

SUB-SLAB DEPRESSURIZATION SYSTEMS START-UP REPORT AND OPERATION & MAINTENANCE PLAN

February 16, 2022

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site #C915344

Prepared For:
65 Lake Avenue LLC

Prepared By:



A handwritten signature in black ink, appearing to read "Christine M. Curtis".

Christine M. Curtis, P.E.
Project Engineer

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Steven L. Marchetti
Senior Project Manager

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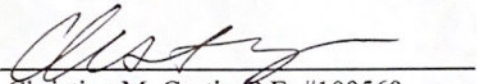
Sean R. Carter, P.E.
Principal Engineer

CERTIFICATION STATEMENT

I, Christine M. Curtis, P.E., certify that I am currently a NYS Professional Engineer as defined in 6 NYCRR Part 375 and that this Sub-Slab Depressurization Systems Start-Up Report and Operation & Maintenance Plan for the sub-slab depressurization (SSD) systems operating at the Lakeside Village Apartments Site located at 65-67 Lake Avenue, Lancaster, NY was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in New York.

I hereby certify the following drawings:

- Figure 2: SSDS Layout and Piping Diagram
- Figure 3: Vapor Extraction Well and Monitoring Point Detail
- Figure 4A: Building 1 SSD System Layout – Profile View
- Figure 4B: Building A SSD System Layout – Profile View
- Figure 5: Process and Instrumentation Diagram
- Figure 6: Post-Mitigation Sampling Locations


Christine M. Curtis, P.E. #100560
Matrix Environmental Engineers, PLLC

02/16/2022
Date



SEAL

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1.0 INTRODUCTION

Matrix Environmental Technologies Inc. (“METI”) has prepared this Start-Up Report and Operation & Maintenance Plan on behalf of 65 Lake Avenue LLC for the Lakeside Village Apartments Site (“Site”). This report documents the completion of sub-slab depressurization (SSD) systems at the Site located at 65-67 Lake Avenue in Lancaster, New York (Brownfield Cleanup Program Site #C915344).

2.0 BACKGROUND

The Site is currently utilized as a residential apartment complex in a moderately developed residential area in the Town of Lancaster, Erie County, New York. The Site includes two parcels totaling approximately 1.18 acres of land: SBL #115.27-1-22.21 addressed as 65 Lake Avenue and SBL #115.27-1-23.11 addressed as 67 Lake Avenue. On-Site structures include three (3) two-story townhomes constructed in 2006 (65 Lake Avenue) designated as Buildings A, B, and C and a one-story apartment building constructed in 1903 (67 Lake Avenue) designated as Building 1. The Site is bordered by undeveloped land and apartment buildings to the south; residences to the north and west; and Lake Avenue to the east. Properties beyond those adjacent to the Site, including to the south, consist mostly of private residences. Cayuga Creek is located approximately 200 feet to the southwest. The location of the site is shown on **Figure 1**.

Historically, the eastern portion of the Site was utilized as a dry cleaner from at least 1949. The former dry cleaning building was located on the eastern portion of 65 Lake Avenue and the northern portion of 67 Lake Avenue. The building was reportedly destroyed by a fire in the late 1970s and was removed or demolished by at least 1995. According to members of the Young family, who owned both properties from at least 1882 through 2005, historical use of the properties has remained residential since at least 1900 with the exception of the dry cleaner.

Due to the detections of chlorinated VOCs in groundwater, vapor intrusion studies were completed in February and April 2019 within the four (4) residential buildings. Vapor intrusion testing results identified chlorinated solvents, specifically PCE and TCE, within both sub-slab and indoor air samples in Buildings 1 and A. Based on guidance from the New York State Department of Health (NYSDOH), the concentrations of these solvents required mitigation in Building A on 65 Lake Avenue and Building 1 on 67 Lake Avenue. Mitigation was not required in Building B or Building C. For additional details, refer to the February 28, 2019 “Soil Vapor Intrusion Assessment Report” (METI) and the May 7, 2019 “Soil Vapor Intrusion Assessment Report” (METI).

The design objective of the SSD systems is to mitigate potential vapor migration into the basement areas of Building 1 and Building A by maintaining a negative pressure of at least 0.004 inches water column (WC) in the sub-slab. The design was developed in accordance with the applicable standards, criteria, and guidance contained in or referenced in NYSDOH’s “Guidance for Evaluating Soil Vapor Intrusion in the State of New York” dated October 2006 and its updates.

This report documents installation and start-up of the SSD systems and notes modifications to the system designs as proposed in the June 20, 2019 “Work Plan for Sub-Slab Depressurization Systems” (METI).

3.0 SSD SYSTEMS DESCRIPTION

To complete the design objective, seven (7) separate SSD systems were installed in the following basement areas:

- Building 1 West
- Building 1 Central
- Building 1 East
- Building A, Apartment 1
- Building A, Apartment 2
- Building A, Apartment 3
- Building A, Apartment 4

Locations of the basement treatment areas and associated system piping, extraction points and monitoring points are shown in **Figure 2**.

The SSD systems create negative pressure under the building floor slab relative to the indoor air pressure, thereby minimizing the potential for soil gas to migrate into the building. The systems use a fan to apply vacuum to vapor extraction points installed throughout the building floor slab. The systems were designed to create a minimum negative pressure of at least 0.004 inches WC in the sub-slab in each area.

4.0 CONSTRUCTION ACTIVITIES

Installation of the SSD systems was completed by METI from October through November 2019. Deficiencies were identified and addressed through system modifications and repairs completed through June 2020. These included encapsulation of the basement space in Building 1 with a waterproof barrier, replacement of the VP-A1 vacuum gauge, and temporary removal of the VP-1 fan operating in Building 1 for repairs. Additional details and any deviations from the Work Plan are addressed in the sections below.

4.1 Extraction Point Installation

As detailed in the Work Plan, each vapor extraction point was constructed using four-inch I.D. Schedule 40 PVC pipe with screen extending to just below the concrete slab. The annular space was filled with clean gravel and sealed with non-shrinking grout. A construction detail is included as **Figure 3**.

Building 1 (1,400 sq. ft.)

To achieve the design objective, three (3) vapor extraction points were installed in the basement of Building 1. Based on pilot testing data, the radius of influence at each extraction point was estimated at approximately 16 feet at 10 inches WC. The extraction points are designated VP-1 through VP-3.

Building A (2,400 sq. ft.)

To achieve the design objective, one centrally located vapor extraction point was installed in each of the apartments in Building A for a total of four (4) points. Based on pilot testing data, the radius of

influence at each extraction point was estimated at approximately 22 feet at 3 inches WC. The extraction points are designated VP-A1 through VP-A4.

4.2 Vapor Monitoring Point Installation

A hammer drill was used to install vacuum monitoring points at numerous locations in each building. The monitoring points, which include a 3/4-inch female coupling and threaded cap, were installed to a depth extending just below the surface of the concrete slab. A construction detail is included in **Figure 3**.

Building 1

Four (4) permanent vapor monitoring points designated M1 through M4 were installed to monitor the induced vacuum at points throughout the target area.

Building A

Two (2) vapor monitoring points were installed in each apartment in Building 1 for a total of eight (8) monitoring points. The points are designated A1-M1, A1-M2, A2-M1, etc.

4.3 Piping Installation

Four-inch diameter Schedule 40 PVC vent pipes were installed to convey the vapor to the wall-mounted fans located outside of the buildings. The riser pipes from the vapor extraction points extend vertically up to the basement ceiling, and the vent pipes are routed through the southern basement wall (Building A) and the western basement wall (Building 1) to the outside of the building. All piping is level or sloped toward the vapor extraction points to prevent condensate accumulation in pipe runs. Piping is labeled with an arrow indicating the air flow direction.

Piping from the extraction points terminates at wall-mounted fans located outside the buildings. Each extraction point line is equipped with a Dwyer differential pressure vacuum gauge (0-20 inches WC for Building 1 and 0-5 inches WC for Building A) at the blower. The vacuum gauge on VP-A1 was not functioning and was replaced on January 25, 2022. The vacuum gauge on VP-A2 was not functioning from December 2019 through January 2021 but was observed to be fully functional during the next site check completed by METI in January 2022.

The collected sub-slab vapor is discharged to the atmosphere more than 12 inches above the building roofline, 10 feet above ground level, and 10 feet away from any openings within two feet below the exhaust point. Each discharge point is located least 10 feet from any adjacent buildings, HVAC intakes or supply registers.

Refer to **Figure 4** for profile views of each treatment area.

4.4 Extraction Equipment and Vapor Treatment Installation

Equipment for vapor extraction and treatment in each treatment area is as follows:

Building 1

Three (3) RadonAway HS2000E fans (37 SCFM at 10 inches WC) were installed to maintain a pressure differential of 0.004 inches WC in the sub-slab in Building 1. Based on pilot testing and sub-slab vapor analytical data, vapor phase carbon treatment is not required. Worst-case emission rate calculations using concentrations of high toxicity air contaminants (HTACs) in the sub-slab vapor samples collected during the investigation on February 12, 2019 are included in **Table 1**.

The fan designated as VP-1 was not operating and removed for repairs on November 25, 2019. Repairs were completed by the manufacturer and the fan was replaced on December 6, 2019.

Building A

One (1) RadonAway GP501 fan (50 SCFM at 3 inches WC) was installed to maintain a pressure differential of 0.004 inches WC in the sub-slab in each apartment in Building A. Based on pilot testing and sub-slab vapor analytical data, vapor phase carbon treatment is not required. Refer to **Table 1** for emissions rate calculations.

Technical specifications for vapor extraction and treatment equipment are included in **Appendix A**. Process and instrumentation diagrams are included in **Figure 5**.

4.5 Wiring and Labeling

Single phase electrical service was installed to each of the fans in Building 1 and Building A. These fans do not have control panels and are operated with an on/off switch. All system piping is labeled with arrows to indicate air flow direction and switches are labeled “ON/OFF – DO NOT SHUT OFF” to avoid accidental changes or system deactivation.

4.6 Crack and Joint Sealing

Prior to system start-up, visible cracks in the sub-slab in Building 1 were sealed using non-shrinking caulk. The basement sumps were sealed by a certified plumber. During the attempted air sampling event on March 30, 2020 it was discovered that the basement had flooded and the basement was subsequently encapsulated with a waterproof barrier using RadonSeal Plus Concrete Sealer. Per manufacturer instructions, two coats of sealer were applied to the floor and three coats were applied to the walls using a low-pressure sprayer. The sealer is VOC-free. A material safety data sheet and detailed application procedures are included in **Appendix B**.

The basements in Building A are finished and carpeted; therefore, no cracks were visible.

4.7 Waste Management

A small volume of soil and concrete debris (approximately 2.5 gallons or 0.4 cubic feet) was generated for offsite disposal during construction activities. The soil was generated during installation of the vapor extraction points in Building 1. No soil was generated from Building A as the concrete foundation was underlain by clean gravel.

Wastes were containerized in a DOT rated 55-gallon drum and temporarily stored on-site for transport to a disposal facility by a subcontractor. While awaiting disposal, the drum was presumably stolen and

could not be located. The drum was labeled as non-hazardous waste and included details on the waste generator and site address. Should the drum be recovered, METI and/or the site owner will be contacted, the contents of the drum will be properly disposed of, and documentation will be submitted to NYSDEC.

4.8 Air Monitoring

Air monitoring was completed during installation activities in accordance with the approved CAMP. Continuous air monitoring for VOCs was completed in each basement (i.e. the location of the nearest potentially exposed individuals), in any adjacent occupied rooms, and near the location of ventilation system intakes for nearby buildings (within 20 feet) during installation of the SSD systems. In addition, fans were utilized to create negative air pressure within the work area. Air monitoring data is included in **Appendix C**.

5.0 START-UP TESTING

Subsequent to the installation of each SSD system, sub-slab pressure was monitored to verify that a negative pressure of at least 0.004 inches was being achieved in the vapor monitoring points in each treatment area. Each SSD system was started and smoke tubes were used to check for leaks through cracks or floor joints and observable leaks in Building 1 were sealed with non-shrinking caulk.

The systems began operating on November 12, 2019. The fans are operating at 14 to 16 in w.c. in Building 1 and 0.5 to 4.0 in w.c. in Building A. Vacuum in all monitoring points exceeds 0.004 in w.c. Due to restricted entry to the apartment buildings during the COVID-19 pandemic, data is not available after January 2020; however, checks are completed on a monthly basis by on-Site maintenance personnel to verify that the fans are operational. A summary of site checks completed as of January 2022 is included in **Appendix D**.

Refer to **Tables 1-2** for system operational and vacuum data.

6.0 OPERATION & MAINTENANCE

Operation, maintenance, and monitoring (OM&M) will be conducted to document that the SSD systems are operating as designed. The OM&M Plan is included in **Appendix E**.

Initial OM&M system checks were completed weekly for the first month of systems operation. Additional site checks were completed monthly for the following two months and on a quarterly basis thereafter. Site checks were completed by METI personnel through January 2020, after which point site checks were completed by on-Site maintenance personnel to minimize exposure to residents during the COVID-19 pandemic. Site checks are completed by METI when necessary to complete indoor air monitoring events and repairs or replacement of system components.

Routine monitoring includes the identification and repair of any leaks, operational status checks of blowers and fans and documentation of vacuum at each vapor extraction point and monitoring point. Non-routine maintenance will be completed as necessary. Tenants are notified in advance of system checks requiring apartment access and may refer to information sheets provided to them that include

an overview of system operation, maintenance, and monitoring. A copy of the information sheet is included in **Appendix F**.

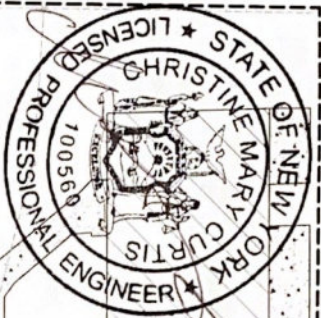
7.0 AIR MONITORING

Confirmation indoor air sampling was completed from January 15-16, 2020 in Building A and Building 1. Indoor air samples were collected from the basement area of each apartment in Building A and from the basement area of Building 1 as shown in **Figure 6**. In addition, one ambient outdoor air sample was collected from between Building 1 and Building A. The home heating systems and SSD systems were operational at the time of sampling.

Prior to sampling, a product inventory survey was completed in each basement area. Surveys are included in **Appendix G**. Samples were then collected simultaneously over a 24-hour period using six-liter Summa canisters equipped with calibrated flow regulators in accordance with NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. Indoor air samples were collected from a central location at a height of approximately 2-3 feet above the basement floor and the outdoor air sample was collected from a height of approximately 3-4 feet above ground surface. Samples were submitted to Centek Laboratories of Syracuse, New York for analysis of VOCs using EPA Method TO-15.

As the January 2020 sampling event was completed prior to resealing of the basement in Building 1, the Table C1 Indoor Air Background Level (Upper Fence Value) for trichloroethene was exceeded. Building 1 was resampled from April 6-7, 2020 following sealing of the basement as described in Section 4.6. All compounds identified in the NYSDOH soil vapor/indoor air decision matrices were not detected or below Indoor Air Background Levels in the Building 1 air sample. Results are summarized in **Tables 3-4** and laboratory analytical reports are included in **Appendix H**.

FIGURES



Building C

Building B

Building A

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

59 Lake Ave

65 Lake Ave

Concrete Berm

69 Lake Ave

RadonAway GP501 Fans

RadonAway HS2000 Fans

Building 1

BCP Site Limit

1991-2021

1991-2021

- LEGEND
- ⊕ - Vapor Extraction Point Location
 - - Monitoring Point Location



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ENGINEERED BY

CHECKED BY

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REVISION

BY

DATE

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Lake Ave

PROJECT NAME / LOCATION
Lakeside Village
Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. 915344

SSDS Layout and
Piping Diagram

DATE

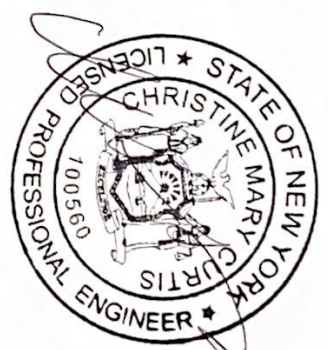
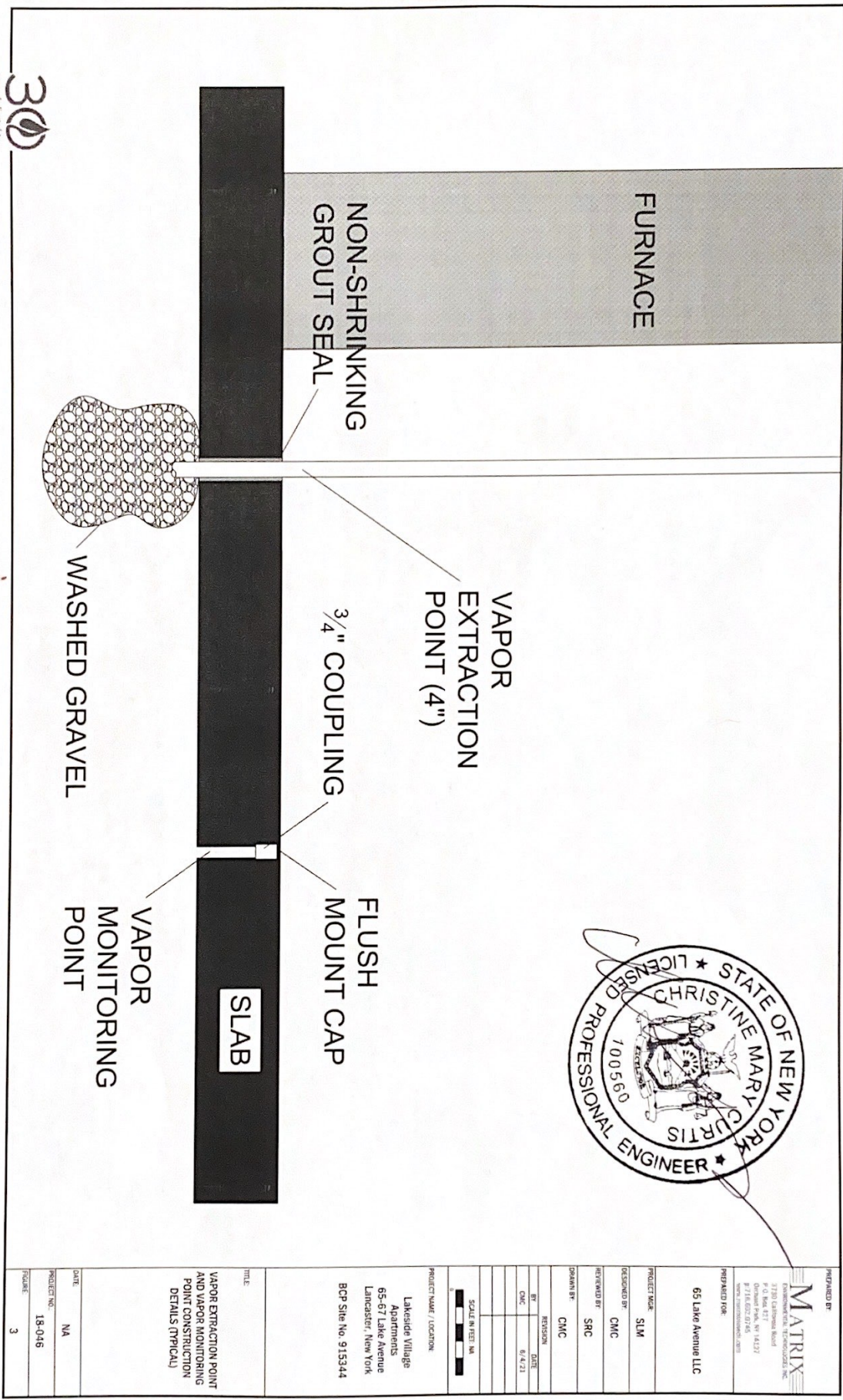
NA

PROJECT NO.

18-046

REVISION

2



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DRAWN BY: CMC

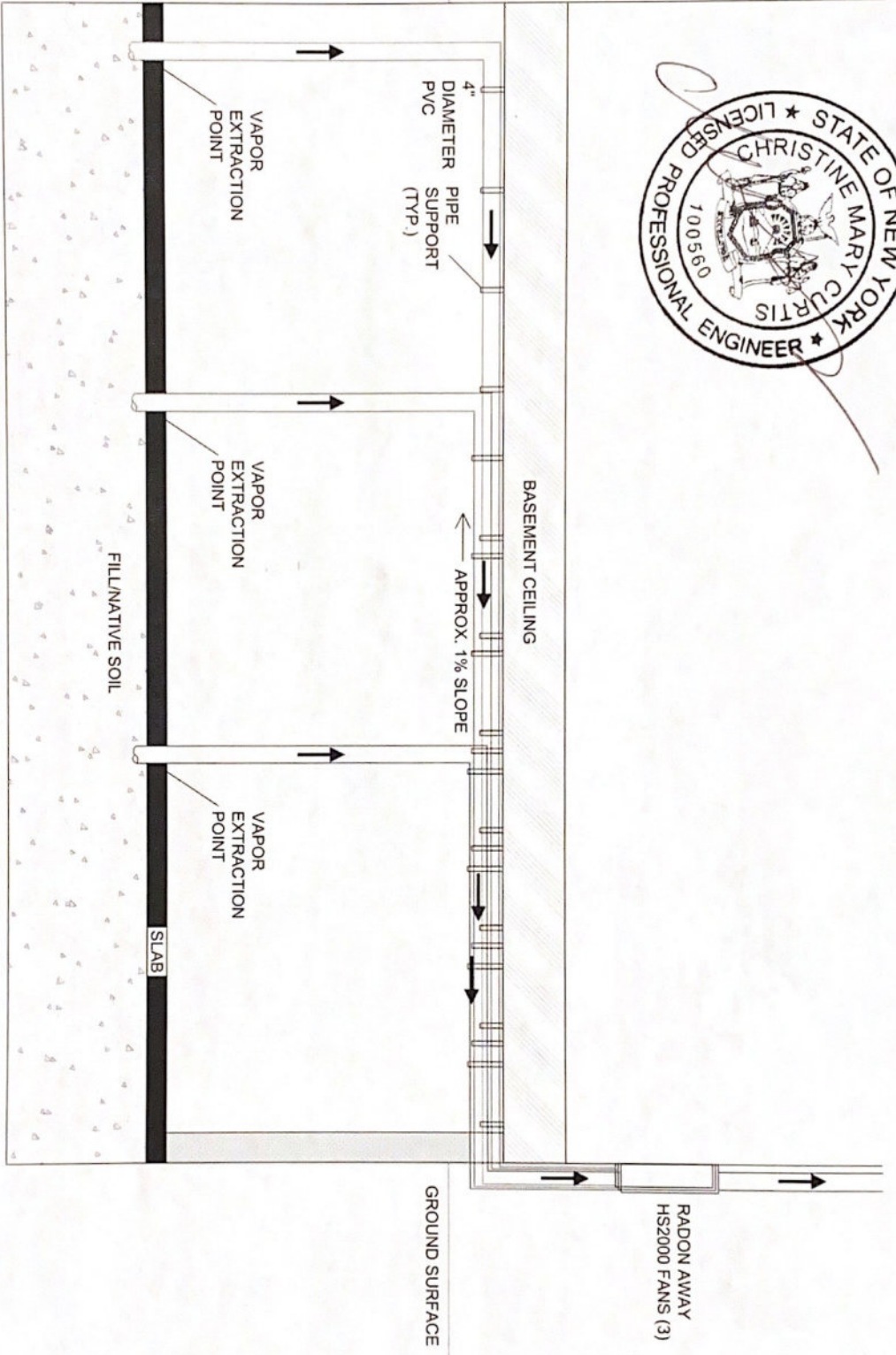
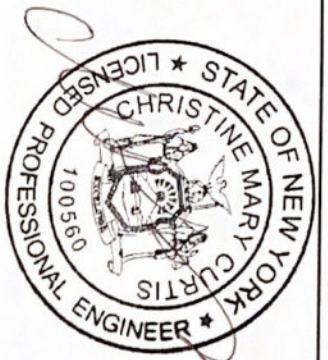
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PROJECT NAME / LOCATION:
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 Apartments
 65-67 Lake Avenue
 Lancaster, New York
 BCP Site No. 915344

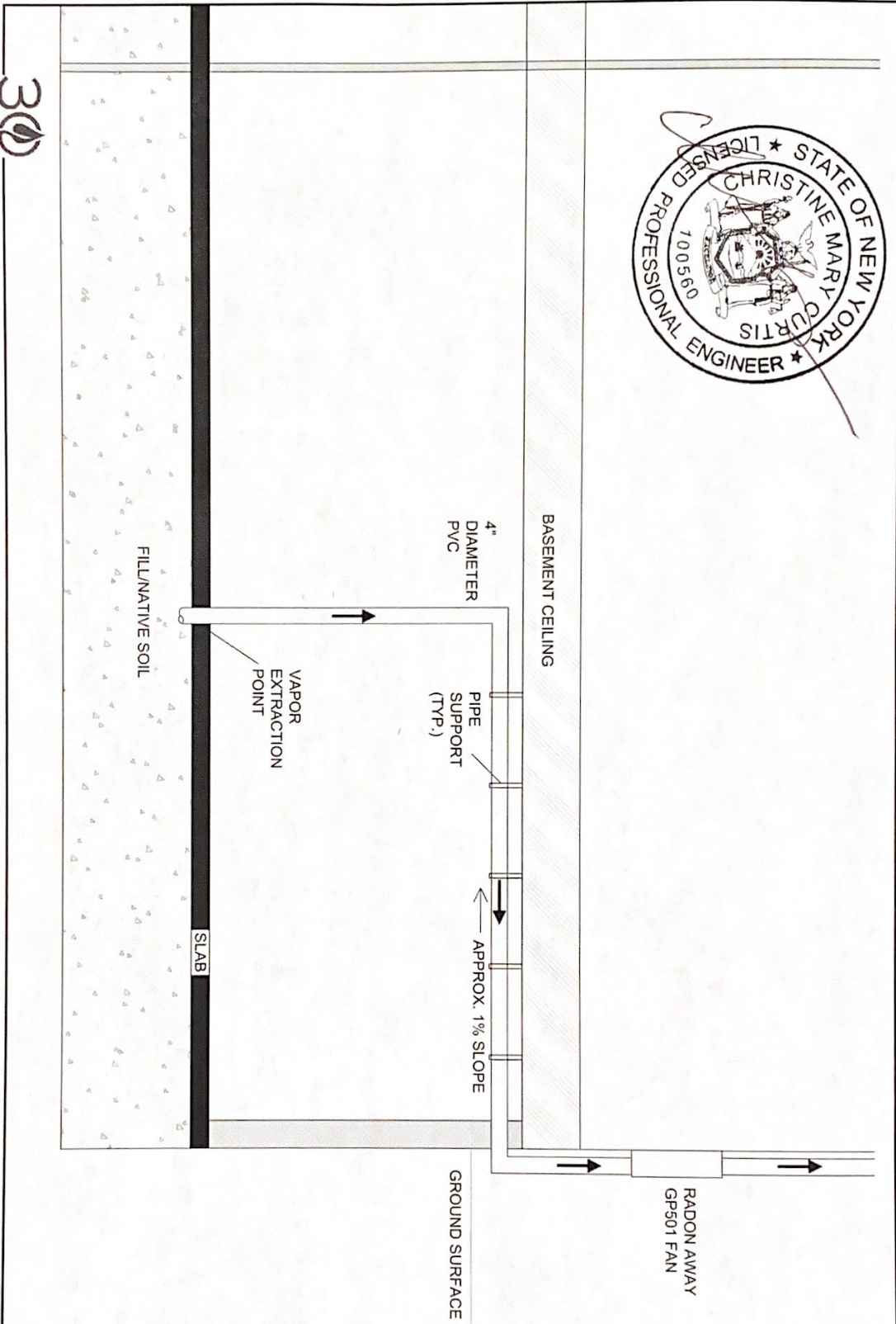
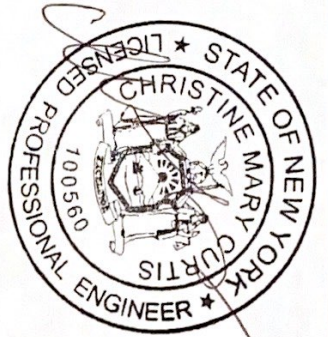
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 AND VAPOR MONITORING
 POINT CONSTRUCTION
 DETAILS (TYPICAL)

DATE:	NA
PROJECT NO.:	18-046
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30 years dedicated to a cleaner environment
1991 - 2021

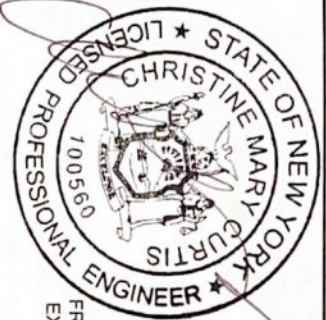
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PROJECT NAME	65 Lake Avenue LLC
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CHECKED BY	CMC
DATE	8.4.21
REVISION	
BY	DATE
CMC	8.4.21
SCALE IN FEET	1" = 1' 0"
PROJECT NAME / LOCATION	Lakeside Village Apartments 65-67 Lake Avenue Lancaster, New York BCP Site No. C915344
TITLE	BUILDING 1 SSD SYSTEM LAYOUT - PROFILE VIEW
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PROJECT NO.	18-046
FOUR	4A



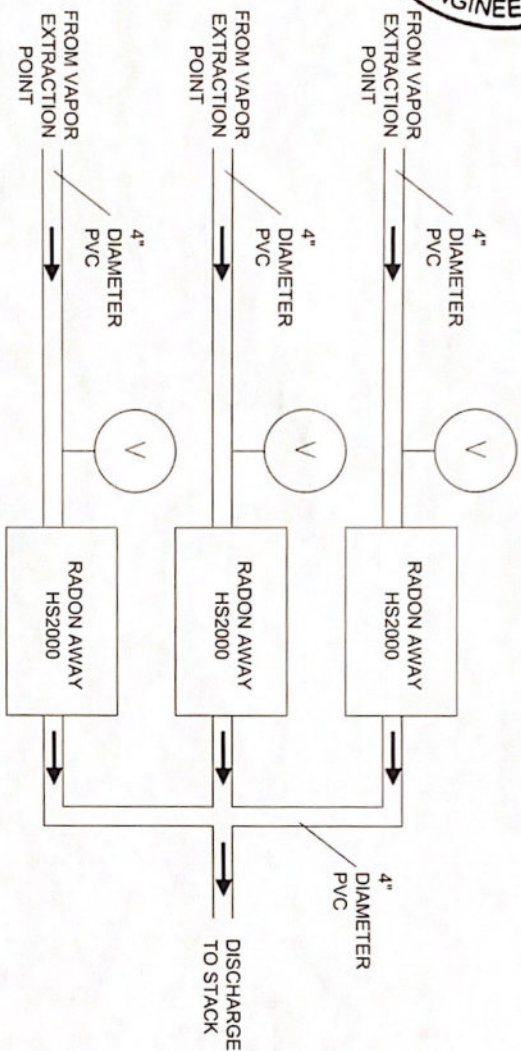
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Seal Reflects in a
License Renewal
10059 2021

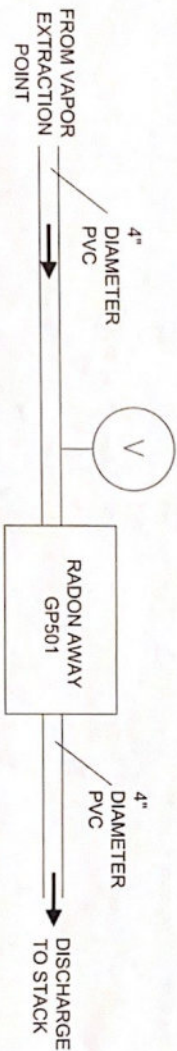
PREPARED BY		PROJECT NAME	
MATRIX		SLM	
3335 Catherine Road P.O. Box 127 Owens Park, NY 14827 Tel: 716/457-1400 Fax: 716/457-1401 www.matrixinc.com		DESIGNED BY	
65 Lake Avenue LLC		CMC	
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		CMC	
		BY	
		DATE	
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		6.4.21	
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		PROJECT NAME / LOCATION	
		Lakeside Village Apartments 65-67 Lake Avenue Lancaster, New York BCP Site No. C915344	
		TITLE	
		BUILDING A APARTMENT SSD SYSTEM LAYOUT - PROFILE VIEW	
		DATE	
		NA	
		PROJECT NO.	
		18-046	
		FIGURE	
		48	



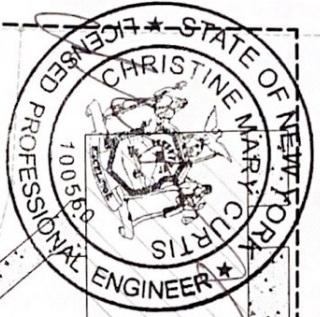
BUILDING 1



BUILDING A (EACH APARTMENT, 4 TOTAL)



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SCALE	AS SHOWN
SCALE IN FEET	1" = 1'
PROJECT NAME / LOCATION	Lakeside Village Apartments 65-67 Lake Avenue Lancaster, New York BCP Site No. C915344
TITLE	Process and Instrumentation Diagram
DATE	NA
PROJECT NO.	18-046
PLANT	S



Building C

Building B

Building A

65 Lake Ave

1A-A4

1A-A3

1A-A2

1A-A1

OA

Building 1

BCP Site Limit

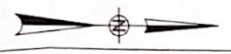
FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

59 Lake Ave

Lake Ave

- LEGEND
- × OA-1 - Outdoor Air Sampling Location
 - × 1A-1 - Indoor Air Sampling Location



James McGovern, Inc.
Professional Engineer
1991-2021

PROJECT NAME / LOCATION		DATE	
Lakeside Village Apartments 65-67 Lake Avenue Lancaster, New York BCP Site No. C915344		NA	
PROJECT NO.		PROJECT NO.	
18-046		18-046	
PROJECT NO.		PROJECT NO.	
6		6	

PROJECT NO.		PROJECT NO.	
SLM		SLM	
DESIGNED BY		DESIGNED BY	
CMC		CMC	
REVIEWED BY		REVIEWED BY	
SRC		SRC	
DRAWN BY		DRAWN BY	
CMC		CMC	
REVISION		REVISION	
DATE		DATE	
CMC		CMC	
2/24/20		2/24/20	

SCALE IN FEET 1"=20'		SCALE IN FEET 1"=20'	
0 10 20		0 10 20	

POST-MITIGATION Sampling Locations		POST-MITIGATION Sampling Locations	
DATE		DATE	
NA		NA	
PROJECT NO.		PROJECT NO.	
18-046		18-046	
PROJECT NO.		PROJECT NO.	
6		6	

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REVISION

DATE

CMC

2/24/20

TABLES

Table 1
HTAC Emission Rates
65-67 Lake Avenue, Lancaster, New York

Compound	Building 1				
	Concentration (ug/m3)	Vacuum (in. WC)	Flow Rate (cfm)	Emission Rate (lb/hr)	Total Systems Emission Rate (lb/hr)
Benzene	6.7	15	23	5.77E-07	1.73E-06
Carbon tetrachloride	0.88	15	23	7.58E-08	2.27E-07
Chloroform	4.9	15	23	4.22E-07	1.27E-06
Tetrachloroethylene	36	15	23	3.10E-06	9.30E-06
Trichloroethene	66	15	23	5.69E-06	1.71E-05

Compound	Building A				
	Concentration (ug/m3)	Vacuum (in. WC)	Flow Rate (cfm)	Emission Rate (lb/hr)	Total Systems Emission Rate (lb/hr)
Benzene	1.4	1.5	72	3.78E-07	1.51E-06
Carbon tetrachloride	0.88	1.5	72	2.37E-07	9.49E-07
Chloroform	0.63	1.5	72	1.70E-07	6.80E-07
Tetrachloroethylene	3.7	1.5	72	9.98E-07	3.99E-06
Trichloroethene	15	1.5	72	4.05E-06	1.62E-05

NOTES:

Sub-slab concentrations are from samples collected 2/12/19. The highest result of all sub-slab samples collected from each building is shown.

Total systems emission rate is calculated based on 3 fans operating in Building 1 and 4 fans operating in Building A.

Table 2
Building A Vacuum Readings (in w.c.)

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. C915344

Date	Apartment A1			Apartment A2		
	Vapor Extraction Point VP-A1	Monitoring Point A1-M1	Monitoring Point A1-M2	Vapor Extraction Point VP-A2	Monitoring Point A2-M1	Monitoring Point A2-M2
11/12/2019	gauge broken	0.061	0.055	3.5	0.024	0.025
11/20/2019		0.059	0.048	3.5	0.028	0.023
11/25/2019		0.048	0.038			
12/6/2019		0.054	0.041	gauge broken	0.018	0.016
1/15/2020		0.044	0.035		0.014	0.013
1/31/2022	3.5			4.0		

Date	Apartment A3			Apartment A4		
	Vapor Extraction Point VP-A3	Monitoring Point A3-M1	Monitoring Point A3-M2	Vapor Extraction Point VP-A4	Monitoring Point A4-M1	Monitoring Point A4-M2
11/12/2019	4.0	0.010	0.014	0.5	0.078	0.074
11/20/2019	4.0	0.010	0.015	0.75	0.067	0.069
11/25/2019	4.0	0.012	0.013	0.75	0.067	0.069
12/6/2019	4.0	0.012	0.012	1.3	0.064	0.071
1/15/2020	4.0	0.010	0.011	1.6	0.077	0.072
1/31/2022	3.5			3.5		

Note: Blank space indicates that data was not collected.

Table 3
Building 1 Vacuum Readings (in w.c.)

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. C915344

Date	Vapor Extraction Point VP-1	Vapor Extraction Point VP-2	Vapor Extraction Point VP-3	Monitoring Points			
				M1	M2	M3	M4
11/12/2019	0	16	15	0.000	0.193	0.133	0.000
11/20/2019	0	15	15	0.000	0.132	0.128	0.018
11/25/2019	fan removed for repairs						
12/6/2019	14	15	15	0.258	0.109	0.053	0.010
1/15/2020	15	16	15	0.222	0.266	0.206	0.016
1/31/2022	16	17	15				

Note: Blank space indicates that data was not collected.

Table 4
Building A Indoor Air Results
65-67 Lake Avenue, Lancaster, New York

January 15-16, 2020

PARAMETER	Table C1 Indoor Air Background Level (Upper Fence Value)	A1 Indoor Air	A2 Indoor Air	A3 Indoor Air	A4 Indoor Air	A4 Indoor Air - DUP	B1 Indoor Air	Table C1 Outdoor Air Background Level (Upper Fence Value)	Outdoor Air
1,1,1-Trichloroethane	2.5	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	0.6	<0.82
1,1-Dichloroethene	0.4	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.4	<0.16
1,2,4-Trimethylbenzene	9.8	0.88	4.8	0.74	0.64	0.59	<0.74	0.5	<0.74
1,2-Dichloroethane	0.4	<0.61	<0.61	0.81	<0.61	<0.61	<0.61	0.4	<0.61
1,3,5-Trimethylbenzene	3.9	0.54	1.3	0.64	<0.74	<0.74	<0.74	0.7	<0.74
1,3-Dichlorobenzene	0.5	<0.90	<0.90	<0.90	<0.90	1.1	<0.90		<0.90
2,2,4-trimethylpentane		0.56	<0.70	<0.70	<0.70	<0.70	<0.70		<0.70
4-ethyltoluene		<0.74	1.4	<0.74	<0.74	<0.74	<0.74		<0.74
Acetone	115	44	47	130	19	18	15	1.2	6.4
Benzene	13	2.9	2.7	0.89	0.57	0.57	0.93	4.8	0.61
Carbon tetrachloride	1.3	0.57	0.50	0.50	0.50	0.50	0.50	1.2	0.50
Chloroform	1.2	1.6	0.54	0.73	<0.73	<0.73	2.7		<0.73
Chloromethane	4.2	2.7	1.8	10	0.91	<0.31	1.2	4.3	0.83
cis-1,2-Dichloroethene	0.4	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.4	<0.16
Cyclohexane	6.3	<0.52	2.1	<0.52	<0.52	<0.52	<0.52		<0.52
Ethyl acetate		6.8	2.2	2.6	0.65	0.68	2.5		<0.54
Ethylbenzene	6.4	1.0	2.7	0.78	<0.65	<0.65	0.52		<0.66
Freon 11		1.3	1.7	1.6	1.5	1.6	1.5		1.6
Freon 12		2.9	2.9	2.9	2.9	3.0	2.9		2.9
Heptane		2.1	3.2	5.0	0.45	<0.61	0.57		<0.61
Hexane		1.9	1.3	1.1	0.56	0.67	0.60		0.60
Isopropyl alcohol		49	26	15	3.1	2.6	8.1		2.3
m&p-Xylene	11	3.4	11	2.9	1.0	1.0	1.7		0.48
Methyl Butyl Ketone		0.57	<1.2	<1.2	<1.2	<1.2	<1.2		<1.2
Methyl Ethyl Ketone	16	4.4	3.2	2.1	1.3	1.1	1.3	5.3	1.1
Methylene chloride	16	0.76	0.56	0.59	0.56	0.63	0.59	1.6	0.59
o-Xylene	7.1	1.0	3.5	1.2	<0.65	<0.65	0.56	1.2	<0.65
Styrene	1.4	1.0	1.3	0.47	<0.64	<0.64	0.72	0.5	<0.64
Tetrachloroethylene	2.5	0.68	<1.0	0.68	0.81	<1.0	16	0.7	<1.0
Tetrahydrofuran	0.8	1.3	1.4	1.1	0.68	0.44	0.80	0.4	<0.44
Toluene	57	11	12	3.2	1.6	1.6	3.3	5.1	1.1
Trichloroethene	0.5	<0.16	<0.16	<0.16	<0.16	<0.16	0.75	0.4	<0.16
Vinyl chloride	0.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.4	<0.10
Total		143	135	186	37	34	63		19.0

NOTES:

- Analytical testing for VOCs via EPA Method TO-15 by Centek Laboratories, LLC.
- Results present in µg/m³ (microgram per cubic meter).
- Indoor and outdoor air background levels as presented in Appendix C, Table C1: NYSDOH 2003: Study of volatile organic chemicals in air of fuel oil heated homes, of "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH, October 2006).
- ND = Not Detected
- Compounds identified in NYSDOH decision matrices and compounds detected in one or more samples are included in this table. For a list of all compounds, refer to the attached analytical report.

Table 5
Building 1 Indoor Air Results
65-67 Lake Avenue, Lancaster, New York

April 6, 2020

PARAMETER	Table C1 Indoor Air Background Level (Upper Fence Value)	B1 Indoor Air
1,1,1-Trichloroethane	2.5	ND<0.82
1,1-Dichloroethene	0.4	ND<0.16
1,2,4-Trimethylbenzene	9.8	1.2
1,3,5-Trimethylbenzene	3.9	0.49
Acetone	115	34
Benzene	13	0.96
Carbon disulfide		0.31
Carbon tetrachloride	1.3	ND<0.19
Chloroform	1.2	0.88
Chloromethane	4.2	1.5
cis-1,2-Dichloroethene	0.4	ND<0.16
Ethyl acetate		0.76
Ethylbenzene	6.4	0.65
Freon 11		1.2
Freon 12		2.3
Heptane		0.45
Isopropyl alcohol		10
m&p-Xylene	11	1.4
Methyl Ethyl Ketone	16	8
Methylene chloride	16	0.66
o-Xylene	7.1	0.65
Tetrachloroethylene	2.5	1.8
Toluene	57	2.8
Trichloroethene	0.5	ND<0.16
Vinyl chloride	0.4	ND<0.10
Total		70

NOTES:

- Analytical testing for VOCs via EPA Method TO-15 by Centek
- Results present in $\mu\text{g}/\text{m}^3$ (microgram per cubic meter).
- Indoor and outdoor air background levels as presented in Appendix C, Table C1: NYSDOH 2003: Study of volatile organic chemicals in air of fuel oil heated homes, of "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH, October 2006).
- ND = Not Detected
- Compounds identified in NYSDOH decision matrices and compounds detected in one or more samples are included in this table. For a list of all compounds, refer to the attached analytical report.

APPENDIX A

SSD System Equipment Specification Sheets

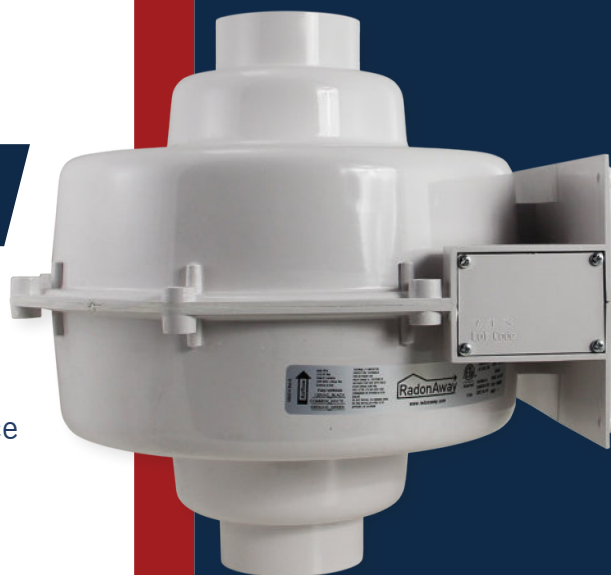
INSTALLS WHITE, STAYS WHITE

Radon Mitigation Fan

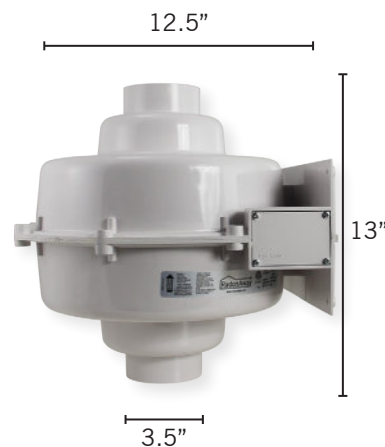
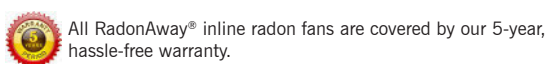
All RadonAway® fans are specifically designed for radon mitigation. GP Series Fans offer a wide range of performance options that make them ideal for most sub-slab radon mitigation systems.

Features

- NEW Stay-White™ housing
- Quiet operation
- Water-hardened motor
- Seams sealed under negative pressure (to inhibit radon leakage)
- Mounts on duct pipe or with integral flange
- 3" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed - for indoor or outdoor use
- 4 interchangeable GP models



MODEL	P/N	FAN DUCT DIAMETER	WATTS	RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM vs. STATIC PRESSURE WC						
					1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	28465	3"	31-65	1.8	54	42	11	-	-	-	-
GP301	28466	3"	56-100	2.3	64	54	41	4	-	-	-
GP401	28467	3"	62-128	3.0	-	61	52	44	22	-	-
GP501	28468	3"	68-146	3.8	-	-	66	58	50	27	4



For Further Information, Contact Your Radon Professional:

HS Series



Radon Mitigation Fan

HS fans offer a proven solution for tough radon mitigation jobs, providing up to 25 times the suction of inline tube fans to deal with sand, tight soil or clay sub-slab material.

Features

- Internal condensate bypass
- Brackets for vertical mounting indoors and outdoors
- Inlet: 3.0" PVC / Outlet: 2.0" PVC
- Weight: 18 lbs.
- Size: 15.5"W x 13.3"H x 8.2"D
- Warranty: 1 year (3-year option available)

MODEL	WATTS	SOUND RATING (dBA)			RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM* vs. STATIC PRESSURE WC					
		OPEN	1/2	CLOSED		0"	10"	15"	20"	25"	35"
HS2000 with cord	174-307	56.5	56.2	51.9	14	63	37	12	-	-	-
HS3000 with cord	120-250	47.9	48.0	46.2	21	39	30	25	19	-	-
HS5000 with cord	223-385	56.0	55.3	53.1	35	44	37	33	29	25	16
HS2000E with switch box	174-307	56.5	56.2	51.9	14	63	37	12	-	-	-
HS3000E with switch box	120-250	47.9	48.0	46.2	21	39	30	25	19	-	-
HS5000E with switch box	223-385	56.0	55.3	53.1	35	44	37	33	29	25	16



* Made in the USA with U.S. and imported parts.

* CFM measured through suction.

For Further Information, Contact Your Radon Professional:

APPENDIX B

RadonSeal Manufacturer Information



SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: RadonSeal® Deep Penetrating Concrete Sealer**PRODUCT USES:** Concrete and Masonry Sealer, Concrete Block Sealer, Mortar Sealer, Concrete Waterproofing, Vapor Barrier, Radon Mitigation, Concrete Preservative, Concrete Densifier, Hardener, Dust Suppression, Primer.**RadonSeal®****MANUFACTURER:**Novion, Inc.
494 Bridgeport Avenue
Suite 101 336
Shelton, CT 06484-4784
USA**EMERGENCY PHONE NUMBER:**PERS Professional Emergency Response Service
Company Code 10492
1-800-633-8253 (U.S. and Canada)
1-801-629-0667 (International)

SYMBOL



SECTION 2: HAZARD IDENTIFICATION

CODE	HAZARD STATEMENT	HAZARD CLASS	CATEGORY	SIGNAL WORD
H315	Causes skin irritation.	Skin irritation	3	Warning
H320	Causes eye irritation.	Serious eye irritation	2	
H335	May cause respiratory irritation.	Specific target organ toxicity	3	

PRECAUTIONARY STATEMENTS

PREVENTION

P280: Wear protective gloves, clothing, eye protection.
P261: Wash hands thoroughly after handling.
P264: Avoid breathing mist/spray.
P271: Use only outdoors or in a well-ventilated area.

RESPONSE

P302+P352: Call a POISON CENTER or physician if you feel unwell.
P304+P340: Absorb spillage to prevent material damage.
P305+P351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: IF SKIN irritation occurs: Get medical advice/attention.
P362: IF eye irritation persists: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.

GENERAL

P102: Keep out of reach of children.

SECTION 3: COMPOSITION/INGREDIENT INFORMATION

INGREDIENTS	CONCENTRATION	OSHA PEL	ACGH TLV
Sodium Silicate CAS# 1344-09-8	10%-20%	2 mg/m3 ceiling (NaOH)	2 mg/m3 ceiling (NaOH)
Proprietary mixture	5%-10%	NE	NE
Deionized water CAS# 7732-18-5	70%-85%	NE	NE

SECTION 4: FIRST AID MEASURES

EYES:	Flush eyes with water for several minutes. Hold eyelids open during rinse. Remove contact lenses. Seek medical attention if irritation continues.
SKIN:	May cause irritation. Wash affected skin areas thoroughly with soap and water.
INGESTION:	Low ingestion hazard. May cause nausea. Drink large volumes of water. Seek medical attention if symptoms develop.
INHALATION:	Avoid breathing mist. May cause respiratory irritation. If irritation occurs, move to a fresh air environment. Seek medical attention if irritation continues.

SECTION 5: FIRE FIGHTING MEASURES

*Product is non-flammable and non-combustible. Under normal conditions of use, this product will not cause or support fire. If fire occurs, use control measures for surrounding materials. This product is compatible with all extinguishing media.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Contain and absorb spill. Wash area with soap and water. Product dries to form a thin glass film. Dispose of response equipment and debris in accordance with applicable regulations. Prevent entry into waterways or sewers.

SECTION 7: HANDLING AND STORAGE

- DO NOT STORE IN DIRECT SUNLIGHT. Do not store at temperatures above 110 °F or below 40 °F. Protect from freezing.
- Keep container sealed when not in use. Mix thoroughly before use and periodically during use.
- Do not store in aluminum, fiberglass, copper, brass, zinc, or galvanized containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

SKIN CONTACT: Wear appropriate protective clothing to prevent repeated or prolonged contact.

INHALATION: Ensure adequate ventilation to keep mist to a minimum. If specific application requires respiratory protection, an appropriate NIOSH/MSHA approved respirator should be used.

PROTECTIVE EQUIPMENT: Wear gloves, eye protection, and clothing to minimize skin contact.





SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid	SOLIDS	12%-26%
ODOR	Slight / None	SPECIFIC GRAVITY	1.01
BOILING POINT	212 °F	FREEZING POINT	Approx. 32 °F
pH LEVEL	11.5	EVAPORATION RATE	NA
APPEARANCE	Clear liquid	AUTO-IGNITION TEMP	NA
VOC (EPA METHOD 24)	0.0	FLASHPOINT	NA
VAPOR DENSITY	N/A	FLAMMABLE LIMITS	NA

RadonSeal®

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable**INCOMPATIBLES (materials to avoid):** The liquid gels and may generate heat when mixed with acid. May react with ammonium salts resulting in the evolution of ammonia gas.

Hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen.**HAZARDOUS POLYMERIZATION:** Will not occur.**CARCINOGENICITY:** N/A

SECTION 11: TOXICOLOGICAL INFORMATION

CARCINOGENICITY: Not classified as a carcinogen.

Most probable routes of exposure during normal use are SKIN CONTACT and INHALATION of mist while applying product. Symptoms of exposure as a result of normal use are not expected.

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY: Product is believed to be non-toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal in accordance with local, state, federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

Non-Hazardous material. Not regulated in transportation.

DOT (USA) STATUS: Not regulated

TDG (CANADA) STATUS: Not regulated

SECTION 15: REGULATORY INFORMATION

OSHA (USA) STATUS:

Hazardous

OSHA (PSM 29CFR 1910.119):

Not regulated

AIR ICAO STATUS:

Not regulated

SEA IMDG STATUS:

Not regulated

U.S Toxic Substances Control Act (TSCA):

All components are listed on the TSCA inventory or are otherwise compliant

SARA Title III Section 312 (40 CFR311/312):

Acutely hazardous (irritant)

CALIFORNIA PROPOSITION 65:

None

MASSACHUSETTS SUBSTANCE LIST:

None

NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST:

None

SECTION 16: OTHER INFORMATION

All statements, technical information and recommendations contained herein are based upon available scientific test or data which we believe to be reliable since we cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products may be used. Novion, Inc. makes no warranties, express or implied, and assumes no responsibility in connection with any use of this information.

REVISION DATE: 10/2019

RadonSeal Deep-Penetrating Concrete Sealers

APPLICATION INSTRUCTIONS

RadonSeal Penetrating Concrete Sealer is a ready-to-use, reactive sealer, formulated for maximum penetration and sealing of capillaries in concrete and cementitious substrates against liquids and gases.

Permanently seals new or old concrete, mortar, plaster, stucco, and porous limestone, indoors and outdoors - foundation walls, concrete slabs, and driveways, concrete block retaining walls, sidewalks, patios, pool decks and sidewalks.

*RadonSeal is not intended to seal cracks, joints, or gaps. Not suitable for concrete **less than 3 inches thick**, fiber-reinforced concrete, concrete with little or no cement content (lightweight, dry pressed, spilt face, or popcorn blocks) or concrete containing additives like integrally colored concrete, patching or leveling compounds.*

RadonSeal Standard - formulated for poured concrete less than 20 years old or outdoor poured concrete less than 1-year-old, concrete floors with a smoother finish, and high-strength structural concrete.

RadonSeal Plus - formulated to seal more porous concrete, concrete/cinder blocks, indoor poured concrete more than 20 years old, or outdoor concrete more than 1-year-old. Also for use on concrete that has already experienced water seepage or significant efflorescence.

SURFACE PREPARATION

Allow new concrete to cure for at least 28 days.

The concrete must be completely **clean and bare**. Remove all paints, sealers, adhesives, curing or form release compounds. Clean off dirt, oil, grease, wax, efflorescence, and other contaminants that may interfere with sealer penetration.

Make sure that **the substrate is porous**. Confirm that it readily absorbs drops of water or apply the sealer in a test area. If needed, increase surface porosity by sanding, grinding, or acid etching.

If acid is used for etching or cleaning, neutralize the surface with a solution of baking soda in warm water or an ammonia solution. Then thoroughly rinse the surface with water.

The concrete must **be thoroughly dry** before RadonSeal application. Allow the surface to dry for at least 2 days after rain or pressure washing. You can speed up the drying process by using fans or dehumidifiers.

Protect glass, ceramic tile, aluminum, plants, and non-masonry surfaces from overspray, splashes, and wind drift. RadonSeal bonds to glass – avoid contact with eyeglasses and wristwatches.

SURFACE AND AIR CONDITIONS

Air and surface temperatures must be above freezing during application and for three days after. Do not apply to hot surfaces in direct sunlight or in strong wind. Avoid rain for 24 hours after application.

TOOLS REQUIRED

Low-pressure sprayer (below 40 psi) equipped with a fan-tip nozzle – hand pump sprayer, battery-powered, or airless. A paint roller may be used when spray application is not practical.

Push broom or stiff-bristle brush.

APPLICATION

RadonSeal is ready to use – do not dilute.

Dampen the concrete surface with water prior to application, using a sprayer or mop, leaving no puddles or dry spots. A damp surface helps the sealer penetrate faster and deeper.

Thoroughly shake the pail prior to opening. Pull out the pouring spout and fill the sprayer.

Apply RadonSeal in a thick, continuous, glistening film, adding more sealer to faster-absorbing areas.

RadonSeal Deep-Penetrating Concrete Sealers

Do **NOT** over-apply. Broom or roll out puddles or excess rundown. Puddles would leave a hard glassy or whitish film on the surface, which is unpaintable and difficult to remove.

APPROXIMATE COVERAGE

Coverage varies with surface porosity.

Poured concrete	2 applications	1,000 sq. ft. per 5-gal. pail
Concrete blocks	3 applications	500 sq. ft. per 5-gal. pail
Cinder Blocks or very porous blocks	4 applications	400 sq. ft. per 5-gal. pail

Apply RadonSeal in two to four "wet-on-wet" applications 30 to 45 minutes apart. (After 30 - 45 minutes of spraying, return to the beginning of the section and apply the subsequent application while the surface is still damp.)

VERTICAL SURFACES

Using a tarp or newspapers, cover the floor adjacent to the walls to prevent over-application.

Spray RadonSeal on the walls from the bottom up to ensure even application.

Brush or roll out rundown or excessive drips until they penetrate.

HORIZONTAL SURFACES

Apply in a saturating, glistening film on the verge of puddling. Brush or roll out puddles until they penetrate.

RadonSeal is safe to walk on while applying it; however, surfaces may be slippery when wet.

DRYING & CURING

The surface should appear dry in 1 to 3 hours. Ventilate the area to facilitate drying and curing.

As RadonSeal reacts and expands inside the pores in concrete, it will purge any dirt, minerals, or efflorescence to the surface. This is more common in older concrete, and may last for several days. Purged material may be swept or washed off.

Full-strength cure will be reached in 60-90 days after application.

