

**CINDERELLA 248 LLC SITE
BROOKLYN, NEW YORK**

**PERIODIC REVIEW REPORT
MARCH 27, 2019 THROUGH MARCH 27, 2020**

NYSDEC BCP Number: C224160

Prepared for:

CINDERELLA 248, LLC

For Submittal to:

**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

Prepared by:



**640 JOHNSON AVENUE, SUITE 101
BOHEMIA, NEW YORK 11716**

JUNE 2020

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LIST OF ACRONYMS

Acronym	Definition
AGC	Annual Guidance Concentration
AS	Air sparging
ASP	Analytical Services Protocol
CLP	Contract Laboratory Protocol
DUSR	Data Usability Summary Report
ECs	Engineering Controls
FPM	FPM Group, Ltd.
HASP	Health and Safety Plan
ICs	Institutional Controls
MS/MSD	Matrix spike/matrix spike duplicate
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	Operation, Monitoring and Maintenance
QA/QC	Quality Assurance/Quality Control
scfm	standard cubic feet per minute
SGC	Short-Term Guidance Concentration
Standards	NYSDEC Class GA Ambient Water Quality Standards
SVE	Soil vapor extraction
ug/l	micrograms per liter
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program
VOC	Volatile organic compound

EXECUTIVE SUMMARY

The findings in this Periodic Review Report (PRR) for the Cinderella 248 LLC Site (C224160), located in Brooklyn, New York, are summarized as follows:

- The EC (SSDS) remained in place and operational during the reporting period. Quarterly monitoring of the SSDS System was conducted during the reporting period in accordance with the SMP. Effluent emissions were in compliance and did not require treatment.
- An IC (environmental easement) is in place and includes restrictions on property and groundwater use and requirements for operating, monitoring, and maintaining the ECs. The provisions of the IC were adhered to during the reporting period.

➤ Effectiveness of Remedial Program

- The remedial program has been effective at providing mitigation as demonstrated by the effluent testing which indicates that PCE is being removed from soil vapor and from the SVI sampling results which indicate that low indoor air PCE concentrations are below PCE's outdoor ambient air concentration and air guidance value (AGV).

➤ Recommendations

- The SSDS should remain in operation to provide mitigation for the Site and adjoining properties. Termination of mitigation should be considered during the next reporting period if the criteria for completion of remediation is achieved.
- The air monitoring frequency should be reduced from annual to every other year as the system has demonstrated its effectiveness at preventing SVI. SVI Monitoring would be performed during the reporting period should the termination of mitigation be considered in accordance with the SMP.

SECTION 1.0 INTRODUCTION AND SITE OVERVIEW

1.1 Introduction

This Periodic Review Report (PRR) was prepared by FPM Group (FPM) to document site management activities at the Cinderella 248 Site (Site) conducted between March 27, 2019 and March 27, 2020 under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC). These activities were conducted in accordance with a Site Management Plan (SMP) for the Site. Copies of the NYSDEC correspondence received during the reporting period are included in Appendix A. The resumes of the FPM environmental professionals implementing the SMP on behalf of the Owner are included in Appendix B.

The Site has an EC consisting of a sub-slab depressurization system (SSDS) which was installed in accordance with a NYSDEC approved Remedial Design Work Plan to prevent soil vapor intrusion (SVI) at the Site and select nearby properties and prevent further migration of sub-slab soil vapors. The remedial activities were documented in the October 2017 Final Engineering Report, which the NYSDEC approved on November 27, 2017. SVI sampling was performed in December 2019 in accordance with the SMP to demonstrate continued effectiveness of the SSDS. Ongoing activities are conducted by FPM on behalf of the owner in accordance with the Site Management Plan (SMP).

1.2 Site Overview

Detailed Site background information was provided in the SMP. Information pertinent to implementation of the SMP during the current reporting period is summarized herein.

The site is located in Brooklyn, Kings County, New York and is identified as Block 936 and Lot 12 on the Kings County Tax Map. The site is an approximately 0.057-acre area and is bounded by 244 Flatbush Avenue to the north, 250 Flatbush Avenue to the south, Flatbush Avenue to the east, and 77 Prospect Place to the west (see Figure 1.2.1 – Site and Vicinity Plan).

The Site was formerly operated as a dry-cleaner from at least 1985 to 2005. During operations tetrachloroethylene (PCE), a common dry-cleaning solvent, was utilized onsite. Investigations identified VOC impacts (primarily PCE) to soil, groundwater, soil vapor and indoor air. Soils impacted with PCE were excavated and removed from the Site prior to the Site entering the BCP. Groundwater impacts were identified at low levels during prior investigations and did not require remediation or further investigation. Soil vapor and indoor air impacted by PCE was identified at levels for which mitigation was necessary at the Site and at other buildings in close proximity to the Site.

A SSDS system for the Site was installed between November 2015 and August 2016 to provide mitigation in accordance with the NYSDEC-approved Remedial Design Work Plan for the Site dated July 2015. SVI sampling results are documented in Section 3 of the report. As discussed in Section 3, the results indicate that the SSDS is effective. Figure 1.2.2 depicts the mitigation system layout.



FPM GROUP

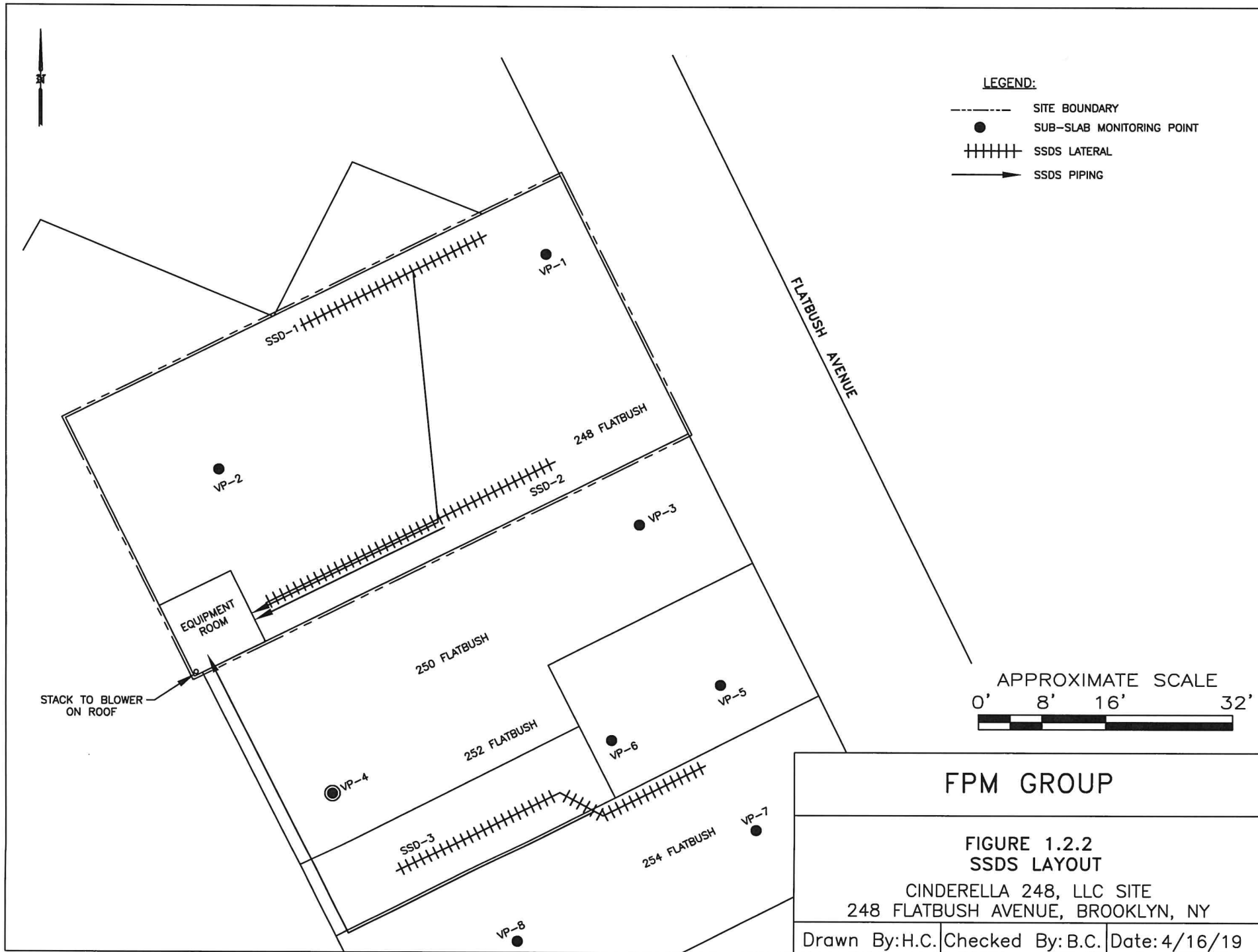
FIGURE 1.2.1

SITE AND VICINITY PLAN
CINDERELLA 248 LLC SITE
248 FLATBUSH AVENUE
BROOKLYN, NEW YORK

Drawn by: BC

Checked By: BC

Date: 4/12/19



1.3 Evaluation of Remedy Performance, Effectiveness, and Protectiveness

The remedy has been implemented in compliance with the submitted and approved work plans and associated correspondence and was managed during this reporting period in compliance with the SMP approved by the NYSDEC. During the reporting period, the remedy performed effectively to prevent SVI at the Site and at properties in its nearby proximity.

SECTION 2.0

ENGINEERING AND INSTITUTIONAL CONTROLS COMPLIANCE

Contamination identified at the Site includes groundwater and soil vapor impacted with chlorinated solvent compounds, primarily PCE, in excess of Standards. Groundwater impacts identified at the Site included low levels of VOCs and did not require additional monitoring or remediation. The Engineering Control (EC) includes a SSDS system to provide mitigation of soil vapor and prevent SVI at the Site and select offsite properties. The SSDS has remained in operation during this reporting period in accordance with SMP. The EC implemented at the Site is described in more detail below.

At present, the SMP and related NYSDEC-approved documents serve as an IC as they are used to implement, maintain, and monitor the EC. Additional ICs are outlined in the IC/EC Certification Form and include a groundwater use restriction and land use restriction.

2.1 Engineering Control Component

The Site EC consisting of a sub-slab depressurization system (SSDS) was installed and has been in continuous operation from August 2016 to present to provide mitigation to the Site and select properties in the site's proximity. The layout consists of three sub-slab depressurization laterals, as shown on previously-presented Figure 1.2.2. Emissions from the SSDS are directed to a stack that discharges above the roof of the Site.

Monitoring of the EC was performed during the reporting period in accordance with the approved SMP; the results are documented in Section 3 of this report.

2.2 Institutional Control Component

The Site remedy required that an IC in the form of an environmental easement be placed on the property to (1) implement, maintain and monitor the ECs; (2) prevent future exposure to the remaining contamination by controlling disturbances of the subsurface contamination; and (3) limit the use and development of the property to restricted residential, commercial and industrial uses only. Adherence to these restrictions on the property is required by the environmental easement and is implemented under the SMP. The environmental easement for the property was executed by the property owner, Cinderella 248 LLC and is on file with the Kings County Clerk.

The IC for this Site includes the following requirements and restrictions:

- Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allows the use and development of the controlled property for residential use, which allows for restricted-residential use, commercial use and industrial use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and

- Requires compliance with the Department approved Site Management Plan.

These requirements and restrictions are more fully described in the SMP and were complied with during the reporting period. The observed Site use during the reporting period (commercial) is consistent with the allowed uses. The Site is presently utilized as a gym. No disturbances or excavations of the Site occurred during the reporting period. Municipal water supply is provided in the Site vicinity and the Site groundwater is not used.

2.3 EC/IC Certification

The EC/IC Certification Form provided by the NYSDEC has been completed in accordance with the associated general certification instructions. The completed certification form is included in Appendix C.

SECTION 3.0

MONITORING PLAN COMPLIANCE

The monitoring plan for the Site includes measures for evaluating the performance and effectiveness of the EC in mitigating soil vapor at the Site and select nearby properties. Monitoring of the EC was performed during the reporting period by monitoring the SSDS system and SVI sampling was conducted to evaluate the effectiveness of the EC.

3.1 SSDS Monitoring

Monitoring of the SSDS system was performed quarterly during the reporting period, as discussed below. The monitoring included procedures to confirm and ensure system operation and to monitor effluent concentrations. Effluent monitoring was performed with a calibrated photoionization detector (PID) and periodically by obtaining effluent samples for laboratory analysis to evaluate the soil vapor conditions.

3.1.1 Summary of Monitoring Program

All monitoring activities were in general accordance with the SMP and were recorded on the System Operating Log. A copy of the System Operating Log is included in Appendix D.

System operation monitoring was performed on a quarterly basis during the reporting period from March 27, 2019 through March 27, 2020. Monitoring of the system in the first quarter of 2019 was delayed and is anticipated to be conducted early in the second quarter of 2020 due to access limitations caused by the COVID-19 pandemic. System operation monitoring included recording vacuums and flowrate to confirm system operation parameters and vacuum measurements at monitoring points to confirm depressurization of the building slabs.

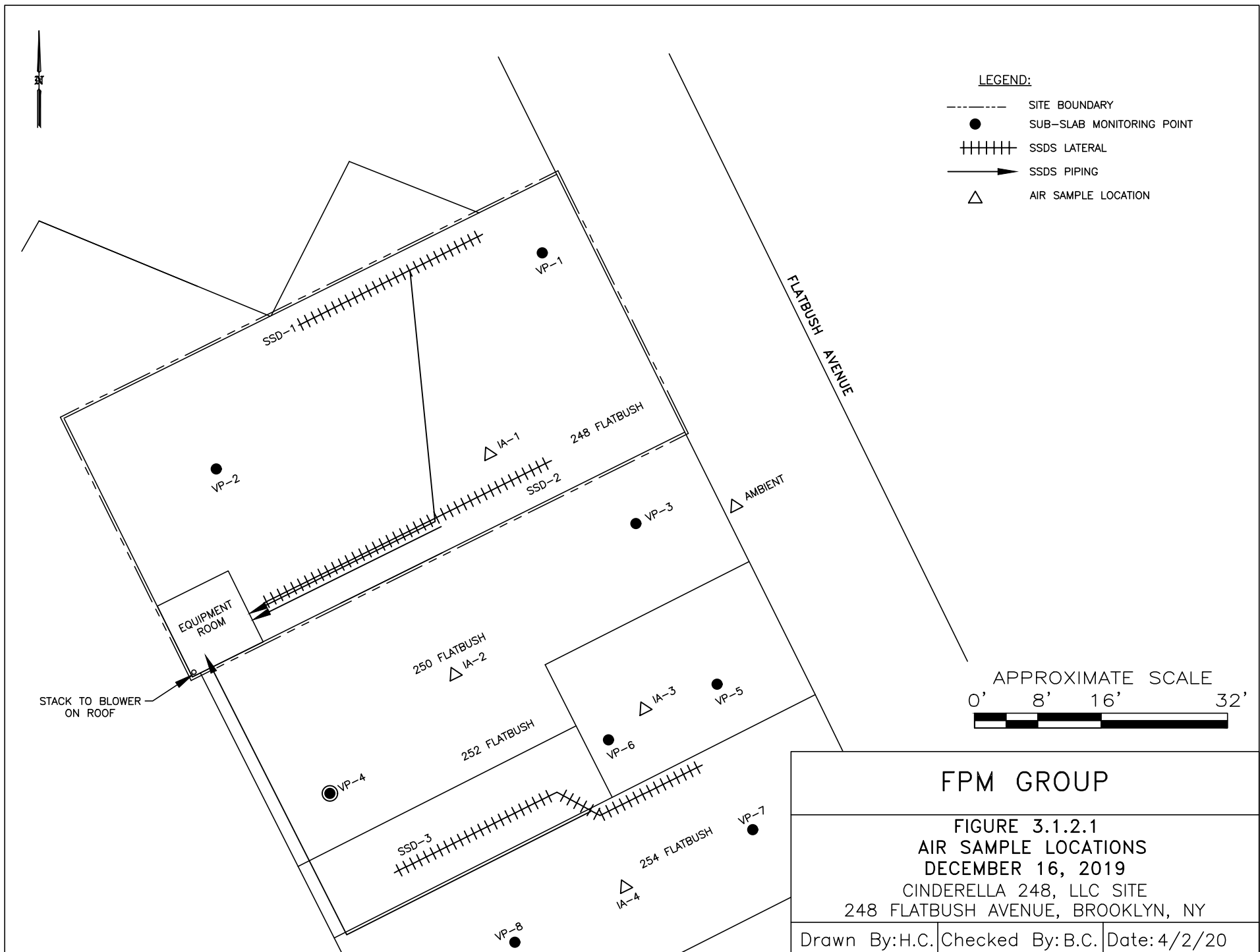
Effluent screening was performed during each monitoring event by collecting an effluent sample from the blower discharge piping and screening it with a calibrated PID. Effluent sampling was also performed periodically to further evaluate VOC emissions.

3.1.2 SVI Sampling

To demonstrate the effectiveness of the SSDS system, SVI testing was conducted on December 16, 2019. The work was conducted in general accordance with the procedures in the SMP. One additional indoor air sample was collected from the basement of 252 Flatbush Avenue as this space is now being utilized for storage. An effluent sample was also collected for informational purposes in lieu of soil vapor samples because the SSDS is currently in continuous operation. A site plan showing the locations of the SVI samples is included as Figure 3.1.2.1.

The indoor air samples were collected from a height of approximately four feet above the slab and the ambient air sample was collected from an outdoor location in proximity to 250 Flatbush Avenue and in a similar manner as the indoor air samples.

The SSDS effluent sample was collected from the sampling port of the SSDS system at the conclusion of indoor air sampling to prevent potential contamination with the indoor sampling at 248 Flatbush Avenue.



The air samples were collected in laboratory-provided Summa canisters equipped with flow controllers in accordance with NYSDOH guidance. The flow controllers for the indoor air and ambient air samples were set for an approximately six-hour period due to available access. The effluent air sample was collected in laboratory-provided Summa canister as a grab sample. The filled indoor canisters were managed under chain-of-custody procedures and transmitted to a NYSDOH-certified lab for analysis of volatile organic compounds (VOCs) using the TO-15 low level method. The SSDS effluent samples were analyzed for standard level VOCs by Method TO-15.

A building inventory form was completed during the course of the sampling event to document the potential presence of VOC sources in the building. No issues with the potential to affect indoor air quality were identified. The completed building inventory form is included as Attachment D.

Quality assurance/quality control (QA/QC) procedures were implemented and included field screening for organic vapors using a calibrated photoionization detector (PID), use of a chain of custody to document the sequence of sample possession, and collection and analysis of duplicate sample for QA/QC. In addition, the laboratory utilized internal QA/QC procedures and samples to confirm that the laboratory data are of sufficient accuracy and precision for their intended use. Following receipt of the chemical analytical data, the data package and associated QA/QC sample results were evaluated and a Data Usability Summary Report (DUSR) was prepared. The DUSR is included as Attachment F.

The data from this sampling event are summarized in Table 3.1.2.1 and the indoor air sample results were evaluated in accordance with NYSDOH Guidance. Based upon the absence of collocated soil vapor data (since the SSDS is currently in operation), which prevents a direct comparison with the NYSDOH soil vapor/indoor air matrix tables, the applicable air guidance values (AGVs) were utilized to demonstrate that the SSDS is effective and operating as designed. The effluent sample was collected in accordance with the NYSDEC requests, for general informational purposes, this data is summarized in Table 3.1.2.2. Our review of these data indicates the following:

- Two VOCs for which the NYSDOH provides guidance, carbon tetrachloride (CT) and tetrachloroethene (PCE), were detected in the indoor air samples;
- PCE was detected in the indoor air samples at low concentrations ranging from 0.45 to 1.03 $\mu\text{g}/\text{m}^3$ and in the ambient air sample at a concentration of 2.72 $\mu\text{g}/\text{m}^3$. The effluent sample from the SSDS at the time of the indoor air sampling was noted to be 6.49 $\mu\text{g}/\text{m}^3$. Based on these results the indoor air PCE concentrations are not attributed to the Site and are related to ambient air conditions in the Site vicinity. It is further noted that the indoor air PCE concentrations are well below its respective AGV (30 $\mu\text{g}/\text{m}^3$). We conclude that PCE does not present a concern for indoor air;
- CT was detected at each of the indoor air sampling locations at generally low concentrations, ranging from 0.45 to 0.50 $\mu\text{g}/\text{m}^3$. CT was also noted in the outdoor ambient air sample at a concentration (0.43 $\mu\text{g}/\text{m}^3$) similar to the indoor air samples. We conclude that the CT concentrations are not attributed to the Site and are related to ambient air conditions in the Site vicinity; and

TABLE 3.1.2.1
INDOOR AIR SAMPLING RESULTS
CINDERELLA 248 LLC SITE - NYSDC SITE NO. C224160
248 FLATBUSH AVENUE, BROOKLYN, NEW YORK

Sample No.	IA-1	IA-2	IA-3	IA-4	IA-4D (duplicate)	Ambient	Indoor Air Background Levels, Commercial*
Sample Location	248 Flatbush Avenue Basement	250 Flatbush Avenue Basement	252 Flatbush Avenue Basement	254 Flatbush Avenue Basement		Outdoors	
Sample Date	12/16/19						
Volatile Organic Compounds in ug/m ³							
1,4-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	21.1	<0.8 - 12.5
Acetone	37	5.6	6.3	6.5	6.8	5	32.4 - 120.2
Carbon Tetrachloride	0.5	0.45	0.47	0.46	0.47	0.43	<0.8 - 0.7
Chloromethane	< 1.00	1.11	1.29	1.29	1.24	1.21	2.1 - 4.4
Dichlorodifluoromethane	< 1.00	1.6	1.7	1.5	1.9	1.5	4.8 - 32.9
Ethanol	753	18.0	16.90	10.9	11.4	17.4	26.0 - 290.0
Isopropyl alcohol	39.3	4.1	5.16	5.65	5.26	4.05	-
Tetrachloroethene	1.03	0.49	0.45	0.48	0.43	2.72	<1.9 - 25.4
Toluene	4.48	1.32	1.45	2.68	1.84	1.78	10.7 - 70.8
Trichlorofluoromethane	< 1.00	1.3	1.43	1.4	1.5	1.4	<3.7 - 54.0

All samples analyzed using Method TO-15.

Only compounds detected in one or more samples are reported herein. See lab report for complete data.

ug/m³ = micrograms per cubic meter.

Shaded compounds are those for which the NYSDOH has provided guidance.

** = NYSDOH Study 2003; 25th to 95th percentiles.

TABLE 3.1.2.2
EFFLUENT SAMPLING RESULTS - DECEMBER 16, 2019
CINDERELLA 248 LLC SITE - NYSDEC SITE NO. C224160
248 FLATBUSH AVENUE , BROOKLYN, NEW YORK

Sample No.	SSDS Effluent		
Sample Location	248 Flatbush Avenue		
Collection Date	6/28/2019	9/26/2019	12/6/2019
Volatile Organic Compounds in ug/m³			
1,2,4-Trimethylbenzene	ND	1.77	ND
1,4-Dichlorobenzene	2.4	66.14	ND
2-Butanone (MEK)	1.5	1.89	ND
Acetone	45	47.51	5.7
Carbon Tetrachloride	0.58	0.56	0.50
Chloroform	6.5	8.79	ND
Chloromethane	ND	0.81	1.23
cis 1,2-Dichloroethylene	ND	0.58	ND
Dichlorodifluoromethane	2	4.13	1.9
Ethanol	ND	ND	24.3
Hexane	ND	ND	4.47
Isopropylalcohol	61	0.03	1.27
Methylene Chloride	ND		16.3
p,m-Xylenes	ND	2.69	ND
Tetrachloroethene	860	678.3	6.49
Toluene	3.5	6.03	1.53
Trichloroethylene	ND	0.65	ND
Trichlorofluoromethane	ND	2.53	1.12

Notes:

All samples analyzed using Method TO-15.

Only compounds detected in one or more samples are reported herein. See lab report for complete data.

ug/m³ = micrograms per cubic meter.

- Several VOCs were detected at concentrations generally comparable to concentrations found within indoor air at commercial buildings. None of these detections were highly elevated or present a concern.

In conclusion, the air sampling results confirm that the SSDS is operating as intended to prevent SVI. This testing was performed in general accordance with the NYSDEC-approved SMP, except as discussed above.

3.1.3 SSDS Monitoring Results

Effluent monitoring was performed to ensure that effluent treatment is not required prior to discharge. During the reporting period, PID responses, as measured with a calibrated Photovac 2020 Pro PID, were noted to range from 0.0 to 2.7 ppm (see System Log in Appendix-D).

The summarized effluent sampling results for PCE, the primary compound of concern for the Site, indicate that removal of PCE is decreasing and becoming more asymptotic. This trend is evident by generally decreasing concentrations as shown in Table 3.1.3.1 and mass removal as shown in Figure 3.1.3.1. The effluent data were also evaluated for compliance with NYSDEC Air Guide 1 criteria with respect to the corresponding AGCs and SGCs, as appropriate. No VOCs were noted to exceed their respective AGCs and SGCs, and therefore, the system emissions remain in compliance and well below the levels required for treatment. The complete effluent laboratory reports for the reporting period are included in Appendix E.

System monitoring parameters and vacuum monitoring points were also measured to evaluate the performance of the SSDS. The system parameters (flow rates, vacuums) were noted to be within the design parameters and conditions as observed during the startup of the SSDS. Vapor monitoring point vacuums have been noted to be variable and have generally decreased since startup, however the decreased sub-slab vacuum measurements do not appear to be affecting the performance or effectiveness of the system based on the effluent PCE concentrations and air sampling results.

3.1.4 Monitoring Deficiencies

No system monitoring deficiencies were noted during this reporting period.

3.1.5 Monitoring Conclusions and Recommendations

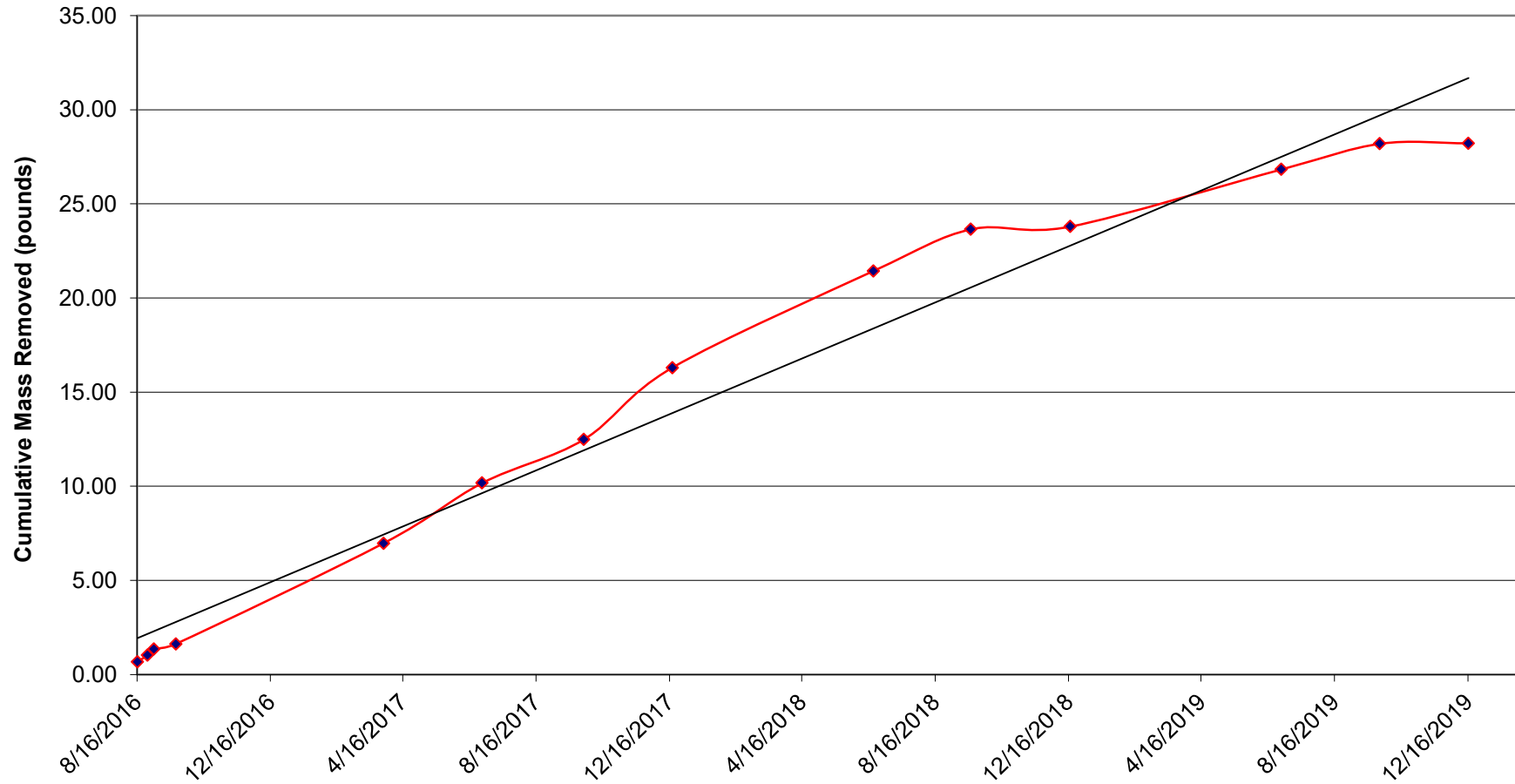
The monitoring results for the reporting period indicate that low to moderate levels of PCE are present in the soil vapor as evident by the effluent concentrations. Continued operation of the SSDS to prevent SVI is recommended at this time. However, as removal of PCE is decreasing, the SSDS effluent concentrations will continue to be evaluated to determine if the criteria for termination of mitigation has been met. If the effluent data meet the criteria for termination, a request to shut down the system for SVI testing will be submitted to the NYSDEC to determine if continued mitigation is necessary.

TABLE 3.1.3.1
PCE EFFLUENT CONCENTRATIONS
CINDERELLA 248 LLC SITE, NYSDEC SITE NO. C224160
248 FLATBUSH AVENUE, BROOKLYN, NEW YORK

Sample Date	8/16/2016	8/25/2016	8/31/2016	9/20/2016	3/29/2017	6/27/2017	9/28/2017
Tetrachloroethylene (ug/m ³)	3,700	2,900	3,800	930	1,900	2,400	1,500

Sample Date	12/18/2017	6/20/2018	9/17/2018	12/17/2018	6/28/2019	9/26/2019	12/6/2019
Tetrachloroethylene (ug/m ³)	3,000	1,600	1,300	89	860	678.3	6.49

FIGURE 3.1.3.1
CUMULATIVE PCE REMOVAL
CINDERELLA 248, LLC SITE
248 FLATBUSH AVENUE, BROOKLYN, NY



SECTION 4.0

OPERATION AND MAINTENANCE PLAN COMPLIANCE

The Site has O&M requirements for the SSDS while the system is operational. During this reporting period the SSDS operation was checked quarterly.

4.1 Summary of O&M Activities

The SSDS was checked quarterly during the reporting period. Routine maintenance of the system including checks of the condensate vessel, air filter, and other components were performed. System operating parameters, including vacuum and flow rates, were also collected to evaluate system performance and the need for preventative maintenance.

4.2 Evaluation of O&M Activities

The O&M activities enabled the SSDS operating as intended.

4.3 O&M Deficiencies

No O&M deficiencies were noted during this reporting period.

4.4 O&M Conclusions and Recommendations

O&M activities were effective during this reporting period. O&M activities will continue, as appropriate, during the next reporting period.

SECTION 5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Compliance with EC/ICs and Monitoring Plan

Assessment of overall Site compliance, including the EC (SSDS), IC, and monitoring plans during the reporting period are summarized as follows:

➤ ECs and IC Compliance

- The EC for the Site, an SSDS, remained in place and operational during the reporting period.
- An IC (environmental easement) is in place and includes restrictions on property use, and requirements for operating, monitoring, and maintaining the EC. The provisions of the IC were adhered to during the reporting period and the EC/IC Certification is included in this PRR.

➤ Monitoring and O&M

- Monitoring of the SSDS was conducted during the reporting period. Emissions were in compliance and did not require treatment. Routine maintenance was performed, as needed.
- SVI sampling was conducted during the reporting and confirmed the EC was effective for mitigation of soil vapor and preventing SVI.

5.2 Performance and Effectiveness of the Remedy

The remedy has been implemented and managed in compliance with the SMP.

5.3 Recommendations

Based on the current Site conditions, FPM recommends the following:

- The SSDS should remain in operation to provide mitigation for the Site and adjoining properties. Termination of mitigation should be considered during the next reporting period if the criteria for completion of remediation is achieved; and
- SVI sampling will be performed in late 2020 in accordance with the SMP to confirm the SSDS continues to remain effective at preventing SVI.

APPENDIX A

- **NYSDEC 2017–2019 PRR APPROVAL (5/23/2019)**
- **PRR REMINDER NOTICE (2/12/2020)**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B

625 Broadway, 12th Floor, Albany, NY 12233-7016

P: (518) 402-9767 | F: (518) 402-9773

www.dec.ny.gov

May 23, 2019

Michael Pintchik
Cinderella 248 LLC
254 Flatbush Ave
Brooklyn, NY 11217

**Re: Cinderella 248 LLC, Kings County, NY, BCP Site No: C224160;
Site Management - Periodic Review Report (PRR), November
2017 to March 2019**

Dear Mr. Pintchik:

The New York State Department of Environmental Conservation (DEC) has reviewed your Periodic Review Report (PRR) and IC/EC Certification for the following period: November 2017 to March 2019. DEC hereby approves the PRR and associated certification.

If you have any questions, please contact me at alicia.barraza@dec.ny.gov or 518-402-9690.

Sincerely,



Alicia Barraza
Project Manager
Section A

ec: Ben Cancemi, FPM Group
M. Komoroske, DEC
J. O'Connell, DEC R2
W. Kuehner, NYSDOH
J. Deming, NYSDOH



Department of
Environmental
Conservation

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2/12/2020

Michael Pintchik
Cinderella 248 LLC
254 Flatbush Avenue
Brooklyn, NY 11217

Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal

Site Name: Cinderella 248 LLC

Site No.: C224160

Site Address: 248 Flatbush Avenue
Brooklyn, NY 11217

Dear Michael Pintchik:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site-specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at <http://www.dec.ny.gov/regulations/67386.html>) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **April 26, 2020**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Professional Engineer (PE). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.



Department of
Environmental
Conservation

All site-related documents and data, including the PRR, must be submitted in electronic format to the Department of Environmental Conservation. The required format for documents is an Adobe PDF file with optical character recognition and no password protection. Data must be submitted as an electronic data deliverable (EDD) according to the instructions on the following webpage:

<https://www.dec.ny.gov/chemical/62440.html>

Documents may be submitted to the project manager either through electronic mail or by using the Department's file transfer service at the following webpage:

<https://fts.dec.state.ny.us/fts/>

The Department will not approve the PRR unless all documents and data generated in support of the PRR have been submitted using the required formats and protocols.

You may contact Alicia Barraza, the Project Manager, at 518-402-9690 or alicia.barraza@dec.ny.gov with any questions or concerns about the site. Please notify the project manager before conducting inspections or field work. You may also write to the project manager at the following address:

New York State Department of Environmental Conservation
Division of Environmental Remediation, BURB
625 Broadway
Albany, NY 12233-7016

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

cc: w/ enclosures

Alicia Barraza, Project Manager

Michael Komoroske, Section Chief

Jane O'Connell, Hazardous Waste Remediation Supervisor, Region 2

FPM Group - Ben Cancemi - b.cancemi@fpm-group.com

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.
- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details		Box 1	
Site No.	C224160		
Site Name Cinderella 248 LLC			
Site Address: 248 Flatbush Avenue		Zip Code: 11217	
City/Town: Brooklyn			
County: Kings			
Site Acreage: 0.050			
Reporting Period: March 27, 2019 to March 27, 2020			
		YES	NO
1. Is the information above correct?		☐	☐
If NO, include handwritten above or on a separate sheet.			
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		☐	☐
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		☐	☐
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		☐	☐
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5. Is the site currently undergoing development?		☐	☐
		Box 2	
		YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		☐	☐
7. Are all ICs/ECs in place and functioning as designed?		☐	☐
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address these issues.			
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date	

Box 2A

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid? ☐ YES ☐ NO

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? ☐ YES ☐ NO
(The Qualitative Exposure Assessment must be certified every five years)

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C224160**Box 3****Description of Institutional Controls**

Parcel
936-12

Owner
Cinderella 248 LLC

Institutional Control

Ground Water Use Restriction
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

1. Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
2. Allows the use and development of the controlled property for restricted-residential use, which allows for commercial use and industrial use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
3. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
4. Requires compliance with the Department approved Site Management Plan.

Box 4**Description of Engineering Controls**

Parcel
936-12

Engineering Control

Vapor Mitigation

Operation and maintenance of a sub-slab depressurization system (SSDS) to mitigate soil vapor intrusion at the site building and adjacent buildings.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☐ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☐ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

**IC CERTIFICATIONS
SITE NO. C224160**

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____ (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Professional Engineer for the _____
(Owner or Remedial Party)

Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification

Stamp
(Required for PE)

Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

- I. Executive Summary: (1/2-page or less)
 - A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
 - B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
 1. progress made during the reporting period toward meeting the remedial objectives for the site
 2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
 - C. Compliance
 1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
 2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
 - D. Recommendations
 1. recommend whether any changes to the SMP are needed
 2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
 3. recommend whether the requirements for discontinuing site management have been met.
- II. Site Overview (one page or less)
 - A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
 - B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.
- III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations should be presented simply and concisely.
- IV. IC/EC Plan Compliance Report (if applicable)
 - A. IC/EC Requirements and Compliance
 1. Describe each control, its objective, and how performance of the control is evaluated.
 2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
 3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
 4. Conclusions and recommendations for changes.
 - B. IC/EC Certification
 1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).
- V. Monitoring Plan Compliance Report (if applicable)
 - A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
 - B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
 - C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
 - D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
 - E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.
- VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
 - A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
 - B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
 - C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

- D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
- E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

- A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
 - 1. whether all requirements of each plan were met during the reporting period
 - 2. any requirements not met
 - 3. proposed plans and a schedule for coming into full compliance.
- B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
- C. Future PRR Submittals
 - 1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
 - 2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

APPENDIX B

RESUMES OF ENVIRONMENTAL PROFESSIONALS



Mr. Cancemi has diversified experience in geology and hydrogeology. His professional experience includes groundwater and soil investigations, design and management of soil remediation projects, installation and maintenance of groundwater containment and remediation systems, aquifer testing and interpretation, geotechnical studies, evaluation of site compliance with environmental regulations and environmental permitting.

Functional Role	Title	Years of Experience
Senior Hydrogeologist	Department Manager - Hydrogeology	22

Personal Data

Education

M.S./2001/Hydrogeology/SUNY Stony Brook
B.S./1995/Geology/SUNY Stony Brook

Registration and Certifications

New York State Professional Geologist, #7051
Certified Professional Geologist – American Institute of Professional Geologists
NYC Office of Environmental Remediation – Gold Certified Professional
OSHA 40-hour HAZWOPER and Current 8-hour Health and Safety Training and Current Annual Physical
OSHA 8-hour HAZWOPER Supervisor
OSHA 10-hour Construction Safety and Health
OSHA Permit-Required Confined Space Training
Long Island Geologists
National Groundwater Association

Employment History

2001-Present FPM Group
1998-2001 Burns & McDonnell Engineering Company
1997-1998 Groundwater and Environmental Services
1996-1997 Advanced Cleanup Technologies

Detailed Experience

Hydrogeologic Evaluations

- **Project Manager, Lower Manhattan, NY. NYCT.** Coordinated and performed constant head hydraulic conductivity (packer) testing in boreholes located in fractured bedrock in lower Manhattan, NY to evaluate fracture connectivity with the nearby Hudson and East Rivers and determine hydraulic conductivity and related parameters such that water management procedures could be implemented for redevelopment of the New South Ferry Subway Station.
- **Project Manager, Manhattan, NY. NYCT** Coordinated and performed a hydrogeologic

investigation, including utility clearing, soil borings, rock coring, packer testing, aquifer pumping testing, data collection, and interpretation, to evaluate subsurface conditions and determine geologic parameters for a proposed subway extension of the NYC Transit No.7 Subway Line.

- **Project Manager, Various Sites Long Island, NYC, and Westchester County, NY** Performed aquifer pumping and slug tests and evaluated hydrologic properties using the computer program AQTESOLV.

Site Investigations

- **Program Manager** for ongoing investigation and remedial projects at several New York State Inactive Hazardous Waste Disposal sites, Voluntary Cleanup Program (VCP) sites, and NYC OER e-designated sites. Investigations have included site characterization, Remedial Investigations/Feasibility Studies (RI/FS), and Resource Conservation and Recovery Act (RCRA) facility investigations and closures. Remedial services have included contaminated soil removal; design, installation, and operation of air sparge/soil vapor extraction (AS/SVE) systems and sub-slab depressurization systems (SSDS), capping, and other remedial services.
- **Program Manager NYSDEC BCP Site, Brooklyn, NY** Coordinated and performed an investigation, implemented remedial measures and regulatory reporting at a former dry-cleaning facility in Brooklyn, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts. Remedial actions included conducting pilot testing for installation of a sub-slab depressurization system (SSDS), coordinating the installation of vapor barrier and SSDS. Prepared a Final Engineering Report documenting remedial activities and a Site Management Plan for continued site monitoring.

- **Program Manager NYSDEC Inactive Hazardous Waste Site, Garden City, NY** Coordinated and performed an investigation, implemented remedial measures and regulatory reporting for a former printing facility in Garden City, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts. Remedial actions included pilot testing and installation of an air sparge/soil vapor extraction (AS/SVE) system and SSDS, coordinating the installation of an SSDS, removal of contaminated soils from two areas and removal of impacted sediments from twelve leaching structures. Prepared a Final Engineering Report documenting remedial activities.
- **Program Manager, NYC Redevelopment Site, Queens NY.** Program Manager for environmental activities at a NYC Voluntary Cleanup Program Site. Environmental activities included preparation of a Phase I report, completion of a remedial investigation, preparation of associated work plans, implementation of a community air monitoring program for site activities, excavation and disposal of impacted soils, management and disposal of clean soils, and regulatory reporting.
- **Project Manager Remedial Investigation NYSDEC BCP Site, Queens, NY** Coordinated and performed an investigation at a vacant commercial property Far Rockaway, NY, including soil, groundwater and soil vapor sampling to assess onsite chlorinated solvent impacts from an adjoining offsite source. Prepared Remedial Work Plan and Report and provided monthly updates.
- **Project Manager, Site Investigation, Former Aerospace Facilities, Long Island, NY** Coordinated and performed soil and groundwater sampling and soil vapor studies at several aerospace manufacturing facilities on Long Island, NY. Assessments included an evaluation of past manufacturing and facility operations, storage and use of solvents, petroleum and manufacturing-derived wastes, and impacts to soils, soil vapor, and groundwater. Areas of concern were identified for further evaluation and/or corrective action.
- **Project Manager, Municipal Landfill Monitoring, Town of East Hampton, NY** Coordinated and performed long term groundwater monitoring at two closed Town of East Hampton, NY municipal landfills, including

the sampling a multi-depth monitoring well network, analysis and interpretation of analytical and hydrogeologic data, and regulatory reporting in accordance with NYSDEC Part 360 requirements.

- **Project Manager, Site Investigation, Former agricultural facilities, Long Island, NY** Coordinated and performed soil and groundwater investigations at various agricultural and horticultural properties to evaluate impacts of past herbicide and pesticide usage on the underlying soil and groundwater.
- **Program Manager, Municipal Landfill Gas Monitoring, Town of East Hampton, NY** Managed and performed routine methane monitoring at two Town of East Hampton landfills for compliance with NYSDEC requirements and to evaluate potential offsite migration to the surrounding community. Monitored indoor air with a flame ionization detector (FID) to evaluate impacts to buildings.
- **Hydrogeologist, Groundwater Modeling, Town of East Hampton, NY** Assisted with groundwater flow modeling for the Springs-Fireplace Road Landfill to evaluate the nature and extent of the landfill plume, its likely downgradient extent, and its fate.
- **Program Manager, Petroleum Release Sites, Various NYC, Long Island and Westchester County** Coordinated and performed onsite and offsite monitoring at petroleum release sites on Long Island, the New York metropolitan area, and in Westchester County in accordance with NYSDEC Spill program requirements. The monitoring programs generally included sampling multi-depth monitoring well networks utilizing low-flow sampling techniques, analysis/interpretation of analytical and hydrogeologic data, and regulatory reporting.
- **Project Manager, Site Investigation, Logan International Airport, Boston, MA.** Coordinated a soil and groundwater sampling program to evaluate environmental conditions at Terminal A, Logan International Airport, East Boston, Massachusetts. The program included an assessment of the current fuel hydrant system and other locations of potential environmental concern using non-destructive air vacuum extraction-clearing techniques combined with direct-push sampling. **Project Manager, Site Investigation, Pyrotechnics Facility, Suffolk County, NY.** Managed and performed a soil and groundwater investigation,

a remedial soil excavation, and groundwater monitoring at a pyrotechnics manufacturing facility in Suffolk County, NY. The work was performed under the direction of the Suffolk County Department of Health Services (SCDHS) to investigate and remediate contamination from historic use of perchlorate- containing materials at the facility.

- **Project Manager, Site Investigation, Automobile Franchise, Westchester County, NY.** Coordinated and performed soil, groundwater and soil vapor investigations at several automobile dealerships in Westchester County, NY to evaluate potential impacts from petroleum and chemical solvent storage and usage and onsite waste water disposal systems.
- **Project Manager, Site, Investigation, Former mercury thermometer manufacturing facility, NYC, NY.** Coordinated and performed soil and soil vapor intrusion study at a former mercury thermometer manufacturing facility in NYC. Assessments included an evaluation of past manufacturing and facility operations, storage and use of mercury, manufacturing-derived wastes, and impacts to soils and soil vapor. Areas of concern were identified for further evaluation and remedial action.

Phase I Environmental Site Assessments

- **Project Manager, Various Northeastern and Mid-Atlantic States.** Performed numerous Phase I Environmental Site Assessments (ESAs) for commercial and industrial properties throughout the Northeastern and Mid-Atlantic States for various clients including trucking companies, major airlines, telecommunication companies, chemical/ petroleum storage facilities, aerospace manufacturing facilities, machine shops, retail shopping centers, auto dealerships and service stations.

Remediation

- **Project Manager, Remediation, Former Landfill, Suffolk County, NY.** Managed remedial activities at a NY State Environmental Restoration Program (ERP) Site situated at a former hospital landfill in Northport, NY. Responsibilities contractor management and oversight, soil disposal management, confirmatory testing, data review, and preparation of remedial work plan and final engineering report for remedial activities.
- **Project Manager, Remediation - AS/SVE, Various Sites, NYC and Long Island.** Performed pilot testing, design, installation and procurement of numerous multi-depth soil vapor extraction (SVE) and air sparge (AS) remediation systems on Long Island and in the NYC metropolitan area to remediate chlorinated solvents and petroleum. Conducted remediation system operation and maintenance, and evaluations of system performance.
- **Project Manager, Remediation - UIC Structures, Nassau and Suffolk County, NY.** Performed numerous storm water and sanitary leaching structure (UIC) cleanouts utilizing excavation and/or vacuum assisted equipment to remove contaminated sediments and liquids. Conducted waste characterization and profiling, pipe camera surveys, and structure locating utilizing water-soluble dyes and electronic locating equipment.
- **Project Manager, Remediation Sub-Slab Depressurization Systems, NYC, Nassau and Suffolk Counties, NY** Conceptually designed and oversaw the installation of a sub- slab depressurization system (SSDS) at several commercial properties in the NYC and Long Island to mitigate chlorinated solvent impacts. SSDS monitoring was conducted to ensure proper operation and emissions compliance of with NYSDEC air discharge guidelines.
- **Project Manager, Remediation System O & M, NYC and Long Island.** Operated and maintained remediation systems, including SVE, groundwater pump and treat, AS, dual-phase extraction, SSDS and free-phase petroleum recovery systems.
- **Project Manager, Remediation. White Plains, NY.** Managed and coordinated a petroleum spill investigation to evaluate the nature and extent of a fuel oil release at an office building in White Plains, NY. The investigation included excavation and removal of a 5,000-gallon UST situated over 20 feet below grade, tightness testing of the UST and associated piping, a soil and groundwater investigation, free product recovery utilizing vacuum-enhanced fluid recovery techniques, and coordination and reporting to the NYSDEC and Westchester County Department of Health.

Health and Safety

- **HASP and CAMP Plan Preparation, Various Sites.** Prepared community air monitoring and health and safety plans for several NYSDEC inactive hazardous waste, brownfield cleanup program, volunteer cleanup program, petroleum spill, and NYC e-designation program sites
- **HASP Monitoring, Various Sites.** Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Calibrated and operated photoionization detectors (PID) and flame-ionization detectors (FID) for organic vapors and combustible gas indicators (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- **CAMP Monitoring, Various Sites.** Performed community monitoring, including monitoring for noise, particulates (dust), and organic vapors. Recorded observations and compared to applicable action levels. Calibrated and operated noise meters, particulate monitors, and PID/FID.
- **Radiation Screening, Various Sites.** Performed screening for radiation at select sites. Operated Geiger counter in different radiation modes and obtained and evaluated background readings.
- **Mercury Screening.** Performed screening of mercury vapor for several projects. Operated and experienced with Jerome and Lumex Mercury Vapor Analyzers.

Expert Witness/Technical Services

- **Expert Witness Services, Glen Cove Waterfront Redevelopment.** Provided expert witness services regarding environmental conditions and remedial procedures for redevelopment of a former industrial and commercial area in Glen Cove, NY.
- **Technical Services, multiple sites, Town of Brookhaven.** Provided technical services regarding environmental conditions at various commercial and residential sites within the municipality to evaluate potential compliance issues with Town code. Services included coordinating subsurface investigations, sampling of various media, methane surveys, tidal surveys, technical oversight of investigation activities.
- **Technical Services, multiple sites, Town of Huntington.** Provide technical review of environmental investigations and soil

management plans prepared for proposed development for the Planning Division to assess if the proposed development has been properly evaluated in accordance with town requirements.

MGP Site Experience

- **Field Team Leader, Property Transfer of MGP sites.** Conducted soil and groundwater sampling at several Nicor MGP sites in Illinois prior to property transfer to Con Edison. Coordinated sampling crews, oversaw sampling and sample management, and implemented HASP monitoring.
- **Project Manager, Geophysical Investigation at Brooklyn Union Greenpoint MGP site.** Developed and implemented a geophysical investigation at an MGP site that was subject to differential settlement. Coordinated with client and subcontractors, oversaw survey activities, implemented HASP, interpreted results, and prepared a report to document the completed work.

Other

- **Project Manager, RCRA Closure, Nassau County, NY** Coordinated RCRA closure activities and performed confirmatory sampling at a former package manufacturing and printing facility in Nassau County, NY. Project duties included preparation of a closure work plan, contractor procurement, a subsurface site investigation, rinsewater sampling, and regulatory agency reporting and coordination, and preparation of a closure report.
- **Project Manager, Former Landfill, Suffolk County, NY.** Prepared a remedial design (RD) work plan for a former hospital landfill on Long Island. The RD work plan included a summary of past investigations, a materials management plan for the excavation and disposal of contaminated soils and debris, a post-excavation sampling plan, a site restoration plan, community air monitoring plan (CAMP), health and safety plan (HASP) and a quality assurance and quality control (QA/QC) plan.
- **Project Manager, Air Monitoring, Nassau County, NY.** Managed and performed monthly soil gas sampling and quarterly indoor air quality sampling at an elementary school in southwestern Nassau County, NY. The monitoring and associated NYSDEC reporting were performed to ensure that a gasoline groundwater plume migrating through the school

property was not impacting indoor air at the school.

- **Project Manager, Environmental Compliance, Multiple Sites.** Performed compliance inspections to assess issues of potential environmental concern at manufacturing, aviation, trucking, retail, and not-for-profit facilities.



Mr. Loyst has over 25 years of experience in environmental and civil engineering involving areas such as design & construction, regulation compliance & permitting, site investigation & remediation, environmental impact analysis, and expert witness testimony.

His clients include Federal agencies – USACE, US Army, USAF, FAA, USCG, USDA, USPS, IRS, VA; State agencies – NYSOGS, NYSParks, NYSDOT, DASNY, NYSOMH, NYSDEC, NYSPolice; City agencies – NYCT, NYCDEP, NYCDOT; Municipalities – Riverhead, Islip, Brookhaven, Smithtown, East Hampton, Village of Lake Success, Greenburgh, City of Rye and numerous private clients.

Functional Role	Title	Years of Experience
Program Manager	Corporate Vice President Department Manager - Environmental Engineering	29

Personal Data

Education

M.S./1997/Environmental Engineering – New York University (formerly Brooklyn Polytechnic University)
B.S./1989/Interdisciplinary Engineering & Management– Clarkson University
B.S./1988/Civil and Environmental Engineering – Clarkson University

Registration and Certifications

Licensed Professional Engineer in State of New York
Project Management Professional
NYSDEC Stormwater Qualified Inspector Training
OSHA-approved 40-hr Health and Safety Training
OSHA-approved 8-hr Refresher Training Course
OSHA 8-hr HAZWOPER Supervisor Training

Societies/Associations

American Society of Civil Engineers
Project Management Institute

Employment History

1992 to Present FPM Group
1989-1992 Westinghouse Electric Corp.

Technical Seminars

Stormwater, Soil Erosion & Sediment Control,
Hazardous Waste/RCRA, Emergency Planning &
Community Right-To-Know (EPCRA), Environmental
Impact Analysis/NEPA/EIS/EA, Air/CAA, Soil
Remediation

Detailed Experience

Design & Construction

- Performed site reconnaissance, surveying, identification, and enumeration activities to develop plans, specifications, and environmental permitting for NYSOGS for processing waste tire materials into beneficial shred material to be used by the New York State Department of Transportation (NYSDOT) in road construction projects and landfills. Following the
- development of plans and specifications, FPM assisted NYSOGS with bidding phase services including contractor award and construction/ remediation/restoration/ oversight. In total approx. 20 million tires were recycled at four sites across New York State (Smithtown, Saugerties, Catskill, and Plattsburgh).
- Prepared Program Reports and Design services for NYSOGS/ NYSDOT water supply treatment facilities in Wellsville, N. Java, and Oswego, NY.
- Evaluated existing site drainage design issues and provided corrective action for NYSOGS/DMNA AAFS in Rochester, NY.
- Investigated and designed corrective actions for failing maintenance bay trench drains at NYS Police Headquarters in Farmingdale, NY.
- Performed SWPPP services for NYSOGS/NYSPolice including weekly construction inspections and filing NOT upon project completion for new State Police zone headquarters in Hempstead, NY.
- Reviewed, prepared, and implemented numerous State Pollutant Discharge Elimination System (SPDES) General Permits for Stormwater Discharges from Construction Activities, Stormwater Pollution Prevention Plans (SWPPPs), and Soil Erosion and Sediment Control Plans for NYSOGS, NYSDEC, NYCDEP, municipalities, and private clients.
- Hazardous material storage area design for NYSOGS, NYSParks, and industrial facilities in accordance with Suffolk County and Nassau County regulations and containment provisions (e.g., containment buildings, bermed epoxy coated storage areas).
- Conventional subsurface sewage disposal system and reduced pressure zone device designs and construction management services for NYSOGS and numerous governmental, municipal, and private facilities.
- Hydrologist consultant to New York City Transit (NYCT) involving numerous drainage studies and

investigation of mitigation measures for stormwater and groundwater issues at bus depots, train yards, and subway stations.

- Hydrologist consultant to Town of Greenburgh involving the review of EIS documents, Stormwater Management Plans, Soil Erosion and Sediment Control Plans, drainage calculations, and modeling for proposed development projects on sites up to 300 acres.
- Hydrologist consultant to City of Rye involving site design review, flooding analyses, and environmental impact assessment for a 10-acre Brownfield remediation/development project.
- Prepared SWPPP and performed bi-weekly stormwater inspections for a NYCDEP 11-acre, 30 million gallon combined storage overflow facility in Brooklyn, NY.
- Performed dye-testing studies at several NYCT facilities in NYC and La Salle Military Academy in Oakdale, NY to identify discharges and remedies.
- Assisted NYCT with design mitigation measures and resiliency projects for critical infrastructure damaged during Hurricane Sandy.
- Design and construction services for rehabilitation and stabilization of streams and drainage channels for USACE in Binghamton, Endicott and Johnson, NY, and Danville, PA.
- Runoff calculations, drainage alternatives, and best management practices for site development projects in Long Island, NYC, and Westchester County.
- Evaluation and rehabilitation of groundwater well dewatering pumping systems for NYCT via downhole camera videotaping, riser swab cleaning, high velocity jetting, pump test analysis, specific capacity testing, and pump redesign.
- Performed leak investigation studies, and designed corrective measures for MTA Grand Central Station and South Ferry Station in Manhattan, NY.
- Certified numerous types of reports including periodic review, feasibility study, engineering, and work plans for inactive hazardous waste disposal (NYS Superfund) and environmental restoration program (ERP) sites.
- As Village of Lake Success environmental consultant, involved in groundwater pump and treat system quarterly OU-1 and OU-2 remedial system reporting, OMM and SSDS design review, indoor air quality monitoring, and overseeing sub-slab construction activities.
- Removal, recycling, and disposal of over 10,000 cy of construction and demolition debris at various waste management areas on Plum Island, NY involving development of plans and specifications, cost estimating, and construction oversight for USDA.
- Soil erosion and sediment control plans and certifications for FAA airport navigational aid projects.
- Performed Dam Classification, Spillway Analysis, and Design services for NYSParks repair/replacement of Connetquot Dam in Long Island, NY.
- Analyzed existing Paumanok Village Sewage Treatment Plant design to evaluate if 60 additional condominium units could be accommodated.
- Porous pavement designs and evaluations for NYCT bus depots.
- Prepared Remedial Design Report, plans and specifications, bid phase services, and construction supervision for remediation of a 3-acre VNSA landfill in Huntington, NY.
- Assisted the Town of Riverhead with capping estimates, feasibility study for reclaiming and capping a reduced landfill and engineering reviews for a full Part 360 landfill cap design.
- Development of plans and specifications for asbestos abatement projects for elementary schools in Long Island.
- Asbestos abatement specification reviews for FAA facility rehabilitations.
- Designed new track and field athletic complex at USCG Academy, New London, CT involving NCAA regulation 8-lane track with synthetic type running service, separate event throwing areas, NCAA regulation soccer field inside the track and all necessary elements for typical collegiate facilities (lighting, grandstand, scoreboard, etc.) Critical design aspects included managing infiltration and surface water runoff for discharge into Thames River and environmental permitting (SWPPP and coastal zone consistency determination).
- Performed study and conceptual design of an equalization tank for storing roof runoff to be used at two NYCT bus depots in Manhattan and Staten Island.
- Soil Vapor Intrusion (SVI) and sub slab depressurization system (SSDS) design work for office buildings and aircraft hangar/warehouses at former Griffiss AFB and 1.3 million sf of office building in Nassau County.
- Prepared plans for relocation of scales/scalehouse at a waste transfer/recycling facility in Islip, NY.
- Acquired Joint Application/Water Withdrawal Permits and prepared Engineering Report and Plans for construction of a lowered hydraulic connection between 2 lakes in Lake Success, NY.
- Sub-slab depressurization system (SSDS) design including a horizontal well and blower system for a DASNY and NYS Office of Alcoholism and Substance Abuse Services (OASAS) 4,000 sf facility on a 1-acre parcel on a municipal landfill in the City of Peekskill.
- Designed an 80'x45'x30' deep recharge basin with infiltration wells for an 11-acre NYCT bus depot in Staten Island, NY.

- Provided water well treatment design services for a golf course irrigation system in Lake Success, NY.
- Designed ground mounted 10kw Photovoltaic system for a Town of Islip Compost Facility.
- Performed condition assessments for the Latimer Reef and Little Gull Light Stations in Southold, NY.
- Feasibility Study (FS) to prevent the potential migration of a PCB oil pool/contaminated aqueous plume and peat layer settlement due to dewatering activities at Sunnyside Yard, Queens.
- FS for disposal alternatives for permanent subway dewatering activities in Brooklyn and Manhattan, NY.
- FS for property consolidations and expansion of shopping centers in Long Island. Site development potential was evaluated in accordance with local ordinances/codes.
- Evaluated roof leaks, mold investigation, and designed corrective action for Great Neck Post Office, NY.

Regulation Compliance/Permitting

- Suffolk County Department of Health Services (SCDHS) Article 12 and Nassau County Department of Health (NCDOH) Article 11 Toxic and Hazardous Material Storage Facility Permits for NYSOGS, USPS, NYS Parks, and private clients.
- UST compliance inspections in accordance with NYSDEC - Petroleum Bulk Storage (PBS) and Chemical Bulk Storage (CBS) regulations; SCDHS Article 12; NCDOH Article 11; and National Fire Protection Agency (NFPA) codes for NYSOGS, NYSDOT, USPS, and private clients.
- Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) permits for industrial and stormwater discharges for NYSOGS, NYCT, USPS, and private clients.
- Environmental compliance audits covering the Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Emergency Planning and Community Right to Know Act (EPCRA), and local regulations involving areas such as hazardous material storage for USPS and private clients.
- Air permitting and associated reporting including Title V and 76-19-3 air permits; new source review; seasonal variance applications; BACT analysis; emission statements; EPA NESHAP surveys, annual and semi-annual compliance certifications; Air Guide 1 and Screen 2 modeling; Air Facility Registrations; air quality assessments; emission reduction credits, and stack testing for VA, Islip, and private clients.
- Performed RCRA compliance activities involving waste stream characterizations; waste minimization; pollution prevention; manifest tracking; preparation of

quarterly, annual, and bi-annual reports; and training for USPS and private clients.

- Prepared hazardous waste closure plans in accordance with 6NYCRR 373-3 and implemented closure of hazardous waste management areas in accordance with 6NYCRR 373-3.7(c) for private clients.
- Performed EPCRA/Sara Title III audits, reporting and investigated administrative complaints for private clients.
- Prepared, reviewed, and certified numerous Spill Prevention Control and Countermeasure Plans (SPCCPs) in accordance with 40 CFR Part 112 for NYS Parks, NYCDOS, and private clients.
- UST Closure activities for private clients in Long Island, NY in accordance with SCDHS requirements.
- SCDHS Article 7 compliance reviews for restricted chemical storage for private clients.
- SCDPW sewer connection and agreements for private clients.
- Prepared and acquired NYCDEP construction dewatering permits for private clients in NYC.
- Developed Stormwater Management Plan for Town of Smithtown in response to USEPA notice of violations.
- Prepared SAPs and performed Indoor Air Quality Sampling for VOCs and mold for municipalities and industrial clients in Long Island.
- Baseline and semi-annual monitoring, BMR and SMR reporting, and sampling for wastewater discharges for compliance with NYCDEP and SCDPW requirements.
- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Monitoring included calibration and operation of photoionization detector (PID) and flame-ionization detector (FID) for organic vapors and combustible gas indicator (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- Site Specific Health and Safety Plans (HASPs) for USACE, USDA, NYSOGS, and private clients.
- Sound level studies to determine compliance with local noise ordinances for private clients.
- Prepared engineering reports for Long Island Well permits.
- Prepared Solid Waste Management Plan (SWMP) for Town of Riverhead.
- Performed compliance inspections and corrected NOV's for shellfish operation in Westbury, NY.

Site Investigation & Remediation

- Petroleum Spill Investigations (gasoline, diesel, No. 2 and No. 6 fuel oil, and lubricating oil) and associated closure work for tanks and other types of discharges for NYSOGS, USAF and private clients in the metropolitan and upstate NY regions.

- Identification, characterization, and removal of hazardous material and hazardous waste at industrial facilities and psychiatric centers for NYSOGS and private clients in Long Island and NYC.
- Developed and Implemented SAPs for USCG Station dredging projects in Long Island in accordance with NYSDEC Region 1 Marine Habitat Division protocols.
- Quarterly and semi-annual sampling/monitoring and reporting in accordance with NYSDEC Part 360 regulations for several landfills in Long Island.
- ASTM Phase I Environmental Assessments for property transactions in Suffolk, Nassau, and the five boroughs of New York.
- Sampling and Analysis Plans for Phase II investigations in Long Island and NYC.
- Groundwater, soil, and air sampling at numerous sites on Long Island and NYC for landfill closures, remedial investigations, and petroleum spills.
- Hazardous, Toxic, and Radioactive Waste (HTRW) Surveys and Preliminary Assessments in NY and NJ for FAA and USACE.
- Polychlorinated Biphenyl (PCB) basewide (3500 acres) evaluation of electrical equipment at Griffiss Air Force Base.
- Anthrax sampling for IRS mail sorting facilities in Holtsville, NY, and Andover, MA.
- Performed Indoor Air Quality Studies for office buildings in Long Island, NY.
- Performed Environmental Assessment Boring Programs (EABP) for NYCT stations/substation construction projects.
- Remediation of lead contaminated soil at four water tower sites at Barksdale Air Force Base, LA via excavation/disposal. Feasibility studies, work plans, Health and Safety Plans, Closure Reports, and No Further Response Action Planned Memorandums were prepared in conjunction with the remediation.
- In-situ soil remediation of VOCs through vapor extraction and soil aeration techniques at Long Island and NJ contaminated sites.
- Estimated the remaining volume and footprint for the Youngs Avenue Landfill, Riverhead, NY, which currently was in full scale reclamation mode, via a boring and excavation plan involving numerous deep borings and shallow test pits and topographic surveys/landfill maps.
- Cultural resource projects for USACE and FAA in the northeast region including cultural resource surveys; cultural resource assessments; underwater archeology surveys; and recordations.
- Wetland Delineations and Biological Surveys (Grassland Birds) in support of FAA EAs at Teterboro Airport.
- Historic Preservation Plan for Plum Island NY and Historic Structure Report for Plum Island Light Station, Plum Island Animal Disease Center, NY.
- Environmental Scoping Document and presentation agenda for the District's Atlantic Coast of Long Island Fire Island Inlet to Montauk Point, NY Storm Damage Reduction Reformation Study.
- Preliminary Environmental Assessment (PEA) Reconnaissance Studies for USACE Flood Control and Shore Protection Projects in South River, Raritan River Basin, NJ and Cliffwood Beach, NJ.
- Environmental assessment and architectural and historical study for a USMA historical building/site at West Point, NY.
- Draft Supplemental Environmental Impact Statement (EIS) Limited Reevaluation Study for the Deepening of the Arthur Kill/Howland Hook Navigation Channel in NY/NJ.
- Water resources impact analysis for Ramapo Energy Limited Partnership DEIS.
- Long and Short Environmental Assessment Forms (EAFs) for construction and site development projects in Long Island, NY.
- Environmental Assessments for Federal Aviation Administration (FAA) navigational aid projects at numerous airports in the northeast region in accordance with the National Environmental Policy Act (NEPA) and FAA order 1050.1D Policies and Procedures for Considering Environmental Impacts. Airport projects included Instrument Landing Systems (ILS), Approach Lighting Systems, Remote Transmitters, Doppler Equipment, Air Traffic Control Towers and Air Route Traffic Control Centers. Airports and support areas included Teterboro, Richmond Intl, Baltimore Washington Intl, Syracuse-Hancock Intl, Newark Intl, Stewart, Philadelphia Intl, LaGuardia Intl, and Leesburgh.
- Environmental assessments for the Army and Air Force Exchange Service (AAFES) at bases in Oahu, HI in accordance with NEPA, AR-200 Environmental Effects of Army Actions and DOD Directive 6050.1 Environmental Effects in the US of DOD Actions. Projects included capital improvement projects at Schofield Barracks, Helemano Military Reservation, Aliamanu Military Reservation, and Bellows Air Force Base.
- Surveying and mapping 3 shoreline and wetland conservation areas as part of a stipulation agreement between NYSDEC and PIADC on Plum Island, NY.

Environmental Impact Analysis

- Coastal/Biological Monitoring Program components for the USACE, New York District Beach Erosion Control Projects including intertidal ichthyoplankton studies, intertidal offshore finfish studies, nearshore and offshore benthic sampling, water quality analysis, and creel census.

- Environmental Assessment for Rehabilitation of the Mine Lake Dam for USAG West Point, NY.
- Long Form EAF and Pine Barrens Core Preservation Area application for Westhampton Ready Mix Corp.
- Evaluated stormwater and subsurface impacts for D/FEIS and Findings Statement for parking improvements and conversion of building use from warehouse to office space at a 93-acre site in Village of Lake Success/Town of North Hempstead, NY.
- Evaluated Planned Development District (PDD) Alternatives for former 105-acre Dowling College site in Brookhaven, NY.
- Hazardous waste and disposal issues for case between defendant/Salinger & Sack and Ecolab, Inc.
- Engineering and Permitting issues for case between Town of Brookhaven and BRT for new rail line in Yaphank, NY. Landfill volume evaluation and closure alternatives for case between Town of Riverhead and Grimes Contracting.
- Hydrology and stormwater issues for case between Town of Greenburgh and Fortress Bible Church.
- Site contamination and site management plans, engineering and institution control issues for case between Town residents and City of Glen Cove/developers in Glen Cove, NY.

Expert Witness Testimony

- Beach erosion and accretion issues and evaluation of engineering/construction alternatives for case between Sea Gate Beach Club and USACE.



Mr. Bukoski is an Environmental Scientist with diversified experience in both the Federal and private sector, including groundwater and soil investigations and evaluation, soil remediation projects, soil vapor intrusion evaluation, aquifer testing and interpretation, design and management of soil and groundwater remediation projects, groundwater flow modeling, evaluation of site compliance with environmental regulations, air quality evaluations, and environmental permitting.

Functional Role	Title	Years of Experience
Environmental Scientist	Project Manager	21

Personal Data

Education

B.S./1998/Environmental Science/SUNY Buffalo

Registration and Certifications

Professional Geologist, NY #438

OSHA 40-hr and current 8-hr Health and Safety Training Course (1999-present)

OSHA-Approved 8-hr Health and Safety Training Refresher Courses (2000-Present)

OSHA-Approved 8-hr Site Safety Supervisor Training Course (2008)

MTA NYC Transit Track Safety Certification

National Groundwater Association

Long Island Association of Professional Geologists

Advanced Technologies for Natural Attenuation Certification

Employment History

1999-present FPM Group

1991-1998 Sutherland's Office Centre

1985-1991 United States Marine Corps

Detailed Experience

Site Investigations

- Performed Phase I Environmental Site Assessments and Phase II Investigations for numerous sites in New York State, including commercial buildings, aerospace facilities, former research and development facilities, and large manufacturing plants.
- Provided oversight and coordination for ongoing investigation and remedial projects at numerous New York State Inactive Hazardous Waste Disposal (Superfund) Sites, Voluntary Cleanup Program (VCP) Sites, and Brownfield Cleanup Program (BCP) Sites. Investigations included Site Characterization (SC), Remedial Investigation/Feasibility Studies (RI/FS), and RCRA Facility Investigations. Remedial services have included contaminated soil removals; UIC closures, ORC

and HRC injections; design, installation and operation of air sparge/soil vapor extraction (AS/SVE) systems; sub-slab depressurization systems (SSDS) and, capping.

- Managed site investigation activities, including soil vapor and air sampling, soil sampling and analysis, groundwater sampling and analysis, and geotechnical evaluation for numerous sites in New York State in support of negotiations for property purchases and redevelopment.
- Investigated several petroleum-contaminated spill sites at Griffiss AFB, Rome, NY. Performed soil and groundwater sampling via Geoprobe, installed groundwater wells for monitoring and assessment of attenuation. Proposed remediation technologies for soil and groundwater contamination. Analyzed chemical data and prepared Site Investigation (SI) Reports and closure reports.
- Investigated several chlorinated solvent-contaminated sites at Griffiss AFB, Rome, NY. Performed aquifer testing to establish direction of groundwater flow. Collected groundwater samples and analyzed the chemical data to identify the constituents of concern. Proposed remediation technologies for groundwater contamination.
- Supervised drilling installation, development, and sampling of monitoring wells at numerous sites throughout New York State. Utilized resulting stratigraphic, hydrologic, and chemical analytical data to evaluate site conditions. Prepared investigation reports identifying site history, contaminant characteristics, sampling methods, and site-specific lithology.
- Managed landfill monitoring projects at several landfills in Suffolk County. Collected and evaluated methane and groundwater monitoring data. Prepared reports documenting monitoring results and provided recommendations regarding methane collection, stormwater runoff, capping, and other landfill management strategies.

- Performed long-term monitoring projects at several landfills at Griffiss AFB. Collected groundwater, leachate, and surface water samples. Evaluated resulting data and prepared monitoring reports for state and federal agency review.

Remediation

- Performed investigation and remedial activities at several NYSDEC BCP sites in New York City. Prepared Remedial Investigation and Remedial Work Plans; coordinated with the owner, contractors, and the NYSDEC; conducted citizen participation activities; performed waste characterization, waste profiles, and waste management; developed Site Management Plans for NYSDEC approval.
- Performed waste characterization of a 90,000-cy construction soil stockpile at a municipal sewer facility. Responsibilities included development and implementation of Sampling and Analysis Plan (SAP), evaluation of lab data, preparation of Field Sampling Summary Reports (FSSR), coordination with disposal facilities, and preparation of waste profiles.
- Developed pilot test plans, evaluated pilot test results, and prepared conceptual designs for several air sparge/soil vapor extraction (AS/SVE) systems to treat petroleum and/or chlorinated solvent VOCs. Provided construction oversight for system installation. Performed routine system operation monitoring and evaluated system performance. Prepared system installation and monitoring reports.
- Assisted in the design of a soil remediation plan and performed construction and soil remediation oversight for a metal parts plating and manufacturing facility in Suffolk County, New York. Remediated numerous leaching pools impacted with petroleum compounds and metals. Prepared a UIC Closure Report for USEPA approval.
- Assisted in the design and oversight of indoor underground storage tank abandonment program, leaching pool remediation plan, and managed contractor support for several manufacturing facilities in Suffolk County, New York.

Hydrogeologic Evaluations

- Performed well design (gravel pack size, screen size, etc.) for numerous groundwater wells and variable depths on Long Island. Experience includes sieve analyses, well construction and development methods.
- Performed aquifer pumping and slug tests and evaluated hydrologic properties using the computer

program AQTESOLV for several sites in New York City and Long Island.

- Participated in multi-day, multi-well aquifer pumping test for New York City Transit (NYCT). Responsible for operating and maintaining data logging equipment, coordinating manual water level measurements, and analyzing resulting drawdown data.
- Performed water level and water quality monitoring at several sites in Nassau and Suffolk Counties. Constructed groundwater elevation contour maps and utilized chemical analytical data to predict contaminant plume migration.
- Supervised drilling, installation and development of groundwater monitoring wells at three sites within Griffiss AFB, NY and numerous sites in New York City and Long Island. Performed aquifer testing and constructed groundwater elevation contour maps to delineate plumes and predict contaminant plume migration.

Landfills

- Managed ongoing groundwater and methane monitoring programs for Town of East Hampton landfills. Responsibilities included field team coordination, communications with the Town, report scheduling, data package review, and report preparation for distribution to the client and NYSDEC.
- Managed and conducted quarterly methane monitoring at Springs-Fireplace Road and Montauk Landfills for the Town of East Hampton. Tabulated resulting data, evaluated historic methane monitoring results, and recommended appropriate actions including methane monitoring well installations and a methane extraction system. Performed off-site methane monitoring on private property confirm methane containment. Prepared quarterly monitoring reports for submittal to the Town and NYSDEC.
- Performed monthly methane monitoring and prepared monitoring reports for all Town of Islip Landfills. Monitoring program included onsite and offsite methane wells, methane collection systems, and flare systems. Data was recorded electronically and downloaded to computer for formatting prior to delivery to Town. Prepared monthly monitoring reports for submittal to the Town and NYSDEC.
- Produced quarterly and annual monitoring reports for all monitoring programs at Town of Smithtown landfill. Project included tabulation and reporting of groundwater and methane monitoring data, solid waste and recycling collection data, yard waste

composting operations, and landfill leachate collection and disposal data.

Water Quality Monitoring

- Conducted groundwater monitoring for the Town of Riverhead, including sampling a multi-depth monitoring well network, analysis and interpretation of analytical and hydrogeologic data, and monitoring reporting in accordance with NYSDEC requirements. Responsibilities including sampling, communications with the Town, laboratory data package review, and report preparation for distribution to the client and NYSDEC.
- Conducted investigation and remedial projects at several New York State BCP Sites. Tasks included contaminated soil removal, groundwater remediation and long-term monitoring, groundwater plume evaluation, and preparation and submittal of annual reports to the NYSDEC.
- Coordinated and performed onsite and offsite groundwater monitoring at various petroleum release sites on Long Island, the New York metropolitan area and in Westchester County in accordance with NYSDEC requirements. Utilized resulting stratigraphic, hydrologic, and chemical analytical data to evaluate site conditions. Prepared work plans identifying site history, contaminant characteristics, sampling methods, and site-specific lithology. Monitoring programs generally included installation and sampling of a multi-depth monitoring well network utilizing standard or low flow sampling techniques, analysis and interpretation of analytical and hydrogeologic data, and reporting.
- Performed water level and water quality monitoring at an industrial site in Mattituck, NY. Constructed groundwater elevation contour maps and utilized chemical analytical data to predict contaminant plume migration. Prepared reports, coordinated with the property owner and NYSDEC, and developed a closure plan.
- Conducted numerous investigations and remediation of contaminated cesspool and stormwater drain pool systems in Nassau and Suffolk County. Fully conversant with County regulations for investigation and cleanup of leaching pool systems, including Action Levels and Cleanup Standards, groundwater monitoring criteria, and remedial requirements.

Griffiss Air Force Base

- Conducted several Site Investigations for AFCEE. Performed soil and groundwater sampling, aquifer testing, and recommended cleanup procedures necessary for the closure and conversion of the Base. Responsible for compliance with all applicable laws including CERCLA, SARA, RCRA, and NCP.

Roslyn Air National Guard Station

- Conducted several Site Investigations for Roslyn ANG base closure work. Performed soil and groundwater sampling, aquifer testing, and mold evaluations. Prepared reports documenting recommended cleanup procedures necessary for the closure and conversion of the Base. Responsible for compliance with all applicable laws including CERCLA, SARA, RCRA, and NCP.

Health and Safety

- Prepared numerous health and safety plans for remediation and construction sites and served as health and safety officer at a variety of work sites.
- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Monitoring included calibration and operation of photoionization detectors (PIDs), flame-ionization detectors (FIDs), dust monitors, and combustible gas indicators (CGI). Compared results to applicable action levels and undertook preventative/protective measures as necessary.
- Performed community monitoring, including monitoring for noise, particulates (dust), and organic vapors at several sites throughout New York State. Recorded observations and compared to applicable action levels. Implemented calibration and operation programs and training for noise meters, particulate monitors, PIDs, and FIDs.
- Performed screening for radiation at several sites. Operated Geiger counters in different radiation modes and compared data to background readings.

Miscellaneous Projects

- Performed unexploded ordnance evaluations and mapping for the United States Marine Corps at several munitions ranges in 29 Palms, California, and Camp Lejeune, North Carolina.
- Conducted land survey and mapping for the United States Marine Corps at several artillery ranges in 29 Palms, California and Camp LeJeune, North Carolina.

APPENDIX C

EC/IC CERTIFICATION



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details		Box 1	
Site No.	C224160		
Site Name Cinderella 248 LLC			
Site Address: 248 Flatbush Avenue		Zip Code: 11217	
City/Town: Brooklyn			
County: Kings			
Site Acreage: 0.050			
Reporting Period: March 27, 2019 to March 27, 2020			
		YES	NO
1. Is the information above correct?		X	☐
If NO, include handwritten above or on a separate sheet.			
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5. Is the site currently undergoing development?		☐	X
		Box 2	
		YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		X	☐
7. Are all ICs/ECs in place and functioning as designed?		X	☐
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address these issues.			
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date	

Box 2A

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

☐ ☒

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid?
(The Qualitative Exposure Assessment must be certified every five years)

☒ ☐

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C224160**Box 3****Description of Institutional Controls**

Parcel
936-12

Owner
Cinderella 248 LLC

Institutional Control

Ground Water Use Restriction
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

1. Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
2. Allows the use and development of the controlled property for restricted-residential use, which allows for commercial use and industrial use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
3. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
4. Requires compliance with the Department approved Site Management Plan.

Box 4**Description of Engineering Controls**

Parcel
936-12

Engineering Control

Vapor Mitigation

Operation and maintenance of a sub-slab depressurization system (SSDS) to mitigate soil vapor intrusion at the site building and adjacent buildings.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ X

☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒ X

☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C224160

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michael Pritchik at c/o Pritchik 254 Flatbush Ave
print name print business address Brooklyn NY

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

[Signature]
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

4/1/20
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I KEVIN LOYST at FPM GROUP, 640 JOHNSON AVE, SUITE 101, BOHEMIA, NY 11716
print name print business address

am certifying as a Professional Engineer for the _____
(Owner or Remedial Party)



[Signature]
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

[Stamp]
Stamp
(Required for PE)

4-22-20
Date

APPENDIX D

SYSTEM OPERATING LOG

SSDS OPERATING LOG
CINDERELLA 248 LLC SITE - NYSDEC SITE NO. C224160
248 FLATBUSH AVENUE, BROOKLYN, NY

	SSDS									Vapor Monitoring Points								
	Vacuum Before Air Filter	Vacuum After Air Filter	Vacuum at Well SSDS-1	Flowrate at Well SSDS-1	Vacuum at Well SSDS-2	Flowrate at Well SSDS-2	Vacuum at Well SSDS-3	Flowrate at Well SSDS-3	Effluent PID	VMP-1	VMP-2	VMP-3	VMP-4	VMP -5	VMP-6	VMP-7	VMP=8	
	("H2O)		("H2O)	(SCFM)	("H2O)	(SCFM)	("H2O)	(SCFM)	(ppm)	("H2O)								
8/10/2016	24	32	18	60	18	60	16	60	150.0	0.02	0.05	0.02	0.02	0	0.005	0.15	0.1	
8/116/16	24	34	20	40	20	60	18	40	20.0	0.02	0.08	0.07	0.01	0.01	0.02	0.02	0.08	Effluent sample collected
8/25/2016	26	34	20	40	20	65	18	50	1.4	0.02	0.07	0.11	0.01	0.01	0.16	0.08	0.07	Effluent sample collected
8/31/2016	26	35	20	45	20	70	18	50	13.5	0.01	0.07	0.01	0.01	0.02	0.03	0.02	0.08	Effluent sample collected
9/20/2016	26	36	20	45	21	70	18	50	16.8	0.01	0.04	0.02	0.02	0.03	0.03	0.03	0.07	Effluent sample collected
12/28/2016	26	38	20	45	22	55	20	40	0.0	-	0.02	0.01	0.02	0.01	0.01	0.02	0.03	
3/29/2017	28	30	26	55	26	60	24	55	0.7	-	0.02	0.01	-	0	0.01	0.01	0.06	Effluent sample collected
6/27/2017	30	32	27	60	28	60	26	50	3.7	0.01	0.01	0.02	0	0	0.01	0.01	0.03	Effluent sample collected
9/28/2017	30	28	26	60	26	60	24	70	2.9	0	0.01	0.01	0.01	0	0	0.01	0.03	Effluent sample collected
12/28/2017	30	40	38	60	38	60	38	60	10.6									Effluent sample collected System offline on arrival - high knockout alarm
3/29/2018	30	28	24	60	26	60	24	60	12.4									System offline on arrival - high knockout alarm
4/15/2018	30	30	26	60	28	70	24	50	0.0	0.01	0.01	0.01	0.01	0	0.01	0.01	0.02	Effluent sample collected SVI Sampling performed
6/20/2018	30	30	28	70	30	70	25	60	0.0	0	0.01	0	0.01	0	0.01	0.01	0.11	Effluent sample collected
9/17/2018	30	30	26	70	28	80	25	70	0.0	0	0.01	0	0.01	0.01	0.01	0	0.02	Effluent sample collected
12/17/2018	32	30	26	70	28	70	26	65	0.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Effluent sample collected
3/27/2019	30	30	26	70	28	75	26	65	0.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
6/28/2019	30	30	26	75	28	75	26	65	0.0	0.025	0.02	0.01	0.015	0.01	0.01	0.005	0.25	Effluent Sample Collected
9/26/2019	32	30	28	75	30	90	26	90	2.7	0.02	0.02	-	-	0.015	0.02	0.01	0.18	Effluent Sample Collected
12/16/2019	30	30	26	75	28	75	26	65	0.0	0.025	0.02	0.01	0.015	0.01	0.01	0.005	0.25	Effluent Sample Collected

Notes:

"H₂O = inches of water

ppm = parts per million

scfm = standard cubic feet per minute

psi = pounds per square inch

APPENDIX E

LABORATORY REPORTS



587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone: 860.645.1102 • Fax: 860.645.0823

NY ANALYTICAL SERVICES PROTOCOL DATA PACKAGE

FPM Group
CINDERELLA

GCE89170

Ver 1

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Saturday, February 01, 2020

Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Project ID: CINDERELLA
SDG ID: GCE89170
Sample ID#s: CE89170 - CE89175

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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**NY ANALYTICAL SERVICES PROTOCOL
DATA PACKAGE**

Client: FPM Group
Project: CINDERELLA
Laboratory Project: GCE89170



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Tel. (860) 645-1102 Fax (860) 645-0823



NY Analytical Services Protocol Format

February 01, 2020

SDG I.D.: GCE89170

FPM Group CINDERELLA

Methodology Summary

Volatiles in Air

Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air: Method TO-15, Second Edition, U. S. Environmental Protection Agency, January 1999.



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NY Analytical Services Protocol Format

February 01, 2020

SDG I.D.: GCE89170

FPM Group CINDERELLA

Laboratory Chronicle

Sample	Analysis	Collection Date	Prep Date	Analysis Date	Analyst	Hold Time Met
CE89170	Volatiles (TO15)	12/16/19	12/18/19	12/18/19	KCA	Y
CE89171	Volatiles (TO15)	12/16/19	12/18/19	12/18/19	KCA	Y
CE89172	Volatiles (TO15)	12/16/19	12/18/19	12/18/19	KCA	Y
CE89173	Volatiles (TO15)	12/16/19	12/18/19	12/18/19	KCA	Y
CE89174	Volatiles (TO15)	12/16/19	12/18/19	12/18/19	KCA	Y
CE89175	Volatiles (TO15)	12/16/19	12/18/19	12/18/19	KCA	Y



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SDG Comments

February 01, 2020

SDG I.D.: GCE89170

Any compound that is not detected above the MDL/LOD is reported as ND on the report and is reported in the electronic deliverables (EDD) as <RL or U at the RL per state and EPA guidance.

Version 1: Analysis results minus raw data.

Version 2: Complete report with raw data.



Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823



Sample Id Cross Reference

February 01, 2020

SDG I.D.: GCE89170

Project ID: CINDERELLA

Client Id	Lab Id	Matrix
IA-2	CE89170	AIR
AMBIENT	CE89171	AIR
IA-4	CE89172	AIR
IA-3	CE89173	AIR
IA-1	CE89174	AIR
IA-4D	CE89175	AIR



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 808

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date

12/16/19 14:05
12/17/19 15:36

Time

Project ID: CINDERELLA
Client ID: IA-2

Laboratory Data

SDG ID: GCE89170
Phoenix ID: CE89170

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Volatiles (TO15)									
1,1,1,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	0.135	ND	1.00	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	0.130	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	0.143	ND	1.00	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	0.452	ND	1.00	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Acetone	2.36	0.421	0.421	5.60	1.00	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	0.461	ND	1.00	1.00	12/18/19	KCA	1
Benzene	ND	0.313	0.313	ND	1.00	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	0.193	ND	1.00	1.00	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	0.149	ND	1.00	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	0.097	ND	1.00	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	0.258	ND	1.00	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	0.321	ND	1.00	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.071	0.032	0.032	0.45	0.20	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	0.379	ND	1.00	1.00	12/18/19	KCA	1
Chloroform	ND	0.205	0.205	ND	1.00	1.00	12/18/19	KCA	1
Chloromethane	0.538	0.485	0.485	1.11	1.00	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	0.291	ND	1.00	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	0.118	ND	1.00	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	0.325	0.202	0.202	1.61	1.00	1.00	12/18/19	KCA	1
Ethanol	9.58	0.531	0.531	18.0	1.00	1.00	12/18/19	KCA	1
Ethyl acetate	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Ethylbenzene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Heptane	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	0.094	ND	1.00	1.00	12/18/19	KCA	1
Hexane	ND	0.284	0.284	ND	1.00	1.00	12/18/19	KCA	1
Isopropylalcohol	1.68	0.407	0.407	4.13	1.00	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Methylene Chloride	ND	0.864	0.864	ND	3.00	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
o-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Propylene	ND	0.581	0.581	ND	1.00	1.00	12/18/19	KCA	1
sec-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
Styrene	ND	0.235	0.235	ND	1.00	1.00	12/18/19	KCA	1
Tetrachloroethene	0.073	0.037	0.037	0.49	0.25	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Toluene	0.350	0.266	0.266	1.32	1.00	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	0.252	ND	1.00	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	0.037	ND	0.20	0.20	12/18/19	KCA	1
Trichlorofluoromethane	0.238	0.178	0.178	1.34	1.00	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	0.131	ND	1.00	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	0.078	ND	0.20	0.20	12/18/19	KCA	1
<u>QA/OC Surrogates/Internals</u>									
% Bromofluorobenzene	105	%	%	105	%	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	114	%	%	114	%	%	12/18/19	KCA	1
% IS-Bromochloromethane	114	%	%	114	%	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	113	%	%	113	%	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

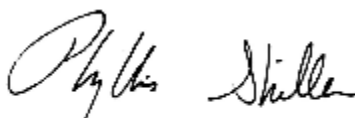
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 01, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 848

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date

12/16/19 13:55
12/17/19 15:36

Time

Project ID: CINDERELLA
Client ID: AMBIENT

Laboratory Data

SDG ID: GCE89170
Phoenix ID: CE89171

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
<u>Volatiles (TO15)</u>									
1,1,1,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	0.135	ND	1.00	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	0.130	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	0.143	ND	1.00	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	0.452	ND	1.00	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	3.51	0.166	0.166	21.1	1.00	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Acetone	2.12	0.421	0.421	5.03	1.00	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	0.461	ND	1.00	1.00	12/18/19	KCA	1
Benzene	ND	0.313	0.313	ND	1.00	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	0.193	ND	1.00	1.00	12/18/19	KCA	1

Client ID: AMBIENT

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	0.149	ND	1.00	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	0.097	ND	1.00	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	0.258	ND	1.00	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	0.321	ND	1.00	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.068	0.032	0.032	0.43	0.20	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	0.379	ND	1.00	1.00	12/18/19	KCA	1
Chloroform	ND	0.205	0.205	ND	1.00	1.00	12/18/19	KCA	1
Chloromethane	0.588	0.485	0.485	1.21	1.00	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	0.291	ND	1.00	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	0.118	ND	1.00	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	0.308	0.202	0.202	1.52	1.00	1.00	12/18/19	KCA	1
Ethanol	9.23	0.531	0.531	17.4	1.00	1.00	12/18/19	KCA	1
Ethyl acetate	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Ethylbenzene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Heptane	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	0.094	ND	1.00	1.00	12/18/19	KCA	1
Hexane	ND	0.284	0.284	ND	1.00	1.00	12/18/19	KCA	1
Isopropylalcohol	1.65	0.407	0.407	4.05	1.00	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Methylene Chloride	ND	0.864	0.864	ND	3.00	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
o-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Propylene	ND	0.581	0.581	ND	1.00	1.00	12/18/19	KCA	1
sec-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
Styrene	ND	0.235	0.235	ND	1.00	1.00	12/18/19	KCA	1
Tetrachloroethene	0.401	0.037	0.037	2.72	0.25	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Toluene	0.472	0.266	0.266	1.78	1.00	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	0.252	ND	1.00	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	0.037	ND	0.20	0.20	12/18/19	KCA	1
Trichlorofluoromethane	0.251	0.178	0.178	1.41	1.00	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	0.131	ND	1.00	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	0.078	ND	0.20	0.20	12/18/19	KCA	1
<u>QA/QC Surrogates/Internals</u>									
% Bromofluorobenzene	105	%	%	105	%	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	111	%	%	111	%	%	12/18/19	KCA	1
% IS-Bromochloromethane	111	%	%	111	%	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	110	%	%	110	%	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

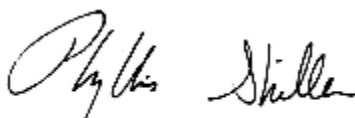
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 01, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 783

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date

12/16/19 14:15
12/17/19 15:36

Time

Project ID: CINDERELLA
Client ID: IA-4

Laboratory Data

SDG ID: GCE89170
Phoenix ID: CE89172

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Volatiles (TO15)									
1,1,1,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	0.135	ND	1.00	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	0.130	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	0.143	ND	1.00	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	0.452	ND	1.00	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Acetone	2.75	0.421	0.421	6.53	1.00	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	0.461	ND	1.00	1.00	12/18/19	KCA	1
Benzene	ND	0.313	0.313	ND	1.00	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	0.193	ND	1.00	1.00	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	0.149	ND	1.00	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	0.097	ND	1.00	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	0.258	ND	1.00	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	0.321	ND	1.00	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.073	0.032	0.032	0.46	0.20	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	0.379	ND	1.00	1.00	12/18/19	KCA	1
Chloroform	ND	0.205	0.205	ND	1.00	1.00	12/18/19	KCA	1
Chloromethane	0.626	0.485	0.485	1.29	1.00	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	0.291	ND	1.00	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	0.118	ND	1.00	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	0.294	0.202	0.202	1.45	1.00	1.00	12/18/19	KCA	1
Ethanol	5.78	0.531	0.531	10.9	1.00	1.00	12/18/19	KCA	1
Ethyl acetate	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Ethylbenzene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Heptane	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	0.094	ND	1.00	1.00	12/18/19	KCA	1
Hexane	ND	0.284	0.284	ND	1.00	1.00	12/18/19	KCA	1
Isopropylalcohol	2.30	0.407	0.407	5.65	1.00	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Methylene Chloride	ND	0.864	0.864	ND	3.00	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
o-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Propylene	ND	0.581	0.581	ND	1.00	1.00	12/18/19	KCA	1
sec-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
Styrene	ND	0.235	0.235	ND	1.00	1.00	12/18/19	KCA	1
Tetrachloroethene	0.071	0.037	0.037	0.48	0.25	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Toluene	0.712	0.266	0.266	2.68	1.00	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	0.252	ND	1.00	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	0.037	ND	0.20	0.20	12/18/19	KCA	1
Trichlorofluoromethane	0.257	0.178	0.178	1.44	1.00	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	0.131	ND	1.00	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	0.078	ND	0.20	0.20	12/18/19	KCA	1
<u>QA/QC Surrogates/Internals</u>									
% Bromofluorobenzene	103	%	%	103	%	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	111	%	%	111	%	%	12/18/19	KCA	1
% IS-Bromochloromethane	109	%	%	109	%	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	111	%	%	111	%	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

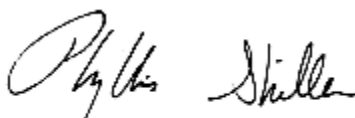
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 01, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 721

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date

12/16/19 13:32
12/17/19 15:36

Time

Project ID: CINDERELLA
Client ID: IA-3

Laboratory Data

SDG ID: GCE89170
Phoenix ID: CE89173

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Volatiles (TO15)									
1,1,1,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	0.135	ND	1.00	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	0.130	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	0.143	ND	1.00	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	0.452	ND	1.00	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Acetone	2.67	0.421	0.421	6.34	1.00	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	0.461	ND	1.00	1.00	12/18/19	KCA	1
Benzene	ND	0.313	0.313	ND	1.00	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	0.193	ND	1.00	1.00	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	0.149	ND	1.00	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	0.097	ND	1.00	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	0.258	ND	1.00	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	0.321	ND	1.00	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.075	0.032	0.032	0.47	0.20	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	0.379	ND	1.00	1.00	12/18/19	KCA	1
Chloroform	ND	0.205	0.205	ND	1.00	1.00	12/18/19	KCA	1
Chloromethane	0.626	0.485	0.485	1.29	1.00	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	0.291	ND	1.00	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	0.118	ND	1.00	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	0.344	0.202	0.202	1.70	1.00	1.00	12/18/19	KCA	1
Ethanol	8.96	0.531	0.531	16.9	1.00	1.00	12/18/19	KCA	1
Ethyl acetate	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Ethylbenzene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Heptane	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	0.094	ND	1.00	1.00	12/18/19	KCA	1
Hexane	ND	0.284	0.284	ND	1.00	1.00	12/18/19	KCA	1
Isopropylalcohol	2.10	0.407	0.407	5.16	1.00	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Methylene Chloride	ND	0.864	0.864	ND	3.00	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
o-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Propylene	ND	0.581	0.581	ND	1.00	1.00	12/18/19	KCA	1
sec-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
Styrene	ND	0.235	0.235	ND	1.00	1.00	12/18/19	KCA	1
Tetrachloroethene	0.066	0.037	0.037	0.45	0.25	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Toluene	0.386	0.266	0.266	1.45	1.00	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	0.252	ND	1.00	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	0.037	ND	0.20	0.20	12/18/19	KCA	1
Trichlorofluoromethane	0.255	0.178	0.178	1.43	1.00	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	0.131	ND	1.00	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	0.078	ND	0.20	0.20	12/18/19	KCA	1
<u>QA/OC Surrogates/Internals</u>									
% Bromofluorobenzene	103	%	%	103	%	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	109	%	%	109	%	%	12/18/19	KCA	1
% IS-Bromochloromethane	109	%	%	109	%	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	110	%	%	110	%	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

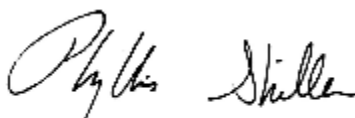
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 01, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 729

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date

12/16/19 14:00
12/17/19 15:36

Time

Project ID: CINDERELLA
Client ID: IA-1

Laboratory Data

SDG ID: GCE89170
Phoenix ID: CE89174

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
<u>Volatiles (TO15)</u>									
1,1,1,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	0.135	ND	1.00	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	0.130	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	0.143	ND	1.00	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	0.452	ND	1.00	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Acetone	15.6	0.421	0.421	37.0	1.00	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	0.461	ND	1.00	1.00	12/18/19	KCA	1
Benzene	ND	0.313	0.313	ND	1.00	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	0.193	ND	1.00	1.00	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	0.149	ND	1.00	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	0.097	ND	1.00	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	0.258	ND	1.00	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	0.321	ND	1.00	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.079	0.032	0.032	0.50	0.20	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	0.379	ND	1.00	1.00	12/18/19	KCA	1
Chloroform	0.630	0.205	0.205	3.07	1.00	1.00	12/18/19	KCA	1
Chloromethane	ND	0.485	0.485	ND	1.00	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	0.291	ND	1.00	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	0.118	ND	1.00	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	ND	0.202	0.202	ND	1.00	1.00	12/18/19	KCA	1
Ethanol	400	E 0.531	0.531	753	1.00	1.00	12/18/19	KCA	1 1
Ethyl acetate	0.342	0.278	0.278	1.23	1.00	1.00	12/18/19	KCA	1 1
Ethylbenzene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Heptane	0.459	0.244	0.244	1.88	1.00	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	0.094	ND	1.00	1.00	12/18/19	KCA	1
Hexane	ND	0.284	0.284	ND	1.00	1.00	12/18/19	KCA	1
Isopropylalcohol	16.0	0.407	0.407	39.3	1.00	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	0.767	0.339	0.339	2.26	1.00	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Methylene Chloride	ND	0.864	0.864	ND	3.00	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1 1
o-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Propylene	ND	0.581	0.581	ND	1.00	1.00	12/18/19	KCA	1 1
sec-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1 1
Styrene	ND	0.235	0.235	ND	1.00	1.00	12/18/19	KCA	1
Tetrachloroethene	0.152	0.037	0.037	1.03	0.25	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1 1
Toluene	1.19	0.266	0.266	4.48	1.00	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	0.252	ND	1.00	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	0.037	ND	0.20	0.20	12/18/19	KCA	1
Trichlorofluoromethane	ND	0.178	0.178	ND	1.00	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	0.131	ND	1.00	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	0.078	ND	0.20	0.20	12/18/19	KCA	1
<u>QA/OC Surrogates/Internals</u>									
% Bromofluorobenzene	105	%	%	105	%	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	100	%	%	100	%	%	12/18/19	KCA	1
% IS-Bromochloromethane	92	%	%	92	%	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	104	%	%	104	%	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

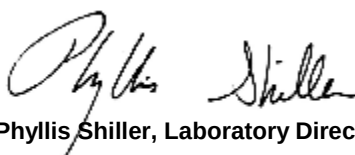
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

E = Estimated value quantitated above calibration range for this compound.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 01, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 823

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date

12/16/19 14:10
12/17/19 15:36

Time

Project ID: CINDERELLA
Client ID: IA-4D

Laboratory Data

SDG ID: GCE89170
Phoenix ID: CE89175

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Volatiles (TO15)									
1,1,1,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	0.146	ND	1.00	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	0.183	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	0.135	ND	1.00	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	0.130	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	0.247	ND	1.00	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	0.143	ND	1.00	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	0.452	ND	1.00	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	ND	0.166	0.166	ND	1.00	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Acetone	2.87	0.421	0.421	6.81	1.00	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	0.461	ND	1.00	1.00	12/18/19	KCA	1
Benzene	ND	0.313	0.313	ND	1.00	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	0.193	ND	1.00	1.00	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	0.149	ND	1.00	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	0.097	ND	1.00	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	0.258	ND	1.00	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	0.321	ND	1.00	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.074	0.032	0.032	0.47	0.20	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	0.217	ND	1.00	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	0.379	ND	1.00	1.00	12/18/19	KCA	1
Chloroform	ND	0.205	0.205	ND	1.00	1.00	12/18/19	KCA	1
Chloromethane	0.603	0.485	0.485	1.24	1.00	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	0.051	ND	0.20	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	0.291	ND	1.00	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	0.118	ND	1.00	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	0.384	0.202	0.202	1.90	1.00	1.00	12/18/19	KCA	1
Ethanol	6.04	0.531	0.531	11.4	1.00	1.00	12/18/19	KCA	1
Ethyl acetate	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Ethylbenzene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Heptane	ND	0.244	0.244	ND	1.00	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	0.094	ND	1.00	1.00	12/18/19	KCA	1
Hexane	ND	0.284	0.284	ND	1.00	1.00	12/18/19	KCA	1
Isopropylalcohol	2.14	0.407	0.407	5.26	1.00	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	0.204	ND	1.00	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	0.278	ND	1.00	1.00	12/18/19	KCA	1
Methylene Chloride	ND	0.864	0.864	ND	3.00	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
o-Xylene	ND	0.230	0.230	ND	1.00	1.00	12/18/19	KCA	1
Propylene	ND	0.581	0.581	ND	1.00	1.00	12/18/19	KCA	1
sec-Butylbenzene	ND	0.182	0.182	ND	1.00	1.00	12/18/19	KCA	1
Styrene	ND	0.235	0.235	ND	1.00	1.00	12/18/19	KCA	1
Tetrachloroethene	0.064	0.037	0.037	0.43	0.25	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	0.339	ND	1.00	1.00	12/18/19	KCA	1
Toluene	0.489	0.266	0.266	1.84	1.00	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	0.252	ND	1.00	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	0.221	ND	1.00	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	0.037	ND	0.20	0.20	12/18/19	KCA	1
Trichlorofluoromethane	0.264	0.178	0.178	1.48	1.00	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	0.131	ND	1.00	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	0.078	ND	0.20	0.20	12/18/19	KCA	1
<u>QA/OC Surrogates/Internals</u>									
% Bromofluorobenzene	104	%	%	104	%	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	108	%	%	108	%	%	12/18/19	KCA	1
% IS-Bromochloromethane	108	%	%	108	%	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	109	%	%	109	%	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

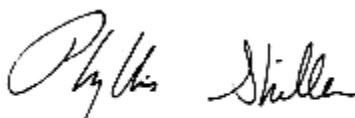
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 01, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Canister Sampling Information

February 01, 2020

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Location Code: FPMGROUP

SDG I.D.: GCE89170

Project ID: CINDERELLA

Client Id	Lab Id	Canister		Reg. Id	Chk Out Date	Laboratory					Field			
		Id	Type			Out Hg	In Hg	Out Flow	In Flow	Flow RPD	Start Hg	End Hg	Sampling Start Date	Sampling End Date
IA-2	CE89170	808	1.4L	5618	12/13/19	3.11	-2	3.11	3.12	0.3	-30	-4	12/16/19 8:35	12/16/19 14:05
AMBIENT	CE89171	848	1.4L	5521	12/13/19	-30	-2	3.11	3.11	0.0	-30	-3	12/16/19 8:30	12/16/19 13:55
IA-4	CE89172	783	1.4L	5237	12/13/19	-30	-2	3.11	3.15	1.3	-30	-4	12/16/19 8:55	12/16/19 14:15
IA-3	CE89173	721	1.4L	7000	12/13/19	-30	-1	3.11	3.20	2.9	-30	-3	12/16/19 8:45	12/16/19 13:52
IA-1	CE89174	729	1.4L	6234	12/13/19	-30	-5	3.11	3.11	0.0	-30	-4	12/16/19 9:00	12/16/19 14:00
IA-4D	CE89175	823	1.4L	5623	12/13/19	-30	-3	3.11	3.10	0.3	-30	-4	12/16/19 9:30	12/16/19 14:10



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QA/QC Report

February 01, 2020

QA/QC Data

SDG I.D.: GCE89170

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510810 (ppbv), QC Sample No: CE89256 (CE89170, CE89171, CE89172, CE89173, CE89174, CE89175)												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	84	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	85	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	97	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	98	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	63	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	83	1.06	1.07	0.215	0.218	NC	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	98	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.250	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.220	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	89	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	83	ND	ND	ND	ND	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	87	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	79	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	106	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	79	ND	ND	ND	ND	NC	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	92	15.7	16.0	6.60	6.73	2.0	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	93	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	0.310	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	86	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	86	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	90	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	103	0.48	0.50	0.076	0.079	NC	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	89	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	0.380	ND	1.00	92	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	0.200	ND	0.98	104	ND	ND	ND	ND	NC	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	84	1.11	1.12	0.540	0.541	NC	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.256	ND	1.01	106	4.12	4.36	1.04	1.10	5.6	70 - 130	25
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	0.290	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	102	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	104	5.98	5.88	1.21	1.19	1.7	70 - 130	25
Ethanol	ND	0.530	ND	1.00	88	67.6	66.1	35.9	35.1	2.3	70 - 130	25

QA/QC Data

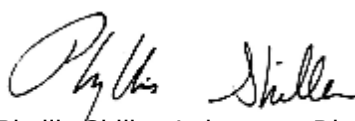
SDG I.D.: GCE89170

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
Ethyl acetate	ND	0.280	ND	1.01	101	1.10	1.07	0.305	0.298	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	84	ND	ND	ND	ND	NC	70 - 130	25
Heptane	ND	0.240	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	75	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	103	ND	ND	ND	ND	NC	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	88	19.0	19.7	7.75	8.00	3.2	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	85	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	87	ND	ND	ND	ND	NC	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	94	ND	ND	ND	ND	NC	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	91	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	89	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	90	ND	ND	ND	ND	NC	70 - 130	25
Propylene	ND	0.580	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	84	ND	ND	ND	ND	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	96	359	371	53.0	54.7	3.2	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	96	ND	ND	ND	ND	NC	70 - 130	25
Toluene	ND	0.270	ND	1.02	102	1.33	1.34	0.353	0.357	NC	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	96	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	100	3.80	3.80	0.708	0.707	0.1	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	91	1.42	1.46	0.253	0.260	NC	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	87	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	99	%	99	%	111	117	114	117	114	NC	70 - 130	25
% IS-1,4-Difluorobenzene	124	%	124	%	77	107	105	107	105	NC	60 - 140	25
% IS-Bromochloromethane	134	%	134	%	72	103	101	103	101	NC	60 - 140	25
% IS-Chlorobenzene-d5	117	%	117	%	81	95	95	95	95	NC	60 - 140	25

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
 LCS - Laboratory Control Sample
 LCSD - Laboratory Control Sample Duplicate
 MS - Matrix Spike
 MS Dup - Matrix Spike Duplicate
 NC - No Criteria
 Intf - Interference


 Phyllis Shiller, Laboratory Director
 February 01, 2020

Sample Criteria Exceedances Report**GCE89170 - FPMGROUP**

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE89170	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.071	0.032	0.032	0.032	ppbv
CE89170	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.45	0.20	0.2	0.2	ug/m3
CE89171	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.068	0.032	0.032	0.032	ppbv
CE89171	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.43	0.20	0.2	0.2	ug/m3
CE89172	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.073	0.032	0.032	0.032	ppbv
CE89172	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.46	0.20	0.2	0.2	ug/m3
CE89173	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.075	0.032	0.032	0.032	ppbv
CE89173	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.47	0.20	0.2	0.2	ug/m3
CE89174	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.079	0.032	0.032	0.032	ppbv
CE89174	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.50	0.20	0.2	0.2	ug/m3
CE89175	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.074	0.032	0.032	0.032	ppbv
CE89175	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.47	0.20	0.2	0.2	ug/m3

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
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NY ANALYTICAL SERVICES PROTOCOL
DATA PACKAGE

Client: FPM Group

CINDERELLA

Laboratory Project: GCE89170

Volatile TO15
Ver 1

Organic Data Flags

LOD(MDL): Limit of Detection or Method Detection Limit
The minimum reportable concentration that can be measured with confidence.

PQL(RL): Practical Quantitation Level or Reporting Level
This value is at or above the MDL and is supported by the lowest calibration standard.

Q Qualifiers:

U - The compound was analyzed for but not detected at or above the MDL. The number immediately preceding the "U" represents the PQL reporting level corrected for percent solids, weight and/or volume calculations, and dilution factors.

J - Indicates an estimated value, may indicate one of the following, depending on the situation:
a) The reported value is estimated and below the MDL
b) Used when estimating a concentration for TIC where a 1:1 response is assumed or when the result indicates the presence of a compound that meets the identification criteria, but the results is less than the quantitation limit, but greater than zero.
c) QC associated with this analyte is within warning limits.

X - The concentration is not reported. This quantitation file was not evaluated for this compound at this dilution; a volatile purging or related issue may be the cause.

L - Biased Low

N - The concentration is based on the response of the nearest internal. This flag is used on the TIC form for all compounds identified.

S - This compound is a solvent that is used in the laboratory. Laboratory contamination is suspected if concentration is less than five times the reporting level.

B - This compound was also present in the method blank

D - The reported concentration is the result of a diluted analysis.

E - The reported value is estimated because the concentration exceeded the calibration range.

A - Indicates that the tentatively identified compound is a suspected aldol condensation product. Aldol condensation products are produced during the extraction process.

Q - For TICS, this compound was quantitated using a calibration curve. This compound is part of the instrument method, but not part of the client target list.

P - Percent difference is greater than 25% between the two GC columns and the lower result is reported.



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SDG: GCE89170

Volatile Air Conformance / Non-Conformance Summary

Project ID / Client ID: CINDERELLA, FPM Group

Form 1 (Analysis):

No observations noted.

Form 2 (Surrogates):

All surrogates met criteria with the following exceptions: None.

Form 3 (Laboratory Control/Matrix Spike):

Sample: CE89256 LCS
All LCS recoveries met criteria with the following exceptions: 1,2,4-Trichlorobenzene 63%

Form 4 (Method Blank):

File: CHEM24 1217_06.D
All compounds were non-detect with the following exceptions: None.

Form 5 (Tune):

File: CHEM24 1216_01.D
All Tune criteria was met with the following exceptions: None.

File: CHEM24 1217_02.D
All Tune criteria was met with the following exceptions: None.

Form 6 (Initial Calibration):

Calibration: CHEM24 12/16/19 - 12/17/19
100% of method compounds met criteria.
The following compounds did not meet maximum % deviations: None.

Calibration: CHEM24 12/16/19 - 12/17/19
100% of method compounds met criteria.
The following compounds did not meet maximum % deviations: None.

Form 7 (Continuing Calibration):

File: CHEM24 1217_02.D (Opening)
99% of method compounds met criteria.
The following compounds did not meet maximum % deviations: Benzyl chloride 40.0% (20), 1,2,4-Trichlorobenzene 52.0% (20), Benzyl chloride(sim) 26.0% (20), 1,4-Dichlorobenzene(sim) 22.0% (20), 1,2-Dichlorobenzene(sim) 21.0% (20), n-Butylbenzene(sim) 22.0% (20), 1,2,4-Trichlorobenzene(sim) 50.0% (20)

Form 8 (Internal Standard and Retention Time):

File: CHEM24 - 24AIR_1216.M / 1217_02.D Full



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SDG: GCE89170

Volatile Air Conformance / Non-Conformance Summary

Project ID / Client ID: CINDERELLA, FPM Group

All samples met internal standard area and retention time criteria with the following exceptions: None.

File: CHEM24 - 24AIR_1216.M / 1217_02.D Sim

All samples met internal standard area and retention time criteria with the following exceptions: None.

File: CHEM24 - 24AIR_1216.M / Average Full

All samples met internal standard area and retention time criteria with the following exceptions: None.

File: CHEM24 - 24AIR_1216.M / Average Sim

All samples met internal standard area and retention time criteria with the following exceptions: None.

