmp = below measuring point

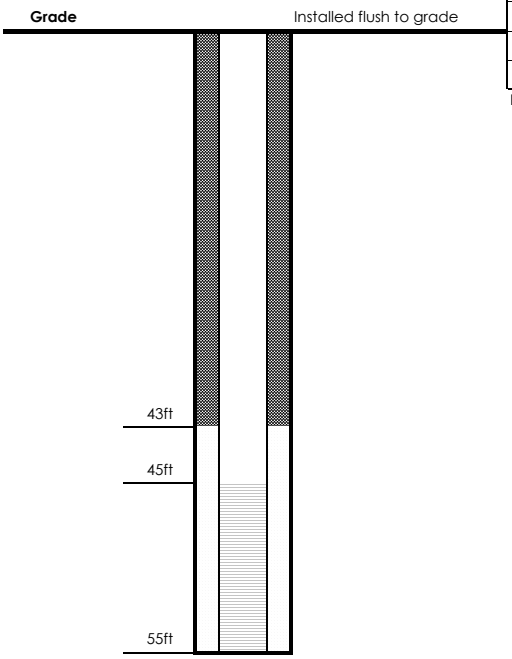
P.W. GROSSER CONSULTING

## Well Construction Log

| | | | |
|---|---|---|---|
| **MW Designation:** | **MW003** | **Logged By:** | Matthew Sanchez |
| **Site Address:** | 233-20 Braddock Ave | **Project Manager:** | Jennifer Lewis |
| **Project Name:** | MHD1801 | **PWGC Project Number:** | MHD1801 |
| **Drilling Contractor:** | Island Pump and Tank | **Driller Name:** | Micheal Mede |
| **Drilling Method:** | Hollow Stem Auger | **Borehole Diameter:** | 4.5in |
| **Soil Sampling Method:** | N/A | **Total Borehole Depth (bls):** | ~55ft |
| **Drilling Fluid:** | N/A | **Fluid Loss During Drilling:** | N/A |
| **Start Time:** | 7:56 | **Completion Time:** | 10:12 |
| **Start Date:** | 3/23/2023 | **Completion Date:** | 3/23/2023 |
| **Surveyor:** | PWGC | **Survey Date:** | 3/31/2023 |

| **MW003** | | | |
|---|---|---|---|
| Well Purpose: | Monitoring | Well Material: | Schedule 40 PVC |
| Well Diameter: | 2in | Reference Elevation: | NM |
| Screen Slot: | 0.010in | Development Date: | 3/23/2023 |
| Static DTP (bmp): | N/A | Development Method: | |
| Static DTW (bmp): | ~48ft | Pumping Duration: | |
| Static DTB (bmp): | ~55ft | Water Removed: | |

Notes:




Legend:

- #2 sand filter pack
- bentonite pellets
- native fill
- bentonite / cement grout
- well screen
- well riser

Notes:

bls = below level surface

bmp = below measuring point

# APPENDIX C

# P.W. GROSSER CONSULTING, Inc

## Groundwater Monitoring Well - Well Development Log

| | |
|---|---|
| **Well Designation: MW001**<br>**Site Address: 233-20 Braddock Ave**<br>**Project Name: MHD1801** | **Sampled By: Matthew Sanchez**<br>**Project Manager: Jennfer Lewis**<br>**Project Number: MHD1801** |
| | |
| **Reference Elevation (ft): NM**<br>**Depth to Product (ft):**<br>**Depth to Water (ft): 48**<br>**Depth to Bottom (ft): 55**<br>**Height of Water Column (ft): 7**<br>**Standing Water Volume (gal): 1.1** | **Well Use: Monitoring Well**<br>**Product Elevation (ft): NM**<br>**Groundwater Elevation (ft): NM**<br>**Bottom Elevation (ft): NM**<br>**Well Diameter (in): 2**<br>**Calculated Purge Volume (gal): 37.5** |
| **Development Date: 3/23/23** | **Start Purge Time:**<br>**End Purge Time:** |
| **Purge Method: Stabilization of Indicator Parameters**<br>**Purge Rate (gal/min): 1.5**<br>**Actual Purge Volume (gal): 37.5** | **Sample Method:**<br>**Purge Time (min): 25**<br>**Casing Volumes Removed: 34** |
| **Sample Appearance: Clear** | **Odors Observed: None** |
| **Analytical Laboratory: N/A**<br>**Date Shipped: N/A**<br>**Analyses Requested: N/A** | **Notes: Equipment mix up occurred only allowing for pH readings. ExStik II pH/Cond/Temp/TDS Meter box contained phTester 2 which only tests for pH. Turbidity visually noted** |

**Field Indicator Parameters**

| Reading | Time | Temp. (°C) | pH | Turbidity NTU | ORP mV | Cond. (mS/cm) | DO mg/L |
|---|---|---|---|---|---|---|---|
| 1 | 13:25 | | 7.4 | Turbid | | | |
| 2 | 13:30 | | 7.0 | Slightly Turbid | | | |
| 3 | 13:35 | | 6.4 | Clear | | | |
| 4 | 13:40 | | 6.4 | Clear | | | |
| 5 | 13:45 | | 6.3 | Clear | | | |
| 6 | 13:50 | | 6.3 | Clear | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# P.W. GROSSER CONSULTING, Inc

## Groundwater Monitoring Well - Well Development Log

| | |
|---|---|
| **Well Designation: MW002**<br>**Site Address: 233-20 Braddock Ave**<br>**Project Name: MHD1801** | **Sampled By: Matthew Sanchez**<br>**Project Manager: Jennfer Lewis**<br>**Project Number: MHD1801** |
| | |
| **Reference Elevation (ft): NM**<br>**Depth to Product (ft): N/A**<br>**Depth to Water (ft): 48**<br>**Depth to Bottom (ft): 55**<br>**Height of Water Column (ft): 7**<br>**Standing Water Volume (gal): 1.1** | **Well Use: Monitoring Well**<br>**Product Elevation (ft): NM**<br>**Groundwater Elevation (ft): NM**<br>**Bottom Elevation (ft): NM**<br>**Well Diameter (in): 2**<br>**Calculated Purge Volume (gal): 30** |
| **Development Date: 3/23/23** | **Start Purge Time: 12:06**<br>**End Purge Time: 12:26** |
| **Purge Method: Stabilization of Indicator Parameters**<br>**Purge Rate (gal/min): 1.5**<br>**Actual Purge Volume (gal): 30** | **Sample Method:**<br>**Purge Time (min): 20**<br>**Casing Volumes Removed: 27** |
| **Sample Appearance: Clear** | **Odors Observed: None** |
| **Analytical Laboratory: N/A**<br>**Date Shipped: N/A**<br>**Analyses Requested: N/A** | **Notes: Equipment mix up occurred only allowing for pH readings. ExStik II pH/Cond/Temp/TDS Meter box contained phTester 2 which only tests for pH. Turbidity visually noted** |

**Field Indicator Parameters**

| Reading | Time | Temp. (°C) | pH | Turbidity NTU | ORP mV | Cond. (mS/cm) | DO mg/L |
|---|---|---|---|---|---|---|---|
| 1 | 12:06 | | 7.60 | Turbid | | | |
| 2 | 12:11 | | 7.00 | Clear | | | |
| 3 | 12:16 | | 6.60 | Clear | | | |
| 4 | 12:21 | | 6.50 | Clear | | | |
| 5 | 12:26 | | 6.50 | Clear | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# P.W. GROSSER CONSULTING, Inc

## Groundwater Monitoring Well - Well Development Log

| | |
|---|---|
| **Well Designation: MW003**<br>**Site Address: 233-20 Braddock Ave**<br>**Project Name: MHD1801** | **Sampled By: Matthew Sanchez**<br>**Project Manager: Jennfer Lewis**<br>**Project Number: MHD1801** |
| | |
| **Reference Elevation (ft): NM**<br>**Depth to Product (ft): N/A**<br>**Depth to Water (ft): 48**<br>**Depth to Bottom (ft): 55**<br>**Height of Water Column (ft): 7**<br>**Standing Water Volume (gal): 1.1** | **Well Use: Monitoring Well**<br>**Product Elevation (ft): NM**<br>**Groundwater Elevation (ft): NM**<br>**Bottom Elevation (ft): NM**<br>**Well Diameter (in): 2**<br>**Calculated Purge Volume (gal): 37.5** |
| **Development Date: 3/23/23** | **Start Purge Time: 11:31**<br>**End Purge Time: 11:56** |
| **Purge Method: Stabilization of Indicator Parameters**<br>**Purge Rate (gal/min): 1.5**<br>**Actual Purge Volume (gal): 37.5** | **Sample Method:**<br>**Purge Time (min): 25**<br>**Casing Volumes Removed: 34** |
| **Sample Appearance: Clear** | **Odors Observed: None** |
| **Analytical Laboratory: N/A**<br>**Date Shipped: N/A**<br>**Analyses Requested: N/A** | **Notes: Equipment mix up occurred only allowing for pH readings. ExStik II pH/Cond/Temp/TDS Meter box contained phTester 2 which only tests for pH. Turbidity visually noted** |

**Field Indicator Parameters**

| Reading | Time | Temp. (°C) | pH | Turbidity NTU | ORP mV | Cond. (mS/cm) | DO mg/L |
|---|---|---|---|---|---|---|---|
| 1 | 11:31 | | 10.00 | Turbid | | | |
| 2 | 11:36 | | 9.70 | Slightly Turbid | | | |
| 3 | 11:41 | | 8.90 | Clear | | | |
| 4 | 11:46 | | 8.20 | Clear | | | |
| 5 | 11:51 | | 8.00 | Clear | | | |
| 6 | 11:56 | | 8.00 | Clear | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# APPENDIX D

# Appendix A
# Well Sampling Logs

P.W. GROSSER CONSULTING

**Well Sampling Log**

| | | | |
|---|---|---|---|
| **Well Designation:** | **MW001** | **Sampled By:** | **AB** |
| **Site Address:** | **223-20 Braddock Ave** | **Project Manager:** | **JL** |
| **Project Name:** | **SSIR** | **Project Number:** | **MHD1801** |

| | | | |
|---|---|---|---|
| **Relative TOC Elevation (ft):** | **NM** | **Well Use:** | **Monitoring/Observation** |
| **Depth to Product (ft):** | **No Product** | **Product Elevation (ft):** | **NM** |
| **Depth to Water (ft):** | **48.82** | **Groundwater Elevation (ft):** | **NM** |
| **Depth to Bottom (ft):** | **55.01** | **Bottom Elevation (ft):** | **NM** |
| **Height of Water Column (ft):** | **6.19** | **Well Diameter (in):** | **2** |
| **Standing Water Volume (gal):** | **0.99** | **Calculated Purge Volume (gal):** | **2.40** |
| **Sample Date:** | **3/31/2023** | **Begin Purge Time:** | **9:55** |
| **Sample Time:** | **13:05** | **Complete Purge Time:** | **10:40** |
| **Purge Method:** | **Low-Flow** | **Sample Method:** | **Tsunami Low-Flow Pump** |
| **Purge Rate (mL/min):** | **200** | **Purge Time (hrs):** | **0:45** |
| **Sample Appearance:** | **Clear** | **Odors Observed:** | **no odor** |
| **Analytical Laboratory:** | **York** | **Notes:** | **0.1 ppm** |
| **Date Shipped:** | **3/31/2023** | | |
| **Analyses Requested:** | | | |
| **VOCs, TCL List** | | | |

**Field Indicator Parameters**

| Time | Temp. (ºC) | pH | Cond. (mS/cm) | ORP (mV) | DO (mg/L) | Turb. (NTU) | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9:55 | 14.31 | 6.05 | 0.739 | 128 | 5.23 | 0 | | | |
| 10:00 | 14.77 | 6.08 | 0.727 | 128 | 5.68 | 0 | | | |
| 10:05 | 17.09 | 6.04 | 0.713 | 134 | 5.63 | 891 | | | |
| 10:10 | 16.91 | 6.04 | 0.713 | 140 | 5.26 | 203 | | | |
| 10:15 | 17.18 | 6.07 | 0.712 | 141 | 4.90 | 94.7 | | | |
| 10:20 | 17.03 | 6.08 | 0.710 | 142 | 4.81 | 60.8 | | | |
| 10:25 | 17.04 | 6.08 | 0.711 | 142 | 4.82 | 50.8 | | | |
| 10:30 | 17.02 | 6.08 | 0.710 | 140 | 4.90 | 49.6 | | | |
| 10:35 | 17.02 | 6.07 | 0.712 | 142 | 4.91 | 49.5 | | | |
| 10:40 | 17.02 | 6.08 | 0.712 | 142 | 4.90 | 48.5 | | | |
| | | | | | | | | | |

- Take readings every 5 minutes until well stabilized
- Flow Rate - between 200-500 mL/min
- NM = Not Measured
- Stabilized Parameters

**Temperature**: ±3% **pH**: ±0.1
**Turbidity**: ±10% **ORP**: ±10 mV
**Conductivity**: ±3% **DO**: ±10%

# Appendix A
# Well Sampling Logs

P.W. GROSSER CONSULTING

**Well Sampling Log**

| | | | |
|---|---|---|---|
| **Well Designation:** | **MW002** | **Sampled By:** | **AB** |
| **Site Address:** | **223-20 Braddock Ave** | **Project Manager:** | **JL** |
| **Project Name:** | **SSIR** | **Project Number:** | **MHD1801** |

| | | | |
|---|---|---|---|
| **Relative TOC Elevation (ft):** | **NM** | **Well Use:** | **Monitoring/Observation** |
| **Depth to Product (ft):** | **No Product** | **Product Elevation (ft):** | **NM** |
| **Depth to Water (ft):** | **49.16** | **Groundwater Elevation (ft):** | **NM** |
| **Depth to Bottom (ft):** | **58.84** | **Bottom Elevation (ft):** | **NM** |
| **Height of Water Column (ft):** | **9.68** | **Well Diameter (in):** | **2** |
| **Standing Water Volume (gal):** | **1.55** | **Calculated Purge Volume (gal):** | **2.60** |
| **Sample Date:** | **3/31/2023** | **Begin Purge Time:** | **11:25** |
| **Sample Time:** | **13:05** | **Complete Purge Time:** | **12:10** |
| **Purge Method:** | **Low-Flow** | **Sample Method:** | **Tsunami Low-Flow Pump** |
| **Purge Rate (mL/min):** | **220** | **Purge Time (hrs):** | **0:45** |
| **Sample Appearance:** | **Clear** | **Odors Observed:** | **no odor** |
| **Analytical Laboratory:** | **York** | **Notes:** | **0.3 ppm** |
| **Date Shipped:** | **3/31/2023** | | |
| **Analyses Requested:** | | | |
| **VOCs, TCL List** | | | |

**Field Indicator Parameters**

| Time | Temp. (ºC) | pH | Cond. (mS/cm) | ORP (mV) | DO (mg/L) | Turb. (NTU) | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11:25 | 15.83 | 5.95 | 0.818 | 173 | 7.26 | 0 | | | |
| 11:30 | 17.28 | 5.97 | 0.810 | 181 | 6.55 | 0 | | | |
| 11:35 | 17.65 | 5.97 | 0.809 | 183 | 6.44 | 889 | | | |
| 11:40 | 17.66 | 5.99 | 0.809 | 183 | 6.30 | 445 | | | |
| 11:45 | 17.62 | 6.02 | 0.814 | 183 | 6.09 | 201 | | | |
| 11:50 | 18.31 | 6.02 | 0.819 | 182 | 5.79 | 92.9 | | | |
| 11:55 | 17.74 | 6.01 | 0.820 | 181 | 5.71 | 23.1 | | | |
| 12:00 | 17.70 | 6.01 | 0.822 | 181 | 5.67 | 18.7 | | | |
| 12:05 | 17.60 | 6.00 | 0.826 | 181 | 5.65 | 16.9 | | | |
| 12:10 | 17.62 | 6.00 | 0.823 | 181 | 5.66 | 16.8 | | | |
| | | | | | | | | | |

- Take readings every 5 minutes until well stabilized
- Flow Rate - between 200-500 mL/min
- NM = Not Measured
- Stabilized Parameters

**Temperature**: ±3% **pH**: ±0.1
**Turbidity**: ±10% **ORP**: ±10 mV
**Conductivity**: ±3% **DO**: ±10%

# Appendix A
# Well Sampling Logs

P.W. GROSSER CONSULTING

**Well Sampling Log**

| | | | |
|---|---|---|---|
| **Well Designation:** | **MW003** | **Sampled By:** | **AB** |
| **Site Address:** | **223-20 Braddock Ave** | **Project Manager:** | **JL** |
| **Project Name:** | **SSIR** | **Project Number:** | **MHD1801** |

| | | | |
|---|---|---|---|
| **Relative TOC Elevation (ft):** | **NM** | **Well Use:** | **Monitoring/Observation** |
| **Depth to Product (ft):** | **No Product** | **Product Elevation (ft):** | **NM** |
| **Depth to Water (ft):** | **49.44** | **Groundwater Elevation (ft):** | **NM** |
| **Depth to Bottom (ft):** | **54.79** | **Bottom Elevation (ft):** | **NM** |
| **Height of Water Column (ft):** | **5.35** | **Well Diameter (in):** | **2** |
| **Standing Water Volume (gal):** | **0.86** | **Calculated Purge Volume (gal):** | **1.65** |
| **Sample Date:** | **3/31/2023** | **Begin Purge Time:** | **12:55** |
| **Sample Time:** | **13:05** | **Complete Purge Time:** | **13:20** |
| **Purge Method:** | **Low-Flow** | **Sample Method:** | **Tsunami Low-Flow Pump** |
| **Purge Rate (mL/min):** | **250** | **Purge Time (hrs):** | **0:25** |
| **Sample Appearance:** | **Slightly Turbid** | **Odors Observed:** | **no odor** |
| **Analytical Laboratory:** | **York** | **Notes:** | **0.1 ppm** |
| **Date Shipped:** | **3/31/2023** | | |
| **Analyses Requested:** | | | |
| **VOCs, TCL List** | | | |

**Field Indicator Parameters**

| Time | Temp. (ºC) | pH | Cond. (mS/cm) | ORP (mV) | DO (mg/L) | Turb. (NTU) | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12:55 | 15.37 | 6.02 | 1.05 | 169 | 4.45 | 0 | | | |
| 13:00 | 15.09 | 6.00 | 1.04 | 179 | 3.70 | 525 | | | |
| 13:05 | 14.92 | 5.98 | 1.02 | 182 | 3.00 | 226 | | | |
| 13:10 | 14.45 | 5.96 | 1.02 | 185 | 3.03 | 210 | | | |
| 13:15 | 13.71 | 5.99 | 1.02 | 186 | 3.15 | 208 | | | |
| 13:20 | 13.48 | 6.03 | 0.982 | 182 | 2.97 | 192 | | | |
| | | | | | | | | | |

- Take readings every 5 minutes until well stabilized
- Flow Rate - between 200-500 mL/min
- NM = Not Measured
- Stabilized Parameters

**Temperature**: ±3% **pH**: ±0.1
**Turbidity**: ±10% **ORP**: ±10 mV
**Conductivity**: ±3% **DO**: ±10%

# APPENDIX E

**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 Matthew Sanchez Date/Time Prepared 3/21/23 @ 14:30

Preparer's Affiliation PWGC Phone No. 516-316-1511

Purpose of Investigation UST Leak Investigation

**1. OCCUPANT:**

**Interviewed: Y /(N)**

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

**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) | School | Commercial/Multi-use |
| Industrial | Church | 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?** 2

**If the property is commercial, type?**

Business Type(s) _____

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

**Other characteristics:**

Number of floors 2 Building age +10 Years

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

N/A

Airflow near source

N/A

Outdoor air infiltration

N/A

Infiltration into air ducts

N/A

**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 _____ |
| **c. Basement floor:** | concrete | dirt | stone | other _____ |
| **d. Basement floor:** | uncovered | covered | covered with tile | |
| **e. Concrete floor:** | unsealed | sealed | sealed with _____ | |
| **f. Foundation walls:** | poured | block | stone | other _____ |
| **g. Foundation walls:** | unsealed | sealed | sealed with _____ | |
| **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:** 10 (feet)

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

_____

_____

**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)**

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

**The primary type of fuel used is**:

| | | |
|---|---|---|
| Natural Gas | Fuel Oil | Kerosene |
| Electric | Propane | Solar |
| Wood | Coal | |

**Domestic hot water tank fueled by:** _____

**Boiler/furnace located in:** Basement Outdoors Main Floor Other_____

**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.**

_____

_____

_____

_____

## 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 | Dinning/Familyroom |
| 1st Floor | Residence |
| 2nd Floor | Residence |
| 3rd Floor | |
| 4th Floor | |

## 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? Household cleaners

**i. Have cosmetic products been used recently?** Y /(N) When & Type? _____

**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?_____

**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) No
Yes, use dry-cleaning infrequently (monthly or less) (Unknown)
Yes, work at a dry-cleaning service

**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

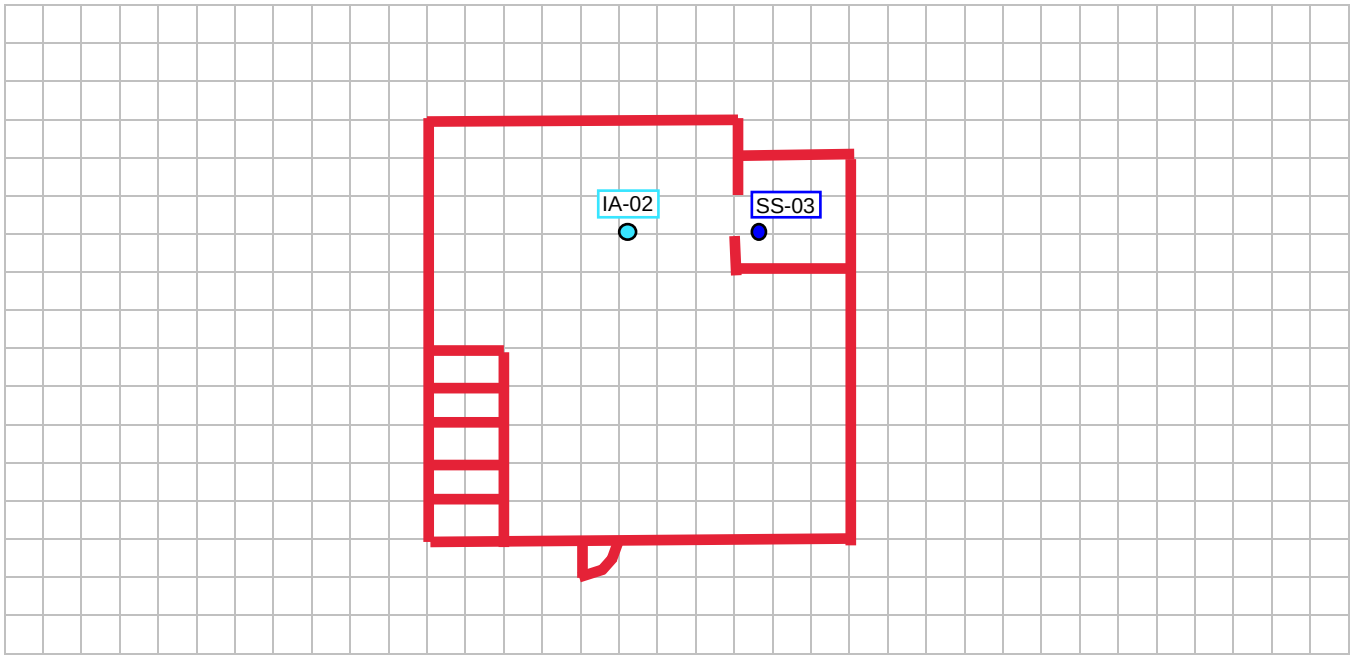
**c. Responsibility for costs associated with reimbursement explained?** Y / N

**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:**

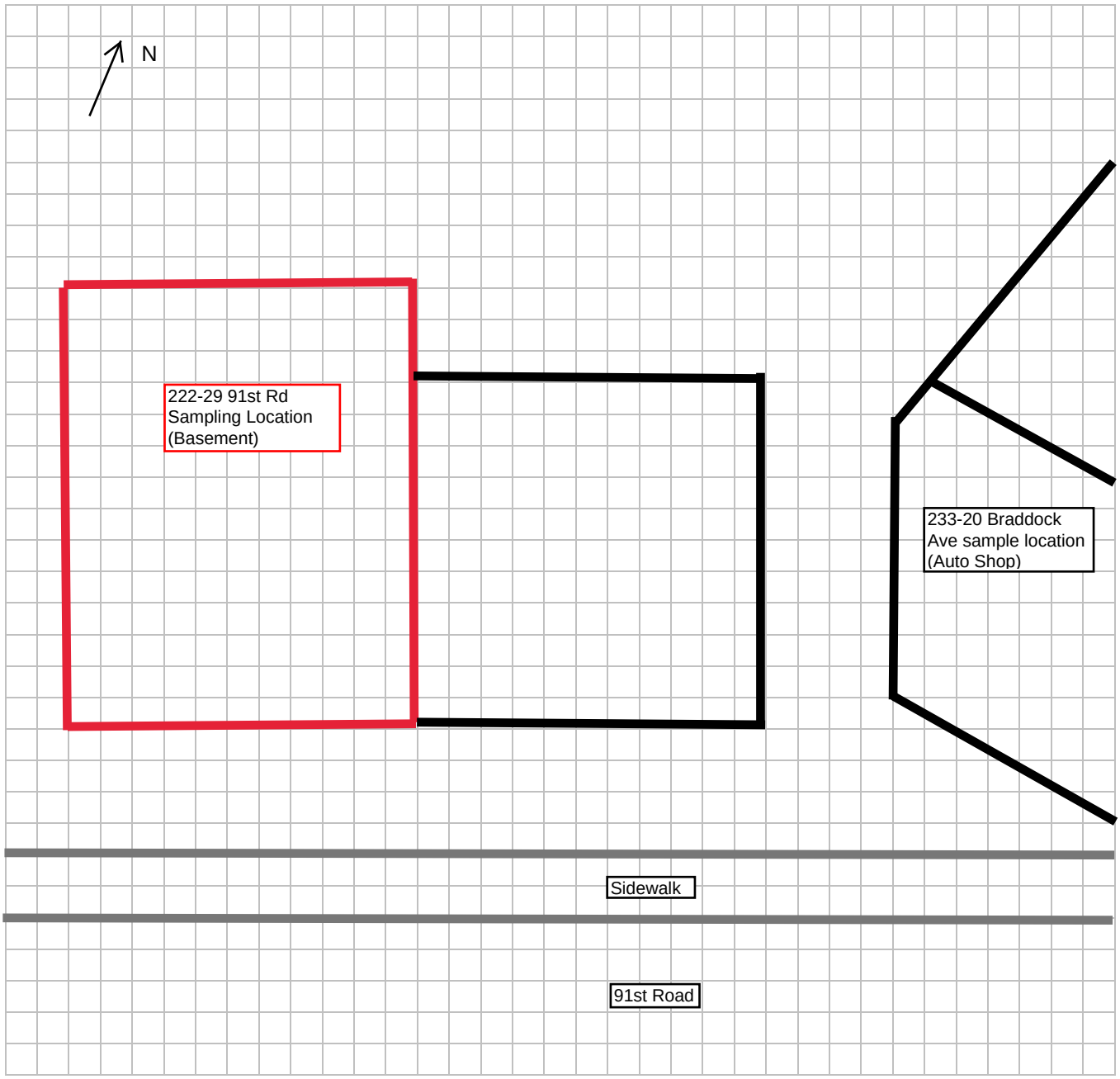



**First Floor:**

**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.**

| Location | Product Description | Size (units) | Condition* | Chemical Ingredients | Field Instrument Reading (units) | Photo ** Y / N |
|---|---|---|---|---|---|---|
| | Laundry Detergent | 9L | O | | | |
| | Cholorox | 4L | O | | | |
| | Matte Finish | 6L | UO | | | |
| | Minwax Oak Gloss Finish | 1L | O | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* 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.