CLEANUP

Flush application equipment with warm water immediately after use.

Wipe off drips and overspray while still wet.

Removing dried residue from the surface may require mechanical abrasion.

In 2 to 3 hours after application, **rinse the treated surface with water and scrub** with a stiff bristle brush to remove any surface residue.

STORAGE

Store in a cool, dry place out of direct sunlight at temperatures below 100 °F. Protect from freezing (if the sealer freezes, thaw and mix thoroughly before use).

TOP COATS, PAINTS, ADHESIVES, AND FLOOR COVERINGS

When properly applied, RadonSeal does not leave a film or color. It does not change the surface profile and leaves the pores open. Treated surfaces remain **suitable for painting, tile adhesives, thinset, levelers, or patching compounds**.

If RadonSeal is not able to penetrate, is over-applied, or allowed to puddle, it will leave a hard glassy or whitish film on the surface., to which paints, adhesives, or patching compounds will not adhere well. Acids or chemicals will not remove this film - it can be removed only mechanically (scraping, shot blasting, or sanding).

RadonSeal Deep-Penetrating Concrete Sealers

After applying RadonSeal, **wait at least 5 days** before installing indoor/outdoor carpeting or painting the concrete with latex and other vapor-permeable ("breathable") paints. **Wait at least 10 days** before installing vinyl floor tiles, linoleum, rubber padding, or painting the concrete with impermeable paints like epoxy or urethane.

APPENDIX C

CAMP Air Monitoring Data

PID #1 - Basement

index	date /time	min	avg	max	real
1	8/7/2019 8:54	0.3	0.4	0.4	0.4
2	8/7/2019 9:09	0.4	0.4	0.4	0.4
3	8/7/2019 9:24	0.4	0.4	0.4	0.4
4	8/7/2019 9:39	0.4	0.4	0.4	0.4
5	8/7/2019 9:54	0.4	0.4	0.4	0.4
6	8/7/2019 10:09	0	0.2	0.5	0
7	8/7/2019 10:24	0	0	0	0
8	8/7/2019 10:39	0	0.2	0.4	0.4
9	8/7/2019 10:54	0.4	0.5	0.5	0.5
10	8/7/2019 11:09	0.5	0.6	0.6	0.6
11	8/7/2019 11:24	0.6	0.7	0.7	0.7
12	8/7/2019 11:39	0.7	0.7	0.7	0.7
13	8/7/2019 11:54	0.7	0.8	0.8	0.8
Peak		0.7	0.8	0.8	0.8
Min		0	0	0	0
Average		0.4	0.4	0.5	0.4

PID #2 - Basement

index	date/time	min	avg	max	real
1	8/6/2019 14:48	0.1	0.1	0.2	0.2
2	8/6/2019 15:03	0.2	0.2	0.3	0.3
3	8/6/2019 15:18	0.2	0.3	0.4	0.4
4	8/6/2019 15:33	0.3	0.4	0.4	0.4
5	8/6/2019 15:48	0	0.2	0.4	0
Peak		0.3	0.4	0.4	0.4
Min		0	0.1	0.2	0
Average		0.2	0.2	0.3	0.3

PID #1 - Adjacent Room

index	date/time	pid/avg
1	8/6/2019 9:25	0.2
2	8/6/2019 9:26	0.1
3	8/6/2019 9:27	0.1
4	8/6/2019 9:28	0.1
5	8/6/2019 9:29	0.1
6	8/6/2019 9:30	0.1
7	8/6/2019 9:31	0.1
8	8/6/2019 9:32	0.1
9	8/6/2019 9:33	0.1
10	8/6/2019 9:34	0.1
11	8/6/2019 9:35	0.1
12	8/6/2019 9:36	0.1
13	8/6/2019 9:37	0.1
14	8/6/2019 9:38	0.2
15	8/6/2019 9:39	0.2
16	8/6/2019 9:40	0.2
17	8/6/2019 9:41	0.2
18	8/6/2019 9:42	0.2
19	8/6/2019 9:43	0.2
20	8/6/2019 9:44	0.2
21	8/6/2019 9:45	0.2
22	8/6/2019 9:46	0.2
23	8/6/2019 9:47	0.2
24	8/6/2019 9:48	0.2
25	8/6/2019 9:49	0.2
26	8/6/2019 9:50	0.2
27	8/6/2019 9:51	0.2
28	8/6/2019 9:52	0.2
29	8/6/2019 9:53	0.2
30	8/6/2019 9:54	0.2
31	8/6/2019 9:55	0.2
32	8/6/2019 9:56	0.2
33	8/6/2019 9:57	0.2
34	8/6/2019 9:58	0.2
35	8/6/2019 9:59	0.2
36	8/6/2019 10:00	0.2
37	8/6/2019 10:01	0.2
38	8/6/2019 10:02	0.2
39	8/6/2019 10:03	0.2
40	8/6/2019 10:04	0.2
41	8/6/2019 10:05	0.2
42	8/6/2019 10:06	0.2
43	8/6/2019 10:07	0.2
44	8/6/2019 10:08	0.3
45	8/6/2019 10:09	0.3
46	8/6/2019 10:10	0.3
47	8/6/2019 10:11	0.3
48	8/6/2019 10:12	0.3

index	date/time	pid/avg
49	8/6/2019 10:13	0.3
50	8/6/2019 10:14	0.3
51	8/6/2019 10:15	0.3
52	8/6/2019 10:16	0.3
53	8/6/2019 10:17	0.3
54	8/6/2019 10:18	0.3
55	8/6/2019 10:19	0.3
56	8/6/2019 10:20	0.3
57	8/6/2019 10:21	0.3
58	8/6/2019 10:22	0.3
59	8/6/2019 10:23	0.3
60	8/6/2019 10:24	0.3
61	8/6/2019 10:25	0.3
62	8/6/2019 10:26	0.3
63	8/6/2019 10:27	0.3
64	8/6/2019 10:28	0.3
65	8/6/2019 10:29	0.3
66	8/6/2019 10:30	0.3
67	8/6/2019 10:31	0.3
68	8/6/2019 10:32	0.3
69	8/6/2019 10:33	0.3
70	8/6/2019 10:34	0.3
71	8/6/2019 10:35	0.3
72	8/6/2019 10:36	0.3
73	8/6/2019 10:37	0.3
74	8/6/2019 10:38	0.3
75	8/6/2019 10:39	0.3
76	8/6/2019 10:40	0.3
77	8/6/2019 10:41	0.3
78	8/6/2019 10:42	0.3
79	8/6/2019 10:43	0.3
80	8/6/2019 10:44	0.3
81	8/6/2019 10:45	0.3
82	8/6/2019 10:46	0.3
83	8/6/2019 10:47	0.3
84	8/6/2019 10:48	0.3
85	8/6/2019 10:49	0.3
86	8/6/2019 10:50	0.3
87	8/6/2019 10:51	0.3
88	8/6/2019 10:52	0.3
89	8/6/2019 10:53	0.3
90	8/6/2019 10:54	0.3
91	8/6/2019 10:55	0.3
92	8/6/2019 10:56	0.3
93	8/6/2019 10:57	0.3
94	8/6/2019 10:58	0.3
95	8/6/2019 10:59	0.3
96	8/6/2019 11:00	0.3

index	date/time	pid/avg
97	8/6/2019 11:01	0.3
98	8/6/2019 11:02	0.3
99	8/6/2019 11:03	0.3
100	8/6/2019 11:04	0.3
101	8/6/2019 11:05	0.3
102	8/6/2019 11:06	0.3
103	8/6/2019 11:07	0.4
104	8/6/2019 11:08	0.3
105	8/6/2019 11:09	0.4
106	8/6/2019 11:10	0.4
107	8/6/2019 11:11	0.4
108	8/6/2019 11:12	0.3
109	8/6/2019 11:13	0.4
110	8/6/2019 11:14	0.4
111	8/6/2019 11:15	0.3
112	8/6/2019 11:16	0.4
113	8/6/2019 11:17	0.3
114	8/6/2019 11:18	0.3
115	8/6/2019 11:19	0.3
116	8/6/2019 11:20	0.4
117	8/6/2019 11:21	0.4
118	8/6/2019 11:22	0.4
119	8/6/2019 11:23	0.3
120	8/6/2019 11:24	0.4
121	8/6/2019 11:25	0.4
122	8/6/2019 11:26	0.4
123	8/6/2019 11:27	0.4
124	8/6/2019 11:28	0.4
125	8/6/2019 11:29	0.4
126	8/6/2019 11:30	0.4
127	8/6/2019 11:31	0.4
128	8/6/2019 11:32	0.4
129	8/6/2019 11:33	0.4
130	8/6/2019 11:34	0.4
131	8/6/2019 11:35	0.4
132	8/6/2019 11:36	0.4
133	8/6/2019 11:37	0.4
134	8/6/2019 11:38	0.4
135	8/6/2019 11:39	0.4
136	8/6/2019 11:40	0.4
137	8/6/2019 11:41	0.4
138	8/6/2019 11:42	0.4
139	8/6/2019 11:43	0.4
140	8/6/2019 11:44	0.4
141	8/6/2019 11:45	0.4
142	8/6/2019 11:46	0.4
143	8/6/2019 11:47	0.4
144	8/6/2019 11:48	0.4
145	8/6/2019 11:49	0.4
146	8/6/2019 11:50	0.4
147	8/6/2019 11:51	0.4
Peak		0.4
Min		0.1
Average		0.3

index	date/time	pid(ppm)(avg)
1	8/7/2019 8:48	0.5
2	8/7/2019 8:49	0.6
3	8/7/2019 8:50	0.6
4	8/7/2019 8:51	0.7
5	8/7/2019 8:52	0.7
6	8/7/2019 8:53	0.7
7	8/7/2019 8:54	0.7
8	8/7/2019 8:55	0.7
9	8/7/2019 8:56	0.7
10	8/7/2019 8:57	0.8
11	8/7/2019 8:58	0.8
12	8/7/2019 8:59	0.8
13	8/7/2019 9:00	0.8
14	8/7/2019 9:01	0.8
15	8/7/2019 9:02	0.8
16	8/7/2019 9:03	0.8
17	8/7/2019 9:04	0.8
18	8/7/2019 9:05	0.8
19	8/7/2019 9:06	0.8
20	8/7/2019 9:07	0.8
21	8/7/2019 9:08	0.8
22	8/7/2019 9:09	0.8
23	8/7/2019 9:10	0.8
24	8/7/2019 9:11	0.9
25	8/7/2019 9:12	0.9
26	8/7/2019 9:13	0.9
27	8/7/2019 9:14	0.9
28	8/7/2019 9:15	0.9
29	8/7/2019 9:16	0.9
30	8/7/2019 9:17	0.9
31	8/7/2019 9:18	0.9
32	8/7/2019 9:19	0.9
33	8/7/2019 9:20	0.9
34	8/7/2019 9:21	0.9
35	8/7/2019 9:22	0.9
36	8/7/2019 9:23	0.9
37	8/7/2019 9:24	0.9
38	8/7/2019 9:25	0.9
39	8/7/2019 9:26	0.9
40	8/7/2019 9:27	0.9
41	8/7/2019 9:28	0.9
42	8/7/2019 9:29	0.9
43	8/7/2019 9:30	0.9
44	8/7/2019 9:31	0.9
45	8/7/2019 9:32	0.9
46	8/7/2019 9:33	0.9

PID #2 - Adjacent Room

index	date/time	pid(ppm)(avg)
47	8/7/2019 9:34	0.8
49	8/7/2019 9:36	0.8
50	8/7/2019 9:37	0.9
51	8/7/2019 9:38	0.8
52	8/7/2019 9:39	0.8
53	8/7/2019 9:40	0.8
54	8/7/2019 9:41	0.8
55	8/7/2019 9:42	0.8
56	8/7/2019 9:43	0.8
57	8/7/2019 9:44	0.8
58	8/7/2019 9:45	0.8
59	8/7/2019 9:46	0.8
60	8/7/2019 9:47	0.8
61	8/7/2019 9:48	0.8
62	8/7/2019 9:49	0.8
63	8/7/2019 9:50	0.8
64	8/7/2019 9:51	0.8
65	8/7/2019 9:52	0.8
66	8/7/2019 9:53	0.8
67	8/7/2019 9:54	0.8
68	8/7/2019 9:55	0.8
69	8/7/2019 9:56	0.3
70	8/7/2019 9:57	0.2
71	8/7/2019 9:58	0.2
72	8/7/2019 9:59	0.1
73	8/7/2019 10:00	0.1
74	8/7/2019 10:01	0.1
75	8/7/2019 10:02	0.1
76	8/7/2019 10:03	0.1
77	8/7/2019 10:04	0.1
78	8/7/2019 10:05	0.1
79	8/7/2019 10:06	0.1
80	8/7/2019 10:07	0.1
81	8/7/2019 10:08	0.1
82	8/7/2019 10:09	0.1
83	8/7/2019 10:10	0.1
84	8/7/2019 10:11	0
85	8/7/2019 10:12	0
86	8/7/2019 10:13	0
87	8/7/2019 10:14	0
88	8/7/2019 10:15	0
89	8/7/2019 10:16	0
90	8/7/2019 10:17	0
91	8/7/2019 10:18	0
92	8/7/2019 10:19	0
93	8/7/2019 10:20	0

index	date/time	pid(ppm)(avg)
94	8/7/2019 10:21	0
95	8/7/2019 10:22	0
96	8/7/2019 10:23	0
97	8/7/2019 10:24	0
98	8/7/2019 10:25	0
99	8/7/2019 10:26	0
100	8/7/2019 10:27	0.4
101	8/7/2019 10:28	0.7
102	8/7/2019 10:29	0.8
103	8/7/2019 10:30	0.8
104	8/7/2019 10:31	0.8
105	8/7/2019 10:32	0.8
106	8/7/2019 10:33	0.8
107	8/7/2019 10:34	0.9
108	8/7/2019 10:35	0.9
109	8/7/2019 10:36	0.9
110	8/7/2019 10:37	0.9
111	8/7/2019 10:38	0.9
112	8/7/2019 10:39	0.9
113	8/7/2019 10:40	0.9
114	8/7/2019 10:41	1
115	8/7/2019 10:42	1
116	8/7/2019 10:43	1
117	8/7/2019 10:44	1
118	8/7/2019 10:45	1
119	8/7/2019 10:46	1
120	8/7/2019 10:47	1
121	8/7/2019 10:48	1
122	8/7/2019 10:49	1.1
123	8/7/2019 10:50	1.2
124	8/7/2019 10:51	1.2
125	8/7/2019 10:52	1.2
126	8/7/2019 10:53	1.3
127	8/7/2019 10:54	1.3
128	8/7/2019 10:55	1.3
129	8/7/2019 10:56	1.4
130	8/7/2019 10:57	1.4
131	8/7/2019 10:58	1.4
132	8/7/2019 10:59	1.5
133	8/7/2019 11:00	1.5
134	8/7/2019 11:01	1.5
135	8/7/2019 11:02	1.5
136	8/7/2019 11:03	1.4
137	8/7/2019 11:04	1.4
138	8/7/2019 11:05	1.4
Peak		1.5
Min		0
Average		0.7

PID #1 - Outdoor

index	date/time	min	avg	max	real
1	8/6/2019 9:42	0.1	0.1	0.2	0.1
2	8/6/2019 9:47	0.1	0.1	0.1	0.1
3	8/6/2019 9:52	0.1	0.1	0.1	0.1
4	8/6/2019 9:57	0	0.1	0.1	0.1
5	8/6/2019 10:02	0	0.1	0.1	0.1
6	8/6/2019 10:07	0	0.1	0.1	0.1
7	8/6/2019 10:12	0.1	0.1	0.1	0.1
8	8/6/2019 10:17	0.1	0.1	0.1	0.1
9	8/6/2019 10:22	0.1	0.1	0.1	0.1
10	8/6/2019 10:27	0.1	0.1	0.1	0.1
11	8/6/2019 10:32	0.1	0.1	0.1	0.1
12	8/6/2019 10:37	0.1	0.1	0.1	0.1
13	8/6/2019 10:42	0.1	0.1	0.1	0.1
14	8/6/2019 10:47	0	0.1	0.1	0.1
15	8/6/2019 10:52	0.1	0.1	0.1	0.1
16	8/6/2019 10:57	0.1	0.1	0.1	0.1
17	8/6/2019 11:02	0.1	0.1	0.1	0.1
18	8/6/2019 11:07	0.1	0.1	0.1	0.1
19	8/6/2019 11:12	0.1	0.1	0.1	0.1
20	8/6/2019 11:17	0.1	0.1	0.1	0.1
21	8/6/2019 11:22	0.1	0.1	0.1	0.1
22	8/6/2019 11:27	0.1	0.1	0.2	0.1
23	8/6/2019 11:32	0.1	0.1	0.2	0.1
24	8/6/2019 11:37	0.1	0.1	0.2	0.1
25	8/6/2019 11:42	0.1	0.1	0.2	0.1
26	8/6/2019 11:47	0.1	0.1	0.2	0.1
27	8/6/2019 11:52	0	0.1	0.2	0.1
28	8/6/2019 11:57	0	0.1	0.2	0.1
Peak		0.1	0.1	0.2	0.1
Min		0	0.1	0.1	0.1
Average		0.1	0.1	0.1	0.1

PID #2 - Outdoor

index	date/time	min	avg	max	real
1	8/6/2019 14:46	0	0	0	0
2	8/6/2019 14:51	0	0	0	0
3	8/6/2019 14:56	0	0	0	0
4	8/6/2019 15:01	0	0	0	0
5	8/6/2019 15:06	0	0	0	0
6	8/6/2019 15:11	0	0	0	0
7	8/6/2019 15:16	0	0	0	0
8	8/6/2019 15:21	0	0	0	0
9	8/6/2019 15:26	0	0	0	0
10	8/6/2019 15:31	0	0	0	0
11	8/6/2019 15:36	0	0	0	0
12	8/6/2019 15:41	0	0	0	0
13	8/6/2019 15:46	0	0	0	0
14	8/6/2019 15:51	0	0	0	0
15	8/6/2019 15:56	0	0	0	0
Peak		0	0	0	0
Min		0	0	0	0
Average		0	0	0	0

PID #3 - Outdoor

index	date/time	min	avg	max	real
1	8/7/2019 8:46	0.1	0.4	0.6	0.2
2	8/7/2019 8:51	0	0.1	0.2	0
3	8/7/2019 8:56	0	0.2	0.6	0.2
4	8/7/2019 9:01	0	0.1	0.6	0
5	8/7/2019 9:06	0	0	0	0
6	8/7/2019 9:11	0	0	0	0
7	8/7/2019 9:16	0	0.1	0.1	0.1
8	8/7/2019 9:21	0	0.1	0.2	0.2
9	8/7/2019 9:26	0.2	0.3	0.4	0.3
10	8/7/2019 9:31	0.3	0.3	0.4	0.4
11	8/7/2019 9:36	0.4	0.4	0.4	0.4
12	8/7/2019 9:41	0.4	0.4	0.4	0.4
13	8/7/2019 9:46	0.3	0.4	0.4	0.4
14	8/7/2019 9:51	0.4	0.4	0.4	0.4
15	8/7/2019 9:56	0.3	0.4	0.4	0.3
16	8/7/2019 10:01	0.3	0.3	0.4	0.3
17	8/7/2019 10:06	0.2	0.3	0.3	0.3
18	8/7/2019 10:11	0.2	0.3	0.3	0.2
19	8/7/2019 10:16	0.2	0.2	0.3	0.2
20	8/7/2019 10:21	0.2	0.2	0.3	0.2
21	8/7/2019 10:26	0.2	0.2	0.3	0.2
22	8/7/2019 10:31	0.2	0.2	0.3	0.2
23	8/7/2019 10:36	0.1	0.2	0.2	0.2
24	8/7/2019 10:41	0.1	0.2	0.2	0.2
25	8/7/2019 10:46	0.1	0.1	0.2	0.1
26	8/7/2019 10:51	0.1	0.1	0.2	0.2
27	8/7/2019 10:56	0.1	0.1	0.2	0.1
28	8/7/2019 11:01	0.1	0.1	0.2	0.1
29	8/7/2019 11:06	0	0.1	0.1	0.1
30	8/7/2019 11:11	0	0.1	0.1	0.1
31	8/7/2019 11:16	0	0.1	0.1	0.1
32	8/7/2019 11:21	0	0.1	0.1	0
33	8/7/2019 11:26	0	0	0.1	0
34	8/7/2019 11:31	0	0.1	0.1	0
35	8/7/2019 11:36	0	0.1	0.1	0.1
36	8/7/2019 11:41	0	0.1	0.1	0.1
37	8/7/2019 11:46	0.1	0.1	0.1	0.1
38	8/7/2019 11:51	0	0.1	0.1	0.1
39	8/7/2019 11:56	0	0.1	0.1	0.1
40	8/7/2019 12:01	0	0.1	0.1	0.1
41	8/7/2019 12:06	0	0.1	0.1	0.1
Peak		0.4	0.4	0.6	0.4
Min		0	0	0	0
Average		0.1	0.2	0.2	0.2

APPENDIX D

Site Check Summary

MONTHLY SITE CHECK SUMMARY (NOVEMBER 2019 – JANUARY 2022)

SUB-SLAB DEPRESSURIZATION SYSTEMS

65-67 LAKE AVENUE, LANCASTER, NY

Date	Completed By	Fan Operational Status							Comments/Repairs
		B1-1	B1-2	B1-3	A1	A2	A3	A4	
11/12/19	METI	on	on	on	on	on	on	on	B1-1 fan is on; however, blower at vacuum is 0"
11/20/19	METI	on	on	on	on	on	on	on	B1-1 fan is on; however, blower at vacuum is 0"
11/25/19	METI	off	on	on	on	NA	on	on	B1-1 fan removed for repairs
12/6/19	METI	on	on	on	on	on	on	on	B1-1 fan replaced
1/15/20	METI	on	on	on	on	on	on	on	Indoor air monitoring event completed in Building A
2/1/20	Site check not completed due to COVID-19								
3/30/20	METI	on	on	on	NC	NC	NC	NC	Building 1 fans intermittently operational due to electrical issue; indoor air monitoring event postponed
4/6/20	METI	on	on	on	NC	NC	NC	NC	Indoor air monitoring event completed in Building 1
5/20/20	maintenance	on	on	on	on	on	on	on	
6/15/20	maintenance	on	on	on	on	on	on	on	
7/16/20	maintenance	on	on	on	on	on	on	on	
8/31/20	maintenance	on	on	on	on	on	on	on	
9/25/20	maintenance	on	on	on	on	on	on	on	
10/31/20	maintenance	on	on	on	on	on	on	on	
11/30/20	maintenance	on	on	on	on	on	on	on	
12/20/20	maintenance	on	on	on	on	on	on	on	
1/31/21	maintenance	on	on	on	on	on	on	on	
2/25/21	maintenance	on	on	on	on	on	on	on	
3/18/21	maintenance	on	on	on	on	on	on	on	
4/20/21	maintenance	on	on	on	on	on	on	on	
5/31/21	maintenance	on	on	on	on	on	on	on	
6/25/21	maintenance	on	on	on	on	on	on	on	
7/25/21	maintenance	on	on	on	on	on	on	on	
8/31/21	maintenance	on	on	on	on	on	on	on	
9/28/21	maintenance	on	on	on	on	on	on	on	
10/25/21	maintenance	on	on	on	on	on	on	on	
11/15/21	maintenance	on	on	on	on	on	on	on	
12/21/21	maintenance	on	on	on	on	on	on	on	
1/31/22	METI	on	on	on	on	on	on	on	Indoor air monitoring event completed in Building 1 and Building A.

NA = no access from apartment tenant

NC = site check not completed due to COVID-19

APPENDIX E

Operation, Monitoring, and Maintenance Plan

OPERATION, MONITORING, AND MAINTENANCE PLAN FOR SSD SYSTEMS

February 16, 2022

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site #C915344

Prepared For:
65 Lake Avenue LLC

Prepared By:



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Figure 1: SSDS Layout and Piping Diagram

Figure 2: Vapor Extraction Well and Monitoring Point Detail

Figure 3: Process and Instrumentation Diagram

Figure 4A: Building 1 SSD Layout – Profile View

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Table 2: Building 1 Vacuum Readings

Appendix A: Equipment Specification Sheets

Appendix B: Field Data Sheets

Appendix C: Operation and Maintenance Manuals

1.0 INTRODUCTION

This Operation, Monitoring, and Maintenance (OM&M) Plan has been developed by Matrix Environmental Technologies Inc. (METI) on behalf of 65 Lake Avenue LLC. The Plan describes operation, monitoring, and maintenance procedures for the sub-slab depressurization (SSD) systems installed in the basement areas of Building 1 and Building A at Lakeside Village Apartments located at 65-67 Lake Avenue, Lancaster, New York.

2.0 SSD SYSTEMS EQUIPMENT

To complete the design objective, seven (7) separate SSD systems were installed in the following basement areas:

- Building 1 West
- Building 1 Central
- Building 1 East
- Building A, Apartment 1
- Building A, Apartment 2
- Building A, Apartment 3
- Building A, Apartment 4

Locations of the basement treatment areas and associated system piping, extraction points and monitoring points are shown in **Figure 1**.

The SSD systems create negative pressure under the building floor slab relative to the indoor air pressure, thereby minimizing the potential for soil gas to migrate into the building. The systems use a fan to apply vacuum to vapor extraction points installed throughout the building floor slab. The systems were designed to create a minimum negative pressure of at least 0.004 inches WC in the sub-slab in each area.

2.1 SSD System Components

The primary components of each SSD system are summarized below.

- **Extraction Wells:** Each SSD system recovers sub-slab vapors from a single extraction well. Each vapor extraction point is constructed of four-inch I.D. Schedule 40 PVC pipe with screen extending to just below the concrete slab. The annular space is filled with clean gravel and sealed with non-shrinking grout. A construction detail is included as **Figure 2**.
- **System Process Piping:** Four-inch diameter Schedule 40 PVC vent pipes were installed to convey the vapor to the wall-mounted fans located outside of the buildings. The riser pipes from the vapor extraction points extend vertically up to the basement ceiling, and the vent pipes are routed through the southern basement wall (Building A) and the western basement wall (Building 1) to the outside of the building. Piping from the extraction points terminates at wall-mounted fans located outside the building. Each extraction point line is equipped

with a Dwyer differential pressure vacuum gauge (0-20 inches WC for Building 1 and 0-5 inches WC for Building A) at the blower.

- **SSD Fans:** Each SSD system includes a fan to recover sub-slab vapors. Specification sheets are included in **Appendix A**.

2.2 SSDS Operation

A process and instrumentation diagram for the SSD systems is included in **Figure 3**. Each system applies a low vacuum to the sub-slab via a single extraction well to induce a negative pressure gradient beneath the building in order to prevent vapor intrusion to indoor air. The systems are designed to operate on a continuous basis. The systems will not be intentionally turned off or decommissioned without notification and approval from the New York State Department of Environmental Conservation and New York State Department of Health.

The minimum target differential pressure for each vapor mitigation area is 0.004 inches of water column (in w.c.). Sub-slab vacuum measurements are to be taken at each monitoring point to verify that this vacuum is achieved.

Vacuum measurements and system operational data collected during systems startup and for the first month of system operation are included in **Tables 1-2**. Refer to **Figures 4A** and **4B** for profile views of each treatment area.

3.0 SSDS MONITORING AND SAMPLING

Initial OM&M system checks were completed weekly for the first month of systems operation by METI. Site checks are completed monthly by apartment maintenance personnel and by METI as needed for repairs and maintenance. In addition, full system checks are completed on an annual basis by METI and include the identification and repair of any leaks, operational status checks of fans, vacuum at each vapor extraction point, and documentation of vacuum at each monitoring point. If determined necessary, site checks may be completed more frequently in the future. A copy of the blank field sheet used to record data is included in **Appendix B**.

4.0 SSD SYSTEMS OPERATIONS AND MAINTENANCE

4.1 Routine Maintenance of Systems Components

Routine maintenance of systems components will be completed to ensure that the SSD systems are operating as designed. Operation and Maintenance Manuals for the fans are included in **Appendix C**. Visual inspection of the extraction wells, piping, and fittings will also be completed.

4.2 Parts Replacement

System components will only require replacement when the part is damaged or malfunctions. Vacuum gauges will be replaced when the gauge stops recording or the dial becomes “stuck”. The replacement gauge will be scaled for the full vacuum range of the fan.

If signs of deterioration or damage to the extraction wells, piping, or fittings such as warping or cracking are observed, the component will be replaced.

4.3 Potential Operating Problems

Potential operating problems are identified below:

- **Obstruction or blockage in system.** The fans may experience low flow and/or high exhaust temperature if an obstruction develops in the vacuum or discharge piping. High blower inlet vacuum is indicative of a blockage or obstruction, such as a completely closed control valve, a clogged filter, condensate, debris, or ice buildup.
- **Break or leak in system piping.** A break or leak in the extraction piping will cause ambient air to be drawn into the system, resulting in higher than normal flows or lower than normal vacuum levels. Vacuum influence in the sub-slab may be diminished, potentially resulting in insufficient vapor mitigation. The cause of the low vacuum condition should be promptly investigated and repaired, and vacuum and system operational data subsequently monitored to ensure they are within the normal range.
- **Fan malfunction.** A fan that is operating outside of its performance curve should be inspected to determine if repairs are needed. Excessive noise, vibrations, or operating temperature may also be indications that a fan is malfunctioning.
- **Low sub-slab differential pressure.** A sub-slab differential pressure less than the target of 0.004 in w.c. may result in insufficient vapor mitigation.
- **Power loss.** The cause of a power loss should be investigated and repaired as quickly as possible.

4.4 Alternate O&M

Should the SSD systems fail to operate as intended due to the potential operating problems detailed in Section 4.3 or if unanticipated conditions are encountered, the following procedures should be employed. If any of the SSD systems fail to sufficiently depressurize the building slab or are otherwise damaged or rendered ineffective, NYSDEC and NYSDOH will be notified within 48 hours of the failure and be provided with a corrective measures work plan.

- **Sub-slab differential pressure below target.** If the target sub-slab differential pressure of 0.004 in w.c. cannot be achieved, alternative measures to ensure effective vapor mitigation may include:
 1. Additional data collection, such as targeted indoor air sampling or smoke testing;
 2. Installation of addition extraction wells;
 3. Repair or replacement of extraction wells;
 4. Repair of any cracks in the floor causing short-circuiting;
 5. Upsizing the SSD system fan.

- **Excessive moisture buildup.** The extraction piping is sloped such that any entrained moisture should drain back to the extraction points. However, if excessive moisture is encountered, the extraction piping will be modified to include moisture collection tanks and/or a moisture knockout tank upstream of the fan.
- **Indoor air concentration exceedances.** If indoor air concentrations exceeding the applicable regulatory standards are detected, the following measures may be implemented:
 1. Conduct additional investigations to identify if an indoor air source may be the cause of the exceedance;
 2. Conduct additional SSD systems inspections and maintenance to ensure the systems are operating as designed;
 3. Enhance vacuum coverage via the methods detailed above.

4.5 Restart Procedures

In the event that the system is shut off for maintenance or unanticipated power interruptions, the fan will be restarted as soon as possible. Vacuum at each fan as measured by the Dwyer differential pressure vacuum gauge installed on each vapor extraction line will be recorded, and sub-slab differential pressure readings at each vapor monitoring point will be measured using a hand-held digital micromanometer. If the system was shut off for the completion of major building modifications or structural repairs, restart procedures will include the additional steps outlined in Section 4.6.

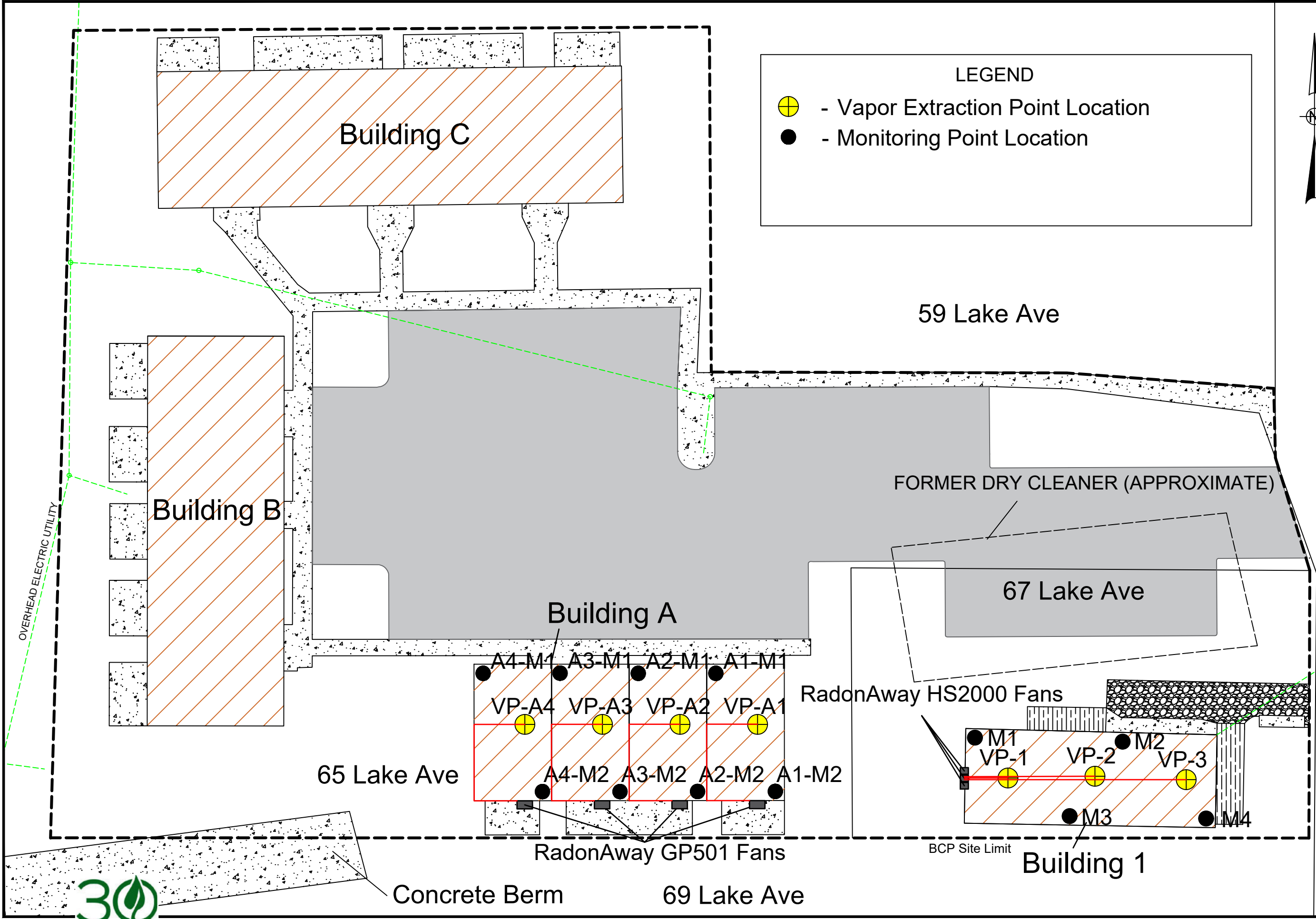
4.6 Change in Building Use

In the event of a significant change in building use, such as if the building becomes unoccupied with the intention of no longer being used for residential purposes, the Site owner may propose that an indoor air sampling event be completed with the SSD systems shut off to assess the ongoing need for system operation. No changes will be made without prior approval from NYSDEC and NYSDOH. In the event of building modifications, such as major structural changes or modifications to the HVAC system, vacuum will be monitored in the vapor extraction points and monitoring points to ensure that a vacuum differential of 0.004 inches w.c. is maintained in the sub-slab. If necessary, additional monitoring points may be installed. An indoor air monitoring event will be scheduled following completion of the modifications. Consistent with the regular annual air monitoring events, the air monitoring event will be completed in accordance with the procedures outlined in NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*.

5.0 RECORD KEEPING AND REPORTING

Field sheets completed during each site visit by METI will be recorded to document system monitoring, inspections, and maintenance. An OM&M form should also be completed during unanticipated site visits in response to a system malfunction. The cause of the system malfunction and any corrective actions taken should be detailed.

FIGURES



PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR:

SLM

DESIGNED BY:

CMC

REVIEWED BY:

SRC

DRAWN BY:

CMC

REVISION

BY	DATE
CMC	6/4/21

SCALE IN FEET: 1" = 20'



PROJECT NAME / LOCATION:

Lakeside Village
Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. 915344

TITLE:

SSDS Layout and
Piping Diagram

DATE:

NA

PROJECT NO.:

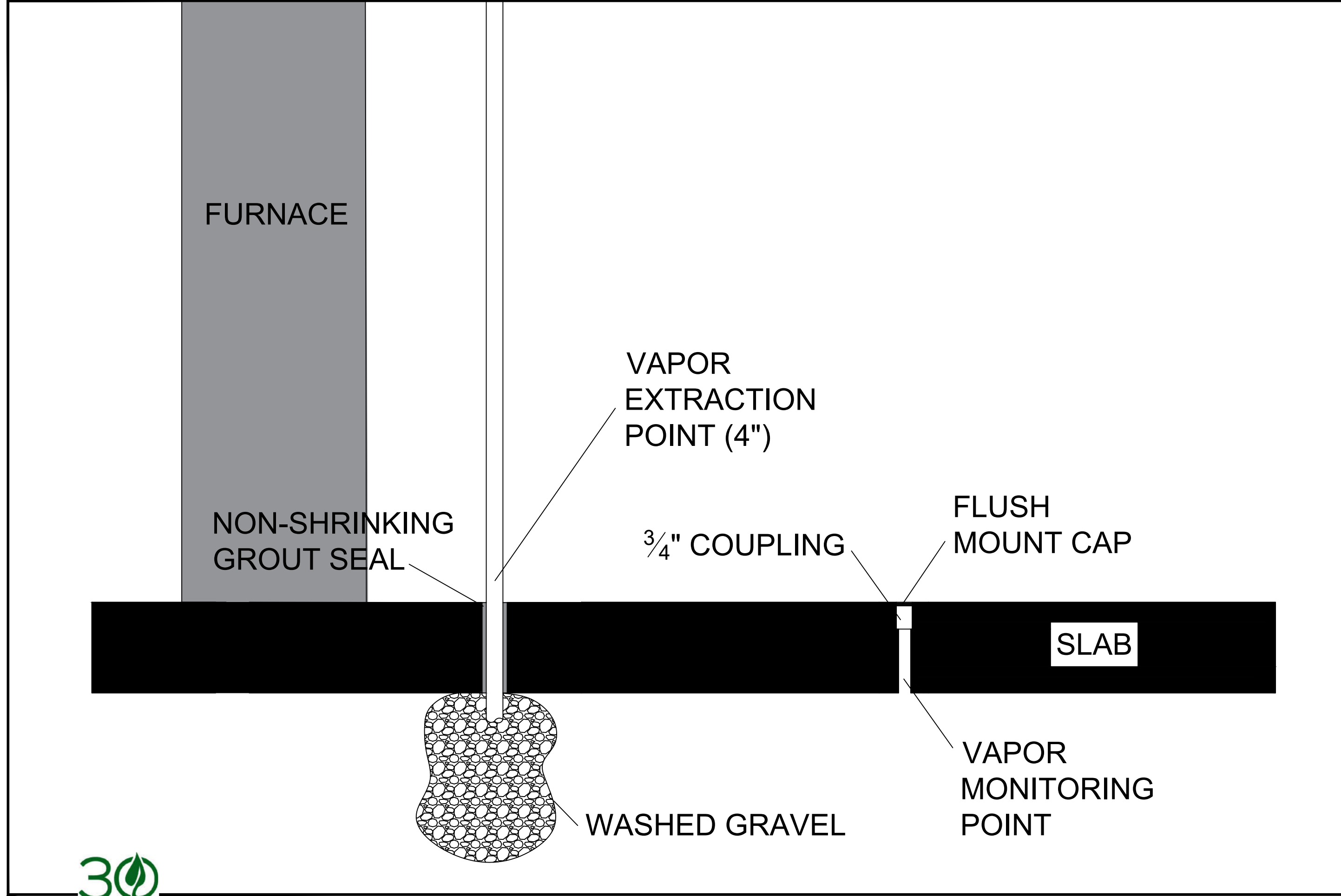
18-046

FIGURE:

1



30 years dedicated to a
CLEANER ENVIRONMENT
1991-2021



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REVISION	
BY	DATE
CMC	6/4/21

SCALE IN FEET: NA

PROJECT NAME / LOCATION:

Lakeside Village
Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. 915344

TITLE:

VAPOR EXTRACTION POINT
AND VAPOR MONITORING
POINT CONSTRUCTION
DETAILS (TYPICAL)

DATE:

NA

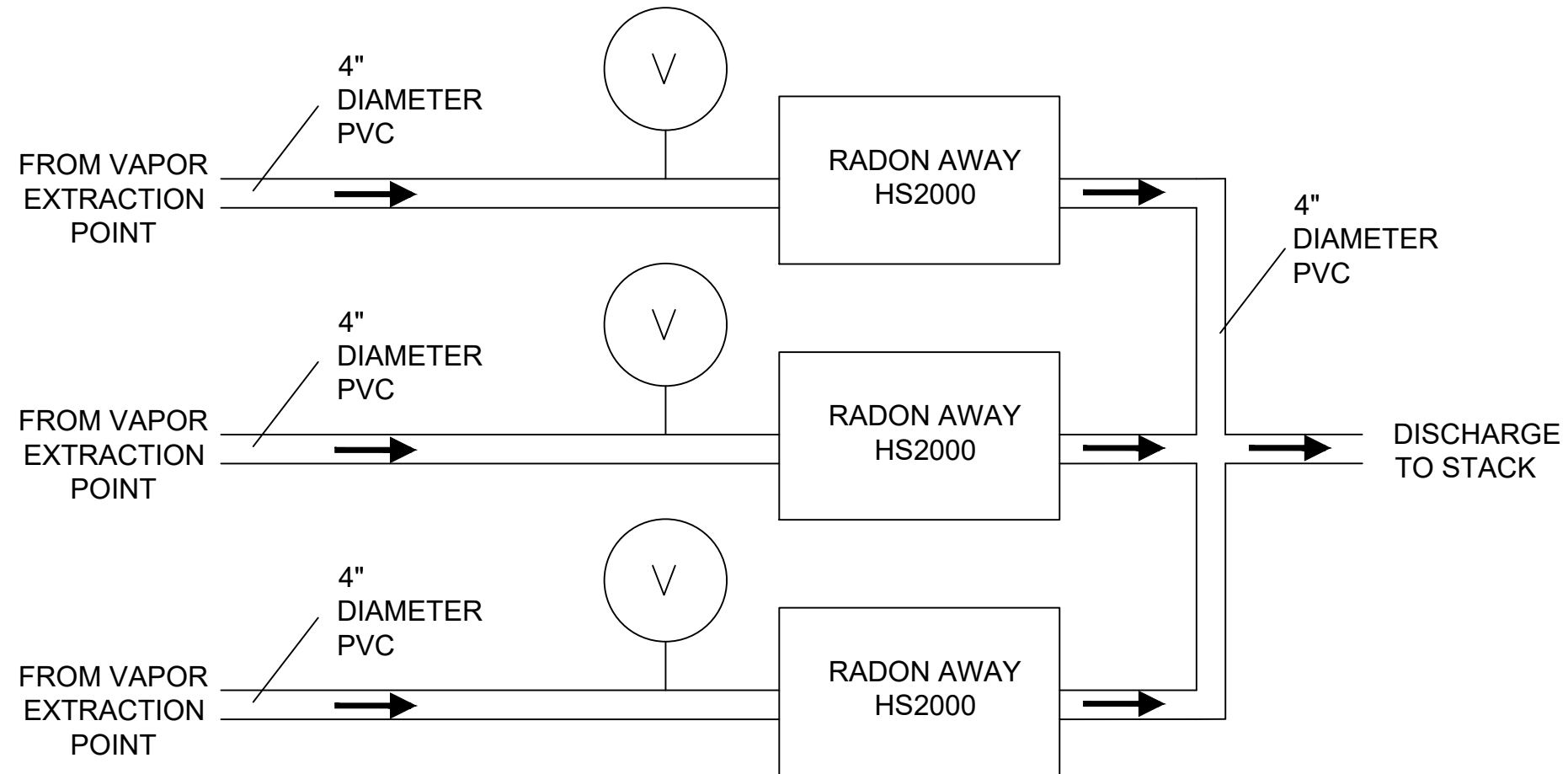
PROJECT NO.:

18-046

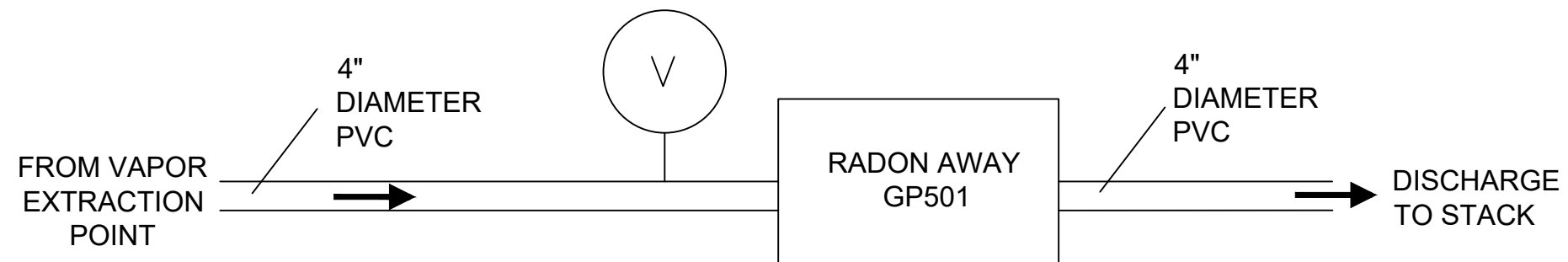
FIGURE:

2

BUILDING 1



BUILDING A (EACH APARTMENT, 4 TOTAL)



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SRC

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REVISION

BY	DATE
CMC	6/4/21

SCALE IN FEET: NA



PROJECT NAME / LOCATION:

Lakeside Village
Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Process and
Instrumentation
Diagram

DATE:

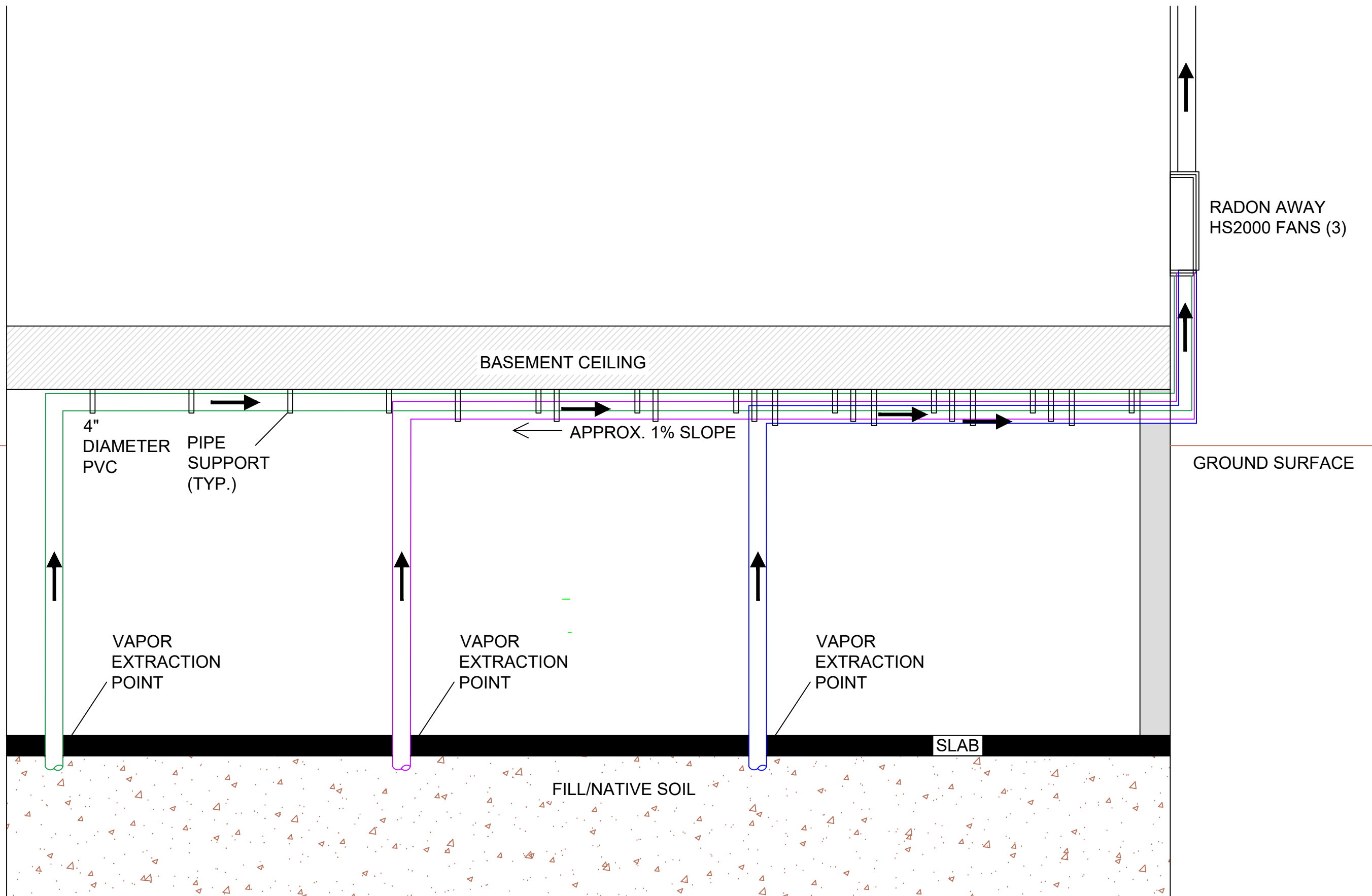
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PROJECT NO.:

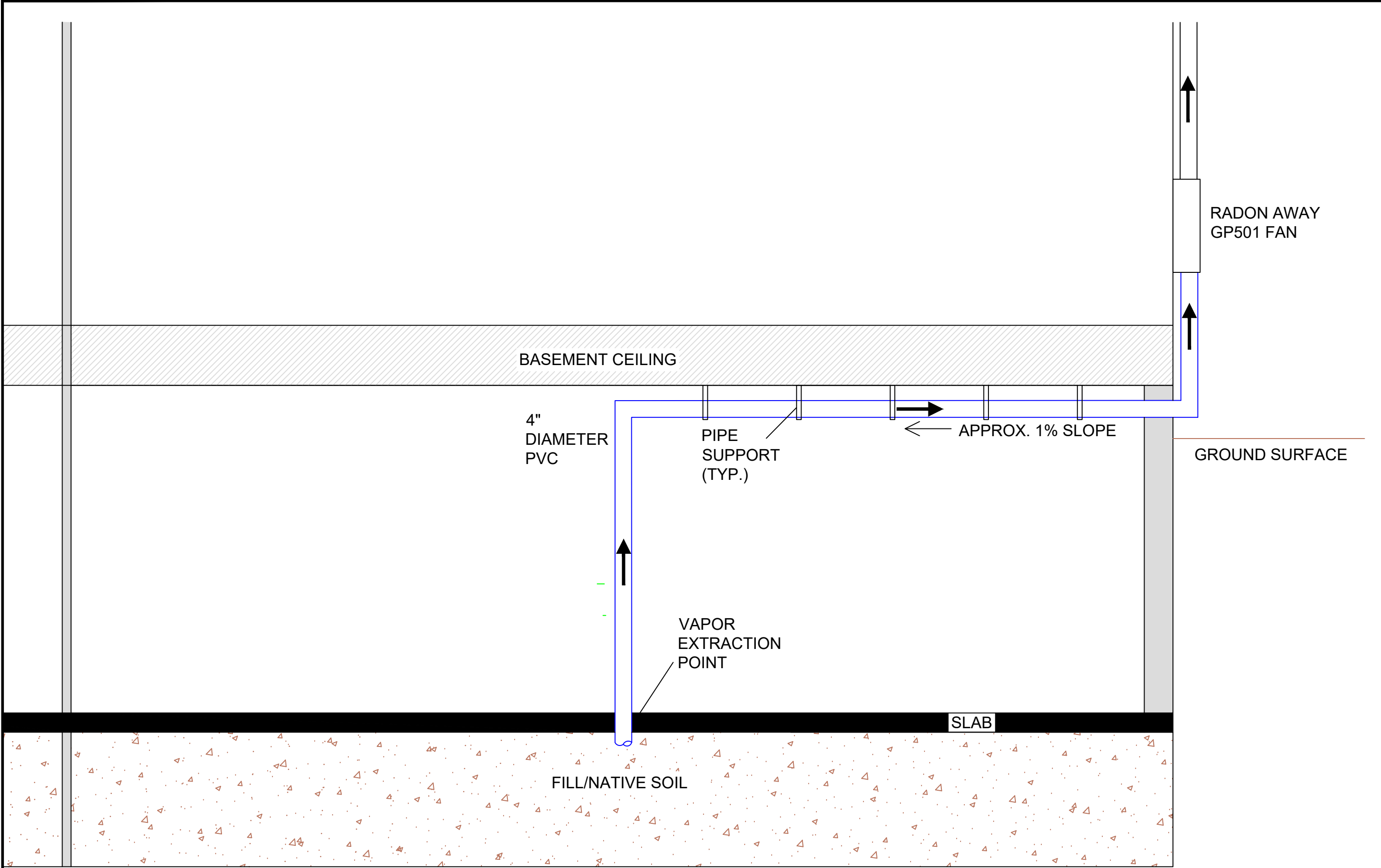
18-046

FIGURE:

3



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PREPARED FOR:		65 Lake Avenue LLC	
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DRAWN BY:		CMC	
REVISION			
BY		DATE	
CMC		6/4/21	
SCALE IN FEET: NA			
 0			
PROJECT NAME / LOCATION:			
Lakeside Village Apartments 65-67 Lake Avenue Lancaster, New York			
BCP Site No. C915344			
TITLE:			
BUILDING 1 SSD SYSTEM LAYOUT - PROFILE VIEW			
DATE:		NA	
PROJECT NO.:		18-046	
FIGURE:		4A	



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REVIEWED BY:

SRC

DRAWN BY:

CMC

REVISION

BY	DATE
CMC	6/4/21

SCALE IN FEET: NA



PROJECT NAME / LOCATION:

Lakeside Village
Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

BUILDING A APARTMENT
SSD SYSTEM LAYOUT -
PROFILE VIEW

DATE:

NA

PROJECT NO.:

18-046

FIGURE:

4B

TABLES

Table 1
Building A Vacuum Readings (in w.c.)

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. C915344

Date	Apartment A1			Apartment A2		
	Vapor Extraction Point VP-A1	Monitoring Point A1-M1	Monitoring Point A1-M2	Vapor Extraction Point VP-A2	Monitoring Point A2-M1	Monitoring Point A2-M2
11/12/2019	gauge broken	0.061	0.055	3.5	0.024	0.025
11/20/2019		0.059	0.048	3.5	0.028	0.023
11/25/2019		0.048	0.038			
12/6/2019		0.054	0.041	gauge broken	0.018	0.016
1/15/2020		0.044	0.035		0.014	0.013
1/31/2022	3.5			4.0		

Date	Apartment A3			Apartment A4		
	Vapor Extraction Point VP-A3	Monitoring Point A3-M1	Monitoring Point A3-M2	Vapor Extraction Point VP-A4	Monitoring Point A4-M1	Monitoring Point A4-M2
11/12/2019	4.0	0.010	0.014	0.5	0.078	0.074
11/20/2019	4.0	0.010	0.015	0.75	0.067	0.069
11/25/2019	4.0	0.012	0.013	0.75	0.067	0.069
12/6/2019	4.0	0.012	0.012	1.3	0.064	0.071
1/15/2020	4.0	0.010	0.011	1.6	0.077	0.072
1/31/2022	3.5			3.5		

Note: Blank space indicates that data was not collected.

Table 2
Building 1 Vacuum Readings (in w.c.)

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
BCP Site No. C915344

Date	Vapor Extraction Point VP-1	Vapor Extraction Point VP-2	Vapor Extraction Point VP-3	Monitoring Points			
				M1	M2	M3	M4
11/12/2019	0	16	15	0.000	0.193	0.133	0.000
11/20/2019	0	15	15	0.000	0.132	0.128	0.018
11/25/2019	fan removed for repairs						
12/6/2019	14	15	15	0.258	0.109	0.053	0.010
1/15/2020	15	16	15	0.222	0.266	0.206	0.016
1/31/2022	16	17	15				

Note: Blank space indicates that data was not collected.

APPENDIX A

Equipment Specification Sheets

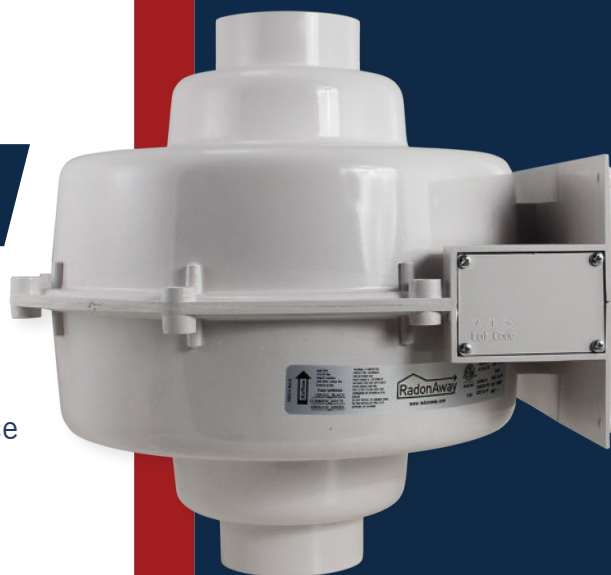
INSTALLS WHITE, STAYS WHITE

Radon Mitigation Fan

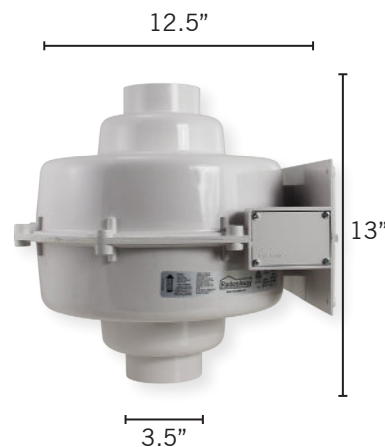
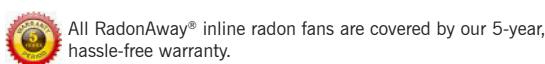
All RadonAway® fans are specifically designed for radon mitigation. GP Series Fans offer a wide range of performance options that make them ideal for most sub-slab radon mitigation systems.