12/27/19

Alejandro Paredes

Project Manager

Lab Name:

Phoenix Environmental Labs

Client:

FPMGROUP

Lab Code:

Phoenix

Case No.:

SDG:

GCE89170

QC Batch Id:

510810

QC Sample Id:

CE89256

	CLIENT ID	LAB ID	SMC1 BFB #				TOT OUT
01	CE89256 LCS	CE89256 LCS	111				0
02	CE89256 BLANK	CE89256 BLANK	99				0
03	CE89256 QC	CE89256 QC	117				0
04	89256 dup	CE89256 DUP	114				0
05	IA-2	CE89170	105				0
06	AMBIENT	CE89171	105				0
07	IA-4	CE89172	103				0
08	IA-3	CE89173	103				0
09	IA-1	CE89174	105				0
10	IA-4D	CE89175	104				0
11	CE89256 QC 5X	CE89256 QC 5X	115				0
12							
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Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

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3
AIR LCS RECOVERY

Lab Name: Phoenix Environmental Labs Client: FPMGROUP
 Lab Code: Phoenix Case No: _____ SAS No: _____ SDG No GCE89170
 LCS - Client Id: CE89256 LCS

COMPOUND	SPIKE ADDED (ppbv)		LCS CONCENTRATION (ppbv)	LCS % REC #	QC. LIMITS REC.	
Propylene	10		11.43	114	70	130
Dichlorodifluoromethane	10		10.40	104	70	130
Chloromethane	10		8.443	84	70	130
1,2-Dichlorotetrafluoroethane	10		8.908	89	70	130
Vinyl Chloride	10		8.735	87	70	130
1,3-Butadiene	10		8.733	87	70	130
Bromomethane	10		9.035	90	70	130
Chloroethane	10		9.171	92	70	130
Ethanol	8		7.047	88	70	130
Acetone	10		9.247	92	70	130
Trichlorofluoromethane	10		9.129	91	70	130
Isopropylalcohol	10		8.775	88	70	130
Acrylonitrile	10		9.350	94	70	130
1,1-Dichloroethene	10		9.809	98	70	130
Methylene Chloride	10		8.932	89	70	130
Carbon Disulfide	10		10.00	100	70	130
Trichlorotrifluoroethane	10		9.693	97	70	130
Trans-1,2-Dichloroethene	10		9.528	95	70	130
1,1-Dichloroethane	10		10.27	103	70	130
Methyl tert-butyl ether(MTBE)	10		9.128	91	70	130
Methyl Ethyl Ketone	10		9.356	94	70	130
Cis-1,2-Dichloroethene	10		10.57	106	70	130
Hexane	10		10.30	103	70	130
Chloroform	10		10.40	104	70	130
Ethyl acetate	10		10.13	101	70	130
Tetrahydrofuran	10		9.565	96	70	130
1,2-Dichloroethane	10		10.29	103	70	130
1,1,1-Trichloroethane	10		9.552	96	70	130
Benzene	10		9.549	95	70	130
Carbon Tetrachloride	10		10.26	103	70	130
Cyclohexane	10		10.06	101	70	130
1,2-dichloropropane	10		10.98	110	70	130
Bromodichloromethane	10		10.38	104	70	130
Trichloroethene	10		10.02	100	70	130
1,4-Dioxane	10		10.29	103	70	130
Heptane	10		9.600	96	70	130
cis-1,3-Dichloropropene	10		10.51	105	70	130
4-Methyl-2-pentanone(MIBK)	10		9.589	96	70	130
trans-1,3-Dichloropropene	10		9.562	96	70	130
1,1,2-Trichloroethane	10		9.666	97	70	130
Toluene	10		10.21	102	70	130
Dibromochloromethane	10		10.19	102	70	130
2-Hexanone(MBK)	10		10.57	106	70	130
1,2-Dibromoethane(EDB)	10		9.782	98	70	130

FORM III AIR

Lab Name: Phoenix Environmental Labs

Client: FPMGROUP

Lab Code: Phoenix

Case No:

SAS No:

SDG No GCE89170

LCS - Client Id: CE89256 LCS

[illegible]

4A
AIR METHOD BLANK SUMMARY

Client ID

CE89256 BLANK

Lab Name: Phoenix Environmental Labs

Client: FPMGROUP

Lab Code: Phoenix Case No.: _____

SAS No.: _____

SDG No.: GCE89170

Lab File ID: 1217_06.D

Lab Sample ID: CE89256 BLK

Date Analyzed: 12/17/2019

Time Analyzed: 21:30

GC Column: RTX-VMS

Lab Batch ID: 510810

Instrument ID: CHEM24

Heated Purge:(Y/N) Y

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	CE89256 LCS	CE89256 LCS	1217_04.D	20:29
02	CE89256 QC	CE89256	1217_07.D	22:06
03	89256 dup	CE89256	1217_08.D	22:42
04	IA-2	CE89170	1217_15.D	03:30
05	AMBIENT	CE89171	1217_16.D	04:06
06	IA-4	CE89172	1217_17.D	04:43
07	IA-3	CE89173	1217_18.D	05:20
08	IA-1	CE89174	1217_19.D	05:56
09	IA-4D	CE89175	1217_20.D	06:32
10	CE89256 QC 5X	CE89256 5X	1217_22.D	07:35
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV AIR

5B
AIR INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Phoenix Environmental Labs Client: FPMGROUP

Lab Code: Phoenix Case No.: _____ SAS No.: _____ SDG No.: GCE89170

Lab File ID: 1216_01.D BFB Injection Date: 12/16/19

Instrument ID: CHEM24 BFB Injection Time: 20:37

GC Column: RTX-VMS Heated Purge: (Y/N) Y

AutoFind: Scans 1676, 1677, 1678; Background Corrected with Scan 1668

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	14.3
75	30.0 - 66.0% of mass 95	41.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.6 (0.5)1
174	50.0 - 120.0% of mass 95	117.0
175	4.0 - 9.0% of mass 174	7.0 (8.3)1
176	93.0 - 101.0% of mass 174	98.5 (116.0)1
177	5.0 - 9.0% of mass 176	6.7 (7.8)1

1-Value is % mass 95

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	
01	ICAL 1	1.0ppb cc	1216_01.D	12/16/19	20:37	
02	ICAL 0.02	0.02 ppbV	1216_04.D	12/16/19	22:51	
03	ICAL 0.035	0.035 ppbV	1216_05.D	12/16/19	23:22	
04	ICAL 0.05	0.05 ppbV	1216_06.D	12/16/19	23:53	
05	ICAL 0.1	0.10 ppbv	1216_07.D	12/17/19	00:25	
06	ICAL 0.5	0.5ppbv	1216_08.D	12/17/19	01:00	
07	ICAL 2.5	2.5 ppbV	1216_09.D	12/17/19	01:36	
08	ICAL 5	5.0 ppbV	1216_10.D	12/17/19	02:07	
09	ICAL 25	25 ppbV	1216_11.D	12/17/19	02:43	
10	ICAL 40	40	1216_12.D	12/17/19	03:21	
11	ICAL 0.2	0.2ppb	1216_14.D	12/17/19	04:24	
12	ICAL 10	10ppb	1216_15.D	12/17/19	04:57	
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25						

(*) Outside 24 hr clock

FORM V AIR

CLPBFB

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_01.D
 Acq On : 16 Dec 2019 8:37 pm
 Operator : Keith
 Sample : 1.0ppb cc
 Misc :
 ALS Vial : 46 Sample Multiplier: 1

Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p

Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:06:11 2019

AutoFind: Scans 1676, 1677, 1678; Background Corrected with Scan 1668

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.3	39757	PASS
75	95	30	66	41.7	116053	PASS
95	95	100	100	100.0	278357	PASS
96	95	5	9	6.9	19211	PASS
173	174	0.00	2	0.5	1560	PASS
174	95	50	120	117.4	326848	PASS
175	174	4	9	7.0	22984	PASS
176	174	93	101	98.5	321920	PASS
177	176	5	9	6.7	21608	PASS

24AIR_1216.M Tue Dec 17 08:07:26 2019

5B
AIR INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Phoenix Environmental Labs

Client: FPMGROUP

Lab Code: Phoenix Case No.: _____

SAS No.: _____

SDG No.: GCE89170

Lab File ID: 1217_02.D

BFB Injection Date: 12/17/19

Instrument ID: CHEM24

BFB Injection Time: 19:21

GC Column: RTX-VMS

Heated Purge: (Y/N) Y

AutoFind: Scans 1678, 1679, 1680; Background Corrected with Scan 1670

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	15.1
75	30.0 - 66.0% of mass 95	42.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.5 (0.5)1
174	50.0 - 120.0% of mass 95	113.0
175	4.0 - 9.0% of mass 174	7.0 (7.9)1
176	93.0 - 101.0% of mass 174	97.8 (110.0)1
177	5.0 - 9.0% of mass 176	6.8 (7.6)1

1-Value is % mass 95

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED	
01	CCAL 1	1ppb cc	1217_02.D	12/17/19	19:21	
02	CE89256 LCS	CE89256 LCS	1217_04.D	12/17/19	20:29	
03	CE89256 BLANK	CE89256 BLANK	1217_06.D	12/17/19	21:30	
04	CE89256 QC	CE89256 QC	1217_07.D	12/17/19	22:06	
05	89256 dup	CE89256 DUP	1217_08.D	12/17/19	22:42	
06	IA-2	CE89170	1217_15.D	12/18/19	03:30	
07	AMBIENT	CE89171	1217_16.D	12/18/19	04:06	
08	IA-4	CE89172	1217_17.D	12/18/19	04:43	
09	IA-3	CE89173	1217_18.D	12/18/19	05:20	
10	IA-1	CE89174	1217_19.D	12/18/19	05:56	
11	IA-4D	CE89175	1217_20.D	12/18/19	06:32	
12	CE89256 QC 5X	CE89256 QC 5X	1217_22.D	12/18/19	07:35	
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25						

(*) Outside 24 hr clock

FORM V AIR

CLPBFB

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_02.D
 Acq On : 17 Dec 2019 7:21 pm
 Operator : Keith
 Sample : 1ppb cc
 Misc :
 ALS Vial : 71 Sample Multiplier: 1

Integration File signal 1: rteint.p
 Integration File signal 2: rteint2.p

Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:06:11 2019

AutoFind: Scans 1678, 1679, 1680; Background Corrected with Scan 1670

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.1	49213	PASS
75	95	30	66	42.6	138755	PASS
95	95	100	100	100.0	325461	PASS
96	95	5	9	7.0	22880	PASS
173	174	0.00	2	0.5	1682	PASS
174	95	50	120	113.0	367659	PASS
175	174	4	9	7.0	25648	PASS
176	174	93	101	97.8	359552	PASS
177	176	5	9	6.8	24600	PASS

24AIR_1216.M Wed Dec 18 08:41:09 2019

8A
AIR INTERNAL STANDARD AREA AND RT SUMMARY
Full Scan

Lab Name: Phoenix Environmental Labs Client: FPMGROUP
 Lab Code: Phoenix Case No.: _____ SAS No.: _____ SDG No.: GCE89170
 Lab Method / File Id: 24AIR_1216.M / Average Date Analyzed: 12/16/19
 Instrument ID: CHEM24 Time Analyzed: 20:37
 GC Column: _____ ID: 0.18 (mm) Heated Purge:(Y/N) Y

	IS1 (BCM) Area Avg #	RT Avg #	IS2 (DFB) Area Avg #	RT Avg #	IS3 (CBZ) Area Avg #	RT Avg #			LAB FILE ID
12 HOUR STD	283512	5.49	790213	7.41	350711	10.98			Average
UPPER LIMIT	398335	5.82	1110249	7.74	492749	11.31			Average
LOWER LIMIT	168690	5.16	470177	7.08	208673	10.65			Average
CLIENT ID									
01 ICAL 1	292050	5.48	786563	7.40	364513	10.98			1216_01.D
02 ICAL 0.5	367141	5.48	963879	7.40	422285	10.98			1216_08.D
03 ICAL 2.5	300986	5.49	823855	7.41	365834	10.98			1216_09.D
04 ICAL 5	272949	5.49	761085	7.41	344901	10.98			1216_10.D
05 ICAL 25	204071	5.50	632407	7.42	281193	10.98			1216_11.D
06 ICAL 40	193707	5.50	626444	7.42	281431	10.98			1216_12.D
07 ICAL 0.2	396747	5.49	1031497	7.41	424277	10.98			1216_14.D
08 ICAL 10	240446	5.50	695974	7.42	321252	10.98			1216_15.D
09									
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20									
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22									

IS1 (BCM) = Bromochloromethane
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +140% of internal standard area
 AREA LOWER LIMIT = - 60% of internal standard area
 RT UPPER LIMIT = +0.33 minutes of internal standard RT
 RT LOWER LIMIT = -0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM VIII VOA

8A
AIR INTERNAL STANDARD AREA AND RT SUMMARY
Sim Scan

Lab Name: Phoenix Environmental Labs Client: FPMGROUP
 Lab Code: Phoenix Case No.: _____ SAS No.: _____ SDG No.: GCE89170
 Lab Method / File Id: 24AIR_1216.M / Average Date Analyzed: 12/16/19
 Instrument ID: CHEM24 Time Analyzed: 20:37
 GC Column: _____ ID: 0.18 (mm) Heated Purge:(Y/N) Y

	IS1 (BCM) Area Avg #	RT Avg #	IS2 (DFB) Area Avg #	RT Avg #	IS3 (CBZ) Area Avg #	RT Avg #			LAB FILE ID
12 HOUR STD	356416	5.49	1026328	7.41	441132	10.98			Average
UPPER LIMIT	500765	5.82	1441990	7.74	619790	11.31			Average
LOWER LIMIT	212068	5.16	610665	7.08	262474	10.65			Average
CLIENT ID									
01 ICAL 1	292566	5.49	865550	7.41	394903	10.97			1216_01.D
02 ICAL 0.02	428428	5.48	1188122	7.41	504945	10.97			1216_04.D
03 ICAL 0.035	423818	5.49	1179485	7.40	501903	10.98			1216_05.D
04 ICAL 0.05	420480	5.48	1178871	7.41	493249	10.97			1216_06.D
05 ICAL 0.1	406012	5.49	1152291	7.41	477751	10.97			1216_07.D
06 ICAL 0.5	369510	5.49	1058213	7.41	456785	10.97			1216_08.D
07 ICAL 2.5	305399	5.49	907661	7.41	397617	10.98			1216_09.D
08 ICAL 5	274758	5.50	836191	7.41	373224	10.98			1216_10.D
09 ICAL 0.2	397702	5.49	1130227	7.41	466977	10.98			1216_14.D
10 ICAL 10	245490	5.50	766665	7.41	343966	10.98			1216_15.D
11									
12									
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16									
17									
18									
19									
20									
21									
22									

IS1 (BCM) = Bromochloromethane
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +140% of internal standard area
 AREA LOWER LIMIT = - 60% of internal standard area
 RT UPPER LIMIT = +0.33 minutes of internal standard RT
 RT LOWER LIMIT = -0.33 minutes of internal standard RT

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 * Values outside of QC limits.

FORM VIII VOA

8A
AIR INTERNAL STANDARD AREA AND RT SUMMARY
Full Scan

Lab Name: Phoenix Environmental Labs Client: FPMGROUP
 Lab Code: Phoenix Case No.: _____ SAS No.: _____ SDG No.: GCE89170
 Lab Method / File Id: 24AIR_1216.M / 1217_02.D Date Analyzed: 12/17/19
 Instrument ID: CHEM24 Time Analyzed: 19:21
 GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge:(Y/N) Y

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #			LAB FILE ID
12 HOUR STD	345393	5.52	913163	7.43	442024	10.99			1217_02.D
UPPER LIMIT	485277	5.85	1282994	7.76	621044	11.32			1217_02.D
LOWER LIMIT	205509	5.19	543332	7.10	263004	10.66			1217_02.D
CLIENT ID									
01 CCAL 1	345393	5.52	913163	7.43	442024	10.99			1217_02.D
02 CE89256 LCS	247763	5.53	703692	7.44	357747	10.99			1217_04.D
03 CE89256 BLANK	464534	5.51	1134431	7.43	517428	10.99			1217_06.D
04 CE89256 QC	356953	5.52	976353	7.43	421927	10.99			1217_07.D
05 89256 dup	347335	5.51	958723	7.43	419650	10.99			1217_08.D
06 IA-2	395103	5.51	1045495	7.43	497371	10.99			1217_15.D
07 AMBIENT	381710	5.51	1011058	7.43	487288	10.99			1217_16.D
08 IA-4	378152	5.51	1016922	7.43	490004	10.99			1217_17.D
09 IA-3	377382	5.51	993351	7.42	484434	10.99			1217_18.D
10 IA-1	317904	5.51	912274	7.43	461146	10.99			1217_19.D
11 IA-4D	371531	5.51	985918	7.43	482532	10.99			1217_20.D
12 CE89256 QC 5X	389988	5.51	1017179	7.42	417380	10.99			1217_22.D
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

IS1 (BCM) = Bromochloromethane
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +140% of internal standard area
 AREA LOWER LIMIT = - 60% of internal standard area
 RT UPPER LIMIT = +0.33 minutes of internal standard RT
 RT LOWER LIMIT = -0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM VIII VOA

8A
AIR INTERNAL STANDARD AREA AND RT SUMMARY
Sim Scan

Lab Name: Phoenix Environmental Labs Client: FPMGROUP
 Lab Code: Phoenix Case No.: _____ SAS No.: _____ SDG No.: GCE89170
 Lab Method / File Id: 24AIR_1216.M / 1217_02.D Date Analyzed: 12/17/19
 Instrument ID: CHEM24 Time Analyzed: 19:21
 GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge:(Y/N) Y

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #			LAB FILE ID
12 HOUR STD	347089	5.52	1003964	7.43	481298	10.99			1217_02.D
UPPER LIMIT	487660	5.85	1410569	7.76	676224	11.32			1217_02.D
LOWER LIMIT	206518	5.19	597359	7.10	286372	10.66			1217_02.D
CLIENT ID									
01 CCAL 1	347089	5.52	1003964	7.43	481298	10.99			1217_02.D
02 CE89256 LCS	252026	5.52	778221	7.44	387960	10.99			1217_04.D
03 CE89256 BLANK	466322	5.52	1247580	7.43	567330	10.99			1217_06.D
04 CE89256 QC	360308	5.51	1074080	7.43	460800	10.99			1217_07.D
05 89256 dup	351600	5.52	1052859	7.43	458894	10.99			1217_08.D
06 IA-2	402701	5.52	1153661	7.43	548087	10.99			1217_15.D
07 AMBIENT	387623	5.51	1113722	7.43	537344	10.99			1217_16.D
08 IA-4	386703	5.51	1121909	7.43	535533	10.99			1217_17.D
09 IA-3	380942	5.51	1096286	7.43	531041	10.99			1217_18.D
10 IA-1	324265	5.52	1015012	7.43	506712	10.99			1217_19.D
11 IA-4D	377990	5.51	1087139	7.43	530084	10.99			1217_20.D
12 CE89256 QC 5X	396010	5.51	1120631	7.43	458016	10.99			1217_22.D
13									
14									
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16									
17									
18									
19									
20									
21									
22									

IS1 (BCM) = Bromochloromethane
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +140% of internal standard area
 AREA LOWER LIMIT = - 60% of internal standard area
 RT UPPER LIMIT = +0.33 minutes of internal standard RT
 RT LOWER LIMIT = -0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM VIII VOA

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89170</u>
Canister:	<u>808</u>	Lab File ID:	<u>1217_15.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/18/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.325		0.202	0.202	r
74-87-3	Chloromethane	0.538		0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	9.58	S	0.531	0.531	r
67-64-1	Acetone	2.36	S	0.421	0.421	r
75-69-4	Trichlorofluoromethane	0.238		0.178	0.178	r
67-63-0	Isopropylalcohol	1.68	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	0.350		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client: FPMGROUP Lab: Phoenix Env. Labs

IA-2

SDG No.: GCE89170

Lab Sample ID: CE89170

Canister: 808

Lab File ID: 1217_15.D

Instrument: CHEM24 Column: RTX-VMS

Date Received: 12/17/19

Purge Volume 200 (cc)

Date Analyzed: 12/18/19

Matrix: AIR

Dilution Factor: 1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
56-23-5	Carbon Tetrachloride(sim)	0.071		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.073		0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_15.D
 Acq On : 18 Dec 2019 3:30 am
 Operator : Keith
 Client ID : IA-2
 Lab ID : CE89170
 ALS Vial : 84 Sample Multiplier: 1

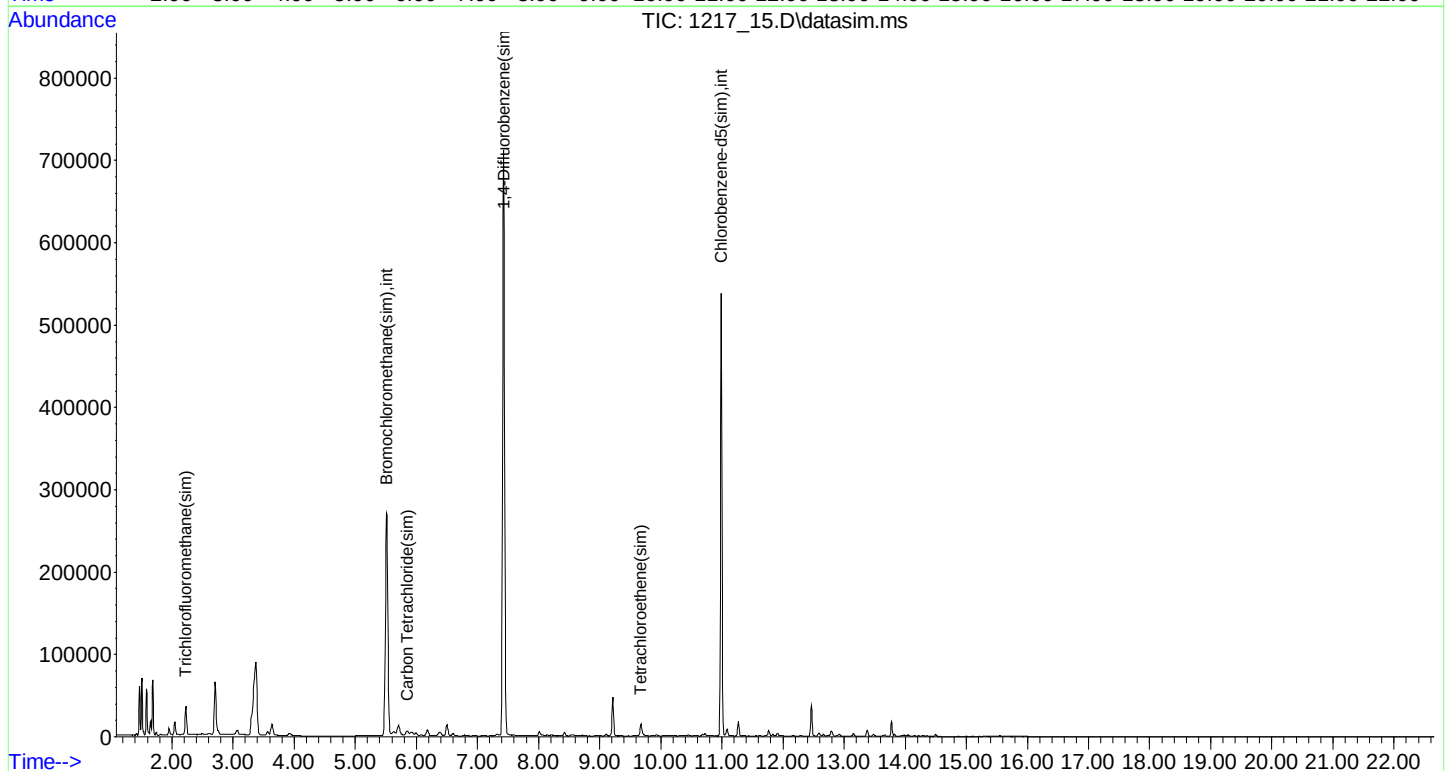
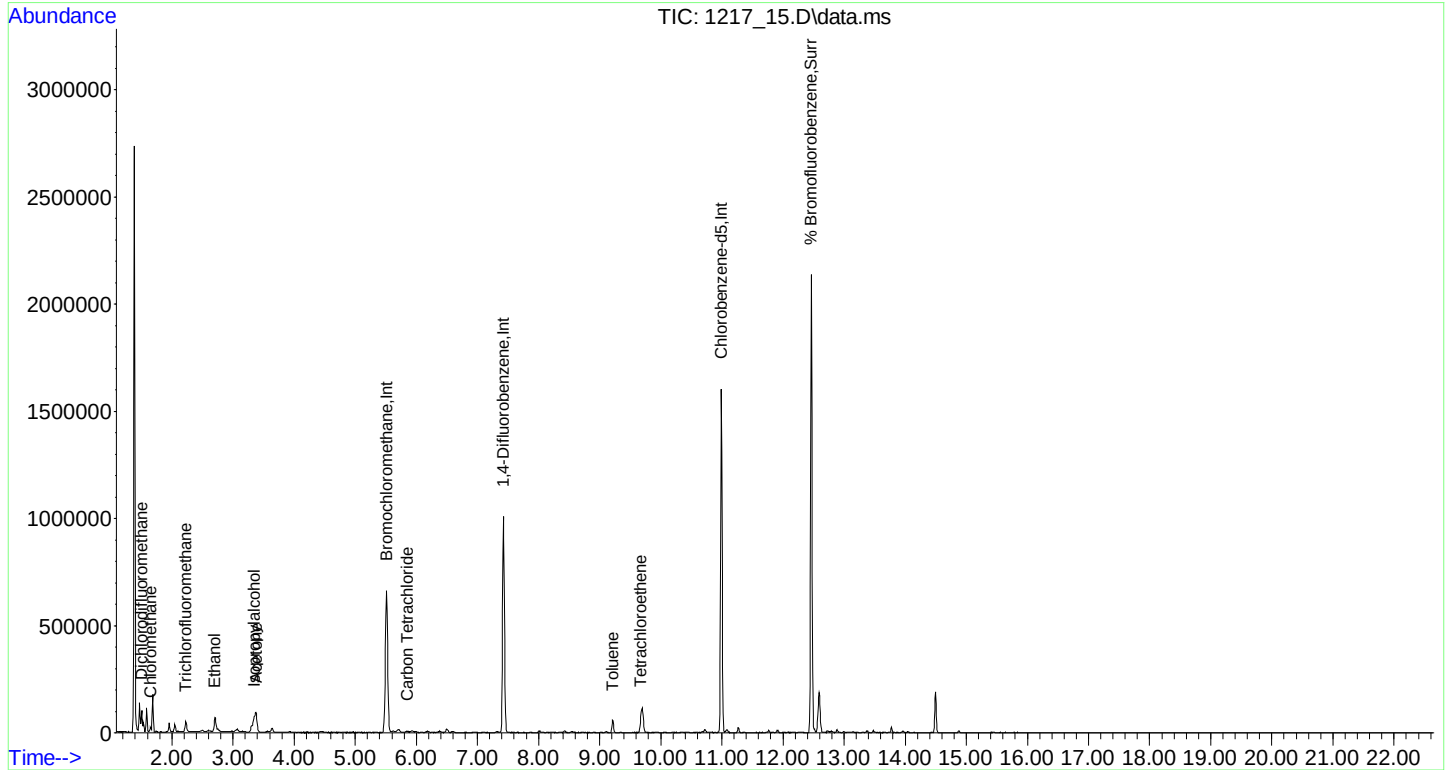
Quant Time: Dec 18 08:37:52 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

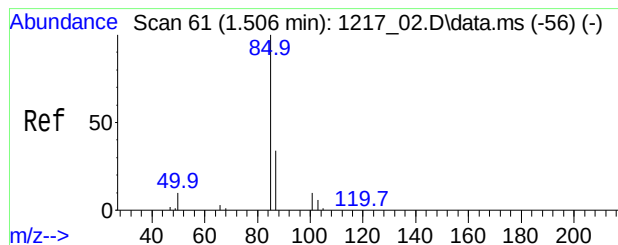
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.514	130	395103	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.425	114	1045495	10.000	ng	0.02
53) Chlorobenzene-d5	10.991	82	497371	10.000	ng	0.01
80) Bromochloromethane(sim)	5.517	130	402701	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.428	114	1153661	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.993	82	548087	10.000	ng	0.02
System Monitoring Compounds						
62) % Bromofluorobenzene	12.461	95	704266	10.533	ppbv	0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	105.30%
Target Compounds						
3) Dichlorodifluoromethane	1.506	101	4478	0.325	ppbv#	89
4) Chloromethane	1.650	50	16035	0.538	ppbv	94
10) Ethanol	2.704	45	76994	9.579	ppbv#	86
12) Acetone	3.374	43	138426	2.360	ppbv	100
13) Trichlorofluoromethane	2.225	101	23804	0.238	ppbv	97
14) Isopropylalcohol	3.347	45	96763	1.684	ppbv#	68
34) Carbon Tetrachloride	5.853	117	6395	0.064	ppbv	94
48) Toluene	9.211	91	47856	0.350	ppbv	98
52) Tetrachloroethene	9.673	166	7381	0.075	ppbv	98
84) Trichlorofluoromethane...	2.228	101	25265	0.221	ppbv	100
86) Carbon Tetrachloride(sim)	5.848	117	7039	0.071	ppbv	99
103) Tetrachloroethene(sim)	9.673	166	7381	0.073	ppbv	93

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_15.D
Acq On : 18 Dec 2019 3:30 am
Operator : Keith
Client ID : IA-2
Lab ID : CE89170
ALS Vial : 84 Sample Multiplier: 1

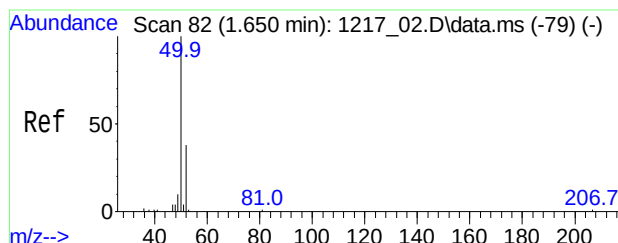
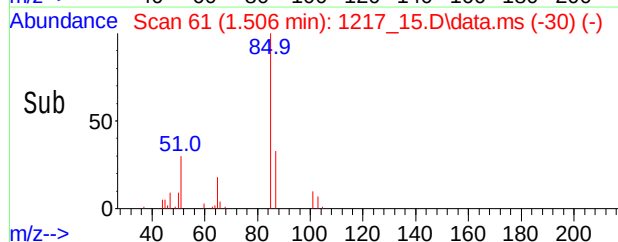
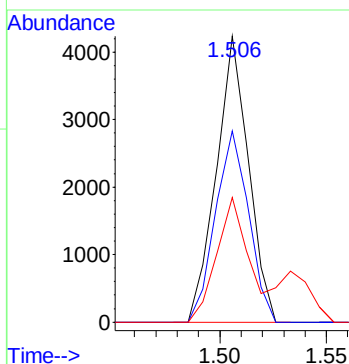
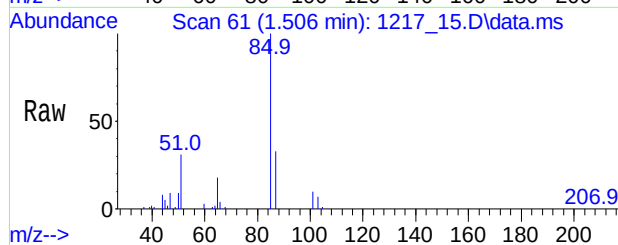
Quant Time: Dec 18 08:37:52 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





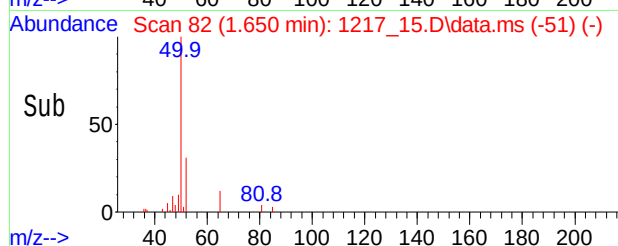
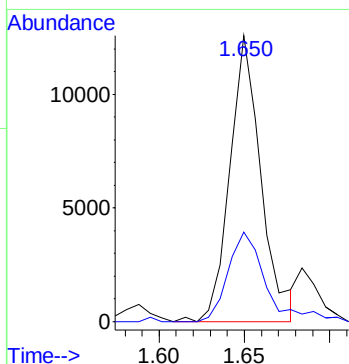
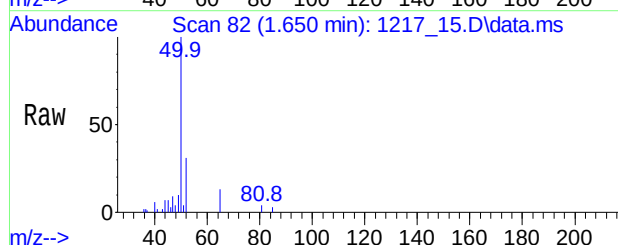
#3
Dichlorodifluoromethane
Conc: 8\$ 0.325 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

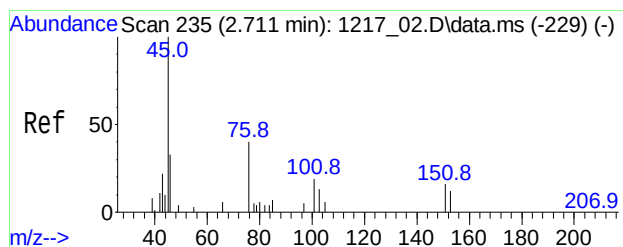
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	4478		
103	68.8	53.4	80.0	
66	47.5	26.0	39.0	



#4
Chloromethane
Conc: 8\$ 0.538 ppbv
RT: 1.650 min Scan# 82
Delta R.T. 0.014 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

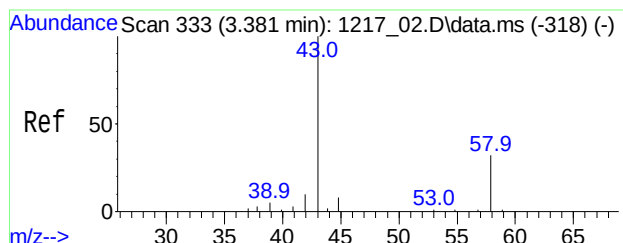
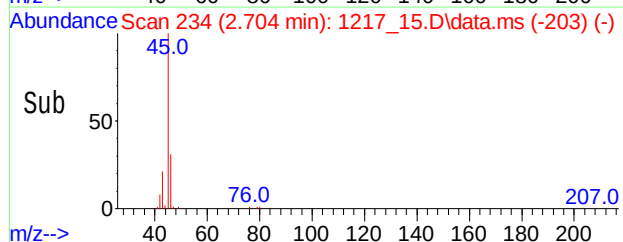
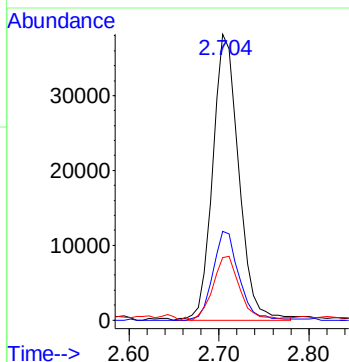
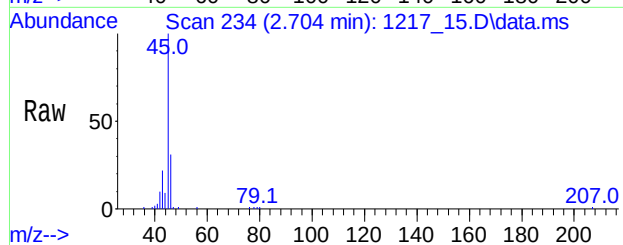
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	16035		
52	37.7	14.3	54.3	





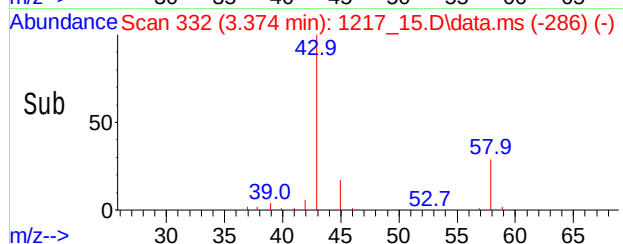
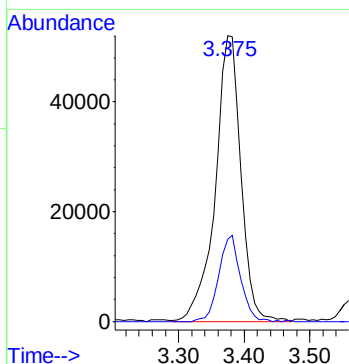
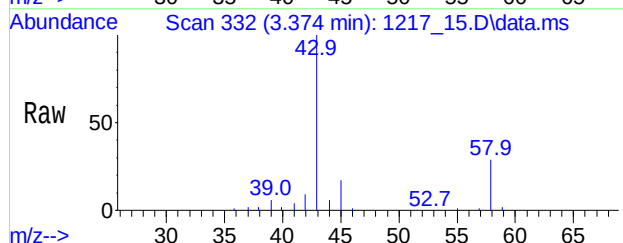
#10
Ethanol
Conc: 8\$ 9.579 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

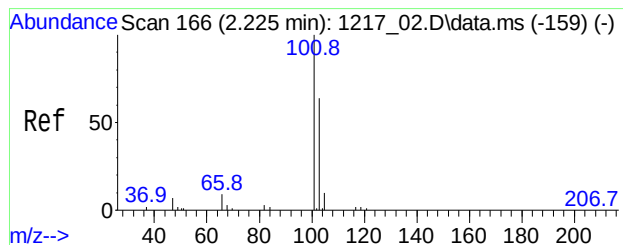
Tgt Ion: 45 Resp: 76994
Ion Ratio Lower Upper
45 100
46 30.8 24.9 37.3
43 23.1 30.8 46.2#



#12
Acetone
Conc: 8\$ 2.360 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

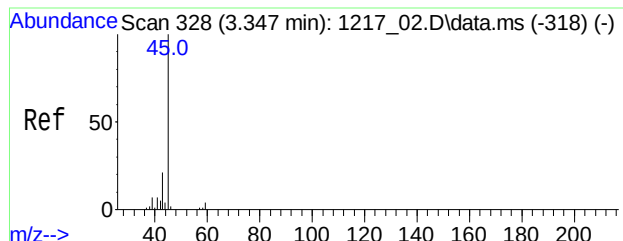
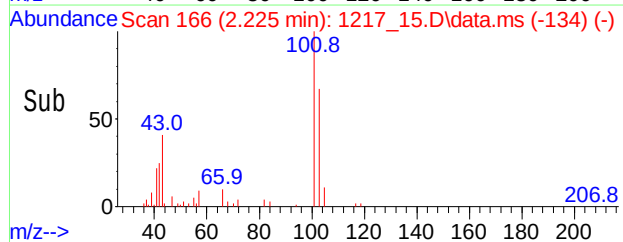
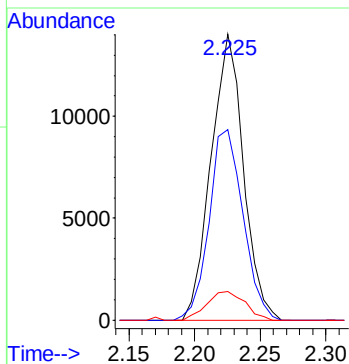
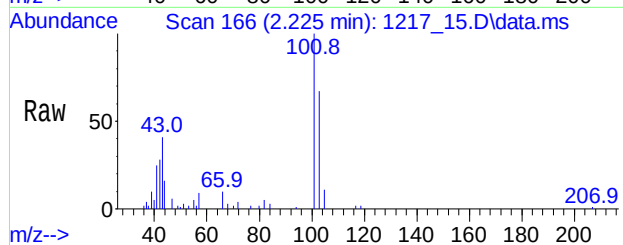
Tgt Ion: 43 Resp: 138426
Ion Ratio Lower Upper
43 100
58 25.4 20.4 30.6





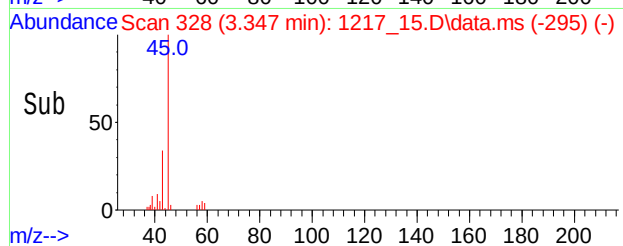
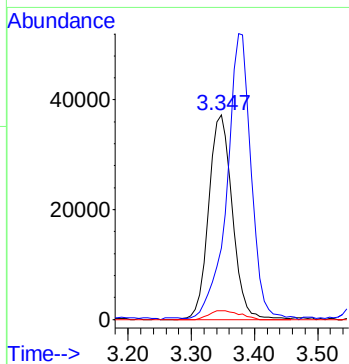
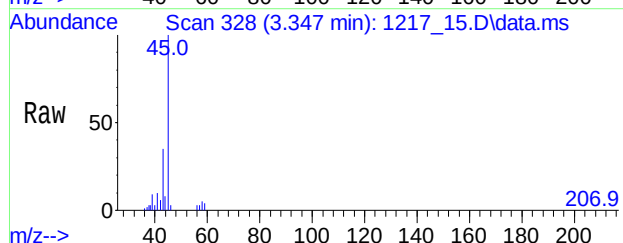
#13
Trichlorofluoromethane
Conc: 8\$ 0.238 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

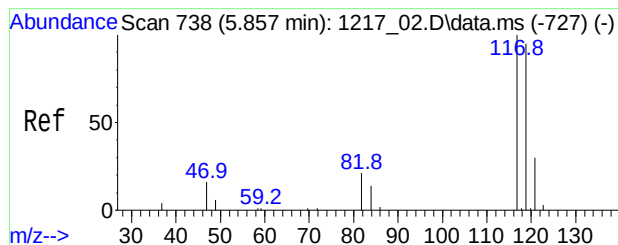
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	23804		
103	69.7	54.1	81.1	
66	11.8	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 1.684 ppbv
RT: 3.347 min Scan# 328
Delta R.T. 0.027 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

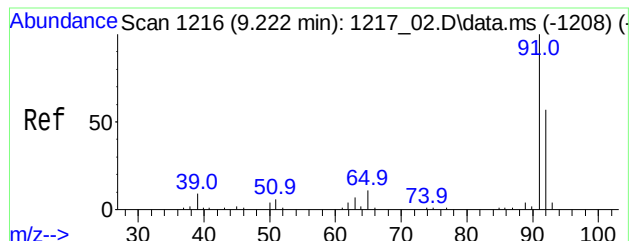
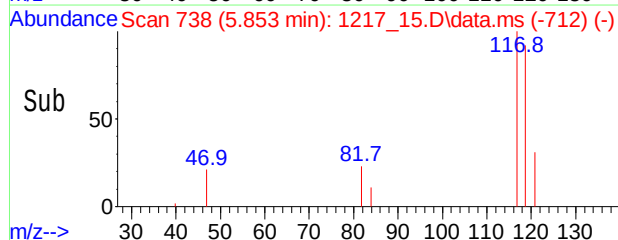
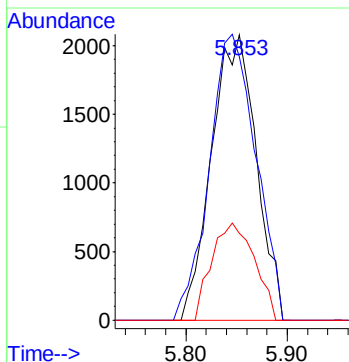
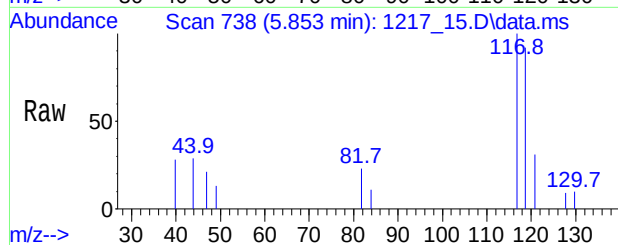
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	96763		
43	143.1	86.3	129.5#	
59	5.5	4.2	6.4	





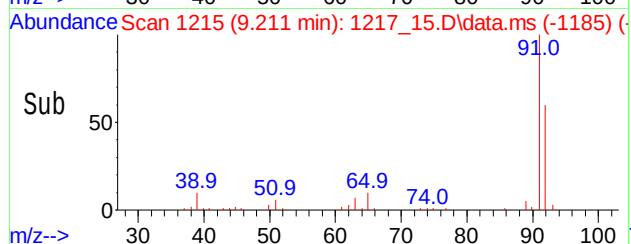
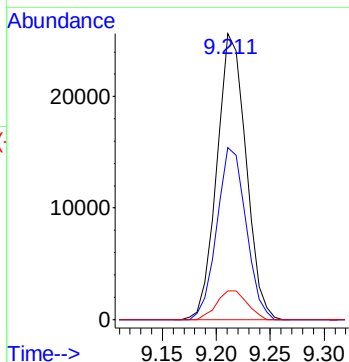
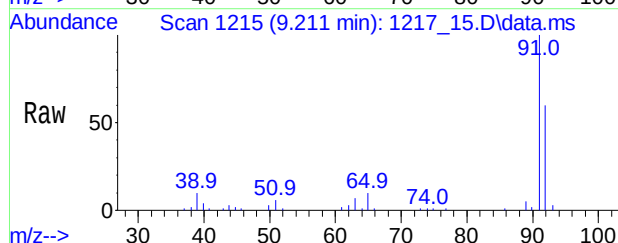
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.853 min Scan# 738
Delta R.T. 0.037 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

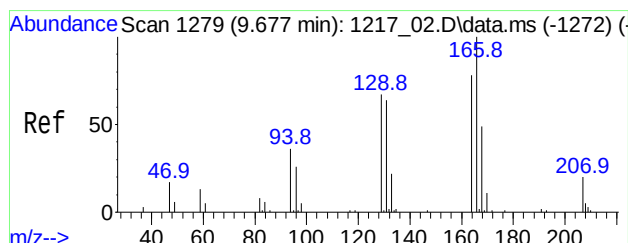
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6395		
119	103.8	77.1	117.1	
121	32.4	10.9	50.9	



#48
Toluene
Conc: 8\$ 0.350 ppbv
RT: 9.211 min Scan# 1215
Delta R.T. 0.015 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

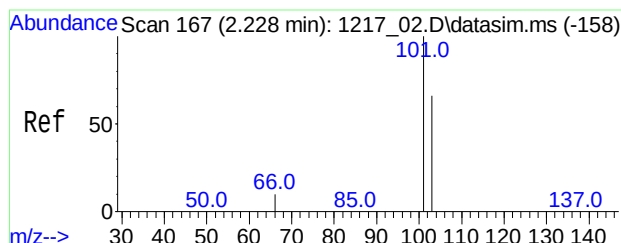
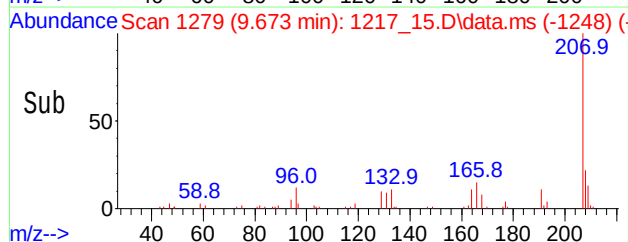
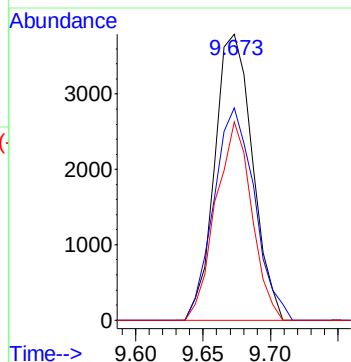
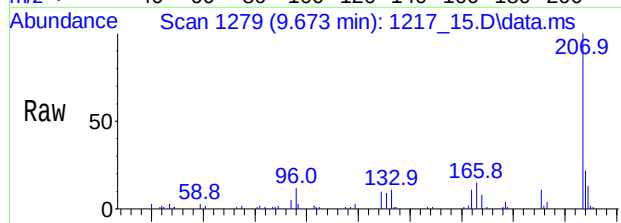
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	47856		
92	60.3	47.0	70.6	
65	10.5	8.3	12.5	





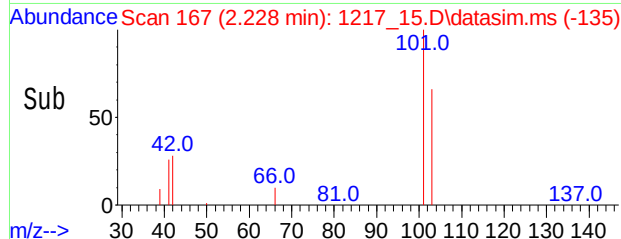
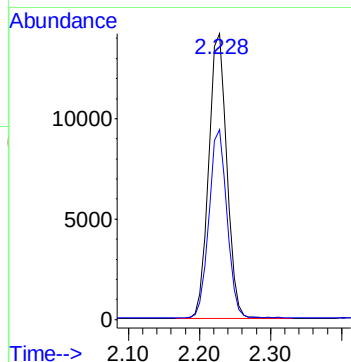
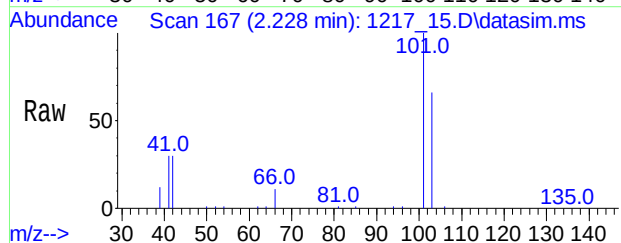
#52
Tetrachloroethene
Conc: 8\$ Below Cal
RT: 9.673 min Scan# 1279
Delta R.T. 0.022 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

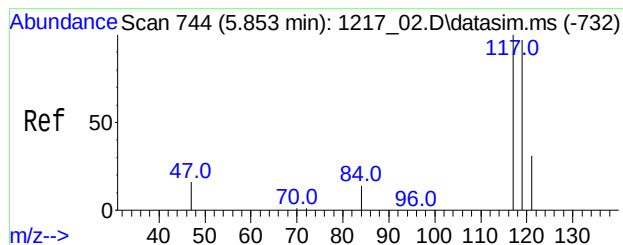
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	7381		
164	80.0	61.8	92.8	
129	66.0	52.4	78.6	



#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.221 ppbv
RT: 2.228 min Scan# 167
Delta R.T. 0.021 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

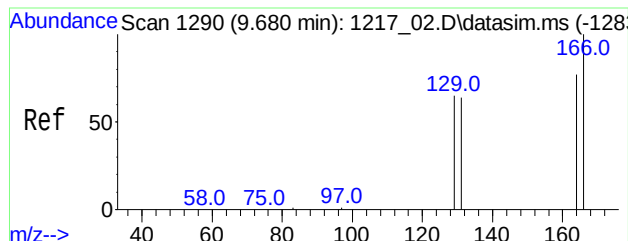
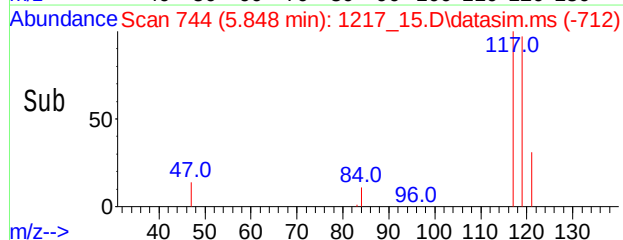
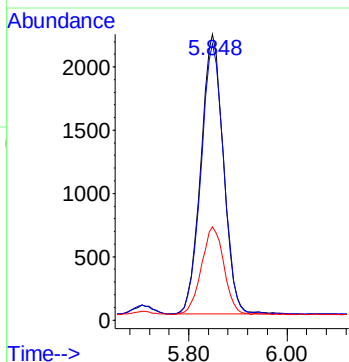
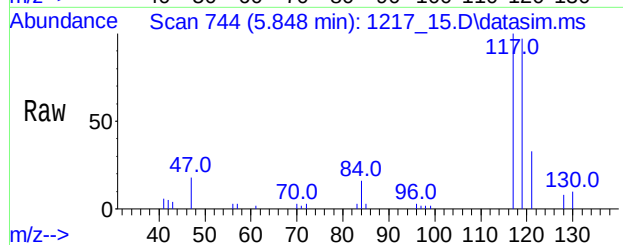
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	25265		
103	65.8	52.8	79.2	





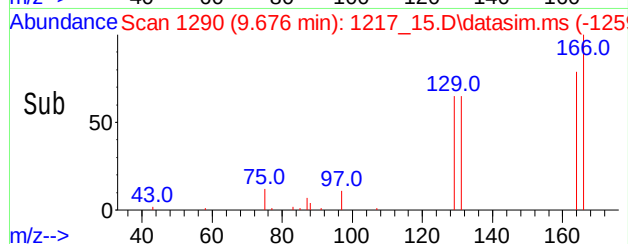
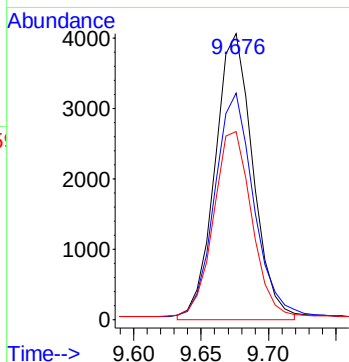
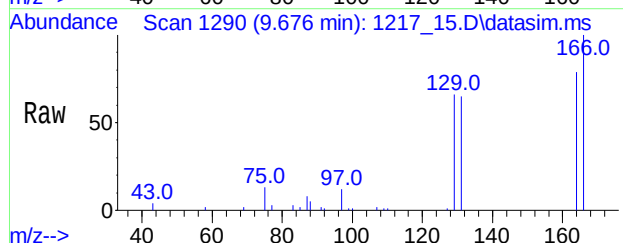
#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.071 ppbv
RT: 5.848 min Scan# 744
Delta R.T. 0.029 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

Tgt Ion	Ratio	Resp	Lower	Upper
117	100	7039		
119	96.2	77.5	116.3	
121	31.2	25.1	37.7	



#103
Tetrachloroethene(sim)
Conc: 8\$ 0.073 ppbv
RT: 9.673 min Scan# 1290
Delta R.T. 0.022 min
Lab File: 1217_15.D
Acq: 18 Dec 2019 3:30 am

Tgt Ion	Ratio	Resp	Lower	Upper
166	100	7381		
164	70.5	57.3	97.3	
129	60.4	45.5	85.5	



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89171</u>
Canister:	<u>848</u>	Lab File ID:	<u>1217_16.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/18/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.308		0.202	0.202	r
74-87-3	Chloromethane	0.588		0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	9.23	S	0.531	0.531	r
67-64-1	Acetone	2.12	S	0.421	0.421	r
75-69-4	Trichlorofluoromethane	0.251		0.178	0.178	r
67-63-0	Isopropylalcohol	1.65	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	0.472		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
127-18-4	Tetrachloroethene	0.401		0.037	0.037	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
106-46-7	1,4-Dichlorobenzene	3.51		0.166	0.166	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89171</u>
Canister:	<u>848</u>	Lab File ID:	<u>1217_16.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/18/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r
56-23-5	Carbon Tetrachloride(sim)	0.068		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_16.D
 Acq On : 18 Dec 2019 4:06 am
 Operator : Keith
 Client ID : AMBIENT
 Lab ID : CE89171
 ALS Vial : 85 Sample Multiplier: 1

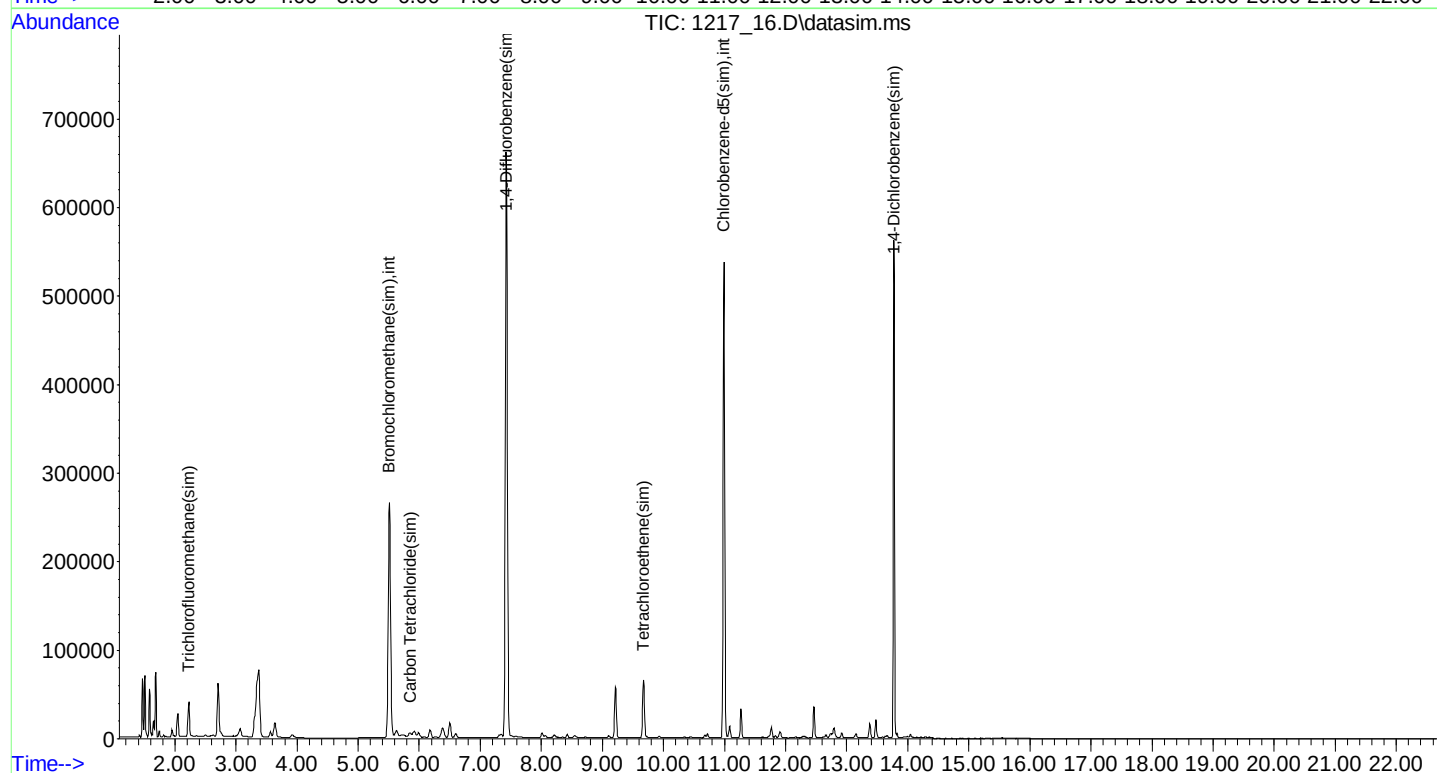
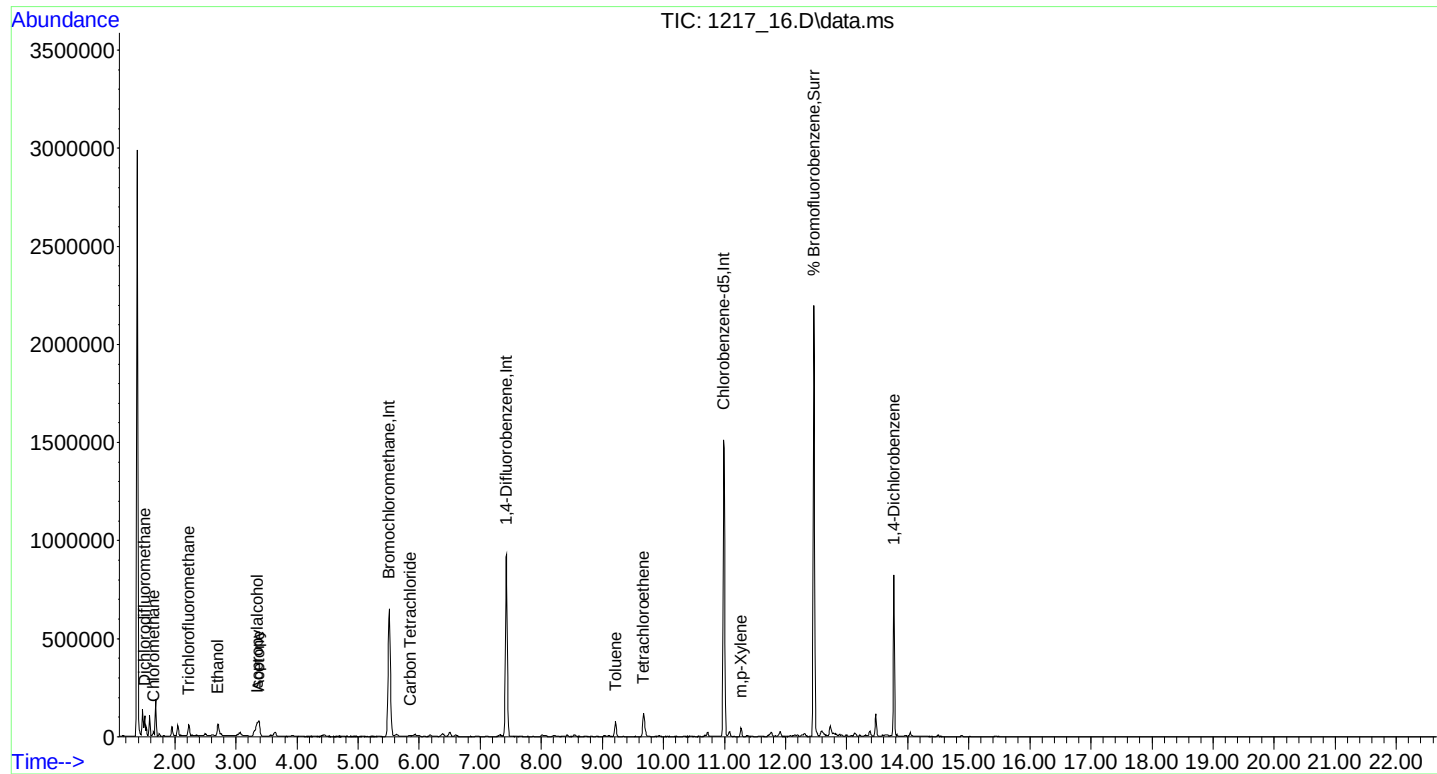
Quant Time: Dec 18 08:38:31 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

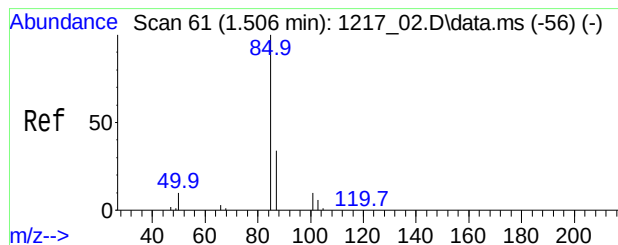
Compound	R.T	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.511	130	381710	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.429	114	1011058	10.000	ng	0.02
53) Chlorobenzene-d5	10.988	82	487288	10.000	ng	0.01
80) Bromochloromethane(sim)	5.514	130	387623	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.425	114	1113722	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.991	82	537344	10.000	ng	0.02
System Monitoring Compounds						
62) % Bromofluorobenzene	12.464	95	686279	10.476	ppbv	0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	104.80%
Target Compounds						
3) Dichlorodifluoromethane	1.506	101	4102	0.308	ppbv#	85
4) Chloromethane	1.649	50	16915	0.588	ppbv	98
10) Ethanol	2.704	45	71666	9.229	ppbv#	86
12) Acetone	3.374	43	120086	2.120	ppbv	99
13) Trichlorofluoromethane	2.225	101	24294	0.251	ppbv	95
14) Isopropylalcohol	3.347	45	91616	1.650	ppbv#	79
34) Carbon Tetrachloride	5.857	117	6057	0.063	ppbv	97
48) Toluene	9.215	91	62524	0.472	ppbv	99
52) Tetrachloroethene	9.669	166	38043	0.401	ppbv	98
57) m,p-Xylene	11.269	91	27480	0.232	ppbv	99
72) 1,4-Dichlorobenzene	13.775	146	337064	3.509	ppbv	99
84) Trichlorofluoromethane...	2.228	101	24999	0.227	ppbv	99
86) Carbon Tetrachloride(sim)	5.852	117	6441	0.068	ppbv	100
103) Tetrachloroethene(sim)	9.669	166	37676	0.386	ppbv	97
113) 1,4-Dichlorobenzene(sim)	13.775	146	337228	3.625	ppbv	99

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_16.D
Acq On : 18 Dec 2019 4:06 am
Operator : Keith
Client ID : AMBIENT
Lab ID : CE89171
ALS Vial : 85 Sample Multiplier: 1

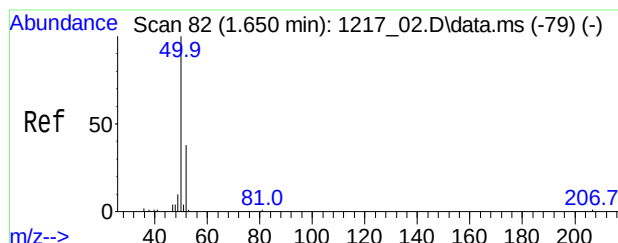
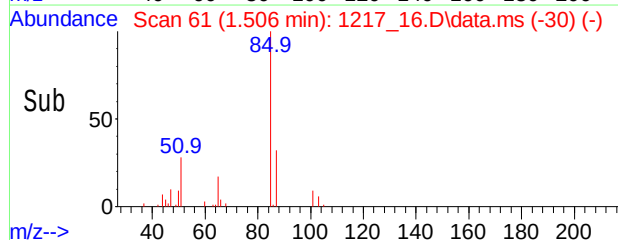
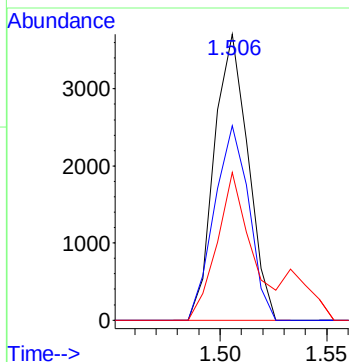
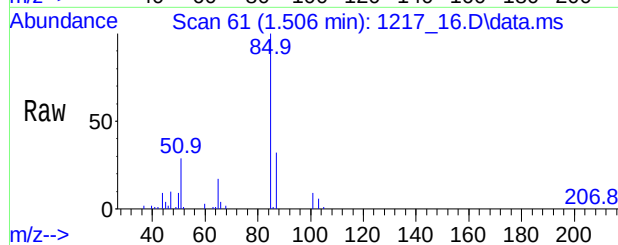
Quant Time: Dec 18 08:38:31 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





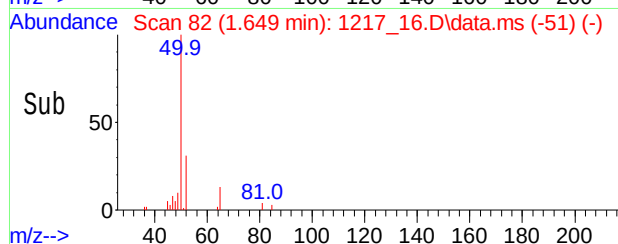
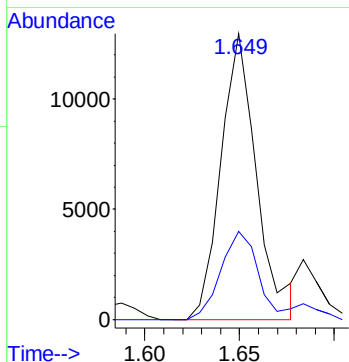
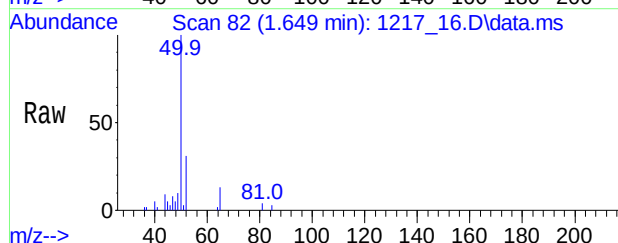
#3
Dichlorodifluoromethane
Conc: 8\$ 0.308 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

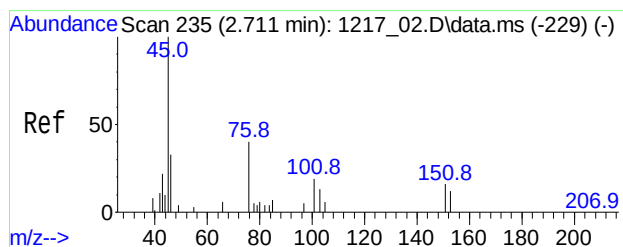
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	4102		
103	70.0	53.4	80.0	
66	53.3	26.0	39.0	



#4
Chloromethane
Conc: 8\$ 0.588 ppbv
RT: 1.649 min Scan# 82
Delta R.T. 0.013 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

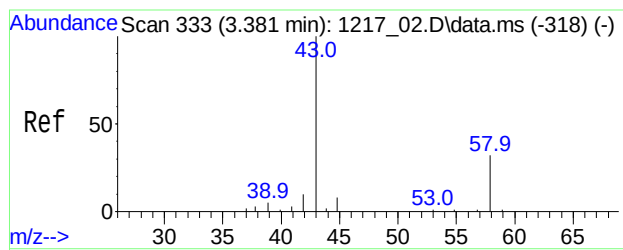
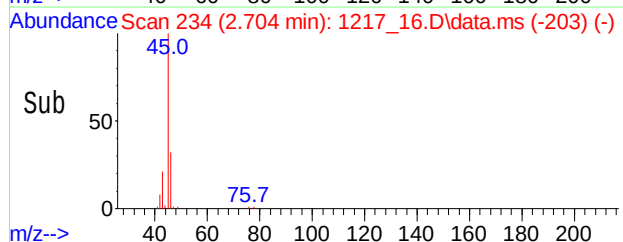
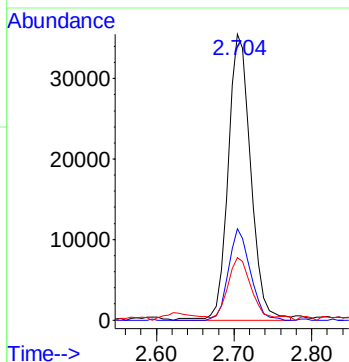
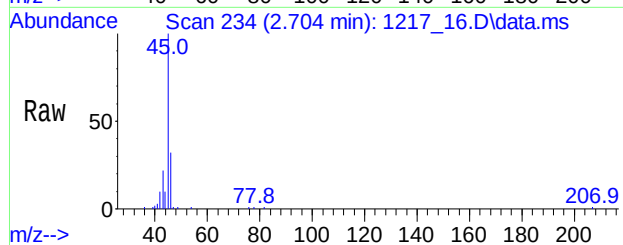
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	16915		
52	32.9	14.3	54.3	





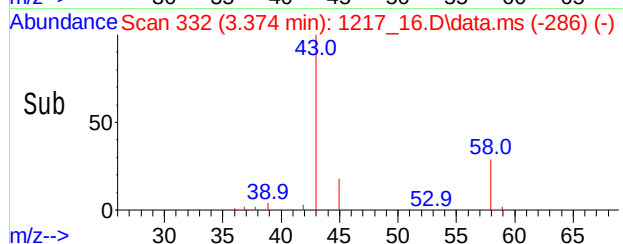
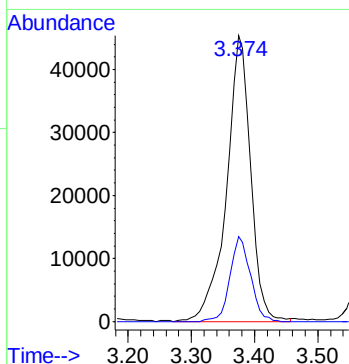
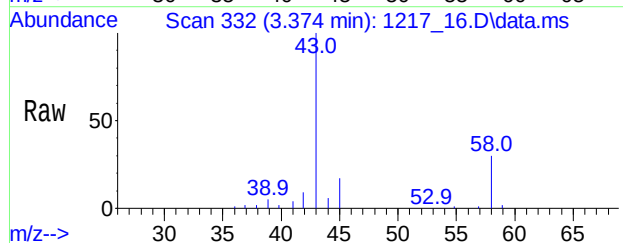
#10
Ethanol
Conc: 8\$ 9.229 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

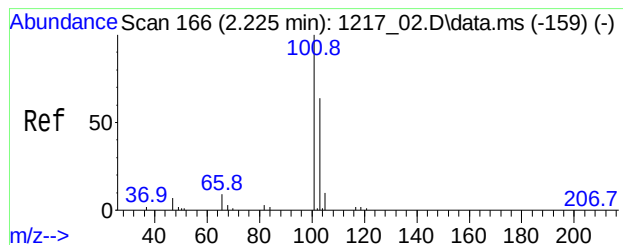
Tgt Ion: 45 Resp: 71666
Ion Ratio Lower Upper
45 100
46 30.9 24.9 37.3
43 23.4 30.8 46.2#



#12
Acetone
Conc: 8\$ 2.120 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

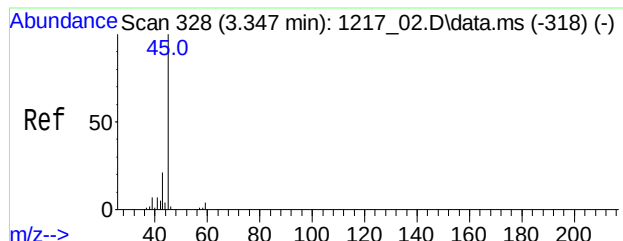
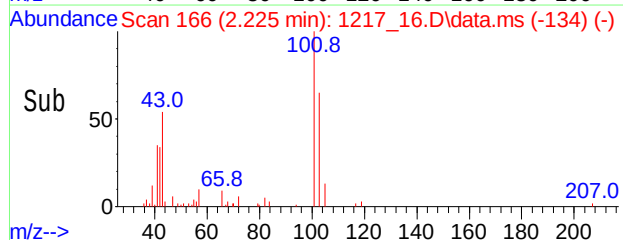
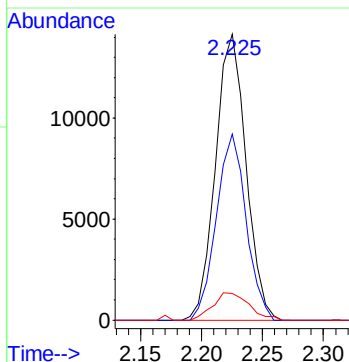
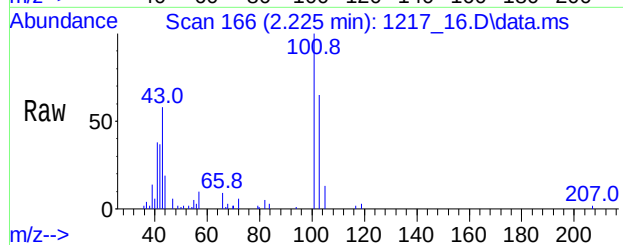
Tgt Ion: 43 Resp: 120086
Ion Ratio Lower Upper
43 100
58 25.2 20.4 30.6





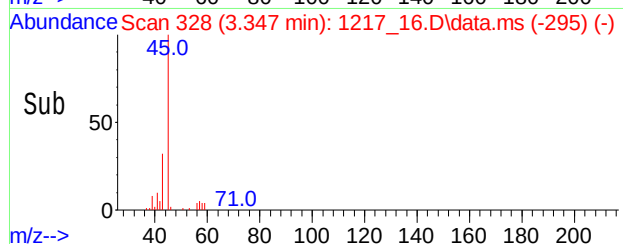
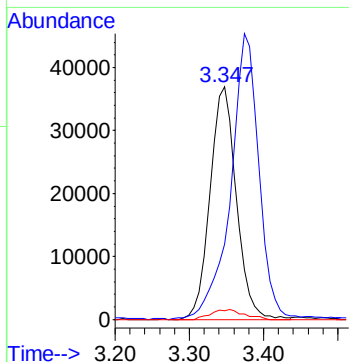
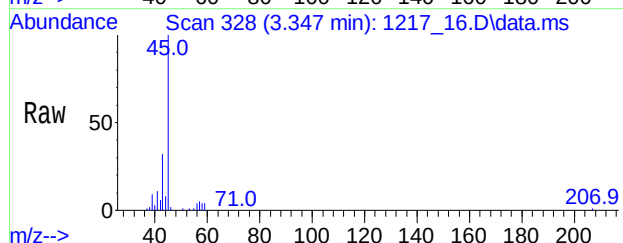
#13
Trichlorofluoromethane
Conc: 8\$ 0.251 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

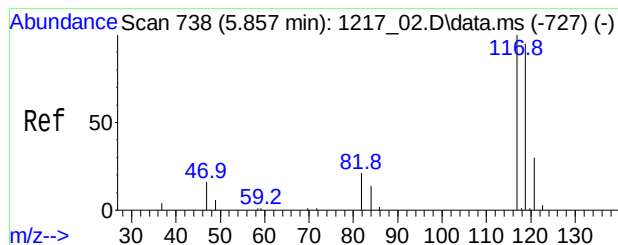
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24294		
103	63.4	54.1	81.1	
66	11.3	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 1.650 ppbv
RT: 3.347 min Scan# 328
Delta R.T. 0.027 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

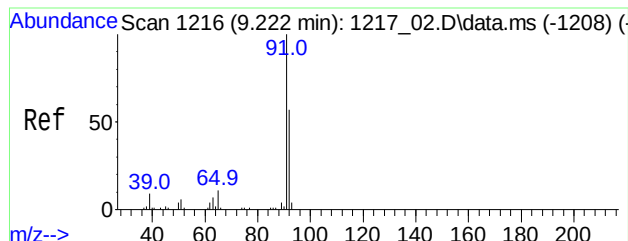
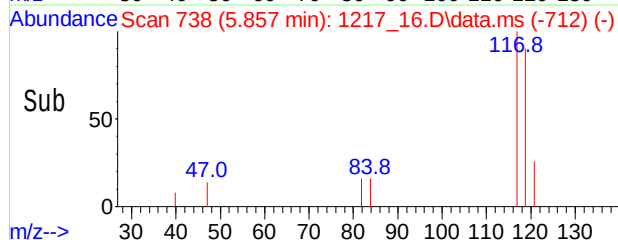
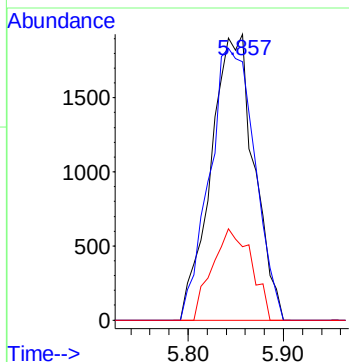
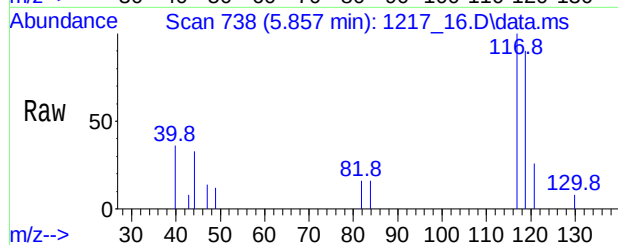
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	91616		
43	131.1	86.3	129.5#	
59	5.4	4.2	6.4	





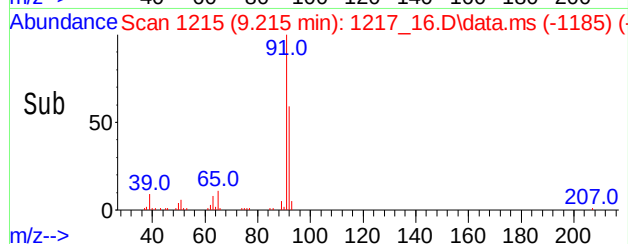
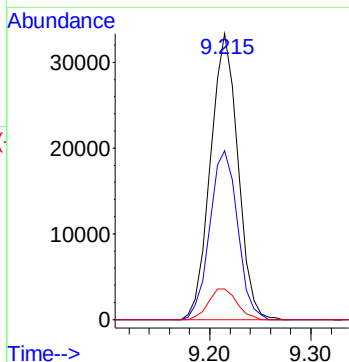
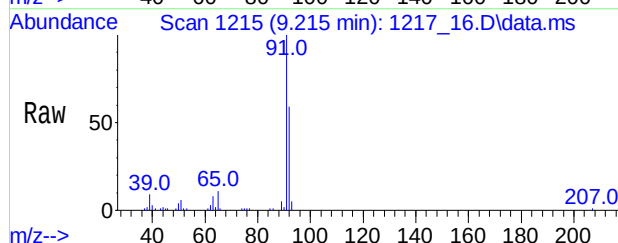
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.857 min Scan# 738
Delta R.T. 0.041 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

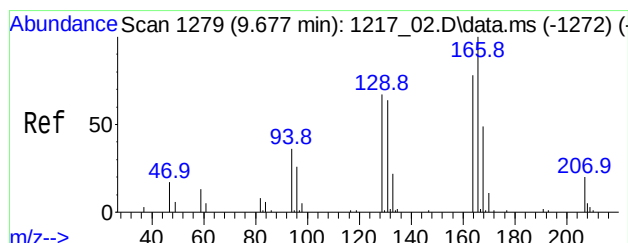
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6057		
119	100.0	77.1	117.1	
121	29.0	10.9	50.9	



#48
Toluene
Conc: 8\$ 0.472 ppbv
RT: 9.215 min Scan# 1215
Delta R.T. 0.019 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

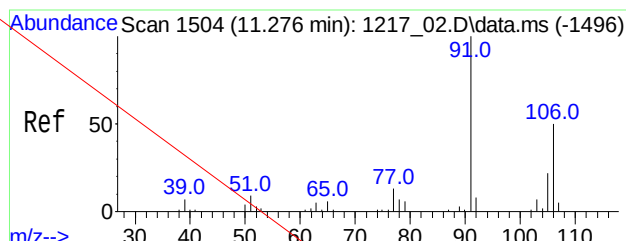
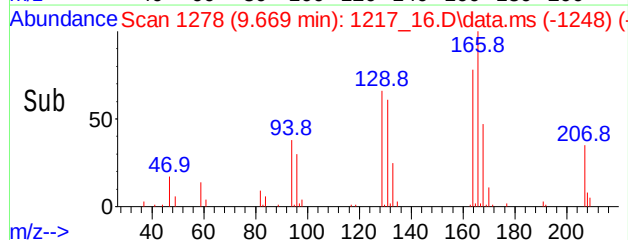
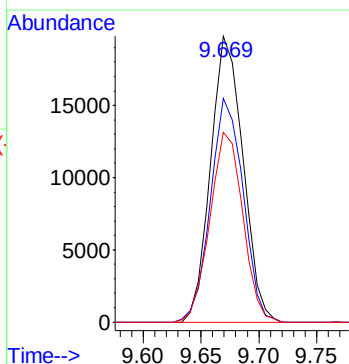
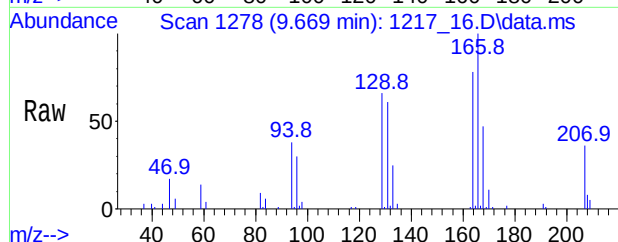
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	62524		
92	59.7	47.0	70.6	
65	11.1	8.3	12.5	





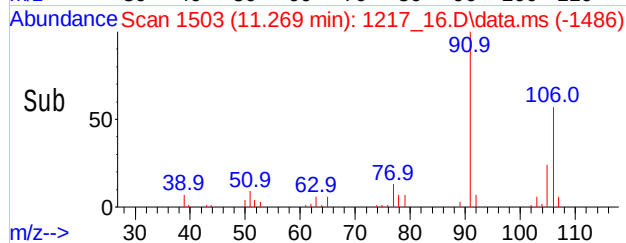
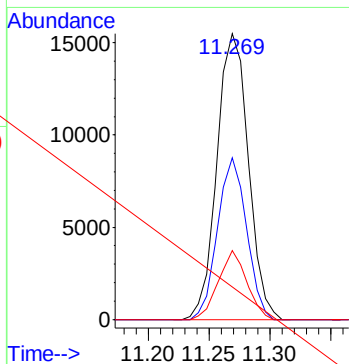
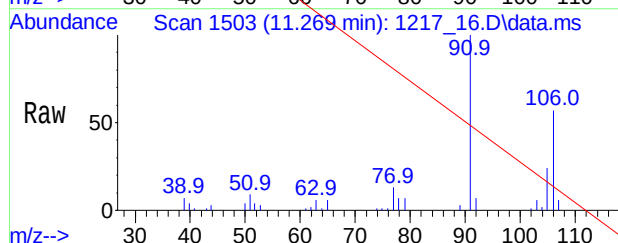
#52
Tetrachloroethene
Conc: 8\$ 0.401 ppbv
RT: 9.669 min Scan# 1278
Delta R.T. 0.018 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

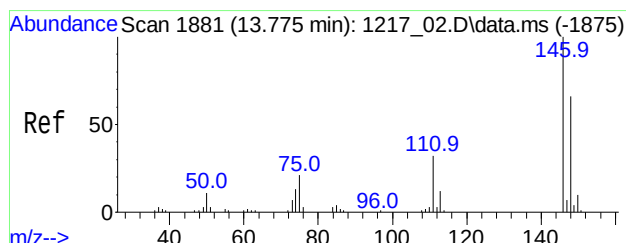
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	38043		
164	79.0	61.8	92.8	
129	67.4	52.4	78.6	



#57
m,p-Xylene
Conc: 8\$ 0.232 ppbv
RT: 11.269 min Scan# 1503
Delta R.T. 0.018 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

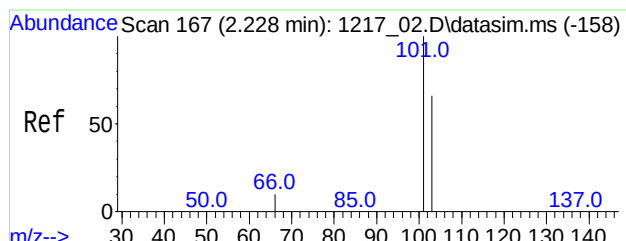
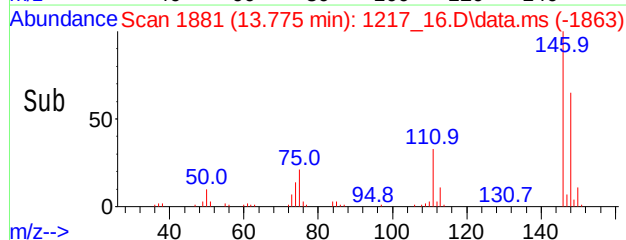
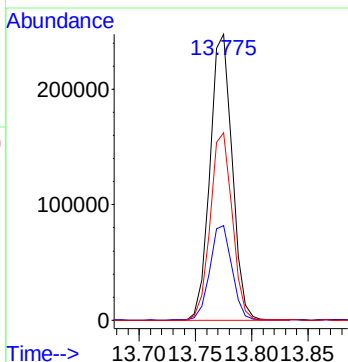
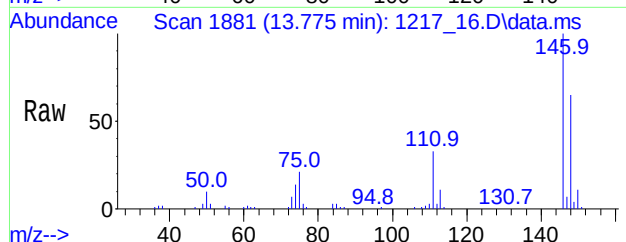
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	27480		
106	52.2	41.0	61.6	
105	21.8	17.7	26.5	





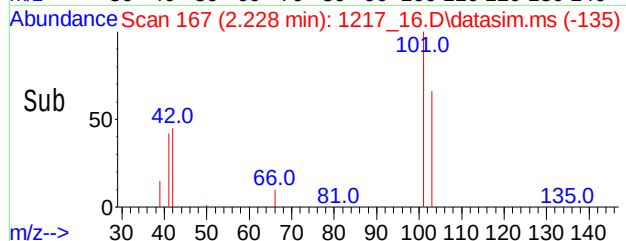
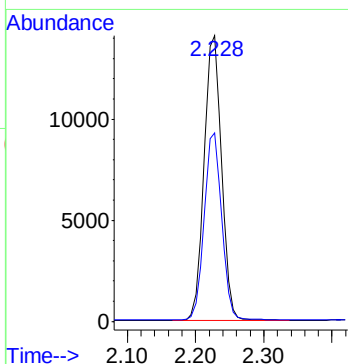
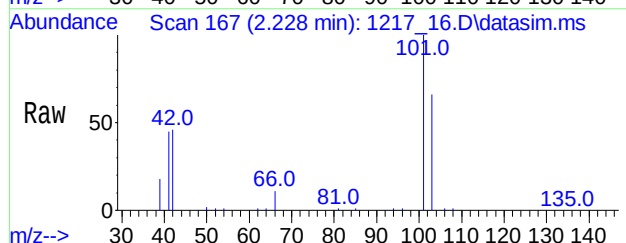
#72
1,4-Dichlorobenzene
Conc: 8\$ 3.509 ppbv
RT: 13.775 min Scan# 1881
Delta R.T. 0.017 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

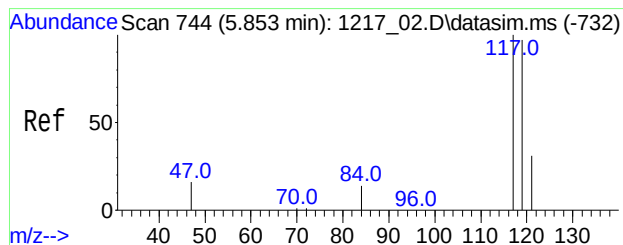
Tgt Ion	Ratio	Resp	Lower	Upper
146	100	337064		
111	33.2	26.1	39.1	
148	65.1	51.8	77.8	



#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.227 ppbv
RT: 2.228 min Scan# 167
Delta R.T. 0.021 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

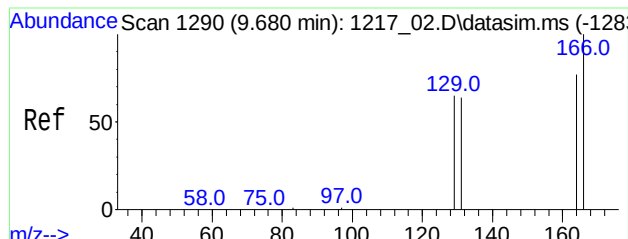
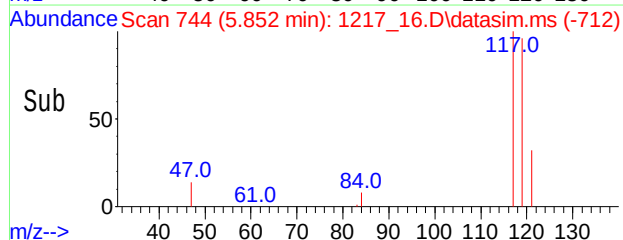
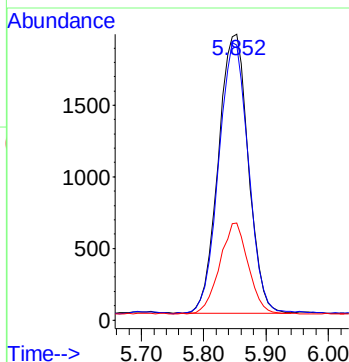
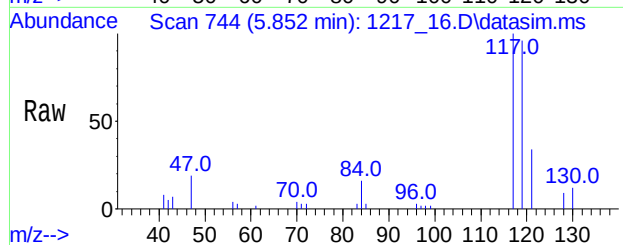
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24999		
103	65.4	52.8	79.2	





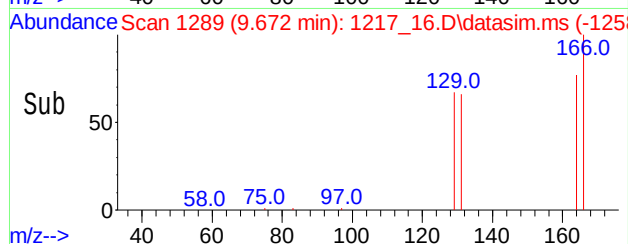
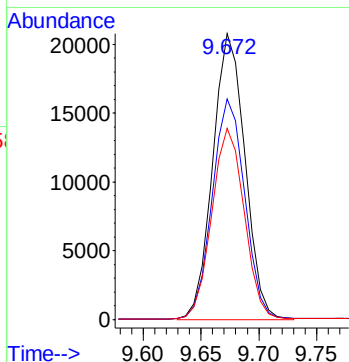
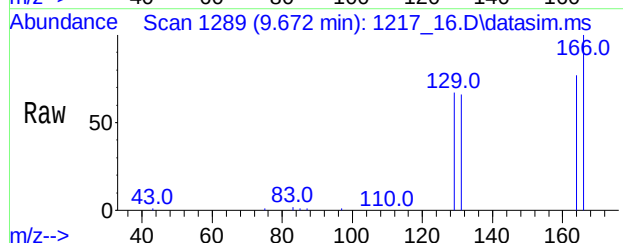
#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.068 ppbv
RT: 5.852 min Scan# 744
Delta R.T. 0.033 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

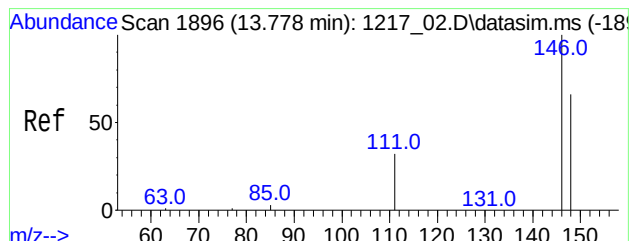
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6441		
119	96.4	77.5	116.3	
121	31.3	25.1	37.7	



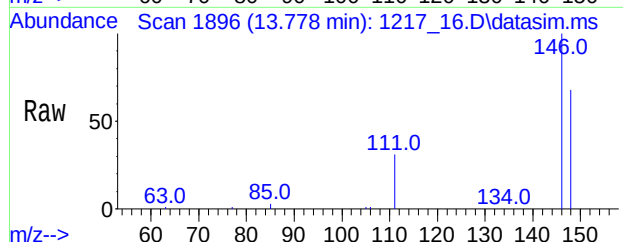
#103
Tetrachloroethene(sim)
Conc: 8\$ 0.386 ppbv
RT: 9.669 min Scan# 1289
Delta R.T. 0.018 min
Lab File: 1217_16.D
Acq: 18 Dec 2019 4:06 am

Tgt Ion	Ratio	Resp	Lower	Upper
166	100	37676		
164	79.2	57.3	97.3	
129	68.1	45.5	85.5	

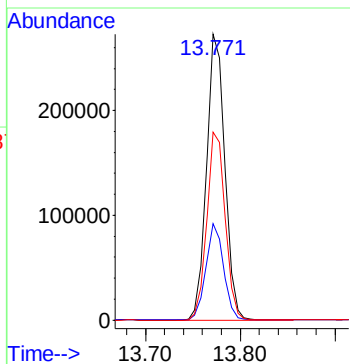
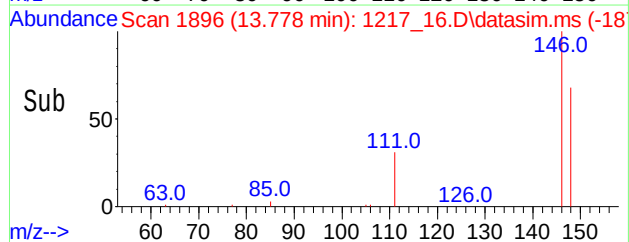




#113
 1,4-Dichlorobenzene(sim)
 Conc: 8\$ 3.625 ppbv
 RT: 13.775 min Scan# 1896
 Delta R.T. 0.017 min
 Lab File: 1217_16.D
 Acq: 18 Dec 2019 4:06 am



Tgt Ion: 146 Resp: 337228
 Ion Ratio Lower Upper
 146 100
 111 33.2 12.6 52.6
 148 65.1 44.8 84.8



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89172</u>
Canister:	<u>783</u>	Lab File ID:	<u>1217_17.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/18/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.294		0.202	0.202	r
74-87-3	Chloromethane	0.626		0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	5.78	S	0.531	0.531	r
67-64-1	Acetone	2.75	S	0.421	0.421	r
75-69-4	Trichlorofluoromethane	0.257		0.178	0.178	r
67-63-0	Isopropylalcohol	2.30	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	0.712		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client: FPMGROUP Lab: Phoenix Env. Labs

IA-4

SDG No.: GCE89170 Lab Sample ID: CE89172

Canister: 783 Lab File ID: 1217_17.D

Instrument: CHEM24 Column: RTX-VMS Date Received: 12/17/19

Purge Volume 200 (cc) Date Analyzed: 12/18/19

Matrix: AIR Dilution Factor: 1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
56-23-5	Carbon Tetrachloride(sim)	0.073		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.071		0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_17.D
 Acq On : 18 Dec 2019 4:43 am
 Operator : Keith
 Client ID : IA-4
 Lab ID : CE89172
 ALS Vial : 86 Sample Multiplier: 1

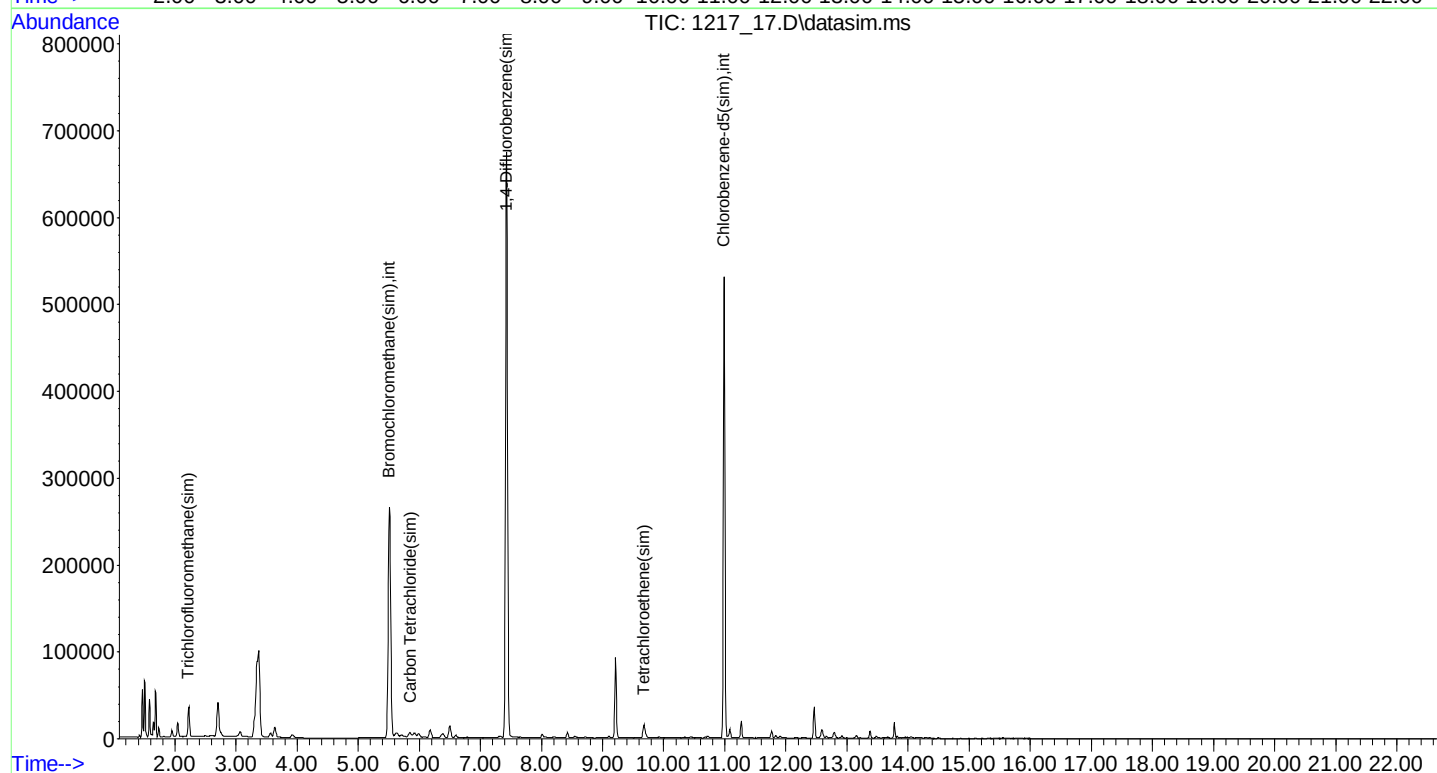
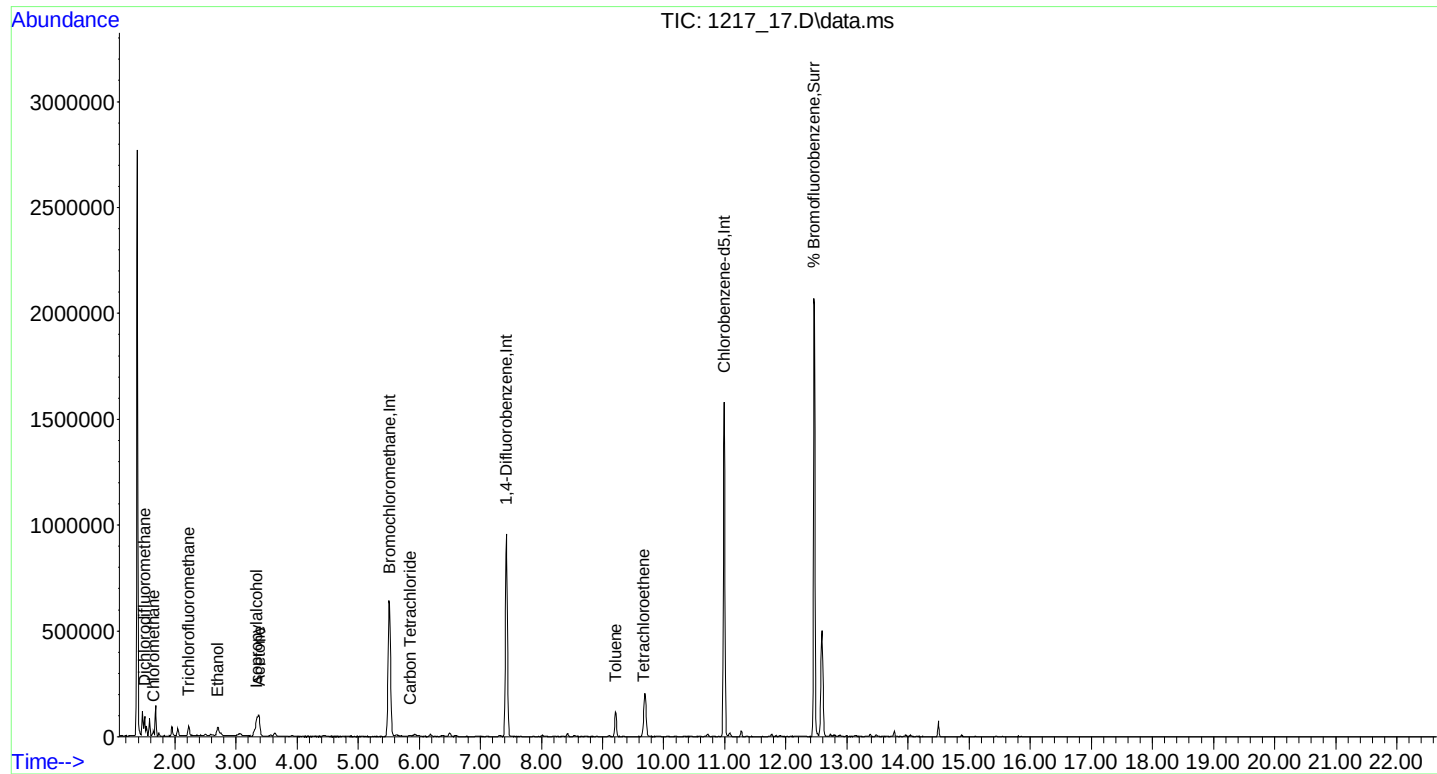
Quant Time: Dec 18 08:38:38 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

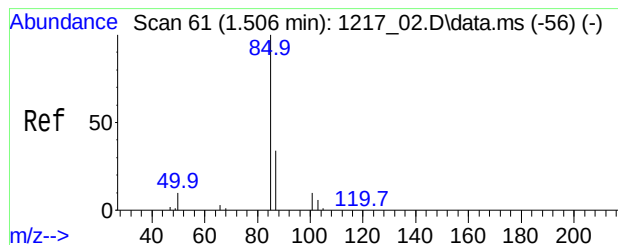
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.514	130	378152	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.425	114	1016922	10.000	ng	0.02
53) Chlorobenzene-d5	10.991	82	490004	10.000	ng	0.01
80) Bromochloromethane(sim)	5.509	130	386703	10.000	ng	# 0.02
94) 1,4-Difluorobenzene(sim)	7.428	114	1121909	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.987	82	535533	10.000	ng	0.01
System Monitoring Compounds						
62) % Bromofluorobenzene	12.461	95	680875	10.336	ppbv	0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	103.40%
Target Compounds						
3) Dichlorodifluoromethane	1.506	101	3878	0.294	ppbv#	87
4) Chloromethane	1.650	50	17841	0.626	ppbv	97
10) Ethanol	2.704	45	44470	5.781	ppbv#	84
12) Acetone	3.374	43	154347	2.750	ppbv	99
13) Trichlorofluoromethane	2.225	101	24642	0.257	ppbv	96
14) Isopropylalcohol	3.340	45	126640	2.302	ppbv	87
34) Carbon Tetrachloride	5.853	117	6380	0.067	ppbv	95
48) Toluene	9.211	91	94761	0.712	ppbv	100
52) Tetrachloroethene	9.673	166	7155	0.075	ppbv	93
84) Trichlorofluoromethane...	2.221	101	25560	0.233	ppbv	99
86) Carbon Tetrachloride(sim)	5.848	117	6932	0.073	ppbv	100
103] Tetrachloroethene(sim)	9.673	166	6968	0.071	ppbv	93

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_17.D
Acq On : 18 Dec 2019 4:43 am
Operator : Keith
Client ID : IA-4
Lab ID : CE89172
ALS Vial : 86 Sample Multiplier: 1

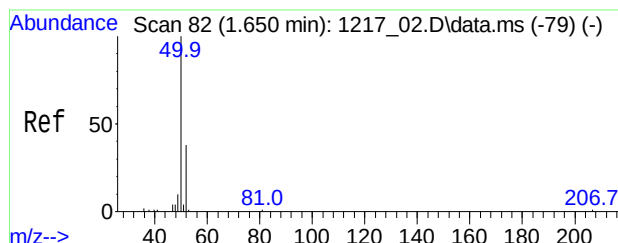
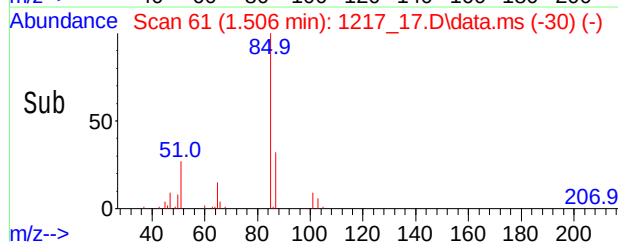
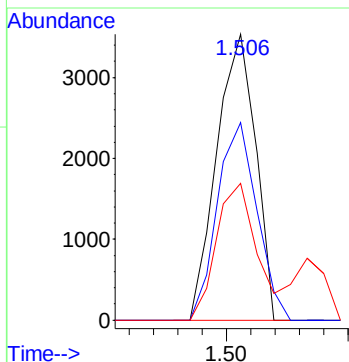
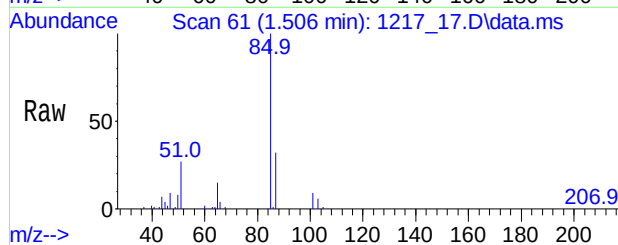
Quant Time: Dec 18 08:38:38 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





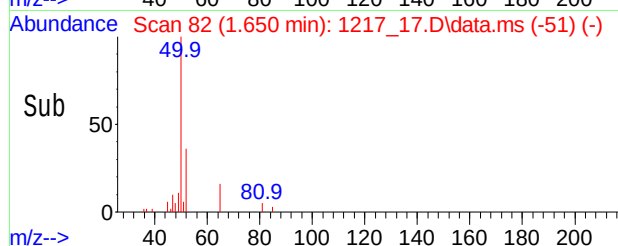
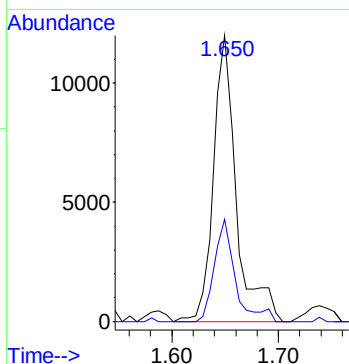
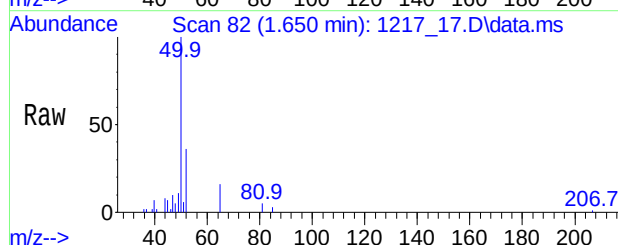
#3
 Dichlorodifluoromethane
 Conc: 8\$ 0.294 ppbv
 RT: 1.506 min Scan# 61
 Delta R.T. 0.014 min
 Lab File: 1217_17.D
 Acq: 18 Dec 2019 4:43 am

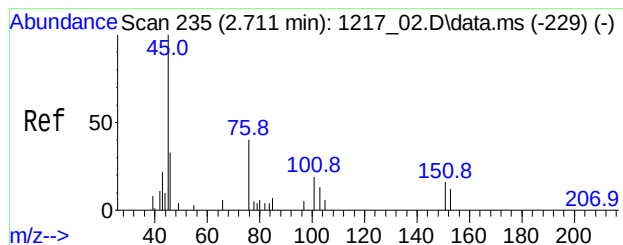
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	3878		
103	70.6	53.4	80.0	
66	49.4	26.0	39.0	



#4
 Chloromethane
 Conc: 8\$ 0.626 ppbv
 RT: 1.650 min Scan# 82
 Delta R.T. 0.014 min
 Lab File: 1217_17.D
 Acq: 18 Dec 2019 4:43 am

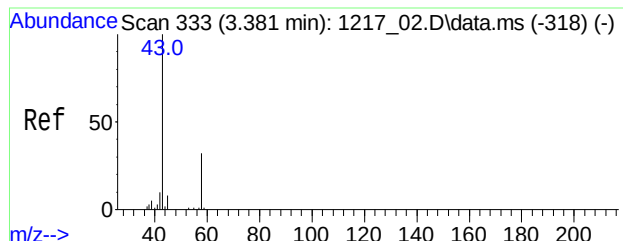
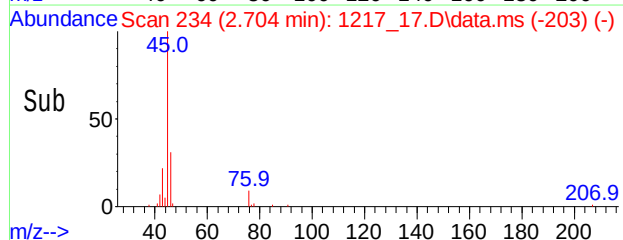
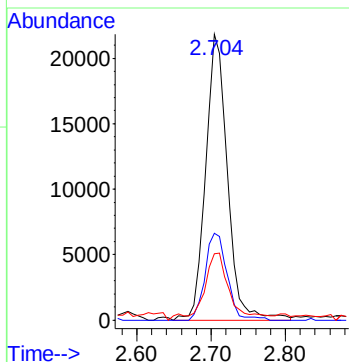
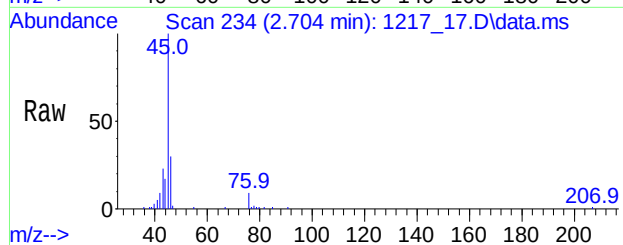
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	17841		
52	32.3	14.3	54.3	





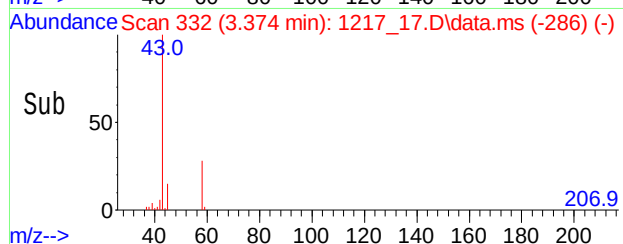
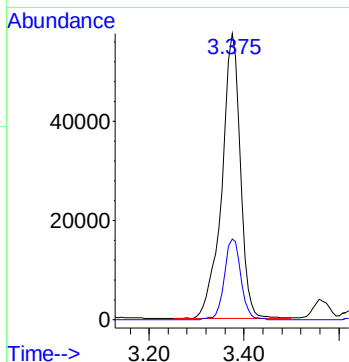
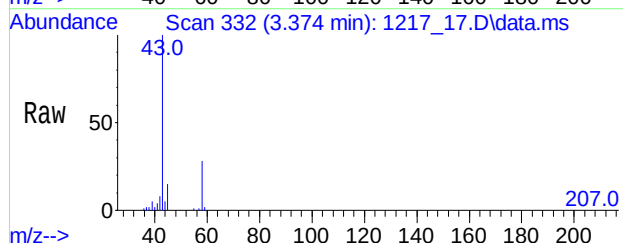
#10
Ethanol
Conc: 8\$ 5.781 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

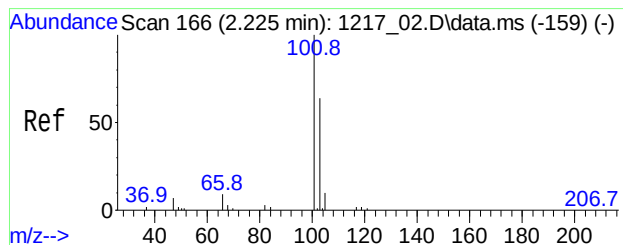
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	44470		
46	30.5	24.9	37.3	
43	21.7	30.8	46.2#	



#12
Acetone
Conc: 8\$ 2.750 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

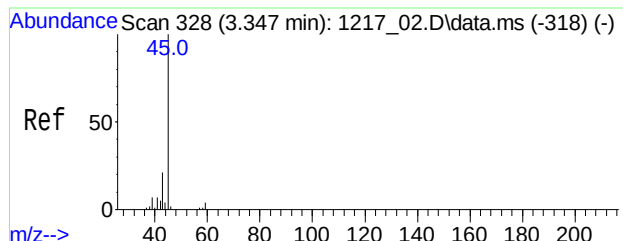
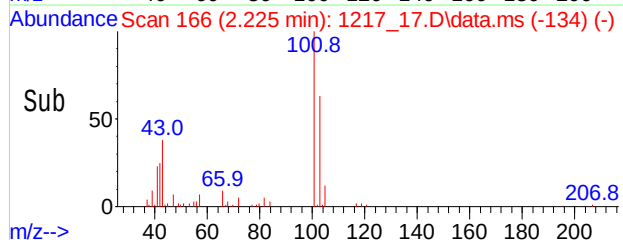
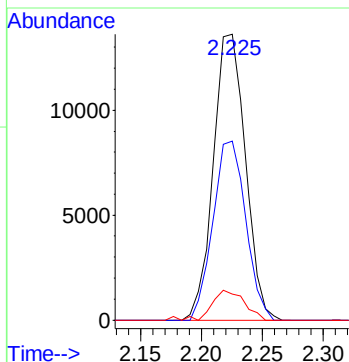
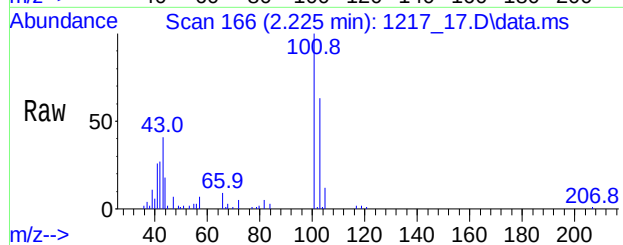
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	154347		
58	24.9	20.4	30.6	





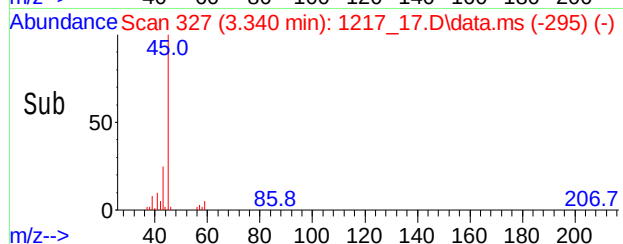
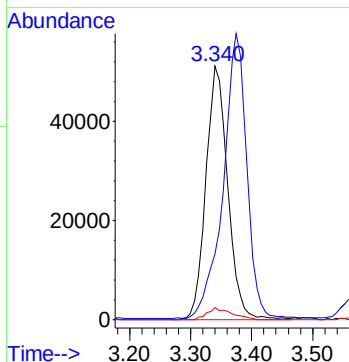
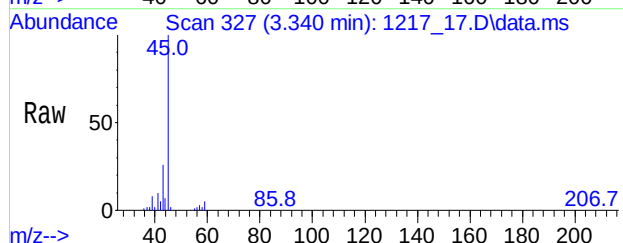
#13
Trichlorofluoromethane
Conc: 8\$ 0.257 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

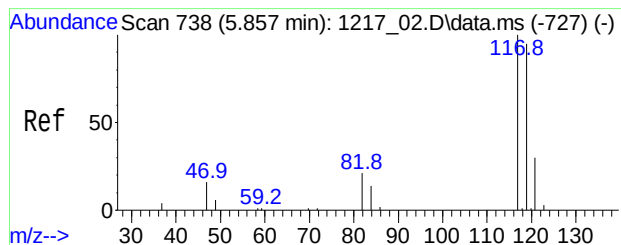
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24642		
103	64.0	54.1	81.1	
66	10.4	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 2.302 ppbv
RT: 3.340 min Scan# 327
Delta R.T. 0.020 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

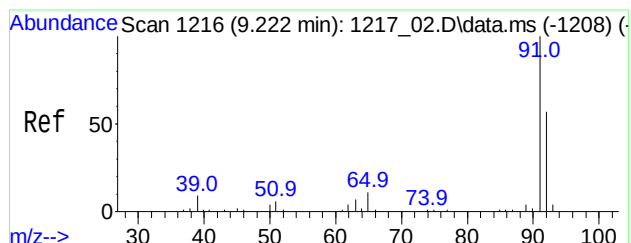
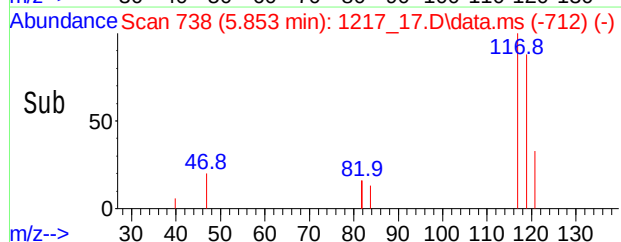
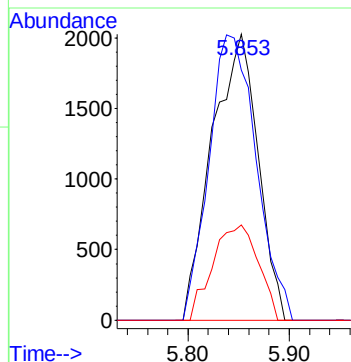
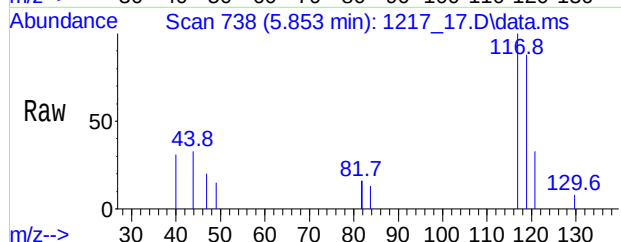
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	126640		
43	121.9	86.3	129.5	
59	5.0	4.2	6.4	





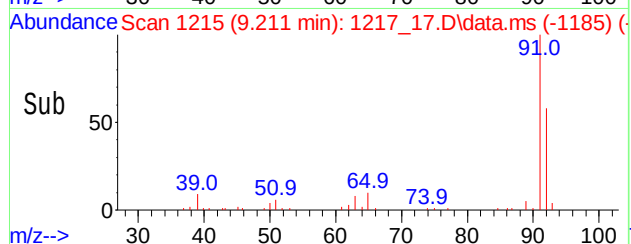
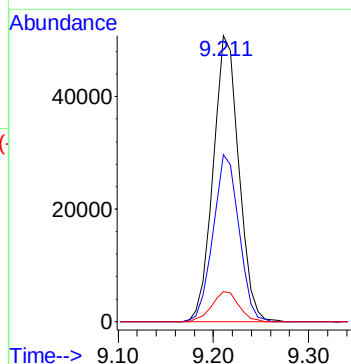
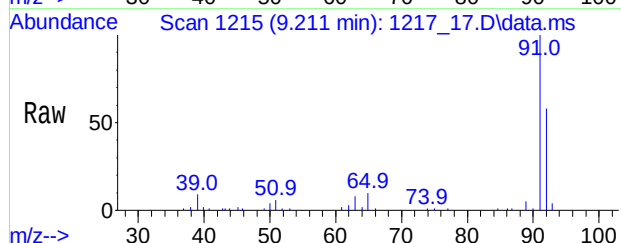
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.853 min Scan# 738
Delta R.T. 0.037 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

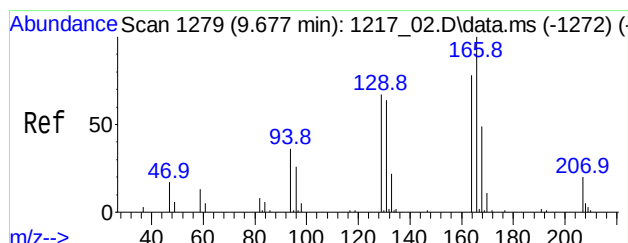
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6380		
119	102.5	77.1	117.1	
121	33.0	10.9	50.9	



#48
Toluene
Conc: 8\$ 0.712 ppbv
RT: 9.211 min Scan# 1215
Delta R.T. 0.015 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

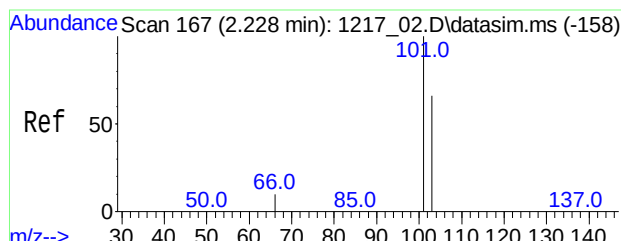
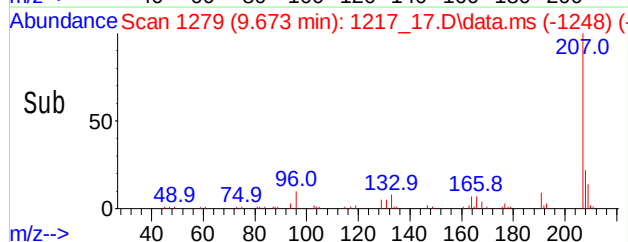
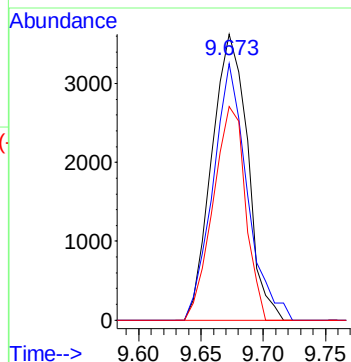
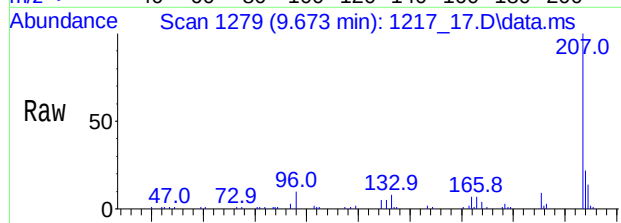
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	94761		
92	58.9	47.0	70.6	
65	11.0	8.3	12.5	