**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 Matthew Sanchez Date/Time Prepared 3/21/23 @ 14:10

Preparer's Affiliation PWGC Phone No. 516-316-1511

Purpose of Investigation UST Leak Investigation

**1. OCCUPANT:**

**Interviewed: Ⓨ / N**

Last Name: _____ First Name: David

Address: 233-20 Braddock Ave

County: Queens

Home Phone: _____ Office Phone: 718-470-2467

Number of Occupants/persons at this location _____ Age of Occupants 60

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

**Interviewed: Y / N**

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

**3. BUILDING CHARACTERISTICS**

**Type of Building:** (Circle appropriate response)

| | | |
|---|---|---|
| Residential | School | Commercial/Multi-use |
| (Industrial) | Church | 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?** _____

**If the property is commercial, type?**

Business Type(s) Car Mechanic

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

**Other characteristics:**

Number of floors 1 Building age 10+ Years

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

N/A

Airflow near source

N/A

Outdoor air infiltration

Large garage bay doors on the north and south side

Infiltration into air ducts

N/A

**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 _____ |
| **c. Basement floor:** | concrete | dirt | stone | other _____ |
| **d. Basement floor:** | uncovered | covered | covered with _____ | |
| **e. Concrete floor:** | (unsealed) | sealed | sealed with _____ | |
| **f. Foundation walls:** | poured | block | stone | other _____ |
| **g. Foundation walls:** | unsealed | sealed | sealed with _____ | |
| **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)**

Trench Drain, Monitoring Wells

**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)**

| | | | |
|---|---|---|---|
| Hot air circulation | Heat pump | Hot water baseboard | |
| (Space Heaters) | Stream radiation | Radiant floor | |
| Electric baseboard | Wood stove | Outdoor wood boiler | Other _____ |

**The primary type of fuel used is**:

| | | |
|---|---|---|
| Natural Gas | Fuel Oil | Kerosene |
| (Electric) | Propane | Solar |
| Wood | Coal | |

**Domestic hot water tank fueled by:** Broken

| | | | | |
|---|---|---|---|---|
| **Boiler/furnace located in:** | Basement | Outdoors | Main Floor | Other Broken |
| **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.**

_____

_____

_____

_____

## 7. OCCUPANCY

**Is basement/lowest level occupied?** Full-time Occasionally Seldom Almost Never (N/A)

| **Level** | **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)** |
|---|---|
| Basement | _____ |
| 1st Floor | Car Mechanic |
| 2nd Floor | _____ |
| 3rd Floor | _____ |
| 4th Floor | _____ |

## 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? _____

**i. Have cosmetic products been used recently?** Y /(N) When & Type? _____

**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?_____

**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) No
Yes, use dry-cleaning infrequently (monthly or less) (Unknown)
Yes, work at a dry-cleaning service

**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

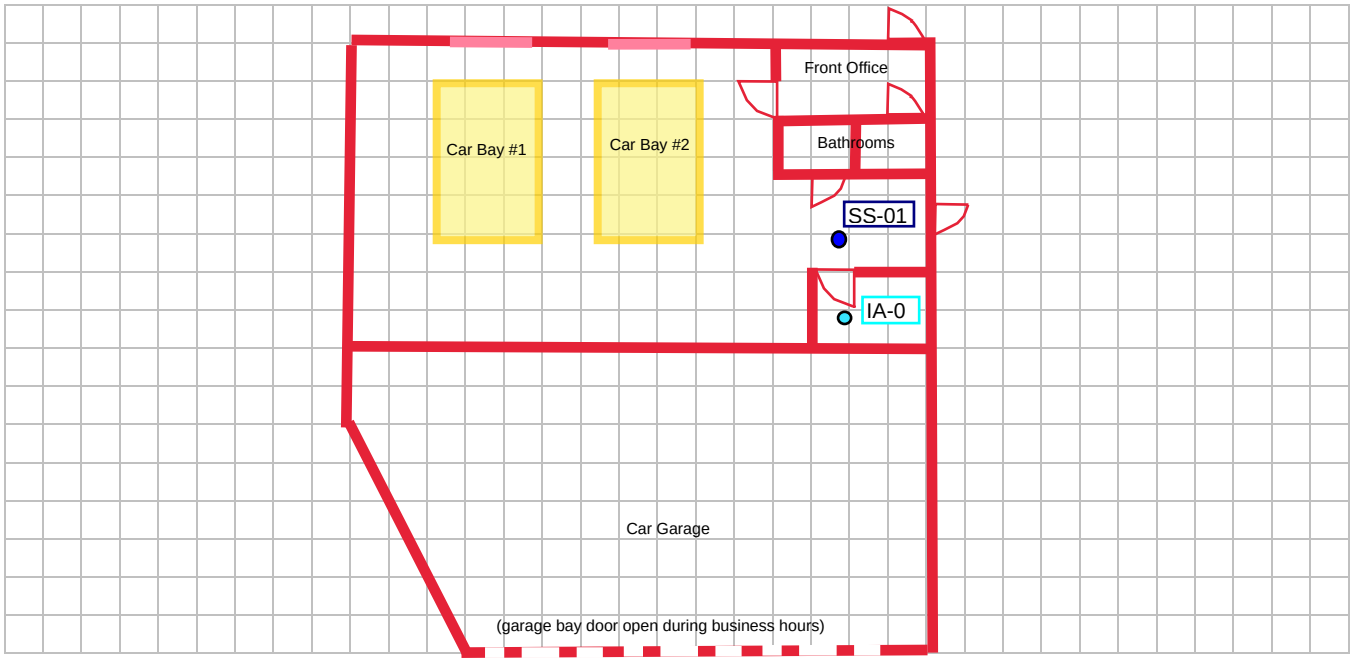
**d. Relocation package provided and explained to residents?** Y / N

## 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:** N/A

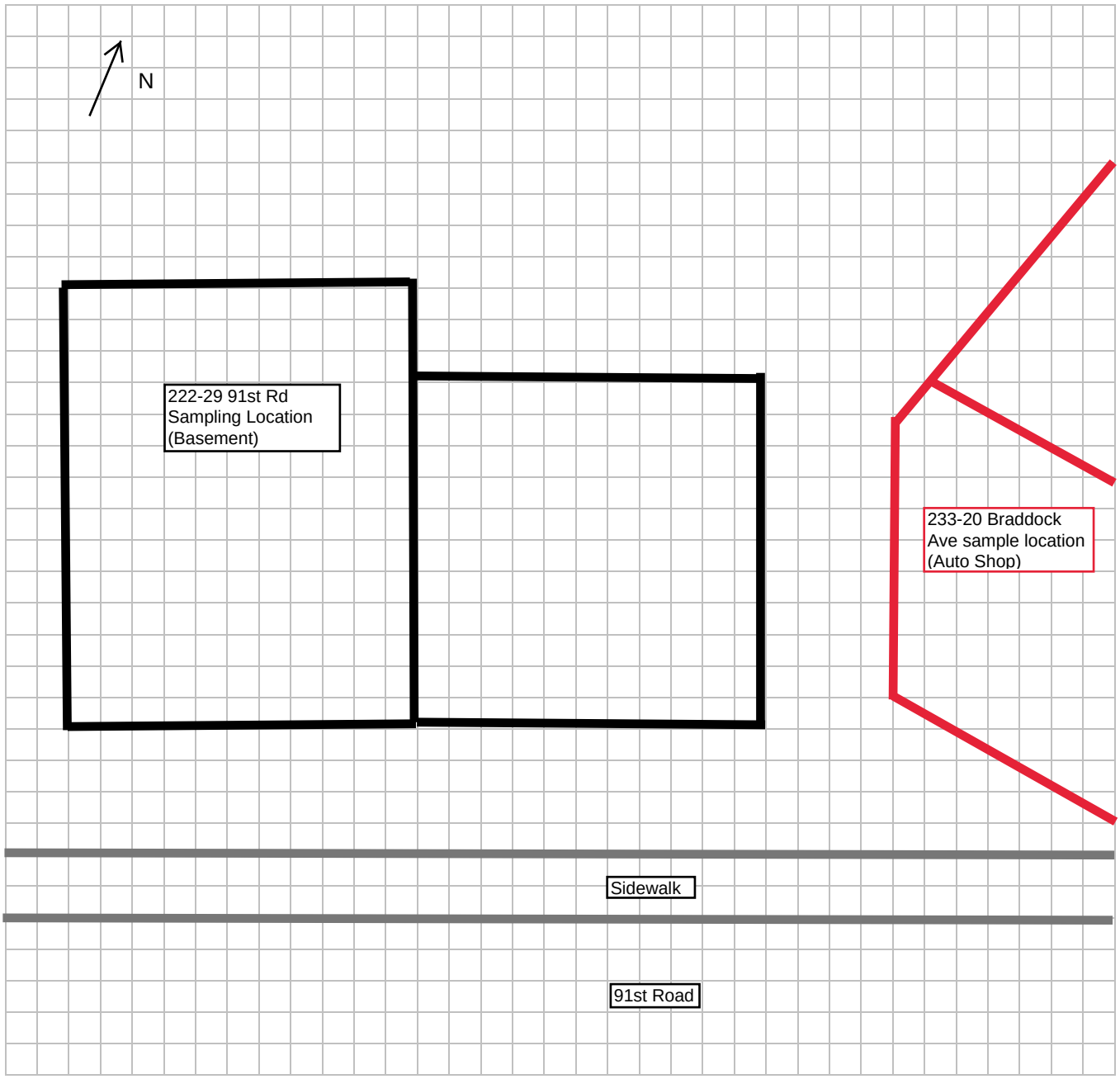
**First Floor:**



**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.**

| Location | Product Description | Size (units) | Condition* | Chemical Ingredients | Field Instrument Reading (units) | Photo ** Y / N |
|---|---|---|---|---|---|---|
| | Simple Green | 8L | O | | | |
| | Zep Degreaser | 3L | O | | | |
| | Berkley Jensen Detergent | 4L | O | | | |
| | Ajax Detergent | 3L | O | | | |
| | Motor Oil | 10L | O | | | |
| | Steering Fluid | 3L | O | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* 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 F

# Technical Report

prepared for:

**P.W. Grosser Consulting**
630 Johnson Avenue, Suite 7
Bohemia NY, 11716
**Attention: Jennifer Lewis**

Report Date: 03/31/2023
**Client Project ID: MHD1801**
York Project (SDG) No.: 23C1292

Report Date: 03/31/2023
Client Project ID: MHD1801
York Project (SDG) No.: 23C1292

**P.W. Grosser Consulting**
630 Johnson Avenue, Suite 7
Bohemia NY, 11716
Attention: Jennifer Lewis

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on March 22, 2023 and listed below. The project was identified as your project: **MHD1801**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 23C1292-01 | IA-01 | Indoor Ambient Air | 03/21/2023 | 03/22/2023 |
| 23C1292-03 | OA-01 | Outdoor Ambient Ai | 03/21/2023 | 03/22/2023 |
| 23C1292-04 | SS-02 | Soil Vapor | 03/21/2023 | 03/22/2023 |
| 23C1292-05 | SS-03 | Soil Vapor | 03/21/2023 | 03/22/2023 |
| 23C1292-06 | IA-02 | Indoor Ambient Air | 03/21/2023 | 03/22/2023 |

## General Notes for York Project (SDG) No.: 23C1292

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

**Date:** 03/31/2023

Cassie L. Mosher
Laboratory Manager

## Sample Information

**Client Sample ID:** IA-01 **York Sample ID:** 23C1292-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 8:49 am | 03/22/2023 |

### VOA, TO15 MASTER

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | * 1,1,1,2-Tetrachloroethane | ND | | ug/m³ | 0.591 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/m³ | 0.470 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/m³ | 0.591 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/m³ | 0.660 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/m³ | 0.470 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/m³ | 0.348 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/m³ | 0.171 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/m³ | 0.639 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **19.5** | | ug/m³ | 0.423 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/m³ | 0.662 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/m³ | 0.518 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/m³ | 0.348 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/m³ | 0.398 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | ND | | ug/m³ | 0.602 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **5.76** | | ug/m³ | 0.423 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-99-0 | **1,3-Butadiene** | **15.2** | | ug/m³ | 0.571 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/m³ | 0.518 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-28-9 | * 1,3-Dichloropropane | ND | | ug/m³ | 0.398 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/m³ | 0.518 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/m³ | 0.620 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-93-3 | **2-Butanone** | **2.31** | | ug/m³ | 0.254 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** IA-01 **York Sample ID:** 23C1292-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 8:49 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 591-78-6 | * 2-Hexanone | ND | | ug/m³ | 0.705 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 107-05-1 | 3-Chloropropene | ND | | ug/m³ | 1.35 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/m³ | 0.353 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-64-1 | **Acetone** | **54.4** | | ug/m³ | 0.409 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-13-1 | Acrylonitrile | ND | | ug/m³ | 0.187 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 71-43-2 | **Benzene** | **20.2** | | ug/m³ | 0.275 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 100-44-7 | Benzyl chloride | ND | | ug/m³ | 0.446 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/m³ | 0.577 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-25-2 | Bromoform | ND | | ug/m³ | 0.890 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-83-9 | Bromomethane | ND | TO-CCV, TO-LCS-L | ug/m³ | 0.334 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-15-0 | Carbon disulfide | ND | | ug/m³ | 0.268 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 56-23-5 | **Carbon tetrachloride** | **0.542** | | ug/m³ | 0.135 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-90-7 | Chlorobenzene | ND | | ug/m³ | 0.396 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-00-3 | Chloroethane | ND | | ug/m³ | 0.227 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-66-3 | Chloroform | ND | | ug/m³ | 0.420 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-87-3 | **Chloromethane** | **1.81** | | ug/m³ | 0.178 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/m³ | 0.171 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/m³ | 0.391 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-82-7 | **Cyclohexane** | **8.27** | | ug/m³ | 0.296 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/m³ | 0.733 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-71-8 | **Dichlorodifluoromethane** | **2.60** | | ug/m³ | 0.426 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** IA-01 **York Sample ID:** 23C1292-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 8:49 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 141-78-6 | * Ethyl acetate | ND | | ug/m³ | 0.620 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 100-41-4 | **Ethyl Benzene** | **21.9** | | ug/m³ | 0.374 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 87-68-3 | Hexachlorobutadiene | ND | CAL-E, TO-CCV, TO-LCS-L | ug/m³ | 0.918 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-63-0 | **Isopropanol** | **3.49** | | ug/m³ | 0.423 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 80-62-6 | Methyl Methacrylate | ND | | ug/m³ | 0.352 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/m³ | 0.310 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-09-2 | **Methylene chloride** | **2.39** | | ug/m³ | 0.598 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-82-5 | **n-Heptane** | **13.9** | | ug/m³ | 0.353 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-54-3 | **n-Hexane** | **24.9** | | ug/m³ | 0.303 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-47-6 | **o-Xylene** | **18.5** | | ug/m³ | 0.374 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 179601-23-1 | **p- & m- Xylenes** | **46.6** | | ug/m³ | 0.748 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 622-96-8 | *** p-Ethyltoluene** | **17.2** | | ug/m³ | 0.423 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 115-07-1 | *** Propylene** | **57.1** | | ug/m³ | 0.148 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 100-42-5 | Styrene | ND | | ug/m³ | 0.367 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/m³ | 0.584 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 109-99-9 | * Tetrahydrofuran | ND | | ug/m³ | 0.508 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | | | |
| 108-88-3 | **Toluene** | **77.9** | | ug/m³ | 0.324 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/m³ | 0.341 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/m³ | 0.391 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-01-6 | Trichloroethylene | ND | | ug/m³ | 0.116 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** IA-01 **York Sample ID:** 23C1292-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 8:49 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 75-69-4 | **Trichlorofluoromethane (Freon 11)** | **1.40** | | ug/m³ | 0.484 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-05-4 | Vinyl acetate | ND | | ug/m³ | 0.303 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 593-60-2 | Vinyl bromide | ND | | ug/m³ | 0.377 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/m³ | 0.110 | 0.861 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 22:10 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** **OA-01** **York Sample ID:** **23C1292-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Outdoor Ambient Air | March 21, 2023 9:21 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | * 1,1,1,2-Tetrachloroethane | ND | | ug/m³ | 0.568 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/m³ | 0.452 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/m³ | 0.568 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-13-1 | **1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)** | **0.635** | | ug/m³ | 0.635 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/m³ | 0.452 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/m³ | 0.335 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/m³ | 0.164 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/m³ | 0.614 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **0.570** | | ug/m³ | 0.407 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/m³ | 0.636 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/m³ | 0.498 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/m³ | 0.335 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/m³ | 0.383 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | ND | | ug/m³ | 0.579 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/m³ | 0.407 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-99-0 | 1,3-Butadiene | ND | | ug/m³ | 0.550 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/m³ | 0.498 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-28-9 | * 1,3-Dichloropropane | ND | | ug/m³ | 0.383 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/m³ | 0.498 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/m³ | 0.597 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-93-3 | **2-Butanone** | **1.05** | | ug/m³ | 0.244 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 591-78-6 | * 2-Hexanone | ND | | ug/m³ | 0.678 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** **OA-01** **York Sample ID:** **23C1292-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Outdoor Ambient Air | March 21, 2023 9:21 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 107-05-1 | 3-Chloropropene | ND | | ug/m³ | 1.30 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/m³ | 0.339 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-64-1 | **Acetone** | **21.0** | | ug/m³ | 0.393 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-13-1 | Acrylonitrile | ND | | ug/m³ | 0.180 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 71-43-2 | **Benzene** | **0.952** | | ug/m³ | 0.265 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 100-44-7 | Benzyl chloride | ND | | ug/m³ | 0.429 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/m³ | 0.555 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-25-2 | Bromoform | ND | | ug/m³ | 0.856 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-83-9 | Bromomethane | ND | TO-CCV, TO-LCS-L | ug/m³ | 0.322 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-15-0 | Carbon disulfide | ND | | ug/m³ | 0.258 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 56-23-5 | **Carbon tetrachloride** | **0.521** | | ug/m³ | 0.130 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-90-7 | Chlorobenzene | ND | | ug/m³ | 0.381 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-00-3 | Chloroethane | ND | | ug/m³ | 0.218 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-66-3 | Chloroform | ND | | ug/m³ | 0.404 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-87-3 | **Chloromethane** | **1.76** | | ug/m³ | 0.171 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/m³ | 0.164 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/m³ | 0.376 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-82-7 | **Cyclohexane** | **0.827** | | ug/m³ | 0.285 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/m³ | 0.705 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-71-8 | **Dichlorodifluoromethane** | **2.74** | | ug/m³ | 0.409 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 141-78-6 | * Ethyl acetate | ND | | ug/m³ | 0.597 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** **OA-01** **York Sample ID:** **23C1292-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Outdoor Ambient Air | March 21, 2023 9:21 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | **Ethyl Benzene** | **1.01** | | ug/m³ | 0.360 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 87-68-3 | Hexachlorobutadiene | ND | CAL-E, TO-CCV, TO-LCS-L | ug/m³ | 0.883 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-63-0 | **Isopropanol** | **112** | TO-IPA, E | ug/m³ | 0.407 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 80-62-6 | Methyl Methacrylate | ND | | ug/m³ | 0.339 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/m³ | 0.299 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-09-2 | **Methylene chloride** | **1.27** | | ug/m³ | 0.575 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-82-5 | **n-Heptane** | **0.950** | | ug/m³ | 0.339 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-54-3 | **n-Hexane** | **2.51** | | ug/m³ | 0.292 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-47-6 | **o-Xylene** | **0.755** | | ug/m³ | 0.360 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 179601-23-1 | **p- & m- Xylenes** | **1.83** | | ug/m³ | 0.719 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 622-96-8 | *** p-Ethyltoluene** | **0.488** | | ug/m³ | 0.407 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |
| 115-07-1 | * Propylene | ND | | ug/m³ | 0.143 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |
| 100-42-5 | Styrene | ND | | ug/m³ | 0.353 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/m³ | 0.562 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 109-99-9 | * Tetrahydrofuran | ND | | ug/m³ | 0.488 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | | | |
| 108-88-3 | **Toluene** | **4.15** | | ug/m³ | 0.312 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/m³ | 0.328 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/m³ | 0.376 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-01-6 | Trichloroethylene | ND | | ug/m³ | 0.111 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-69-4 | **Trichlorofluoromethane (Freon 11)** | **1.44** | | ug/m³ | 0.465 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** OA-01 **York Sample ID:** 23C1292-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Outdoor Ambient Air | March 21, 2023 9:21 am | 03/22/2023 |

### VOA, TO15 MASTER

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 108-05-4 | Vinyl acetate | ND | | ug/m³ | 0.292 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 593-60-2 | Vinyl bromide | ND | | ug/m³ | 0.362 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/m³ | 0.106 | 0.828 | EPA TO-15 | 03/29/2023 06:00 | 03/29/2023 23:09 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** SS-02 **York Sample ID:** 23C1292-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 10:27 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | * 1,1,1,2-Tetrachloroethane | ND | | ug/m³ | 0.976 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/m³ | 0.775 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/m³ | 0.976 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/m³ | 1.09 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/m³ | 0.775 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/m³ | 0.575 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/m³ | 0.282 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/m³ | 1.05 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **1.96** | | ug/m³ | 0.699 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/m³ | 1.09 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/m³ | 0.854 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/m³ | 0.575 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/m³ | 0.657 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | ND | | ug/m³ | 0.993 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/m³ | 0.699 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-99-0 | **1,3-Butadiene** | **1.51** | TO-CCV | ug/m³ | 0.943 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/m³ | 0.854 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-28-9 | * 1,3-Dichloropropane | ND | | ug/m³ | 0.657 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/m³ | 0.854 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/m³ | 1.02 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-93-3 | **2-Butanone** | **32.9** | | ug/m³ | 0.419 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 591-78-6 | * 2-Hexanone | ND | | ug/m³ | 1.16 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** SS-02 **York Sample ID:** 23C1292-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 10:27 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 107-05-1 | 3-Chloropropene | ND | | ug/m³ | 2.22 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/m³ | 0.582 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-64-1 | **Acetone** | **28.6** | | ug/m³ | 0.675 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-13-1 | Acrylonitrile | ND | | ug/m³ | 0.308 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 71-43-2 | **Benzene** | **1.13** | | ug/m³ | 0.454 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 100-44-7 | Benzyl chloride | ND | | ug/m³ | 0.736 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-27-4 | **Bromodichloromethane** | **5.05** | | ug/m³ | 0.952 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-25-2 | Bromoform | ND | | ug/m³ | 1.47 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-83-9 | Bromomethane | ND | TO-CCV, TO-LCS-L | ug/m³ | 0.552 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-15-0 | **Carbon disulfide** | **144** | | ug/m³ | 0.443 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 56-23-5 | **Carbon tetrachloride** | **0.268** | | ug/m³ | 0.223 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-90-7 | Chlorobenzene | ND | | ug/m³ | 0.654 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-00-3 | Chloroethane | ND | | ug/m³ | 0.375 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-66-3 | **Chloroform** | **12.7** | | ug/m³ | 0.694 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-87-3 | **Chloromethane** | **0.704** | TO-CCV | ug/m³ | 0.293 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/m³ | 0.282 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/m³ | 0.645 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-82-7 | **Cyclohexane** | **1.37** | | ug/m³ | 0.489 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 124-48-1 | **Dibromochloromethane** | **3.39** | | ug/m³ | 1.21 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-71-8 | **Dichlorodifluoromethane** | **2.25** | | ug/m³ | 0.703 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 141-78-6 | *** Ethyl acetate** | **1.33** | | ug/m³ | 1.02 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** SS-02 **York Sample ID:** 23C1292-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 10:27 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | **Ethyl Benzene** | **1.05** | | ug/m³ | 0.617 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 87-68-3 | Hexachlorobutadiene | ND | CAL-E, TO-CCV, TO-LCS-L | ug/m³ | 1.52 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-63-0 | **Isopropanol** | **9.12** | | ug/m³ | 0.699 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 80-62-6 | Methyl Methacrylate | ND | | ug/m³ | 0.582 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/m³ | 0.512 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-09-2 | **Methylene chloride** | **1.48** | | ug/m³ | 0.987 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-82-5 | **n-Heptane** | **1.05** | | ug/m³ | 0.582 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-54-3 | **n-Hexane** | **2.50** | | ug/m³ | 0.501 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-47-6 | **o-Xylene** | **0.864** | | ug/m³ | 0.617 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 179601-23-1 | **p- & m- Xylenes** | **2.16** | | ug/m³ | 1.23 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 622-96-8 | *** p-Ethyltoluene** | **1.33** | | ug/m³ | 0.699 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |
| 115-07-1 | *** Propylene** | **23.6** | | ug/m³ | 0.245 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |
| 100-42-5 | Styrene | ND | | ug/m³ | 0.605 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 127-18-4 | **Tetrachloroethylene** | **3.18** | | ug/m³ | 0.964 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 109-99-9 | * Tetrahydrofuran | ND | | ug/m³ | 0.838 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | | | |
| 108-88-3 | **Toluene** | **7.82** | | ug/m³ | 0.536 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/m³ | 0.563 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/m³ | 0.645 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-01-6 | Trichloroethylene | ND | | ug/m³ | 0.191 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-69-4 | **Trichlorofluoromethane (Freon 11)** | **1.12** | | ug/m³ | 0.798 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** SS-02 **York Sample ID:** 23C1292-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 10:27 am | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 108-05-4 | Vinyl acetate | ND | | ug/m³ | 0.500 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 593-60-2 | Vinyl bromide | ND | | ug/m³ | 0.622 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/m³ | 0.182 | 1.421 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 17:28 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** SS-03 **York Sample ID:** 23C1292-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 2:40 pm | 03/22/2023 |