Features

- NEW Stay-White™ housing
- Quiet operation
- Water-hardened motor
- Seams sealed under negative pressure (to inhibit radon leakage)
- Mounts on duct pipe or with integral flange
- 3" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed - for indoor or outdoor use
- 4 interchangeable GP models



MODEL	P/N	FAN DUCT DIAMETER	WATTS	RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM vs. STATIC PRESSURE WC						
					1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	28465	3"	31-65	1.8	54	42	11	-	-	-	-
GP301	28466	3"	56-100	2.3	64	54	41	4	-	-	-
GP401	28467	3"	62-128	3.0	-	61	52	44	22	-	-
GP501	28468	3"	68-146	3.8	-	-	66	58	50	27	4



For Further Information, Contact Your Radon Professional:

HS Series



Radon Mitigation Fan

HS fans offer a proven solution for tough radon mitigation jobs, providing up to 25 times the suction of inline tube fans to deal with sand, tight soil or clay sub-slab material.

Features

- Internal condensate bypass
- Brackets for vertical mounting indoors and outdoors
- Inlet: 3.0" PVC / Outlet: 2.0" PVC
- Weight: 18 lbs.
- Size: 15.5"W x 13.3"H x 8.2"D
- Warranty: 1 year (3-year option available)

MODEL	WATTS	SOUND RATING (dBA)			RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM* vs. STATIC PRESSURE WC					
		OPEN	1/2	CLOSED		0"	10"	15"	20"	25"	35"
HS2000 with cord	174-307	56.5	56.2	51.9	14	63	37	12	-	-	-
HS3000 with cord	120-250	47.9	48.0	46.2	21	39	30	25	19	-	-
HS5000 with cord	223-385	56.0	55.3	53.1	35	44	37	33	29	25	16
HS2000E with switch box	174-307	56.5	56.2	51.9	14	63	37	12	-	-	-
HS3000E with switch box	120-250	47.9	48.0	46.2	21	39	30	25	19	-	-
HS5000E with switch box	223-385	56.0	55.3	53.1	35	44	37	33	29	25	16

 Made in the USA with U.S. and imported parts.

* CFM measured through suction.

For Further Information, Contact Your Radon Professional:

APPENDIX B

Field Data Sheets

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, NY
METI Project #18-046

DATE: _____

COMPLETED BY: _____

Extraction Well						
Pressure Gauge Reading (in. H2O)						

Monitoring Point						
Pressure Gauge Reading (in. H2O)						

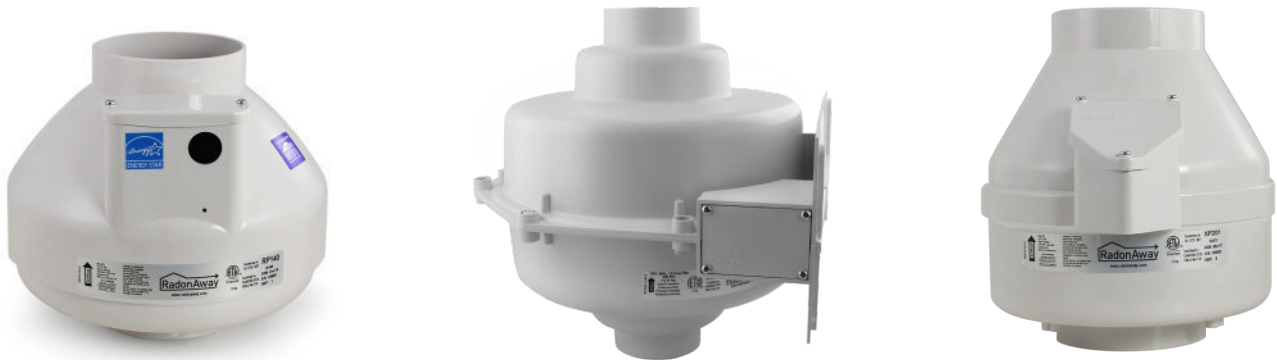
Monitoring Point						
Pressure Gauge Reading (in. H2O)						

Monitoring Point						
Pressure Gauge Reading (in. H2O)						

NOTES:

APPENDIX C

Operation and Maintenance Manuals



RP, GP, XP Pro Series Installation Instructions



Fan Installation & Operating Instructions
RP, GP, XP Pro Series Fans
Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN “OFF” POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** For General Ventilating Use Only. Do Not Use to Exhaust Hazardous, Corrosive or Explosive Materials, Gases or Vapors. See Vapor Intrusion Application Note #AN001 for important information on VI Applications. RadonAway.com/vapor-intrusion
2. **NOTE:** Fan is suitable for use with solid state speed controls; however, use of speed controls is not generally recommended.
2. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.
3. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
4. **NOTICE!** There are no user serviceable parts located inside the fan unit.
Do NOT attempt to open. Return unit to the factory. (See Warranty, p. 8, for details.)
5. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
6. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:
 - a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer. (See p. 8.)
 - b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
 - c) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire rated construction.
 - d) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturers' guidelines and safety standards such as those published by any National Fire Protection Association, and the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and the local code authorities.
 - e) When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
 - f) Ducted fans must always be vented to outdoors.
 - g) If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) protected branch circuit.



Fan Installation & Operating Instructions

RP Pro Series		GP Pro Series		XP Pro Series	
RP140	P/N 28460	GP201	P/N 28465	XP151	P/N 28469
RP145	P/N 28461	GP301	P/N 28466	XP201	P/N 28470
RP260	P/N 28462	GP401	P/N 28467		
RP265	P/N 28463	GP501	P/N 28468		
RP380	P/N 28464				

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The RP, GP and XP Pro Series Radon Fans are intended for use by trained, professional, certified/licensed radon mitigators. The purpose of these instructions is to provide additional guidance for the most effective use of RP, GP and XP Series Fans. These instructions should be considered supplemental to EPA/radon industry standard practices, state and local building codes and regulations. In the event of a conflict, those codes, practices and regulations take precedence over these instructions.

1.2 FAN SEALING

The RP, GP and XP Pro Series Fans are factory sealed; no additional caulk or other materials are required to inhibit air leakage.

1.3 ENVIRONMENTALS

The RP, GP and XP Pro Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F or more than 100 degrees F.

1.4 ACOUSTICS

The RP, GP and XP Pro Series Fans, when installed properly, operate with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the “rushing” sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

(To ensure quiet operation of inline and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan(s). RP, GP and XP Pro Series Fans are not suitable for kitchen range hood remote ventilation applications.)

1.5 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes, thus blocking air flow to the RP, GP and XP Pro Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes, allowing for return to normal operation.

1.6 SLAB COVERAGE

The RP, GP and XP Pro Series Fans can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the RP, GP and XP Pro Series Fan best suited for the sub-slab material can improve the slab coverage. The RP, GP and XP Pro Series have a wide range of models to choose from to cover a wide range of sub-slab materials. The RP140 and 145 are best suited for general purpose use. The RP 260 can be used where additional airflow is required, and the RP265 and RP 380 are best suited for large slab, high airflow applications. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.7 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The RP, GP and XP Pro Series Fan MUST be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The RP, GP and XP Pro Series Fans are NOT suitable for underground burial.

For RP, GP and XP Pro Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Diameter	Minimum Rise per Ft of Run*		
	@25 CFM	@50 CFM	@100 CFM
4"	1/8"	1/4"	3/8"
3"	1/4"	3/8"	1 1/2"

RISE

RUN

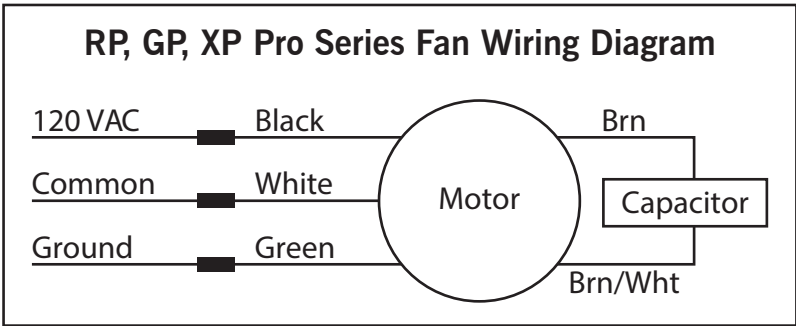
See p. 7 for detailed specifications.

1.8 SYSTEM MONITOR & LABEL

A System Monitor, such as a manometer (P/N 50017) or audible alarm (P/N 28001-2, 28001-4 or 28421), is required to notify the occupants of a fan system malfunction. A System Label (provided with Manometer P/N 50017) with instructions for contacting the installing contractor for service and identifying the necessity for regular radon tests to be conducted by the building occupants must be conspicuously placed in a location where the occupants frequent and can see the label.

1.9 ELECTRICAL WIRING

The RP, GP and XP Pro Series Fans operate on standard 120V, 60Hz AC. All wiring must be performed in accordance with National Fire Protection (NFPA) National Electrical Code, Standard #70, current edition, for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a UL Listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.



1.10 SPEED CONTROLS

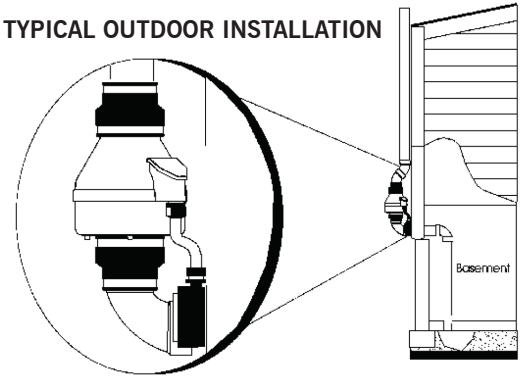
The RP, GP and XP Pro Series Fans are rated for use with electronic speed controls; however, speed controls are generally not recommended. If used, the recommended speed control is Pass & Seymour Solid State Speed Control (Cat. No. 94601-1).

2.0 INSTALLATION

The RP, GP and XP Pro Series Fans can be mounted indoors or outdoors. (It is suggested that EPA and radon mitigation standards recommendations be followed in choosing the fan location.) The GP fans have an integrated mounting bracket; RP and XP Pro Series Fans may be mounted directly on the system piping or fastened to a supporting structure by means of an optional mounting bracket.

The ducting from the fan to the outside of the building has a strong effect on noise and fan energy use. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.

TYPICAL OUTDOOR INSTALLATION



2.1 MOUNTING

Mount the RP, GP and XP Pro Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.

2.2 MOUNTING BRACKET (optional)

The RP and XP Pro Series Fans may be optionally secured with the RadonAway P/N 25007 mounting bracket. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as a means of disconnect for servicing the unit and for vibration isolation. As the fan is typically outside of the building thermal boundary and is venting to the outside, installation of insulation around the fan is not required.

2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections (See Section 1.9). Note that the fan is not intended for connection to rigid metal conduit.

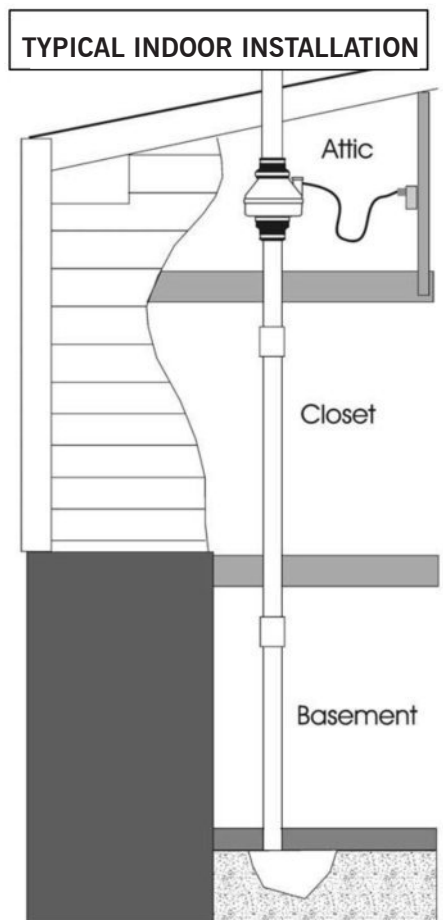
2.5 VENT MUFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS & ANNUAL SYSTEM MAINTENANCE

- _____ **Verify** all connections are tight and **leak-free**.
- _____ **Ensure** the RP, GP and XP Pro Series Fan and all ducting are **secure and vibration-free**.
- _____ **Verify system vacuum pressure** with manometer. **Insure** vacuum pressure is within normal operating range and **less than** the maximum recommended operating pressure.
(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 feet)
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments.)
See Product Specifications. If this is exceeded, increase the number of suction points.
- _____ **Verify Radon levels** by testing to EPA Protocol and applicable testing standards.

TYPICAL INDOOR INSTALLATION



THE FOLLOWING CHARTS SHOW THE PERFORMANCE OF THE RP, GP and XP PRO SERIES FANS

RP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC									
Model	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
RP140	135	103	70	14	-	-	-	-	
RP145	166	146	126	104	82	61	41	21	3
RP260	251	209	157	117	70	26	-	-	-
RP265	375	330	282	238	204	170	140	108	70
RP380	531	490	415	340	268	200	139	84	41

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
RP140	15 - 21 watts	0.7" WC
RP145	41 - 72 watts	1.7" WC
RP260	47-65 watts	1.3" WC
RP265	95 - 139 watts	2.3" WC
RP380	96 - 138 watts	2.0" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet	L.2
RP140	8.5"H x 9.7" Dia.	5.5 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)	25
RP145	8.5"H x 9.7" Dia.	5.5 lbs	4.5" OD	15
RP260	8.6"H x 11.75" Dia.	5.5 lbs	6.0" OD	48
RP265	8.6"H x 11.75" Dia.	6.5 lbs	6.0" OD	30
RP380	10.53"H x 13.41" Dia.	11.5 lbs	8.0" OD	57

L.2 = Estimated Equivalent Length of Rigid Metal Ducting resulting in .2" WC pressure loss for Duct Size listed. Longer Equivalent Lengths can be accommodated at Flows Lower than that at .2" WC pressure loss (see CFM Vs Static Pressure "WC Table).

XP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC						
	0"	.5"	1.0"	1.5"	1.75"	2.0"
XP151	167	127	77	-	-	-
XP201	126	98	66	26	-	-

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
XP151	53-70 watts	1.4" WC
XP201	38-74 watts	1.6" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet
XP151	9.5"H x 8.5" Dia.	6 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)
XP201	9.5"H x 8.5" Dia.	6 lbs	4.5" OD

GP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC							
	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	54	42	11	-	-	-	-
GP301	64	54	41	4	-	-	-
GP401	-	61	52	44	22	-	-
GP501	-	-	66	58	50	27	4

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
GP201	31-67 watts	1.8" WC
GP301	56-100 watts	2.3" WC
GP401	62-128 watts	3.0" WC
GP501	68 - 146 watts	3.8" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet
GP201	13"H x 12.5" Dia.	12 lbs	3.5"OD (3.0" PVC Sched 40 size compatible)
GP301	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP401	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP501	13"H x 12.5" Dia.	12 lbs	3.5" OD

RP, XP and GP Pro Series Additional Specifications

Model	Recommended Duct	PVC Pipe Mounting	Thermal Cutout	Insulation Class
RP140	3" or 4" Schedule 20/40 PVC	Mount on the duct pipe or with optional mounting bracket. For Ventilation: 4", 6" or 8" Rigid or Flexible Ducting.	130°C/266°F	Class B Insulation
RP145			130°C/266°F	Class F Insulation
RP260			150°C/302°F	
RP265			150°C/302°F	
RP380	6" Schedule 20/40 PVC Pipe		150°C/302°F	
XP151	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
XP201				
GP201	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
GP301				
GP401				
GP501				

Continuous Duty
3000 RPM
Thermally Protected
RP, GP Residential and Commercial
XP Residential Only
Rated for Indoor or Outdoor Use



LISTED
Electric Fan



Conforms to
 UL STD. 507
 Certified to
 CAN/CSA STD.
 C22.2 No.113

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the RadonAway® RP, GP and XP Pro Series Fan for shipping damage within 15 days of receipt. **Notify RadonAway of any damages immediately.** RadonAway is not responsible for damages incurred during shipping. However, for your benefit, RadonAway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open the housing.** Return unit to factory. (See Warranty below).

Install the RP, GP and XP Pro Series Fan in accordance with all EPA, ANSI/AARST standard practices, and state and local building codes and regulations.

Provide a copy of this instruction or comparable radon system and testing information to the building occupants after completing system installation.

Warranty

RadonAway® warrants that the RP, GP (excluding GP500) and XP Pro Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner (the "Warranty Term").

RadonAway® will replace any fan which fails due to defects in materials or workmanship during the Warranty Term. This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway®.

The Fan must be returned (at Owner's cost) to the RadonAway® factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

5-YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway® will extend the Warranty Term of the fan to 60 months (5 years) from date of purchase or 66 months from date of manufacture, whichever is sooner, provided that the fan is installed by a professional radon mitigation contractor. Proof of purchase and/or proof of professional installation may be required for service under this warranty. No extended warranty is offered outside the Continental United States and Canada beyond the standard 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner.

RadonAway® is not responsible for installation, removal or delivery costs associated with this Warranty.

LIMITATION OF WARRANTY

EXCEPT AS STATED ABOVE, THE RP, GP (excluding GP500) and XP PRO SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

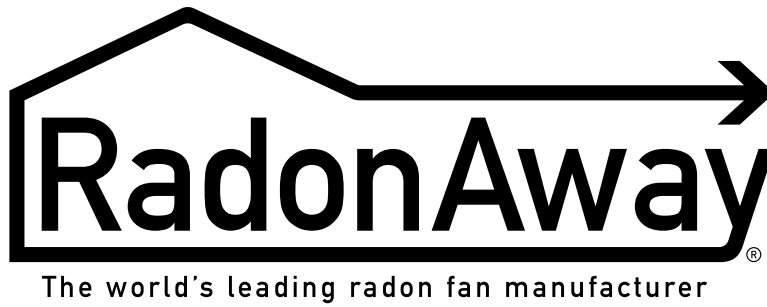
For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping costs, including insurance, to and from factory.

RadonAway® 3 Saber Way
Ward Hill, MA 01835 USA TEL (978) 521-3703
FAX (978) 521-3964
Email to: Returns@RadonAway.com

Record the following information for your records:

Serial Number: _____

Purchase Date: _____



HS Series Installation & Operating Instructions



HS Series Fan Installation & Operating Instructions

Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN “OFF” POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** Do not use fan in hazardous environments where fan electrical system could provide ignition to combustible or flammable materials.
2. **WARNING!** Check voltage at the fan to ensure it corresponds with nameplate. See Vapor Intrusion Application Note #AN001 for important information on VI Applications. RadonAway.com/vapor-intrusion
3. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
4. **NOTICE!** There are no user serviceable parts located inside the fan unit.
Do NOT attempt to open. Return unit to the factory for service.
5. All wiring must be performed in accordance with the National Fire Protection Association’s (NFPA) “National Electrical Code, Standard #70”-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician.
6. **WARNING!** In the event that the fan is immersed in water, return unit to factory for service before operating.
7. **WARNING!** Do not twist or torque fan inlet or outlet piping as leakage may result.
8. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
9. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:
 - a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
 - b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.



HS Series Fan Installation & Operating Instructions

High Suction Series

HS2000 p/n 23004-1
HS3000 p/n 23004-2
HS5000 p/n 23004-3
HS2000E p/n 23004-4
HS3000E p/n 23004-5
HS5000E p/n 23004-6

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The HS Series Fan is intended for use by trained, certified/licensed, professional radon mitigators. The purpose of this instruction is to provide additional guidance for the most effective use of the HS Series Fan. This instruction should be considered as a supplement to EPA/Radon Industry standard practices, state and local building codes and state regulations. In the event of a conflict, those codes, practices and regulations take precedence over this instruction.

1.2 ENVIRONMENTALS

The HS Series Fan is designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the HS Series Fan should be stored in an area where the temperature is always greater than 32°F or less than 100°F. The HS Series Fan is thermally protected such that it will shut off when the internal temperature is above 194°F +/- 9°F (90°C +/- 5°C). If the HS Series Fan is idle in an area where the ambient temperature exceeds this shut off, it will not restart until the internal temperature falls below 104°F.

1.3 ACOUSTICS

The HS Series Fan, when installed properly, operates with little or no noticeable noise to the building occupants. Recommended system design and installation considerations to minimize noise: When installing the HS Series Fan above sleeping areas, select a location for mounting at the farthest possible distance. Avoid mounting near doors, fold-down stairs or other uninsulated structures which may transmit sound. Ensure a solid mounting for the HS Series Fan to avoid structure-borne vibration or noise.

The velocity of the outgoing air must also be considered in the overall system design. With small diameter piping, the “rushing” sound of the outlet air can be disturbing. The system design should incorporate a means to slow and quiet the outlet air. The use of the RadonAway Exhaust Muffler, p/n 24002, is strongly recommended.

1.4 GROUND WATER

Under no circumstances should water be allowed to be drawn into the inlet of the HS Series Fan as this may result in damage to the unit. The HS Series Fan should be mounted at least 5 feet above the slab penetration to minimize the risk of filling the HS Series Fan with water in installations with occasional high water tables.

In the event that a temporary high water table results in water at or above slab level, water will be drawn into the riser pipes thus blocking air flow to the HS Series Fan. The lack of cooling air will result in the HS Series Fan cycling on and off as the internal temperature rises above the thermal cutoff and falls upon shutoff. Should this condition arise, power down and disconnect the HS Series Fan until the water recedes allowing for return to normal operation; then reconnect and power on to turn the fan back on.

1.5 CONDENSATION & DRAINAGE

WARNING!: Failure to provide adequate drainage for condensation can result in system failure and damage the HS Series Fan.

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation.

The use of small diameter piping in a system increases the speed at which the air moves. The speed of the air can pull water uphill and, at sufficient velocity, it can actually move water vertically up the side walls of the pipe. This has the potential of creating a problem in the negative pressure (inlet) side piping. For HS Series Fan inlet piping, the following table provides the minimum recommended pipe diameters as well as minimum pitch under several system conditions. Use this chart to size piping for a system.



Pipe Diameter	Minimum Rise per 1 Foot of Run*		
	@ 25 CFM	@ 50 CFM	@ 100 CFM
4"	1/32"	3/32"	3/8"
3"	1/8"	3/8"	1 1/2"

*Typical operational flow rates:

HS2000 12 - 63 CFM
 HS3000 19 - 39 CFM
 HS5000 16 - 44 CFM

All exhaust piping should be 2" PVC.

1.6 SYSTEM MONITOR & LABEL

A properly designed system should incorporate a "System On" indicator for affirmation of system operation. A Magnehelic pressure gauge is recommended for this purpose. The indicator should be mounted at least 5 feet above the slab penetration to minimize the risk of filling the gauge with water in installations with occasional high water tables. A System Label (P/N 15022) with instructions for contacting the installing contractor for service and also identifying the necessity for regular radon tests to be conducted by the building occupants, must be conspicuously placed where the occupants frequent and can see the label.

1.7 SLAB COVERAGE

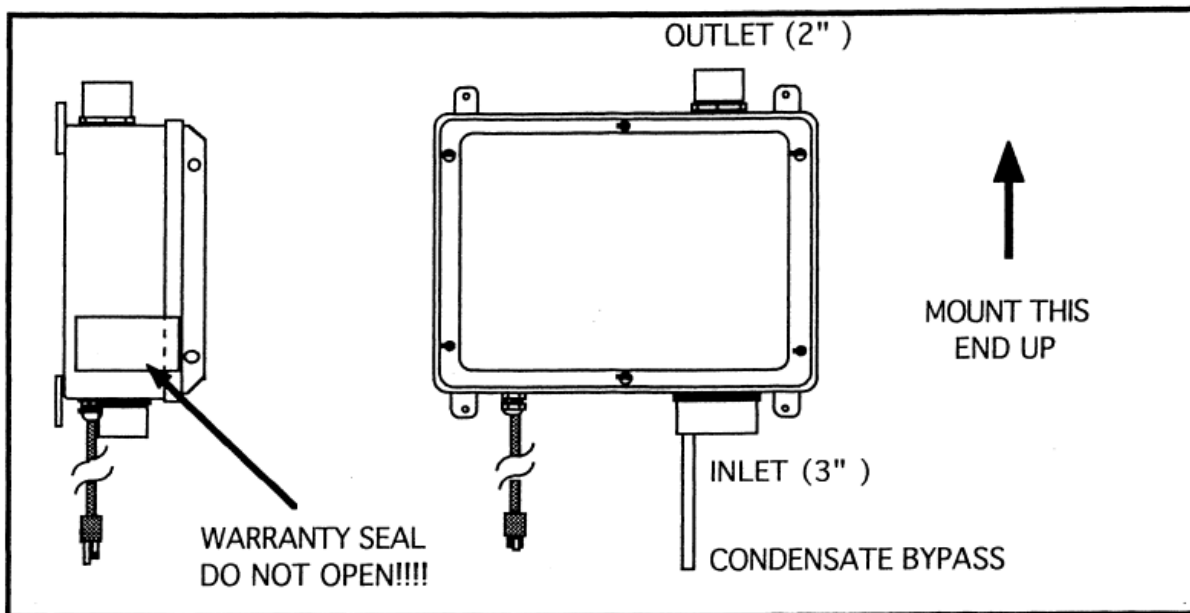
The HS Series Fan can provide coverage of well over 1000 sq. ft. per slab penetration. This will, of course, depend on the sub-slab aggregate in any particular installation and the diagnostic results. In general, sand and gravel are much looser aggregates than dirt and clay. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size; larger as needed) be created below the slab at each suction hole. When fine sand or dirt is present it is recommended that the pit be lined with a material such as clean gravel, size 4, 5, 56, or 6 as classified (ASTM C33).

1.8 ELECTRICAL WIRING

For models with a cord, the HS Series Fan plugs into a standard 120V outlet. The switch box models are hardwired. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a UL listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly caulked to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.

1.9 SPEED CONTROLS

Electronic speed controls can **NOT** be used on HS Series units.



2.0 INSTALLATION

2.1 MOUNTING

Mount the HS Series Fan to the wall studs, or similar structure, in the selected location with (4) 1/4" x 1 1/2" lag screws (not provided). Ensure the HS Series Fan is both plumb and level.

2.2 DUCTING CONNECTIONS

Make final ducting connection to HS Series Fan with flexible couplings. Ensure all connections are tight. Do not twist or torque inlet and outlet piping on HS Series Fan or leaks may result.

NOTE: Do NOT solvent weld fittings to unit hubs.

2.3 VENT MUFFLER INSTALLATION

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed above the roofline at the end of the vent pipe.

2.4 OPERATION CHECKS & ANNUAL SYSTEM MAINTENANCE

_____ **Verify** all connections are tight and **leak-free**.

_____ **Ensure** the HS Series Fan and all ducting is secure and vibration-free.

_____ **Verify** system vacuum pressure with Magnehelic. **Ensure** vacuum pressure is within normal operating range and **less than** the maximum recommended as shown below:

HS2000 14" WC

HS3000 21" WC

HS5000 35" WC

(Above are based on sea-level operation, at higher altitudes reduce above by about 4% per 1000 Feet.)

If these are exceeded, increase number of suction points.

_____ **Verify Radon levels** by testing to EPA Protocol and applicable testing standards.

Product Specifications

Model	Maximum Static Suction	Recommended Maximum Static Suction	Typical CFM vs Static Suction WC (Recommended Operating Range)						Power* Watts @ 115VAC
			0"	10"	15"	20"	25"	35"	
HS2000	16"	14"	62	40	23	-	-	-	153-314
HS3000	24"	21"	39	30	25	19	-	-	120-250
HS5000	41"	35"	43	35	32	28	24	18	349-381
HS2000E	16"	14"	62	40	23	-	-	-	153-314
HS3000E	24"	21"	39	30	25	19	-	-	120-250
HS5000E	41"	35"	43	35	32	28	24	18	349-381

**Power consumption varies with actual load conditions*

Inlet: 3.0" PVC

Outlet: 2.0" PVC

Mounting: Brackets for vertical mount

Weight: Approximately 18 lbs

Size: Approximately 15"W x 13"H x 8"D

Minimum recommended inlet ducting (greater diameter may always be used):

HS3000, HS5000 --- 2.0" PVC Pipe

HS2000 --- Main feeder line of 3.0" or greater PVC Pipe

Branch lines (if 3 or more) may be 2.0" PVC Pipe

Outlet ducting: 2.0" PVC

Storage Temperature Range: 32°F-100°F

Thermal Cutout: 194°F +/- 9°F (90°C +/- 5°C)

Locked rotor protection

Internal condensate bypass

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the RadonAway® HS Series Fan for shipping damage within 15 days of receipt. **Notify RadonAway® of any damages immediately.** RadonAway® is not responsible for damages incurred during shipping.

There are no user serviceable parts inside the fan. **Do not attempt to open the housing.** Return unit to factory for service.

Install the HS Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.

Provide a copy of this instruction or comparable radon system and testing information to the building occupants after completing system installation.

Warranty

RadonAway® warrants that the HS Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 90 days from the date of purchase (the "Warranty Term").

RadonAway® will repair or replace any Fan which fails due to defects in materials or workmanship during the Warranty Term. The Fan must be returned (at Owner's cost) to the RadonAway® factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway®.

1 YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION

RadonAway® will extend the Warranty Term of the fan to twelve (12) months from date of installation or fifteen (15) months from the date of manufacture, whichever is sooner, if the Fan is installed in a professionally designed and professionally installed active soil depressurization system or installed as a replacement fan in a professionally designed and professionally installed active soil depressurization system. Proof of purchase and/or proof of professional installation may be required for service under this warranty. RadonAway® is not responsible for installation, removal or delivery costs associated with this Warranty.

EXCEPT AS STATED ABOVE, THE HS SERIES FAN IS PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY® BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway® for a Return Material Authorization (RMA) Number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping costs to and from factory.

RadonAway®
3 Saber Way
Ward Hill, MA 01835 USA
TEL (978) 521-3703
FAX (978) 521-3964
Email to: Returns@RadonAway.com

Record the following information for your records:

Serial No. _____

Purchase Date: _____

APPENDIX F

Tenant Notification

SUB-SLAB DEPRESSURIZATION (SSD) SYSTEMS FACT SHEET
LAKESIDE VILLAGE APARTMENTS
65 – 67 LAKE AVENUE, LANCASTER, NEW YORK
NYSDEC BCP Site #C915344

SSD Systems Description

- The SSD systems create negative pressure under the basement floor relative to indoor air. This minimizes the potential for soil gas to migrate into the building. The systems use a fan to apply vacuum to vapor extraction points installed throughout the building floor.
- Piping from the extraction points terminates at wall-mounted fans located outside the buildings. The collected sub-slab vapor is discharged to the atmosphere.
- Regular system checks are completed by maintenance and by the environmental contractor, Matrix Environmental Technologies Inc. (METI). METI also conducts annual indoor air monitoring events to verify that the systems are operating as designed.
- **If you observe damage to any of the system piping or components, please notify maintenance immediately.**

Air Monitoring

- Indoor air monitoring is completed each winter. Air samples are collected from each apartment basement over a 24-hour duration. **Please do not disturb the sampling equipment during this time.**
- Tenants will be notified in advance of the monitoring event and asked to temporarily remove any chemicals that may be stored in the basement.
- Refer to previously provided New York State Department of Health (NYSDOH) Fact Sheets for specific air contaminants for additional information. Fact Sheets are also available on the NYSDOH website at <https://www.health.ny.gov/environmental/indoors/air/contaminants/>.

Contact Information

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Lancaster, New York 14086
(716) 681-1450
Email: Aquinolaw@gmail.com

New York State Department of Environmental Conservation (NYSDEC):

Benjamin McPherson
Project Manager
NYSDEC Region 9
Division of Environmental Remediation
270 Michigan Ave
Buffalo, NY 14203-2915
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APPENDIX G

Product Inventory Survey

1-15-20 Aguila Lancaster

Air Sampling Event & Inventory

Building 1 - Inventory

General Laundry detergent and Air dryer Sheets -

Apartment A1

Nothing found, Just Cloths + Bags of Pop + Beer cans.

Apartment A2 -

Gas can w/ Gas. Could Small gas.

Generator w/ Gas.

Laundry (dryer sheets + detergent)

Basement ~~top~~ Very Cluttered. Could not find anything else.

* - Did not Sample today. We removed Gas can + generator. Will Sample tomorrow after 24 Hour wait.

Apartment A3 -

Laundry detergent + dryer Sheets.

1-15-20 Aquino Lancaster

Air Sample Event + Inventory.

Attachment A 4

BEH R. Paint - 4 Cans

Paint Thinner - Klean Strip.

- Construction guy said he cleaned Paint Brushes
in Sink 48 HRS Ago.

- Removed all paint cans + stripper. Waited
an hour to Air out basement. Then Sampled
about 10:00 Am. (see chart).

APPENDIX H

Laboratory Analytical Reports

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 5:25:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 5:25:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 5:25:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 5:25:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 5:25:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
Acetone	6.4	0.71		ug/m3	1	1/20/2020 5:25:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 5:25:00 PM
Benzene	0.61	0.48		ug/m3	1	1/20/2020 5:25:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 5:25:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 5:25:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 5:25:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 5:25:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 5:25:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 5:25:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 5:25:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 5:25:00 PM
Chloromethane	0.83	0.31		ug/m3	1	1/20/2020 5:25:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 5:25:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 5:25:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 5:25:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	1/20/2020 5:25:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 5:25:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 5:25:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 5:25:00 PM
Heptane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 5:25:00 PM
Hexane	0.60	0.53		ug/m3	1	1/20/2020 5:25:00 PM
Isopropyl alcohol	2.3	0.37		ug/m3	1	1/20/2020 5:25:00 PM
m&p-Xylene	0.48	1.3	J	ug/m3	1	1/20/2020 5:25:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
Methyl Ethyl Ketone	1.1	0.88		ug/m3	1	1/20/2020 5:25:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 5:25:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 5:25:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 5:25:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 5:25:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 5:25:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	1/20/2020 5:25:00 PM
Toluene	1.1	0.57		ug/m3	1	1/20/2020 5:25:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 5:25:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 5:25:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:12:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:12:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:12:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:12:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 6:12:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 6:12:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 6:12:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
Acetone	15	7.1		ug/m3	10	1/21/2020 2:43:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 6:12:00 PM
Benzene	0.93	0.48		ug/m3	1	1/20/2020 6:12:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 6:12:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 6:12:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 6:12:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 6:12:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 6:12:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 6:12:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 6:12:00 PM
Chloroform	2.7	0.73		ug/m3	1	1/20/2020 6:12:00 PM
Chloromethane	1.2	0.31		ug/m3	1	1/20/2020 6:12:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:12:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:12:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 6:12:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 6:12:00 PM
Ethyl acetate	2.5	0.54		ug/m3	1	1/20/2020 6:12:00 PM
Ethylbenzene	0.52	0.65	J	ug/m3	1	1/20/2020 6:12:00 PM
Freon 11	1.5	0.84		ug/m3	1	1/20/2020 6:12:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 6:12:00 PM
Heptane	0.57	0.61	J	ug/m3	1	1/20/2020 6:12:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 6:12:00 PM
Hexane	0.60	0.53		ug/m3	1	1/20/2020 6:12:00 PM
Isopropyl alcohol	8.1	3.7		ug/m3	10	1/21/2020 2:43:00 AM
m&p-Xylene	1.7	1.3		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 6:12:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 6:12:00 PM
o-Xylene	0.56	0.65	J	ug/m3	1	1/20/2020 6:12:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 6:12:00 PM
Styrene	0.72	0.64		ug/m3	1	1/20/2020 6:12:00 PM
Tetrachloroethylene	16	10		ug/m3	10	1/21/2020 2:43:00 AM
Tetrahydrofuran	0.80	0.44		ug/m3	1	1/20/2020 6:12:00 PM
Toluene	3.3	0.57		ug/m3	1	1/20/2020 6:12:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 6:12:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:12:00 PM
Trichloroethene	0.75	0.16		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:59:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:59:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:59:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
1,2,4-Trimethylbenzene	0.88	0.74		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 6:59:00 PM
1,3,5-Trimethylbenzene	0.54	0.74	J	ug/m3	1	1/20/2020 6:59:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 6:59:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	1/20/2020 6:59:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 6:59:00 PM
Acetone	44	7.1		ug/m3	10	1/21/2020 3:28:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 6:59:00 PM
Benzene	2.9	0.48		ug/m3	1	1/20/2020 6:59:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 6:59:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 6:59:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 6:59:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 6:59:00 PM
Carbon tetrachloride	0.57	0.19		ug/m3	1	1/20/2020 6:59:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 6:59:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 6:59:00 PM
Chloroform	1.6	0.73		ug/m3	1	1/20/2020 6:59:00 PM
Chloromethane	2.7	0.31		ug/m3	1	1/20/2020 6:59:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:59:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 6:59:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 6:59:00 PM
Ethyl acetate	6.8	0.54		ug/m3	1	1/20/2020 6:59:00 PM
Ethylbenzene	1.0	0.65		ug/m3	1	1/20/2020 6:59:00 PM
Freon 11	1.3	0.84		ug/m3	1	1/20/2020 6:59:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 6:59:00 PM
Heptane	2.1	0.61		ug/m3	1	1/20/2020 6:59:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 6:59:00 PM
Hexane	1.9	0.53		ug/m3	1	1/20/2020 6:59:00 PM
Isopropyl alcohol	49	3.7		ug/m3	10	1/21/2020 3:28:00 AM
m&p-Xylene	3.4	1.3		ug/m3	1	1/20/2020 6:59:00 PM
Methyl Butyl Ketone	0.57	1.2	J	ug/m3	1	1/20/2020 6:59:00 PM
Methyl Ethyl Ketone	4.4	0.88		ug/m3	1	1/20/2020 6:59:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:59:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 6:59:00 PM
Methylene chloride	0.76	0.52		ug/m3	1	1/20/2020 6:59:00 PM
o-Xylene	1.0	0.65		ug/m3	1	1/20/2020 6:59:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 6:59:00 PM
Styrene	1.0	0.64		ug/m3	1	1/20/2020 6:59:00 PM
Tetrachloroethylene	0.68	1.0	J	ug/m3	1	1/20/2020 6:59:00 PM
Tetrahydrofuran	1.3	0.44		ug/m3	1	1/20/2020 6:59:00 PM
Toluene	11	5.7		ug/m3	10	1/21/2020 3:28:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 6:59:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:59:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 7:46:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 7:46:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 7:46:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
1,2,4-Trimethylbenzene	0.74	0.74		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichloroethane	0.81	0.61		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 7:46:00 PM
1,3,5-Trimethylbenzene	0.64	0.74	J	ug/m3	1	1/20/2020 7:46:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 7:46:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 7:46:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 7:46:00 PM
Acetone	130	28		ug/m3	40	1/21/2020 4:59:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 7:46:00 PM
Benzene	0.89	0.48		ug/m3	1	1/20/2020 7:46:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 7:46:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 7:46:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 7:46:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 7:46:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 7:46:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 7:46:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 7:46:00 PM
Chloroform	0.73	0.73		ug/m3	1	1/20/2020 7:46:00 PM
Chloromethane	10	3.1		ug/m3	10	1/21/2020 4:14:00 AM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 7:46:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 7:46:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 7:46:00 PM
Ethyl acetate	2.6	0.54		ug/m3	1	1/20/2020 7:46:00 PM
Ethylbenzene	0.78	0.65		ug/m3	1	1/20/2020 7:46:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 7:46:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 7:46:00 PM
Heptane	5.0	0.61		ug/m3	1	1/20/2020 7:46:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 7:46:00 PM
Hexane	1.1	0.53		ug/m3	1	1/20/2020 7:46:00 PM
Isopropyl alcohol	15	3.7		ug/m3	10	1/21/2020 4:14:00 AM
m&p-Xylene	2.9	1.3		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Ethyl Ketone	2.1	0.88		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 7:46:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 7:46:00 PM
o-Xylene	1.2	0.65		ug/m3	1	1/20/2020 7:46:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 7:46:00 PM
Styrene	0.47	0.64	J	ug/m3	1	1/20/2020 7:46:00 PM
Tetrachloroethylene	0.68	1.0	J	ug/m3	1	1/20/2020 7:46:00 PM
Tetrahydrofuran	1.1	0.44		ug/m3	1	1/20/2020 7:46:00 PM
Toluene	3.2	0.57		ug/m3	1	1/20/2020 7:46:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 7:46:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 7:46:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 8:33:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 8:33:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 8:33:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
1,2,4-Trimethylbenzene	0.64	0.74	J	ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 8:33:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 8:33:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 8:33:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 8:33:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 8:33:00 PM
Acetone	19	7.1		ug/m3	10	1/21/2020 5:44:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 8:33:00 PM
Benzene	0.57	0.48		ug/m3	1	1/20/2020 8:33:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 8:33:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 8:33:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 8:33:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 8:33:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 8:33:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 8:33:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 8:33:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 8:33:00 PM
Chloromethane	0.91	0.31		ug/m3	1	1/20/2020 8:33:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 8:33:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 8:33:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 8:33:00 PM
Ethyl acetate	0.65	0.54		ug/m3	1	1/20/2020 8:33:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 8:33:00 PM
Freon 11	1.5	0.84		ug/m3	1	1/20/2020 8:33:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 8:33:00 PM
Heptane	0.45	0.61	J	ug/m3	1	1/20/2020 8:33:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 8:33:00 PM
Hexane	0.56	0.53		ug/m3	1	1/20/2020 8:33:00 PM
Isopropyl alcohol	3.1	0.37		ug/m3	1	1/20/2020 8:33:00 PM
m&p-Xylene	1.0	1.3	J	ug/m3	1	1/20/2020 8:33:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	1/20/2020 8:33:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 8:33:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	1/20/2020 8:33:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 8:33:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 8:33:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 8:33:00 PM
Tetrachloroethylene	0.81	1.0	J	ug/m3	1	1/20/2020 8:33:00 PM
Tetrahydrofuran	0.68	0.44		ug/m3	1	1/20/2020 8:33:00 PM
Toluene	1.6	0.57		ug/m3	1	1/20/2020 8:33:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 8:33:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 8:33:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 9:20:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 9:20:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
1,2,4-Trimethylbenzene	0.59	0.74	J	ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 9:20:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 9:20:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 9:20:00 PM
1,3-Dichlorobenzene	1.1	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 9:20:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 9:20:00 PM
Acetone	18	7.1		ug/m3	10	1/21/2020 6:30:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 9:20:00 PM
Benzene	0.57	0.48		ug/m3	1	1/20/2020 9:20:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 9:20:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 9:20:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 9:20:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 9:20:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 9:20:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 9:20:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 9:20:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 9:20:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	1/20/2020 9:20:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 9:20:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 9:20:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 9:20:00 PM
Ethyl acetate	0.68	0.54		ug/m3	1	1/20/2020 9:20:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 9:20:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 9:20:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	3.0	0.74		ug/m3	1	1/20/2020 9:20:00 PM
Heptane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 9:20:00 PM
Hexane	0.67	0.53		ug/m3	1	1/20/2020 9:20:00 PM
Isopropyl alcohol	2.6	0.37		ug/m3	1	1/20/2020 9:20:00 PM
m&p-Xylene	1.0	1.3	J	ug/m3	1	1/20/2020 9:20:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
Methyl Ethyl Ketone	1.1	0.88		ug/m3	1	1/20/2020 9:20:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 9:20:00 PM
Methylene chloride	0.63	0.52		ug/m3	1	1/20/2020 9:20:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 9:20:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 9:20:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 9:20:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
Tetrahydrofuran	0.44	0.44		ug/m3	1	1/20/2020 9:20:00 PM
Toluene	1.6	0.57		ug/m3	1	1/20/2020 9:20:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 9:20:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 9:20:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 10:06:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 10:06:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 10:06:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
1,2,4-Trimethylbenzene	4.8	0.74		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 10:06:00 PM
1,3,5-Trimethylbenzene	1.3	0.74		ug/m3	1	1/20/2020 10:06:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 10:06:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 10:06:00 PM
4-ethyltoluene	1.4	0.74		ug/m3	1	1/20/2020 10:06:00 PM
Acetone	47	7.1		ug/m3	10	1/21/2020 7:15:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 10:06:00 PM
Benzene	2.7	0.48		ug/m3	1	1/20/2020 10:06:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 10:06:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 10:06:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 10:06:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 10:06:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 10:06:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 10:06:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 10:06:00 PM
Chloroform	0.54	0.73	J	ug/m3	1	1/20/2020 10:06:00 PM
Chloromethane	1.8	0.31		ug/m3	1	1/20/2020 10:06:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 10:06:00 PM
Cyclohexane	2.1	0.52		ug/m3	1	1/20/2020 10:06:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 10:06:00 PM
Ethyl acetate	2.2	0.54		ug/m3	1	1/20/2020 10:06:00 PM
Ethylbenzene	2.7	0.65		ug/m3	1	1/20/2020 10:06:00 PM
Freon 11	1.7	0.84		ug/m3	1	1/20/2020 10:06:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 24-Jan-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 10:06:00 PM
Heptane	3.2	0.61		ug/m3	1	1/20/2020 10:06:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 10:06:00 PM
Hexane	1.3	0.53		ug/m3	1	1/20/2020 10:06:00 PM
Isopropyl alcohol	26	3.7		ug/m3	10	1/21/2020 7:15:00 AM
m&p-Xylene	11	1.3		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Ethyl Ketone	3.2	0.88		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 10:06:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	1/20/2020 10:06:00 PM
o-Xylene	3.5	0.65		ug/m3	1	1/20/2020 10:06:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 10:06:00 PM
Styrene	1.3	0.64		ug/m3	1	1/20/2020 10:06:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
Tetrahydrofuran	1.4	0.44		ug/m3	1	1/20/2020 10:06:00 PM
Toluene	12	5.7		ug/m3	10	1/21/2020 7:15:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 10:06:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 10:06:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 10:06:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 15-Apr-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2004010
Project: Aquino 65-67 Lake Ave.
Lab ID: C2004010-001A

Client Sample ID: Building 1- Indoor Air
Tag Number: 287,173
Collection Date: 4/6/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	4/9/2020 4:26:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	4/9/2020 4:26:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	4/9/2020 4:26:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	4/9/2020 4:26:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	4/9/2020 4:26:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	4/9/2020 4:26:00 PM
1,2,4-Trimethylbenzene	1.2	0.74		ug/m3	1	4/9/2020 4:26:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	4/9/2020 4:26:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/9/2020 4:26:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	4/9/2020 4:26:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	4/9/2020 4:26:00 PM
1,3,5-Trimethylbenzene	0.49	0.74	J	ug/m3	1	4/9/2020 4:26:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	4/9/2020 4:26:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/9/2020 4:26:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	4/9/2020 4:26:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	4/9/2020 4:26:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	4/9/2020 4:26:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	4/9/2020 4:26:00 PM
Acetone	34	7.1		ug/m3	10	4/10/2020 12:14:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	4/9/2020 4:26:00 PM
Benzene	0.96	0.48		ug/m3	1	4/9/2020 4:26:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	4/9/2020 4:26:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	4/9/2020 4:26:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	4/9/2020 4:26:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	4/9/2020 4:26:00 PM
Carbon disulfide	0.31	0.47	J	ug/m3	1	4/9/2020 4:26:00 PM
Carbon tetrachloride	< 0.19	0.19		ug/m3	1	4/9/2020 4:26:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	4/9/2020 4:26:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	4/9/2020 4:26:00 PM
Chloroform	0.88	0.73		ug/m3	1	4/9/2020 4:26:00 PM
Chloromethane	1.5	0.31		ug/m3	1	4/9/2020 4:26:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	4/9/2020 4:26:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/9/2020 4:26:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	4/9/2020 4:26:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	4/9/2020 4:26:00 PM
Ethyl acetate	0.76	0.54		ug/m3	1	4/9/2020 4:26:00 PM
Ethylbenzene	0.65	0.65		ug/m3	1	4/9/2020 4:26:00 PM
Freon 11	1.2	0.84		ug/m3	1	4/9/2020 4:26:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	4/9/2020 4:26:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	4/9/2020 4:26:00 PM

Qualifiers:	.	Results reported are not blank corrected	B	Analyte detected in the associated Method Blank
	DL	Detection Limit	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	SC	Sub-Contracted

Centek Laboratories, LLC**Date:** 15-Apr-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2004010
Project: Aquino 65-67 Lake Ave.
Lab ID: C2004010-001A

Client Sample ID: Building 1- Indoor Air
Tag Number: 287,173
Collection Date: 4/6/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.3	0.74		ug/m3	1	4/9/2020 4:26:00 PM
Heptane	0.45	0.61	J	ug/m3	1	4/9/2020 4:26:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	4/9/2020 4:26:00 PM
Hexane	< 0.53	0.53		ug/m3	1	4/9/2020 4:26:00 PM
Isopropyl alcohol	10	3.7		ug/m3	10	4/10/2020 12:14:00 AM
m&p-Xylene	1.4	1.3		ug/m3	1	4/9/2020 4:26:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	4/9/2020 4:26:00 PM
Methyl Ethyl Ketone	8.0	8.8	J	ug/m3	10	4/10/2020 12:14:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	4/9/2020 4:26:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	4/9/2020 4:26:00 PM
Methylene chloride	0.66	0.52		ug/m3	1	4/9/2020 4:26:00 PM
o-Xylene	0.65	0.65		ug/m3	1	4/9/2020 4:26:00 PM
Propylene	< 0.26	0.26		ug/m3	1	4/9/2020 4:26:00 PM
Styrene	< 0.64	0.64		ug/m3	1	4/9/2020 4:26:00 PM
Tetrachloroethylene	1.8	1.0		ug/m3	1	4/9/2020 4:26:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	4/9/2020 4:26:00 PM
Toluene	2.8	0.57		ug/m3	1	4/9/2020 4:26:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	4/9/2020 4:26:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	4/9/2020 4:26:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	4/9/2020 4:26:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	4/9/2020 4:26:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	4/9/2020 4:26:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	4/9/2020 4:26:00 PM

Qualifiers:	.	Results reported are not blank corrected	B	Analyte detected in the associated Method Blank
	DL	Detection Limit	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	SC	Sub-Contracted



Centek Laboratories TO-15 Package Review Checklist

Client: **Matrix Environmental** Project: **Aquino Lake Ave A SDG:** **C2001030**

		<u>YES</u>	<u>NO</u>	<u>NA</u>
Analytical Results	Present and Complete	/	—	—
TIC's Present	Present and Complete	/	—	—
	Holdin Times Met	/	—	—

Comments:

Chain of Custody	Present and Complete	/	—	—
Surrogate	Present and Complete	/	—	—
	Recoveries within Limits	/	—	—
	Sample(s) reanalyzed	—	/	—
Internal Standards	Present and Complete	/	—	—
Recovery	Recoveries within Limits	/	—	—
	Sample(s) reanalyzed	—	/	—

Comments:

Lab Control Sample (LCS)	Present and Complete	/	—	—
	Recoveries within Limits	/	—	—
Lab Control Sample Dupe (LCSD)	Present and Complete	/	—	—
	Recoveries within Limits	/	—	—
MS/MSD	Present and Complete	—	—	/
	Recoveries within Limits	—	—	/

Comments:

NO MS/MSD

Sample Raw Data	Present and Complete	/	—	—
	Spectra present	/	—	—

Comments:

Centek Laboratories TO-15 Package Review Checklist



Client: **Matrix Environmental** Project: **Aquino Lake Ave A** SDG: **C2001030**

		YES	NO	NA
<u>Standards Data</u>				
Initial Calibration	Present and Complete	/		
	Calibration meets criteria	/	X	
Continuing Calibration	Present and Complete	/		
	Calibration meets criteria		/	
Standards Raw Data	Present and Complete	/		

Comments: SEE CASE NARRATIVE

Raw Quality Control Data

Tune Criteria Report	Present and Complete	/		
Method Blank Data	MB Results <PQL	/		
	Associated results flagged "B"	/		
LCS Sample Data	Present and Complete	/		
LCSD Sample Data	Present and Complete	/		
MS/MSD Sample Data	Present and Complete			/

Comments:

Logbooks

Injection Log	/		
Standards Log	/		
Can Cleaning Log	/		
Calculation Sheet	/		
IDL's	/		
Canister Order Form	/		
Sample Tracking Form	/		

Additional Comments:

Section Supervisor:

Will Schell

Date:

2/12/20

QC Supervisor:

LPL

Date:

2/12/20



CEN TEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, NY 13206

Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752

NYSDOH ELAP

Certificate No. 11830

Analytical Report

Steve Marchetti
Matrix Environmental Technologies, Inc
3730 California Rd.
Orchard Park, NY 14127

Friday, January 24, 2020
Order No.: C2001030

TEL: (585) 770-4332

FAX

RE: Aquino Lake Ave Apts

Dear Steve Marchetti:

Centek Laboratories, LLC received 7 sample(s) on 1/20/2020 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

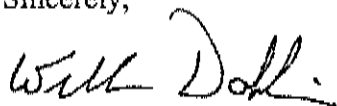
Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

This report cannot be reproduced except in its entirety, without prior written authorization.

Sincerely,



William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, tetrahydrofuran, 4-PCH, sulfur derived and silicon series compounds.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:

Same day TAT = 200%

Next business day TAT by Noon = 150%

Next business day TAT by 6:00pm = 100%

Second business day TAT by 6:00pm = 75%

Third business day TAT by 6:00pm = 50%

Fourth business day TAT by 6:00pm = 35%

Fifth business day = Standard

Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of

liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.

ASP CAT B DELIVERABLE PACKAGE

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CENTEK LABORATORIES, LLC

Date: 12-Feb-20

CLIENT: Matrix Environmental Technologies, Inc

Project: Aquino Lake Ave Apts

Lab Order: C2001030

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

NYSDEC ASP samples:

Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg (± 2 ", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg (± 1 ", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg, ± 1 ". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

See Corrective Action: [4086] CC did not meet criteria.

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 20-Jan-20

Corrective Action Report ID: 4086

Initiated By: Russell Pellegrino

Department: MSVOA

Corrective Action Description

CAR Summary: CC did not meet criteria.

Description of Nonconformance Root/Cause(s): Continuing calibration did not meet criteria on 1/20/20 for 1,4-DCB & 1,2,4-TCB. The compounds were more sensitive. The compounds in question were not detected in the associated samples. The results would have been biased high.

Description of Corrective Action w/Proposed C.A.: The sample results should be considered valid, since the compounds of interest were not detected and would have been considered biased high. No corrective action taken at this time. If results continue to be outside established limits then recalibrate system. All sets of data submitted.

Performed By: Russell Pellegrino

Completion Date: 20-Jan-20

Client Notification

Client Notification Required: No

Notified By:

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Recalibrate the system ASAP if compound remains outside criteria. Monitoring of all quality control remains post initial calibration. All sets of data submitted.

Approval and Closure

Technical Director /
Deputy Tech. Dir.:



William Dobbin

Close Date: 22-Jan-20

QA Officer Approval:



Nick Scala

QA Date: 22-Jan-20

Last Updated BY russ

Updated: 12-Feb-2020 2:47 PM

Reported: 12-Feb-2020 2:47 PM



Date: 12-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Project: Aquino Lake Ave Apts
Lab Order: C2001030

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C2001030-001A	Outdoor Air	365,394	1/15/2020	1/20/2020
C2001030-002A	Building 1-Indoor	438,381	1/15/2020	1/20/2020
C2001030-003A	Apartment A1-Indoor	1178,434	1/15/2020	1/20/2020
C2001030-004A	Apartment A3-Indoor	285,439	1/15/2020	1/20/2020
C2001030-005A	Apartment A4-Indoor	1183,372	1/15/2020	1/20/2020
C2001030-006A	Apartment A4-Dup	1189,378	1/15/2020	1/20/2020
C2001030-007A	Apartment A2-Indoor	1316,440	1/16/2020	1/20/2020



CEN TEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name: **MATRIX ENVIRONMENTAL**

Date and Time Received

1/20/2020

Work Order Number **C2001030**

Received by: **RG**

Checklist completed by

Robin Joshua **1.20.20**
Signature Date

Reviewed by

WD **1/20/20**
Initials Date

Matrix:

Carrier name: **UPS - Ground**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
COC signed when relinquished and received?	Yes ☒	No ☐	
COC agrees with sample labels?	Yes ☒	No ☐	
COC completely filled out?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☒	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☒	

Adjusted?

Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section below

Client contacted:

Date contacted:

Person contacted:

Contacted by:

Regarding:

Comments:

Corrective Action:

QC'd By:

DATE:

Lab Order: C2001030
Client: Matrix Environmental Technologies, Inc
Project: Aquino Lake Ave Apts

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C2001030-001A	Outdoor Air	1/15/2020	Air	1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020
C2001030-002A	Building 1-Indoor			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
C2001030-003A	Apartment A1-Indoor			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020
C2001030-004A	Apartment A3-Indoor			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020
C2001030-005A	Apartment A4-Indoor			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020
C2001030-006A	Apartment A4-Dup			1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020
C2001030-007A	Apartment A2-Indoor	1/16/2020		1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/21/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			1/20/2020



CENTEK LABORATORIES, LLC

Air Quality Testing...It's a Gas

143 Midler Park Drive * Syracuse, NY 13206

TEL: 315-431-9730 * FAX: 315-431-9731

CANISTER ORDER

8192

12-Feb-20

SHIPPED TO:

Company: Matrix Environmental Technologies, Inc
Contact: Steve Marchetti
Address: 3730 California Rd.
Orchard Park, NY 14127
Phone: (716) 662-0745
Quote ID: 0
Project:
PO:

Submitted By:

MadeBy: DH

Ship Date: 1/9/2020

VIA: UPS - Ground

Due Date: 1/14/2020

Bottle Code	Bottle Type	TEST(s)	QTY
MC1000CC	1L Mini-Can	1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DC	7

Can / Reg ID Description

285	1L Mini-Can - 1061 VI
365	1L Mini-Can - 1314 VI
372	Time-Set Reg - 746 VI
378	Time-Set Reg - 752 VI
381	Time-Set Reg - 755 VI
394	Time-Set Reg - 773 VI
1189	1L Mini-Can - VI
1316	1 L Mini-Can -7642 VI
434	Time-Set Reg - 813 VI
439	Time-Set Reg - 818 VI
440	Time-Set Reg - 819 VI
458	1L Mini-Can - 1361 VI
1178	1L Mini-Can - 1236 VI
1183	1L Mini-Can - 1250 VI

Comments: (7) 1 L @ 24 Hours. SHIP TO: 4570 Green Road, Lockport, NY 14094. WAC 120919 A-C

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

ANALYTICAL RESULTS

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	0			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 5:25:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 5:25:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Acetone	2.7	0.30		ppbV	1	1/20/2020 5:25:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Benzene	0.19	0.15		ppbV	1	1/20/2020 5:25:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 5:25:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Chloroform	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Chloromethane	0.40	0.15		ppbV	1	1/20/2020 5:25:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 5:25:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc

Client Sample ID: Outdoor Air

Lab Order: C2001030

Tag Number: 365,394

Project: Aquino Lake Ave Apts

Collection Date: 1/15/2020

Lab ID: C2001030-001A

Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 11	0.28	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 5:25:00 PM
Heptane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Hexane	0.17	0.15		ppbV	1	1/20/2020 5:25:00 PM
Isopropyl alcohol	0.94	0.15		ppbV	1	1/20/2020 5:25:00 PM
m&p-Xylene	0.11	0.30	J	ppbV	1	1/20/2020 5:25:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 5:25:00 PM
Methyl Ethyl Ketone	0.38	0.30		ppbV	1	1/20/2020 5:25:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 5:25:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Methylene chloride	0.17	0.15		ppbV	1	1/20/2020 5:25:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Styrene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Toluene	0.28	0.15		ppbV	1	1/20/2020 5:25:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 5:25:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 5:25:00 PM
Surr: Bromofluorobenzene	98.0	70-130		%REC	1	1/20/2020 5:25:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 5:25:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 5:25:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 5:25:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 5:25:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 5:25:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
Acetone	6.4	0.71		ug/m3	1	1/20/2020 5:25:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 5:25:00 PM
Benzene	0.61	0.48		ug/m3	1	1/20/2020 5:25:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 5:25:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 5:25:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 5:25:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 5:25:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 5:25:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 5:25:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 5:25:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 5:25:00 PM
Chloromethane	0.83	0.31		ug/m3	1	1/20/2020 5:25:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 5:25:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 5:25:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 5:25:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	1/20/2020 5:25:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 5:25:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 5:25:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM

Qualifiers: SC Sub-Contracted
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection
DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 5:25:00 PM
Heptane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 5:25:00 PM
Hexane	0.60	0.53		ug/m3	1	1/20/2020 5:25:00 PM
Isopropyl alcohol	2.3	0.37		ug/m3	1	1/20/2020 5:25:00 PM
m&p-Xylene	0.48	1.3	J	ug/m3	1	1/20/2020 5:25:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
Methyl Ethyl Ketone	1.1	0.88		ug/m3	1	1/20/2020 5:25:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 5:25:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 5:25:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 5:25:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 5:25:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 5:25:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	1/20/2020 5:25:00 PM
Toluene	1.1	0.57		ug/m3	1	1/20/2020 5:25:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 5:25:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 5:25:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
		FLD				Analyst:
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE						
		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:12:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 6:12:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Acetone	6.2	3.0		ppbV	10	1/21/2020 2:43:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Benzene	0.29	0.15		ppbV	1	1/20/2020 6:12:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 6:12:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Chloroform	0.56	0.15		ppbV	1	1/20/2020 6:12:00 PM
Chloromethane	0.56	0.15		ppbV	1	1/20/2020 6:12:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:12:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Ethyl acetate	0.70	0.15		ppbV	1	1/20/2020 6:12:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Ethylbenzene	0.12	0.15	J	ppbV	1	1/20/2020 6:12:00 PM
Freon 11	0.27	0.15		ppbV	1	1/20/2020 6:12:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 6:12:00 PM
Heptane	0.14	0.15	J	ppbV	1	1/20/2020 6:12:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Hexane	0.17	0.15		ppbV	1	1/20/2020 6:12:00 PM
Isopropyl alcohol	3.3	1.5		ppbV	10	1/21/2020 2:43:00 AM
m&p-Xylene	0.39	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl Ethyl Ketone	0.45	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Methylene chloride	0.17	0.15		ppbV	1	1/20/2020 6:12:00 PM
o-Xylene	0.13	0.15	J	ppbV	1	1/20/2020 6:12:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Styrene	0.17	0.15		ppbV	1	1/20/2020 6:12:00 PM
Tetrachloroethylene	2.4	1.5		ppbV	10	1/21/2020 2:43:00 AM
Tetrahydrofuran	0.27	0.15		ppbV	1	1/20/2020 6:12:00 PM
Toluene	0.88	0.15		ppbV	1	1/20/2020 6:12:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Trichloroethene	0.14	0.030		ppbV	1	1/20/2020 6:12:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 6:12:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:12:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:12:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:12:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:12:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 6:12:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 6:12:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 6:12:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
Acetone	15	7.1		ug/m3	10	1/21/2020 2:43:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 6:12:00 PM
Benzene	0.93	0.48		ug/m3	1	1/20/2020 6:12:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 6:12:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 6:12:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 6:12:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 6:12:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 6:12:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 6:12:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 6:12:00 PM
Chloroform	2.7	0.73		ug/m3	1	1/20/2020 6:12:00 PM
Chloromethane	1.2	0.31		ug/m3	1	1/20/2020 6:12:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:12:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:12:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 6:12:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 6:12:00 PM
Ethyl acetate	2.5	0.54		ug/m3	1	1/20/2020 6:12:00 PM
Ethylbenzene	0.52	0.65	J	ug/m3	1	1/20/2020 6:12:00 PM
Freon 11	1.5	0.84		ug/m3	1	1/20/2020 6:12:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte, Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc

Client Sample ID: Building 1-Indoor

Lab Order: C2001030

Tag Number: 438,381

Project: Aquino Lake Ave Apts

Collection Date: 1/15/2020

Lab ID: C2001030-002A

Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 6:12:00 PM
Heptane	0.57	0.61	J	ug/m3	1	1/20/2020 6:12:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 6:12:00 PM
Hexane	0.60	0.53		ug/m3	1	1/20/2020 6:12:00 PM
Isopropyl alcohol	8.1	3.7		ug/m3	10	1/21/2020 2:43:00 AM
m&p-Xylene	1.7	1.3		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 6:12:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 6:12:00 PM
o-Xylene	0.56	0.65	J	ug/m3	1	1/20/2020 6:12:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 6:12:00 PM
Styrene	0.72	0.64		ug/m3	1	1/20/2020 6:12:00 PM
Tetrachloroethylene	16	10		ug/m3	10	1/21/2020 2:43:00 AM
Tetrahydrofuran	0.80	0.44		ug/m3	1	1/20/2020 6:12:00 PM
Toluene	3.3	0.57		ug/m3	1	1/20/2020 6:12:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 6:12:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:12:00 PM
Trichloroethene	0.75	0.16		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:59:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2,4-Trimethylbenzene	0.18	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,3,5-Trimethylbenzene	0.11	0.15	J	ppbV	1	1/20/2020 6:59:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 6:59:00 PM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	1/20/2020 6:59:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Acetone	19	3.0		ppbV	10	1/21/2020 3:28:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Benzene	0.91	0.15		ppbV	1	1/20/2020 6:59:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Carbon tetrachloride	0.090	0.030		ppbV	1	1/20/2020 6:59:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Chloroform	0.33	0.15		ppbV	1	1/20/2020 6:59:00 PM
Chloromethane	1.3	0.15		ppbV	1	1/20/2020 6:59:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:59:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Ethyl acetate	1.9	0.15		ppbV	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc

Client Sample ID: Apartment A1-Indoor

Lab Order: C2001030

Tag Number: 1178,434

Project: Aquino Lake Ave Apts

Collection Date: 1/15/2020

Lab ID: C2001030-003A

Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Ethylbenzene	0.24	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 11	0.23	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 6:59:00 PM
Heptane	0.51	0.15		ppbV	1	1/20/2020 6:59:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Hexane	0.53	0.15		ppbV	1	1/20/2020 6:59:00 PM
Isopropyl alcohol	20	1.5		ppbV	10	1/21/2020 3:28:00 AM
m&p-Xylene	0.78	0.30		ppbV	1	1/20/2020 6:59:00 PM
Methyl Butyl Ketone	0.14	0.30	J	ppbV	1	1/20/2020 6:59:00 PM
Methyl Ethyl Ketone	1.5	0.30		ppbV	1	1/20/2020 6:59:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 6:59:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Methylene chloride	0.22	0.15		ppbV	1	1/20/2020 6:59:00 PM
o-Xylene	0.24	0.15		ppbV	1	1/20/2020 6:59:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Styrene	0.24	0.15		ppbV	1	1/20/2020 6:59:00 PM
Tetrachloroethylene	0.10	0.15	J	ppbV	1	1/20/2020 6:59:00 PM
Tetrahydrofuran	0.44	0.15		ppbV	1	1/20/2020 6:59:00 PM
Toluene	2.8	1.5		ppbV	10	1/21/2020 3:28:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 6:59:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 6:59:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	1/20/2020 6:59:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:59:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:59:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:59:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
1,2,4-Trimethylbenzene	0.88	0.74		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 6:59:00 PM
1,3,5-Trimethylbenzene	0.54	0.74	J	ug/m3	1	1/20/2020 6:59:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 6:59:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	1/20/2020 6:59:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 6:59:00 PM
Acetone	44	7.1		ug/m3	10	1/21/2020 3:28:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 6:59:00 PM
Benzene	2.9	0.48		ug/m3	1	1/20/2020 6:59:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 6:59:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 6:59:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 6:59:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 6:59:00 PM
Carbon tetrachloride	0.57	0.19		ug/m3	1	1/20/2020 6:59:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 6:59:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 6:59:00 PM
Chloroform	1.6	0.73		ug/m3	1	1/20/2020 6:59:00 PM
Chloromethane	2.7	0.31		ug/m3	1	1/20/2020 6:59:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:59:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 6:59:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 6:59:00 PM
Ethyl acetate	6.8	0.54		ug/m3	1	1/20/2020 6:59:00 PM
Ethylbenzene	1.0	0.65		ug/m3	1	1/20/2020 6:59:00 PM
Freon 11	1.3	0.84		ug/m3	1	1/20/2020 6:59:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 6:59:00 PM
Heptane	2.1	0.61		ug/m3	1	1/20/2020 6:59:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 6:59:00 PM
Hexane	1.9	0.53		ug/m3	1	1/20/2020 6:59:00 PM
Isopropyl alcohol	49	3.7		ug/m3	10	1/21/2020 3:28:00 AM
m&p-Xylene	3.4	1.3		ug/m3	1	1/20/2020 6:59:00 PM
Methyl Butyl Ketone	0.57	1.2	J	ug/m3	1	1/20/2020 6:59:00 PM
Methyl Ethyl Ketone	4.4	0.88		ug/m3	1	1/20/2020 6:59:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:59:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 6:59:00 PM
Methylene chloride	0.76	0.52		ug/m3	1	1/20/2020 6:59:00 PM
o-Xylene	1.0	0.65		ug/m3	1	1/20/2020 6:59:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 6:59:00 PM
Styrene	1.0	0.64		ug/m3	1	1/20/2020 6:59:00 PM
Tetrachloroethylene	0.68	1.0	J	ug/m3	1	1/20/2020 6:59:00 PM
Tetrahydrofuran	1.3	0.44		ug/m3	1	1/20/2020 6:59:00 PM
Toluene	11	5.7		ug/m3	10	1/21/2020 3:28:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 6:59:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:59:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 7:46:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2,4-Trimethylbenzene	0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dichloroethane	0.20	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,3,5-Trimethylbenzene	0.13	0.15	J	ppbV	1	1/20/2020 7:46:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 7:46:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Acetone	55	12		ppbV	40	1/21/2020 4:59:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Benzene	0.28	0.15		ppbV	1	1/20/2020 7:46:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 7:46:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Chloroform	0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Chloromethane	5.0	1.5		ppbV	10	1/21/2020 4:14:00 AM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 7:46:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Ethyl acetate	0.71	0.15		ppbV	1	1/20/2020 7:46:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VG-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.18	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 11	0.28	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 7:46:00 PM
Heptane	1.2	0.15		ppbV	1	1/20/2020 7:46:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Hexane	0.30	0.15		ppbV	1	1/20/2020 7:46:00 PM
Isopropyl alcohol	6.0	1.5		ppbV	10	1/21/2020 4:14:00 AM
m&p-Xylene	0.66	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl Ethyl Ketone	0.72	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Methylene chloride	0.17	0.15		ppbV	1	1/20/2020 7:46:00 PM
o-Xylene	0.27	0.15		ppbV	1	1/20/2020 7:46:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Styrene	0.11	0.15	J	ppbV	1	1/20/2020 7:46:00 PM
Tetrachloroethylene	0.10	0.15	J	ppbV	1	1/20/2020 7:46:00 PM
Tetrahydrofuran	0.37	0.15		ppbV	1	1/20/2020 7:46:00 PM
Toluene	0.85	0.15		ppbV	1	1/20/2020 7:46:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 7:46:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 7:46:00 PM
Surr: Bromofluorobenzene	103	70-130		%REC	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 7:46:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 7:46:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 7:46:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
1,2,4-Trimethylbenzene	0.74	0.74		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichloroethane	0.81	0.61		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 7:46:00 PM
1,3,5-Trimethylbenzene	0.64	0.74	J	ug/m3	1	1/20/2020 7:46:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 7:46:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 7:46:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 7:46:00 PM
Acetone	130	28		ug/m3	40	1/21/2020 4:59:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 7:46:00 PM
Benzene	0.89	0.48		ug/m3	1	1/20/2020 7:46:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 7:46:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 7:46:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 7:46:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 7:46:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 7:46:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 7:46:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 7:46:00 PM
Chloroform	0.73	0.73		ug/m3	1	1/20/2020 7:46:00 PM
Chloromethane	10	3.1		ug/m3	10	1/21/2020 4:14:00 AM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 7:46:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 7:46:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 7:46:00 PM
Ethyl acetate	2.6	0.54		ug/m3	1	1/20/2020 7:46:00 PM
Ethylbenzene	0.78	0.65		ug/m3	1	1/20/2020 7:46:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 7:46:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 7:46:00 PM
Heptane	5.0	0.61		ug/m3	1	1/20/2020 7:46:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 7:46:00 PM
Hexane	1.1	0.53		ug/m3	1	1/20/2020 7:46:00 PM
Isopropyl alcohol	15	3.7		ug/m3	10	1/21/2020 4:14:00 AM
m&p-Xylene	2.9	1.3		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Ethyl Ketone	2.1	0.88		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 7:46:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 7:46:00 PM
o-Xylene	1.2	0.65		ug/m3	1	1/20/2020 7:46:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 7:46:00 PM
Styrene	0.47	0.64	J	ug/m3	1	1/20/2020 7:46:00 PM
Tetrachloroethylene	0.68	1.0	J	ug/m3	1	1/20/2020 7:46:00 PM
Tetrahydrofuran	1.1	0.44		ug/m3	1	1/20/2020 7:46:00 PM
Toluene	3.2	0.57		ug/m3	1	1/20/2020 7:46:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 7:46:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 7:46:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 8:33:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2,4-Trimethylbenzene	0.13	0.15	J	ppbV	1	1/20/2020 8:33:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 8:33:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Acetone	7.8	3.0		ppbV	10	1/21/2020 5:44:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Benzene	0.18	0.15		ppbV	1	1/20/2020 8:33:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 8:33:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Chloroform	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Chloromethane	0.44	0.15		ppbV	1	1/20/2020 8:33:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 8:33:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Ethyl acetate	0.18	0.15		ppbV	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 11	0.27	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 12	0.59	0.15		ppbV	1	1/20/2020 8:33:00 PM
Heptane	0.11	0.15	J	ppbV	1	1/20/2020 8:33:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Hexane	0.16	0.15		ppbV	1	1/20/2020 8:33:00 PM
Isopropyl alcohol	1.3	0.15		ppbV	1	1/20/2020 8:33:00 PM
m&p-Xylene	0.24	0.30	J	ppbV	1	1/20/2020 8:33:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 8:33:00 PM
Methyl Ethyl Ketone	0.43	0.30		ppbV	1	1/20/2020 8:33:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 8:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Methylene chloride	0.16	0.15		ppbV	1	1/20/2020 8:33:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Styrene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Tetrachloroethylene	0.12	0.15	J	ppbV	1	1/20/2020 8:33:00 PM
Tetrahydrofuran	0.23	0.15		ppbV	1	1/20/2020 8:33:00 PM
Toluene	0.42	0.15		ppbV	1	1/20/2020 8:33:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 8:33:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 8:33:00 PM
Surr: Bromofluorobenzene	102	70-130		%REC	1	1/20/2020 8:33:00 PM

Qualifiers: SC Sub-Contracted
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection
DL Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 8:33:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 8:33:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 8:33:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
1,2,4-Trimethylbenzene	0.64	0.74	J	ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 8:33:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 8:33:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 8:33:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 8:33:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 8:33:00 PM
Acetone	19	7.1		ug/m3	10	1/21/2020 5:44:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 8:33:00 PM
Benzene	0.57	0.48		ug/m3	1	1/20/2020 8:33:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 8:33:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 8:33:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 8:33:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 8:33:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 8:33:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 8:33:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 8:33:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 8:33:00 PM
Chloromethane	0.91	0.31		ug/m3	1	1/20/2020 8:33:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 8:33:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 8:33:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 8:33:00 PM
Ethyl acetate	0.65	0.54		ug/m3	1	1/20/2020 8:33:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 8:33:00 PM
Freon 11	1.5	0.84		ug/m3	1	1/20/2020 8:33:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TQ-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 8:33:00 PM
Heptane	0.45	0.61	J	ug/m3	1	1/20/2020 8:33:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 8:33:00 PM
Hexane	0.56	0.53		ug/m3	1	1/20/2020 8:33:00 PM
Isopropyl alcohol	3.1	0.37		ug/m3	1	1/20/2020 8:33:00 PM
m&p-Xylene	1.0	1.3	J	ug/m3	1	1/20/2020 8:33:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	1/20/2020 8:33:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 8:33:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	1/20/2020 8:33:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 8:33:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 8:33:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 8:33:00 PM
Tetrachloroethylene	0.81	1.0	J	ug/m3	1	1/20/2020 8:33:00 PM
Tetrahydrofuran	0.68	0.44		ug/m3	1	1/20/2020 8:33:00 PM
Toluene	1.6	0.57		ug/m3	1	1/20/2020 8:33:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 8:33:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 8:33:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 9:20:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2,4-Trimethylbenzene	0.12	0.15	J	ppbV	1	1/20/2020 9:20:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,3-Dichlorobenzene	0.18	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 9:20:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Acetone	7.4	3.0		ppbV	10	1/21/2020 6:30:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Benzene	0.18	0.15		ppbV	1	1/20/2020 9:20:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 9:20:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Chloroform	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 9:20:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Ethyl acetate	0.19	0.15		ppbV	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Ethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 11	0.28	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 12	0.60	0.15		ppbV	1	1/20/2020 9:20:00 PM
Heptane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Hexane	0.19	0.15		ppbV	1	1/20/2020 9:20:00 PM
Isopropyl alcohol	1.0	0.15		ppbV	1	1/20/2020 9:20:00 PM
m&p-Xylene	0.24	0.30	J	ppbV	1	1/20/2020 9:20:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 9:20:00 PM
Methyl Ethyl Ketone	0.38	0.30		ppbV	1	1/20/2020 9:20:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 9:20:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Methylene chloride	0.18	0.15		ppbV	1	1/20/2020 9:20:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Styrene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Tetrahydrofuran	0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Toluene	0.42	0.15		ppbV	1	1/20/2020 9:20:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 9:20:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 9:20:00 PM
Surr: Bromofluorobenzene	100	70-130		%REC	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 9:20:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 9:20:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
1,2,4-Trimethylbenzene	0.59	0.74	J	ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 9:20:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 9:20:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 9:20:00 PM
1,3-Dichlorobenzene	1.1	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 9:20:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 9:20:00 PM
Acetone	18	7.1		ug/m3	10	1/21/2020 6:30:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 9:20:00 PM
Benzene	0.57	0.48		ug/m3	1	1/20/2020 9:20:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 9:20:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 9:20:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 9:20:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 9:20:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 9:20:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 9:20:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 9:20:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 9:20:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	1/20/2020 9:20:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 9:20:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 9:20:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 9:20:00 PM
Ethyl acetate	0.68	0.54		ug/m3	1	1/20/2020 9:20:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 9:20:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 9:20:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	3.0	0.74		ug/m3	1	1/20/2020 9:20:00 PM
Heptane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 9:20:00 PM
Hexane	0.67	0.53		ug/m3	1	1/20/2020 9:20:00 PM
Isopropyl alcohol	2.6	0.37		ug/m3	1	1/20/2020 9:20:00 PM
m&p-Xylene	1.0	1.3	J	ug/m3	1	1/20/2020 9:20:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
Methyl Ethyl Ketone	1.1	0.88		ug/m3	1	1/20/2020 9:20:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 9:20:00 PM
Methylene chloride	0.63	0.52		ug/m3	1	1/20/2020 9:20:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 9:20:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 9:20:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 9:20:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
Tetrahydrofuran	0.44	0.44		ug/m3	1	1/20/2020 9:20:00 PM
Toluene	1.6	0.57		ug/m3	1	1/20/2020 9:20:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 9:20:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 9:20:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 9:20:00 PM

Qualifiers: SC Sub-Contracted . Results reported are not blank corrected
B Analyte detected in the associated Method Blank E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit
JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection
S Spike Recovery outside accepted recovery limits DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	0			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 10:06:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2,4-Trimethylbenzene	0.97	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,3,5-Trimethylbenzene	0.27	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 10:06:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
4-ethyltoluene	0.28	0.15		ppbV	1	1/20/2020 10:06:00 PM
Acetone	20	3.0		ppbV	10	1/21/2020 7:15:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Benzene	0.86	0.15		ppbV	1	1/20/2020 10:06:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 10:06:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Chloroform	0.11	0.15	J	ppbV	1	1/20/2020 10:06:00 PM
Chloromethane	0.89	0.15		ppbV	1	1/20/2020 10:06:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 10:06:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Cyclohexane	0.61	0.15		ppbV	1	1/20/2020 10:06:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Ethyl acetate	0.61	0.15		ppbV	1	1/20/2020 10:06:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.62	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 11	0.30	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 12	0.59	0.15		ppbV	1	1/20/2020 10:06:00 PM
Heptane	0.79	0.15		ppbV	1	1/20/2020 10:06:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Hexane	0.37	0.15		ppbV	1	1/20/2020 10:06:00 PM
Isopropyl alcohol	10	1.5		ppbV	10	1/21/2020 7:15:00 AM
m&p-Xylene	2.4	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl Ethyl Ketone	1.1	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Methylene chloride	0.16	0.15		ppbV	1	1/20/2020 10:06:00 PM
o-Xylene	0.81	0.15		ppbV	1	1/20/2020 10:06:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Styrene	0.30	0.15		ppbV	1	1/20/2020 10:06:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Tetrahydrofuran	0.46	0.15		ppbV	1	1/20/2020 10:06:00 PM
Toluene	3.3	1.5		ppbV	10	1/21/2020 7:15:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 10:06:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 10:06:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	1/20/2020 10:06:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 10:06:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 10:06:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 10:06:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
1,2,4-Trimethylbenzene	4.8	0.74		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 10:06:00 PM
1,3,5-Trimethylbenzene	1.3	0.74		ug/m3	1	1/20/2020 10:06:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 10:06:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 10:06:00 PM
4-ethyltoluene	1.4	0.74		ug/m3	1	1/20/2020 10:06:00 PM
Acetone	47	7.1		ug/m3	10	1/21/2020 7:15:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 10:06:00 PM
Benzene	2.7	0.48		ug/m3	1	1/20/2020 10:06:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 10:06:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 10:06:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 10:06:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 10:06:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 10:06:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 10:06:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 10:06:00 PM
Chloroform	0.54	0.73	J	ug/m3	1	1/20/2020 10:06:00 PM
Chloromethane	1.8	0.31		ug/m3	1	1/20/2020 10:06:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 10:06:00 PM
Cyclohexane	2.1	0.52		ug/m3	1	1/20/2020 10:06:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 10:06:00 PM
Ethyl acetate	2.2	0.54		ug/m3	1	1/20/2020 10:06:00 PM
Ethylbenzene	2.7	0.65		ug/m3	1	1/20/2020 10:06:00 PM
Freon 11	1.7	0.84		ug/m3	1	1/20/2020 10:06:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 10:06:00 PM
Heptane	3.2	0.61		ug/m3	1	1/20/2020 10:06:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 10:06:00 PM
Hexane	1.3	0.53		ug/m3	1	1/20/2020 10:06:00 PM
Isopropyl alcohol	26	3.7		ug/m3	10	1/21/2020 7:15:00 AM
m&p-Xylene	11	1.3		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Ethyl Ketone	3.2	0.88		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 10:06:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	1/20/2020 10:06:00 PM
o-Xylene	3.5	0.65		ug/m3	1	1/20/2020 10:06:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 10:06:00 PM
Styrene	1.3	0.64		ug/m3	1	1/20/2020 10:06:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
Tetrahydrofuran	1.4	0.44		ug/m3	1	1/20/2020 10:06:00 PM
Toluene	12	5.7		ug/m3	10	1/21/2020 7:15:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 10:06:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 10:06:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 10:06:00 PM

Qualifiers: SC Sub-Contracted . Results reported are not blank corrected
B Analyte detected in the associated Method Blank E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit
JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection
S Spike Recovery outside accepted recovery limits DL Detection Limit

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GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

QUALITY CONTROL SUMMARY



CEN TEK LABORATORIES, LLC

Date: 05-Feb-20

QC SUMMARY REPORT SURROGATE RECOVERIES

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apts
Test No: TO-15 Matrix: A

Sample ID	BR4FBZ								
ALCSIUG-012020	102								
ALSCIUGD-012020	101								
AMB1UG-012020	97.0								
C2001030-001A	98.0								
C2001030-002A	101								
C2001030-003A	101								
C2001030-004A	103								
C2001030-005A	102								
C2001030-006A	100								
C2001030-007A	101								

Acronym	Surrogate	QC Limits
BR4FBZ	= Bromofluorobenzene	70-130

* Surrogate recovery outside acceptance limits

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AR012002.D

Tune Time : 20 Jan 2020 10:48 am

Daily Calibration File : C:\HPCHEM\1\DATA\AR012002.D

File	Sample	DL	Surrogate Recovery %	(IS1) 51836	(IS2) 250647	(IS3) 221226
AR012003.D	ALCS1UG-012020	102		50859	240167	212617
AR012004.D	AMB1UG-012020	97		49286	235568	203879
AR012010.D	C2001030-001A	98		44877	216049	185365
AR012011.D	C2001030-002A	101		44673	211949	185863
AR012012.D	C2001030-003A	101		44294	209383	182705
AR012013.D	C2001030-004A	103		43684	205581	176539
AR012014.D	C2001030-005A	102		43265	199717	173549
AR012015.D	C2001030-006A	100		42084	197482	171778
AR012016.D	C2001030-007A	101		41768	196706	172403
AR012019.D	ALSC1UGD-012020	101		47277	225678	198991
AR012022.D	C2001030-002A 10x	97		40404	192104	161527
AR012023.D	C2001030-003A 10x	96		40213	185163	155745
AR012024.D	C2001030-004A 10x	94		37656	179942	152306
AR012025.D	C2001030-004A 40x	95		36580	172505	143387
AR012026.D	C2001030-005A 10x	94		36105	171203	140720
AR012027.D	C2001030-006A 10x	96		36339	168084	144667
AR012028.D	C2001030-007A 10x	98		35503	166360	144069

t - fails 24hr time check * - fails criteria

Created: Wed Feb 05 10:14:25 2020 MSD #1/



Date: 05-Feb-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc

Work Order: C2001030

Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALCS1UG-012020		SampType: LCS		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 15921	
Client ID: ZZZZZ		Batch ID: R15921		TestNo: TO-15				Analysis Date: 1/20/2020		SeqNo: 181776	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0	100	70	130				S
1,1,2,2-Tetrachloroethane	1.010	0.15	1	0	101	70	130				
1,1,2-Trichloroethane	1.040	0.15	1	0	104	70	130				
1,1-Dichloroethane	0.9100	0.15	1	0	91.0	70	130				
1,1-Dichloroethene	1.020	0.040	1	0	102	70	130				
1,2,4-Trichlorobenzene	1.620	0.15	1	0	162	70	130				
1,2,4-Trimethylbenzene	1.020	0.15	1	0	102	70	130				
1,2-Dibromoethane	1.060	0.15	1	0	106	70	130				
1,2-Dichlorobenzene	1.180	0.15	1	0	118	70	130				
1,2-Dichloroethane	0.8900	0.15	1	0	89.0	70	130				
1,2-Dichloropropane	0.9300	0.15	1	0	93.0	70	130				
1,3,5-Trimethylbenzene	1.010	0.15	1	0	101	70	130				
1,3-butadiene	0.7400	0.15	1	0	74.0	70	130				
1,3-Dichlorobenzene	1.270	0.15	1	0	127	70	130				
1,4-Dichlorobenzene	1.290	0.15	1	0	129	70	130				
1,4-Dioxane	1.000	0.30	1	0	100	70	130				
2,2,4-trimethylpentane	0.9000	0.15	1	0	90.0	70	130				
4-ethyltoluene	1.060	0.15	1	0	106	70	130				
Acetone	0.9100	0.30	1	0	91.0	70	130				
Allyl chloride	0.8000	0.15	1	0	80.0	70	130				
Benzene	1.000	0.15	1	0	100	70	130				
Benzyl chloride	1.210	0.15	1	0	121	70	130				
Bromodichloromethane	0.9600	0.15	1	0	96.0	70	130				
Bromoform	0.9800	0.15	1	0	98.0	70	130				
Bromomethane	0.7900	0.15	1	0	79.0	70	130				

Qualifiers:	J	S	Results reported are not blank corrected	Analyte detected below quantitation limit	Spike Recovery outside accepted recovery limits	E	Estimated Value above quantitation range		H	Holding times for preparation or analysis exceeded	
							ND	Not Detected at the Limit of Detection		R	RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALCS1UG-012020	SampType: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181776						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.9600	0.15	1	0	96.0	70	130				
Carbon tetrachloride	1.000	0.030	1	0	100	70	130				
Chlorobenzene	1.040	0.15	1	0	104	70	130				
Chloroethane	0.5100	0.15	1	0	51.0	70	130				
Chloroform	0.9600	0.15	1	0	96.0	70	130				
Chloromethane	0.8000	0.15	1	0	80.0	70	130				
cis-1,2-Dichloroethene	0.9100	0.040	1	0	91.0	70	130				
cis-1,3-Dichloropropene	0.9800	0.15	1	0	98.0	70	130				
Cyclohexane	0.9000	0.15	1	0	90.0	70	130				
Dibromochloromethane	1.000	0.15	1	0	100	70	130				
Ethyl acetate	0.8500	0.15	1	0	85.0	70	130				
Ethylbenzene	0.9800	0.15	1	0	98.0	70	130				
Freon 11	1.010	0.15	1	0	101	70	130				
Freon 113	1.020	0.15	1	0	102	70	130				
Freon 114	0.9700	0.15	1	0	97.0	70	130				
Freon 12	0.9900	0.15	1	0	99.0	70	130				
Heptane	0.8500	0.15	1	0	85.0	70	130				
Hexachloro-1,3-butadiene	1.170	0.15	1	0	117	70	130				
Hexane	0.8900	0.15	1	0	89.0	70	130				
Isopropyl alcohol	0.8600	0.15	1	0	86.0	70	130				
m&p-Xylene	1.970	0.30	2	0	98.5	70	130				
Methyl Butyl Ketone	0.9100	0.30	1	0	91.0	70	130				
Methyl Ethyl Ketone	0.9500	0.30	1	0	95.0	70	130				
Methyl Isobutyl Ketone	0.8400	0.30	1	0	84.0	70	130				
Methyl tert-butyl ether	0.9100	0.15	1	0	91.0	70	130				
Methylene chloride	0.9800	0.15	1	0	98.0	70	130				
o-Xylene	0.9800	0.15	1	0	98.0	70	130				
Propylene	1.000	0.15	1	0	100	70	130				
Styrene	1.030	0.15	1	0	103	70	130				
Tetrachloroethylene	1.080	0.15	1	0	108	70	130				
Tetrahydrofuran	0.8300	0.15	1	0	83.0	70	130				

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 DL Detection Limit
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALCS1UG-012020	SampleType: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181776						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	0.9800	0.15	1	0	98.0	70	130				
trans-1,2-Dichloroethene	0.9100	0.15	1	0	91.0	70	130				
trans-1,3-Dichloropropene	0.9600	0.15	1	0	96.0	70	130				
Trichloroethene	1.160	0.030	1	0	116	70	130				
Vinyl acetate	0.7900	0.15	1	0	79.0	70	130				
Vinyl Bromide	1.020	0.15	1	0	102	70	130				
Vinyl chloride	0.8100	0.040	1	0	81.0	70	130				

Sample ID: ALSC1UGD-012020	SampType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/21/2020	SeqNo: 181777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.9600	0.15	1	0	96.0	70	130	1	4.08	30	
1,1,2,2-Tetrachloroethane	0.9900	0.15	1	0	99.0	70	130	1.01	2.00	30	
1,1,2-Trichloroethane	1.050	0.15	1	0	105	70	130	1.04	0.957	30	
1,1-Dichloroethane	0.9200	0.15	1	0	92.0	70	130	0.91	1.09	30	
1,1-Dichloroethene	1.050	0.040	1	0	105	70	130	1.02	2.90	30	
1,2,4-Trichlorobenzene	1.520	0.15	1	0	152	70	130	1.62	6.37	30	
1,2,4-Trimethylbenzene	1.020	0.15	1	0	102	70	130	1.02	0	30	
1,2-Dibromoethane	1.060	0.15	1	0	106	70	130	1.06	0	30	
1,2-Dichlorobenzene	1.180	0.15	1	0	118	70	130	1.18	0	30	
1,2-Dichloroethane	0.9100	0.15	1	0	91.0	70	130	0.89	2.22	30	
1,2-Dichloropropane	0.9300	0.15	1	0	93.0	70	130	0.93	0	30	
1,3,5-Trimethylbenzene	1.010	0.15	1	0	101	70	130	1.01	0	30	
1,3-butadiene	0.7600	0.15	1	0	76.0	70	130	0.74	2.67	30	
1,3-Dichlorobenzene	1.250	0.15	1	0	125	70	130	1.27	1.59	30	
1,4-Dichlorobenzene	1.290	0.15	1	0	129	70	130	1.29	0	30	
1,4-Dioxane	1.000	0.30	1	0	100	70	130	1	0	30	
2,2,4-trimethylpentane	0.9100	0.15	1	0	91.0	70	130	0.9	1.10	30	
4-ethyltoluene	1.070	0.15	1	0	107	70	130	1.06	0.939	30	

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALSC1UGD-012020		SampType: LCSD		TestCode: 0.20_NYS		Units: ppbv		Prep Date:		RunNo: 15921	
Client ID: ZZZZZ		Batch ID: R15921		TestNo: TO-15		Analysis Date: 1/21/2020		SeqNo: 181777			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Quat
Acetone	1.020	0.30	1	0	102	70	130	0.91	11.4	30	
Allyl chloride	0.8000	0.15	1	0	80.0	70	130	0.8	0	30	
Benzene	0.9900	0.15	1	0	99.0	70	130	1	1.01	30	
Benzyl chloride	0.9800	0.15	1	0	98.0	70	130	1.21	21.0	30	
Bromodichloromethane	0.9100	0.15	1	0	91.0	70	130	0.96	5.35	30	
Bromoform	0.7800	0.15	1	0	78.0	70	130	0.98	22.7	30	
Bromomethane	0.7200	0.15	1	0	72.0	70	130	0.79	9.27	30	
Carbon disulfide	0.9500	0.15	1	0	95.0	70	130	0.96	1.05	30	
Carbon tetrachloride	0.8600	0.030	1	0	86.0	70	130	1	15.1	30	
Chlorobenzene	1.070	0.15	1	0	107	70	130	1.04	2.84	30	
Chloroethane	0.8700	0.15	1	0	87.0	70	130	0.51	52.2	30	R
Chloroform	0.9900	0.15	1	0	99.0	70	130	0.96	3.08	30	
Chloromethane	0.7400	0.15	1	0	74.0	70	130	0.8	7.79	30	
cis-1,2-Dichloroethene	0.9300	0.040	1	0	93.0	70	130	0.91	2.17	30	
cis-1,3-Dichloropropene	0.9600	0.15	1	0	96.0	70	130	0.98	2.06	30	
Cyclohexane	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Dibromochloromethane	0.8800	0.15	1	0	88.0	70	130	1	12.8	30	
Ethyl acetate	0.8400	0.15	1	0	84.0	70	130	0.85	1.18	30	
Ethylbenzene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
Freon 11	1.020	0.15	1	0	102	70	130	1.01	0.985	30	
Freon 113	1.040	0.15	1	0	104	70	130	1.02	1.94	30	
Freon 114	0.9200	0.15	1	0	92.0	70	130	0.97	5.29	30	
Freon 12	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	
Heptane	0.8700	0.15	1	0	87.0	70	130	0.85	2.33	30	
Hexachloro-1,3-butadiene	1.180	0.15	1	0	118	70	130	1.17	0.851	30	
Hexane	0.9100	0.15	1	0	91.0	70	130	0.89	2.22	30	
Isopropyl alcohol	0.8000	0.15	1	0	80.0	70	130	0.86	7.23	30	
m&p-Xylene	2.000	0.30	2	0	100	70	130	1.97	1.51	30	
Methyl Butyl Ketone	0.9200	0.30	1	0	92.0	70	130	0.91	1.09	30	
Methyl Ethyl Ketone	0.9900	0.30	1	0	99.0	70	130	0.95	4.12	30	
Methyl Isobutyl Ketone	0.8400	0.30	1	0	84.0	70	130	0.84	0	30	

Qualifiers:		Results reported are not blank corrected		E		Estimated Value above quantitation range		H		Holding times for preparation or analysis exceeded	
J	S	Analyte detected below quantitation limit	Spike Recovery outside accepted recovery limits	ND	DL	Not Detected at the Limit of Detection	Detection Limit	R	R	RPD outside accepted recovery limits	

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apis

TestCode: 0.20_NYS

Sample ID: ALSC1UGD-012020		Sample Type: LCSD		TestCode: 0.20_NYS		Units: ppbv		Prep Date:		RunNo: 15921	
Client ID: ZZZZZ		Batch ID: R15921		TestNo: TO-15		Analysis Date: 1/21/2020		SeqNo: 181777			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.9200	0.15	1	0	92.0	70	130	0.91	1.09	30	
Methylene chloride	0.9900	0.15	1	0	99.0	70	130	0.98	1.02	30	
o-Xylene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
Propylene	0.9400	0.15	1	0	94.0	70	130	1	6.19	30	
Styrene	1.050	0.15	1	0	105	70	130	1.03	1.92	30	
Tetrachloroethylene	1.110	0.15	1	0	111	70	130	1.08	2.74	30	
Tetrahydrofuran	0.8400	0.15	1	0	84.0	70	130	0.83	1.20	30	
Toluene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
trans-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130	0.91	2.17	30	
trans-1,3-Dichloropropene	0.9200	0.15	1	0	92.0	70	130	0.96	4.26	30	
Trichloroethene	1.180	0.030	1	0	118	70	130	1.16	1.71	30	
Vinyl acetate	0.7400	0.15	1	0	74.0	70	130	0.79	6.54	30	
Vinyl Bromide	1.020	0.15	1	0	102	70	130	1.02	0	30	
Vinyl chloride	0.7700	0.040	1	0	77.0	70	130	0.81	5.06	30	

Qualifiers:	J	S	Results reported are not blank corrected	Analyte detected below quantitation limit	Spike Recovery outside accepted recovery limits	E	Estimated Value above quantitation range		H	Holding times for preparation or analysis exceeded	
							ND	DL		R	RPD outside accepted recovery limits



CENTEK LABORATORIES, LLC

Date: 05-Feb-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc

Work Order: C2001030

Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: AMB1UG-012020	SampleType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.040	0.040									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: AMB1UG-012020	SampType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/29/2020	SeqNo: 181775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.030	0.030									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.040	0.040									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: AMB1UG-012020	SampleType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.030	0.030									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.040	0.040									

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 DL Detection Limit

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Propylene	0.3	0.32	0.31	0.3	0.3	0.33	0.32	0.33	0.32	0.01	105.2%	0.040
Freon 12	0.3	0.32	0.32	0.32	0.33	0.3	0.33	0.31	0.32	0.01	106.2%	0.034
Chloromethane	0.3	0.32	0.32	0.3	0.31	0.28	0.31	0.32	0.31	0.01	102.9%	0.046
Freon 114	0.3	0.31	0.31	0.3	0.3	0.29	0.31	0.3	0.30	0.01	101.0%	0.024
Vinyl Chloride	0.3	0.27	0.29	0.28	0.28	0.28	0.27	0.27	0.28	0.01	92.4%	0.024
Butane	0.3	0.32	0.31	0.31	0.31	0.28	0.29	0.29	0.30	0.01	100.5%	0.046
1,3-butadiene	0.3	0.3	0.29	0.29	0.3	0.28	0.29	0.29	0.29	0.01	97.1%	0.022
Bromomethane	0.3	0.29	0.3	0.31	0.32	0.31	0.32	0.28	0.30	0.02	101.4%	0.048
Chloroethane	0.3	0.3	0.29	0.31	0.31	0.27	0.29	0.29	0.29	0.01	98.1%	0.044
Ethanol	0.3	0.28	0.35	0.39	0.28	0.24	0.31	0.34	0.31	0.05	104.3%	0.160
Acrolein	0.3	0.3	0.29	0.34	0.29	0.31	0.32	0.28	0.30	0.02	101.4%	0.065
Vinyl Bromide	0.3	0.32	0.3	0.31	0.31	0.29	0.31	0.3	0.31	0.01	101.9%	0.031
Freon 11	0.3	0.33	0.31	0.32	0.32	0.3	0.31	0.3	0.31	0.01	104.3%	0.035
Acetone	0.3	0.31	0.28	0.28	0.26	0.21	0.32	0.3	0.28	0.04	93.3%	0.116
Pentane	0.3	0.32	0.29	0.3	0.31	0.21	0.3	0.29	0.29	0.04	96.2%	0.114
Isopropyl alcohol	0.3	0.29	0.23	0.29	0.23	0.26	0.25	0.29	0.26	0.03	87.6%	0.086
1,1-dichloroethene	0.3	0.31	0.29	0.28	0.29	0.28	0.29	0.28	0.29	0.01	96.2%	0.034
Freon 113	0.3	0.32	0.3	0.31	0.32	0.3	0.33	0.32	0.31	0.01	104.8%	0.036
t-Butyl alcohol	0.3	0.29	0.22	0.26	0.39	0.24	0.26	0.27	0.28	0.06	91.9%	0.173
Methylene chloride	0.3	0.32	0.31	0.29	0.33	0.31	0.32	0.32	0.31	0.01	104.8%	0.040
Allyl chloride	0.3	0.31	0.29	0.32	0.32	0.3	0.33	0.31	0.31	0.01	103.8%	0.042
Carbon disulfide	0.3	0.31	0.31	0.3	0.32	0.31	0.34	0.33	0.32	0.01	105.7%	0.043
trans-1,2-dichloroethene	0.3	0.31	0.3	0.31	0.32	0.29	0.33	0.32	0.31	0.01	103.8%	0.042
methyl tert-butyl ether	0.3	0.31	0.28	0.3	0.28	0.26	0.31	0.31	0.29	0.02	97.6%	0.062
1,1-dichloroethane	0.3	0.33	0.32	0.32	0.33	0.31	0.33	0.33	0.32	0.01	108.1%	0.025
Vinyl acetate	0.3	0.29	0.29	0.29	0.31	0.28	0.3	0.3	0.29	0.01	98.1%	0.031
Methyl Ethyl Ketone	0.3	0.29	0.29	0.27	0.24	0.21	0.3	0.32	0.27	0.04	91.4%	0.119
cis-1,2-dichloroethene	0.3	0.31	0.29	0.3	0.31	0.21	0.32	0.31	0.29	0.04	97.6%	0.119
Hexane	0.3	0.32	0.29	0.31	0.3	0.31	0.34	0.3	0.31	0.02	103.3%	0.051
Ethyl acetate	0.3	0.3	0.27	0.29	0.23	0.21	0.3	0.33	0.28	0.04	91.9%	0.133
Chloroform	0.3	0.33	0.31	0.31	0.33	0.31	0.33	0.32	0.32	0.01	106.7%	0.031
Tetrahydrofuran	0.3	0.31	0.26	0.31	0.26	0.25	0.31	0.32	0.29	0.03	96.2%	0.095
1,2-dichloroethane	0.3	0.33	0.31	0.31	0.32	0.31	0.33	0.32	0.32	0.01	106.2%	0.028
1,1,1-trichloroethane	0.3	0.33	0.31	0.33	0.32	0.31	0.32	0.34	0.32	0.01	107.6%	0.035
Cyclohexane	0.3	0.31	0.29	0.3	0.3	0.31	0.31	0.33	0.31	0.01	102.4%	0.039
Carbon tetrachloride	0.3	0.29	0.28	0.3	0.29	0.28	0.29	0.29	0.29	0.01	96.2%	0.022
Benzene	0.3	0.32	0.31	0.32	0.32	0.31	0.33	0.35	0.32	0.01	107.6%	0.043

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Methyl methacrylate	0.3	0.27	0.24	0.25	0.21	0.2	0.28	0.29	0.25	0.03	82.9%	0.108
1,4-dioxane	0.3	0.28	0.2	0.25	0.39	0.2	0.24	0.27	0.26	0.06	87.1%	0.203
2,2,4-trimethylpentane	0.3	0.3	0.29	0.31	0.31	0.3	0.32	0.33	0.31	0.01	102.9%	0.042
Heptane	0.3	0.29	0.29	0.31	0.3	0.29	0.3	0.32	0.30	0.01	100.0%	0.036
Trichloroethene	0.3	0.28	0.27	0.27	0.28	0.27	0.28	0.28	0.28	0.01	91.9%	0.017
1,2-dichloropropane	0.3	0.31	0.31	0.32	0.33	0.31	0.35	0.35	0.33	0.02	108.6%	0.057
Bromodichloromethane	0.3	0.32	0.31	0.32	0.33	0.32	0.34	0.33	0.32	0.01	108.1%	0.031
cis-1,3-dichloropropene	0.3	0.28	0.29	0.3	0.3	0.29	0.32	0.3	0.30	0.01	99.0%	0.039
trans-1,3-dichloropropene	0.3	0.3	0.3	0.31	0.3	0.29	0.29	0.32	0.30	0.01	100.5%	0.034
1,1,2-trichloroethane	0.3	0.32	0.31	0.31	0.32	0.31	0.33	0.35	0.32	0.01	107.1%	0.046
Toluene	0.3	0.29	0.28	0.29	0.3	0.29	0.3	0.33	0.30	0.02	99.0%	0.050
Methyl isobutyl Ketone	0.3	0.28	0.23	0.26	0.36	0.26	0.27	0.26	0.27	0.04	91.4%	0.128
Dibromochloromethane	0.3	0.33	0.32	0.34	0.33	0.33	0.34	0.34	0.33	0.01	111.0%	0.024
Methyl Butyl Ketone	0.3	0.23	0.24	0.26	0.3	0.29	0.25	0.23	0.26	0.03	85.7%	0.088
1,2-dibromoethane	0.3	0.32	0.32	0.32	0.33	0.31	0.33	0.35	0.33	0.01	108.6%	0.040
Tetrachloroethylene	0.3	0.32	0.32	0.32	0.33	0.32	0.33	0.34	0.33	0.01	108.6%	0.025
Chlorobenzene	0.3	0.32	0.32	0.32	0.31	0.31	0.33	0.34	0.32	0.01	107.1%	0.034
Ethylbenzene	0.3	0.28	0.27	0.28	0.27	0.26	0.28	0.29	0.28	0.01	91.9%	0.031
m&p-xylene	0.6	0.51	0.5	0.51	0.5	0.48	0.5	0.53	0.50	0.02	84.0%	0.048
Nonane	0.3	0.24	0.26	0.27	0.25	0.25	0.28	0.28	0.26	0.02	87.1%	0.049
Styrene	0.3	0.26	0.25	0.26	0.24	0.24	0.27	0.27	0.26	0.01	85.2%	0.040
Bromoform	0.3	0.32	0.32	0.33	0.31	0.32	0.33	0.33	0.32	0.01	107.6%	0.024
o-xylene	0.3	0.27	0.28	0.28	0.27	0.27	0.28	0.28	0.28	0.01	91.9%	0.017
Cumene	0.3	0.26	0.26	0.26	0.24	0.24	0.26	0.28	0.26	0.01	85.7%	0.043
Bromofluorobenzene	1	0.97	0.97	0.95	0.95	0.95	0.93	0.95	0.95	0.01	95.3%	0.043
1,1,2,2-tetrachloroethane	0.3	0.33	0.31	0.33	0.31	0.31	0.37	0.39	0.34	0.03	111.9%	0.101
Propylbenzene	0.3	0.26	0.26	0.26	0.23	0.22	0.26	0.27	0.25	0.02	83.8%	0.059
2-Chlorotoluene	0.3	0.28	0.28	0.28	0.26	0.26	0.28	0.3	0.28	0.01	92.4%	0.043
4-ethyltoluene	0.3	0.24	0.24	0.24	0.21	0.21	0.24	0.26	0.23	0.02	78.1%	0.057
1,3,5-trimethylbenzene	0.3	0.26	0.25	0.26	0.22	0.21	0.25	0.27	0.25	0.02	81.9%	0.070
1,2,4-trimethylbenzene	0.3	0.25	0.24	0.24	0.2	0.2	0.24	0.26	0.23	0.02	77.6%	0.074
1,3-dichlorobenzene	0.3	0.28	0.28	0.29	0.25	0.26	0.27	0.29	0.27	0.02	91.4%	0.048
benzyl chloride	0.3	0.26	0.26	0.26	0.24	0.19	0.26	0.29	0.25	0.03	83.8%	0.097
1,4-dichlorobenzene	0.3	0.27	0.26	0.27	0.24	0.25	0.26	0.28	0.26	0.01	87.1%	0.042
1,2,3-trimethylbenzene	0.3	0.24	0.22	0.23	0.19	0.19	0.24	0.25	0.22	0.02	74.3%	0.076
1,2-dichlorobenzene	0.3	0.29	0.27	0.29	0.25	0.25	0.29	0.3	0.28	0.02	92.4%	0.065
1,2,4-trichlorobenzene	0.3	0.26	0.21	0.22	0.19	0.2	0.21	0.25	0.22	0.03	73.3%	0.081
Naphthalene	0.3	0.2	0.2	0.21	0.22	0.18	0.19	0.21	0.20	0.01	67.1%	0.042
Hexachloro-1,3-butadiene	0.3	0.3	0.26	0.28	0.23	0.24	0.3	0.32	0.28	0.03	91.9%	0.106

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Vinyl Chloride	0.1	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.01	114.3%	0.017
1,1-dichloroethene	0.1	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.00	121.4%	0.012
1,1-dichloroethane	0.1	0.13	0.12	0.13	0.13	0.14	0.13	0.13	0.13	0.01	130.0%	0.018
cis-1,2-dichloroethene	0.1	0.12	0.11	0.11	0.11	0.13	0.13	0.13	0.12	0.01	120.0%	0.031
Carbon tetrachloride	0.1	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.12	0.00	117.1%	0.015
Trichloroethene	0.1	0.1	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.00	108.6%	0.012
Bromofluorobenzene	1	0.88	0.84	0.86	0.85	0.85	0.85	0.85	0.85	0.01	85.4%	0.040
Naphthalene	0.1	0.09	0.08	0.08	0.1	0.09	0.07	0.07	0.08	0.01	82.9%	0.035

GC/MS-Whole Air Calculations

Relative Response Factor (RRF)

$$RRF = \frac{A_x * C_{is}}{A_{is} * C_x}$$

where: A_x = area of the characteristic ion for the compound being measured
 A_{is} = area of the characteristic ion for the specific internal standard of the compound being measured
 C_x = concentration of the compound being measured (ppbv)
 C_{is} = concentration of the internal standard (ppbv)

Percent Relative Standard Deviation (%RSD)

$$\% RSD = \frac{\text{Standard deviation of RRF values} * 100}{\text{mean RRF}}$$

Percent Difference (%D)

$$\% D = \frac{(RRF_c - \text{mean } RRF_i) * 100}{\text{mean } RRF_i}$$

where: RRF_c = relative response factor from the continuing calibration
mean RRF_i = mean relative response factor from the initial calibration

Sample Calculations

$$ppbv = \frac{A_x * I_s * D_f}{A_{is} * RRF}$$

where: A_x = area of the characteristic ion for the compound being measured
 A_{is} = area of the characteristic ion for the specific internal standard of the compound being measured
 I_s = Concentration of the internal standard injected (ppbv)
 RRF = relative response factor for the compound being measured
 D_f = Dilution factor

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

SAMPLE DATA

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
		FLD				Analyst:
Lab Vacuum In	0			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE TO-15						
						Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 5:25:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 5:25:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Acetone	2.7	0.30		ppbV	1	1/20/2020 5:25:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Benzene	0.19	0.15		ppbV	1	1/20/2020 5:25:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 5:25:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Chloroform	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Chloromethane	0.40	0.15		ppbV	1	1/20/2020 5:25:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 5:25:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 11	0.28	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 5:25:00 PM
Heptane	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Hexane	0.17	0.15		ppbV	1	1/20/2020 5:25:00 PM
Isopropyl alcohol	0.94	0.15		ppbV	1	1/20/2020 5:25:00 PM
m&p-Xylene	0.11	0.30	J	ppbV	1	1/20/2020 5:25:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 5:25:00 PM
Methyl Ethyl Ketone	0.38	0.30		ppbV	1	1/20/2020 5:25:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 5:25:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Methylene chloride	0.17	0.15		ppbV	1	1/20/2020 5:25:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Styrene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Toluene	0.28	0.15		ppbV	1	1/20/2020 5:25:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 5:25:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 5:25:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 5:25:00 PM
Surr: Bromofluorobenzene	98.0	70-130		%REC	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 5:25:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 5:25:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 5:25:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 5:25:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 5:25:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 5:25:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 5:25:00 PM
Acetone	6.4	0.71		ug/m3	1	1/20/2020 5:25:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 5:25:00 PM
Benzene	0.61	0.48		ug/m3	1	1/20/2020 5:25:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 5:25:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 5:25:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 5:25:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 5:25:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 5:25:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 5:25:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 5:25:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 5:25:00 PM
Chloromethane	0.83	0.31		ug/m3	1	1/20/2020 5:25:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 5:25:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 5:25:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 5:25:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	1/20/2020 5:25:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 5:25:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 5:25:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 5:25:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted		Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank		E Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded		J Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.		ND Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-001A

Client Sample ID: Outdoor Air
Tag Number: 365,394
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 5:25:00 PM
Heptane	< 0.61	0.61		ug/m3	1	1/20/2020 5:25:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 5:25:00 PM
Hexane	0.60	0.53		ug/m3	1	1/20/2020 5:25:00 PM
Isopropyl alcohol	2.3	0.37		ug/m3	1	1/20/2020 5:25:00 PM
m&p-Xylene	0.48	1.3	J	ug/m3	1	1/20/2020 5:25:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
Methyl Ethyl Ketone	1.1	0.88		ug/m3	1	1/20/2020 5:25:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 5:25:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 5:25:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 5:25:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 5:25:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 5:25:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 5:25:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 5:25:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	1/20/2020 5:25:00 PM
Toluene	1.1	0.57		ug/m3	1	1/20/2020 5:25:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 5:25:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 5:25:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 5:25:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 5:25:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Data File : C:\HPCHEM\1\DATA\AR012010.D

Vial: 10

Acq On : 20 Jan 2020 5:25 pm

Operator: RJP

Sample : C2001030-001A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:16 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.96	128	44877	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.23	114	216049	1.00	ppb	0.01
50) Chlorobenzene-d5	17.02	117	185365	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	121135	0.98	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	98.00%

Target Compounds

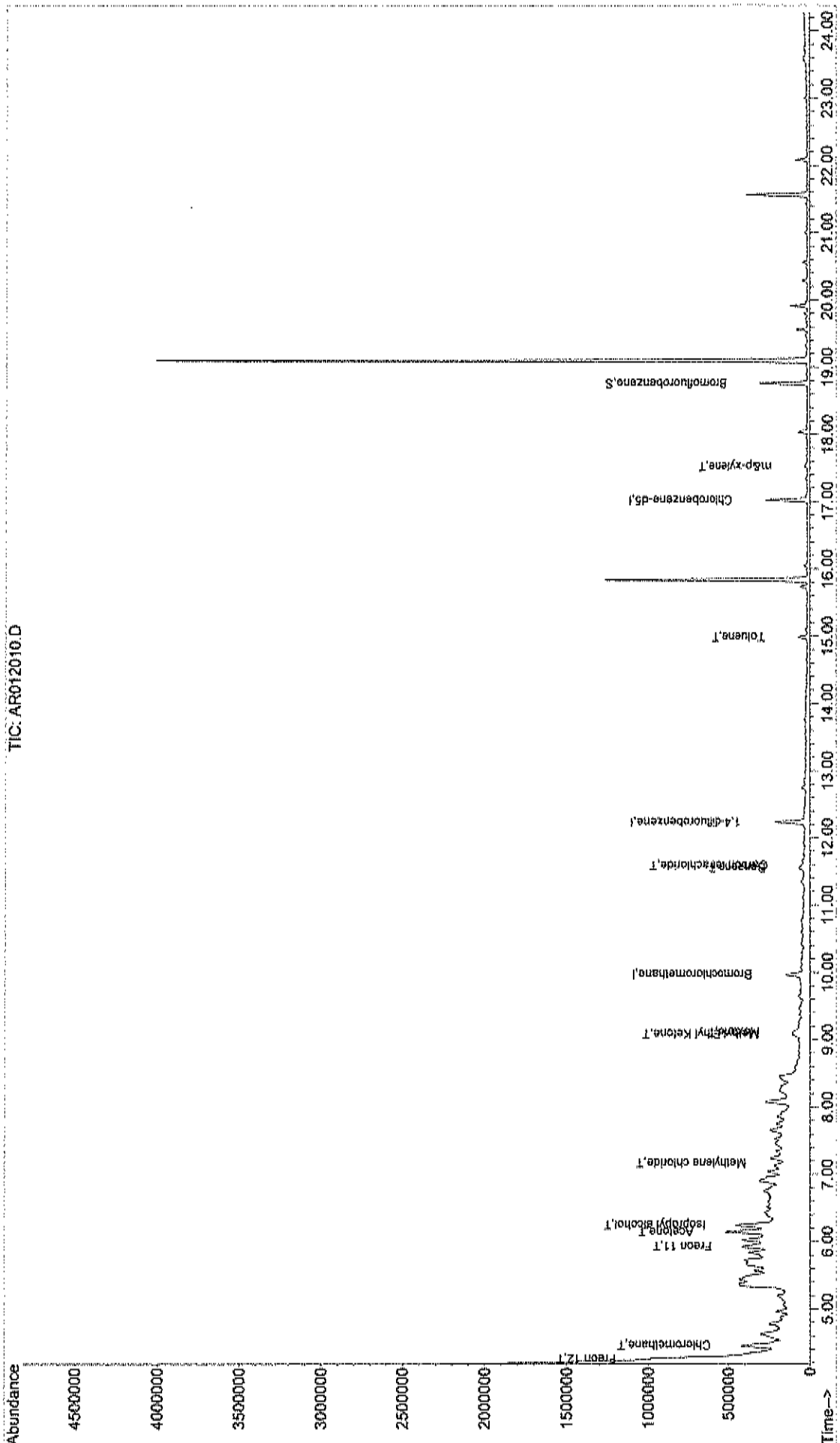
						Qvalue
3) Freon 12	4.27	85	68566	0.58	ppb	97
4) Chloromethane	4.47	50	10864	0.40	ppb	72
14) Freon 11	5.93	101	34531	0.28	ppb	96
15) Acetone	6.14	58	69877m //	2.68	ppb	
17) Isopropyl alcohol	6.26	45	77865	0.94	ppb	# 1
21) Methylene chloride	7.17	84	8049	0.17	ppb	# 28
28) Methyl Ethyl Ketone	9.07	72	9361	0.38	ppb	# 100
30) Hexane	9.11	57	14878	0.17	ppb	88
38) Carbon tetrachloride	11.59	117	9119	0.08	ppb	92
39) Benzene	11.56	78	30014	0.19	ppb	100
51) Toluene	14.98	92	31185	0.28	ppb	99
59) m&p-xylene	17.53	91	20859	0.11	ppb	99