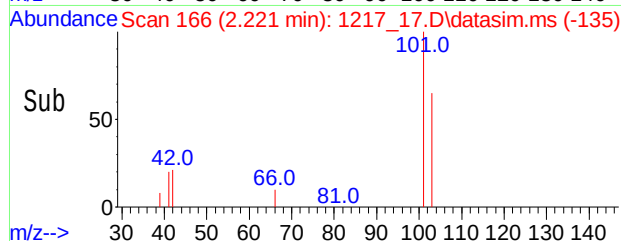
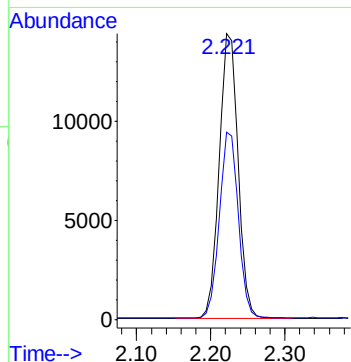
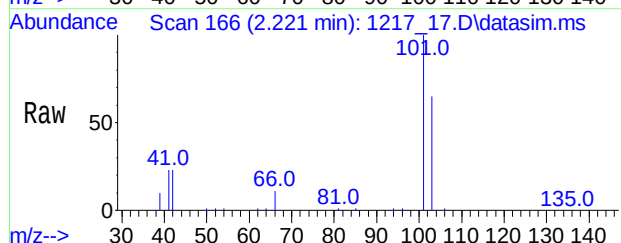
#52
Tetrachloroethene
Conc: 8\$ Below Cal
RT: 9.673 min Scan# 1279
Delta R.T. 0.022 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

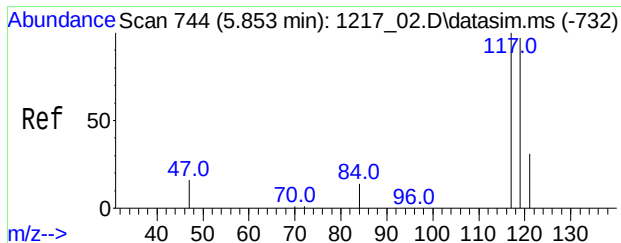
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	7155		
164	86.1	61.8	92.8	
129	67.7	52.4	78.6	



#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.233 ppbv
RT: 2.221 min Scan# 166
Delta R.T. 0.014 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

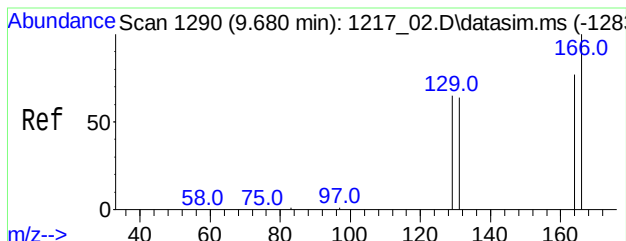
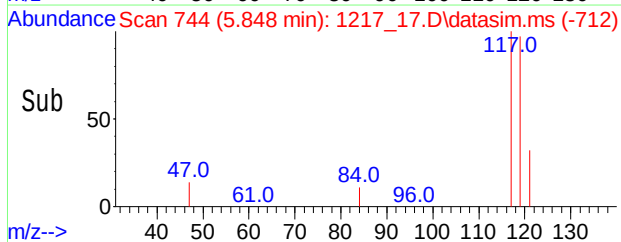
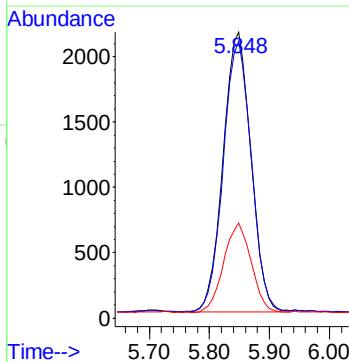
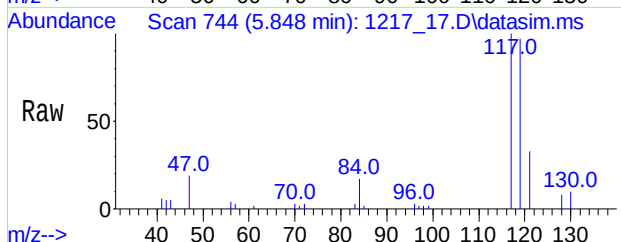
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	25560		
103	65.4	52.8	79.2	





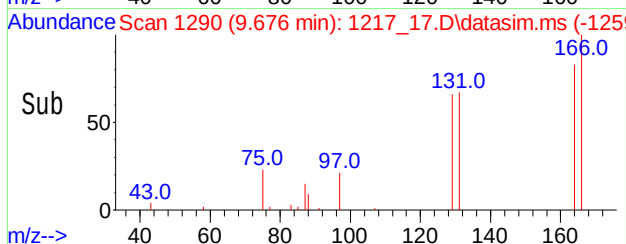
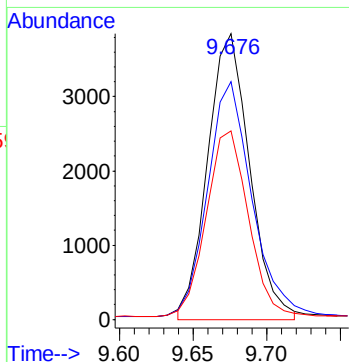
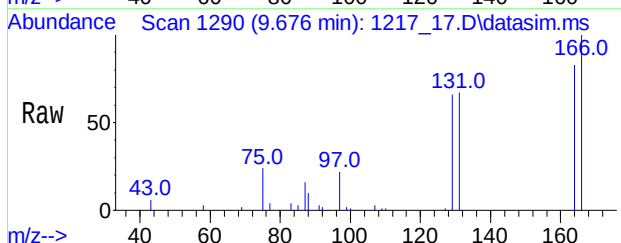
#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.073 ppbv
RT: 5.848 min Scan# 744
Delta R.T. 0.029 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

Tgt Ion: 117 Resp: 6932
Ion Ratio Lower Upper
117 100
119 96.9 77.5 116.3
121 31.4 25.1 37.7



#103
Tetrachloroethene(sim)
Conc: 8\$ 0.071 ppbv
RT: 9.673 min Scan# 1290
Delta R.T. 0.022 min
Lab File: 1217_17.D
Acq: 18 Dec 2019 4:43 am

Tgt Ion: 166 Resp: 6968
Ion Ratio Lower Upper
166 100
164 86.6 57.3 97.3
129 64.1 45.5 85.5



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>	IA-3
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89173</u>	
Canister:	<u>721</u>	Lab File ID:	<u>1217_18.D</u>	
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>	Date Received: <u>12/17/19</u>
Purge Volume	<u>200</u> (cc)	Date Analyzed:	<u>12/18/19</u>	
Matrix:	<u>AIR</u>	Dilution Factor:	<u>1</u>	

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.344		0.202	0.202	r
74-87-3	Chloromethane	0.626		0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	8.96	S	0.531	0.531	r
67-64-1	Acetone	2.67	S	0.421	0.421	r
75-69-4	Trichlorofluoromethane	0.255		0.178	0.178	r
67-63-0	Isopropylalcohol	2.10	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	0.386		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

IA-3

Client:	FPMGROUP	Lab:	Phoenix Env. Labs
SDG No.:	GCE89170	Lab Sample ID:	CE89173
Canister:	721	Lab File ID:	1217_18.D
Instrument:	CHEM24	Column:	RTX-VMS
		Date Received:	12/17/19
Purge Volume	200 (cc)	Date Analyzed:	12/18/19
Matrix:	AIR	Dilution Factor:	1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
56-23-5	Carbon Tetrachloride(sim)	0.075		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.066		0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_18.D
 Acq On : 18 Dec 2019 5:20 am
 Operator : Keith
 Client ID : IA-3
 Lab ID : CE89173
 ALS Vial : 87 Sample Multiplier: 1

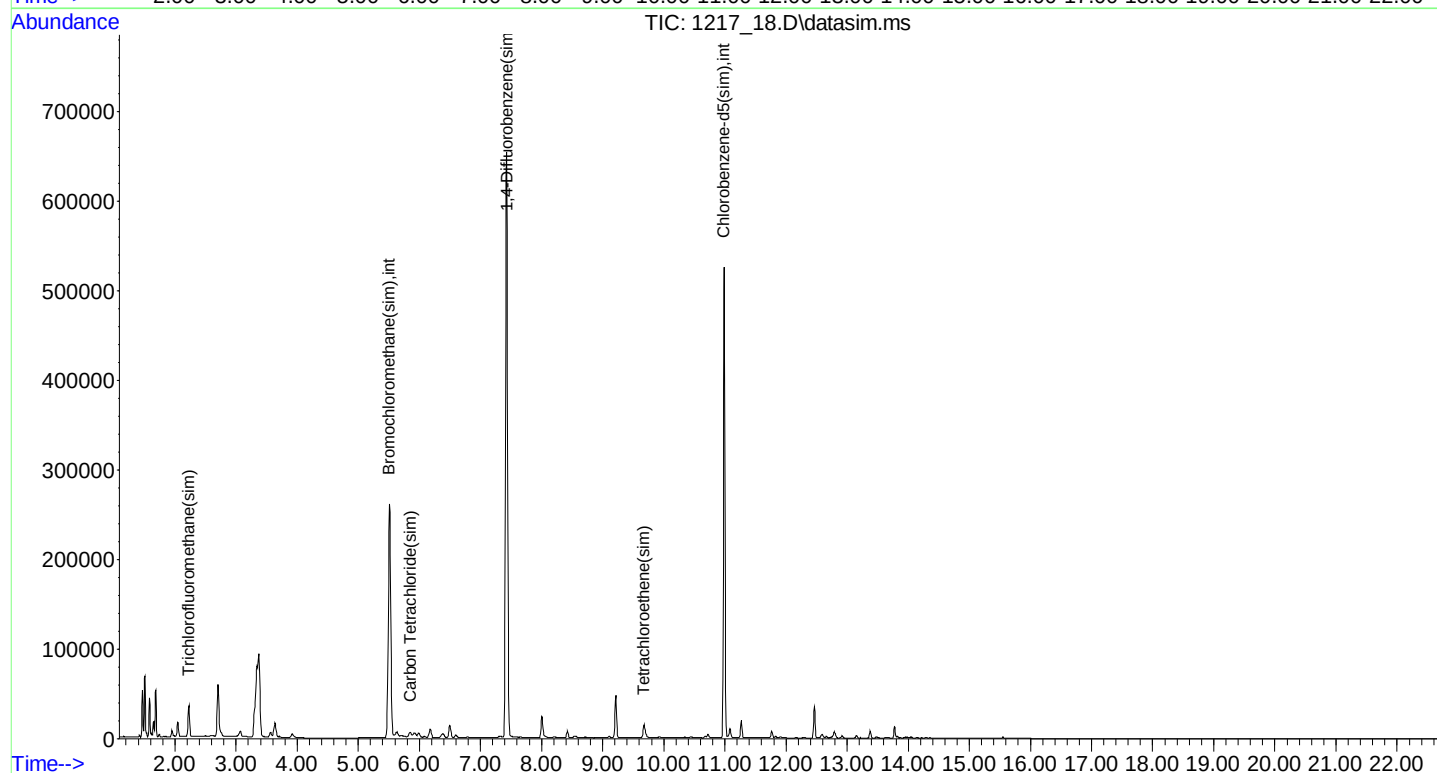
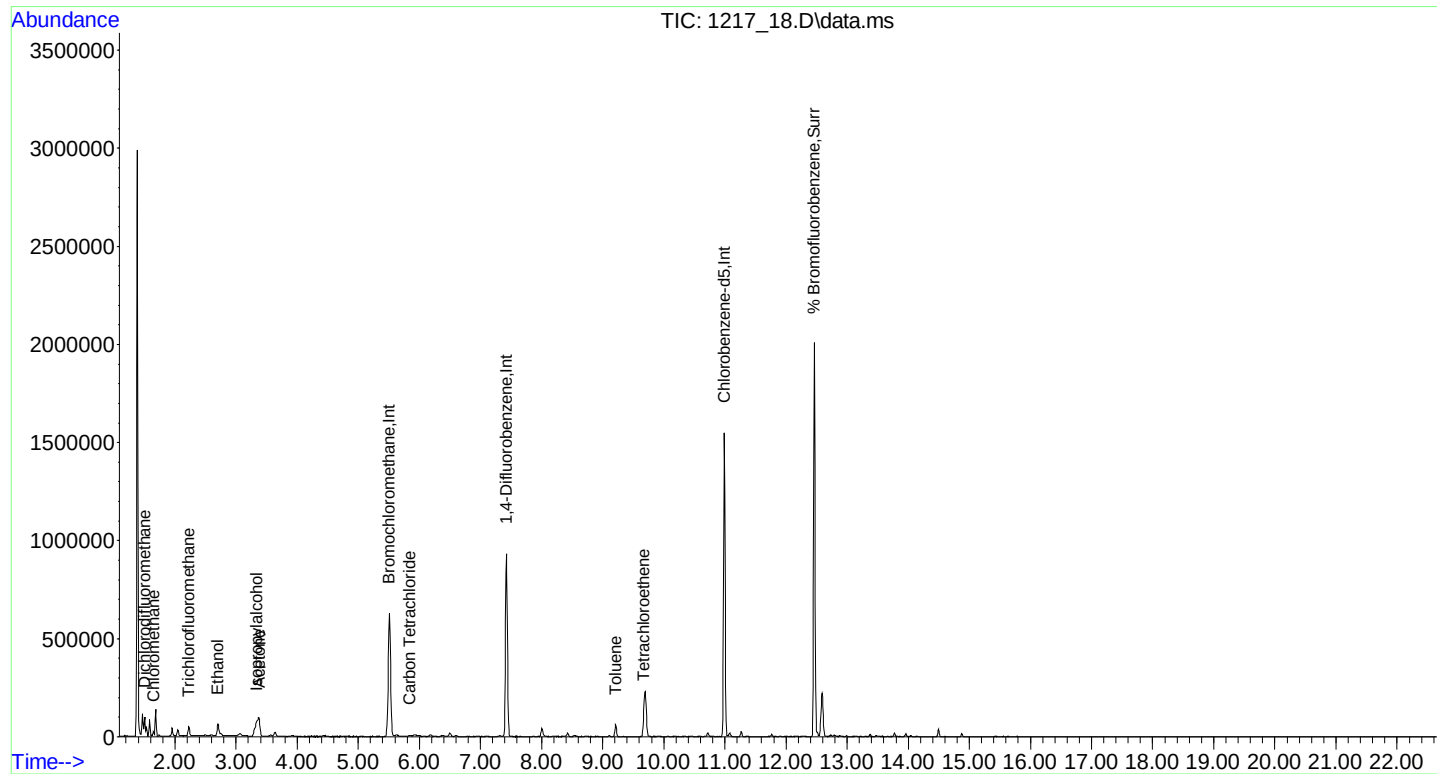
Quant Time: Dec 18 08:39:02 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

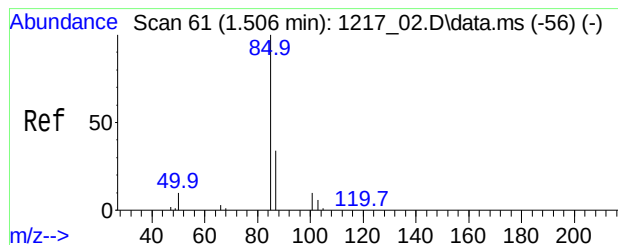
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.506	130	377382	10.000	ng	0.02
36) 1,4-Difluorobenzene	7.425	114	993351	10.000	ng	0.02
53) Chlorobenzene-d5	10.990	82	484434	10.000	ng	0.01
80) Bromochloromethane(sim)	5.509	130	380942	10.000	ng	# 0.02
94) 1,4-Difluorobenzene(sim)	7.428	114	1096286	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.986	82	531041	10.000	ng	0.01
System Monitoring Compounds						
62) % Bromofluorobenzene	12.461	95	668396	10.263	ppbv	0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	102.60%
Target Compounds						
3) Dichlorodifluoromethane	1.506	101	4521	0.344	ppbv#	88
4) Chloromethane	1.649	50	17806	0.626	ppbv	96
10) Ethanol	2.704	45	68748	8.955	ppbv#	86
12) Acetone	3.374	43	149656	2.672	ppbv	100
13) Trichlorofluoromethane	2.225	101	24391	0.255	ppbv	96
14) Isopropylalcohol	3.340	45	115427	2.103	ppbv#	80
34) Carbon Tetrachloride	5.845	117	6895	0.072	ppbv	97
48) Toluene	9.211	91	50243	0.386	ppbv	99
52) Tetrachloroethene	9.673	166	6427	0.069	ppbv	93
84) Trichlorofluoromethane...	2.228	101	25828	0.239	ppbv	99
86) Carbon Tetrachloride(sim)	5.848	117	6986	0.075	ppbv	100
103] Tetrachloroethene(sim)	9.673	166	6332	0.066	ppbv	91

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_18.D
Acq On : 18 Dec 2019 5:20 am
Operator : Keith
Client ID : IA-3
Lab ID : CE89173
ALS Vial : 87 Sample Multiplier: 1

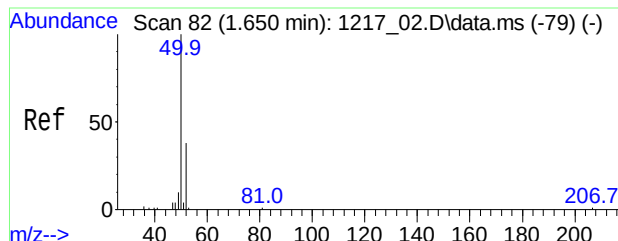
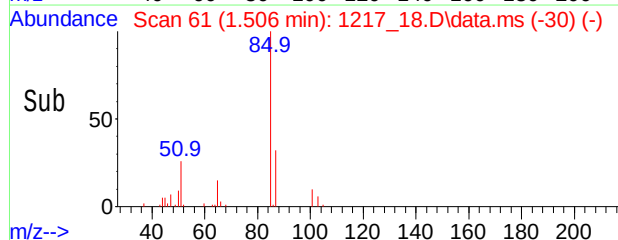
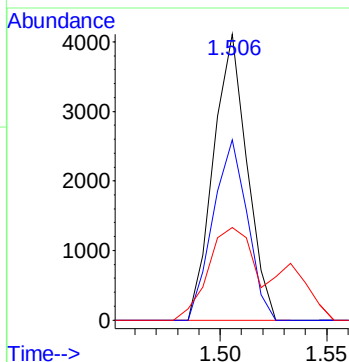
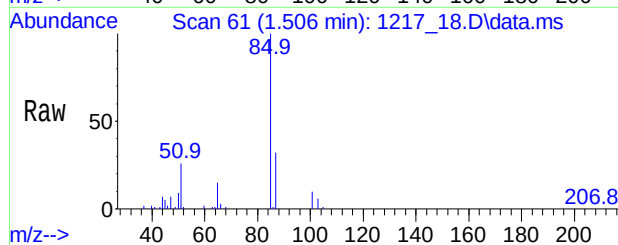
Quant Time: Dec 18 08:39:02 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





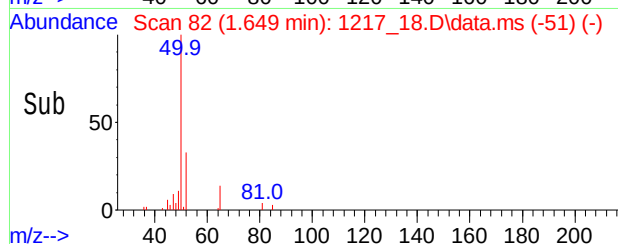
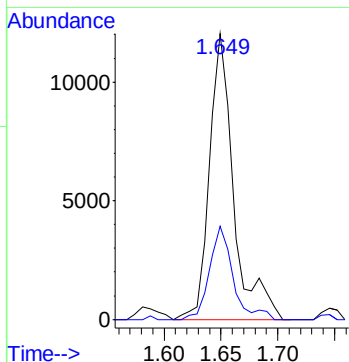
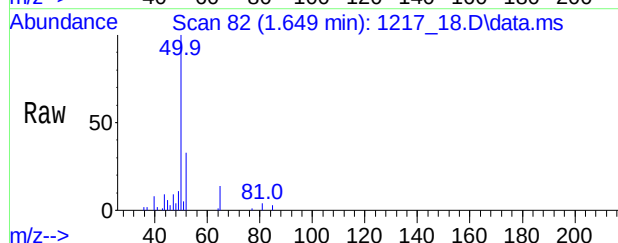
#3
 Dichlorodifluoromethane
 Conc: 8\$ 0.344 ppbv
 RT: 1.506 min Scan# 61
 Delta R.T. 0.014 min
 Lab File: 1217_18.D
 Acq: 18 Dec 2019 5:20 am

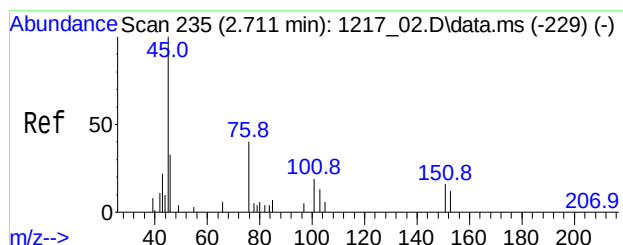
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	4521		
103	64.5	53.4	80.0	
66	49.3	26.0	39.0	



#4
 Chloromethane
 Conc: 8\$ 0.626 ppbv
 RT: 1.649 min Scan# 82
 Delta R.T. 0.013 min
 Lab File: 1217_18.D
 Acq: 18 Dec 2019 5:20 am

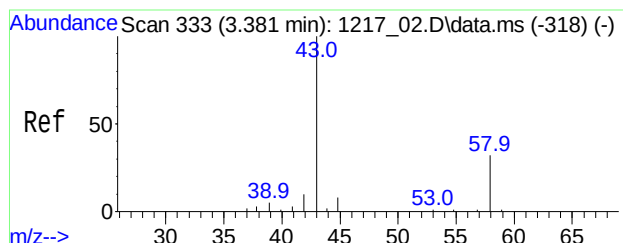
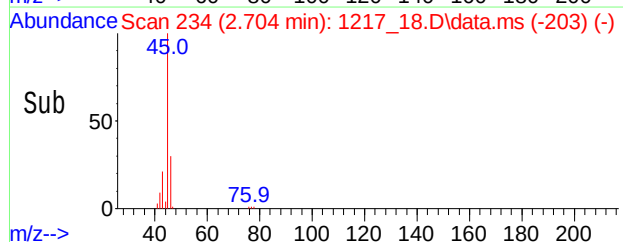
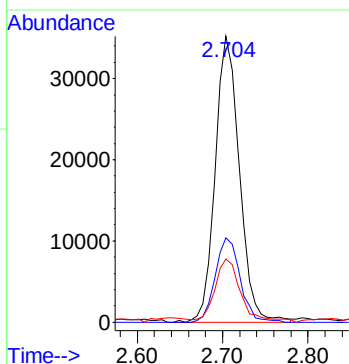
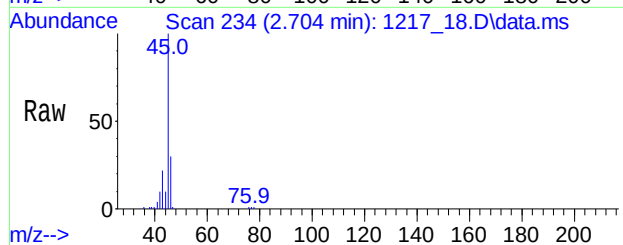
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	17806		
52	31.7	14.3	54.3	





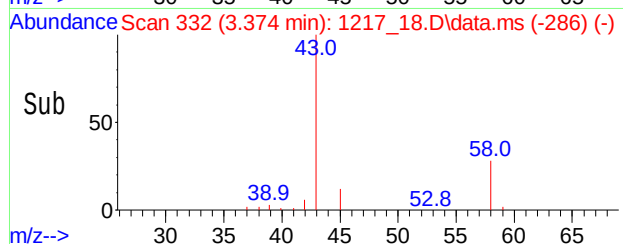
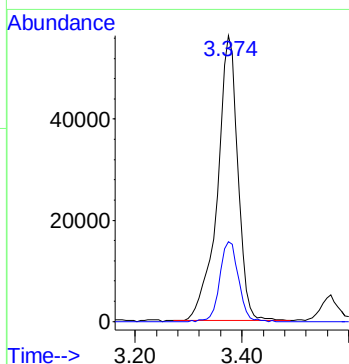
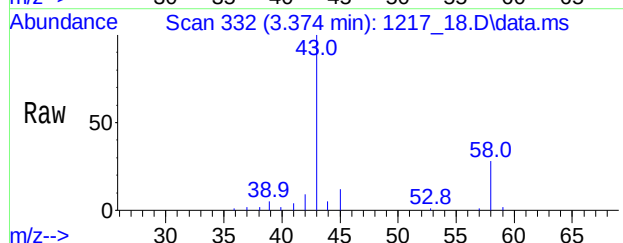
#10
Ethanol
Conc: 8\$ 8.955 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

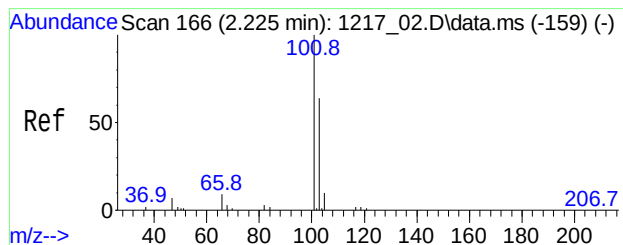
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	68748		
46	30.2	24.9	37.3	
43	23.7	30.8	46.2#	



#12
Acetone
Conc: 8\$ 2.672 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

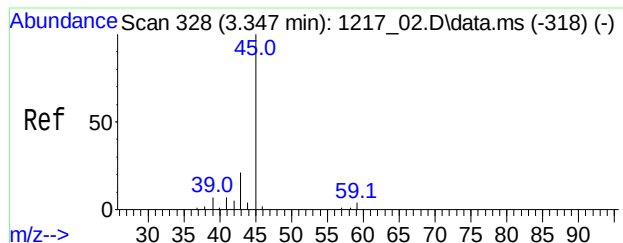
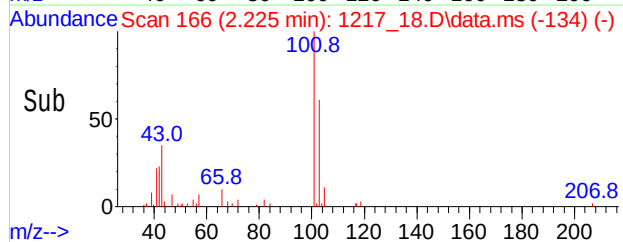
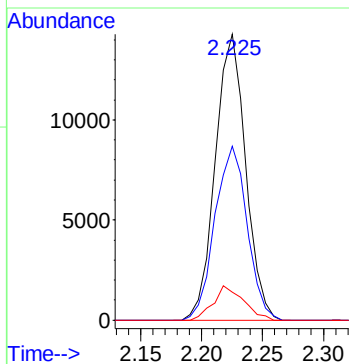
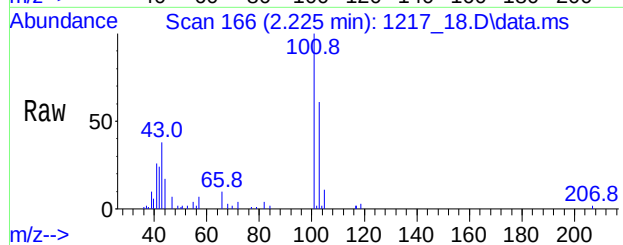
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	149656		
58	25.5	20.4	30.6	





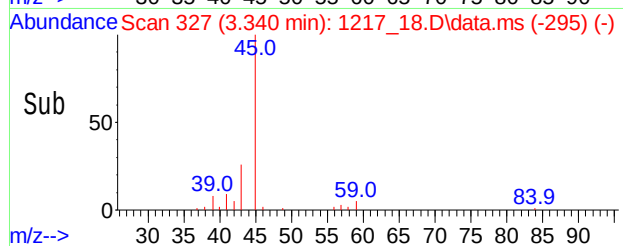
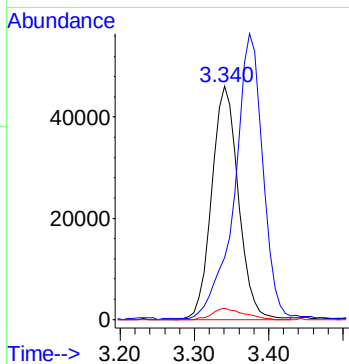
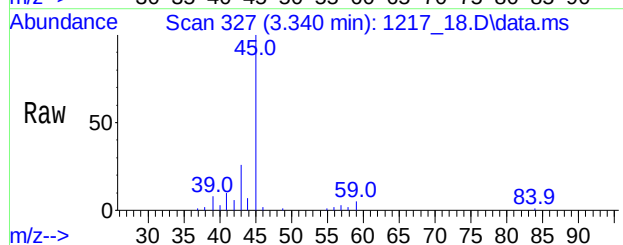
#13
Trichlorofluoromethane
Conc: 8\$ 0.255 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

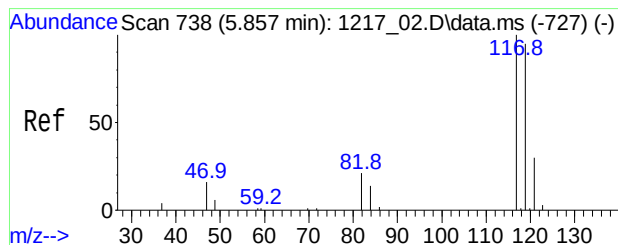
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24391		
103	64.6	54.1	81.1	
66	11.9	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 2.103 ppbv
RT: 3.340 min Scan# 327
Delta R.T. 0.020 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

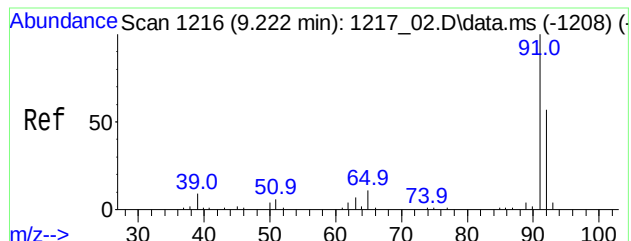
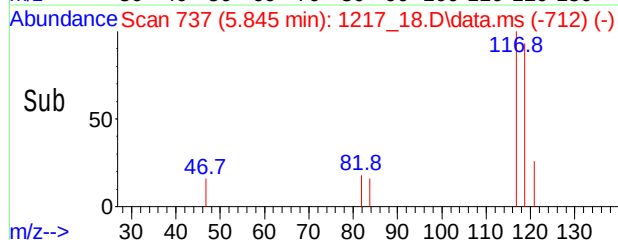
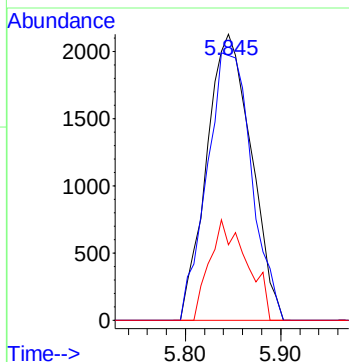
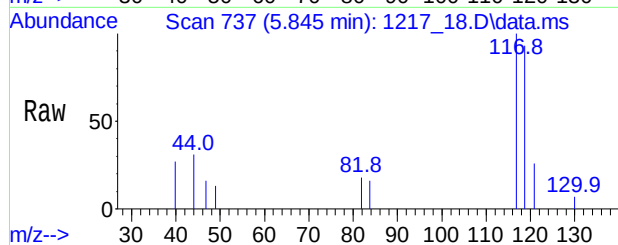
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	115427		
43	129.7	86.3	129.5#	
59	5.5	4.2	6.4	





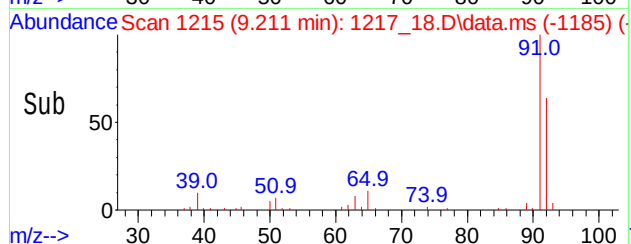
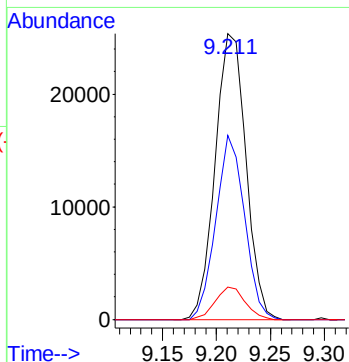
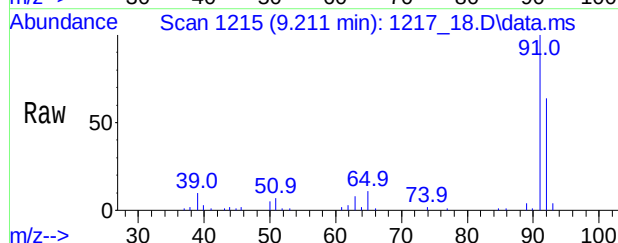
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.845 min Scan# 737
Delta R.T. 0.029 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

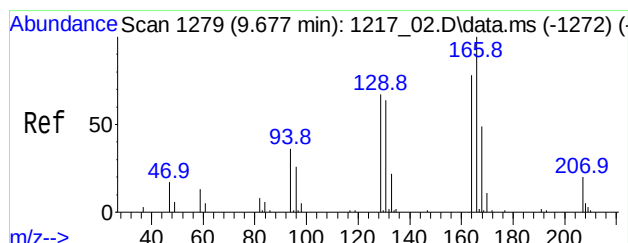
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6895		
119	93.6	77.1	117.1	
121	29.4	10.9	50.9	



#48
Toluene
Conc: 8\$ 0.386 ppbv
RT: 9.211 min Scan# 1215
Delta R.T. 0.015 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

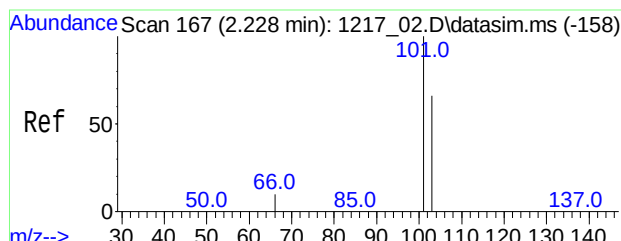
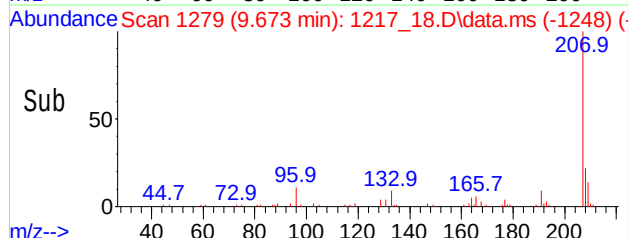
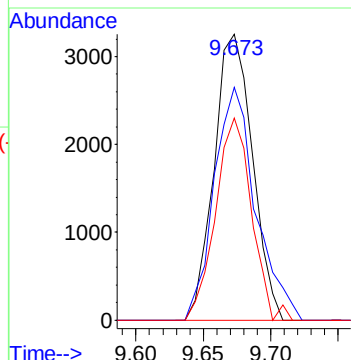
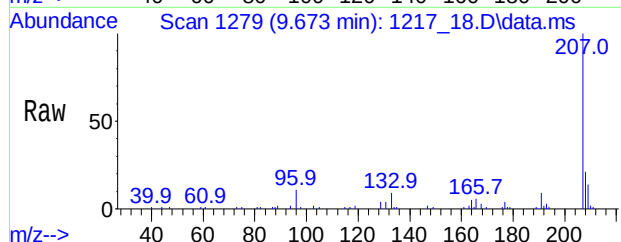
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	50243		
92	59.8	47.0	70.6	
65	10.9	8.3	12.5	





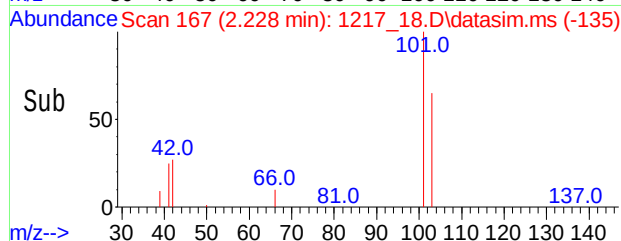
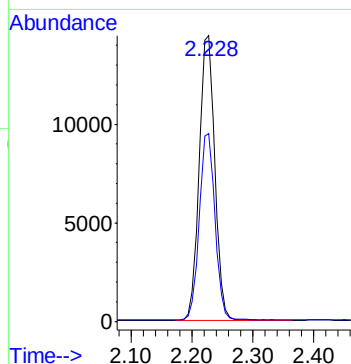
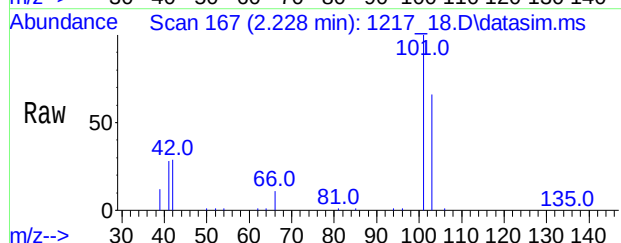
#52
Tetrachloroethene
Conc: 8\$ Below Cal
RT: 9.673 min Scan# 1279
Delta R.T. 0.022 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

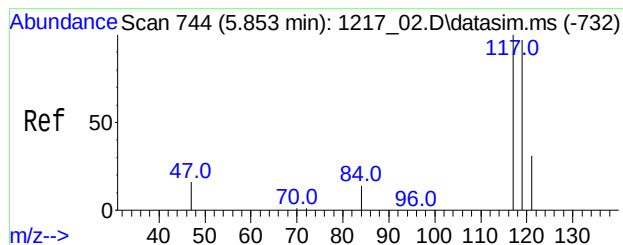
Tgt Ion: 166 Resp: 6427
Ion Ratio Lower Upper
166 100
164 88.4 61.8 92.8
129 66.4 52.4 78.6



#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.239 ppbv
RT: 2.228 min Scan# 167
Delta R.T. 0.021 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

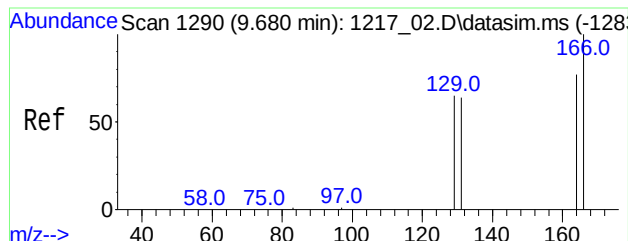
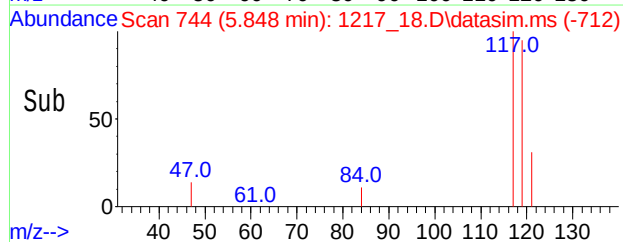
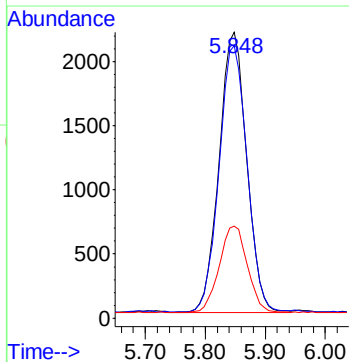
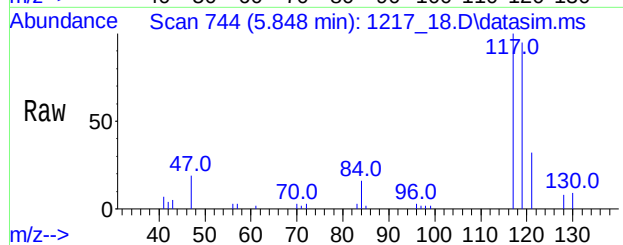
Tgt Ion: 101 Resp: 25828
Ion Ratio Lower Upper
101 100
103 65.3 52.8 79.2





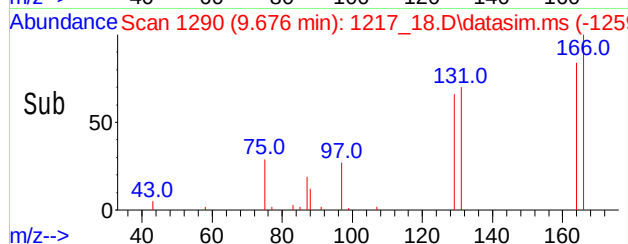
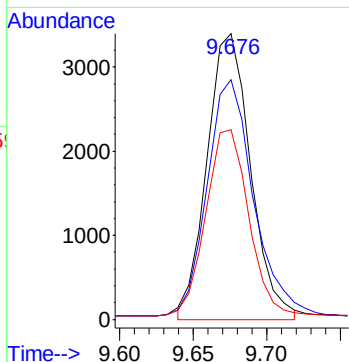
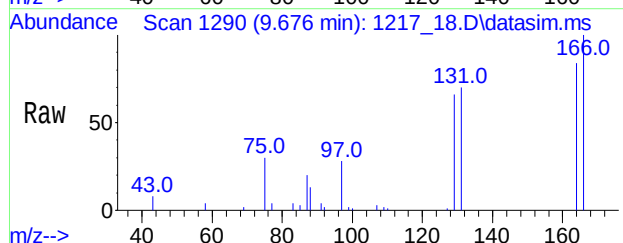
#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.075 ppbv
RT: 5.848 min Scan# 744
Delta R.T. 0.029 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

Tgt Ion: 117 Resp: 6986
Ion Ratio Lower Upper
117 100
119 96.5 77.5 116.3
121 31.4 25.1 37.7



#103
Tetrachloroethene(sim)
Conc: 8\$ 0.066 ppbv
RT: 9.673 min Scan# 1290
Delta R.T. 0.022 min
Lab File: 1217_18.D
Acq: 18 Dec 2019 5:20 am

Tgt Ion: 166 Resp: 6332
Ion Ratio Lower Upper
166 100
164 89.8 57.3 97.3
129 67.4 45.5 85.5



1
AIR ANALYSIS DATA SHEET

CLIENT ID

IA-1

Client:	FPMGROUP	Lab:	Phoenix Env. Labs
SDG No.:	GCE89170	Lab Sample ID:	CE89174
Canister:	729	Lab File ID:	1217_19.D
Instrument:	CHEM24	Column:	RTX-VMS
		Date Received:	12/17/19
Purge Volume	200 (cc)	Date Analyzed:	12/18/19
Matrix:	AIR	Dilution Factor:	1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.202	U	0.202	0.202	r
74-87-3	Chloromethane	0.485	U	0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	400	ES	0.531	0.531	r
67-64-1	Acetone	15.6	S	0.421	0.421	r
67-63-0	Isopropylalcohol	16.0	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.767		0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
67-66-3	Chloroform	0.630		0.205	0.205	r
141-78-6	Ethyl acetate	0.342		0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.459		0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	1.19		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
75-69-4	Trichlorofluoromethane(sim)	0.178	U	0.178	0.178	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

IA-1

Client: FPMGROUP Lab: Phoenix Env. Labs

SDG No.: GCE89170 Lab Sample ID: CE89174

Canister: 729 Lab File ID: 1217_19.D

Instrument: CHEM24 Column: RTX-VMS Date Received: 12/17/19

Purge Volume 200 (cc) Date Analyzed: 12/18/19

Matrix: AIR Dilution Factor: 1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r
56-23-5	Carbon Tetrachloride(sim)	0.079		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.152		0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_19.D
 Acq On : 18 Dec 2019 5:56 am
 Operator : Keith
 Client ID : IA-1
 Lab ID : CE89174
 ALS Vial : 88 Sample Multiplier: 1

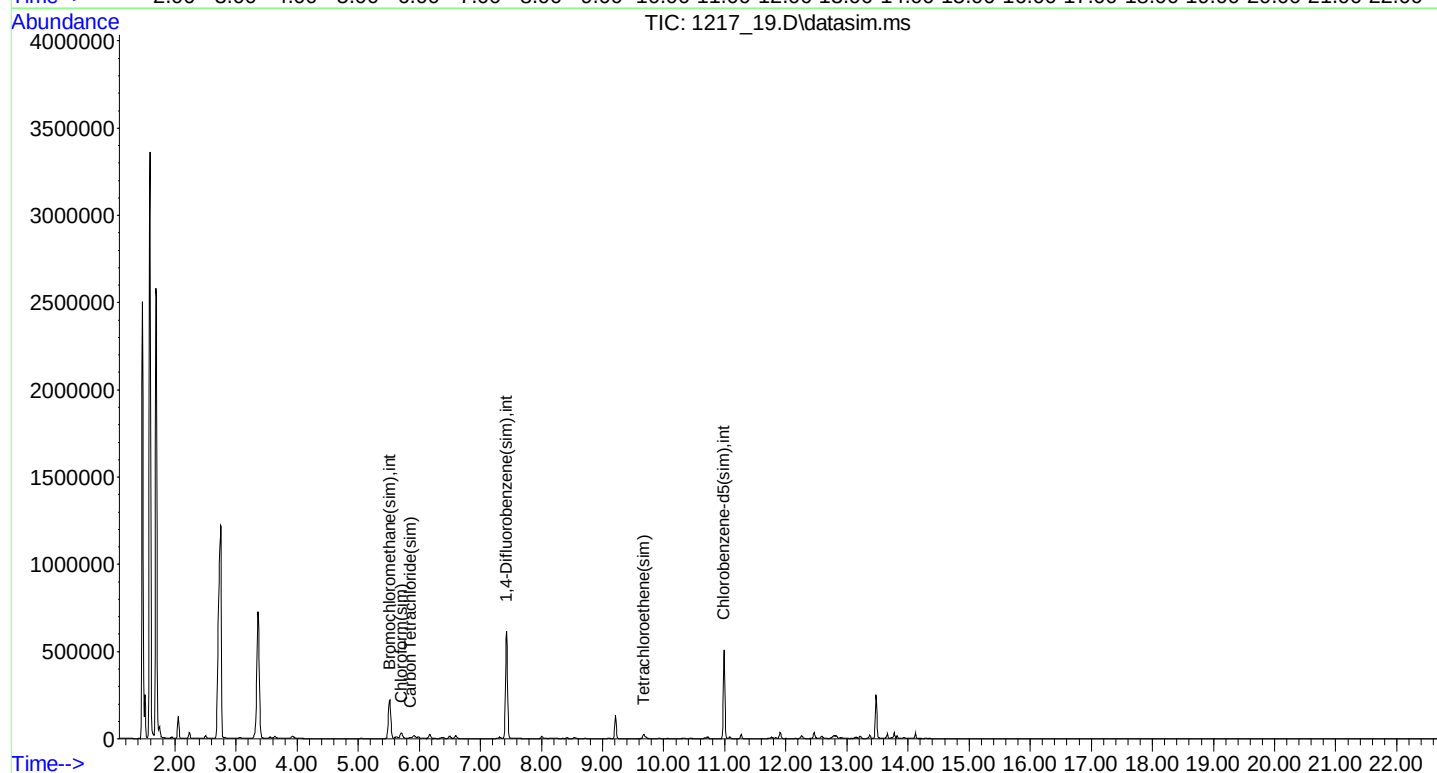
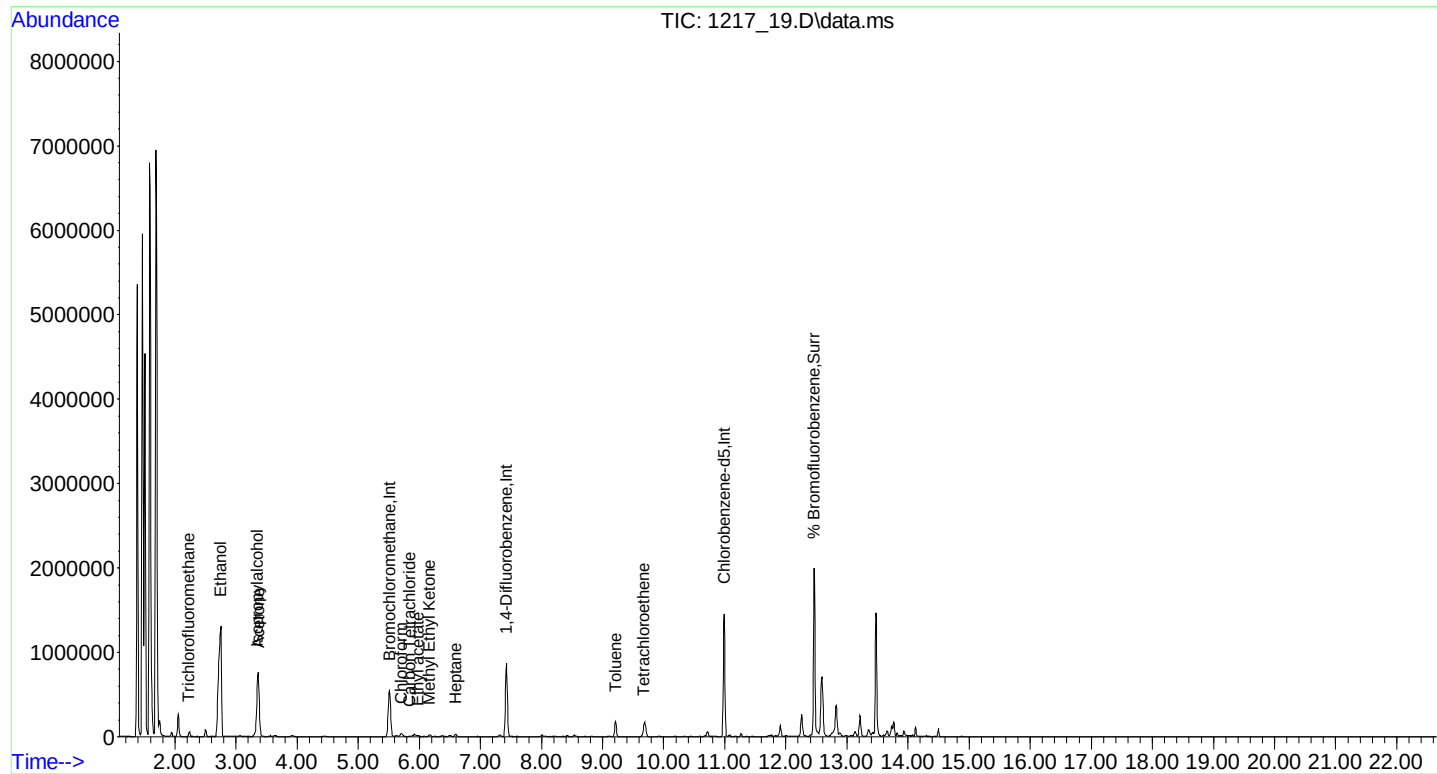
Quant Time: Dec 18 08:39:56 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

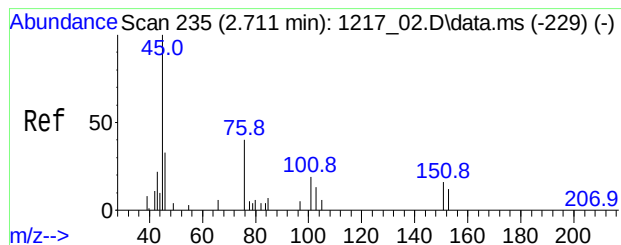
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.514	130	317904	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.425	114	912274	10.000	ng	0.02
53) Chlorobenzene-d5	10.991	82	461146	10.000	ng	0.01
80) Bromochloromethane(sim)	5.517	130	324265	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.428	114	1015012	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.987	82	506712	10.000	ng	0.01
System Monitoring Compounds						
62) % Bromofluorobenzene	12.461	95	650328	10.490	ppbv	0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	104.90%
Target Compounds						
10) Ethanol	2.752	45	2584960	399.716	ppbv#	83
12) Acetone	3.368	43	734725	15.571	ppbv	98
~~13) Trichlorofluoromethane~~	~~2.232~~	~~101~~	~~14450~~	~~0.179~~	~~ppbv~~	~~99~~
14) Isopropylalcohol	3.354	45	740796	16.019	ppbv	92
25) Methyl Ethyl Ketone	6.170	43	39265	0.767	ppbv	97
28) Chloroform	5.708	83	45996	0.630	ppbv	98
29) Ethyl acetate	5.982	43	17012	0.342	ppbv	100
34) Carbon Tetrachloride	5.845	117	5674	0.071	ppbv	93
43) Heptane	6.596	43	18523	0.459	ppbv	98
48) Toluene	9.211	91	142053	1.189	ppbv	98
52) Tetrachloroethene	9.673	166	13538	0.158	ppbv	96
86] Carbon Tetrachloride(sim)	5.848	117	6293	0.079	ppbv	100
92] Chloroform(sim)	5.704	83	48598	0.657	ppbv	99
103] Tetrachloroethene(sim)	9.673	166	13538	0.152	ppbv	96

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_19.D
Acq On : 18 Dec 2019 5:56 am
Operator : Keith
Client ID : IA-1
Lab ID : CE89174
ALS Vial : 88 Sample Multiplier: 1

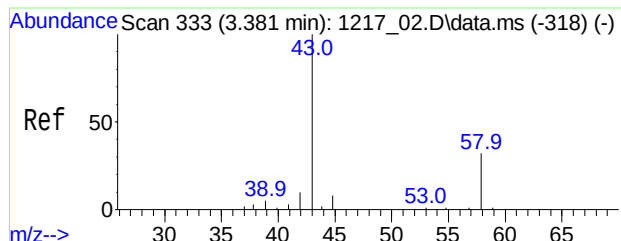
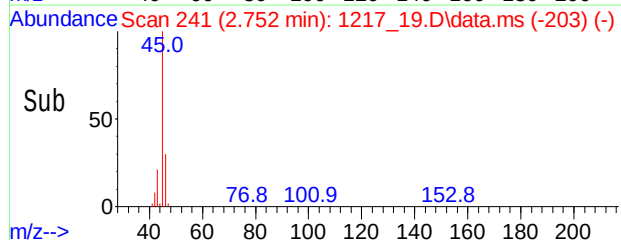
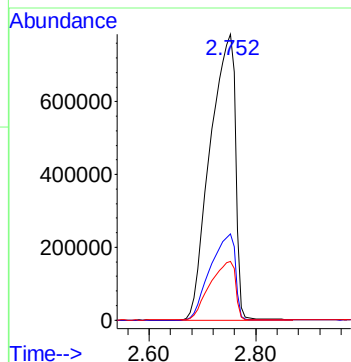
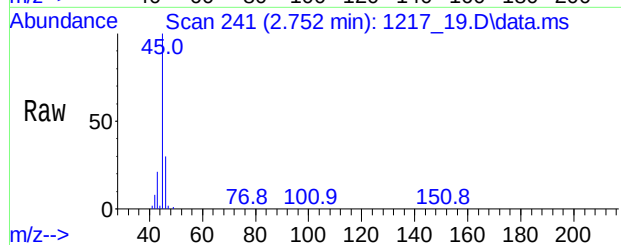
Quant Time: Dec 18 08:39:56 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





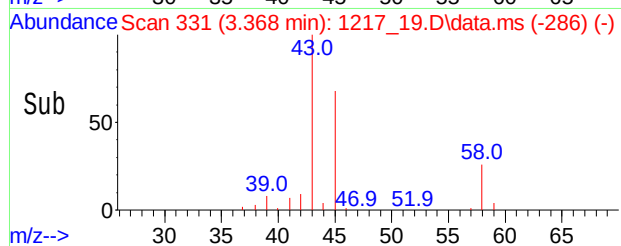
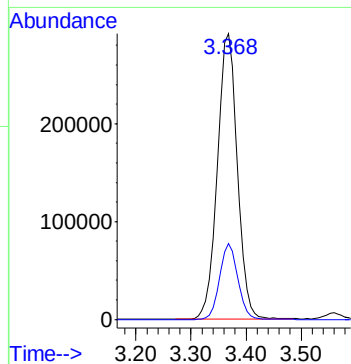
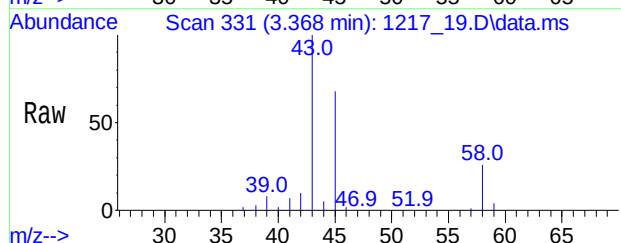
#10
Ethanol
Conc: 8\$ 399.716 ppbv
RT: 2.752 min Scan# 241
Delta R.T. 0.062 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

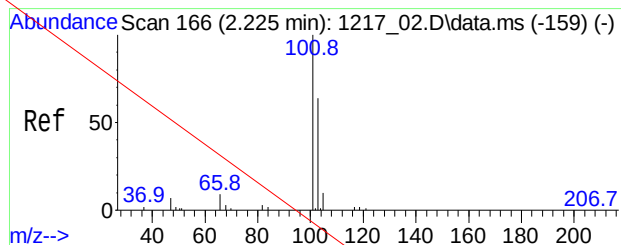
Tgt Ion: 45 Resp: 2584960
Ion Ratio Lower Upper
45 100
46 29.9 24.9 37.3
43 20.6 30.8 46.2#



#12
Acetone
Conc: 8\$ 15.571 ppbv
RT: 3.368 min Scan# 331
Delta R.T. 0.007 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

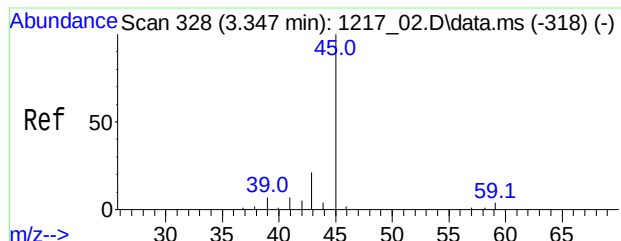
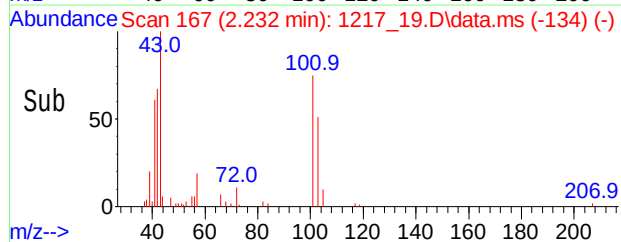
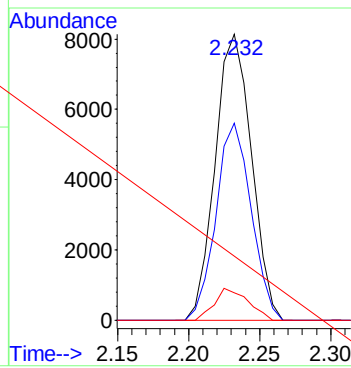
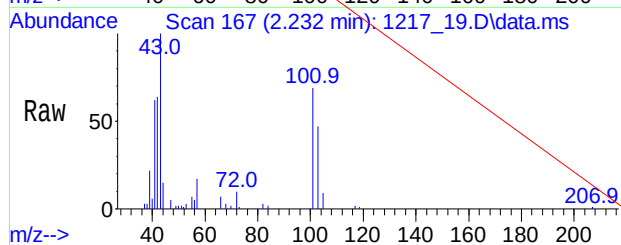
Tgt Ion: 43 Resp: 734725
Ion Ratio Lower Upper
43 100
58 24.3 20.4 30.6





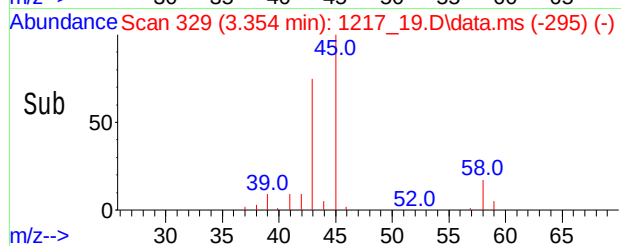
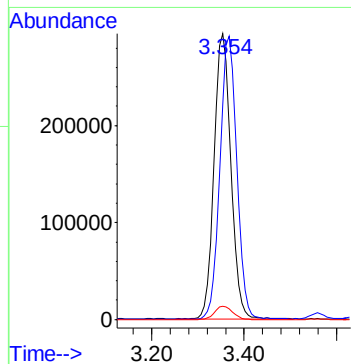
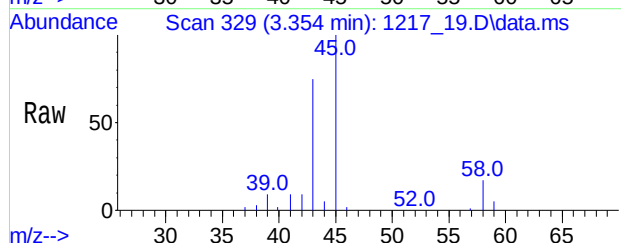
#13
Trichlorofluoromethane
Conc: 8\$ 0.179 ppbv
RT: 2.232 min Scan# 167
Delta R.T. 0.028 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

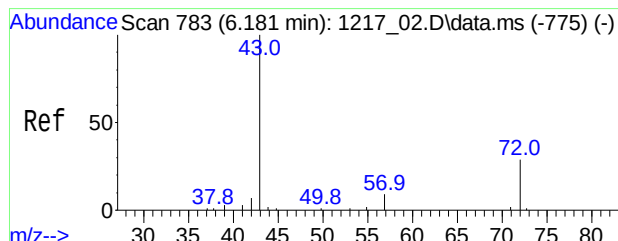
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	14450		
103	66.7	54.1	81.1	
66	10.3	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 16.019 ppbv
RT: 3.354 min Scan# 329
Delta R.T. 0.034 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

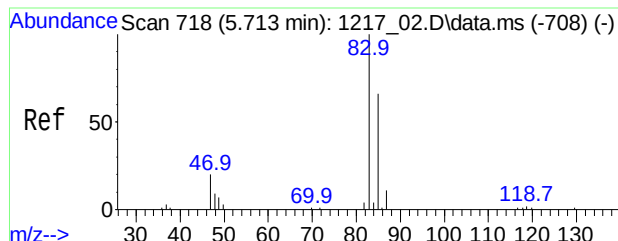
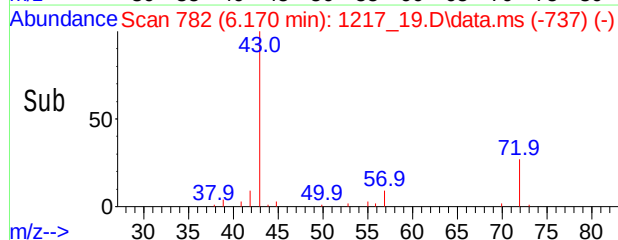
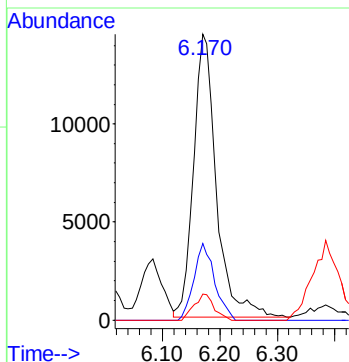
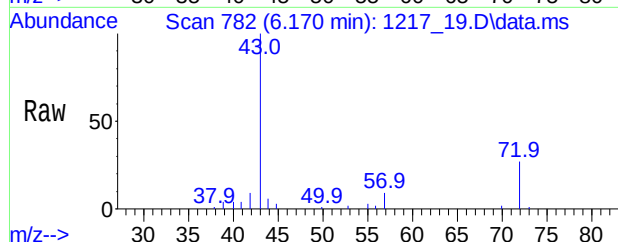
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	740796		
43	99.2	86.3	129.5	
59	4.9	4.2	6.4	





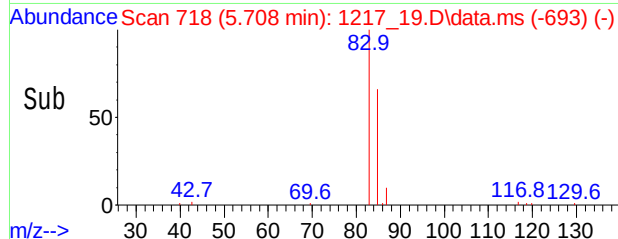
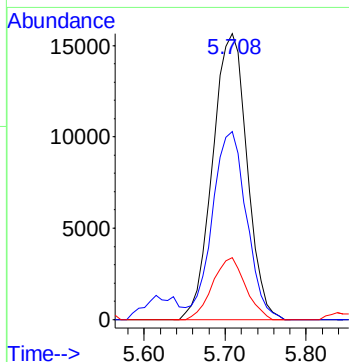
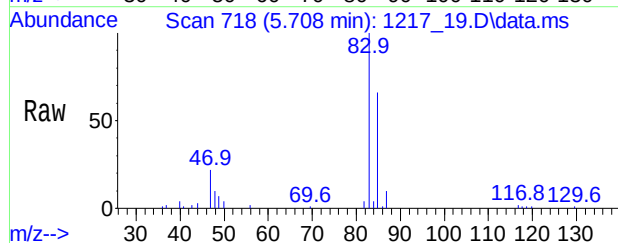
#25
Methyl Ethyl Ketone
Conc: 8\$ 0.767 ppbv
RT: 6.170 min Scan# 782
Delta R.T. 0.022 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

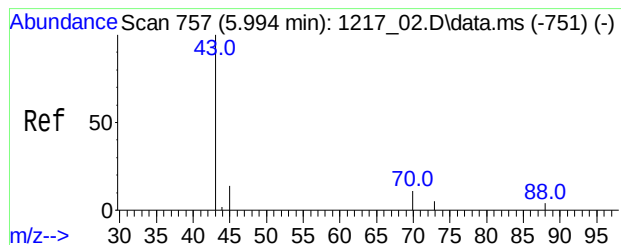
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	39265		
72	26.4	23.0	34.4	
57	8.9	7.2	10.8	



#28
Chloroform
Conc: 8\$ 0.630 ppbv
RT: 5.708 min Scan# 718
Delta R.T. 0.029 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

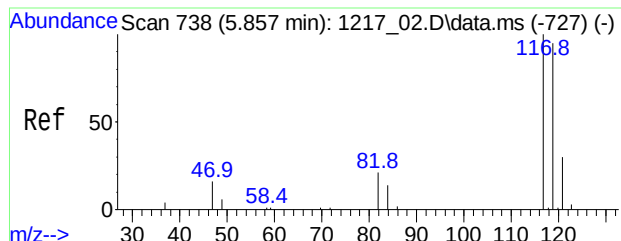
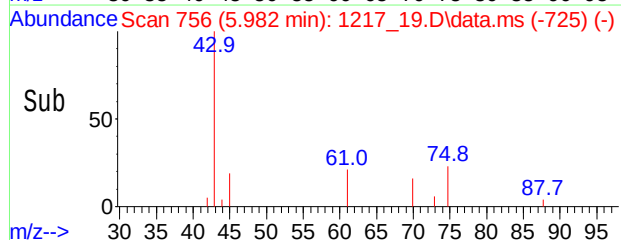
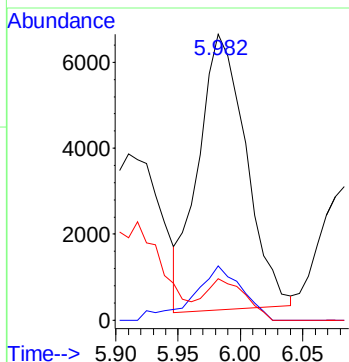
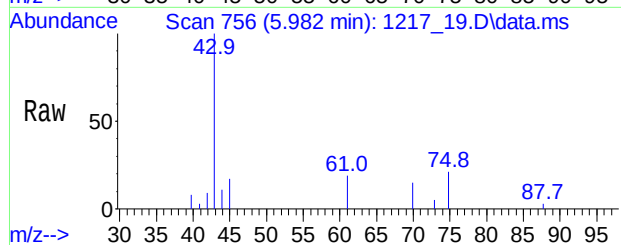
Tgt Ion	Ratio	Resp	Lower	Upper
83	100	45996		
85	65.6	47.0	87.0	
47	20.7	0.1	40.1	





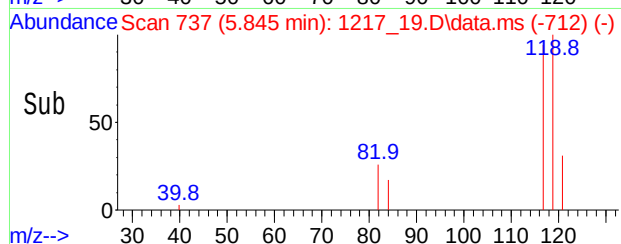
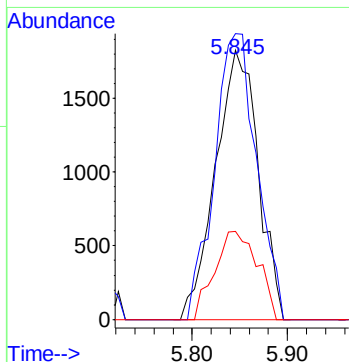
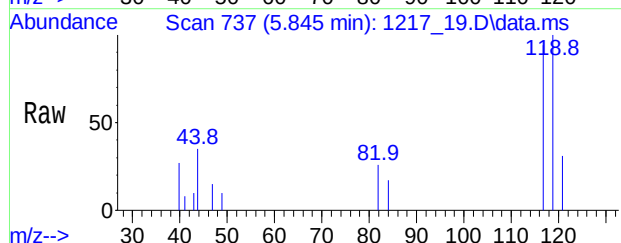
#29
Ethyl acetate
Conc: 8\$ 0.342 ppbv
RT: 5.982 min Scan# 756
Delta R.T. 0.021 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

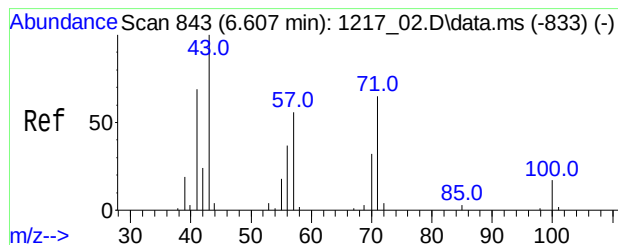
Tgt Ion: 43 Resp: 17012
Ion Ratio Lower Upper
43 100
61 19.7 0.0 0.0#
70 12.5 10.2 15.2



#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.845 min Scan# 737
Delta R.T. 0.029 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

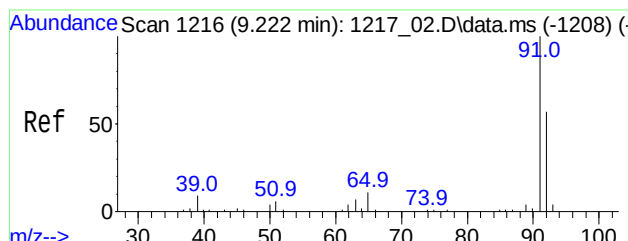
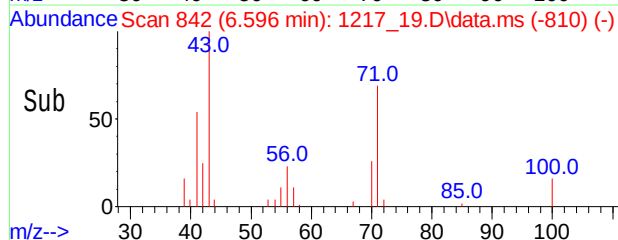
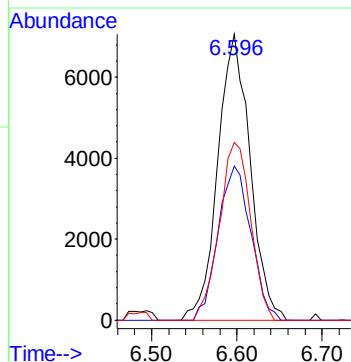
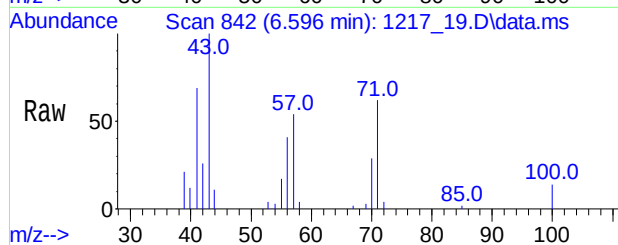
Tgt Ion: 117 Resp: 5674
Ion Ratio Lower Upper
117 100
119 105.0 77.1 117.1
121 32.9 10.9 50.9





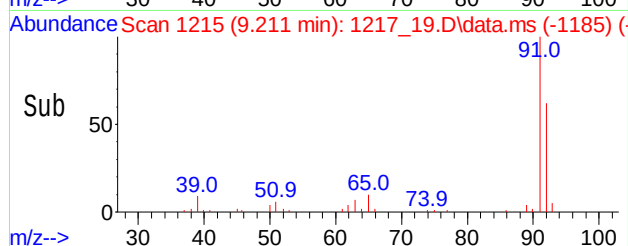
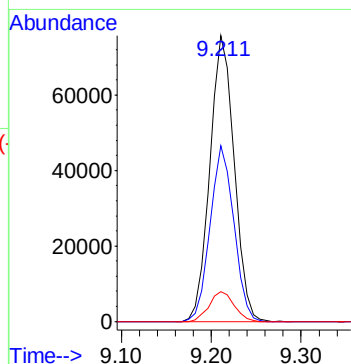
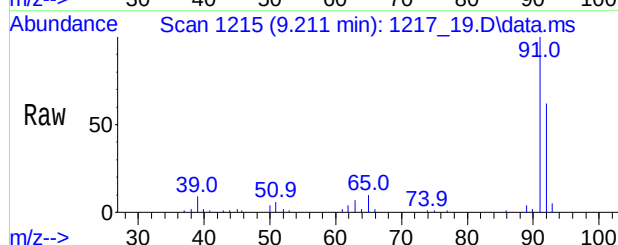
#43
Heptane
Conc: 8\$ 0.459 ppbv
RT: 6.596 min Scan# 842
Delta R.T. 0.020 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

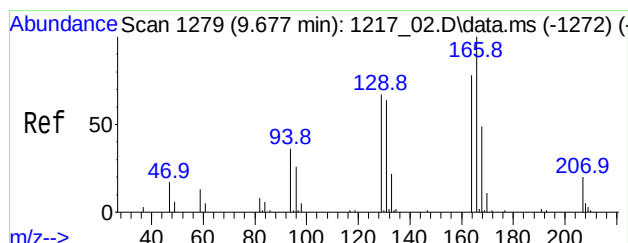
Tgt Ion: 43 Resp: 18523
Ion Ratio Lower Upper
43 100
57 54.8 44.6 67.0
71 60.3 49.8 74.8



#48
Toluene
Conc: 8\$ 1.189 ppbv
RT: 9.211 min Scan# 1215
Delta R.T. 0.015 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

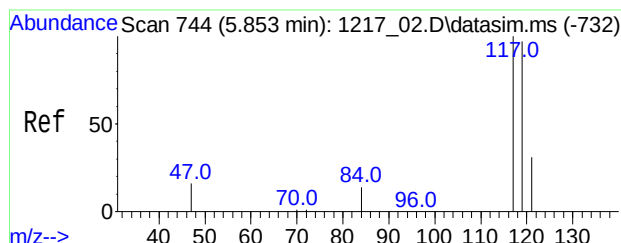
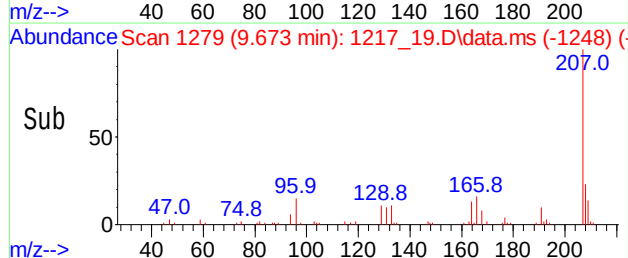
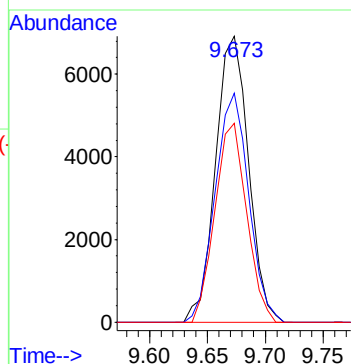
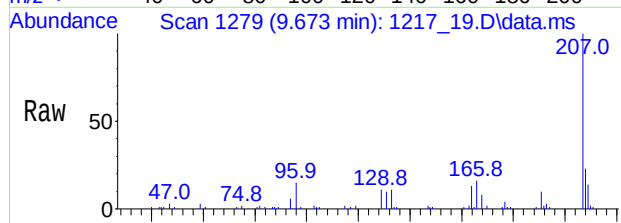
Tgt Ion: 91 Resp: 142053
Ion Ratio Lower Upper
91 100
92 60.0 47.0 70.6
65 10.7 8.3 12.5





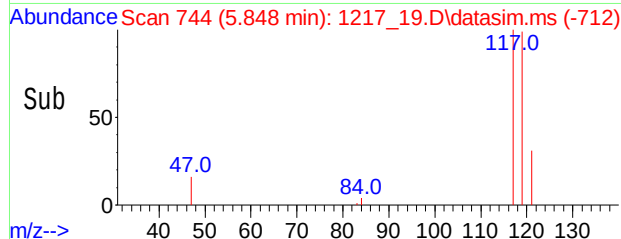
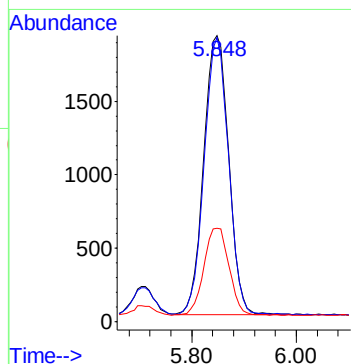
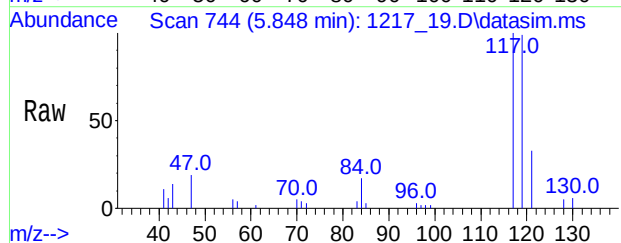
#52
Tetrachloroethene
Conc: 8\$ 0.158 ppbv
RT: 9.673 min Scan# 1279
Delta R.T. 0.022 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

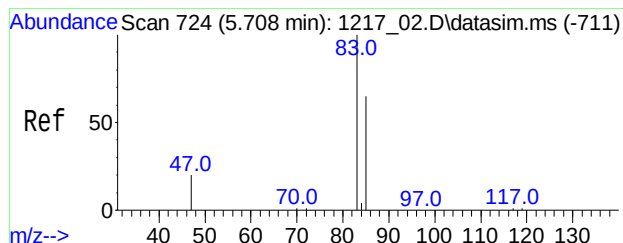
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	13538		
164	81.8	61.8	92.8	
129	67.0	52.4	78.6	



#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.079 ppbv
RT: 5.848 min Scan# 744
Delta R.T. 0.029 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

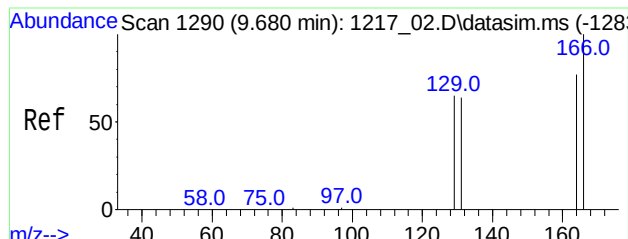
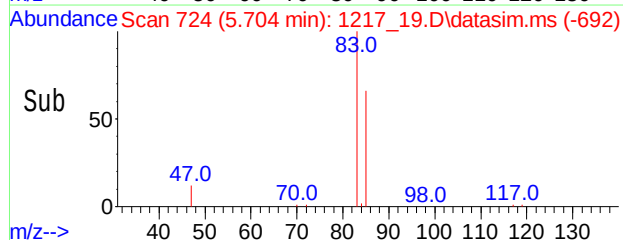
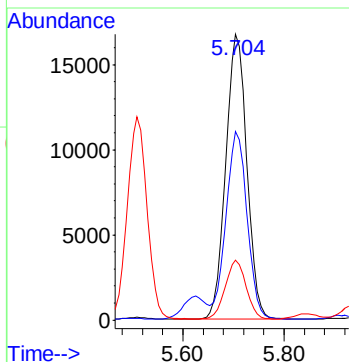
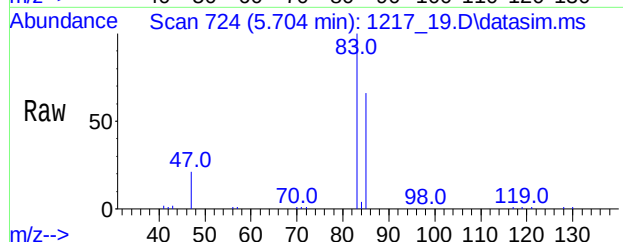
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6293		
119	96.5	77.5	116.3	
121	31.4	25.1	37.7	





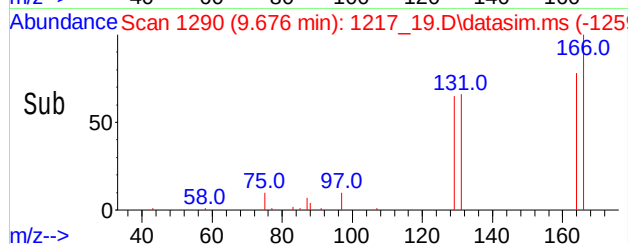
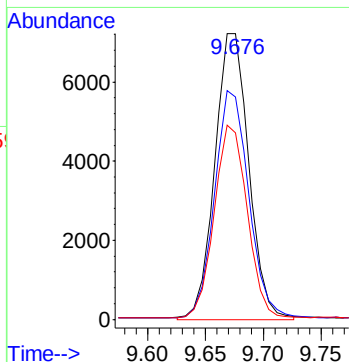
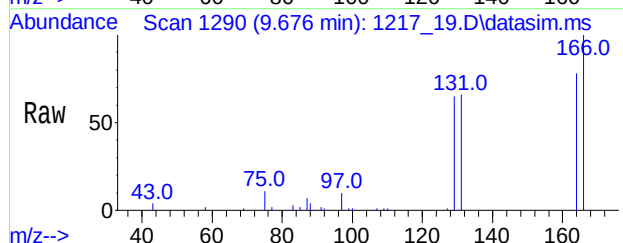
#92
Chloroform(sim)
Conc: 8\$ 0.657 ppbv
RT: 5.704 min Scan# 724
Delta R.T. 0.029 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

Tgt Ion	Ratio	Resp	Lower	Upper
83	100	48598		
85	65.8	52.6	79.0	
47	20.2	15.2	22.8	



#103
Tetrachloroethene(sim)
Conc: 8\$ 0.152 ppbv
RT: 9.673 min Scan# 1290
Delta R.T. 0.022 min
Lab File: 1217_19.D
Acq: 18 Dec 2019 5:56 am

Tgt Ion	Ratio	Resp	Lower	Upper
166	100	13538		
164	81.8	57.3	97.3	
129	67.0	45.5	85.5	



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89175</u>
Canister:	<u>823</u>	Lab File ID:	<u>1217_20.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/18/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.384		0.202	0.202	r
74-87-3	Chloromethane	0.603		0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	6.04	S	0.531	0.531	r
67-64-1	Acetone	2.87	S	0.421	0.421	r
75-69-4	Trichlorofluoromethane	0.264		0.178	0.178	r
67-63-0	Isopropylalcohol	2.14	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	0.489		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

IA-4D

Client:	FPMGROUP	Lab:	Phoenix Env. Labs
SDG No.:	GCE89170	Lab Sample ID:	CE89175
Canister:	823	Lab File ID:	1217_20.D
Instrument:	CHEM24	Column:	RTX-VMS
		Date Received:	12/17/19
Purge Volume	200 (cc)	Date Analyzed:	12/18/19
Matrix:	AIR	Dilution Factor:	1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
56-23-5	Carbon Tetrachloride(sim)	0.074		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.064		0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_20.D
 Acq On : 18 Dec 2019 6:32 am
 Operator : Keith
 Client ID : IA-4D
 Lab ID : CE89175
 ALS Vial : 89 Sample Multiplier: 1

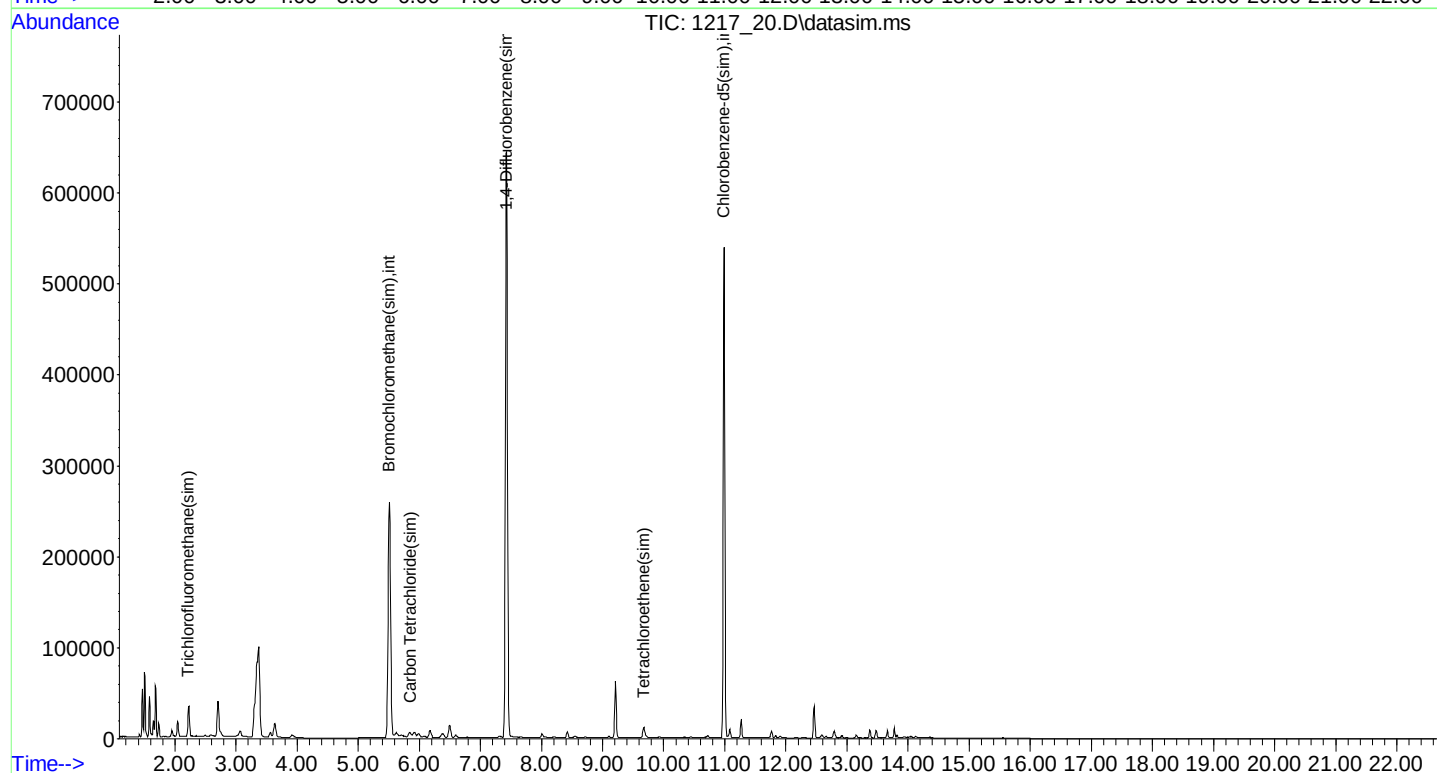
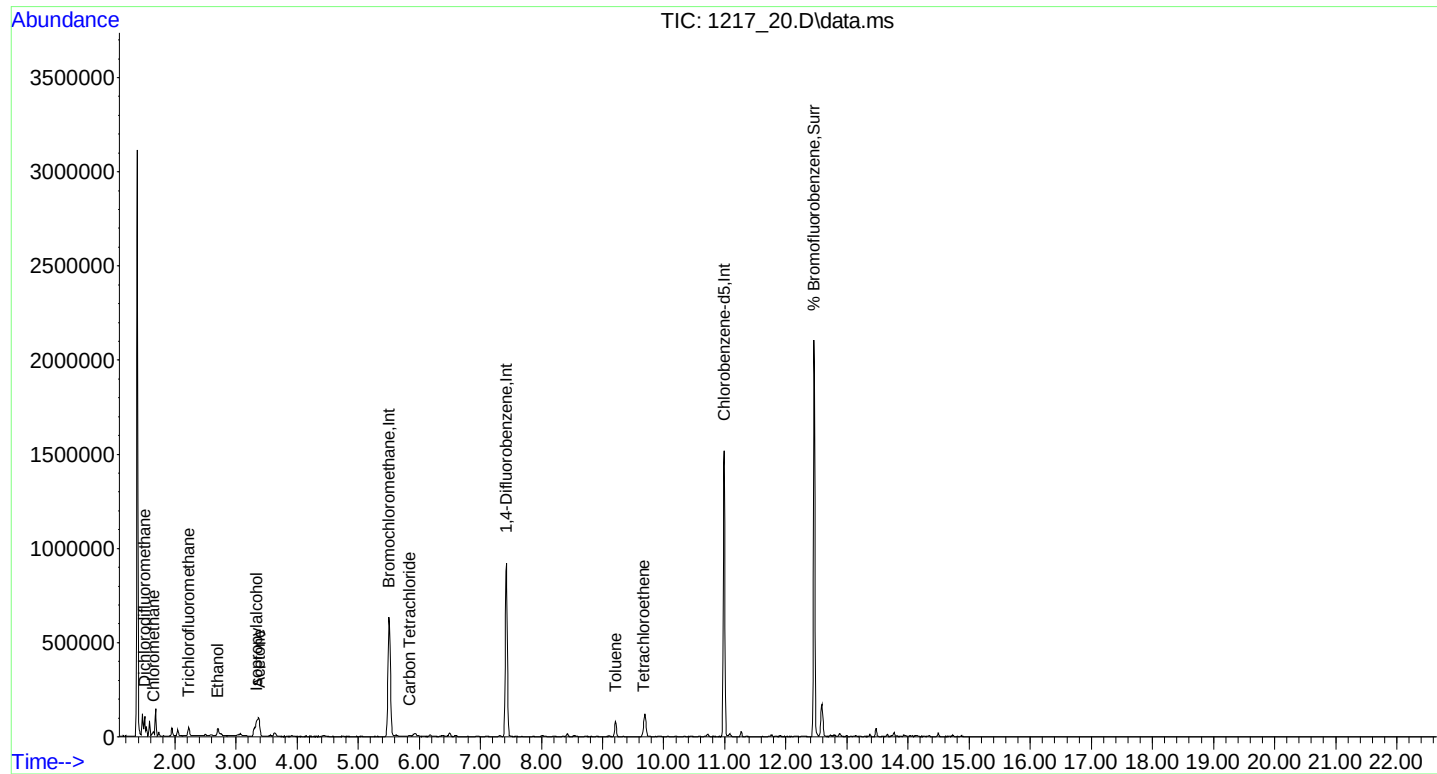
Quant Time: Dec 18 08:40:08 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

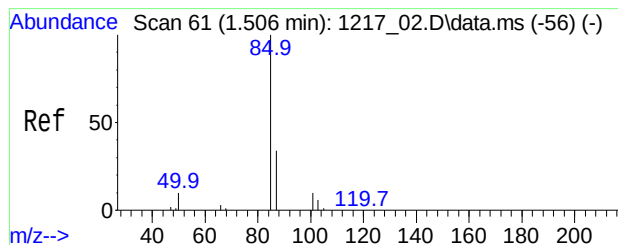
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.506	130	371531	10.000	ng	0.02
36) 1,4-Difluorobenzene	7.425	114	985918	10.000	ng	0.02
53) Chlorobenzene-d5	10.991	82	482532	10.000	ng	0.01
80) Bromochloromethane(sim)	5.509	130	377990	10.000	ng	# 0.02
94) 1,4-Difluorobenzene(sim)	7.428	114	1087139	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.987	82	530084	10.000	ng	0.01
System Monitoring Compounds						
62) % Bromofluorobenzene	12.461	95	676626	10.431	ppbv	0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	104.30%
Target Compounds						
3) Dichlorodifluoromethane	1.506	101	4976	0.384	ppbv	Qvalue 97
4) Chloromethane	1.649	50	16895	0.603	ppbv	97
10) Ethanol	2.704	45	45671	6.043	ppbv#	85
12) Acetone	3.374	43	158038	2.866	ppbv	98
13) Trichlorofluoromethane	2.225	101	24874	0.264	ppbv	94
14) Isopropylalcohol	3.340	45	115688	2.141	ppbv#	74
34) Carbon Tetrachloride	5.838	117	6385	0.068	ppbv	93
48) Toluene	9.211	91	63066	0.488	ppbv	98
52) Tetrachloroethene	9.673	166	6081	0.066	ppbv	95
84) Trichlorofluoromethane...	2.221	101	25314	0.236	ppbv	99
86) Carbon Tetrachloride(sim)	5.848	117	6870	0.074	ppbv	100
103] Tetrachloroethene(sim)	9.673	166	6081	0.064	ppbv	92

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_20.D
Acq On : 18 Dec 2019 6:32 am
Operator : Keith
Client ID : IA-4D
Lab ID : CE89175
ALS Vial : 89 Sample Multiplier: 1

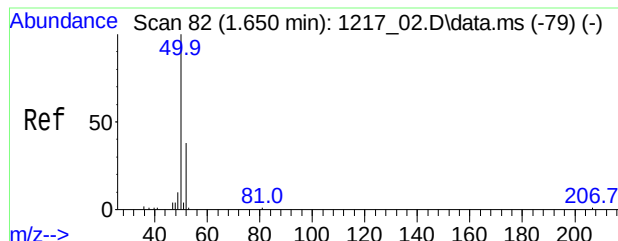
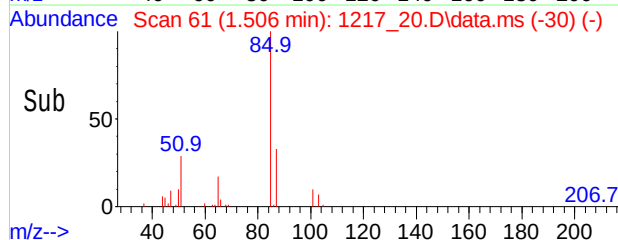
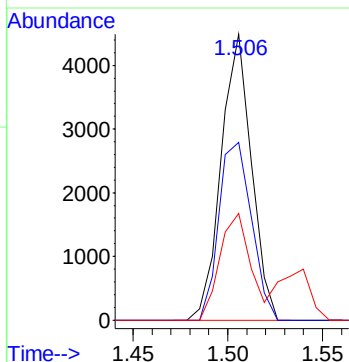
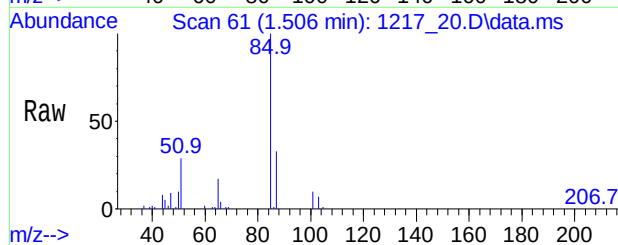
Quant Time: Dec 18 08:40:08 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





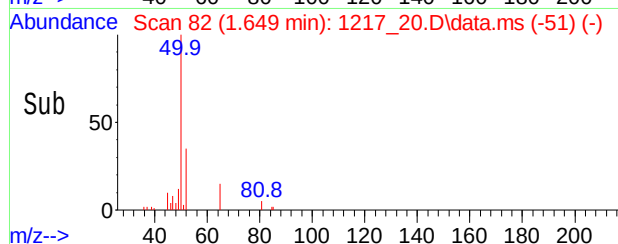
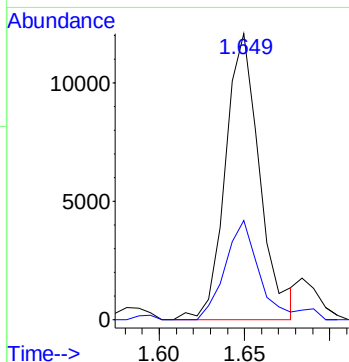
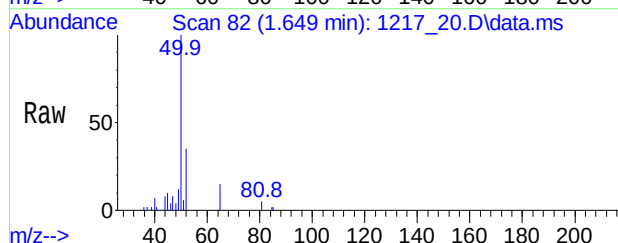
#3
Dichlorodifluoromethane
Conc: 8\$ 0.384 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

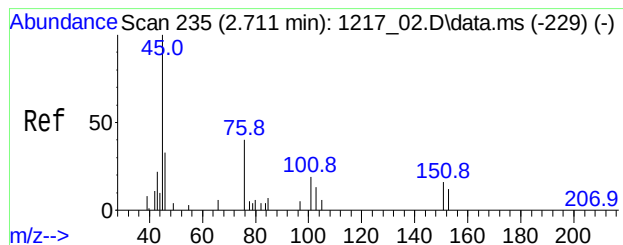
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	4976		
103	67.0	53.4	80.0	
66	37.9	26.0	39.0	



#4
Chloromethane
Conc: 8\$ 0.603 ppbv
RT: 1.649 min Scan# 82
Delta R.T. 0.013 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

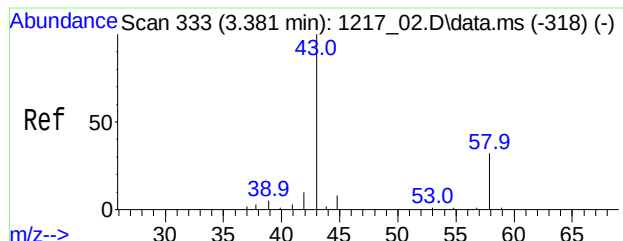
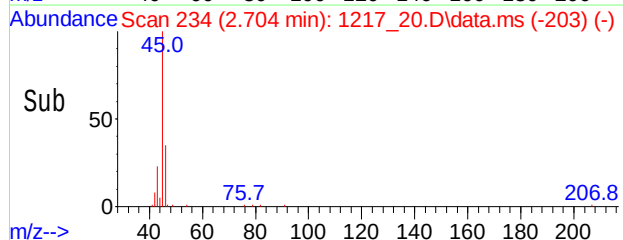
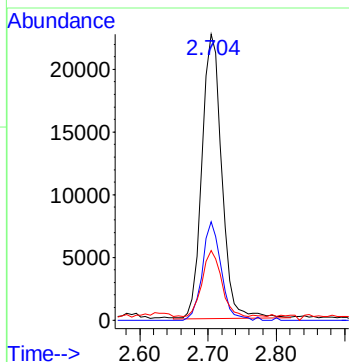
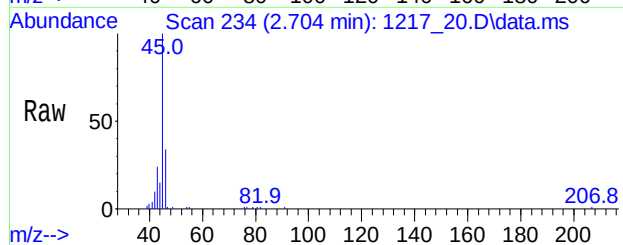
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	16895		
52	35.9	14.3	54.3	





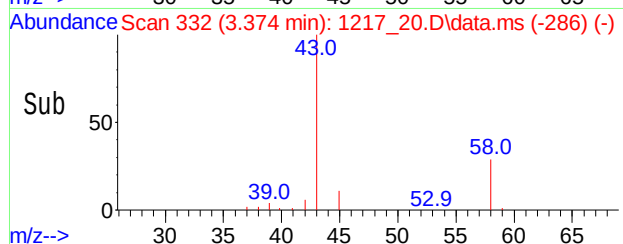
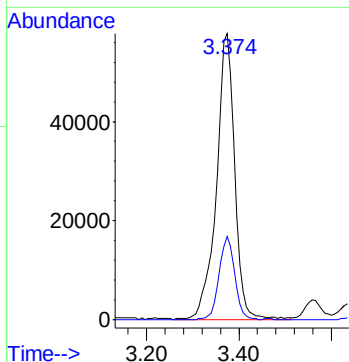
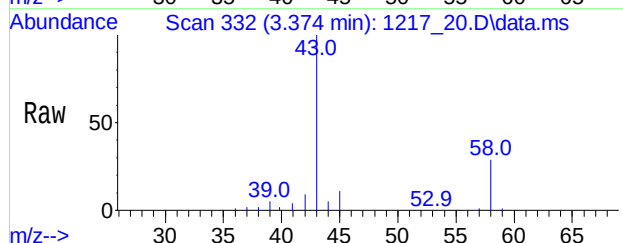
#10
Ethanol
Conc: 8\$ 6.043 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

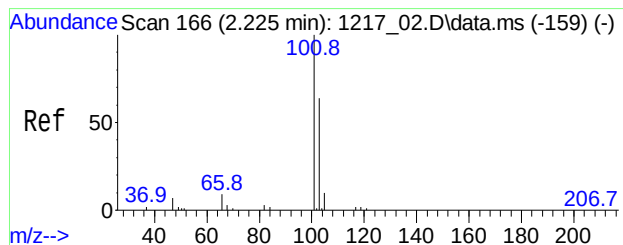
Tgt Ion	Ratio	Lower	Upper
45	100		
46	32.3	24.9	37.3
43	22.7	30.8	46.2#



#12
Acetone
Conc: 8\$ 2.866 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

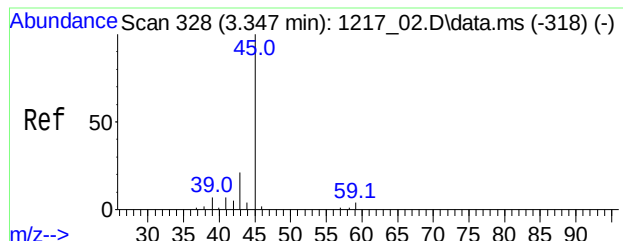
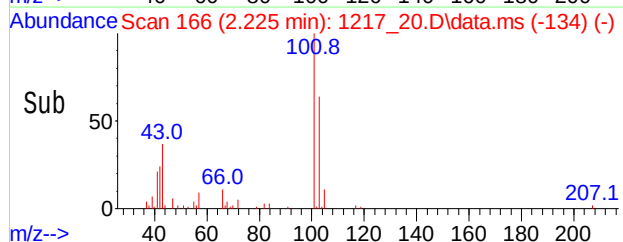
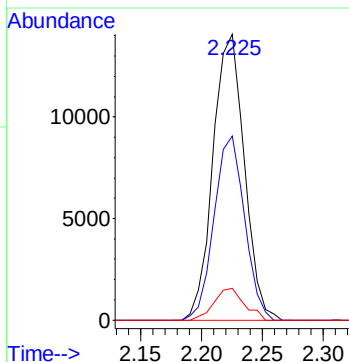
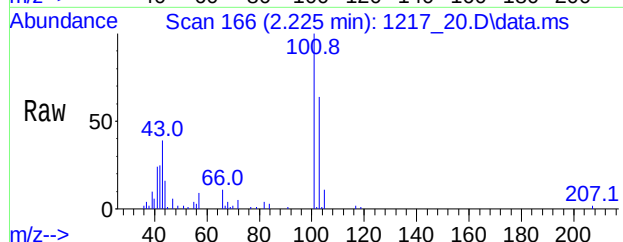
Tgt Ion	Ratio	Lower	Upper
43	100		
58	24.7	20.4	30.6





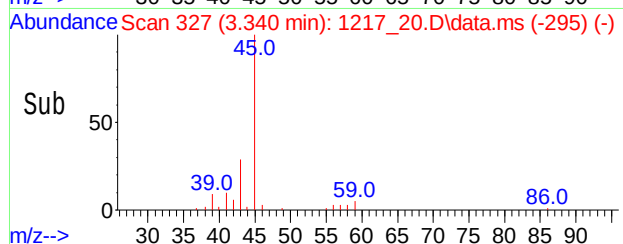
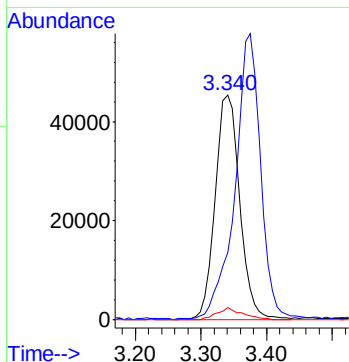
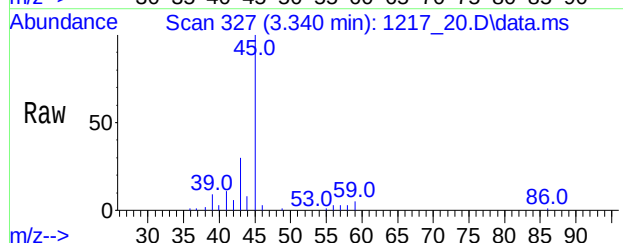
#13
Trichlorofluoromethane
Conc: 8\$ 0.264 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

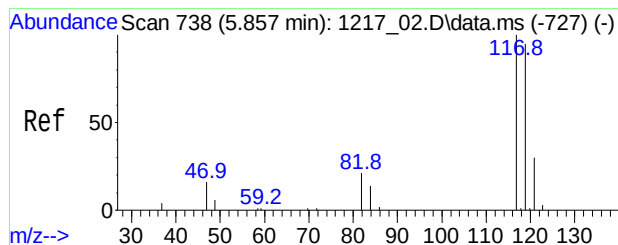
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24874		
103	62.5	54.1	81.1	
66	10.8	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 2.141 ppbv
RT: 3.340 min Scan# 327
Delta R.T. 0.020 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

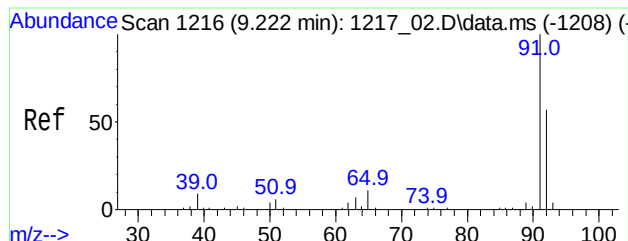
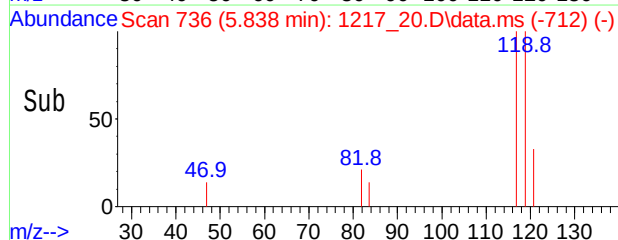
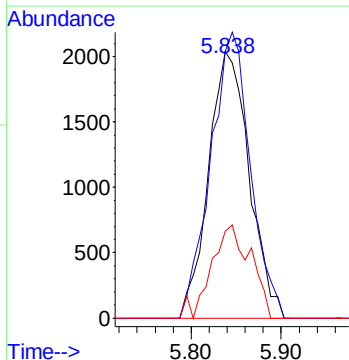
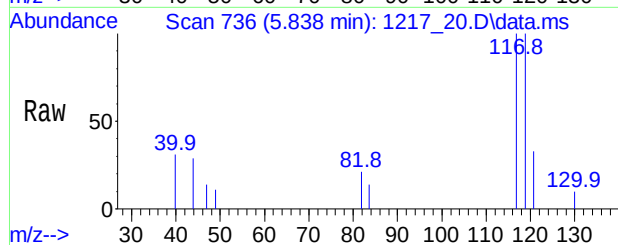
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	115688		
43	136.4	86.3	129.5#	
59	5.3	4.2	6.4	





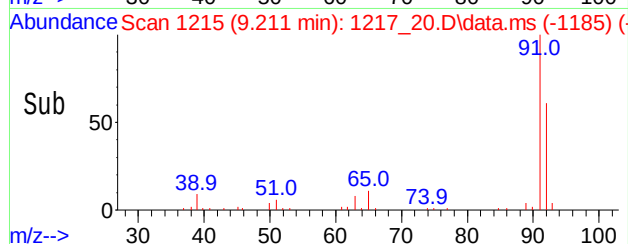
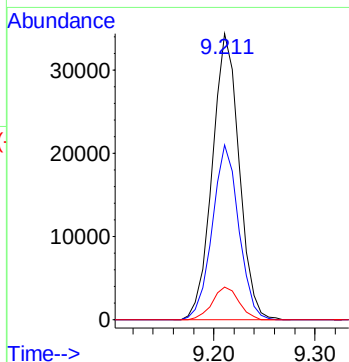
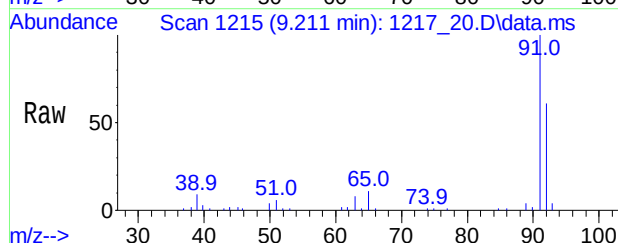
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.838 min Scan# 736
Delta R.T. 0.022 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

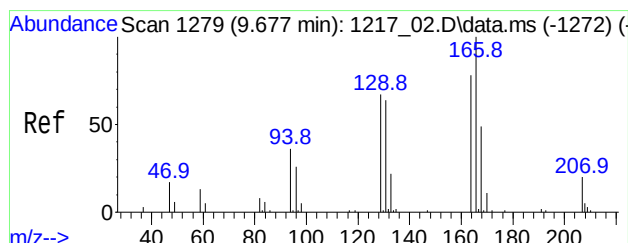
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6385		
119	104.5	77.1	117.1	
121	33.7	10.9	50.9	



#48
Toluene
Conc: 8\$ 0.488 ppbv
RT: 9.211 min Scan# 1215
Delta R.T. 0.015 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

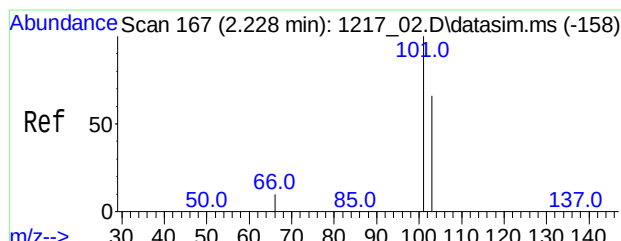
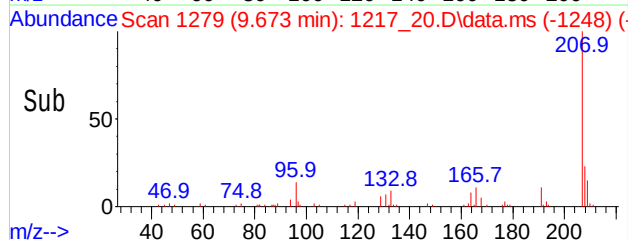
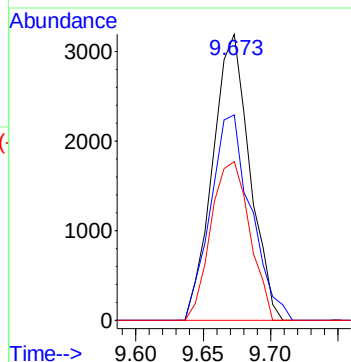
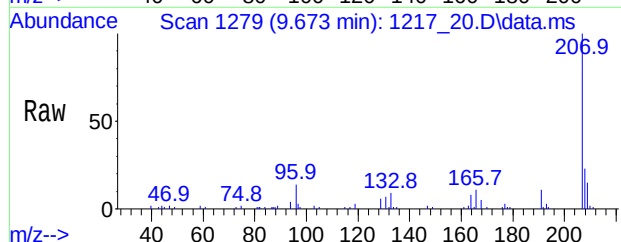
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	63066		
92	60.2	47.0	70.6	
65	11.2	8.3	12.5	





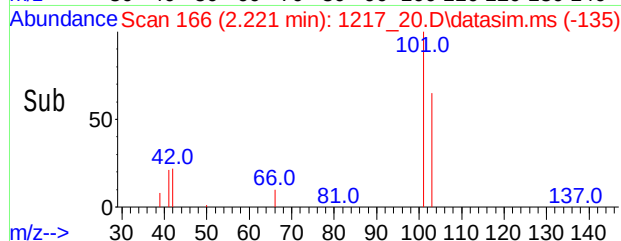
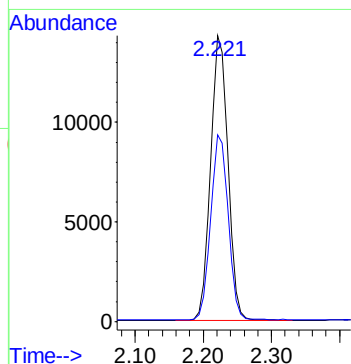
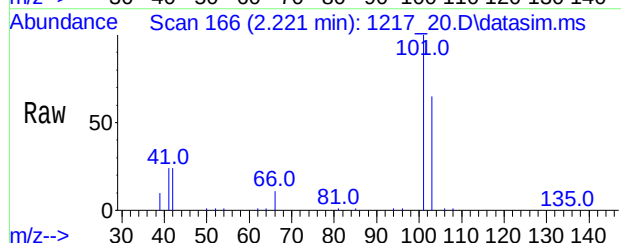
#52
Tetrachloroethene
Conc: 8\$ Below Cal
RT: 9.673 min Scan# 1279
Delta R.T. 0.022 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

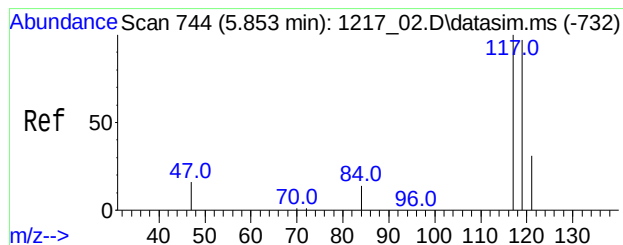
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	6081		
164	78.5	61.8	92.8	
129	58.1	52.4	78.6	



#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.236 ppbv
RT: 2.221 min Scan# 166
Delta R.T. 0.014 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

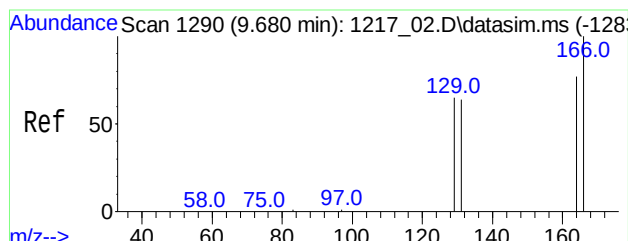
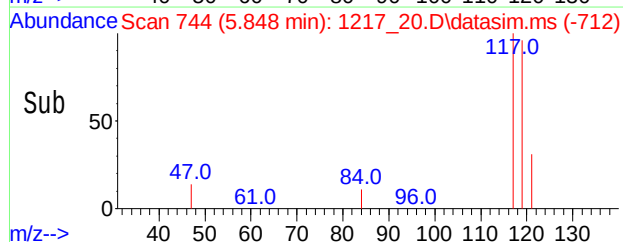
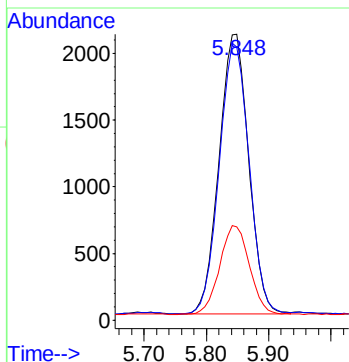
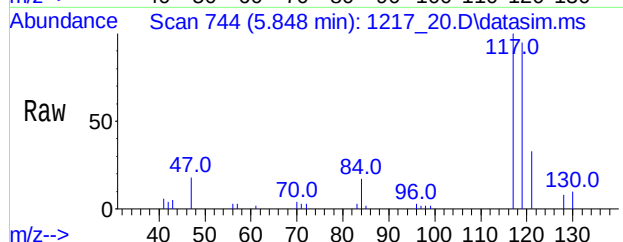
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	25314		
103	65.3	52.8	79.2	





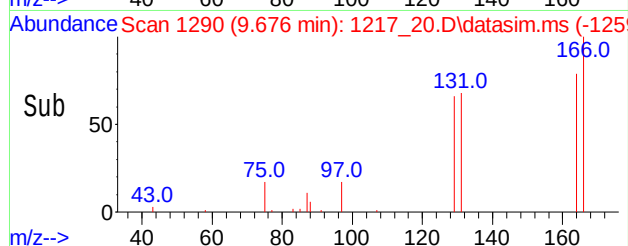
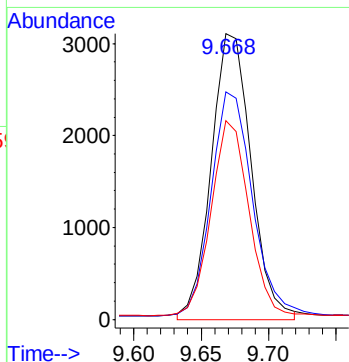
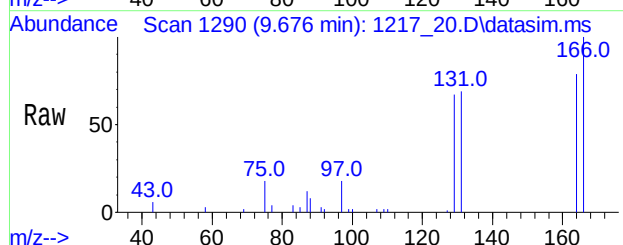
#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.074 ppbv
RT: 5.848 min Scan# 744
Delta R.T. 0.029 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6870		
119	96.6	77.5	116.3	
121	31.6	25.1	37.7	



#103
Tetrachloroethene(sim)
Conc: 8\$ 0.064 ppbv
RT: 9.673 min Scan# 1290
Delta R.T. 0.022 min
Lab File: 1217_20.D
Acq: 18 Dec 2019 6:32 am

Tgt Ion	Ratio	Resp	Lower	Upper
166	100	6081		
164	70.9	57.3	97.3	
129	58.1	45.5	85.5	



Response Factor Report Chem24

Method Path : H:\AIR2019\CHEM24\METHODS\
 Method File : 24AIR_1216.M
 Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:06:11 2019
 Response Via : Initial Calibration

Calibration Files (Note: Curves (l,lf,q,qf) display calculated conc and corr. coefficient.)