**VOA, TO15 MASTER** **Log-in Notes:** **Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | * 1,1,1,2-Tetrachloroethane | ND | | ug/m³ | 1.02 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/m³ | 0.809 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/m³ | 1.02 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/m³ | 1.14 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/m³ | 0.809 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/m³ | 0.600 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/m³ | 0.294 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/m³ | 1.10 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **14.9** | | ug/m³ | 0.729 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/m³ | 1.14 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/m³ | 0.892 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/m³ | 0.600 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/m³ | 0.685 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | ND | | ug/m³ | 1.04 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **6.85** | | ug/m³ | 0.729 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-99-0 | 1,3-Butadiene | ND | | ug/m³ | 0.984 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/m³ | 0.892 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-28-9 | * 1,3-Dichloropropane | ND | | ug/m³ | 0.685 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/m³ | 0.892 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/m³ | 1.07 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-93-3 | **2-Butanone** | **22.7** | | ug/m³ | 0.437 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 591-78-6 | * 2-Hexanone | ND | | ug/m³ | 1.22 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** SS-03 **York Sample ID:** 23C1292-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 2:40 pm | 03/22/2023 |

**VOA, TO15 MASTER** **Log-in Notes:** **Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 107-05-1 | 3-Chloropropene | ND | | ug/m³ | 2.32 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/m³ | 0.608 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-64-1 | **Acetone** | **133** | | ug/m³ | 0.705 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-13-1 | Acrylonitrile | ND | | ug/m³ | 0.322 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 71-43-2 | **Benzene** | **1.66** | | ug/m³ | 0.474 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 100-44-7 | Benzyl chloride | ND | | ug/m³ | 0.768 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/m³ | 0.994 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-25-2 | Bromoform | ND | | ug/m³ | 1.53 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-83-9 | Bromomethane | ND | TO-CCV, TO-LCS-L | ug/m³ | 0.576 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-15-0 | **Carbon disulfide** | **1.39** | | ug/m³ | 0.462 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/m³ | 0.233 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-90-7 | Chlorobenzene | ND | | ug/m³ | 0.683 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-00-3 | Chloroethane | ND | | ug/m³ | 0.391 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-66-3 | **Chloroform** | **1.16** | | ug/m³ | 0.724 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-87-3 | **Chloromethane** | **0.367** | TO-CCV | ug/m³ | 0.306 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/m³ | 0.294 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/m³ | 0.673 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-82-7 | **Cyclohexane** | **7.35** | | ug/m³ | 0.510 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/m³ | 1.26 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-71-8 | **Dichlorodifluoromethane** | **2.64** | | ug/m³ | 0.733 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 141-78-6 | * Ethyl acetate | ND | | ug/m³ | 1.07 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** SS-03 **York Sample ID:** 23C1292-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 2:40 pm | 03/22/2023 |

**VOA, TO15 MASTER** **Log-in Notes:** **Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | **Ethyl Benzene** | **7.28** | | ug/m³ | 0.644 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 87-68-3 | Hexachlorobutadiene | ND | CAL-E, TO-CCV, TO-LCS-L | ug/m³ | 1.58 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 67-63-0 | **Isopropanol** | **22.2** | | ug/m³ | 0.729 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 80-62-6 | **Methyl Methacrylate** | **0.729** | | ug/m³ | 0.607 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/m³ | 0.535 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-09-2 | **Methylene chloride** | **2.78** | | ug/m³ | 1.03 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 142-82-5 | **n-Heptane** | **0.851** | | ug/m³ | 0.608 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 110-54-3 | **n-Hexane** | **15.8** | | ug/m³ | 0.523 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 95-47-6 | **o-Xylene** | **10.0** | | ug/m³ | 0.644 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 179601-23-1 | **p- & m- Xylenes** | **18.7** | | ug/m³ | 1.29 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 622-96-8 | *** p-Ethyltoluene** | **16.6** | | ug/m³ | 0.729 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |
| 115-07-1 | * Propylene | ND | | ug/m³ | 0.255 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |
| 100-42-5 | Styrene | ND | | ug/m³ | 0.632 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 127-18-4 | **Tetrachloroethylene** | **307** | | ug/m³ | 1.01 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 109-99-9 | * Tetrahydrofuran | ND | | ug/m³ | 0.875 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | | | |
| 108-88-3 | **Toluene** | **141** | | ug/m³ | 0.559 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/m³ | 0.588 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/m³ | 0.673 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 79-01-6 | **Trichloroethylene** | **2.07** | | ug/m³ | 0.199 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-69-4 | **Trichlorofluoromethane (Freon 11)** | **1.67** | | ug/m³ | 0.833 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |

## Sample Information

**Client Sample ID:** SS-03 **York Sample ID:** 23C1292-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Soil Vapor | March 21, 2023 2:40 pm | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:** TO-VAC

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 108-05-4 | Vinyl acetate | ND | | ug/m³ | 0.522 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 593-60-2 | Vinyl bromide | ND | | ug/m³ | 0.649 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/m³ | 0.190 | 1.483 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 18:21 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** IA-02 **York Sample ID:** 23C1292-06

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 2:42 pm | 03/22/2023 |

**VOA, TO15 MASTER** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | * 1,1,1,2-Tetrachloroethane | ND | | ug/m³ | 0.644 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/m³ | 0.512 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/m³ | 0.644 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/m³ | 0.719 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/m³ | 0.512 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/m³ | 0.380 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/m³ | 0.186 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/m³ | 0.696 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **1.01** | | ug/m³ | 0.461 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/m³ | 0.721 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/m³ | 0.564 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-06-2 | **1,2-Dichloroethane** | **0.418** | | ug/m³ | 0.380 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/m³ | 0.433 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | ND | | ug/m³ | 0.656 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/m³ | 0.461 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 106-99-0 | 1,3-Butadiene | ND | | ug/m³ | 0.623 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/m³ | 0.564 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-28-9 | * 1,3-Dichloropropane | ND | | ug/m³ | 0.433 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |
| 106-46-7 | **1,4-Dichlorobenzene** | **0.790** | | ug/m³ | 0.564 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/m³ | 0.676 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 78-93-3 | **2-Butanone** | **2.21** | | ug/m³ | 0.277 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 591-78-6 | * 2-Hexanone | ND | | ug/m³ | 0.769 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** IA-02 **York Sample ID:** 23C1292-06

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 2:42 pm | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 107-05-1 | 3-Chloropropene | ND | | ug/m³ | 1.47 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/m³ | 0.384 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-64-1 | **Acetone** | **61.0** | | ug/m³ | 0.446 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 107-13-1 | Acrylonitrile | ND | | ug/m³ | 0.204 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 71-43-2 | **Benzene** | **0.929** | | ug/m³ | 0.300 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 100-44-7 | Benzyl chloride | ND | | ug/m³ | 0.486 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/m³ | 0.628 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-25-2 | Bromoform | ND | | ug/m³ | 0.970 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-83-9 | Bromomethane | ND | TO-CCV, TO-LCS-L | ug/m³ | 0.364 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-15-0 | Carbon disulfide | ND | | ug/m³ | 0.292 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 56-23-5 | **Carbon tetrachloride** | **0.531** | | ug/m³ | 0.148 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-90-7 | Chlorobenzene | ND | | ug/m³ | 0.432 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-00-3 | Chloroethane | ND | | ug/m³ | 0.247 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-66-3 | **Chloroform** | **2.84** | | ug/m³ | 0.458 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 74-87-3 | **Chloromethane** | **2.11** | | ug/m³ | 0.194 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/m³ | 0.186 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/m³ | 0.426 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-82-7 | **Cyclohexane** | **0.484** | | ug/m³ | 0.323 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/m³ | 0.799 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-71-8 | **Dichlorodifluoromethane** | **2.64** | | ug/m³ | 0.464 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 141-78-6 | * **Ethyl acetate** | **11.3** | | ug/m³ | 0.676 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |

## Sample Information

**Client Sample ID:** IA-02 **York Sample ID:** 23C1292-06

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 2:42 pm | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | **Ethyl Benzene** | **0.896** | | ug/m³ | 0.407 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 87-68-3 | Hexachlorobutadiene | ND | CAL-E, TO-CCV, TO-LCS-L | ug/m³ | 1.00 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 67-63-0 | **Isopropanol** | **72.1** | | ug/m³ | 0.461 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 80-62-6 | Methyl Methacrylate | ND | | ug/m³ | 0.384 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/m³ | 0.338 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-09-2 | **Methylene chloride** | **3.00** | | ug/m³ | 0.652 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 142-82-5 | **n-Heptane** | **1.42** | | ug/m³ | 0.384 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 110-54-3 | **n-Hexane** | **1.12** | | ug/m³ | 0.331 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 95-47-6 | **o-Xylene** | **0.733** | | ug/m³ | 0.407 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 179601-23-1 | **p- & m- Xylenes** | **1.63** | | ug/m³ | 0.815 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 622-96-8 | *** p-Ethyltoluene** | **0.692** | | ug/m³ | 0.461 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |
| 115-07-1 | * Propylene | ND | | ug/m³ | 0.161 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |
| 100-42-5 | Styrene | ND | | ug/m³ | 0.400 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 127-18-4 | **Tetrachloroethylene** | **2.42** | | ug/m³ | 0.636 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 109-99-9 | * Tetrahydrofuran | ND | | ug/m³ | 0.553 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | | | |
| 108-88-3 | **Toluene** | **3.99** | | ug/m³ | 0.353 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/m³ | 0.372 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/m³ | 0.426 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 79-01-6 | Trichloroethylene | ND | | ug/m³ | 0.126 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-69-4 | **Trichlorofluoromethane (Freon 11)** | **1.48** | | ug/m³ | 0.527 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |

## Sample Information

**Client Sample ID:** IA-02 **York Sample ID:** 23C1292-06

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1292 | MHD1801 | Indoor Ambient Air | March 21, 2023 2:42 pm | 03/22/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 108-05-4 | Vinyl acetate | ND | | ug/m³ | 0.330 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 593-60-2 | Vinyl bromide | ND | | ug/m³ | 0.410 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/m³ | 0.120 | 0.938 | EPA TO-15 | 03/29/2023 06:00 | 03/30/2023 01:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

# Analytical Batch Summary

**Batch ID:** BC31960 **Preparation Method:** EPA TO15 PREP **Prepared By:** VH

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 23C1292-01 | IA-01 | 03/29/23 |
| 23C1292-03 | OA-01 | 03/29/23 |
| 23C1292-06 | IA-02 | 03/29/23 |
| BC31960-BLK1 | Blank | 03/29/23 |
| BC31960-BS1 | LCS | 03/29/23 |
| BC31960-DUP1 | Duplicate | 03/29/23 |