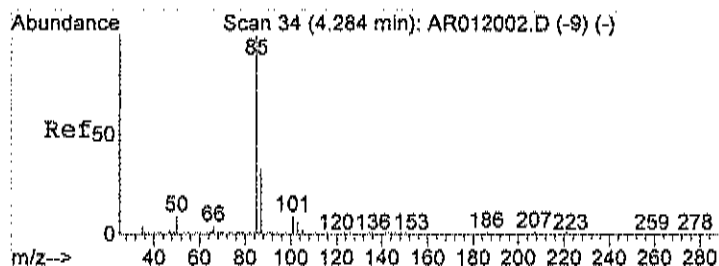
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR012010.D A116_1UG.M Wed Feb 05 10:01:13 2020 MSD1

Data File : C:\HPCHEM\1\DATA\AR012010.D
Acq On : 20 Jan 2020 5:25 pm
Sample : C2001030-001A
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 12:19 2020

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A116_1UG.RES

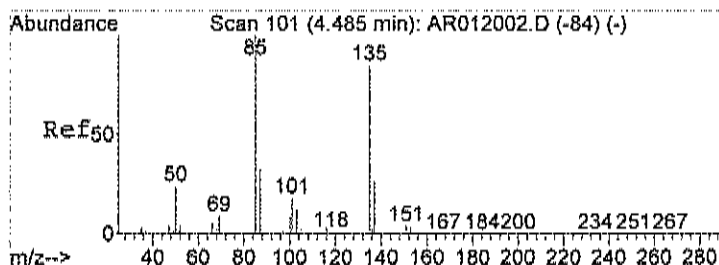
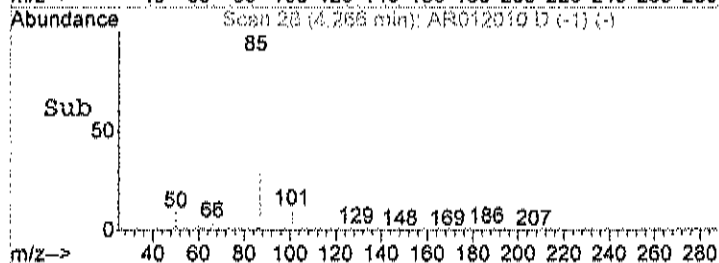
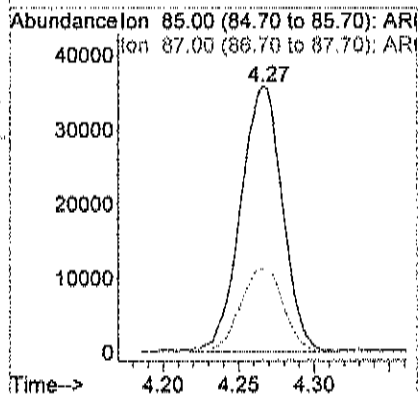
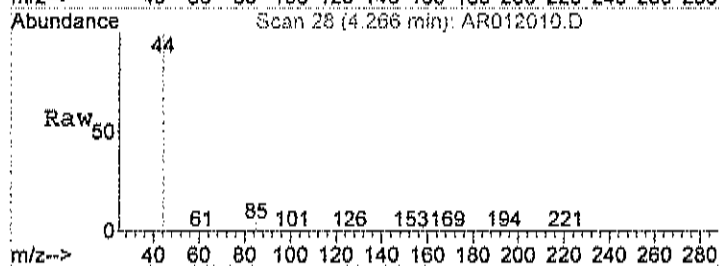
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





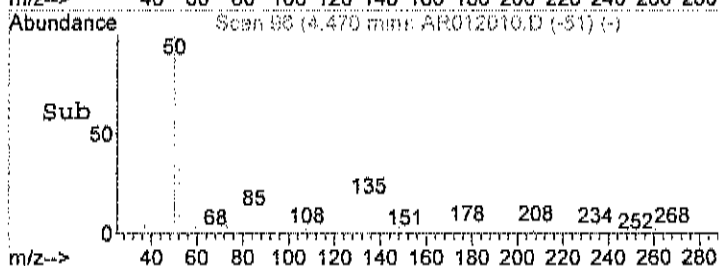
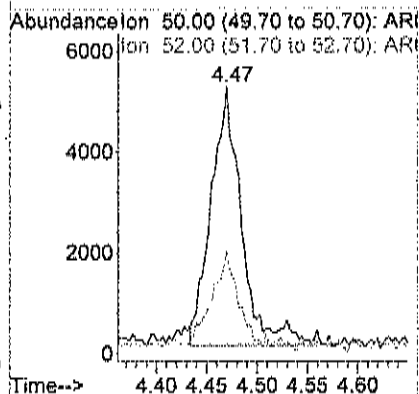
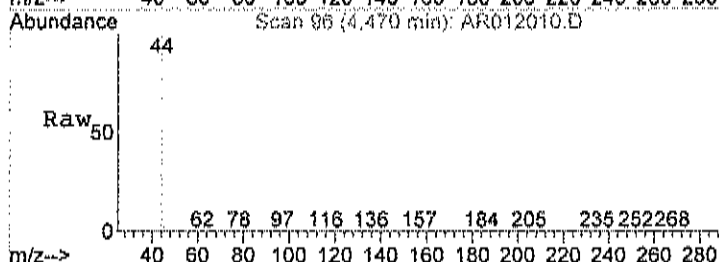
#3
 Freon 12
 Concen: 0.58 ppb
 RT: 4.27 min Scan# 28
 Delta R.T. -0.02 min
 Lab File: AR012010.D
 Acq: 20 Jan 2020 5:25 pm

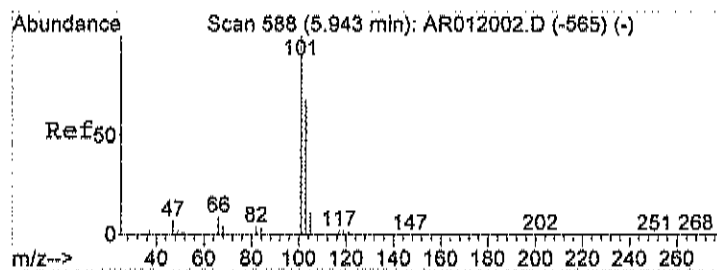
Tgt Ion: 85 Resp: 68566
 Ion Ratio Lower Upper
 85 100
 87 33.8 11.9 51.9



#4
 Chloromethane
 Concen: 0.40 ppb
 RT: 4.47 min Scan# 96
 Delta R.T. -0.02 min
 Lab File: AR012010.D
 Acq: 20 Jan 2020 5:25 pm

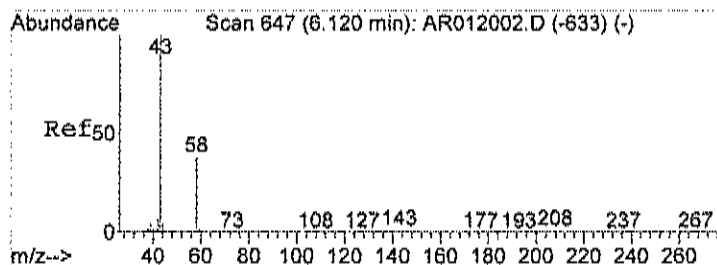
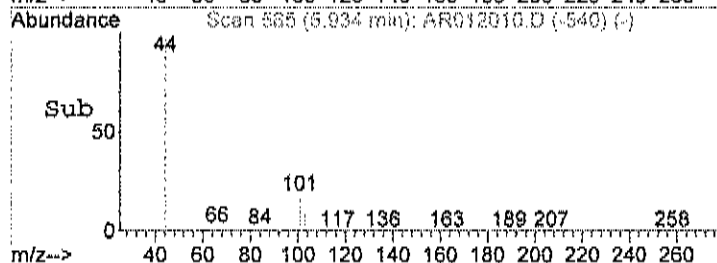
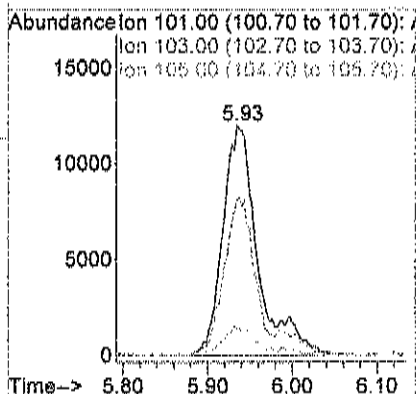
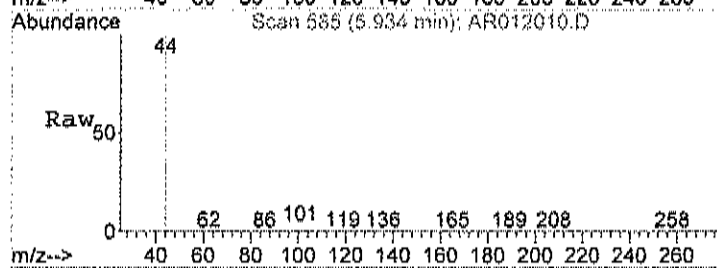
Tgt Ion: 50 Resp: 10864
 Ion Ratio Lower Upper
 50 100
 52 40.3 6.1 46.1





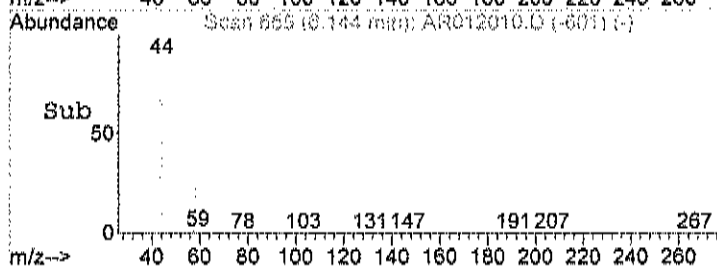
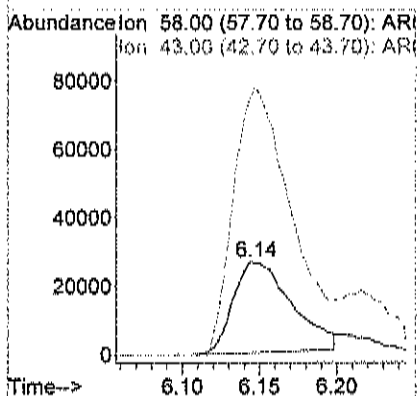
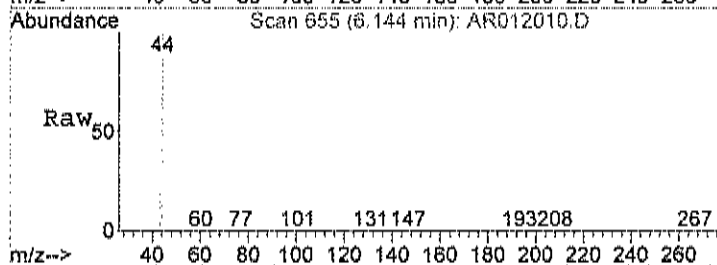
#14
Freon 11
Concen: 0.28 ppb
RT: 5.93 min Scan# 585
Delta R.T. -0.02 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

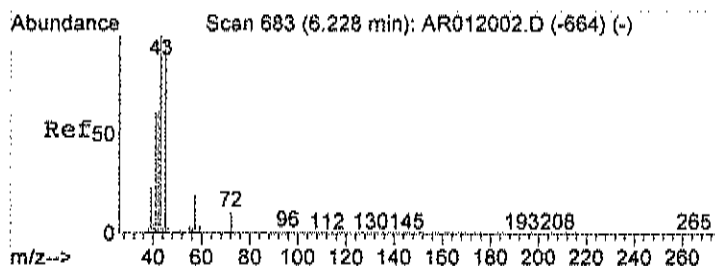
Tgt Ion: 101 Resp: 34531
Ion Ratio Lower Upper
101 100
103 67.3 44.2 84.2
105 11.3 0.0 30.3



#15
Acetone
Concen: 2.68 ppb m
RT: 6.14 min Scan# 655
Delta R.T. 0.01 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

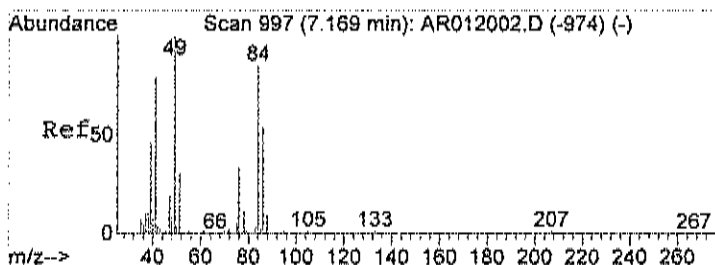
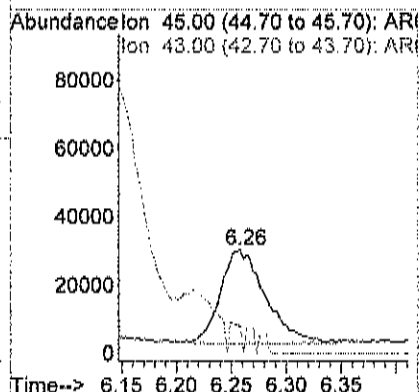
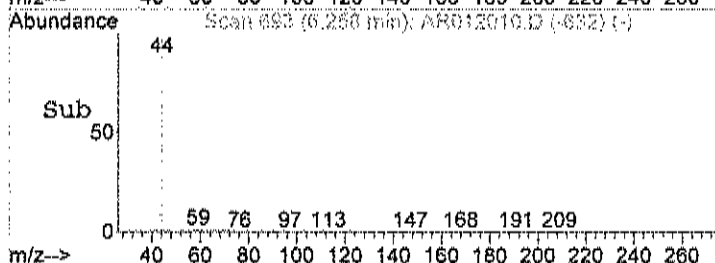
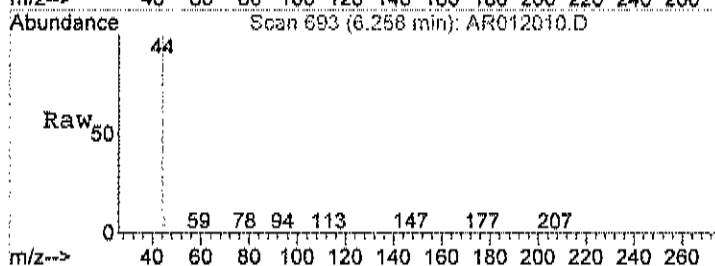
Tgt Ion: 58 Resp: 69877
Ion Ratio Lower Upper
58 100
43 352.0 0.0 30.0#





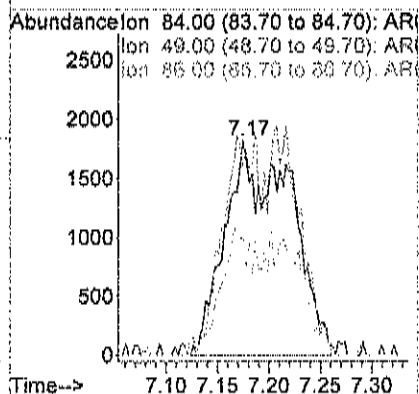
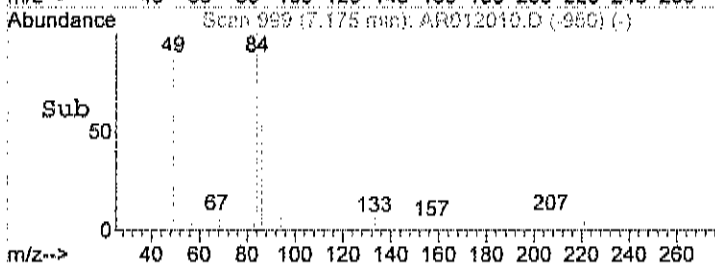
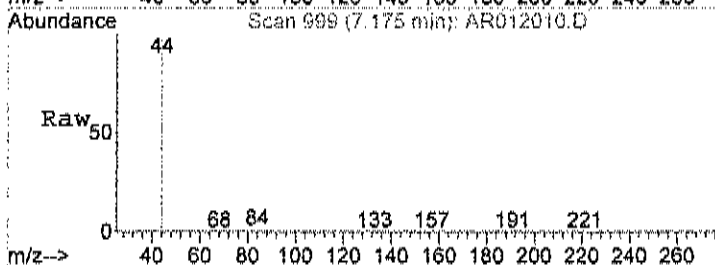
#17
Isopropyl alcohol
Concen: 0.94 ppb
RT: 6.26 min Scan# 693
Delta R.T. 0.03 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

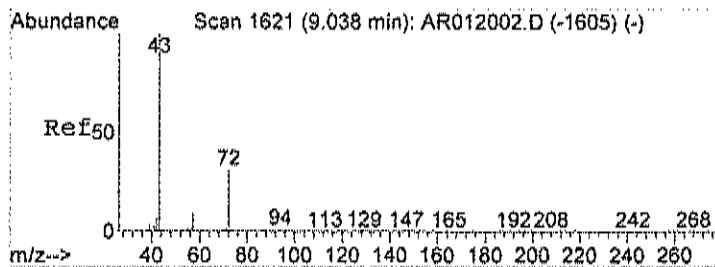
Tgt Ion: 45 Resp: 77865
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#



#21
Methylene chloride
Concen: 0.17 ppb
RT: 7.17 min Scan# 999
Delta R.T. -0.00 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

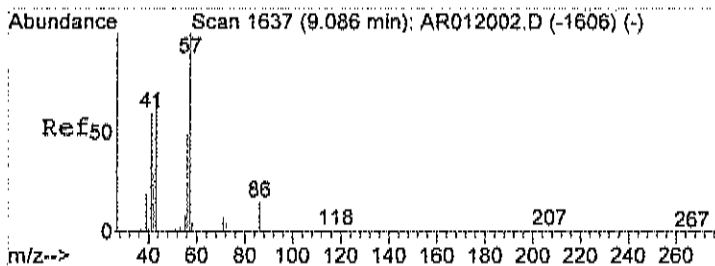
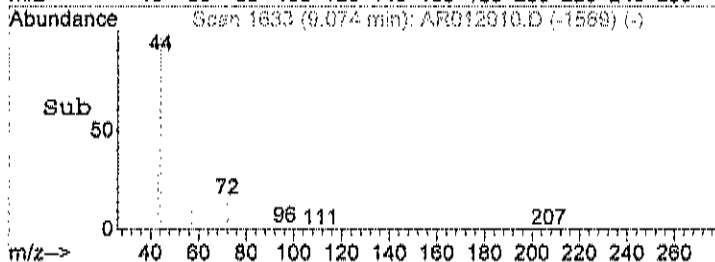
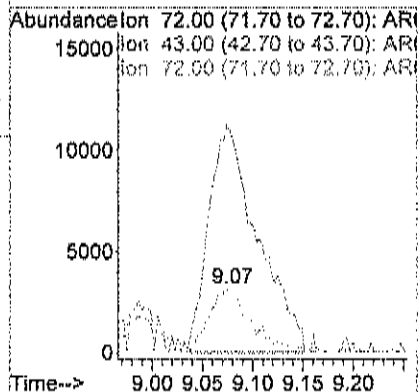
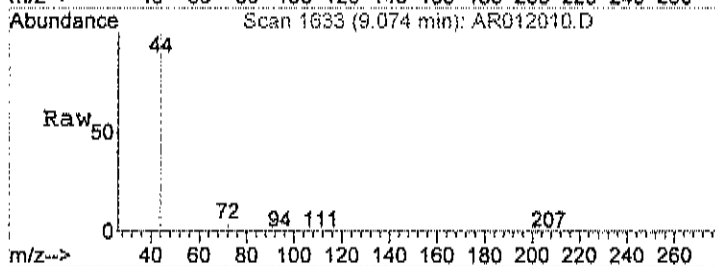
Tgt Ion: 84 Resp: 8049
Ion Ratio Lower Upper
84 100
49 0.0 101.4 141.4#
86 61.7 45.4 85.4





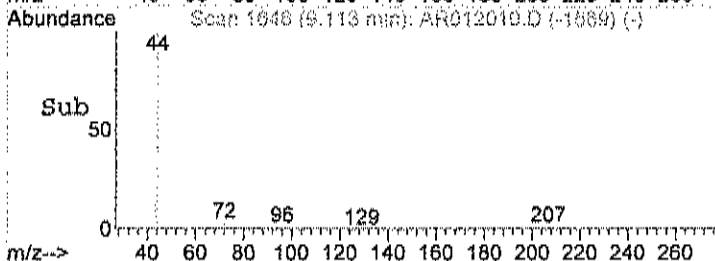
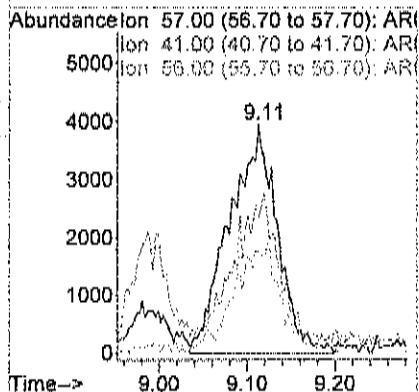
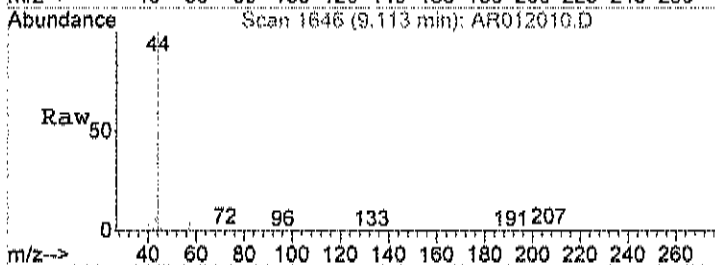
#28
Methyl Ethyl Ketone
Concen: 0.38 ppb
RT: 9.07 min Scan# 1633
Delta R.T. 0.04 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

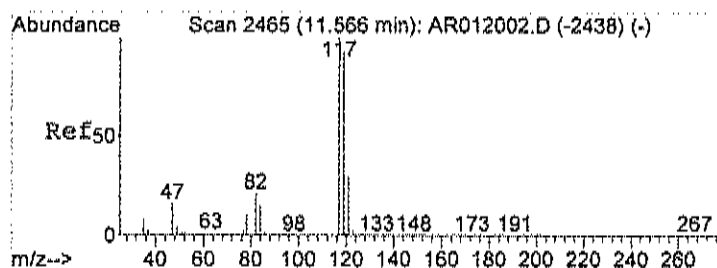
Tgt Ion: 72 Resp: 9361
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0



#30
Hexane
Concen: 0.17 ppb
RT: 9.11 min Scan# 1646
Delta R.T. 0.02 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

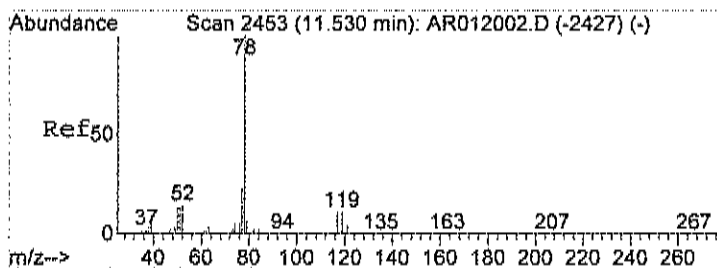
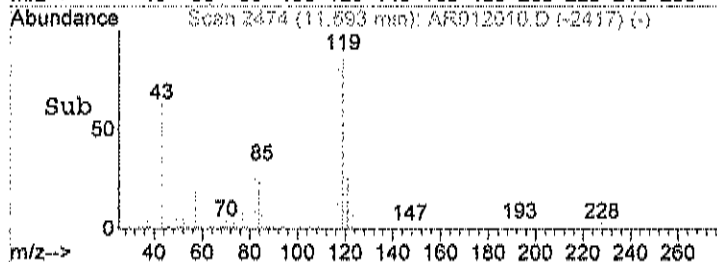
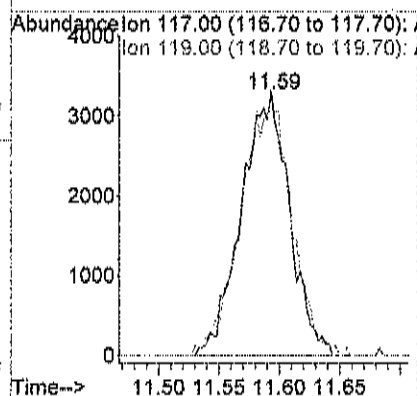
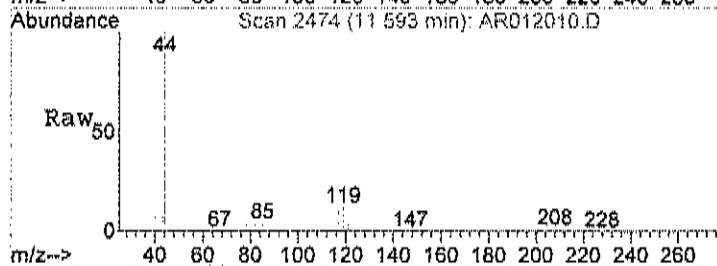
Tgt Ion: 57 Resp: 14878
Ion Ratio Lower Upper
57 100
41 86.3 55.7 95.7
56 44.3 32.4 72.4





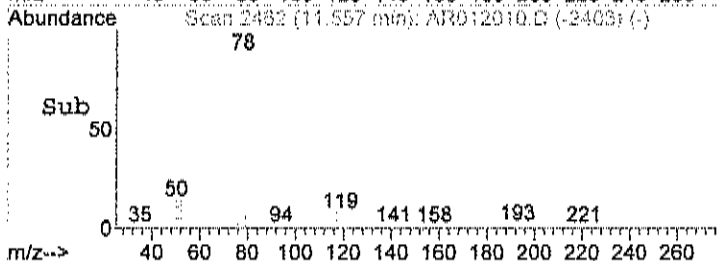
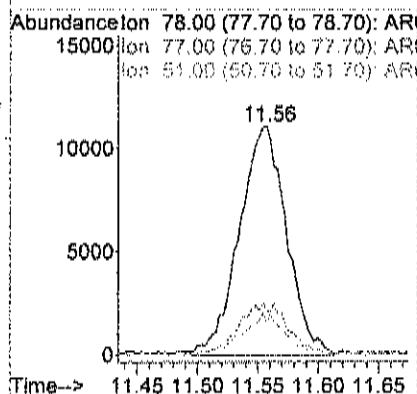
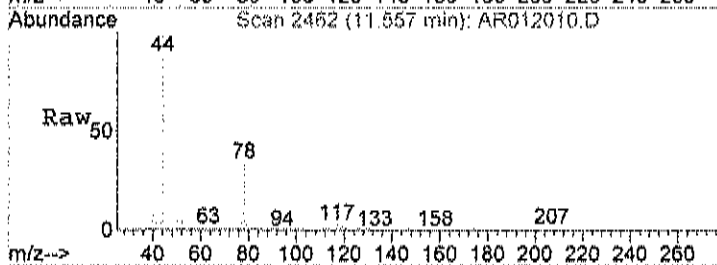
#38
Carbon tetrachloride
Concen: 0.08 ppb
RT: 11.59 min Scan# 2474
Delta R.T. 0.02 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

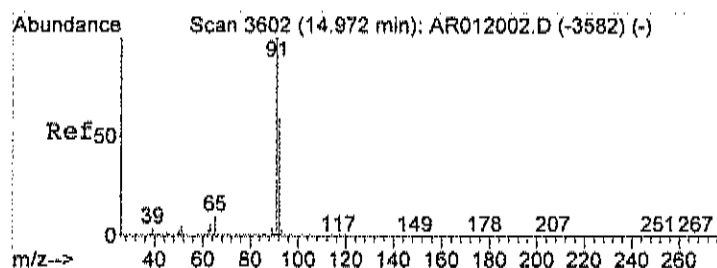
Tgt Ion: 117 Resp: 9119
Ion Ratio Lower Upper
117 100
119 103.6 75.6 115.6



#39
Benzene
Concen: 0.19 ppb
RT: 11.56 min Scan# 2462
Delta R.T. 0.03 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

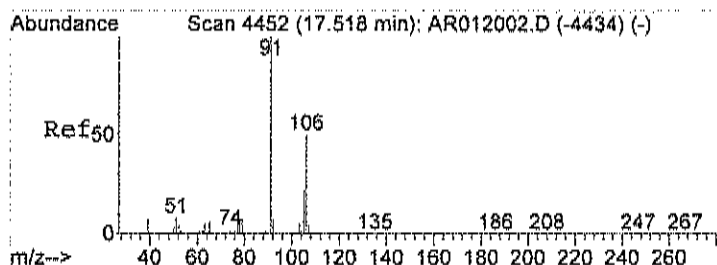
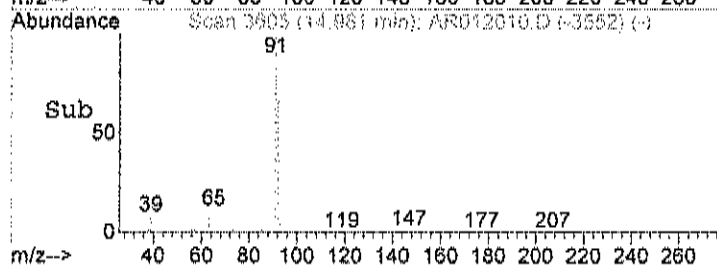
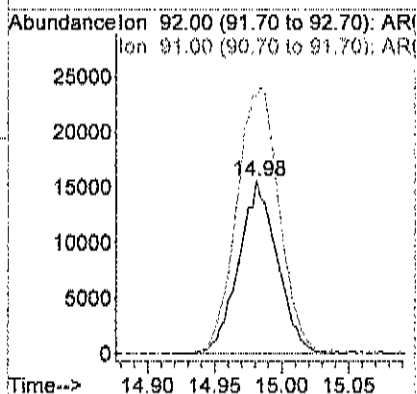
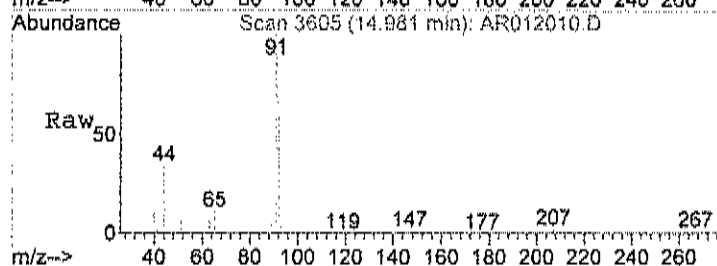
Tgt Ion: 78 Resp: 30014
Ion Ratio Lower Upper
78 100
77 23.9 4.1 44.1
51 16.5 0.0 36.8





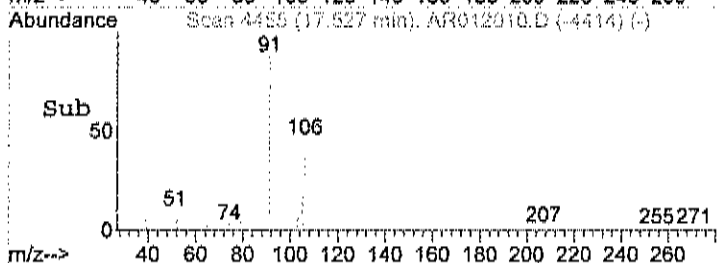
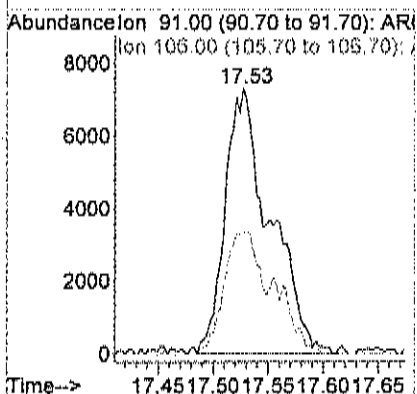
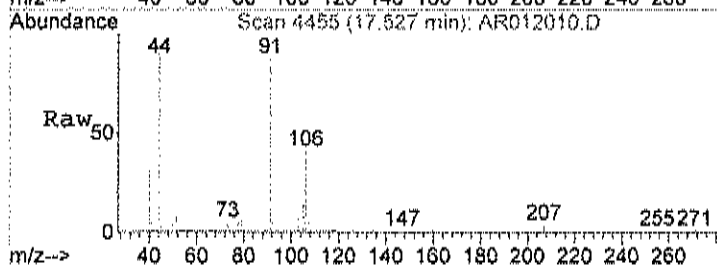
#51
Toluene
Concen: 0.28 ppb
RT: 14.98 min Scan# 3605
Delta R.T. 0.01 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

Tgt Ion: 92 Resp: 31185
Ion Ratio Lower Upper
92 100
91 173.3 154.5 194.5



#59
m&p-xylene
Concen: 0.11 ppb
RT: 17.53 min Scan# 4455
Delta R.T. -0.03 min
Lab File: AR012010.D
Acq: 20 Jan 2020 5:25 pm

Tgt Ion: 91 Resp: 20859
Ion Ratio Lower Upper
91 100
106 49.6 29.0 69.0



Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:12:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 6:12:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Acetone	6.2	3.0		ppbV	10	1/21/2020 2:43:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Benzene	0.29	0.15		ppbV	1	1/20/2020 6:12:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 6:12:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Chloroform	0.56	0.15		ppbV	1	1/20/2020 6:12:00 PM
Chloromethane	0.56	0.15		ppbV	1	1/20/2020 6:12:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:12:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Ethyl acetate	0.70	0.15		ppbV	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.12	0.15	J	ppbV	1	1/20/2020 6:12:00 PM
Freon 11	0.27	0.15		ppbV	1	1/20/2020 6:12:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 6:12:00 PM
Heptane	0.14	0.15	J	ppbV	1	1/20/2020 6:12:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Hexane	0.17	0.15		ppbV	1	1/20/2020 6:12:00 PM
Isopropyl alcohol	3.3	1.5		ppbV	10	1/21/2020 2:43:00 AM
m&p-Xylene	0.39	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl Ethyl Ketone	0.45	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 6:12:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Methylene chloride	0.17	0.15		ppbV	1	1/20/2020 6:12:00 PM
o-Xylene	0.13	0.15	J	ppbV	1	1/20/2020 6:12:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Styrene	0.17	0.15		ppbV	1	1/20/2020 6:12:00 PM
Tetrachloroethylene	2.4	1.5		ppbV	10	1/21/2020 2:43:00 AM
Tetrahydrofuran	0.27	0.15		ppbV	1	1/20/2020 6:12:00 PM
Toluene	0.88	0.15		ppbV	1	1/20/2020 6:12:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Trichloroethene	0.14	0.030		ppbV	1	1/20/2020 6:12:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 6:12:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 6:12:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	1/20/2020 6:12:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:12:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:12:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:12:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:12:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:12:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 6:12:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 6:12:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:12:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 6:12:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 6:12:00 PM
Acetone	15	7.1		ug/m3	10	1/21/2020 2:43:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 6:12:00 PM
Benzene	0.93	0.48		ug/m3	1	1/20/2020 6:12:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 6:12:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 6:12:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 6:12:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 6:12:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 6:12:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 6:12:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 6:12:00 PM
Chloroform	2.7	0.73		ug/m3	1	1/20/2020 6:12:00 PM
Chloromethane	1.2	0.31		ug/m3	1	1/20/2020 6:12:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:12:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:12:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 6:12:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 6:12:00 PM
Ethyl acetate	2.5	0.54		ug/m3	1	1/20/2020 6:12:00 PM
Ethylbenzene	0.52	0.65	J	ug/m3	1	1/20/2020 6:12:00 PM
Freon 11	1.5	0.84		ug/m3	1	1/20/2020 6:12:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 6:12:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-002A

Client Sample ID: Building 1-Indoor
Tag Number: 438,381
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 6:12:00 PM
Heptane	0.57	0.61	J	ug/m3	1	1/20/2020 6:12:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 6:12:00 PM
Hexane	0.60	0.53		ug/m3	1	1/20/2020 6:12:00 PM
Isopropyl alcohol	8.1	3.7		ug/m3	10	1/21/2020 2:43:00 AM
m&p-Xylene	1.7	1.3		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	1/20/2020 6:12:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:12:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 6:12:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 6:12:00 PM
o-Xylene	0.56	0.65	J	ug/m3	1	1/20/2020 6:12:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 6:12:00 PM
Styrene	0.72	0.64		ug/m3	1	1/20/2020 6:12:00 PM
Tetrachloroethylene	16	10		ug/m3	10	1/21/2020 2:43:00 AM
Tetrahydrofuran	0.80	0.44		ug/m3	1	1/20/2020 6:12:00 PM
Toluene	3.3	0.57		ug/m3	1	1/20/2020 6:12:00 PM
trans-1,2-Dichloroethane	< 0.59	0.59		ug/m3	1	1/20/2020 6:12:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:12:00 PM
Trichloroethene	0.75	0.16		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 6:12:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 6:12:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Data File : C:\HPCHEM\1\DATA\AR012011.D

Vial: 11

Acq On : 20 Jan 2020 6:12 pm

Operator: RJP

Sample : C2001030-002A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:17 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.96	128	44673	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.23	114	211949	1.00	ppb	0.02
50) Chlorobenzene-d5	17.02	117	185863	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	125685	1.01	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	101.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.27	85	67728	0.58	ppb	98
4) Chloromethane	4.47	50	15084	0.56	ppb	84
14) Freon 11	5.94	101	33444	0.27	ppb	99
15) Acetone	6.14	58	146920	5.66	ppb	# 100
17) Isopropyl alcohol	6.25	45	210636	2.56	ppb	# 1
21) Methylene chloride	7.18	84	7776m	0.17	ppb	
28) Methyl Ethyl Ketone	9.07	72	11173	0.45	ppb	# 100
29) cis-1,2-dichloroethene	9.51	61	5664	0.08	ppb	91
30) Hexane	9.08	57	15120	0.17	ppb	84
31) Ethyl acetate	9.66	43	78628	0.70	ppb	94
32) Chloroform	10.12	83	60383	0.56	ppb	98
33) Tetrahydrofuran	10.31	42	13645	0.27	ppb	96
38) Carbon tetrachloride	11.58	117	9306	0.08	ppb	98
39) Benzene	11.55	78	45780	0.29	ppb	99
43) Heptane	12.75	43	12939	0.14	ppb	# 73
44) Trichloroethene	12.89	130	9361	0.14	ppb	98
51) Toluene	14.98	92	99753	0.88	ppb	100
56) Tetrachloroethylene	16.05	164	167216	2.27	ppb	99
58) Ethylbenzene	17.34	91	29866	0.12	ppb	98
59) m&p-xylene	17.52	91	74285	0.39	ppb	96
61) Styrene	18.02	104	23635	0.17	ppb	96
63) o-xylene	18.05	91	26322	0.13	ppb	99

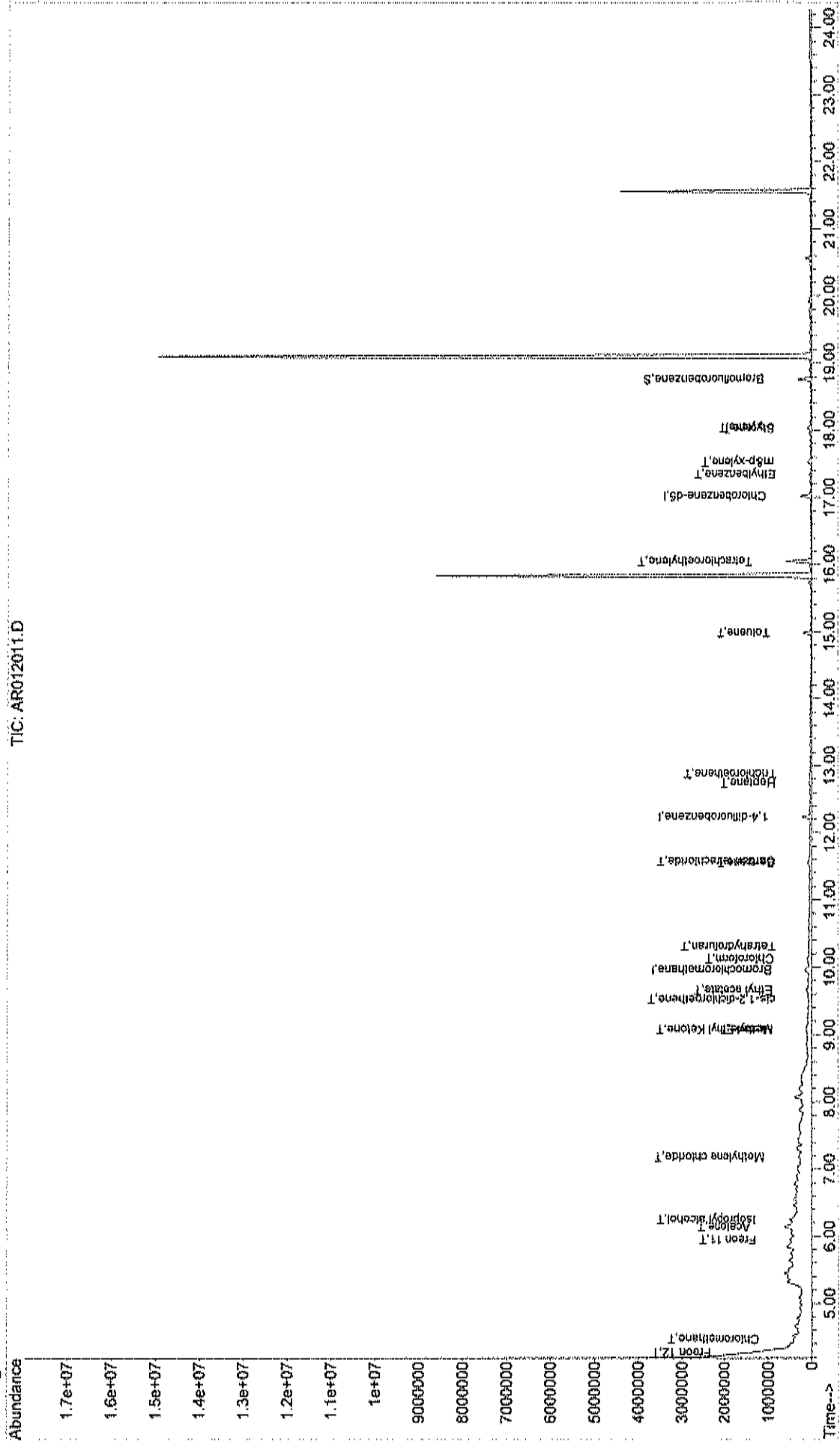
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR012011.D A116_1UG.M Wed Feb 05 10:01:23 2020 MSD1

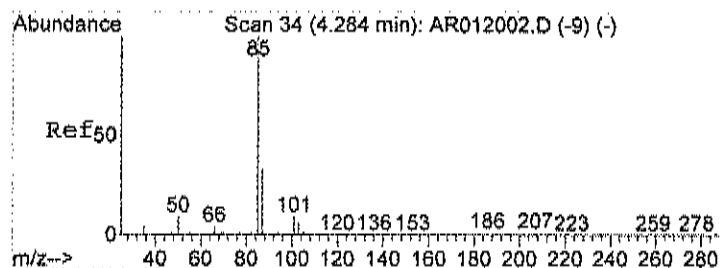
Data File : C:\HPCHEM\1\DATA\AR012011.D
 Acq On : 20 Jan 2020 6:12 pm
 Sample : C2001030-002A
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 23 8:46 2020

Vial: 11
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

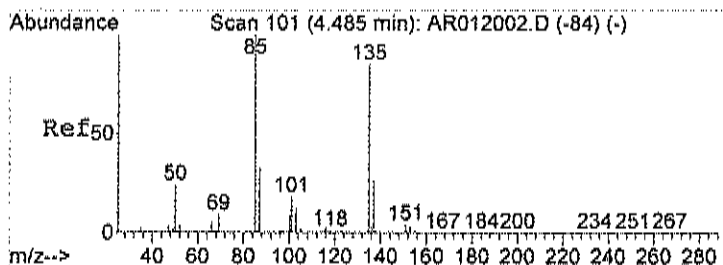
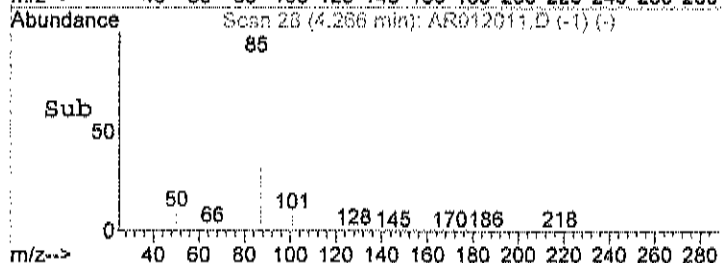
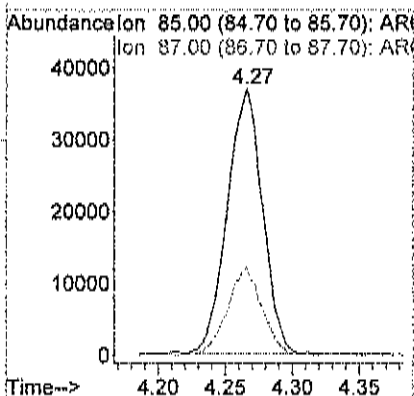
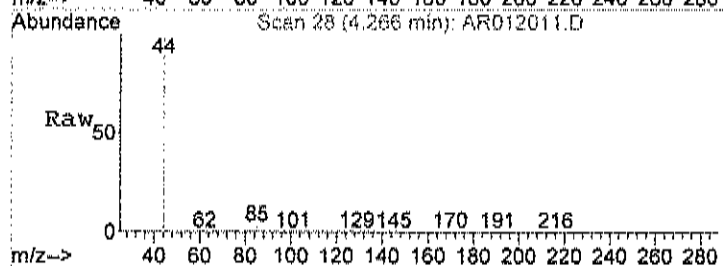
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration





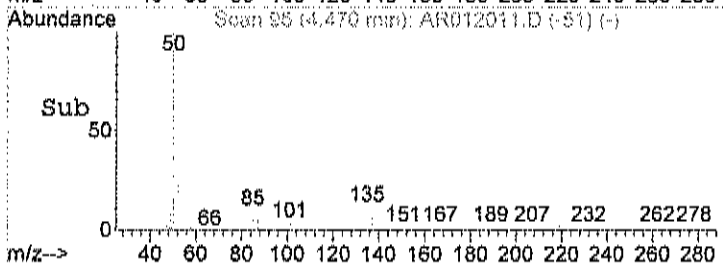
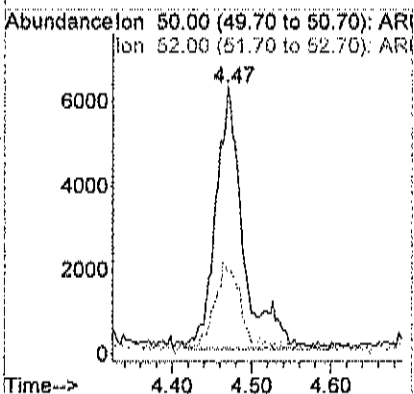
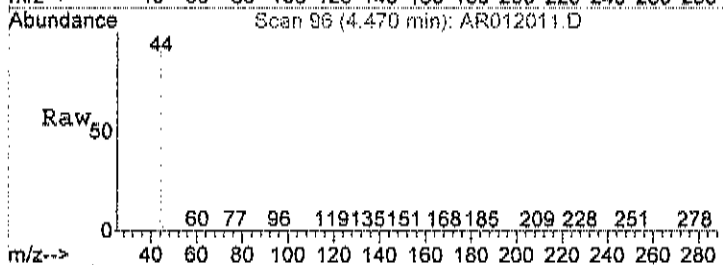
#3
Freon 12
Concen: 0.58 ppb
RT: 4.27 min Scan# 28
Delta R.T. -0.02 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

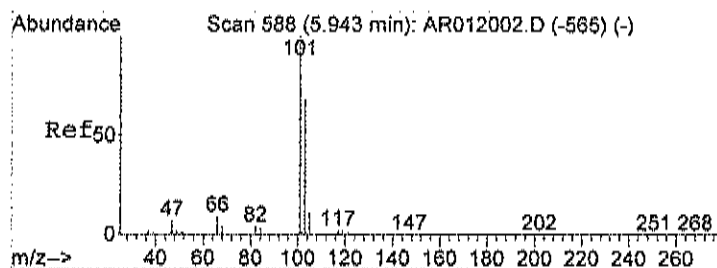
Tgt Ion: 85 Resp: 67728
Ion Ratio Lower Upper
85 100
87 32.8 11.9 51.9



#4
Chloromethane
Concen: 0.56 ppb
RT: 4.47 min Scan# 96
Delta R.T. -0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

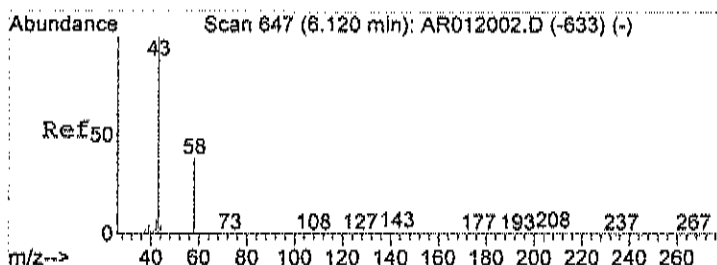
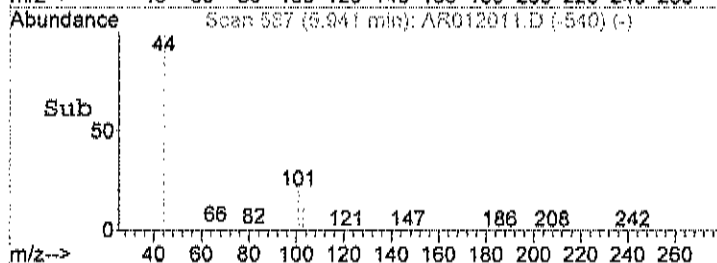
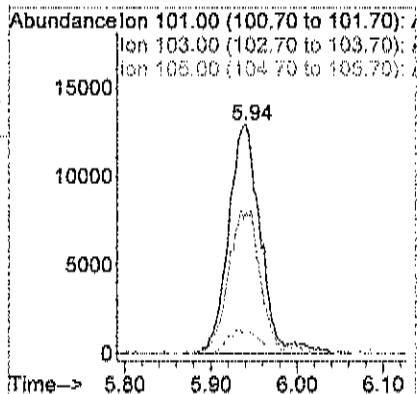
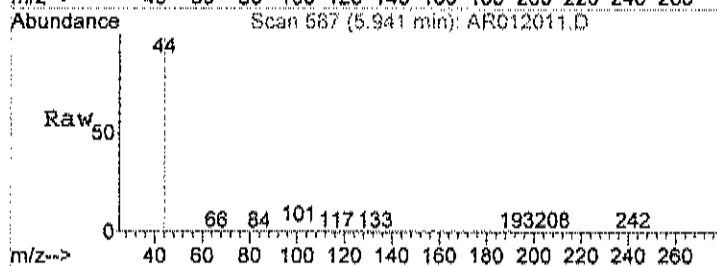
Tgt Ion: 50 Resp: 15084
Ion Ratio Lower Upper
50 100
52 34.5 6.1 46.1





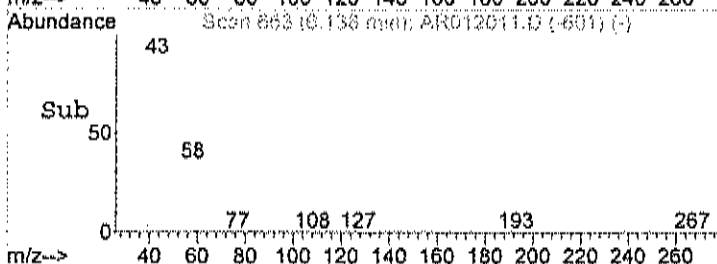
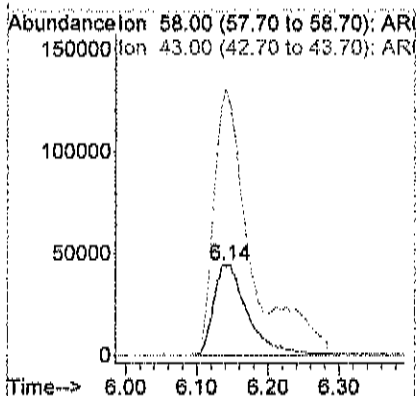
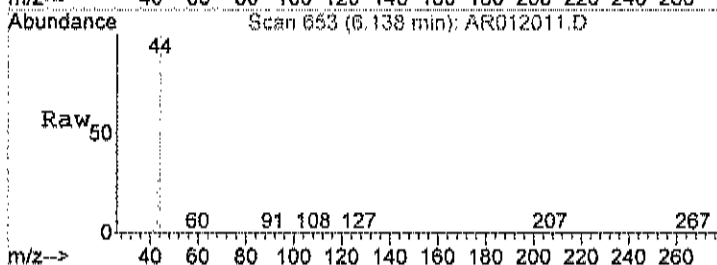
#14
Freon 11
Concen: 0.27 ppb
RT: 5.94 min Scan# 587
Delta R.T. -0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

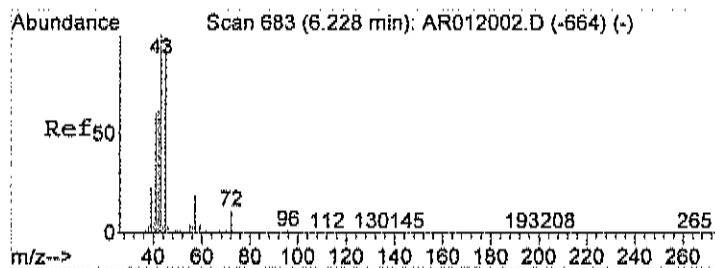
Tgt Ion: 101 Resp: 33444
Ion Ratio Lower Upper
101 100
103 64.8 44.2 84.2
105 11.6 0.0 30.3



#15
Acetone
Concen: 5.66 ppb
RT: 6.14 min Scan# 653
Delta R.T. 0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

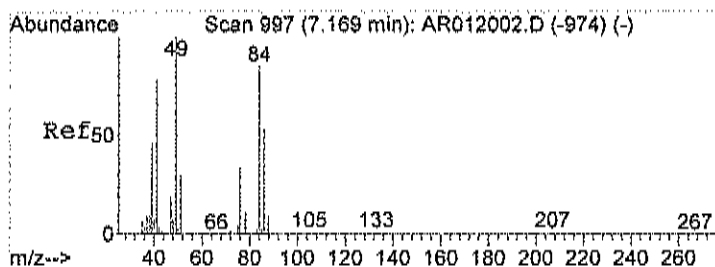
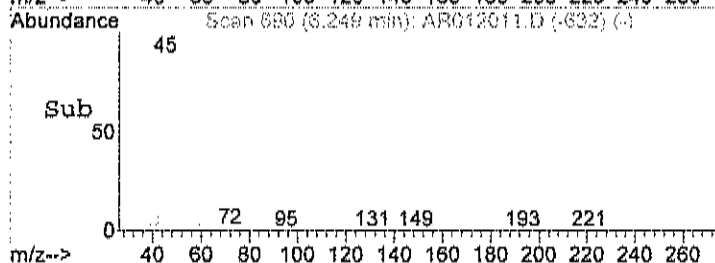
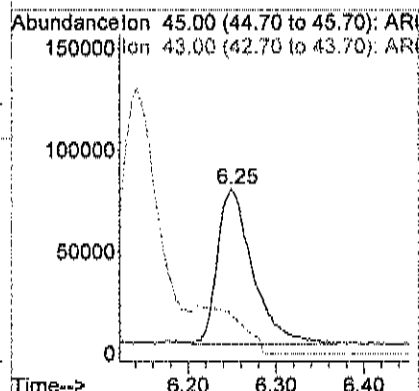
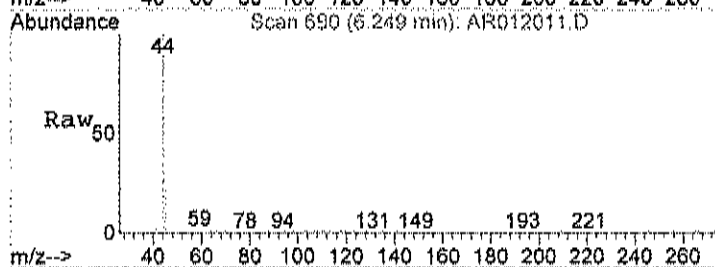
Tgt Ion: 58 Resp: 146920
Ion Ratio Lower Upper
58 100
43 318.8 0.0 30.0#