.035=1216_05.D 0.05=1216_06.D 0.1=1216_07.D 0.2=1216_14.D 0.5=1216_08.D 1.0=1216_01.D 2.5=1216_09.D 5.0=1216_10.D
 10=1216_15.D 25=1216_11.D 40=1216_12.D 0.02=1216_04.D

Compound	.035	0.05	0.1	0.2	0.5	1.0	2.5	5.0	10	25	40	0.02	Avg	%RSD
1) Int Bromochloromethane	-----ISTD-----													
2) Propylene				0.644	0.715	0.822	0.785	0.821	0.937	0.950	0.931		0.826	13.41
3) Dichlorodifluo...		0.272	0.345	0.335	0.432	0.379	0.379	0.380	0.330	0.286			0.349	14.41
4) Chloromethane			0.959	0.922	0.970	0.761	0.685	0.671	0.545	0.519			0.754	23.91
5) 1,2-Dichlorote...			2.960	2.790	3.264	2.679	2.468	2.357	2.068	1.868			2.557	18.07
6) Vinyl Chloride	0.993		1.050	1.044	1.142	0.890	0.856	0.826	0.805	0.790			0.933	13.62
7) 1,3-Butadiene	0.569		0.666	0.630	0.718	0.564	0.524	0.513	0.498	0.468			0.572	14.58
8) Bromomethane	1.221		1.302	1.126	1.224	0.992	0.959	0.965	0.995	0.969			1.084	12.51
9) Chloroethane	0.407		0.313	0.334	0.364	0.287	0.283	0.295	0.309	0.307			0.322	12.58
10) Ethanol				0.300	0.273	0.189	0.170	0.165	0.168	0.159			0.203	28.46
12) Acetone				1.929	1.787	1.432	1.342	1.333	1.330	1.237			1.484	17.83
13) Trichlorofluor...		2.808	2.864	2.850	2.997	2.454	2.371	2.245	2.199	2.035			2.536	13.77
14) Isopropylalcohol			1.726	1.561	1.657	1.370	1.373	1.350	1.335	1.265			1.455	11.64
15) Acrylonitrile			0.537	0.513	0.564	0.479	0.477	0.500	0.516	0.505			0.511	5.66
16) 1,1-Dichloroet...	1.112		1.130	1.134	1.219	1.017	1.023	1.031	1.036	0.977			1.076	7.20
17) Methylene Chlo...			1.563	1.056	1.203	0.971	0.951	0.975	0.974	0.941			1.079	19.79
20) Carbon Disulfide				2.087	2.320	1.945	1.887	1.918	1.915	1.780			1.979	8.87
21) Trichlorotrifl...			1.922	1.811	1.970	1.622	1.568	1.546	1.535	1.442			1.677	11.74
22) Trans-1,2-Dich...	1.346		1.482	1.387	1.479	1.256	1.254	1.282	1.292	1.248			1.336	7.03
23) 1,1-Dichloroet...	1.746		1.773	1.699	1.915	1.616	1.675	1.751	1.783	1.720			1.742	4.78
24) Methyl tert-bu...			2.856	2.605	2.830	2.296	2.269	2.320	2.293	2.227			2.462	10.64
25) Methyl Ethyl K...			1.688	1.613	1.721	1.458	1.466	1.570	1.694	1.676			1.611	6.44
26) Cis-1,2-Dichlo...	1.326		1.347	1.293	1.496	1.307	1.376	1.472	1.478	1.429			1.392	5.66
27) Hexane			1.452	1.221	1.408	1.509	1.497	1.518	1.519	1.457			1.448	6.87
28) Chloroform	2.193		2.183	2.176	2.498	2.186	2.299	2.394	2.410	2.323			2.296	5.19
29) Ethyl acetate			1.884	1.570	1.795	1.447	1.436	1.467	1.487	1.419			1.563	11.39
30) Tetrahydrofuran			0.830	0.724	0.772	0.640	0.634	0.642	0.648	0.623			0.689	11.18
31) 1,2-Dichloroet...	1.278		1.307	1.303	1.474	1.288	1.329	1.391	1.445	1.416			1.359	5.41
32) 1,1,1-Trichlor...	2.163		2.282	2.236	2.592	2.147	2.161	2.155	2.183	2.134			2.228	6.48
33) Benzene	3.104		2.901	2.690	3.087	2.554	2.590	2.661	2.721	2.647			2.773	7.47
34) Carbon Tetrach...	2.226		2.447	2.388	2.861	2.416	2.524	2.618	2.650	2.596			2.525	7.26
35) Cyclohexane			1.256	1.103	1.325	1.133	1.179	1.244	1.243	1.224			1.213	5.92
36) Int 1,4-Difluorobenzene	-----ISTD-----													
37) 1,2-dichloropr...			0.342	0.367	0.352	0.409	0.375	0.386	0.399	0.380	0.348		0.373	6.17
38) Bromodichlorom...			0.757	0.852	0.829	0.973	0.881	0.902	0.903	0.846	0.768		0.857	7.95
39) Trichloroethene			0.689	0.746	0.707	0.773	0.658	0.676	0.699	0.641	0.590		0.687	7.93
41) 1,4-Dioxane				0.278	0.241	0.269	0.237	0.260	0.266	0.259	0.245		0.257	5.66
43) Heptane		0.500	0.497	0.459	0.509	0.424	0.424	0.418	0.395	0.358			0.442	11.77
44) cis-1,3-Dichlo...		0.603	0.646	0.651	0.792	0.717	0.739	0.766	0.727	0.657			0.700	9.02
45) 4-Methyl-2-pen...		0.642	0.705	0.668	0.724	0.606	0.591	0.570	0.516	0.458			0.609	14.27
46) trans-1,3-Dich...		0.572	0.595	0.571	0.680	0.552	0.539	0.538	0.516	0.474			0.560	10.24

Response Factor Report Chem24

Method Path : H:\AIR2019\CHEM24\METHODS\

Method File : 24AIR_1216.M

Title : VOA Standards for 5 point calibration

47)	1,1,2-Trichlor...	0.520	0.568	0.545	0.583	0.495	0.490	0.499	0.469	0.438	0.512	9.18
48)	Toluene	1.288	1.372	1.310	1.569	1.324	1.334	1.320	1.185	1.084	1.310	10.06
49)	Dibromochlorom...	0.968	1.132	1.062	1.236	1.068	1.117	1.139	1.081	0.986	1.088	7.48
50)	2-Hexanone(MBK)		0.723	0.658	0.709	0.647	0.668	0.693	0.655	0.590	0.668	6.26
51)	1,2-Dibromoeth...	0.943	1.023	0.939	1.073	0.911	0.919	0.933	0.883	0.812	0.937	8.03
52)	Tetrachloroethene	0.942	1.006	0.968	1.136	0.933	0.928	0.931	0.846	0.764	0.939	10.88

53)	Int Chlorobenzene-d5	-----ISTD-----										
54)	1,1,1,2-Tetrac...	1.384	1.409	1.269	1.399	1.227	1.196	1.185	1.177	1.070	1.257	9.35
55)	Chlorobenzene	2.359	2.589	2.341	2.569	2.304	2.325	2.347	2.312	2.085	2.359	6.34
56)	Ethylbenzene	3.610	3.858	3.441	3.713	3.229	3.130	2.949	2.738	2.324	3.221	15.39
57)	m,p-Xylene	2.696	3.000	2.704	2.310	2.501	2.371	2.277	2.120	1.854	2.426	14.17
58)	Bromoform	1.921	2.499	2.092	2.424	2.210	2.301	2.343	2.274	2.009	2.230	8.59
59)	Styrene		2.341	2.099	2.317	1.982	1.875	1.800	1.660	1.454	1.941	15.92
60)	1,1,2,2-Tetrac...	2.195	2.554	2.236	2.355	2.082	2.015	1.953	1.893	1.670	2.106	12.50
61)	o-Xylene		3.284	2.923	3.250	2.984	2.917	2.913	2.808	2.535	2.952	8.08
62)	Surr% Bromofluorob...	1.242	1.248	1.290	1.426	1.308	1.317	1.343	1.390	1.536	1.344	6.98
64)	Isopropylbenzene	4.142	4.646	3.974	4.248	3.813	3.712	3.644	3.516	3.131	3.870	11.49
66)	4-Ethyltoluene	4.180	4.604	4.050	4.279	3.605	3.364	3.186	2.971	2.574	3.646	18.56
67)	1,3,5-Trimethy...	3.379	3.892	3.311	3.461	2.967	2.864	2.865	2.810	2.524	3.119	13.51
68)	1,2,4-Trimethy...	3.211	3.623	3.042	3.195	2.831	2.690	2.642	2.576	2.273	2.898	14.12
70)	qfi Benzyl chloride	0.064	0.199	0.345	0.900	2.188	4.746	10.33	26.48	39.04	Coef R2	1.00
71)	1,3-Dichlorobe...	2.180	2.717	2.120	2.230	1.921	1.813	1.742	1.684	1.458	1.985	18.79
72)	1,4-Dichlorobe...	2.069	2.569	1.937	2.120	1.880	1.822	1.835	1.849	1.659	1.971	13.32
73)	sec-Butylbenzene	4.262	4.968	4.035	4.149	3.679	3.548	3.450	3.352	2.947	3.821	15.70
74)	4-Isopropyltol...	3.199	3.845	3.220	3.310	2.972	2.897	2.804	2.686	2.296	3.026	14.49
75)	1,2-Dichlorobe...	1.684	2.165	1.656	1.737	1.532	1.501	1.500	1.503	1.336	1.624	14.55
76)	n-Butylbenzene	2.300	2.724	2.222	2.259	2.014	1.910	1.868	1.829	1.569	2.077	16.30
77)	qfi 1,2,4-Trichlor...		0.465	0.373	0.981	2.465	4.786	10.14	25.00		Coef R2	0.99
79)	qfi Hexachlorobuta...		0.365	0.504	1.116	2.630	4.949	9.574	24.47	41.53	Coef R2	1.00

80)	int Bromochloromethane...	-----ISTD-----											
81)	1,2-Dichlorote...	2.422	2.718	2.673	2.953	2.772	3.257	2.640	2.450		2.563	2.717	9.57
82)	Vinyl Chloride...	1.027	1.062	1.058	1.127	1.116	1.240	0.964	0.917			1.064	9.44
83)	Bromomethane(sim)	1.298	1.201	1.209	1.299	1.119	1.241	0.977	0.953		1.389	1.187	12.37
84)	Trichlorofluor...	2.894	2.916	2.868	2.932	2.900	3.111	2.497	2.443		2.965	2.836	7.75
85)	1,1,1-Trichlor...	2.125	2.216	2.143	2.276	2.222	2.583	2.116	2.146		1.871	2.189	8.54
86)	Carbon Tetrach...	2.273	2.360	2.330	2.534	2.426	2.878	2.463	2.563		2.234	2.451	7.96
87)	1,1-Dichloroet...	1.513	1.128	1.102	1.127	1.127	1.217	1.002	1.017		1.376	1.179	14.17
88)	Trichlorotrifl...	2.695	2.758	1.927	1.948	1.884	2.050	1.656	1.608		2.751	2.142	21.75
89)	Trans-1,2-Dich...	1.327	1.360	1.334	1.479	1.379	1.476	1.237	1.246		1.364	1.356	6.27
90)	1,1-Dichloroet...	1.841	1.869	1.878	1.926	1.844	2.068	1.729	1.801		1.766	1.858	5.32
91)	Cis-1,2-Dichlo...	1.280	1.292	1.314	1.344	1.285	1.493	1.288	1.367		1.309	1.330	5.08
92)	Chloroform(sim)	2.131	2.187	2.208	2.316	2.285	2.671	2.286	2.403		2.032	2.280	8.01
93)	1,2-Dichloroet...	1.211	1.201	1.266	1.304	1.295	1.471	1.269	1.320		1.210	1.283	6.45

94)	int	1,4-Difluorobenzen...	-----ISTD-----													
95)		1,2-dichloropr...	0.291	0.262	0.311	0.335	0.320	0.372	0.341	0.351			0.301	0.320	10.45	
96)		Bromodichlorom...	0.715	0.735	0.743	0.813	0.804	0.941	0.836	0.861			0.656	0.789	10.93	
97)		Trichloroethen...	0.599	0.597	0.626	0.671	0.643	0.702	0.597	0.615			0.638	0.632	5.75	
98)	qfi	1,4-Dioxane(sim)	0.041	0.048	0.096	0.237	0.485	1.079	2.331	5.069				Coef R2	1.00	
99)		cis-1,3-Dichlo...	0.498	0.542	0.549	0.590	0.593	0.720	0.652				0.540	0.585	12.19	

Response Factor Report Chem24

Method Path : H:\AIR2019\CHEM24\METHODS\												
Method File : 24AIR_1216.M												
Title : VOA Standards for 5 point calibration												
100)	1,1,2-Trichlor...	0.490	0.516	0.511	0.546	0.522	0.580	0.483	0.483	0.456	0.510	7.35
101)	Dibromochlorom...	0.828	0.884	0.881	1.033	0.968	1.120	0.968	1.016	0.611	0.923	15.94
102)	1,2-Dibromoeth...	0.866	0.869	0.904	0.977	0.919	1.049	0.878	0.876	0.776	0.902	8.49
103)	Tetrachloroeth...	0.815	0.851	0.856	0.915	0.879	1.032	0.847	0.844	0.876	0.876	6.96
104)	int Chlorobenzene-d5(sim)	-----ISTD-----										
105)	Bromoform(sim)	1.319	1.739	1.721	2.256	1.934	2.234	2.030	2.124	1.541	1.878	17.12
106)	1,1,1,2-Tetrac...	1.165	1.215	1.248	1.376	1.266	1.350	1.190	1.166	1.053	1.225	8.09
107)	qfi m,p-Xylene(sim)	0.068	0.097	0.190	0.423	0.978	2.125	4.808	10.09		Coef R2	1.00
108)	1,1,2,2-Tetrac...	1.998	2.125	2.192	2.494	2.164	2.309	2.022	1.971	1.846	2.125	9.19
111)	qfi Benzyl chlorid...	0.020	0.034	0.079	0.246	0.430	1.091	2.503	4.989	0.010	Coef R2	1.00
112)	1,3-Dichlorobe...	2.048	2.156	2.235	2.691	2.137	2.254	1.922	1.827		2.159	12.09
113)	qf 1,4-Dichlorobe...	0.032	0.047	0.102	0.253	0.488	1.078	2.443	5.012		Coef R2	1.00
114)	qfi sec-Butylbenze...			0.102	0.233	0.494	1.033	2.374	5.068		Coef R2	1.00
115)	qfi 4-Isopropyltol...		0.048	0.096	0.231	0.496	1.032	2.396	5.052		Coef R2	1.00
116)	qfi 1,2-Dichlorobe...	0.031	0.048	0.098	0.254	0.485	1.037	2.369	5.069	0.017	Coef R2	1.00
117)	qfi n-Butylbenzene...	0.031	0.045	0.100	0.237	0.497	1.027	2.396	5.056		Coef R2	1.00
118)	qf 1,2,4-Trichlor...	0.016	0.027	0.063	0.464	0.385	0.997	2.508	4.999	0.009	Coef R2	1.00
119)	Hexachlorobuta...	1.410	1.345	1.442	2.472	1.394	1.530	1.414	1.305	1.204	1.502	24.98

(#,\$,@)=Out of Range l=linear lf=linear(0,0) q=Quadratic qf=Quadratic(0,0)

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs
Lab Code: Phoenix
Instrument ID: CHEM24
Heated Purge (Y/N): Y
GC Column: _____

Client: FPMGROUP
SDG No.: GCE89170
Calibration Date From: 12/16/19 20:37
Calibration Date Thru: 12/17/19 04:57
Method File: 24AIR_1216.M

Laboratory File Ids

RRF1	1216_04.D	RRF2	1216_05.D	RRF3	1216_06.D	RRF4	1216_07.D	RRF5	1216_14.D	RRF6	1216_08.D				
RRF7	1216_01.D	RRF8	1216_09.D	RRF9	1216_10.D	RRF10	1216_15.D	RRF11	1216_11.D	RRF12	1216_12.D				
COMPOUND	RRF1 0.02	RRF2 0.035	RRF3 0.05	RRF4 0.1	RRF5 0.2	RRF6 0.5	RRF7 1	RRF8 2.5	RRF9 5	RRF10 10	RRF11 25	RRF12 40	— RRF	% RSD	
Propylene					0.644	0.715	0.822	0.785	0.821	0.937	0.950	0.931	0.826	13.41	
Dichlorodifluoromethane				0.272	0.345	0.335	0.432	0.379	0.379	0.380	0.330	0.286	0.349	14.41	
Chloromethane					0.959	0.922	0.970	0.761	0.685	0.671	0.545	0.519	0.754	23.91	
1,2-Dichlorotetrafluoroethane					2.960	2.790	3.264	2.679	2.468	2.357	2.068	1.868	2.557	18.07	
Vinyl Chloride				0.993	1.050	1.044	1.142	0.890	0.856	0.826	0.805	0.790	0.933	13.62	
1,3-Butadiene				0.569	0.666	0.630	0.718	0.564	0.524	0.513	0.498	0.468	0.572	14.58	
Bromomethane				1.221	1.302	1.126	1.224	0.992	0.959	0.965	0.995	0.969	1.084	12.51	
Chloroethane				0.407	0.313	0.334	0.364	0.287	0.283	0.295	0.309	0.307	0.322	12.58	
Ethanol						0.300	0.273	0.189	0.170	0.165	0.168	0.159	0.203	28.46	
Acetone						1.929	1.787	1.432	1.342	1.333	1.330	1.237	1.484	17.83	
Trichlorofluoromethane				2.808	2.864	2.850	2.997	2.454	2.371	2.245	2.199	2.035	2.536	13.77	
Isopropylalcohol					1.726	1.561	1.657	1.370	1.373	1.350	1.335	1.265	1.455	11.64	
Acrylonitrile					0.537	0.513	0.564	0.479	0.477	0.500	0.516	0.505	0.511	5.66	
1,1-Dichloroethene				1.112	1.130	1.134	1.219	1.017	1.023	1.031	1.036	0.977	1.076	7.20	
Methylene Chloride					1.563	1.056	1.203	0.971	0.951	0.975	0.974	0.941	1.079	19.79	
Carbon Disulfide						2.087	2.320	1.945	1.887	1.918	1.915	1.780	1.979	8.87	
Trichlorotrifluoroethane					1.922	1.811	1.970	1.622	1.568	1.546	1.535	1.442	1.677	11.74	
Trans-1,2-Dichloroethene				1.346	1.482	1.387	1.479	1.256	1.254	1.282	1.292	1.248	1.336	7.03	
1,1-Dichloroethane				1.746	1.773	1.699	1.915	1.616	1.675	1.751	1.783	1.720	1.742	4.78	
Methyl tert-butyl ether(MTBE)					2.856	2.605	2.830	2.296	2.269	2.320	2.293	2.227	2.462	10.64	
Methyl Ethyl Ketone					1.688	1.613	1.721	1.458	1.466	1.570	1.694	1.676	1.611	6.44	
Cis-1,2-Dichloroethene				1.326	1.347	1.293	1.496	1.307	1.376	1.472	1.478	1.429	1.392	5.66	
Hexane					1.452	1.221	1.408	1.509	1.497	1.518	1.519	1.457	1.448	6.87	
Chloroform				2.193	2.183	2.176	2.498	2.186	2.299	2.394	2.410	2.323	2.296	5.19	
Ethyl acetate					1.884	1.570	1.795	1.447	1.436	1.467	1.487	1.419	1.563	11.39	

(#) The maximum %RSD was not met for this compound

Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

Phoenix Environmental Laboratories, Inc.

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs
Lab Code: Phoenix
Instrument ID: CHEM24
Heated Purge (Y/N): Y
GC Column: _____

Client: FPMGROUP
SDG No.: GCE89170
Calibration Date From: 12/16/19 20:37
Calibration Date Thru: 12/17/19 04:57
Method File: 24AIR_1216.M

Laboratory File Ids

RRF1	1216_04.D	RRF2	1216_05.D	RRF3	1216_06.D	RRF4	1216_07.D	RRF5	1216_14.D	RRF6	1216_08.D				
RRF7	1216_01.D	RRF8	1216_09.D	RRF9	1216_10.D	RRF10	1216_15.D	RRF11	1216_11.D	RRF12	1216_12.D				
COMPOUND	RRF1 0.02	RRF2 0.035	RRF3 0.05	RRF4 0.1	RRF5 0.2	RRF6 0.5	RRF7 1	RRF8 2.5	RRF9 5	RRF10 10	RRF11 25	RRF12 40	— RRF	% RSD	
Tetrahydrofuran					0.830	0.724	0.772	0.640	0.634	0.642	0.648	0.623	0.689	11.18	
1,2-Dichloroethane				1.278	1.307	1.303	1.474	1.288	1.329	1.391	1.445	1.416	1.359	5.41	
1,1,1-Trichloroethane				2.163	2.282	2.236	2.592	2.147	2.161	2.155	2.183	2.134	2.228	6.48	
Benzene				3.104	2.901	2.690	3.087	2.554	2.590	2.661	2.721	2.647	2.773	7.47	
Carbon Tetrachloride				2.226	2.447	2.388	2.861	2.416	2.524	2.618	2.650	2.596	2.525	7.26	
Cyclohexane					1.256	1.103	1.325	1.133	1.179	1.244	1.243	1.224	1.213	5.92	
1,2-dichloropropane				0.342	0.367	0.352	0.409	0.375	0.386	0.399	0.380	0.348	0.373	6.17	
Bromodichloromethane				0.757	0.852	0.829	0.973	0.881	0.902	0.903	0.846	0.768	0.857	7.95	
Trichloroethene				0.689	0.746	0.707	0.773	0.658	0.676	0.699	0.641	0.590	0.687	7.93	
1,4-Dioxane					0.278	0.241	0.269	0.237	0.260	0.266	0.259	0.245	0.257	5.66	
Heptane				0.500	0.497	0.459	0.509	0.424	0.424	0.418	0.395	0.358	0.442	11.77	
cis-1,3-Dichloropropene				0.603	0.646	0.651	0.792	0.717	0.739	0.766	0.727	0.657	0.700	9.02	
4-Methyl-2-pentanone(MIBK)				0.642	0.705	0.668	0.724	0.606	0.591	0.570	0.516	0.458	0.609	14.27	
trans-1,3-Dichloropropene				0.572	0.595	0.571	0.680	0.552	0.539	0.538	0.516	0.474	0.560	10.24	
1,1,2-Trichloroethane				0.520	0.568	0.545	0.583	0.495	0.490	0.499	0.469	0.438	0.512	9.18	
Toluene				1.288	1.372	1.310	1.569	1.324	1.334	1.320	1.185	1.084	1.310	10.06	
Dibromochloromethane				0.968	1.132	1.062	1.236	1.068	1.117	1.139	1.081	0.986	1.088	7.48	
2-Hexanone(MBK)					0.723	0.658	0.709	0.647	0.668	0.693	0.655	0.590	0.668	6.26	
1,2-Dibromoethane(EDB)				0.943	1.023	0.939	1.073	0.911	0.919	0.933	0.883	0.812	0.937	8.03	
Tetrachloroethene				0.942	1.006	0.968	1.136	0.933	0.928	0.931	0.846	0.764	0.939	10.88	
1,1,1,2-Tetrachloroethane				1.384	1.409	1.269	1.399	1.227	1.196	1.185	1.177	1.070	1.257	9.35	
Chlorobenzene				2.359	2.589	2.341	2.569	2.304	2.325	2.347	2.312	2.085	2.359	6.34	
Ethylbenzene				3.610	3.858	3.441	3.713	3.229	3.130	2.949	2.738	2.324	3.221	15.39	
m,p-Xylene				2.696	3.000	2.704	2.310	2.501	2.371	2.277	2.120	1.854	2.426	14.17	
Bromoform				1.921	2.499	2.092	2.424	2.210	2.301	2.343	2.274	2.009	2.230	8.59	

(#) The maximum %RSD was not met for this compound

Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, li2, li2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs
Lab Code: Phoenix
Instrument ID: CHEM24
Heated Purge (Y/N): Y
GC Column: _____

Client: FPMGROUP
SDG No.: GCE89170
Calibration Date From: 12/16/19 20:37
Calibration Date Thru: 12/17/19 04:57
Method File: 24AIR_1216.M

Laboratory File Ids

RRF1	1216 04.D	RRF2	1216 05.D	RRF3	1216 06.D	RRF4	1216 07.D	RRF5	1216 14.D	RRF6	1216 08.D				
RRF7	1216 01.D	RRF8	1216 09.D	RRF9	1216 10.D	RRF10	1216 15.D	RRF11	1216 11.D	RRF12	1216 12.D				
COMPOUND		RRF1 0.02	RRF2 0.035	RRF3 0.05	RRF4 0.1	RRF5 0.2	RRF6 0.5	RRF7 1	RRF8 2.5	RRF9 5	RRF10 10	RRF11 25	RRF12 40	— RRF	% RSD
Styrene						2.341	2.099	2.317	1.982	1.875	1.800	1.660	1.454	1.941	15.92
1,1,2,2-Tetrachloroethane					2.195	2.554	2.236	2.355	2.082	2.015	1.953	1.893	1.670	2.106	12.50
o-Xylene						3.284	2.923	3.250	2.984	2.917	2.913	2.808	2.535	2.952	8.08
Isopropylbenzene					4.142	4.646	3.974	4.248	3.813	3.712	3.644	3.516	3.131	3.870	11.49
4-Ethyltoluene					4.180	4.604	4.050	4.279	3.605	3.364	3.186	2.971	2.574	3.646	18.56
1,3,5-Trimethylbenzene					3.379	3.892	3.311	3.461	2.967	2.864	2.865	2.810	2.524	3.119	13.51
1,2,4-Trimethylbenzene					3.211	3.623	3.042	3.195	2.831	2.690	2.642	2.576	2.273	2.898	14.12
Benzyl chloride qfi					0.064	0.199	0.345	0.900	2.188	4.746	10.330	26.480	39.040	Coef R2	1.00
1,3-Dichlorobenzene					2.180	2.717	2.120	2.230	1.921	1.813	1.742	1.684	1.458	1.985	18.79
1,4-Dichlorobenzene					2.069	2.569	1.937	2.120	1.880	1.822	1.835	1.849	1.659	1.971	13.32
sec-Butylbenzene					4.262	4.968	4.035	4.149	3.679	3.548	3.450	3.352	2.947	3.821	15.70
4-Isopropyltoluene					3.199	3.845	3.220	3.310	2.972	2.897	2.804	2.686	2.296	3.026	14.49
1,2-Dichlorobenzene					1.684	2.165	1.656	1.737	1.532	1.501	1.500	1.503	1.336	1.624	14.55
n-Butylbenzene					2.300	2.724	2.222	2.259	2.014	1.910	1.868	1.829	1.569	2.077	16.30
1,2,4-Trichlorobenzene qfi						0.465	0.373	0.981	2.465	4.786	10.140	25.000		Coef R2	0.99
Hexachlorobutadiene qfi						0.365	0.504	1.116	2.630	4.949	9.574	24.470	41.530	Coef R2	1.00
1,2-Dichlorotetrafluoroethane(sim)		2.563	2.422	2.718	2.673	2.953	2.772	3.257	2.640	2.450				2.717	9.57
Vinyl Chloride(sim)			1.027	1.062	1.058	1.127	1.116	1.240	0.964	0.917				1.064	9.44
Bromomethane(sim)		1.389	1.298	1.201	1.209	1.299	1.119	1.241	0.977	0.953				1.187	12.37
Trichlorofluoromethane(sim)		2.965	2.894	2.916	2.868	2.932	2.900	3.111	2.497	2.443				2.836	7.75
1,1,1-Trichloroethane(sim)		1.871	2.125	2.216	2.143	2.276	2.222	2.583	2.116	2.146				2.189	8.54
Carbon Tetrachloride(sim)		2.234	2.273	2.360	2.330	2.534	2.426	2.878	2.463	2.563				2.451	7.96
1,1-Dichloroethene(sim)		1.376	1.513	1.128	1.102	1.127	1.127	1.217	1.002	1.017				1.179	14.17
Trichlorotrifluoroethane(sim)		2.751	2.695	2.758	1.927	1.948	1.884	2.050	1.656	1.608				2.142	21.75
Trans-1,2-Dichloroethene(sim)		1.364	1.327	1.360	1.334	1.479	1.379	1.476	1.237	1.246				1.356	6.27

(#) The maximum %RSD was not met for this compound Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

Phoenix Environmental Laboratories, Inc.

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs
Lab Code: Phoenix
Instrument ID: CHEM24
Heated Purge (Y/N): Y
GC Column: _____

Client: FPMGROUP
SDG No.: GCE89170
Calibration Date From: 12/16/19 20:37
Calibration Date Thru: 12/17/19 04:57
Method File: 24AIR_1216.M

Laboratory File Ids

RRF1	1216_04.D	RRF2	1216_05.D	RRF3	1216_06.D	RRF4	1216_07.D	RRF5	1216_14.D	RRF6	1216_08.D	RRF7	1216_01.D	RRF8	1216_09.D	RRF9	1216_10.D	RRF10	1216_15.D	RRF11	1216_11.D	RRF12	1216_12.D		
COMPOUND	RRF1 0.02	RRF2 0.035	RRF3 0.05	RRF4 0.1	RRF5 0.2	RRF6 0.5	RRF7 1	RRF8 2.5	RRF9 5	RRF10 10	RRF11 25	RRF12 40	— RRF	% RSD											
1,1-Dichloroethane(sim)	1.766	1.841	1.869	1.878	1.926	1.844	2.068	1.729	1.801				1.858	5.32											
Cis-1,2-Dichloroethene(sim)	1.309	1.280	1.292	1.314	1.344	1.285	1.493	1.288	1.367				1.330	5.08											
Chloroform(sim)	2.032	2.131	2.187	2.208	2.316	2.285	2.671	2.286	2.403				2.280	8.01											
1,2-Dichloroethane(sim)	1.210	1.211	1.201	1.266	1.304	1.295	1.471	1.269	1.320				1.283	6.45											
1,2-dichloropropane(sim)	0.301	0.291	0.262	0.311	0.335	0.320	0.372	0.341	0.351				0.320	10.45											
Bromodichloromethane(sim)	0.656	0.715	0.735	0.743	0.813	0.804	0.941	0.836	0.861				0.789	10.93											
Trichloroethene(sim)	0.638	0.599	0.597	0.626	0.671	0.643	0.702	0.597	0.615				0.632	5.75											
1,4-Dioxane(sim) qfi		0.041	0.048	0.096	0.237	0.485	1.079	2.331	5.069				Coef R2	1.00											
cis-1,3-Dichloropropene(sim)	0.540	0.498	0.542	0.549	0.590	0.593	0.720	0.652					0.585	12.19											
1,1,2-Trichloroethane(sim)	0.456	0.490	0.516	0.511	0.546	0.522	0.580	0.483	0.483				0.510	7.35											
Dibromochloromethane(sim)	0.611	0.828	0.884	0.881	1.033	0.968	1.120	0.968	1.016				0.923	15.94											
1,2-Dibromoethane(EDB)(sim)	0.776	0.866	0.869	0.904	0.977	0.919	1.049	0.878	0.876				0.902	8.49											
Tetrachloroethene(sim)	0.876	0.815	0.851	0.856	0.915	0.879	1.032	0.847	0.844	0.845			0.876	6.96											
Bromoform(sim)	1.541	1.319	1.739	1.721	2.256	1.934	2.234	2.030	2.124				1.878	17.12											
1,1,1,2-Tetrachloroethane(sim)	1.053	1.165	1.215	1.248	1.376	1.266	1.350	1.190	1.166				1.225	8.09											
m,p-Xylene(sim) qfi		0.068	0.097	0.190	0.423	0.978	2.125	4.808	10.090				Coef R2	1.00											
1,1,2,2-Tetrachloroethane(sim)	1.846	1.998	2.125	2.192	2.494	2.164	2.309	2.022	1.971				2.125	9.19											
Benzyl chloride(sim) qfi	0.010	0.020	0.034	0.079	0.246	0.430	1.091	2.503	4.989				Coef R2	1.00											
1,3-Dichlorobenzene(sim)		2.048	2.156	2.235	2.691	2.137	2.254	1.922	1.827				2.159	12.09											
1,4-Dichlorobenzene(sim) q		0.032	0.047	0.102	0.253	0.488	1.078	2.443	5.012				Coef R2	1.00											
sec-Butylbenzene(sim) qfi				0.102	0.233	0.494	1.033	2.374	5.068				Coef R2	1.00											
4-Isopropyltoluene(sim) qfi			0.048	0.096	0.231	0.496	1.032	2.396	5.052				Coef R2	1.00											
1,2-Dichlorobenzene(sim) qfi	0.017	0.031	0.048	0.098	0.254	0.485	1.037	2.369	5.069				Coef R2	1.00											
n-Butylbenzene(sim) qfi		0.031	0.045	0.100	0.237	0.497	1.027	2.396	5.056				Coef R2	1.00											
1,2,4-Trichlorobenzene(sim) q	0.009	0.016	0.027	0.063	0.464	0.385	0.997	2.508	4.999				Coef R2	1.00											

(#) The maximum %RSD was not met for this compound

Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

Phoenix Environmental Laboratories, Inc.

6B

Client: FPMGROUP

SDG No.: GCE89170

Calibration Date From: 12/16/19 20:37

Calibration Date Thru: 12/17/19 04:57

Method File: 24AIR 1216.M

RRF1	<u>1216_04.D</u>	RRF2	<u>1216_05.D</u>	RRF3	<u>1216_06.D</u>	RRF4	<u>1216_07.D</u>	RRF5	<u>1216_14.D</u>	RRF6	<u>1216_08.D</u>
RRF7	<u>1216_01.D</u>	RRF8	<u>1216_09.D</u>	RRF9	<u>1216_10.D</u>	RRF10	<u>1216_15.D</u>	RRF11	<u>1216_11.D</u>	RRF12	<u>1216_12.D</u>

[illegible]

(#) The maximum %RSD was not met for this compound

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

Phoenix Environmental Laboratories, Inc.

02/01/2020

Page 119 of 245

FORM VI AIR

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_01.D
 Acq On : 16 Dec 2019 8:37 pm
 Operator : Keith
 Client ID : BFB TUNE
 Lab ID : 1.0ppb cc
 ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 17 08:07:38 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.485	130	292050	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.404	114	786563	10.000	ng	0.00
53) Chlorobenzene-d5	10.977	82	364513	10.000	ng	0.00
80) Bromochloromethane(sim)	5.488	130	292566	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.407	114	865550	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.973	82	394903	10.000	ng	0.00

System Monitoring Compounds
 62) % Bromofluorobenzene 12.448 95 519680 10.605 ppbv 0.00
 Spiked Amount 10.000 Range 70 - 130 Recovery = 106.10%

Target Compounds					Qvalue
2) Propylene	1.464	41	24021	0.996 ppbv	100
3) Dichlorodifluoromethane	1.492	101	12613	1.239 ppbv	100
4) Chloromethane	1.636	50	28316	1.286 ppbv	100
5) 1,2-Dichlorotetrafluor...	1.601	135	95330	1.277 ppbv	100
6) Vinyl Chloride	1.711	62	33354	1.224 ppbv	100
7) 1,3-Butadiene	1.732	54	20964	1.255 ppbv	100
8) Bromomethane	1.965	94	35754	1.130 ppbv	100
9) Chloroethane	2.081	64	10639	1.131 ppbv	100
10) Ethanol	2.690	45	7973	1.342 ppbv	100
12) Acetone	3.361	43	52189	1.204 ppbv	100
13) Trichlorofluoromethane	2.204	101	87520	1.182 ppbv	100
14) Isopropylalcohol	3.320	45	48379	1.139 ppbv	100
15) Acrylonitrile	4.354	53	16480	1.103 ppbv	100
16) 1,1-Dichloroethene	2.663	61	35611	1.134 ppbv	100
17) Methylene Chloride	3.279	49	35135	1.115 ppbv	100
20) Carbon Disulfide	2.670	76	67745	1.172 ppbv	100
21) Trichlorotrifluoroethane	2.731	101	57526	1.175 ppbv	100
22) Trans-1,2-Dichloroethene	3.477	61	43201	1.107 ppbv	100
23) 1,1-Dichloroethane	4.291	63	55933	1.099 ppbv	100
24) Methyl tert-butyl ethe...	3.675	73	82651	1.150 ppbv	100
25) Methyl Ethyl Ketone	6.148	43	50264	1.069 ppbv	100
26) Cis-1,2-Dichloroethene	5.175	61	43684	1.075 ppbv	100
27) Hexane	3.614	57	41118	0.973 ppbv	100
28) Chloroform	5.679	83	72943	1.088 ppbv	100
29) Ethyl acetate	5.961	43	52412	1.148 ppbv	100
30) Tetrahydrofuran	5.888	42	22558	1.121 ppbv	100
31) 1,2-Dichloroethane	6.768	62	43047	1.085 ppbv	100
32) 1,1,1-Trichloroethane	5.917	97	75687	1.163 ppbv	100
33) Benzene	6.473	78	90143	1.113 ppbv	100
34) Carbon Tetrachloride	5.816	117	83545	1.133 ppbv	100
35) Cyclohexane	5.470	56	38621	1.090 ppbv	100
37) 1,2-dichloropropane	7.980	63	32179	1.096 ppbv	100
38) Bromodichloromethane	8.123	83	76513	1.135 ppbv	100
39) Trichloroethene	7.329	130	60769	1.125 ppbv	100
41) 1,4-Dioxane	8.388	88	21152	1.047 ppbv	100
43) Heptane	6.576	43	40017	1.150 ppbv	100
44) cis-1,3-Dichloropropene	8.915	75	62310	1.132 ppbv	100
45) 4-Methyl-2-pentanone(M...	9.702	43	56981	1.189 ppbv	100
46) trans-1,3-Dichloropropene	9.730	75	53500	1.215 ppbv	100
47) 1,1,2-Trichloroethane	9.904	97	45824	1.138 ppbv	100
48) Toluene	9.196	91	123432	1.198 ppbv	100
49) Dibromochloromethane	10.099	129	97190	1.136 ppbv	100
50) 2-Hexanone(MBK)	10.709	43	55801	1.062 ppbv	100
51) 1,2-Dibromoethane(EDB)	10.330	107	84368	1.144 ppbv	100

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_01.D
 Acq On : 16 Dec 2019 8:37 pm
 Operator : Keith
 Client ID : BFB TUNE
 Lab ID : 1.0ppb cc
 ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 17 08:07:38 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.651	166	89317	1.209	ppbv	100
54)	1,1,1,2-Tetrachloroethane	11.093	131	51008	1.113	ppbv	100
55)	Chlorobenzene	10.990	112	93638	1.089	ppbv	100
56)	Ethylbenzene	11.066	91	135353	1.153	ppbv	100
57)	m,p-Xylene	11.251	91	210399	2.379	ppbv	100
58)	Bromoform	11.807	173	88365	1.087	ppbv	100
59)	Styrene	11.814	104	84448	1.194	ppbv	100
60)	1,1,2,2-Tetrachloroethane	12.746	83	85830	1.118	ppbv	100
61)	o-Xylene	11.752	91	118479	1.101	ppbv	100
64)	Isopropylbenzene	12.149	105	154863	1.098	ppbv	100
66)	4-Ethyltoluene	12.792	105	155968	1.174	ppbv	100
67)	1,3,5-Trimethylbenzene	12.902	105	126175	1.110	ppbv	100
68)	1,2,4-Trimethylbenzene	13.363	105	116449	1.102	ppbv	100
70)	Benzyl chloride	14.005	91	59419	0.900	ppbv	100
71)	1,3-Dichlorobenzene	13.668	146	81269	1.123	ppbv	100
72)	1,4-Dichlorobenzene	13.758	146	77283	1.076	ppbv	100
73)	sec-Butylbenzene	13.479	105	151241	1.086	ppbv	100
74)	4-Isopropyltoluene	13.648	119	120644	1.094	ppbv	100
75)	1,2-Dichlorobenzene	14.135	146	63301	1.069	ppbv	100
76)	n-Butylbenzene	14.050	91	82356	1.088	ppbv	100
77)	1,2,4-Trichlorobenzene	15.301	180	36204	0.981	ppbv	100
79)	Hexachlorobutadiene	15.306	225	60479	1.116	ppbv	100
81)	1,2-Dichlorotetrafluor...	1.601	135	95330	1.199	ppbv	100
82)	Vinyl Chloride(sim)	1.707	62	36286	1.166	ppbv	100
83)	Bromomethane(sim)	1.965	94	36322	1.046	ppbv	100
84)	Trichlorofluoromethane...	2.207	101	91052	1.097	ppbv	100
85)	1,1,1-Trichloroethane(...	5.917	97	75609	1.181	ppbv#	100
86)	Carbon Tetrachloride(sim)	5.819	117	84245	1.175	ppbv	100
87)	1,1-Dichloroethene(sim)	2.663	61	35611	1.033	ppbv	100
88)	Trichlorotrifluoroetha...	2.734	101	60005	0.958	ppbv	100
89)	Trans-1,2-Dichloroethe...	3.477	61	43201	1.089	ppbv	100
90)	1,1-Dichloroethane(sim)	4.289	63	60519	1.113	ppbv	100
91)	Cis-1,2-Dichloroethene...	5.175	61	43684	1.123	ppbv	100
92)	Chloroform(sim)	5.675	83	78171	1.172	ppbv	100
93)	1,2-Dichloroethane(sim)	6.768	62	43047	1.147	ppbv	100
95)	1,2-dichloropropane(sim)	7.980	63	32179	1.160	ppbv	100
96)	Bromodichloromethane(sim)	8.119	83	81460	1.192	ppbv	100
97)	Trichloroethene(sim)	7.329	130	60769	1.111	ppbv	100
98)	1,4-Dioxane(sim)	8.383	88	24122	1.078	ppbv	100
99)	cis-1,3-Dichloropropen...	8.915	75	62310	1.230	ppbv	100
100)	1,1,2-Trichloroethane(...	9.907	97	50230	1.139	ppbv	100
101)	Dibromochloromethane(sim)	10.099	129	96911	1.213	ppbv	100
102)	1,2-Dibromoethane(EDB)...	10.333	107	90778	1.163	ppbv	100
103)	Tetrachloroethene(sim)	9.651	166	89317	1.178	ppbv	100
105)	Bromoform(sim)	11.807	173	88204	1.190	ppbv	100
106)	1,1,1,2-Tetrachloroeth...	11.096	131	53297	1.101	ppbv	100
107)	m,p-Xylene(sim)	11.251	91	210469	2.125	ppbv	100
108)	1,1,2,2-Tetrachloroeth...	12.743	83	91202	1.087	ppbv	100
111)	Benzyl chloride(sim)	14.005	91	59419	1.091	ppbv	100
112)	1,3-Dichlorobenzene(sim)	13.670	146	89002	1.044	ppbv	100
113)	1,4-Dichlorobenzene(sim)	13.758	146	77283	1.078	ppbv	100
114)	sec-Butylbenzene(sim)	13.482	105	164588	1.033	ppbv	100
115)	4-Isopropyltoluene(sim)	13.648	119	120644	1.032	ppbv	100
116)	1,2-Dichlorobenzene(sim)	14.138	146	69739	1.037	ppbv	100
117)	n-Butylbenzene(sim)	14.050	91	82356	1.027	ppbv	100
118)	1,2,4-Trichlorobenzene...	15.299	180	40278	0.997	ppbv	100
119)	Hexachlorobutadiene(sim)	15.306	225	60421	1.019	ppbv	100

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1216_01.D
Acq On : 16 Dec 2019 8:37 pm
Operator : Keith
Client ID : BFB TUNE
Lab ID : 1.0ppb cc
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 17 08:07:38 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration

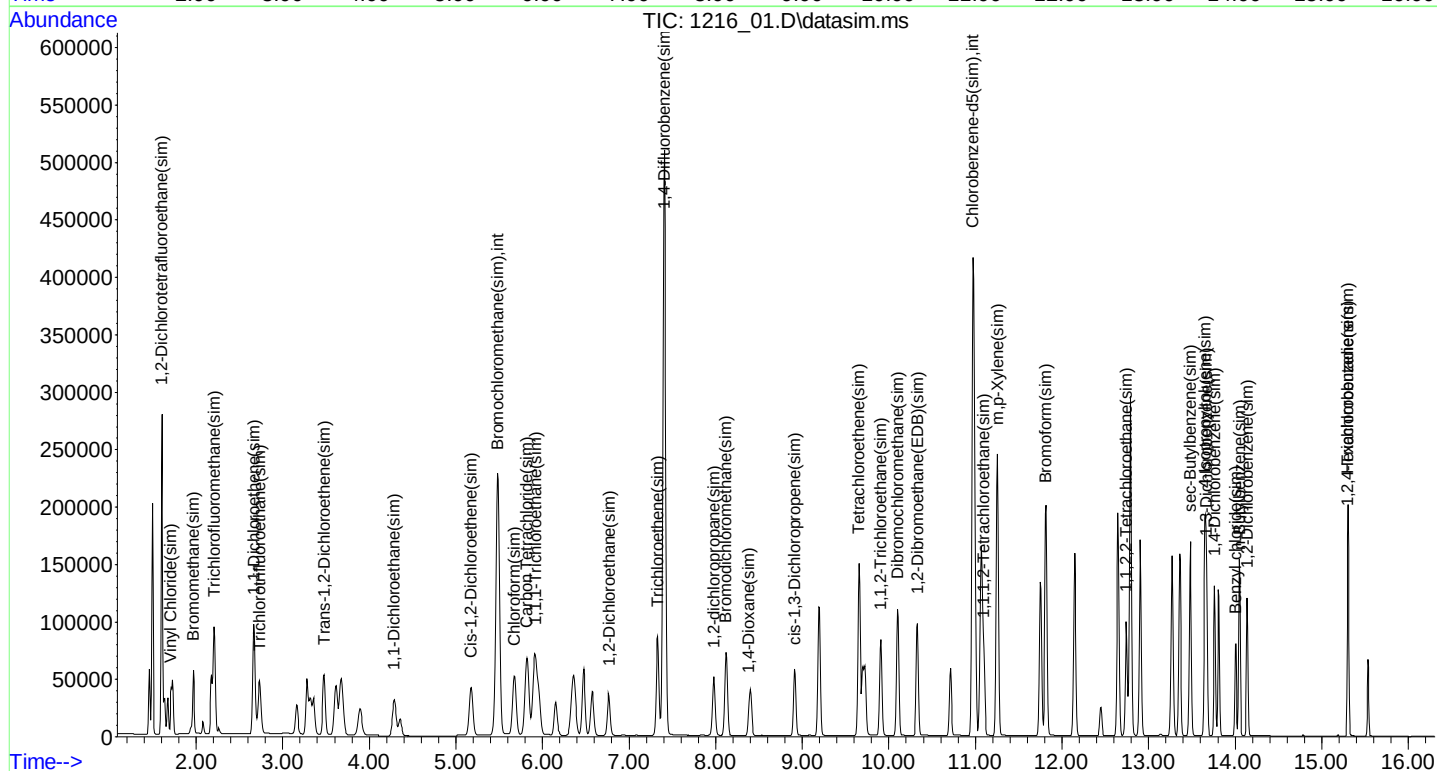
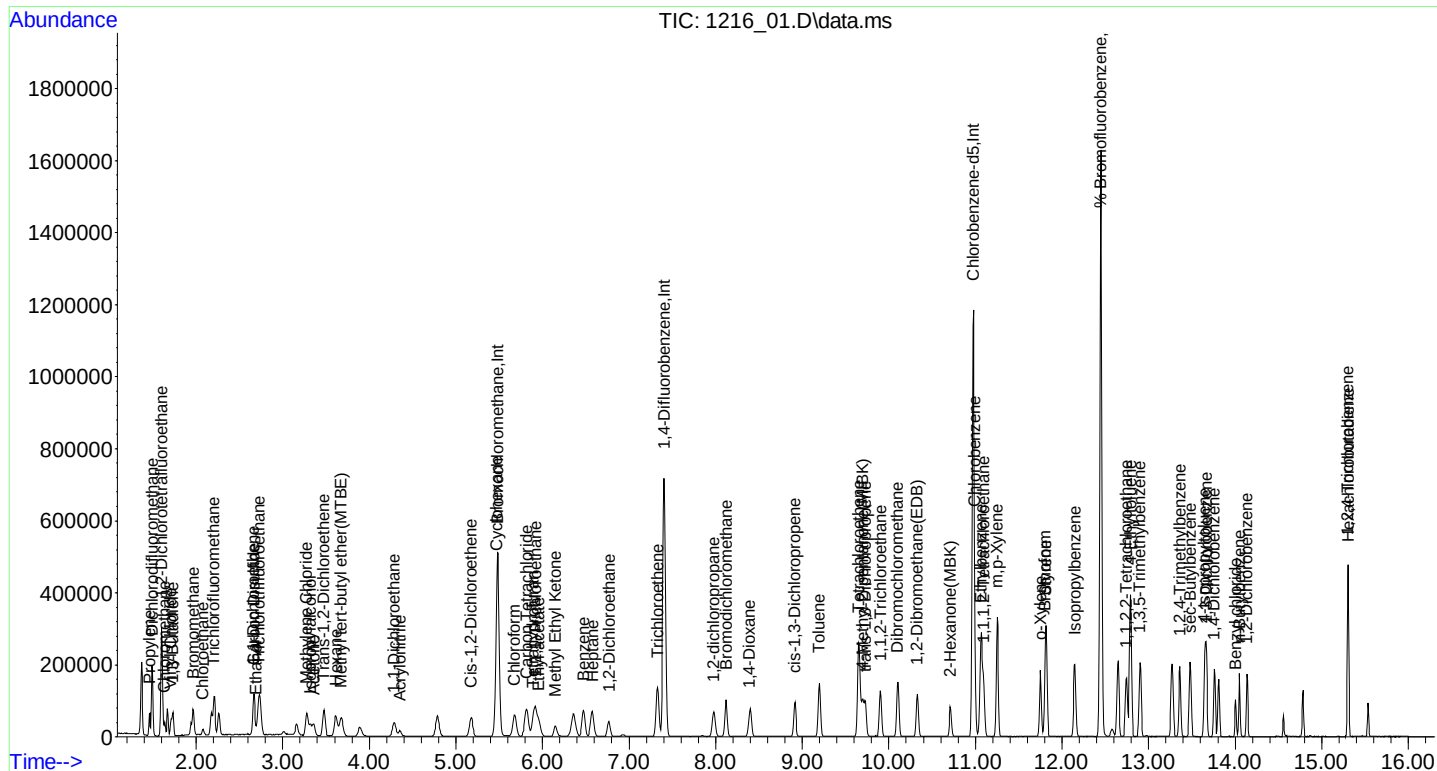
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_01.D
 Acq On : 16 Dec 2019 8:37 pm
 Operator : Keith
 Client ID : BFB TUNE
 Lab ID : 1.0ppb cc
 ALS Vial : 46 Sample Multiplier: 1

Quant Time: Dec 17 08:07:38 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_04.D
 Acq On : 16 Dec 2019 10:51 pm
 Operator : Keith
 Client ID : ICAL 0.02
 Lab ID : 0.02 ppbv
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 08:00:44 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 07:59:36 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.485	130	428651	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.404	114	1092227	10.000	ng	0.00
53) Chlorobenzene-d5	10.970	82	460361	10.000	ng	0.00
80) Bromochloromethane(sim)	5.481	130	428428	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.407	114	1188122	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.973	82	504945	10.000	ng	0.00

System Monitoring Compounds						
62) % Bromofluorobenzene	12.448	95	596147	9.083	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	90.80%

Target Compounds					Qvalue	
2) Propylene	1.464	41	1159	0.033	ppbv#	43
3) Dichlorodifluoromethane	1.499	101	228	0.015	ppbv#	79
4) Chloromethane	1.643	50	1600	0.050	ppbv	92
5) 1,2-Dichlorotetrafluor...	1.608	135	2196	0.020	ppbv	92
6) Vinyl Chloride	1.718	62	900	0.023	ppbv	78
7) 1,3-Butadiene	1.732	54	432	0.018	ppbv#	69
8) Bromomethane	1.978	94	1644	0.035	ppbv#	86
9) Chloroethane	2.088	64	320	0.023	ppbv#	67
10) Ethanol	2.690	45	1760	0.202	ppbv#	81
12) Acetone	3.361	43	7774	0.122	ppbv	99
13) Trichlorofluoromethane	2.211	101	2530	0.023	ppbv#	88
14) Isopropylalcohol	3.313	45	2226	0.036	ppbv#	1
15) Acrylonitrile	4.364	53	353	0.016	ppbv#	84
16) 1,1-Dichloroethene	2.670	61	1179	0.026	ppbv#	88
17) Methylene Chloride	3.286	49	2600	0.056	ppbv	90
20) Carbon Disulfide	2.670	76	4312	0.051	ppbv	99
21) Trichlorotrifluoroethane	2.738	101	2461	0.034	ppbv	92
22) Trans-1,2-Dichloroethene	3.484	61	1169	0.020	ppbv#	79
23) 1,1-Dichloroethane	4.291	63	1428	0.019	ppbv#	64
24) Methyl tert-butyl ethe...	3.682	73	2270	0.022	ppbv#	62
25) Methyl Ethyl Ketone	6.155	43	2421	0.035	ppbv#	61
26) Cis-1,2-Dichloroethene	5.182	61	812	0.014	ppbv	93
27) Hexane	3.621	57	1869	0.030	ppbv#	79
28) Chloroform	5.680	83	1619	0.016	ppbv	86
29) Ethyl acetate	5.975	43	1416	0.021	ppbv#	68
30) Tetrahydrofuran	5.903	42	1064	0.036	ppbv#	62
31) 1,2-Dichloroethane	6.754	62	1084	0.019	ppbv#	45
32) 1,1,1-Trichloroethane	5.910	97	1603	0.017	ppbv#	76
33) Benzene	6.480	78	4027	0.034	ppbv#	89
34) Carbon Tetrachloride	5.824	117	1712	0.016	ppbv	87
35) Cyclohexane	5.492	56	876	0.017	ppbv#	17
37) 1,2-dichloropropane	7.980	63	715	0.018	ppbv#	46
38) Bromodichloromethane	8.123	83	1515	0.016	ppbv	88
39) Trichloroethene	7.329	130	1297	0.017	ppbv	97
41) 1,4-Dioxane	8.402	88	572	0.020	ppbv#	47
43) Heptane	6.583	43	1254	0.026	ppbv#	82
44) cis-1,3-Dichloropropene	8.915	75	1282	0.017	ppbv	78
45) 4-Methyl-2-pentanone(M...	9.702	43	1442	0.022	ppbv#	73
46) trans-1,3-Dichloropropene	9.731	75	1192	0.019	ppbv#	82
47) 1,1,2-Trichloroethane	9.911	97	1016	0.018	ppbv	91
48) Toluene	9.196	91	3233	0.023	ppbv#	97
49) Dibromochloromethane	10.106	129	1772	0.015	ppbv	97
50) 2-Hexanone(MBK)	10.716	43	1370	0.019	ppbv#	76
51) 1,2-Dibromoethane(EDB)	10.323	107	1619	0.016	ppbv	87

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_04.D
 Acq On : 16 Dec 2019 10:51 pm
 Operator : Keith
 Client ID : ICAL 0.02
 Lab ID : 0.02 ppbv
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 08:00:44 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 07:59:36 2019
 Response via : Initial Calibration

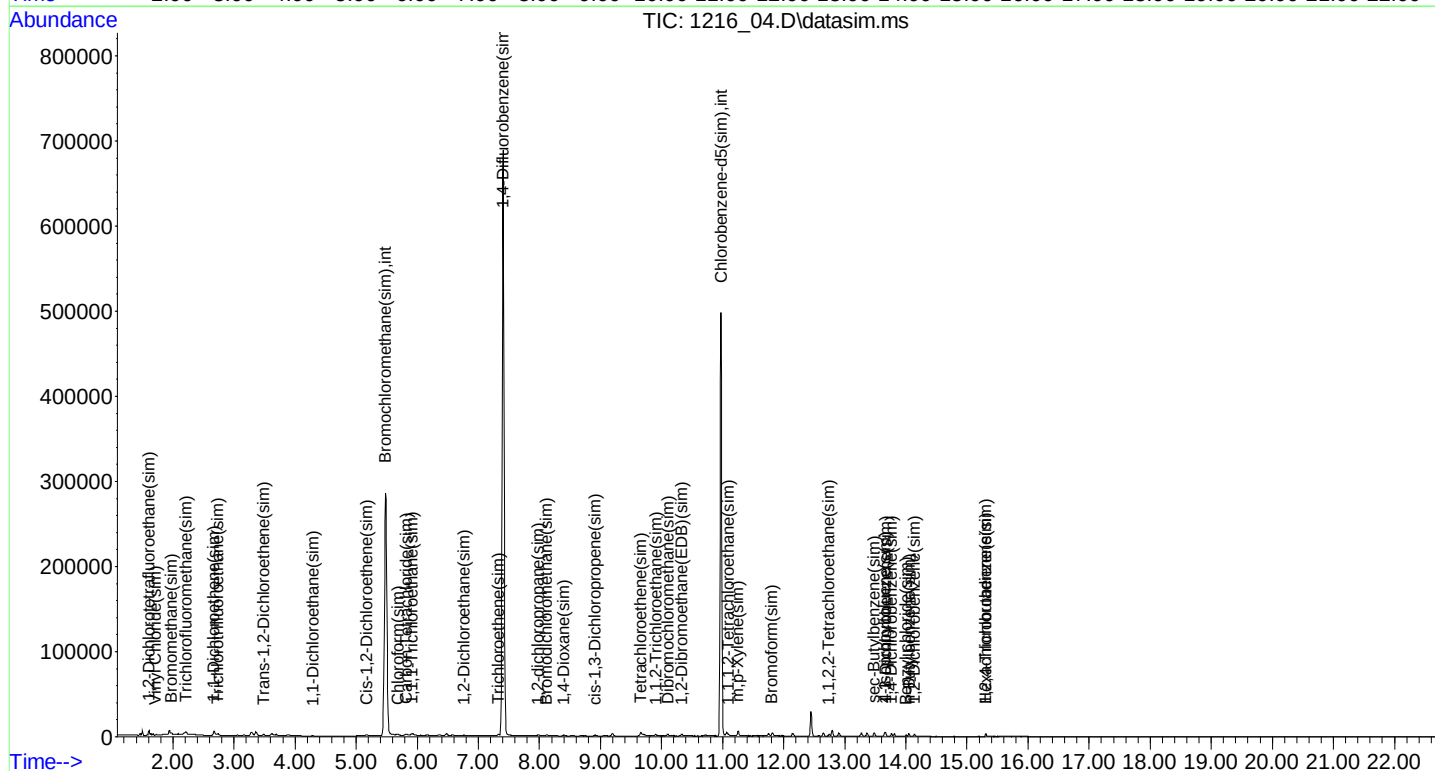
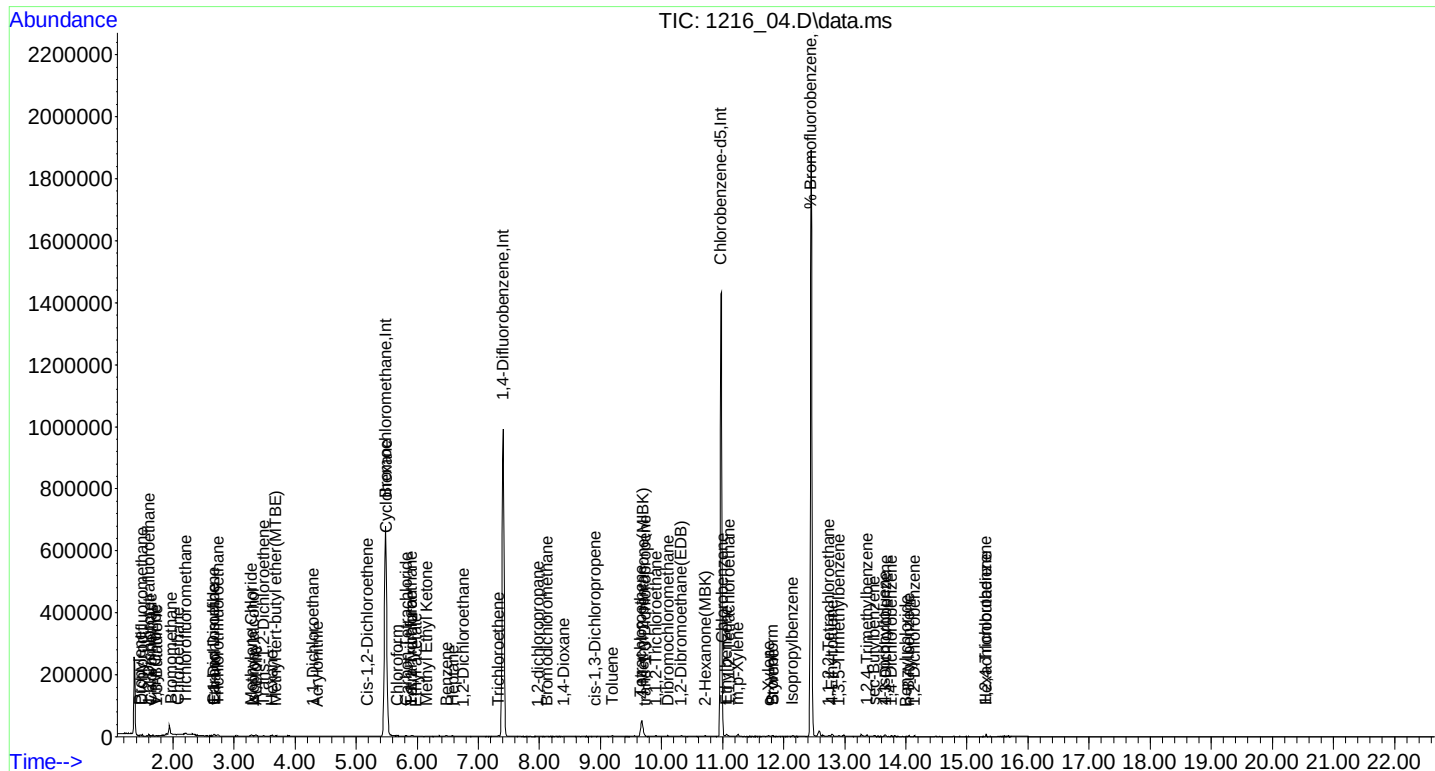
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.658	166	1687	0.016	ppbv#	84
54)	1,1,1,2-Tetrachloroethane	11.100	131	976	0.017	ppbv#	88
55)	Chlorobenzene	10.997	112	1937	0.018	ppbv#	1
56)	Ethylbenzene	11.066	91	2737	0.018	ppbv	93
57)	m,p-Xylene	11.251	91	4648	0.042	ppbv	97
58)	Bromoform	11.814	173	1499	0.015	ppbv	98
59)	Styrene	11.821	104	1609	0.018	ppbv#	94
60)	1,1,2,2-Tetrachloroethane	12.740	83	1629	0.017	ppbv	93
61)	o-Xylene	11.752	91	2450	0.018	ppbv	91
64)	Isopropylbenzene	12.143	105	3340	0.019	ppbv	99
66)	4-Ethyltoluene	12.792	105	3400	0.020	ppbv	98
67)	1,3,5-Trimethylbenzene	12.902	105	2745	0.019	ppbv#	93
68)	1,2,4-Trimethylbenzene	13.363	105	2655	0.020	ppbv	96
71)	1,3-Dichlorobenzene	13.674	146	1736	0.019	ppbv#	86
72)	1,4-Dichlorobenzene	13.765	146	1523	0.017	ppbv	97
73)	sec-Butylbenzene	13.479	105	3764	0.021	ppbv	95
74)	4-Isopropyltoluene	13.655	119	2597	0.019	ppbv#	95
75)	1,2-Dichlorobenzene	14.141	146	1311	0.018	ppbv	92
76)	n-Butylbenzene	14.050	91	1673	0.017	ppbv	91
81)	1,2-Dichlorotetrafluor...	1.608	135	2196	0.019	ppbv	92
82)	Vinyl Chloride(sim)	1.714	62	866	0.019	ppbv	95
83)	Bromomethane(sim)	1.974	94	1190m	0.023	ppbv	88
84)	Trichlorofluoromethane...	2.214	101	2541	0.021	ppbv	99
85)	1,1,1-Trichloroethane(...	5.910	97	1603	0.017	ppbv#	76
86)	Carbon Tetrachloride(sim)	5.827	117	1914	0.018	ppbv	98
87)	1,1-Dichloroethene(sim)	2.670	61	1179	0.023	ppbv#	88
88)	Trichlorotrifluoroetha...	2.734	101	2357	0.026	ppbv	100
89)	Trans-1,2-Dichloroethe...	3.484	61	1169	0.020	ppbv#	79
90)	1,1-Dichloroethane(sim)	4.289	63	1513	0.019	ppbv	97
91)	Cis-1,2-Dichloroethene...	5.178	61	1122m	0.020	ppbv	93
92)	Chloroform(sim)	5.682	83	1741	0.018	ppbv#	95
93)	1,2-Dichloroethane(sim)	6.764	62	1037m	0.019	ppbv	58
95)	1,2-dichloropropane(sim)	7.983	63	715m	0.019	ppbv	39
96)	Bromodichloromethane(sim)	8.120	83	1559	0.017	ppbv	100
97)	Trichloroethene(sim)	7.332	130	1516m	0.020	ppbv	93
99)	cis-1,3-Dichloropropen...	8.915	75	1282	0.018	ppbv#	78
100)	1,1,2-Trichloroethane(...	9.907	97	1083	0.018	ppbv	99
101)	Dibromochloromethane(sim)	10.106	129	1452	0.013	ppbv	78
102)	1,2-Dibromoethane(EDB)...	10.333	107	1845	0.017	ppbv	99
103)	Tetrachloroethene(sim)	9.661	166	2081m	0.020	ppbv	51
105)	Bromoform(sim)	11.810	173	1556m	0.016	ppbv	93
106)	1,1,1,2-Tetrachloroeth...	11.096	131	1063	0.017	ppbv	98
108)	1,1,2,2-Tetrachloroeth...	12.743	83	1864	0.017	ppbv	99
112)	1,3-Dichlorobenzene(sim)	13.671	146	1929	0.018	ppbv	99
119)	Hexachlorobutadiene(sim)	15.310	225	1216	0.016	ppbv#	74

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_04.D
 Acq On : 16 Dec 2019 10:51 pm
 Operator : Keith
 Client ID : ICAL 0.02
 Lab ID : 0.02 ppbV
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 08:00:44 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 07:59:36 2019
 Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_05.D
 Acq On : 16 Dec 2019 11:22 pm
 Operator : Keith
 Client ID : ICAL 0.035
 Lab ID : 0.035 ppbV
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 17 08:01:16 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:01:03 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.482	130	423883	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.402	114	1078654	10.000	ng	0.00
53) Chlorobenzene-d5	10.974	82	459767	10.000	ng	0.00
80) Bromochloromethane(sim)	5.485	130	423818	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.405	114	1179485	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.977	82	501903	10.000	ng	0.00

System Monitoring Compounds
 62) % Bromofluorobenzene 12.451 95 588098 8.972 ppbv 0.00
 Spiked Amount 10.000 Range 70 - 130 Recovery = 89.70%

Target Compounds					Qvalue
2) Propylene	1.465	41	1625	0.046 ppbv#	85
3) Dichlorodifluoromethane	1.499	101	523	0.035 ppbv#	79
4) Chloromethane	1.643	50	1902	0.060 ppbv	91
5) 1,2-Dichlorotetrafluor...	1.609	135	3592	0.033 ppbv	97
6) Vinyl Chloride	1.718	62	1293	0.033 ppbv	96
7) 1,3-Butadiene	1.739	54	956	0.039 ppbv#	62
8) Bromomethane	1.972	94	1989	0.043 ppbv#	87
9) Chloroethane	2.081	64	720	0.053 ppbv	82
10) Ethanol	2.697	45	2030	0.235 ppbv#	84
12) Acetone	3.361	43	7717	0.123 ppbv	97
13) Trichlorofluoromethane	2.211	101	3852	0.036 ppbv#	96
14) Isopropylalcohol	3.306	45	3045	0.049 ppbv#	25
15) Acrylonitrile	4.356	53	794	0.037 ppbv#	43
16) 1,1-Dichloroethene	2.670	61	2244	0.049 ppbv	96
17) Methylene Chloride	3.286	49	2698	0.059 ppbv	88
20) Carbon Disulfide	2.670	76	5336	0.064 ppbv#	92
21) Trichlorotrifluoroethane	2.732	101	3957	0.056 ppbv	95
22) Trans-1,2-Dichloroethene	3.477	61	1969	0.035 ppbv	95
23) 1,1-Dichloroethane	4.288	63	2577	0.035 ppbv	82
24) Methyl tert-butyl ethe...	3.696	73	3928	0.038 ppbv#	73
25) Methyl Ethyl Ketone	6.160	43	3437	0.050 ppbv#	78
26) Cis-1,2-Dichloroethene	5.172	61	1898	0.032 ppbv	93
27) Hexane	3.614	57	2704	0.044 ppbv	96
28) Chloroform	5.684	83	2908	0.030 ppbv	99
29) Ethyl acetate	5.965	43	2305	0.035 ppbv#	76
30) Tetrahydrofuran	5.915	42	1484	0.051 ppbv#	66
31) 1,2-Dichloroethane	6.765	62	1797	0.031 ppbv#	89
32) 1,1,1-Trichloroethane	5.929	97	3152	0.033 ppbv	90
33) Benzene	6.477	78	5308	0.045 ppbv	96
34) Carbon Tetrachloride	5.828	117	3165	0.030 ppbv	91
35) Cyclohexane	5.460	56	889	0.017 ppbv#	1
37) 1,2-dichloropropane	7.984	63	1202	0.030 ppbv#	62
38) Bromodichloromethane	8.114	83	2779	0.030 ppbv	96
39) Trichloroethene	7.333	130	2471	0.033 ppbv	95
41) 1,4-Dioxane	8.392	88	874	0.032 ppbv#	78
43) Heptane	6.587	43	1977	0.041 ppbv#	86
44) cis-1,3-Dichloropropene	8.912	75	2055	0.027 ppbv	88
45) 4-Methyl-2-pentanone(M...	9.713	43	2427	0.037 ppbv#	80
46) trans-1,3-Dichloropropene	9.727	75	1804	0.030 ppbv	97
47) 1,1,2-Trichloroethane	9.908	97	1893	0.034 ppbv	92
48) Toluene	9.193	91	5600	0.040 ppbv	94
49) Dibromochloromethane	10.103	129	3494	0.030 ppbv	95
50) 2-Hexanone(MBK)	10.720	43	2534	0.035 ppbv#	87
51) 1,2-Dibromoethane(EDB)	10.327	107	3284	0.032 ppbv	97

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_05.D
 Acq On : 16 Dec 2019 11:22 pm
 Operator : Keith
 Client ID : ICAL 0.035
 Lab ID : 0.035 ppbV
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 17 08:01:16 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:01:03 2019
 Response via : Initial Calibration

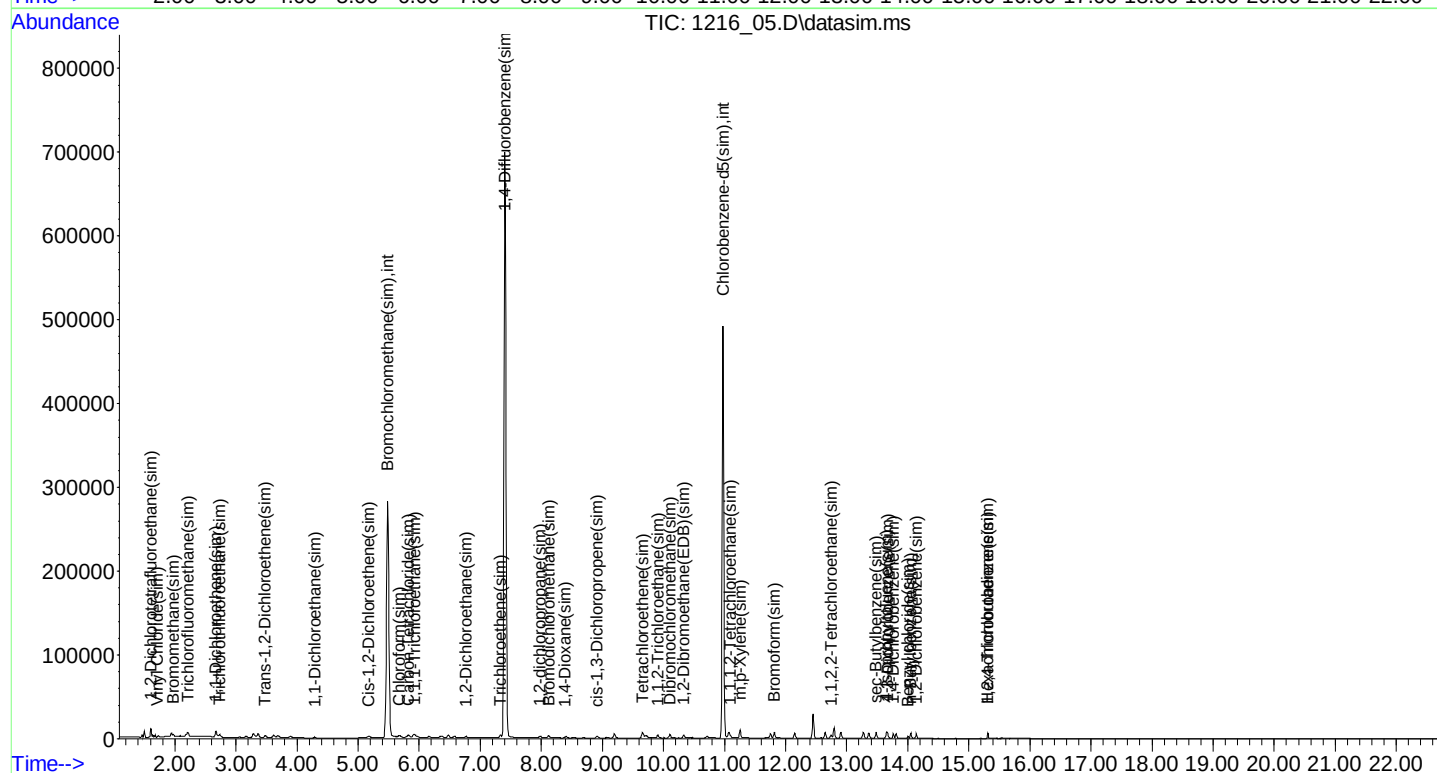
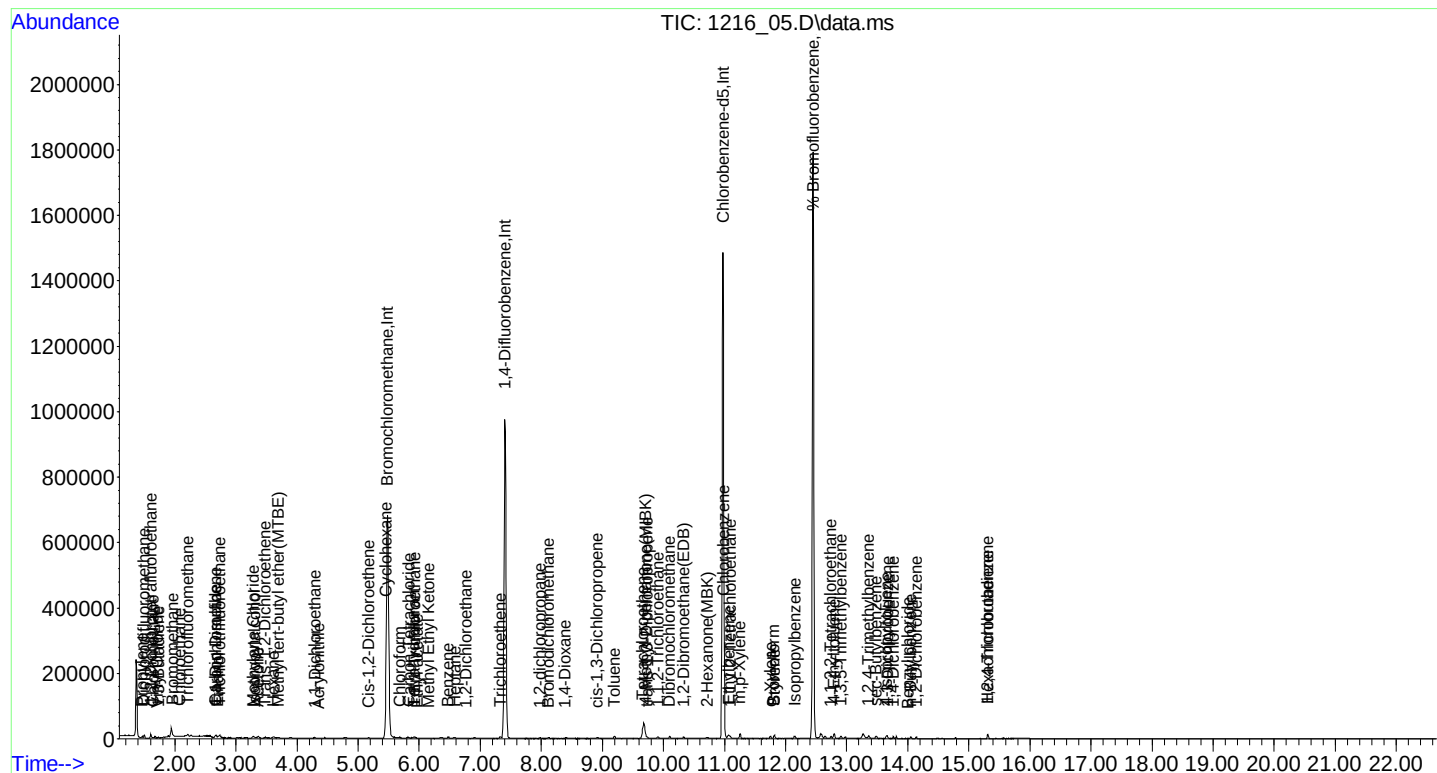
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.655	166	3363	0.033	ppbv	93
54)	1,1,1,2-Tetrachloroethane	11.091	131	1982	0.034	ppbv#	97
55)	Chlorobenzene	10.995	112	3318	0.031	ppbv#	1
56)	Ethylbenzene	11.070	91	5199	0.035	ppbv	97
57)	m,p-Xylene	11.255	91	8814	0.079	ppbv	98
58)	Bromoform	11.811	173	2767	0.027	ppbv	95
59)	Styrene	11.818	104	3153	0.035	ppbv	96
60)	1,1,2,2-Tetrachloroethane	12.743	83	3338	0.034	ppbv#	90
61)	o-Xylene	11.749	91	4622	0.034	ppbv	100
64)	Isopropylbenzene	12.153	105	6088	0.034	ppbv#	96
66)	4-Ethyltoluene	12.795	105	6389	0.038	ppbv	98
67)	1,3,5-Trimethylbenzene	12.906	105	4969	0.035	ppbv	98
68)	1,2,4-Trimethylbenzene	13.360	105	4904	0.037	ppbv	98
71)	1,3-Dichlorobenzene	13.671	146	3144	0.034	ppbv	97
72)	1,4-Dichlorobenzene	13.762	146	2938	0.032	ppbv	98
73)	sec-Butylbenzene	13.483	105	6198	0.035	ppbv	98
74)	4-Isopropyltoluene	13.652	119	4464	0.032	ppbv	94
75)	1,2-Dichlorobenzene	14.139	146	2491	0.033	ppbv	97
76)	n-Butylbenzene	14.048	91	3256	0.034	ppbv	95
81)	1,2-Dichlorotetrafluor...	1.609	135	3592	0.031	ppbv	97
82)	Vinyl Chloride(sim)	1.714	62	1523	0.034	ppbv	99
83)	Bromomethane(sim)	1.972	94	1925	0.038	ppbv#	58
84)	Trichlorofluoromethane...	2.214	101	4293	0.036	ppbv	99
85)	1,1,1-Trichloroethane(...	5.929	97	3152	0.034	ppbv#	90
86)	Carbon Tetrachloride(sim)	5.824	117	3371	0.032	ppbv	98
87)	1,1-Dichloroethene(sim)	2.670	61	2244	0.045	ppbv	94
88)	Trichlorotrifluoroetha...	2.735	101	3997	0.044	ppbv	99
89)	Trans-1,2-Dichloroethe...	3.477	61	1969	0.034	ppbv	95
90)	1,1-Dichloroethane(sim)	4.291	63	2731	0.035	ppbv	98
91)	Cis-1,2-Dichloroethene...	5.172	61	1898	0.034	ppbv	93
92)	Chloroform(sim)	5.680	83	3161	0.033	ppbv	96
93)	1,2-Dichloroethane(sim)	6.765	62	1797	0.033	ppbv#	79
95)	1,2-dichloropropane(sim)	7.984	63	1202	0.032	ppbv#	62
96)	Bromodichloromethane(sim)	8.124	83	2951	0.032	ppbv	100
97)	Trichloroethene(sim)	7.333	130	2471	0.033	ppbv	96
99)	cis-1,3-Dichloropropen...	8.912	75	2055	0.030	ppbv#	88
100)	1,1,2-Trichloroethane(...	9.911	97	2021	0.034	ppbv	97
101)	Dibromochloromethane(sim)	10.103	129	3419	0.031	ppbv	96
102)	1,2-Dibromoethane(EDB)...	10.330	107	3575	0.034	ppbv	99
103)	Tetrachloroethene(sim)	9.655	166	3363	0.033	ppbv	91
105)	Bromoform(sim)	11.811	173	2317	0.025	ppbv#	71
106)	1,1,1,2-Tetrachloroeth...	11.094	131	2046	0.033	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.746	83	3509	0.033	ppbv	97
112)	1,3-Dichlorobenzene(sim)	13.668	146	3598	0.033	ppbv	99
118)	1,2,4-Trichlorobenzene...	15.307	180	864	0.036	ppbv	92
119)	Hexachlorobutadiene(sim)	15.309	225	2477	0.033	ppbv#	79