**Batch ID:** BC32054 **Preparation Method:** EPA TO15 PREP **Prepared By:** VH

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 23C1292-04 | SS-02 | 03/29/23 |
| 23C1292-05 | SS-03 | 03/29/23 |
| BC32054-BLK1 | Blank | 03/30/23 |
| BC32054-BS1 | LCS | 03/30/23 |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC31960 - EPA TO15 PREP** | | | | | | | | | | | |
| **Blank (BC31960-BLK1)** | | | | | | | | | | | Prepared & Analyzed: 03/29/2023 |
| 1,1,1,2-Tetrachloroethane | ND | 0.687 | ug/m³ | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.546 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.687 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 0.766 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.546 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.405 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 0.198 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.742 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.492 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.768 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.405 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.462 | " | | | | | | | | |
| 1,2-Dichlorotetrafluoroethane | ND | 0.699 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.492 | " | | | | | | | | |
| 1,3-Butadiene | ND | 0.664 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,3-Dichloropropane | ND | 0.462 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,4-Dioxane | ND | 0.721 | " | | | | | | | | |
| 2-Butanone | ND | 0.295 | " | | | | | | | | |
| 2-Hexanone | ND | 0.819 | " | | | | | | | | |
| 3-Chloropropene | ND | 1.57 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 0.410 | " | | | | | | | | |
| Acetone | ND | 0.475 | " | | | | | | | | |
| Acrylonitrile | ND | 0.217 | " | | | | | | | | |
| Benzene | ND | 0.319 | " | | | | | | | | |
| Benzyl chloride | ND | 0.518 | " | | | | | | | | |
| Bromodichloromethane | ND | 0.670 | " | | | | | | | | |
| Bromoform | ND | 1.03 | " | | | | | | | | |
| Bromomethane | ND | 0.388 | " | | | | | | | | |
| Carbon disulfide | ND | 0.311 | " | | | | | | | | |
| Carbon tetrachloride | ND | 0.157 | " | | | | | | | | |
| Chlorobenzene | ND | 0.460 | " | | | | | | | | |
| Chloroethane | ND | 0.264 | " | | | | | | | | |
| Chloroform | ND | 0.488 | " | | | | | | | | |
| Chloromethane | ND | 0.207 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.198 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.454 | " | | | | | | | | |
| Cyclohexane | ND | 0.344 | " | | | | | | | | |
| Dibromochloromethane | ND | 0.852 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.495 | " | | | | | | | | |
| Ethyl acetate | ND | 0.721 | " | | | | | | | | |
| Ethyl Benzene | ND | 0.434 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 1.07 | " | | | | | | | | |
| Isopropanol | ND | 0.492 | " | | | | | | | | |
| Methyl Methacrylate | ND | 0.409 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.361 | " | | | | | | | | |
| Methylene chloride | ND | 0.695 | " | | | | | | | | |
| n-Heptane | ND | 0.410 | " | | | | | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC31960 - EPA TO15 PREP** | | | | | | | | | | | |
| **Blank (BC31960-BLK1)** | | | | | | | | Prepared & Analyzed: 03/29/2023 | | | |
| n-Hexane | ND | 0.352 | ug/m³ | | | | | | | | |
| o-Xylene | ND | 0.434 | " | | | | | | | | |
| p- & m- Xylenes | ND | 0.868 | " | | | | | | | | |
| p-Ethyltoluene | ND | 0.492 | " | | | | | | | | |
| Propylene | ND | 0.172 | " | | | | | | | | |
| Styrene | ND | 0.426 | " | | | | | | | | |
| Tetrachloroethylene | ND | 0.678 | " | | | | | | | | |
| Tetrahydrofuran | ND | 0.590 | " | | | | | | | | |
| Toluene | ND | 0.377 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.396 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.454 | " | | | | | | | | |
| Trichloroethylene | ND | 0.134 | " | | | | | | | | |
| Trichlorofluoromethane (Freon 11) | ND | 0.562 | " | | | | | | | | |
| Vinyl acetate | ND | 0.352 | " | | | | | | | | |
| Vinyl bromide | ND | 0.437 | " | | | | | | | | |
| Vinyl Chloride | ND | 0.128 | " | | | | | | | | |
| **LCS (BC31960-BS1)** | | | | | | | | Prepared & Analyzed: 03/29/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 9.86 | | ppbv | 10.0 | | 98.6 | 70-130 | | | | |
| 1,1,1-Trichloroethane | 10.8 | | " | 10.0 | | 108 | 70-130 | | | | |
| 1,1,2,2-Tetrachloroethane | 11.4 | | " | 10.0 | | 114 | 70-130 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 9.82 | | " | 10.0 | | 98.2 | 70-130 | | | | |
| 1,1,2-Trichloroethane | 8.28 | | " | 10.0 | | 82.8 | 70-130 | | | | |
| 1,1-Dichloroethane | 10.6 | | " | 10.0 | | 106 | 70-130 | | | | |
| 1,1-Dichloroethylene | 11.5 | | " | 10.0 | | 115 | 70-130 | | | | |
| 1,2,4-Trichlorobenzene | 8.16 | | " | 10.0 | | 81.6 | 70-130 | | | | |
| 1,2,4-Trimethylbenzene | 8.33 | | " | 10.0 | | 83.3 | 70-130 | | | | |
| 1,2-Dibromoethane | 8.83 | | " | 10.0 | | 88.3 | 70-130 | | | | |
| 1,2-Dichlorobenzene | 7.76 | | " | 10.0 | | 77.6 | 70-130 | | | | |
| 1,2-Dichloroethane | 11.6 | | " | 10.0 | | 116 | 70-130 | | | | |
| 1,2-Dichloropropane | 8.67 | | " | 10.0 | | 86.7 | 70-130 | | | | |
| 1,2-Dichlorotetrafluoroethane | 8.09 | | " | 10.0 | | 80.9 | 70-130 | | | | |
| 1,3,5-Trimethylbenzene | 8.51 | | " | 10.0 | | 85.1 | 70-130 | | | | |
| 1,3-Butadiene | 10.2 | | " | 10.0 | | 102 | 70-130 | | | | |
| 1,3-Dichlorobenzene | 8.04 | | " | 10.0 | | 80.4 | 70-130 | | | | |
| 1,3-Dichloropropane | 9.35 | | " | 10.0 | | 93.5 | 70-130 | | | | |
| 1,4-Dichlorobenzene | 7.92 | | " | 10.0 | | 79.2 | 70-130 | | | | |
| 1,4-Dioxane | 11.3 | | " | 10.0 | | 113 | 70-130 | | | | |
| 2-Butanone | 11.0 | | " | 10.0 | | 110 | 70-130 | | | | |
| 2-Hexanone | 8.24 | | " | 10.0 | | 82.4 | 70-130 | | | | |
| 3-Chloropropene | 11.9 | | " | 10.0 | | 119 | 70-130 | | | | |
| 4-Methyl-2-pentanone | 8.99 | | " | 10.0 | | 89.9 | 70-130 | | | | |
| Acetone | 8.91 | | " | 10.0 | | 89.1 | 70-130 | | | | |
| Acrylonitrile | 12.3 | | " | 10.0 | | 123 | 70-130 | | | | |
| Benzene | 7.55 | | " | 10.0 | | 75.5 | 70-130 | | | | |
| Benzyl chloride | 8.96 | | " | 10.0 | | 89.6 | 70-130 | | | | |
| Bromodichloromethane | 9.27 | | " | 10.0 | | 92.7 | 70-130 | | | | |
| Bromoform | 9.43 | | " | 10.0 | | 94.3 | 70-130 | | | | |
| Bromomethane | 6.16 | | " | 10.0 | | 61.6 | 70-130 | Low Bias | | | |
| Carbon disulfide | 10.4 | | " | 10.0 | | 104 | 70-130 | | | | |
| Carbon tetrachloride | 9.69 | | " | 10.0 | | 96.9 | 70-130 | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC31960 - EPA TO15 PREP** | | | | | | | | | | | |
| **LCS (BC31960-BS1)** | | | | | | | | Prepared & Analyzed: 03/29/2023 | | | |
| Chlorobenzene | 10.5 | | ppbv | 10.0 | | 105 | 70-130 | | | | |
| Chloroethane | 10.8 | | " | 10.0 | | 108 | 70-130 | | | | |
| Chloroform | 10.5 | | " | 10.0 | | 105 | 70-130 | | | | |
| Chloromethane | 9.44 | | " | 10.0 | | 94.4 | 70-130 | | | | |
| cis-1,2-Dichloroethylene | 11.6 | | " | 10.0 | | 116 | 70-130 | | | | |
| cis-1,3-Dichloropropylene | 10.0 | | " | 10.0 | | 100 | 70-130 | | | | |
| Cyclohexane | 9.67 | | " | 10.0 | | 96.7 | 70-130 | | | | |
| Dibromochloromethane | 8.80 | | " | 10.0 | | 88.0 | 70-130 | | | | |
| Dichlorodifluoromethane | 10.0 | | " | 10.0 | | 100 | 70-130 | | | | |
| Ethyl acetate | 10.9 | | " | 10.0 | | 109 | 70-130 | | | | |
| Ethyl Benzene | 11.2 | | " | 10.0 | | 112 | 70-130 | | | | |
| Hexachlorobutadiene | 5.35 | | " | 10.0 | | 53.5 | 70-130 | Low Bias | | | |
| Isopropanol | 10.4 | | " | 10.0 | | 104 | 70-130 | | | | |
| Methyl Methacrylate | 9.03 | | " | 10.0 | | 90.3 | 70-130 | | | | |
| Methyl tert-butyl ether (MTBE) | 11.7 | | " | 10.0 | | 117 | 70-130 | | | | |
| Methylene chloride | 9.96 | | " | 10.0 | | 99.6 | 70-130 | | | | |
| n-Heptane | 7.50 | | " | 10.0 | | 75.0 | 70-130 | | | | |
| n-Hexane | 9.41 | | " | 10.0 | | 94.1 | 70-130 | | | | |
| o-Xylene | 8.37 | | " | 10.0 | | 83.7 | 70-130 | | | | |
| p- & m- Xylenes | 14.9 | | " | 20.0 | | 74.7 | 70-130 | | | | |
| p-Ethyltoluene | 8.07 | | " | 10.0 | | 80.7 | 70-130 | | | | |
| Propylene | 11.5 | | " | 10.0 | | 115 | 70-130 | | | | |
| Styrene | 7.92 | | " | 10.0 | | 79.2 | 70-130 | | | | |
| Tetrachloroethylene | 9.03 | | " | 10.0 | | 90.3 | 70-130 | | | | |
| Tetrahydrofuran | 11.8 | | " | 10.0 | | 118 | 70-130 | | | | |
| Toluene | 8.42 | | " | 10.0 | | 84.2 | 70-130 | | | | |
| trans-1,2-Dichloroethylene | 11.4 | | " | 10.0 | | 114 | 70-130 | | | | |
| trans-1,3-Dichloropropylene | 9.99 | | " | 10.0 | | 99.9 | 70-130 | | | | |
| Trichloroethylene | 9.71 | | " | 10.0 | | 97.1 | 70-130 | | | | |
| Trichlorofluoromethane (Freon 11) | 9.96 | | " | 10.0 | | 99.6 | 70-130 | | | | |
| Vinyl acetate | 9.26 | | " | 10.0 | | 92.6 | 70-130 | | | | |
| Vinyl bromide | 10.5 | | " | 10.0 | | 105 | 70-130 | | | | |
| Vinyl Chloride | 8.29 | | " | 10.0 | | 82.9 | 70-130 | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC31960 - EPA TO15 PREP** | | | | | | | | | | | |
| **Duplicate (BC31960-DUP1)** | *Source sample: 23C1190-04 (Duplicate) | | | | | | | | Prepared & Analyzed: 03/29/2023 | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.544 | ug/m³ | | ND | | | | | 25 | |
| 1,1,1-Trichloroethane | ND | 0.432 | " | | ND | | | | | 25 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.544 | " | | ND | | | | | 25 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 0.607 | 0.607 | " | | 0.607 | | | | 0.00 | 25 | |
| 1,1,2-Trichloroethane | ND | 0.432 | " | | ND | | | | | 25 | |
| 1,1-Dichloroethane | ND | 0.321 | " | | ND | | | | | 25 | |
| 1,1-Dichloroethylene | ND | 0.157 | " | | ND | | | | | 25 | |
| 1,2,4-Trichlorobenzene | ND | 0.588 | " | | ND | | | | | 25 | |
| 1,2,4-Trimethylbenzene | 0.740 | 0.389 | " | | 0.740 | | | | 0.00 | 25 | |
| 1,2-Dibromoethane | ND | 0.609 | " | | ND | | | | | 25 | |
| 1,2-Dichlorobenzene | ND | 0.476 | " | | ND | | | | | 25 | |
| 1,2-Dichloroethane | ND | 0.321 | " | | ND | | | | | 25 | |
| 1,2-Dichloropropane | ND | 0.366 | " | | ND | | | | | 25 | |
| 1,2-Dichlorotetrafluoroethane | ND | 0.554 | " | | ND | | | | | 25 | |
| 1,3,5-Trimethylbenzene | 0.311 | 0.389 | " | | 0.311 | | | | 0.00 | 25 | |
| 1,3-Butadiene | ND | 0.526 | " | | ND | | | | | 25 | |
| 1,3-Dichlorobenzene | ND | 0.476 | " | | ND | | | | | 25 | |
| 1,3-Dichloropropane | ND | 0.366 | " | | ND | | | | | 25 | |
| 1,4-Dichlorobenzene | ND | 0.476 | " | | ND | | | | | 25 | |
| 1,4-Dioxane | ND | 0.571 | " | | ND | | | | | 25 | |
| 2-Butanone | 1.38 | 0.234 | " | | 1.40 | | | | 1.68 | 25 | |
| 2-Hexanone | ND | 0.649 | " | | ND | | | | | 25 | |
| 3-Chloropropene | ND | 1.24 | " | | ND | | | | | 25 | |
| 4-Methyl-2-pentanone | 0.941 | 0.324 | " | | 1.01 | | | | 6.67 | 25 | |
| Acetone | 8.47 | 0.376 | " | | 9.03 | | | | 6.45 | 25 | |
| Acrylonitrile | ND | 0.172 | " | | ND | | | | | 25 | |
| Benzene | 0.607 | 0.253 | " | | 0.607 | | | | 0.00 | 25 | |
| Benzyl chloride | ND | 0.410 | " | | ND | | | | | 25 | |
| Bromodichloromethane | ND | 0.531 | " | | ND | | | | | 25 | |
| Bromoform | ND | 0.819 | " | | ND | | | | | 25 | |
| Bromomethane | ND | 0.308 | " | | ND | | | | | 25 | |
| Carbon disulfide | ND | 0.247 | " | | ND | | | | | 25 | |
| Carbon tetrachloride | 0.548 | 0.125 | " | | 0.548 | | | | 0.00 | 25 | |
| Chlorobenzene | ND | 0.365 | " | | ND | | | | | 25 | |
| Chloroethane | ND | 0.209 | " | | ND | | | | | 25 | |
| Chloroform | ND | 0.387 | " | | ND | | | | | 25 | |
| Chloromethane | 1.88 | 0.164 | " | | 1.90 | | | | 0.866 | 25 | |
| cis-1,2-Dichloroethylene | ND | 0.157 | " | | ND | | | | | 25 | |
| cis-1,3-Dichloropropylene | ND | 0.359 | " | | ND | | | | | 25 | |
| Cyclohexane | 0.300 | 0.273 | " | | 0.300 | | | | 0.00 | 25 | |
| Dibromochloromethane | ND | 0.675 | " | | ND | | | | | 25 | |
| Dichlorodifluoromethane | 2.82 | 0.392 | " | | 2.74 | | | | 2.82 | 25 | |
| Ethyl acetate | 0.771 | 0.571 | " | | 0.799 | | | | 3.64 | 25 | |
| Ethyl Benzene | 0.481 | 0.344 | " | | 0.516 | | | | 6.90 | 25 | |
| Hexachlorobutadiene | ND | 0.845 | " | | ND | | | | | 25 | |
| Isopropanol | 8.23 | 0.389 | " | | 8.80 | | | | 6.63 | 25 | |
| Methyl Methacrylate | ND | 0.324 | " | | ND | | | | | 25 | |
| Methyl tert-butyl ether (MTBE) | ND | 0.286 | " | | ND | | | | | 25 | |
| Methylene chloride | 1.62 | 0.550 | " | | 1.62 | | | | 0.00 | 25 | |
| n-Heptane | 0.325 | 0.325 | " | | 0.357 | | | | 9.52 | 25 | |
| n-Hexane | 0.754 | 0.279 | " | | 0.782 | | | | 3.64 | 25 | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC31960 - EPA TO15 PREP** | | | | | | | | | | | |
| **Duplicate (BC31960-DUP1)** | *Source sample: 23C1190-04 (Duplicate) | | | | | | | | Prepared & Analyzed: 03/29/2023 | | |
| o-Xylene | 0.447 | 0.344 | ug/m³ | | 0.447 | | | | 0.00 | 25 | |
| p- & m- Xylenes | 0.928 | 0.688 | " | | 0.997 | | | | 7.14 | 25 | |
| p-Ethyltoluene | 0.506 | 0.389 | " | | 0.506 | | | | 0.00 | 25 | |
| Propylene | ND | 0.136 | " | | ND | | | | | 25 | |
| Styrene | ND | 0.337 | " | | ND | | | | | 25 | |
| Tetrachloroethylene | 0.322 | 0.537 | " | | 0.322 | | | | 0.00 | 25 | |
| Tetrahydrofuran | ND | 0.467 | " | | ND | | | | | 25 | |
| Toluene | 1.73 | 0.298 | " | | 1.76 | | | | 1.71 | 25 | |
| trans-1,2-Dichloroethylene | ND | 0.314 | " | | ND | | | | | 25 | |
| trans-1,3-Dichloropropylene | ND | 0.359 | " | | ND | | | | | 25 | |
| Trichloroethylene | ND | 0.106 | " | | ND | | | | | 25 | |
| Trichlorofluoromethane (Freon 11) | 1.60 | 0.445 | " | | 1.56 | | | | 2.82 | 25 | |
| Vinyl acetate | ND | 0.279 | " | | ND | | | | | 25 | |
| Vinyl bromide | ND | 0.346 | " | | ND | | | | | 25 | |
| Vinyl Chloride | ND | 0.101 | " | | ND | | | | | 25 | |
| **Batch BC32054 - EPA TO15 PREP** | | | | | | | | | | | |
| **Blank (BC32054-BLK1)** | | | | | | | | | Prepared & Analyzed: 03/30/2023 | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.687 | ug/m³ | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.546 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.687 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 0.766 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.546 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.405 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 0.198 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.742 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.492 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.768 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.405 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.462 | " | | | | | | | | |
| 1,2-Dichlorotetrafluoroethane | ND | 0.699 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.492 | " | | | | | | | | |
| 1,3-Butadiene | ND | 0.664 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,3-Dichloropropane | ND | 0.462 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,4-Dioxane | ND | 0.721 | " | | | | | | | | |
| 2-Butanone | ND | 0.295 | " | | | | | | | | |
| 2-Hexanone | ND | 0.819 | " | | | | | | | | |
| 3-Chloropropene | ND | 1.57 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 0.410 | " | | | | | | | | |
| Acetone | ND | 0.475 | " | | | | | | | | |
| Acrylonitrile | ND | 0.217 | " | | | | | | | | |
| Benzene | ND | 0.319 | " | | | | | | | | |
| Benzyl chloride | ND | 0.518 | " | | | | | | | | |
| Bromodichloromethane | ND | 0.670 | " | | | | | | | | |
| Bromoform | ND | 1.03 | " | | | | | | | | |
| Bromomethane | ND | 0.388 | " | | | | | | | | |
| Carbon disulfide | ND | 0.311 | " | | | | | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC32054 - EPA TO15 PREP** | | | | | | | | | | | |
| **Blank (BC32054-BLK1)** | | | | | | | | | | | Prepared & Analyzed: 03/30/2023 |
| Carbon tetrachloride | ND | 0.157 | ug/m³ | | | | | | | | |
| Chlorobenzene | ND | 0.460 | " | | | | | | | | |
| Chloroethane | ND | 0.264 | " | | | | | | | | |
| Chloroform | ND | 0.488 | " | | | | | | | | |
| Chloromethane | ND | 0.207 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.198 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.454 | " | | | | | | | | |
| Cyclohexane | ND | 0.344 | " | | | | | | | | |
| Dibromochloromethane | ND | 0.852 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.495 | " | | | | | | | | |
| Ethyl acetate | ND | 0.721 | " | | | | | | | | |
| Ethyl Benzene | ND | 0.434 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 1.07 | " | | | | | | | | |
| Isopropanol | ND | 0.492 | " | | | | | | | | |
| Methyl Methacrylate | ND | 0.409 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.361 | " | | | | | | | | |
| Methylene chloride | ND | 0.695 | " | | | | | | | | |
| n-Heptane | ND | 0.410 | " | | | | | | | | |
| n-Hexane | ND | 0.352 | " | | | | | | | | |
| o-Xylene | ND | 0.434 | " | | | | | | | | |
| p- & m- Xylenes | ND | 0.868 | " | | | | | | | | |
| p-Ethyltoluene | ND | 0.492 | " | | | | | | | | |
| Propylene | ND | 0.172 | " | | | | | | | | |
| Styrene | ND | 0.426 | " | | | | | | | | |
| Tetrachloroethylene | ND | 0.678 | " | | | | | | | | |
| Tetrahydrofuran | ND | 0.590 | " | | | | | | | | |
| Toluene | ND | 0.377 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.396 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.454 | " | | | | | | | | |
| Trichloroethylene | ND | 0.134 | " | | | | | | | | |
| Trichlorofluoromethane (Freon 11) | ND | 0.562 | " | | | | | | | | |
| Vinyl acetate | ND | 0.352 | " | | | | | | | | |
| Vinyl bromide | ND | 0.437 | " | | | | | | | | |
| Vinyl Chloride | ND | 0.128 | " | | | | | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC32054 - EPA TO15 PREP** | | | | | | | | | | | |
| **LCS (BC32054-BS1)** | | | | | | | | Prepared & Analyzed: 03/30/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 9.44 | | ppbv | 10.0 | | 94.4 | 70-130 | | | | |
| 1,1,1-Trichloroethane | 10.4 | | " | 10.0 | | 104 | 70-130 | | | | |
| 1,1,2,2-Tetrachloroethane | 10.9 | | " | 10.0 | | 109 | 70-130 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 9.54 | | " | 10.0 | | 95.4 | 70-130 | | | | |
| 1,1,2-Trichloroethane | 7.85 | | " | 10.0 | | 78.5 | 70-130 | | | | |
| 1,1-Dichloroethane | 10.1 | | " | 10.0 | | 101 | 70-130 | | | | |
| 1,1-Dichloroethylene | 11.0 | | " | 10.0 | | 110 | 70-130 | | | | |
| 1,2,4-Trichlorobenzene | 7.76 | | " | 10.0 | | 77.6 | 70-130 | | | | |
| 1,2,4-Trimethylbenzene | 8.11 | | " | 10.0 | | 81.1 | 70-130 | | | | |
| 1,2-Dibromoethane | 8.45 | | " | 10.0 | | 84.5 | 70-130 | | | | |
| 1,2-Dichlorobenzene | 7.66 | | " | 10.0 | | 76.6 | 70-130 | | | | |
| 1,2-Dichloroethane | 11.1 | | " | 10.0 | | 111 | 70-130 | | | | |
| 1,2-Dichloropropane | 8.22 | | " | 10.0 | | 82.2 | 70-130 | | | | |
| 1,2-Dichlorotetrafluoroethane | 7.24 | | " | 10.0 | | 72.4 | 70-130 | | | | |
| 1,3,5-Trimethylbenzene | 8.20 | | " | 10.0 | | 82.0 | 70-130 | | | | |
| 1,3-Butadiene | 12.6 | | " | 10.0 | | 126 | 70-130 | | | | |
| 1,3-Dichlorobenzene | 7.84 | | " | 10.0 | | 78.4 | 70-130 | | | | |
| 1,3-Dichloropropane | 8.79 | | " | 10.0 | | 87.9 | 70-130 | | | | |
| 1,4-Dichlorobenzene | 7.68 | | " | 10.0 | | 76.8 | 70-130 | | | | |
| 1,4-Dioxane | 10.7 | | " | 10.0 | | 107 | 70-130 | | | | |
| 2-Butanone | 10.4 | | " | 10.0 | | 104 | 70-130 | | | | |
| 2-Hexanone | 7.75 | | " | 10.0 | | 77.5 | 70-130 | | | | |
| 3-Chloropropene | 11.3 | | " | 10.0 | | 113 | 70-130 | | | | |
| 4-Methyl-2-pentanone | 8.46 | | " | 10.0 | | 84.6 | 70-130 | | | | |
| Acetone | 8.47 | | " | 10.0 | | 84.7 | 70-130 | | | | |
| Acrylonitrile | 11.4 | | " | 10.0 | | 114 | 70-130 | | | | |
| Benzene | 7.21 | | " | 10.0 | | 72.1 | 70-130 | | | | |
| Benzyl chloride | 8.70 | | " | 10.0 | | 87.0 | 70-130 | | | | |
| Bromodichloromethane | 8.89 | | " | 10.0 | | 88.9 | 70-130 | | | | |
| Bromoform | 9.07 | | " | 10.0 | | 90.7 | 70-130 | | | | |
| Bromomethane | 5.87 | | " | 10.0 | | 58.7 | 70-130 | Low Bias | | | |
| Carbon disulfide | 9.74 | | " | 10.0 | | 97.4 | 70-130 | | | | |
| Carbon tetrachloride | 9.48 | | " | 10.0 | | 94.8 | 70-130 | | | | |
| Chlorobenzene | 9.95 | | " | 10.0 | | 99.5 | 70-130 | | | | |
| Chloroethane | 10.2 | | " | 10.0 | | 102 | 70-130 | | | | |
| Chloroform | 10.0 | | " | 10.0 | | 100 | 70-130 | | | | |
| Chloromethane | 11.8 | | " | 10.0 | | 118 | 70-130 | | | | |
| cis-1,2-Dichloroethylene | 11.1 | | " | 10.0 | | 111 | 70-130 | | | | |
| cis-1,3-Dichloropropylene | 9.47 | | " | 10.0 | | 94.7 | 70-130 | | | | |
| Cyclohexane | 9.24 | | " | 10.0 | | 92.4 | 70-130 | | | | |
| Dibromochloromethane | 8.52 | | " | 10.0 | | 85.2 | 70-130 | | | | |
| Dichlorodifluoromethane | 9.41 | | " | 10.0 | | 94.1 | 70-130 | | | | |
| Ethyl acetate | 10.4 | | " | 10.0 | | 104 | 70-130 | | | | |
| Ethyl Benzene | 10.6 | | " | 10.0 | | 106 | 70-130 | | | | |
| Hexachlorobutadiene | 5.55 | | " | 10.0 | | 55.5 | 70-130 | Low Bias | | | |
| Isopropanol | 9.95 | | " | 10.0 | | 99.5 | 70-130 | | | | |
| Methyl Methacrylate | 8.47 | | " | 10.0 | | 84.7 | 70-130 | | | | |
| Methyl tert-butyl ether (MTBE) | 11.3 | | " | 10.0 | | 113 | 70-130 | | | | |
| Methylene chloride | 9.44 | | " | 10.0 | | 94.4 | 70-130 | | | | |
| n-Heptane | 7.23 | | " | 10.0 | | 72.3 | 70-130 | | | | |
| n-Hexane | 8.99 | | " | 10.0 | | 89.9 | 70-130 | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BC32054 - EPA TO15 PREP** | | | | | | | | | | | |
| **LCS (BC32054-BS1)** | | | | | | | | Prepared & Analyzed: 03/30/2023 | | | |
| o-Xylene | 7.93 | | ppbv | 10.0 | | 79.3 | 70-130 | | | | |
| p- & m- Xylenes | 14.2 | | " | 20.0 | | 70.9 | 70-130 | | | | |
| p-Ethyltoluene | 7.76 | | " | 10.0 | | 77.6 | 70-130 | | | | |
| Propylene | 10.7 | | " | 10.0 | | 107 | 70-130 | | | | |
| Styrene | 7.52 | | " | 10.0 | | 75.2 | 70-130 | | | | |
| Tetrachloroethylene | 8.76 | | " | 10.0 | | 87.6 | 70-130 | | | | |
| Tetrahydrofuran | 11.2 | | " | 10.0 | | 112 | 70-130 | | | | |
| Toluene | 8.03 | | " | 10.0 | | 80.3 | 70-130 | | | | |
| trans-1,2-Dichloroethylene | 10.7 | | " | 10.0 | | 107 | 70-130 | | | | |
| trans-1,3-Dichloropropylene | 9.34 | | " | 10.0 | | 93.4 | 70-130 | | | | |
| Trichloroethylene | 9.26 | | " | 10.0 | | 92.6 | 70-130 | | | | |
| Trichlorofluoromethane (Freon 11) | 9.74 | | " | 10.0 | | 97.4 | 70-130 | | | | |
| Vinyl acetate | 8.64 | | " | 10.0 | | 86.4 | 70-130 | | | | |
| Vinyl bromide | 10.2 | | " | 10.0 | | 102 | 70-130 | | | | |
| Vinyl Chloride | 10.1 | | " | 10.0 | | 101 | 70-130 | | | | |

## Sample and Data Qualifiers Relating to This Work Order

| | |
|---|---|
| TO-VAC | The final vacuum in the canister was less than -2 inches Hg vacuum. The time integrated sampling may be affected and not reflect proper sampling over the time period. The data user should take note. |
| TO-LCS-L | The result reported for this compound may be biased low due to its behavior in the analysis batch LCS where it recovered less 70% of the expected value. |
| TO-IPA | The value for isopropanol is estimated. Dilutions are not conducted for this species as not to preclude actionable analytes by dilution. |
| TO-CCV | The value reported is ESTIMATED for this compound due to its behavior during continuing calibration verification (>30% Difference from initial calibration). |
| E | The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate. |
| CAL-E | The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%) |

## Definitions and Other Explanations

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

---

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615 | 132-02 89th Ave Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

# Field Chain-of-Custody Record - AIR

YORK Project No. 23C1292

**NOTE:** YORK's Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

Page ____ of ____

| YOUR Information | Report To: | Invoice To: |
|---|---|---|
| Company: PW Grosser Consulting | Company: | Company: |
| Address: 630 Johnson Ave Bohemia, NY, 11716 | Address: | Address: |
| Phone.: 516-315-6028 | Phone.: | Phone.: |
| Contact: Jennifer Lewis | Contact: | Contact: |
| E-mail: Jennifer@PWGrosser.com | E-mail: | E-mail: |

**YOUR Project Number:** MHD1801

**YOUR Project Name:** MHD1801

**YOUR PO#:**

**Turn-Around Time**

| | |
|---|---|
| RUSH - Next Day | |
| RUSH - Two Day | |
| RUSH - Three Day | |
| RUSH - Four Day | |
| Standard (5-7 Day) | X |

*Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.*

Samples Collected by: (print your name above and sign below)

Matthew Sanchez

MSanchez

**Air Matrix Codes**

AI - Indoor Ambient Air
AO - Outdoor Amb. Air
AE - Vapor Extraction Well/ Process Gas/Effluent
AS - Soil Vapor/Sub-Slab

**Samples From**

| | |
|---|---|
| New York | X |
| New Jersey | |
| Connecticut | |
| Pennsylvania | |
| Other | |

**Report / EDD Type** (circle selections)

| | | |
|---|---|---|
| Summary Report | CT RCP | Standard Excel EDD |
| QA Report | CT RCP DQA/DUE | EQuIS (Standard) |
| NY ASP A Package | NJDEP Reduced Deliv. | NYSDEC EQuIS |
| NY ASP B Package | NJDKQP | NJDEP SRP HazSite |
| Other: | | |

**YORK Reg. Comp.**

Compared to the following Regulation(s): (please fill in)

**Certified Canisters:** Batch ___ Individual ___

**Please enter the following REQUIRED Field Data**

**Reporting Units:** ug/m³ ___ ppbv ___ ppmv ___

| Sample Identification | Date/Time Sampled | Air Matrix | Canister Vacuum Before Sampling (in Hg) | Canister Vacuum After Sampling (in Hg) | Canister ID | Flow Cont. ID | Analysis Requested |
|---|---|---|---|---|---|---|---|
| IA-01 | 3/21/23 08:49 | AI | -30 | -8 | 2883C | 6879 | TO-15, TO-15 SIM |
| SS-01 | 3/21/23 09:05 | AS | -30 | -30 | 18293 | 6869 | TO-15 |
| OA-01 | 3/21/23 09:21 | AO | -30 | -6 | 36987 | 7422 | TO-15, TO-15 SIM |
| SS-02 | 3/21/23 10:27 | AS | -30 | -4 | 37424 | 5706 | TO-15 |
| SS-03 | 3/21/23 14:40 | AS | -30 | -6 | 10042 | 7084 | TO-15 |
| IA-02 | 3/21/23 14:42 | AI | -30 | -10 | 18294 | 13565 | TO-15, TO-15 SIM |
| | | | | | | | |
| | | " | | | | | |
| | | | | | | | |
| | | | | | | | |

**Comments:** SS-01 (Canister ID 18293) pressure gauge was unchanged during the 8-hour run time

**Detection Limits Required**

≤ 1 ug/m³ ____ NYSDEC V1 Limits ____
Routine Survey ____ Other ____

**Sampling Media**

| | |
|---|---|
| 6 Liter Canister | |
| Tedlar Bag | |

| Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time | Samples Relinquished by / Company | Date/Time |
|---|---|---|---|---|---|
| Matthew Sanchez PWGC | 3/22/23 | Tom A / Yorks | 3/22/23 1515 | Tom A / Yorks | 3/22/23 |
| Samples Received by / Company | Date/Time | Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time |
| | | | | | |
| Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time | Samples Received in LAB by | Date/Time |
| | | | | adam Combs | 3/22/23 16:00 |

# Technical Report

prepared for:

**P.W. Grosser Consulting**
630 Johnson Avenue, Suite 7
Bohemia NY, 11716
**Attention: Michael Pecoraro**

Report Date: 04/10/2023
**Client Project ID: MHB1801**
York Project (SDG) No.: 23C1881

Report Date: 04/10/2023
Client Project ID: MHB1801
York Project (SDG) No.: 23C1881

**P.W. Grosser Consulting**
630 Johnson Avenue, Suite 7
Bohemia NY, 11716
Attention: Michael Pecoraro

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 03, 2023 and listed below. The project was identified as your project: **MHB1801**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 23C1881-01 | MW001 | Water | 03/31/2023 | 04/03/2023 |
| 23C1881-02 | MW002 | Water | 03/31/2023 | 04/03/2023 |
| 23C1881-03 | MW003 | Water | 03/31/2023 | 04/03/2023 |
| 23C1881-04 | DUP001 | Water | 03/31/2023 | 04/03/2023 |
| 23C1881-05 | EBOU1 | Water | 03/31/2023 | 04/03/2023 |
| 23C1881-06 | Trip Blank | Water | 03/31/2023 | 04/03/2023 |

## General Notes for York Project (SDG) No.: 23C1881

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

**Date:** 04/10/2023

Cassie L. Mosher
Laboratory Manager

## Sample Information

**Client Sample ID:** MW001 **York Sample ID:** 23C1881-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 10:40 am | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/L | 0.216 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/L | 0.266 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/L | 0.256 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/L | 0.286 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/L | 0.272 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/L | 0.222 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/L | 0.273 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/L | 0.138 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/L | 0.310 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/L | 0.432 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/L | 0.215 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/L | 0.270 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/L | 0.347 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/L | 0.283 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 142-28-9 | 1,3-Dichloropropane | ND | | ug/L | 0.260 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/L | 0.311 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/L | 35.3 | 80.0 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** **MW001** **York Sample ID:** **23C1881-01**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 10:40 am | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 78-93-3 | 2-Butanone | ND | | ug/L | 0.421 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 591-78-6 | 2-Hexanone | ND | | ug/L | 0.320 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/L | 0.365 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-64-1 | **Acetone** | **1.35** | J | ug/L | 1.34 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-02-8 | Acrolein | ND | CCVE | ug/L | 0.447 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-13-1 | Acrylonitrile | ND | | ug/L | 0.422 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-43-2 | Benzene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-97-5 | Bromochloromethane | ND | | ug/L | 0.354 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/L | 0.245 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-25-2 | Bromoform | ND | CCVE | ug/L | 0.163 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-83-9 | Bromomethane | ND | | ug/L | 0.119 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-15-0 | Carbon disulfide | ND | | ug/L | 0.362 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/L | 0.204 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-90-7 | Chlorobenzene | ND | | ug/L | 0.284 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-00-3 | Chloroethane | ND | | ug/L | 0.448 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-66-3 | Chloroform | ND | | ug/L | 0.243 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-87-3 | Chloromethane | ND | | ug/L | 0.372 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/L | 0.294 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/L | 0.262 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 110-82-7 | Cyclohexane | ND | QL-02 | ug/L | 0.491 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/L | 0.146 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-95-3 | Dibromomethane | ND | | ug/L | 0.203 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** **MW001** **York Sample ID:** **23C1881-01**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 10:40 am | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/L | 0.451 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 100-41-4 | Ethyl Benzene | ND | | ug/L | 0.290 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/L | 0.241 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-82-8 | Isopropylbenzene | ND | | ug/L | 0.405 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-20-9 | Methyl acetate | ND | | ug/L | 0.442 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/L | 0.244 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-87-2 | Methylcyclohexane | ND | | ug/L | 0.477 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/L | 0.397 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 91-20-3 | Naphthalene | ND | | ug/L | 0.212 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/L | 0.399 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/L | 0.384 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-47-6 | o-Xylene | ND | | ug/L | 0.261 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/L | 0.578 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 105-05-5 | * p-Diethylbenzene | ND | | ug/L | 0.341 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | | | |
| 622-96-8 | * p-Ethyltoluene | ND | | ug/L | 0.200 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/L | 0.444 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 100-42-5 | Styrene | ND | | ug/L | 0.255 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-65-0 | **tert-Butyl alcohol (TBA)** | **1.47** | CCVE | ug/L | 0.608 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/L | 0.367 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 127-18-4 | **Tetrachloroethylene** | **1.40** | | ug/L | 0.239 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-88-3 | **Toluene** | **0.430** | J | ug/L | 0.346 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** MW001 **York Sample ID:** 23C1881-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 10:40 am | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/L | 0.229 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-01-6 | Trichloroethylene | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/L | 0.337 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/L | 0.469 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/L | 0.836 | 1.50 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:40 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *103 %* | *69-130* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *107 %* | *81-117* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *88.6 %* | *79-122* |