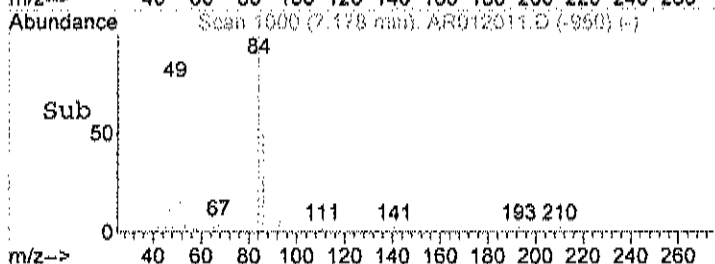
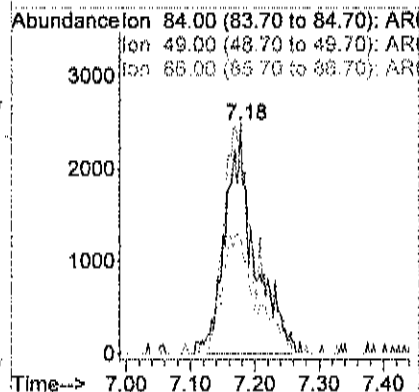
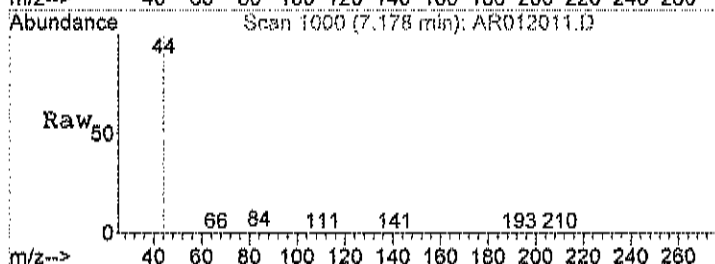
#17
Isopropyl alcohol
Concen: 2.56 ppb
RT: 6.25 min Scan# 690
Delta R.T. 0.02 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

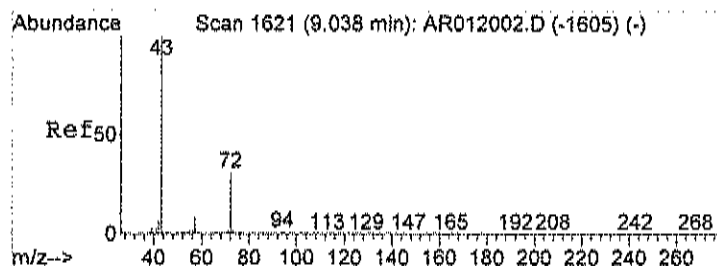
Tgt Ion: 45 Resp: 210636
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#



#21
Methylene chloride
Concen: 0.17 ppb m
RT: 7.18 min Scan# 1000
Delta R.T. -0.00 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

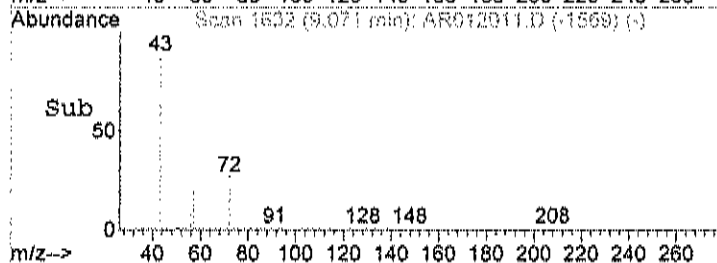
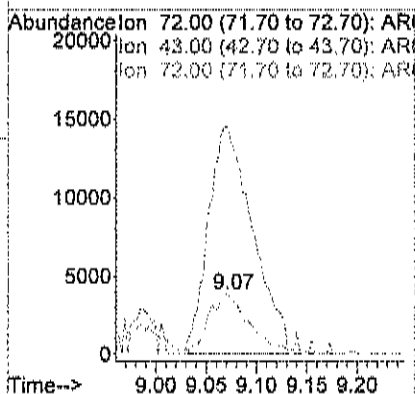
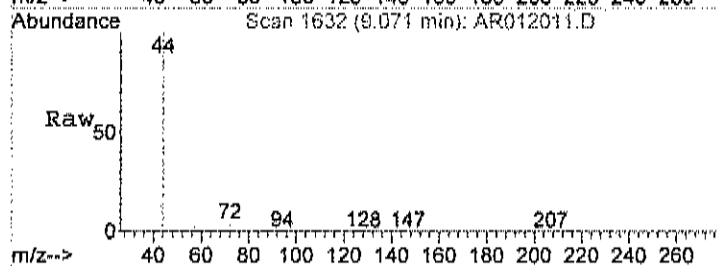
Tgt Ion: 84 Resp: 7776
Ion Ratio Lower Upper
84 100
49 106.5 101.4 141.4
86 61.0 45.4 85.4





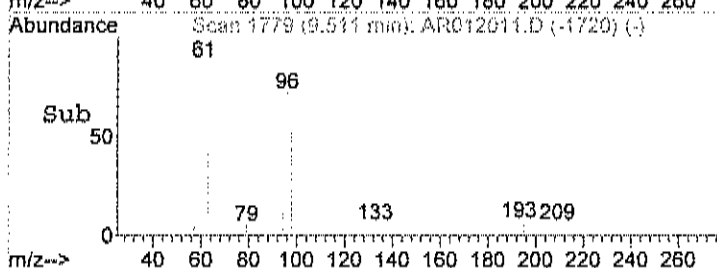
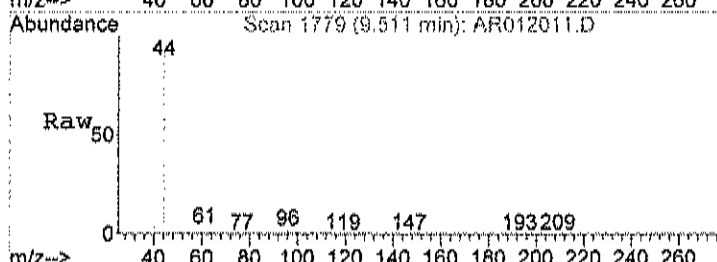
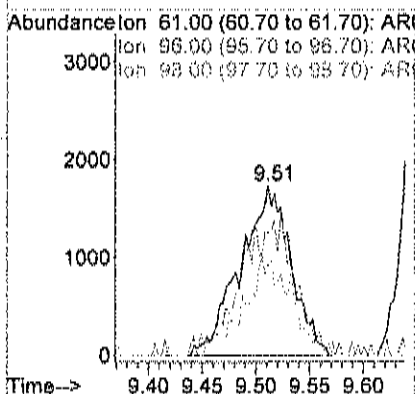
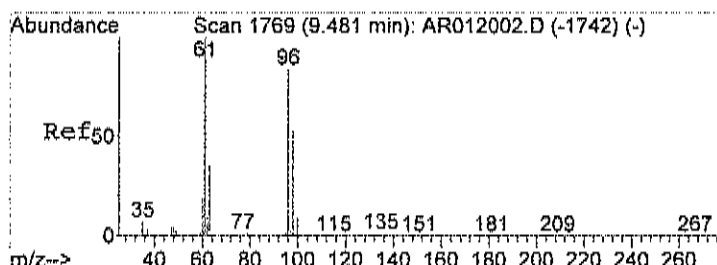
#28
Methyl Ethyl Ketone
Concen: 0.45 ppb
RT: 9.07 min Scan# 1632
Delta R.T. 0.04 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

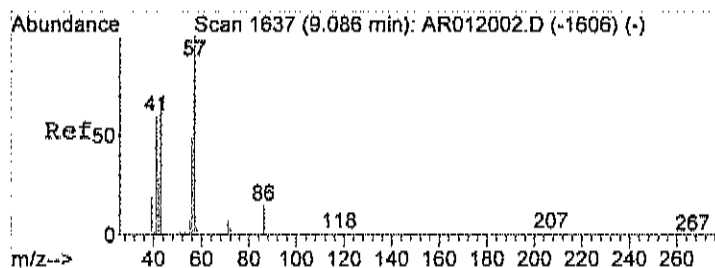
Tgt Ion: 72 Resp: 11173
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0



#29
cis-1,2-dichloroethene
Concen: 0.08 ppb
RT: 9.51 min Scan# 1779
Delta R.T. 0.03 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

Tgt Ion: 61 Resp: 5664
Ion Ratio Lower Upper
61 100
96 86.7 57.9 97.9
98 54.2 28.8 68.8

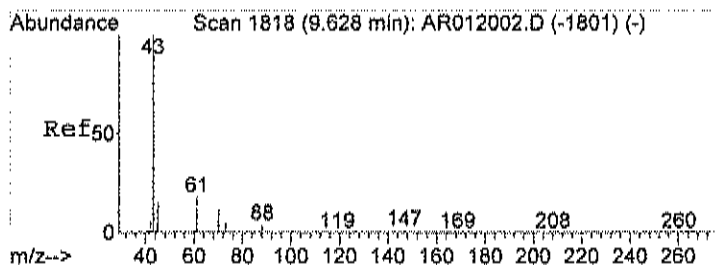
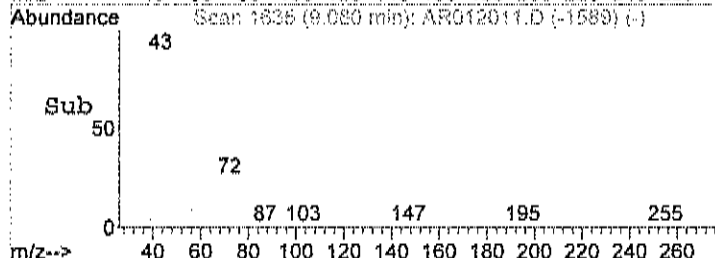
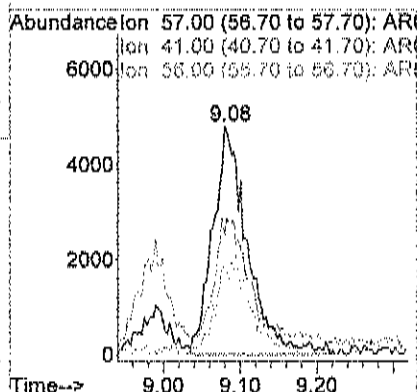
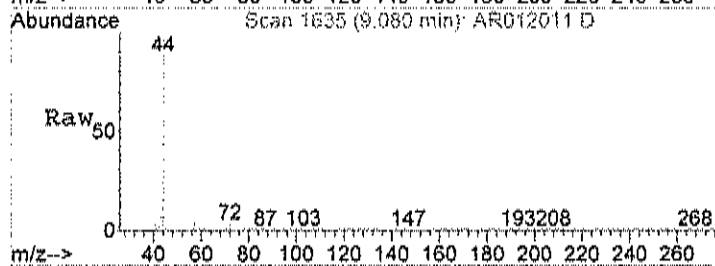




#30
Hexane
Concen: 0.17 ppb
RT: 9.08 min Scan# 1635
Delta R.T. -0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

Tgt Ion: 57 Resp: 15120

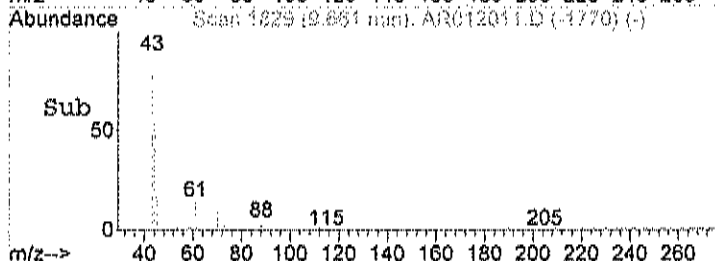
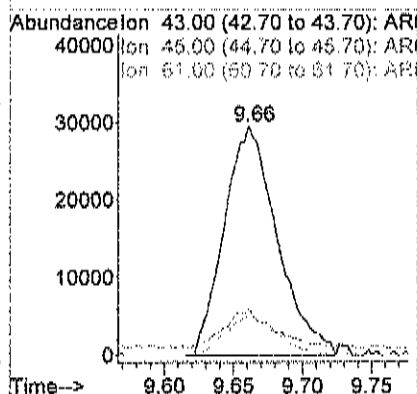
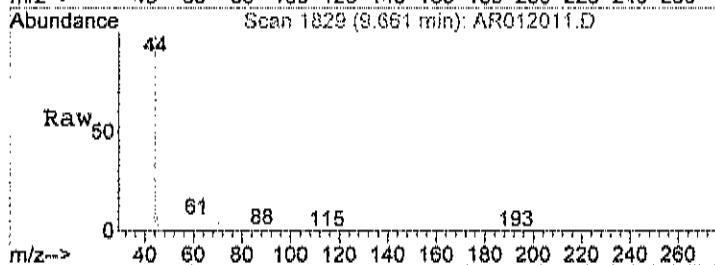
Ion	Ratio	Lower	Upper
57	100		
41	60.4	55.7	95.7
56	42.7	32.4	72.4

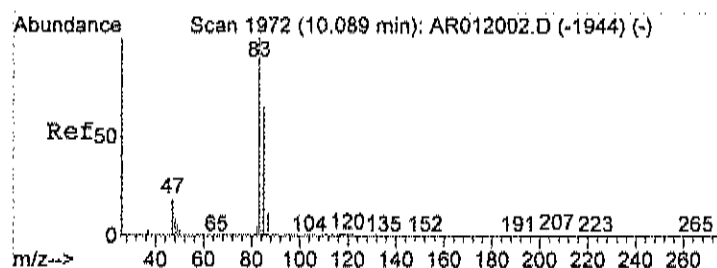


#31
Ethyl acetate
Concen: 0.70 ppb
RT: 9.66 min Scan# 1829
Delta R.T. 0.03 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

Tgt Ion: 43 Resp: 78628

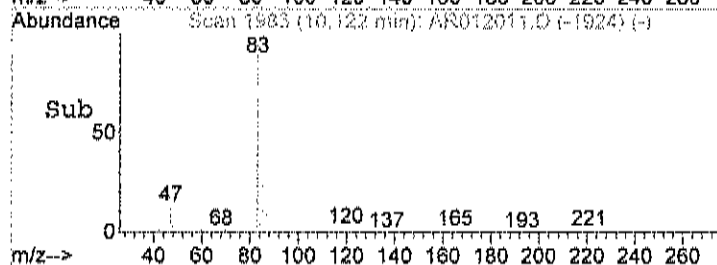
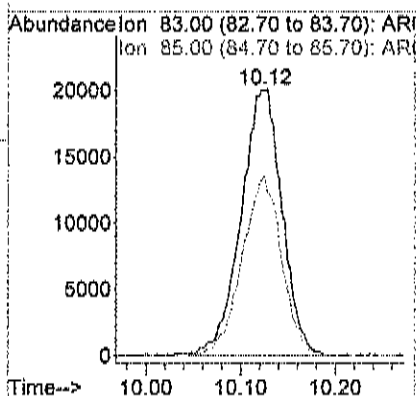
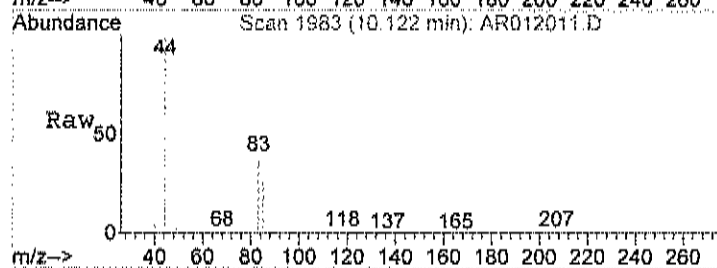
Ion	Ratio	Lower	Upper
43	100		
45	18.3	0.0	34.5
61	17.0	0.0	35.8





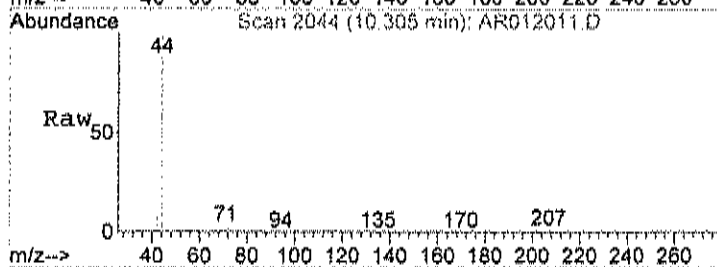
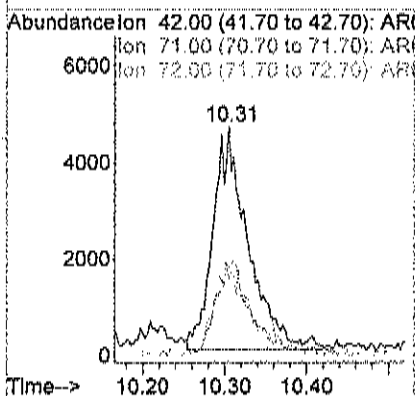
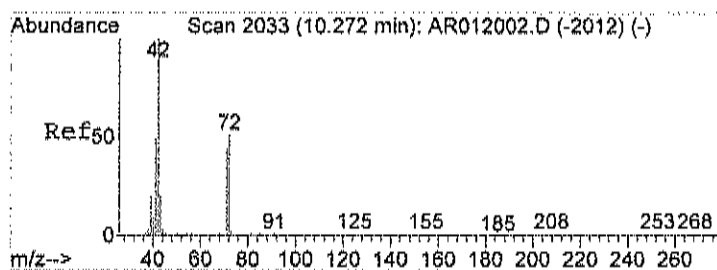
#32
Chloroform
Concen: 0.56 ppb
RT: 10.12 min Scan# 1983
Delta R.T. 0.03 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

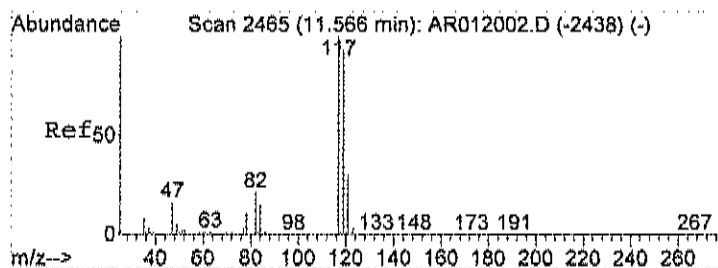
Tgt Ion: 83 Resp: 60383
Ion Ratio Lower Upper
83 100
85 65.2 46.5 86.5



#33
Tetrahydrofuran
Concen: 0.27 ppb
RT: 10.31 min Scan# 2044
Delta R.T. 0.04 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

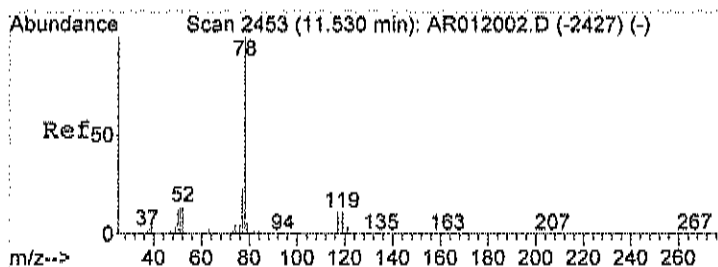
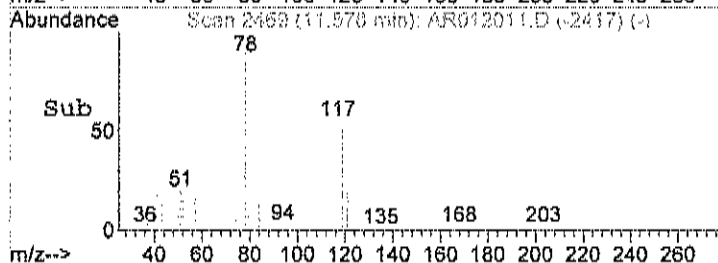
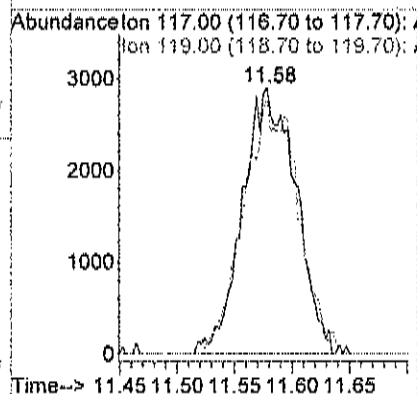
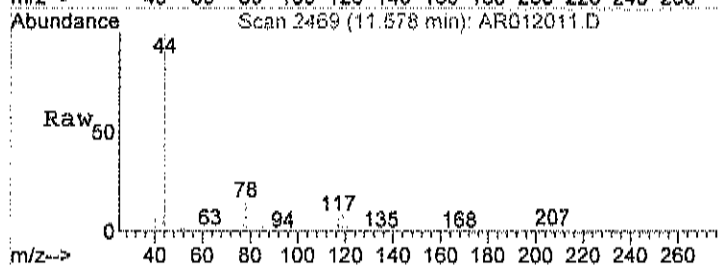
Tgt Ion: 42 Resp: 13645
Ion Ratio Lower Upper
42 100
71 42.9 25.1 65.1
72 45.6 23.3 63.3





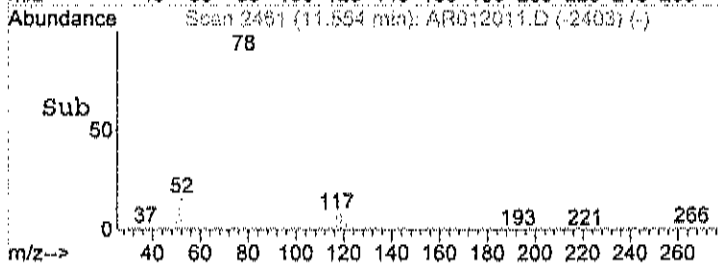
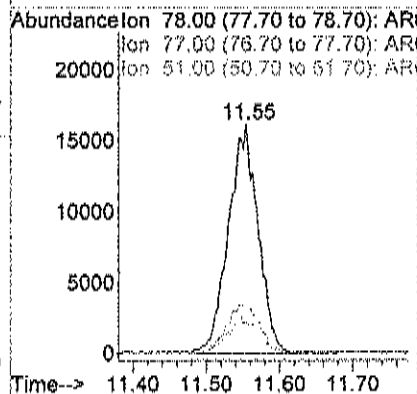
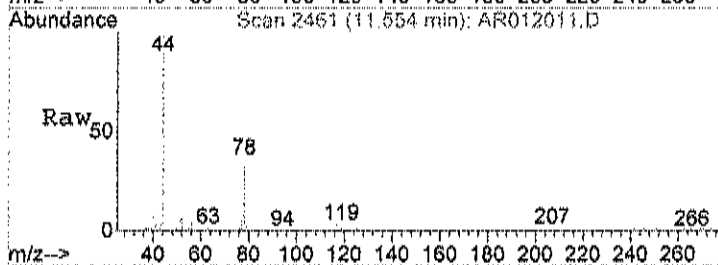
#38
Carbon tetrachloride
Concen: 0.08 ppb
RT: 11.58 min Scan# 2469
Delta R.T. 0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

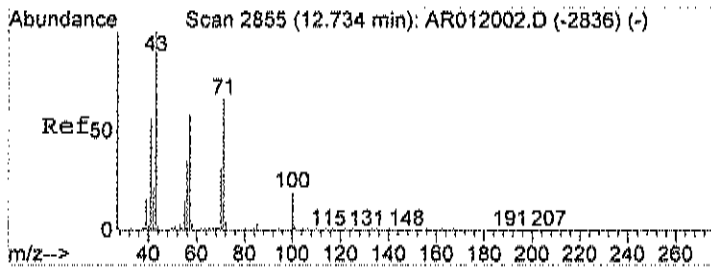
Tgt Ion: 117 Resp: 9306
Ion Ratio Lower Upper
117 100
119 97.4 75.6 115.6



#39
Benzene
Concen: 0.29 ppb
RT: 11.55 min Scan# 2461
Delta R.T. 0.02 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

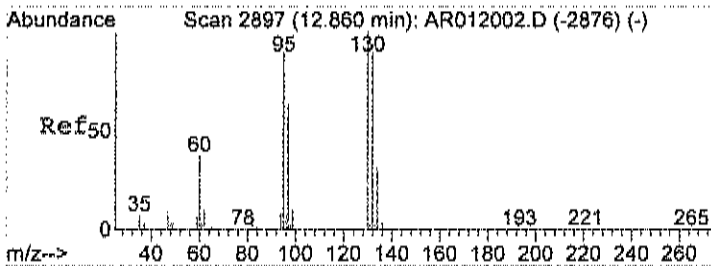
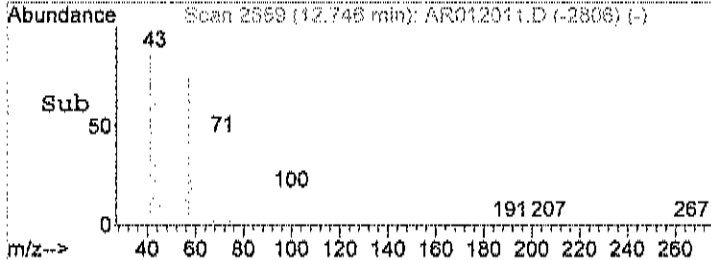
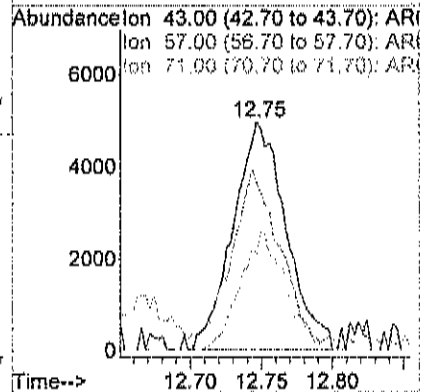
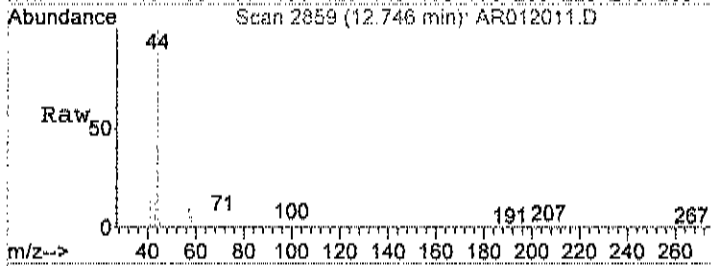
Tgt Ion: 78 Resp: 45780
Ion Ratio Lower Upper
78 100
77 24.3 4.1 44.1
51 17.4 0.0 36.8





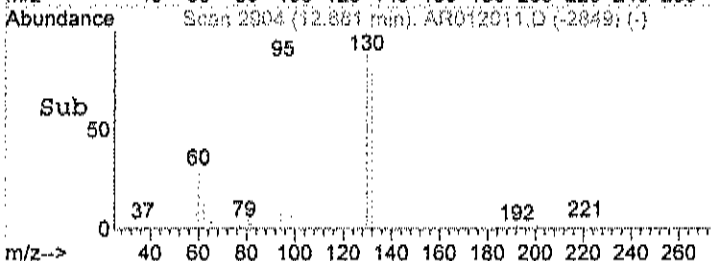
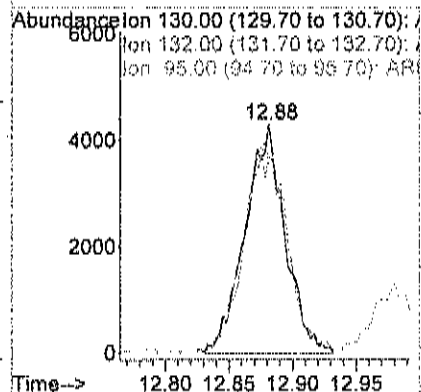
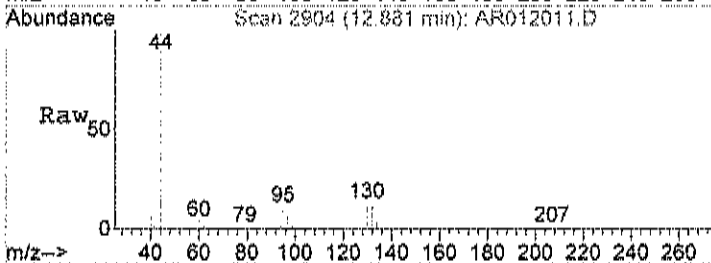
#43
Heptane
Concen: 0.14 ppb
RT: 12.75 min Scan# 2859
Delta R.T. 0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

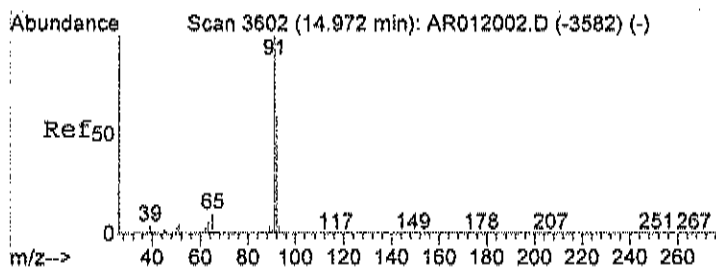
Tgt Ion: 43 Resp: 12939
Ion Ratio Lower Upper
43 100
57 78.8 36.0 76.0#
71 44.3 42.5 82.5



#44
Trichloroethene
Concen: 0.14 ppb
RT: 12.88 min Scan# 2904
Delta R.T. 0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

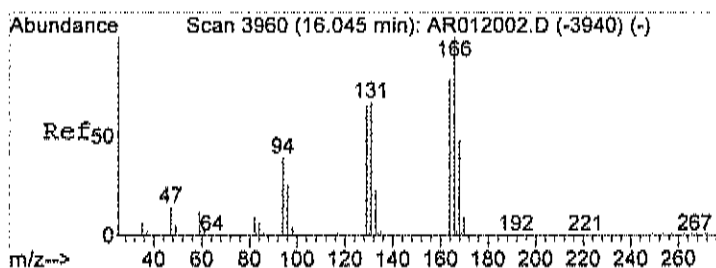
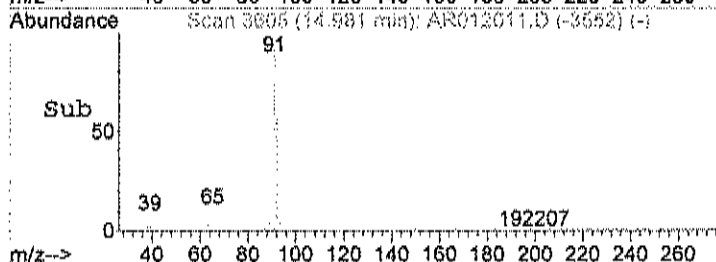
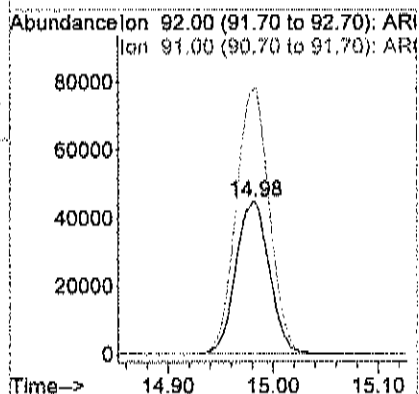
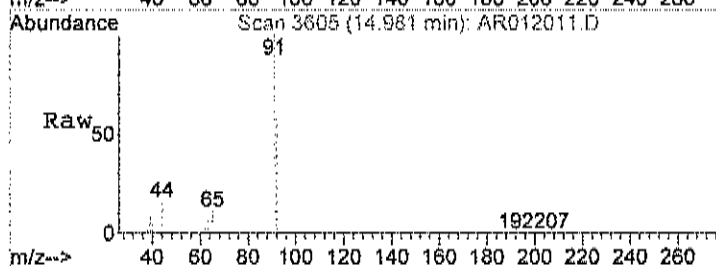
Tgt Ion: 130 Resp: 9361
Ion Ratio Lower Upper
130 100
132 98.6 76.9 116.9
95 99.9 78.6 118.6





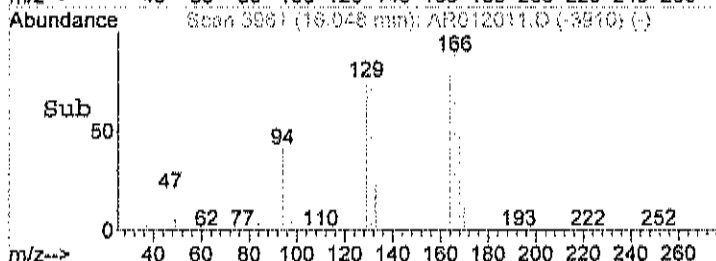
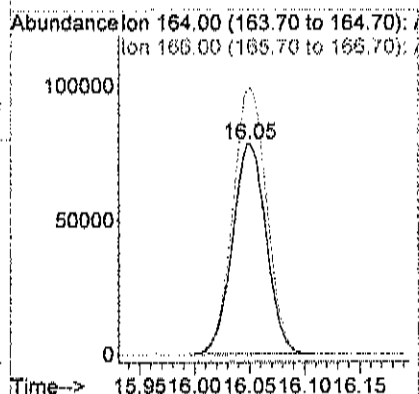
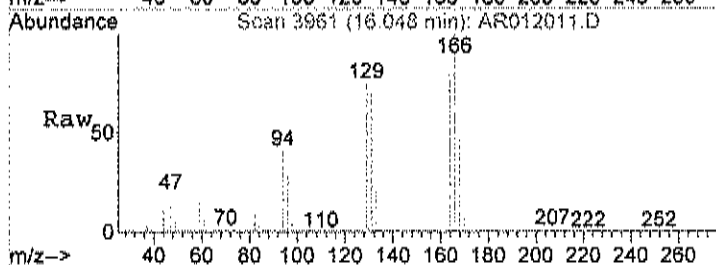
#51
Toluene
Concen: 0.88 ppb
RT: 14.98 min Scan# 3605
Delta R.T. 0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

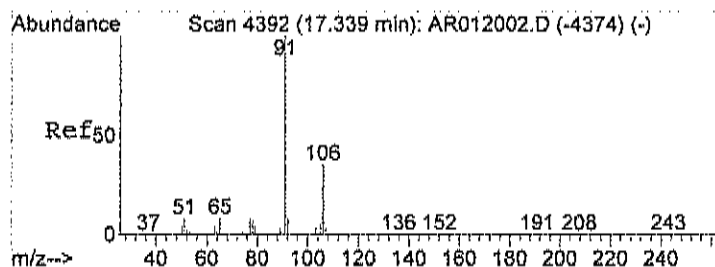
Tgt Ion: 92 Resp: 99753
Ion Ratio Lower Upper
92 100
91 174.3 154.5 194.5



#56
Tetrachloroethylene
Concen: 2.27 ppb
RT: 16.05 min Scan# 3961
Delta R.T. 0.00 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

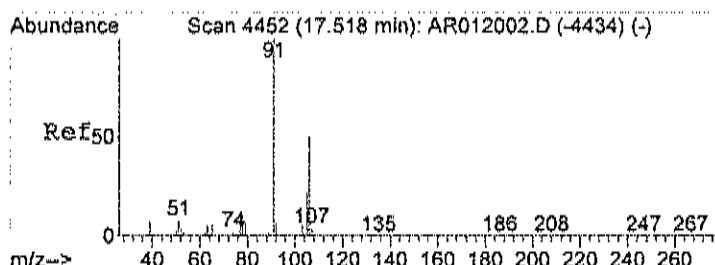
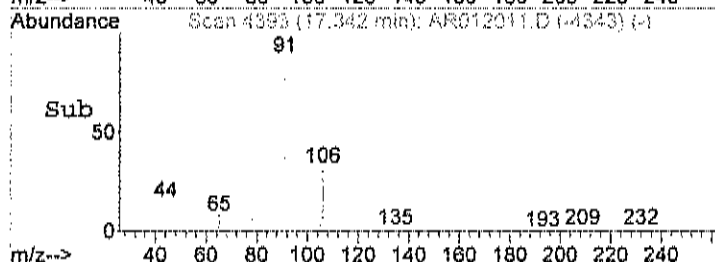
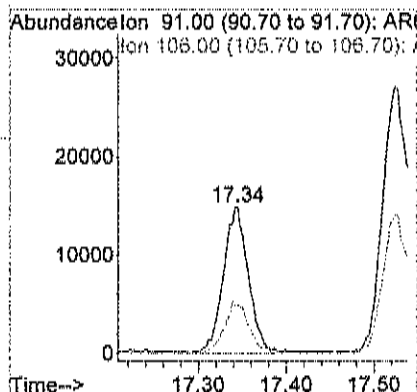
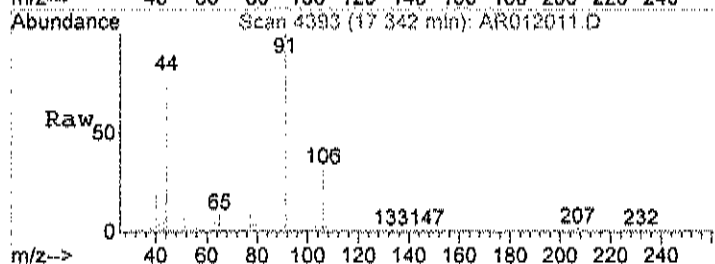
Tgt Ion: 164 Resp: 167216
Ion Ratio Lower Upper
164 100
166 127.4 106.4 146.4





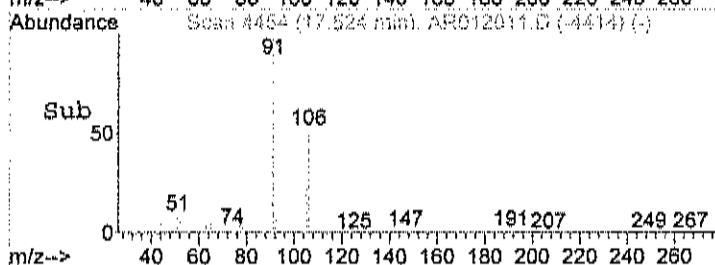
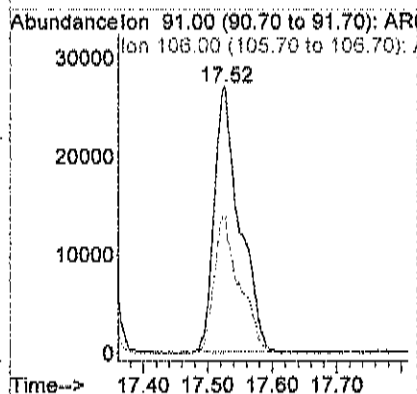
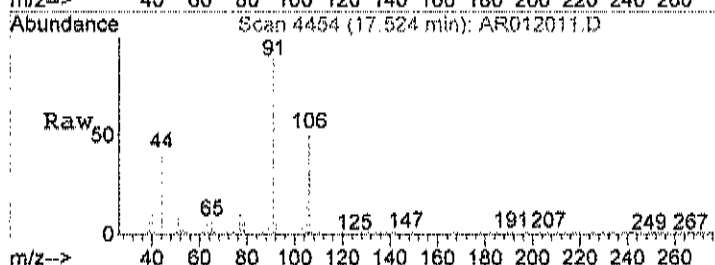
#58
Ethylbenzene
Concen: 0.12 ppb
RT: 17.34 min Scan# 4393
Delta R.T. -0.00 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

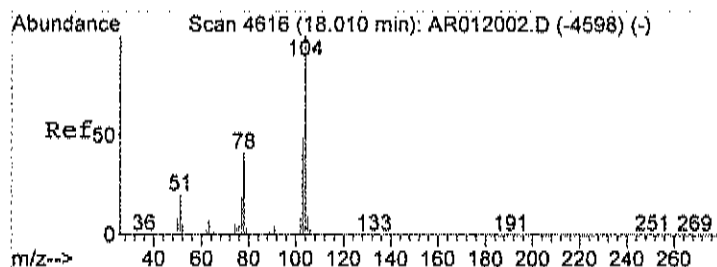
Tgt Ion: 91 Resp: 29866
Ion Ratio Lower Upper
91 100
106 33.1 11.7 51.7



#59
m&p-xylene
Concen: 0.39 ppb
RT: 17.52 min Scan# 4454
Delta R.T. -0.03 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

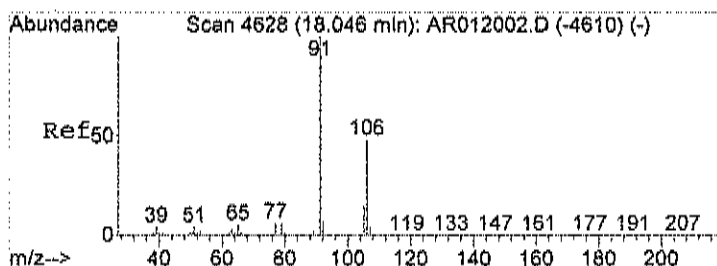
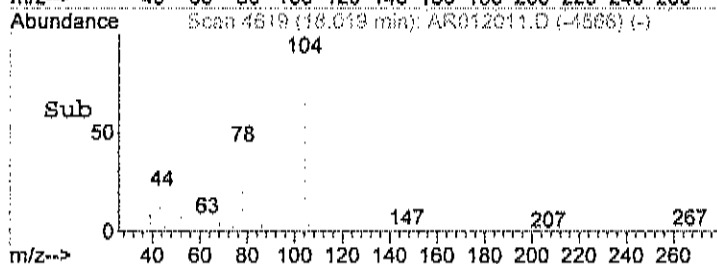
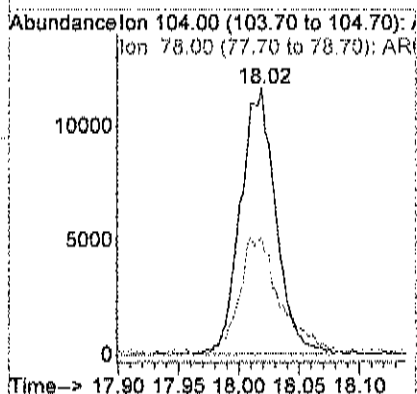
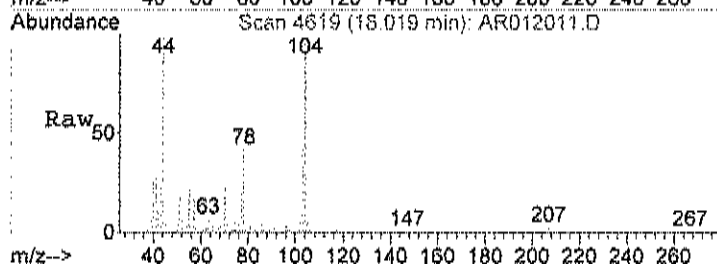
Tgt Ion: 91 Resp: 74285
Ion Ratio Lower Upper
91 100
106 51.5 29.0 69.0





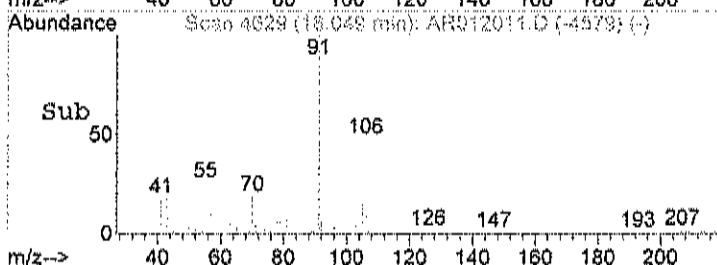
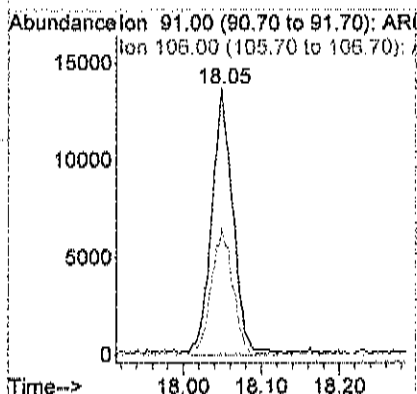
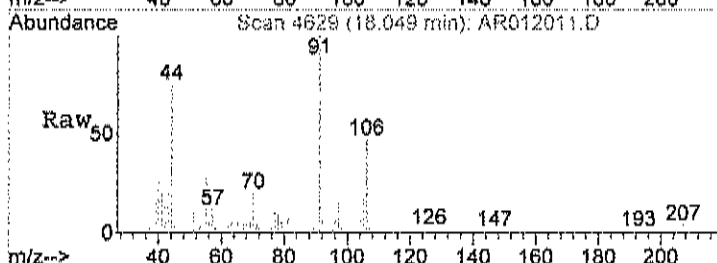
#61
Styrene
Concen: 0.17 ppb
RT: 18.02 min Scan# 4619
Delta R.T. 0.01 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

Tgt Ion: 104 Resp: 23635
Ion Ratio Lower Upper
104 100
78 51.5 34.7 74.7



#63
o-xylene
Concen: 0.13 ppb
RT: 18.05 min Scan# 4629
Delta R.T. -0.00 min
Lab File: AR012011.D
Acq: 20 Jan 2020 6:12 pm

Tgt Ion: 91 Resp: 26322
Ion Ratio Lower Upper
91 100
106 46.9 26.2 66.2



Data File : C:\HPCHEM\1\DATA\AR012022.D

Vial: 22

Acq On : 21 Jan 2020 2:43 am

Operator: RJP

Sample : C2001030-002A 10x

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:28 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	40404	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	192104	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	161527	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.75	95	104769	0.97	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	97.00%

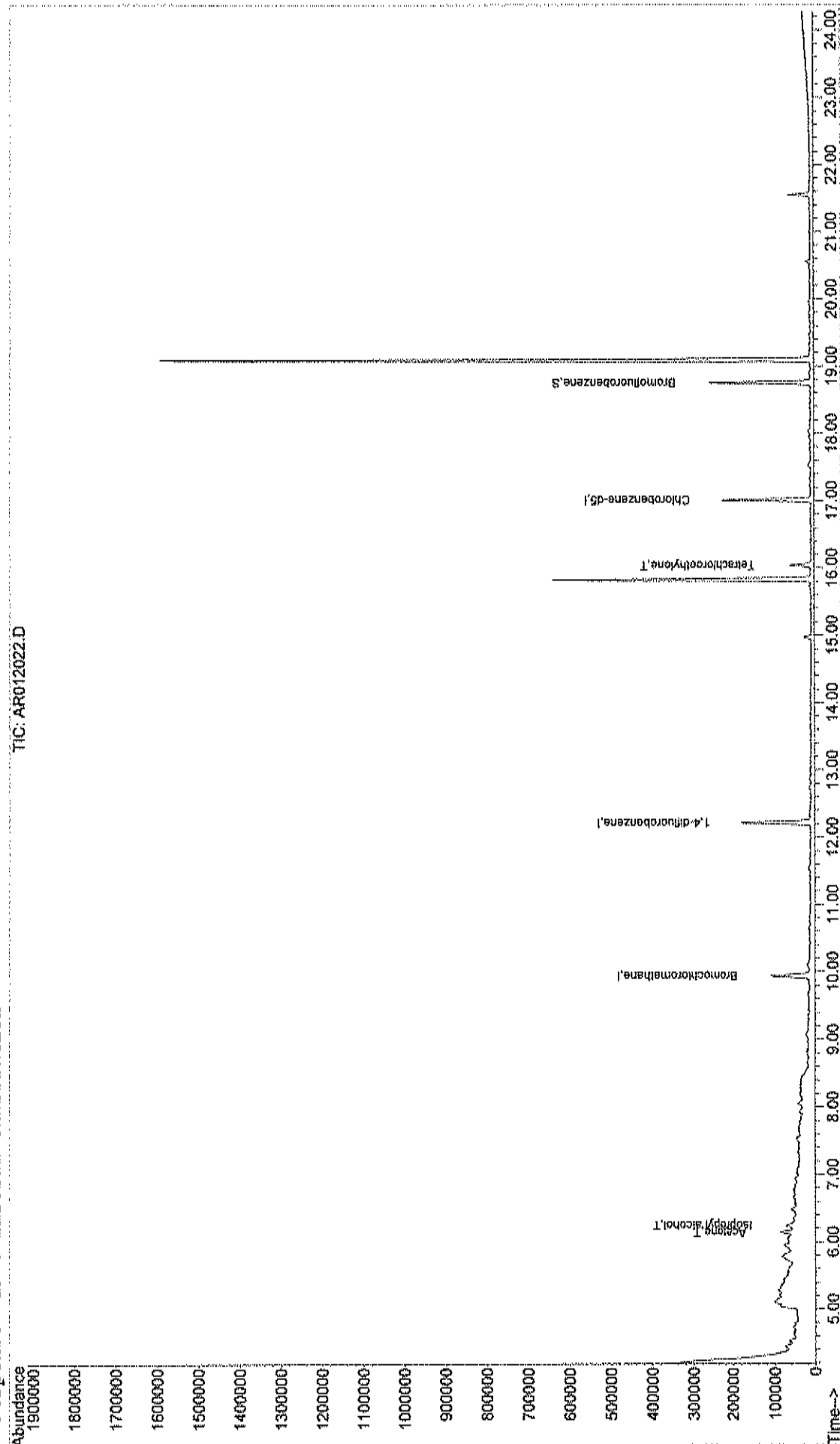
Target Compounds

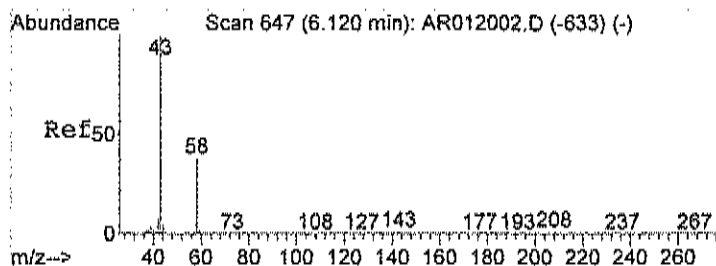
						Qvalue
15) Acetone	6.14	58	14660	0.62	ppb	# 100
17) Isopropyl alcohol	6.25	45	24362	0.33	ppb	# 1
56) Tetrachloroethylene	16.04	164	15386	0.24	ppb	95

Data File : C:\HPCHEM\1\DATA\AR012022.D
Acq On : 21 Jan 2020 2:43 am
Sample : C2001030-002A 10X
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 12:20 2020

Vial: 22
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A116_1UG.RES

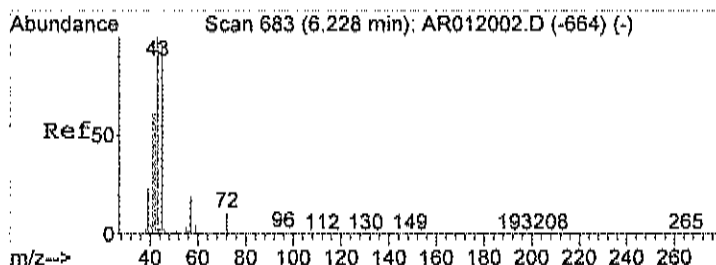
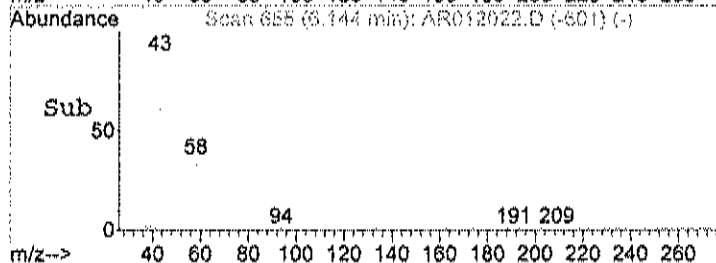
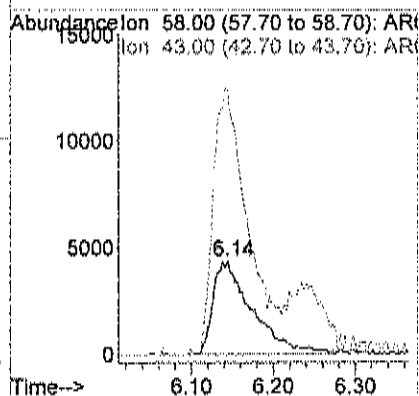
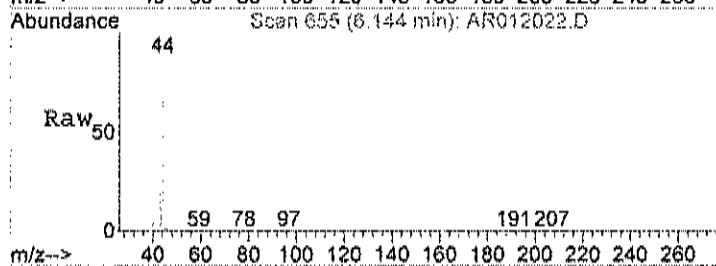
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





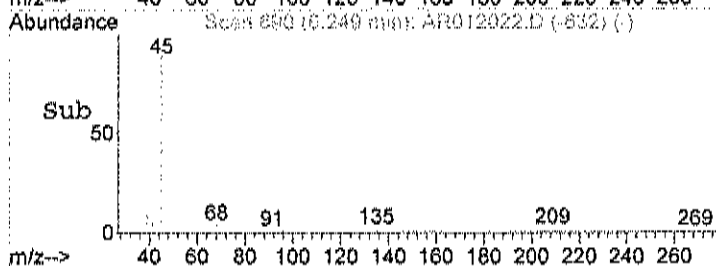
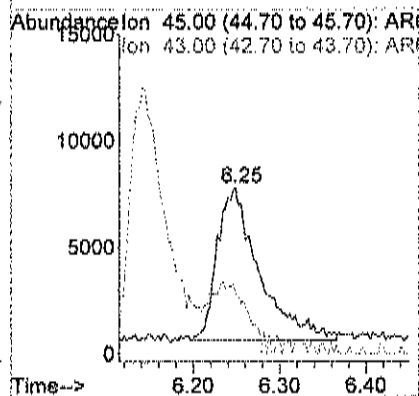
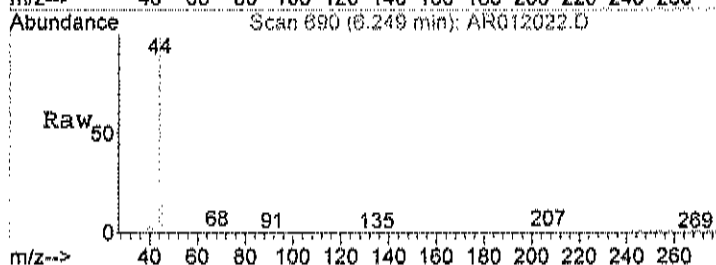
#15
Acetone
Concen: 0.62 ppb
RT: 6.14 min Scan# 655
Delta R.T. 0.01 min
Lab File: AR012022.D
Acq: 21 Jan 2020 2:43 am

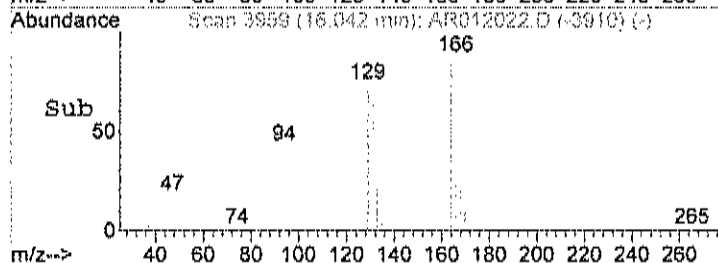
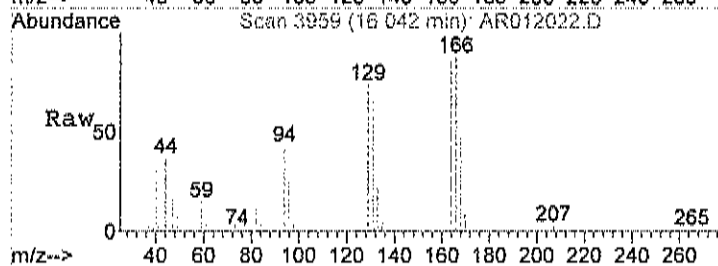
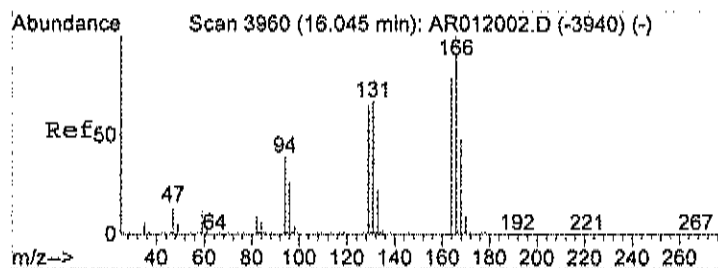
Tgt Ion: 58 Resp: 14660
Ion Ratio Lower Upper
58 100
43 316.1 0.0 30.0#



#17
Isopropyl alcohol
Concen: 0.33 ppb
RT: 6.25 min Scan# 690
Delta R.T. 0.02 min
Lab File: AR012022.D
Acq: 21 Jan 2020 2:43 am

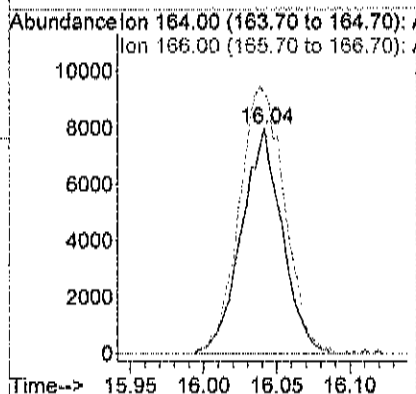
Tgt Ion: 45 Resp: 24362
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#





#56
Tetrachloroethylene
Concen: 0.24 ppb
RT: 16.04 min Scan# 3959
Delta R.T. -0.00 min
Lab File: AR012022.D
Acq: 21 Jan 2020 2:43 am

Tgt Ion:164 Resp: 15386
Ion Ratio Lower Upper
164 100
166 132.5 106.4 146.4



Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:59:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2,4-Trimethylbenzene	0.18	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,3,5-Trimethylbenzene	0.11	0.15	J	ppbV	1	1/20/2020 6:59:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 6:59:00 PM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	1/20/2020 6:59:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Acetone	19	3.0		ppbV	10	1/21/2020 3:28:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Benzene	0.91	0.15		ppbV	1	1/20/2020 6:59:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Carbon tetrachloride	0.090	0.030		ppbV	1	1/20/2020 6:59:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Chloroform	0.33	0.15		ppbV	1	1/20/2020 6:59:00 PM
Chloromethane	1.3	0.15		ppbV	1	1/20/2020 6:59:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 6:59:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Ethyl acetate	1.9	0.15		ppbV	1	1/20/2020 6:59:00 PM