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

```
Data Path   : H:\AIR2019\CHEM24\12DEC\15\  
Data File  : 1216_05.D  
Acq On     : 16 Dec 2019   11:22 pm  
Operator   : Keith  
Client ID  : ICAL 0.035  
Lab ID     : 0.035 ppbV  
ALS Vial   : 4   Sample Multiplier: 1
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Quant Time: Dec 17 08:01:16 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:01:03 2019
Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_06.D
 Acq On : 16 Dec 2019 11:53 pm
 Operator : Keith
 Client ID : ICAL 0.05
 Lab ID : 0.05 ppbv
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 17 08:01:55 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:01:43 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.487	130	417255	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.406	114	1076752	10.000	ng	0.00
53) Chlorobenzene-d5	10.972	82	455147	10.000	ng	0.00
80) Bromochloromethane(sim)	5.483	130	420480	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.409	114	1178871	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.975	82	493249	10.000	ng	0.00

System Monitoring Compounds						
62) % Bromofluorobenzene	12.449	95	586477	9.038	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	90.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	1.465	41	2407	0.070	ppbv	86
3) Dichlorodifluoromethane	1.499	101	682	0.047	ppbv#	87
4) Chloromethane	1.643	50	2455	0.078	ppbv	97
5) 1,2-Dichlorotetrafluor...	1.608	135	5715	0.054	ppbv	93
6) Vinyl Chloride	1.718	62	2067	0.053	ppbv	89
7) 1,3-Butadiene	1.732	54	1408	0.059	ppbv#	72
8) Bromomethane	1.972	94	2525	0.056	ppbv#	89
9) Chloroethane	2.088	64	899	0.067	ppbv#	70
10) Ethanol	2.711	45	1939	0.228	ppbv#	89
12) Acetone	3.368	43	9019	0.146	ppbv	98
13) Trichlorofluoromethane	2.211	101	5753	0.054	ppbv#	96
14) Isopropylalcohol	3.320	45	3951	0.065	ppbv#	1
15) Acrylonitrile	4.366	53	1075	0.050	ppbv#	91
16) 1,1-Dichloroethene	2.677	61	2371	0.053	ppbv#	87
17) Methylene Chloride	3.279	49	3367	0.075	ppbv	93
20) Carbon Disulfide	2.670	76	5555	0.067	ppbv#	79
21) Trichlorotrifluoroethane	2.732	101	5347	0.076	ppbv	95
22) Trans-1,2-Dichloroethene	3.477	61	2860	0.051	ppbv	96
23) 1,1-Dichloroethane	4.293	63	3597	0.049	ppbv	90
24) Methyl tert-butyl ethe...	3.689	73	5639	0.055	ppbv#	66
25) Methyl Ethyl Ketone	6.172	43	4227	0.063	ppbv#	80
26) Cis-1,2-Dichloroethene	5.177	61	2717	0.047	ppbv	98
27) Hexane	3.621	57	3699	0.061	ppbv#	82
28) Chloroform	5.682	83	4371	0.046	ppbv	97
29) Ethyl acetate	5.970	43	4004	0.061	ppbv#	82
30) Tetrahydrofuran	5.912	42	1930	0.067	ppbv#	71
31) 1,2-Dichloroethane	6.770	62	2610	0.046	ppbv#	92
32) 1,1,1-Trichloroethane	5.927	97	4659	0.050	ppbv#	92
33) Benzene	6.475	78	7236	0.063	ppbv	94
34) Carbon Tetrachloride	5.833	117	4953	0.047	ppbv	96
35) Cyclohexane	5.487	56	2596	0.051	ppbv#	86
37) 1,2-dichloropropane	7.982	63	1543	0.038	ppbv#	66
38) Bromodichloromethane	8.119	83	4004	0.043	ppbv	97
39) Trichloroethene	7.331	130	3706	0.050	ppbv	98
41) 1,4-Dioxane	8.397	88	1407	0.051	ppbv#	66
43) Heptane	6.585	43	2884	0.061	ppbv	92
44) cis-1,3-Dichloropropene	8.917	75	3194	0.042	ppbv	98
45) 4-Methyl-2-pentanone(M...	9.704	43	3349	0.051	ppbv#	91
46) trans-1,3-Dichloropropene	9.733	75	2996	0.050	ppbv	98
47) 1,1,2-Trichloroethane	9.906	97	2871	0.052	ppbv	96
48) Toluene	9.198	91	7200	0.051	ppbv	93
49) Dibromochloromethane	10.101	129	5213	0.045	ppbv	95
50) 2-Hexanone(MBK)	10.718	43	3346	0.047	ppbv#	87
51) 1,2-Dibromoethane(EDB)	10.332	107	4881	0.048	ppbv	98

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_06.D
 Acq On : 16 Dec 2019 11:53 pm
 Operator : Keith
 Client ID : ICAL 0.05
 Lab ID : 0.05 ppbv
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 17 08:01:55 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:01:43 2019
 Response via : Initial Calibration

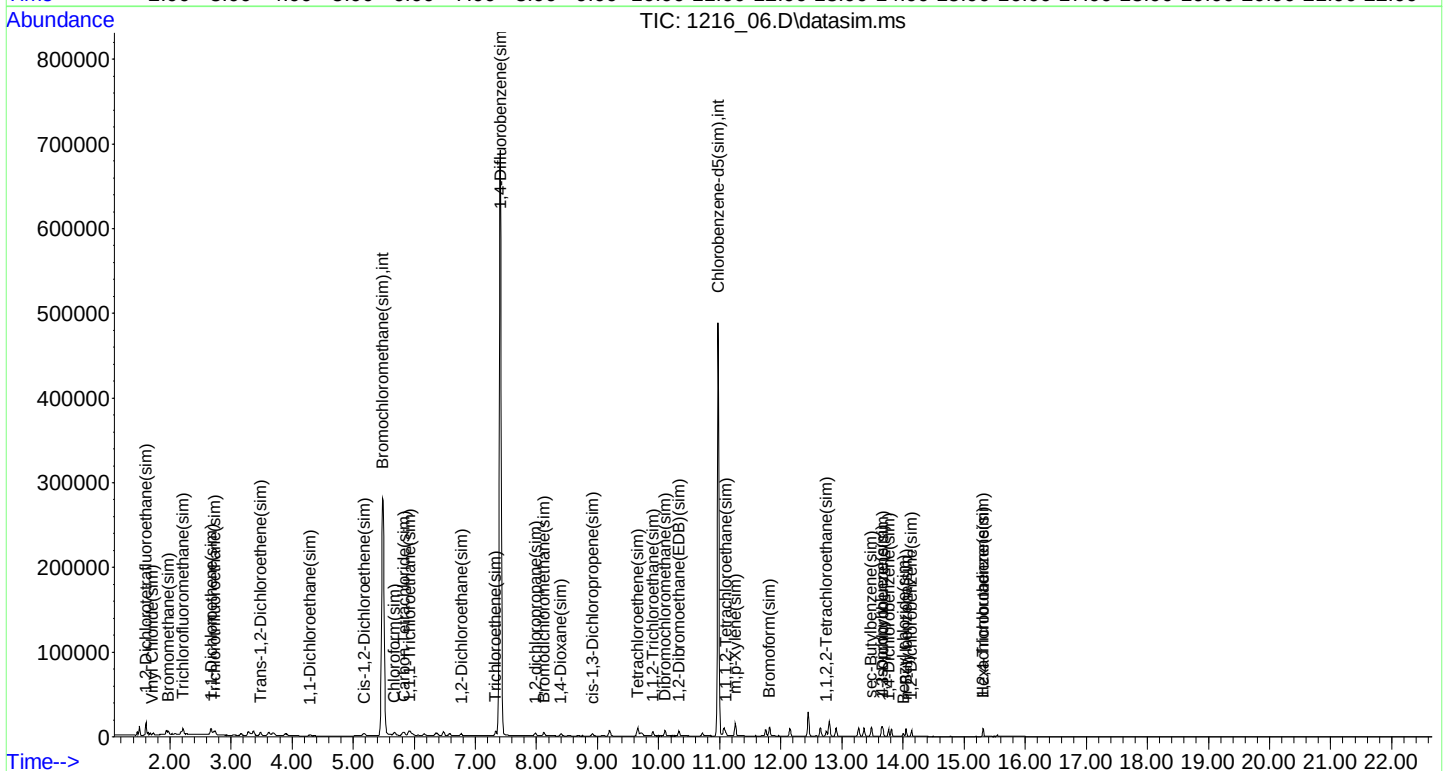
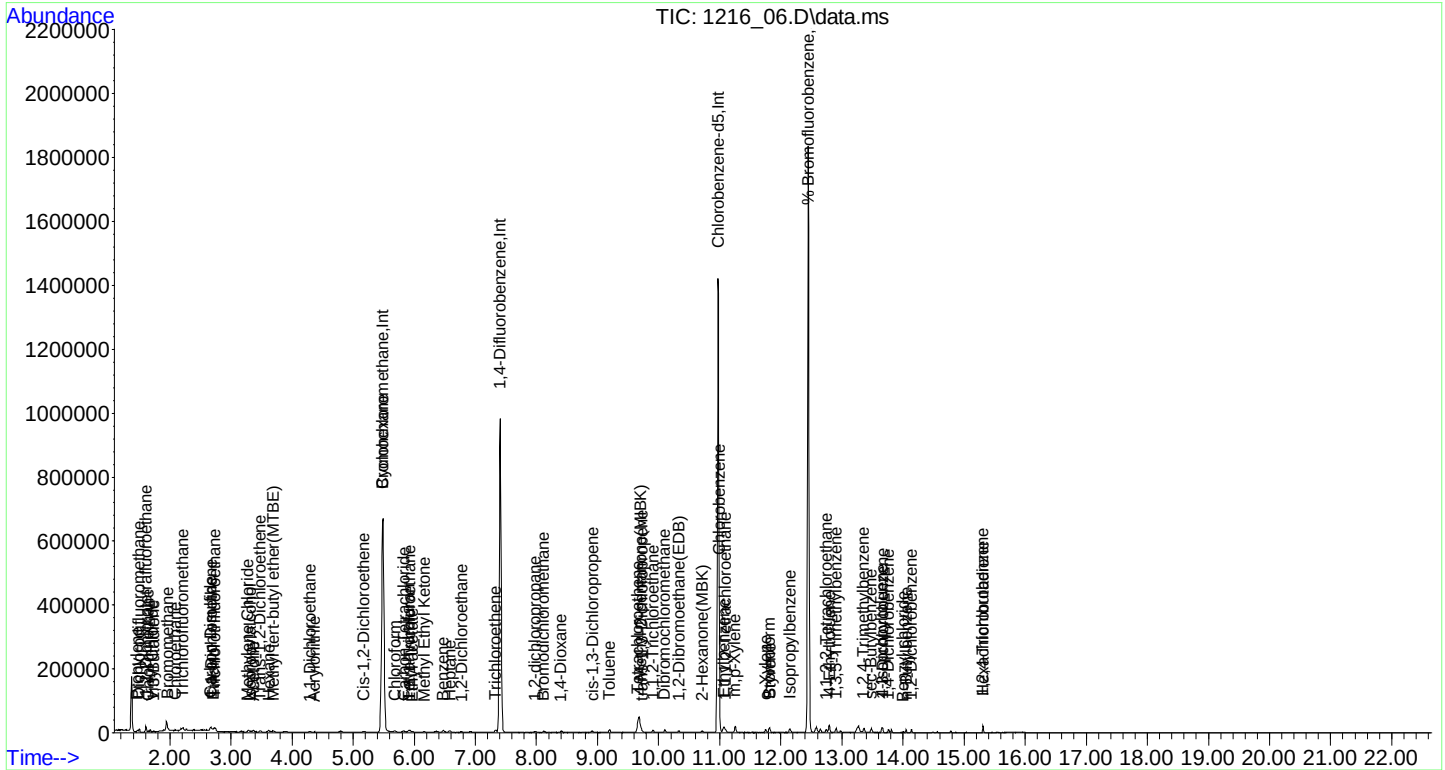
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.653	166	5140	0.051	ppbv	94
54)	1,1,1,2-Tetrachloroethane	11.095	131	2736	0.048	ppbv	91
55)	Chlorobenzene	10.993	112	5344	0.050	ppbv#	1
56)	Ethylbenzene	11.075	91	7756	0.053	ppbv	98
57)	m,p-Xylene	11.253	91	12451	0.113	ppbv	99
58)	Bromoform	11.809	173	4377	0.043	ppbv	98
59)	Styrene	11.823	104	4433	0.050	ppbv#	96
60)	1,1,2,2-Tetrachloroethane	12.741	83	4703	0.049	ppbv#	84
61)	o-Xylene	11.754	91	6245	0.046	ppbv	96
64)	Isopropylbenzene	12.151	105	9633	0.055	ppbv	94
66)	4-Ethyltoluene	12.793	105	9144	0.055	ppbv	95
67)	1,3,5-Trimethylbenzene	12.904	105	7729	0.054	ppbv	97
68)	1,2,4-Trimethylbenzene	13.358	105	6929	0.053	ppbv	97
71)	1,3-Dichlorobenzene	13.669	146	4899	0.054	ppbv	99
72)	1,4-Dichlorobenzene	13.767	146	4319	0.048	ppbv	97
73)	sec-Butylbenzene	13.481	105	9650	0.055	ppbv	97
74)	4-Isopropyltoluene	13.656	119	7255	0.053	ppbv	99
75)	1,2-Dichlorobenzene	14.136	146	3770	0.051	ppbv	98
76)	n-Butylbenzene	14.052	91	4662	0.049	ppbv	95
81)	1,2-Dichlorotetrafluor...	1.608	135	5715	0.050	ppbv	93
82)	Vinyl Chloride(sim)	1.714	62	2233	0.050	ppbv	99
83)	Bromomethane(sim)	1.972	94	2525	0.051	ppbv	91
84)	Trichlorofluoromethane...	2.214	101	6131	0.051	ppbv	99
85)	1,1,1-Trichloroethane(...	5.927	97	4659	0.051	ppbv#	92
86)	Carbon Tetrachloride(sim)	5.829	117	4961	0.048	ppbv	100
87)	1,1-Dichloroethene(sim)	2.677	61	2371	0.048	ppbv#	87
88)	Trichlorotrifluoroetha...	2.734	101	5799	0.064	ppbv	100
89)	Trans-1,2-Dichloroethe...	3.477	61	2860	0.050	ppbv	96
90)	1,1-Dichloroethane(sim)	4.296	63	3929	0.050	ppbv	99
91)	Cis-1,2-Dichloroethene...	5.177	61	2717	0.049	ppbv	98
92)	Chloroform(sim)	5.677	83	4598	0.048	ppbv	98
93)	1,2-Dichloroethane(sim)	6.770	62	2525	0.047	ppbv#	88
95)	1,2-dichloropropane(sim)	7.982	63	1543	0.041	ppbv#	66
96)	Bromodichloromethane(sim)	8.122	83	4333	0.047	ppbv	99
97)	Trichloroethene(sim)	7.331	130	3519	0.047	ppbv	94
99)	cis-1,3-Dichloropropen...	8.917	75	3194	0.046	ppbv	98
100)	1,1,2-Trichloroethane(...	9.909	97	3043	0.051	ppbv	100
101)	Dibromochloromethane(sim)	10.101	129	5213	0.048	ppbv	97
102)	1,2-Dibromoethane(EDB)...	10.335	107	5120	0.048	ppbv	99
103)	Tetrachloroethene(sim)	9.653	166	5017	0.049	ppbv	95
105)	Bromoform(sim)	11.809	173	4289	0.046	ppbv#	77
106)	1,1,1,2-Tetrachloroeth...	11.098	131	2997	0.050	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.744	83	5242	0.050	ppbv	97
111)	Benzyl chloride(sim)	14.007	91	2224	0.061	ppbv	90
112)	1,3-Dichlorobenzene(sim)	13.672	146	5318	0.050	ppbv	100
113)	1,4-Dichlorobenzene(sim)	13.767	146	4319	0.052	ppbv	97
116)	1,2-Dichlorobenzene(sim)	14.139	146	4167	0.054	ppbv	98
118)	1,2,4-Trichlorobenzene...	15.310	180	1387	0.056	ppbv	97
119)	Hexachlorobutadiene(sim)	15.312	225	3317	0.045	ppbv	92

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_06.D
 Acq On : 16 Dec 2019 11:53 pm
 Operator : Keith
 Client ID : ICAL 0.05
 Lab ID : 0.05 ppbV
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 17 08:01:55 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:01:43 2019
 Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_07.D
 Acq On : 17 Dec 2019 12:25 am
 Operator : Keith
 Client ID : ICAL 0.1
 Lab ID : 0.10 ppbv
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 17 08:02:24 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:02:14 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.485	130	402276	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.405	114	1048183	10.000	ng	0.00
53) Chlorobenzene-d5	10.977	82	435853	10.000	ng	0.00
80) Bromochloromethane(sim)	5.488	130	406012	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.407	114	1152291	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.973	82	477751	10.000	ng	0.00

System Monitoring Compounds						
62) % Bromofluorobenzene	12.448	95	541456	8.714	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	87.10%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	1.465	41	3144	0.095	ppbv	93
3) Dichlorodifluoromethane	1.499	101	1093	0.078	ppbv#	54
4) Chloromethane	1.636	50	4452	0.147	ppbv	99
5) 1,2-Dichlorotetrafluor...	1.608	135	10853	0.106	ppbv	99
6) Vinyl Chloride	1.711	62	3994	0.106	ppbv	96
7) 1,3-Butadiene	1.732	54	2288	0.099	ppbv#	58
8) Bromomethane	1.972	94	4910	0.113	ppbv	96
9) Chloroethane	2.081	64	1639	0.126	ppbv	85
10) Ethanol	2.704	45	1781	0.218	ppbv#	87
12) Acetone	3.375	43	14416	0.241	ppbv	95
13) Trichlorofluoromethane	2.211	101	11296	0.111	ppbv#	97
14) Isopropylalcohol	3.340	45	6735	0.115	ppbv#	3
15) Acrylonitrile	4.364	53	2324	0.113	ppbv	99
16) 1,1-Dichloroethene	2.670	61	4475	0.103	ppbv	95
17) Methylene Chloride	3.286	49	5560	0.128	ppbv	99
20) Carbon Disulfide	2.670	76	9422	0.118	ppbv#	86
21) Trichlorotrifluoroethane	2.738	101	7498	0.111	ppbv	97
22) Trans-1,2-Dichloroethene	3.484	61	5416	0.101	ppbv	98
23) 1,1-Dichloroethane	4.291	63	7022	0.100	ppbv	93
24) Methyl tert-butyl ethe...	3.696	73	11656	0.118	ppbv	99
25) Methyl Ethyl Ketone	6.170	43	7500	0.116	ppbv#	91
26) Cis-1,2-Dichloroethene	5.182	61	5334	0.095	ppbv	97
27) Hexane	3.607	57	6183	0.106	ppbv	96
28) Chloroform	5.687	83	8822	0.096	ppbv	95
29) Ethyl acetate	5.975	43	6073	0.097	ppbv#	92
30) Tetrahydrofuran	5.910	42	3248	0.117	ppbv#	83
31) 1,2-Dichloroethane	6.768	62	5140	0.094	ppbv	97
32) 1,1,1-Trichloroethane	5.925	97	8700	0.097	ppbv	96
33) Benzene	6.473	78	12487	0.112	ppbv	98
34) Carbon Tetrachloride	5.809	117	8953	0.088	ppbv	98
35) Cyclohexane	5.478	56	4785	0.098	ppbv#	91
37) 1,2-dichloropropane	7.987	63	3588	0.092	ppbv#	80
38) Bromodichloromethane	8.124	83	7931	0.088	ppbv	100
39) Trichloroethene	7.336	130	7219	0.100	ppbv	98
41) 1,4-Dioxane	8.395	88	2498	0.093	ppbv#	87
43) Heptane	6.576	43	5245	0.113	ppbv	96
44) cis-1,3-Dichloropropene	8.915	75	6322	0.086	ppbv	98
45) 4-Methyl-2-pentanone(M...	9.709	43	6732	0.105	ppbv	98
46) trans-1,3-Dichloropropene	9.731	75	5995	0.102	ppbv	98
47) 1,1,2-Trichloroethane	9.911	97	5453	0.102	ppbv	98
48) Toluene	9.196	91	13504	0.098	ppbv	96
49) Dibromochloromethane	10.106	129	10146	0.089	ppbv	98
50) 2-Hexanone(MBK)	10.716	43	6767	0.097	ppbv	96
51) 1,2-Dibromoethane(EDB)	10.337	107	9889	0.101	ppbv	99

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_07.D
 Acq On : 17 Dec 2019 12:25 am
 Operator : Keith
 Client ID : ICAL 0.1
 Lab ID : 0.10 ppbv
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 17 08:02:24 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:02:14 2019
 Response via : Initial Calibration

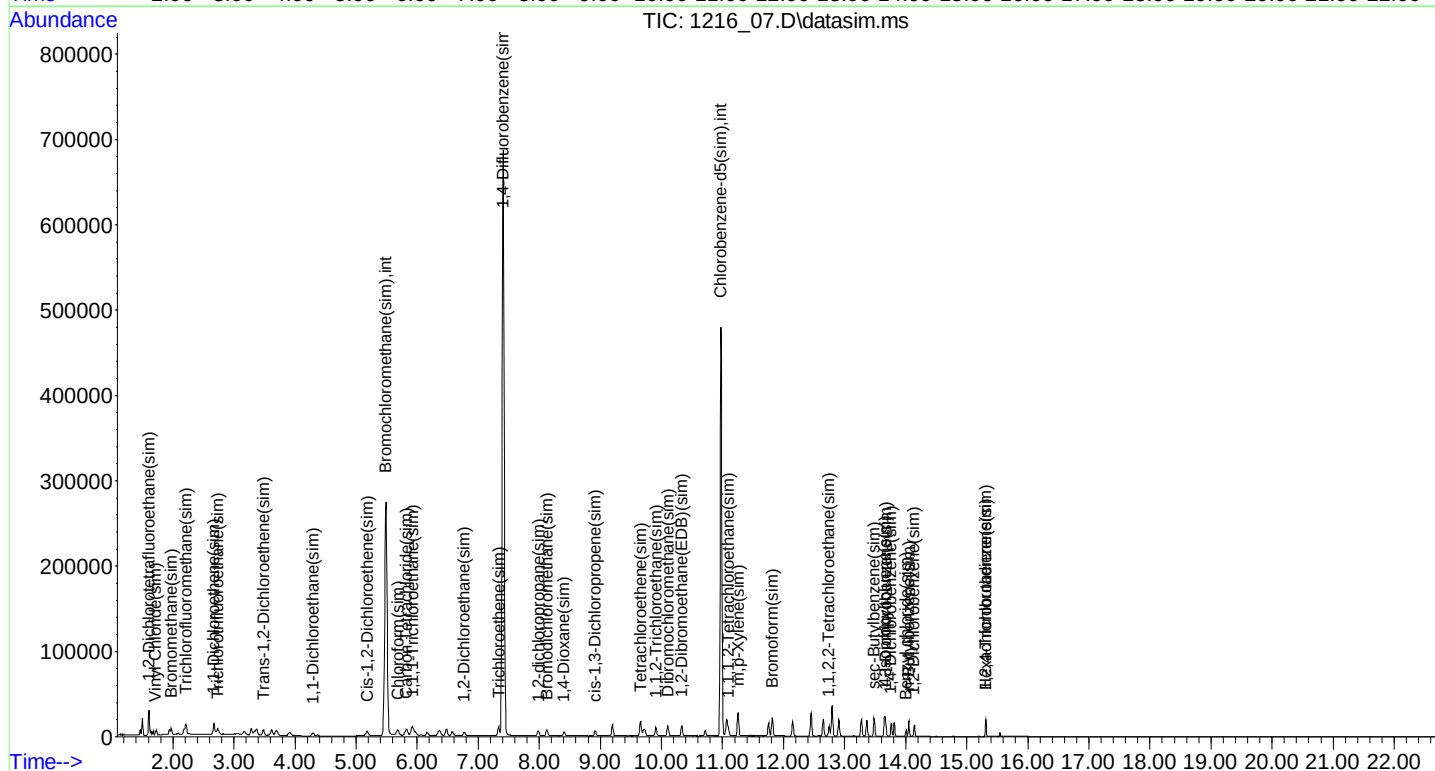
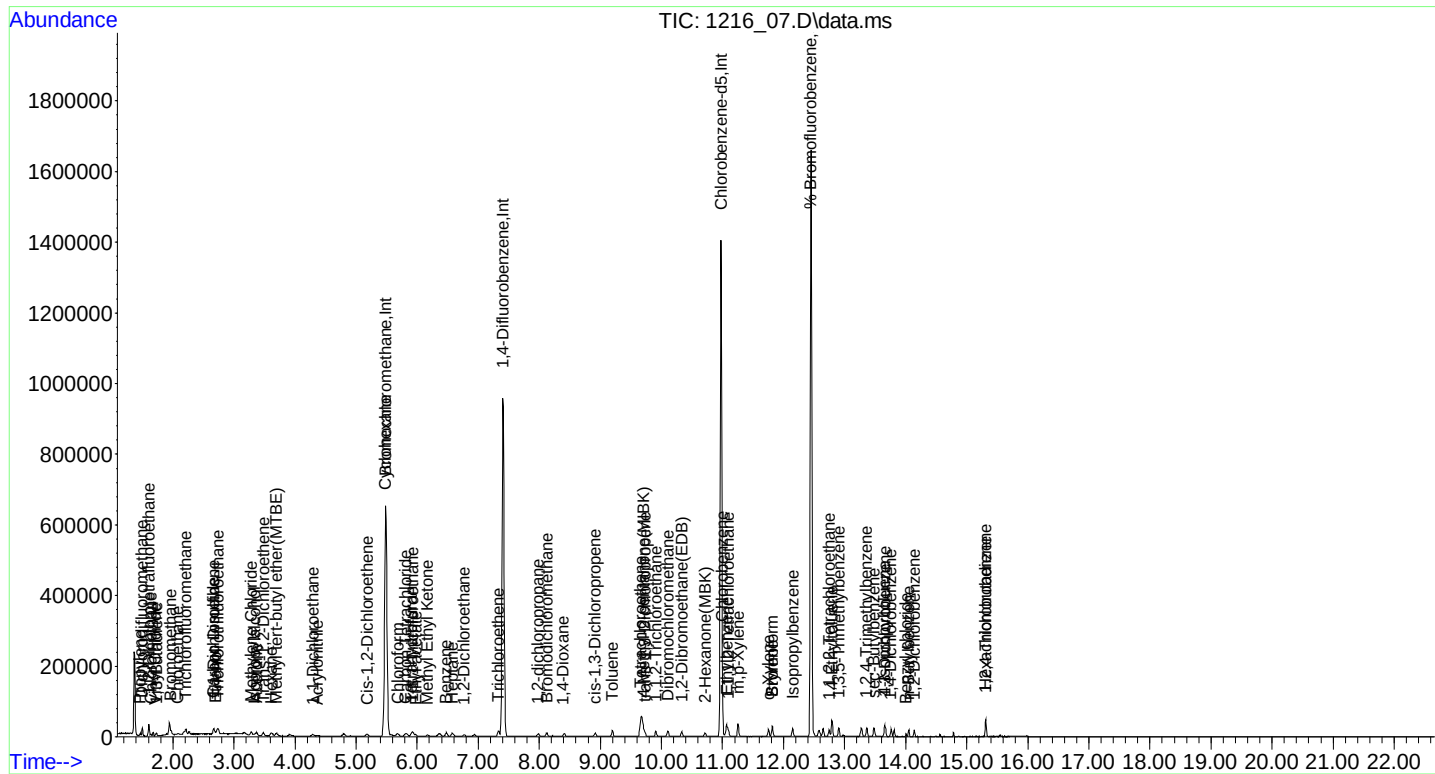
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.658	166	9869	0.100	ppbv	97
54)	1,1,1,2-Tetrachloroethane	11.094	131	6031	0.110	ppbv	96
55)	Chlorobenzene	10.997	112	10282	0.100	ppbv#	41
56)	Ethylbenzene	11.073	91	15734	0.112	ppbv	98
57)	m,p-Xylene	11.258	91	23504	0.222	ppbv	99
58)	Bromoform	11.814	173	8372	0.086	ppbv	97
59)	Styrene	11.821	104	8570	0.101	ppbv	96
60)	1,1,2,2-Tetrachloroethane	12.746	83	9568	0.104	ppbv	98
61)	o-Xylene	11.752	91	12693	0.099	ppbv	98
64)	Isopropylbenzene	12.149	105	18053	0.107	ppbv	98
66)	4-Ethyltoluene	12.792	105	18220	0.115	ppbv	99
67)	1,3,5-Trimethylbenzene	12.902	105	14729	0.108	ppbv	98
68)	1,2,4-Trimethylbenzene	13.363	105	13994	0.111	ppbv	98
71)	1,3-Dichlorobenzene	13.668	146	9501	0.110	ppbv	97
72)	1,4-Dichlorobenzene	13.759	146	9018	0.105	ppbv	96
73)	sec-Butylbenzene	13.480	105	18576	0.112	ppbv	98
74)	4-Isopropyltoluene	13.655	119	13944	0.106	ppbv	98
75)	1,2-Dichlorobenzene	14.141	146	7340	0.104	ppbv	97
76)	n-Butylbenzene	14.051	91	10025	0.111	ppbv	98
81)	1,2-Dichlorotetrafluor...	1.608	135	10853	0.098	ppbv	99
82)	Vinyl Chloride(sim)	1.714	62	4295	0.099	ppbv	98
83)	Bromomethane(sim)	1.972	94	4910	0.102	ppbv	98
84)	Trichlorofluoromethane...	2.214	101	11643	0.101	ppbv	100
85)	1,1,1-Trichloroethane(...	5.925	97	8700	0.098	ppbv#	96
86)	Carbon Tetrachloride(sim)	5.827	117	9461	0.095	ppbv	100
87)	1,1-Dichloroethene(sim)	2.670	61	4475	0.094	ppbv	97
88)	Trichlorotrifluoroetha...	2.734	101	7822	0.090	ppbv	99
89)	Trans-1,2-Dichloroethe...	3.484	61	5416	0.098	ppbv	97
90)	1,1-Dichloroethane(sim)	4.294	63	7625	0.101	ppbv	99
91)	Cis-1,2-Dichloroethene...	5.182	61	5334	0.099	ppbv	95
92)	Chloroform(sim)	5.683	83	8963	0.097	ppbv	99
93)	1,2-Dichloroethane(sim)	6.768	62	5140	0.099	ppbv	98
95)	1,2-dichloropropane(sim)	7.987	63	3588	0.097	ppbv#	77
96)	Bromodichloromethane(sim)	8.126	83	8565	0.094	ppbv	100
97)	Trichloroethene(sim)	7.336	130	7219	0.099	ppbv	97
98)	1,4-Dioxane(sim)	8.398	88	2850	0.092	ppbv#	93
99)	cis-1,3-Dichloropropen...	8.915	75	6322	0.094	ppbv	98
100)	1,1,2-Trichloroethane(...	9.907	97	5888	0.100	ppbv	99
101)	Dibromochloromethane(sim)	10.106	129	10146	0.095	ppbv	99
102)	1,2-Dibromoethane(EDB)...	10.333	107	10414	0.100	ppbv	100
103)	Tetrachloroethene(sim)	9.658	166	9869	0.098	ppbv	98
105)	Bromoform(sim)	11.814	173	8223	0.092	ppbv	95
106)	1,1,1,2-Tetrachloroeth...	11.096	131	5963	0.102	ppbv	100
107)	m,p-Xylene(sim)	11.258	91	23504	0.195	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.743	83	10472	0.103	ppbv	99
111)	Benzyl chloride(sim)	14.005	91	5025	0.122	ppbv	96
112)	1,3-Dichlorobenzene(sim)	13.671	146	10680	0.104	ppbv	100
113)	1,4-Dichlorobenzene(sim)	13.759	146	9018	0.108	ppbv	96
116)	1,2-Dichlorobenzene(sim)	14.138	146	8217	0.105	ppbv	100
117)	n-Butylbenzene(sim)	14.051	91	10025	0.111	ppbv	98
118)	1,2,4-Trichlorobenzene...	15.309	180	3121	0.115	ppbv	97
119)	Hexachlorobutadiene(sim)	15.311	225	6891	0.096	ppbv	99

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1216_07.D
Acq On : 17 Dec 2019 12:25 am
Operator : Keith
Client ID : ICAL 0.1
Lab ID : 0.10 ppbv
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 17 08:02:24 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Tue Dec 17 08:02:14 2019
Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_08.D
 Acq On : 17 Dec 2019 1:00 am
 Operator : Keith
 Client ID : ICAL 0.5
 Lab ID : 0.5ppbv
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 17 08:02:56 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:02:44 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.485	130	367141	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.404	114	963879	10.000	ng	0.00
53) Chlorobenzene-d5	10.977	82	422285	10.000	ng	0.00
80) Bromochloromethane(sim)	5.488	130	369510	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.407	114	1058213	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.973	82	456785	10.000	ng	0.00

System Monitoring Compounds

62) % Bromofluorobenzene 12.448 95 544539 9.667 ppbv 0.00
 Spiked Amount 10.000 Range 70 - 130 Recovery = 96.70%

Target Compounds

						Qvalue
2) Propylene	1.465	41	13134	0.433	ppbv	99
3) Dichlorodifluoromethane	1.499	101	6150	0.481	ppbv	96
4) Chloromethane	1.643	50	16921	0.611	ppbv	96
5) 1,2-Dichlorotetrafluor...	1.608	135	51218	0.546	ppbv	99
6) Vinyl Chloride	1.718	62	19158	0.559	ppbv	99
7) 1,3-Butadiene	1.732	54	11561	0.550	ppbv	91
8) Bromomethane	1.971	94	20678	0.520	ppbv	99
9) Chloroethane	2.081	64	6123	0.518	ppbv	97
10) Ethanol	2.697	45	5501	0.737	ppbv#	89
12) Acetone	3.368	43	35409	0.650	ppbv	99
13) Trichlorofluoromethane	2.211	101	52314	0.562	ppbv	97
14) Isopropylalcohol	3.327	45	28655	0.537	ppbv	86
15) Acrylonitrile	4.364	53	9413	0.501	ppbv	100
16) 1,1-Dichloroethene	2.670	61	20819	0.527	ppbv	98
17) Methylene Chloride	3.286	49	19394	0.489	ppbv	96
20) Carbon Disulfide	2.670	76	38314	0.527	ppbv	97
21) Trichlorotrifluoroethane	2.738	101	33248	0.540	ppbv	98
22) Trans-1,2-Dichloroethene	3.477	61	25470	0.519	ppbv	97
23) 1,1-Dichloroethane	4.291	63	31186	0.488	ppbv	100
24) Methyl tert-butyl ethe...	3.689	73	47812	0.529	ppbv#	91
25) Methyl Ethyl Ketone	6.155	43	29611	0.501	ppbv	98
26) Cis-1,2-Dichloroethene	5.175	61	23735	0.465	ppbv	98
27) Hexane	3.621	57	22413	0.422	ppbv	92
28) Chloroform	5.687	83	39949	0.474	ppbv	99
29) Ethyl acetate	5.968	43	28829	0.502	ppbv	98
30) Tetrahydrofuran	5.903	42	13292	0.525	ppbv	95
31) 1,2-Dichloroethane	6.768	62	23924	0.480	ppbv	99
32) 1,1,1-Trichloroethane	5.925	97	41044	0.502	ppbv	98
33) Benzene	6.473	78	49384	0.485	ppbv	99
34) Carbon Tetrachloride	5.824	117	43836	0.473	ppbv	99
35) Cyclohexane	5.478	56	20251	0.455	ppbv	96
37) 1,2-dichloropropane	7.980	63	16944	0.471	ppbv	99
38) Bromodichloromethane	8.123	83	39940	0.484	ppbv	99
39) Trichloroethene	7.336	130	34085	0.515	ppbv	97
41) 1,4-Dioxane	8.395	88	11594	0.468	ppbv#	99
43) Heptane	6.576	43	22101	0.518	ppbv	99
44) cis-1,3-Dichloropropene	8.915	75	31387	0.465	ppbv	99
45) 4-Methyl-2-pentanone(M...	9.709	43	32195	0.548	ppbv	99
46) trans-1,3-Dichloropropene	9.731	75	27536	0.510	ppbv	98
47) 1,1,2-Trichloroethane	9.911	97	26282	0.533	ppbv	98
48) Toluene	9.196	91	63134	0.500	ppbv	100
49) Dibromochloromethane	10.106	129	51206	0.488	ppbv	99
50) 2-Hexanone(MBK)	10.716	43	31722	0.493	ppbv	97
51) 1,2-Dibromoethane(EDB)	10.330	107	45262	0.501	ppbv	99

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_08.D
 Acq On : 17 Dec 2019 1:00 am
 Operator : Keith
 Client ID : ICAL 0.5
 Lab ID : 0.5ppbv
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 17 08:02:56 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:02:44 2019
 Response via : Initial Calibration

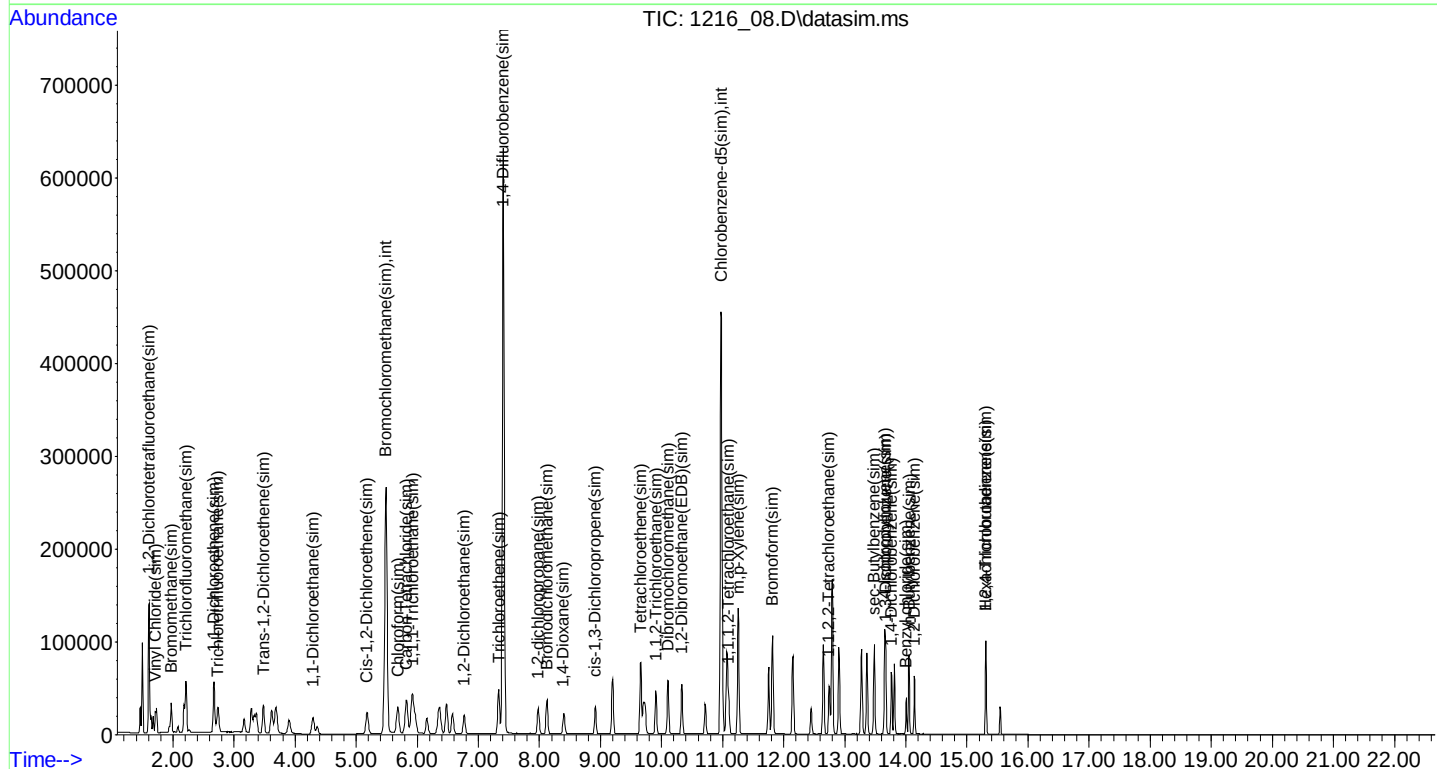
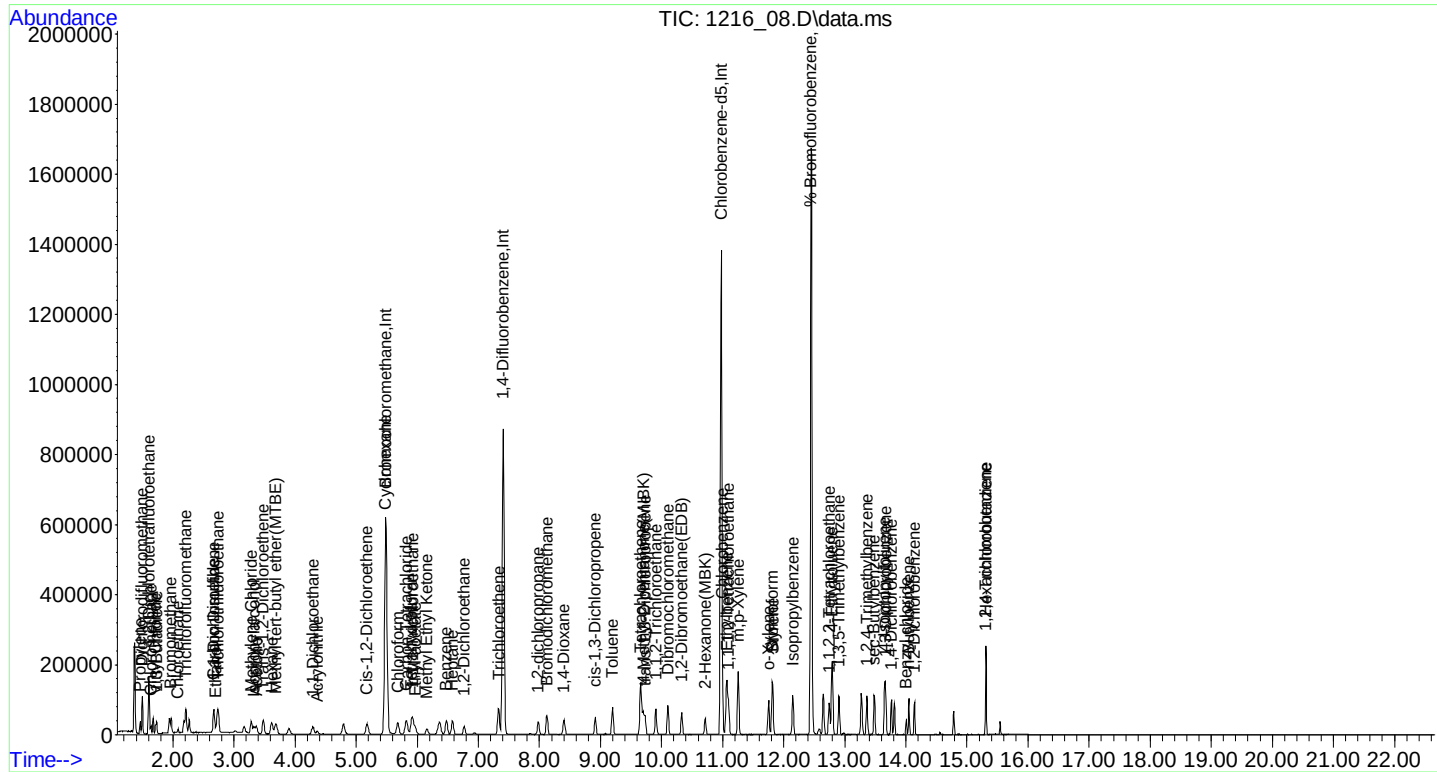
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.658	166	46641	0.515	ppbv	99
54)	1,1,1,2-Tetrachloroethane	11.093	131	26789	0.505	ppbv	97
55)	Chlorobenzene	10.997	112	49428	0.496	ppbv	93
56)	Ethylbenzene	11.073	91	72648	0.534	ppbv	99
57)	m,p-Xylene	11.258	91	114205	1.115	ppbv	99
58)	Bromoform	11.814	173	44171	0.469	ppbv	99
59)	Styrene	11.821	104	44311	0.541	ppbv	98
60)	1,1,2,2-Tetrachloroethane	12.746	83	47205	0.531	ppbv	98
61)	o-Xylene	11.752	91	61717	0.495	ppbv	98
64)	Isopropylbenzene	12.149	105	83911	0.514	ppbv	99
66)	4-Ethyltoluene	12.792	105	85523	0.555	ppbv	99
67)	1,3,5-Trimethylbenzene	12.908	105	69901	0.531	ppbv	100
68)	1,2,4-Trimethylbenzene	13.363	105	64221	0.525	ppbv	99
71)	1,3-Dichlorobenzene	13.668	146	44770	0.534	ppbv	100
72)	1,4-Dichlorobenzene	13.765	146	40907	0.491	ppbv	98
73)	sec-Butylbenzene	13.479	105	85203	0.528	ppbv	100
74)	4-Isopropyltoluene	13.655	119	67998	0.532	ppbv	99
75)	1,2-Dichlorobenzene	14.141	146	34974	0.510	ppbv	98
76)	n-Butylbenzene	14.050	91	46906	0.535	ppbv	98
81)	1,2-Dichlorotetrafluor...	1.608	135	51218	0.510	ppbv	99
82)	Vinyl Chloride(sim)	1.714	62	20614	0.524	ppbv	100
83)	Bromomethane(sim)	1.971	94	20678	0.471	ppbv	99
84)	Trichlorofluoromethane...	2.214	101	53580	0.511	ppbv	100
85)	1,1,1-Trichloroethane(...	5.925	97	41044	0.508	ppbv#	98
86)	Carbon Tetrachloride(sim)	5.827	117	44821	0.495	ppbv	100
87)	1,1-Dichloroethene(sim)	2.670	61	20819	0.478	ppbv	98
88)	Trichlorotrifluoroetha...	2.734	101	34815	0.440	ppbv	99
89)	Trans-1,2-Dichloroethe...	3.477	61	25470	0.508	ppbv	97
90)	1,1-Dichloroethane(sim)	4.294	63	34070	0.496	ppbv	100
91)	Cis-1,2-Dichloroethene...	5.175	61	23735	0.483	ppbv	98
92)	Chloroform(sim)	5.682	83	42222	0.501	ppbv	100
93)	1,2-Dichloroethane(sim)	6.768	62	23924	0.505	ppbv	99
95)	1,2-dichloropropane(sim)	7.980	63	16944	0.500	ppbv	99
96)	Bromodichloromethane(sim)	8.126	83	42547	0.509	ppbv	100
97)	Trichloroethene(sim)	7.336	130	34019	0.509	ppbv	98
98)	1,4-Dioxane(sim)	8.391	88	13271	0.470	ppbv	98
99)	cis-1,3-Dichloropropen...	8.915	75	31387	0.507	ppbv	99
100)	1,1,2-Trichloroethane(...	9.907	97	27594	0.512	ppbv	99
101)	Dibromochloromethane(sim)	10.106	129	51206	0.524	ppbv	100
102)	1,2-Dibromoethane(EDB)...	10.333	107	48617	0.510	ppbv	99
103)	Tetrachloroethene(sim)	9.658	166	46510	0.502	ppbv	99
105)	Bromoform(sim)	11.814	173	44171	0.515	ppbv	99
106)	1,1,1,2-Tetrachloroeth...	11.096	131	28919	0.517	ppbv	100
107)	m,p-Xylene(sim)	11.258	91	114210	0.974	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.743	83	49425	0.509	ppbv	99
111)	Benzyl chloride(sim)	14.005	91	26407	0.488	ppbv	99
112)	1,3-Dichlorobenzene(sim)	13.671	146	48818	0.495	ppbv	100
113)	1,4-Dichlorobenzene(sim)	13.765	146	40907	0.474	ppbv	98
115)	4-Isopropyltoluene(sim)	13.655	119	67998	0.499	ppbv	99
116)	1,2-Dichlorobenzene(sim)	14.138	146	38325	0.490	ppbv	99
117)	n-Butylbenzene(sim)	14.050	91	46906	0.504	ppbv	98
118)	1,2,4-Trichlorobenzene...	15.309	180	18230	0.499	ppbv	99
119)	Hexachlorobutadiene(sim)	15.311	225	31834	0.464	ppbv	99

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_08.D
 Acq On : 17 Dec 2019 1:00 am
 Operator : Keith
 Client ID : ICAL 0.5
 Lab ID : 0.5ppbv
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 17 08:02:56 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:02:44 2019
 Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_09.D
 Acq On : 17 Dec 2019 1:36 am
 Operator : Keith
 Client ID : ICAL 2.5
 Lab ID : 2.5 ppbv
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 17 08:03:23 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:03:11 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.492	130	300986	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.411	114	823855	10.000	ng	0.00
53) Chlorobenzene-d5	10.977	82	365834	10.000	ng	0.00
80) Bromochloromethane(sim)	5.495	130	305399	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.414	114	907661	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.980	82	397617	10.000	ng	0.00

System Monitoring Compounds						
62) % Bromofluorobenzene	12.448	95	478433	9.914	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	99.10%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	1.464	41	59079	2.377	ppbv	96
3) Dichlorodifluoromethane	1.499	101	28484	2.715	ppbv	97
4) Chloromethane	1.643	50	57268	2.524	ppbv	99
5) 1,2-Dichlorotetrafluor...	1.608	135	201583	2.619	ppbv	99
6) Vinyl Chloride	1.711	62	66959	2.385	ppbv	98
7) 1,3-Butadiene	1.732	54	42417	2.463	ppbv	98
8) Bromomethane	1.971	94	74627	2.288	ppbv	99
9) Chloroethane	2.088	64	21583	2.226	ppbv	97
10) Ethanol	2.690	45	14222	2.323	ppbv#	91
12) Acetone	3.361	43	107767	2.412	ppbv	98
13) Trichlorofluoromethane	2.211	101	184662	2.419	ppbv	97
14) Isopropylalcohol	3.320	45	103091	2.355	ppbv	97
15) Acrylonitrile	4.354	53	36008	2.339	ppbv	99
16) 1,1-Dichloroethene	2.670	61	76509	2.363	ppbv	98
17) Methylene Chloride	3.285	49	73066	2.249	ppbv	98
20) Carbon Disulfide	2.670	76	146372	2.458	ppbv	96
21) Trichlorotrifluoroethane	2.738	101	122038	2.418	ppbv	99
22) Trans-1,2-Dichloroethene	3.484	61	94476	2.349	ppbv	97
23) 1,1-Dichloroethane	4.296	63	121565	2.319	ppbv	98
24) Methyl tert-butyl ethe...	3.675	73	172780	2.332	ppbv#	66
25) Methyl Ethyl Ketone	6.155	43	109720	2.263	ppbv	99
26) Cis-1,2-Dichloroethene	5.182	61	98335	2.348	ppbv	100
27) Hexane	3.621	57	113559	2.606	ppbv#	81
28) Chloroform	5.687	83	164496	2.381	ppbv	98
29) Ethyl acetate	5.968	43	108912	2.315	ppbv	99
30) Tetrahydrofuran	5.888	42	48184	2.323	ppbv	98
31) 1,2-Dichloroethane	6.774	62	96909	2.369	ppbv	98
32) 1,1,1-Trichloroethane	5.924	97	161518	2.409	ppbv	99
33) Benzene	6.480	78	192186	2.303	ppbv	99
34) Carbon Tetrachloride	5.824	117	181758	2.392	ppbv	100
35) Cyclohexane	5.478	56	85234	2.334	ppbv	99
37) 1,2-dichloropropane	7.980	63	77296	2.514	ppbv	97
38) Bromodichloromethane	8.123	83	181496	2.572	ppbv	97
39) Trichloroethene	7.336	130	135526	2.396	ppbv	99
41) 1,4-Dioxane	8.388	88	48828	2.307	ppbv	99
43) Heptane	6.576	43	87291	2.394	ppbv	99
44) cis-1,3-Dichloropropene	8.915	75	147723	2.562	ppbv	99
45) 4-Methyl-2-pentanone(M...	9.702	43	124863	2.489	ppbv	99
46) trans-1,3-Dichloropropene	9.730	75	113683	2.465	ppbv	99
47) 1,1,2-Trichloroethane	9.904	97	101891	2.416	ppbv	99
48) Toluene	9.196	91	272666	2.527	ppbv	100
49) Dibromochloromethane	10.106	129	219884	2.454	ppbv	99
50) 2-Hexanone(MBK)	10.709	43	133252	2.421	ppbv	98
51) 1,2-Dibromoethane(EDB)	10.330	107	187688	2.431	ppbv	100

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_09.D
 Acq On : 17 Dec 2019 1:36 am
 Operator : Keith
 Client ID : ICAL 2.5
 Lab ID : 2.5 ppbV
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 17 08:03:23 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:03:11 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Tetrachloroethene	9.658	166	192233	2.484	ppbv	99
54) 1,1,1,2-Tetrachloroethane	11.100	131	112254	2.440	ppbv	98
55) Chlorobenzene	10.997	112	210733	2.442	ppbv	97
56) Ethylbenzene	11.073	91	295343	2.506	ppbv	99
57) m,p-Xylene	11.258	91	457504	5.155	ppbv	99
58) Bromoform	11.814	173	202139	2.477	ppbv	99
59) Styrene	11.821	104	181243	2.552	ppbv	99
60) 1,1,2,2-Tetrachloroethane	12.746	83	190440	2.472	ppbv	97
61) o-Xylene	11.752	91	272950	2.528	ppbv	99
64) Isopropylbenzene	12.149	105	348703	2.463	ppbv	99
66) 4-Ethyltoluene	12.791	105	329715	2.472	ppbv	100
67) 1,3,5-Trimethylbenzene	12.902	105	271351	2.378	ppbv	99
68) 1,2,4-Trimethylbenzene	13.363	105	258921	2.442	ppbv	100
70) Benzyl chloride	14.005	91	144969	1.832	ppbv	99
71) 1,3-Dichlorobenzene	13.668	146	175694	2.420	ppbv	100
72) 1,4-Dichlorobenzene	13.765	146	171942	2.384	ppbv	100
73) sec-Butylbenzene	13.486	105	336512	2.407	ppbv	99
74) 4-Isopropyltoluene	13.655	119	271858	2.456	ppbv	100
75) 1,2-Dichlorobenzene	14.141	146	140129	2.359	ppbv	100
76) n-Butylbenzene	14.050	91	184229	2.424	ppbv	99
81) 1,2-Dichlorotetrafluor...	1.608	135	201586	2.430	ppbv	99
82) Vinyl Chloride(sim)	1.714	62	73596	2.265	ppbv	100
83) Bromomethane(sim)	1.971	94	74627	2.058	ppbv	99
84) Trichlorofluoromethane...	2.214	101	190612	2.201	ppbv	100
85) 1,1,1-Trichloroethane(...	5.924	97	161518	2.416	ppbv#	99
86) Carbon Tetrachloride(sim)	5.826	117	188029	2.512	ppbv	100
87) 1,1-Dichloroethene(sim)	2.670	61	76509	2.125	ppbv	98
88) Trichlorotrifluoroetha...	2.734	101	126409	1.933	ppbv	100
89) Trans-1,2-Dichloroethe...	3.484	61	94414	2.280	ppbv	97
90) 1,1-Dichloroethane(sim)	4.294	63	131975	2.326	ppbv	100
91) Cis-1,2-Dichloroethene...	5.182	61	98335	2.421	ppbv	100
92) Chloroform(sim)	5.682	83	174550	2.507	ppbv	100
93) 1,2-Dichloroethane(sim)	6.774	62	96909	2.473	ppbv	98
95) 1,2-dichloropropane(sim)	7.980	63	77296	2.657	ppbv	97
96) Bromodichloromethane(sim)	8.126	83	189686	2.647	ppbv	100
97) Trichloroethene(sim)	7.336	130	135397	2.360	ppbv	99
98) 1,4-Dioxane(sim)	8.383	88	54574	1.946	ppbv	99
99) cis-1,3-Dichloropropen...	8.915	75	147885	2.784	ppbv	99
100) 1,1,2-Trichloroethane(...	9.907	97	109561	2.368	ppbv	100
101) Dibromochloromethane(sim)	10.106	129	219652	2.621	ppbv	99
102) 1,2-Dibromoethane(EDB)...	10.333	107	199318	2.436	ppbv	99
103) Tetrachloroethene(sim)	9.658	166	192233	2.417	ppbv	99
105) Bromoform(sim)	11.814	173	201811	2.703	ppbv	99
106) 1,1,1,2-Tetrachloroeth...	11.096	131	118328	2.429	ppbv	100
107) m,p-Xylene(sim)	11.258	91	457918	3.980	ppbv	99
108) 1,1,2,2-Tetrachloroeth...	12.743	83	200993	2.379	ppbv	99
111) Benzyl chloride(sim)	14.005	91	144969	1.803	ppbv	99
112) 1,3-Dichlorobenzene(sim)	13.670	146	191057	2.226	ppbv	100
113) 1,4-Dichlorobenzene(sim)	13.765	146	171933	1.936	ppbv	100
114) sec-Butylbenzene(sim)	13.482	105	363673	2.152	ppbv	100
115) 4-Isopropyltoluene(sim)	13.655	119	271858	2.124	ppbv	100
116) 1,2-Dichlorobenzene(sim)	14.138	146	153841	2.041	ppbv	100
117) n-Butylbenzene(sim)	14.050	91	184229	2.118	ppbv	99
118) 1,2,4-Trichlorobenzene...	15.308	180	98934	1.807	ppbv	99
119) Hexachlorobutadiene(sim)	15.310	225	140586	2.354	ppbv	100

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_09.D
 Acq On : 17 Dec 2019 1:36 am
 Operator : Keith
 Client ID : ICAL 2.5
 Lab ID : 2.5 ppbV
 ALS Vial : 10 Sample Multiplier: 1

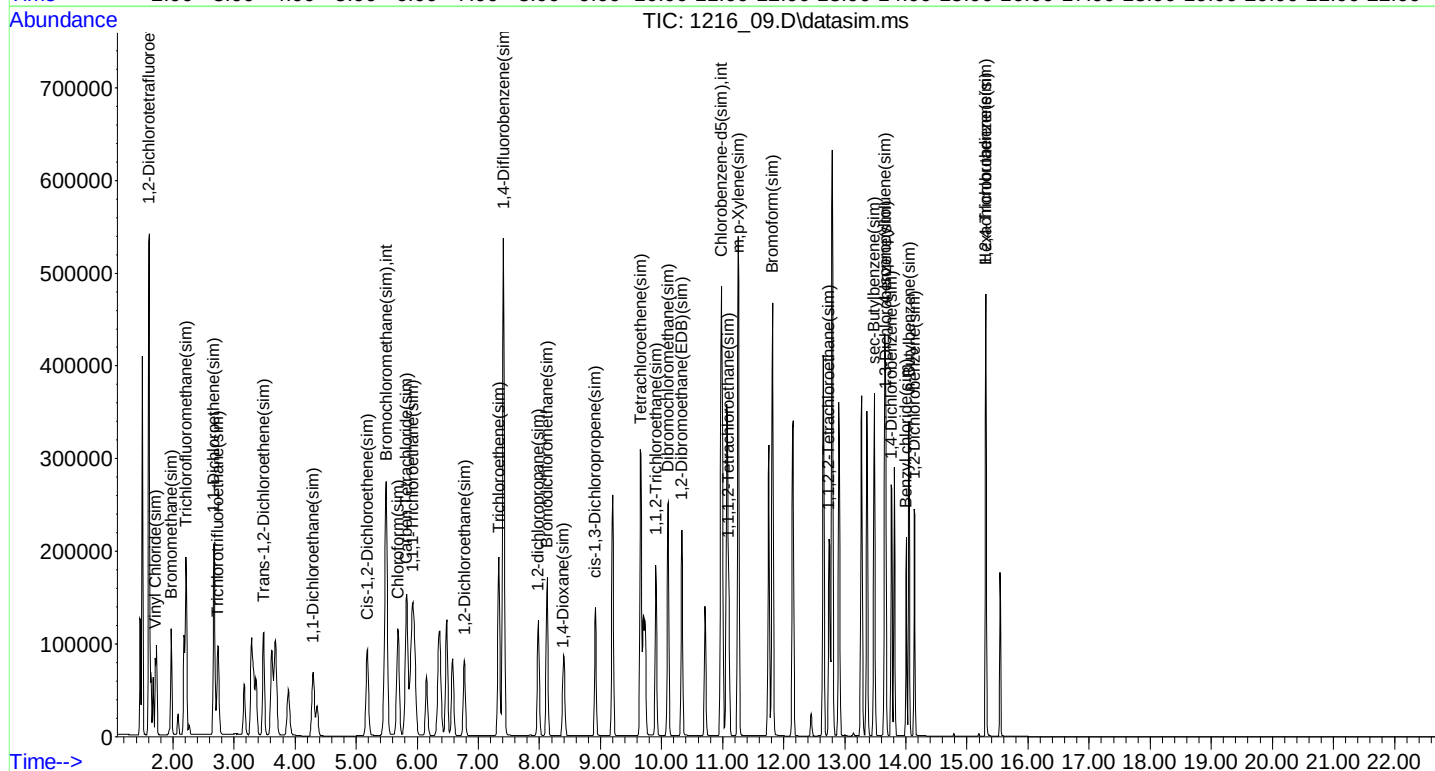
Quant Time: Dec 17 08:03:23 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:03:11 2019
 Response via : Initial Calibration

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

(#)out of range (m)manual integration reviewed by analyst (+)signals summed						

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Data Path : H:\AIR2019\CHEM24\12DEC\15\  
Data File : 1216_09.D  
Acq On : 17 Dec 2019 1:36 am  
Operator : Keith  
Client ID : ICAL 2.5  
Lab ID : 2.5 ppbV  
ALS Vial : 10 Sample Multiplier: 1
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Chromatogram showing abundance versus time (TIC: 1216_09.D\data.ms). The y-axis represents abundance from 0 to 1,600,000. The x-axis represents time from 2.00 to 22.00 minutes. Numerous peaks are labeled with chemical names, including Dichlorodifluoromethane, Chloroethane, Chlorobenzene, and many others.



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_10.D
 Acq On : 17 Dec 2019 2:07 am
 Operator : Keith
 Client ID : ICAL 5
 Lab ID : 5.0 ppbv
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 17 08:04:03 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:03:47 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.492	130	272949	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.411	114	761085	10.000	ng	0.00
53) Chlorobenzene-d5	10.977	82	344901	10.000	ng	0.00
80) Bromochloromethane(sim)	5.495	130	274758	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.414	114	836191	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.980	82	373224	10.000	ng	0.00

System Monitoring Compounds
 62) % Bromofluorobenzene 12.454 95 454075 10.002 ppbv 0.00
 Spiked Amount 10.000 Range 70 - 130 Recovery = 100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	1.465	41	112072	4.973	ppbv	97
3) Dichlorodifluoromethane	1.499	101	51752	5.440	ppbv	98
4) Chloromethane	1.643	50	93540	4.545	ppbv	99
5) 1,2-Dichlorotetrafluor...	1.608	135	336859	4.827	ppbv	99
6) Vinyl Chloride	1.711	62	116818	4.588	ppbv	99
7) 1,3-Butadiene	1.739	54	71474	4.577	ppbv	96
8) Bromomethane	1.971	94	130878	4.424	ppbv	99
9) Chloroethane	2.088	64	38642	4.394	ppbv	98
10) Ethanol	2.690	45	23234	4.184	ppbv	91
12) Acetone	3.361	43	183175	4.521	ppbv	98
13) Trichlorofluoromethane	2.211	101	323525	4.674	ppbv	98
14) Isopropylalcohol	3.313	45	187440	4.721	ppbv	91
15) Acrylonitrile	4.364	53	65146	4.667	ppbv	98
16) 1,1-Dichloroethene	2.670	61	139654	4.757	ppbv	98
17) Methylene Chloride	3.286	49	129748	4.404	ppbv	99
20) Carbon Disulfide	2.677	76	257464	4.767	ppbv	96
21) Trichlorotrifluoroethane	2.738	101	214009	4.676	ppbv	99
22) Trans-1,2-Dichloroethene	3.484	61	171136	4.692	ppbv	98
23) 1,1-Dichloroethane	4.296	63	228533	4.807	ppbv	99
24) Methyl tert-butyl ethe...	3.675	73	309608	4.607	ppbv#	66
25) Methyl Ethyl Ketone	6.148	43	200038	4.550	ppbv	100
26) Cis-1,2-Dichloroethene	5.182	61	187852	4.946	ppbv	100
27) Hexane	3.621	57	204262	5.169	ppbv#	83
28) Chloroform	5.687	83	313807	5.008	ppbv	99
29) Ethyl acetate	5.961	43	196031	4.594	ppbv	99
30) Tetrahydrofuran	5.889	42	86550	4.601	ppbv	98
31) 1,2-Dichloroethane	6.774	62	181308	4.888	ppbv	99
32) 1,1,1-Trichloroethane	5.932	97	294875	4.849	ppbv	99
33) Benzene	6.480	78	353489	4.671	ppbv	100
34) Carbon Tetrachloride	5.824	117	344470	4.998	ppbv	100
35) Cyclohexane	5.478	56	160836	4.857	ppbv	99
37) 1,2-dichloropropane	7.987	63	146785	5.169	ppbv	96
38) Bromodichloromethane	8.123	83	343156	5.263	ppbv	99
39) Trichloroethene	7.336	130	257308	4.924	ppbv	98
41) 1,4-Dioxane	8.381	88	98981	5.062	ppbv	100
43) Heptane	6.576	43	161407	4.793	ppbv	99
44) cis-1,3-Dichloropropene	8.915	75	281186	5.279	ppbv	100
45) 4-Methyl-2-pentanone(M...	9.702	43	224749	4.849	ppbv	99
46) trans-1,3-Dichloropropene	9.731	75	205230	4.818	ppbv	98
47) 1,1,2-Trichloroethane	9.911	97	186579	4.789	ppbv	99
48) Toluene	9.196	91	507499	5.092	ppbv	99
49) Dibromochloromethane	10.106	129	425021	5.135	ppbv	99
50) 2-Hexanone(MBK)	10.709	43	254344	5.003	ppbv	99
51) 1,2-Dibromoethane(EDB)	10.330	107	349609	4.901	ppbv	99

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_10.D
 Acq On : 17 Dec 2019 2:07 am
 Operator : Keith
 Client ID : ICAL 5
 Lab ID : 5.0 ppbv
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 17 08:04:03 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:03:47 2019
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.658	166	353188	4.941	ppbv	100
54)	1,1,1,2-Tetrachloroethane	11.100	131	206325	4.757	ppbv	99
55)	Chlorobenzene	10.997	112	400987	4.928	ppbv	95
56)	Ethylbenzene	11.073	91	539697	4.857	ppbv	99
57)	m,p-Xylene	11.258	91	817805	9.775	ppbv	99
58)	Bromoform	11.814	173	396849	5.159	ppbv	99
59)	Styrene	11.821	104	323410	4.831	ppbv	99
60)	1,1,2,2-Tetrachloroethane	12.746	83	347477	4.784	ppbv	98
61)	o-Xylene	11.752	91	503043	4.941	ppbv	100
64)	Isopropylbenzene	12.149	105	640151	4.797	ppbv	99
66)	4-Ethyltoluene	12.792	105	580082	4.613	ppbv	100
67)	1,3,5-Trimethylbenzene	12.908	105	493885	4.591	ppbv	100
68)	1,2,4-Trimethylbenzene	13.363	105	463863	4.641	ppbv	100
70)	Benzyl chloride	14.005	91	296401	4.774	ppbv	99
71)	1,3-Dichlorobenzene	13.668	146	312623	4.567	ppbv	100
72)	1,4-Dichlorobenzene	13.765	146	314187	4.622	ppbv	100
73)	sec-Butylbenzene	13.486	105	611892	4.643	ppbv	100
74)	4-Isopropyltoluene	13.655	119	499580	4.787	ppbv	100
75)	1,2-Dichlorobenzene	14.141	146	258909	4.623	ppbv	100
76)	n-Butylbenzene	14.051	91	329435	4.598	ppbv	98
77)	1,2,4-Trichlorobenzene	15.306	180	163071	4.297	ppbv	99
79)	Hexachlorobutadiene	15.311	225	243526	4.790	ppbv	100
81)	1,2-Dichlorotetrafluor...	1.608	135	336632	4.510	ppbv	99
82)	Vinyl Chloride(sim)	1.714	62	125998	4.311	ppbv	100
83)	Bromomethane(sim)	1.971	94	130878	4.012	ppbv	98
84)	Trichlorofluoromethane...	2.214	101	335626	4.307	ppbv	99
85)	1,1,1-Trichloroethane...	5.932	97	294875	4.904	ppbv#	99
86)	Carbon Tetrachloride(sim)	5.827	117	352109	5.228	ppbv	100
87)	1,1-Dichloroethene(sim)	2.670	61	139654	4.312	ppbv	98
88)	Trichlorotrifluoroetha...	2.741	101	220936	3.754	ppbv	100
89)	Trans-1,2-Dichloroethe...	3.484	61	171136	4.594	ppbv	98
90)	1,1-Dichloroethane(sim)	4.299	63	247363	4.846	ppbv	100
91)	Cis-1,2-Dichloroethene...	5.182	61	187852	5.140	ppbv	100
92)	Chloroform(sim)	5.690	83	330139	5.270	ppbv	100
93)	1,2-Dichloroethane(sim)	6.774	62	181308	5.143	ppbv	98
95)	1,2-dichloropropane(sim)	7.987	63	146785	5.478	ppbv	96
96)	Bromodichloromethane(sim)	8.126	83	360066	5.455	ppbv	99
97)	Trichloroethene(sim)	7.336	130	257048	4.864	ppbv	99
98)	1,4-Dioxane(sim)	8.383	88	108898	7.187	ppbv	100
99)	cis-1,3-Dichloropropen...	8.915	75	281186	5.745	ppbv	100
100)	1,1,2-Trichloroethane...	9.907	97	202070	4.742	ppbv	100
101)	Dibromochloromethane(sim)	10.106	129	424958	5.505	ppbv	99
102)	1,2-Dibromoethane(EDB)...	10.333	107	366283	4.859	ppbv	99
103)	Tetrachloroethene(sim)	9.658	166	353025	4.819	ppbv	100
105)	Bromoform(sim)	11.814	173	396314	5.656	ppbv	99
106)	1,1,1,2-Tetrachloroeth...	11.096	131	217507	4.756	ppbv	99
107)	m,p-Xylene(sim)	11.258	91	818452	12.218	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.743	83	367859	4.639	ppbv	98
111)	Benzyl chloride(sim)	14.005	91	296401	4.654	ppbv	99
112)	1,3-Dichlorobenzene(sim)	13.671	146	340899	4.231	ppbv	99
113)	1,4-Dichlorobenzene(sim)	13.765	146	315372	6.657	ppbv	100
114)	sec-Butylbenzene(sim)	13.482	105	659502	7.633	ppbv	99
115)	4-Isopropyltoluene(sim)	13.655	119	499580	6.021	ppbv	100
116)	1,2-Dichlorobenzene(sim)	14.138	146	282320	6.157	ppbv	99
117)	n-Butylbenzene(sim)	14.051	91	329435	5.965	ppbv	98
118)	1,2,4-Trichlorobenzene...	15.309	180	175543	4.499	ppbv	99
119)	Hexachlorobutadiene(sim)	15.311	225	243526	4.344	ppbv	100

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_10.D
 Acq On : 17 Dec 2019 2:07 am
 Operator : Keith
 Client ID : ICAL 5
 Lab ID : 5.0 ppbV
 ALS Vial : 11 Sample Multiplier: 1

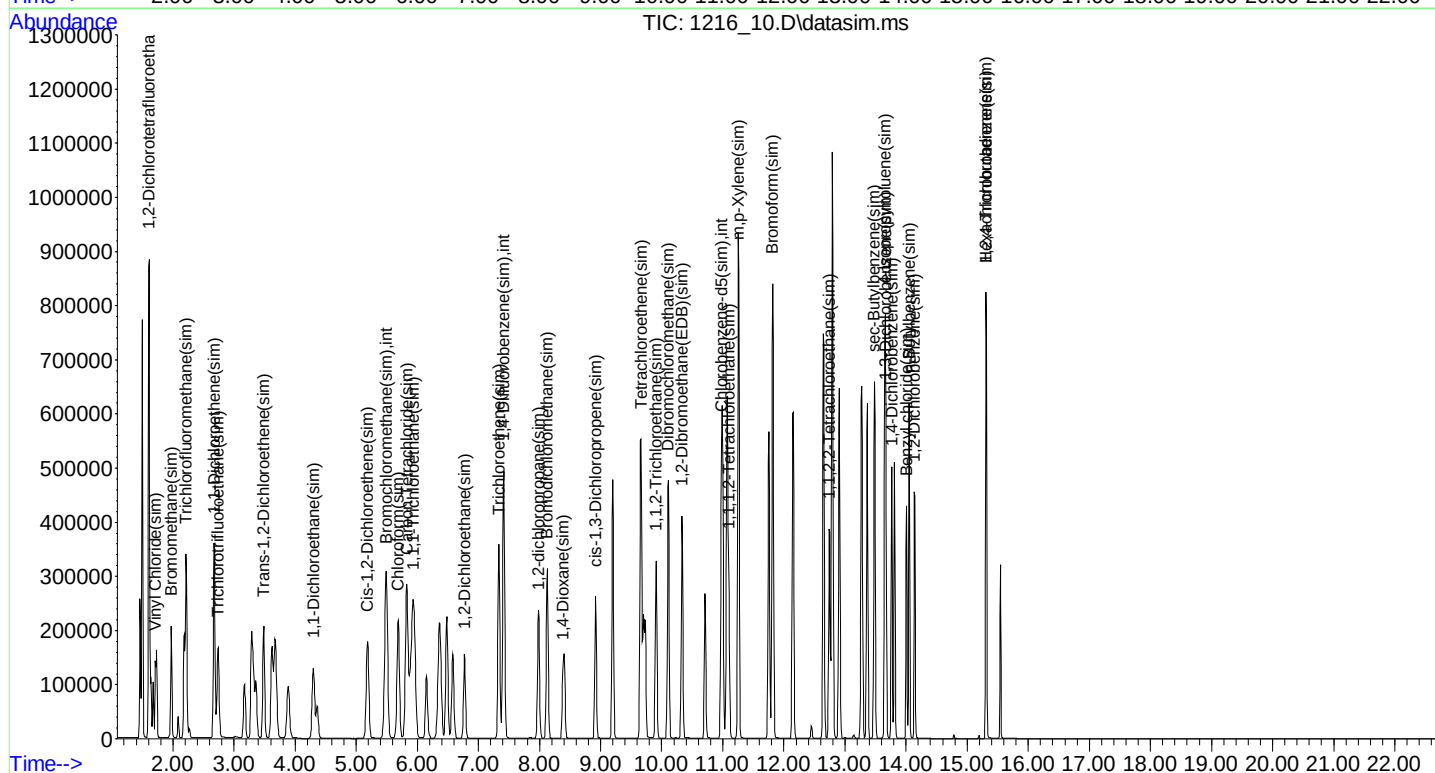
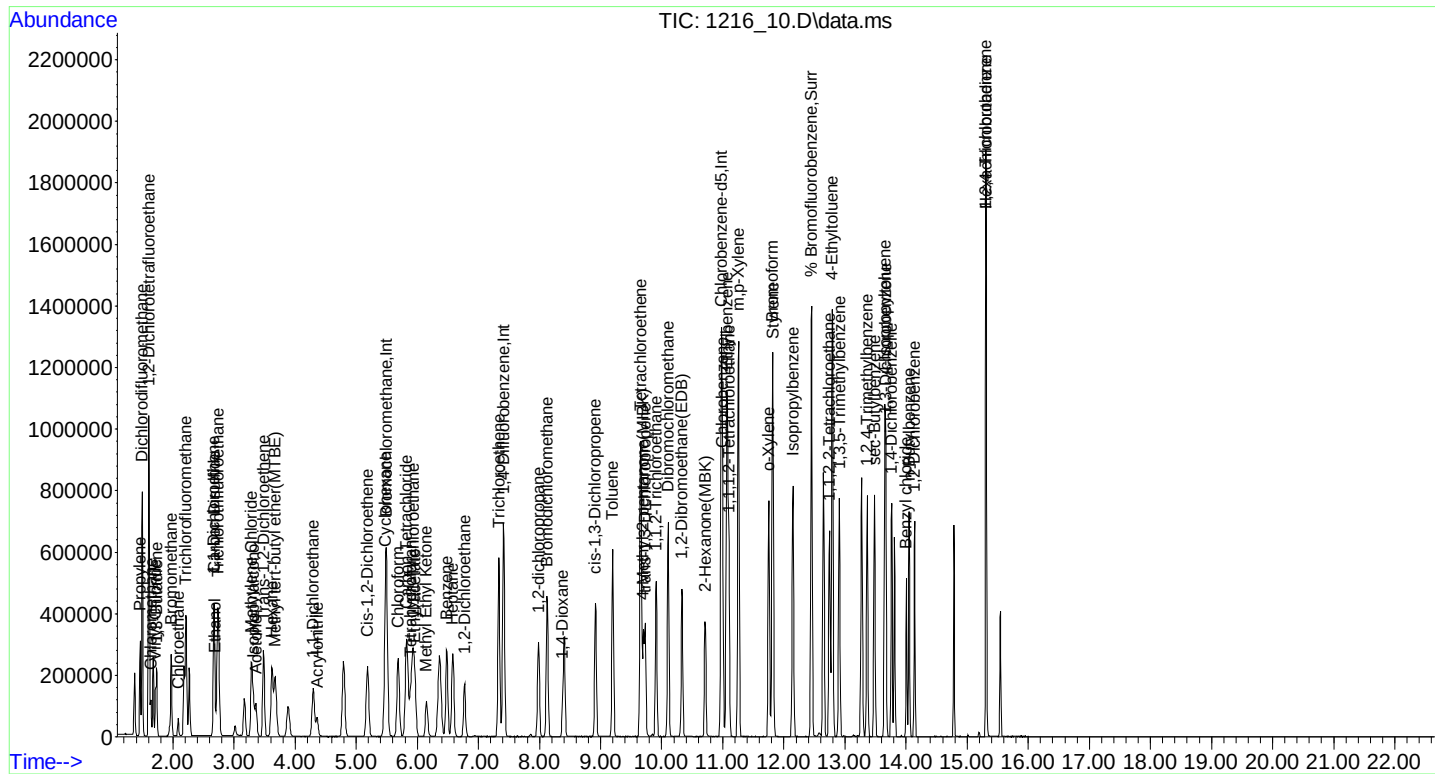
Quant Time: Dec 17 08:04:03 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:03:47 2019
 Response via : Initial Calibration

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

(#)out of range (m)manual integration reviewed by analyst (+)signals summed


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Data Path : H:\AIR2019\CHEM24\12DEC\15\  
Data File : 1216_10.D  
Acq On : 17 Dec 2019 2:07 am  
Operator : Keith  
Client ID : ICAL 5  
Lab ID : 5.0 ppbv  
ALS Vial : 11 Sample Multiplier: 1
```

Quant Time: Dec 17 08:04:03 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
QLast Update : Tue Dec 17 08:03:47 2019
Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_11.D
 Acq On : 17 Dec 2019 2:43 am
 Operator : Keith
 Client ID : ICAL 25
 Lab ID : 25 ppbV
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 17 08:04:27 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:04:14 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.499	130	204071	10.000	ng	0.01
36) 1,4-Difluorobenzene	7.418	114	632407	10.000	ng	0.01
53) Chlorobenzene-d5	10.977	82	281193	10.000	ng	0.00
80) Bromochloromethane(sim)	5.502	130	205832	10.000	ng	# 0.01
94) 1,4-Difluorobenzene(sim)	7.421	114	696887	10.000	ng	# 0.01
104) Chlorobenzene-d5(sim)	10.980	82	298993	10.000	ng	0.00

System Monitoring Compounds

62) % Bromofluorobenzene 12.454 95 390904 10.561 ppbv 0.00
 Spiked Amount 10.000 Range 70 - 130 Recovery = 105.60%

Target Compounds

						Qvalue
2) Propylene	1.464	41	484518	28.754	ppbv	97
3) Dichlorodifluoromethane	1.499	101	168435	23.680	ppbv	99
4) Chloromethane	1.643	50	277926	18.064	ppbv	93
5) 1,2-Dichlorotetrafluor...	1.608	135	1055043	20.220	ppbv	99
6) Vinyl Chloride	1.718	62	410930	21.585	ppbv	100
7) 1,3-Butadiene	1.738	54	254069	21.760	ppbv	98
8) Bromomethane	1.971	94	507765	22.959	ppbv	100
9) Chloroethane	2.088	64	157805	24.002	ppbv	97
10) Ethanol	2.697	45	85719	20.649	ppbv#	87
12) Acetone	3.361	43	678468	22.400	ppbv	98
13) Trichlorofluoromethane	2.218	101	1122115	21.683	ppbv	98
14) Isopropylalcohol	3.326	45	681175	22.946	ppbv	92
15) Acrylonitrile	4.364	53	263261	25.224	ppbv	99
16) 1,1-Dichloroethene	2.677	61	528522	24.080	ppbv	98
17) Methylene Chloride	3.292	49	496954	22.561	ppbv	99
20) Carbon Disulfide	2.677	76	976960	24.193	ppbv	97
21) Trichlorotrifluoroethane	2.738	101	783159	22.885	ppbv	99
22) Trans-1,2-Dichloroethene	3.491	61	658928	24.164	ppbv	99
23) 1,1-Dichloroethane	4.300	63	909551	25.588	ppbv	99
24) Methyl tert-butyl ethe...	3.675	73	1169988	23.288	ppbv#	6
25) Methyl Ethyl Ketone	6.148	43	864071	26.289	ppbv	99
26) Cis-1,2-Dichloroethene	5.189	61	753984	26.552	ppbv	99
27) Hexane	3.627	57	774944	26.232	ppbv	93
28) Chloroform	5.694	83	1229405	26.242	ppbv	99
29) Ethyl acetate	5.968	43	758762	23.785	ppbv	99
30) Tetrahydrofuran	5.881	42	330671	23.509	ppbv	98
31) 1,2-Dichloroethane	6.774	62	736952	26.575	ppbv	100
32) 1,1,1-Trichloroethane	5.932	97	1113778	24.498	ppbv	99
33) Benzene	6.487	78	1388290	24.535	ppbv	99
34) Carbon Tetrachloride	5.831	117	1351900	26.237	ppbv	99
35) Cyclohexane	5.485	56	634248	25.616	ppbv	99
37) 1,2-dichloropropane	7.986	63	600270	25.438	ppbv	96
38) Bromodichloromethane	8.130	83	1337597	24.689	ppbv	99
39) Trichloroethene	7.336	130	1014146	23.357	ppbv	98
41) 1,4-Dioxane	8.380	88	410264	25.252	ppbv	98
43) Heptane	6.589	43	624027	22.300	ppbv	97
44) cis-1,3-Dichloropropene	8.922	75	1149668	25.978	ppbv	99
45) 4-Methyl-2-pentanone(M...	9.702	43	815697	21.178	ppbv	97
46) trans-1,3-Dichloropropene	9.738	75	815903	23.050	ppbv	98
47) 1,1,2-Trichloroethane	9.911	97	742043	22.920	ppbv	98
48) Toluene	9.203	91	1873950	22.628	ppbv	99
49) Dibromochloromethane	10.106	129	1709415	24.853	ppbv	98
50) 2-Hexanone(MBK)	10.709	43	1034813	24.496	ppbv	99
51) 1,2-Dibromoethane(EDB)	10.337	107	1396296	23.556	ppbv	95

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_11.D
 Acq On : 17 Dec 2019 2:43 am
 Operator : Keith
 Client ID : ICAL 25
 Lab ID : 25 ppbV
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 17 08:04:27 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:04:14 2019
 Response via : Initial Calibration

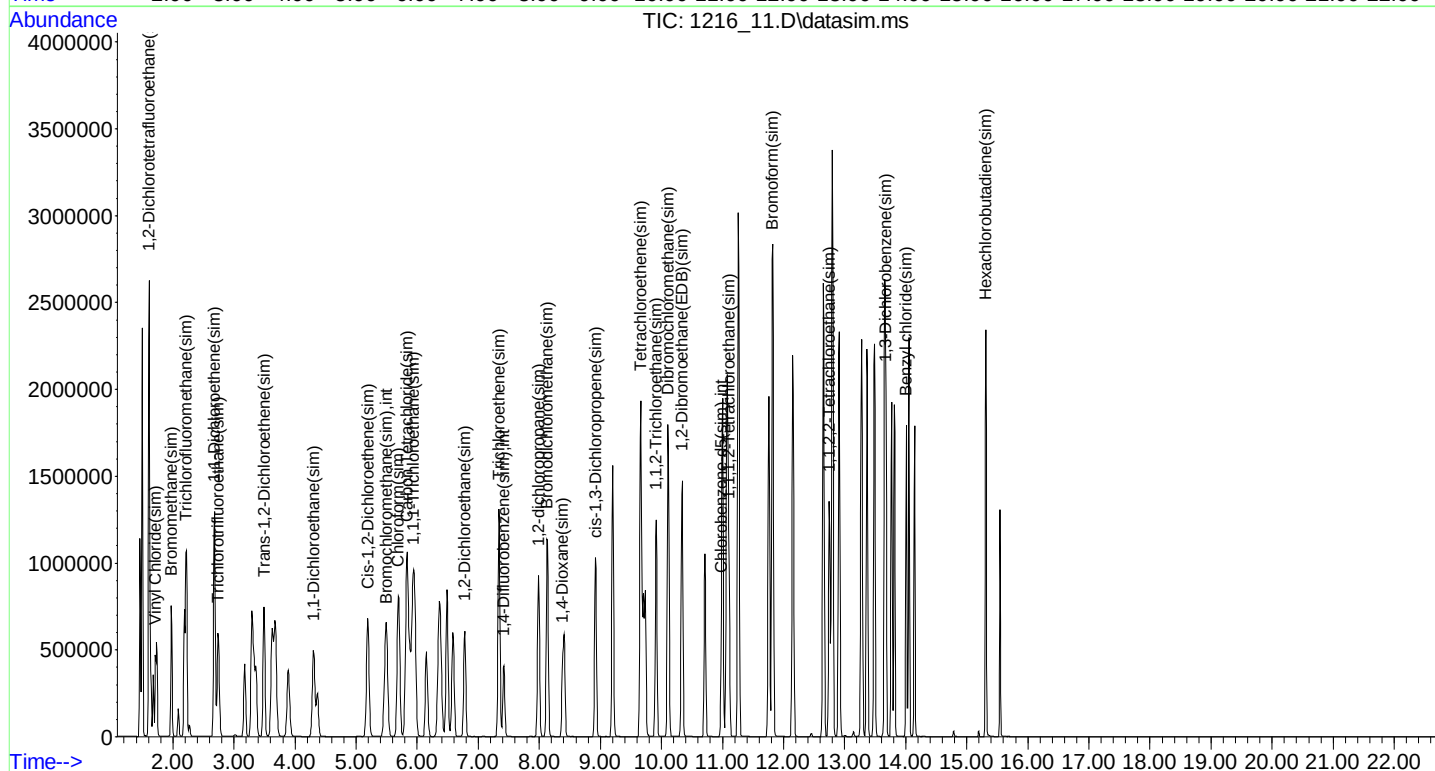
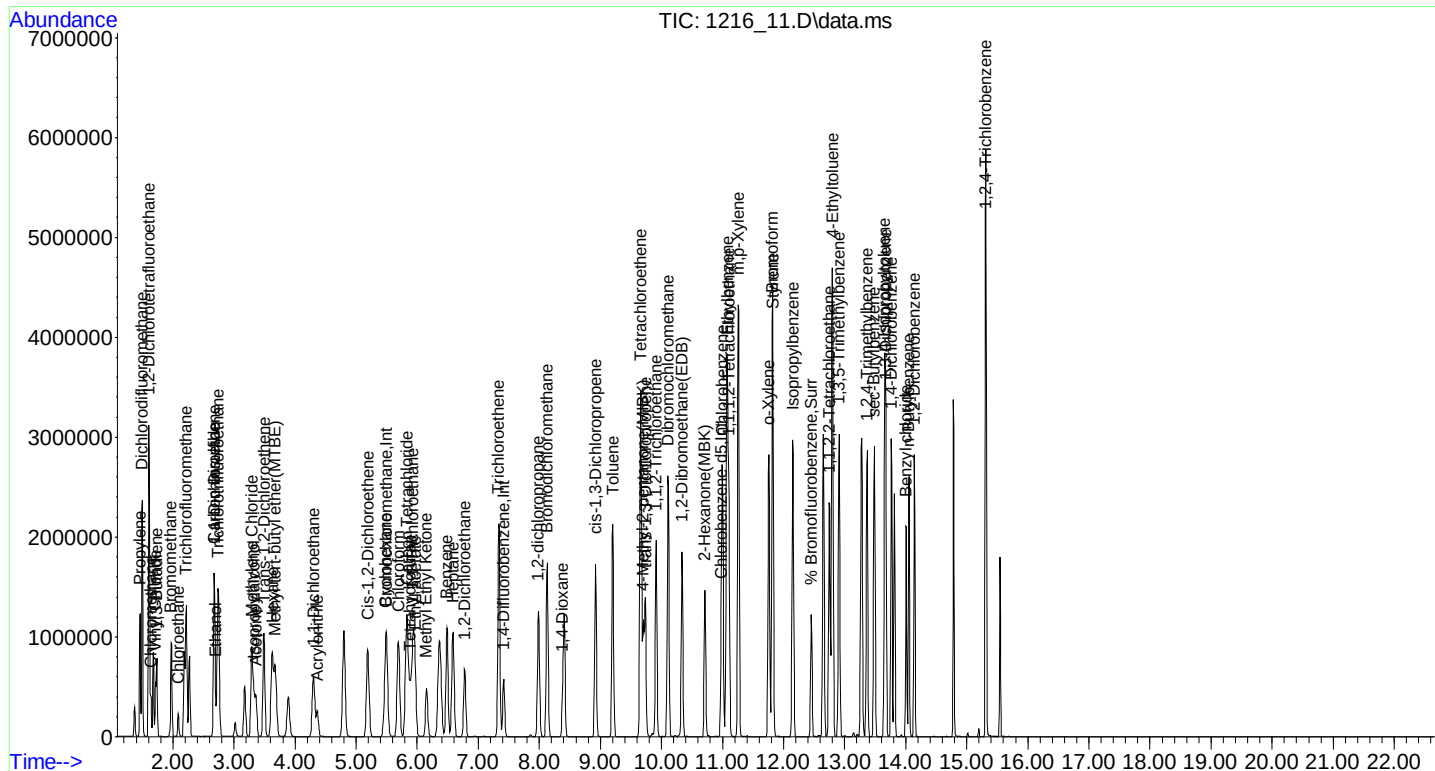
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.658	166	1336937	22.507	ppbv	100
54)	1,1,1,2-Tetrachloroethane	11.100	131	827558	23.405	ppbv	99
55)	Chlorobenzene	10.997	112	1625058	24.498	ppbv	94
56)	Ethylbenzene	11.080	91	1924840	21.249	ppbv	98
57)	m,p-Xylene	11.258	91	2979990	43.687	ppbv	97
58)	Bromoform	11.814	173	1598896	25.494	ppbv	98
59)	Styrene	11.828	104	1167041	21.382	ppbv	99
60)	1,1,2,2-Tetrachloroethane	12.746	83	1331026	22.477	ppbv#	91
61)	o-Xylene	11.759	91	1974164	23.784	ppbv	99
64)	Isopropylbenzene	12.149	105	2471401	22.713	ppbv	100
66)	4-Ethyltoluene	12.798	105	2088459	20.371	ppbv	98
67)	1,3,5-Trimethylbenzene	12.908	105	1975248	22.520	ppbv	99
68)	1,2,4-Trimethylbenzene	13.369	105	1810779	22.221	ppbv	99
70)	Benzyl chloride	14.005	91	1344267	18.848	ppbv	99
71)	1,3-Dichlorobenzene	13.674	146	1183950	21.213	ppbv	99
72)	1,4-Dichlorobenzene	13.765	146	1299768	23.450	ppbv	100
73)	sec-Butylbenzene	13.486	105	2356102	21.927	ppbv	99
74)	4-Isopropyltoluene	13.655	119	1888158	22.193	ppbv	99
75)	1,2-Dichlorobenzene	14.141	146	1056297	23.134	ppbv	100
76)	n-Butylbenzene	14.050	91	1285460	22.008	ppbv	99
77)	1,2,4-Trichlorobenzene	15.310	180	604651	21.731	ppbv	99
81)	1,2-Dichlorotetrafluor...	1.608	135	1052125	18.816	ppbv	98
82)	Vinyl Chloride(sim)	1.714	62	440320	20.110	ppbv	99
83)	Bromomethane(sim)	1.971	94	507765	20.776	ppbv	99
84)	Trichlorofluoromethane...	2.221	101	1126850	19.302	ppbv	97
85)	1,1,1-Trichloroethane(...)	5.932	97	1114152	24.732	ppbv#	99
86)	Carbon Tetrachloride(sim)	5.834	117	1349749	26.753	ppbv	98
87)	1,1-Dichloroethene(sim)	2.677	61	528522	21.784	ppbv	98
88)	Trichlorotrifluoroetha...	2.741	101	796258	18.061	ppbv	98
89)	Trans-1,2-Dichloroethe...	3.491	61	659753	23.642	ppbv	99
90)	1,1-Dichloroethane(sim)	4.303	63	970760	25.385	ppbv	99
91)	Cis-1,2-Dichloroethene...	5.189	61	754232	27.547	ppbv	99
92)	Chloroform(sim)	5.690	83	1275275	27.175	ppbv	98
93)	1,2-Dichloroethane(sim)	6.774	62	737047	27.909	ppbv	99
95)	1,2-dichloropropane(sim)	7.986	63	600270	26.878	ppbv	96
96)	Bromodichloromethane(sim)	8.126	83	1352953	24.592	ppbv	97
97)	Trichloroethene(sim)	7.336	130	1012927	22.998	ppbv	99
98)	1,4-Dioxane(sim)	8.383	88	449988	23.657	ppbv	97
99)	cis-1,3-Dichloropropen...	8.922	75	1149668	28.186	ppbv	99
100)	1,1,2-Trichloroethane(...)	9.914	97	787786	22.181	ppbv	98
101)	Dibromochloromethane(sim)	10.106	129	1709415	26.569	ppbv	99
102)	1,2-Dibromoethane(EDB)...	10.340	107	1390234	22.128	ppbv	95
103)	Tetrachloroethene(sim)	9.658	166	1336937	21.896	ppbv	100
105)	Bromoform(sim)	11.814	173	1598144	28.469	ppbv	98
106)	1,1,1,2-Tetrachloroeth...	11.103	131	840846	22.951	ppbv	97
108)	1,1,2,2-Tetrachloroeth...	12.749	83	1354337	21.320	ppbv	95
111)	Benzyl chloride(sim)	14.005	91	1344267	18.467	ppbv	99
112)	1,3-Dichlorobenzene(sim)	13.677	146	1237569	19.173	ppbv	97
119)	Hexachlorobutadiene(sim)	15.310	225	772071	17.193	ppbv	99

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_11.D
 Acq On : 17 Dec 2019 2:43 am
 Operator : Keith
 Client ID : ICAL 25
 Lab ID : 25 ppbV
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 17 08:04:27 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:04:14 2019
 Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_12.D
 Acq On : 17 Dec 2019 3:21 am
 Operator : Keith
 Client ID : ICAL 40
 Lab ID : 40
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 17 08:05:01 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:04:42 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.504	130	193707	10.000	ng	0.02
36) 1,4-Difluorobenzene	7.422	114	626444	10.000	ng	0.02
53) Chlorobenzene-d5	10.981	82	281431	10.000	ng	0.00
80) Bromochloromethane(sim)	5.507	130	196422	10.000	ng	# 0.02
94) 1,4-Difluorobenzene(sim)	7.418	114	684815	10.000	ng	# 0.01
104) Chlorobenzene-d5(sim)	10.984	82	295702	10.000	ng	0.01

System Monitoring Compounds

62) % Bromofluorobenzene 12.458 95 432395 11.564 ppbv 0.01
 Spiked Amount 10.000 Range 70 - 130 Recovery = 115.60%

Target Compounds

						Qvalue
2) Propylene	1.458	41	721411	45.103	ppbv	97
3) Dichlorodifluoromethane	1.499	101	221226	32.765	ppbv	99
4) Chloromethane	1.643	50	401913	27.520	ppbv	94
5) 1,2-Dichlorotetrafluor...	1.608	135	1447209	29.221	ppbv	99
6) Vinyl Chloride	1.718	62	612490	33.894	ppbv	100
7) 1,3-Butadiene	1.739	54	362426	32.701	ppbv	97
8) Bromomethane	1.978	94	751175	35.782	ppbv	100
9) Chloroethane	2.088	64	237896	38.120	ppbv	97
10) Ethanol	2.697	45	123186	31.262	ppbv#	87
12) Acetone	3.361	43	958401	33.335	ppbv	99
13) Trichlorofluoromethane	2.218	101	1576778	32.099	ppbv	99
14) Isopropylalcohol	3.327	45	980205	34.785	ppbv	91
15) Acrylonitrile	4.366	53	391541	39.522	ppbv	99
16) 1,1-Dichloroethene	2.677	61	756688	36.320	ppbv	98
17) Methylene Chloride	3.292	49	729274	34.879	ppbv	97
20) Carbon Disulfide	2.677	76	1379281	35.984	ppbv	96
21) Trichlorotrifluoroethane	2.738	101	1117388	34.398	ppbv	100
22) Trans-1,2-Dichloroethene	3.491	61	966938	37.357	ppbv	99
23) 1,1-Dichloroethane	4.303	63	1333065	39.508	ppbv	99
24) Methyl tert-butyl ethe...	3.675	73	1725277	36.178	ppbv#	9
25) Methyl Ethyl Ketone	6.152	43	1298496	41.620	ppbv	99
26) Cis-1,2-Dichloroethene	5.194	61	1107068	41.071	ppbv	98
27) Hexane	3.628	57	1129208	40.269	ppbv	93
28) Chloroform	5.698	83	1799748	40.472	ppbv	99
29) Ethyl acetate	5.972	43	1099542	36.311	ppbv	98
30) Tetrahydrofuran	5.886	42	482516	36.140	ppbv	97
31) 1,2-Dichloroethane	6.778	62	1097204	41.682	ppbv	100
32) 1,1,1-Trichloroethane	5.936	97	1653441	38.314	ppbv	99
33) Benzene	6.491	78	2051122	38.188	ppbv	99
34) Carbon Tetrachloride	5.835	117	2011596	41.128	ppbv	99
35) Cyclohexane	5.489	56	948161	40.343	ppbv	98
37) 1,2-dichloropropane	7.991	63	872754	37.337	ppbv	95
38) Bromodichloromethane	8.127	83	1923509	35.842	ppbv	99
39) Trichloroethene	7.340	130	1479292	34.394	ppbv	97
41) 1,4-Dioxane	8.385	88	614461	38.181	ppbv	98
43) Heptane	6.587	43	896331	32.336	ppbv	96
44) cis-1,3-Dichloropropene	8.919	75	1645735	37.541	ppbv	99
45) 4-Methyl-2-pentanone(M...	9.706	43	1148509	30.103	ppbv	96
46) trans-1,3-Dichloropropene	9.742	75	1187074	33.855	ppbv	97
47) 1,1,2-Trichloroethane	9.915	97	1096476	34.190	ppbv	97
48) Toluene	9.200	91	2717112	33.121	ppbv	98
49) Dibromochloromethane	10.110	129	2471696	36.278	ppbv	98
50) 2-Hexanone(MBK)	10.713	43	1478155	35.324	ppbv	98
51) 1,2-Dibromoethane(EDB)	10.341	107	2034408	34.649	ppbv	95

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_12.D
 Acq On : 17 Dec 2019 3:21 am
 Operator : Keith
 Client ID : ICAL 40
 Lab ID : 40
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 17 08:05:01 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:04:42 2019
 Response via : Initial Calibration

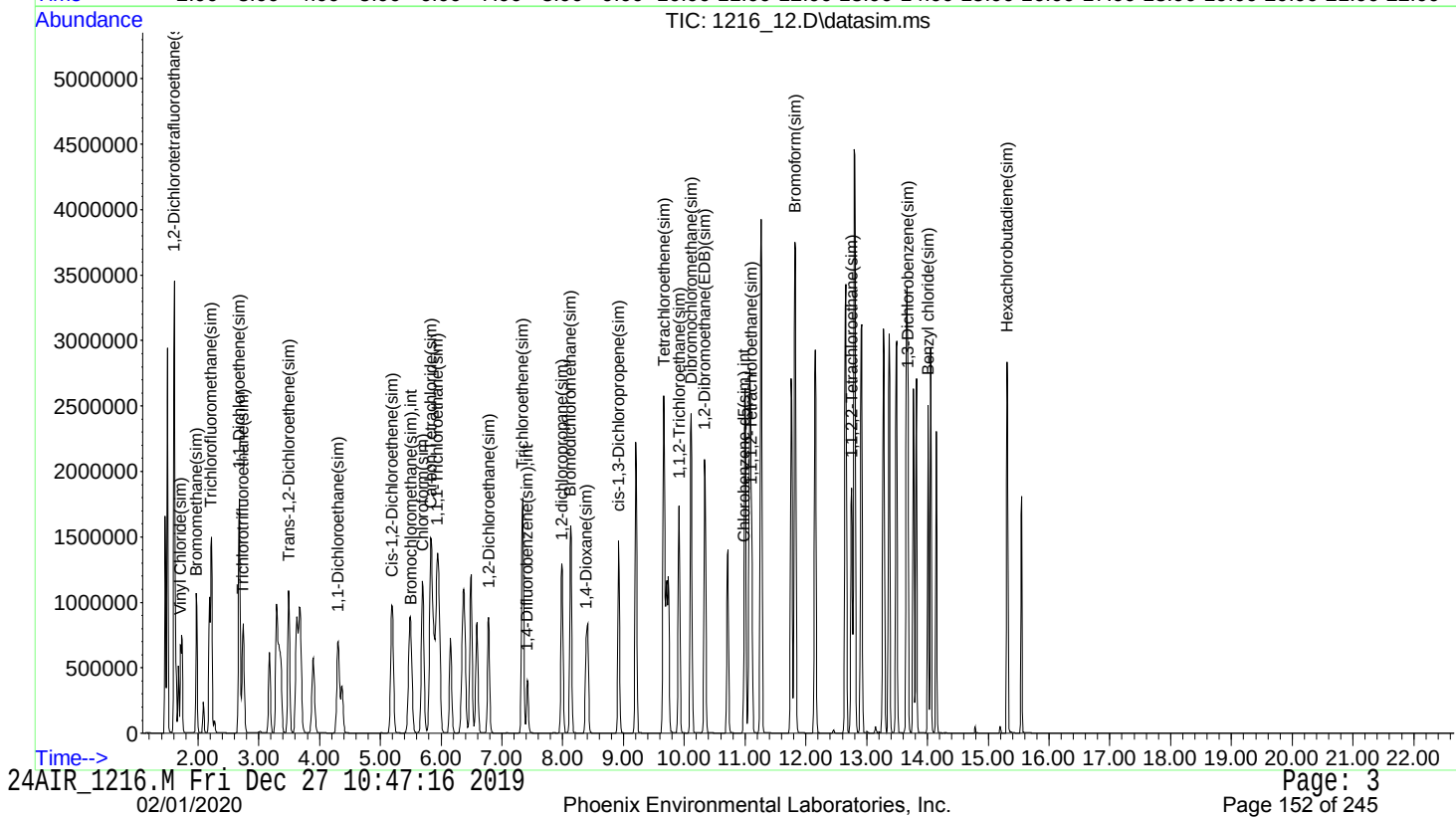
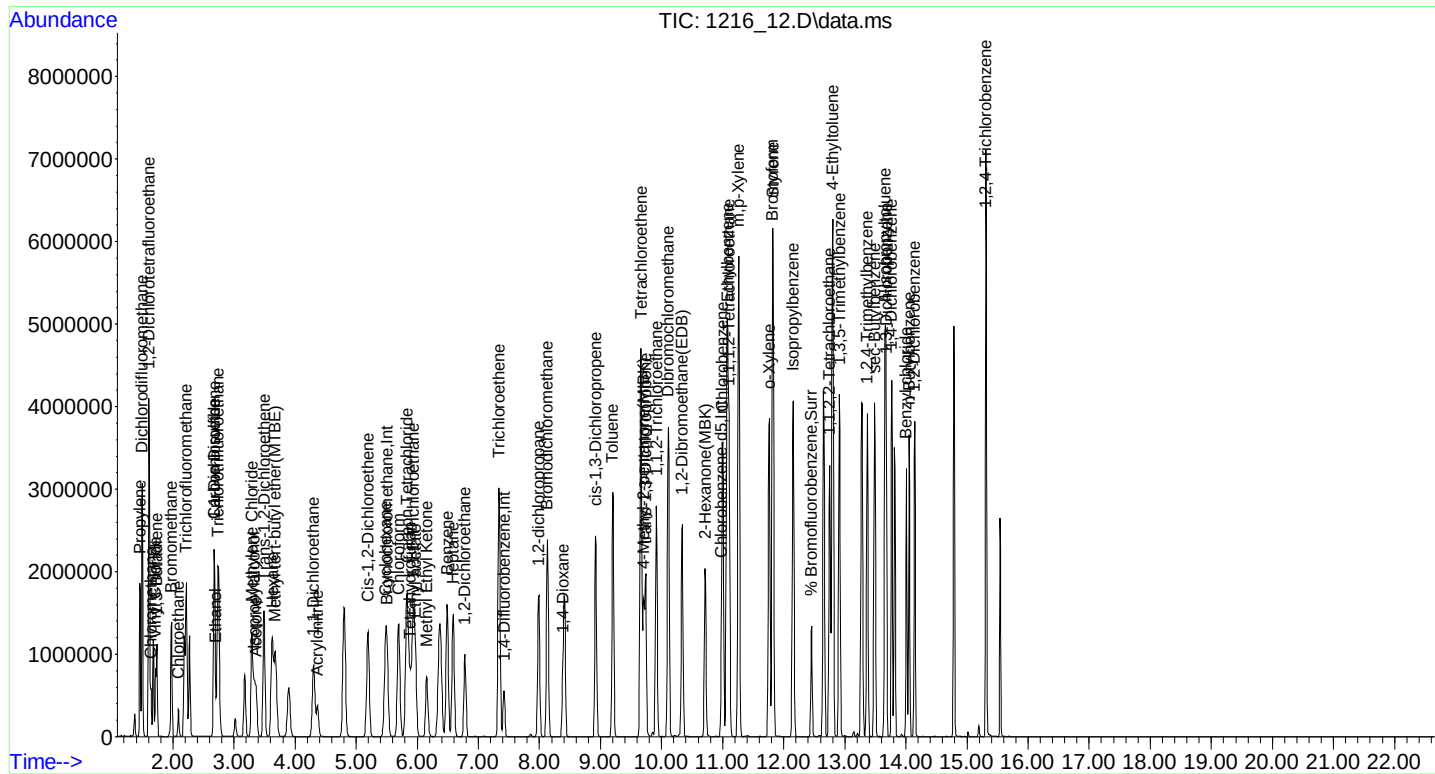
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.662	166	1914496	32.537	ppbv	99
54)	1,1,1,2-Tetrachloroethane	11.104	131	1204513	34.038	ppbv	99
55)	Chlorobenzene	11.001	112	2347162	35.354	ppbv	93
56)	Ethylbenzene	11.084	91	2616650	28.862	ppbv	97
57)	m,p-Xylene	11.262	91	4173502	61.133	ppbv	96
58)	Bromoform	11.818	173	2261018	36.020	ppbv	98
59)	Styrene	11.825	104	1637107	29.969	ppbv	98
60)	1,1,2,2-Tetrachloroethane	12.750	83	1880270	31.725	ppbv	98
61)	o-Xylene	11.763	91	2853514	34.349	ppbv	98
64)	Isopropylbenzene	12.153	105	3524407	32.363	ppbv	99
66)	4-Ethyltoluene	12.802	105	2897950	28.243	ppbv	97
67)	1,3,5-Trimethylbenzene	12.912	105	2841452	32.369	ppbv	98
68)	1,2,4-Trimethylbenzene	13.366	105	2559322	31.380	ppbv	98
70)	Benzyl chloride	14.009	91	1979990	34.509	ppbv	99
71)	1,3-Dichlorobenzene	13.678	146	1640791	29.373	ppbv	98
72)	1,4-Dichlorobenzene	13.769	146	1867222	33.660	ppbv	99
73)	sec-Butylbenzene	13.490	105	3317708	30.850	ppbv	99
74)	4-Isopropyltoluene	13.658	119	2584243	30.350	ppbv	98
75)	1,2-Dichlorobenzene	14.145	146	1503720	32.906	ppbv	99
76)	n-Butylbenzene	14.054	91	1765887	30.208	ppbv	97
77)	1,2,4-Trichlorobenzene	15.309	180	830635	36.344	ppbv	99
81)	1,2-Dichlorotetrafluor...	1.608	135	1443388	27.051	ppbv	99
82)	Vinyl Chloride(sim)	1.714	62	649446	31.082	ppbv	98
83)	Bromomethane(sim)	1.978	94	751239	32.211	ppbv	99
84)	Trichlorofluoromethane...	2.221	101	1561423	28.027	ppbv	96
85)	1,1,1-Trichloroethane(...)	5.936	97	1655475	38.509	ppbv#	99
86)	Carbon Tetrachloride(sim)	5.831	117	1965034	40.814	ppbv	97
87)	1,1-Dichloroethene(sim)	2.677	61	756688	32.683	ppbv	98
88)	Trichlorotrifluoroetha...	2.741	101	1132787	26.926	ppbv	98
89)	Trans-1,2-Dichloroethe...	3.491	61	968203	36.358	ppbv	99
90)	1,1-Dichloroethane(sim)	4.305	63	1410930	38.663	ppbv	98
91)	Cis-1,2-Dichloroethene...	5.194	61	1107264	42.379	ppbv	98
92)	Chloroform(sim)	5.694	83	1847595	41.257	ppbv	98
93)	1,2-Dichloroethane(sim)	6.778	62	1097204	43.538	ppbv	99
95)	1,2-dichloropropane(sim)	7.991	63	872754	39.768	ppbv	95
96)	Bromodichloromethane(sim)	8.130	83	1919634	35.508	ppbv	96
97)	Trichloroethene(sim)	7.340	130	1479175	34.175	ppbv	98
98)	1,4-Dioxane(sim)	8.387	88	678223	35.079	ppbv#	95
99)	cis-1,3-Dichloropropen...	8.919	75	1646648	41.082	ppbv	99
100)	1,1,2-Trichloroethane(...)	9.918	97	1150038	32.952	ppbv	97
101)	Dibromochloromethane(sim)	10.110	129	2470925	39.082	ppbv	99
102)	1,2-Dibromoethane(EDB)...	10.337	107	1993496	32.290	ppbv	93
103)	Tetrachloroethene(sim)	9.662	166	1914237	31.904	ppbv	99
105)	Bromoform(sim)	11.818	173	2261490	40.734	ppbv	98
106)	1,1,1,2-Tetrachloroeth...	11.107	131	1206450	33.297	ppbv	96
108)	1,1,2,2-Tetrachloroeth...	12.753	83	1894559	30.156	ppbv	94
111)	Benzyl chloride(sim)	14.009	91	1979990	24.062	ppbv	99
112)	1,3-Dichlorobenzene(sim)	13.681	146	1680545	26.325	ppbv	97
119)	Hexachlorobutadiene(sim)	15.314	225	1004640	22.621	ppbv	99

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1216_12.D
Acq On : 17 Dec 2019 3:21 am
Operator : Keith
Client ID : ICAL 40
Lab ID : 40
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 17 08:05:01 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Tue Dec 17 08:04:42 2019
Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_14.D
 Acq On : 17 Dec 2019 4:24 am
 Operator : Keith
 Client ID : ICAL 0.2
 Lab ID : 0.2ppb
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 17 08:05:31 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:05:16 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.492	130	396747	10.000	ng	0.00
36) 1,4-Difluorobenzene	7.411	114	1031497	10.000	ng	0.00
53) Chlorobenzene-d5	10.977	82	424277	10.000	ng	0.00
80) Bromochloromethane(sim)	5.495	130	397702	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.414	114	1130227	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.980	82	466977	10.000	ng	0.00

System Monitoring Compounds						
62) % Bromofluorobenzene	12.454	95	529392	9.186	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	91.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	1.464	41	5108	0.156	ppbv#	84
3) Dichlorodifluoromethane	1.499	101	2737	0.198	ppbv	97
4) Chloromethane	1.643	50	7610	0.254	ppbv	96
5) 1,2-Dichlorotetrafluor...	1.608	135	23489	0.232	ppbv	99
6) Vinyl Chloride	1.718	62	8332	0.225	ppbv	99
7) 1,3-Butadiene	1.738	54	5287	0.233	ppbv	95
8) Bromomethane	1.978	94	10334	0.240	ppbv#	87
9) Chloroethane	2.088	64	2481	0.194	ppbv	85
10) Ethanol	2.704	45	3810	0.472	ppbv#	78
12) Acetone	3.374	43	18558	0.315	ppbv	99
13) Trichlorofluoromethane	2.218	101	22727	0.226	ppbv	96
14) Isopropylalcohol	3.340	45	13697	0.237	ppbv#	76
15) Acrylonitrile	4.364	53	4260	0.210	ppbv	95
16) 1,1-Dichloroethene	2.670	61	8968	0.210	ppbv	96
17) Methylene Chloride	3.285	49	12406	0.290	ppbv	97
20) Carbon Disulfide	2.677	76	17377	0.221	ppbv#	91
21) Trichlorotrifluoroethane	2.738	101	15250	0.229	ppbv	99
22) Trans-1,2-Dichloroethene	3.477	61	11763	0.222	ppbv	94
23) 1,1-Dichloroethane	4.296	63	14065	0.204	ppbv	99
24) Methyl tert-butyl ethe...	3.696	73	22663	0.232	ppbv#	90
25) Methyl Ethyl Ketone	6.162	43	13393	0.210	ppbv	100
26) Cis-1,2-Dichloroethene	5.182	61	10690	0.194	ppbv	95
27) Hexane	3.621	57	11522	0.201	ppbv	91
28) Chloroform	5.679	83	17322	0.190	ppbv	100
29) Ethyl acetate	5.982	43	14950	0.241	ppbv	97
30) Tetrahydrofuran	5.925	42	6584	0.241	ppbv	89
31) 1,2-Dichloroethane	6.774	62	10370	0.192	ppbv	99
32) 1,1,1-Trichloroethane	5.925	97	18105	0.205	ppbv	96
33) Benzene	6.480	78	23017	0.209	ppbv	98
34) Carbon Tetrachloride	5.831	117	19413	0.194	ppbv	99
35) Cyclohexane	5.478	56	9965	0.207	ppbv	98
37) 1,2-dichloropropane	7.986	63	7576	0.197	ppbv	96
38) Bromodichloromethane	8.130	83	17578	0.199	ppbv	96
39) Trichloroethene	7.336	130	15389	0.217	ppbv	97
41) 1,4-Dioxane	8.395	88	5731	0.216	ppbv	99
43) Heptane	6.583	43	10243	0.224	ppbv	96
44) cis-1,3-Dichloropropene	8.922	75	13326	0.185	ppbv	98
45) 4-Methyl-2-pentanone(M...	9.709	43	14554	0.232	ppbv	99
46) trans-1,3-Dichloropropene	9.730	75	12275	0.213	ppbv	99
47) 1,1,2-Trichloroethane	9.911	97	11728	0.222	ppbv	97
48) Toluene	9.203	91	28297	0.209	ppbv	100
49) Dibromochloromethane	10.106	129	23344	0.208	ppbv	98
50) 2-Hexanone(MBK)	10.716	43	14920	0.217	ppbv	99
51) 1,2-Dibromoethane(EDB)	10.337	107	21097	0.218	ppbv	99

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_14.D
 Acq On : 17 Dec 2019 4:24 am
 Operator : Keith
 Client ID : ICAL 0.2
 Lab ID : 0.2ppb
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 17 08:05:31 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:05:16 2019
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.658	166	20758	0.214	ppbv	99
54)	1,1,1,2-Tetrachloroethane	11.100	131	11955	0.224	ppbv	97
55)	Chlorobenzene	10.997	112	21970	0.220	ppbv#	79
56)	Ethylbenzene	11.073	91	32737	0.240	ppbv	99
57)	m,p-Xylene	11.258	91	50908	0.495	ppbv	98
58)	Bromoform	11.814	173	21203	0.224	ppbv	100
59)	Styrene	11.821	104	19868	0.241	ppbv	98
60)	1,1,2,2-Tetrachloroethane	12.746	83	21671	0.243	ppbv#	92
61)	o-Xylene	11.752	91	27863	0.222	ppbv	99
64)	Isopropylbenzene	12.149	105	39420	0.240	ppbv	98
66)	4-Ethyltoluene	12.792	105	39069	0.253	ppbv	99
67)	1,3,5-Trimethylbenzene	12.908	105	33022	0.250	ppbv	100
68)	1,2,4-Trimethylbenzene	13.363	105	30740	0.250	ppbv	99
70)	Benzyl chloride	14.005	91	15331	0.204	ppbv	98
71)	1,3-Dichlorobenzene	13.674	146	23053	0.274	ppbv	99
72)	1,4-Dichlorobenzene	13.765	146	21796	0.261	ppbv	96
73)	sec-Butylbenzene	13.486	105	42156	0.260	ppbv	98
74)	4-Isopropyltoluene	13.655	119	32630	0.254	ppbv	99
75)	1,2-Dichlorobenzene	14.141	146	18372	0.267	ppbv	99
76)	n-Butylbenzene	14.050	91	23111	0.262	ppbv	100
77)	1,2,4-Trichlorobenzene	15.307	180	20042	0.490	ppbv	97
79)	Hexachlorobutadiene	15.312	225	23175	0.362	ppbv	100
81)	1,2-Dichlorotetrafluor...	1.608	135	23489	0.217	ppbv	99
82)	Vinyl Chloride(sim)	1.714	62	8962	0.212	ppbv	99
83)	Bromomethane(sim)	1.978	94	10334	0.219	ppbv#	88
84)	Trichlorofluoromethane...	2.214	101	23325	0.207	ppbv	100
85)	1,1,1-Trichloroethane(...	5.925	97	18105	0.208	ppbv#	96
86)	Carbon Tetrachloride(sim)	5.826	117	20156	0.207	ppbv	99
87)	1,1-Dichloroethene(sim)	2.670	61	8968	0.191	ppbv	96
88)	Trichlorotrifluoroetha...	2.741	101	15495	0.182	ppbv	100
89)	Trans-1,2-Dichloroethe...	3.477	61	11763	0.218	ppbv	94
90)	1,1-Dichloroethane(sim)	4.298	63	15321	0.207	ppbv	100
91)	Cis-1,2-Dichloroethene...	5.182	61	10690	0.202	ppbv	95
92)	Chloroform(sim)	5.682	83	18424	0.203	ppbv	100
93)	1,2-Dichloroethane(sim)	6.774	62	10370	0.203	ppbv	98
95)	1,2-dichloropropane(sim)	7.986	63	7576	0.209	ppbv	96
96)	Bromodichloromethane(sim)	8.126	83	18378	0.206	ppbv	100
97)	Trichloroethene(sim)	7.336	130	15178	0.212	ppbv	100
98)	1,4-Dioxane(sim)	8.398	88	6937	0.242	ppbv#	97
99)	cis-1,3-Dichloropropen...	8.922	75	13326	0.201	ppbv	98
100)	1,1,2-Trichloroethane(...	9.914	97	12348	0.214	ppbv	99
101)	Dibromochloromethane(sim)	10.106	129	23344	0.224	ppbv	99
102)	1,2-Dibromoethane(EDB)...	10.333	107	22082	0.217	ppbv	99
103)	Tetrachloroethene(sim)	9.658	166	20688	0.209	ppbv	99
105)	Bromoform(sim)	11.814	173	21071	0.240	ppbv	99
106)	1,1,1,2-Tetrachloroeth...	11.103	131	12848	0.225	ppbv	100
107)	m,p-Xylene(sim)	11.258	91	50908	0.425	ppbv	98
108)	1,1,2,2-Tetrachloroeth...	12.749	83	23295	0.235	ppbv	100
111)	Benzyl chloride(sim)	14.005	91	15331	0.252	ppbv	98
112)	1,3-Dichlorobenzene(sim)	13.670	146	25132	0.249	ppbv	100
113)	1,4-Dichlorobenzene(sim)	13.765	146	21796	0.254	ppbv	96
114)	sec-Butylbenzene(sim)	13.489	105	45112	0.238	ppbv	100
115)	4-Isopropyltoluene(sim)	13.655	119	32630	0.235	ppbv	99
116)	1,2-Dichlorobenzene(sim)	14.144	146	20680	0.261	ppbv	99
117)	n-Butylbenzene(sim)	14.050	91	23111	0.242	ppbv	100
118)	1,2,4-Trichlorobenzene...	15.310	180	22423	0.474	ppbv	99
119)	Hexachlorobutadiene(sim)	15.312	225	23092	0.329	ppbv	98

Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_14.D
 Acq On : 17 Dec 2019 4:24 am
 Operator : Keith
 Client ID : ICAL 0.2
 Lab ID : 0.2ppb
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 17 08:05:31 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:05:16 2019
 Response via : Initial Calibration

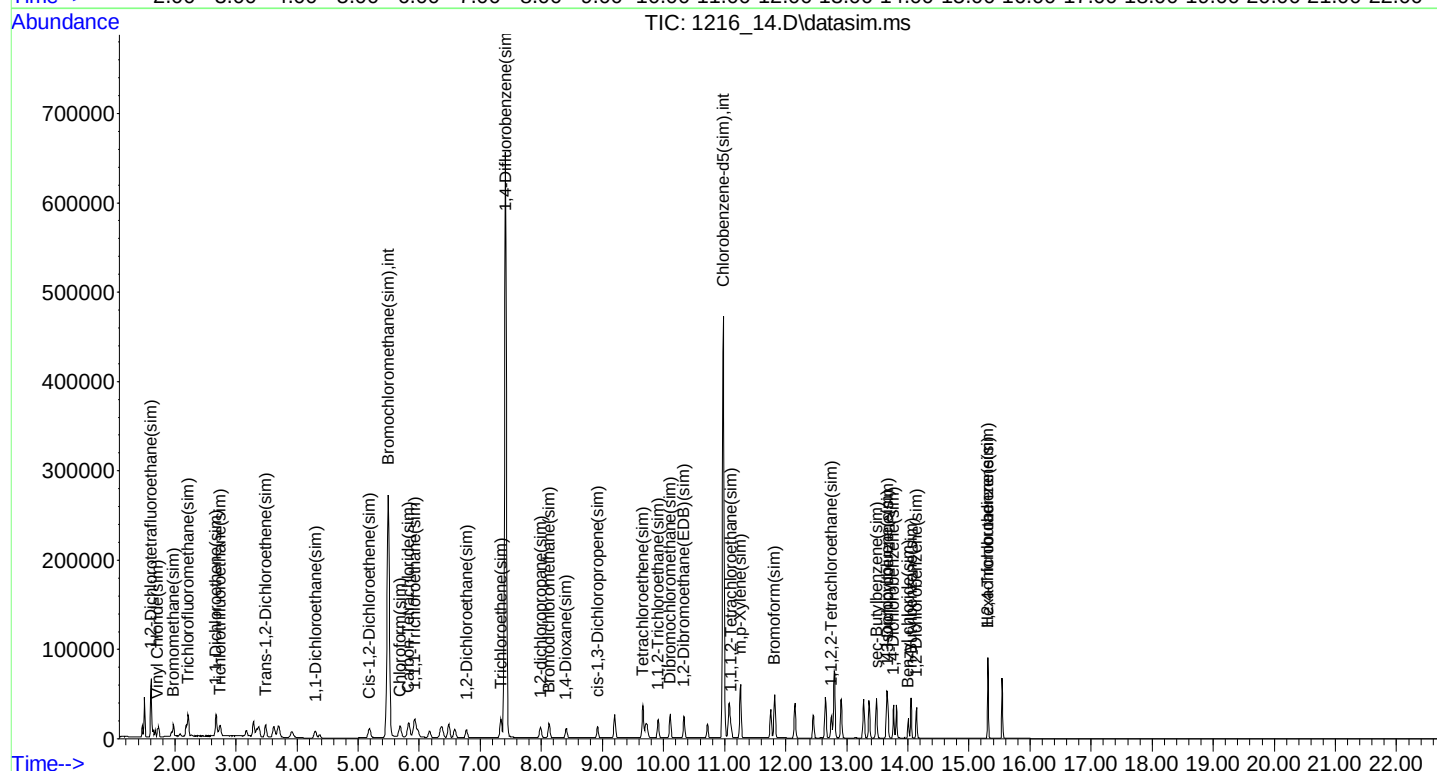
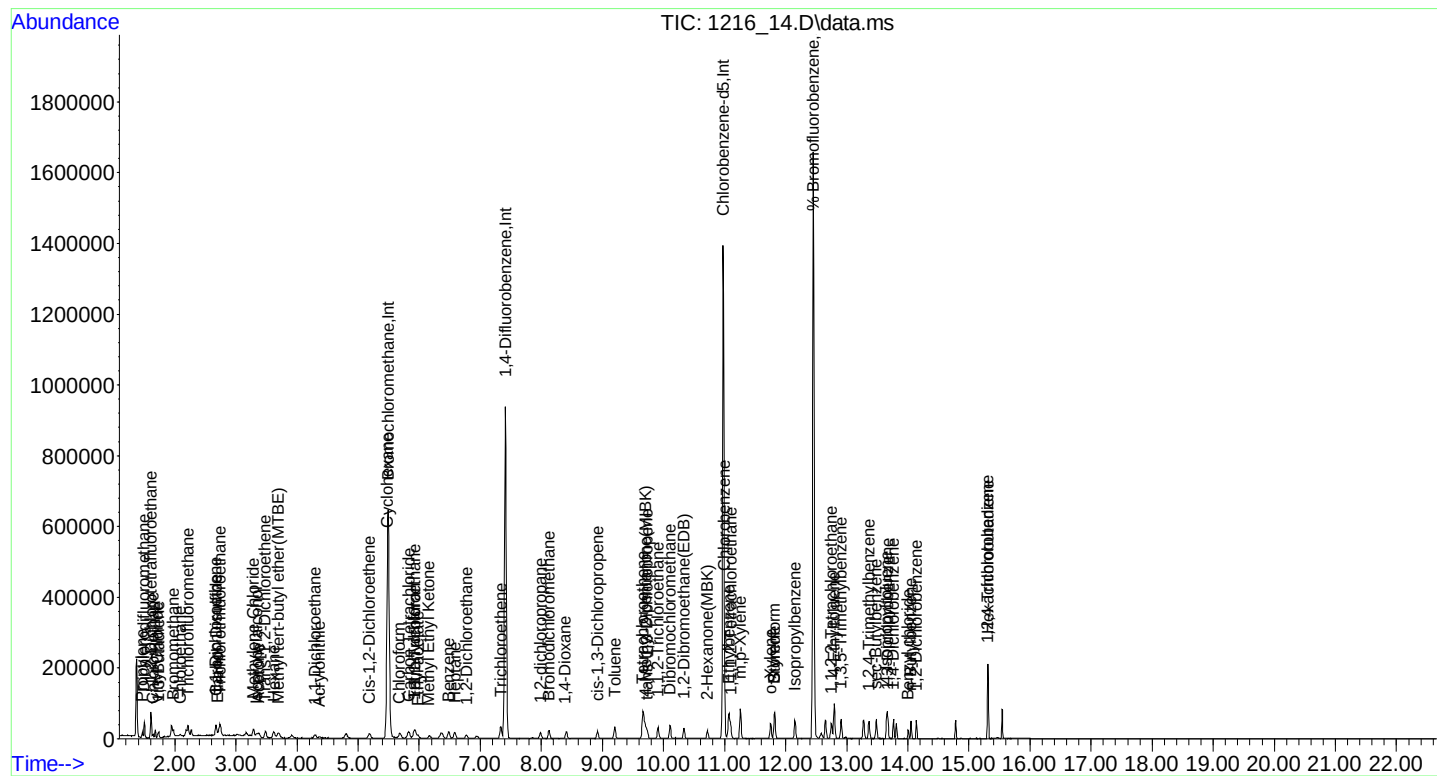
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)out of range (m>manual integration reviewed by analyst (+)signals summed

Quantitation Report (RF) (QT Reviewed)

```
Data Path   : H:\AIR2019\CHEM24\12DEC\15\  
Data File  : 1216_14.D  
Acq On     : 17 Dec 2019    4:24 am  
Operator   : Keith  
Client ID  :  
Lab ID     : ICAL 0.2  
ALS Vial   : 0.2ppb  
            : 17 Sample Multiplier: 1
```

Quant Time: Dec 17 08:05:31 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
QLast Update : Tue Dec 17 08:05:16 2019
Response via : Initial Calibration



Quantitation Report (RF) (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_15.D
 Acq On : 17 Dec 2019 4:57 am
 Operator : Keith
 Client ID : ICAL 10
 Lab ID : 10ppb
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 17 08:05:56 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:05:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.499	130	240446	10.000	ng	0.01
36) 1,4-Difluorobenzene	7.418	114	695974	10.000	ng	0.01
53) Chlorobenzene-d5	10.977	82	321252	10.000	ng	0.00
80) Bromochloromethane(sim)	5.495	130	245490	10.000	ng	# 0.00
94) 1,4-Difluorobenzene(sim)	7.414	114	766665	10.000	ng	# 0.00
104) Chlorobenzene-d5(sim)	10.980	82	343966	10.000	ng	0.00

System Monitoring Compounds

62) % Bromofluorobenzene 12.454 95 431407 9.988 ppbv 0.00
 Spiked Amount 10.000 Range 70 - 130 Recovery = 99.90%

Target Compounds

						Qvalue
2) Propylene	1.458	41	225286	11.347	ppbv	96
3) Dichlorodifluoromethane	1.492	101	91387	10.904	ppbv	99
4) Chloromethane	1.636	50	161415	8.904	ppbv	96
5) 1,2-Dichlorotetrafluor...	1.608	135	566723	9.218	ppbv	99
6) Vinyl Chloride	1.711	62	198507	8.850	ppbv	99
7) 1,3-Butadiene	1.732	54	123464	8.975	ppbv	97
8) Bromomethane	1.972	94	231995	8.903	ppbv	100
9) Chloroethane	2.088	64	71010	9.167	ppbv	99
10) Ethanol	2.690	45	39688	8.114	ppbv	91
12) Acetone	3.361	43	320423	8.978	ppbv	98
13) Trichlorofluoromethane	2.211	101	539905	8.854	ppbv	99
14) Isopropylalcohol	3.320	45	324661	9.282	ppbv	92
15) Acrylonitrile	4.364	53	120295	9.782	ppbv	98
16) 1,1-Dichloroethene	2.670	61	247923	9.587	ppbv	98
17) Methylene Chloride	3.286	49	234477	9.034	ppbv	98
20) Carbon Disulfide	2.677	76	461183	9.693	ppbv	96
21) Trichlorotrifluoroethane	2.738	101	371649	9.217	ppbv	99
22) Trans-1,2-Dichloroethene	3.484	61	308182	9.592	ppbv	99
23) 1,1-Dichloroethane	4.296	63	421110	10.054	ppbv	99
24) Methyl tert-butyl ethe...	3.675	73	557760	9.422	ppbv#	66
25) Methyl Ethyl Ketone	6.155	43	377410	9.745	ppbv	99
26) Cis-1,2-Dichloroethene	5.189	61	353899	10.577	ppbv	100
27) Hexane	3.621	57	365002	10.486	ppbv#	88
28) Chloroform	5.687	83	575508	10.426	ppbv	98
29) Ethyl acetate	5.968	43	352658	9.382	ppbv	99
30) Tetrahydrofuran	5.889	42	154461	9.320	ppbv	97
31) 1,2-Dichloroethane	6.774	62	334541	10.239	ppbv	99
32) 1,1,1-Trichloroethane	5.932	97	518095	9.672	ppbv	99
33) Benzene	6.487	78	639843	9.597	ppbv	99
34) Carbon Tetrachloride	5.831	117	629540	10.369	ppbv	99
35) Cyclohexane	5.485	56	299203	10.256	ppbv	98
37) 1,2-dichloropropane	7.987	63	277707	10.694	ppbv	96
38) Bromodichloromethane	8.130	83	628748	10.545	ppbv	100
39) Trichloroethene	7.336	130	486304	10.177	ppbv	97
41) 1,4-Dioxane	8.388	88	185164	10.356	ppbv	99
43) Heptane	6.583	43	290779	9.442	ppbv	98
44) cis-1,3-Dichloropropene	8.922	75	532821	10.940	ppbv	99
45) 4-Methyl-2-pentanone(M...	9.702	43	396700	9.359	ppbv	99
46) trans-1,3-Dichloropropene	9.738	75	374411	9.611	ppbv	98
47) 1,1,2-Trichloroethane	9.911	97	347244	9.746	ppbv	98
48) Toluene	9.204	91	918465	10.077	ppbv	99
49) Dibromochloromethane	10.106	129	792470	10.469	ppbv	99
50) 2-Hexanone(MBK)	10.716	43	482521	10.379	ppbv	99
51) 1,2-Dibromoethane(EDB)	10.337	107	649108	9.951	ppbv	100

Quantitation Report (RF) (QT Reviewed)

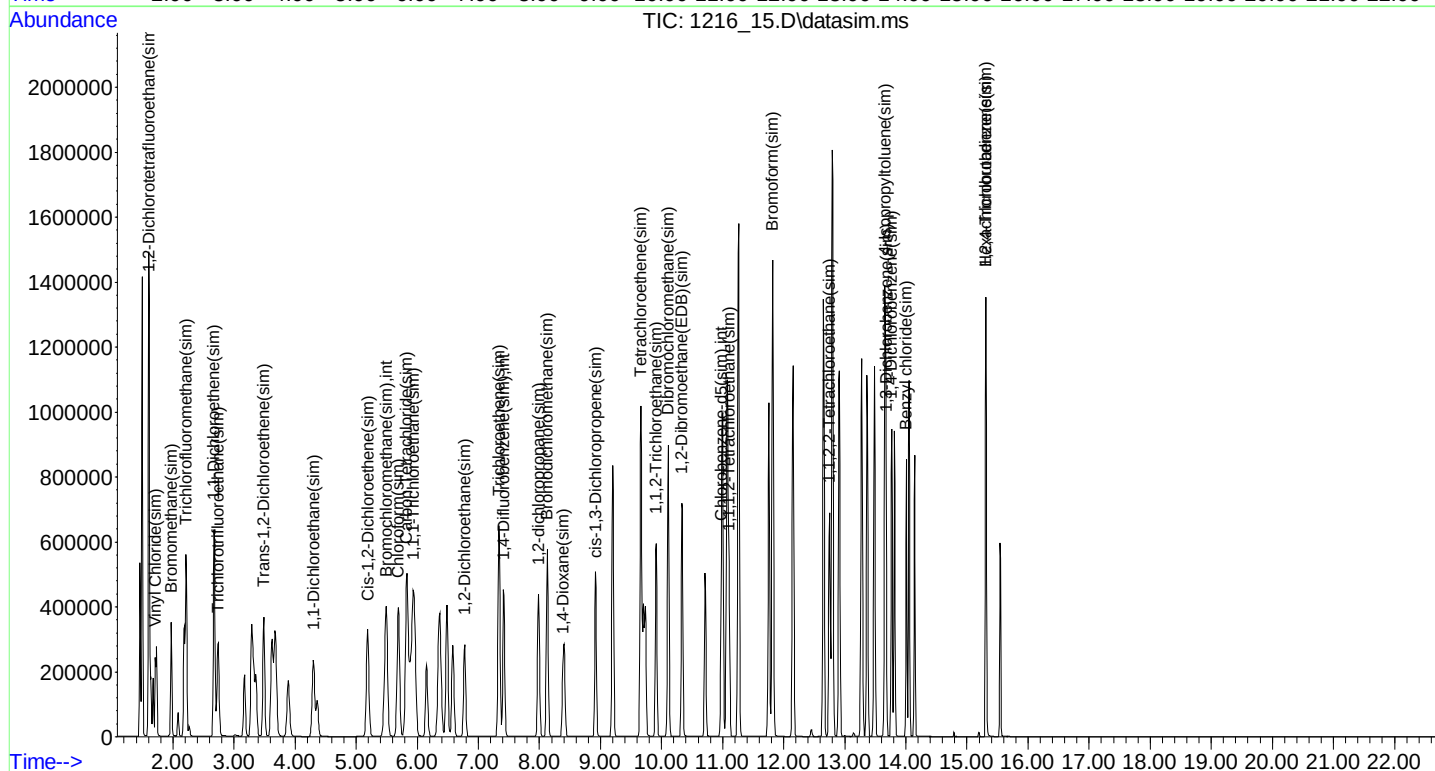
Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1216_15.D
 Acq On : 17 Dec 2019 4:57 am
 Operator : Keith
 Client ID : ICAL 10
 Lab ID : 10ppb
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 17 08:05:56 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:05:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Tetrachloroethene	9.658	166	648189	9.916	ppbv	100
54) 1,1,1,2-Tetrachloroethane	11.100	131	380696	9.424	ppbv	99
55) Chlorobenzene	10.997	112	754129	9.951	ppbv	94
56) Ethylbenzene	11.073	91	947454	9.155	ppbv	99
57) m,p-Xylene	11.258	91	1462687	18.769	ppbv	98
58) Bromoform	11.814	173	752853	10.507	ppbv	99
59) Styrene	11.821	104	578223	9.273	ppbv	99
60) 1,1,2,2-Tetrachloroethane	12.746	83	627541	9.276	ppbv	98
61) o-Xylene	11.759	91	935835	9.869	ppbv	99
64) Isopropylbenzene	12.149	105	1170797	9.418	ppbv	99
66) 4-Ethyltoluene	12.792	105	1023505	8.738	ppbv	99
67) 1,3,5-Trimethylbenzene	12.908	105	920346	9.185	ppbv	99
68) 1,2,4-Trimethylbenzene	13.363	105	848753	9.117	ppbv	99
70) Benzyl chloride	14.005	91	600698	10.510	ppbv	100
71) 1,3-Dichlorobenzene	13.674	146	559530	8.775	ppbv	99
72) 1,4-Dichlorobenzene	13.765	146	589573	9.311	ppbv	100
73) sec-Butylbenzene	13.486	105	1108432	9.029	ppbv	100
74) 4-Isopropyltoluene	13.655	119	900931	9.269	ppbv	99
75) 1,2-Dichlorobenzene	14.141	146	481859	9.237	ppbv	99
76) n-Butylbenzene	14.051	91	600108	8.993	ppbv	99
77) 1,2,4-Trichlorobenzene	15.311	180	310713	10.215	ppbv	99
79) Hexachlorobutadiene	15.311	225	416745	9.368	ppbv	100
81) 1,2-Dichlorotetrafluor...	1.608	135	565976	8.487	ppbv	99
82) Vinyl Chloride(sim)	1.714	62	216043	8.273	ppbv	99
83) Bromomethane(sim)	1.972	94	231995	7.959	ppbv	99
84) Trichlorofluoromethane...	2.214	101	559680	8.038	ppbv	98
85) 1,1,1-Trichloroethane(...	5.932	97	518183	9.644	ppbv#	99
86) Carbon Tetrachloride(sim)	5.827	117	638381	10.609	ppbv	99
87) 1,1-Dichloroethene(sim)	2.670	61	247923	8.568	ppbv	98
88) Trichlorotrifluoroetha...	2.741	101	382716	7.279	ppbv	99
89) Trans-1,2-Dichloroethe...	3.484	61	308182	9.260	ppbv	99
90) 1,1-Dichloroethane(sim)	4.299	63	453994	9.954	ppbv	99
91) Cis-1,2-Dichloroethene...	5.189	61	354246	10.848	ppbv	100
92) Chloroform(sim)	5.690	83	603444	10.782	ppbv	99
93) 1,2-Dichloroethane(sim)	6.774	62	334541	10.621	ppbv	99
95) 1,2-dichloropropane(sim)	7.987	63	277707	11.303	ppbv	96
96) Bromodichloromethane(sim)	8.126	83	653811	10.803	ppbv	99
97) Trichloroethene(sim)	7.336	130	485835	10.026	ppbv	98
98) 1,4-Dioxane(sim)	8.383	88	203032	10.391	ppbv	98
99) cis-1,3-Dichloropropen...	8.922	75	532821	11.874	ppbv	99
100) 1,1,2-Trichloroethane(...	9.914	97	370256	9.476	ppbv	99
101) Dibromochloromethane(sim)	10.106	129	790826	11.173	ppbv	99
102) 1,2-Dibromoethane(EDB)...	10.333	107	667534	9.658	ppbv	97
103) Tetrachloroethene(sim)	9.658	166	648189	9.650	ppbv	100
105) Bromoform(sim)	11.814	173	752469	11.652	ppbv	99
106) 1,1,1,2-Tetrachloroeth...	11.103	131	393063	9.326	ppbv	99
108) 1,1,2,2-Tetrachloroeth...	12.749	83	652525	8.929	ppbv	97
111) Benzyl chloride(sim)	14.005	91	600698	9.502	ppbv	100
112) 1,3-Dichlorobenzene(sim)	13.677	146	603084	8.121	ppbv	98
113) 1,4-Dichlorobenzene(sim)	13.765	146	590211	11.701	ppbv	100
115) 4-Isopropyltoluene(sim)	13.655	119	900931	12.725	ppbv	99
118) 1,2,4-Trichlorobenzene...	15.309	180	325769	11.836	ppbv	98
119) Hexachlorobutadiene(sim)	15.311	225	416215	8.057	ppbv	100

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

```
Data Path : H:\AIR2019\CHEM24\12DEC\15\  
Data File : 1216_15.D  
Acq On : 17 Dec 2019 4:57 am  
Operator : Keith  
Client ID : ICAL 10  
Lab ID : 10ppb  
ALS Vial : 18 Sample Multiplier: 1
```

[illegible]

7A
AIR CONTINUING CALIBRATION CHECK

Lab Name: Phoenix Environmental Labs Client: FPMGROUP

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCE89170

Instrument: CHEM24 Calibration Date: 12/17/19 Time: 19:21

Lab File Id: 1217_02.D Init. Calib. Date(s): 12/16/19 12/17/19

Heated Purge (Y/N): Y Init. Calib. Times: 20:37 04:57

GC Column: RTX-VMS Method File: 24AIR_1216.M

COMPOUND	RRF	RRF1	RRF MIN	%D	% D LIMITS
Propylene	0.826	0.763		7.6	30
Dichlorodifluoromethane	0.349	0.380		-8.9	30
Chloromethane	0.754	0.870		-15.4	30
1,2-Dichlorotetrafluoroethane	2.557	2.720		-6.4	30
Vinyl Chloride	0.933	0.971		-4.1	30
1,3-Butadiene	0.572	0.608		-6.3	30
Bromomethane	1.084	1.086		-0.2	30
Chloroethane	0.322	0.309		4.0	30
Ethanol	0.203	0.214		-5.4	30
Acetone	1.484	1.563		-5.3	30
Trichlorofluoromethane	2.536	2.790		-10.0	30
Isopropylalcohol	1.455	1.432		1.6	30
Acrylonitrile	0.511	0.468		8.4	30
1,1-Dichloroethene	1.076	1.100		-2.2	30
Methylene Chloride	1.079	1.010		6.4	30
Carbon Disulfide	1.979	2.042		-3.2	30
Trichlorotrifluoroethane	1.677	1.811		-8.0	30
Trans-1,2-Dichloroethene	1.336	1.290		3.4	30
1,1-Dichloroethane	1.742	1.646		5.5	30
Methyl tert-butyl ether(MTBE)	2.462	2.345		4.8	30
Methyl Ethyl Ketone	1.611	1.293		19.7	30
Cis-1,2-Dichloroethene	1.392	1.293		7.1	30
Hexane	1.448	1.136		21.5	30
Chloroform	2.296	2.116		7.8	30
Ethyl acetate	1.563	1.450		7.2	30
Tetrahydrofuran	0.689	0.633		8.1	30
1,2-Dichloroethane	1.359	1.265		6.9	30
1,1,1-Trichloroethane	2.228	2.146		3.7	30
Benzene	2.773	2.504		9.7	30
Carbon Tetrachloride	2.525	2.388		5.4	30
Cyclohexane	1.213	1.085		10.6	30
1,2-dichloropropane	0.373	0.349		6.4	30
Bromodichloromethane	0.857	0.839		2.1	30
Trichloroethene	0.687	0.647		5.8	30
1,4-Dioxane	0.257	0.217		15.6	30

(*) Recommended RRF not met (+) %D exceeds criteria % (#) %D exceeds (maximum) criteria

%D: 20% of target compounds are allowed to be above criteria %, but must be less than the (maximum) %D

(#) Maximum %D not met.

7B
AIR CONTINUING CALIBRATION CHECK

Lab Name: Phoenix Environmental Labs Client: FPMGROUP

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCE89170

Instrument: CHEM24 Calibration Date: 12/17/19 Time: 19:21

Lab File Id: 1217_02.D Init. Calib. Date(s): 12/16/19 12/17/19

Heated Purge (Y/N): Y Init. Calib. Times: 20:37 04:57

GC Column: RTX-VMS Method File: 24AIR_1216.M

COMPOUND	RRF	RRF1	RRF MIN	%D	% D LIMITS
Heptane	0.442	0.438		0.9	30
cis-1,3-Dichloropropene	0.700	0.641		8.4	30
4-Methyl-2-pentanone(MIBK)	0.609	0.639		-4.9	30
trans-1,3-Dichloropropene	0.560	0.558		0.4	30
1,1,2-Trichloroethane	0.512	0.497		2.9	30
Toluene	1.310	1.254		4.3	30
Dibromochloromethane	1.088	1.036		4.8	30
2-Hexanone(MBK)	0.668	0.615		7.9	30
1,2-Dibromoethane(EDB)	0.937	0.874		6.7	30
Tetrachloroethene	0.939	0.911		3.0	30
1,1,1,2-Tetrachloroethane	1.257	1.087		13.5	30
Chlorobenzene	2.359	1.961		16.9	30
Ethylbenzene	3.221	2.880		10.6	30
m,p-Xylene	2.426	1.797		25.9	30
Bromoform	2.230	1.870		16.1	30
Styrene	1.941	1.728		11.0	30
1,1,2,2-Tetrachloroethane	2.106	1.883		10.6	30
o-Xylene	2.952	2.479		16.0	30
Isopropylbenzene	3.870	3.284		15.1	30
4-Ethyltoluene	3.646	3.326		8.8	30
1,3,5-Trimethylbenzene	3.119	2.640		15.4	30
1,2,4-Trimethylbenzene	2.898	2.444		15.7	30
Benzyl chloride qfi	1.000	0.60		40.0 #	20
1,3-Dichlorobenzene	1.985	1.666		16.1	30
1,4-Dichlorobenzene	1.971	1.558		21.0	30
sec-Butylbenzene	3.821	3.312		13.3	30
4-Isopropyltoluene	3.026	2.577		14.8	30
1,2-Dichlorobenzene	1.624	1.320		18.7	30
n-Butylbenzene	2.077	1.731		16.7	30
1,2,4-Trichlorobenzene qfi	1.000	0.48		52.0 #	20
Hexachlorobutadiene qfi	1.000	0.81		19.0	20
1,2-Dichlorotetrafluoroethane(sim)	2.717	2.707		0.4	30
Vinyl Chloride(sim)	1.064	1.065		-0.1	30
Bromomethane(sim)	1.187	1.078		9.2	30
Trichlorofluoromethane(sim)	2.836	2.858		-0.8	30

(*) Recommended RRF not met (+) %D exceeds criteria % (#) %D exceeds (maximum) criteria

%D: 20% of target compounds are allowed to be above criteria %, but must be less than the (maximum) %D

(#) Maximum %D not met.

7B
AIR CONTINUING CALIBRATION CHECK

Lab Name: Phoenix Environmental Labs Client: FPMGROUP

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCE89170

Instrument: CHEM24 Calibration Date: 12/17/19 Time: 19:21

Lab File Id: 1217_02.D Init. Calib. Date(s): 12/16/19 12/17/19

Heated Purge (Y/N): Y Init. Calib. Times: 20:37 04:57

GC Column: RTX-VMS Method File: 24AIR_1216.M

COMPOUND	RRF	RRF1	RRF MIN	%D	% D LIMITS
1,1,1-Trichloroethane(sim)	2.189	2.135		2.5	30
Carbon Tetrachloride(sim)	2.451	2.437		0.6	30
1,1-Dichloroethene(sim)	1.179	1.095		7.1	30
Trichlorotrifluoroethane(sim)	2.142	1.858		13.3	30
Trans-1,2-Dichloroethene(sim)	1.356	1.281		5.5	30
1,1-Dichloroethane(sim)	1.858	1.784		4.0	30
Cis-1,2-Dichloroethene(sim)	1.330	1.286		3.3	30
Chloroform(sim)	2.280	2.255		1.1	30
1,2-Dichloroethane(sim)	1.283	1.259		1.9	30
1,2-dichloropropane(sim)	0.320	0.317		0.9	30
Bromodichloromethane(sim)	0.789	0.811		-2.8	30
Trichloroethene(sim)	0.632	0.588		7.0	30
1,4-Dioxane(sim) qfi	1.000	0.85		15.0	20
cis-1,3-Dichloropropene(sim)	0.585	0.583		0.3	30
1,1,2-Trichloroethane(sim)	0.510	0.485		4.9	30
Dibromochloromethane(sim)	0.923	0.941		-2.0	30
1,2-Dibromoethane(EDB)(sim)	0.902	0.858		4.9	30
Tetrachloroethene(sim)	0.876	0.825		5.8	30
Bromoform(sim)	1.878	1.713		8.8	30
1,1,1,2-Tetrachloroethane(sim)	1.225	1.058		13.6	30
m,p-Xylene(sim) qfi	2.000	1.63		18.5	20
1,1,2,2-Tetrachloroethane(sim)	2.125	1.835		13.6	30
Benzyl chloride(sim) qfi	1.000	0.74		26.0 #	20
1,3-Dichlorobenzene(sim)	2.159	1.710		20.8	30
1,4-Dichlorobenzene(sim) q	1.000	0.78		22.0 #	20
sec-Butylbenzene(sim) qfi	1.000	0.82		18.0	20
4-Isopropyltoluene(sim) qfi	1.000	0.80		20.0	20
1,2-Dichlorobenzene(sim) qfi	1.000	0.79		21.0 #	20
n-Butylbenzene(sim) qfi	1.000	0.78		22.0 #	20
1,2,4-Trichlorobenzene(sim) q	1.000	0.50		50.0 #	20
Hexachlorobutadiene(sim)	1.502	1.104		26.5	30
% Bromofluorobenzene	1.344	1.398		-4.0	30

(*) Recommended RRF not met (+) %D exceeds criteria % (#) %D exceeds (maximum) criteria

%D: 20% of target compounds are allowed to be above criteria %, but must be less than the (maximum) %D

(#) Maximum %D not met.