## Sample Information

**Client Sample ID:** **MW002** **York Sample ID:** **23C1881-02**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 12:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/L | 0.216 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/L | 0.266 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/L | 0.256 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/L | 0.286 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/L | 0.272 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | CCVE, QL-02 | ug/L | 0.222 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/L | 0.273 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | CCVE, QL-02 | ug/L | 0.138 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/L | 0.310 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/L | 0.432 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/L | 0.215 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/L | 0.270 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/L | 0.347 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/L | 0.283 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 142-28-9 | 1,3-Dichloropropane | ND | | ug/L | 0.260 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/L | 0.311 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/L | 35.3 | 80.0 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/L | 0.421 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** MW002 **York Sample ID:** 23C1881-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 12:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 591-78-6 | 2-Hexanone | ND | | ug/L | 0.320 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/L | 0.365 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-64-1 | Acetone | ND | | ug/L | 1.34 | 2.00 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-02-8 | Acrolein | ND | CCVE | ug/L | 0.447 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-13-1 | Acrylonitrile | ND | | ug/L | 0.422 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-43-2 | Benzene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-97-5 | Bromochloromethane | ND | | ug/L | 0.354 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/L | 0.245 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-25-2 | Bromoform | ND | CCVE, QL-02 | ug/L | 0.163 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-83-9 | Bromomethane | ND | CCVE | ug/L | 0.119 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-15-0 | Carbon disulfide | ND | | ug/L | 0.362 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/L | 0.204 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-90-7 | Chlorobenzene | ND | | ug/L | 0.284 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-00-3 | Chloroethane | ND | | ug/L | 0.448 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-66-3 | Chloroform | ND | | ug/L | 0.243 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-87-3 | Chloromethane | ND | | ug/L | 0.372 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/L | 0.294 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/L | 0.262 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 110-82-7 | Cyclohexane | ND | QL-02 | ug/L | 0.491 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/L | 0.146 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-95-3 | Dibromomethane | ND | | ug/L | 0.203 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-71-8 | Dichlorodifluoromethane | ND | CCVE, QL-02 | ug/L | 0.451 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** **MW002** **York Sample ID:** **23C1881-02**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 12:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | Ethyl Benzene | ND | | ug/L | 0.290 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-68-3 | Hexachlorobutadiene | ND | CCVE, QL-02 | ug/L | 0.241 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-82-8 | Isopropylbenzene | ND | | ug/L | 0.405 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-20-9 | Methyl acetate | ND | | ug/L | 0.442 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/L | 0.244 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-87-2 | Methylcyclohexane | ND | | ug/L | 0.477 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/L | 0.397 | 2.00 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 91-20-3 | Naphthalene | ND | CCVE | ug/L | 0.212 | 2.00 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/L | 0.399 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/L | 0.384 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-47-6 | o-Xylene | ND | | ug/L | 0.261 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/L | 0.578 | 1.00 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 105-05-5 | * p-Diethylbenzene | ND | | ug/L | 0.341 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | | | |
| 622-96-8 | * p-Ethyltoluene | ND | | ug/L | 0.200 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/L | 0.444 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 100-42-5 | Styrene | ND | | ug/L | 0.255 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | CCVE | ug/L | 0.608 | 1.00 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/L | 0.367 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 127-18-4 | **Tetrachloroethylene** | **0.430** | J | ug/L | 0.239 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-88-3 | **Toluene** | **0.380** | J | ug/L | 0.346 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** MW002 **York Sample ID:** 23C1881-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 12:10 pm | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/L | 0.229 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-01-6 | Trichloroethylene | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/L | 0.337 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/L | 0.469 | 0.500 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/L | 0.836 | 1.50 | 1 | EPA 8260C | 04/10/2023 06:15 | 04/10/2023 14:20 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *104 %* | *69-130* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *95.4 %* | *81-117* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *89.6 %* | *79-122* |

## Sample Information

**Client Sample ID:** MW003 **York Sample ID:** 23C1881-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 1:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/L | 0.216 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/L | 0.266 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/L | 0.256 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/L | 0.286 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/L | 0.272 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/L | 0.222 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/L | 0.273 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/L | 0.138 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/L | 0.310 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/L | 0.432 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/L | 0.215 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/L | 0.270 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/L | 0.347 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/L | 0.283 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 142-28-9 | 1,3-Dichloropropane | ND | | ug/L | 0.260 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/L | 0.311 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/L | 35.3 | 80.0 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/L | 0.421 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** MW003 **York Sample ID:** 23C1881-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 1:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 591-78-6 | 2-Hexanone | ND | | ug/L | 0.320 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/L | 0.365 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-64-1 | **Acetone** | **3.56** | | ug/L | 1.34 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-02-8 | Acrolein | ND | CCVE | ug/L | 0.447 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-13-1 | Acrylonitrile | ND | | ug/L | 0.422 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-43-2 | Benzene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-97-5 | Bromochloromethane | ND | | ug/L | 0.354 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/L | 0.245 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-25-2 | Bromoform | ND | CCVE | ug/L | 0.163 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-83-9 | Bromomethane | ND | | ug/L | 0.119 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-15-0 | Carbon disulfide | ND | | ug/L | 0.362 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/L | 0.204 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-90-7 | Chlorobenzene | ND | | ug/L | 0.284 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-00-3 | Chloroethane | ND | | ug/L | 0.448 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-66-3 | Chloroform | ND | | ug/L | 0.243 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-87-3 | Chloromethane | ND | | ug/L | 0.372 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/L | 0.294 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/L | 0.262 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 110-82-7 | Cyclohexane | ND | QL-02 | ug/L | 0.491 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/L | 0.146 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-95-3 | Dibromomethane | ND | | ug/L | 0.203 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/L | 0.451 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** **MW003** **York Sample ID:** **23C1881-03**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 1:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | Ethyl Benzene | ND | | ug/L | 0.290 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/L | 0.241 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-82-8 | Isopropylbenzene | ND | | ug/L | 0.405 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-20-9 | Methyl acetate | ND | | ug/L | 0.442 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/L | 0.244 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-87-2 | Methylcyclohexane | ND | | ug/L | 0.477 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/L | 0.397 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 91-20-3 | Naphthalene | ND | | ug/L | 0.212 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/L | 0.399 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/L | 0.384 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-47-6 | o-Xylene | ND | | ug/L | 0.261 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/L | 0.578 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 105-05-5 | * p-Diethylbenzene | ND | | ug/L | 0.341 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | | | |
| 622-96-8 | * p-Ethyltoluene | ND | | ug/L | 0.200 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/L | 0.444 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 100-42-5 | Styrene | ND | | ug/L | 0.255 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-65-0 | **tert-Butyl alcohol (TBA)** | **0.800** | J, CCVE | ug/L | 0.608 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/L | 0.367 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 127-18-4 | **Tetrachloroethylene** | **0.470** | J | ug/L | 0.239 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-88-3 | **Toluene** | **0.750** | | ug/L | 0.346 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** MW003 **York Sample ID:** 23C1881-03

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 1:10 pm | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/L | 0.229 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-01-6 | Trichloroethylene | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/L | 0.337 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/L | 0.469 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/L | 0.836 | 1.50 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:30 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *103 %* | *69-130* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *105 %* | *81-117* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *90.5 %* | *79-122* |

## Sample Information

**Client Sample ID:** DUP001 **York Sample ID:** 23C1881-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/L | 0.216 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/L | 0.266 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/L | 0.256 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/L | 0.286 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/L | 0.272 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/L | 0.222 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/L | 0.273 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/L | 0.138 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/L | 0.310 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/L | 0.432 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/L | 0.215 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/L | 0.270 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/L | 0.347 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/L | 0.283 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 142-28-9 | 1,3-Dichloropropane | ND | | ug/L | 0.260 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/L | 0.311 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/L | 35.3 | 80.0 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/L | 0.421 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** **DUP001** **York Sample ID:** **23C1881-04**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 591-78-6 | 2-Hexanone | ND | | ug/L | 0.320 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/L | 0.365 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-64-1 | Acetone | ND | | ug/L | 1.34 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-02-8 | Acrolein | ND | CCVE | ug/L | 0.447 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-13-1 | Acrylonitrile | ND | | ug/L | 0.422 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-43-2 | Benzene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-97-5 | Bromochloromethane | ND | | ug/L | 0.354 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/L | 0.245 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-25-2 | Bromoform | ND | CCVE | ug/L | 0.163 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-83-9 | Bromomethane | ND | | ug/L | 0.119 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-15-0 | Carbon disulfide | ND | | ug/L | 0.362 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/L | 0.204 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-90-7 | Chlorobenzene | ND | | ug/L | 0.284 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-00-3 | Chloroethane | ND | | ug/L | 0.448 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-66-3 | Chloroform | ND | | ug/L | 0.243 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-87-3 | Chloromethane | ND | | ug/L | 0.372 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/L | 0.294 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/L | 0.262 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 110-82-7 | Cyclohexane | ND | QL-02 | ug/L | 0.491 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/L | 0.146 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-95-3 | Dibromomethane | ND | | ug/L | 0.203 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/L | 0.451 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** **DUP001** **York Sample ID:** **23C1881-04**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | Ethyl Benzene | ND | | ug/L | 0.290 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/L | 0.241 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-82-8 | Isopropylbenzene | ND | | ug/L | 0.405 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-20-9 | Methyl acetate | ND | | ug/L | 0.442 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/L | 0.244 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-87-2 | Methylcyclohexane | ND | | ug/L | 0.477 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/L | 0.397 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 91-20-3 | Naphthalene | ND | | ug/L | 0.212 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/L | 0.399 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/L | 0.384 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-47-6 | o-Xylene | ND | | ug/L | 0.261 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/L | 0.578 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 105-05-5 | * p-Diethylbenzene | ND | | ug/L | 0.341 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | | | |
| 622-96-8 | * p-Ethyltoluene | ND | | ug/L | 0.200 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/L | 0.444 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 100-42-5 | Styrene | ND | | ug/L | 0.255 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-65-0 | **tert-Butyl alcohol (TBA)** | **1.20** | CCVE | ug/L | 0.608 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/L | 0.367 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 127-18-4 | **Tetrachloroethylene** | **1.27** | | ug/L | 0.239 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-88-3 | **Toluene** | **0.460** | J | ug/L | 0.346 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** DUP001 **York Sample ID:** 23C1881-04

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/L | 0.229 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-01-6 | Trichloroethylene | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/L | 0.337 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/L | 0.469 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/L | 0.836 | 1.50 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 13:55 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *105 %* | *69-130* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *107 %* | *81-117* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *85.3 %* | *79-122* |

## Sample Information

**Client Sample ID:** EBOU1 **York Sample ID:** 23C1881-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 2:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/L | 0.216 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/L | 0.266 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/L | 0.256 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/L | 0.286 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/L | 0.272 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/L | 0.222 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/L | 0.273 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/L | 0.138 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/L | 0.310 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/L | 0.432 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/L | 0.215 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/L | 0.270 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/L | 0.347 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/L | 0.283 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 142-28-9 | 1,3-Dichloropropane | ND | | ug/L | 0.260 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/L | 0.311 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/L | 35.3 | 80.0 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/L | 0.421 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** EBOU1 **York Sample ID:** 23C1881-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 2:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 591-78-6 | 2-Hexanone | ND | | ug/L | 0.320 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/L | 0.365 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-64-1 | Acetone | ND | | ug/L | 1.34 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-02-8 | Acrolein | ND | CCVE | ug/L | 0.447 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-13-1 | Acrylonitrile | ND | | ug/L | 0.422 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-43-2 | Benzene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-97-5 | Bromochloromethane | ND | | ug/L | 0.354 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/L | 0.245 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-25-2 | Bromoform | ND | CCVE | ug/L | 0.163 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-83-9 | Bromomethane | ND | | ug/L | 0.119 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-15-0 | Carbon disulfide | ND | | ug/L | 0.362 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/L | 0.204 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-90-7 | Chlorobenzene | ND | | ug/L | 0.284 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-00-3 | Chloroethane | ND | | ug/L | 0.448 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-66-3 | Chloroform | ND | | ug/L | 0.243 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-87-3 | Chloromethane | ND | | ug/L | 0.372 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/L | 0.294 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/L | 0.262 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 110-82-7 | Cyclohexane | ND | QL-02 | ug/L | 0.491 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/L | 0.146 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-95-3 | Dibromomethane | ND | | ug/L | 0.203 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/L | 0.451 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** EBOU1 **York Sample ID:** 23C1881-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 2:10 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | Ethyl Benzene | ND | | ug/L | 0.290 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/L | 0.241 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-82-8 | Isopropylbenzene | ND | | ug/L | 0.405 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-20-9 | Methyl acetate | ND | | ug/L | 0.442 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/L | 0.244 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-87-2 | Methylcyclohexane | ND | | ug/L | 0.477 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-09-2 | Methylene chloride | ND | | ug/L | 0.397 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 91-20-3 | Naphthalene | ND | | ug/L | 0.212 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/L | 0.399 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/L | 0.384 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-47-6 | o-Xylene | ND | | ug/L | 0.261 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/L | 0.578 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 105-05-5 | * p-Diethylbenzene | ND | | ug/L | 0.341 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | | | |
| 622-96-8 | * p-Ethyltoluene | ND | | ug/L | 0.200 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/L | 0.444 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 100-42-5 | Styrene | ND | | ug/L | 0.255 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | CCVE | ug/L | 0.608 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/L | 0.367 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/L | 0.239 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-88-3 | Toluene | ND | | ug/L | 0.346 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** EBOU1 **York Sample ID:** 23C1881-05

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 2:10 pm | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/L | 0.229 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-01-6 | Trichloroethylene | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/L | 0.337 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/L | 0.469 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/L | 0.836 | 1.50 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 12:15 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *100 %* | *69-130* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *106 %* | *81-117* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *94.1 %* | *79-122* |

## Sample Information

**Client Sample ID:** **Trip Blank** **York Sample ID:** **23C1881-06**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/L | 0.216 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/L | 0.266 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/L | 0.256 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/L | 0.286 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/L | 0.272 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/L | 0.222 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/L | 0.273 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/L | 0.138 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/L | 0.310 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/L | 0.432 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/L | 0.215 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/L | 0.270 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/L | 0.327 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/L | 0.347 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/L | 0.283 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 142-28-9 | 1,3-Dichloropropane | ND | | ug/L | 0.260 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/L | 0.311 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/L | 35.3 | 80.0 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 78-93-3 | 2-Butanone | ND | | ug/L | 0.421 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** **Trip Blank** **York Sample ID:** **23C1881-06**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 591-78-6 | 2-Hexanone | ND | | ug/L | 0.320 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/L | 0.365 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-64-1 | **Acetone** | **1.48** | J | ug/L | 1.34 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-02-8 | Acrolein | ND | CCVE | ug/L | 0.447 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 107-13-1 | Acrylonitrile | ND | | ug/L | 0.422 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 71-43-2 | Benzene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-97-5 | Bromochloromethane | ND | | ug/L | 0.354 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/L | 0.245 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-25-2 | Bromoform | ND | CCVE | ug/L | 0.163 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-83-9 | Bromomethane | ND | | ug/L | 0.119 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-15-0 | Carbon disulfide | ND | | ug/L | 0.362 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/L | 0.204 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-90-7 | Chlorobenzene | ND | | ug/L | 0.284 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-00-3 | Chloroethane | ND | | ug/L | 0.448 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 67-66-3 | Chloroform | ND | | ug/L | 0.243 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-87-3 | Chloromethane | ND | | ug/L | 0.372 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/L | 0.294 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/L | 0.262 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 110-82-7 | Cyclohexane | ND | QL-02 | ug/L | 0.491 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/L | 0.146 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 74-95-3 | Dibromomethane | ND | | ug/L | 0.203 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/L | 0.451 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** **Trip Blank** **York Sample ID:** **23C1881-06**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

**VOA, 8260 LOW MASTER** **Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100-41-4 | Ethyl Benzene | ND | | ug/L | 0.290 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/L | 0.241 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-82-8 | Isopropylbenzene | ND | | ug/L | 0.405 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-20-9 | Methyl acetate | ND | | ug/L | 0.442 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/L | 0.244 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-87-2 | Methylcyclohexane | ND | | ug/L | 0.477 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 75-09-2 | **Methylene chloride** | **0.420** | J | ug/L | 0.397 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 91-20-3 | Naphthalene | ND | | ug/L | 0.212 | 2.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 104-51-8 | n-Butylbenzene | ND | | ug/L | 0.399 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 103-65-1 | n-Propylbenzene | ND | | ug/L | 0.384 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-47-6 | o-Xylene | ND | | ug/L | 0.261 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/L | 0.578 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,PADEP | | |
| 105-05-5 | * p-Diethylbenzene | ND | | ug/L | 0.341 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | | | |
| 622-96-8 | * p-Ethyltoluene | ND | | ug/L | 0.200 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | | | |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/L | 0.377 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 135-98-8 | sec-Butylbenzene | ND | | ug/L | 0.444 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 100-42-5 | Styrene | ND | | ug/L | 0.255 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | CCVE | ug/L | 0.608 | 1.00 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | |
| 98-06-6 | tert-Butylbenzene | ND | | ug/L | 0.367 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 127-18-4 | Tetrachloroethylene | ND | | ug/L | 0.239 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 108-88-3 | Toluene | ND | | ug/L | 0.346 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/L | 0.279 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** **Trip Blank** **York Sample ID:** **23C1881-06**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1881 | MHB1801 | Water | March 31, 2023 3:00 pm | 04/03/2023 |

### VOA, 8260 LOW MASTER

**Log-in Notes:** TEMP **Sample Notes:**

Sample Prepared by Method: EPA 5030B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/L | 0.229 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 79-01-6 | Trichloroethylene | ND | | ug/L | 0.249 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/L | 0.337 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/L | 0.469 | 0.500 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/L | 0.836 | 1.50 | 1 | EPA 8260C | 04/05/2023 06:45 | 04/05/2023 11:49 | JTG |
| | | | | | | | | Certifications: | CTDOH-PH-0723,NELAC-NY10854,NELAC-NY12058,NJDEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *102 %* | *69-130* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *108 %* | *81-117* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *91.1 %* | *79-122* |

# Analytical Batch Summary

**Batch ID:** BD30292 **Preparation Method:** EPA 5030B **Prepared By:** JTG

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 23C1881-01 | MW001 | 04/05/23 |
| 23C1881-03 | MW003 | 04/05/23 |
| 23C1881-04 | DUP001 | 04/05/23 |
| 23C1881-05 | EBOU1 | 04/05/23 |
| 23C1881-06 | Trip Blank | 04/05/23 |
| BD30292-BLK1 | Blank | 04/05/23 |
| BD30292-BS1 | LCS | 04/05/23 |
| BD30292-BSD1 | LCS Dup | 04/05/23 |