Qualifiers:	SC Sub-Contracted	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.24	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 11	0.23	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 6:59:00 PM
Heptane	0.51	0.15		ppbV	1	1/20/2020 6:59:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Hexane	0.53	0.15		ppbV	1	1/20/2020 6:59:00 PM
Isopropyl alcohol	20	1.5		ppbV	10	1/21/2020 3:28:00 AM
m&p-Xylene	0.78	0.30		ppbV	1	1/20/2020 6:59:00 PM
Methyl Butyl Ketone	0.14	0.30	J	ppbV	1	1/20/2020 6:59:00 PM
Methyl Ethyl Ketone	1.5	0.30		ppbV	1	1/20/2020 6:59:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 6:59:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Methylene chloride	0.22	0.15		ppbV	1	1/20/2020 6:59:00 PM
o-Xylene	0.24	0.15		ppbV	1	1/20/2020 6:59:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Styrene	0.24	0.15		ppbV	1	1/20/2020 6:59:00 PM
Tetrachloroethylene	0.10	0.15	J	ppbV	1	1/20/2020 6:59:00 PM
Tetrahydrofuran	0.44	0.15		ppbV	1	1/20/2020 6:59:00 PM
Toluene	2.8	1.5		ppbV	10	1/21/2020 3:28:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 6:59:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 6:59:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 6:59:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:59:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 6:59:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:59:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
1,2,4-Trimethylbenzene	0.88	0.74		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 6:59:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 6:59:00 PM
1,3,5-Trimethylbenzene	0.54	0.74	J	ug/m3	1	1/20/2020 6:59:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 6:59:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 6:59:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	1/20/2020 6:59:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 6:59:00 PM
Acetone	44	7.1		ug/m3	10	1/21/2020 3:28:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 6:59:00 PM
Benzene	2.9	0.48		ug/m3	1	1/20/2020 6:59:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 6:59:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 6:59:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 6:59:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 6:59:00 PM
Carbon tetrachloride	0.57	0.19		ug/m3	1	1/20/2020 6:59:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 6:59:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 6:59:00 PM
Chloroform	1.6	0.73		ug/m3	1	1/20/2020 6:59:00 PM
Chloromethane	2.7	0.31		ug/m3	1	1/20/2020 6:59:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:59:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 6:59:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 6:59:00 PM
Ethyl acetate	6.8	0.54		ug/m3	1	1/20/2020 6:59:00 PM
Ethylbenzene	1.0	0.65		ug/m3	1	1/20/2020 6:59:00 PM
Freon 11	1.3	0.84		ug/m3	1	1/20/2020 6:59:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 6:59:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 6:59:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-003A

Client Sample ID: Apartment A1-Indoor
Tag Number: 1178,434
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 6:59:00 PM
Heptane	2.1	0.61		ug/m3	1	1/20/2020 6:59:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 6:59:00 PM
Hexane	1.9	0.53		ug/m3	1	1/20/2020 6:59:00 PM
Isopropyl alcohol	49	3.7		ug/m3	10	1/21/2020 3:28:00 AM
m&p-Xylene	3.4	1.3		ug/m3	1	1/20/2020 6:59:00 PM
Methyl Butyl Ketone	0.57	1.2	J	ug/m3	1	1/20/2020 6:59:00 PM
Methyl Ethyl Ketone	4.4	0.88		ug/m3	1	1/20/2020 6:59:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 6:59:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 6:59:00 PM
Methylene chloride	0.76	0.52		ug/m3	1	1/20/2020 6:59:00 PM
o-Xylene	1.0	0.65		ug/m3	1	1/20/2020 6:59:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 6:59:00 PM
Styrene	1.0	0.64		ug/m3	1	1/20/2020 6:59:00 PM
Tetrachloroethylene	0.68	1.0	J	ug/m3	1	1/20/2020 6:59:00 PM
Tetrahydrofuran	1.3	0.44		ug/m3	1	1/20/2020 6:59:00 PM
Toluene	11	5.7		ug/m3	10	1/21/2020 3:28:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 6:59:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 6:59:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 6:59:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 6:59:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Data File : C:\HPCHEM\1\DATA\AR012012.D

Vial: 12

Acq On : 20 Jan 2020 6:59 pm

Operator: RJP

Sample : C2001030-003A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:18 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.97	128	44294	1.00	ppb	0.04
35) 1,4-difluorobenzene	12.23	114	209383	1.00	ppb	0.02
50) Chlorobenzene-d5	17.02	117	182705	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	123059	1.01	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	101.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.24	85	67144	0.58	ppb	97
4) Chloromethane	4.45	50	35824	1.33	ppb	85
14) Freon 11	5.93	101	28626	0.23	ppb	84
15) Acetone	6.15	58	473076	18.37	ppb	100
17) Isopropyl alcohol	6.25	45	1891781	23.17	ppb	1
21) Methylene chloride	7.23	84	10212	0.22	ppb	91
28) Methyl Ethyl Ketone	9.07	72	36796	1.50	ppb	100
30) Hexane	9.12	57	45760	0.53	ppb	93
31) Ethyl acetate	9.66	43	209091	1.89	ppb	99
32) Chloroform	10.13	83	35345	0.33	ppb	99
33) Tetrahydrofuran	10.31	42	22098m	0.44	ppb	
38) Carbon tetrachloride	11.59	117	9533	0.09	ppb	92
39) Benzene	11.56	78	139766	0.91	ppb	98
42) 2,2,4-trimethylpentane	12.41	57	30186m	0.12	ppb	
43) Heptane	12.75	43	46363	0.51	ppb	69
51) Toluene	14.98	92	317061	2.84	ppb	99
54) Methyl Butyl Ketone	15.41	43	11950	0.14	ppb	68
56) Tetrachloroethylene	16.05	164	7270	0.10	ppb	99
58) Ethylbenzene	17.34	91	59224	0.24	ppb	100
59) m&p-xylene	17.52	91	146827	0.78	ppb	98
61) Styrene	18.02	104	34148	0.24	ppb	95
63) o-xylene	18.05	91	46336	0.24	ppb	99
70) 1,3,5-trimethylbenzene	19.47	105	25089m	0.11	ppb	
71) 1,2,4-trimethylbenzene	19.97	105	39190	0.18	ppb	98

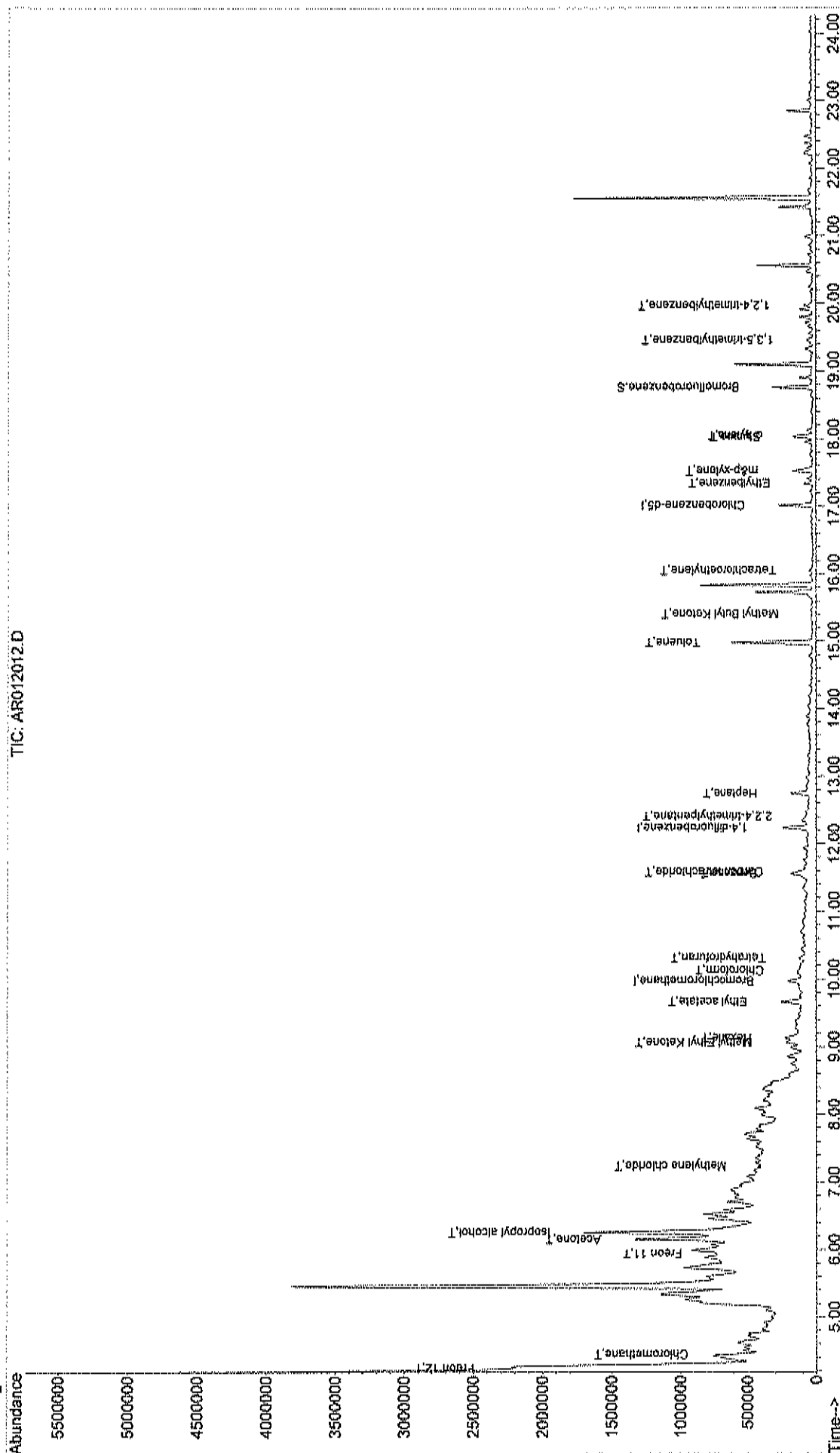
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR012012.D A116_1UG.M Wed Feb 05 10:01:38 2020 MSD1

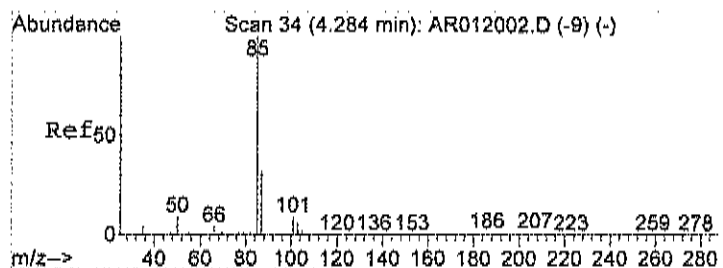
Data File : C:\HPCHEM\1\DATA\AR012012.D
 Acq On : 20 Jan 2020 6:59 pm
 Sample : C2001030-003A
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 23 8:48 2020

Vial: 12
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

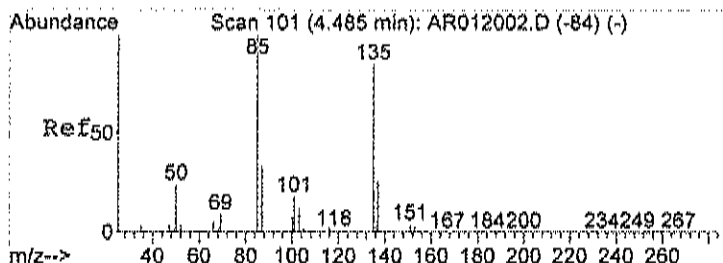
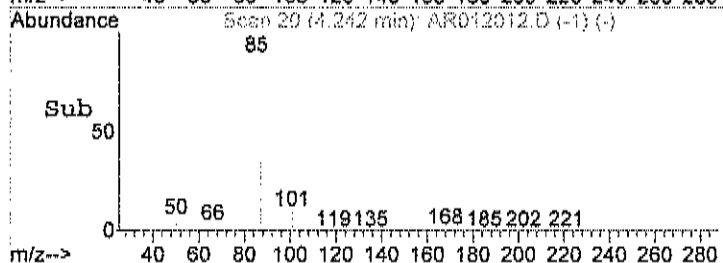
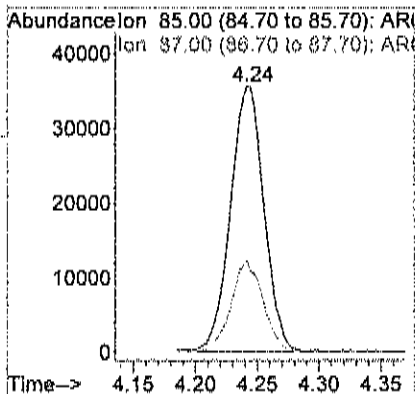
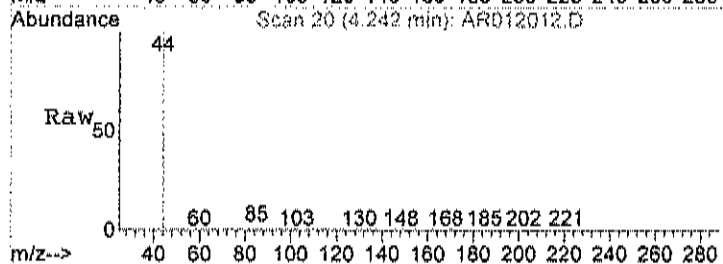
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration





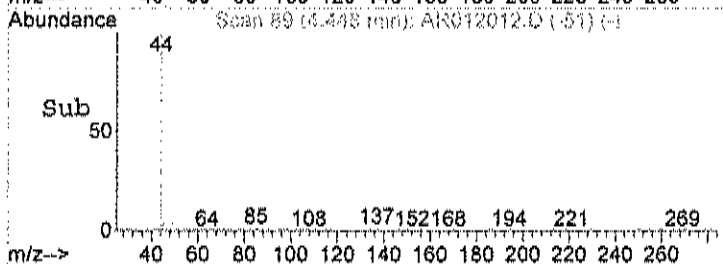
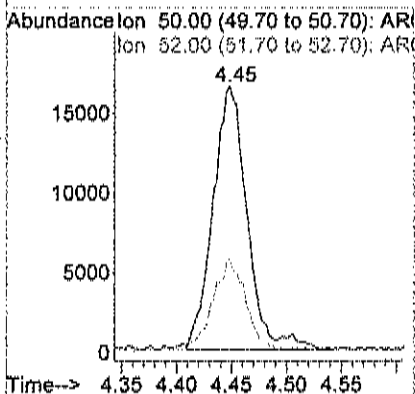
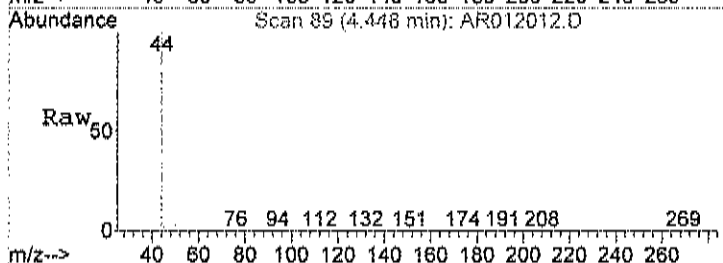
#3
Freon 12
Concen: 0.58 ppb
RT: 4.24 min Scan# 20
Delta R.T. -0.04 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

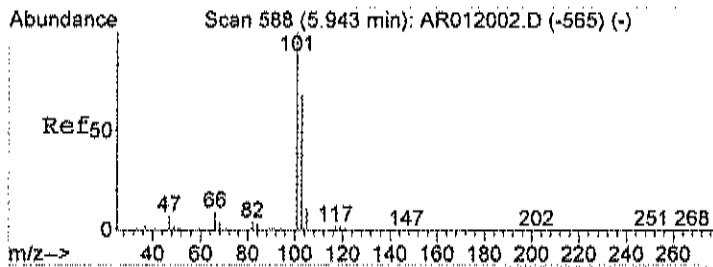
Tgt Ion: 85 Resp: 67144
Ion Ratio Lower Upper
85 100
87 33.3 11.9 51.9



#4
Chloromethane
Concen: 1.33 ppb
RT: 4.45 min Scan# 89
Delta R.T. -0.04 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 50 Resp: 35824
Ion Ratio Lower Upper
50 100
52 33.6 6.1 46.1

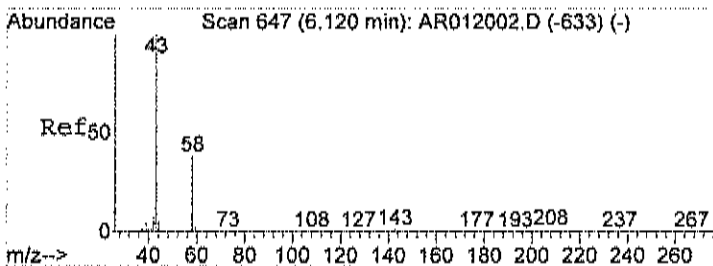
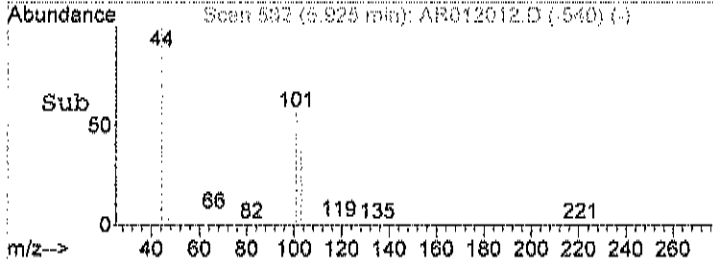
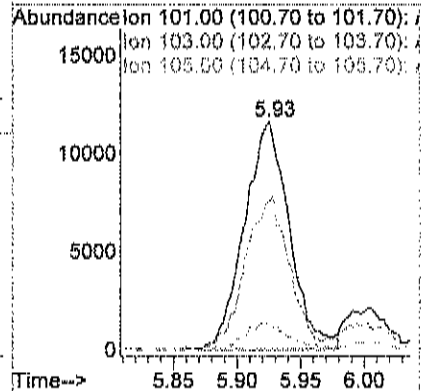
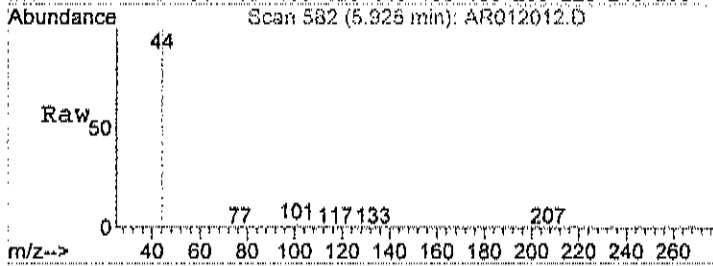




#14
Freon 11
Concen: 0.23 ppb
RT: 5.93 min Scan# 582
Delta R.T. -0.02 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 101 Resp: 28626

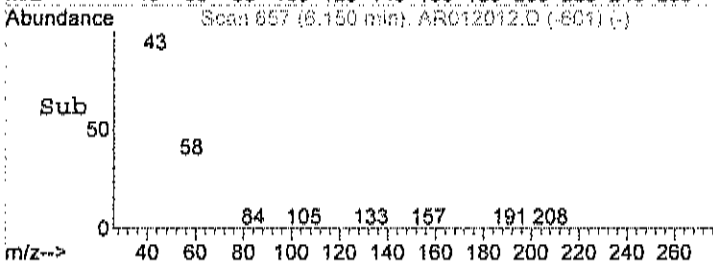
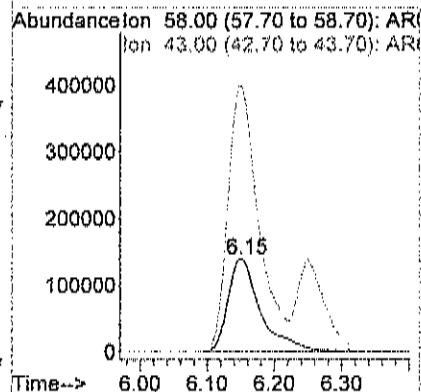
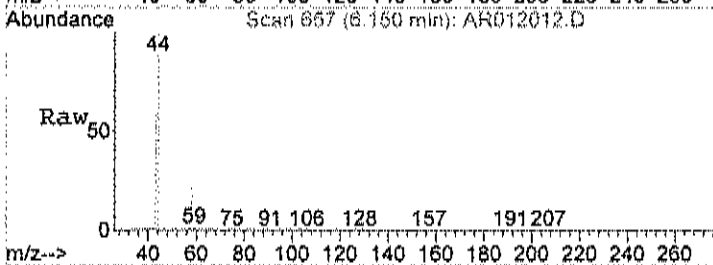
Ion	Ratio	Lower	Upper
101	100		
103	78.1	44.2	84.2
105	12.5	0.0	30.3

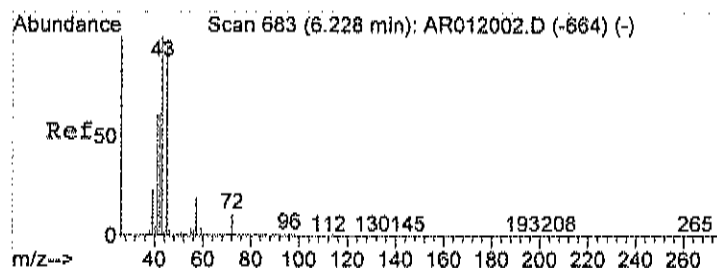


#15
Acetone
Concen: 18.37 ppb
RT: 6.15 min Scan# 657
Delta R.T. 0.02 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 58 Resp: 473076

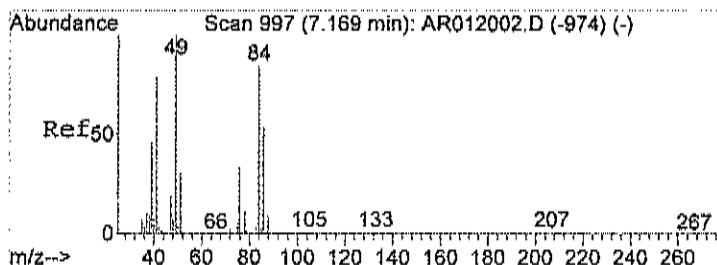
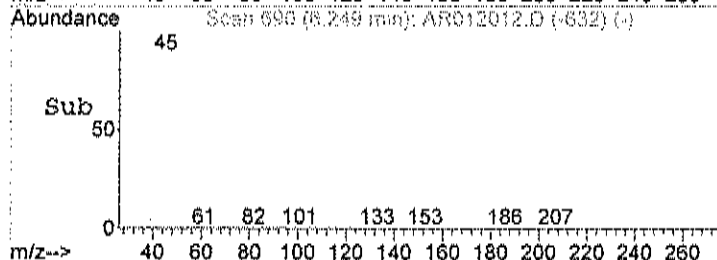
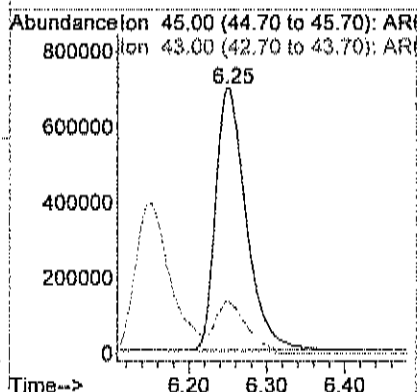
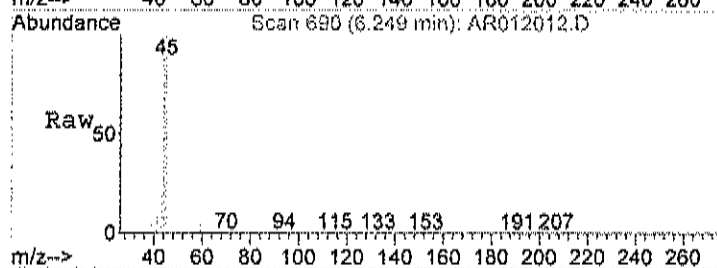
Ion	Ratio	Lower	Upper
58	100		
43	348.1	0.0	30.0#





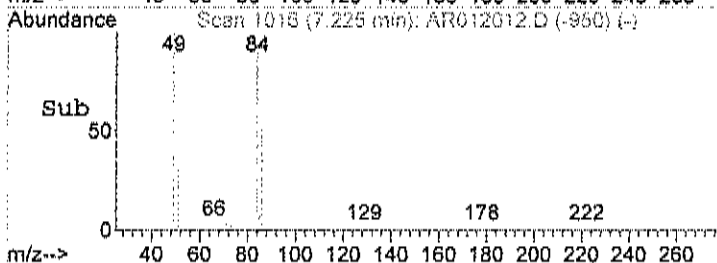
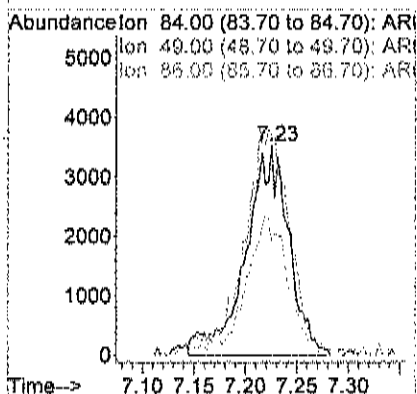
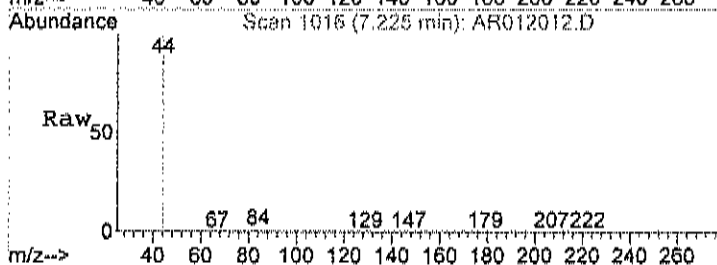
#17
Isopropyl alcohol
Concen: 23.17 ppb
RT: 6.25 min Scan# 690
Delta R.T. 0.02 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

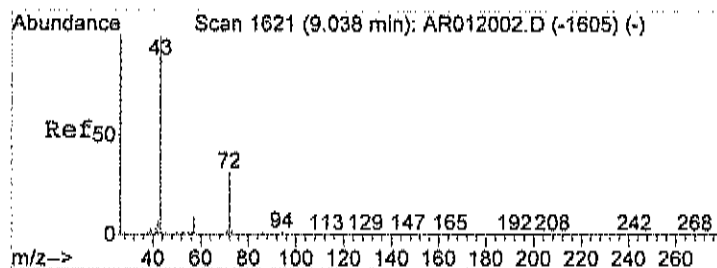
Tgt Ion: 45 Resp: 1891781
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#



#21
Methylene chloride
Concen: 0.22 ppb
RT: 7.23 min Scan# 1016
Delta R.T. 0.05 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

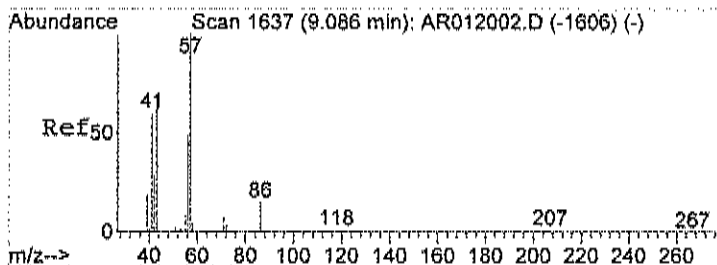
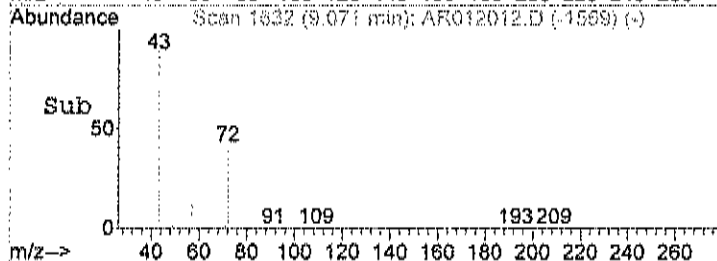
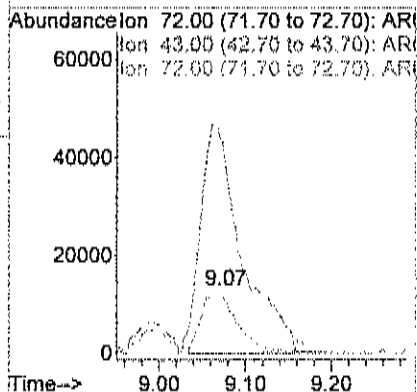
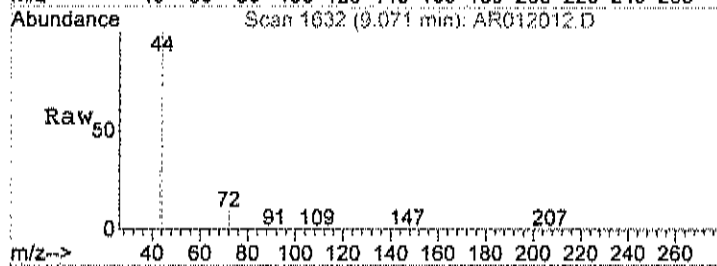
Tgt Ion: 84 Resp: 10212
Ion Ratio Lower Upper
84 100
49 107.2 101.4 141.4
86 63.4 45.4 85.4





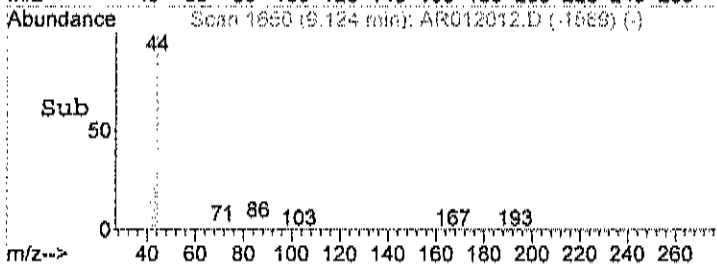
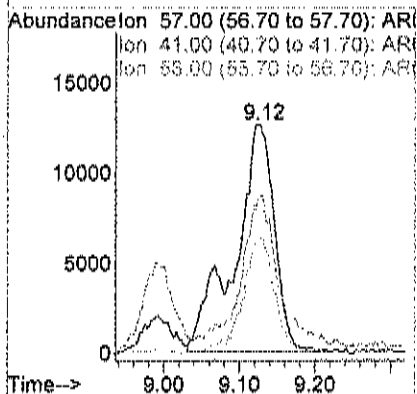
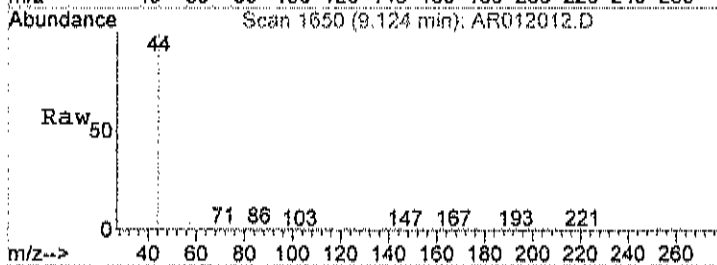
#28
Methyl Ethyl Ketone
Concen: 1.50 ppb
RT: 9.07 min Scan# 1632
Delta R.T. 0.04 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

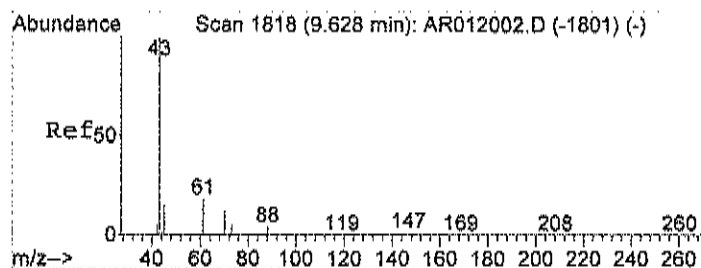
Tgt Ion: 72 Resp: 36796
Ion Ratio Lower Upper
72 100
43 421.0 0.0 20.0#
72 100.0 80.0 120.0



#30
Hexane
Concen: 0.53 ppb
RT: 9.12 min Scan# 1650
Delta R.T. 0.03 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 57 Resp: 45760
Ion Ratio Lower Upper
57 100
41 75.6 55.7 95.7
56 40.9 32.4 72.4

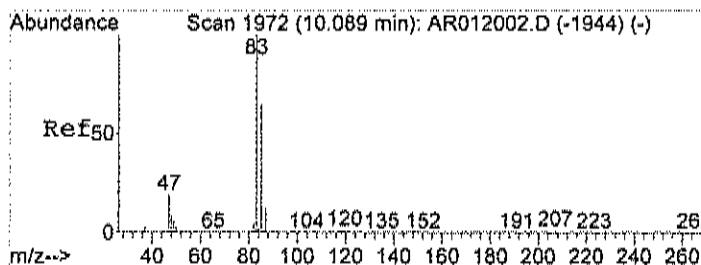
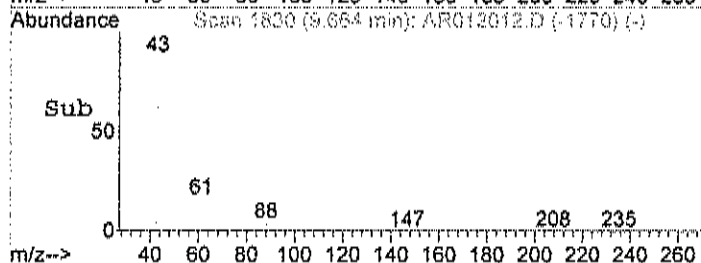
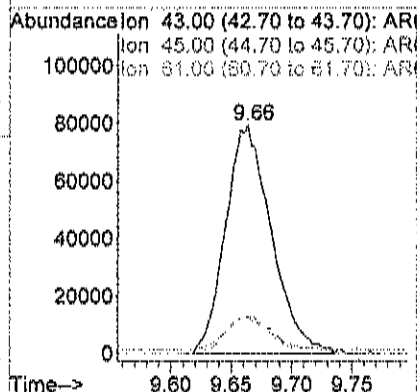
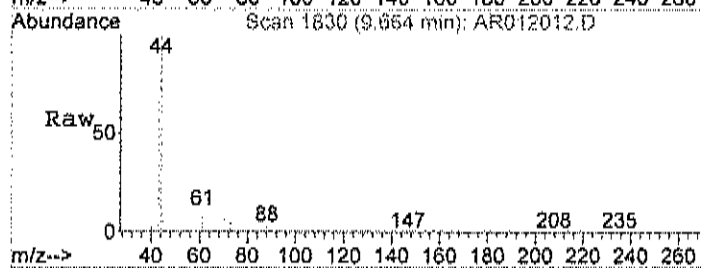




#31
Ethyl acetate
Concen: 1.89 ppb
RT: 9.66 min Scan# 1830
Delta R.T. 0.03 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 43 Resp: 209091

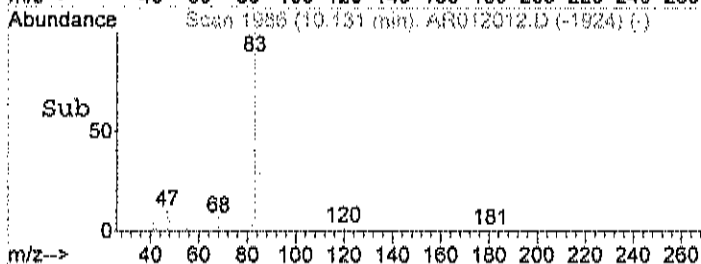
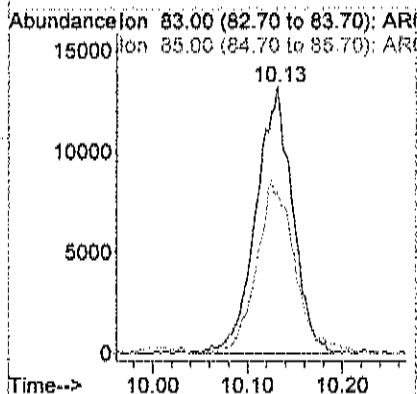
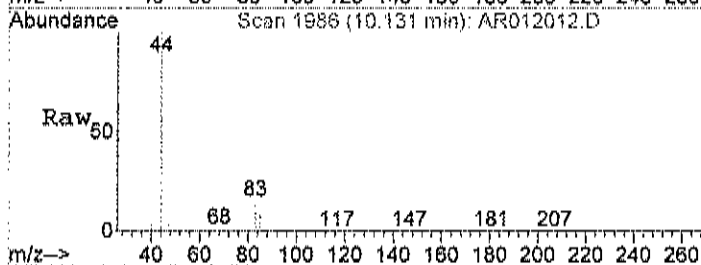
Ion	Ratio	Lower	Upper
43	100		
45	15.4	0.0	34.5
61	16.1	0.0	35.8

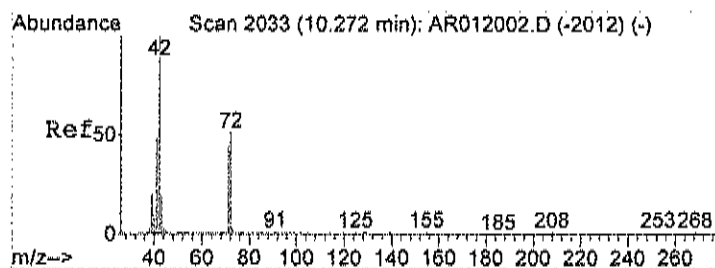


#32
Chloroform
Concen: 0.33 ppb
RT: 10.13 min Scan# 1986
Delta R.T. 0.04 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 83 Resp: 35345

Ion	Ratio	Lower	Upper
83	100		
85	67.1	46.5	86.5

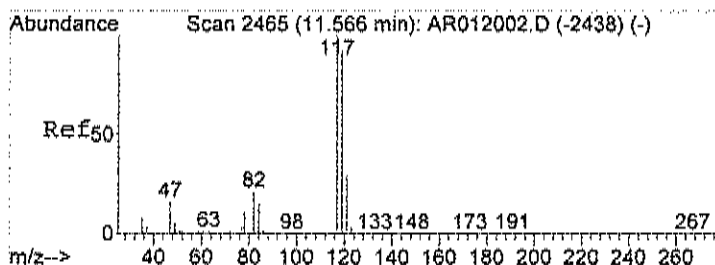
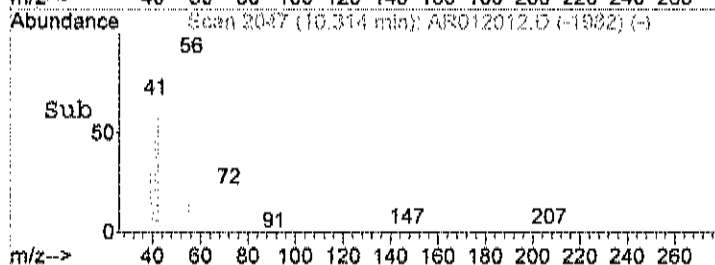
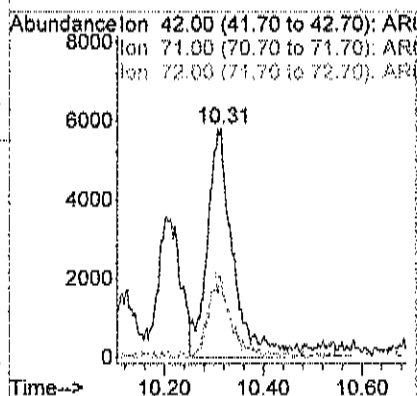
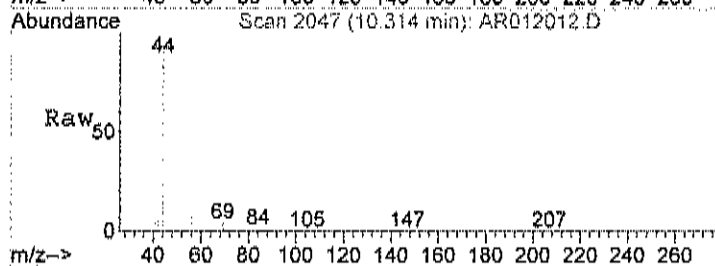




#33
Tetrahydrofuran
Concen: 0.44 ppb m
RT: 10.31 min Scan# 2047
Delta R.T. 0.04 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 42 Resp: 22098

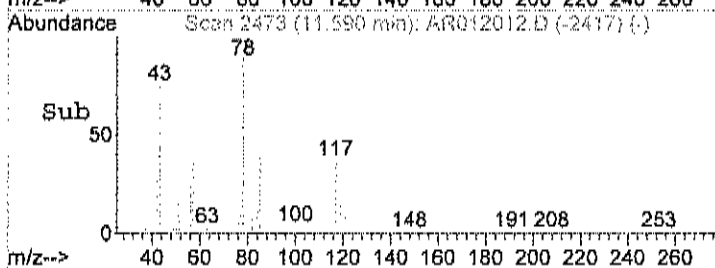
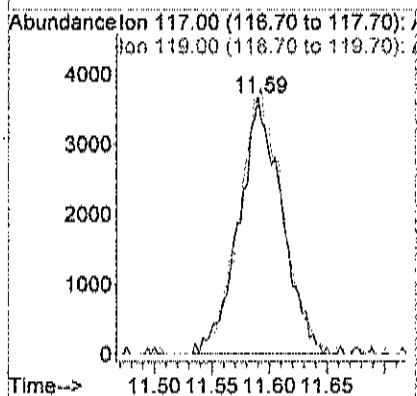
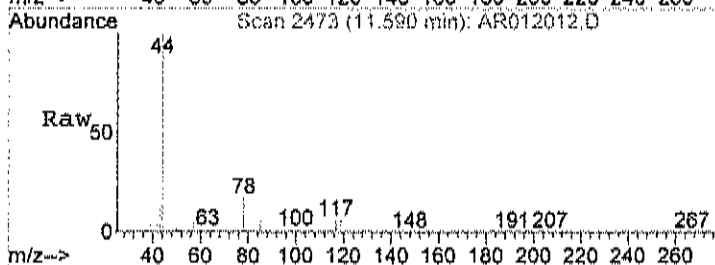
Ion	Ratio	Lower	Upper
42	100		
71	28.8	25.1	65.1
72	30.0	23.3	63.3

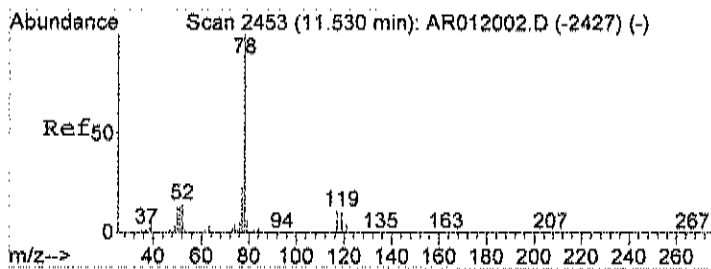


#38
Carbon tetrachloride
Concen: 0.09 ppb
RT: 11.59 min Scan# 2473
Delta R.T. 0.02 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 117 Resp: 9533

Ion	Ratio	Lower	Upper
117	100		
119	103.8	75.6	115.6

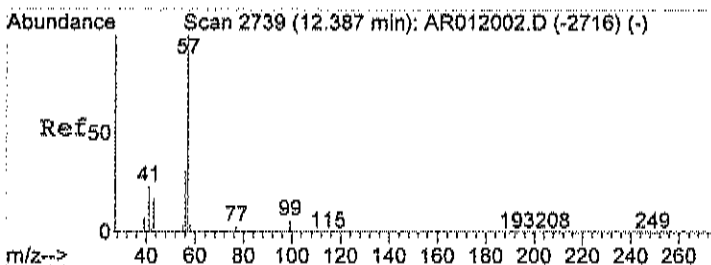
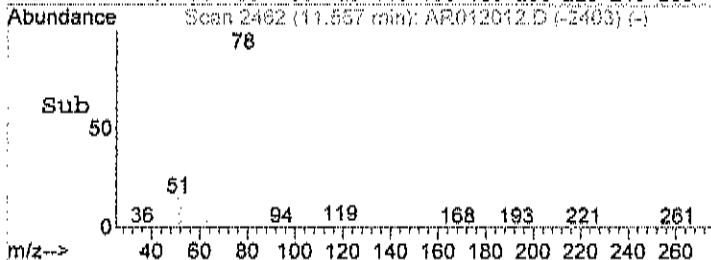
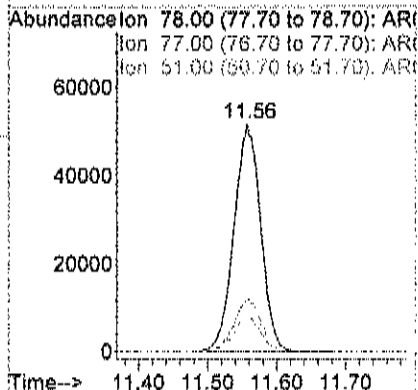
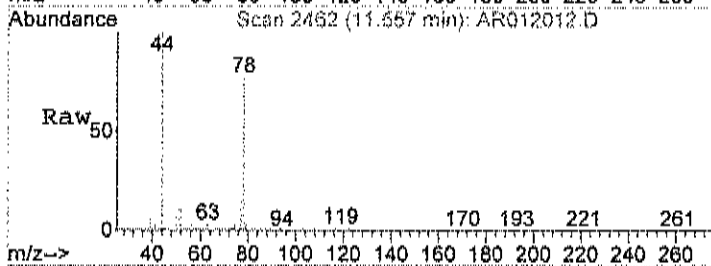




#39
Benzene
Concen: 0.91 ppb
RT: 11.56 min Scan# 2462
Delta R.T. 0.03 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 78 Resp: 139766

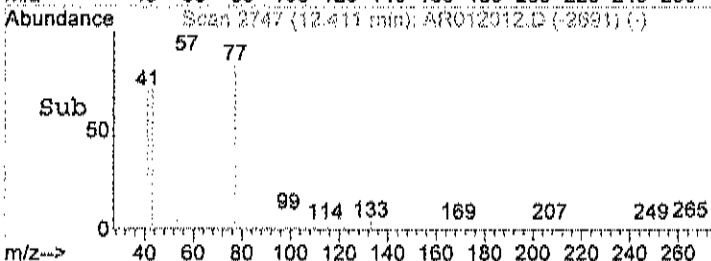
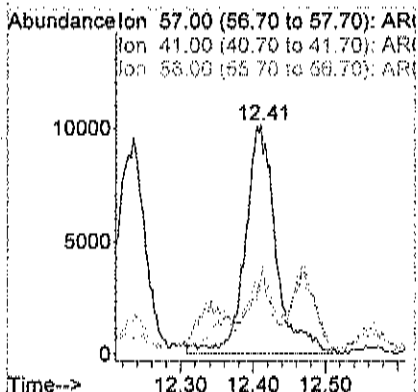
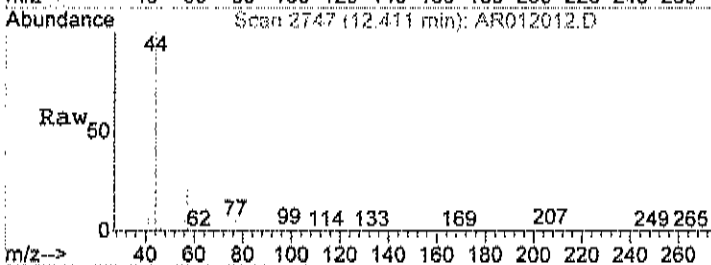
Ion	Ratio	Lower	Upper
78	100		
77	23.2	4.1	44.1
51	16.2	0.0	36.8

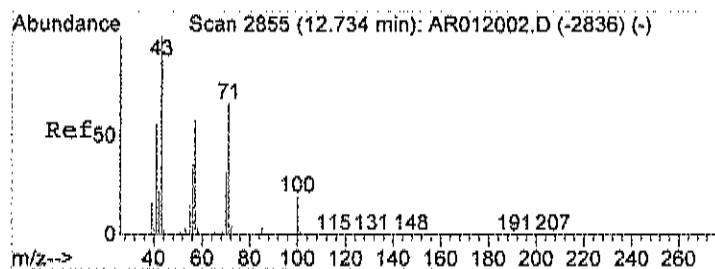


#42
2,2,4-trimethylpentane
Concen: 0.12 ppb m
RT: 12.41 min Scan# 2747
Delta R.T. 0.02 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion: 57 Resp: 30186

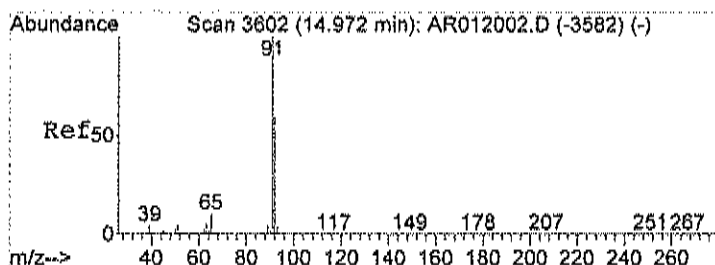
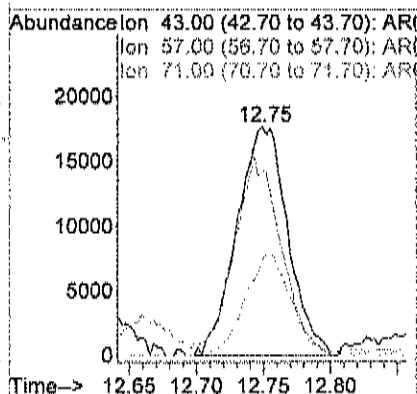
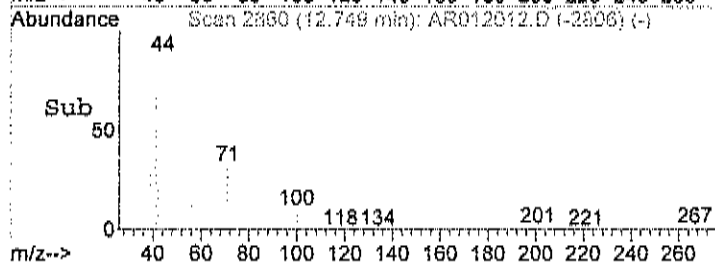
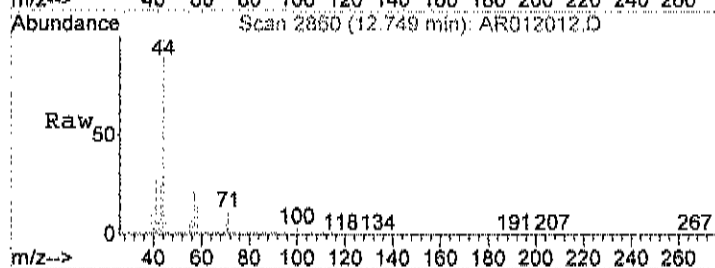
Ion	Ratio	Lower	Upper
57	100		
41	0.0	12.1	52.1#
56	0.0	12.7	52.7#





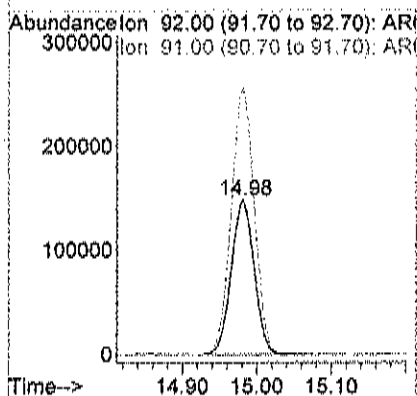
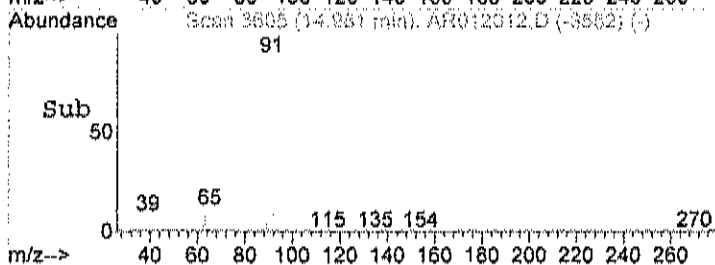
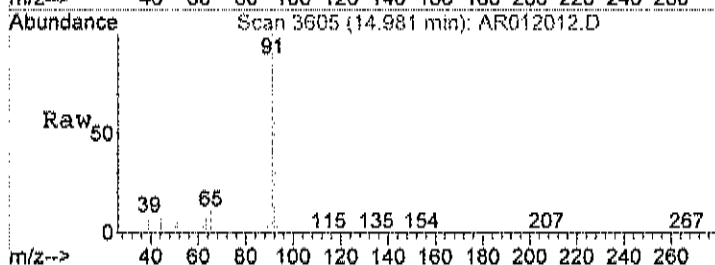
#43
Heptane
Concen: 0.51 ppb
RT: 12.75 min Scan# 2860
Delta R.T. 0.01 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

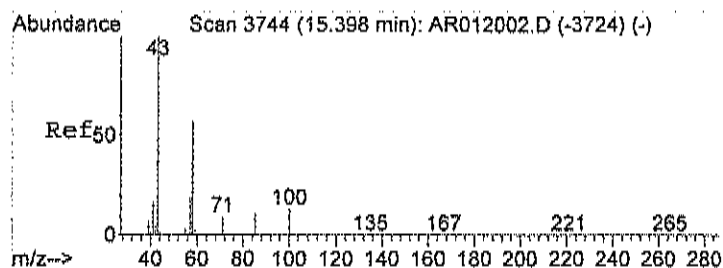
Tgt Ion: 43 Resp: 46363
Ion Ratio Lower Upper
43 100
57 80.4 36.0 76.0#
71 39.8 42.5 82.5#



#51
Toluene
Concen: 2.84 ppb
RT: 14.98 min Scan# 3605
Delta R.T. 0.01 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

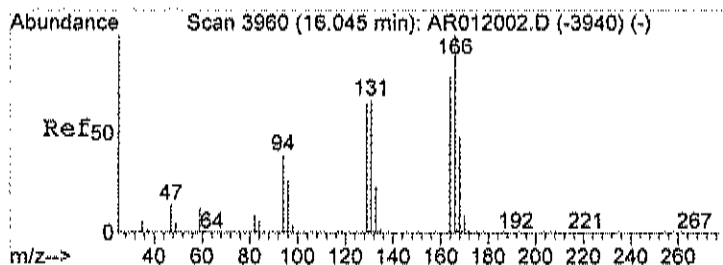
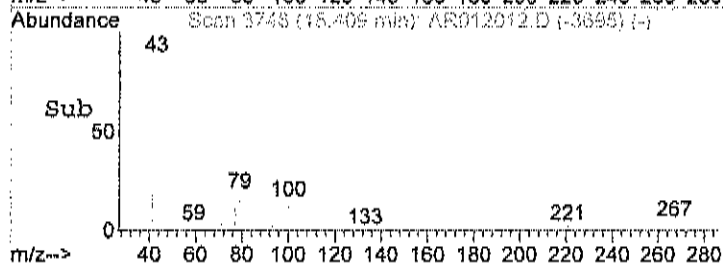
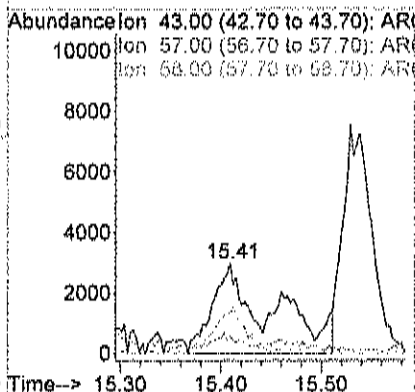
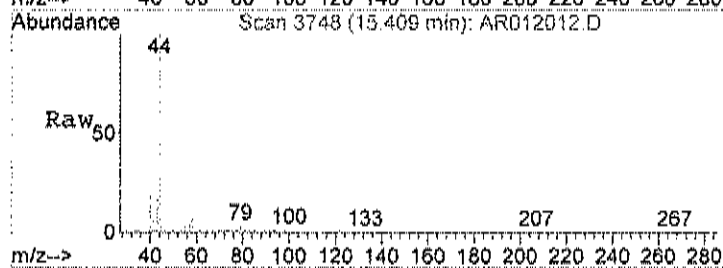
Tgt Ion: 92 Resp: 317061
Ion Ratio Lower Upper
92 100
91 172.9 154.5 194.5





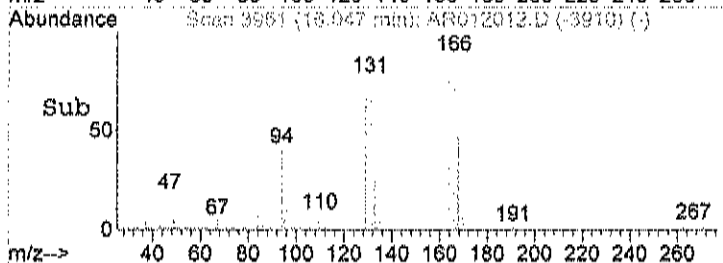
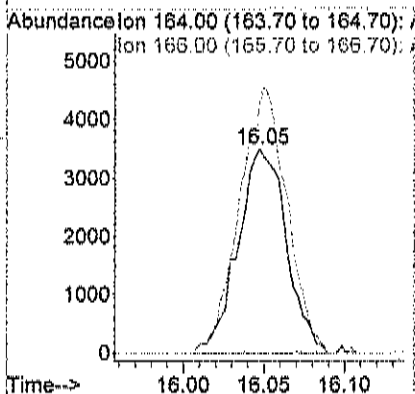
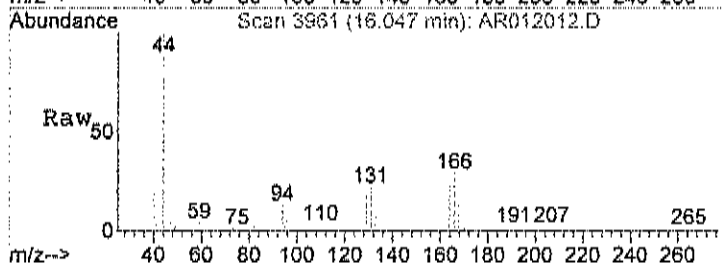
#54
Methyl Butyl Ketone
Concen: 0.14 ppb
RT: 15.41 min Scan# 3748
Delta R.T. 0.01 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

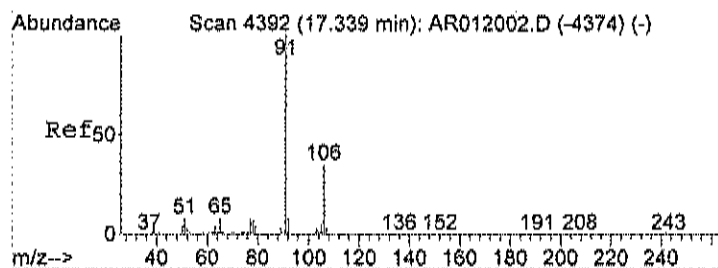
Tgt Ion: 43 Resp: 11950
Ion Ratio Lower Upper
43 100
57 7.2 0.0 37.9
58 26.5 30.2 70.2#