Evaluate Continuing Calibration Report

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_02.D
 Acq On : 17 Dec 2019 7:21 pm
 Operator : Keith
 Client ID : CCAL 1 - BFB TUNE
 Lab ID : 1ppb cc - 1ppb cc
 ALS Vial : 71 Sample Multiplier: 1

Quant Time: Dec 18 08:19:08 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

Note: Curves (l,lf,g,qf) display calculated concentration.
 Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%
1 Int	Bromochloromethane	1.000	1.000	0.0	118
2	Propylene	0.826	0.763	7.6	
3	Dichlorodifluoromethane	0.349	0.380	-8.9	
4	Chloromethane	0.754	0.870	-15.4	
5	1,2-Dichlorotetrafluoroetha	2.557	2.720	-6.4	
6	Vinyl Chloride	0.933	0.971	-4.1	
7	1,3-Butadiene	0.572	0.608	-6.3	
8	Bromomethane	1.084	1.086	-0.2	
9	Chloroethane	0.322	0.309	4.0	
10	Ethanol	0.203	0.214	-5.4	
12	Acetone	1.484	1.563	-5.3	
13	Trichlorofluoromethane	2.536	2.790	-10.0	
14	Isopropylalcohol	1.455	1.432	1.6	
15	Acrylonitrile	0.511	0.468	8.4	
16	1,1-Dichloroethene	1.076	1.100	-2.2	
17	Methylene Chloride	1.079	1.010	6.4	
20	Carbon Disulfide	1.979	2.042	-3.2	
21	Trichlorotrifluoroethane	1.677	1.811	-8.0	
22	Trans-1,2-Dichloroethene	1.336	1.290	3.4	
23	1,1-Dichloroethane	1.742	1.646	5.5	
24	Methyl tert-butyl ether(MTB)	2.462	2.345	4.8	
25	Methyl Ethyl Ketone	1.611	1.293	19.7	
26	Cis-1,2-Dichloroethene	1.392	1.293	7.1	
27	Hexane	1.448	1.136	21.5	
28	Chloroform	2.296	2.116	7.8	
29	Ethyl acetate	1.563	1.450	7.2	
30	Tetrahydrofuran	0.689	0.633	8.1	
31	1,2-Dichloroethane	1.359	1.265	6.9	
32	1,1,1-Trichloroethane	2.228	2.146	3.7	
33	Benzene	2.773	2.504	9.7	
34	Carbon Tetrachloride	2.525	2.388	5.4	
35	Cyclohexane	1.213	1.085	10.6	
36 Int	1,4-Difluorobenzene	1.000	1.000	0.0	116
37	1,2-dichloropropane	0.373	0.349	6.4	
38	Bromodichloromethane	0.857	0.839	2.1	
39	Trichloroethene	0.687	0.647	5.8	
41	1,4-Dioxane	0.257	0.217	15.6	
43	Heptane	0.442	0.438	0.9	
44	cis-1,3-Dichloropropene	0.700	0.641	8.4	
45	4-Methyl-2-pentanone(MIBK)	0.609	0.639	-4.9	
46	trans-1,3-Dichloropropene	0.560	0.558	0.4	
47	1,1,2-Trichloroethane	0.512	0.497	2.9	
48	Toluene	1.310	1.254	4.3	
49	Dibromochloromethane	1.088	1.036	4.8	
50	2-Hexanone(MBK)	0.668	0.615	7.9	
51	1,2-Dibromoethane(EDB)	0.937	0.874	6.7	
52	Tetrachloroethene	0.939	0.911	3.0	
53 Int	Chlorobenzene-d5	1.000	1.000	0.0	121
54	1,1,1,2-Tetrachloroethane	1.257	1.087	13.5	
55	Chlorobenzene	2.359	1.961	16.9	
56	Ethylbenzene	3.221	2.880	10.6	

Evaluate Continuing Calibration Report

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_02.D
 Acq On : 17 Dec 2019 7:21 pm
 Operator : Keith
 Client ID : CCAL 1 - BFB TUNE
 Lab ID : 1ppb cc - 1ppb cc
 ALS Vial : 71 Sample Multiplier: 1

Quant Time: Dec 18 08:19:08 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

Note: Curves (l, lf, g, qf) display calculated concentration.
 Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev Area%	
57	m, p-Xylene	2.426	1.797	25.9	
58	Bromoform	2.230	1.870	16.1	
59	Styrene	1.941	1.728	11.0	
60	1,1,2,2-Tetrachloroethane	2.106	1.883	10.6	
61	o-Xylene	2.952	2.479	16.0	
62	Surr % Bromofluorobenzene	1.344	1.398	-4.0	
64	Isopropylbenzene	3.870	3.284	15.1	
66	4-Ethyltoluene	3.646	3.326	8.8	
67	1,3,5-Trimethylbenzene	3.119	2.640	15.4	
68	1,2,4-Trimethylbenzene	2.898	2.444	15.7	
70	qf Benzyl chloride	1.000	0.604	39.6#	
71	1,3-Dichlorobenzene	1.985	1.666	16.1	
72	1,4-Dichlorobenzene	1.971	1.558	21.0	
73	sec-Butylbenzene	3.821	3.312	13.3	
74	4-Isopropyltoluene	3.026	2.577	14.8	
75	1,2-Dichlorobenzene	1.624	1.320	18.7	
76	n-Butylbenzene	2.077	1.731	16.7	
77	qf 1,2,4-Trichlorobenzene	1.000	0.481	51.9#	
79	qf Hexachlorobutadiene	1.000	0.808	19.2	
80	int Bromochloromethane(sim)	1.000	1.000	0.0	119
81	1,2-Dichlorotetrafluoroetha	2.717	2.707	0.4	
82	Vinyl Chloride(sim)	1.064	1.065	-0.1	
83	Bromomethane(sim)	1.187	1.078	9.2	
84	Trichlorofluoromethane(sim)	2.836	2.858	-0.8	
85	1,1,1-Trichloroethane(sim)	2.189	2.135	2.5	
86	Carbon Tetrachloride(sim)	2.451	2.437	0.6	
87	1,1-Dichloroethene(sim)	1.179	1.095	7.1	
88	Trichlorotrifluoroethane(si	2.142	1.858	13.3	
89	Trans-1,2-Dichloroethene(si	1.356	1.281	5.5	
90	1,1-Dichloroethane(sim)	1.858	1.784	4.0	
91	Cis-1,2-Dichloroethene(sim)	1.330	1.286	3.3	
92	Chloroform(sim)	2.280	2.255	1.1	
93	1,2-Dichloroethane(sim)	1.283	1.259	1.9	
94	int 1,4-Difluorobenzene(sim)	1.000	1.000	0.0	116
95	1,2-dichloropropane(sim)	0.320	0.317	0.9	
96	Bromodichloromethane(sim)	0.789	0.811	-2.8	
97	Trichloroethene(sim)	0.632	0.588	7.0	
98	qf 1,4-Dioxane(sim)	1.000	0.855	14.5	
99	cis-1,3-Dichloropropene(sim	0.585	0.583	0.3	
100	1,1,2-Trichloroethane(sim)	0.510	0.485	4.9	
101	Dibromochloromethane(sim)	0.923	0.941	-2.0	
102	1,2-Dibromoethane(EDB)(sim)	0.902	0.858	4.9	
103	Tetrachloroethene(sim)	0.876	0.825	5.8	
104	int Chlorobenzene-d5(sim)	1.000	1.000	0.0	122
105	Bromoform(sim)	1.878	1.713	8.8	
106	1,1,1,2-Tetrachloroethane(s	1.225	1.058	13.6	
107	qf m, p-Xylene(sim)	2.000	1.631	18.4	
108	1,1,2,2-Tetrachloroethane(s	2.125	1.835	13.6	
111	qf Benzyl chloride(sim)	1.000	0.739	26.1	
112	1,3-Dichlorobenzene(sim)	2.159	1.710	20.8	

Evaluate Continuing Calibration Report

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_02.D
 Acq On : 17 Dec 2019 7:21 pm
 Operator : Keith
 Client ID : CCAL 1 - BFB TUNE
 Lab ID : 1ppb cc - 1ppb cc
 ALS Vial : 71 Sample Multiplier: 1

Quant Time: Dec 18 08:19:08 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

Note: Curves (l, lf, q, qf) display calculated concentration.
 Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev Area%
113 qf	1,4-Dichlorobenzene(sim)	1.000	0.784	21.6
114 qf	sec-Butylbenzene(sim)	1.000	0.815	18.5
115 qf	4-Isopropyltoluene(sim)	1.000	0.795	20.5
116 qf	1,2-Dichlorobenzene(sim)	1.000	0.786	21.4
117 qf	n-Butylbenzene(sim)	1.000	0.776	22.4
118 qf	1,2,4-Trichlorobenzene(sim)	1.000	0.496	50.4#
119	Hexachlorobutadiene(sim)	1.502	1.104	26.5

(#)=Out of Range l=linear, lf=liner(0,0), q=quadratic, qf=quadratic(0,0)
 Laboratory Warning Limits Out = 0

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_02.D
 Acq On : 17 Dec 2019 7:21 pm
 Operator : Keith
 Client ID : CCAL 1 - BFB TUNE
 Lab ID : 1ppb cc - 1ppb cc
 ALS Vial : 71 Sample Multiplier: 1

Quant Time: Dec 18 08:19:08 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.518	130	345393	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.429	114	913163	10.000	ng	0.03
53) Chlorobenzene-d5	10.995	82	442024	10.000	ng	0.02
80) Bromochloromethane(sim)	5.521	130	347089	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.432	114	1003964	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.991	82	481298	10.000	ng	0.02

System Monitoring Compounds

62) % Bromofluorobenzene 12.464 95 617892 10.398 ppbv 0.02
 Spiked Amount 10.000 Range 70 - 130 Recovery = 104.00%

Target Compounds

						Qvalue
2) Propylene	1.471	41	26348	0.924	ppbv	96
3) Dichlorodifluoromethane	1.506	101	13119	1.090	ppbv	93
4) Chloromethane	1.650	50	30056	1.154	ppbv	98
5) 1,2-Dichlorotetrafluor...	1.615	135	93964	1.064	ppbv	99
6) Vinyl Chloride	1.725	62	33553	1.041	ppbv	98
7) 1,3-Butadiene	1.745	54	20988	1.062	ppbv	96
8) Bromomethane	1.985	94	37518	1.002	ppbv	99
9) Chloroethane	2.095	64	10677	0.959	ppbv	97
10) Ethanol	2.711	45	7395	1.052	ppbv	97
12) Acetone	3.381	43	53995	1.053	ppbv	99
13) Trichlorofluoromethane	2.225	101	96348	1.100	ppbv	97
14) Isopropylalcohol	3.347	45	49469	0.985	ppbv	99
15) Acrylonitrile	4.380	53	16173	0.916	ppbv	97
16) 1,1-Dichloroethene	2.691	61	38003	1.023	ppbv	99
17) Methylene Chloride	3.306	49	34880	0.936	ppbv	98
20) Carbon Disulfide	2.691	76	70524	1.032	ppbv	98
21) Trichlorotrifluoroethane	2.752	101	62542	1.080	ppbv	98
22) Trans-1,2-Dichloroethene	3.504	61	44563	0.966	ppbv	96
23) 1,1-Dichloroethane	4.322	63	56840	0.945	ppbv	98
24) Methyl tert-butyl ethe...	3.710	73	81010	0.953	ppbv#	66
25) Methyl Ethyl Ketone	6.181	43	44668	0.803	ppbv	97
26) Cis-1,2-Dichloroethene	5.208	61	44644	0.929	ppbv	97
27) Hexane	3.648	57	39237	0.785	ppbv	95
28) Chloroform	5.713	83	73097	0.922	ppbv	99
29) Ethyl acetate	5.994	43	50092	0.928	ppbv	99
30) Tetrahydrofuran	5.922	42	21852	0.918	ppbv	95
31) 1,2-Dichloroethane	6.792	62	43687	0.931	ppbv	98
32) 1,1,1-Trichloroethane	5.951	97	74120	0.963	ppbv	99
33) Benzene	6.505	78	86503	0.903	ppbv	99
34) Carbon Tetrachloride	5.857	117	82474	0.946	ppbv	99
35) Cyclohexane	5.511	56	37492	0.895	ppbv	96
37) 1,2-dichloropropane	8.004	63	31859	0.935	ppbv	99
38) Bromodichloromethane	8.148	83	76624	0.979	ppbv	97
39) Trichloroethene	7.354	130	59071	0.942	ppbv	99
41) 1,4-Dioxane	8.413	88	19815	0.845	ppbv	96
43) Heptane	6.607	43	40023	0.991	ppbv	98
44) cis-1,3-Dichloropropene	8.933	75	58541	0.916	ppbv	98
45) 4-Methyl-2-pentanone(M...	9.720	43	58321	1.049	ppbv	96
46) trans-1,3-Dichloropropene	9.749	75	50965	0.997	ppbv	98
47) 1,1,2-Trichloroethane	9.929	97	45396	0.971	ppbv	99
48) Toluene	9.222	91	114502	0.958	ppbv	99
49) Dibromochloromethane	10.124	129	94597	0.952	ppbv	99
50) 2-Hexanone(MBK)	10.734	43	56129	0.920	ppbv	96
51) 1,2-Dibromoethane(EDB)	10.348	107	79781	0.932	ppbv	99

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_02.D
 Acq On : 17 Dec 2019 7:21 pm
 Operator : Keith
 Client ID : CCAL 1 - BFB TUNE
 Lab ID : 1ppb cc - 1ppb cc
 ALS Vial : 71 Sample Multiplier: 1

Quant Time: Dec 18 08:19:08 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.677	166	83170	0.970	ppbv	99
54)	1,1,1,2-Tetrachloroethane	11.118	131	48062	0.865	ppbv	100
55)	Chlorobenzene	11.015	112	86687	0.831	ppbv	97
56)	Ethylbenzene	11.091	91	127317	0.894	ppbv	99
57)	m,p-Xylene	11.276	91	198527	1.851	ppbv	99
58)	Bromoform	11.832	173	82644	0.838	ppbv	99
59)	Styrene	11.839	104	76403	0.891	ppbv	97
60)	1,1,2,2-Tetrachloroethane	12.763	83	83229	0.894	ppbv	96
61)	o-Xylene	11.770	91	109573	0.840	ppbv	98
64)	Isopropylbenzene	12.166	105	145145	0.849	ppbv	99
66)	4-Ethyltoluene	12.808	105	147022	0.912	ppbv	99
67)	1,3,5-Trimethylbenzene	12.919	105	116688	0.846	ppbv	98
68)	1,2,4-Trimethylbenzene	13.379	105	108038	0.843	ppbv	99
70)	Benzyl chloride	14.015	91	48375	0.604	ppbv	99
71)	1,3-Dichlorobenzene	13.684	146	73639	0.839	ppbv	98
72)	1,4-Dichlorobenzene	13.775	146	68867	0.790	ppbv	99
73)	sec-Butylbenzene	13.496	105	146413	0.867	ppbv	99
74)	4-Isopropyltoluene	13.665	119	113928	0.852	ppbv	99
75)	1,2-Dichlorobenzene	14.151	146	58328	0.813	ppbv	99
76)	n-Butylbenzene	14.061	91	76523	0.833	ppbv	99
77)	1,2,4-Trichlorobenzene	15.314	180	21604	0.481	ppbv	95
79)	Hexachlorobutadiene	15.319	225	53243	0.808	ppbv	100
81)	1,2-Dichlorotetrafluor...	1.615	135	93964	0.997	ppbv	99
82)	Vinyl Chloride(sim)	1.728	62	36969	1.001	ppbv	100
83)	Bromomethane(sim)	1.985	94	37425	0.908	ppbv	98
84)	Trichlorofluoromethane...	2.228	101	99200	1.008	ppbv	99
85)	1,1,1-Trichloroethane(...	5.951	97	74120	0.976	ppbv#	99
86)	Carbon Tetrachloride(sim)	5.853	117	84569	0.994	ppbv	100
87)	1,1-Dichloroethene(sim)	2.691	61	38003	0.929	ppbv	99
88)	Trichlorotrifluoroetha...	2.755	101	64497	0.868	ppbv	100
89)	Trans-1,2-Dichloroethe...	3.504	61	44475	0.945	ppbv	96
90)	1,1-Dichloroethane(sim)	4.325	63	61936	0.960	ppbv	100
91)	Cis-1,2-Dichloroethene...	5.208	61	44644	0.967	ppbv	97
92)	Chloroform(sim)	5.708	83	78267	0.989	ppbv	99
93)	1,2-Dichloroethane(sim)	6.792	62	43687	0.981	ppbv	98
95)	1,2-dichloropropane(sim)	8.004	63	31859	0.990	ppbv	99
96)	Bromodichloromethane(sim)	8.144	83	81414	1.027	ppbv	99
97)	Trichloroethene(sim)	7.354	130	59071	0.931	ppbv	99
98)	1,4-Dioxane(sim)	8.409	88	22188	0.855	ppbv#	93
99)	cis-1,3-Dichloropropen...	8.933	75	58541	0.996	ppbv	98
100)	1,1,2-Trichloroethane(...	9.925	97	48738	0.953	ppbv	99
101)	Dibromochloromethane(sim)	10.124	129	94450	1.019	ppbv	100
102)	1,2-Dibromoethane(EDB)...	10.351	107	86159	0.952	ppbv	100
103)	Tetrachloroethene(sim)	9.677	166	82824	0.942	ppbv	98
105)	Bromoform(sim)	11.832	173	82438	0.912	ppbv	99
106)	1,1,1,2-Tetrachloroeth...	11.114	131	50921	0.863	ppbv	100
107)	m,p-Xylene(sim)	11.276	91	198537	1.631	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.759	83	88329	0.864	ppbv	99
111)	Benzyl chloride(sim)	14.015	91	48375	0.739	ppbv	99
112)	1,3-Dichlorobenzene(sim)	13.681	146	82299	0.792	ppbv	100
113)	1,4-Dichlorobenzene(sim)	13.775	146	68867	0.784	ppbv	99
114)	sec-Butylbenzene(sim)	13.499	105	159418	0.815	ppbv	99
115)	4-Isopropyltoluene(sim)	13.665	119	113928	0.795	ppbv	99
116)	1,2-Dichlorobenzene(sim)	14.148	146	64874	0.786	ppbv	100
117)	n-Butylbenzene(sim)	14.061	91	76523	0.776	ppbv	99
118)	1,2,4-Trichlorobenzene...	15.317	180	24679	0.496	ppbv	97
119)	Hexachlorobutadiene(sim)	15.319	225	53150	0.735	ppbv	99

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_02.D
Acq On : 17 Dec 2019 7:21 pm
Operator : Keith
Client ID : CCAL 1 - BFB TUNE
Lab ID : 1ppb cc - 1ppb cc
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Dec 18 08:19:08 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration

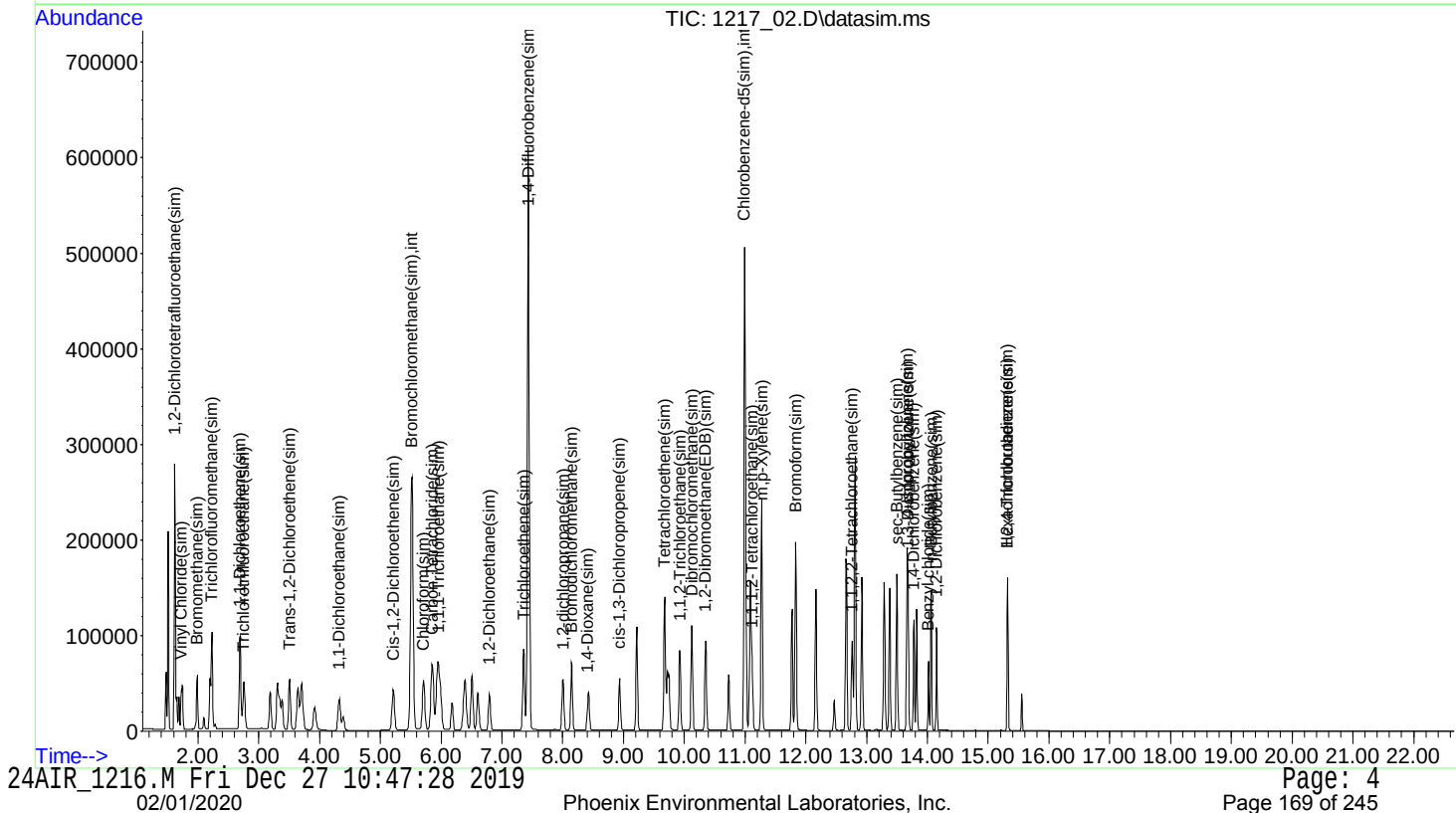
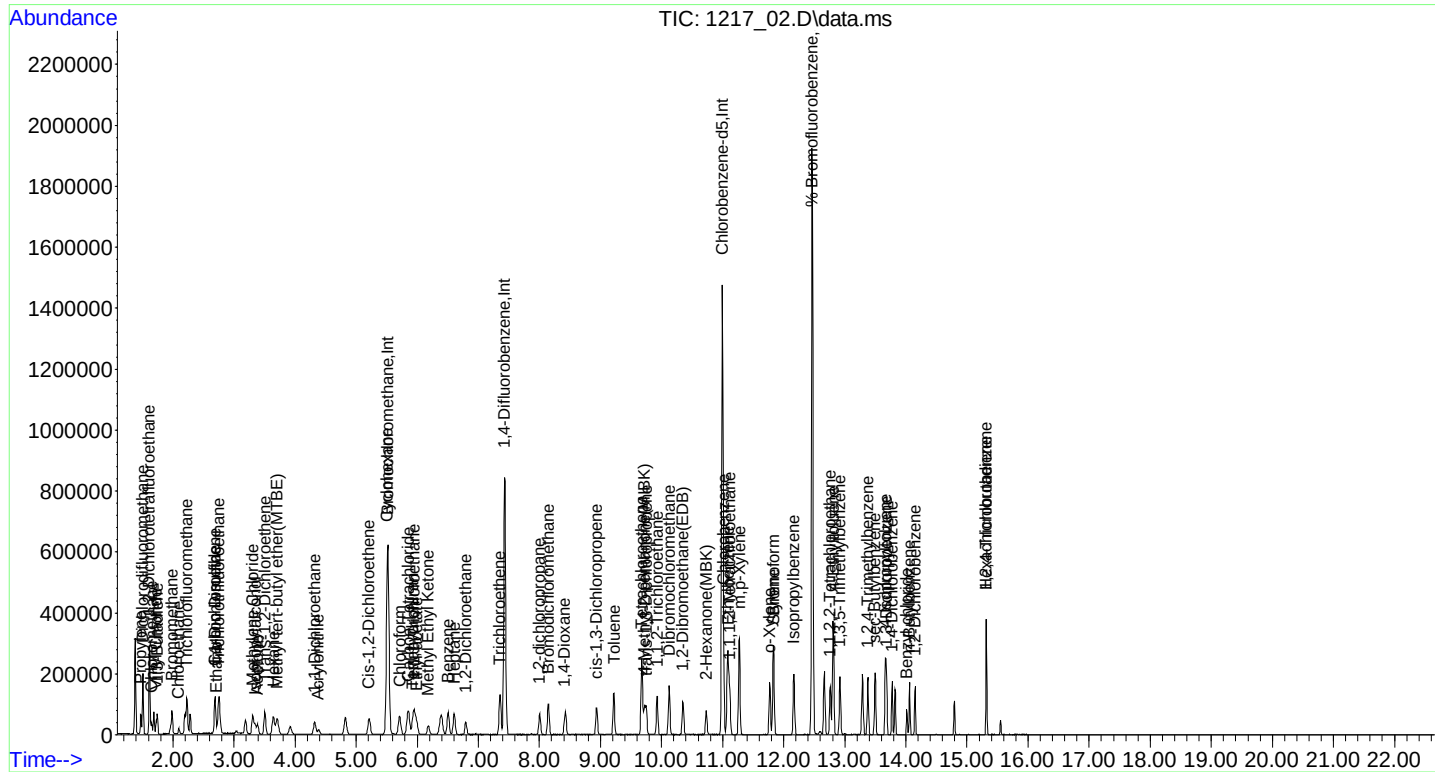
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)out of range (m>manual integration reviewed by analyst (+)signals summed

(QT Reviewed)

```
Data Path : H:\AIR2019\CHEM24\12DEC\15\  
Data File : 1217_02.D  
Acq On : 17 Dec 2019 7:21 pm  
Operator : Keith  
Client ID : CCAL 1 - BFB TUNE  
Lab ID : 1ppb cc - 1ppb cc  
ALS Vial : 71 Sample Multiplier: 1
```

Quant Time: Dec 18 08:19:08 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
QLast Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>	CE89256 LCS
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89256 LCS</u>	
Canister:	<u>LCS</u>	Lab File ID:	<u>1217_04.D</u>	
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>	Date Received:
				<u>12/17/19</u>
Purge Volume	<u>200</u>	(cc)	Date Analyzed:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Dilution Factor:	<u>1</u>	

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	11.4		0.581	0.581	r
75-71-8	Dichlorodifluoromethane	10.4		0.202	0.202	r
74-87-3	Chloromethane	8.44		0.485	0.485	r
76-14-2	1,2-Dichlorotetrafluoroethane	8.91		0.143	0.143	r
75-01-4	Vinyl Chloride	8.74		0.078	0.078	r
106-99-0	1,3-Butadiene	8.73		0.452	0.452	r
74-83-9	Bromomethane	9.04		0.258	0.258	r
75-00-3	Chloroethane	9.17		0.379	0.379	r
64-17-5	Ethanol	7.05		0.531	0.531	r
67-64-1	Acetone	9.25		0.421	0.421	r
75-69-4	Trichlorofluoromethane	9.13		0.178	0.178	r
67-63-0	Isopropylalcohol	8.78		0.407	0.407	r
107-13-1	Acrylonitrile	9.35		0.461	0.461	r
75-35-4	1,1-Dichloroethene	9.81		0.051	0.051	r
75-09-2	Methylene Chloride	8.93		0.864	0.864	r
75-15-0	Carbon Disulfide	10.0		0.321	0.321	r
76-13-1	Trichlorotrifluoroethane	9.69		0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene	9.53		0.252	0.252	r
75-34-3	1,1-Dichloroethane	10.3		0.247	0.247	r
1634-04-4	Methyl tert-butyl ether(MTBE)	9.13		0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	9.36		0.339	0.339	r
156-59-2	Cis-1,2-Dichloroethene	10.6		0.051	0.051	r
110-54-3	Hexane	10.3		0.284	0.284	r
67-66-3	Chloroform	10.4		0.205	0.205	r
141-78-6	Ethyl acetate	10.1		0.278	0.278	r
109-99-9	Tetrahydrofuran	9.57		0.339	0.339	r
107-06-2	1,2-Dichloroethane	10.3		0.247	0.247	r
71-55-6	1,1,1-Trichloroethane	9.55		0.183	0.183	r
71-43-2	Benzene	9.55		0.313	0.313	r
56-23-5	Carbon Tetrachloride	10.3		0.032	0.032	r
110-82-7	Cyclohexane	10.1		0.291	0.291	r
78-87-5	1,2-dichloropropane	11.0		0.217	0.217	r
75-27-4	Bromodichloromethane	10.4		0.149	0.149	r
79-01-6	Trichloroethene	10.0		0.037	0.037	r
123-91-1	1,4-Dioxane	10.3		0.278	0.278	r
142-82-5	Heptane	9.60		0.244	0.244	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89256 LCS</u>
Canister:	<u>LCS</u>	Lab File ID:	<u>1217_04.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
		Date Received:	<u>12/17/19</u>
Purge Volume	<u>200</u> (cc)	Date Analyzed:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
10061-01-5	cis-1,3-Dichloropropene	10.5		0.220	0.220	r
108-10-1	4-Methyl-2-pentanone(MIBK)	9.59		0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	9.56		0.220	0.220	r
79-00-5	1,1,2-Trichloroethane	9.67		0.183	0.183	r
108-88-3	Toluene	10.2		0.266	0.266	r
124-48-1	Dibromochloromethane	10.2		0.117	0.117	r
591-78-6	2-Hexanone(MBK)	10.6		0.244	0.244	r
106-93-4	1,2-Dibromoethane(EDB)	9.78		0.130	0.130	r
127-18-4	Tetrachloroethene	9.60		0.037	0.037	r
630-20-6	1,1,1,2-Tetrachloroethane	8.43		0.146	0.146	r
108-90-7	Chlorobenzene	8.86		0.217	0.217	r
100-41-4	Ethylbenzene	8.40		0.230	0.230	r
179601-23-1	m,p-Xylene	17.3		0.230	0.230	r
75-25-2	Bromoform	8.56		0.097	0.097	r
100-42-5	Styrene	8.43		0.235	0.235	r
79-34-5	1,1,2,2-Tetrachloroethane	8.45		0.146	0.146	r
95-47-6	o-Xylene	9.02		0.230	0.230	r
98-82-8	Isopropylbenzene	8.46		0.204	0.204	r
622-96-8	4-Ethyltoluene	7.89		0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	8.31		0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	8.26		0.204	0.204	r
100-44-7	Benzyl chloride	8.60		0.193	0.193	r
541-73-1	1,3-Dichlorobenzene	7.94		0.166	0.166	r
106-46-7	1,4-Dichlorobenzene	8.35		0.166	0.166	r
135-98-8	sec-Butylbenzene	8.11		0.182	0.182	r
99-87-6	4-Isopropyltoluene	8.11		0.182	0.182	r
95-50-1	1,2-Dichlorobenzene	8.41		0.166	0.166	r
104-51-8	n-Butylbenzene	8.09		0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene	6.34		0.135	0.135	r
87-68-3	Hexachlorobutadiene	7.50		0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_04.D
 Acq On : 17 Dec 2019 8:29 pm
 Operator : Keith
 Client ID : CE89256 LCS
 Lab ID : CE89256 LCS
 ALS Vial : 73 Sample Multiplier: 1

Quant Time: Dec 18 08:19:18 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.525	130	247763	10.000	ng	0.04
36) 1,4-Difluorobenzene	7.436	114	703692	10.000	ng	0.03
53) Chlorobenzene-d5	10.994	82	357747	10.000	ng	0.02
80) Bromochloromethane(sim)	5.521	130	252026	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.439	114	778221	10.000	ng	# 0.03
104) Chlorobenzene-d5(sim)	10.990	82	387960	10.000	ng	0.02

System Monitoring Compounds

62) % Bromofluorobenzene 12.471 95 531892 11.060 ppbv 0.02
 Spiked Amount 10.000 Range 70 - 130 Recovery = 110.60%

Target Compounds

Compound	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	1.471	41	233894	11.433	ppbv	96
3) Dichlorodifluoromethane	1.506	101	89848	10.404	ppbv	98
4) Chloromethane	1.649	50	157716	8.443	ppbv	97
5) 1,2-Dichlorotetrafluor...	1.615	135	564300	8.908	ppbv	99
6) Vinyl Chloride	1.725	62	201887	8.735	ppbv	100
7) 1,3-Butadiene	1.745	54	123800	8.733	ppbv	96
8) Bromomethane	1.985	94	242593	9.035	ppbv	99
9) Chloroethane	2.102	64	73208	9.171	ppbv	96
10) Ethanol	2.704	45	35517	7.047	ppbv#	82
12) Acetone	3.374	43	340048	9.247	ppbv	99
13) Trichlorofluoromethane	2.232	101	573586	9.129	ppbv	98
14) Isopropylalcohol	3.333	45	316275	8.775	ppbv	100
15) Acrylonitrile	4.385	53	118474	9.350	ppbv	98
16) 1,1-Dichloroethene	2.690	61	261375	9.809	ppbv	98
17) Methylene Chloride	3.306	49	238870	8.932	ppbv	99
20) Carbon Disulfide	2.690	76	490342	10.001	ppbv	96
21) Trichlorotrifluoroethane	2.759	101	402726	9.693	ppbv	99
22) Trans-1,2-Dichloroethene	3.504	61	315455	9.528	ppbv	97
23) 1,1-Dichloroethane	4.322	63	443238	10.270	ppbv	98
24) Methyl tert-butyl ethe...	3.696	73	556755	9.128	ppbv#	2
25) Methyl Ethyl Ketone	6.174	43	373369	9.356	ppbv	98
26) Cis-1,2-Dichloroethene	5.215	61	364384	10.569	ppbv	99
27) Hexane	3.648	57	369401	10.299	ppbv	90
28) Chloroform	5.713	83	591280	10.395	ppbv	99
29) Ethyl acetate	5.987	43	392367	10.130	ppbv	100
30) Tetrahydrofuran	5.907	42	163347	9.565	ppbv	98
31) 1,2-Dichloroethane	6.799	62	346611	10.295	ppbv	99
32) 1,1,1-Trichloroethane	5.958	97	527257	9.552	ppbv	99
33) Benzene	6.511	78	656029	9.549	ppbv	100
34) Carbon Tetrachloride	5.857	117	641723	10.258	ppbv	99
35) Cyclohexane	5.511	56	302513	10.063	ppbv	98
37) 1,2-dichloropropane	8.004	63	288301	10.980	ppbv	96
38) Bromodichloromethane	8.148	83	625737	10.380	ppbv	99
39) Trichloroethene	7.354	130	484279	10.024	ppbv	99
41) 1,4-Dioxane	8.399	88	186087	10.294	ppbv	99
43) Heptane	6.607	43	298918	9.600	ppbv	100
44) cis-1,3-Dichloropropene	8.933	75	517324	10.505	ppbv	99
45) 4-Methyl-2-pentanone(M...	9.720	43	410974	9.589	ppbv	99
46) trans-1,3-Dichloropropene	9.749	75	376619	9.562	ppbv	98
47) 1,1,2-Trichloroethane	9.929	97	348212	9.666	ppbv	98
48) Toluene	9.215	91	940597	10.207	ppbv	99
49) Dibromochloromethane	10.124	129	780016	10.192	ppbv	99
50) 2-Hexanone(MBK)	10.727	43	496750	10.568	ppbv	99
51) 1,2-Dibromoethane(EDB)	10.348	107	645194	9.782	ppbv	99

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_04.D
 Acq On : 17 Dec 2019 8:29 pm
 Operator : Keith
 Client ID : CE89256 LCS
 Lab ID : CE89256 LCS
 ALS Vial : 73 Sample Multiplier: 1

Quant Time: Dec 18 08:19:18 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52)	Tetrachloroethene	9.677	166	634325	9.597	ppbv	99
54)	1,1,1,2-Tetrachloroethane	11.118	131	379233	8.430	ppbv	100
55)	Chlorobenzene	11.015	112	747398	8.856	ppbv	95
56)	Ethylbenzene	11.091	91	968420	8.403	ppbv	99
57)	m,p-Xylene	11.276	91	1502899	17.318	ppbv	99
58)	Bromoform	11.832	173	682780	8.557	ppbv	99
59)	Styrene	11.838	104	585471	8.431	ppbv	100
60)	1,1,2,2-Tetrachloroethane	12.763	83	636710	8.451	ppbv	97
61)	o-Xylene	11.770	91	952431	9.019	ppbv	99
64)	Isopropylbenzene	12.166	105	1170732	8.457	ppbv	99
66)	4-Ethyltoluene	12.808	105	1029128	7.890	ppbv	99
67)	1,3,5-Trimethylbenzene	12.918	105	927000	8.307	ppbv	100
68)	1,2,4-Trimethylbenzene	13.379	105	856630	8.263	ppbv	100
70)	Benzyl chloride	14.015	91	556697	8.598	ppbv	100
71)	1,3-Dichlorobenzene	13.684	146	564116	7.944	ppbv	99
72)	1,4-Dichlorobenzene	13.775	146	589001	8.353	ppbv	100
73)	sec-Butylbenzene	13.496	105	1108408	8.108	ppbv	100
74)	4-Isopropyltoluene	13.665	119	877924	8.111	ppbv	99
75)	1,2-Dichlorobenzene	14.151	146	488450	8.408	ppbv	100
76)	n-Butylbenzene	14.060	91	601098	8.089	ppbv	99
77)	1,2,4-Trichlorobenzene	15.314	180	221754	6.337	ppbv	100
79)	Hexachlorobutadiene	15.319	225	372006	7.496	ppbv	100
81)	1,2-Dichlorotetrafluor...	1.615	135	564163	8.240	ppbv	99
82)	Vinyl Chloride(sim)	1.728	62	217438	8.111	ppbv	99
83)	Bromomethane(sim)	1.985	94	242593	8.107	ppbv	99
84)	Trichlorofluoromethane...	2.228	101	575443	8.050	ppbv	98
85)	1,1,1-Trichloroethane...	5.958	97	527877	9.570	ppbv#	99
86)	Carbon Tetrachloride(sim)	5.852	117	649862	10.520	ppbv	99
87)	1,1-Dichloroethene(sim)	2.690	61	261375	8.799	ppbv	98
88)	Trichlorotrifluoroetha...	2.755	101	408837	7.574	ppbv	99
89)	Trans-1,2-Dichloroethe...	3.504	61	315455	9.232	ppbv	97
90)	1,1-Dichloroethane(sim)	4.325	63	478709	10.224	ppbv	100
91)	Cis-1,2-Dichloroethene...	5.215	61	364552	10.874	ppbv	98
92)	Chloroform(sim)	5.716	83	621129	10.810	ppbv	99
93)	1,2-Dichloroethane(sim)	6.799	62	346611	10.719	ppbv	99
95)	1,2-dichloropropane(sim)	8.004	63	288301	11.560	ppbv	96
96)	Bromodichloromethane(sim)	8.144	83	653877	10.643	ppbv	99
97)	Trichloroethene(sim)	7.354	130	483907	9.838	ppbv	99
98)	1,4-Dioxane(sim)	8.402	88	204698	10.320	ppbv	100
99)	cis-1,3-Dichloropropen...	8.933	75	517324	11.358	ppbv	99
100)	1,1,2-Trichloroethane(...)	9.925	97	372126	9.383	ppbv	100
101)	Dibromochloromethane(sim)	10.124	129	778968	10.842	ppbv	99
102)	1,2-Dibromoethane(EDB)...	10.351	107	670167	9.552	ppbv	98
103)	Tetrachloroethene(sim)	9.677	166	633169	9.286	ppbv	99
105)	Bromoform(sim)	11.832	173	682086	9.364	ppbv	99
106)	1,1,1,2-Tetrachloroeth...	11.114	131	393747	8.283	ppbv	99
107)	m,p-Xylene(sim)	11.276	91	1505082	25.197	ppbv	99
108)	1,1,2,2-Tetrachloroeth...	12.759	83	664877	8.066	ppbv	97
111)	Benzyl chloride(sim)	14.015	91	556697	8.137	ppbv	100
112)	1,3-Dichlorobenzene(sim)	13.687	146	609394	7.276	ppbv	98
113)	1,4-Dichlorobenzene(sim)	13.775	146	590115	9.990	ppbv	100
114)	sec-Butylbenzene(sim)	13.499	105	1182560	11.924	ppbv	99
115)	4-Isopropyltoluene(sim)	13.665	119	877924	9.964	ppbv	99
116)	1,2-Dichlorobenzene(sim)	14.154	146	524575	11.912	ppbv	99
117)	n-Butylbenzene(sim)	14.060	91	601098	13.436	ppbv	99
118)	1,2,4-Trichlorobenzene...	15.312	180	237132	6.756	ppbv	99
119)	Hexachlorobutadiene(sim)	15.319	225	371772	6.380	ppbv	99

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_04.D
Acq On : 17 Dec 2019 8:29 pm
Operator : Keith
Client ID : CE89256 LCS
Lab ID : CE89256 LCS
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Dec 18 08:19:18 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration

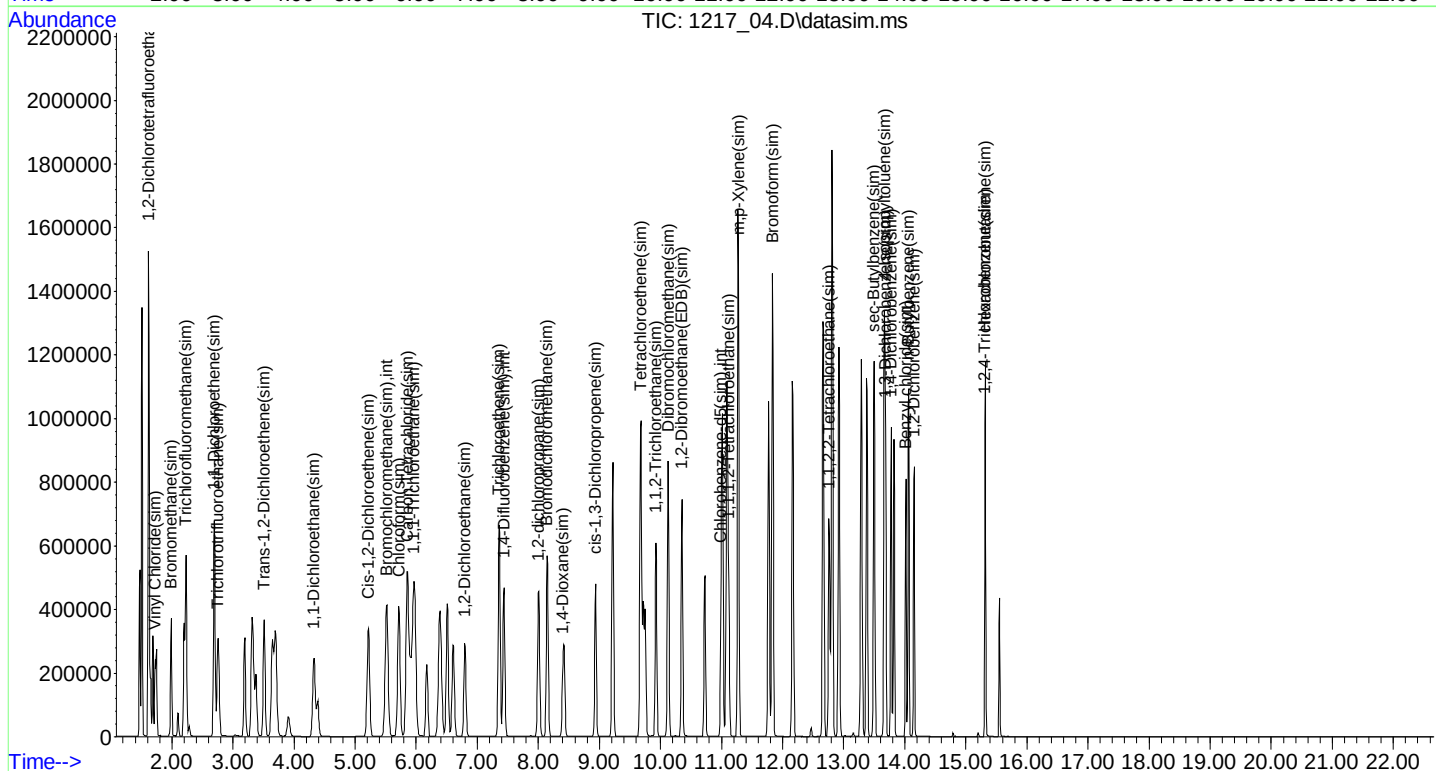
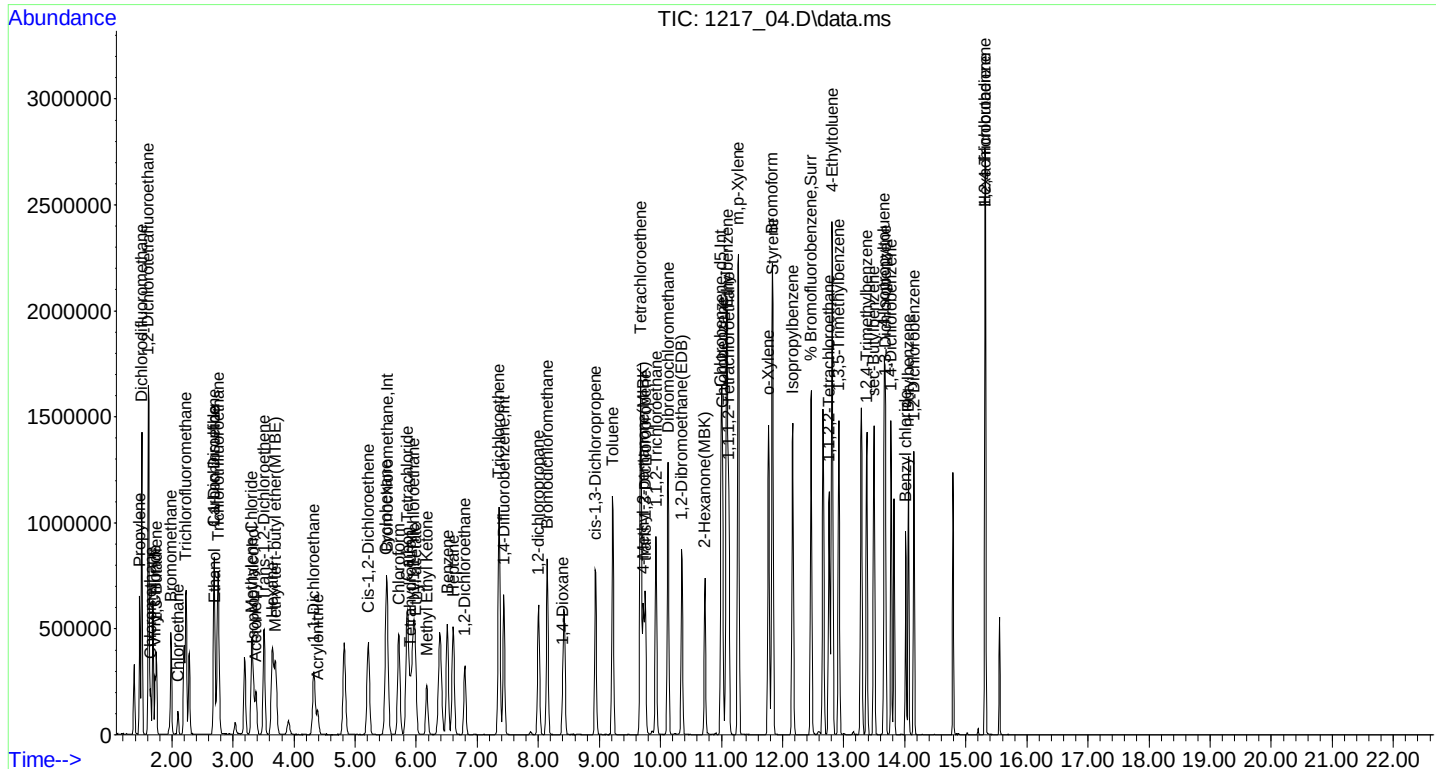
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#)out of range (m>manual integration reviewed by analyst (+)signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_04.D
 Acq On : 17 Dec 2019 8:29 pm
 Operator : Keith
 Client ID : CE89256 LCS
 Lab ID : CE89256 LCS
 ALS Vial : 73 Sample Multiplier: 1

Quant Time: Dec 18 08:19:18 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89256</u>
Canister:	<u>28601</u>	Lab File ID:	<u>1217_07.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
		Date Received:	<u>12/17/19</u>
Purge Volume	<u>200</u> (cc)	Date Analyzed:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	1.21		0.202	0.202	r
74-87-3	Chloromethane	0.540		0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	35.9	S	0.531	0.531	r
67-64-1	Acetone	6.60	S	0.421	0.421	r
75-69-4	Trichlorofluoromethane	0.253		0.178	0.178	r
67-63-0	Isopropylalcohol	7.75	S	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
156-59-2	Cis-1,2-Dichloroethene	1.04		0.051	0.051	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.305		0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
79-01-6	Trichloroethene	0.708		0.037	0.037	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.221	U	0.221	0.221	r
108-88-3	Toluene	0.353		0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
127-18-4	Tetrachloroethene	53.0	E	0.037	0.037	
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.215		0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>	CE89256 QC
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89256</u>	
Canister:	<u>28601</u>	Lab File ID:	<u>1217_07.D</u>	
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>	Date Received:
				<u>12/17/19</u>
Purge Volume	<u>200</u> (cc)	Date Analyzed:	<u>12/17/19</u>	
Matrix:	<u>AIR</u>	Dilution Factor:	<u>1</u>	

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r
56-23-5	Carbon Tetrachloride(sim)	0.076		0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.221	U	0.221	0.221	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.118	U	0.118	0.118	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_07.D
 Acq On : 17 Dec 2019 10:06 pm
 Operator : Keith
 Client ID : CE89256 QC
 Lab ID : CE89256 QC
 ALS Vial : 76 Sample Multiplier: 1

Quant Time: Dec 18 08:35:37 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

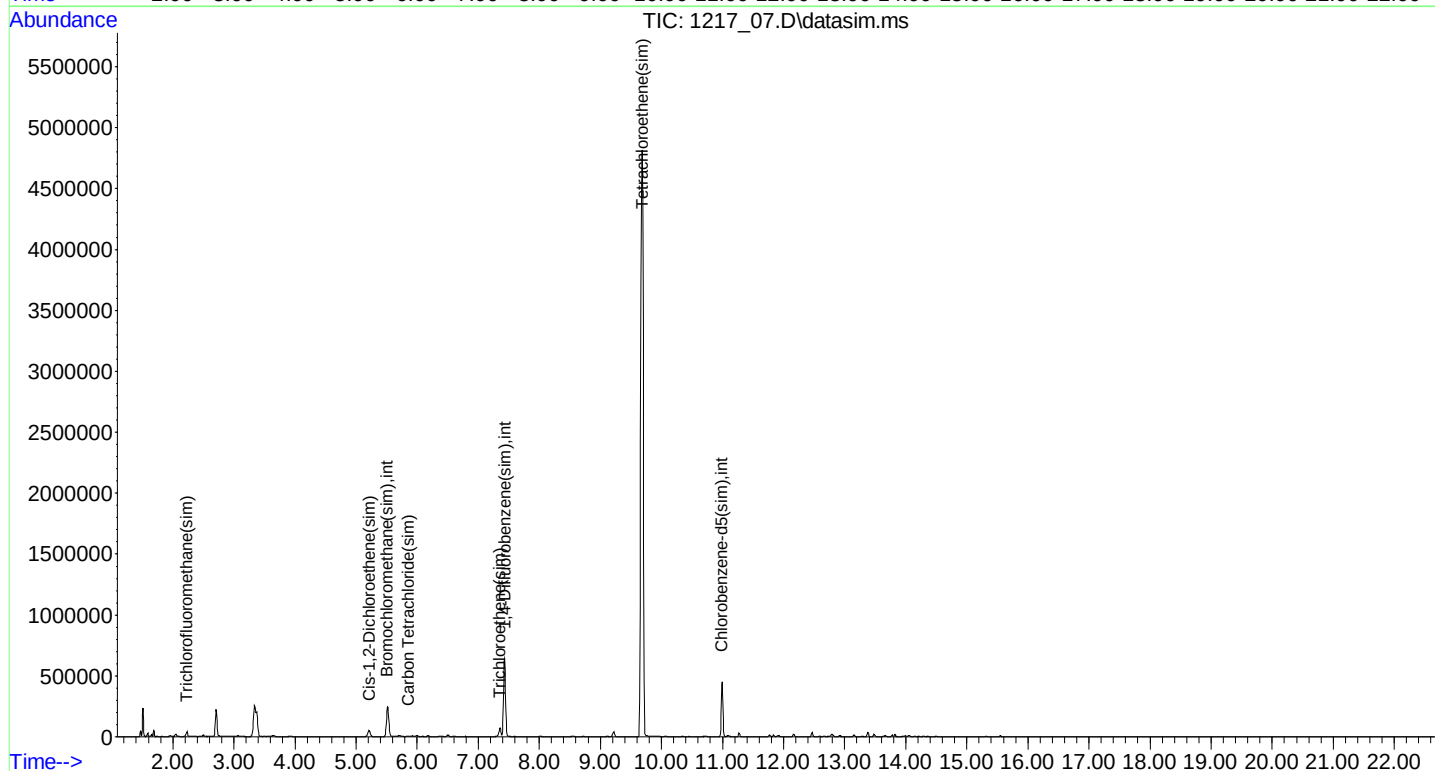
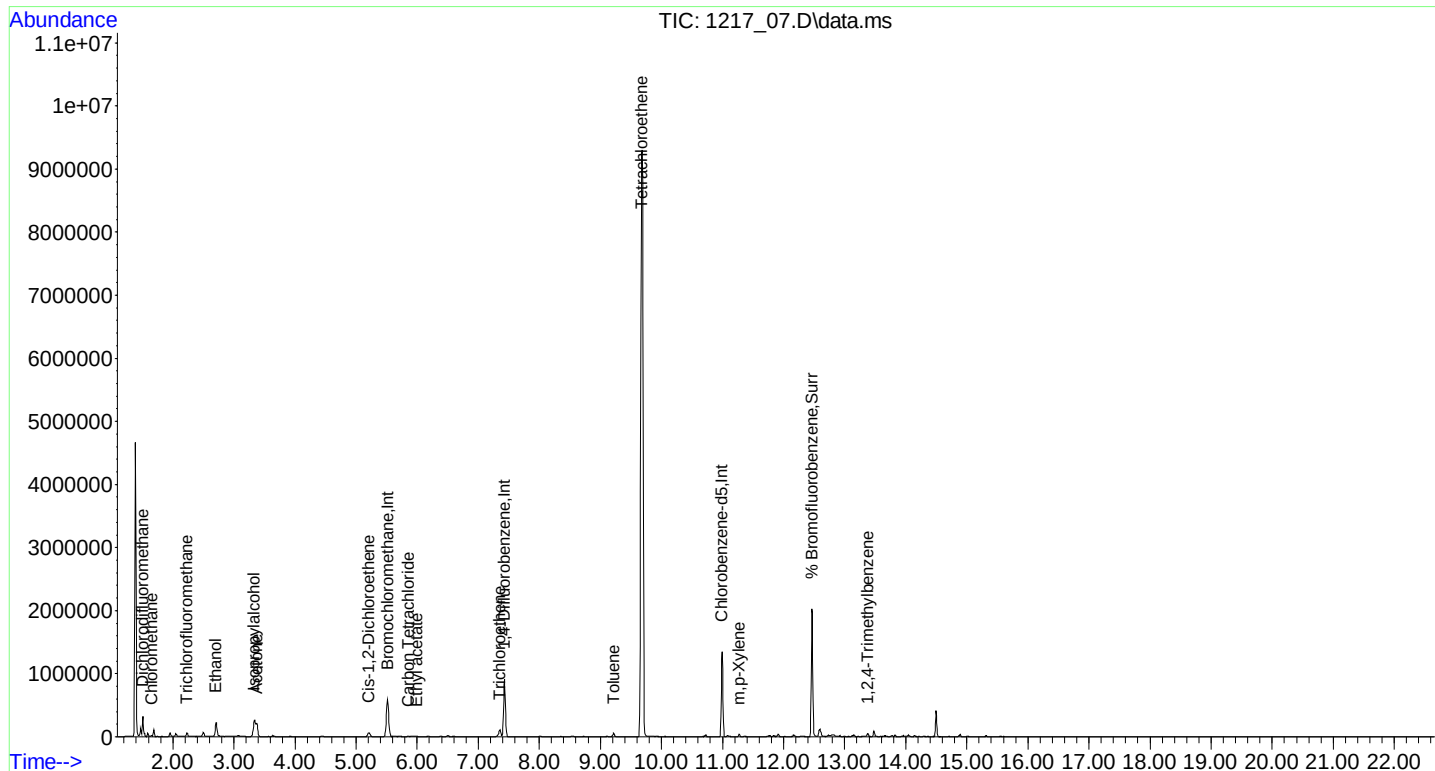
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.518	130	356953	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.429	114	976353	10.000	ng	0.03
53) Chlorobenzene-d5	10.995	82	421927	10.000	ng	0.02
80) Bromochloromethane(sim)	5.514	130	360308	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.432	114	1074080	10.000	ng	# 0.03
104) Chlorobenzene-d5(sim)	10.991	82	460800	10.000	ng	0.02
System Monitoring Compounds						
62) % Bromofluorobenzene	12.464	95	666110	11.744	ppbv	0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	117.40%
Target Compounds						
					Qvalue	
3) Dichlorodifluoromethane	1.506	101	15037	1.209	ppbv#	88
4) Chloromethane	1.650	50	14537	0.540	ppbv	92
10) Ethanol	2.704	45	260697	35.902	ppbv#	83
12) Acetone	3.375	43	349894	6.604	ppbv	95
13) Trichlorofluoromethane	2.225	101	22904	0.253	ppbv	100
14) Isopropylalcohol	3.334	45	402366	7.749	ppbv	81
26) Cis-1,2-Dichloroethene	5.208	61	51799	1.043	ppbv	98
29) Ethyl acetate	5.994	43	17019	0.305	ppbv	97
34) Carbon Tetrachloride	5.857	117	6606	0.073	ppbv	96
39) Trichloroethene	7.354	130	47463	0.708	ppbv	98
48) Toluene	9.215	91	45172	0.353	ppbv	99
52) Tetrachloroethene	9.684	166	4864100	53.040	ppbv	98
57) m,p-Xylene	11.276	91	24461	0.239	ppbv	99
68) 1,2,4-Trimethylbenzene	13.379	105	26239	0.215	ppbv	97
84) Trichlorofluoromethane...	2.228	101	23962	0.234	ppbv	100
86) Carbon Tetrachloride(sim)	5.853	117	6734	0.076	ppbv	100
91) Cis-1,2-Dichloroethene...	5.208	61	51799	1.081	ppbv	98
97) Trichloroethene(sim)	7.354	130	47300	0.697	ppbv	98
103) Tetrachloroethene(sim)	9.684	166	4864100	51.688	ppbv	98

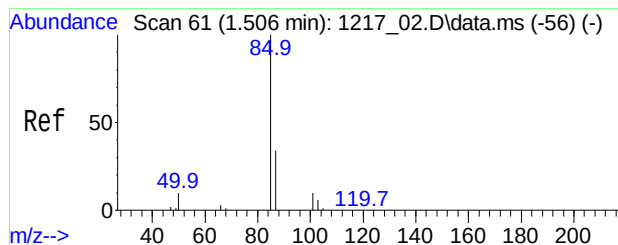
(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_07.D
 Acq On : 17 Dec 2019 10:06 pm
 Operator : Keith
 Client ID : CE89256 QC
 Lab ID : CE89256 QC
 ALS Vial : 76 Sample Multiplier: 1

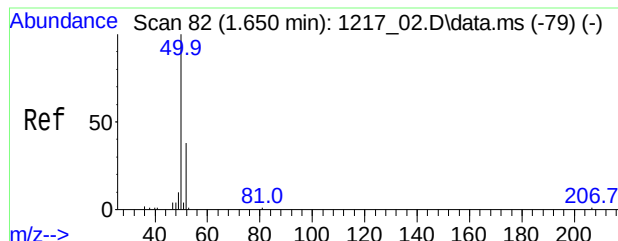
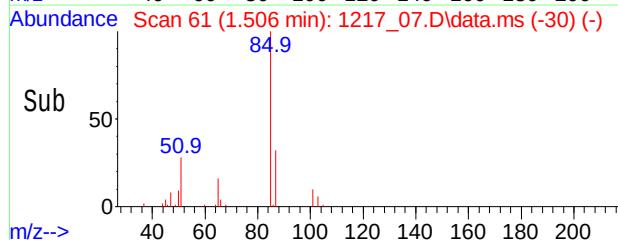
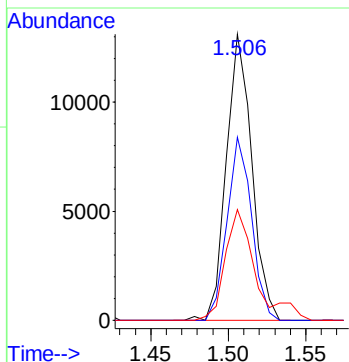
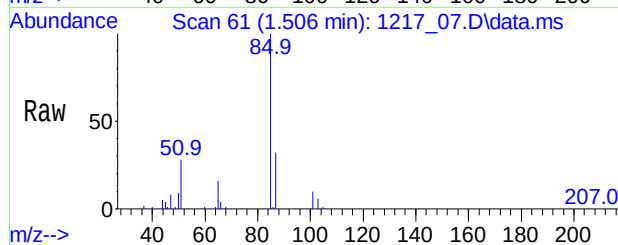
Quant Time: Dec 18 08:35:37 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration





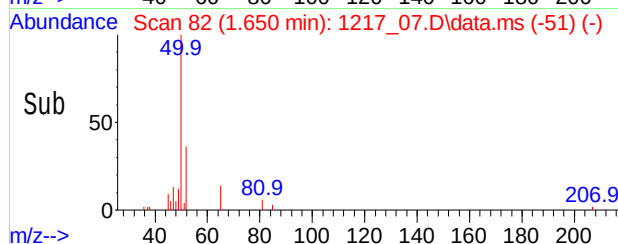
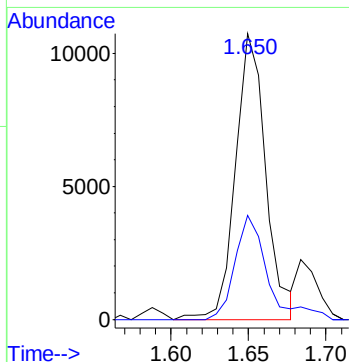
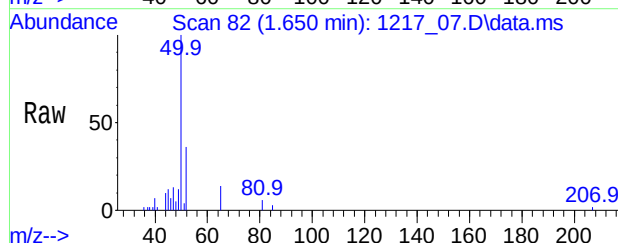
#3
Dichlorodifluoromethane
Conc: 8\$ 1.209 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

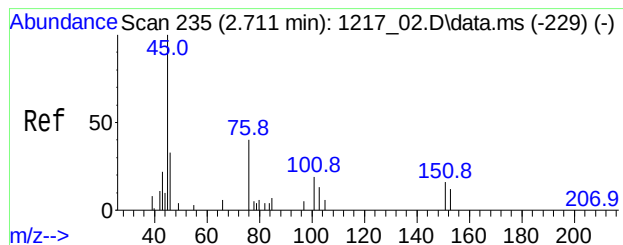
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	15037		
103	61.6	53.4	80.0	
66	45.6	26.0	39.0	



#4
Chloromethane
Conc: 8\$ 0.540 ppbv
RT: 1.650 min Scan# 82
Delta R.T. 0.014 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

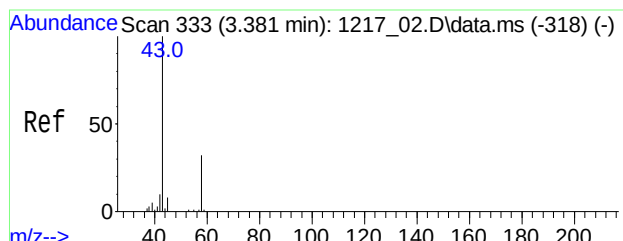
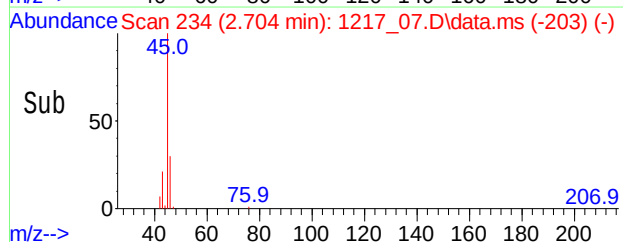
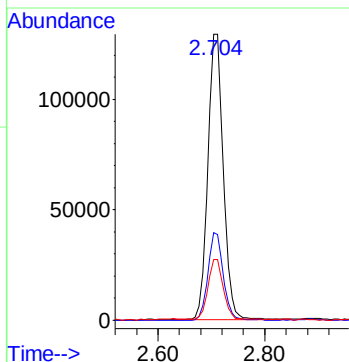
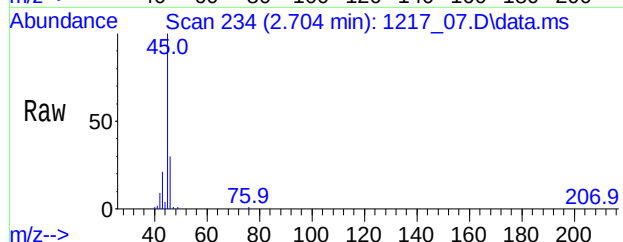
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	14537		
52	39.1	14.3	54.3	





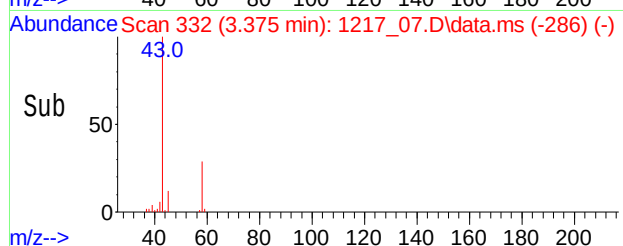
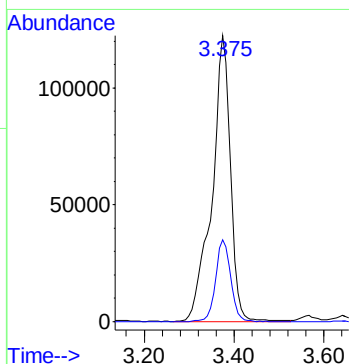
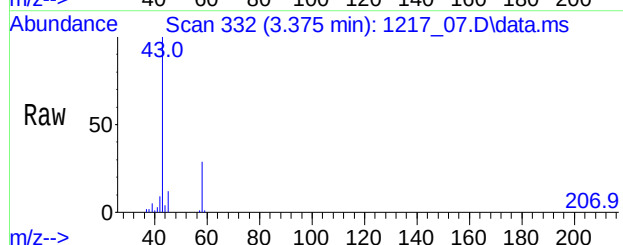
#10
Ethanol
Conc: 8\$ 35.902 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

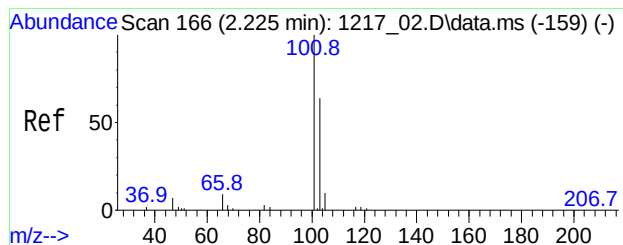
Tgt Ion: 45 Resp: 260697
Ion Ratio Lower Upper
45 100
46 30.1 24.9 37.3
43 20.6 30.8 46.2#



#12
Acetone
Conc: 8\$ 6.604 ppbv
RT: 3.375 min Scan# 332
Delta R.T. 0.014 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

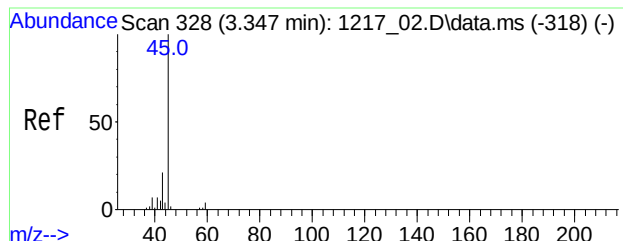
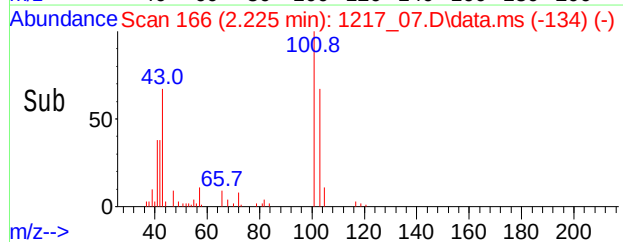
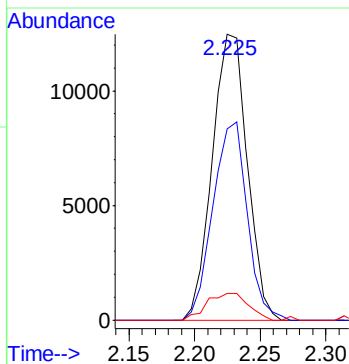
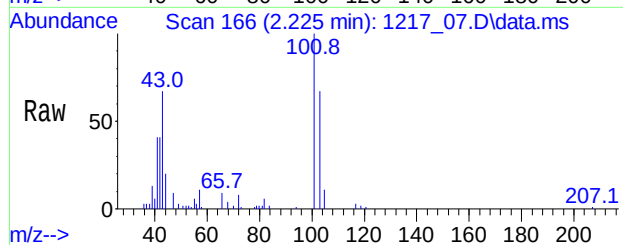
Tgt Ion: 43 Resp: 349894
Ion Ratio Lower Upper
43 100
58 23.1 20.4 30.6





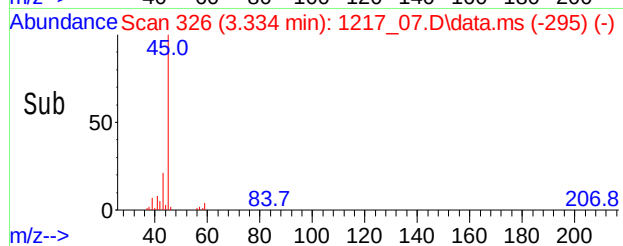
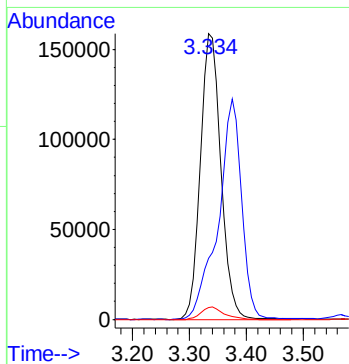
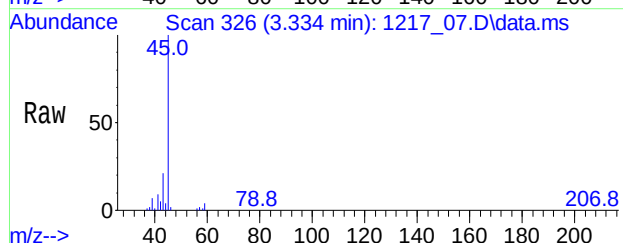
#13
Trichlorofluoromethane
Conc: 8\$ 0.253 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

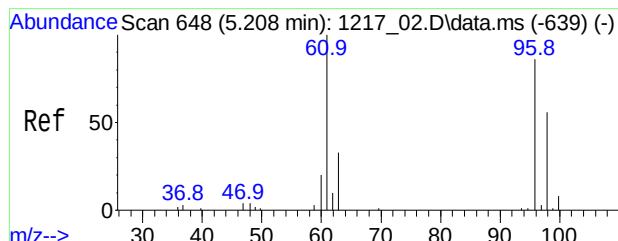
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	22904		
103	67.8	54.1	81.1	
66	11.0	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 7.749 ppbv
RT: 3.334 min Scan# 326
Delta R.T. 0.014 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

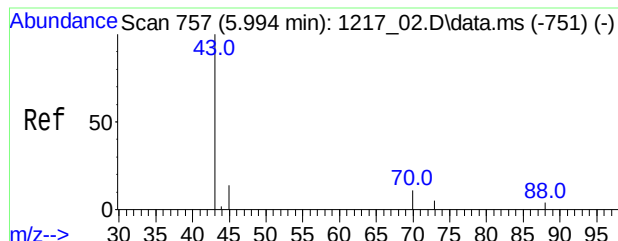
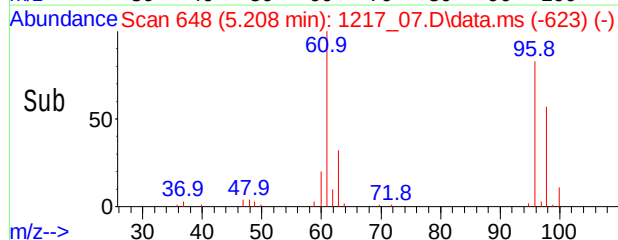
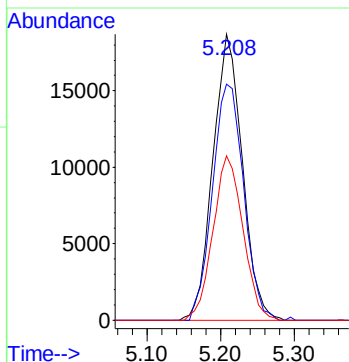
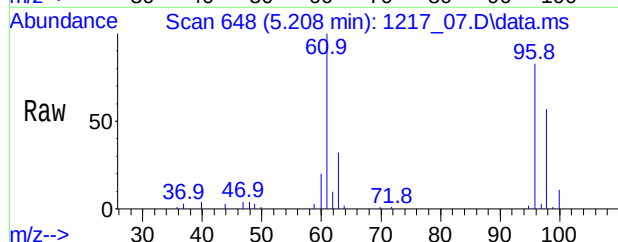
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	402366		
43	86.8	86.3	129.5	
59	4.9	4.2	6.4	





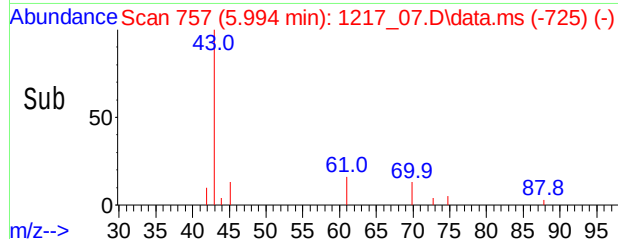
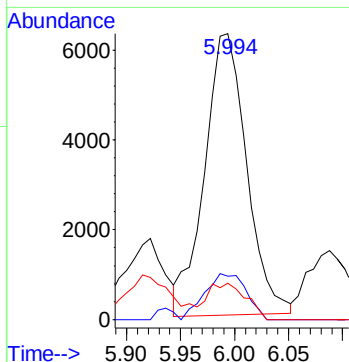
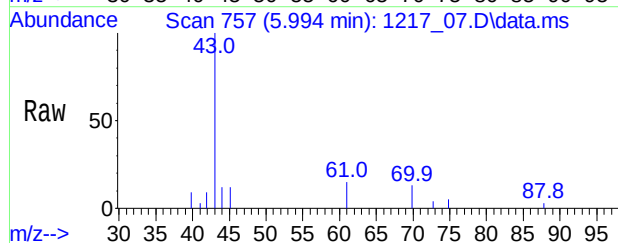
#26
Cis-1,2-Dichloroethene
Conc: 8\$ 1.043 ppbv
RT: 5.208 min Scan# 648
Delta R.T. 0.033 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

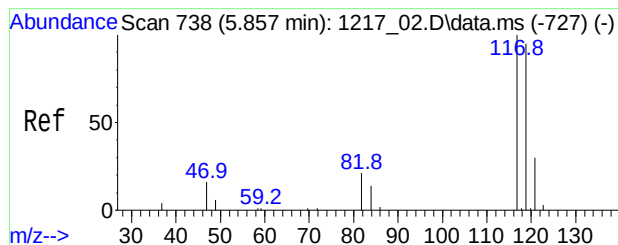
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	51799		
96	87.6	71.7	107.5	
98	58.5	46.3	69.5	



#29
Ethyl acetate
Conc: 8\$ 0.305 ppbv
RT: 5.994 min Scan# 757
Delta R.T. 0.033 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

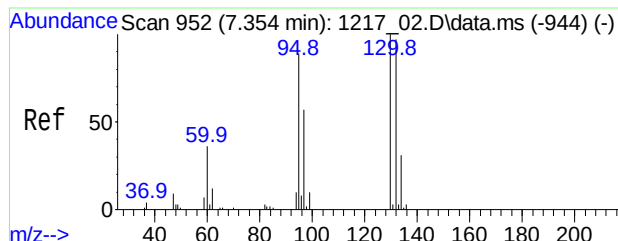
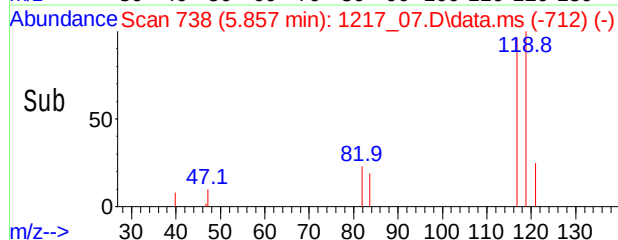
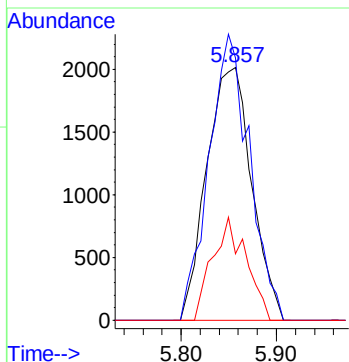
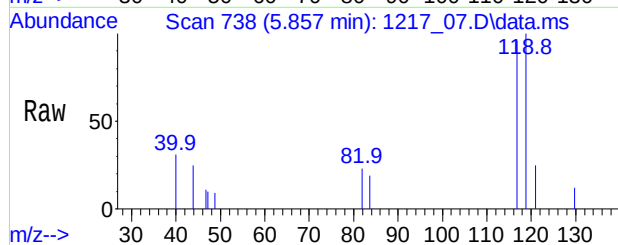
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	17019		
61	16.1	0.0	0.0#	
70	11.5	10.2	15.2	





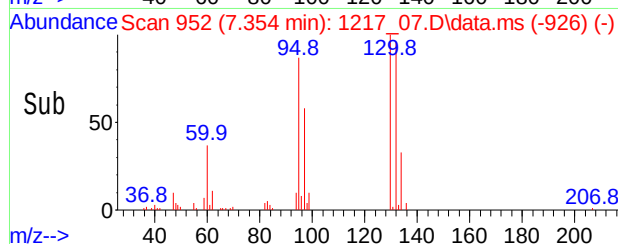
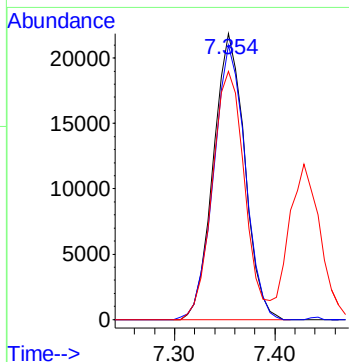
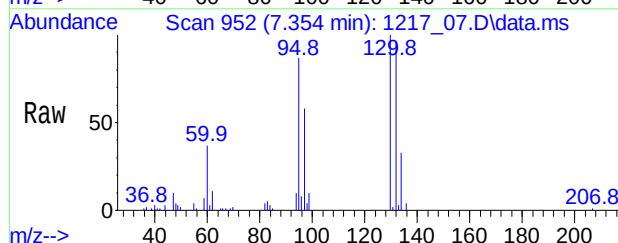
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.857 min Scan# 738
Delta R.T. 0.041 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

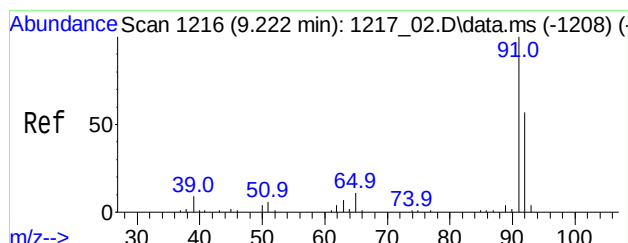
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6606		
119	101.8	77.1	117.1	
121	30.5	10.9	50.9	



#39
Trichloroethene
Conc: 8\$ 0.708 ppbv
RT: 7.354 min Scan# 952
Delta R.T. 0.025 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

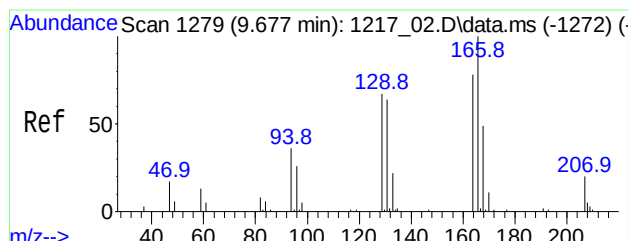
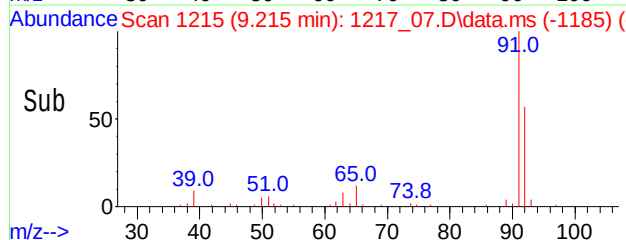
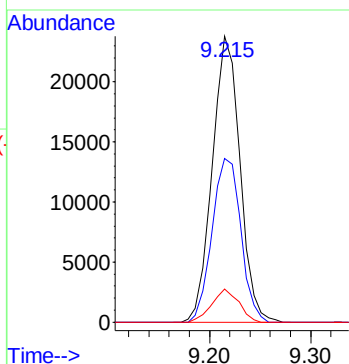
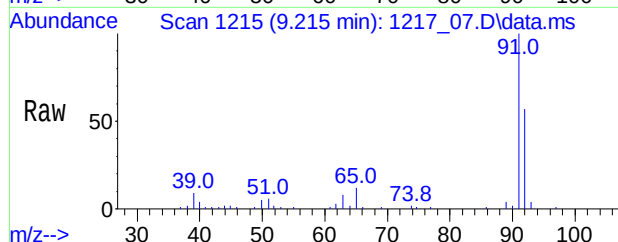
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	47463		
132	96.3	78.5	117.7	
95	89.6	73.3	109.9	





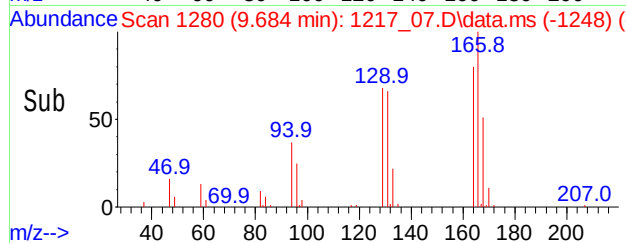
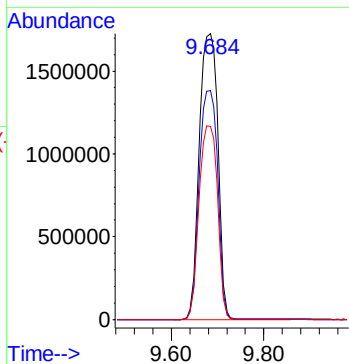
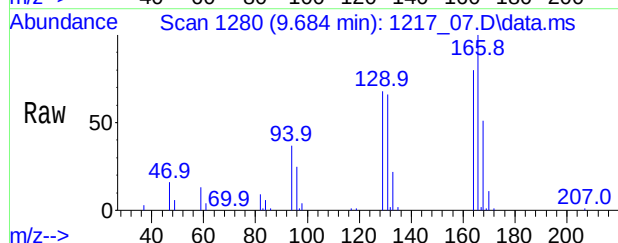
#48
Toluene
Conc: 8\$ 0.353 ppbv
RT: 9.215 min Scan# 1215
Delta R.T. 0.019 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

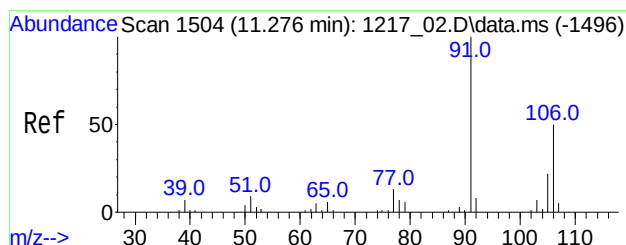
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	45172		
92	59.3	47.0	70.6	
65	11.2	8.3	12.5	



#52
Tetrachloroethene
Conc: 8\$ 53.040 ppbv
RT: 9.684 min Scan# 1280
Delta R.T. 0.033 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

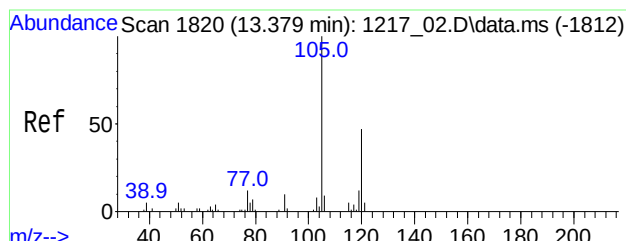
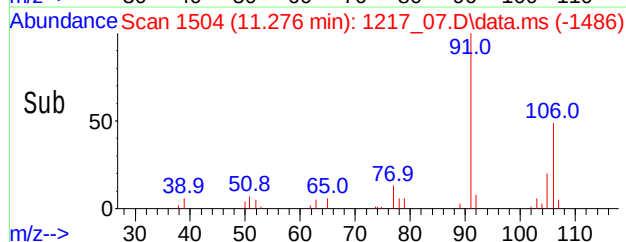
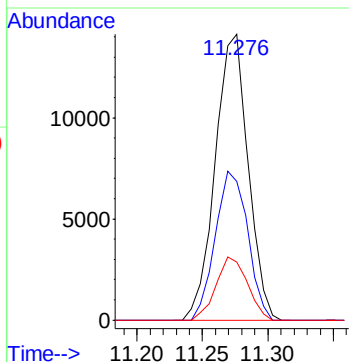
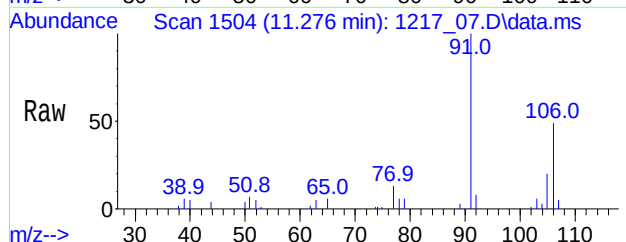
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	4864100		
164	79.4	61.8	92.8	
129	67.0	52.4	78.6	





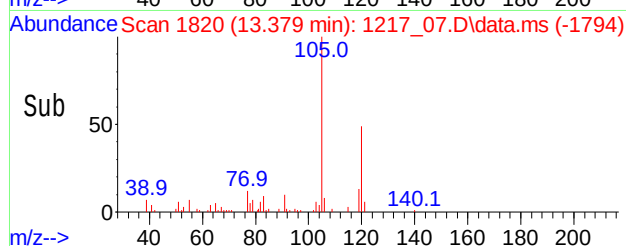
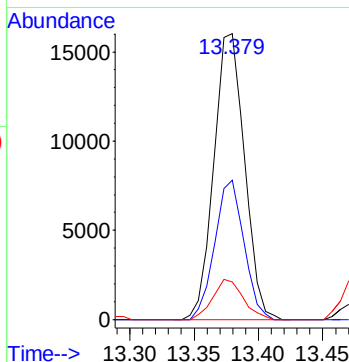
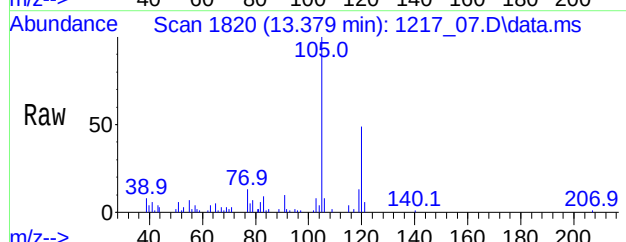
#57
m,p-Xylene
Conc: 8\$ 0.239 ppbv
RT: 11.276 min Scan# 1504
Delta R.T. 0.025 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

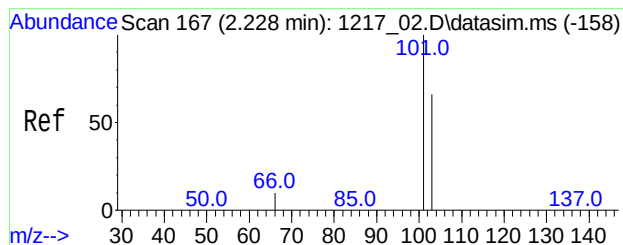
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	24461		
106	51.2	41.0	61.6	
105	21.0	17.7	26.5	



#68
1,2,4-Trimethylbenzene
Conc: 8\$ 0.215 ppbv
RT: 13.379 min Scan# 1820
Delta R.T. 0.016 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

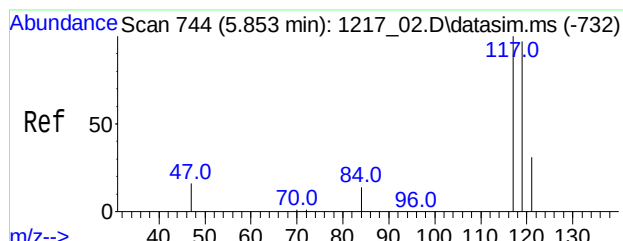
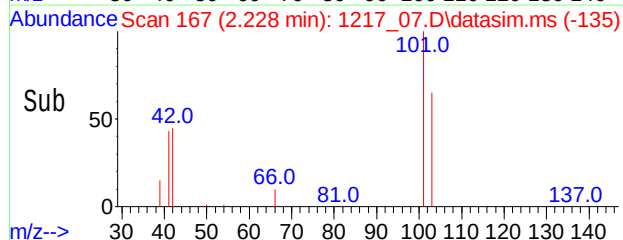
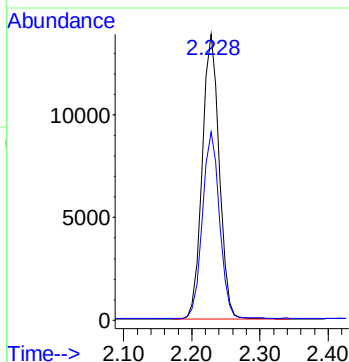
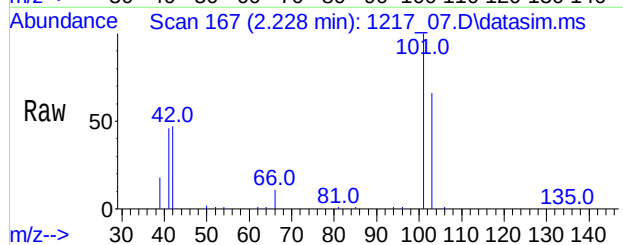
Tgt Ion	Ratio	Resp	Lower	Upper
105	100	26239		
120	46.4	38.5	57.7	
77	14.0	9.4	14.2	





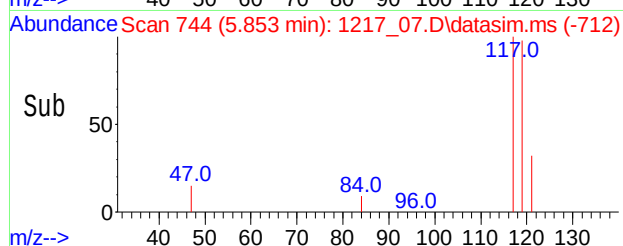
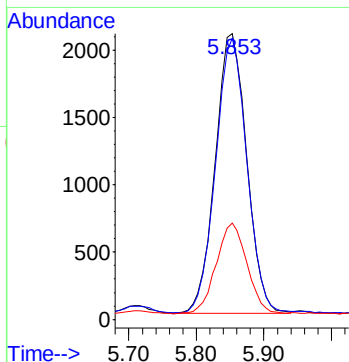
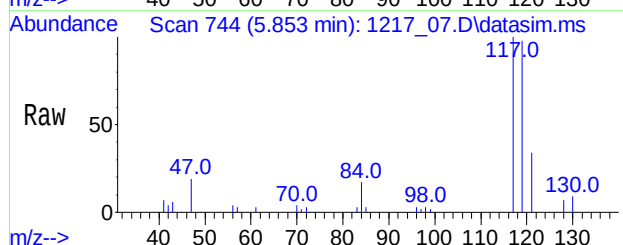
#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.234 ppbv
RT: 2.228 min Scan# 167
Delta R.T. 0.021 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

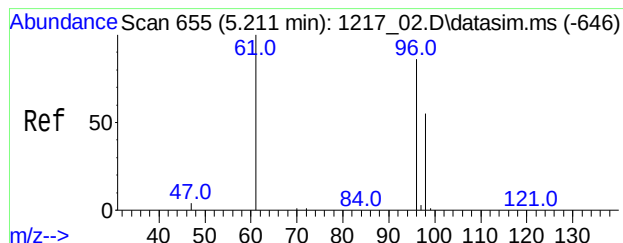
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	23962		
103	66.0	52.8		79.2



#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.076 ppbv
RT: 5.853 min Scan# 744
Delta R.T. 0.034 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

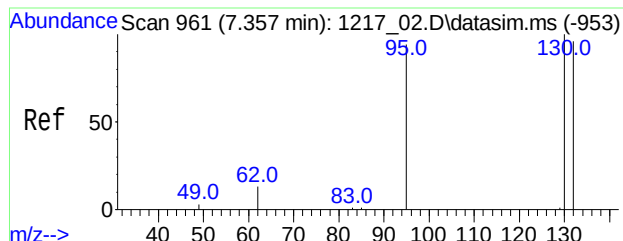
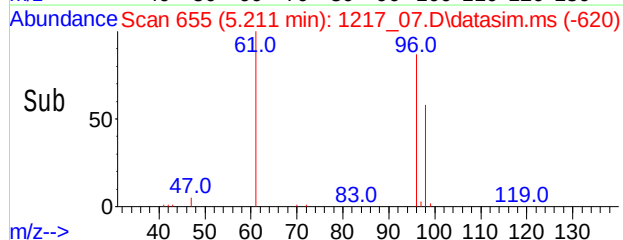
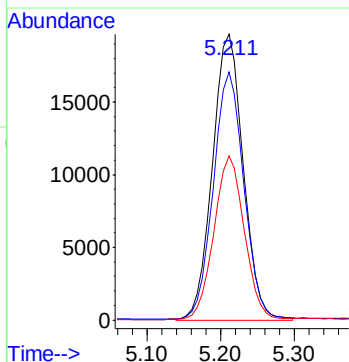
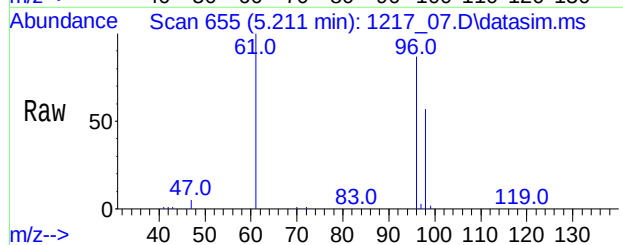
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6734		
119	96.8	77.5		116.3
121	31.6	25.1		37.7





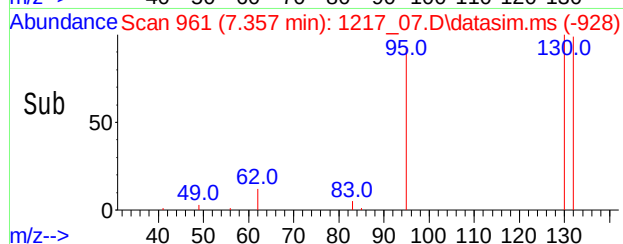
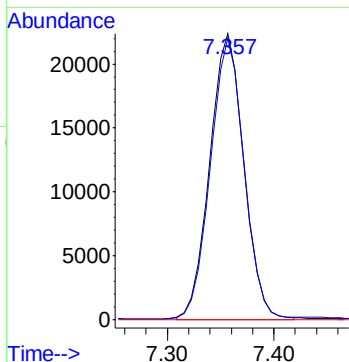
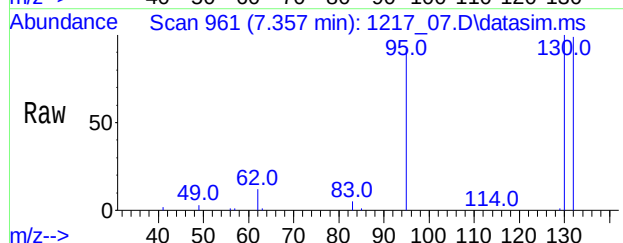
#91
Cis-1,2-Dichloroethene(sim)
Conc: 8\$ 1.081 ppbv
RT: 5.208 min Scan# 655
Delta R.T. 0.033 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

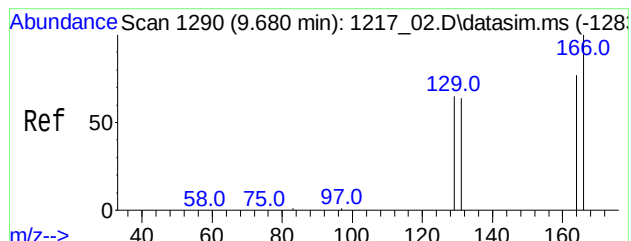
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	51799		
96	87.6	71.7	107.5	
98	58.5	46.3	69.5	



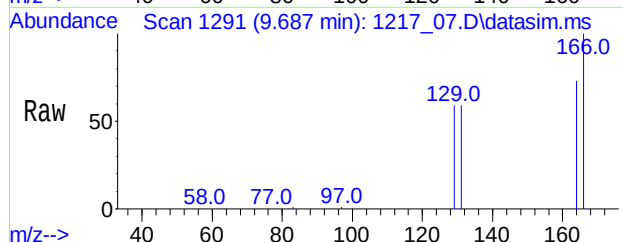
#97
Trichloroethene(sim)
Conc: 8\$ 0.697 ppbv
RT: 7.354 min Scan# 961
Delta R.T. 0.025 min
Lab File: 1217_07.D
Acq: 17 Dec 2019 10:06 pm

Tgt Ion	Ratio	Resp	Lower	Upper
130	100	47300		
132	96.6	78.4	117.6	
97	61.0	47.3	70.9	

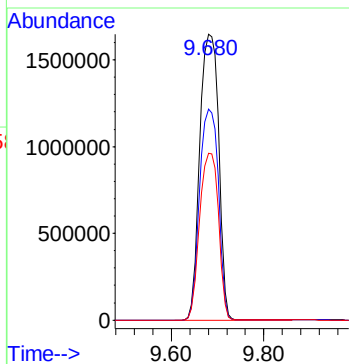
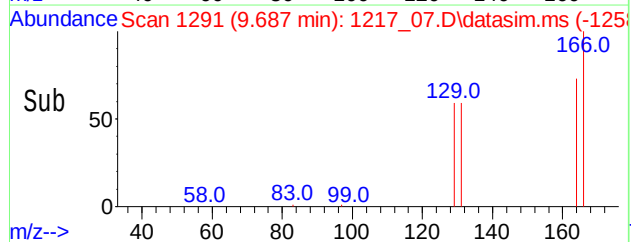




#103
 Tetrachloroethene(sim)
 Conc: 8\$ 51.688 ppbv
 RT: 9.684 min Scan# 1291
 Delta R.T. 0.033 min
 Lab File: 1217_07.D
 Acq: 17 Dec 2019 10:06 pm



Tgt Ion: 166 Resp: 4864100
 Ion Ratio Lower Upper
 166 100
 164 79.4 57.3 97.3
 129 67.0 45.5 85.5



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client: FPMGROUP Lab: Phoenix Env. Labs

89256 dup

SDG No.: GCE89170

Lab Sample ID: CE89256

Canister: 28601

Lab File ID: 1217_08.D

Instrument: CHEM24 Column: RTX-VMS

Date Received: 12/17/19

Purge Volume 200 (cc)

Date Analyzed: 12/17/19

Matrix: AIR

Dilution Factor: 1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	
75-71-8	Dichlorodifluoromethane	1.19		0.202	0.202	
74-87-3	Chloromethane	0.541		0.485	0.485	
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	
75-00-3	Chloroethane	0.379	U	0.379	0.379	
64-17-5	Ethanol	35.1	S	0.531	0.531	
67-64-1	Acetone	6.73	S	0.421	0.421	
75-69-4	Trichlorofluoromethane	0.260		0.178	0.178	
67-63-0	Isopropylalcohol	8.00	S	0.407	0.407	
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	
156-59-2	Cis-1,2-Dichloroethene	1.10		0.051	0.051	
110-54-3	Hexane	0.284	U	0.284	0.284	
141-78-6	Ethyl acetate	0.298		0.278	0.278	
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	
71-43-2	Benzene	0.313	U	0.313	0.313	
110-82-7	Cyclohexane	0.291	U	0.291	0.291	
79-01-6	Trichloroethene	0.707		0.037	0.037	
142-82-5	Heptane	0.244	U	0.244	0.244	
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	
10061-02-6	trans-1,3-Dichloropropene	0.220	U	0.220	0.220	
108-88-3	Toluene	0.357		0.266	0.266	
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	
127-18-4	Tetrachloroethene	54.7	E	0.037	0.037	
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	
100-42-5	Styrene	0.235	U	0.235	0.235	
95-47-6	o-Xylene	0.230	U	0.230	0.230	
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	
95-63-6	1,2,4-Trimethylbenzene	0.218		0.204	0.204	
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client: FPMGROUP Lab: Phoenix Env. Labs

89256 dup

SDG No.: GCE89170

Lab Sample ID: CE89256

Canister: 28601

Lab File ID: 1217_08.D

Instrument: CHEM24 Column: RTX-VMS

Date Received: 12/17/19

Purge Volume 200 (cc)

Date Analyzed: 12/17/19

Matrix: AIR

Dilution Factor: 1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	
56-23-5	Carbon Tetrachloride(sim)	0.079		0.032	0.032	
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	
10061-01-5	cis-1,3-Dichloropropene(sim)	0.220	U	0.220	0.220	
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	
124-48-1	Dibromochloromethane(sim)	0.117	U	0.117	0.117	
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_08.D
 Acq On : 17 Dec 2019 10:42 pm
 Operator : Keith
 Client ID : 89256 dup
 Lab ID : CE89256 DUP
 ALS Vial : 77 Sample Multiplier: 1

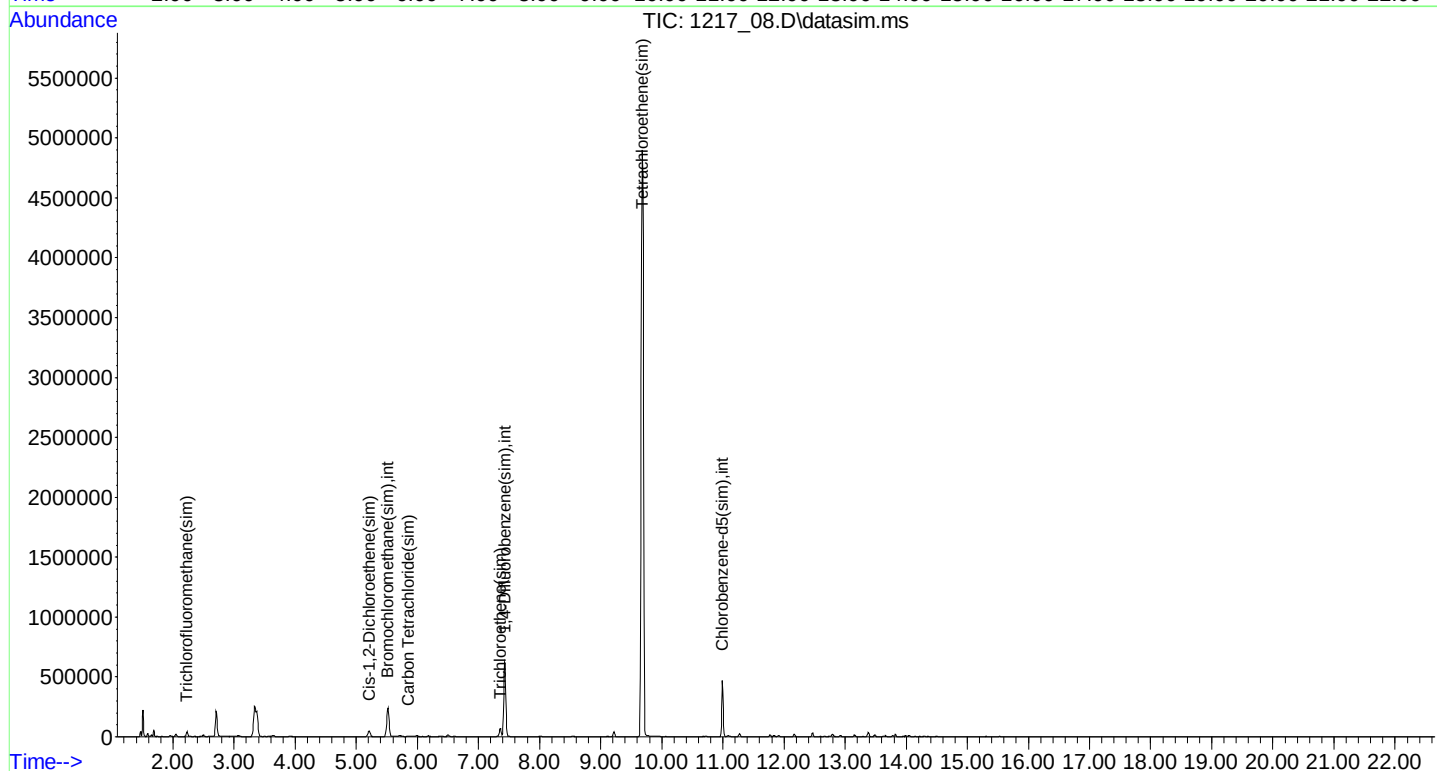
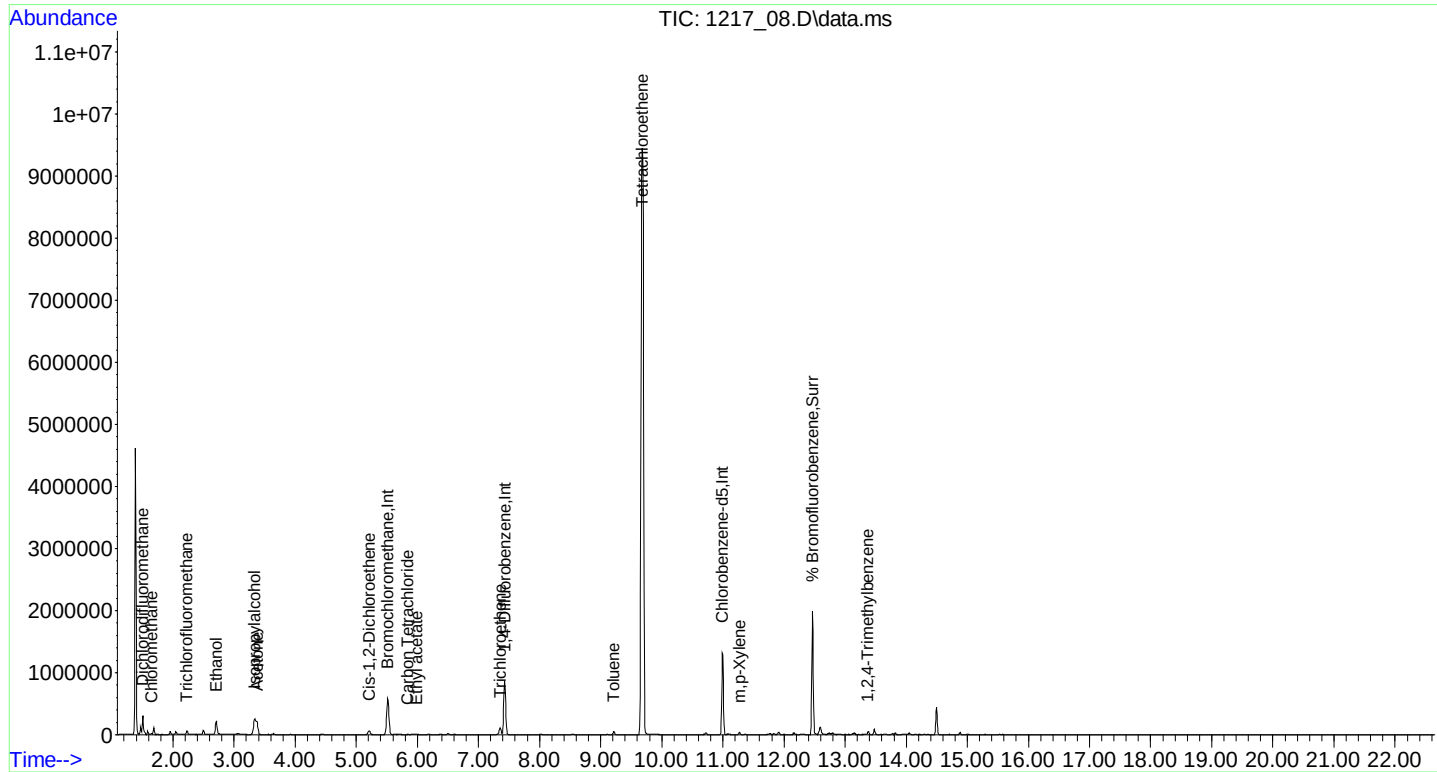
Quant Time: Dec 18 08:35:50 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

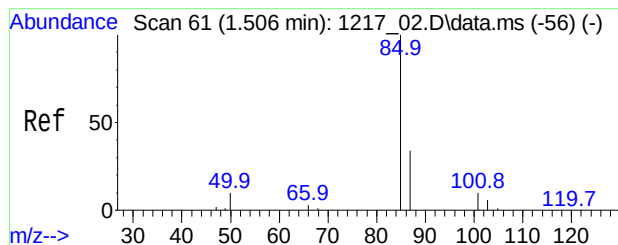
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.514	130	347335	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.432	114	958723	10.000	ng	0.03
53) Chlorobenzene-d5	10.991	82	419650	10.000	ng	0.01
80) Bromochloromethane(sim)	5.517	130	351600	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.428	114	1052859	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.993	82	458894	10.000	ng	0.02
System Monitoring Compounds						
62) % Bromofluorobenzene	12.467	95	645458	11.441	ppbv	0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	114.40%
Target Compounds						
					Qvalue	
3) Dichlorodifluoromethane	1.506	101	14438	1.193	ppbv#	91
4) Chloromethane	1.649	50	14157	0.541	ppbv	99
10) Ethanol	2.711	45	247875	35.081	ppbv#	84
12) Acetone	3.374	43	347140	6.734	ppbv	96
13) Trichlorofluoromethane	2.225	101	22927	0.260	ppbv	97
14) Isopropylalcohol	3.340	45	404327	8.002	ppbv#	80
26) Cis-1,2-Dichloroethene	5.211	61	53189	1.100	ppbv	97
29) Ethyl acetate	5.989	43	16177	0.298	ppbv	96
34) Carbon Tetrachloride	5.845	117	6603	0.075	ppbv	96
39) Trichloroethene	7.356	130	46507	0.707	ppbv	99
48) Toluene	9.218	91	44770	0.357	ppbv	99
52) Tetrachloroethene	9.680	166	4924723	54.688	ppbv	98
57) m,p-Xylene	11.272	91	23714	0.233	ppbv	100
68) 1,2,4-Trimethylbenzene	13.376	105	26533	0.218	ppbv	98
84) Trichlorofluoromethane...	2.228	101	24071	0.241	ppbv	99
86) Carbon Tetrachloride(sim)	5.848	117	6815	0.079	ppbv	99
91) Cis-1,2-Dichloroethene...	5.211	61	53189	1.137	ppbv	97
97) Trichloroethene(sim)	7.356	130	46507	0.699	ppbv	98
103) Tetrachloroethene(sim)	9.680	166	4923855	53.378	ppbv	98

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_08.D
Acq On : 17 Dec 2019 10:42 pm
Operator : Keith
Client ID : 89256 dup
Lab ID : CE89256 DUP
ALS Vial : 77 Sample Multiplier: 1

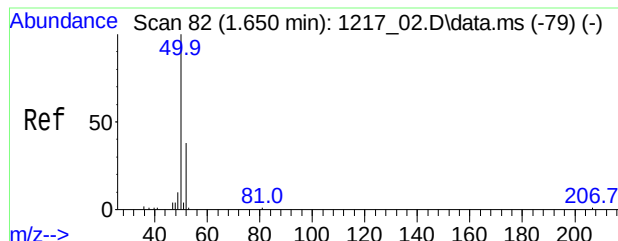
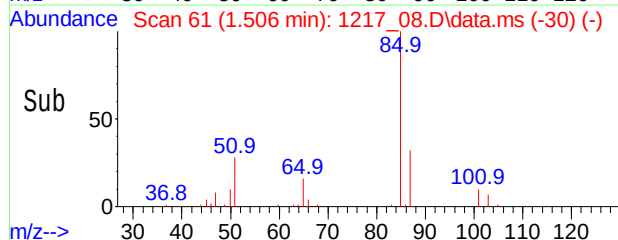
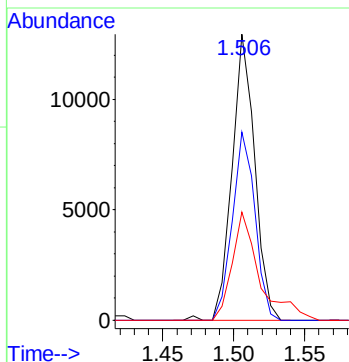
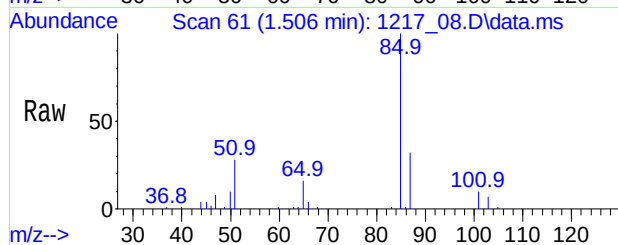
Quant Time: Dec 18 08:35:50 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration





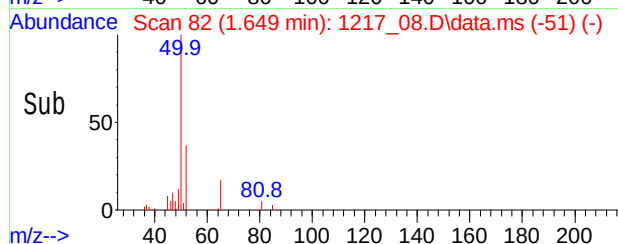
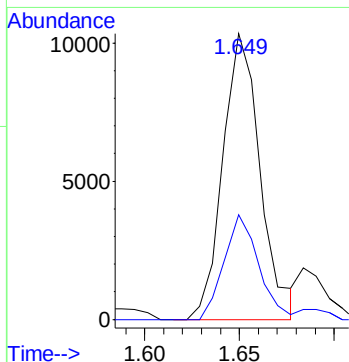
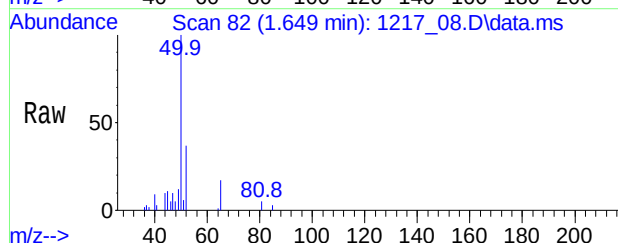
#3
Dichlorodifluoromethane
Conc: 8\$ 1.193 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

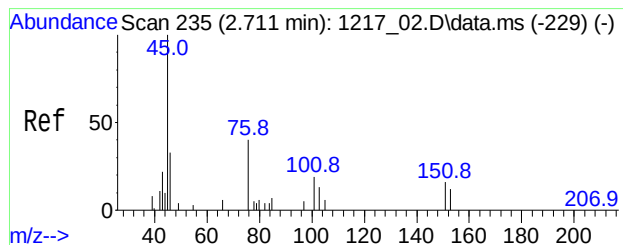
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	14438		
103	65.6	53.4	80.0	
66	45.7	26.0	39.0	



#4
Chloromethane
Conc: 8\$ 0.541 ppbv
RT: 1.649 min Scan# 82
Delta R.T. 0.013 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

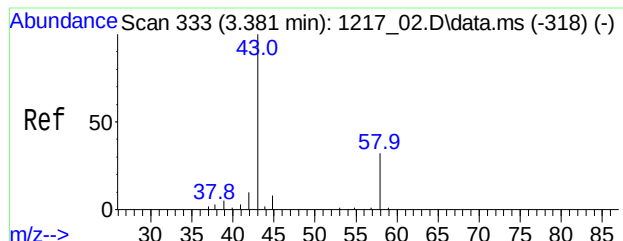
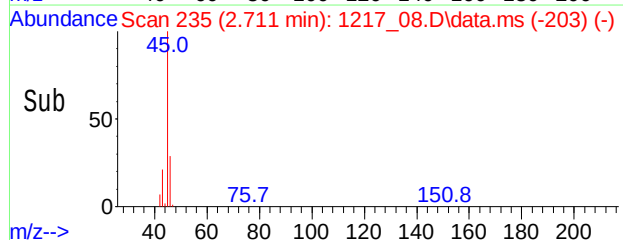
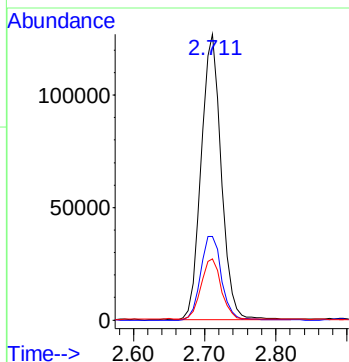
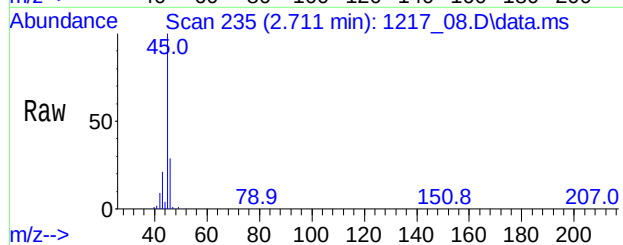
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	14157		
52	33.8	14.3	54.3	





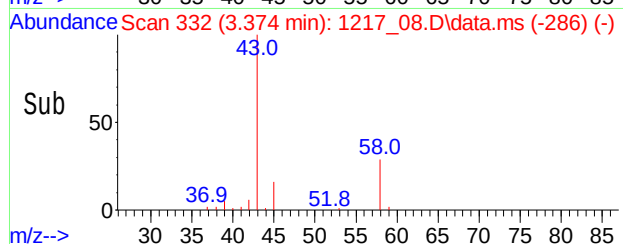
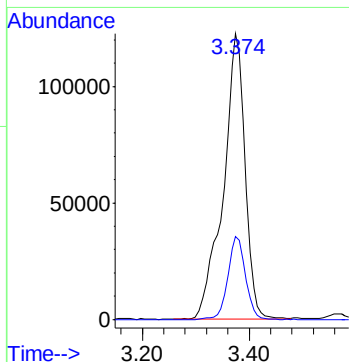
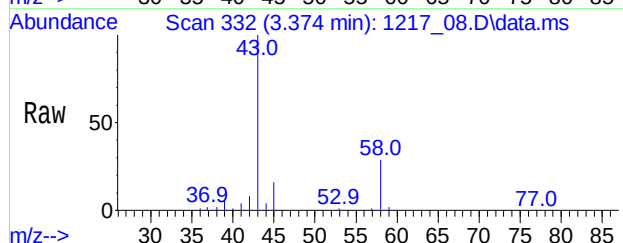
#10
Ethanol
Conc: 8\$ 35.081 ppbv
RT: 2.711 min Scan# 235
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

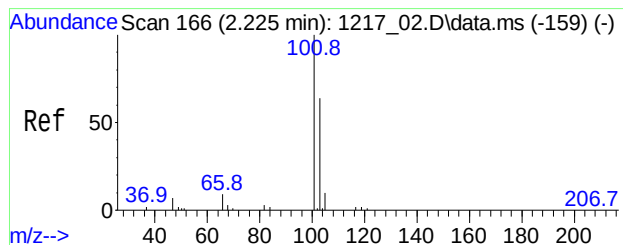
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	247875		
46	30.8	24.9	37.3	
43	21.5	30.8	46.2#	



#12
Acetone
Conc: 8\$ 6.734 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

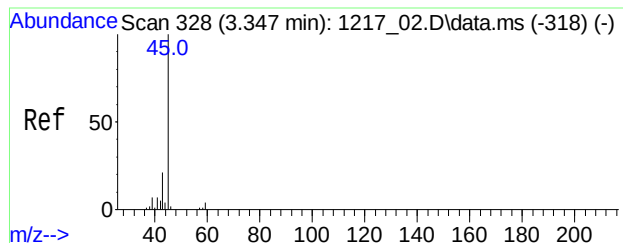
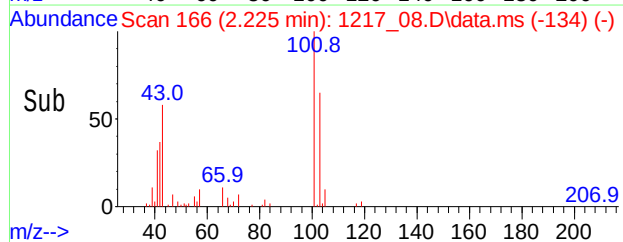
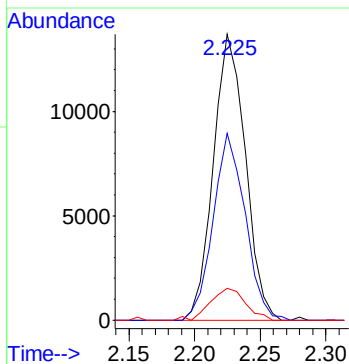
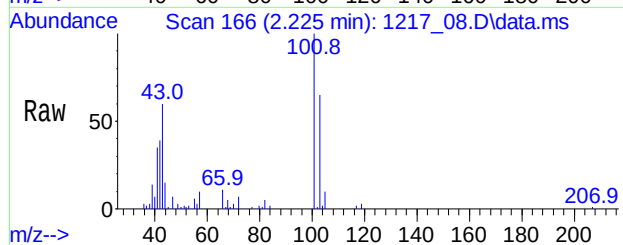
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	347140		
58	23.4	20.4	30.6	