**Batch ID:** BD30333 **Preparation Method:** EPA 5030B **Prepared By:** JTG

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 23C1881-02 | MW002 | 04/10/23 |
| BD30333-BS1 | LCS | 04/10/23 |
| BD30333-BSD1 | LCS Dup | 04/10/23 |
| BD30333-MS1 | Matrix Spike | 04/10/23 |
| BD30333-MSD1 | Matrix Spike Dup | 04/10/23 |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30292 - EPA 5030B** | | | | | | | | | | | |
| **Blank (BD30292-BLK1)** | | | | | | | | | | | Prepared & Analyzed: 04/05/2023 |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | ug/L | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 0.500 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 0.500 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.500 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.500 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.500 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 0.500 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | " | | | | | | | | |
| 1,3-Dichloropropane | ND | 0.500 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | " | | | | | | | | |
| 1,4-Dioxane | ND | 80.0 | " | | | | | | | | |
| 2-Butanone | ND | 0.500 | " | | | | | | | | |
| 2-Hexanone | ND | 0.500 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 0.500 | " | | | | | | | | |
| Acetone | ND | 2.00 | " | | | | | | | | |
| Acrolein | ND | 0.500 | " | | | | | | | | |
| Acrylonitrile | ND | 0.500 | " | | | | | | | | |
| Benzene | ND | 0.500 | " | | | | | | | | |
| Bromochloromethane | ND | 0.500 | " | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | " | | | | | | | | |
| Bromoform | ND | 0.500 | " | | | | | | | | |
| Bromomethane | ND | 0.500 | " | | | | | | | | |
| Carbon disulfide | ND | 0.500 | " | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | " | | | | | | | | |
| Chlorobenzene | ND | 0.500 | " | | | | | | | | |
| Chloroethane | ND | 0.500 | " | | | | | | | | |
| Chloroform | ND | 0.500 | " | | | | | | | | |
| Chloromethane | ND | 0.500 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.500 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.500 | " | | | | | | | | |
| Cyclohexane | ND | 0.500 | " | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | " | | | | | | | | |
| Dibromomethane | ND | 0.500 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.500 | " | | | | | | | | |
| Ethyl Benzene | ND | 0.500 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 0.500 | " | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | " | | | | | | | | |
| Methyl acetate | ND | 0.500 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.500 | " | | | | | | | | |
| Methylcyclohexane | ND | 0.500 | " | | | | | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30292 - EPA 5030B** | | | | | | | | | | | |
| **Blank (BD30292-BLK1)** | | | | | | | | Prepared & Analyzed: 04/05/2023 | | | |
| Methylene chloride | ND | 2.00 | ug/L | | | | | | | | |
| Naphthalene | ND | 2.00 | " | | | | | | | | |
| n-Butylbenzene | ND | 0.500 | " | | | | | | | | |
| n-Propylbenzene | ND | 0.500 | " | | | | | | | | |
| o-Xylene | ND | 0.500 | " | | | | | | | | |
| p- & m- Xylenes | ND | 1.00 | " | | | | | | | | |
| p-Diethylbenzene | ND | 0.500 | " | | | | | | | | |
| p-Ethyltoluene | ND | 0.500 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | " | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | " | | | | | | | | |
| Styrene | ND | 0.500 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 1.00 | " | | | | | | | | |
| tert-Butylbenzene | ND | 0.500 | " | | | | | | | | |
| Tetrachloroethylene | ND | 0.500 | " | | | | | | | | |
| Toluene | ND | 0.500 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.500 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.500 | " | | | | | | | | |
| Trichloroethylene | ND | 0.500 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 0.500 | " | | | | | | | | |
| Vinyl Chloride | ND | 0.500 | " | | | | | | | | |
| Xylenes, Total | ND | 1.50 | " | | | | | | | | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *10.2* | | *"* | *10.0* | | *102* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *10.5* | | *"* | *10.0* | | *105* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *9.22* | | *"* | *10.0* | | *92.2* | *79-122* | | | | |
| **LCS (BD30292-BS1)** | | | | | | | | Prepared & Analyzed: 04/05/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 10.3 | | ug/L | 10.0 | | 103 | 82-126 | | | | |
| 1,1,1-Trichloroethane | 9.09 | | " | 10.0 | | 90.9 | 78-136 | | | | |
| 1,1,2,2-Tetrachloroethane | 10.6 | | " | 10.0 | | 106 | 76-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.1 | | " | 10.0 | | 101 | 54-165 | | | | |
| 1,1,2-Trichloroethane | 10.5 | | " | 10.0 | | 105 | 82-123 | | | | |
| 1,1-Dichloroethane | 10.4 | | " | 10.0 | | 104 | 82-129 | | | | |
| 1,1-Dichloroethylene | 10.4 | | " | 10.0 | | 104 | 68-138 | | | | |
| 1,2,3-Trichlorobenzene | 8.63 | | " | 10.0 | | 86.3 | 76-136 | | | | |
| 1,2,3-Trichloropropane | 9.76 | | " | 10.0 | | 97.6 | 77-128 | | | | |
| 1,2,4-Trichlorobenzene | 8.53 | | " | 10.0 | | 85.3 | 76-137 | | | | |
| 1,2,4-Trimethylbenzene | 10.3 | | " | 10.0 | | 103 | 82-132 | | | | |
| 1,2-Dibromo-3-chloropropane | 9.49 | | " | 10.0 | | 94.9 | 45-147 | | | | |
| 1,2-Dibromoethane | 9.73 | | " | 10.0 | | 97.3 | 83-124 | | | | |
| 1,2-Dichlorobenzene | 10.6 | | " | 10.0 | | 106 | 79-123 | | | | |
| 1,2-Dichloroethane | 9.86 | | " | 10.0 | | 98.6 | 73-132 | | | | |
| 1,2-Dichloropropane | 12.7 | | " | 10.0 | | 127 | 78-126 | High Bias | | | |
| 1,3,5-Trimethylbenzene | 10.7 | | " | 10.0 | | 107 | 80-131 | | | | |
| 1,3-Dichlorobenzene | 10.0 | | " | 10.0 | | 100 | 86-122 | | | | |
| 1,3-Dichloropropane | 11.1 | | " | 10.0 | | 111 | 81-125 | | | | |
| 1,4-Dichlorobenzene | 10.1 | | " | 10.0 | | 101 | 85-124 | | | | |
| 1,4-Dioxane | 259 | | " | 210 | | 123 | 10-349 | | | | |
| 2-Butanone | 10.6 | | " | 10.0 | | 106 | 49-152 | | | | |
| 2-Hexanone | 9.80 | | " | 10.0 | | 98.0 | 51-146 | | | | |
| 4-Methyl-2-pentanone | 8.90 | | " | 10.0 | | 89.0 | 57-145 | | | | |
| Acetone | 11.0 | | " | 10.0 | | 110 | 14-150 | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30292 - EPA 5030B** | | | | | | | | | | | |
| **LCS (BD30292-BS1)** | | | | | | | | Prepared & Analyzed: 04/05/2023 | | | |
| Acrolein | 5.62 | | ug/L | 25.0 | | 22.5 | 10-153 | | | | |
| Acrylonitrile | 9.37 | | " | 10.0 | | 93.7 | 51-150 | | | | |
| Benzene | 11.1 | | " | 10.0 | | 111 | 85-126 | | | | |
| Bromochloromethane | 11.1 | | " | 10.0 | | 111 | 77-128 | | | | |
| Bromodichloromethane | 10.3 | | " | 10.0 | | 103 | 79-128 | | | | |
| Bromoform | 7.93 | | " | 10.0 | | 79.3 | 78-133 | | | | |
| Bromomethane | 8.37 | | " | 10.0 | | 83.7 | 43-168 | | | | |
| Carbon disulfide | 10.0 | | " | 10.0 | | 100 | 68-146 | | | | |
| Carbon tetrachloride | 9.32 | | " | 10.0 | | 93.2 | 77-141 | | | | |
| Chlorobenzene | 11.7 | | " | 10.0 | | 117 | 88-120 | | | | |
| Chloroethane | 15.6 | | " | 10.0 | | 156 | 65-136 | High Bias | | | |
| Chloroform | 9.94 | | " | 10.0 | | 99.4 | 82-128 | | | | |
| Chloromethane | 12.4 | | " | 10.0 | | 124 | 43-155 | | | | |
| cis-1,2-Dichloroethylene | 10.5 | | " | 10.0 | | 105 | 83-129 | | | | |
| cis-1,3-Dichloropropylene | 10.2 | | " | 10.0 | | 102 | 80-131 | | | | |
| Cyclohexane | 5.19 | | " | 10.0 | | 51.9 | 63-149 | Low Bias | | | |
| Dibromochloromethane | 9.18 | | " | 10.0 | | 91.8 | 80-130 | | | | |
| Dibromomethane | 10.3 | | " | 10.0 | | 103 | 72-134 | | | | |
| Dichlorodifluoromethane | 7.07 | | " | 10.0 | | 70.7 | 44-144 | | | | |
| Ethyl Benzene | 12.2 | | " | 10.0 | | 122 | 80-131 | | | | |
| Hexachlorobutadiene | 6.74 | | " | 10.0 | | 67.4 | 67-146 | | | | |
| Isopropylbenzene | 10.8 | | " | 10.0 | | 108 | 76-140 | | | | |
| Methyl acetate | 10.6 | | " | 10.0 | | 106 | 51-139 | | | | |
| Methyl tert-butyl ether (MTBE) | 8.80 | | " | 10.0 | | 88.0 | 76-135 | | | | |
| Methylcyclohexane | 11.5 | | " | 10.0 | | 115 | 72-143 | | | | |
| Methylene chloride | 10.8 | | " | 10.0 | | 108 | 55-137 | | | | |
| Naphthalene | 8.95 | | " | 10.0 | | 89.5 | 70-147 | | | | |
| n-Butylbenzene | 12.1 | | " | 10.0 | | 121 | 79-132 | | | | |
| n-Propylbenzene | 11.7 | | " | 10.0 | | 117 | 78-133 | | | | |
| o-Xylene | 11.7 | | " | 10.0 | | 117 | 78-130 | | | | |
| p- & m- Xylenes | 24.3 | | " | 20.0 | | 122 | 77-133 | | | | |
| p-Diethylbenzene | 11.1 | | " | 10.0 | | 111 | 84-134 | | | | |
| p-Ethyltoluene | 12.1 | | " | 10.0 | | 121 | 88-129 | | | | |
| p-Isopropyltoluene | 10.7 | | " | 10.0 | | 107 | 81-136 | | | | |
| sec-Butylbenzene | 11.2 | | " | 10.0 | | 112 | 79-137 | | | | |
| Styrene | 11.8 | | " | 10.0 | | 118 | 67-132 | | | | |
| tert-Butyl alcohol (TBA) | 30.2 | | " | 50.0 | | 60.4 | 25-162 | | | | |
| tert-Butylbenzene | 8.95 | | " | 10.0 | | 89.5 | 77-138 | | | | |
| Tetrachloroethylene | 9.96 | | " | 10.0 | | 99.6 | 82-131 | | | | |
| Toluene | 11.4 | | " | 10.0 | | 114 | 80-127 | | | | |
| trans-1,2-Dichloroethylene | 10.4 | | " | 10.0 | | 104 | 80-132 | | | | |
| trans-1,3-Dichloropropylene | 10.1 | | " | 10.0 | | 101 | 78-131 | | | | |
| Trichloroethylene | 10.6 | | " | 10.0 | | 106 | 82-128 | | | | |
| Trichlorofluoromethane | 14.5 | | " | 10.0 | | 145 | 67-139 | High Bias | | | |
| Vinyl Chloride | 14.2 | | " | 10.0 | | 142 | 58-145 | | | | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *9.69* | | *"* | *10.0* | | *96.9* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *10.7* | | *"* | *10.0* | | *107* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *8.91* | | *"* | *10.0* | | *89.1* | *79-122* | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30292 - EPA 5030B** | | | | | | | | | | | |
| **LCS Dup (BD30292-BSD1)** | | | | | | | | Prepared & Analyzed: 04/05/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 10.0 | | ug/L | 10.0 | | 100 | 82-126 | | 2.65 | 30 | |
| 1,1,1-Trichloroethane | 8.64 | | " | 10.0 | | 86.4 | 78-136 | | 5.08 | 30 | |
| 1,1,2,2-Tetrachloroethane | 10.7 | | " | 10.0 | | 107 | 76-129 | | 0.658 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 9.58 | | " | 10.0 | | 95.8 | 54-165 | | 5.58 | 30 | |
| 1,1,2-Trichloroethane | 10.9 | | " | 10.0 | | 109 | 82-123 | | 3.84 | 30 | |
| 1,1-Dichloroethane | 10.0 | | " | 10.0 | | 100 | 82-129 | | 4.01 | 30 | |
| 1,1-Dichloroethylene | 9.82 | | " | 10.0 | | 98.2 | 68-138 | | 5.83 | 30 | |
| 1,2,3-Trichlorobenzene | 8.45 | | " | 10.0 | | 84.5 | 76-136 | | 2.11 | 30 | |
| 1,2,3-Trichloropropane | 9.61 | | " | 10.0 | | 96.1 | 77-128 | | 1.55 | 30 | |
| 1,2,4-Trichlorobenzene | 8.42 | | " | 10.0 | | 84.2 | 76-137 | | 1.30 | 30 | |
| 1,2,4-Trimethylbenzene | 9.54 | | " | 10.0 | | 95.4 | 82-132 | | 7.66 | 30 | |
| 1,2-Dibromo-3-chloropropane | 9.50 | | " | 10.0 | | 95.0 | 45-147 | | 0.105 | 30 | |
| 1,2-Dibromoethane | 10.1 | | " | 10.0 | | 101 | 83-124 | | 3.43 | 30 | |
| 1,2-Dichlorobenzene | 9.83 | | " | 10.0 | | 98.3 | 79-123 | | 7.25 | 30 | |
| 1,2-Dichloroethane | 9.87 | | " | 10.0 | | 98.7 | 73-132 | | 0.101 | 30 | |
| 1,2-Dichloropropane | 12.4 | | " | 10.0 | | 124 | 78-126 | | 2.39 | 30 | |
| 1,3,5-Trimethylbenzene | 9.66 | | " | 10.0 | | 96.6 | 80-131 | | 9.94 | 30 | |
| 1,3-Dichlorobenzene | 9.26 | | " | 10.0 | | 92.6 | 86-122 | | 7.78 | 30 | |
| 1,3-Dichloropropane | 11.6 | | " | 10.0 | | 116 | 81-125 | | 3.97 | 30 | |
| 1,4-Dichlorobenzene | 9.43 | | " | 10.0 | | 94.3 | 85-124 | | 6.86 | 30 | |
| 1,4-Dioxane | 259 | | " | 210 | | 124 | 10-349 | | 0.0771 | 30 | |
| 2-Butanone | 11.0 | | " | 10.0 | | 110 | 49-152 | | 4.18 | 30 | |
| 2-Hexanone | 10.6 | | " | 10.0 | | 106 | 51-146 | | 7.47 | 30 | |
| 4-Methyl-2-pentanone | 9.93 | | " | 10.0 | | 99.3 | 57-145 | | 10.9 | 30 | |
| Acetone | 10.8 | | " | 10.0 | | 108 | 14-150 | | 2.39 | 30 | |
| Acrolein | 5.69 | | " | 25.0 | | 22.8 | 10-153 | | 1.24 | 30 | |
| Acrylonitrile | 10.0 | | " | 10.0 | | 100 | 51-150 | | 6.50 | 30 | |
| Benzene | 10.8 | | " | 10.0 | | 108 | 85-126 | | 3.29 | 30 | |
| Bromochloromethane | 11.2 | | " | 10.0 | | 112 | 77-128 | | 0.805 | 30 | |
| Bromodichloromethane | 10.2 | | " | 10.0 | | 102 | 79-128 | | 1.76 | 30 | |
| Bromoform | 8.38 | | " | 10.0 | | 83.8 | 78-133 | | 5.52 | 30 | |
| Bromomethane | 6.55 | | " | 10.0 | | 65.5 | 43-168 | | 24.4 | 30 | |
| Carbon disulfide | 9.42 | | " | 10.0 | | 94.2 | 68-146 | | 6.17 | 30 | |
| Carbon tetrachloride | 8.66 | | " | 10.0 | | 86.6 | 77-141 | | 7.34 | 30 | |
| Chlorobenzene | 11.3 | | " | 10.0 | | 113 | 88-120 | | 3.04 | 30 | |
| Chloroethane | 13.8 | | " | 10.0 | | 138 | 65-136 | High Bias | 11.8 | 30 | |
| Chloroform | 9.70 | | " | 10.0 | | 97.0 | 82-128 | | 2.44 | 30 | |
| Chloromethane | 10.5 | | " | 10.0 | | 105 | 43-155 | | 16.6 | 30 | |
| cis-1,2-Dichloroethylene | 10.3 | | " | 10.0 | | 103 | 83-129 | | 1.44 | 30 | |
| cis-1,3-Dichloropropylene | 10.2 | | " | 10.0 | | 102 | 80-131 | | 0.0977 | 30 | |
| Cyclohexane | 4.89 | | " | 10.0 | | 48.9 | 63-149 | Low Bias | 5.95 | 30 | |
| Dibromochloromethane | 9.38 | | " | 10.0 | | 93.8 | 80-130 | | 2.16 | 30 | |
| Dibromomethane | 10.6 | | " | 10.0 | | 106 | 72-134 | | 3.05 | 30 | |
| Dichlorodifluoromethane | 6.25 | | " | 10.0 | | 62.5 | 44-144 | | 12.3 | 30 | |
| Ethyl Benzene | 11.6 | | " | 10.0 | | 116 | 80-131 | | 5.31 | 30 | |
| Hexachlorobutadiene | 6.53 | | " | 10.0 | | 65.3 | 67-146 | Low Bias | 3.17 | 30 | |
| Isopropylbenzene | 9.82 | | " | 10.0 | | 98.2 | 76-140 | | 9.97 | 30 | |
| Methyl acetate | 11.1 | | " | 10.0 | | 111 | 51-139 | | 5.06 | 30 | |
| Methyl tert-butyl ether (MTBE) | 9.32 | | " | 10.0 | | 93.2 | 76-135 | | 5.74 | 30 | |
| Methylcyclohexane | 10.8 | | " | 10.0 | | 108 | 72-143 | | 5.47 | 30 | |
| Methylene chloride | 10.6 | | " | 10.0 | | 106 | 55-137 | | 2.61 | 30 | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30292 - EPA 5030B** | | | | | | | | | | | |
| **LCS Dup (BD30292-BSD1)** | | | | | | | | Prepared & Analyzed: 04/05/2023 | | | |
| Naphthalene | 9.23 | | ug/L | 10.0 | | 92.3 | 70-147 | | 3.08 | 30 | |
| n-Butylbenzene | 11.1 | | " | 10.0 | | 111 | 79-132 | | 8.97 | 30 | |
| n-Propylbenzene | 10.5 | | " | 10.0 | | 105 | 78-133 | | 11.2 | 30 | |
| o-Xylene | 11.4 | | " | 10.0 | | 114 | 78-130 | | 2.68 | 30 | |
| p- & m- Xylenes | 23.2 | | " | 20.0 | | 116 | 77-133 | | 4.80 | 30 | |
| p-Diethylbenzene | 10.0 | | " | 10.0 | | 100 | 84-134 | | 10.1 | 30 | |
| p-Ethyltoluene | 11.0 | | " | 10.0 | | 110 | 88-129 | | 9.98 | 30 | |
| p-Isopropyltoluene | 9.70 | | " | 10.0 | | 97.0 | 81-136 | | 10.2 | 30 | |
| sec-Butylbenzene | 10.1 | | " | 10.0 | | 101 | 79-137 | | 10.5 | 30 | |
| Styrene | 11.5 | | " | 10.0 | | 115 | 67-132 | | 2.40 | 30 | |
| tert-Butyl alcohol (TBA) | 33.0 | | " | 50.0 | | 65.9 | 25-162 | | 8.84 | 30 | |
| tert-Butylbenzene | 8.11 | | " | 10.0 | | 81.1 | 77-138 | | 9.85 | 30 | |
| Tetrachloroethylene | 9.30 | | " | 10.0 | | 93.0 | 82-131 | | 6.85 | 30 | |
| Toluene | 11.0 | | " | 10.0 | | 110 | 80-127 | | 3.92 | 30 | |
| trans-1,2-Dichloroethylene | 10.0 | | " | 10.0 | | 100 | 80-132 | | 3.72 | 30 | |
| trans-1,3-Dichloropropylene | 10.2 | | " | 10.0 | | 102 | 78-131 | | 1.09 | 30 | |
| Trichloroethylene | 10.1 | | " | 10.0 | | 101 | 82-128 | | 4.83 | 30 | |
| Trichlorofluoromethane | 13.5 | | " | 10.0 | | 135 | 67-139 | | 7.20 | 30 | |
| Vinyl Chloride | 12.6 | | " | 10.0 | | 126 | 58-145 | | 11.8 | 30 | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *10.0* | | *"* | *10.0* | | *100* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *10.5* | | *"* | *10.0* | | *105* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *8.58* | | *"* | *10.0* | | *85.8* | *79-122* | | | | |
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **LCS (BD30333-BS1)** | | | | | | | | Prepared & Analyzed: 04/10/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 9.47 | | ug/L | 10.0 | | 94.7 | 82-126 | | | | |
| 1,1,1-Trichloroethane | 9.41 | | " | 10.0 | | 94.1 | 78-136 | | | | |
| 1,1,2,2-Tetrachloroethane | 9.66 | | " | 10.0 | | 96.6 | 76-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 9.36 | | " | 10.0 | | 93.6 | 54-165 | | | | |
| 1,1,2-Trichloroethane | 9.47 | | " | 10.0 | | 94.7 | 82-123 | | | | |
| 1,1-Dichloroethane | 10.7 | | " | 10.0 | | 107 | 82-129 | | | | |
| 1,1-Dichloroethylene | 9.78 | | " | 10.0 | | 97.8 | 68-138 | | | | |
| 1,2,3-Trichlorobenzene | 6.80 | | " | 10.0 | | 68.0 | 76-136 | Low Bias | | | |
| 1,2,3-Trichloropropane | 8.39 | | " | 10.0 | | 83.9 | 77-128 | | | | |
| 1,2,4-Trichlorobenzene | 6.88 | | " | 10.0 | | 68.8 | 76-137 | Low Bias | | | |
| 1,2,4-Trimethylbenzene | 9.79 | | " | 10.0 | | 97.9 | 82-132 | | | | |
| 1,2-Dibromo-3-chloropropane | 7.74 | | " | 10.0 | | 77.4 | 45-147 | | | | |
| 1,2-Dibromoethane | 8.74 | | " | 10.0 | | 87.4 | 83-124 | | | | |
| 1,2-Dichlorobenzene | 9.56 | | " | 10.0 | | 95.6 | 79-123 | | | | |
| 1,2-Dichloroethane | 10.1 | | " | 10.0 | | 101 | 73-132 | | | | |
| 1,2-Dichloropropane | 11.7 | | " | 10.0 | | 117 | 78-126 | | | | |
| 1,3,5-Trimethylbenzene | 10.1 | | " | 10.0 | | 101 | 80-131 | | | | |
| 1,3-Dichlorobenzene | 9.22 | | " | 10.0 | | 92.2 | 86-122 | | | | |
| 1,3-Dichloropropane | 10.0 | | " | 10.0 | | 100 | 81-125 | | | | |
| 1,4-Dichlorobenzene | 9.13 | | " | 10.0 | | 91.3 | 85-124 | | | | |
| 1,4-Dioxane | 202 | | " | 210 | | 96.1 | 10-349 | | | | |
| 2-Butanone | 10.4 | | " | 10.0 | | 104 | 49-152 | | | | |
| 2-Hexanone | 8.58 | | " | 10.0 | | 85.8 | 51-146 | | | | |
| 4-Methyl-2-pentanone | 7.80 | | " | 10.0 | | 78.0 | 57-145 | | | | |
| Acetone | 10.9 | | " | 10.0 | | 109 | 14-150 | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **LCS (BD30333-BS1)** | | | | | | | | Prepared & Analyzed: 04/10/2023 | | | |
| Acrolein | 6.10 | | ug/L | 25.0 | | 24.4 | 10-153 | | | | |
| Acrylonitrile | 9.63 | | " | 10.0 | | 96.3 | 51-150 | | | | |
| Benzene | 11.4 | | " | 10.0 | | 114 | 85-126 | | | | |
| Bromochloromethane | 11.7 | | " | 10.0 | | 117 | 77-128 | | | | |
| Bromodichloromethane | 9.34 | | " | 10.0 | | 93.4 | 79-128 | | | | |
| Bromoform | 6.90 | | " | 10.0 | | 69.0 | 78-133 | Low Bias | | | |
| Bromomethane | 5.25 | | " | 10.0 | | 52.5 | 43-168 | | | | |
| Carbon disulfide | 8.53 | | " | 10.0 | | 85.3 | 68-146 | | | | |
| Carbon tetrachloride | 9.70 | | " | 10.0 | | 97.0 | 77-141 | | | | |
| Chlorobenzene | 11.0 | | " | 10.0 | | 110 | 88-120 | | | | |
| Chloroethane | 12.4 | | " | 10.0 | | 124 | 65-136 | | | | |
| Chloroform | 10.4 | | " | 10.0 | | 104 | 82-128 | | | | |
| Chloromethane | 8.78 | | " | 10.0 | | 87.8 | 43-155 | | | | |
| cis-1,2-Dichloroethylene | 11.1 | | " | 10.0 | | 111 | 83-129 | | | | |
| cis-1,3-Dichloropropylene | 9.41 | | " | 10.0 | | 94.1 | 80-131 | | | | |
| Cyclohexane | 5.12 | | " | 10.0 | | 51.2 | 63-149 | Low Bias | | | |
| Dibromochloromethane | 8.25 | | " | 10.0 | | 82.5 | 80-130 | | | | |
| Dibromomethane | 9.10 | | " | 10.0 | | 91.0 | 72-134 | | | | |
| Dichlorodifluoromethane | 2.93 | | " | 10.0 | | 29.3 | 44-144 | Low Bias | | | |
| Ethyl Benzene | 11.5 | | " | 10.0 | | 115 | 80-131 | | | | |
| Hexachlorobutadiene | 5.30 | | " | 10.0 | | 53.0 | 67-146 | Low Bias | | | |
| Isopropylbenzene | 10.5 | | " | 10.0 | | 105 | 76-140 | | | | |
| Methyl acetate | 10.2 | | " | 10.0 | | 102 | 51-139 | | | | |
| Methyl tert-butyl ether (MTBE) | 8.42 | | " | 10.0 | | 84.2 | 76-135 | | | | |
| Methylcyclohexane | 10.3 | | " | 10.0 | | 103 | 72-143 | | | | |
| Methylene chloride | 11.2 | | " | 10.0 | | 112 | 55-137 | | | | |
| Naphthalene | 7.20 | | " | 10.0 | | 72.0 | 70-147 | | | | |
| n-Butylbenzene | 11.0 | | " | 10.0 | | 110 | 79-132 | | | | |
| n-Propylbenzene | 11.2 | | " | 10.0 | | 112 | 78-133 | | | | |
| o-Xylene | 11.1 | | " | 10.0 | | 111 | 78-130 | | | | |
| p- & m- Xylenes | 23.0 | | " | 20.0 | | 115 | 77-133 | | | | |
| p-Diethylbenzene | 10.1 | | " | 10.0 | | 101 | 84-134 | | | | |
| p-Ethyltoluene | 11.6 | | " | 10.0 | | 116 | 88-129 | | | | |
| p-Isopropyltoluene | 10.0 | | " | 10.0 | | 100 | 81-136 | | | | |
| sec-Butylbenzene | 10.5 | | " | 10.0 | | 105 | 79-137 | | | | |
| Styrene | 10.9 | | " | 10.0 | | 109 | 67-132 | | | | |
| tert-Butyl alcohol (TBA) | 28.3 | | " | 50.0 | | 56.6 | 25-162 | | | | |
| tert-Butylbenzene | 8.52 | | " | 10.0 | | 85.2 | 77-138 | | | | |
| Tetrachloroethylene | 9.19 | | " | 10.0 | | 91.9 | 82-131 | | | | |
| Toluene | 10.8 | | " | 10.0 | | 108 | 80-127 | | | | |
| trans-1,2-Dichloroethylene | 10.6 | | " | 10.0 | | 106 | 80-132 | | | | |
| trans-1,3-Dichloropropylene | 9.08 | | " | 10.0 | | 90.8 | 78-131 | | | | |
| Trichloroethylene | 9.86 | | " | 10.0 | | 98.6 | 82-128 | | | | |
| Trichlorofluoromethane | 12.2 | | " | 10.0 | | 122 | 67-139 | | | | |
| Vinyl Chloride | 9.83 | | " | 10.0 | | 98.3 | 58-145 | | | | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *9.29* | | *"* | *10.0* | | *92.9* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *10.0* | | *"* | *10.0* | | *100* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *9.42* | | *"* | *10.0* | | *94.2* | *79-122* | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **LCS Dup (BD30333-BSD1)** | | | | | | | | Prepared & Analyzed: 04/10/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 9.18 | | ug/L | 10.0 | | 91.8 | 82-126 | | 3.11 | 30 | |
| 1,1,1-Trichloroethane | 9.21 | | " | 10.0 | | 92.1 | 78-136 | | 2.15 | 30 | |
| 1,1,2,2-Tetrachloroethane | 9.58 | | " | 10.0 | | 95.8 | 76-129 | | 0.832 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8.90 | | " | 10.0 | | 89.0 | 54-165 | | 5.04 | 30 | |
| 1,1,2-Trichloroethane | 9.83 | | " | 10.0 | | 98.3 | 82-123 | | 3.73 | 30 | |
| 1,1-Dichloroethane | 10.4 | | " | 10.0 | | 104 | 82-129 | | 2.94 | 30 | |
| 1,1-Dichloroethylene | 9.39 | | " | 10.0 | | 93.9 | 68-138 | | 4.07 | 30 | |
| 1,2,3-Trichlorobenzene | 7.24 | | " | 10.0 | | 72.4 | 76-136 | Low Bias | 6.27 | 30 | |
| 1,2,3-Trichloropropane | 8.72 | | " | 10.0 | | 87.2 | 77-128 | | 3.86 | 30 | |
| 1,2,4-Trichlorobenzene | 7.33 | | " | 10.0 | | 73.3 | 76-137 | Low Bias | 6.33 | 30 | |
| 1,2,4-Trimethylbenzene | 9.09 | | " | 10.0 | | 90.9 | 82-132 | | 7.42 | 30 | |
| 1,2-Dibromo-3-chloropropane | 8.13 | | " | 10.0 | | 81.3 | 45-147 | | 4.91 | 30 | |
| 1,2-Dibromoethane | 8.93 | | " | 10.0 | | 89.3 | 83-124 | | 2.15 | 30 | |
| 1,2-Dichlorobenzene | 9.18 | | " | 10.0 | | 91.8 | 79-123 | | 4.06 | 30 | |
| 1,2-Dichloroethane | 10.4 | | " | 10.0 | | 104 | 73-132 | | 2.44 | 30 | |
| 1,2-Dichloropropane | 11.5 | | " | 10.0 | | 115 | 78-126 | | 1.29 | 30 | |
| 1,3,5-Trimethylbenzene | 9.20 | | " | 10.0 | | 92.0 | 80-131 | | 9.03 | 30 | |
| 1,3-Dichlorobenzene | 8.69 | | " | 10.0 | | 86.9 | 86-122 | | 5.92 | 30 | |
| 1,3-Dichloropropane | 10.2 | | " | 10.0 | | 102 | 81-125 | | 2.07 | 30 | |
| 1,4-Dichlorobenzene | 8.68 | | " | 10.0 | | 86.8 | 85-124 | | 5.05 | 30 | |
| 1,4-Dioxane | 224 | | " | 210 | | 106 | 10-349 | | 10.2 | 30 | |
| 2-Butanone | 11.1 | | " | 10.0 | | 111 | 49-152 | | 5.96 | 30 | |
| 2-Hexanone | 9.48 | | " | 10.0 | | 94.8 | 51-146 | | 9.97 | 30 | |
| 4-Methyl-2-pentanone | 8.82 | | " | 10.0 | | 88.2 | 57-145 | | 12.3 | 30 | |
| Acetone | 10.9 | | " | 10.0 | | 109 | 14-150 | | 0.183 | 30 | |
| Acrolein | 6.62 | | " | 25.0 | | 26.5 | 10-153 | | 8.18 | 30 | |
| Acrylonitrile | 10.1 | | " | 10.0 | | 101 | 51-150 | | 5.16 | 30 | |
| Benzene | 11.2 | | " | 10.0 | | 112 | 85-126 | | 1.86 | 30 | |
| Bromochloromethane | 11.8 | | " | 10.0 | | 118 | 77-128 | | 0.170 | 30 | |
| Bromodichloromethane | 9.39 | | " | 10.0 | | 93.9 | 79-128 | | 0.534 | 30 | |
| Bromoform | 7.27 | | " | 10.0 | | 72.7 | 78-133 | Low Bias | 5.22 | 30 | |
| Bromomethane | 4.05 | | " | 10.0 | | 40.5 | 43-168 | Low Bias | 25.8 | 30 | |
| Carbon disulfide | 8.10 | | " | 10.0 | | 81.0 | 68-146 | | 5.17 | 30 | |
| Carbon tetrachloride | 9.33 | | " | 10.0 | | 93.3 | 77-141 | | 3.89 | 30 | |
| Chlorobenzene | 10.6 | | " | 10.0 | | 106 | 88-120 | | 3.15 | 30 | |
| Chloroethane | 12.0 | | " | 10.0 | | 120 | 65-136 | | 4.02 | 30 | |
| Chloroform | 10.3 | | " | 10.0 | | 103 | 82-128 | | 1.54 | 30 | |
| Chloromethane | 7.81 | | " | 10.0 | | 78.1 | 43-155 | | 11.7 | 30 | |
| cis-1,2-Dichloroethylene | 10.9 | | " | 10.0 | | 109 | 83-129 | | 1.73 | 30 | |
| cis-1,3-Dichloropropylene | 9.32 | | " | 10.0 | | 93.2 | 80-131 | | 0.961 | 30 | |
| Cyclohexane | 4.89 | | " | 10.0 | | 48.9 | 63-149 | Low Bias | 4.60 | 30 | |
| Dibromochloromethane | 8.49 | | " | 10.0 | | 84.9 | 80-130 | | 2.87 | 30 | |
| Dibromomethane | 9.54 | | " | 10.0 | | 95.4 | 72-134 | | 4.72 | 30 | |
| Dichlorodifluoromethane | 2.71 | | " | 10.0 | | 27.1 | 44-144 | Low Bias | 7.80 | 30 | |
| Ethyl Benzene | 10.9 | | " | 10.0 | | 109 | 80-131 | | 5.08 | 30 | |
| Hexachlorobutadiene | 5.50 | | " | 10.0 | | 55.0 | 67-146 | Low Bias | 3.70 | 30 | |
| Isopropylbenzene | 9.62 | | " | 10.0 | | 96.2 | 76-140 | | 9.03 | 30 | |
| Methyl acetate | 11.1 | | " | 10.0 | | 111 | 51-139 | | 8.08 | 30 | |
| Methyl tert-butyl ether (MTBE) | 9.11 | | " | 10.0 | | 91.1 | 76-135 | | 7.87 | 30 | |
| Methylcyclohexane | 9.63 | | " | 10.0 | | 96.3 | 72-143 | | 6.72 | 30 | |
| Methylene chloride | 11.1 | | " | 10.0 | | 111 | 55-137 | | 1.25 | 30 | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **LCS Dup (BD30333-BSD1)** | | | | | | | | Prepared & Analyzed: 04/10/2023 | | | |
| Naphthalene | 7.97 | | ug/L | 10.0 | | 79.7 | 70-147 | | 10.2 | 30 | |
| n-Butylbenzene | 10.2 | | " | 10.0 | | 102 | 79-132 | | 8.20 | 30 | |
| n-Propylbenzene | 10.2 | | " | 10.0 | | 102 | 78-133 | | 9.23 | 30 | |
| o-Xylene | 10.6 | | " | 10.0 | | 106 | 78-130 | | 3.87 | 30 | |
| p- & m- Xylenes | 22.0 | | " | 20.0 | | 110 | 77-133 | | 4.09 | 30 | |
| p-Diethylbenzene | 9.32 | | " | 10.0 | | 93.2 | 84-134 | | 8.43 | 30 | |
| p-Ethyltoluene | 10.6 | | " | 10.0 | | 106 | 88-129 | | 9.31 | 30 | |
| p-Isopropyltoluene | 9.17 | | " | 10.0 | | 91.7 | 81-136 | | 9.06 | 30 | |
| sec-Butylbenzene | 9.62 | | " | 10.0 | | 96.2 | 79-137 | | 9.13 | 30 | |
| Styrene | 10.6 | | " | 10.0 | | 106 | 67-132 | | 2.51 | 30 | |
| tert-Butyl alcohol (TBA) | 32.6 | | " | 50.0 | | 65.3 | 25-162 | | 14.3 | 30 | |
| tert-Butylbenzene | 7.85 | | " | 10.0 | | 78.5 | 77-138 | | 8.19 | 30 | |
| Tetrachloroethylene | 8.61 | | " | 10.0 | | 86.1 | 82-131 | | 6.52 | 30 | |
| Toluene | 10.3 | | " | 10.0 | | 103 | 80-127 | | 4.66 | 30 | |
| trans-1,2-Dichloroethylene | 10.1 | | " | 10.0 | | 101 | 80-132 | | 4.26 | 30 | |
| trans-1,3-Dichloropropylene | 9.28 | | " | 10.0 | | 92.8 | 78-131 | | 2.18 | 30 | |
| Trichloroethylene | 9.45 | | " | 10.0 | | 94.5 | 82-128 | | 4.25 | 30 | |
| Trichlorofluoromethane | 11.5 | | " | 10.0 | | 115 | 67-139 | | 5.41 | 30 | |
| Vinyl Chloride | 8.88 | | " | 10.0 | | 88.8 | 58-145 | | 10.2 | 30 | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *9.92* | | *"* | *10.0* | | *99.2* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *9.77* | | *"* | *10.0* | | *97.7* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *9.18* | | *"* | *10.0* | | *91.8* | *79-122* | | | | |
| **Matrix Spike (BD30333-MS1)** | *Source sample: 23C1881-02 (MW002) | | | | | | | Prepared & Analyzed: 04/10/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 10.7 | | ug/L | 10.0 | 0.00 | 107 | 45-161 | | | | |
| 1,1,1-Trichloroethane | 11.2 | | " | 10.0 | 0.00 | 112 | 70-146 | | | | |
| 1,1,2,2-Tetrachloroethane | 11.6 | | " | 10.0 | 0.00 | 116 | 74-121 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.5 | | " | 10.0 | 0.00 | 105 | 21-217 | | | | |
| 1,1,2-Trichloroethane | 12.0 | | " | 10.0 | 0.00 | 120 | 59-146 | | | | |
| 1,1-Dichloroethane | 12.3 | | " | 10.0 | 0.00 | 123 | 54-146 | | | | |
| 1,1-Dichloroethylene | 11.2 | | " | 10.0 | 0.00 | 112 | 44-165 | | | | |
| 1,2,3-Trichlorobenzene | 7.13 | | " | 10.0 | 0.00 | 71.3 | 40-161 | | | | |
| 1,2,3-Trichloropropane | 10.7 | | " | 10.0 | 0.00 | 107 | 74-127 | | | | |
| 1,2,4-Trichlorobenzene | 7.33 | | " | 10.0 | 0.00 | 73.3 | 41-161 | | | | |
| 1,2,4-Trimethylbenzene | 9.60 | | " | 10.0 | 0.00 | 96.0 | 72-129 | | | | |
| 1,2-Dibromo-3-chloropropane | 9.28 | | " | 10.0 | 0.00 | 92.8 | 31-151 | | | | |
| 1,2-Dibromoethane | 10.9 | | " | 10.0 | 0.00 | 109 | 75-125 | | | | |
| 1,2-Dichlorobenzene | 9.64 | | " | 10.0 | 0.00 | 96.4 | 63-122 | | | | |
| 1,2-Dichloroethane | 12.5 | | " | 10.0 | 0.00 | 125 | 68-131 | | | | |
| 1,2-Dichloropropane | 13.3 | | " | 10.0 | 0.00 | 133 | 77-121 | High Bias | | | |
| 1,3,5-Trimethylbenzene | 9.93 | | " | 10.0 | 0.00 | 99.3 | 69-126 | | | | |
| 1,3-Dichlorobenzene | 9.20 | | " | 10.0 | 0.00 | 92.0 | 74-119 | | | | |
| 1,3-Dichloropropane | 12.4 | | " | 10.0 | 0.00 | 124 | 77-119 | High Bias | | | |
| 1,4-Dichlorobenzene | 9.20 | | " | 10.0 | 0.00 | 92.0 | 70-124 | | | | |
| 1,4-Dioxane | 284 | | " | 210 | 0.00 | 135 | 10-310 | | | | |
| 2-Butanone | 14.4 | | " | 10.0 | 0.150 | 142 | 10-193 | | | | |
| 2-Hexanone | 12.0 | | " | 10.0 | 0.00 | 120 | 53-133 | | | | |
| 4-Methyl-2-pentanone | 10.8 | | " | 10.0 | 0.00 | 108 | 38-150 | | | | |
| Acetone | 14.2 | | " | 10.0 | 1.15 | 130 | 13-149 | | | | |
| Acrolein | 7.90 | | " | 25.0 | 0.00 | 31.6 | 10-195 | | | | |
| Acrylonitrile | 12.8 | | " | 10.0 | 0.00 | 128 | 37-165 | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **Matrix Spike (BD30333-MS1)** | *Source sample: 23C1881-02 (MW002) | | | | | | | Prepared & Analyzed: 04/10/2023 | | | |
| Benzene | 13.2 | | ug/L | 10.0 | 0.00 | 132 | 38-155 | | | | |
| Bromochloromethane | 14.0 | | " | 10.0 | 0.00 | 140 | 75-121 | High Bias | | | |
| Bromodichloromethane | 10.7 | | " | 10.0 | 0.00 | 107 | 70-129 | | | | |
| Bromoform | 8.99 | | " | 10.0 | 0.00 | 89.9 | 66-136 | | | | |
| Bromomethane | 4.81 | | " | 10.0 | 0.00 | 48.1 | 30-158 | | | | |
| Carbon disulfide | 9.23 | | " | 10.0 | 0.00 | 92.3 | 10-138 | | | | |
| Carbon tetrachloride | 11.3 | | " | 10.0 | 0.00 | 113 | 71-146 | | | | |
| Chlorobenzene | 12.2 | | " | 10.0 | 0.00 | 122 | 81-117 | High Bias | | | |
| Chloroethane | 12.9 | | " | 10.0 | 0.00 | 129 | 51-145 | | | | |
| Chloroform | 12.2 | | " | 10.0 | 0.00 | 122 | 80-124 | | | | |
| Chloromethane | 7.51 | | " | 10.0 | 0.00 | 75.1 | 16-163 | | | | |
| cis-1,2-Dichloroethylene | 13.0 | | " | 10.0 | 0.00 | 130 | 76-125 | High Bias | | | |
| cis-1,3-Dichloropropylene | 10.9 | | " | 10.0 | 0.00 | 109 | 58-131 | | | | |
| Cyclohexane | 5.73 | | " | 10.0 | 0.00 | 57.3 | 70-130 | Low Bias | | | |
| Dibromochloromethane | 9.95 | | " | 10.0 | 0.00 | 99.5 | 71-129 | | | | |
| Dibromomethane | 11.2 | | " | 10.0 | 0.00 | 112 | 76-120 | | | | |
| Dichlorodifluoromethane | 2.82 | | " | 10.0 | 0.00 | 28.2 | 30-147 | Low Bias | | | |
| Ethyl Benzene | 12.6 | | " | 10.0 | 0.00 | 126 | 72-128 | | | | |
| Hexachlorobutadiene | 6.16 | | " | 10.0 | 0.00 | 61.6 | 34-166 | | | | |
| Isopropylbenzene | 10.0 | | " | 10.0 | 0.00 | 100 | 66-139 | | | | |
| Methyl acetate | 13.7 | | " | 10.0 | 0.00 | 137 | 10-200 | | | | |
| Methyl tert-butyl ether (MTBE) | 11.2 | | " | 10.0 | 0.00 | 112 | 75-128 | | | | |
| Methylcyclohexane | 10.9 | | " | 10.0 | 0.00 | 109 | 70-130 | | | | |
| Methylene chloride | 12.7 | | " | 10.0 | 0.00 | 127 | 57-128 | | | | |
| Naphthalene | 9.01 | | " | 10.0 | 0.00 | 90.1 | 39-158 | | | | |
| n-Butylbenzene | 10.8 | | " | 10.0 | 0.00 | 108 | 61-138 | | | | |
| n-Propylbenzene | 11.2 | | " | 10.0 | 0.00 | 112 | 66-134 | | | | |
| o-Xylene | 12.0 | | " | 10.0 | 0.00 | 120 | 69-126 | | | | |
| p- & m- Xylenes | 25.1 | | " | 20.0 | 0.00 | 125 | 67-130 | | | | |
| p-Diethylbenzene | 9.78 | | " | 10.0 | 0.00 | 97.8 | 52-150 | | | | |
| p-Ethyltoluene | 11.5 | | " | 10.0 | 0.00 | 115 | 76-127 | | | | |
| p-Isopropyltoluene | 9.68 | | " | 10.0 | 0.00 | 96.8 | 64-137 | | | | |
| sec-Butylbenzene | 10.2 | | " | 10.0 | 0.00 | 102 | 53-155 | | | | |
| Styrene | 12.0 | | " | 10.0 | 0.00 | 120 | 69-125 | | | | |
| tert-Butyl alcohol (TBA) | 42.4 | | " | 50.0 | 0.00 | 84.7 | 10-130 | | | | |
| tert-Butylbenzene | 8.42 | | " | 10.0 | 0.00 | 84.2 | 65-139 | | | | |
| Tetrachloroethylene | 10.5 | | " | 10.0 | 0.430 | 101 | 64-139 | | | | |
| Toluene | 12.2 | | " | 10.0 | 0.380 | 118 | 76-123 | | | | |
| trans-1,2-Dichloroethylene | 12.1 | | " | 10.0 | 0.00 | 121 | 79-131 | | | | |
| trans-1,3-Dichloropropylene | 11.1 | | " | 10.0 | 0.00 | 111 | 55-130 | | | | |
| Trichloroethylene | 11.1 | | " | 10.0 | 0.00 | 111 | 53-145 | | | | |
| Trichlorofluoromethane | 12.9 | | " | 10.0 | 0.00 | 129 | 61-142 | | | | |
| Vinyl Chloride | 9.57 | | " | 10.0 | 0.00 | 95.7 | 31-165 | | | | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *10.6* | | *"* | *10.0* | | *106* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *9.60* | | *"* | *10.0* | | *96.0* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *8.51* | | *"* | *10.0* | | *85.1* | *79-122* | | | | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **Matrix Spike Dup (BD30333-MSD1)** | *Source sample: 23C1881-02 (MW002) | | | | | | | | Prepared & Analyzed: 04/10/2023 | | |
| 1,1,1,2-Tetrachloroethane | 11.7 | | ug/L | 10.0 | 0.00 | 117 | 45-161 | | 9.01 | 30 | |
| 1,1,1-Trichloroethane | 11.7 | | " | 10.0 | 0.00 | 117 | 70-146 | | 5.16 | 30 | |
| 1,1,2,2-Tetrachloroethane | 12.1 | | " | 10.0 | 0.00 | 121 | 74-121 | | 4.04 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.9 | | " | 10.0 | 0.00 | 109 | 21-217 | | 3.46 | 30 | |
| 1,1,2-Trichloroethane | 12.5 | | " | 10.0 | 0.00 | 125 | 59-146 | | 3.99 | 30 | |
| 1,1-Dichloroethane | 13.1 | | " | 10.0 | 0.00 | 131 | 54-146 | | 5.67 | 30 | |
| 1,1-Dichloroethylene | 11.6 | | " | 10.0 | 0.00 | 116 | 44-165 | | 4.12 | 30 | |
| 1,2,3-Trichlorobenzene | 7.59 | | " | 10.0 | 0.00 | 75.9 | 40-161 | | 6.25 | 30 | |
| 1,2,3-Trichloropropane | 10.5 | | " | 10.0 | 0.00 | 105 | 74-127 | | 2.36 | 30 | |
| 1,2,4-Trichlorobenzene | 7.72 | | " | 10.0 | 0.00 | 77.2 | 41-161 | | 5.18 | 30 | |
| 1,2,4-Trimethylbenzene | 10.1 | | " | 10.0 | 0.00 | 101 | 72-129 | | 5.47 | 30 | |
| 1,2-Dibromo-3-chloropropane | 9.57 | | " | 10.0 | 0.00 | 95.7 | 31-151 | | 3.08 | 30 | |
| 1,2-Dibromoethane | 11.4 | | " | 10.0 | 0.00 | 114 | 75-125 | | 4.48 | 30 | |
| 1,2-Dichlorobenzene | 10.2 | | " | 10.0 | 0.00 | 102 | 63-122 | | 5.55 | 30 | |
| 1,2-Dichloroethane | 13.1 | | " | 10.0 | 0.00 | 131 | 68-131 | | 4.38 | 30 | |
| 1,2-Dichloropropane | 14.4 | | " | 10.0 | 0.00 | 144 | 77-121 | High Bias | 7.81 | 30 | |
| 1,3,5-Trimethylbenzene | 10.4 | | " | 10.0 | 0.00 | 104 | 69-126 | | 5.01 | 30 | |
| 1,3-Dichlorobenzene | 9.73 | | " | 10.0 | 0.00 | 97.3 | 74-119 | | 5.60 | 30 | |
| 1,3-Dichloropropane | 13.1 | | " | 10.0 | 0.00 | 131 | 77-119 | High Bias | 5.81 | 30 | |
| 1,4-Dichlorobenzene | 9.61 | | " | 10.0 | 0.00 | 96.1 | 70-124 | | 4.36 | 30 | |
| 1,4-Dioxane | 331 | | " | 210 | 0.00 | 158 | 10-310 | | 15.3 | 30 | |
| 2-Butanone | 14.4 | | " | 10.0 | 0.150 | 142 | 10-193 | | 0.0697 | 30 | |
| 2-Hexanone | 12.6 | | " | 10.0 | 0.00 | 126 | 53-133 | | 5.12 | 30 | |
| 4-Methyl-2-pentanone | 11.4 | | " | 10.0 | 0.00 | 114 | 38-150 | | 4.68 | 30 | |
| Acetone | 17.8 | | " | 10.0 | 1.15 | 166 | 13-149 | High Bias | 22.3 | 30 | |
| Acrolein | 8.19 | | " | 25.0 | 0.00 | 32.8 | 10-195 | | 3.60 | 30 | |
| Acrylonitrile | 12.8 | | " | 10.0 | 0.00 | 128 | 37-165 | | 0.0779 | 30 | |
| Benzene | 14.2 | | " | 10.0 | 0.00 | 142 | 38-155 | | 6.72 | 30 | |
| Bromochloromethane | 14.7 | | " | 10.0 | 0.00 | 147 | 75-121 | High Bias | 5.16 | 30 | |
| Bromodichloromethane | 11.8 | | " | 10.0 | 0.00 | 118 | 70-129 | | 10.4 | 30 | |
| Bromoform | 9.22 | | " | 10.0 | 0.00 | 92.2 | 66-136 | | 2.53 | 30 | |
| Bromomethane | 4.70 | | " | 10.0 | 0.00 | 47.0 | 30-158 | | 2.31 | 30 | |
| Carbon disulfide | 9.53 | | " | 10.0 | 0.00 | 95.3 | 10-138 | | 3.20 | 30 | |
| Carbon tetrachloride | 12.0 | | " | 10.0 | 0.00 | 120 | 71-146 | | 5.93 | 30 | |
| Chlorobenzene | 13.1 | | " | 10.0 | 0.00 | 131 | 81-117 | High Bias | 7.34 | 30 | |
| Chloroethane | 13.3 | | " | 10.0 | 0.00 | 133 | 51-145 | | 2.90 | 30 | |
| Chloroform | 13.0 | | " | 10.0 | 0.00 | 130 | 80-124 | High Bias | 5.94 | 30 | |
| Chloromethane | 8.27 | | " | 10.0 | 0.00 | 82.7 | 16-163 | | 9.63 | 30 | |
| cis-1,2-Dichloroethylene | 13.8 | | " | 10.0 | 0.00 | 138 | 76-125 | High Bias | 5.97 | 30 | |
| cis-1,3-Dichloropropylene | 11.8 | | " | 10.0 | 0.00 | 118 | 58-131 | | 8.08 | 30 | |
| Cyclohexane | 5.95 | | " | 10.0 | 0.00 | 59.5 | 70-130 | Low Bias | 3.77 | 30 | |
| Dibromochloromethane | 10.7 | | " | 10.0 | 0.00 | 107 | 71-129 | | 7.64 | 30 | |
| Dibromomethane | 12.0 | | " | 10.0 | 0.00 | 120 | 76-120 | | 7.67 | 30 | |
| Dichlorodifluoromethane | 2.92 | | " | 10.0 | 0.00 | 29.2 | 30-147 | Low Bias | 3.48 | 30 | |
| Ethyl Benzene | 13.6 | | " | 10.0 | 0.00 | 136 | 72-128 | High Bias | 7.68 | 30 | |
| Hexachlorobutadiene | 6.22 | | " | 10.0 | 0.00 | 62.2 | 34-166 | | 0.969 | 30 | |
| Isopropylbenzene | 10.7 | | " | 10.0 | 0.00 | 107 | 66-139 | | 6.64 | 30 | |
| Methyl acetate | 13.3 | | " | 10.0 | 0.00 | 133 | 10-200 | | 3.10 | 30 | |
| Methyl tert-butyl ether (MTBE) | 11.8 | | " | 10.0 | 0.00 | 118 | 75-128 | | 5.22 | 30 | |
| Methylcyclohexane | 11.3 | | " | 10.0 | 0.00 | 113 | 70-130 | | 3.61 | 30 | |
| Methylene chloride | 13.5 | | " | 10.0 | 0.00 | 135 | 57-128 | High Bias | 6.34 | 30 | |

## Volatile Organic Compounds by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30333 - EPA 5030B** | | | | | | | | | | | |
| **Matrix Spike Dup (BD30333-MSD1)** | *Source sample: 23C1881-02 (MW002) | | | | | | | | Prepared & Analyzed: 04/10/2023 | | |
| Naphthalene | 8.98 | | ug/L | 10.0 | 0.00 | 89.8 | 39-158 | | 0.334 | 30 | |
| n-Butylbenzene | 11.1 | | " | 10.0 | 0.00 | 111 | 61-138 | | 2.55 | 30 | |
| n-Propylbenzene | 11.5 | | " | 10.0 | 0.00 | 115 | 66-134 | | 2.37 | 30 | |
| o-Xylene | 13.1 | | " | 10.0 | 0.00 | 131 | 69-126 | High Bias | 8.59 | 30 | |
| p- & m- Xylenes | 27.0 | | " | 20.0 | 0.00 | 135 | 67-130 | High Bias | 7.41 | 30 | |
| p-Diethylbenzene | 10.2 | | " | 10.0 | 0.00 | 102 | 52-150 | | 3.91 | 30 | |
| p-Ethyltoluene | 11.8 | | " | 10.0 | 0.00 | 118 | 76-127 | | 2.83 | 30 | |
| p-Isopropyltoluene | 10.0 | | " | 10.0 | 0.00 | 100 | 64-137 | | 3.75 | 30 | |
| sec-Butylbenzene | 10.6 | | " | 10.0 | 0.00 | 106 | 53-155 | | 3.26 | 30 | |
| Styrene | 13.1 | | " | 10.0 | 0.00 | 131 | 69-125 | High Bias | 8.59 | 30 | |
| tert-Butyl alcohol (TBA) | 45.7 | | " | 50.0 | 0.00 | 91.3 | 10-130 | | 7.47 | 30 | |
| tert-Butylbenzene | 8.71 | | " | 10.0 | 0.00 | 87.1 | 65-139 | | 3.39 | 30 | |
| Tetrachloroethylene | 11.3 | | " | 10.0 | 0.430 | 108 | 64-139 | | 7.07 | 30 | |
| Toluene | 13.0 | | " | 10.0 | 0.380 | 126 | 76-123 | High Bias | 6.03 | 30 | |
| trans-1,2-Dichloroethylene | 12.6 | | " | 10.0 | 0.00 | 126 | 79-131 | | 4.13 | 30 | |
| trans-1,3-Dichloropropylene | 11.9 | | " | 10.0 | 0.00 | 119 | 55-130 | | 7.40 | 30 | |
| Trichloroethylene | 11.8 | | " | 10.0 | 0.00 | 118 | 53-145 | | 6.37 | 30 | |
| Trichlorofluoromethane | 13.2 | | " | 10.0 | 0.00 | 132 | 61-142 | | 2.23 | 30 | |
| Vinyl Chloride | 9.86 | | " | 10.0 | 0.00 | 98.6 | 31-165 | | 2.99 | 30 | |
| *Surrogate: SURR: 1,2-Dichloroethane-d4* | *10.3* | | *"* | *10.0* | | *103* | *69-130* | | | | |
| *Surrogate: SURR: Toluene-d8* | *9.64* | | *"* | *10.0* | | *96.4* | *81-117* | | | | |
| *Surrogate: SURR: p-Bromofluorobenzene* | *8.52* | | *"* | *10.0* | | *85.2* | *79-122* | | | | |

## Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|---|---|---|
| 23C1881-01 | MW001 | 40mL Clear Vial (pre-pres.) HCl; Cool to 4° C |
| 23C1881-02 | MW002 | 40mL Clear Vial (pre-pres.) HCl; Cool to 4° C |
| 23C1881-03 | MW003 | 40mL Clear Vial (pre-pres.) HCl; Cool to 4° C |
| 23C1881-04 | DUP001 | 40mL Clear Vial (pre-pres.) HCl; Cool to 4° C |
| 23C1881-05 | EBOU1 | 40mL Clear Vial (pre-pres.) HCl; Cool to 4° C |
| 23C1881-06 | Trip Blank | 40mL Clear Vial (pre-pres.) HCl; Cool to 4° C |

## Sample and Data Qualifiers Relating to This Work Order

| | |
|---|---|
| TEMP | The temperature of the samples received was > 6 degrees C.<br>The actual temperature is listed on the Chain-of-Custody |
| QL-02 | This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature. |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| CCVE | The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit). |