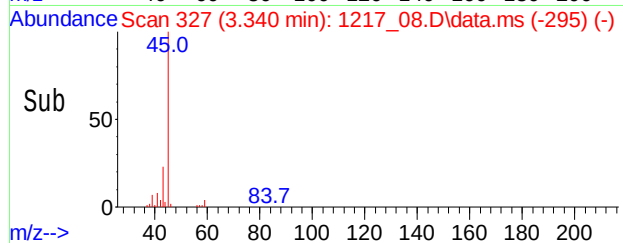
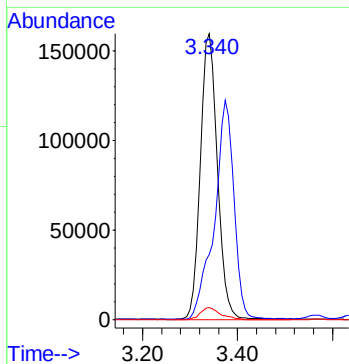
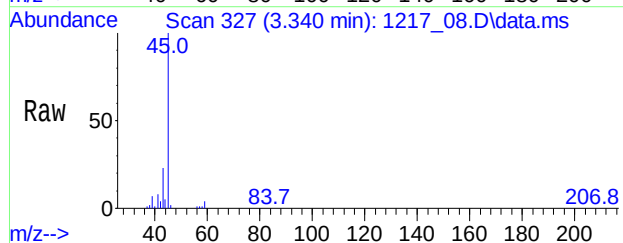
#13
Trichlorofluoromethane
Conc: 8\$ 0.260 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

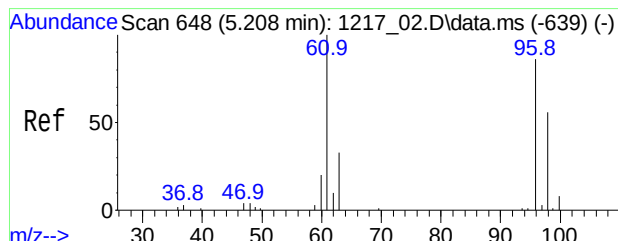
Tgt	Ion	Ratio	Resp	Lower	Upper
101	101	100	22927		
103	65.2	54.1	81.1		
66	12.2	8.3	12.5		



#14
Isopropylalcohol
Conc: 8\$ 8.002 ppbv
RT: 3.340 min Scan# 327
Delta R.T. 0.020 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

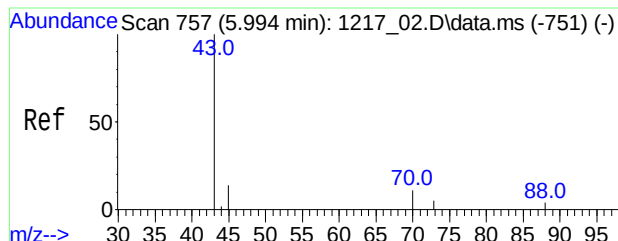
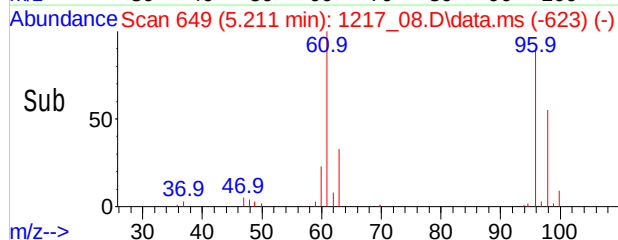
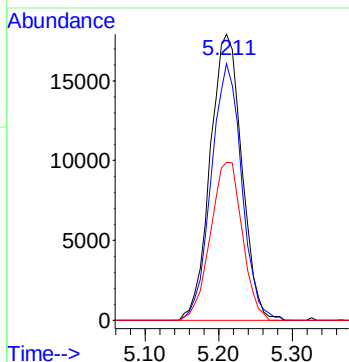
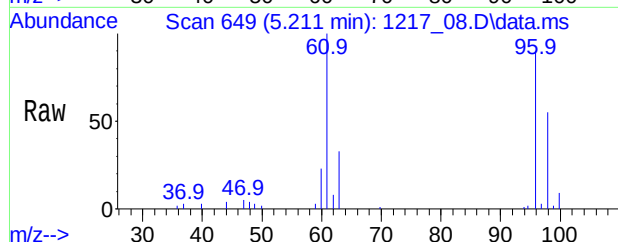
Tgt	Ion	Ratio	Resp	Lower	Upper
45	45	100	404327		
43	85.9	86.3	129.5#		
59	4.7	4.2	6.4		





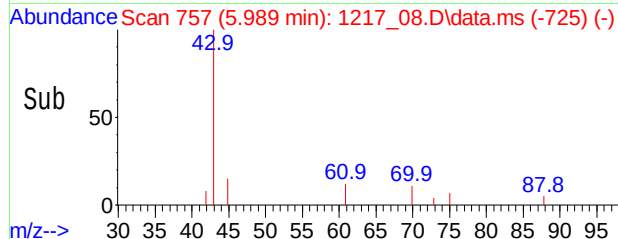
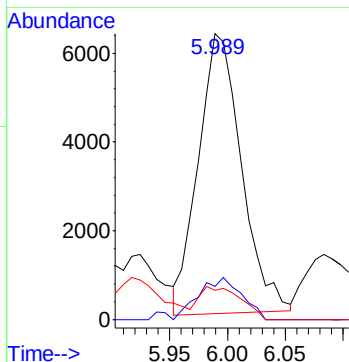
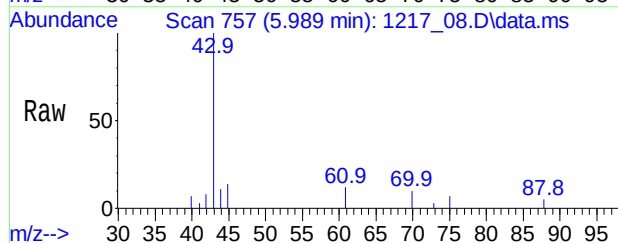
#26
Cis-1,2-Dichloroethene
Conc: 8\$ 1.100 ppbv
RT: 5.211 min Scan# 649
Delta R.T. 0.036 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

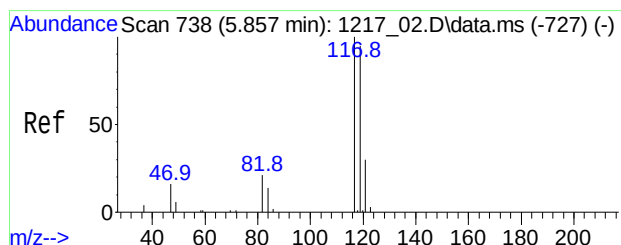
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	53189		
96	86.6	71.7	107.5	
98	55.7	46.3	69.5	



#29
Ethyl acetate
Conc: 8\$ 0.298 ppbv
RT: 5.989 min Scan# 757
Delta R.T. 0.028 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

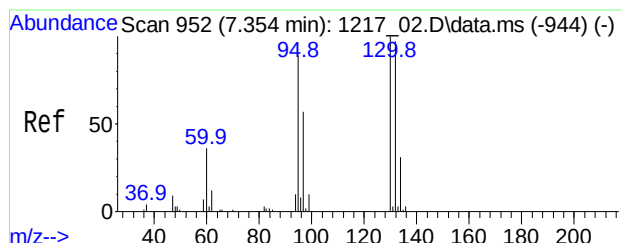
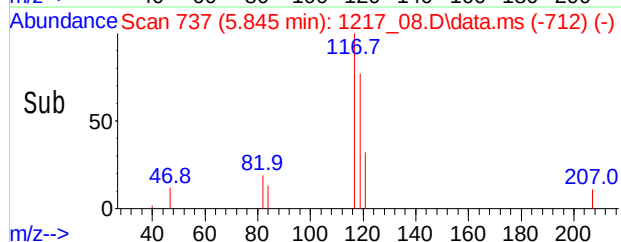
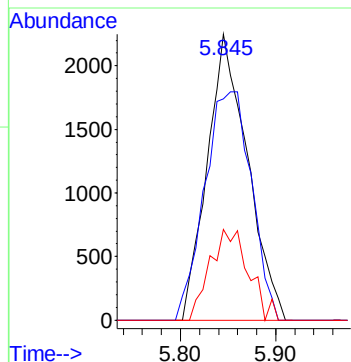
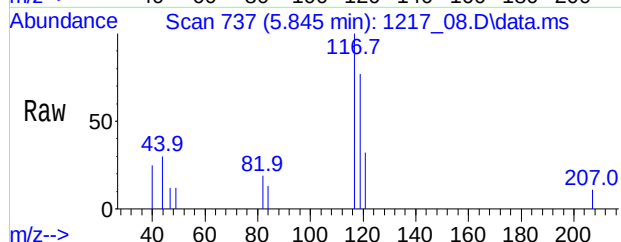
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	16177		
61	15.8	0.0	0.0#	
70	11.2	10.2	15.2	





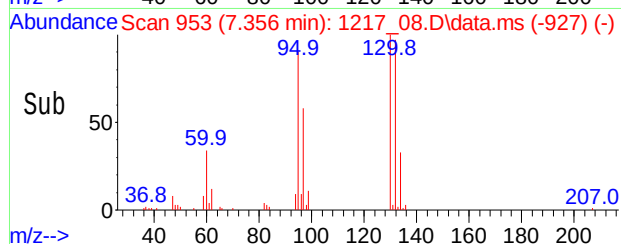
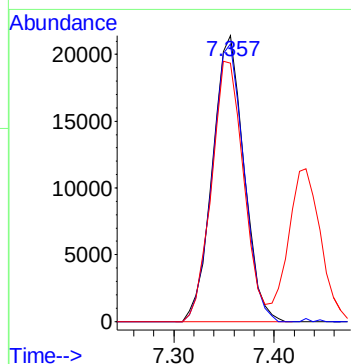
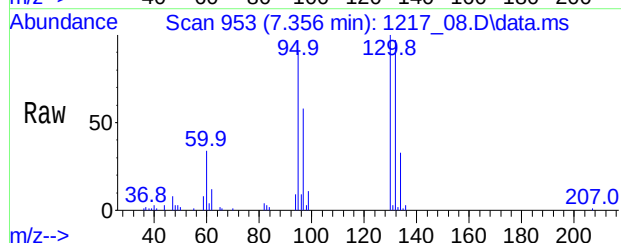
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.845 min Scan# 737
Delta R.T. 0.029 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

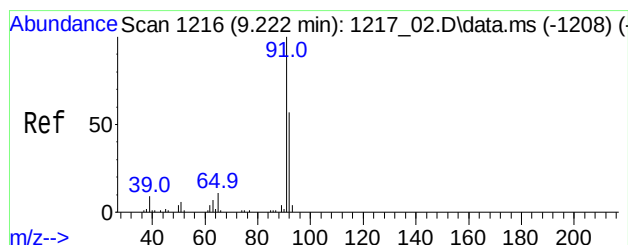
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6603		
119	92.6	77.1	117.1	
121	30.3	10.9	50.9	



#39
Trichloroethene
Conc: 8\$ 0.707 ppbv
RT: 7.356 min Scan# 953
Delta R.T. 0.027 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

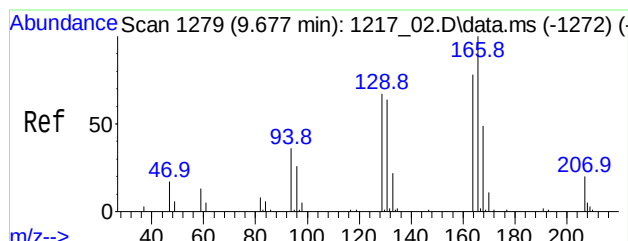
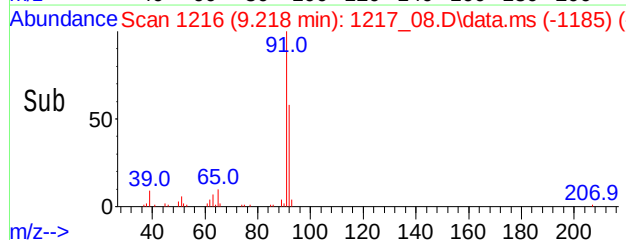
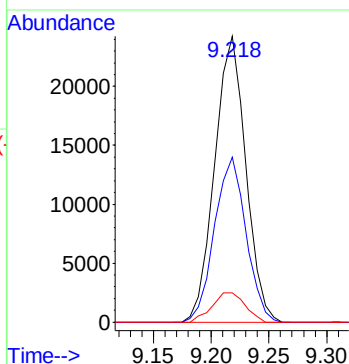
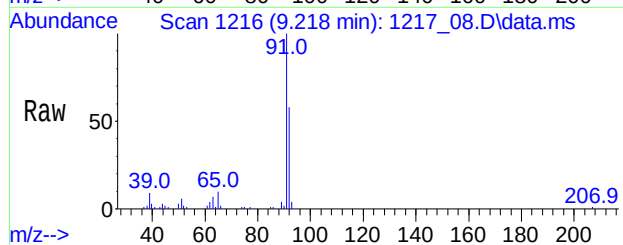
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	46507		
132	97.5	78.5	117.7	
95	92.7	73.3	109.9	





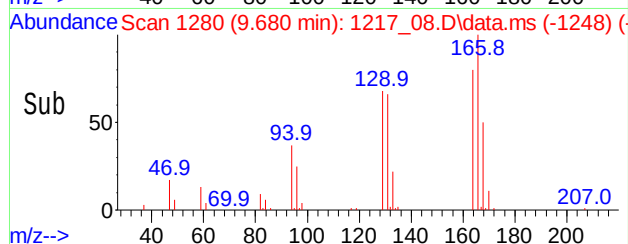
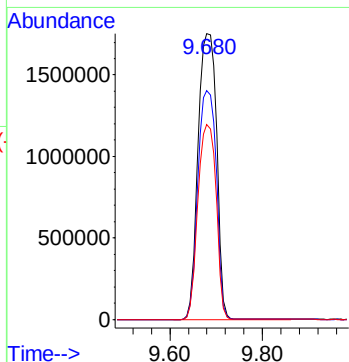
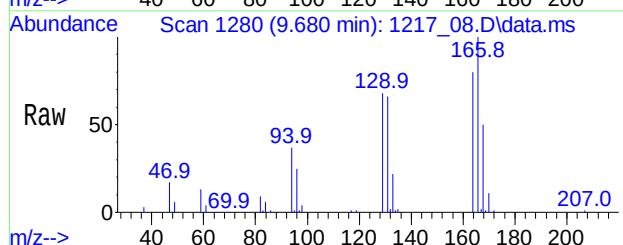
#48
Toluene
Conc: 8\$ 0.357 ppbv
RT: 9.218 min Scan# 1216
Delta R.T. 0.022 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

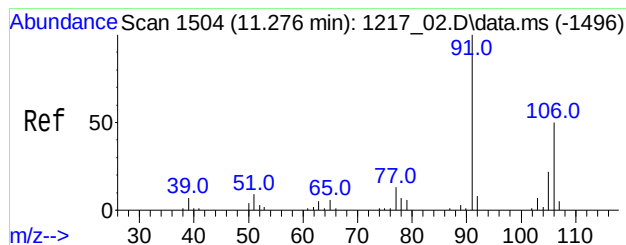
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	44770		
92	58.3	47.0	70.6	
65	10.9	8.3	12.5	



#52
Tetrachloroethene
Conc: 8\$ 54.688 ppbv
RT: 9.680 min Scan# 1280
Delta R.T. 0.029 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

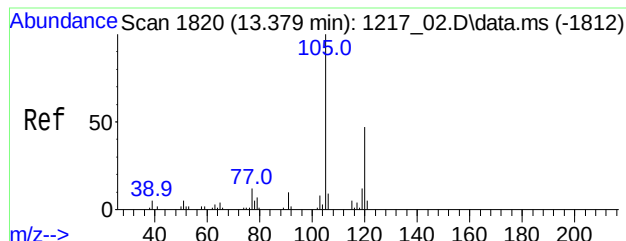
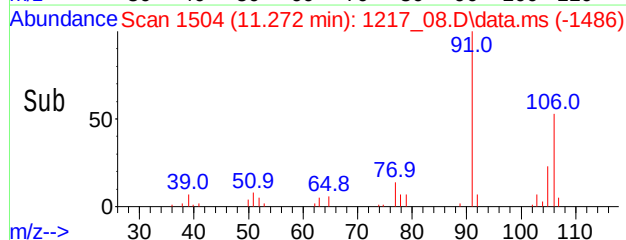
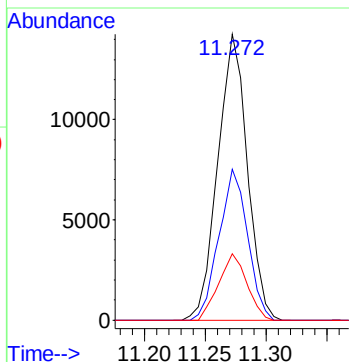
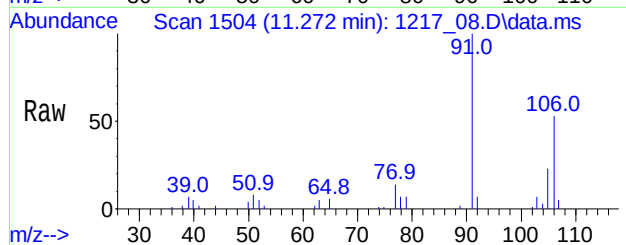
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	4924723		
164	79.4	61.8	92.8	
129	67.0	52.4	78.6	





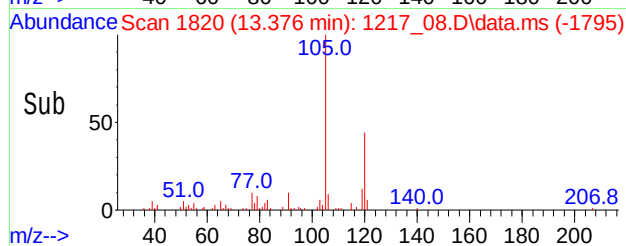
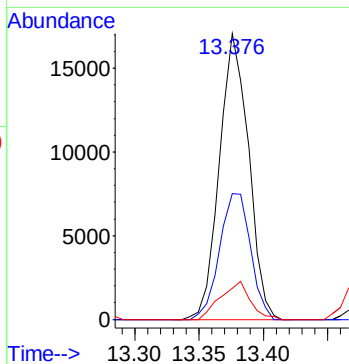
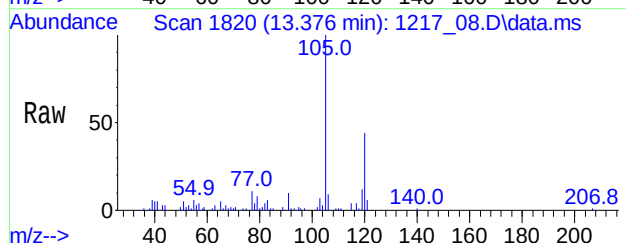
#57
m,p-Xylene
Conc: 8\$ 0.233 ppbv
RT: 11.272 min Scan# 1504
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

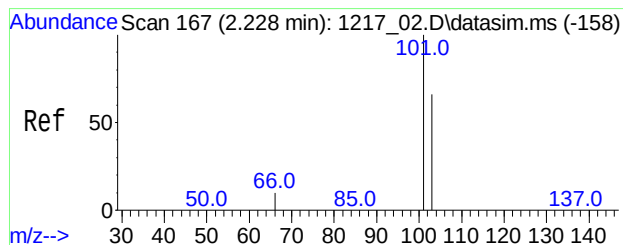
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	23714		
106	51.3	41.0	61.6	
105	22.2	17.7	26.5	



#68
1,2,4-Trimethylbenzene
Conc: 8\$ 0.218 ppbv
RT: 13.376 min Scan# 1820
Delta R.T. 0.013 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

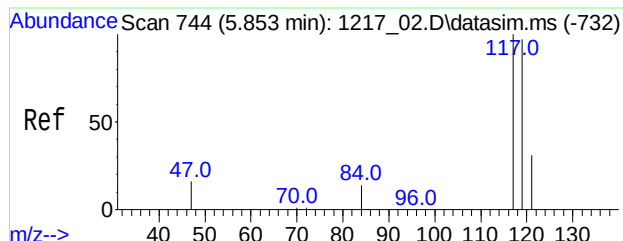
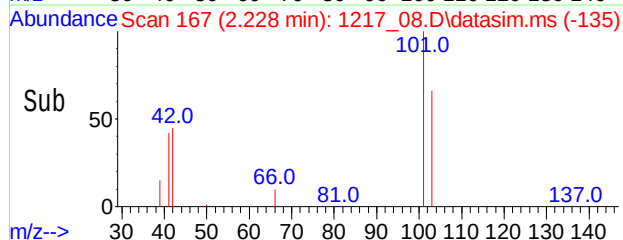
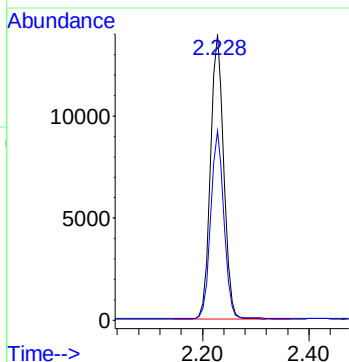
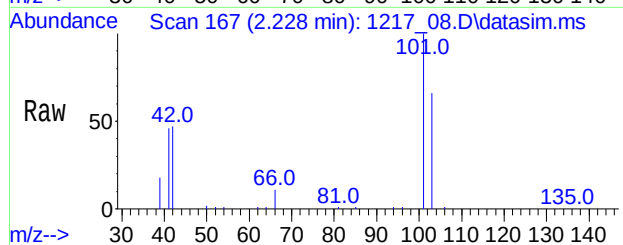
Tgt Ion	Ratio	Resp	Lower	Upper
105	100	26533		
120	46.9	38.5	57.7	
77	13.5	9.4	14.2	





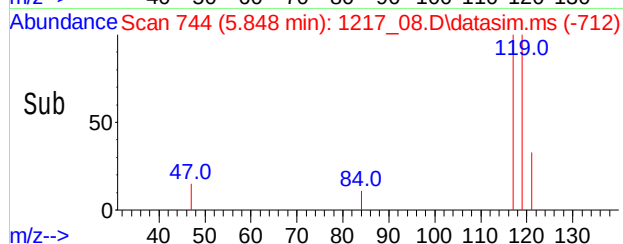
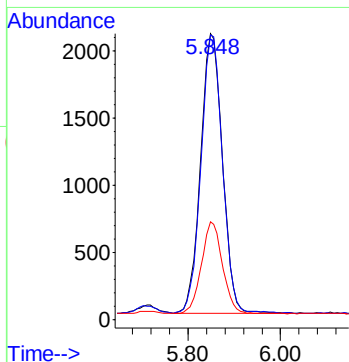
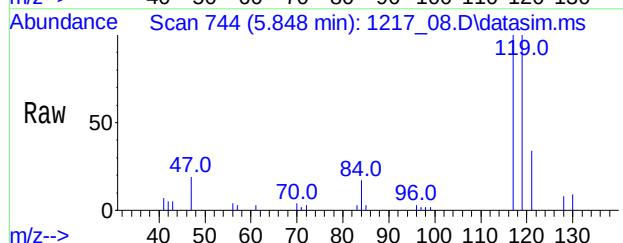
#84
Trichlorofluoromethane(sim)
Conc: 8\$ 0.241 ppbv
RT: 2.228 min Scan# 167
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

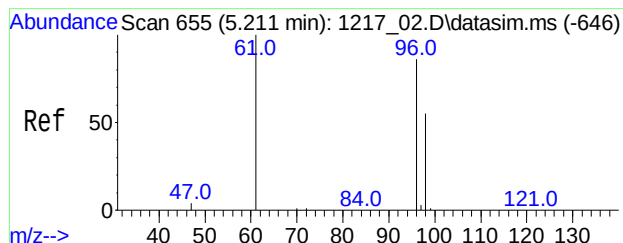
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24071		
103	65.4	52.8		79.2



#86
Carbon Tetrachloride(sim)
Conc: 8\$ 0.079 ppbv
RT: 5.848 min Scan# 744
Delta R.T. 0.029 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

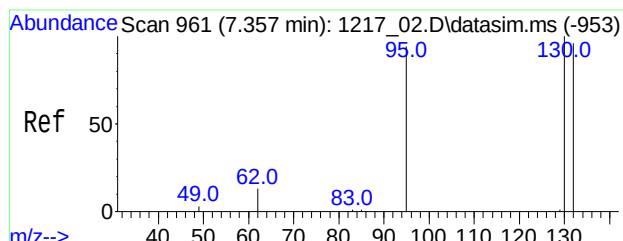
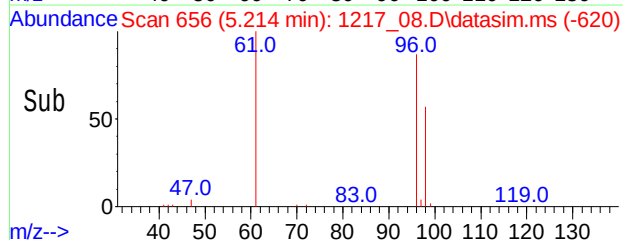
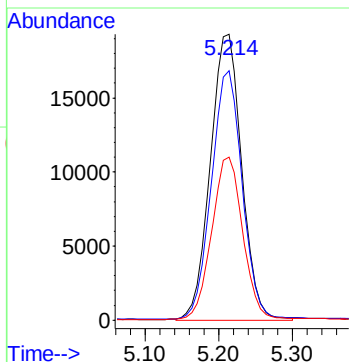
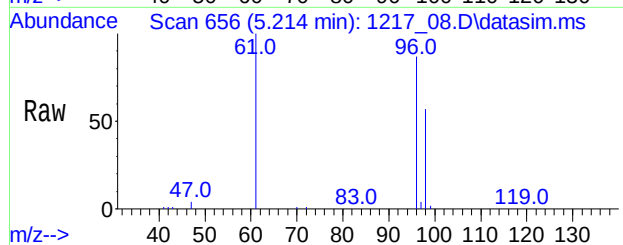
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6815		
119	98.0	77.5		116.3
121	31.4	25.1		37.7





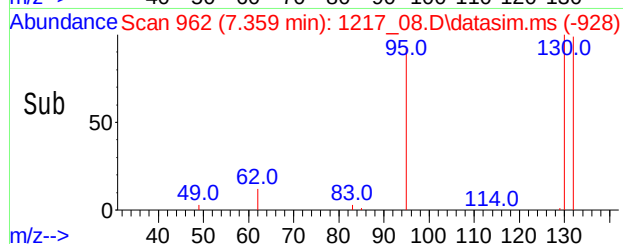
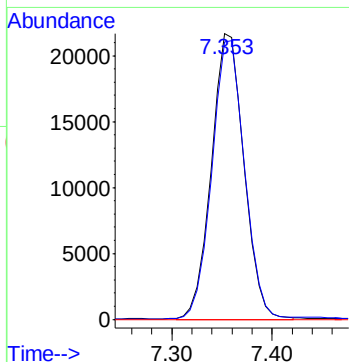
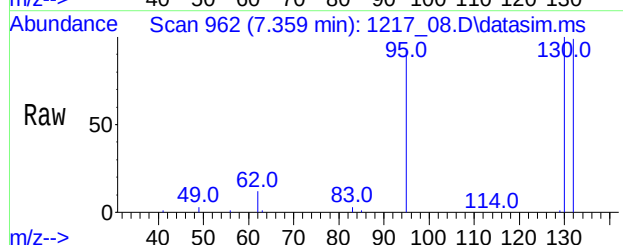
#91
Cis-1,2-Dichloroethene(sim)
Conc: 8\$ 1.137 ppbv
RT: 5.211 min Scan# 656
Delta R.T. 0.036 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

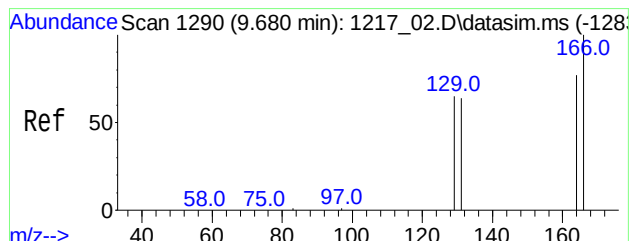
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	53189		
96	86.6	71.7	107.5	
98	55.7	46.3	69.5	



#97
Trichloroethene(sim)
Conc: 8\$ 0.699 ppbv
RT: 7.356 min Scan# 962
Delta R.T. 0.027 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

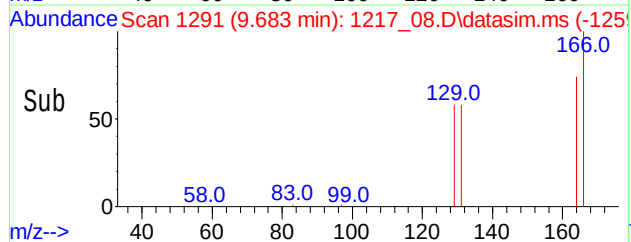
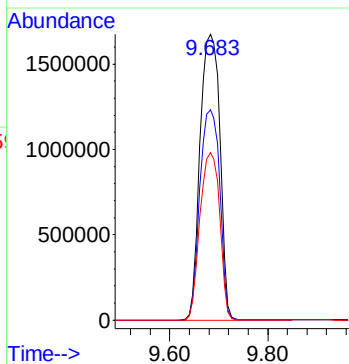
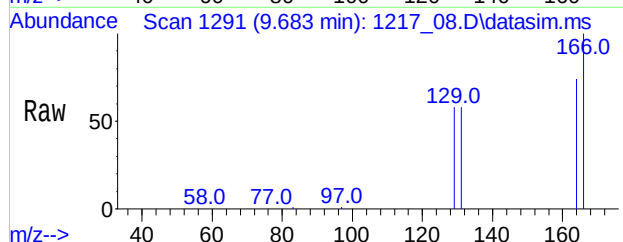
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	46507		
132	97.0	78.4	117.6	
97	60.9	47.3	70.9	





#103
 Tetrachloroethene(sim)
 Conc: 8\$ 53.378 ppbv
 RT: 9.680 min Scan# 1291
 Delta R.T. 0.029 min
 Lab File: 1217_08.D
 Acq: 17 Dec 2019 10:42 pm

Tgt Ion: 166 Resp: 4923855
 Ion Ratio Lower Upper
 166 100
 164 79.4 57.3 97.3
 129 67.0 45.5 85.5



CLIENT ID

CE89256 QC 5X

ppbv

r

This form 1 and the associated quantitation report are filtered for detected compounds in the undiluted analysis.

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_22.D
 Acq On : 18 Dec 2019 7:35 am
 Operator : Keith
 Client ID : CE89256 QC 5X
 Lab ID : CE89256 QC 5X
 ALS Vial : 91 Sample Multiplier: 1

Quant Time: Dec 18 08:20:48 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

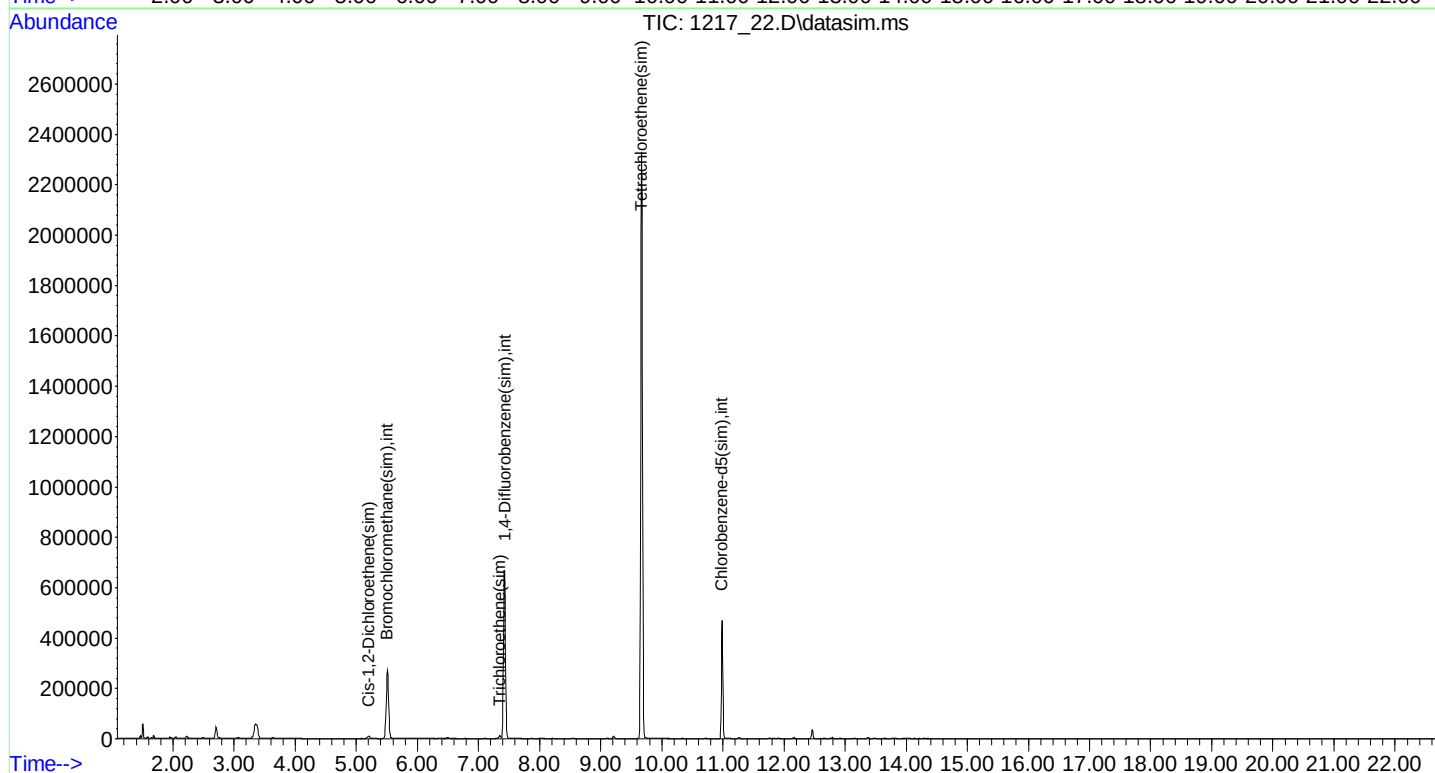
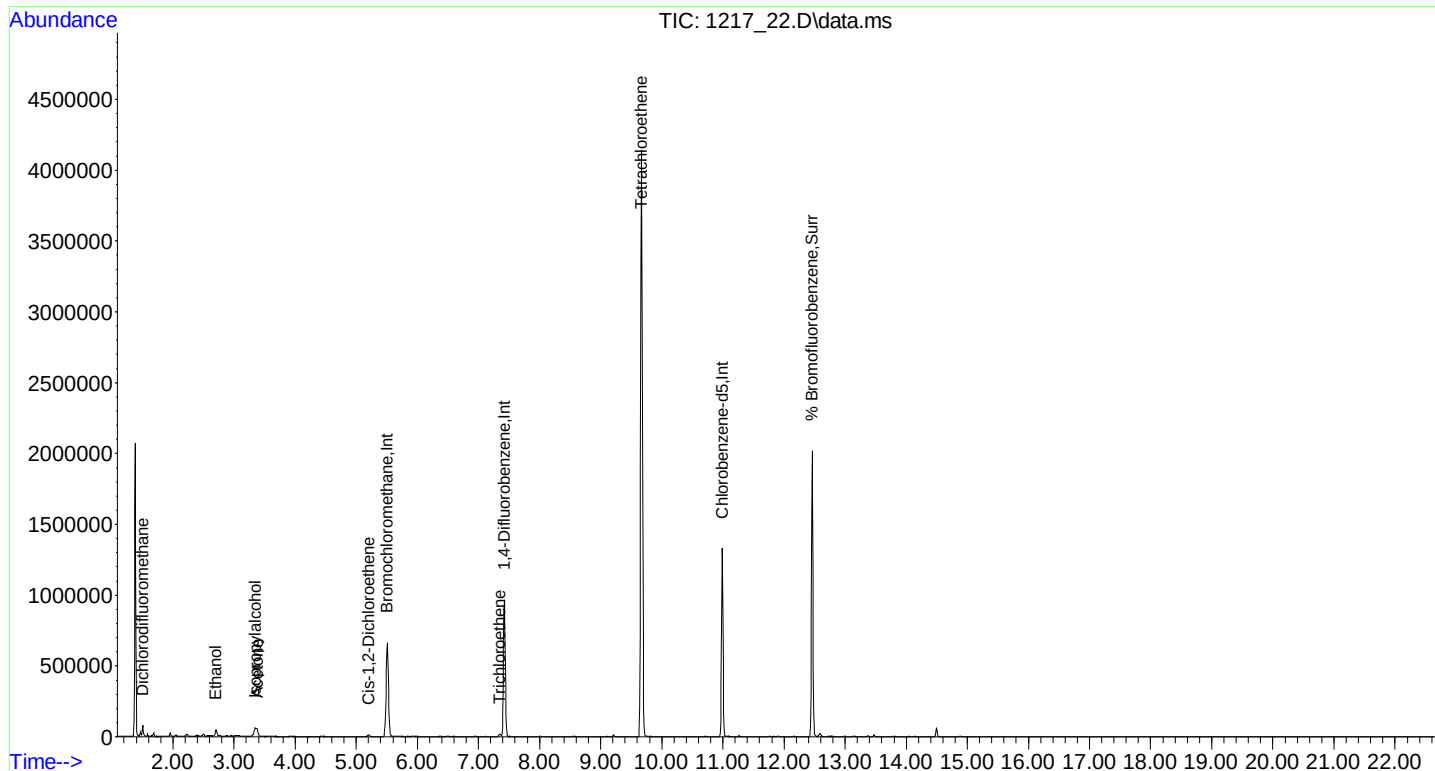
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.506	130	389988	10.000	ng	0.02
36) 1,4-Difluorobenzene	7.425	114	1017179	10.000	ng	0.02
53) Chlorobenzene-d5	10.990	82	417380	10.000	ng	0.01
80) Bromochloromethane(sim)	5.509	130	396010	10.000	ng	# 0.02
94) 1,4-Difluorobenzene(sim)	7.428	114	1120631	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.986	82	458016	10.000	ng	0.01
System Monitoring Compounds						
62) % Bromofluorobenzene	12.461	95	644854	11.493	ppbv	0.01
Spiked Amount	10.000	Range	70 - 130	Recovery	=	114.90%
Target Compounds						
3) Dichlorodifluoromethane	1.506	101	3482	0.256	ppbv#	90
10) Ethanol	2.704	45	51238	6.459	ppbv#	83
12) Acetone	3.374	43	86289	1.491	ppbv	97
14) Isopropylalcohol	3.347	45	83537	1.472	ppbv	96
26) Cis-1,2-Dichloroethene	5.196	61	9496	0.175	ppbv	97
39) Trichloroethene	7.350	130	8221	0.118	ppbv	95
52) Tetrachloroethene	9.665	166	1601607	16.763	ppbv	98
91) Cis-1,2-Dichloroethene...	5.196	61	9496	0.180	ppbv	97
97) Trichloroethene(sim)	7.350	130	8221	0.116	ppbv	96
103) Tetrachloroethene(sim)	9.665	166	1600511	16.301	ppbv	98

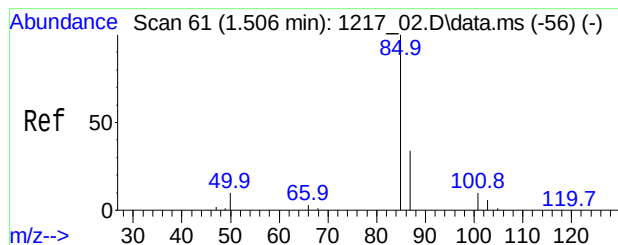
(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_22.D
 Acq On : 18 Dec 2019 7:35 am
 Operator : Keith
 Client ID : CE89256 QC 5X
 Lab ID : CE89256 QC 5X
 ALS Vial : 91 Sample Multiplier: 1

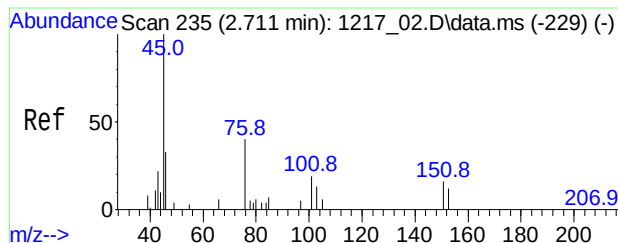
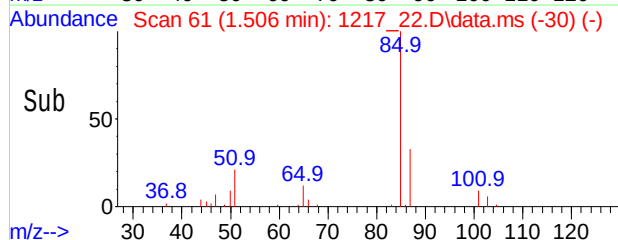
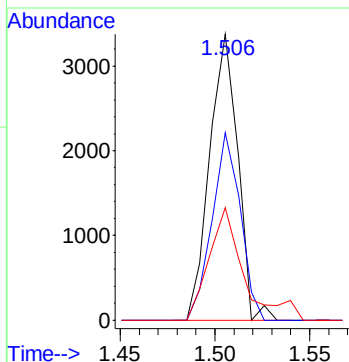
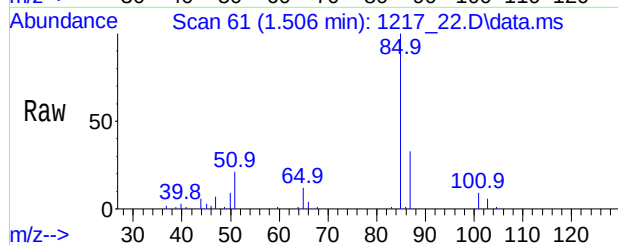
Quant Time: Dec 18 08:20:48 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration





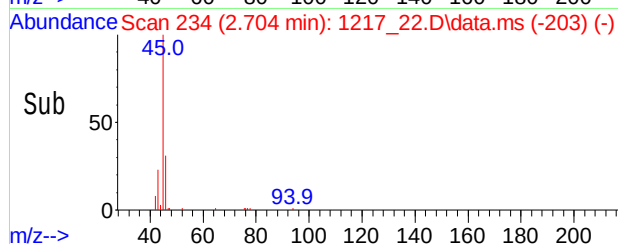
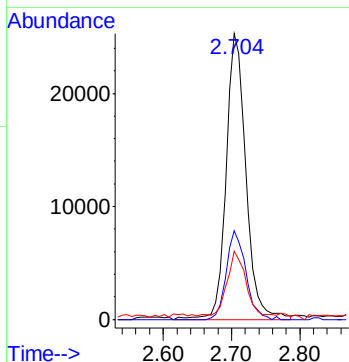
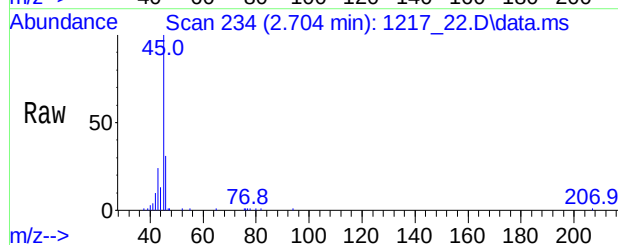
#3
Dichlorodifluoromethane
Conc: 8\$ 0.256 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

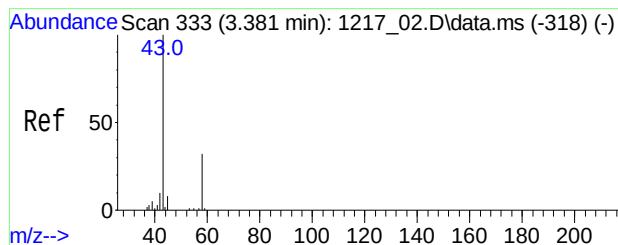
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	3482		
103	65.8	53.4	80.0	
66	48.4	26.0	39.0	#



#10
Ethanol
Conc: 8\$ 6.459 ppbv
RT: 2.704 min Scan# 234
Delta R.T. 0.014 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

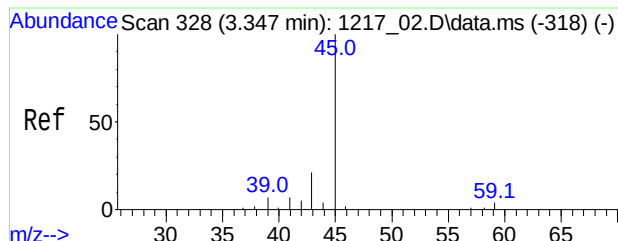
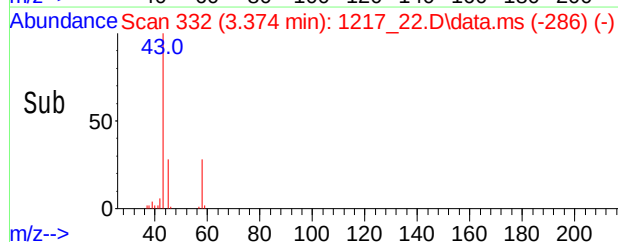
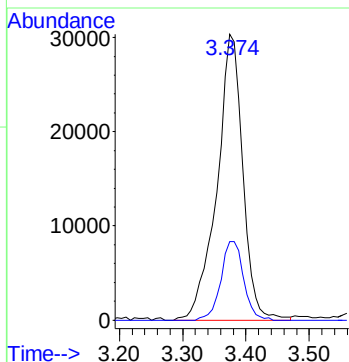
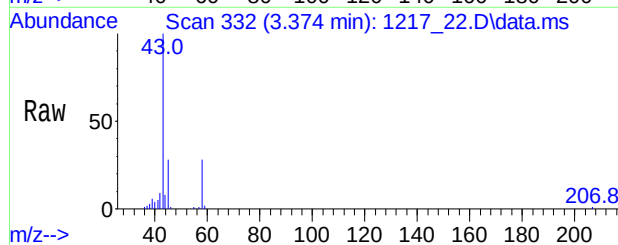
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	51238		
46	30.4	24.9	37.3	
43	20.5	30.8	46.2	#





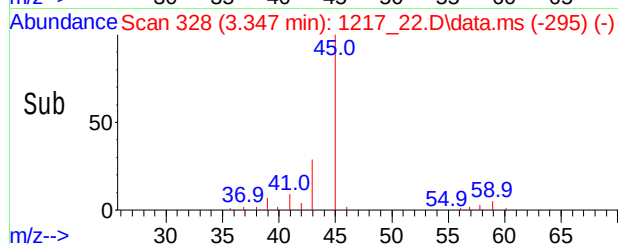
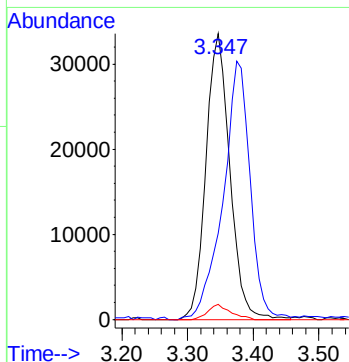
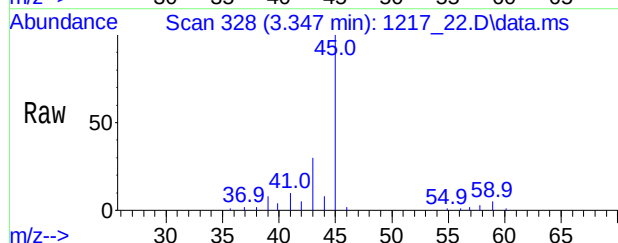
#12
Acetone
Conc: 8\$ 1.491 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

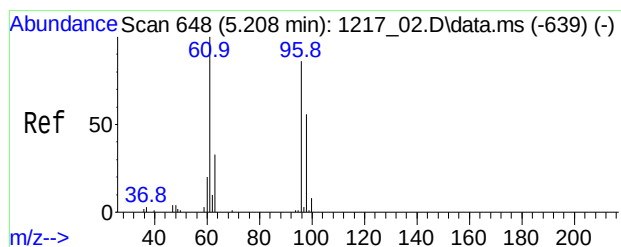
Tgt Ion: 43 Resp: 86289
Ion Ratio Lower Upper
43 100
58 24.1 20.4 30.6



#14
Isopropylalcohol
Conc: 8\$ 1.472 ppbv
RT: 3.347 min Scan# 328
Delta R.T. 0.027 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

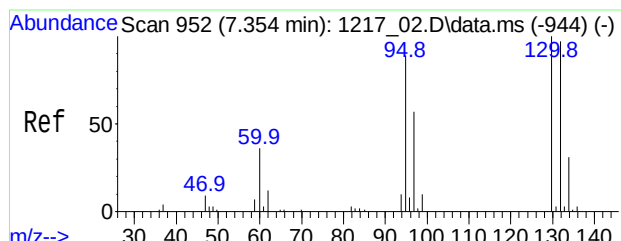
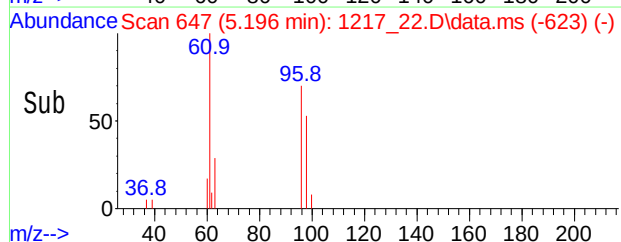
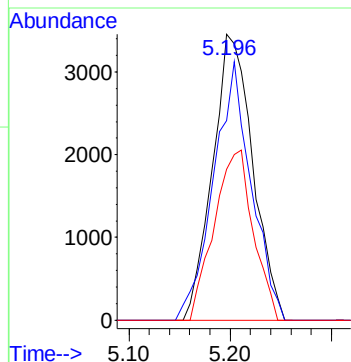
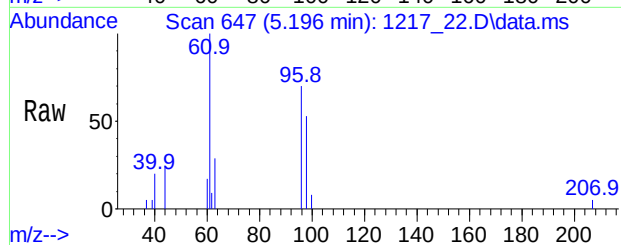
Tgt Ion: 45 Resp: 83537
Ion Ratio Lower Upper
45 100
43 103.3 86.3 129.5
59 4.9 4.2 6.4





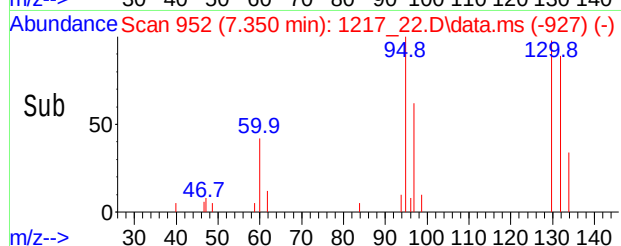
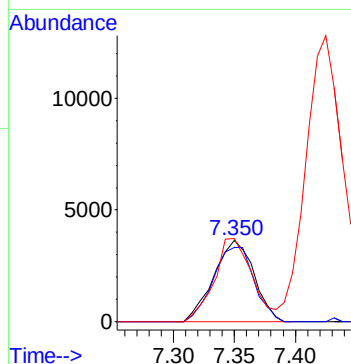
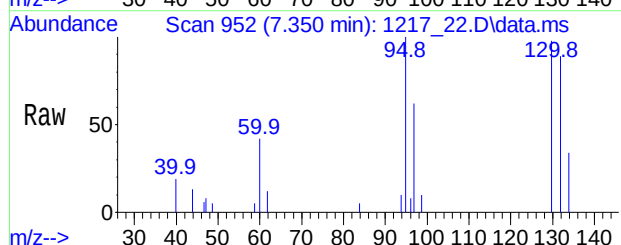
#26
Cis-1,2-Dichloroethene
Conc: 8\$ 0.175 ppbv
RT: 5.196 min Scan# 647
Delta R.T. 0.021 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

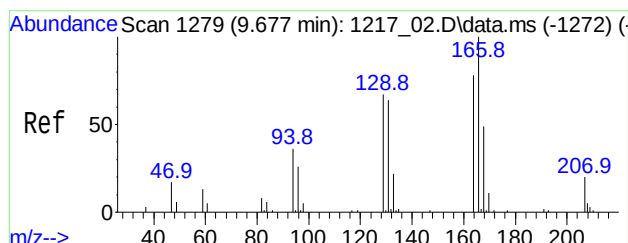
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	9496		
96	85.0	71.7	107.5	
98	57.8	46.3	69.5	



#39
Trichloroethene
Conc: 8\$ Below Cal
RT: 7.350 min Scan# 952
Delta R.T. 0.021 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

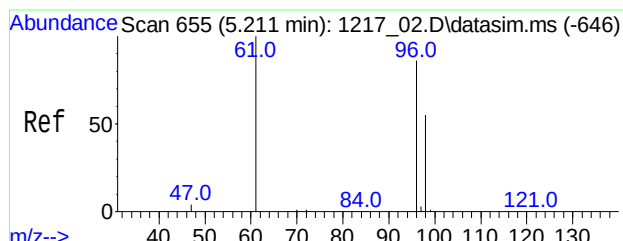
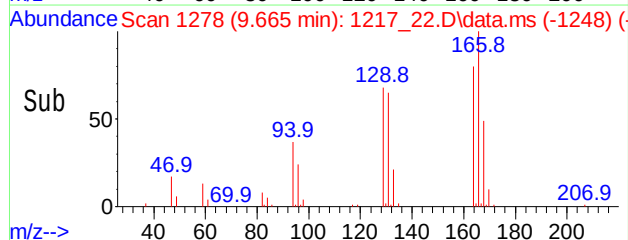
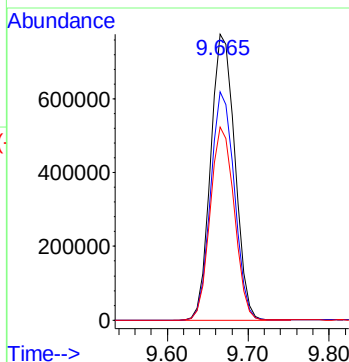
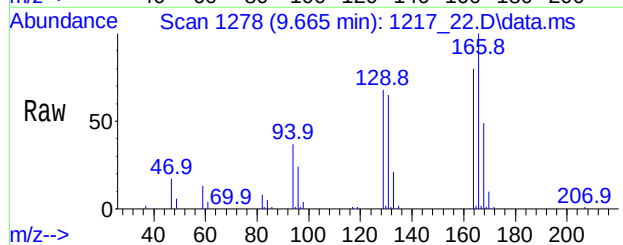
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	8221		
132	93.4	78.5	117.7	
95	97.3	73.3	109.9	





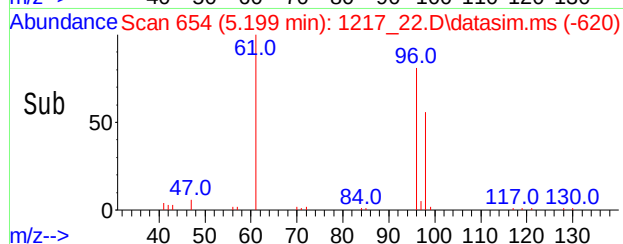
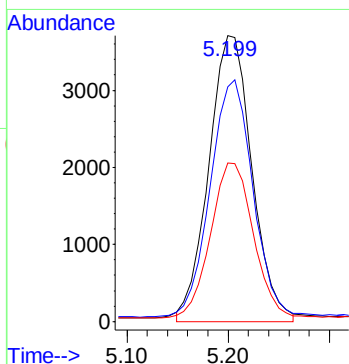
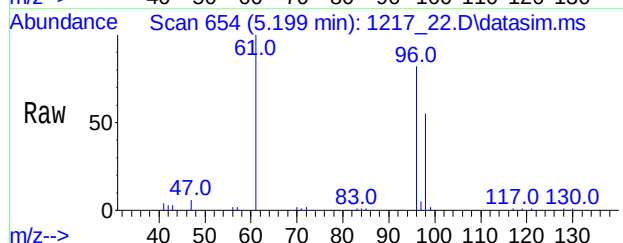
#52
Tetrachloroethene
Conc: 8\$ 16.763 ppbv
RT: 9.665 min Scan# 1278
Delta R.T. 0.014 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

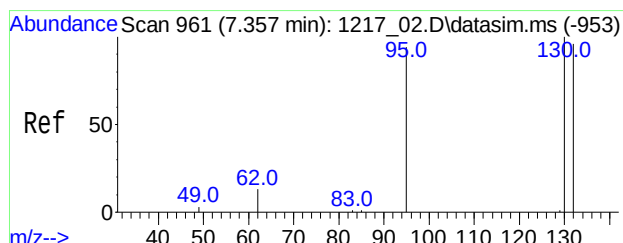
Tgt Ion	Ratio	Lower	Upper
166	100		
164	78.6	61.8	92.8
129	67.1	52.4	78.6



#91
Cis-1,2-Dichloroethene(sim)
Conc: 8\$ 0.180 ppbv
RT: 5.196 min Scan# 654
Delta R.T. 0.021 min
Lab File: 1217_22.D
Acq: 18 Dec 2019 7:35 am

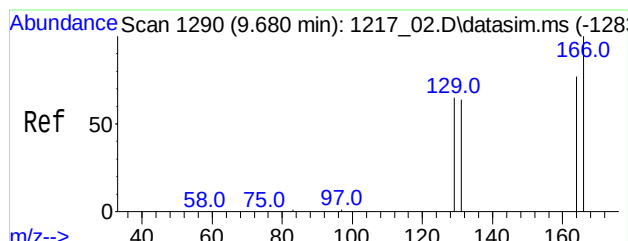
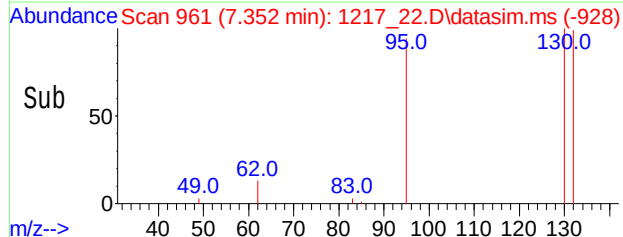
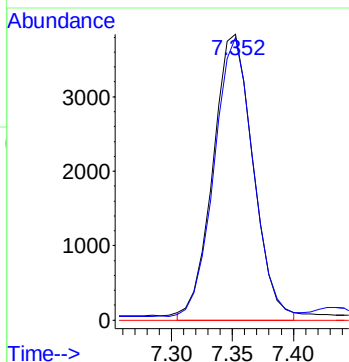
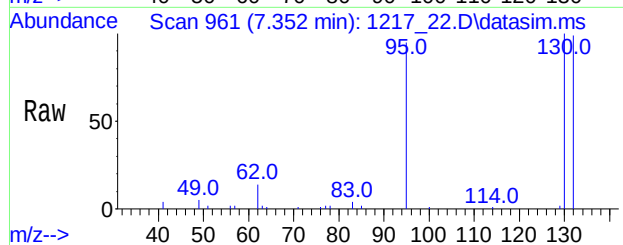
Tgt Ion	Ratio	Lower	Upper
61	100		
96	85.0	71.7	107.5
98	57.8	46.3	69.5





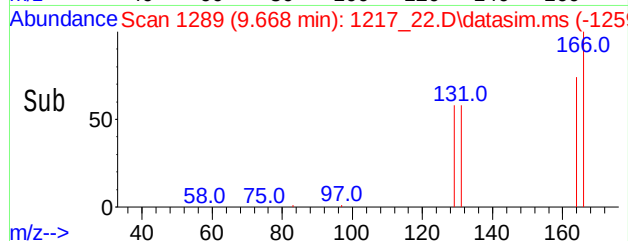
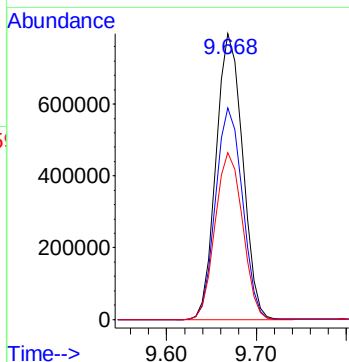
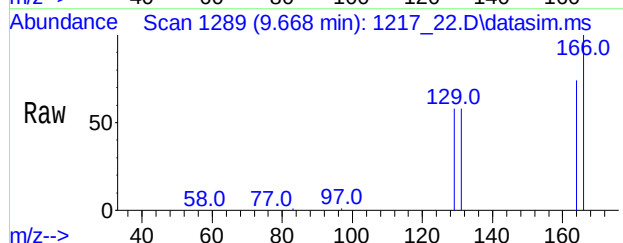
#97
 Trichloroethene(sim)
 Conc: 8\$ 0.116 ppbv
 RT: 7.350 min Scan# 961
 Delta R.T. 0.021 min
 Lab File: 1217_22.D
 Acq: 18 Dec 2019 7:35 am

Tgt Ion:	130	Resp:	8221
Ion Ratio	Lower	Upper	
130	100		
132	92.2	78.4	117.6
97	57.9	47.3	70.9



#103
 Tetrachloroethene(sim)
 Conc: 8\$ 16.301 ppbv
 RT: 9.665 min Scan# 1289
 Delta R.T. 0.014 min
 Lab File: 1217_22.D
 Acq: 18 Dec 2019 7:35 am

Tgt Ion:	166	Resp:	1600511
Ion Ratio	Lower	Upper	
166	100		
164	78.6	57.3	97.3
129	67.2	45.5	85.5



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client: FPMGROUP Lab: Phoenix Env. Labs

SDG No.: GCE89170 Lab Sample ID: CE89256

Canister: 28601 Lab File ID: 1217_08.D

Instrument: CHEM24 Column: RTX-VMS Date Received: 12/17/19

Purge Volume 200 (cc) Date Analyzed: 12/17/19

Matrix: AIR Dilution Factor: 1

89256 dup

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	
75-71-8	Dichlorodifluoromethane	1.19		0.202	0.202	
74-87-3	Chloromethane	0.541		0.485	0.485	
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	
75-00-3	Chloroethane	0.379	U	0.379	0.379	
64-17-5	Ethanol	35.1	S	0.531	0.531	
67-64-1	Acetone	6.73	S	0.421	0.421	
75-69-4	Trichlorofluoromethane	0.260		0.178	0.178	
67-63-0	Isopropylalcohol	8.00	S	0.407	0.407	
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	
156-59-2	Cis-1,2-Dichloroethene	1.10		0.051	0.051	
110-54-3	Hexane	0.284	U	0.284	0.284	
141-78-6	Ethyl acetate	0.298		0.278	0.278	
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	
71-43-2	Benzene	0.313	U	0.313	0.313	
110-82-7	Cyclohexane	0.291	U	0.291	0.291	
79-01-6	Trichloroethene	0.707		0.037	0.037	
142-82-5	Heptane	0.244	U	0.244	0.244	
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	
10061-02-6	trans-1,3-Dichloropropene	0.220	U	0.220	0.220	
108-88-3	Toluene	0.357		0.266	0.266	
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	
127-18-4	Tetrachloroethene	54.7	E	0.037	0.037	
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	
100-42-5	Styrene	0.235	U	0.235	0.235	
95-47-6	o-Xylene	0.230	U	0.230	0.230	
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	
95-63-6	1,2,4-Trimethylbenzene	0.218		0.204	0.204	
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client: FPMGROUP Lab: Phoenix Env. Labs

SDG No.: GCE89170 Lab Sample ID: CE89256

Canister: 28601 Lab File ID: 1217_08.D

Instrument: CHEM24 Column: RTX-VMS Date Received: 12/17/19

Purge Volume 200 (cc) Date Analyzed: 12/17/19

Matrix: AIR Dilution Factor: 1

89256 dup

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	
56-23-5	Carbon Tetrachloride(sim)	0.079		0.032	0.032	
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	
10061-01-5	cis-1,3-Dichloropropene(sim)	0.220	U	0.220	0.220	
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	
124-48-1	Dibromochloromethane(sim)	0.117	U	0.117	0.117	
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_08.D
 Acq On : 17 Dec 2019 10:42 pm
 Operator : Keith
 Client ID : 89256 dup
 Lab ID : CE89256 DUP
 ALS Vial : 77 Sample Multiplier: 1

Quant Time: Dec 18 08:35:50 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Qlast Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration

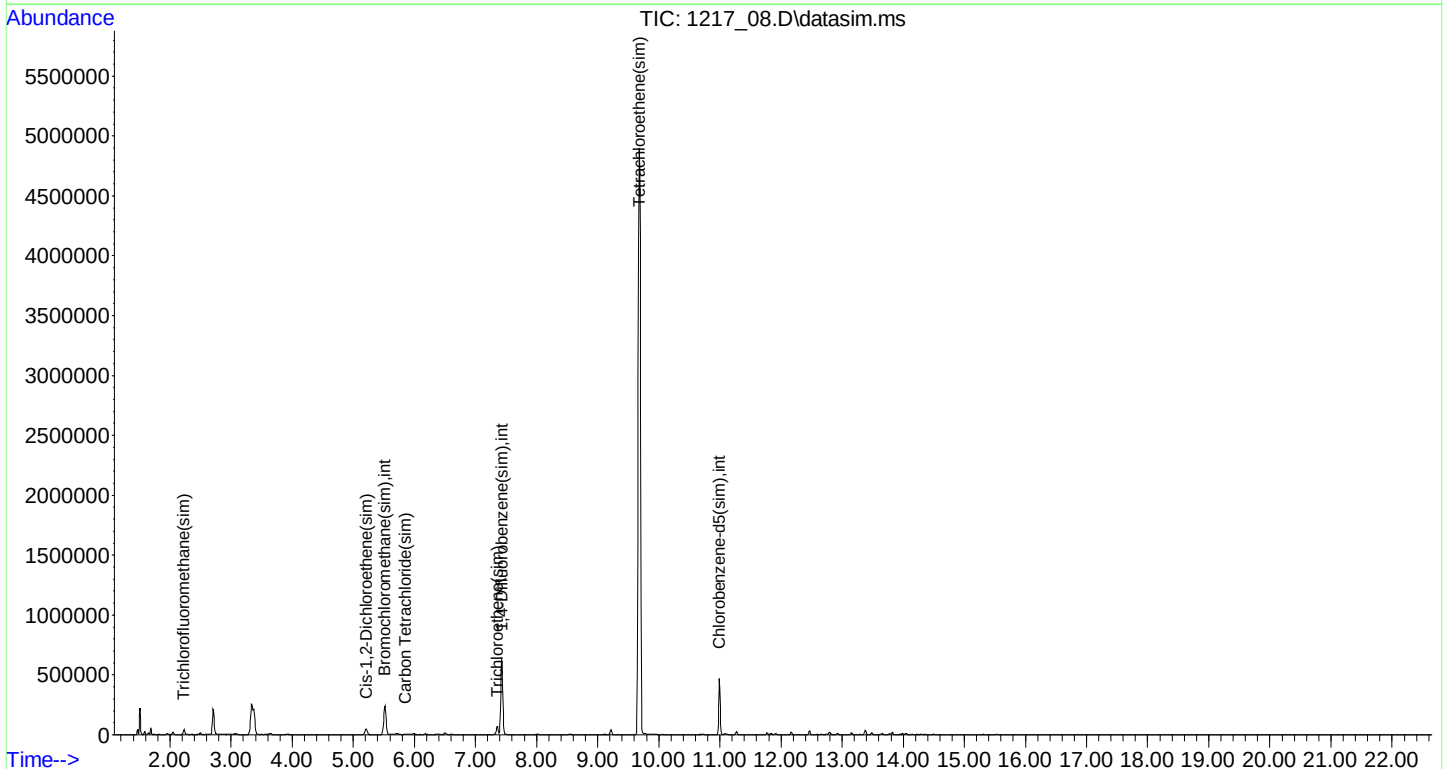
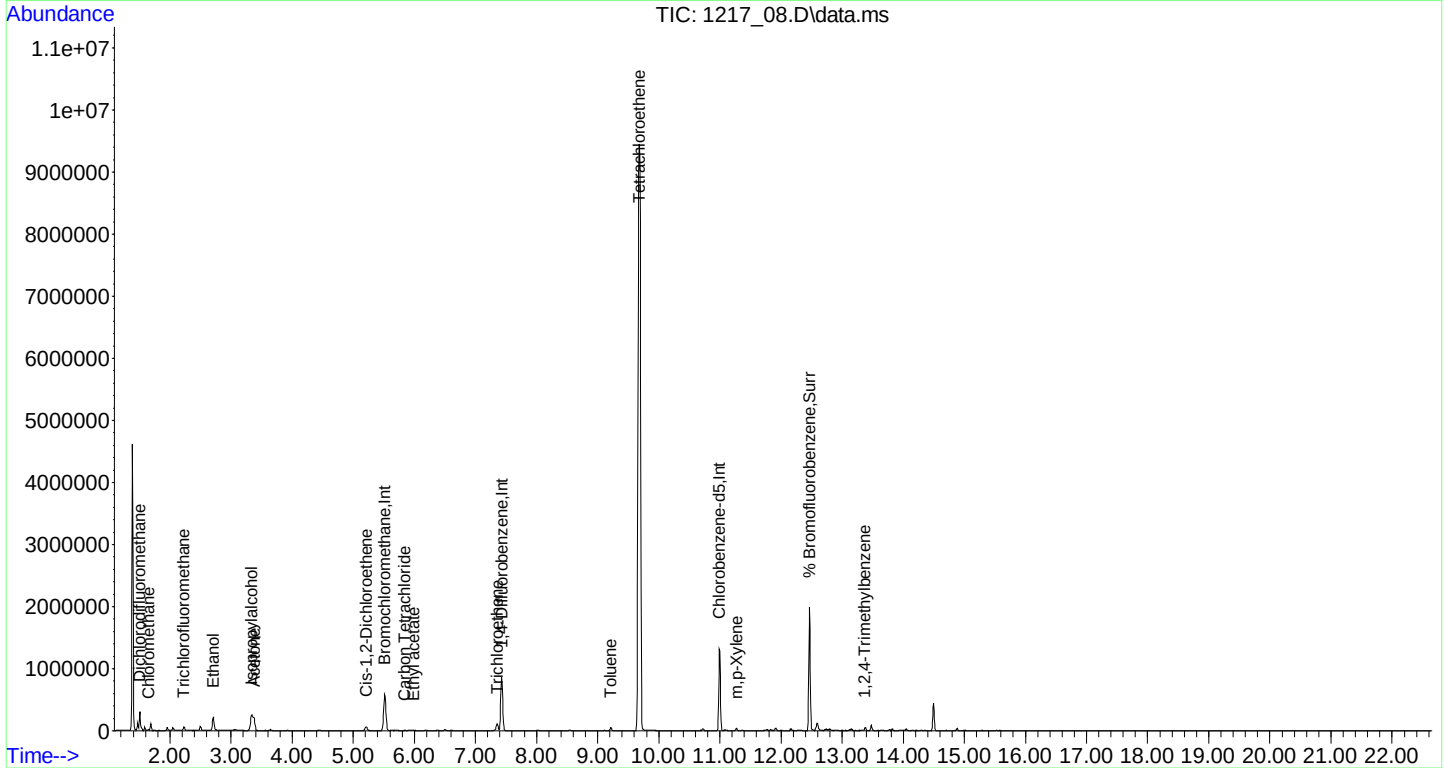
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.514	130	347335	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.432	114	958723	10.000	ng	0.03
53) Chlorobenzene-d5	10.991	82	419650	10.000	ng	0.01
80) Bromochloromethane(sim)	5.517	130	351600	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.428	114	1052859	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.993	82	458894	10.000	ng	0.02
System Monitoring Compounds						
62) % Bromofluorobenzene	12.467	95	645458	11.441	ppbv	0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	114.40%
Target Compounds						
					Qvalue	
3) Dichlorodifluoromethane	1.506	101	14438	1.193	ppbv#	91
4) Chloromethane	1.649	50	14157	0.541	ppbv	99
10) Ethanol	2.711	45	247875	35.081	ppbv#	84
12) Acetone	3.374	43	347140	6.734	ppbv	96
13) Trichlorofluoromethane	2.225	101	22927	0.260	ppbv	97
14) Isopropylalcohol	3.340	45	404327	8.002	ppbv#	80
26) Cis-1,2-Dichloroethene	5.211	61	53189	1.100	ppbv	97
29) Ethyl acetate	5.989	43	16177	0.298	ppbv	96
34) Carbon Tetrachloride	5.845	117	6603	0.075	ppbv	96
39) Trichloroethene	7.356	130	46507	0.707	ppbv	99
48) Toluene	9.218	91	44770	0.357	ppbv	99
52) Tetrachloroethene	9.680	166	4924723	54.688	ppbv	98
57) m,p-Xylene	11.272	91	23714	0.233	ppbv	100
68) 1,2,4-Trimethylbenzene	13.376	105	26533	0.218	ppbv	98
84) Trichlorofluoromethane...	2.228	101	24071	0.241	ppbv	99
86) Carbon Tetrachloride(sim)	5.848	117	6815	0.079	ppbv	99
91) Cis-1,2-Dichloroethene...	5.211	61	53189	1.137	ppbv	97
97) Trichloroethene(sim)	7.356	130	46507	0.699	ppbv	98
103) Tetrachloroethene(sim)	9.680	166	4923855	53.378	ppbv	98

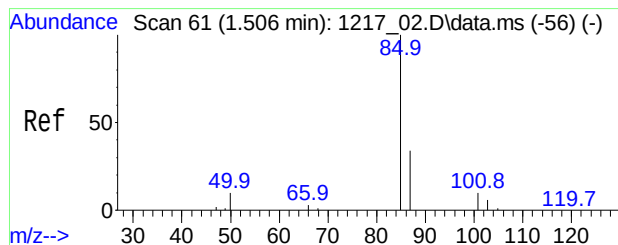
(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\AIR2019\CHEM24\12DEC\15\
 Data File : 1217_08.D
 Acq On : 17 Dec 2019 10:42 pm
 Operator : Keith
 Client ID : 89256 dup
 Lab ID : CE89256 DUP
 ALS Vial : 77 Sample Multiplier: 1

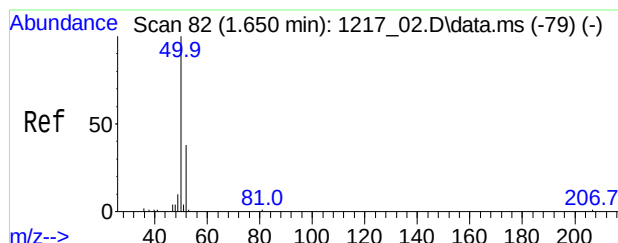
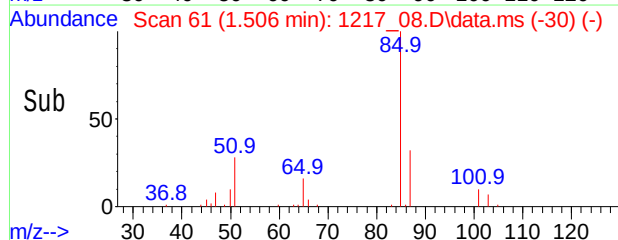
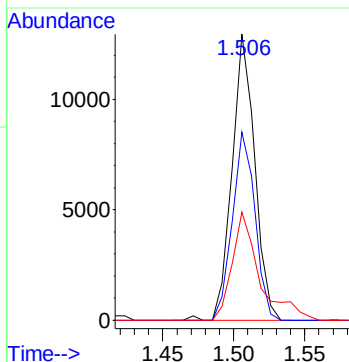
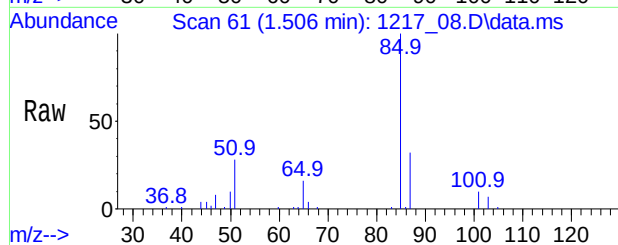
Quant Time: Dec 18 08:35:50 2019
 Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
 Quant Title : VOA Standards for 5 point calibration
 Last Update : Tue Dec 17 08:07:13 2019
 Response via : Initial Calibration





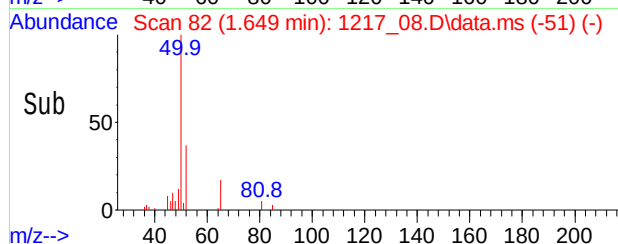
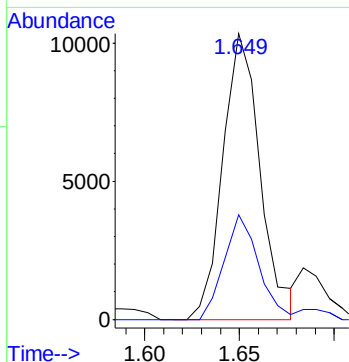
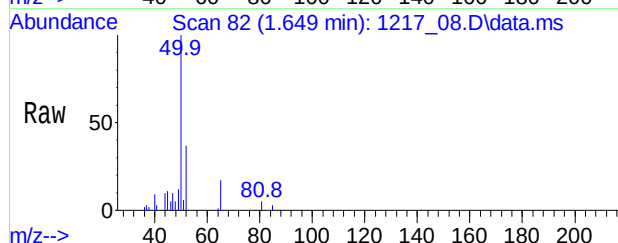
#3
Dichlorodifluoromethane
Conc: 8\$ 1.193 ppbv
RT: 1.506 min Scan# 61
Delta R.T. 0.014 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

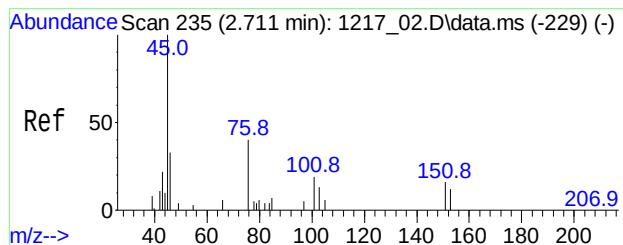
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	14438		
103	65.6	53.4	80.0	
66	45.7	26.0	39.0	



#4
Chloromethane
Conc: 8\$ 0.541 ppbv
RT: 1.649 min Scan# 82
Delta R.T. 0.013 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

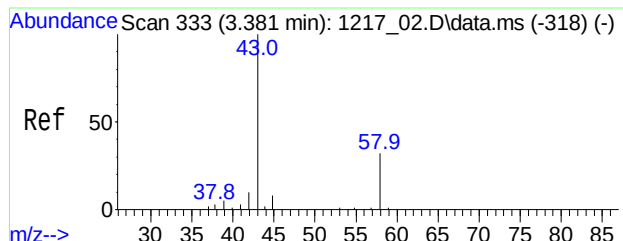
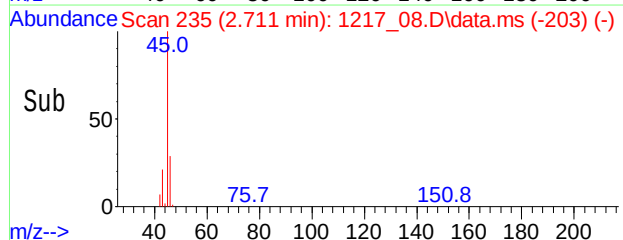
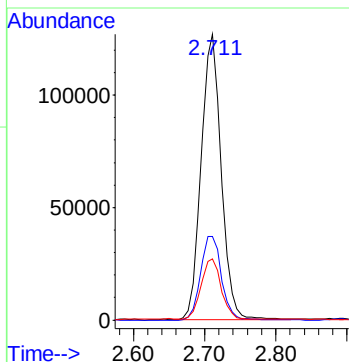
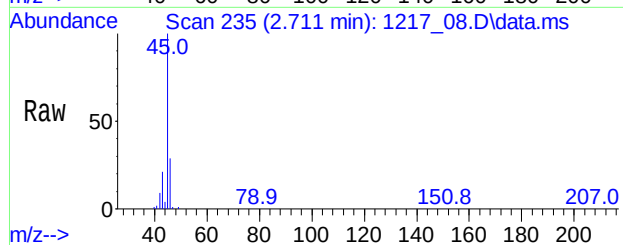
Tgt Ion	Ratio	Resp	Lower	Upper
50	100	14157		
52	33.8	14.3	54.3	





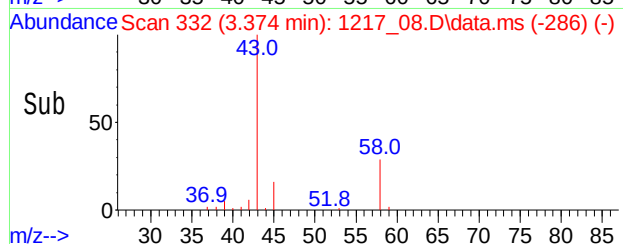
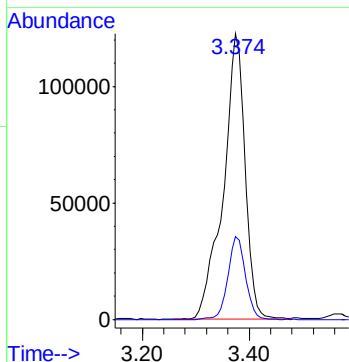
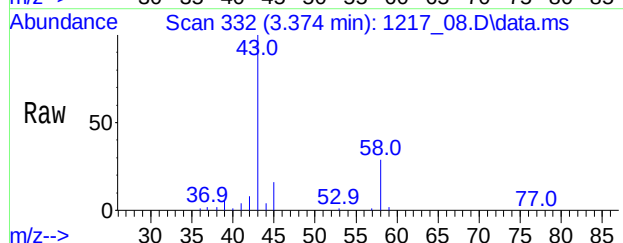
#10
Ethanol
Conc: 8\$ 35.081 ppbv
RT: 2.711 min Scan# 235
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

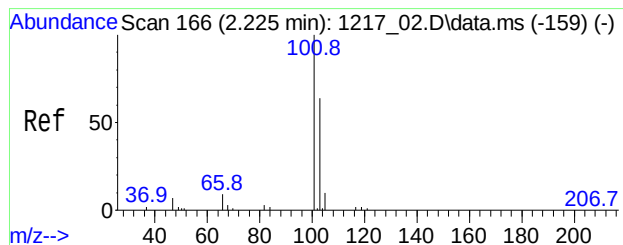
Tgt Ion: 45 Resp: 247875
Ion Ratio Lower Upper
45 100
46 30.8 24.9 37.3
43 21.5 30.8 46.2#



#12
Acetone
Conc: 8\$ 6.734 ppbv
RT: 3.374 min Scan# 332
Delta R.T. 0.013 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

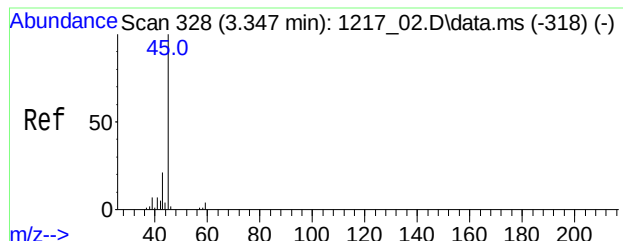
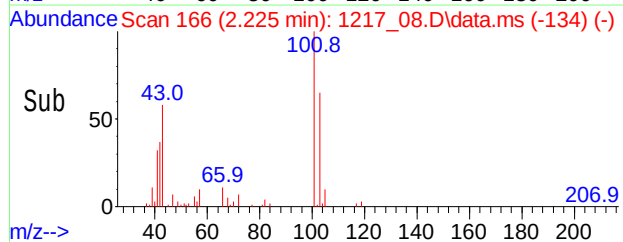
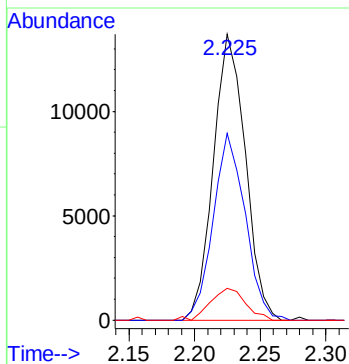
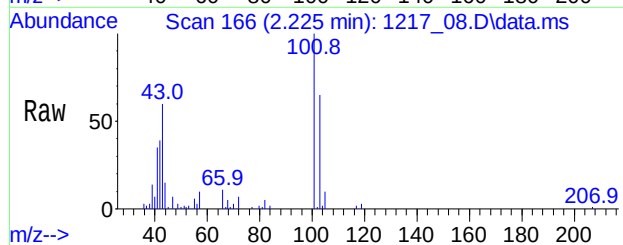
Tgt Ion: 43 Resp: 347140
Ion Ratio Lower Upper
43 100
58 23.4 20.4 30.6





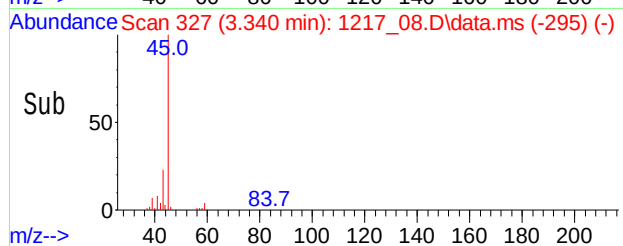
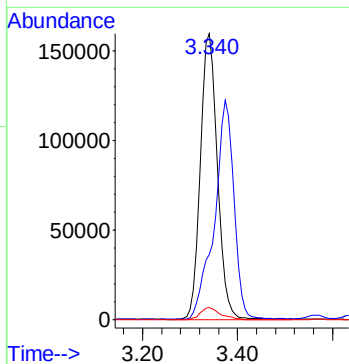
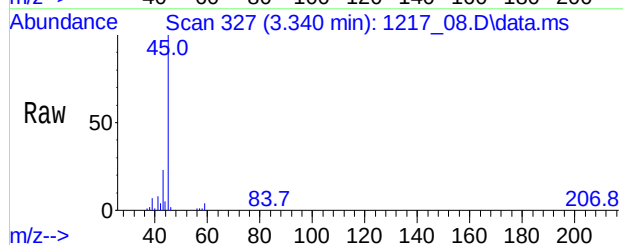
#13
Trichlorofluoromethane
Conc: 8\$ 0.260 ppbv
RT: 2.225 min Scan# 166
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

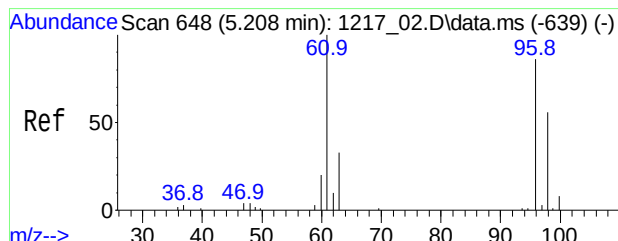
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	22927		
103	65.2	54.1	81.1	
66	12.2	8.3	12.5	



#14
Isopropylalcohol
Conc: 8\$ 8.002 ppbv
RT: 3.340 min Scan# 327
Delta R.T. 0.020 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

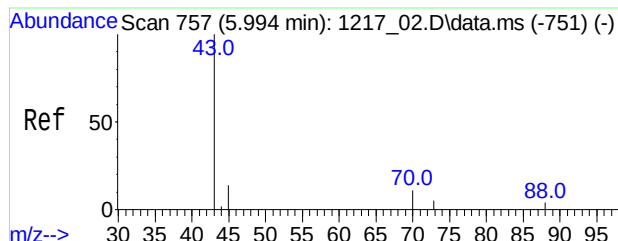
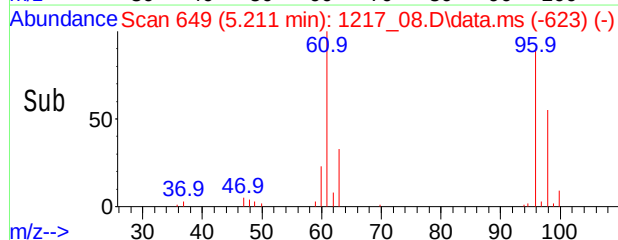
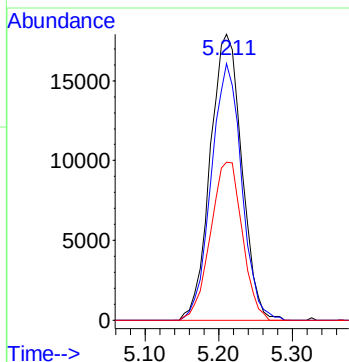
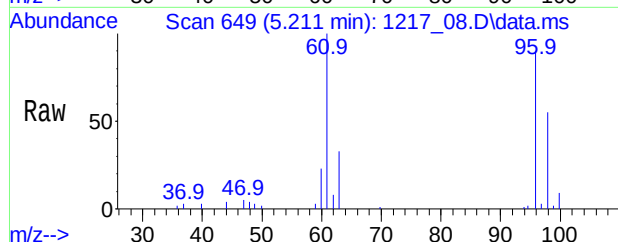
Tgt Ion	Ratio	Resp	Lower	Upper
45	100	404327		
43	85.9	86.3	129.5#	
59	4.7	4.2	6.4	





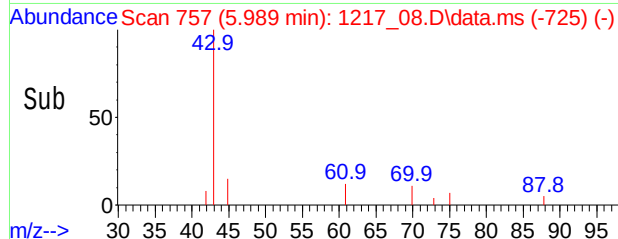
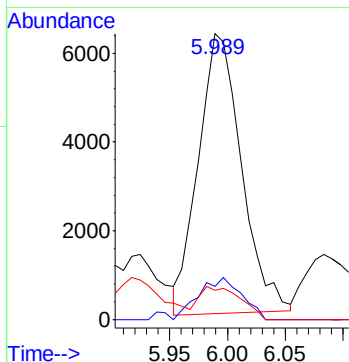
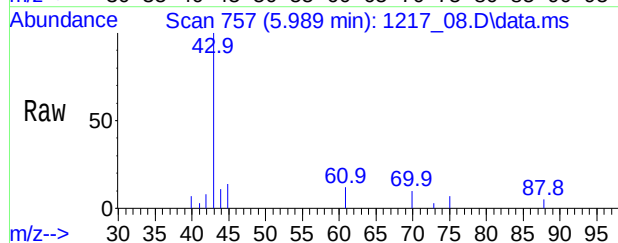
#26
Cis-1,2-Dichloroethene
Conc: 8\$ 1.100 ppbv
RT: 5.211 min Scan# 649
Delta R.T. 0.036 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

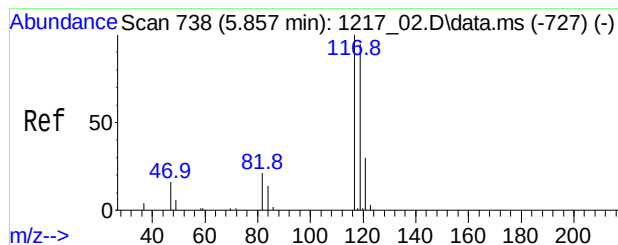
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	53189		
96	86.6	71.7	107.5	
98	55.7	46.3	69.5	



#29
Ethyl acetate
Conc: 8\$ 0.298 ppbv
RT: 5.989 min Scan# 757
Delta R.T. 0.028 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

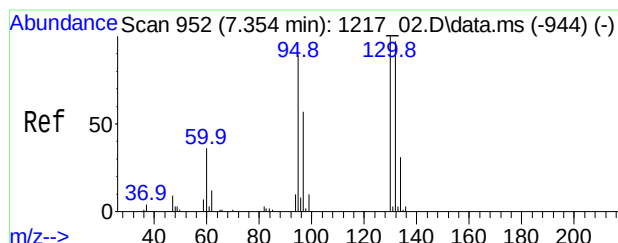
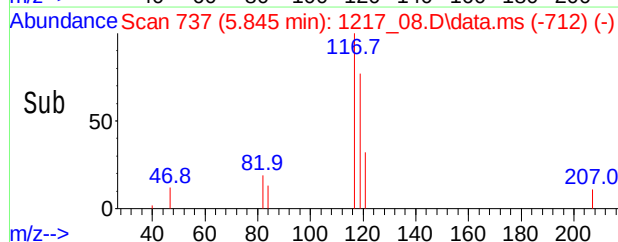
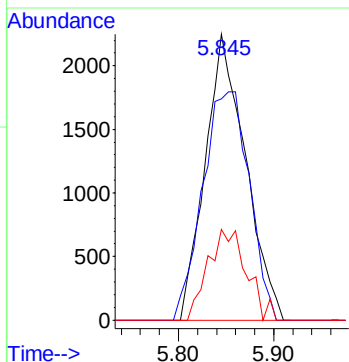
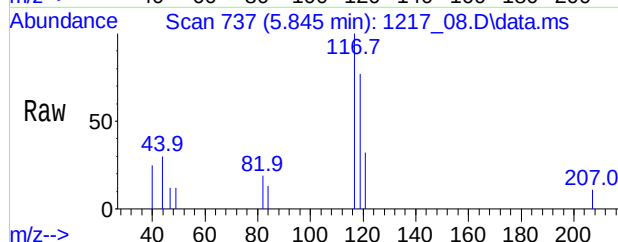
Tgt Ion	Ratio	Resp	Lower	Upper
43	100	16177		
61	15.8	0.0	0.0#	
70	11.2	10.2	15.2	





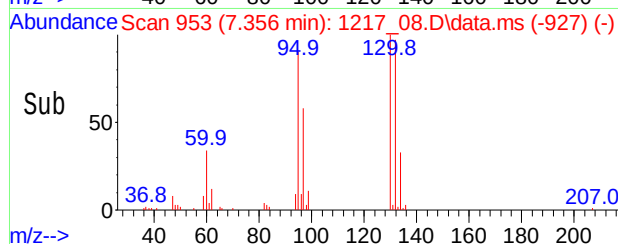
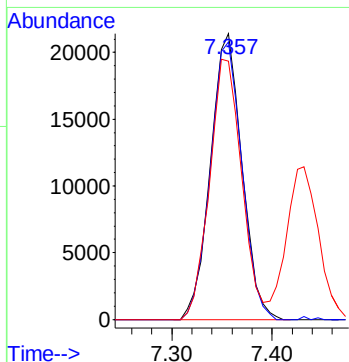
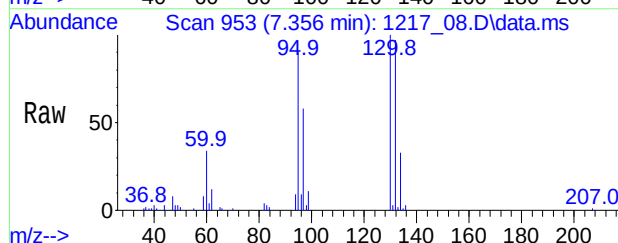
#34
Carbon Tetrachloride
Conc: 8\$ Below Cal
RT: 5.845 min Scan# 737
Delta R.T. 0.029 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

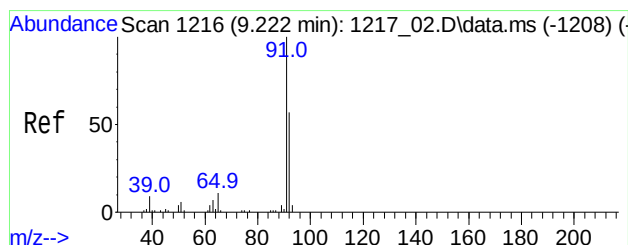
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6603		
119	92.6	77.1	117.1	
121	30.3	10.9	50.9	



#39
Trichloroethene
Conc: 8\$ 0.707 ppbv
RT: 7.356 min Scan# 953
Delta R.T. 0.027 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

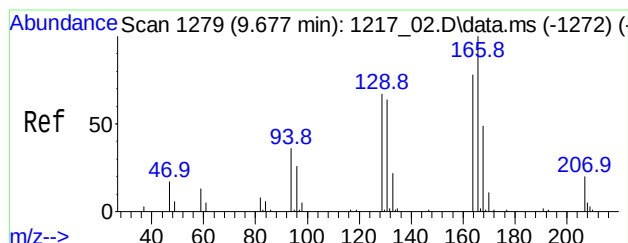
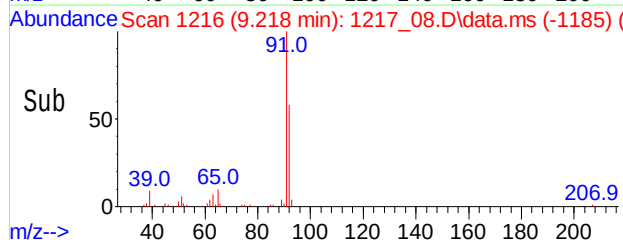
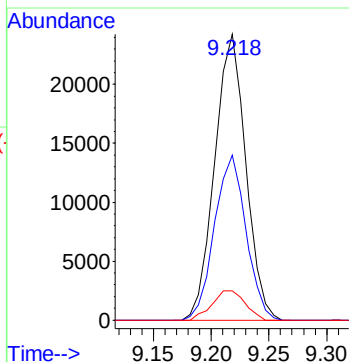
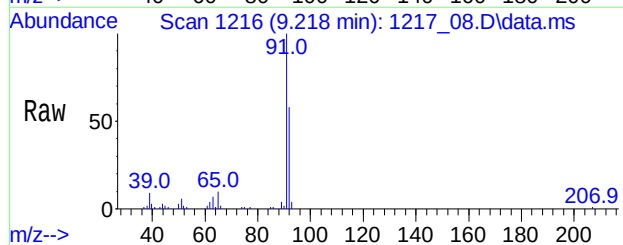
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	46507		
132	97.5	78.5	117.7	
95	92.7	73.3	109.9	





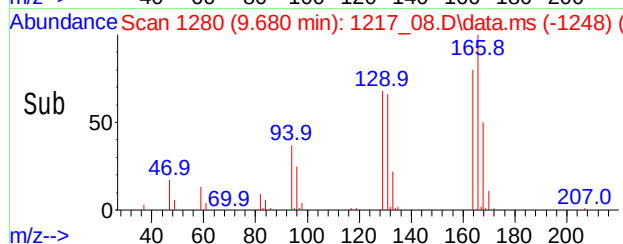
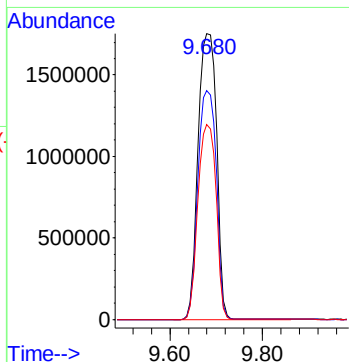
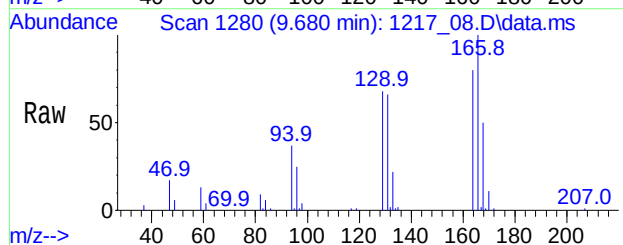
#48
Toluene
Conc: 8\$ 0.357 ppbv
RT: 9.218 min Scan# 1216
Delta R.T. 0.022 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

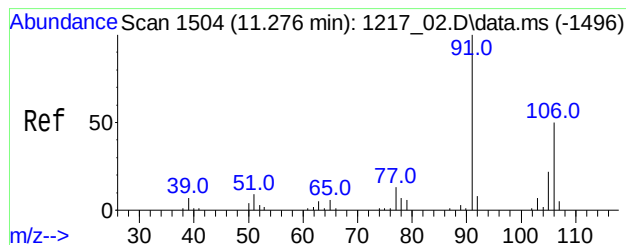
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	44770		
92	58.3	47.0	70.6	
65	10.9	8.3	12.5	



#52
Tetrachloroethene
Conc: 8\$ 54.688 ppbv
RT: 9.680 min Scan# 1280
Delta R.T. 0.029 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

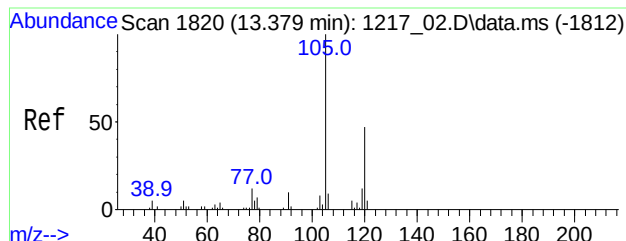
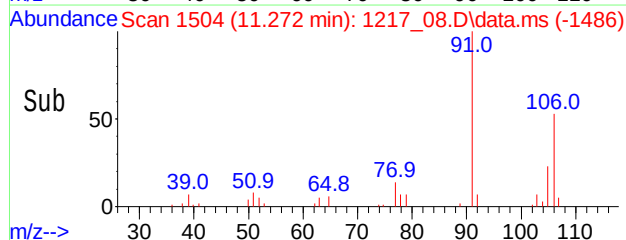
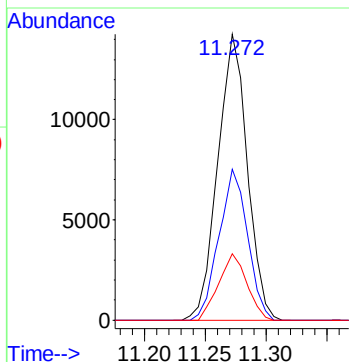
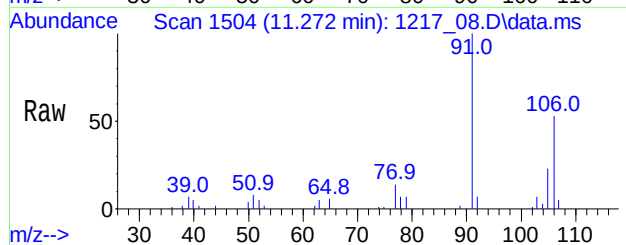
Tgt Ion	Ratio	Resp	Lower	Upper
166	100	4924723		
164	79.4	61.8	92.8	
129	67.0	52.4	78.6	





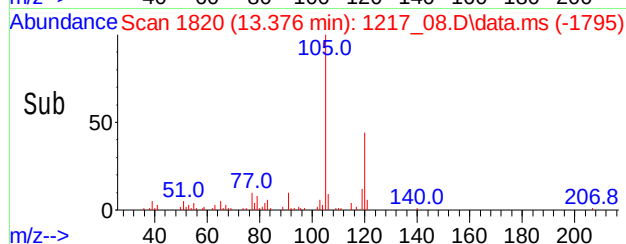
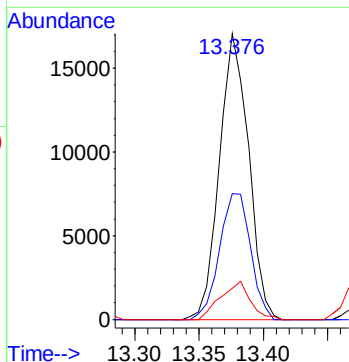
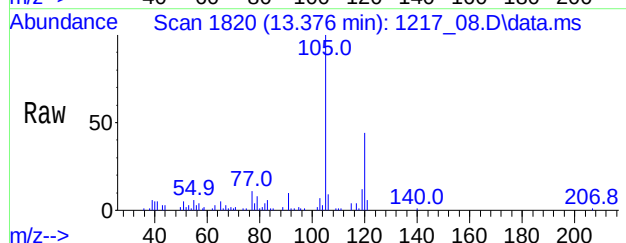
#57
m,p-Xylene
Conc: 8\$ 0.233 ppbv
RT: 11.272 min Scan# 1504
Delta R.T. 0.021 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

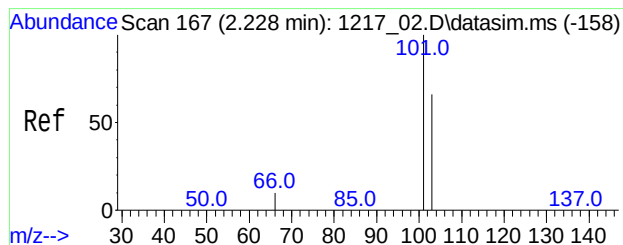
Tgt Ion	Ratio	Resp	Lower	Upper
91	100	23714		
106	51.3	41.0	61.6	
105	22.2	17.7	26.5	



#68
1,2,4-Trimethylbenzene
Conc: 8\$ 0.218 ppbv
RT: 13.376 min Scan# 1820
Delta R.T. 0.013 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

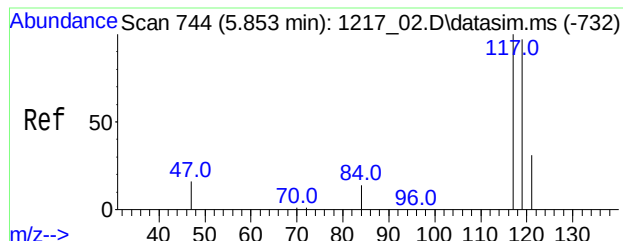
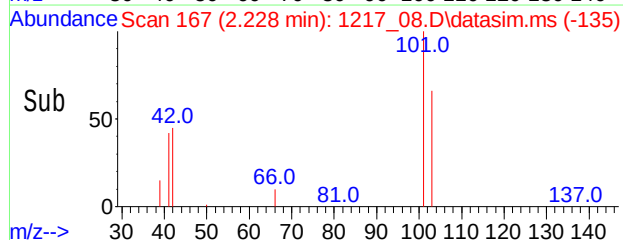
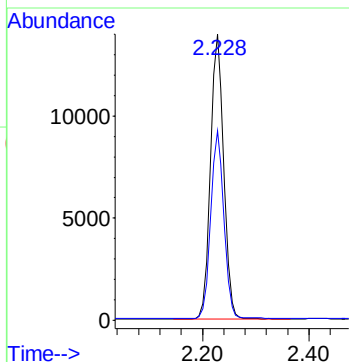
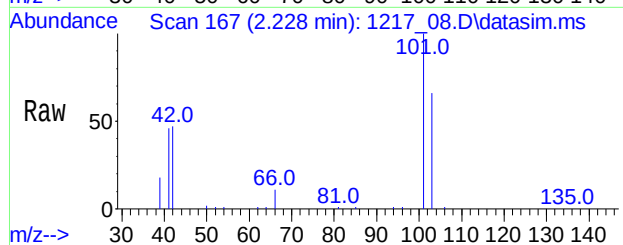
Tgt Ion	Ratio	Resp	Lower	Upper
105	100	26533		
120	46.9	38.5	57.7	
77	13.5	9.4	14.2	





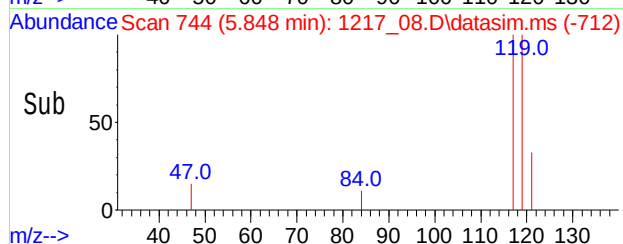
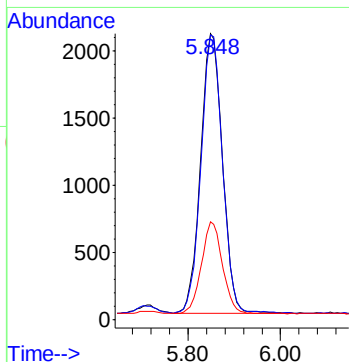
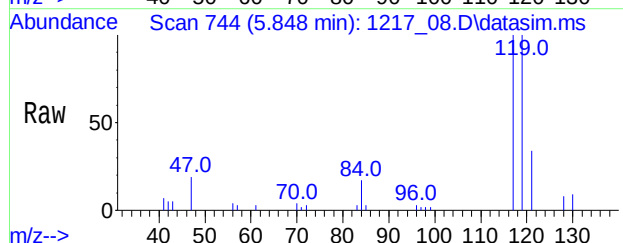
#84
 Trichlorofluoromethane(sim)
 Conc: 8\$ 0.241 ppbv
 RT: 2.228 min Scan# 167
 Delta R.T. 0.021 min
 Lab File: 1217_08.D
 Acq: 17 Dec 2019 10:42 pm

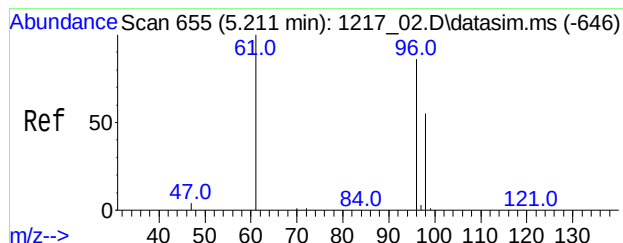
Tgt Ion	Ratio	Resp	Lower	Upper
101	100	24071		
103	65.4	52.8		79.2



#86
 Carbon Tetrachloride(sim)
 Conc: 8\$ 0.079 ppbv
 RT: 5.848 min Scan# 744
 Delta R.T. 0.029 min
 Lab File: 1217_08.D
 Acq: 17 Dec 2019 10:42 pm

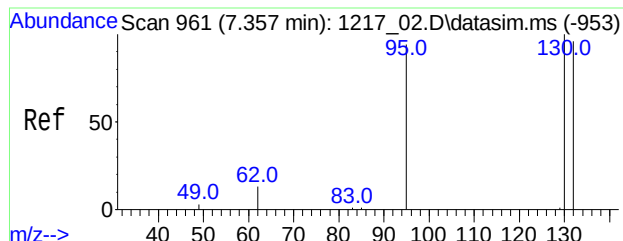
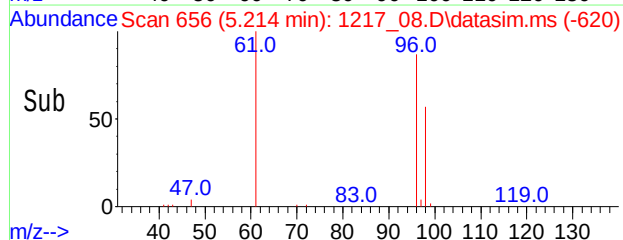
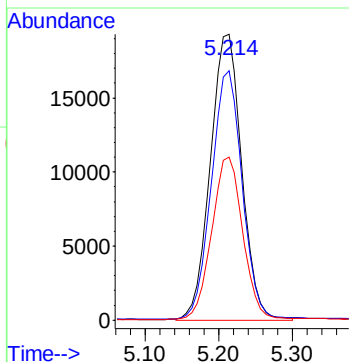
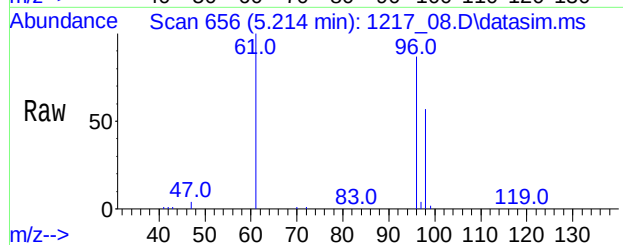
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	6815		
119	98.0	77.5		116.3
121	31.4	25.1		37.7





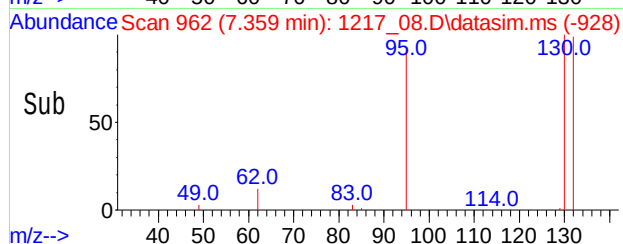
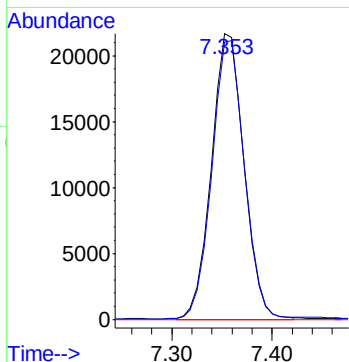
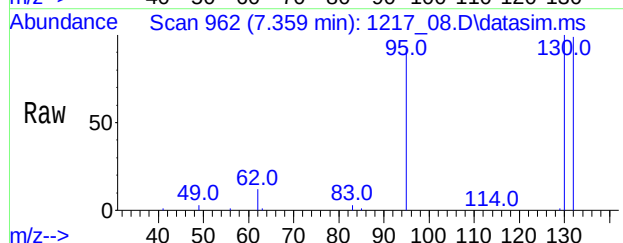
#91
Cis-1,2-Dichloroethene(sim)
Conc: 8\$ 1.137 ppbv
RT: 5.211 min Scan# 656
Delta R.T. 0.036 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

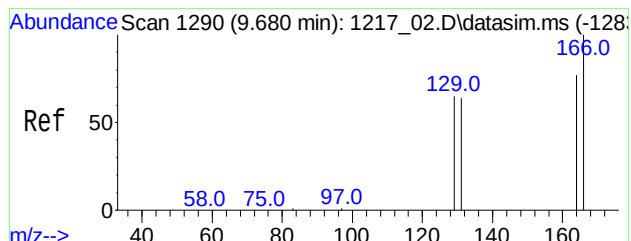
Tgt Ion	Ratio	Resp	Lower	Upper
61	100	53189		
96	86.6	71.7	107.5	
98	55.7	46.3	69.5	



#97
Trichloroethene(sim)
Conc: 8\$ 0.699 ppbv
RT: 7.356 min Scan# 962
Delta R.T. 0.027 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

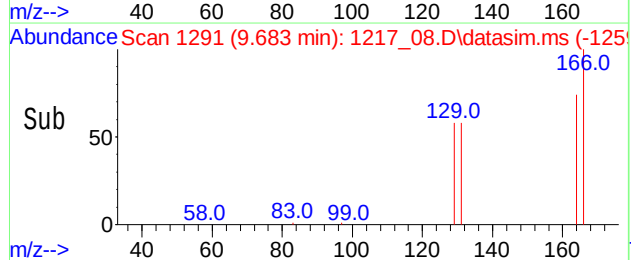
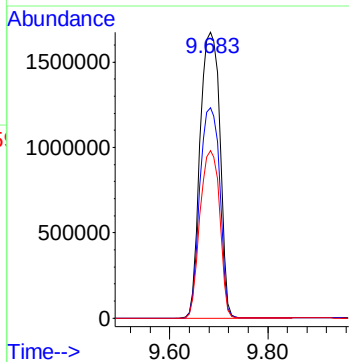
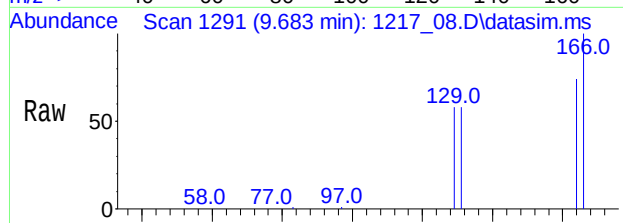
Tgt Ion	Ratio	Resp	Lower	Upper
130	100	46507		
132	97.0	78.4	117.6	
97	60.9	47.3	70.9	





#103
Tetrachloroethene(sim)
Conc: 8\$ 53.378 ppbv
RT: 9.680 min Scan# 1291
Delta R.T. 0.029 min
Lab File: 1217_08.D
Acq: 17 Dec 2019 10:42 pm

Tgt Ion: 166 Resp: 4923855
Ion Ratio Lower Upper
166 100
164 79.4 57.3 97.3
129 67.0 45.5 85.5



1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89256 BL</u>
Canister:	<u>BL</u>	Lab File ID:	<u>1217_06.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/17/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.580	U	0.580	0.580	r
75-71-8	Dichlorodifluoromethane	0.200	U	0.200	0.200	r
74-87-3	Chloromethane	0.480	U	0.480	0.480	r
106-99-0	1,3-Butadiene	0.450	U	0.450	0.450	r
75-00-3	Chloroethane	0.380	U	0.380	0.380	r
64-17-5	Ethanol	0.530	U	0.530	0.530	r
67-64-1	Acetone	0.420	U	0.420	0.420	r
67-63-0	Isopropylalcohol	0.410	U	0.410	0.410	r
107-13-1	Acrylonitrile	0.460	U	0.460	0.460	r
75-09-2	Methylene Chloride	0.860	U	0.860	0.860	r
75-15-0	Carbon Disulfide	0.320	U	0.320	0.320	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.280	U	0.280	0.280	r
78-93-3	Methyl Ethyl Ketone	0.340	U	0.340	0.340	r
110-54-3	Hexane	0.280	U	0.280	0.280	r
141-78-6	Ethyl acetate	0.280	U	0.280	0.280	r
109-99-9	Tetrahydrofuran	0.340	U	0.340	0.340	r
71-43-2	Benzene	0.310	U	0.310	0.310	r
110-82-7	Cyclohexane	0.290	U	0.290	0.290	r
142-82-5	Heptane	0.240	U	0.240	0.240	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.240	U	0.240	0.240	r
10061-02-6	trans-1,3-Dichloropropene	0.220	U	0.220	0.220	r
108-88-3	Toluene	0.270	U	0.270	0.270	r
591-78-6	2-Hexanone(MBK)	0.240	U	0.240	0.240	r
108-90-7	Chlorobenzene	0.220	U	0.220	0.220	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.230	U	0.230	0.230	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.200	U	0.200	0.200	r
622-96-8	4-Ethyltoluene	0.200	U	0.200	0.200	r
108-67-8	1,3,5-Trimethylbenzene	0.200	U	0.200	0.200	r
95-63-6	1,2,4-Trimethylbenzene	0.200	U	0.200	0.200	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.140	U	0.140	0.140	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.260	U	0.260	0.260	r
75-69-4	Trichlorofluoromethane(sim)	0.180	U	0.180	0.180	r
71-55-6	1,1,1-Trichloroethane(sim)	0.180	U	0.180	0.180	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CE89256 BL</u>
Canister:	<u>BL</u>	Lab File ID:	<u>1217_06.D</u>
Instrument:	<u>CHEM24</u>	Column:	<u>RTX-VMS</u>
		Date Received:	<u>12/17/19</u>
Purge Volume	<u>200</u> (cc)	Date Analyzed:	<u>12/17/19</u>
Matrix:	<u>AIR</u>	Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
56-23-5	Carbon Tetrachloride(sim)	0.032	U	0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.050	U	0.050	0.050	r
76-13-1	Trichlorotrifluoroethane(sim)	0.130	U	0.130	0.130	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.250	U	0.250	0.250	r
75-34-3	1,1-Dichloroethane(sim)	0.250	U	0.250	0.250	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.256	U	0.256	0.256	r
67-66-3	Chloroform(sim)	0.200	U	0.200	0.200	r
107-06-2	1,2-Dichloroethane(sim)	0.250	U	0.250	0.250	r
78-87-5	1,2-dichloropropane(sim)	0.220	U	0.220	0.220	r
75-27-4	Bromodichloromethane(sim)	0.150	U	0.150	0.150	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.280	U	0.280	0.280	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.220	U	0.220	0.220	r
79-00-5	1,1,2-Trichloroethane(sim)	0.180	U	0.180	0.180	r
124-48-1	Dibromochloromethane(sim)	0.120	U	0.120	0.120	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.037	U	0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
630-20-6	1,1,1,2-Tetrachloroethane(sim)	0.150	U	0.150	0.150	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.150	U	0.150	0.150	r
100-44-7	Benzyl chloride(sim)	0.190	U	0.190	0.190	r
541-73-1	1,3-Dichlorobenzene(sim)	0.170	U	0.170	0.170	r
106-46-7	1,4-Dichlorobenzene(sim)	0.170	U	0.170	0.170	r
135-98-8	sec-Butylbenzene(sim)	0.180	U	0.180	0.180	r
99-87-6	4-Isopropyltoluene(sim)	0.180	U	0.180	0.180	r
95-50-1	1,2-Dichlorobenzene(sim)	0.170	U	0.170	0.170	r
104-51-8	n-Butylbenzene(sim)	0.180	U	0.180	0.180	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.130	U	0.130	0.130	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_06.D
Acq On : 17 Dec 2019 9:30 pm
Operator : Keith
Client ID : CE89256 BLANK
Lab ID : CE89256 BLANK
ALS Vial : 75 Sample Multiplier: 1