## Definitions and Other Explanations

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

---

# Field Chain-of-Custody Record

YORK ANALYTICAL LABORATORIES INC

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 23C1881

120 Research Drive Stratford, CT 06615 | 132-02 89th Ave Queens, NY 11418 | 56 Church Hill Rd. #2 Newtown, CT 06470 | clientservices@yorklab.com | www.yorklab.com | 800-306-YORK



| YOUR Information | Report To: | Invoice To: | YOUR Project Number | Turn-Around Time |
|---|---|---|---|---|
| Company: Jwtac | Company: SAME | Company: SAME | MHB 1801 | RUSH - Next Day |
| Address: 630 Horsm. Ave. Suite 7, Bohema. | Address: | Address: | YOUR Project Name | RUSH - Two Day |
| Phone.: 631-669-8881. | Phone.: | Phone.: | | RUSH - Three Day |
| Contact: mpecoraro@jwgrosser.com. | Contact: | Contact: | | RUSH - Four Day |
| E-mail: Michael Pecoraro. | E-mail: | E-mail: | YOUR PO#: | RUSH - Five Day |
| | | | | Standard (6-9 Day) ☑ |
| | | | | PFAS Standard is 7-10 Days |

*Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.*

Andrea Pullano

**Samples Collected by:** (print AND sign your name)

| Matrix Codes | Samples From | Report / EDD Type (circle selections) | | | YORK Reg. Comp. |
|---|---|---|---|---|---|
| S - soil / solid | New York ☒ | Summary Report | CT RCP | EQuIS (Standard) | Compared to the following Regulation(s): (please fill in) |
| GW - groundwater | New Jersey | QA Report | CT RCP DQA/DUE | NYSDEC EQuIS | |
| DW - drinking water | Connecticut | CMDP | NJDEP Reduced Deliverables | NJDKQP | |
| WW - wastewater | Pennsylvania | Standard Excel EDD | | NJDEP SRP HazSite | |
| O - Oil \| Other | Other: | NY ASP B Package | Other: | | |

| Sample Identification | Sample Matrix | Date/Time Sampled | Analyses Requested | Container Type | No. |
|---|---|---|---|---|---|
| MW001 | GW. | 03/31/23 1040. | TCL. VOCs | 40 mL vials | 3 |
| MW002. MS/MSD | | 1210 | | | |
| MW003 | | 1320 | | | |
| DUP001 | | — | | | |
| EB001 | | 1410 | | | |
| Trip blank | | | | | |

**Comments:**

**Preservation:** (check all that apply)
HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other: ___

**Special Instruction**
Field Filtered ☐
Lab to Filter ☐

Samples iced/chilled at time of lab pickup? circle Yes or No

| 1. Samples Relinquished by / Company | Date/Time | 1. Samples Received by / Company | Date/Time | 2. Samples Relinquished by / Company | Date/Time |
|---|---|---|---|---|---|
| Andrea Pullano | 3/31/23 1655 | Tom A / Yuk | 3/31/23 1655 | Tom A / Yuk | 3/31/23 |
| 2. Samples Received by / Company | Date/Time | 3. Samples Relinquished by / Company | Date/Time | 3. Samples Received by / Company | Date/Time |
| | | | | | |
| 4. Samples Relinquished by / Company | Date/Time | 4. Samples Received by / Company | Date/Time | Samples Received in LAB by | Date/Time / Temperature |
| | | | | B Cuely | 4/3/23 900 / 6.1 Degrees C |

# Technical Report

prepared for:

**P.W. Grosser Consulting**
630 Johnson Avenue, Suite 7
Bohemia NY, 11716
**Attention: Michael Pecoraro**

Report Date: 04/13/2023
**Client Project ID: MHB1801**
York Project (SDG) No.: 23C1883

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 04/13/2023
Client Project ID: MHB1801
York Project (SDG) No.: 23C1883

**P.W. Grosser Consulting**
630 Johnson Avenue, Suite 7
Bohemia NY, 11716
Attention: Michael Pecoraro

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on March 31, 2023 and listed below. The project was identified as your project: **MHB1801**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 23C1883-01 | SS-01 | Soil Vapor | 03/31/2023 | 03/31/2023 |

## General Notes for York Project (SDG) No.: 23C1883

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

**Date:** 04/13/2023

Cassie L. Mosher
Laboratory Manager

## Sample Information

**Client Sample ID:** SS-01 **York Sample ID:** 23C1883-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1883 | MHB1801 | Soil Vapor | March 31, 2023 8:00 am | 03/31/2023 |

### VOA, TO15 MASTER

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | * 1,1,1,2-Tetrachloroethane | ND | | ug/m³ | 11.5 | 16.7 | EPA TO-15 Certifications: | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/m³ | 9.11 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/m³ | 11.5 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/m³ | 12.8 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/m³ | 9.11 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/m³ | 6.76 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/m³ | 3.31 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | TO-CCV, TO-LCS-L | ug/m³ | 12.4 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **9.03** | | ug/m³ | 8.21 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/m³ | 12.8 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/m³ | 10.0 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/m³ | 6.76 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/m³ | 7.72 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | ND | | ug/m³ | 11.7 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/m³ | 8.21 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 106-99-0 | 1,3-Butadiene | ND | | ug/m³ | 11.1 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/m³ | 10.0 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 142-28-9 | * 1,3-Dichloropropane | ND | | ug/m³ | 7.72 | 16.7 | EPA TO-15 Certifications: | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/m³ | 10.0 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| 123-91-1 | 1,4-Dioxane | ND | | ug/m³ | 12.0 | 16.7 | EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |

## Sample Information

**Client Sample ID:** SS-01 **York Sample ID:** 23C1883-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1883 | MHB1801 | Soil Vapor | March 31, 2023 8:00 am | 03/31/2023 |

### VOA, TO15 MASTER

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 78-93-3 | **2-Butanone** | **11.8** | | ug/m³ | 4.93 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 591-78-6 | * 2-Hexanone | ND | TO-CCV, TO-LCS-L | ug/m³ | 13.7 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | | | |
| 107-05-1 | 3-Chloropropene | ND | | ug/m³ | 26.1 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/m³ | 6.84 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 67-64-1 | **Acetone** | **1040** | | ug/m³ | 7.93 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 107-13-1 | Acrylonitrile | ND | | ug/m³ | 3.62 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 71-43-2 | **Benzene** | **5.34** | | ug/m³ | 5.34 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 100-44-7 | Benzyl chloride | ND | TO-CCV, TO-LCS-L | ug/m³ | 8.65 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/m³ | 11.2 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-25-2 | Bromoform | ND | | ug/m³ | 17.3 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 74-83-9 | Bromomethane | ND | TO-CCV, TO-LCS-L | ug/m³ | 6.48 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-15-0 | Carbon disulfide | ND | | ug/m³ | 5.20 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/m³ | 2.63 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 108-90-7 | Chlorobenzene | ND | | ug/m³ | 7.69 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 75-00-3 | Chloroethane | ND | | ug/m³ | 4.41 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 67-66-3 | Chloroform | ND | | ug/m³ | 8.15 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 74-87-3 | Chloromethane | ND | | ug/m³ | 3.45 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/m³ | 3.31 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/m³ | 7.58 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: NELAC-NY12058,NJDEP-Queens | | | |

## Sample Information

**Client Sample ID:** **SS-01** **York Sample ID:** **23C1883-01**

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1883 | MHB1801 | Soil Vapor | March 31, 2023 8:00 am | 03/31/2023 |

**VOA, TO15 MASTER**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 110-82-7 | **Cyclohexane** | **19.5** | | ug/m³ | 5.75 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/m³ | 14.2 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/m³ | 8.26 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 141-78-6 | * Ethyl acetate | ND | | ug/m³ | 12.0 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | | | |
| 100-41-4 | **Ethyl Benzene** | **10.2** | | ug/m³ | 7.25 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 87-68-3 | Hexachlorobutadiene | ND | CAL-E, TO-CCV, TO-LCS-L | ug/m³ | 17.8 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 67-63-0 | **Isopropanol** | **41.9** | B | ug/m³ | 16.4 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 80-62-6 | Methyl Methacrylate | ND | | ug/m³ | 6.84 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/m³ | 6.02 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-09-2 | **Methylene chloride** | **14.5** | | ug/m³ | 11.6 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 142-82-5 | **n-Heptane** | **7.53** | | ug/m³ | 6.84 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 110-54-3 | **n-Hexane** | **33.6** | | ug/m³ | 5.89 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 95-47-6 | **o-Xylene** | **10.9** | | ug/m³ | 7.25 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 179601-23-1 | **p- & m- Xylenes** | **21.8** | | ug/m³ | 14.5 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 622-96-8 | *** p-Ethyltoluene** | **8.21** | | ug/m³ | 8.21 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | | | |
| 115-07-1 | * Propylene | ND | | ug/m³ | 2.87 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | | | |
| 100-42-5 | Styrene | ND | | ug/m³ | 7.11 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 127-18-4 | **Tetrachloroethylene** | **2620** | | ug/m³ | 11.3 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 109-99-9 | * Tetrahydrofuran | ND | | ug/m³ | 9.85 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | | | |
| 108-88-3 | **Toluene** | **51.6** | | ug/m³ | 6.29 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

## Sample Information

**Client Sample ID:** SS-01 **York Sample ID:** 23C1883-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 23C1883 | MHB1801 | Soil Vapor | March 31, 2023 8:00 am | 03/31/2023 |

### VOA, TO15 MASTER

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/m³ | 6.62 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/m³ | 7.58 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 79-01-6 | Trichloroethylene | ND | | ug/m³ | 2.24 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | ND | | ug/m³ | 9.38 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 108-05-4 | Vinyl acetate | ND | | ug/m³ | 5.88 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 593-60-2 | Vinyl bromide | ND | | ug/m³ | 7.30 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/m³ | 2.13 | 16.7 | EPA TO-15 | 04/09/2023 12:00 | 04/12/2023 18:41 | VH |
| | | | | | | | Certifications: | NELAC-NY12058,NJDEP-Queens | | |

# Analytical Batch Summary

**Batch ID:** BD30889 **Preparation Method:** EPA TO15 PREP **Prepared By:** YR

| YORK Sample ID | Client Sample ID | Preparation Date |
|---|---|---|
| 23C1883-01 | SS-01 | 04/09/23 |
| BD30889-BLK1 | Blank | 04/09/23 |
| BD30889-BS1 | LCS | 04/09/23 |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30889 - EPA TO15 PREP** | | | | | | | | | | | |
| **Blank (BD30889-BLK1)** | | | | | | | | | | | Prepared: 04/09/2023 Analyzed: 04/12/2023 |
| 1,1,1,2-Tetrachloroethane | ND | 0.687 | ug/m³ | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.546 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.687 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 0.766 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.546 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.405 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 0.198 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.742 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.492 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.768 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.405 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.462 | " | | | | | | | | |
| 1,2-Dichlorotetrafluoroethane | ND | 0.699 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.492 | " | | | | | | | | |
| 1,3-Butadiene | ND | 0.664 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,3-Dichloropropane | ND | 0.462 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.601 | " | | | | | | | | |
| 1,4-Dioxane | ND | 0.721 | " | | | | | | | | |
| 2-Butanone | ND | 0.295 | " | | | | | | | | |
| 2-Hexanone | ND | 0.819 | " | | | | | | | | |
| 3-Chloropropene | ND | 1.57 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 0.410 | " | | | | | | | | |
| Acetone | ND | 0.475 | " | | | | | | | | |
| Acrylonitrile | ND | 0.217 | " | | | | | | | | |
| Benzene | ND | 0.319 | " | | | | | | | | |
| Benzyl chloride | ND | 0.518 | " | | | | | | | | |
| Bromodichloromethane | ND | 0.670 | " | | | | | | | | |
| Bromoform | ND | 1.03 | " | | | | | | | | |
| Bromomethane | ND | 0.388 | " | | | | | | | | |
| Carbon disulfide | ND | 0.311 | " | | | | | | | | |
| Carbon tetrachloride | ND | 0.157 | " | | | | | | | | |
| Chlorobenzene | ND | 0.460 | " | | | | | | | | |
| Chloroethane | ND | 0.264 | " | | | | | | | | |
| Chloroform | ND | 0.488 | " | | | | | | | | |
| Chloromethane | ND | 0.207 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.198 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.454 | " | | | | | | | | |
| Cyclohexane | ND | 0.344 | " | | | | | | | | |
| Dibromochloromethane | ND | 0.852 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.495 | " | | | | | | | | |
| Ethyl acetate | ND | 0.721 | " | | | | | | | | |
| Ethyl Benzene | ND | 0.434 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 1.07 | " | | | | | | | | |
| Isopropanol | 0.811 | 0.492 | " | | | | | | | | |
| Methyl Methacrylate | ND | 0.409 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.361 | " | | | | | | | | |
| Methylene chloride | ND | 0.695 | " | | | | | | | | |
| n-Heptane | ND | 0.410 | " | | | | | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30889 - EPA TO15 PREP** | | | | | | | | | | | |
| **Blank (BD30889-BLK1)** | | | | | | | | Prepared: 04/09/2023 Analyzed: 04/12/2023 | | | |
| n-Hexane | ND | 0.352 | ug/m³ | | | | | | | | |
| o-Xylene | ND | 0.434 | " | | | | | | | | |
| p- & m- Xylenes | ND | 0.868 | " | | | | | | | | |
| p-Ethyltoluene | ND | 0.492 | " | | | | | | | | |
| Propylene | ND | 0.172 | " | | | | | | | | |
| Styrene | ND | 0.426 | " | | | | | | | | |
| Tetrachloroethylene | ND | 0.678 | " | | | | | | | | |
| Tetrahydrofuran | ND | 0.590 | " | | | | | | | | |
| Toluene | ND | 0.377 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.396 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.454 | " | | | | | | | | |
| Trichloroethylene | ND | 0.134 | " | | | | | | | | |
| Trichlorofluoromethane (Freon 11) | ND | 0.562 | " | | | | | | | | |
| Vinyl acetate | ND | 0.352 | " | | | | | | | | |
| Vinyl bromide | ND | 0.437 | " | | | | | | | | |
| Vinyl Chloride | ND | 0.128 | " | | | | | | | | |
| **LCS (BD30889-BS1)** | | | | | | | | Prepared: 04/09/2023 Analyzed: 04/12/2023 | | | |
| 1,1,1,2-Tetrachloroethane | 10.1 | | ppbv | 10.0 | | 101 | 70-130 | | | | |
| 1,1,1-Trichloroethane | 11.3 | | " | 10.0 | | 113 | 70-130 | | | | |
| 1,1,2,2-Tetrachloroethane | 11.4 | | " | 10.0 | | 114 | 70-130 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.5 | | " | 10.0 | | 105 | 70-130 | | | | |
| 1,1,2-Trichloroethane | 8.21 | | " | 10.0 | | 82.1 | 70-130 | | | | |
| 1,1-Dichloroethane | 10.6 | | " | 10.0 | | 106 | 70-130 | | | | |
| 1,1-Dichloroethylene | 11.8 | | " | 10.0 | | 118 | 70-130 | | | | |
| 1,2,4-Trichlorobenzene | 1.32 | | " | 10.0 | | 13.2 | 70-130 | Low Bias | | | |
| 1,2,4-Trimethylbenzene | 8.58 | | " | 10.0 | | 85.8 | 70-130 | | | | |
| 1,2-Dibromoethane | 8.76 | | " | 10.0 | | 87.6 | 70-130 | | | | |
| 1,2-Dichlorobenzene | 7.61 | | " | 10.0 | | 76.1 | 70-130 | | | | |
| 1,2-Dichloroethane | 11.5 | | " | 10.0 | | 115 | 70-130 | | | | |
| 1,2-Dichloropropane | 8.84 | | " | 10.0 | | 88.4 | 70-130 | | | | |
| 1,2-Dichlorotetrafluoroethane | 9.31 | | " | 10.0 | | 93.1 | 70-130 | | | | |
| 1,3,5-Trimethylbenzene | 8.79 | | " | 10.0 | | 87.9 | 70-130 | | | | |
| 1,3-Butadiene | 9.93 | | " | 10.0 | | 99.3 | 70-130 | | | | |
| 1,3-Dichlorobenzene | 8.02 | | " | 10.0 | | 80.2 | 70-130 | | | | |
| 1,3-Dichloropropane | 9.28 | | " | 10.0 | | 92.8 | 70-130 | | | | |
| 1,4-Dichlorobenzene | 7.66 | | " | 10.0 | | 76.6 | 70-130 | | | | |
| 1,4-Dioxane | 8.97 | | " | 10.0 | | 89.7 | 70-130 | | | | |
| 2-Butanone | 10.3 | | " | 10.0 | | 103 | 70-130 | | | | |
| 2-Hexanone | 3.99 | | " | 10.0 | | 39.9 | 70-130 | Low Bias | | | |
| 3-Chloropropene | 12.3 | | " | 10.0 | | 123 | 70-130 | | | | |
| 4-Methyl-2-pentanone | 8.00 | | " | 10.0 | | 80.0 | 70-130 | | | | |
| Acetone | 8.72 | | " | 10.0 | | 87.2 | 70-130 | | | | |
| Acrylonitrile | 11.7 | | " | 10.0 | | 117 | 70-130 | | | | |
| Benzene | 7.89 | | " | 10.0 | | 78.9 | 70-130 | | | | |
| Benzyl chloride | 6.60 | | " | 10.0 | | 66.0 | 70-130 | Low Bias | | | |
| Bromodichloromethane | 9.38 | | " | 10.0 | | 93.8 | 70-130 | | | | |
| Bromoform | 9.24 | | " | 10.0 | | 92.4 | 70-130 | | | | |
| Bromomethane | 6.37 | | " | 10.0 | | 63.7 | 70-130 | Low Bias | | | |
| Carbon disulfide | 10.5 | | " | 10.0 | | 105 | 70-130 | | | | |
| Carbon tetrachloride | 10.1 | | " | 10.0 | | 101 | 70-130 | | | | |

## Volatile Organic Compounds in Air by GC/MS - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BD30889 - EPA TO15 PREP** | | | | | | | | | | | |
| **LCS (BD30889-BS1)** | | | | | | | | Prepared: 04/09/2023 Analyzed: 04/12/2023 | | | |
| Chlorobenzene | 10.7 | | ppbv | 10.0 | | 107 | 70-130 | | | | |
| Chloroethane | 11.2 | | " | 10.0 | | 112 | 70-130 | | | | |
| Chloroform | 10.9 | | " | 10.0 | | 109 | 70-130 | | | | |
| Chloromethane | 12.1 | | " | 10.0 | | 121 | 70-130 | | | | |
| cis-1,2-Dichloroethylene | 12.0 | | " | 10.0 | | 120 | 70-130 | | | | |
| cis-1,3-Dichloropropylene | 9.98 | | " | 10.0 | | 99.8 | 70-130 | | | | |
| Cyclohexane | 10.1 | | " | 10.0 | | 101 | 70-130 | | | | |
| Dibromochloromethane | 8.98 | | " | 10.0 | | 89.8 | 70-130 | | | | |
| Dichlorodifluoromethane | 9.91 | | " | 10.0 | | 99.1 | 70-130 | | | | |
| Ethyl acetate | 10.6 | | " | 10.0 | | 106 | 70-130 | | | | |
| Ethyl Benzene | 11.5 | | " | 10.0 | | 115 | 70-130 | | | | |
| Hexachlorobutadiene | 3.66 | | " | 10.0 | | 36.6 | 70-130 | Low Bias | | | |
| Isopropanol | 9.70 | | " | 10.0 | | 97.0 | 70-130 | | | | |
| Methyl Methacrylate | 8.33 | | " | 10.0 | | 83.3 | 70-130 | | | | |
| Methyl tert-butyl ether (MTBE) | 11.8 | | " | 10.0 | | 118 | 70-130 | | | | |
| Methylene chloride | 10.2 | | " | 10.0 | | 102 | 70-130 | | | | |
| n-Heptane | 7.86 | | " | 10.0 | | 78.6 | 70-130 | | | | |
| n-Hexane | 9.79 | | " | 10.0 | | 97.9 | 70-130 | | | | |
| o-Xylene | 8.48 | | " | 10.0 | | 84.8 | 70-130 | | | | |
| p- & m- Xylenes | 15.3 | | " | 20.0 | | 76.4 | 70-130 | | | | |
| p-Ethyltoluene | 8.40 | | " | 10.0 | | 84.0 | 70-130 | | | | |
| Propylene | 11.4 | | " | 10.0 | | 114 | 70-130 | | | | |
| Styrene | 7.76 | | " | 10.0 | | 77.6 | 70-130 | | | | |
| Tetrachloroethylene | 9.25 | | " | 10.0 | | 92.5 | 70-130 | | | | |
| Tetrahydrofuran | 11.7 | | " | 10.0 | | 117 | 70-130 | | | | |
| Toluene | 8.56 | | " | 10.0 | | 85.6 | 70-130 | | | | |
| trans-1,2-Dichloroethylene | 11.6 | | " | 10.0 | | 116 | 70-130 | | | | |
| trans-1,3-Dichloropropylene | 9.64 | | " | 10.0 | | 96.4 | 70-130 | | | | |
| Trichloroethylene | 9.88 | | " | 10.0 | | 98.8 | 70-130 | | | | |
| Trichlorofluoromethane (Freon 11) | 10.5 | | " | 10.0 | | 105 | 70-130 | | | | |
| Vinyl acetate | 8.57 | | " | 10.0 | | 85.7 | 70-130 | | | | |
| Vinyl bromide | 11.5 | | " | 10.0 | | 115 | 70-130 | | | | |
| Vinyl Chloride | 7.73 | | " | 10.0 | | 77.3 | 70-130 | | | | |

## Sample and Data Qualifiers Relating to This Work Order

| | |
|---|---|
| TO-LCS-L | The result reported for this compound may be biased low due to its behavior in the analysis batch LCS where it recovered less 70% of the expected value. |
| TO-CCV | The value reported is ESTIMATED for this compound due to its behavior during continuing calibration verification (>30% Difference from initial calibration). |
| CAL-E | The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%) |
| B | Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. |

## Definitions and Other Explanations

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

---

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615 | 132-02 89th Ave Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

# Field Chain-of-Custody Record - AIR

**NOTE:** YORK's Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.: 23C1883



| YOUR Information | Report To: | Invoice To: |
|---|---|---|
| Company: PWGC | Company: | Company: |
| Address: 630 Johnson Ave Suite 7, Bohemia | Address: SAME | Address: SAME |
| Phone.: 631-664-2881 | Phone.: | Phone.: |
| Contact: Michael Pecoraro | Contact: | Contact: |
| E-mail: mpecoraro@pwgc.com | E-mail: | E-mail: |

**YOUR Project Number:** MHB1801

**YOUR Project Name:**

**YOUR PO#:**

**Turn-Around Time**

| | |
|---|---|
| RUSH - Next Day | |
| RUSH - Two Day | |
| RUSH - Three Day | |
| RUSH - Four Day | |
| Standard (5-7 Day) | X |

*Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.*

Samples Collected by: (print your name above and sign below) Andrew Balkus

**Air Matrix Codes**

AI - Indoor Ambient Air
AO - Outdoor Amb. Air
AE - Vapor Extraction Well/ Process Gas/Effluent
AS - Soil Vapor/Sub-Slab

**Samples From**

| | |
|---|---|
| New York | X |
| New Jersey | |
| Connecticut | |
| Pennsylvania | |
| Other | |

**Report / EDD Type** (circle selections)

| | | |
|---|---|---|
| Summary Report | CT RCP | Standard Excel EDD |
| QA Report | CT RCP DQA/DUE | EQuIS (Standard) |
| NY ASP A Package | NJDEP Reduced Deliv. | NYSDEC EQuIS |
| NY ASP B Package | NJDKQP | NJDEP SRP HazSite |
| Other: | | |

**YORK Reg. Comp.**

Compared to the following Regulation(s): (please fill in)

**Certified Canisters:** Batch ___ Individual ___

**Please enter the following REQUIRED Field Data**

**Reporting Units:** ug/m³ X ppbv ___ ppmv ___

| Sample Identification | Date/Time Sampled | Air Matrix | Canister Vacuum Before Sampling (in Hg) | Canister Vacuum After Sampling (in Hg) | Canister ID | Flow Cont. ID | Analysis Requested |
|---|---|---|---|---|---|---|---|
| SS-01 | 3/31/23 08:00 | AS | -30. | -5.1. | 16691 | 17984. | TCL VOCs. |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Comments:**

**Detection Limits Required**

≤ 1 ug/m³ ___ NYSDEC V1 Limits ___
Routine Survey ___ Other ___

**Sampling Media**

| | |
|---|---|
| 6 Liter Canister | X |
| Tedlar Bag | |

| Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time | Samples Relinquished by / Company | Date/Time |
|---|---|---|---|---|---|
| Andrew Balkus / PWGC | 3/31/23 1655 | Tom A / York | 3/31/23 1655 | Tom A / York | 3/31/23 |
| Samples Received by / Company | Date/Time | Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time |
| | | | | | |
| Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time | Samples Received in LAB by | Date/Time |
| | | | | [illegible] YORK | 03/31/23 1733 |

# APPENDIX G

# Soil Vapor/Indoor Air Matrix A

May 2017

**Analytes Assigned:**
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

| | **INDOOR AIR CONCENTRATION of COMPOUND (mcg/m$^3$)** | | |
|---|---|---|---|
| **SUB-SLAB VAPOR 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

| | **INDOOR AIR CONCENTRATION of COMPOUND (mcg/m$^3$)** | | |
|---|---|---|---|
| **SUB-SLAB VAPOR 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

| | **INDOOR AIR CONCENTRATION of COMPOUND (mcg/m$^3$)** | |
|---|---|---|
| **SUB-SLAB VAPOR 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.