Quant Time: Dec 18 08:19:28 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration

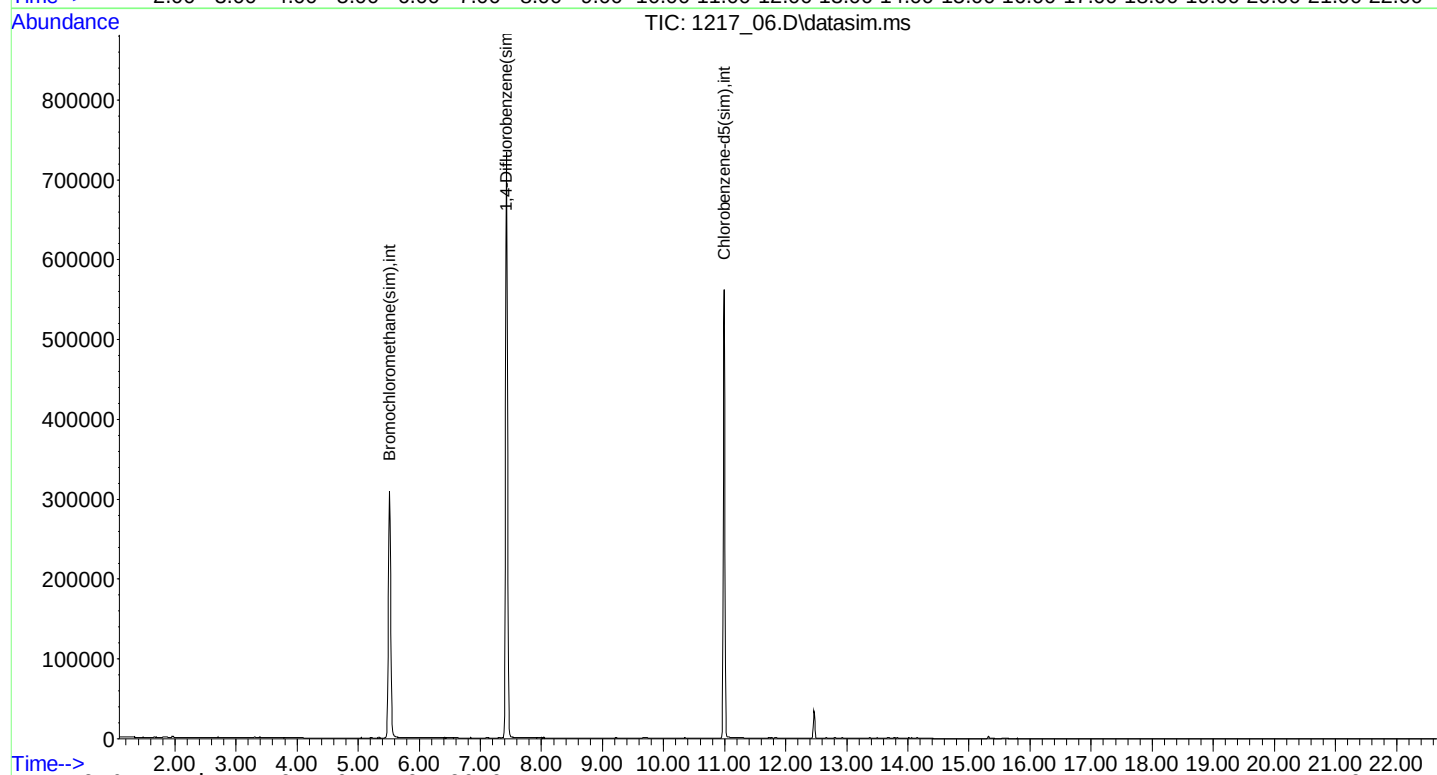
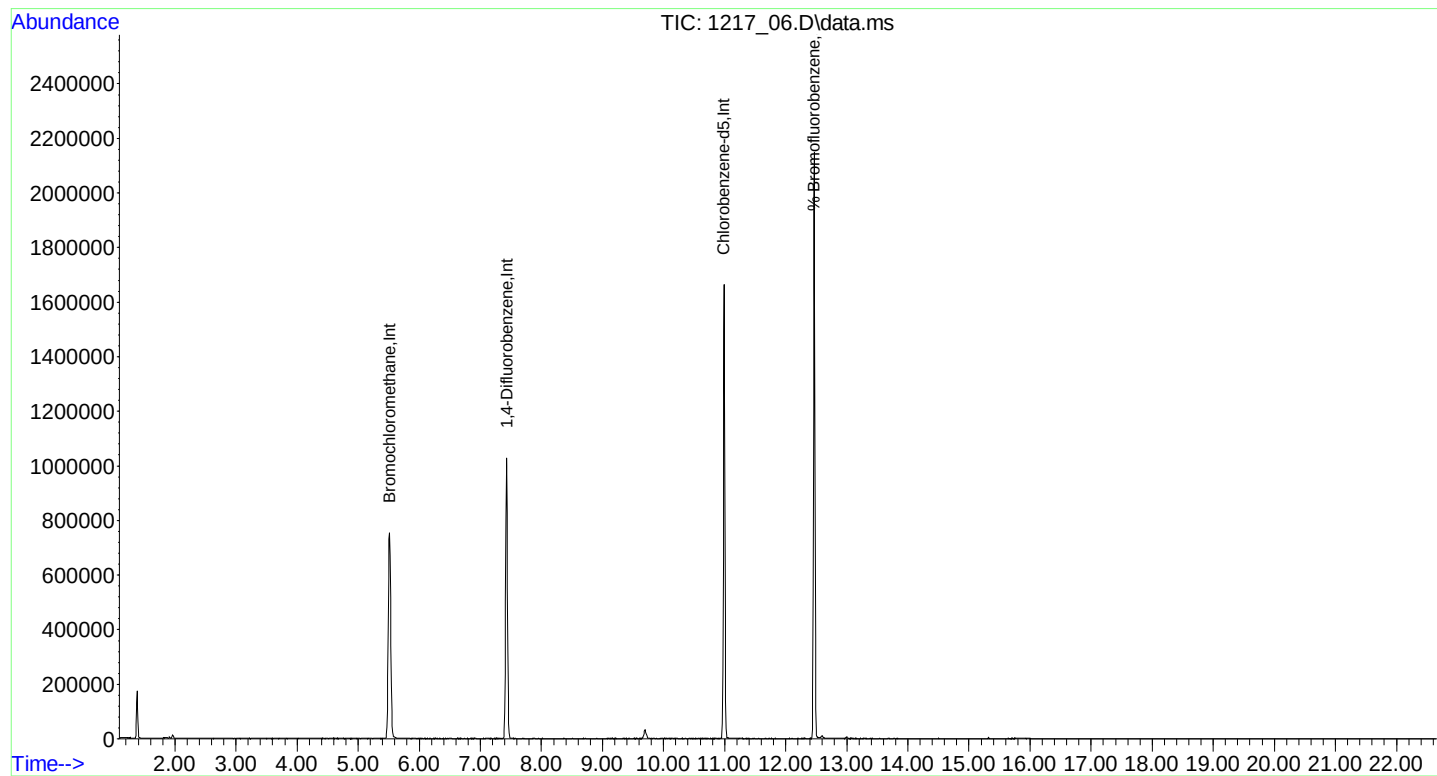
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	5.514	130	464534	10.000	ng	0.03
36) 1,4-Difluorobenzene	7.432	114	1134431	10.000	ng	0.03
53) Chlorobenzene-d5	10.990	82	517428	10.000	ng	0.01
80) Bromochloromethane(sim)	5.517	130	466322	10.000	ng	# 0.03
94) 1,4-Difluorobenzene(sim)	7.428	114	1247580	10.000	ng	# 0.02
104) Chlorobenzene-d5(sim)	10.993	82	567330	10.000	ng	0.02
System Monitoring Compounds						
62) % Bromofluorobenzene	12.467	95	689746	9.916	ppbv	0.02
Spiked Amount	10.000	Range	70 - 130	Recovery	=	99.20%

Target Compounds	Qvalue

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM24\12DEC\15\
Data File : 1217_06.D
Acq On : 17 Dec 2019 9:30 pm
Operator : Keith
Client ID : CE89256 BLANK
Lab ID : CE89256 BLANK
ALS Vial : 75 Sample Multiplier: 1

Quant Time: Dec 18 08:19:28 2019
Quant Method : H:\AIR2019\CHEM24\METHODS\24AIR_1216.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 17 08:07:13 2019
Response via : Initial Calibration



1
AIR ANALYSIS DATA SHEET

CLIENT ID

CANISTER BLK 1691

Client:	FPMGROUP	Lab:	Phoenix Env. Labs
SDG No.:	GCE89170	Lab Sample ID:	CANISTER BLK 1691
Canister:	CANBL	Lab File ID:	1202_10.D
Instrument:	CHEM20	Column:	
Purge Volume	200	(cc)	Date Received:
Matrix:	AIR	Dilution Factor:	1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.202	U	0.202	0.202	r
74-87-3	Chloromethane	0.485	U	0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	0.531	U	0.531	0.531	r
67-64-1	Acetone	0.421	U	0.421	0.421	r
67-63-0	Isopropylalcohol	0.407	U	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.220	U	0.220	0.220	r
108-88-3	Toluene	0.266	U	0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
630-20-6	1,1,1,2-Tetrachloroethane	0.146	U	0.146	0.146	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
75-69-4	Trichlorofluoromethane(sim)	0.178	U	0.178	0.178	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

CANISTER BLK 1691

Client:	FPMGROUP	Lab:	Phoenix Env. Labs
SDG No.:	GCE89170	Lab Sample ID:	CANISTER BLK 1691
Canister:	CANBL	Lab File ID:	1202_10.D
Instrument:	CHEM20	Column:	
Purge Volume	200	(cc)	Date Received:
Matrix:	AIR	Dilution Factor:	1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r
56-23-5	Carbon Tetrachloride(sim)	0.032	U	0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.220	U	0.220	0.220	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.117	U	0.117	0.117	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.037	U	0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM20\12DEC\02\
Data File : 1202_10.D
Acq On : 02 Dec 2019 02:33 pm
Operator : CORTEX\ms
Client ID : CANISTER BLK 1691
Lab ID : CANISTER BLK 1691
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 03 09:00:36 2019
Quant Method : H:\AIR2019\CHEM20\METHODS\20_AIR_1120.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Mon Dec 02 13:02:56 2019
Response via : Initial Calibration

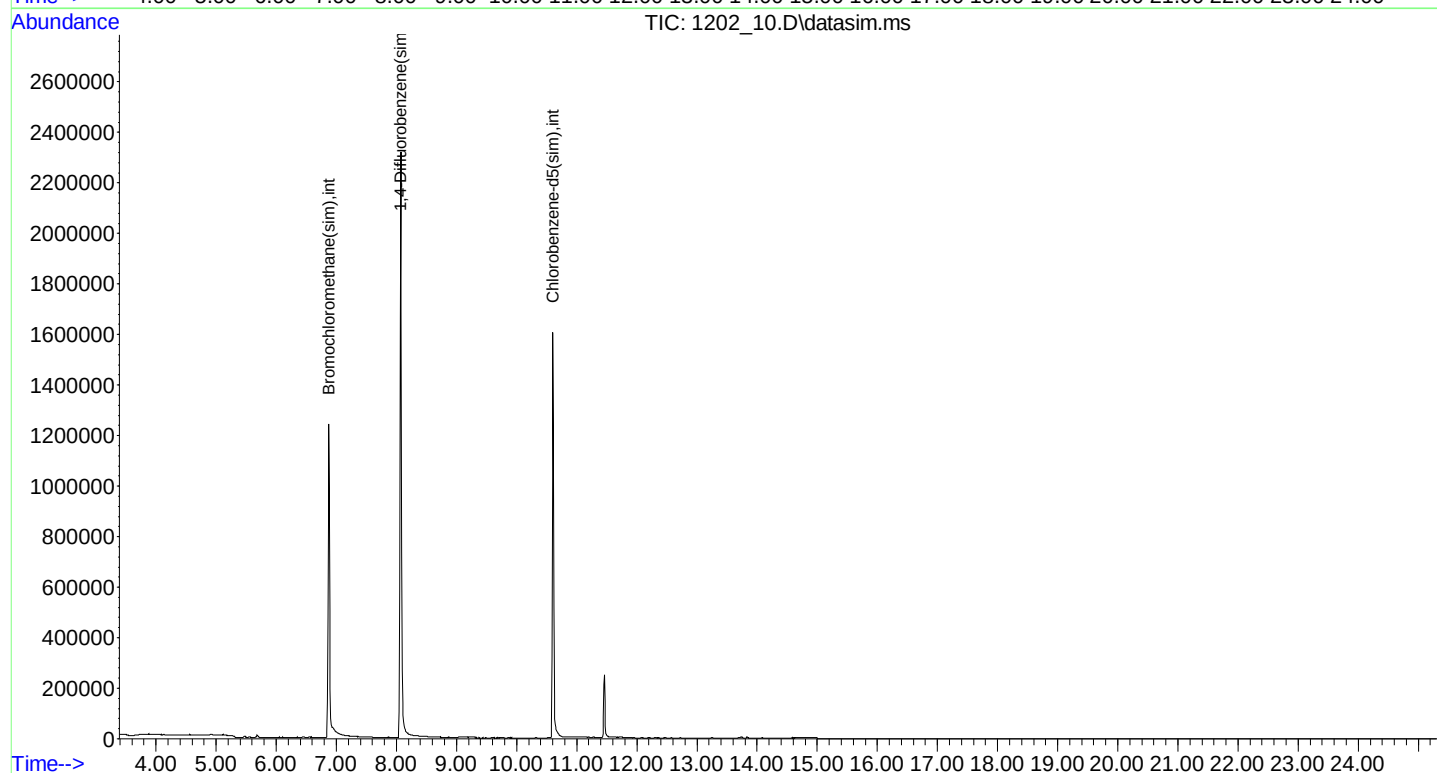
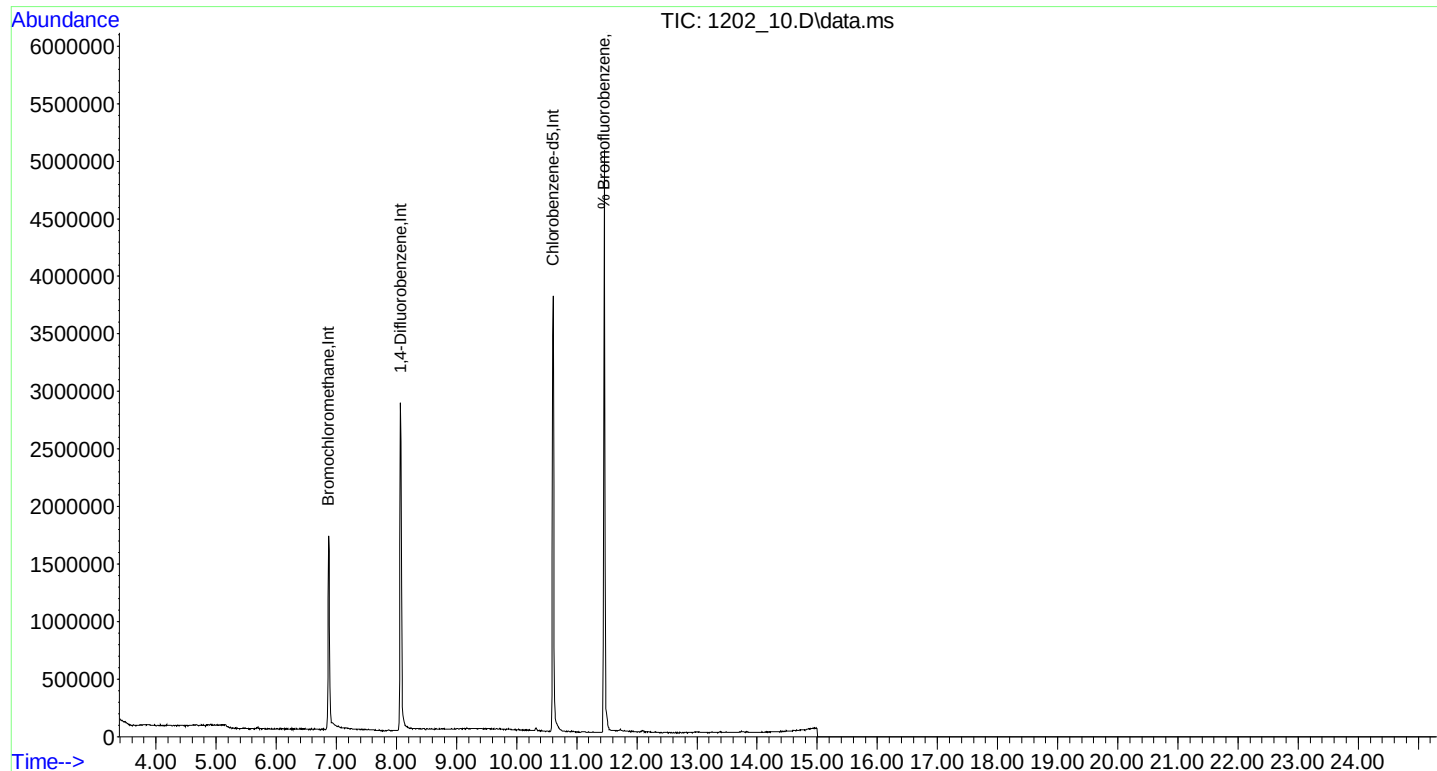
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	6.873	130	577913	10.000	ng	-0.02
36) 1,4-Difluorobenzene	8.068	114	2085745	10.000	ng	0.00
53) Chlorobenzene-d5	10.608	82	988615	10.000	ng	0.00
80) Bromochloromethane(sim)	6.875	130	739161	10.000	ng	#-0.02
94) 1,4-Difluorobenzene(sim)	8.071	114	2451653	10.000	ng	0.00
104) Chlorobenzene-d5(sim)	10.603	82	1061046	10.000	ng	# 0.00
System Monitoring Compounds						
62) % Bromofluorobenzene	11.457	95	1378510	9.630	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	96.30%

Target Compounds	Qvalue

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM20\12DEC\02\
Data File : 1202_10.D
Acq On : 02 Dec 2019 02:33 pm
Operator : CORTEX\ms
Client ID : CANISTER BLK 1691
Lab ID : CANISTER BLK 1691
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 03 09:00:36 2019
Quant Method : H:\AIR2019\CHEM20\METHODS\20_AIR_1120.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Mon Dec 02 13:02:56 2019
Response via : Initial Calibration



Canister Cleaning Certification

Batch Id:	1691	Certified:	☒
QC Canister Id:	763	Certified Date:	12/2/2019 2:33:00 PM
Canister Ids:	702, 735, 758, 763, 769, 780, 797, 803, 809, 815, 818, 823, 828, 842, 847, 855	Certified By:	airlab
		Certified Computer:	CHEM13XP0609
		Sample Id:	blk 1691

Comment: Initial vacuum of all canisters in this batch is -30 psig.

Data File: H:\AIR2019\CHEM20\12DEC\02\1202_10.D\1202_10-20_AIR_1120.rr

Analyte	Result (ppbv)	Analyte	Result (ppbv)
% Bromofluorobenzene	9.6304	1,1,1,2-Tetrachloroethane	0
1,1,1-Trichloroethane	0	1,1,1-Trichloroethane(sim)	0
1,1,2,2-Tetrachloroethane	0	1,1,2,2-Tetrachloroethane(sim)	0
1,1,2-Trichloroethane	0	1,1,2-Trichloroethane(sim)	0
1,1-Dichloroethane	0	1,1-Dichloroethane(sim)	0
1,1-Dichloroethene	0	1,1-Dichloroethene(sim)	0
1,2,4-Trichlorobenzene	0	1,2,4-Trichlorobenzene(sim)	0
1,2,4-Trimethylbenzene	0	1,2-Dibromoethane(EDB)	0
1,2-Dibromoethane(EDB)(sim)	0	1,2-Dichlorobenzene	0
1,2-Dichlorobenzene(sim)	0	1,2-Dichloroethane	0
1,2-Dichloroethane(sim)	0	1,2-dichloropropane	0
1,2-dichloropropane(sim)	0	1,2-Dichlorotetrafluoroethane	0
1,2-Dichlorotetrafluoroethane(sim)	0	1,3,5-Trimethylbenzene	0
1,3-Butadiene	0	1,3-Dichlorobenzene	0
1,3-Dichlorobenzene(sim)	0	1,4-Dichlorobenzene	0
1,4-Dichlorobenzene(sim)	0	1,4-Difluorobenzene	10
1,4-Difluorobenzene(sim)	10	1,4-Dioxane	0
1,4-Dioxane(sim)	0	2,2,4-trimethylpentane	0
2-Chlorotoluene	0	2-Hexanone(MBK)	0
4-Ethyltoluene	0	4-Isopropyltoluene	0
4-Isopropyltoluene(sim)	0	4-Methyl-2-pentanone(MIBK)	0
Acetone	0	Acrylonitrile	0
Allyl Chloride	0	Benzene	0
Benzyl chloride	0	Benzyl chloride(sim)	0
Bromochloromethane	10	Bromochloromethane(sim)	10
Bromodichloromethane	0	Bromodichloromethane(sim)	0
Bromoform	0	Bromoform(sim)	0
Bromomethane	0	Bromomethane(sim)	0
Carbon Disulfide	0	Carbon Tetrachloride	0
Carbon Tetrachloride(sim)	0	Chlorobenzene	0
Chlorobenzene-d5	10	Chlorobenzene-d5(sim)	10
Chloroethane	0	Chloroform	0
Chloroform(sim)	0	Chloromethane	0
Cis-1,2-Dichloroethene	0	Cis-1,2-Dichloroethene(sim)	0
cis-1,3-Dichloropropene	0	cis-1,3-Dichloropropene(sim)	0
Cyclohexane	0	Dibromochloromethane	0
Dibromochloromethane(sim)	0	Dichlorodifluoromethane	0
Ethanol	0	Ethyl acetate	0
Ethylbenzene	0	Heptane	0
Hexachlorobutadiene	0	Hexachlorobutadiene(sim)	0
Hexane	0	Isopropylalcohol	0
Isopropylbenzene	0	m,p-Xylene	0
m,p-Xylene(sim)	0	Methyl Ethyl Ketone	0
Methyl methacrylate	0	Methyl tert-butyl ether(MTBE)	0
Methylene Chloride	0	n-Butylbenzene	0
n-Butylbenzene(sim)	0	n-Propylbenzene	0

Canister Cleaning Certification

Batch Id: 1691

Certified: ☒

QC Canister Id: 763

Certified Date: 12/2/2019 2:33:00 PM

Canister Ids: 702, 735, 758, 763, 769, 780, 797, 803, 809, 815, 818, 823, 828, 842, 847, 855

Certified By: airlab

Certified Computer: CHEM13XP0609

Sample Id: blk 1691

Comment: Initial vacuum of all canisters in this batch is -30 psig.

Data File: H:\AIR2019\CHEM20\12DEC\02\1202_10.D\1202_10-20_AIR_1120.rr

Analyte	Result (ppbv)	Analyte	Result (ppbv)
n-Propylbenzene(sim)	0	Naphthalene	0
Naphthalene(sim)	0	o-Xylene	0
Propylene	0	sec-Butylbenzene	0
sec-Butylbenzene(sim)	0	Styrene	0
tert-butyl alcohol	0	tert-butylbenzene	0
tert-butylbenzene(sim)	0	Tetrachloroethene	0
Tetrachloroethene(sim)	0	Tetrahydrofuran	0
Toluene	0	Trans-1,2-Dichloroethene	0
Trans-1,2-Dichloroethene(sim)	0	trans-1,3-Dichloropropene	0
Trichloroethene	0	Trichloroethene(sim)	0
Trichlorofluoromethane	0	Trichlorofluoromethane(sim)	0
Trichlorotrifluoroethane	0	Trichlorotrifluoroethane(sim)	0
Vinyl Bromide	0	Vinyl Chloride	0
Vinyl Chloride(sim)	0		

1
AIR ANALYSIS DATA SHEET

CLIENT ID

CANISTER BLK 1692

Client: FPMGROUP Lab: Phoenix Env. Labs

SDG No.: GCE89170 Lab Sample ID: CANISTER BLK 1692

Canister: CANBL Lab File ID: 1202_28.D

Instrument: CHEM20 Column: Date Received:

Purge Volume 200 (cc) Date Analyzed: 12/03/19

Matrix: AIR Dilution Factor: 1

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
115-07-1	Propylene	0.581	U	0.581	0.581	r
75-71-8	Dichlorodifluoromethane	0.202	U	0.202	0.202	r
74-87-3	Chloromethane	0.485	U	0.485	0.485	r
106-99-0	1,3-Butadiene	0.452	U	0.452	0.452	r
75-00-3	Chloroethane	0.379	U	0.379	0.379	r
64-17-5	Ethanol	0.531	U	0.531	0.531	r
67-64-1	Acetone	0.421	U	0.421	0.421	r
67-63-0	Isopropylalcohol	0.407	U	0.407	0.407	r
107-13-1	Acrylonitrile	0.461	U	0.461	0.461	r
75-09-2	Methylene Chloride	0.864	U	0.864	0.864	r
75-15-0	Carbon Disulfide	0.321	U	0.321	0.321	r
1634-04-4	Methyl tert-butyl ether(MTBE)	0.278	U	0.278	0.278	r
78-93-3	Methyl Ethyl Ketone	0.339	U	0.339	0.339	r
110-54-3	Hexane	0.284	U	0.284	0.284	r
141-78-6	Ethyl acetate	0.278	U	0.278	0.278	r
109-99-9	Tetrahydrofuran	0.339	U	0.339	0.339	r
71-43-2	Benzene	0.313	U	0.313	0.313	r
110-82-7	Cyclohexane	0.291	U	0.291	0.291	r
142-82-5	Heptane	0.244	U	0.244	0.244	r
108-10-1	4-Methyl-2-pentanone(MIBK)	0.244	U	0.244	0.244	r
10061-02-6	trans-1,3-Dichloropropene	0.220	U	0.220	0.220	r
108-88-3	Toluene	0.266	U	0.266	0.266	r
591-78-6	2-Hexanone(MBK)	0.244	U	0.244	0.244	r
630-20-6	1,1,1,2-Tetrachloroethane	0.146	U	0.146	0.146	r
108-90-7	Chlorobenzene	0.217	U	0.217	0.217	r
100-41-4	Ethylbenzene	0.230	U	0.230	0.230	r
100-42-5	Styrene	0.235	U	0.235	0.235	r
95-47-6	o-Xylene	0.230	U	0.230	0.230	r
98-82-8	Isopropylbenzene	0.204	U	0.204	0.204	r
622-96-8	4-Ethyltoluene	0.204	U	0.204	0.204	r
108-67-8	1,3,5-Trimethylbenzene	0.204	U	0.204	0.204	r
95-63-6	1,2,4-Trimethylbenzene	0.204	U	0.204	0.204	r
76-14-2	1,2-Dichlorotetrafluoroethane(sim)	0.143	U	0.143	0.143	r
75-01-4	Vinyl Chloride(sim)	0.078	U	0.078	0.078	r
74-83-9	Bromomethane(sim)	0.258	U	0.258	0.258	r
75-69-4	Trichlorofluoromethane(sim)	0.178	U	0.178	0.178	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

1
AIR ANALYSIS DATA SHEET

CLIENT ID

CANISTER BLK 1692

Client:	<u>FPMGROUP</u>	Lab:	<u>Phoenix Env. Labs</u>
SDG No.:	<u>GCE89170</u>	Lab Sample ID:	<u>CANISTER BLK 1692</u>
Canister:	<u>CANBL</u>	Lab File ID:	<u>1202_28.D</u>
Instrument:	<u>CHEM20</u>	Column:	<u></u>
Purge Volume	<u>200</u> (cc)	Date Received:	<u></u>
Matrix:	<u>AIR</u>	Date Analyzed:	<u>12/03/19</u>
		Dilution Factor:	<u>1</u>

CONCENTRATION UNITS: (ppbv or ug/m3) ppbv

CAS NO.	COMPOUND	CONC.	Q	MDL	PQL	R
107-06-2	1,2-Dichloroethane(sim)	0.247	U	0.247	0.247	r
71-55-6	1,1,1-Trichloroethane(sim)	0.183	U	0.183	0.183	r
56-23-5	Carbon Tetrachloride(sim)	0.032	U	0.032	0.032	r
75-35-4	1,1-Dichloroethene(sim)	0.051	U	0.051	0.051	r
76-13-1	Trichlorotrifluoroethane(sim)	0.131	U	0.131	0.131	r
156-60-5	Trans-1,2-Dichloroethene(sim)	0.252	U	0.252	0.252	r
75-34-3	1,1-Dichloroethane(sim)	0.247	U	0.247	0.247	r
156-59-2	Cis-1,2-Dichloroethene(sim)	0.051	U	0.051	0.051	r
67-66-3	Chloroform(sim)	0.205	U	0.205	0.205	r
78-87-5	1,2-dichloropropane(sim)	0.217	U	0.217	0.217	r
75-27-4	Bromodichloromethane(sim)	0.149	U	0.149	0.149	r
79-01-6	Trichloroethene(sim)	0.037	U	0.037	0.037	r
123-91-1	1,4-Dioxane(sim)	0.278	U	0.278	0.278	r
10061-01-5	cis-1,3-Dichloropropene(sim)	0.220	U	0.220	0.220	r
79-00-5	1,1,2-Trichloroethane(sim)	0.183	U	0.183	0.183	r
124-48-1	Dibromochloromethane(sim)	0.117	U	0.117	0.117	r
106-93-4	1,2-Dibromoethane(EDB)(sim)	0.130	U	0.130	0.130	r
127-18-4	Tetrachloroethene(sim)	0.037	U	0.037	0.037	r
75-25-2	Bromoform(sim)	0.097	U	0.097	0.097	r
179601-23-1	m,p-Xylene(sim)	0.230	U	0.230	0.230	r
79-34-5	1,1,2,2-Tetrachloroethane(sim)	0.146	U	0.146	0.146	r
100-44-7	Benzyl chloride(sim)	0.193	U	0.193	0.193	r
541-73-1	1,3-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
106-46-7	1,4-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
135-98-8	sec-Butylbenzene(sim)	0.182	U	0.182	0.182	r
99-87-6	4-Isopropyltoluene(sim)	0.182	U	0.182	0.182	r
95-50-1	1,2-Dichlorobenzene(sim)	0.166	U	0.166	0.166	r
104-51-8	n-Butylbenzene(sim)	0.182	U	0.182	0.182	r
120-82-1	1,2,4-Trichlorobenzene(sim)	0.135	U	0.135	0.135	r
87-68-3	Hexachlorobutadiene(sim)	0.094	U	0.094	0.094	r

FORM I AIR

r=Result Reported U=Not Detected D=Reported Dilution E/J=Estimated Value X=Not Used S=Lab Solvent

Data Path : H:\AIR2019\CHEM20\12DEC\02\
Data File : 1202_28.D
Acq On : 03 Dec 2019 01:59 am
Operator : CORTEX\ms
Client ID : CANISTER BLK 1692
Lab ID : CANISTER BLK 1692
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 03 09:12:33 2019
Quant Method : H:\AIR2019\CHEM20\METHODS\20_AIR_1120.M
Quant Title : VOA Standards for 5 point calibration
Qlast Update : Mon Dec 02 13:02:56 2019
Response via : Initial Calibration

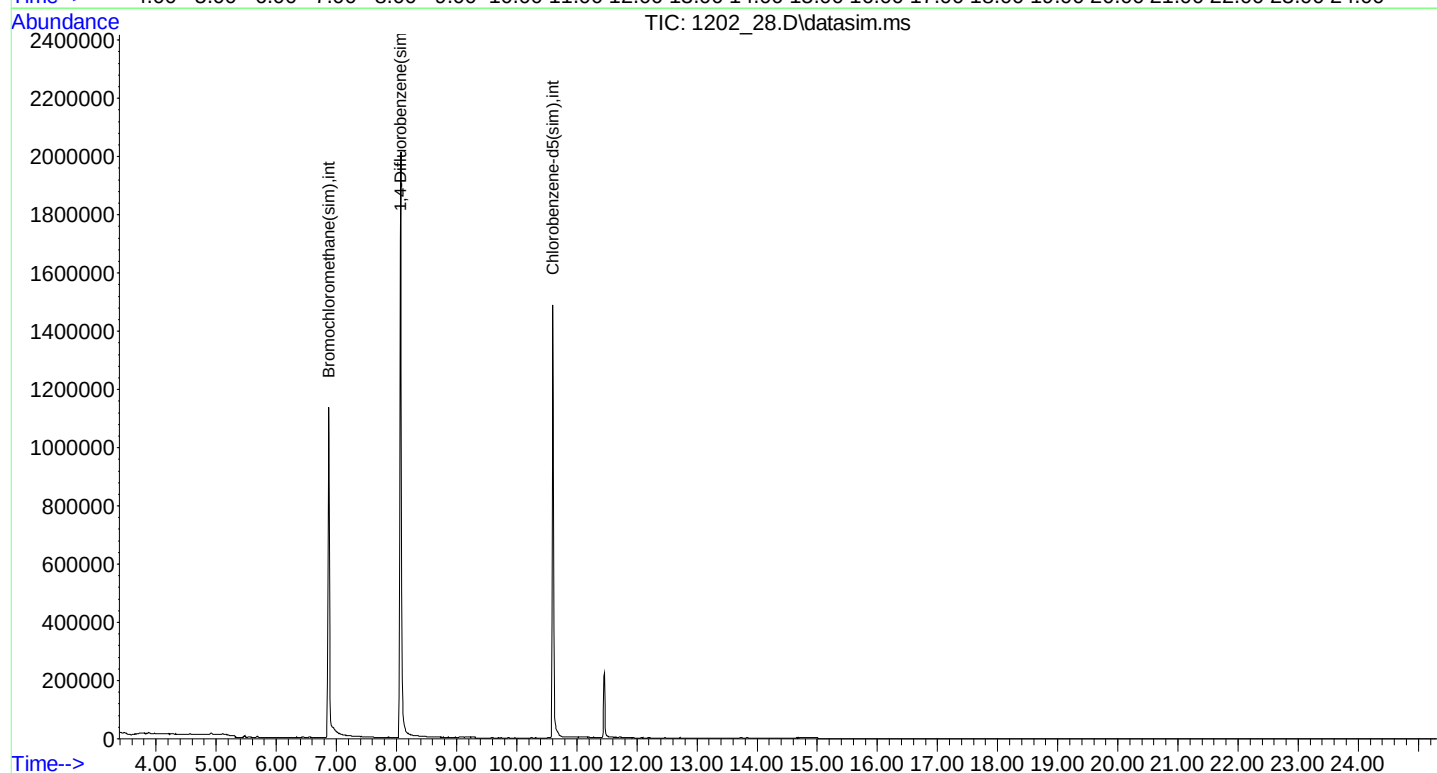
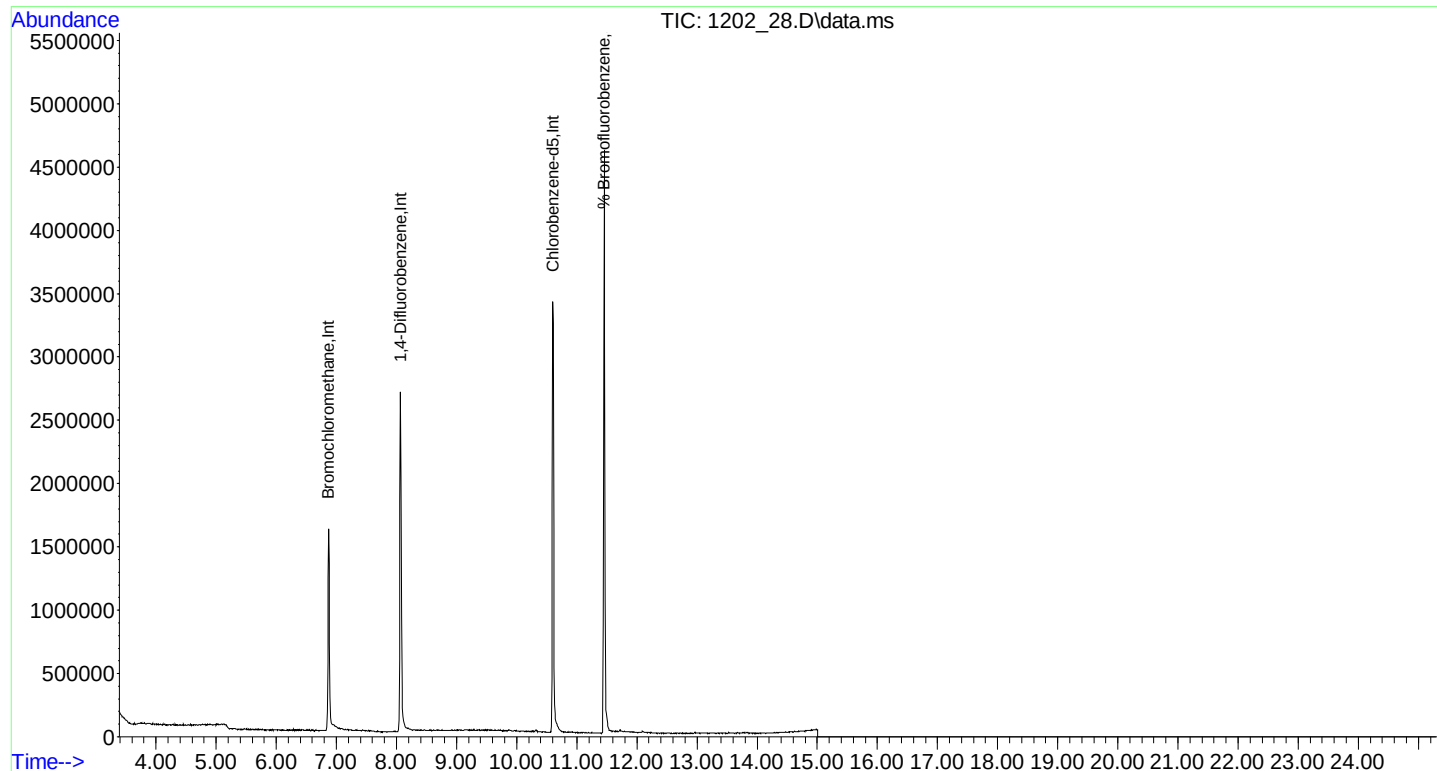
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	6.872	130	493817	10.000	ng	-0.02
36) 1,4-Difluorobenzene	8.068	114	1823115	10.000	ng	0.00
53) Chlorobenzene-d5	10.600	82	903491	10.000	ng	0.00
80) Bromochloromethane(sim)	6.875	130	638948	10.000	ng	#-0.02
94) 1,4-Difluorobenzene(sim)	8.070	114	2103538	10.000	ng	0.00
104) Chlorobenzene-d5(sim)	10.603	82	950796	10.000	ng	# 0.00
System Monitoring Compounds						
62) % Bromofluorobenzene	11.457	95	1230838	9.409	ppbv	0.00
Spiked Amount	10.000	Range	70 - 130	Recovery	=	94.10%

Target Compounds	Qvalue

(#)out of range (m)manual integration reviewed by analyst (+)signals summed

Data Path : H:\AIR2019\CHEM20\12DEC\02\
Data File : 1202_28.D
Acq On : 03 Dec 2019 01:59 am
Operator : CORTEX\ms
Client ID : CANISTER BLK 1692
Lab ID : CANISTER BLK 1692
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 03 09:12:33 2019
Quant Method : H:\AIR2019\CHEM20\METHODS\20_AIR_1120.M
Quant Title : VOA Standards for 5 point calibration
Last Update : Mon Dec 02 13:02:56 2019
Response via : Initial Calibration



Canister Cleaning Certification

Batch Id: 1692

Certified: ☒

QC Canister Id: 824

Certified Date: 12/3/2019 1:59:00 AM

Canister Ids: 717, 721, 729, 757, 778, 783, 804, 805, 808, 824, 848, 856

Certified By: airlab

Certified Computer: CHEM13XP0609

Sample Id: blk 1692

Comment: Initial vacuum of all canisters in this batch is -30 psig.

Data File: H:\AIR2019\CHEM20\12DEC\02\1202_28.D\1202_28-20_AIR_1120.rr

Analyte	Result (ppbv)	Analyte	Result (ppbv)
% Bromofluorobenzene	9.4089	1,1,1,2-Tetrachloroethane	0
1,1,1-Trichloroethane	0	1,1,1-Trichloroethane(sim)	0
1,1,2,2-Tetrachloroethane	0	1,1,2,2-Tetrachloroethane(sim)	0
1,1,2-Trichloroethane	0	1,1,2-Trichloroethane(sim)	0
1,1-Dichloroethane	0	1,1-Dichloroethane(sim)	0
1,1-Dichloroethene	0	1,1-Dichloroethene(sim)	0
1,2,4-Trichlorobenzene	0	1,2,4-Trichlorobenzene(sim)	0
1,2,4-Trimethylbenzene	0	1,2-Dibromoethane(EDB)	0
1,2-Dibromoethane(EDB)(sim)	0	1,2-Dichlorobenzene	0
1,2-Dichlorobenzene(sim)	0	1,2-Dichloroethane	0
1,2-Dichloroethane(sim)	0	1,2-dichloropropane	0
1,2-dichloropropane(sim)	0	1,2-Dichlorotetrafluoroethane	0
1,2-Dichlorotetrafluoroethane(sim)	0	1,3,5-Trimethylbenzene	0
1,3-Butadiene	0	1,3-Dichlorobenzene	0
1,3-Dichlorobenzene(sim)	0	1,4-Dichlorobenzene	0
1,4-Dichlorobenzene(sim)	0	1,4-Difluorobenzene	10
1,4-Difluorobenzene(sim)	10	1,4-Dioxane	0
1,4-Dioxane(sim)	0	2,2,4-trimethylpentane	0
2-Chlorotoluene	0	2-Hexanone(MBK)	0
4-Ethyltoluene	0	4-Isopropyltoluene	0
4-Isopropyltoluene(sim)	0	4-Methyl-2-pentanone(MIBK)	0
Acetone	0	Acrylonitrile	0
Allyl Chloride	0	Benzene	0
Benzyl chloride	0	Benzyl chloride(sim)	0
Bromochloromethane	10	Bromochloromethane(sim)	10
Bromodichloromethane	0	Bromodichloromethane(sim)	0
Bromoform	0	Bromoform(sim)	0
Bromomethane	0	Bromomethane(sim)	0
Carbon Disulfide	0.0631	Carbon Tetrachloride	0
Carbon Tetrachloride(sim)	0	Chlorobenzene	0
Chlorobenzene-d5	10	Chlorobenzene-d5(sim)	10
Chloroethane	0	Chloroform	0
Chloroform(sim)	0	Chloromethane	0
Cis-1,2-Dichloroethene	0	Cis-1,2-Dichloroethene(sim)	0
cis-1,3-Dichloropropene	0	cis-1,3-Dichloropropene(sim)	0
Cyclohexane	0.1183	Dibromochloromethane	0
Dibromochloromethane(sim)	0	Dichlorodifluoromethane	0
Ethanol	0.1049	Ethyl acetate	0
Ethylbenzene	0	Heptane	0
Hexachlorobutadiene	0	Hexachlorobutadiene(sim)	0
Hexane	0	Isopropylalcohol	0
Isopropylbenzene	0	m,p-Xylene	0
m,p-Xylene(sim)	0	Methyl Ethyl Ketone	0
Methyl methacrylate	0	Methyl tert-butyl ether(MTBE)	0
Methylene Chloride	0	n-Butylbenzene	0
n-Butylbenzene(sim)	0	n-Propylbenzene	0

Canister Cleaning Certification

Batch Id: 1692

QC Canister Id: 824

Canister Ids: 717, 721, 729, 757, 778, 783, 804, 805, 808, 824, 848, 856

Certified:



Certified Date:

12/3/2019 1:59:00 AM

Certified By:

airlab

Certified Computer:

CHEM13XP0609

Sample Id:

blk 1692

Comment: Initial vacuum of all canisters in this batch is -30 psig.

Data File: H:\AIR2019\CHEM20\12DEC\02\1202_28.D\1202_28-20_AIR_1120.rr

Analyte	Result (ppbv)	Analyte	Result (ppbv)
n-Propylbenzene(sim)	0	Naphthalene	0
Naphthalene(sim)	0	o-Xylene	0
Propylene	0	sec-Butylbenzene	0
sec-Butylbenzene(sim)	0	Styrene	0
tert-butyl alcohol	0	tert-butylbenzene	0
tert-butylbenzene(sim)	0	Tetrachloroethene	0
Tetrachloroethene(sim)	0	Tetrahydrofuran	0
Toluene	0	Trans-1,2-Dichloroethene	0
Trans-1,2-Dichloroethene(sim)	0	trans-1,3-Dichloropropene	0
Trichloroethene	0	Trichloroethene(sim)	0
Trichlorofluoromethane	0	Trichlorofluoromethane(sim)	0
Trichlorotrifluoroethane	0	Trichlorotrifluoroethane(sim)	0
Vinyl Bromide	0	Vinyl Chloride	0
Vinyl Chloride(sim)	0		

Injection Log

Data Directory: H:\AIR2019\CHEM20\12DEC\02\

Line	VL	FileName	SampleName	MiscInfo	Injection Time
1)	0	1202_11.D	XXXXXXXXXX		N/A
2)	0	1203_04.D	XXXXXXXXXX		N/A
3)	1	1202_01.D	XXXXXXXXXX		12/02/19 7:46
4)	1	1202_02.D	XXXXXXXXXX		12/02/19 8:22
5)	1	1202_03.D	XXXXXXXXXX		12/02/19 8:59
6)	1	1202_04.D	XXXXXXXXXX		12/02/19 9:36
7)	1	1202_05.D	XXXXXXXXXX		12/02/19 10:11
8)	1	1202_06.D	XXXXXXXXXX		12/02/19 10:45
9)	1	1202_07.D	XXXXXXXXXX		12/02/19 12:23
10)	1	1202_08.D	XXXXXXXXXX		12/02/19 13:01
11)	1	1202_09.D	XXXXXXXXXX		12/02/19 13:55
12)	1	1202_10.D	CANISTER BLK 1691	CANISTER BLK 1691	12/02/19 14:33
13)	1	1202_12.D	XXXXXXXXXX		12/02/19 15:40
14)	1	1202_13.D	XXXXXXXXXX		12/02/19 16:19
15)	1	1202_14.D	XXXXXXXXXX		12/02/19 16:57
16)	1	1202_15.D	XXXXXXXXXX		12/02/19 17:36
17)	1	1202_16.D	XXXXXXXXXX		12/02/19 18:15
18)	1	1202_17.D	XXXXXXXXXX		12/02/19 18:53
19)	1	1202_18.D	XXXXXXXXXX		12/02/19 19:32
20)	1	1202_19.D	XXXXXXXXXX		12/02/19 20:11
21)	1	1202_20.D	XXXXXXXXXX		12/02/19 20:50
22)	1	1202_21.D	XXXXXXXXXX		12/02/19 21:28
23)	1	1202_22.D	XXXXXXXXXX		12/02/19 22:07
24)	1	1202_23.D	XXXXXXXXXX		12/02/19 22:46
25)	1	1202_24.D	XXXXXXXXXX		12/02/19 23:25
26)	1	1202_25.D	XXXXXXXXXX		12/03/19 0:03
27)	1	1202_26.D	XXXXXXXXXX		12/03/19 0:42
28)	1	1202_27.D	XXXXXXXXXX		12/03/19 1:21
29)	1	1202_28.D	CANISTER BLK 1692	CANISTER BLK 1692	12/03/19 1:59
30)	1	1202_29.D	XXXXXXXXXX		12/03/19 2:37
31)	1	1202_30.D	XXXXXXXXXX		12/03/19 9:33
32)	1	1203_01.D	XXXXXXXXXX		12/03/19 10:10
33)	1	1203_02.D	XXXXXXXXXX		12/03/19 10:47
34)	1	1203_03.D	XXXXXXXXXX		12/03/19 11:24

Injection Log

Data Directory: H:\AIR2019\CHEM24\12DEC\15\

Line	VL	FileName	SampleName	MiscInfo	Injection Time
1)	0	1219_05.D	XXXXXXXXXX		N/A
2)	4	1215_01.D	XXXXXXXXXX		12/15/19 13:17
3)	5	1215_02.D	XXXXXXXXXX		12/15/19 13:58
4)	6	1215_03.D	XXXXXXXXXX		12/15/19 14:39
5)	7	1215_04.D	XXXXXXXXXX		12/15/19 15:10
6)	8	1215_05.D	XXXXXXXXXX		12/15/19 15:40
7)	3	1215_06.D	XXXXXXXXXX		12/15/19 16:11
8)	4	1215_07.D	XXXXXXXXXX		12/15/19 16:42
9)	5	1215_08.D	XXXXXXXXXX		12/15/19 17:14
10)	6	1215_09.D	XXXXXXXXXX		12/15/19 17:45
11)	8	1215_10.D	XXXXXXXXXX		12/15/19 18:21
12)	10	1215_11.D	XXXXXXXXXX		12/15/19 18:57
13)	11	1215_12.D	XXXXXXXXXX		12/15/19 19:29
14)	13	1215_13.D	XXXXXXXXXX		12/15/19 20:05
15)	14	1215_14.D	XXXXXXXXXX		12/15/19 20:44
16)	15	1215_15.D	XXXXXXXXXX		12/15/19 21:15
17)	16	1215_16.D	XXXXXXXXXX		12/15/19 21:47
18)	17	1215_17.D	XXXXXXXXXX		12/15/19 22:20
19)	18	1215_18.D	XXXXXXXXXX		12/15/19 22:53
20)	19	1215_19.D	XXXXXXXXXX		12/15/19 23:28
21)	20	1215_20.D	XXXXXXXXXX		12/16/19 0:55
22)	21	1215_21.D	XXXXXXXXXX		12/16/19 1:39
23)	22	1215_22.D	XXXXXXXXXX		12/16/19 2:11
24)	23	1215_23.D	XXXXXXXXXX		12/16/19 2:43
25)	24	1215_24.D	XXXXXXXXXX		12/16/19 3:15
26)	25	1215_25.D	XXXXXXXXXX		12/16/19 3:47
27)	26	1215_26.D	XXXXXXXXXX		12/16/19 4:19
28)	27	1215_27.D	XXXXXXXXXX		12/16/19 4:51
29)	28	1215_28.D	XXXXXXXXXX		12/16/19 5:23
30)	29	1215_29.D	XXXXXXXXXX		12/16/19 6:49
31)	30	1215_30.D	XXXXXXXXXX		12/16/19 7:26
32)	31	1215_31.D	XXXXXXXXXX		12/16/19 8:06
33)	32	1215_32.D	XXXXXXXXXX		12/16/19 8:44
34)	33	1215_33.D	XXXXXXXXXX		12/16/19 9:22
35)	34	1215_34.D	XXXXXXXXXX		12/16/19 10:08
36)	35	1215_35.D	XXXXXXXXXX		12/16/19 10:48
37)	36	1215_36.D	XXXXXXXXXX		12/16/19 11:45
38)	37	1215_37.D	XXXXXXXXXX		12/16/19 12:31
39)	38	1215_38.D	XXXXXXXXXX		12/16/19 13:42
40)	39	1215_39.D	XXXXXXXXXX		12/16/19 14:40
41)	40	1215_40.D	XXXXXXXXXX		12/16/19 15:30
42)	41	1215_41.D	XXXXXXXXXX		12/16/19 18:00
43)	42	1215_42.D	XXXXXXXXXX		12/16/19 18:32
44)	43	1215_43.D	XXXXXXXXXX		12/16/19 19:03
45)	44	1215_44.D	XXXXXXXXXX		12/16/19 19:34
46)	45	1215_45.D	XXXXXXXXXX		12/16/19 20:04
47)	46	1216_01.D	BFB TUNE	1.0ppb cc	12/16/19 20:37
48)	7	1216_02.D	XXXXXXXXXX		12/16/19 21:50
49)	8	1216_03.D	XXXXXXXXXX		12/16/19 22:21
50)	3	1216_04.D	ICAL 0.02	0.02 ppbV	12/16/19 22:51
51)	4	1216_05.D	ICAL 0.035	0.035 ppbV	12/16/19 23:22
52)	5	1216_06.D	ICAL 0.05	0.05 ppbV	12/16/19 23:53
53)	6	1216_07.D	ICAL 0.1	0.10 ppbV	12/17/19 0:25
54)	8	1216_08.D	ICAL 0.5	0.5ppbV	12/17/19 1:00
55)	10	1216_09.D	ICAL 2.5	2.5 ppbV	12/17/19 1:36
56)	11	1216_10.D	ICAL 5	5.0 ppbV	12/17/19 2:07
57)	13	1216_11.D	ICAL 25	25 ppbV	12/17/19 2:43
58)	14	1216_12.D	ICAL 40	40	12/17/19 3:21
59)	15	1216_13.D	XXXXXXXXXX		12/17/19 3:52
60)	17	1216_14.D	ICAL 0.2	0.2ppb	12/17/19 4:24
61)	18	1216_15.D	ICAL 10	10ppb	12/17/19 4:57
62)	19	1216_16.D	XXXXXXXXXX		12/17/19 5:33
63)	20	1216_17.D	XXXXXXXXXX		12/17/19 6:03
64)	21	1216_18.D	XXXXXXXXXX		12/17/19 6:33
65)	52	1216_19.D	XXXXXXXXXX		12/17/19 7:09
66)	53	1216_20.D	XXXXXXXXXX		12/17/19 7:44
67)	54	1216_21.D	XXXXXXXXXX		12/17/19 8:20
68)	55	1216_22.D	XXXXXXXXXX		12/17/19 8:56

69)	56	1216_23.D	XXXXXXXXXX		12/17/19	9:28
70)	57	1216_24.D	XXXXXXXXXX		12/17/19	9:59
71)	58	1216_25.D	XXXXXXXXXX		12/17/19	10:31
72)	59	1216_26.D	XXXXXXXXXX		12/17/19	11:09
73)	60	1216_27.D	XXXXXXXXXX		12/17/19	11:41
74)	61	1216_28.D	XXXXXXXXXX		12/17/19	12:12
75)	62	1216_29.D	XXXXXXXXXX		12/17/19	12:44
76)	63	1216_30.D	XXXXXXXXXX		12/17/19	13:16
77)	64	1216_31.D	XXXXXXXXXX		12/17/19	14:47
78)	65	1216_32.D	XXXXXXXXXX		12/17/19	15:28
79)	66	1216_33.D	XXXXXXXXXX		12/17/19	16:30
80)	67	1216_34.D	XXXXXXXXXX		12/17/19	17:06
81)	67	1216_35.D	XXXXXXXXXX		12/17/19	17:37
82)	68	1216_36.D	XXXXXXXXXX		12/17/19	18:18
83)	70	1217_01.D	XXXXXXXXXX		12/17/19	18:48
84)	71	1217_02.D	CCAL 1 - BFB TUNE	1ppb cc - 1ppb cc	12/17/19	19:21
85)	72	1217_03.D	XXXXXXXXXX		12/17/19	19:53
86)	73	1217_04.D	CE89256 LCS	CE89256 LCS	12/17/19	20:29
87)	74	1217_05.D	XXXXXXXXXX		12/17/19	20:59
88)	75	1217_06.D	CE89256 BLANK	CE89256 BLANK	12/17/19	21:30
89)	76	1217_07.D	CE89256 QC	CE89256 QC	12/17/19	22:06
90)	77	1217_08.D	89256 dup	CE89256 DUP	12/17/19	22:42
91)	78	1217_09.D	XXXXXXXXXX		12/17/19	23:16
92)	79	1217_10.D	XXXXXXXXXX		12/18/19	0:38
93)	80	1217_11.D	XXXXXXXXXX		12/18/19	1:14
94)	81	1217_12.D	XXXXXXXXXX		12/18/19	1:46
95)	82	1217_13.D	XXXXXXXXXX		12/18/19	2:18
96)	83	1217_14.D	XXXXXXXXXX		12/18/19	2:53
97)	84	1217_15.D	IA-2	CE89170	12/18/19	3:30
98)	85	1217_16.D	AMBIENT	CE89171	12/18/19	4:06
99)	86	1217_17.D	IA-4	CE89172	12/18/19	4:43
100)	87	1217_18.D	IA-3	CE89173	12/18/19	5:20
101)	88	1217_19.D	IA-1	CE89174	12/18/19	5:56
102)	89	1217_20.D	IA-4D	CE89175	12/18/19	6:32
103)	90	1217_21.D	XXXXXXXXXX		12/18/19	7:03
104)	91	1217_22.D	CE89256 QC 5X	CE89256 QC 5X	12/18/19	7:35
105)	92	1217_23.D	XXXXXXXXXX		12/18/19	8:07
106)	93	1217_24.D	XXXXXXXXXX		12/18/19	8:43
107)	94	1217_25.D	XXXXXXXXXX		12/18/19	9:27
108)	95	1217_26.D	XXXXXXXXXX		12/18/19	9:58
109)	96	1217_27.D	XXXXXXXXXX		12/18/19	10:30
110)	97	1217_28.D	XXXXXXXXXX		12/18/19	11:06
111)	98	1217_29.D	XXXXXXXXXX		12/18/19	11:41
112)	99	1217_30.D	XXXXXXXXXX		12/18/19	12:17
113)	100	1217_31.D	XXXXXXXXXX		12/18/19	12:53
114)	101	1217_32.D	XXXXXXXXXX		12/18/19	13:29
115)	102	1217_33.D	XXXXXXXXXX		12/18/19	14:41
116)	103	1217_34.D	XXXXXXXXXX		12/18/19	15:18
117)	104	1217_35.D	XXXXXXXXXX		12/18/19	15:55
118)	105	1217_36.D	XXXXXXXXXX		12/18/19	16:27
119)	106	1217_37.D	XXXXXXXXXX		12/18/19	17:04
120)	107	1217_38.D	XXXXXXXXXX		12/18/19	17:38
121)	108	1217_39.D	XXXXXXXXXX		12/18/19	18:16
122)	109	1217_40.D	XXXXXXXXXX		12/18/19	18:48
123)	110	1217_41.D	XXXXXXXXXX		12/18/19	19:21
124)	111	1217_42.D	XXXXXXXXXX		12/18/19	19:58
125)	112	1217_43.D	XXXXXXXXXX		12/18/19	20:39
126)	113	1217_44.D	XXXXXXXXXX		12/18/19	21:19
127)	114	1217_45.D	XXXXXXXXXX		12/18/19	21:59
128)	115	1217_46.D	XXXXXXXXXX		12/18/19	22:45
129)	116	1217_47.D	XXXXXXXXXX		12/18/19	23:34
130)	117	1217_48.D	XXXXXXXXXX		12/19/19	0:32
131)	118	1217_49.D	XXXXXXXXXX		12/19/19	1:17
132)	119	1217_50.D	XXXXXXXXXX		12/19/19	2:16
133)	120	1217_51.D	XXXXXXXXXX		12/19/19	3:09
134)	121	1217_52.D	XXXXXXXXXX		12/19/19	3:50
135)	122	1217_53.D	XXXXXXXXXX		12/19/19	4:54
136)	123	1217_54.D	XXXXXXXXXX		12/19/19	5:48
137)	124	1217_55.D	XXXXXXXXXX		12/19/19	6:56
138)	125	1217_56.D	XXXXXXXXXX		12/19/19	9:32
139)	126	1217_57.D	XXXXXXXXXX		12/19/19	10:08
140)	127	1217_58.D	XXXXXXXXXX		12/19/19	10:43
141)	128	1217_59.D	XXXXXXXXXX		12/19/19	11:19
142)	129	1217_60.D	XXXXXXXXXX		12/19/19	14:45
143)	130	1217_61.D	XXXXXXXXXX		12/19/19	15:17

144)	131	1217_62.D	XXXXXXXXXX	12/19/19	15:49
145)	132	1217_63.D	XXXXXXXXXX	12/19/19	16:25
146)	133	1217_64.D	XXXXXXXXXX	12/19/19	17:01
147)	134	1217_65.D	XXXXXXXXXX	12/19/19	17:42
148)	135	1219_01.D	XXXXXXXXXX	12/19/19	18:12
149)	136	1219_02.D	XXXXXXXXXX	12/19/19	18:45
150)	137	1219_03.D	XXXXXXXXXX	12/19/19	19:17
151)	138	1219_04.D	XXXXXXXXXX	12/19/19	19:53



Technical Report

prepared for:

FPM Group
909 Marconi Avenue
Ronkonkoma NY, 11779
Attention: Ben Cancemi

Report Date: 07/09/2019
Client Project ID: 1104g-19-06COD Cinderella
York Project (SDG) No.: 19G0030

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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RICHMOND HILL, NY 11418
ClientServices@yorklab.com

FPM Group
909 Marconi Avenue
Ronkonkoma NY, 11779
Attention: Ben Cancemi

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 July 01, 2019 and listed below. The project was identified as your project: **1104g-19-06COD Cinderella**.

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.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
19G0030-01	248 Effluent 0628	Vapor Extraction	06/28/2019	07/01/2019

General Notes for York Project (SDG) No.: 19G0030

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.

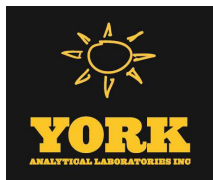
Approved By:



Benjamin Gulizia
Laboratory Director

Date: 07/09/2019





Sample Information

Client Sample ID: 248 Effluent 0628

York Sample ID: 19G0030-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19G0030

1104g-19-06COD Cinderella

Vapor Extraction

June 28, 2019 12:30 pm

07/01/2019

Volatile Organics, EPA TO15 Full List

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/m ³	2.1	3.09	EPA TO-15 Certifications:	07/09/2019 12:41	07/09/2019 16:19	AS
71-55-6	1,1,1-Trichloroethane	ND		ug/m ³	1.7	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m ³	2.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m ³	2.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
79-00-5	1,1,2-Trichloroethane	ND		ug/m ³	1.7	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-34-3	1,1-Dichloroethane	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-35-4	1,1-Dichloroethylene	ND		ug/m ³	0.31	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m ³	2.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
106-93-4	1,2-Dibromoethane	ND		ug/m ³	2.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
95-50-1	1,2-Dichlorobenzene	ND		ug/m ³	1.9	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
107-06-2	1,2-Dichloroethane	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
78-87-5	1,2-Dichloropropane	ND		ug/m ³	1.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m ³	2.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
106-99-0	1,3-Butadiene	ND		ug/m ³	2.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
541-73-1	1,3-Dichlorobenzene	ND		ug/m ³	1.9	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
142-28-9	* 1,3-Dichloropropane	ND		ug/m ³	1.4	3.09	EPA TO-15 Certifications:	07/09/2019 12:41	07/09/2019 16:19	AS
106-46-7	1,4-Dichlorobenzene	2.4		ug/m ³	1.9	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
123-91-1	1,4-Dioxane	ND		ug/m ³	2.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
78-93-3	2-Butanone	1.5		ug/m ³	0.91	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
591-78-6	* 2-Hexanone	ND		ug/m ³	2.5	3.09	EPA TO-15 Certifications:	07/09/2019 12:41	07/09/2019 16:19	AS



Sample Information

Client Sample ID: 248 Effluent 0628

York Sample ID: 19G0030-01

York Project (SDG) No.
19G0030

Client Project ID
1104g-19-06COD Cinderella

Matrix
Vapor Extraction

Collection Date/Time
June 28, 2019 12:30 pm

Date Received
07/01/2019

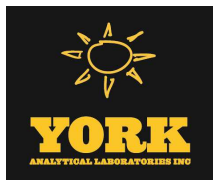
Volatile Organics, EPA TO15 Full List

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/m ³	4.8	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
108-10-1	4-Methyl-2-pentanone	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
67-64-1	Acetone	45		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
107-13-1	Acrylonitrile	ND		ug/m ³	0.67	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
71-43-2	Benzene	ND		ug/m ³	0.99	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
100-44-7	Benzyl chloride	ND		ug/m ³	1.6	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-27-4	Bromodichloromethane	ND		ug/m ³	2.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-25-2	Bromoform	ND		ug/m ³	3.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
74-83-9	Bromomethane	ND		ug/m ³	1.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-15-0	Carbon disulfide	ND		ug/m ³	0.96	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
56-23-5	Carbon tetrachloride	0.58		ug/m ³	0.49	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
108-90-7	Chlorobenzene	ND		ug/m ³	1.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-00-3	Chloroethane	ND		ug/m ³	0.82	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
67-66-3	Chloroform	6.5		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
74-87-3	Chloromethane	ND		ug/m ³	0.64	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m ³	0.31	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m ³	1.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
110-82-7	Cyclohexane	ND		ug/m ³	1.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
124-48-1	Dibromochloromethane	ND		ug/m ³	2.6	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-71-8	Dichlorodifluoromethane	2.0		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
141-78-6	* Ethyl acetate	ND		ug/m ³	2.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
100-41-4	Ethyl Benzene	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
87-68-3	Hexachlorobutadiene	ND		ug/m ³	3.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS



Sample Information

Client Sample ID: 248 Effluent 0628

York Sample ID: 19G0030-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19G0030

1104g-19-06COD Cinderella

Vapor Extraction

June 28, 2019 12:30 pm

07/01/2019

Volatile Organics, EPA TO15 Full List

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
67-63-0	Isopropanol	61		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
80-62-6	Methyl Methacrylate	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m ³	1.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-09-2	Methylene chloride	ND		ug/m ³	2.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
142-82-5	n-Heptane	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
110-54-3	n-Hexane	ND		ug/m ³	1.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
95-47-6	o-Xylene	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
179601-23-1	p- & m- Xylenes	ND		ug/m ³	2.7	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
622-96-8	* p-Ethyltoluene	ND		ug/m ³	1.5	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
115-07-1	* Propylene	ND		ug/m ³	0.53	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
100-42-5	Styrene	ND		ug/m ³	1.3	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
127-18-4	Tetrachloroethylene	860		ug/m ³	0.52	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
109-99-9	* Tetrahydrofuran	ND		ug/m ³	1.8	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
108-88-3	Toluene	3.5		ug/m ³	1.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m ³	1.2	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m ³	1.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
79-01-6	Trichloroethylene	ND		ug/m ³	0.42	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m ³	1.7	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
108-05-4	Vinyl acetate	ND		ug/m ³	1.1	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
593-60-2	Vinyl bromide	ND		ug/m ³	1.4	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
75-01-4	Vinyl Chloride	ND		ug/m ³	0.20	3.09	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	07/09/2019 12:41	07/09/2019 16:19	AS
Surrogate Recoveries		Result	Acceptance Range							
460-00-4	Surrogate: SURR: p-Bromofluorobenzene	101 %	70-130							



Analytical Batch Summary

Batch ID: BG90439

Preparation Method: EPA TO15 PREP

Prepared By: AS

YORK Sample ID	Client Sample ID	Preparation Date
19G0030-01	248 Effluent 0628	07/09/19
BG90439-BLK1	Blank	07/09/19
BG90439-BS1	LCS	07/09/19



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BG90439 - EPA TO15 PREP											
Blank (BG90439-BLK1)										Prepared & Analyzed: 07/09/2019	
1,1,1,2-Tetrachloroethane	ND	0.69	ug/m ³								
1,1,1-Trichloroethane	ND	0.55	"								
1,1,2,2-Tetrachloroethane	ND	0.69	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.77	"								
1,1,2-Trichloroethane	ND	0.55	"								
1,1-Dichloroethane	ND	0.40	"								
1,1-Dichloroethylene	ND	0.099	"								
1,2,4-Trichlorobenzene	ND	0.74	"								
1,2,4-Trimethylbenzene	ND	0.49	"								
1,2-Dibromoethane	ND	0.77	"								
1,2-Dichlorobenzene	ND	0.60	"								
1,2-Dichloroethane	ND	0.40	"								
1,2-Dichloropropane	ND	0.46	"								
1,2-Dichlorotetrafluoroethane	ND	0.70	"								
1,3,5-Trimethylbenzene	ND	0.49	"								
1,3-Butadiene	ND	0.66	"								
1,3-Dichlorobenzene	ND	0.60	"								
1,3-Dichloropropane	ND	0.46	"								
1,4-Dichlorobenzene	ND	0.60	"								
1,4-Dioxane	ND	0.72	"								
2-Butanone	ND	0.29	"								
2-Hexanone	ND	0.82	"								
3-Chloropropene	ND	1.6	"								
4-Methyl-2-pentanone	ND	0.41	"								
Acetone	ND	0.48	"								
Acrylonitrile	ND	0.22	"								
Benzene	ND	0.32	"								
Benzyl chloride	ND	0.52	"								
Bromodichloromethane	ND	0.67	"								
Bromoform	ND	1.0	"								
Bromomethane	ND	0.39	"								
Carbon disulfide	ND	0.31	"								
Carbon tetrachloride	ND	0.16	"								
Chlorobenzene	ND	0.46	"								
Chloroethane	ND	0.26	"								
Chloroform	ND	0.49	"								
Chloromethane	ND	0.21	"								
cis-1,2-Dichloroethylene	ND	0.099	"								
cis-1,3-Dichloropropylene	ND	0.45	"								
Cyclohexane	ND	0.34	"								
Dibromochloromethane	ND	0.85	"								
Dichlorodifluoromethane	ND	0.49	"								
Ethyl acetate	ND	0.72	"								
Ethyl Benzene	ND	0.43	"								
Hexachlorobutadiene	ND	1.1	"								
Isopropanol	ND	0.49	"								
Methyl Methacrylate	ND	0.41	"								
Methyl tert-butyl ether (MTBE)	ND	0.36	"								
Methylene chloride	ND	0.69	"								



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag

Batch BG90439 - EPA TO15 PREP

Blank (BG90439-BLK1)

Prepared & Analyzed: 07/09/2019

n-Heptane	ND	0.41	ug/m ³
n-Hexane	ND	0.35	"
o-Xylene	ND	0.43	"
p- & m- Xylenes	ND	0.87	"
p-Ethyltoluene	ND	0.49	"
Propylene	ND	0.17	"
Styrene	ND	0.43	"
Tetrachloroethylene	ND	0.17	"
Tetrahydrofuran	ND	0.59	"
Toluene	ND	0.38	"
trans-1,2-Dichloroethylene	ND	0.40	"
trans-1,3-Dichloropropylene	ND	0.45	"
Trichloroethylene	ND	0.13	"
Trichlorofluoromethane (Freon 11)	ND	0.56	"
Vinyl acetate	ND	0.35	"
Vinyl bromide	ND	0.44	"
Vinyl Chloride	ND	0.064	"

<i>Surrogate: SURR: p-Bromofluorobenzene</i>	<i>9.40</i>		<i>ppbv</i>	<i>10.0</i>		<i>94.0</i>	<i>70-130</i>

LCS (BG90439-BS1)

Prepared & Analyzed: 07/09/2019

1,1,1,2-Tetrachloroethane	9.61		ppbv	10.0		96.1	70-130
1,1,1-Trichloroethane	10.3		"	10.0		103	70-130
1,1,2,2-Tetrachloroethane	8.85		"	10.0		88.5	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.07		"	10.0		90.7	70-130
1,1,2-Trichloroethane	8.84		"	10.0		88.4	70-130
1,1-Dichloroethane	9.22		"	10.0		92.2	70-130
1,1-Dichloroethylene	8.70		"	10.0		87.0	70-130
1,2,4-Trichlorobenzene	8.42		"	10.0		84.2	70-130
1,2,4-Trimethylbenzene	9.77		"	10.0		97.7	70-130
1,2-Dibromoethane	9.00		"	10.0		90.0	70-130
1,2-Dichlorobenzene	9.56		"	10.0		95.6	70-130
1,2-Dichloroethane	10.2		"	10.0		102	70-130
1,2-Dichloropropane	8.46		"	10.0		84.6	70-130
1,2-Dichlorotetrafluoroethane	9.51		"	10.0		95.1	70-130
1,3,5-Trimethylbenzene	9.86		"	10.0		98.6	70-130
1,3-Butadiene	9.05		"	10.0		90.5	70-130
1,3-Dichlorobenzene	9.83		"	10.0		98.3	70-130
1,3-Dichloropropane	8.91		"	10.0		89.1	70-130
1,4-Dichlorobenzene	9.96		"	10.0		99.6	70-130
1,4-Dioxane	7.48		"	10.0		74.8	70-130
2-Butanone	8.79		"	10.0		87.9	70-130
2-Hexanone	7.94		"	10.0		79.4	70-130
3-Chloropropene	9.01		"	10.0		90.1	70-130
4-Methyl-2-pentanone	8.74		"	10.0		87.4	70-130
Acetone	8.66		"	10.0		86.6	70-130
Acrylonitrile	8.20		"	10.0		82.0	70-130
Benzene	8.39		"	10.0		83.9	70-130
Benzyl chloride	10.6		"	10.0		106	70-130
Bromodichloromethane	9.65		"	10.0		96.5	70-130
Bromoform	9.96		"	10.0		99.6	70-130



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag

Batch BG90439 - EPA TO15 PREP

LCS (BG90439-BS1)

Prepared & Analyzed: 07/09/2019

Bromomethane	8.03		ppbv	10.0		80.3	70-130				
Carbon disulfide	8.98		"	10.0		89.8	70-130				
Carbon tetrachloride	9.81		"	10.0		98.1	70-130				
Chlorobenzene	8.91		"	10.0		89.1	70-130				
Chloroethane	8.55		"	10.0		85.5	70-130				
Chloroform	9.50		"	10.0		95.0	70-130				
Chloromethane	9.44		"	10.0		94.4	70-130				
cis-1,2-Dichloroethylene	8.56		"	10.0		85.6	70-130				
cis-1,3-Dichloropropylene	9.57		"	10.0		95.7	70-130				
Cyclohexane	9.04		"	10.0		90.4	70-130				
Dibromochloromethane	9.66		"	10.0		96.6	70-130				
Dichlorodifluoromethane	9.24		"	10.0		92.4	70-130				
Ethyl acetate	10.2		"	10.0		102	70-130				
Ethyl Benzene	8.83		"	10.0		88.3	70-130				
Hexachlorobutadiene	9.67		"	10.0		96.7	70-130				
Isopropanol	7.93		"	10.0		79.3	70-130				
Methyl Methacrylate	8.67		"	10.0		86.7	70-130				
Methyl tert-butyl ether (MTBE)	9.36		"	10.0		93.6	70-130				
Methylene chloride	9.19		"	10.0		91.9	70-130				
n-Heptane	9.56		"	10.0		95.6	70-130				
n-Hexane	9.04		"	10.0		90.4	70-130				
o-Xylene	9.38		"	10.0		93.8	70-130				
p- & m- Xylenes	18.6		"	20.0		93.0	70-130				
p-Ethyltoluene	10.0		"	10.0		100	70-130				
Propylene	7.96		"	10.0		79.6	70-130				
Styrene	9.25		"	10.0		92.5	70-130				
Tetrachloroethylene	9.31		"	10.0		93.1	70-130				
Tetrahydrofuran	8.97		"	10.0		89.7	70-130				
Toluene	8.70		"	10.0		87.0	70-130				
trans-1,2-Dichloroethylene	9.53		"	10.0		95.3	70-130				
trans-1,3-Dichloropropylene	9.20		"	10.0		92.0	70-130				
Trichloroethylene	8.62		"	10.0		86.2	70-130				
Trichlorofluoromethane (Freon 11)	10.0		"	10.0		100	70-130				
Vinyl acetate	8.76		"	10.0		87.6	70-130				
Vinyl bromide	9.03		"	10.0		90.3	70-130				
Vinyl Chloride	11.0		"	10.0		110	70-130				
Surrogate: SURR: p-Bromofluorobenzene	10.4		"	10.0		104	70-130				



Sample and Data Qualifiers Relating to This Work Order

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.



Technical Report

prepared for:

FPM Group
909 Marconi Avenue
Ronkonkoma NY, 11779
Attention: Ben Cancemi

Report Date: 10/07/2019
Client Project ID: 1104g-19-06-01 Cinderella
York Project (SDG) No.: 19I1359

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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RICHMOND HILL, NY 11418
ClientServices@yorklab.com

FPM Group
909 Marconi Avenue
Ronkonkoma NY, 11779
Attention: Ben Cancemi

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 September 30, 2019 and listed below. The project was identified as your project: **1104g-19-06-01 Cinderella**.

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.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
19I1359-01	248 Effluent 092619	Vapor Extraction	09/26/2019	09/30/2019

General Notes for York Project (SDG) No.: 19I1359

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:



Benjamin Gulizia
Laboratory Director

Date: 10/07/2019





Sample Information

Client Sample ID: 248 Effluent 092619

York Sample ID: 1911359-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

1911359

1104g-19-06-01 Cinderella

Vapor Extraction

September 26, 2019 12:00 am

09/30/2019

Volatile Organics, EPA TO15 Full List

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		ppbv	0.30	2.97	EPA TO-15 Certifications:	10/03/2019 09:00	10/06/2019 03:46	PP
71-55-6	1,1,1-Trichloroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
79-34-5	1,1,2,2-Tetrachloroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
79-00-5	1,1,2-Trichloroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-34-3	1,1-Dichloroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-35-4	1,1-Dichloroethylene	ND		ppbv	0.074	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
120-82-1	1,2,4-Trichlorobenzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
95-63-6	1,2,4-Trimethylbenzene	0.36		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
106-93-4	1,2-Dibromoethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
95-50-1	1,2-Dichlorobenzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
107-06-2	1,2-Dichloroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
78-87-5	1,2-Dichloropropane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
108-67-8	1,3,5-Trimethylbenzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
106-99-0	1,3-Butadiene	ND		ppbv	0.89	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
541-73-1	1,3-Dichlorobenzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
142-28-9	* 1,3-Dichloropropane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications:	10/03/2019 09:00	10/06/2019 03:46	PP
106-46-7	1,4-Dichlorobenzene	11		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
123-91-1	1,4-Dioxane	ND		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
78-93-3	2-Butanone	0.53		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
591-78-6	* 2-Hexanone	ND		ppbv	0.59	2.97	EPA TO-15 Certifications:	10/03/2019 09:00	10/06/2019 03:46	PP



Sample Information

Client Sample ID: 248 Effluent 092619

York Sample ID: 19I1359-01

York Project (SDG) No.
19I1359

Client Project ID
1104g-19-06-01 Cinderella

Matrix
Vapor Extraction

Collection Date/Time
September 26, 2019 12:00 am

Date Received
09/30/2019

Volatile Organics, EPA TO15 Full List

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		ppbv	1.5	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
108-10-1	4-Methyl-2-pentanone	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
67-64-1	Acetone	20		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
107-13-1	Acrylonitrile	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
71-43-2	Benzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
100-44-7	Benzyl chloride	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-27-4	Bromodichloromethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-25-2	Bromoform	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
74-83-9	Bromomethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-15-0	Carbon disulfide	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
56-23-5	Carbon tetrachloride	0.089		ppbv	0.074	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
108-90-7	Chlorobenzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-00-3	Chloroethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
67-66-3	Chloroform	1.8		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
74-87-3	Chloromethane	0.39	TO-CC V, TO-LC S-L	ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
156-59-2	cis-1,2-Dichloroethylene	0.15		ppbv	0.074	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
10061-01-5	cis-1,3-Dichloropropylene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
110-82-7	Cyclohexane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
124-48-1	Dibromochloromethane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-71-8	Dichlorodifluoromethane	0.59		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
141-78-6	* Ethyl acetate	ND		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
100-41-4	Ethyl Benzene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP



Sample Information

Client Sample ID: 248 Effluent 092619

York Sample ID: 19I1359-01

York Project (SDG) No.

19I1359

Client Project ID

1104g-19-06-01 Cinderella

Matrix

Vapor Extraction

Collection Date/Time

September 26, 2019 12:00 am

Date Received

09/30/2019

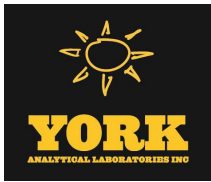
Volatile Organics, EPA TO15 Full List

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
87-68-3	Hexachlorobutadiene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
67-63-0	Isopropanol	14		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
80-62-6	Methyl Methacrylate	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-09-2	Methylene chloride	ND		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
142-82-5	n-Heptane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
110-54-3	n-Hexane	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
95-47-6	o-Xylene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
179601-23-1	p- & m- Xylenes	0.62		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
622-96-8	* p-Ethyltoluene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
115-07-1	* Propylene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
100-42-5	Styrene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
127-18-4	Tetrachloroethylene	100		ppbv	0.074	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
109-99-9	* Tetrahydrofuran	ND		ppbv	0.59	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
108-88-3	Toluene	1.6		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
156-60-5	trans-1,2-Dichloroethylene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
10061-02-6	trans-1,3-Dichloropropylene	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
79-01-6	Trichloroethylene	0.12		ppbv	0.074	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-69-4	Trichlorofluoromethane (Freon 11)	0.33		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
108-05-4	Vinyl acetate	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
593-60-2	Vinyl bromide	ND		ppbv	0.30	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
75-01-4	Vinyl Chloride	ND		ppbv	0.074	2.97	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	10/03/2019 09:00	10/06/2019 03:46	PP
Surrogate Recoveries		Result	Acceptance Range							



Sample Information

Client Sample ID: 248 Effluent 092619

York Sample ID: 19I1359-01

York Project (SDG) No.

19I1359

Client Project ID

1104g-19-06-01 Cinderella

Matrix

Vapor Extraction

Collection Date/Time

September 26, 2019 12:00 am

Date Received

09/30/2019

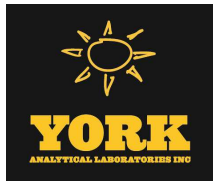
Volatile Organics, EPA TO15 Full List

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
460-00-4	Surrogate: SURR: <i>p</i> -Bromofluorobenzene	112 %			70-130					



Analytical Batch Summary

Batch ID: BJ90223

Preparation Method: EPA TO15 PREP

Prepared By: AS

YORK Sample ID	Client Sample ID	Preparation Date
19I1359-01	248 Effluent 092619	10/03/19
BJ90223-BLK1	Blank	10/03/19
BJ90223-BS1	LCS	10/03/19



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag

Batch BJ90223 - EPA TO15 PREP

Blank (BJ90223-BLK1)

Prepared: 10/03/2019 Analyzed: 10/05/2019

1,1,1,2-Tetrachloroethane	ND	0.10	ppbv
1,1,1-Trichloroethane	ND	0.10	"
1,1,2,2-Tetrachloroethane	ND	0.10	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10	"
1,1,2-Trichloroethane	ND	0.10	"
1,1-Dichloroethane	ND	0.10	"
1,1-Dichloroethylene	ND	0.025	"
1,2,4-Trichlorobenzene	ND	0.10	"
1,2,4-Trimethylbenzene	ND	0.10	"
1,2-Dibromoethane	ND	0.10	"
1,2-Dichlorobenzene	ND	0.10	"
1,2-Dichloroethane	ND	0.10	"
1,2-Dichloropropane	ND	0.10	"
1,2-Dichlorotetrafluoroethane	ND	0.10	"
1,3,5-Trimethylbenzene	ND	0.10	"
1,3-Butadiene	ND	0.30	"
1,3-Dichlorobenzene	ND	0.10	"
1,3-Dichloropropane	ND	0.10	"
1,4-Dichlorobenzene	ND	0.10	"
1,4-Dioxane	ND	0.20	"
2-Butanone	ND	0.10	"
2-Hexanone	ND	0.20	"
3-Chloropropene	ND	0.50	"
4-Methyl-2-pentanone	ND	0.10	"
Acetone	ND	0.20	"
Acrylonitrile	ND	0.10	"
Benzene	ND	0.10	"
Benzyl chloride	ND	0.10	"
Bromodichloromethane	ND	0.10	"
Bromoform	ND	0.10	"
Bromomethane	ND	0.10	"
Carbon disulfide	ND	0.10	"
Carbon tetrachloride	ND	0.025	"
Chlorobenzene	ND	0.10	"
Chloroethane	ND	0.10	"
Chloroform	ND	0.10	"
Chloromethane	ND	0.10	"
cis-1,2-Dichloroethylene	ND	0.025	"
cis-1,3-Dichloropropylene	ND	0.10	"
Cyclohexane	ND	0.10	"
Dibromochloromethane	ND	0.10	"
Dichlorodifluoromethane	ND	0.10	"
Ethyl acetate	ND	0.20	"
Ethyl Benzene	ND	0.10	"
Hexachlorobutadiene	ND	0.10	"
Isopropanol	ND	0.20	"
Methyl Methacrylate	ND	0.10	"
Methyl tert-butyl ether (MTBE)	ND	0.10	"
Methylene chloride	ND	0.20	"



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag

Batch BJ90223 - EPA TO15 PREP

Blank (BJ90223-BLK1)

Prepared: 10/03/2019 Analyzed: 10/05/2019

n-Heptane	ND	0.10	ppbv
n-Hexane	ND	0.10	"
o-Xylene	ND	0.10	"
p- & m- Xylenes	ND	0.20	"
p-Ethyltoluene	ND	0.10	"
Propylene	ND	0.10	"
Styrene	ND	0.10	"
Tetrachloroethylene	ND	0.025	"
Tetrahydrofuran	ND	0.20	"
Toluene	ND	0.10	"
trans-1,2-Dichloroethylene	ND	0.10	"
trans-1,3-Dichloropropylene	ND	0.10	"
Trichloroethylene	ND	0.025	"
Trichlorofluoromethane (Freon 11)	ND	0.10	"
Vinyl acetate	ND	0.10	"
Vinyl bromide	ND	0.10	"
Vinyl Chloride	ND	0.025	"

<i>Surrogate: SURR: p-Bromofluorobenzene</i>	9.96		"	10.0		99.6	70-130

LCS (BJ90223-BS1)

Prepared: 10/03/2019 Analyzed: 10/05/2019

1,1,1,2-Tetrachloroethane	10.6		ppbv	10.0		106	70-130
1,1,1-Trichloroethane	11.8		"	10.0		118	70-130
1,1,2,2-Tetrachloroethane	8.53		"	10.0		85.3	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.64		"	10.0		96.4	70-130
1,1,2-Trichloroethane	9.05		"	10.0		90.5	70-130
1,1-Dichloroethane	9.12		"	10.0		91.2	70-130
1,1-Dichloroethylene	9.22		"	10.0		92.2	70-130
1,2,4-Trichlorobenzene	11.2		"	10.0		112	70-130
1,2,4-Trimethylbenzene	10.2		"	10.0		102	70-130
1,2-Dibromoethane	9.62		"	10.0		96.2	70-130
1,2-Dichlorobenzene	11.2		"	10.0		112	70-130
1,2-Dichloroethane	11.7		"	10.0		117	70-130
1,2-Dichloropropane	7.57		"	10.0		75.7	70-130
1,2-Dichlorotetrafluoroethane	8.83		"	10.0		88.3	70-130
1,3,5-Trimethylbenzene	9.88		"	10.0		98.8	70-130
1,3-Butadiene	6.65		"	10.0		66.5	70-130
1,3-Dichlorobenzene	11.2		"	10.0		112	70-130
1,3-Dichloropropane	8.61		"	10.0		86.1	70-130
1,4-Dichlorobenzene	11.4		"	10.0		114	70-130
1,4-Dioxane	7.34		"	10.0		73.4	70-130
2-Butanone	8.59		"	10.0		85.9	70-130
2-Hexanone	8.79		"	10.0		87.9	70-130
3-Chloropropene	8.33		"	10.0		83.3	70-130
4-Methyl-2-pentanone	8.74		"	10.0		87.4	70-130
Acetone	10.7		"	10.0		107	70-130
Acrylonitrile	8.00		"	10.0		80.0	70-130
Benzene	7.49		"	10.0		74.9	70-130
Benzyl chloride	11.8		"	10.0		118	70-130
Bromodichloromethane	11.0		"	10.0		110	70-130
Bromoform	11.5		"	10.0		115	70-130

Low Bias



Volatile Organic Compounds in Air by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag

Batch BJ90223 - EPA TO15 PREP

LCS (BJ90223-BS1)

Prepared: 10/03/2019 Analyzed: 10/05/2019

Bromomethane	7.82		ppbv	10.0		78.2	70-130				
Carbon disulfide	8.19		"	10.0		81.9	70-130				
Carbon tetrachloride	11.5		"	10.0		115	70-130				
Chlorobenzene	9.09		"	10.0		90.9	70-130				
Chloroethane	7.55		"	10.0		75.5	70-130				
Chloroform	10.3		"	10.0		103	70-130				
Chloromethane	6.61		"	10.0		66.1	70-130	Low Bias			
cis-1,2-Dichloroethylene	8.61		"	10.0		86.1	70-130				
cis-1,3-Dichloropropylene	9.33		"	10.0		93.3	70-130				
Cyclohexane	8.15		"	10.0		81.5	70-130				
Dibromochloromethane	11.1		"	10.0		111	70-130				
Dichlorodifluoromethane	11.9		"	10.0		119	70-130				
Ethyl acetate	9.64		"	10.0		96.4	70-130				
Ethyl Benzene	8.69		"	10.0		86.9	70-130				
Hexachlorobutadiene	12.9		"	10.0		129	70-130				
Isopropanol	8.73		"	10.0		87.3	70-130				
Methyl Methacrylate	8.03		"	10.0		80.3	70-130				
Methyl tert-butyl ether (MTBE)	9.48		"	10.0		94.8	70-130				
Methylene chloride	9.46		"	10.0		94.6	70-130				
n-Heptane	8.35		"	10.0		83.5	70-130				
n-Hexane	8.15		"	10.0		81.5	70-130				
o-Xylene	9.14		"	10.0		91.4	70-130				
p- & m- Xylenes	18.6		"	20.0		93.0	70-130				
p-Ethyltoluene	9.65		"	10.0		96.5	70-130				
Propylene	8.89		"	10.0		88.9	70-130				
Styrene	9.03		"	10.0		90.3	70-130				
Tetrachloroethylene	10.8		"	10.0		108	70-130				
Tetrahydrofuran	8.15		"	10.0		81.5	70-130				
Toluene	7.90		"	10.0		79.0	70-130				
trans-1,2-Dichloroethylene	9.79		"	10.0		97.9	70-130				
trans-1,3-Dichloropropylene	9.75		"	10.0		97.5	70-130				
Trichloroethylene	8.56		"	10.0		85.6	70-130				
Trichlorofluoromethane (Freon 11)	12.2		"	10.0		122	70-130				
Vinyl acetate	8.04		"	10.0		80.4	70-130				
Vinyl bromide	9.30		"	10.0		93.0	70-130				
Vinyl Chloride	7.11		"	10.0		71.1	70-130				
Surrogate: SURR: p-Bromofluorobenzene	10.9		"	10.0		109	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).

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.





Thursday, December 19, 2019

Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Project ID: CINDERELLA
SDG ID: GCE89169
Sample ID#s: CE89169

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis/Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Sample Id Cross Reference

December 19, 2019

SDG I.D.: GCE89169

Project ID: CINDERELLA

Client Id	Lab Id	Matrix
EFFLUENT	CE89169	AIR



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

December 19, 2019

FOR: Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Sample Information

Matrix: AIR
Location Code: FPMGROUP
Rush Request: Standard
P.O.#:
Canister Id: 804

Custody Information

Collected by: BC
Received by: CP
Analyzed by: see "By" below

Date Time
12/16/19 9:15
12/17/19 15:36

Laboratory Data

SDG ID: GCE89169
Phoenix ID: CE89169

Project ID: CINDERELLA
Client ID: EFFLUENT

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Volatiles (TO15)							
1,1,1,2-Tetrachloroethane	ND	0.146	ND	1.00	12/18/19	KCA	1
1,1,1-Trichloroethane	ND	0.183	ND	1.00	12/18/19	KCA	1
1,1,2,2-Tetrachloroethane	ND	0.146	ND	1.00	12/18/19	KCA	1
1,1,2-Trichloroethane	ND	0.183	ND	1.00	12/18/19	KCA	1
1,1-Dichloroethane	ND	0.247	ND	1.00	12/18/19	KCA	1
1,1-Dichloroethene	ND	0.051	ND	0.20	12/18/19	KCA	1
1,2,4-Trichlorobenzene	ND	0.135	ND	1.00	12/18/19	KCA	1
1,2,4-Trimethylbenzene	ND	0.204	ND	1.00	12/18/19	KCA	1
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	12/18/19	KCA	1
1,2-Dichlorobenzene	ND	0.166	ND	1.00	12/18/19	KCA	1
1,2-Dichloroethane	ND	0.247	ND	1.00	12/18/19	KCA	1
1,2-dichloropropane	ND	0.217	ND	1.00	12/18/19	KCA	1
1,2-Dichlorotetrafluoroethane	ND	0.143	ND	1.00	12/18/19	KCA	1
1,3,5-Trimethylbenzene	ND	0.204	ND	1.00	12/18/19	KCA	1
1,3-Butadiene	ND	0.452	ND	1.00	12/18/19	KCA	1
1,3-Dichlorobenzene	ND	0.166	ND	1.00	12/18/19	KCA	1
1,4-Dichlorobenzene	ND	0.166	ND	1.00	12/18/19	KCA	1
1,4-Dioxane	ND	0.278	ND	1.00	12/18/19	KCA	1
2-Hexanone(MBK)	ND	0.244	ND	1.00	12/18/19	KCA	1
4-Ethyltoluene	ND	0.204	ND	1.00	12/18/19	KCA	1
4-Isopropyltoluene	ND	0.182	ND	1.00	12/18/19	KCA	1
4-Methyl-2-pentanone(MIBK)	ND	0.244	ND	1.00	12/18/19	KCA	1
Acetone	2.41	0.421	5.72	1.00	12/18/19	KCA	1
Acrylonitrile	ND	0.461	ND	1.00	12/18/19	KCA	1
Benzene	ND	0.313	ND	1.00	12/18/19	KCA	1
Benzyl chloride	ND	0.193	ND	1.00	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.149	ND	1.00	12/18/19	KCA	1
Bromoform	ND	0.097	ND	1.00	12/18/19	KCA	1
Bromomethane	ND	0.258	ND	1.00	12/18/19	KCA	1
Carbon Disulfide	ND	0.321	ND	1.00	12/18/19	KCA	1
Carbon Tetrachloride	0.079	0.032	0.50	0.20	12/18/19	KCA	1
Chlorobenzene	ND	0.217	ND	1.00	12/18/19	KCA	1
Chloroethane	ND	0.379	ND	1.00	12/18/19	KCA	1
Chloroform	ND	0.205	ND	1.00	12/18/19	KCA	1
Chloromethane	0.598	0.485	1.23	1.00	12/18/19	KCA	1
Cis-1,2-Dichloroethene	ND	0.051	ND	0.20	12/18/19	KCA	1
cis-1,3-Dichloropropene	ND	0.221	ND	1.00	12/18/19	KCA	1
Cyclohexane	ND	0.291	ND	1.00	12/18/19	KCA	1
Dibromochloromethane	ND	0.118	ND	1.00	12/18/19	KCA	1
Dichlorodifluoromethane	0.384	0.202	1.90	1.00	12/18/19	KCA	1
Ethanol	12.9	0.531	24.3	1.00	12/18/19	KCA	1 1
Ethyl acetate	ND	0.278	ND	1.00	12/18/19	KCA	1 1
Ethylbenzene	ND	0.230	ND	1.00	12/18/19	KCA	1
Heptane	ND	0.244	ND	1.00	12/18/19	KCA	1
Hexachlorobutadiene	ND	0.094	ND	1.00	12/18/19	KCA	1
Hexane	1.27	0.284	4.47	1.00	12/18/19	KCA	1
Isopropylalcohol	0.519	0.407	1.27	1.00	12/18/19	KCA	1
Isopropylbenzene	ND	0.204	ND	1.00	12/18/19	KCA	1
m,p-Xylene	ND	0.230	ND	1.00	12/18/19	KCA	1
Methyl Ethyl Ketone	ND	0.339	ND	1.00	12/18/19	KCA	1
Methyl tert-butyl ether(MTBE)	ND	0.278	ND	1.00	12/18/19	KCA	1
Methylene Chloride	4.69	0.864	16.3	3.00	12/18/19	KCA	1
n-Butylbenzene	ND	0.182	ND	1.00	12/18/19	KCA	1 1
o-Xylene	ND	0.230	ND	1.00	12/18/19	KCA	1
Propylene	ND	0.581	ND	1.00	12/18/19	KCA	1 1
sec-Butylbenzene	ND	0.182	ND	1.00	12/18/19	KCA	1 1
Styrene	ND	0.235	ND	1.00	12/18/19	KCA	1
Tetrachloroethene	0.958	0.037	6.49	0.25	12/18/19	KCA	1
Tetrahydrofuran	ND	0.339	ND	1.00	12/18/19	KCA	1 1
Toluene	0.406	0.266	1.53	1.00	12/18/19	KCA	1
Trans-1,2-Dichloroethene	ND	0.252	ND	1.00	12/18/19	KCA	1
trans-1,3-Dichloropropene	ND	0.221	ND	1.00	12/18/19	KCA	1
Trichloroethene	ND	0.037	ND	0.20	12/18/19	KCA	1
Trichlorofluoromethane	0.199	0.178	1.12	1.00	12/18/19	KCA	1
Trichlorotrifluoroethane	ND	0.131	ND	1.00	12/18/19	KCA	1
Vinyl Chloride	ND	0.078	ND	0.20	12/18/19	KCA	1
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene	109	%	109	%	12/18/19	KCA	1
% IS-1,4-Difluorobenzene	107	%	107	%	12/18/19	KCA	1
% IS-Bromochloromethane	102	%	102	%	12/18/19	KCA	1
% IS-Chlorobenzene-d5	108	%	108	%	12/18/19	KCA	1

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution

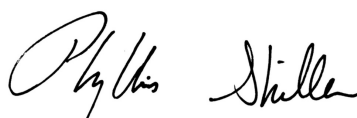
1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 19, 2019

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



QA/QC Report

December 19, 2019

QA/QC Data

SDG I.D.: GCE89169

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510810 (ppbv), QC Sample No: CE89256 (CE89169)												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	84	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	85	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	97	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	98	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	63	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	83	1.06	1.07	0.215	0.218	NC	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	98	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.250	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.220	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	89	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	83	ND	ND	ND	ND	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	87	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	79	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	106	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	79	ND	ND	ND	ND	NC	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	92	15.7	16.0	6.60	6.73	2.0	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	93	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	0.310	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	86	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	86	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	90	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	103	0.48	0.50	0.076	0.079	NC	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	89	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	0.380	ND	1.00	92	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	0.200	ND	0.98	104	ND	ND	ND	ND	NC	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	84	1.11	1.12	0.540	0.541	NC	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.256	ND	1.01	106	4.12	4.36	1.04	1.10	5.6	70 - 130	25
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	0.290	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	102	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	104	5.98	5.88	1.21	1.19	1.7	70 - 130	25
Ethanol	ND	0.530	ND	1.00	88	67.6	66.1	35.9	35.1	2.3	70 - 130	25

QA/QC Data

SDG I.D.: GCE89169

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
Ethyl acetate	ND	0.280	ND	1.01	101	1.10	1.07	0.305	0.298	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	84	ND	ND	ND	ND	NC	70 - 130	25
Heptane	ND	0.240	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	75	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	103	ND	ND	ND	ND	NC	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	88	19.0	19.7	7.75	8.00	3.2	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	85	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	87	ND	ND	ND	ND	NC	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	94	ND	ND	ND	ND	NC	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	91	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	89	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	90	ND	ND	ND	ND	NC	70 - 130	25
Propylene	ND	0.580	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	84	ND	ND	ND	ND	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	96	359	371	53.0	54.7	3.2	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	96	ND	ND	ND	ND	NC	70 - 130	25
Toluene	ND	0.270	ND	1.02	102	1.33	1.34	0.353	0.357	NC	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	96	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	100	3.80	3.80	0.708	0.707	0.1	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	91	1.42	1.46	0.253	0.260	NC	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	87	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	99	%	99	%	111	117	114	117	114	NC	70 - 130	25
% IS-1,4-Difluorobenzene	124	%	124	%	77	107	105	107	105	NC	60 - 140	25
% IS-Bromochloromethane	134	%	134	%	72	103	101	103	101	NC	60 - 140	25
% IS-Chlorobenzene-d5	117	%	117	%	81	95	95	95	95	NC	60 - 140	25

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference


Phyllis Shiller, Laboratory Director
December 19, 2019

Criteria: None
State: NY

Sample Criteria Exceedances Report
GCE89169 - FPMGROUP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

December 19, 2019

SDG I.D.: GCE89169

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



387 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone: 860.645.1102 • Fax 860.645.0823

CHAIN OF CUSTODY RECORD AIR ANALYSES

800-827-5426

email: greg@phoenixlabs.com

P.O. #

Page 1 of 1

Data Delivery:

☐ Fax #:

☒ Email:

☐ Phone #:

Project Name: Carborella

Invoice to: FPM

Sampled by: BC

Data Format: (Circle) Excel Other:

Requested Deliverable: Results + Bar Chart

Quote Number:

Equis

RCP

ASP CAT B

MCP

NJ Deliverables

Canister Pressure at Start (" Hg)

Canister Pressure at End (" Hg)

Sample Start Date

Sampling End Time

Sampling Start Time

Flow Controller Setting (mL/min)

Flow Regulator ID #

Incoming Canister Pressure (" Hg)

Outgoing Canister Pressure (" Hg)

Canister Size (L)

Canister ID #

Client Sample ID

Phoenix ID #

Relinquished by

Accepted by

Date:

Time:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Report to:

Customer:

Address:

City:

State:

Zip:

Country:

Phone:

Fax:

Email:

Website:

Other:

Comments:

Notes:

Remarks:

Observations:

Findings:

Conclusions:

Recommendations:

Next Steps:

Follow-up:

Completion Date:

Responsible Party:

Approval:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

Date:

Signature:

State Where Samples Collected:

Special Instructions, OC Requirements, Regulatory Information:

(1) (1.4L) (Grab)

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

Indoor Air: Vapor Intrusion

Indoor Air: Soil Gas

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

Indoor Air: Vapor Intrusion

Indoor Air: Soil Gas

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

Indoor Air: Vapor Intrusion

Indoor Air: Soil Gas

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

Indoor Air: Vapor Intrusion

Indoor Air: Soil Gas

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

Indoor Air: Vapor Intrusion

Indoor Air: Soil Gas

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

Indoor Air: Vapor Intrusion

Indoor Air: Soil Gas

Indoor Air: Residential

Indoor Air: Commercial

Indoor Air: Industrial

Indoor Air: Non-Residential

PEL-115 Rev. 9/2019

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APPENDIX F

DATA USABILITY SUMMARY REPORT

**DATA USABILITY SUMMARY REPORT
FOR DECEMBER 2019 AIR SAMPLING
CINDERELLA 248, LLC SITE,
248 FLATBUSH AVENUE, BROOKLYN, NY
SAMPLE DELIVERY GROUP # GCE89170**

This DUSR was prepared using the entire original laboratory report, including the sample data summary report and the extended data package. The sampling event included four indoor air sample (IA-1 through IA-4), and one outdoor air sample (Ambient). The duplicate sampling for QA/QC purposes was conducted on primary samples IA-4.

Sample Collection Procedures

The samples were collected in laboratory-provided batch-certified Summa canisters equipped with laboratory calibrated flow controllers. Collection of each sample was performed over an approximate six-hour period. Each of the flow controllers for the primary samples was closed when the vacuum in the canister was nearly depleted but some vacuum remained. Chain-of-custody documentation was present and complete.

Sample Analyses

The samples were transported to the laboratory and analyzed by Phoenix Environmental Laboratories, Inc. at their Manchester, Connecticut facility, which is NYSDOH-certified for the analyses performed. The samples were analyzed for volatile organic compounds (VOCs) using Method TO-15, with low-level analyses for the indoor and ambient air samples. The analytical methods and analytes are appropriate for the intended use of the data. The sample holding times were met and no problems with sample receipt or handling were reported by the laboratory. The samples were logged in by the lab based on the sample IDs on the tags and the correct can numbers printed on the canisters themselves were used.

Surrogate recoveries were complete and within limits. Internal standards were also noted to be complete and within limits.

Duplicate samples were collected and utilized to evaluate the precision of the laboratory analyses. The results from the duplicate sample (IA-4D) and the associated parent sample (IA-4) are very similar. Based on the blind duplicate sample results, the laboratory results are likely to be precise.

Duplicate samples analysis were also performed by the laboratory and utilized to evaluate the precision of the laboratory analyses. The results from the laboratory duplicate sample and the associated parent sample are very similar. Based on the laboratory's duplicate sample results, the laboratory results are likely to be precise.

A method blank (MB) sample was analyzed by the laboratory to evaluate the potential for cross-contamination associated with the sample preparation and analysis. The MB results did not show detectable concentrations of VOCs and, therefore, cross-contamination associated with sample preparation or analysis does not appear to affect the sample data.

Air canister cleanings logs are maintained by the laboratory to evaluate the potential for cross-contamination associated with the sample containers. The air canister cleanings logs show that

cleaning measures are taken to prevent cross-contamination associated with sample containers.

A Laboratory control sample (LCS) was used by the laboratory to verify the accuracy and precision of the analyses. The LCS percent recoveries (%REC) were within established guidelines, with the exception of 1,2,4-trimethylbenzene which was below recovery criteria. Based on the absence of 1,2,4-trimethylbenzene in the primary samples and that this compound is not a contaminant of concern for the Site, the analytical results for the VOCs of concern are anticipated to be precise and accurate.

Questions and Responses

1. Is the data package complete as defined under the current requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

The data package is complete. The external and internal chain of custody forms are present and complete. The case narrative and sample analysis summaries are present and complete. The analytical QA/QC summary forms, including surrogate recovery forms, LCS forms, IDL forms, initial and continuing calibration summary forms, standards raw data, tuning criteria report, and MB data are all present and complete. The data report forms, including sample prep logs, injection logs, canister cleaning logs, and examples of the calculations used to determine the sample concentrations are all present and complete. The raw data used to identify and quantify the contract-specified analytes are present and complete.

Data completeness for the field program was also verified. The numbers and types of samples collected are in agreement with the work plan.

2. Have all holding times been met?

All samples were received and analyzed within the EPA-recommended holding times for the analyses performed.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data, fall within the protocol-required limits and specifications?

No – LCS QC data was noted to be outside for one compound as noted above. All other were within the protocol required limits and specifications.

4. Have all of the data been generated using established and agreed-upon analytical protocols?

Yes – all of the data were generated using the Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

Yes – a representative number of raw data results were compared with the reported data results to confirm that the reported analytical results (identification and quantification) are substantiated by the raw data.

6. Have the correct data qualifiers been used?

Yes, L-qualified data qualifiers were used when sample criteria were biased low. No other qualifiers were utilized in the data package.

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

Yes, QC exceedances have been reported in the data packages and the appropriate QC summary sheets have been attached.

Conclusions

The indoor/outdoor air and sub-slab soil vapor samples were collected in accordance with NYSDOH guidance. No field or laboratory conditions occurred that would result in non-valid analytical data for the VOCs of concern at this site. The data appear to be adequate for their intended purpose.

https://fpmrem-my.sharepoint.com/Personal/Ben_Fpm-Group_Com1/Documents/Cinderella_Prr_2019-2020/Svi_Dusr_Feb20.Docx



Saturday, February 01, 2020

Attn: Mr John Bukoski, PG
FPM Group
909 Marconi Ave
Ronkonkoma, NY 11779

Project ID: CINDERELLA
SDG ID: GCE89170
Sample ID#s: CE89170 - CE89175

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



SDG Comments

February 01, 2020

SDG I.D.: GCE89170

Any compound that is not detected above the MDL/LOD is reported as ND on the report and is reported in the electronic deliverables (EDD) as <RL or U at the RL per state and EPA guidance.

Version 1: Analysis results minus raw data.

Version 2: Complete report with raw data.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



QA/QC Report

February 01, 2020

QA/QC Data

SDG I.D.: GCE89170

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510810 (ppbv), QC Sample No: CE89256 (CE89170, CE89171, CE89172, CE89173, CE89174, CE89175)												
Volatiles												
1,1,1,2-Tetrachloroethane	ND	0.150	ND	1.03	84	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	0.180	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.150	ND	1.03	85	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.180	ND	0.98	97	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.250	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.050	ND	0.20	98	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.130	ND	0.96	63	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	0.200	ND	0.98	83	1.06	1.07	0.215	0.218	NC	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.130	ND	1.00	98	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.170	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.250	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.220	ND	1.02	110	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	0.140	ND	0.98	89	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	0.200	ND	0.98	83	ND	ND	ND	ND	NC	70 - 130	25
1,3-Butadiene	ND	0.450	ND	0.99	87	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.170	ND	1.02	79	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.170	ND	1.02	84	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.280	ND	1.01	103	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	0.240	ND	0.98	106	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	0.200	ND	0.98	79	ND	ND	ND	ND	NC	70 - 130	25
4-Isopropyltoluene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	0.240	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
Acetone	ND	0.420	ND	1.00	92	15.7	16.0	6.60	6.73	2.0	70 - 130	25
Acrylonitrile	ND	0.460	ND	1.00	93	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	0.310	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
Benzyl chloride	ND	0.190	ND	0.98	86	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.150	ND	1.00	104	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.097	ND	1.00	86	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.260	ND	1.01	90	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	0.320	ND	1.00	100	ND	ND	ND	ND	NC	70 - 130	25
Carbon Tetrachloride	ND	0.032	ND	0.20	103	0.48	0.50	0.076	0.079	NC	70 - 130	25
Chlorobenzene	ND	0.220	ND	1.01	89	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	0.380	ND	1.00	92	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	0.200	ND	0.98	104	ND	ND	ND	ND	NC	70 - 130	25
Chloromethane	ND	0.480	ND	0.99	84	1.11	1.12	0.540	0.541	NC	70 - 130	25
Cis-1,2-Dichloroethene	ND	0.256	ND	1.01	106	4.12	4.36	1.04	1.10	5.6	70 - 130	25
cis-1,3-Dichloropropene	ND	0.220	ND	1.00	105	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	0.290	ND	1.00	101	ND	ND	ND	ND	NC	70 - 130	25
Dibromochloromethane	ND	0.120	ND	1.02	102	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	0.200	ND	0.99	104	5.98	5.88	1.21	1.19	1.7	70 - 130	25
Ethanol	ND	0.530	ND	1.00	88	67.6	66.1	35.9	35.1	2.3	70 - 130	25

QA/QC Data

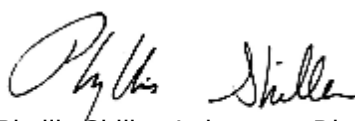
SDG I.D.: GCE89170

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
Ethyl acetate	ND	0.280	ND	1.01	101	1.10	1.07	0.305	0.298	NC	70 - 130	25
Ethylbenzene	ND	0.230	ND	1.00	84	ND	ND	ND	ND	NC	70 - 130	25
Heptane	ND	0.240	ND	0.98	96	ND	ND	ND	ND	NC	70 - 130	25
Hexachlorobutadiene	ND	0.094	ND	1.00	75	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	0.280	ND	0.99	103	ND	ND	ND	ND	NC	70 - 130	25
Isopropylalcohol	ND	0.410	ND	1.01	88	19.0	19.7	7.75	8.00	3.2	70 - 130	25
Isopropylbenzene	ND	0.200	ND	0.98	85	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	0.230	ND	1.00	87	ND	ND	ND	ND	NC	70 - 130	25
Methyl Ethyl Ketone	ND	0.340	ND	1.00	94	ND	ND	ND	ND	NC	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	0.280	ND	1.01	91	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	0.860	ND	2.99	89	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	0.230	ND	1.00	90	ND	ND	ND	ND	NC	70 - 130	25
Propylene	ND	0.580	ND	1.00	114	ND	ND	ND	ND	NC	70 - 130	25
sec-Butylbenzene	ND	0.180	ND	0.99	81	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	0.230	ND	0.98	84	ND	ND	ND	ND	NC	70 - 130	25
Tetrachloroethene	ND	0.037	ND	0.25	96	359	371	53.0	54.7	3.2	70 - 130	25
Tetrahydrofuran	ND	0.340	ND	1.00	96	ND	ND	ND	ND	NC	70 - 130	25
Toluene	ND	0.270	ND	1.02	102	1.33	1.34	0.353	0.357	NC	70 - 130	25
Trans-1,2-Dichloroethene	ND	0.250	ND	0.99	95	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	0.220	ND	1.00	96	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.037	ND	0.20	100	3.80	3.80	0.708	0.707	0.1	70 - 130	25
Trichlorofluoromethane	ND	0.180	ND	1.01	91	1.42	1.46	0.253	0.260	NC	70 - 130	25
Trichlorotrifluoroethane	ND	0.130	ND	1.00	97	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.078	ND	0.20	87	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	99	%	99	%	111	117	114	117	114	NC	70 - 130	25
% IS-1,4-Difluorobenzene	124	%	124	%	77	107	105	107	105	NC	60 - 140	25
% IS-Bromochloromethane	134	%	134	%	72	103	101	103	101	NC	60 - 140	25
% IS-Chlorobenzene-d5	117	%	117	%	81	95	95	95	95	NC	60 - 140	25

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
 LCS - Laboratory Control Sample
 LCSD - Laboratory Control Sample Duplicate
 MS - Matrix Spike
 MS Dup - Matrix Spike Duplicate
 NC - No Criteria
 Intf - Interference


 Phyllis Shiller, Laboratory Director
 February 01, 2020

Sample Criteria Exceedances Report**GCE89170 - FPMGROUP**

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE89170	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.071	0.032	0.032	0.032	ppbv
CE89170	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.45	0.20	0.2	0.2	ug/m3
CE89171	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.068	0.032	0.032	0.032	ppbv
CE89171	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.43	0.20	0.2	0.2	ug/m3
CE89172	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.073	0.032	0.032	0.032	ppbv
CE89172	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.46	0.20	0.2	0.2	ug/m3
CE89173	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.075	0.032	0.032	0.032	ppbv
CE89173	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.47	0.20	0.2	0.2	ug/m3
CE89174	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.079	0.032	0.032	0.032	ppbv
CE89174	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.50	0.20	0.2	0.2	ug/m3
CE89175	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.074	0.032	0.032	0.032	ppbv
CE89175	\$AIR_NYTO15	Carbon Tetrachloride	NY / Air Guideline Values / Indor Air	0.47	0.20	0.2	0.2	ug/m3

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Organic Data Flags

LOD(MDL): Limit of Detection or Method Detection Limit
The minimum reportable concentration that can be measured with confidence.

PQL(RL): Practical Quantitation Level or Reporting Level
This value is at or above the MDL and is supported by the lowest calibration standard.

Q Qualifiers:

U - The compound was analyzed for but not detected at or above the MDL. The number immediately preceding the "U" represents the PQL reporting level corrected for percent solids, weight and/or volume calculations, and dilution factors.

J - Indicates an estimated value, may indicate one of the following, depending on the situation:
a) The reported value is estimated and below the MDL
b) Used when estimating a concentration for TIC where a 1:1 response is assumed or when the result indicates the presence of a compound that meets the identification criteria, but the results is less than the quantitation limit, but greater than zero.
c) QC associated with this analyte is within warning limits.

X - The concentration is not reported. This quantitation file was not evaluated for this compound at this dilution; a volatile purging or related issue may be the cause.

L - Biased Low

N - The concentration is based on the response of the nearest internal. This flag is used on the TIC form for all compounds identified.

S - This compound is a solvent that is used in the laboratory. Laboratory contamination is suspected if concentration is less than five times the reporting level.

B - This compound was also present in the method blank

D - The reported concentration is the result of a diluted analysis.

E - The reported value is estimated because the concentration exceeded the calibration range.

A - Indicates that the tentatively identified compound is a suspected aldol condensation product. Aldol condensation products are produced during the extraction process.

Q - For TICS, this compound was quantitated using a calibration curve. This compound is part of the instrument method, but not part of the client target list.

P - Percent difference is greater than 25% between the two GC columns and the lower result is reported.



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SDG: GCE89170

Volatile Air Conformance / Non-Conformance Summary

Project ID / Client ID: CINDERELLA, FPM Group

Form 1 (Analysis):

No observations noted.

Form 2 (Surrogates):

All surrogates met criteria with the following exceptions: None.

Form 3 (Laboratory Control/Matrix Spike):

Sample: CE89256 LCS
All LCS recoveries met criteria with the following exceptions: 1,2,4-Trichlorobenzene 63%

Form 4 (Method Blank):

File: CHEM24 1217_06.D
All compounds were non-detect with the following exceptions: None.

Form 5 (Tune):

File: CHEM24 1216_01.D
All Tune criteria was met with the following exceptions: None.

File: CHEM24 1217_02.D
All Tune criteria was met with the following exceptions: None.

Form 6 (Initial Calibration):

Calibration: CHEM24 12/16/19 - 12/17/19
100% of method compounds met criteria.
The following compounds did not meet maximum % deviations: None.

Calibration: CHEM24 12/16/19 - 12/17/19
100% of method compounds met criteria.
The following compounds did not meet maximum % deviations: None.

Form 7 (Continuing Calibration):

File: CHEM24 1217_02.D (Opening)
99% of method compounds met criteria.
The following compounds did not meet maximum % deviations: Benzyl chloride 40.0% (20), 1,2,4-Trichlorobenzene 52.0% (20), Benzyl chloride(sim) 26.0% (20), 1,4-Dichlorobenzene(sim) 22.0% (20), 1,2-Dichlorobenzene(sim) 21.0% (20), n-Butylbenzene(sim) 22.0% (20), 1,2,4-Trichlorobenzene(sim) 50.0% (20)

Form 8 (Internal Standard and Retention Time):

File: CHEM24 - 24AIR_1216.M / 1217_02.D Full



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All samples met internal standard area and retention time criteria with the following exceptions: None.

File: CHEM24 - 24AIR_1216.M / 1217_02.D Sim

All samples met internal standard area and retention time criteria with the following exceptions: None.

File: CHEM24 - 24AIR_1216.M / Average Full

All samples met internal standard area and retention time criteria with the following exceptions: None.

File: CHEM24 - 24AIR_1216.M / Average Sim

All samples met internal standard area and retention time criteria with the following exceptions: None.

12/27/19

Alejandro Paredes

Project Manager