#56
Tetrachloroethylene
Concen: 0.10 ppb
RT: 16.05 min Scan# 3961
Delta R.T. 0.00 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

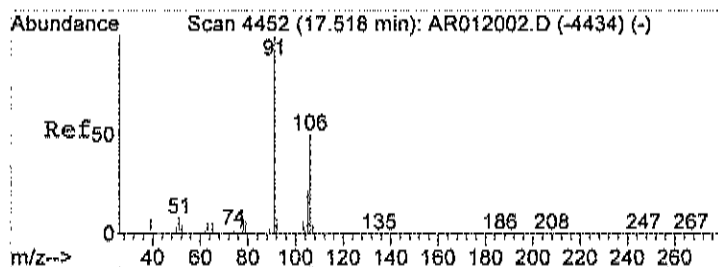
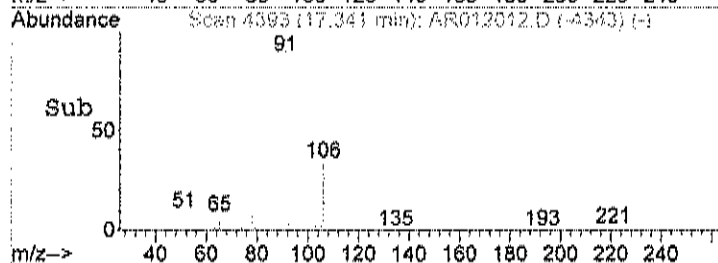
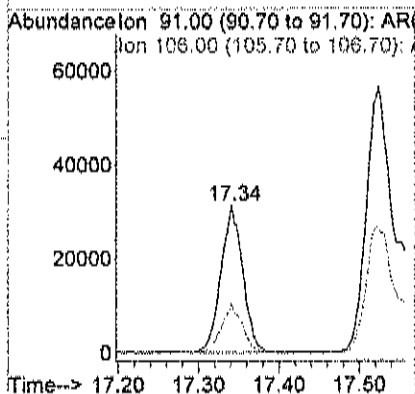
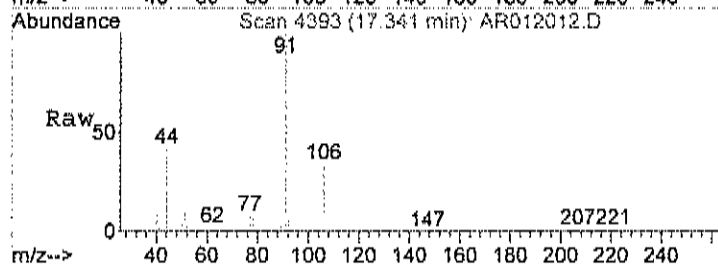
Tgt Ion: 164 Resp: 7270
Ion Ratio Lower Upper
164 100
166 127.5 106.4 146.4





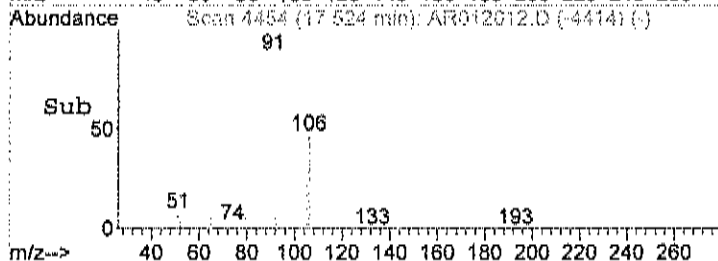
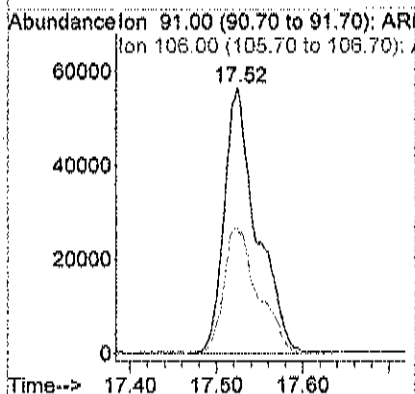
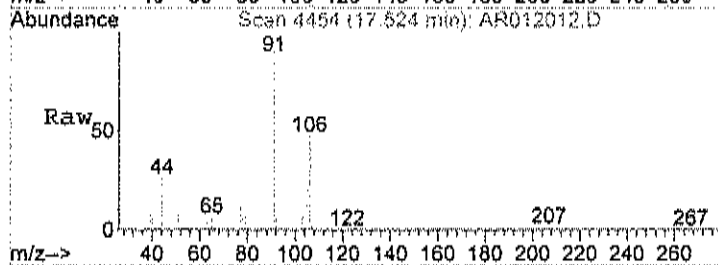
#58
Ethylbenzene
Concen: 0.24 ppb
RT: 17.34 min Scan# 4393
Delta R.T. -0.00 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

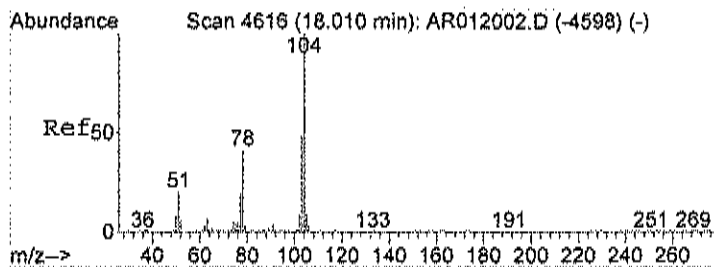
Tgt Ion: 91 Resp: 59224
Ion Ratio Lower Upper
91 100
106 31.8 11.7 51.7



#59
m&p-xylene
Concen: 0.78 ppb
RT: 17.52 min Scan# 4454
Delta R.T. -0.03 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

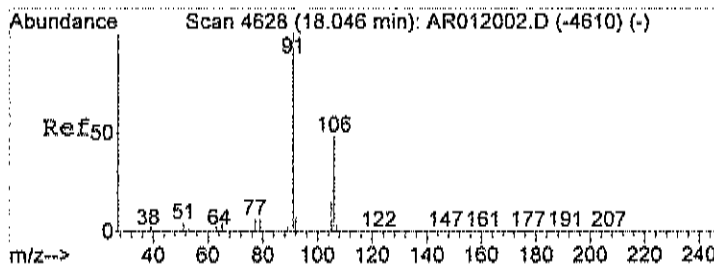
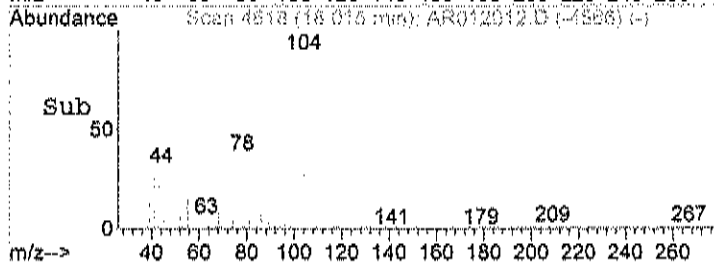
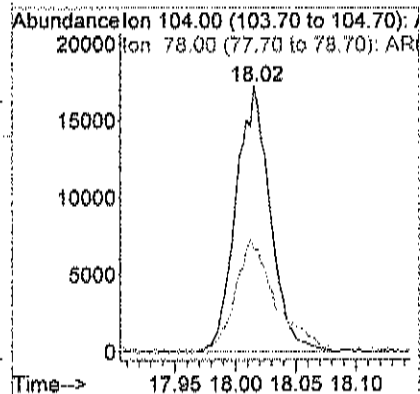
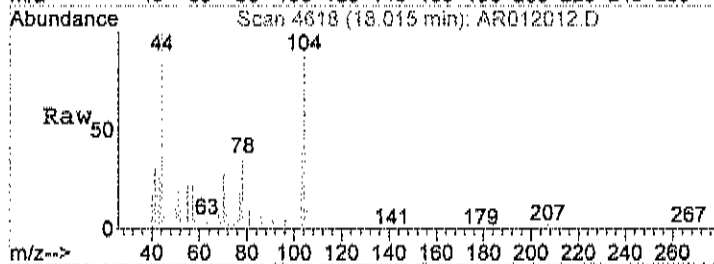
Tgt Ion: 91 Resp: 146827
Ion Ratio Lower Upper
91 100
106 50.2 29.0 69.0





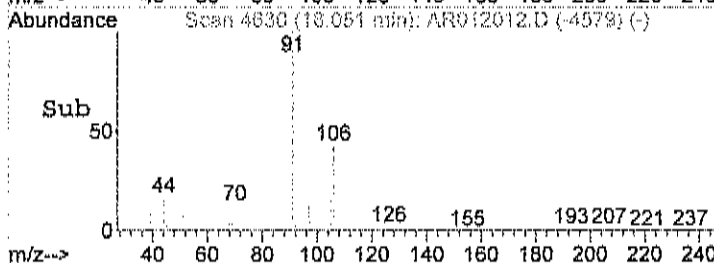
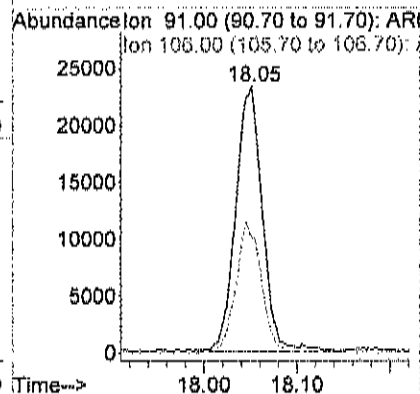
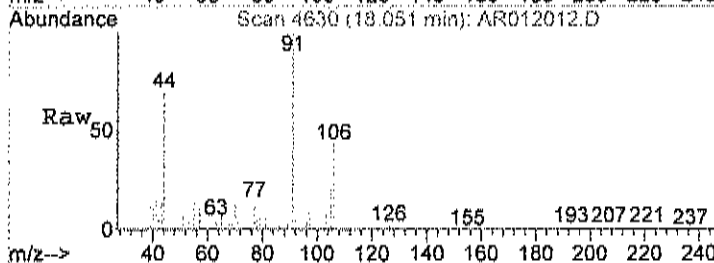
#61
Styrene
Concen: 0.24 ppb
RT: 18.02 min Scan# 4618
Delta R.T. 0.01 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

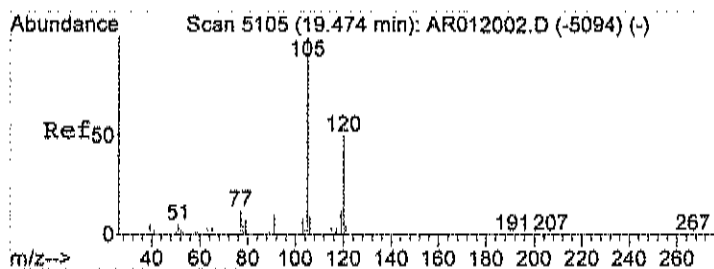
Tgt Ion: 104 Resp: 34148
Ion Ratio Lower Upper
104 100
78 51.2 34.7 74.7



#63
o-xylene
Concen: 0.24 ppb
RT: 18.05 min Scan# 4630
Delta R.T. 0.00 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

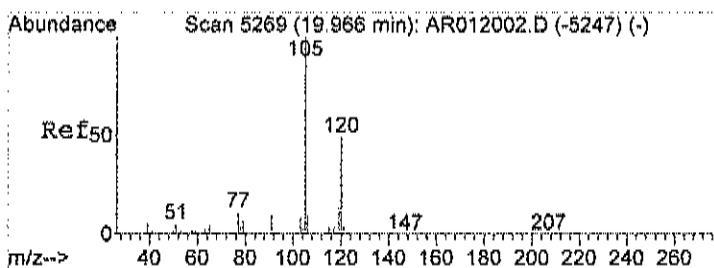
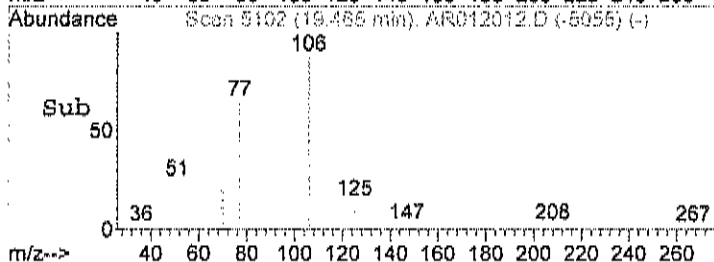
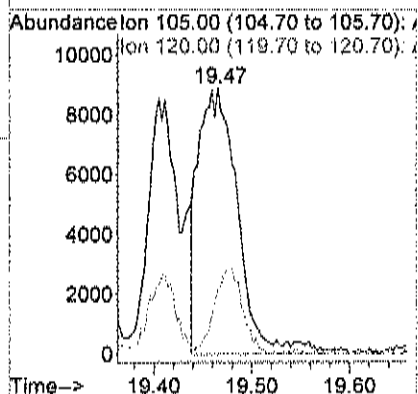
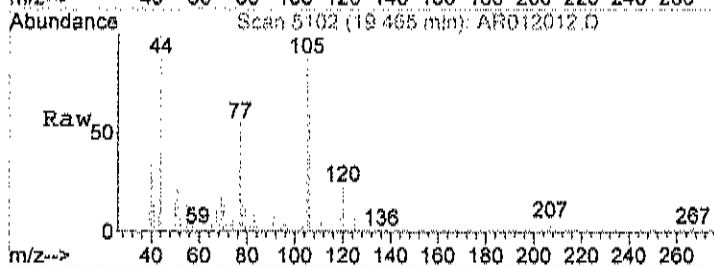
Tgt Ion: 91 Resp: 46336
Ion Ratio Lower Upper
91 100
106 47.0 26.2 66.2





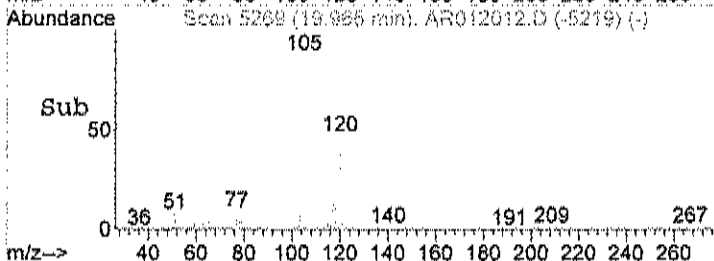
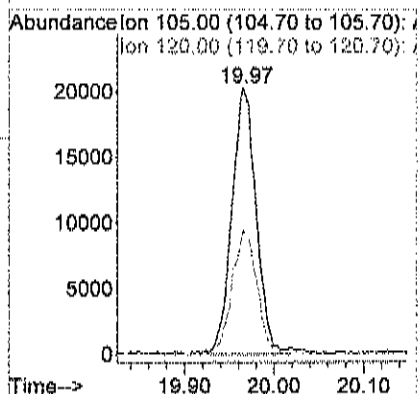
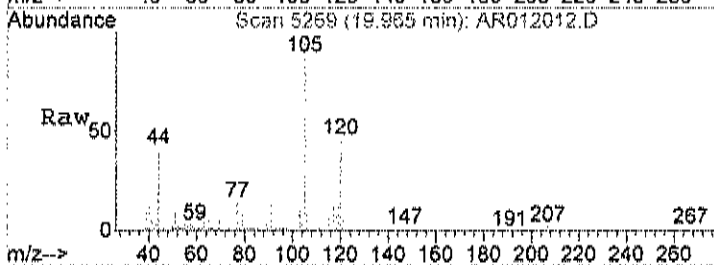
#70
1,3,5-trimethylbenzene
Concen: 0.11 ppb m
RT: 19.47 min Scan# 5102
Delta R.T. -0.01 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion:105 Resp: 25089
Ion Ratio Lower Upper
105 100
120 23.1 28.2 68.2#



#71
1,2,4-trimethylbenzene
Concen: 0.18 ppb
RT: 19.97 min Scan# 5269
Delta R.T. -0.00 min
Lab File: AR012012.D
Acq: 20 Jan 2020 6:59 pm

Tgt Ion:105 Resp: 39190
Ion Ratio Lower Upper
105 100
120 46.2 24.9 64.9



Data File : C:\HPCHEM\1\DATA\AR012023.D

Vial: 23

Acq On : 21 Jan 2020 3:28 am

Operator: RJP

Sample : C2001030-003A 10x

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:29 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	40213	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	185163	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	155745	1.00	ppb	0.00

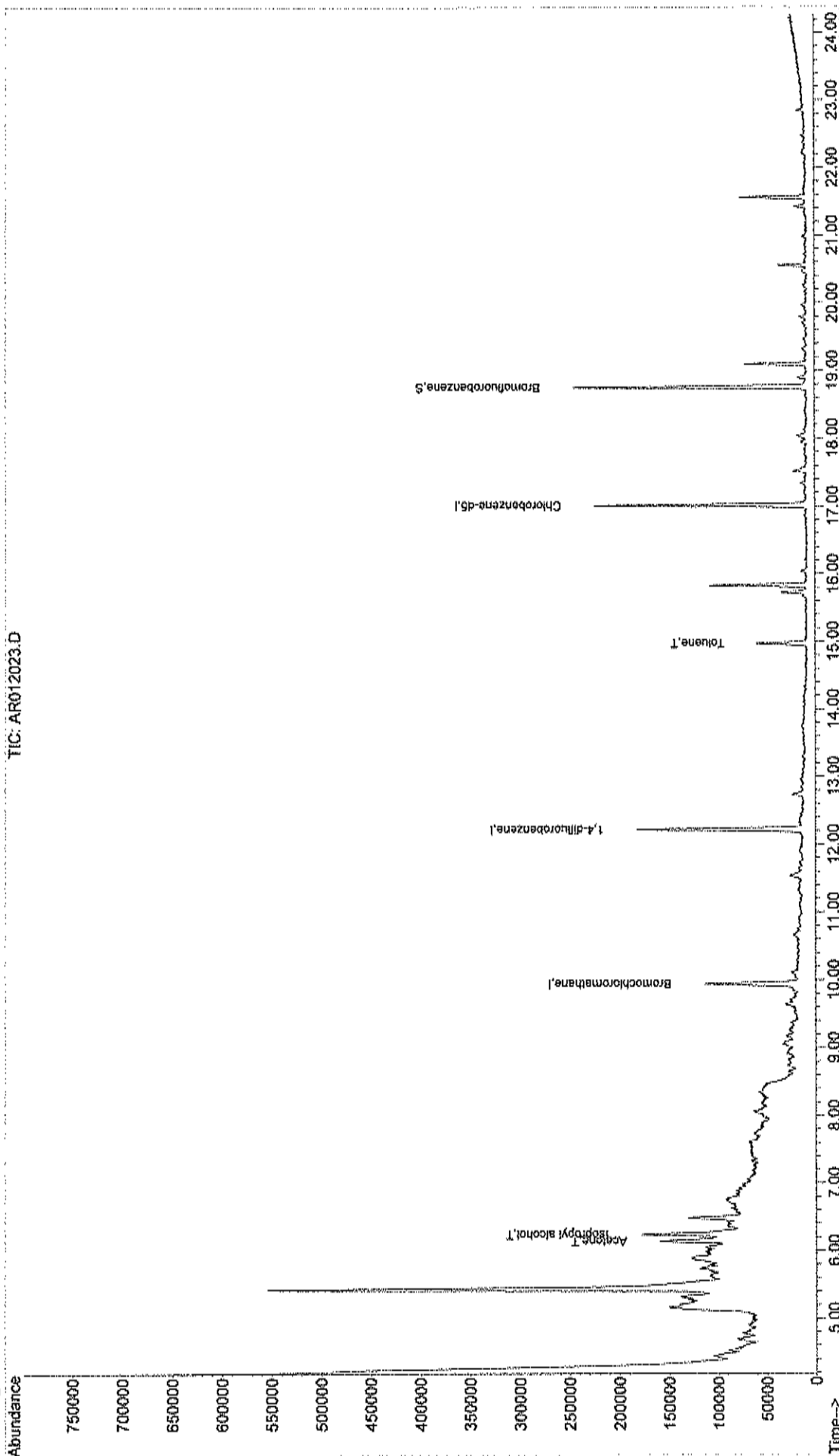
System Monitoring Compounds

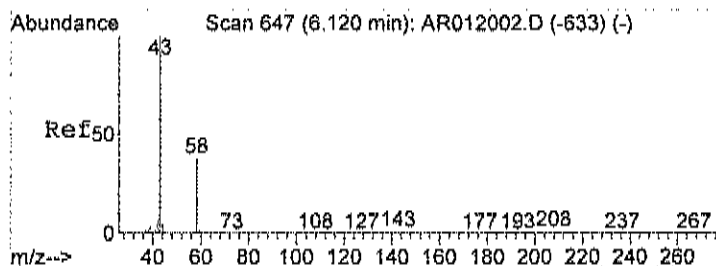
65) Bromofluorobenzene	18.76	95	99734	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

						Qvalue
15) Acetone	6.13	58	43409	1.86	ppb	# 100
17) Isopropyl alcohol	6.23	45	147236	1.99	ppb	# 1
51) Toluene	14.97	92	27075	0.28	ppb	99

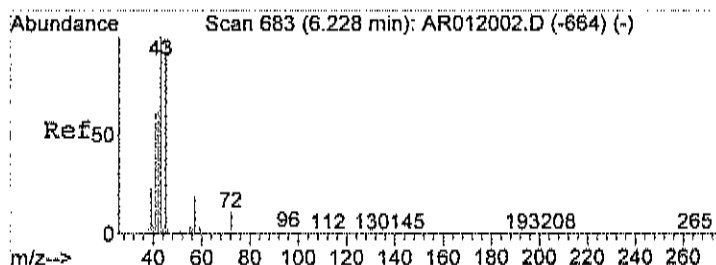
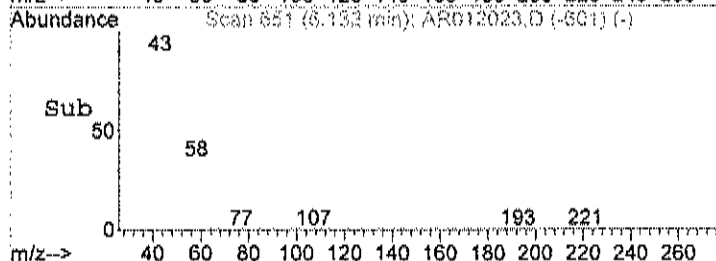
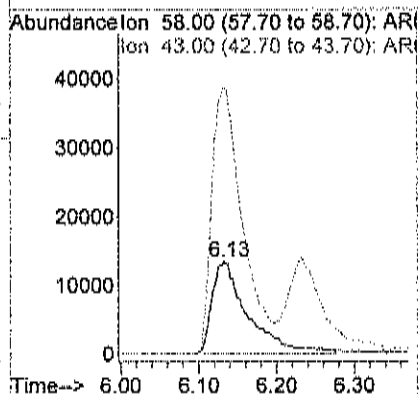
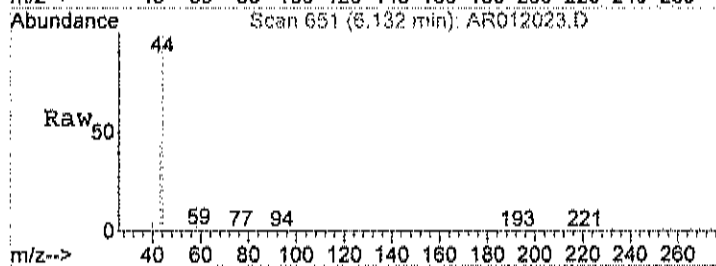
TIC: AR012023.D





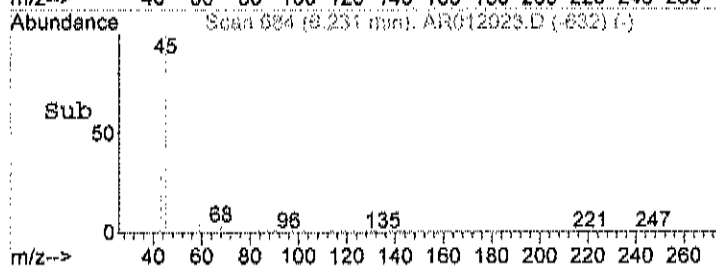
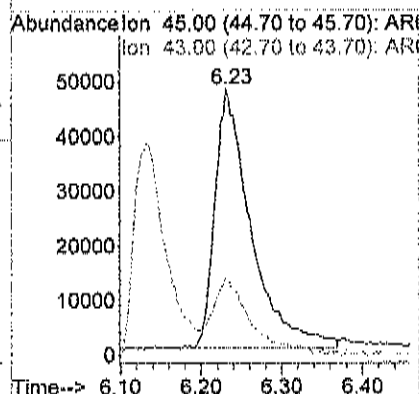
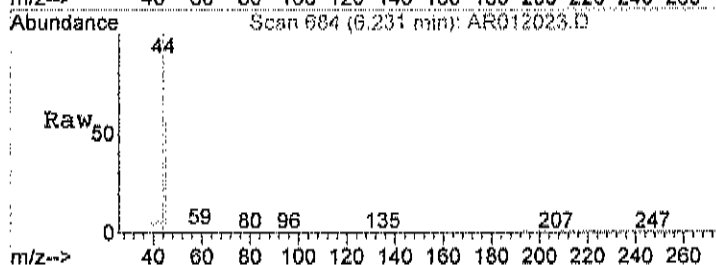
#15
Acetone
Concen: 1.86 ppb
RT: 6.13 min Scan# 651
Delta R.T. -0.00 min
Lab File: AR012023.D
Acq: 21 Jan 2020 3:28 am

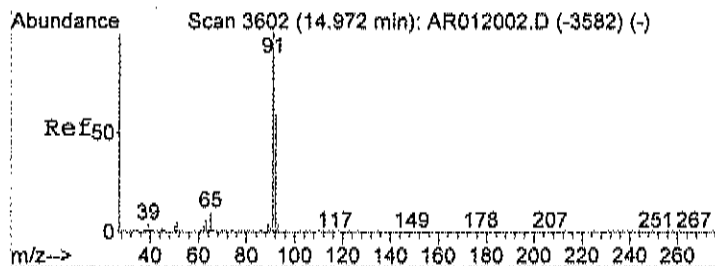
Tgt Ion: 58 Resp: 43409
Ion Ratio Lower Upper
58 100
43 339.1 0.0 30.0#



#17
Isopropyl alcohol
Concen: 1.99 ppb
RT: 6.23 min Scan# 684
Delta R.T. 0.01 min
Lab File: AR012023.D
Acq: 21 Jan 2020 3:28 am

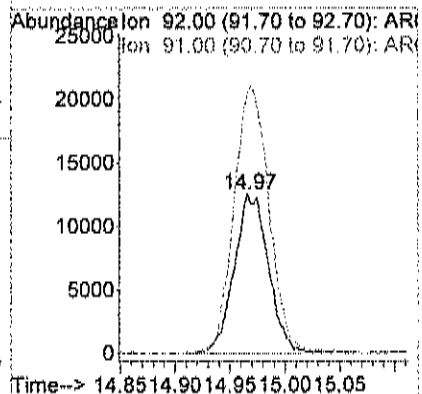
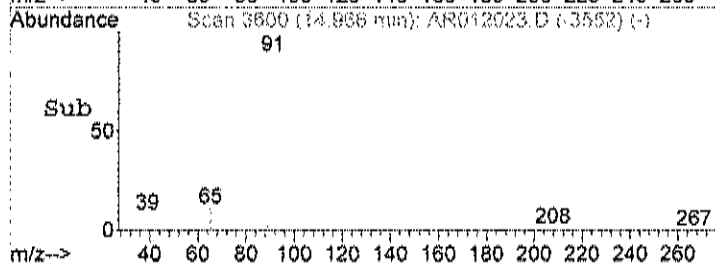
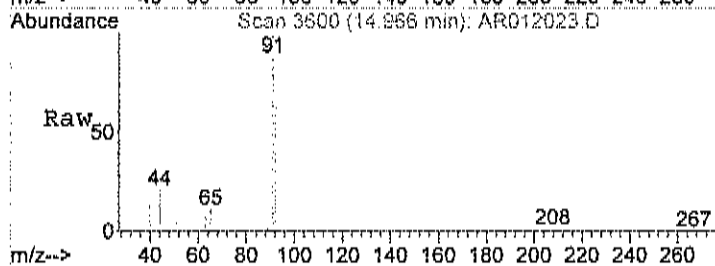
Tgt Ion: 45 Resp: 147236
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#





#51
Toluene
Concen: 0.28 ppb
RT: 14.97 min Scan# 3600
Delta R.T. -0.01 min
Lab File: AR012023.D
Acq: 21 Jan 2020 3:28 am

Tgt Ion: 92 Resp: 27075
Ion Ratio Lower Upper
92 100
91 173.1 154.5 194.5



Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 7:46:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2,4-Trimethylbenzene	0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dichloroethane	0.20	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,3,5-Trimethylbenzene	0.13	0.15	J	ppbV	1	1/20/2020 7:46:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 7:46:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Acetone	55	12		ppbV	40	1/21/2020 4:59:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Benzene	0.28	0.15		ppbV	1	1/20/2020 7:46:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 7:46:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Chloroform	0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Chloromethane	5.0	1.5		ppbV	10	1/21/2020 4:14:00 AM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 7:46:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Ethyl acetate	0.71	0.15		ppbV	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.18	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 11	0.28	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Freon 12	0.58	0.15		ppbV	1	1/20/2020 7:46:00 PM
Heptane	1.2	0.15		ppbV	1	1/20/2020 7:46:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Hexane	0.30	0.15		ppbV	1	1/20/2020 7:46:00 PM
Isopropyl alcohol	6.0	1.5		ppbV	10	1/21/2020 4:14:00 AM
m&p-Xylene	0.66	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl Ethyl Ketone	0.72	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 7:46:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Methylene chloride	0.17	0.15		ppbV	1	1/20/2020 7:46:00 PM
o-Xylene	0.27	0.15		ppbV	1	1/20/2020 7:46:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Styrene	0.11	0.15	J	ppbV	1	1/20/2020 7:46:00 PM
Tetrachloroethylene	0.10	0.15	J	ppbV	1	1/20/2020 7:46:00 PM
Tetrahydrofuran	0.37	0.15		ppbV	1	1/20/2020 7:46:00 PM
Toluene	0.85	0.15		ppbV	1	1/20/2020 7:46:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 7:46:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 7:46:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 7:46:00 PM
Surr: Bromofluorobenzene	103	70-130		%REC	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	,	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 7:46:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 7:46:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 7:46:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
1,2,4-Trimethylbenzene	0.74	0.74		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichloroethane	0.81	0.61		ug/m3	1	1/20/2020 7:46:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 7:46:00 PM
1,3,5-Trimethylbenzene	0.64	0.74	J	ug/m3	1	1/20/2020 7:46:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 7:46:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 7:46:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 7:46:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 7:46:00 PM
Acetone	130	28		ug/m3	40	1/21/2020 4:59:00 AM
Aliyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 7:46:00 PM
Benzene	0.89	0.48		ug/m3	1	1/20/2020 7:46:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 7:46:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM
Bromofom	< 1.6	1.6		ug/m3	1	1/20/2020 7:46:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 7:46:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 7:46:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 7:46:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 7:46:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 7:46:00 PM
Chloroform	0.73	0.73		ug/m3	1	1/20/2020 7:46:00 PM
Chloromethane	10	3.1		ug/m3	10	1/21/2020 4:14:00 AM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 7:46:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 7:46:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 7:46:00 PM
Ethyl acetate	2.6	0.54		ug/m3	1	1/20/2020 7:46:00 PM
Ethylbenzene	0.78	0.65		ug/m3	1	1/20/2020 7:46:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 7:46:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 7:46:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-004A

Client Sample ID: Apartment A3-Indoor
Tag Number: 285,439
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 7:46:00 PM
Heptane	5.0	0.61		ug/m3	1	1/20/2020 7:46:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 7:46:00 PM
Hexane	1.1	0.53		ug/m3	1	1/20/2020 7:46:00 PM
Isopropyl alcohol	15	3.7		ug/m3	10	1/21/2020 4:14:00 AM
m&p-Xylene	2.9	1.3		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Ethyl Ketone	2.1	0.88		ug/m3	1	1/20/2020 7:46:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 7:46:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 7:46:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	1/20/2020 7:46:00 PM
o-Xylene	1.2	0.65		ug/m3	1	1/20/2020 7:46:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 7:46:00 PM
Styrene	0.47	0.64	J	ug/m3	1	1/20/2020 7:46:00 PM
Tetrachloroethylene	0.68	1.0	J	ug/m3	1	1/20/2020 7:46:00 PM
Tetrahydrofuran	1.1	0.44		ug/m3	1	1/20/2020 7:46:00 PM
Toluene	3.2	0.57		ug/m3	1	1/20/2020 7:46:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 7:46:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 7:46:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 7:46:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 7:46:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated,	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Page 8 of 14

Data File : C:\HPCHEM\1\DATA\AR012013.D

Vial: 13

Acq On : 20 Jan 2020 7:46 pm

Operator: RJP

Sample : C2001030-004A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:19 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.96	128	43684	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.23	114	205581	1.00	ppb	0.02
50) Chlorobenzene-d5	17.02	117	176539	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	121277	1.03	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	103.00%

Target Compounds

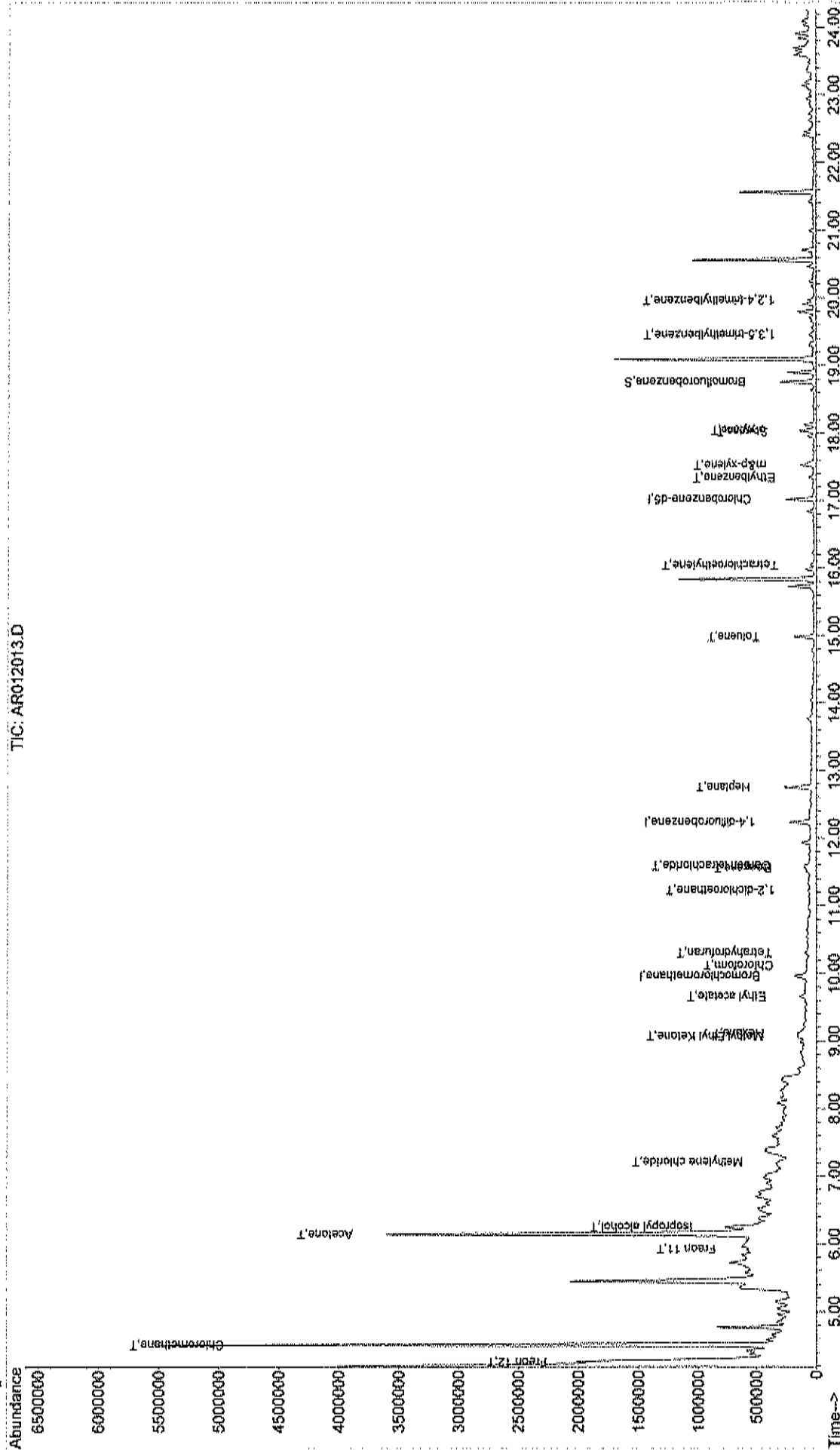
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.25	85	66371	0.58	ppb	98
4) Chloromethane	4.51	50	85964	3.24	ppb	79
14) Freon 11	5.92	101	34103	0.28	ppb	98
15) Acetone	6.14	58	1993385	78.48	ppb	# 100
17) Isopropyl alcohol	6.25	45	577786	7.18	ppb	# 1
21) Methylene chloride	7.21	84	7512	0.17	ppb	95
28) Methyl Ethyl Ketone	9.07	72	17445	0.72	ppb	# 100
30) Hexane	9.12	57	25063	0.30	ppb	84
31) Ethyl acetate	9.66	43	76912	0.71	ppb	98
32) Chloroform	10.13	83	15756	0.15	ppb	98
33) Tetrahydrofuran	10.31	42	18462m	0.37	ppb	
34) 1,2-dichloroethane	11.24	62	13295	0.20	ppb	99
38) Carbon tetrachloride	11.59	117	9145	0.08	ppb	97
39) Benzene	11.55	78	41570	0.28	ppb	98
43) Heptane	12.75	43	107016	1.21	ppb	94
51) Toluene	14.98	92	92187	0.85	ppb	98
56) Tetrachloroethylene	16.04	164	7347	0.10	ppb	100
58) Ethylbenzene	17.34	91	42041	0.18	ppb	98
59) m&p-xylene	17.52	91	119827	0.66	ppb	97
61) Styrene	18.02	104	15071	0.11	ppb	83
63) o-xylene	18.05	91	50396	0.27	ppb	97
70) 1,3,5-trimethylbenzene	19.46	105	27339m	0.13	ppb	
71) 1,2,4-trimethylbenzene	19.97	105	31123	0.15	ppb	95

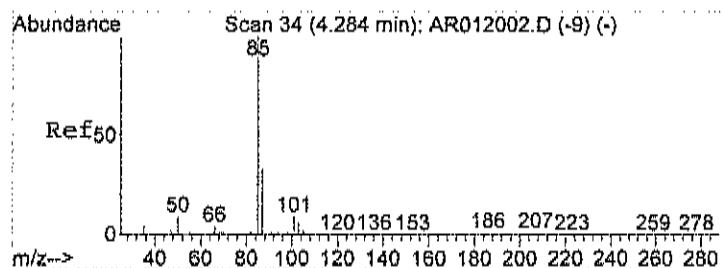
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR012013.D A116_1UG.M Wed Feb 05 10:01:54 2020 MSD1

Data File : C:\HPCHEM\1\DATA\AR012013.D
 Acq On : 20 Jan 2020 7:46 pm
 Sample : C2001030-004A
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 23 8:49 2020

Vial: 13
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00
 Quant Results File: A116_1UG.RES

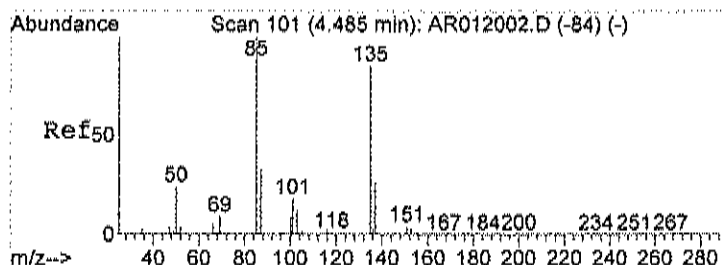
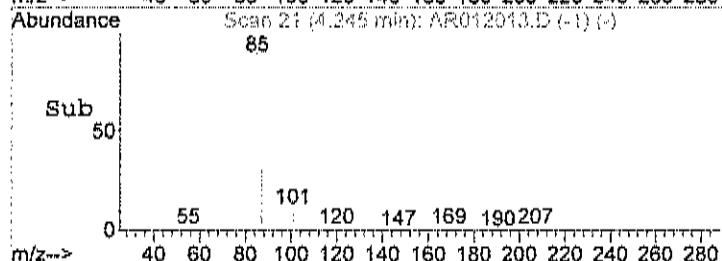
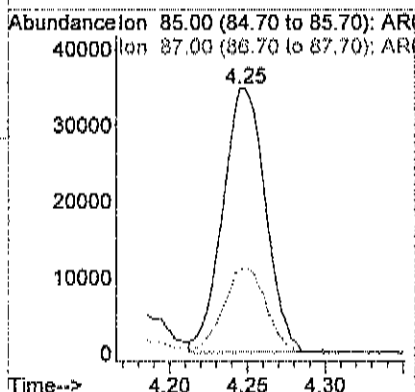
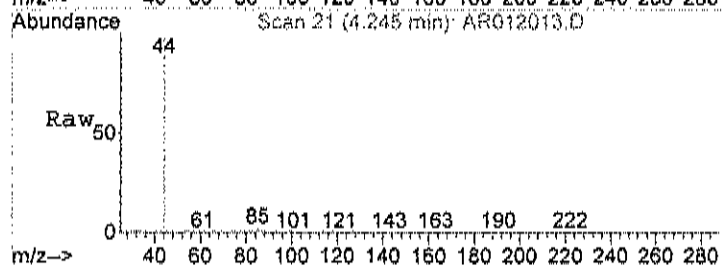
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration





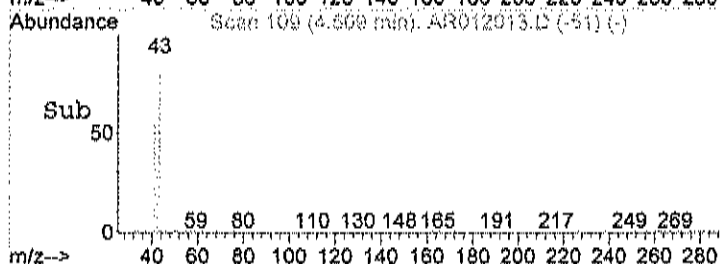
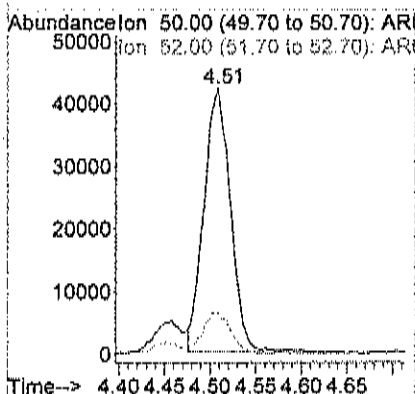
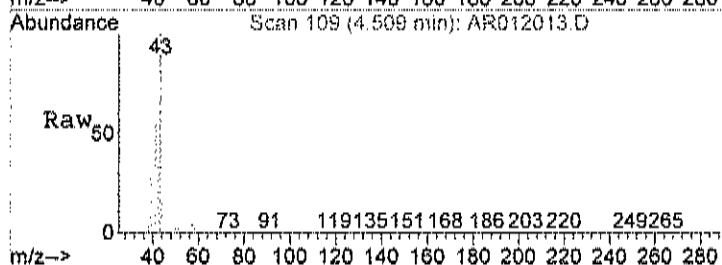
#3
Freon 12
Concen: 0.58 ppb
RT: 4.25 min Scan# 21
Delta R.T. -0.04 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

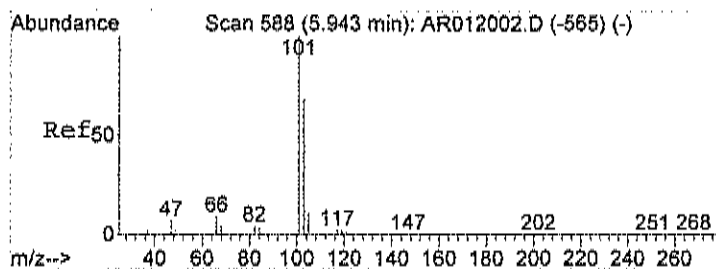
Tgt Ion: 85 Resp: 66371
Ion Ratio Lower Upper
85 100
87 33.0 11.9 51.9



#4
Chloromethane
Concen: 3.24 ppb
RT: 4.51 min Scan# 109
Delta R.T. 0.02 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

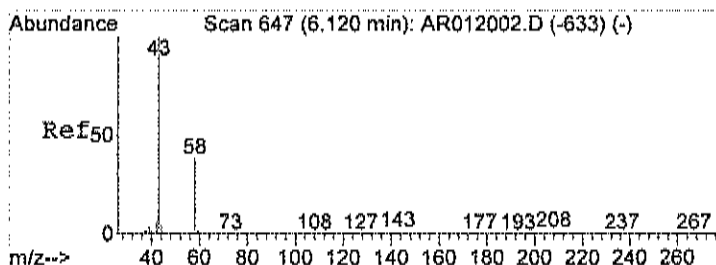
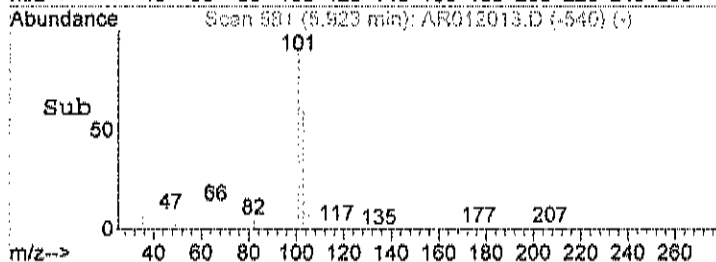
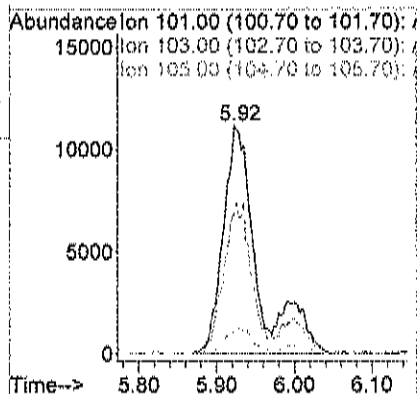
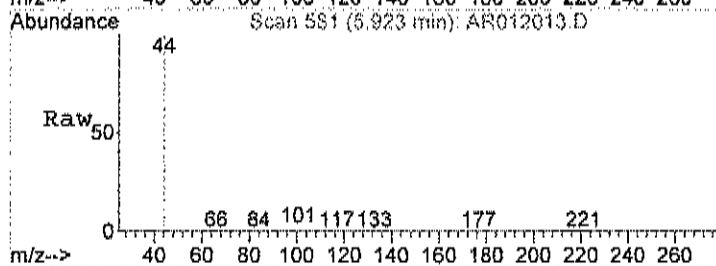
Tgt Ion: 50 Resp: 85964
Ion Ratio Lower Upper
50 100
52 15.5 6.1 46.1





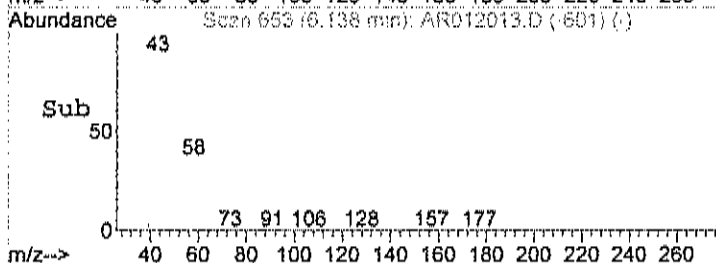
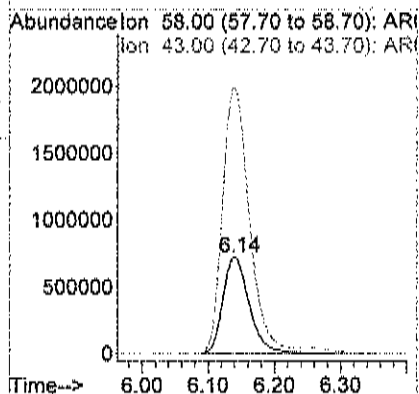
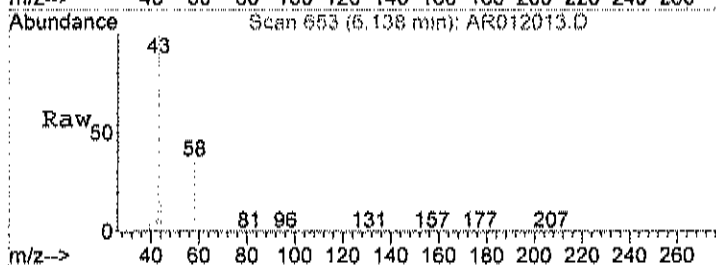
#14
Freon 11
Concen: 0.28 ppb
RT: 5.92 min Scan# 581
Delta R.T. -0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

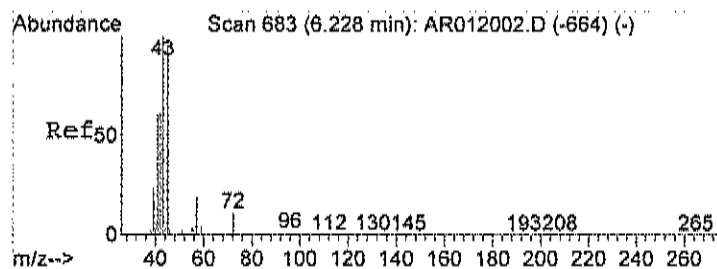
Tgt Ion: 101 Resp: 34103
Ion Ratio Lower Upper
101 100
103 65.9 44.2 84.2
105 9.6 0.0 30.3



#15
Acetone
Concen: 78.48 ppb
RT: 6.14 min Scan# 653
Delta R.T. 0.01 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

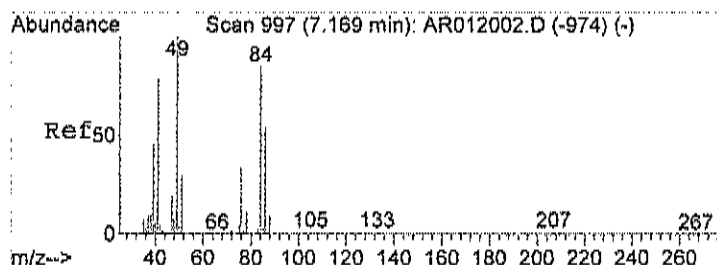
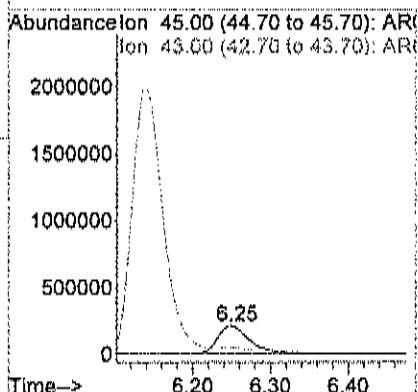
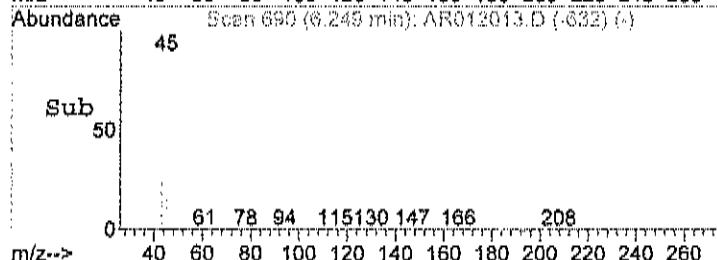
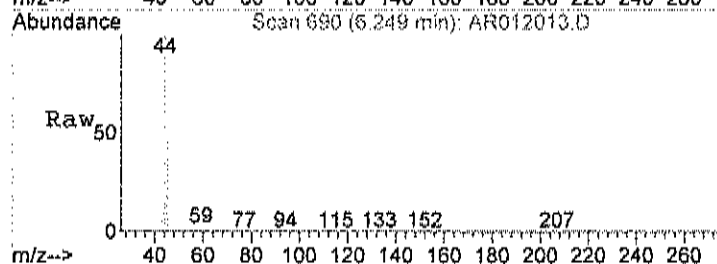
Tgt Ion: 58 Resp: 1993385
Ion Ratio Lower Upper
58 100
43 286.3 0.0 30.0#





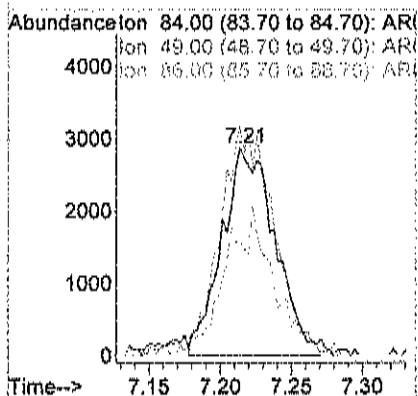
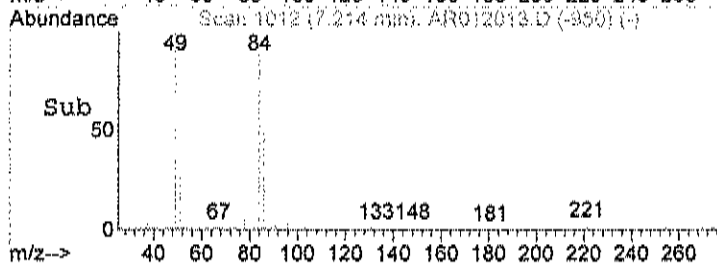
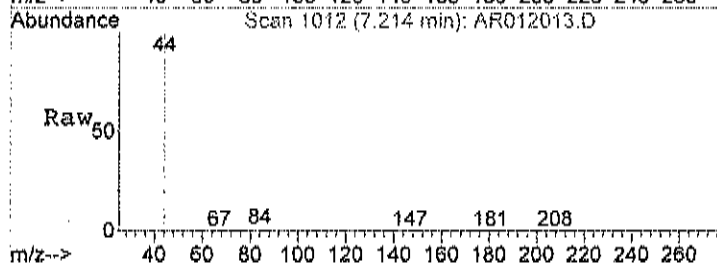
#17
Isopropyl alcohol
Concen: 7.18 ppb
RT: 6.25 min Scan# 690
Delta R.T. 0.02 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

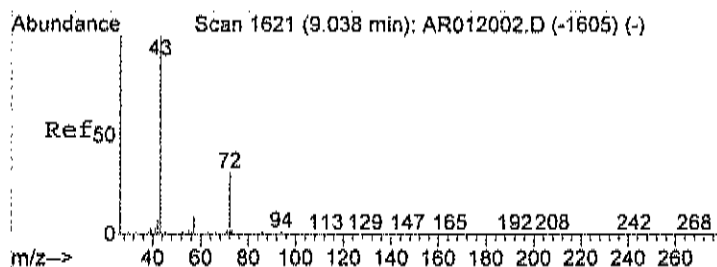
Tgt Ion: 45 Resp: 577786
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#



#21
Methylene chloride
Concen: 0.17 ppb
RT: 7.21 min Scan# 1012
Delta R.T. 0.04 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

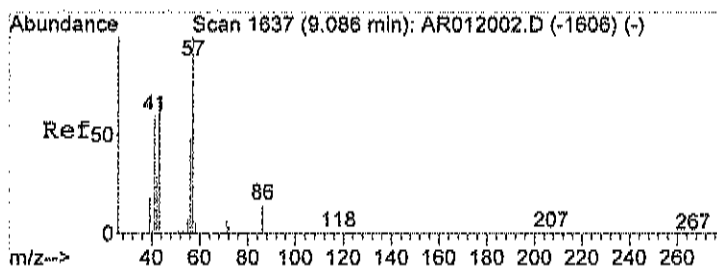
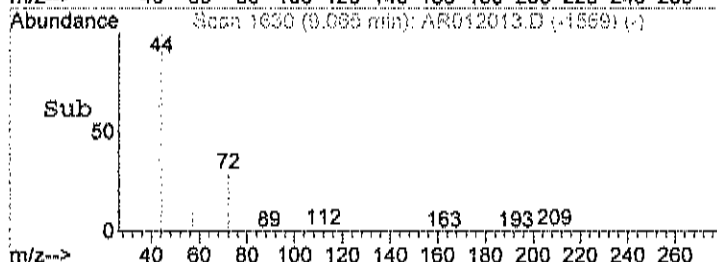
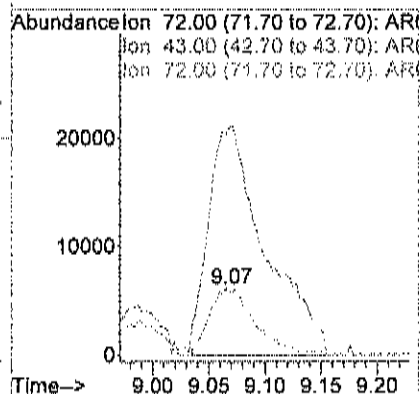
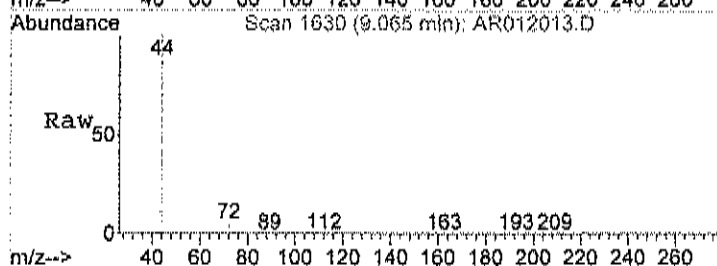
Tgt Ion: 84 Resp: 7512
Ion Ratio Lower Upper
84 100
49 114.1 101.4 141.4
86 62.8 45.4 85.4





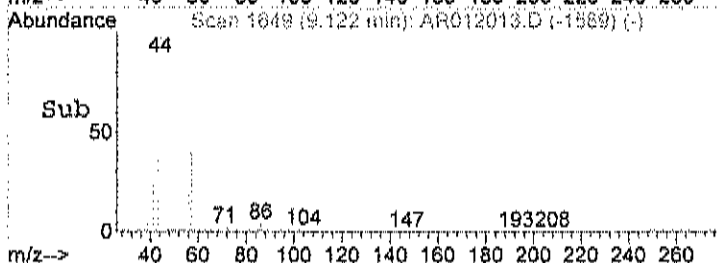
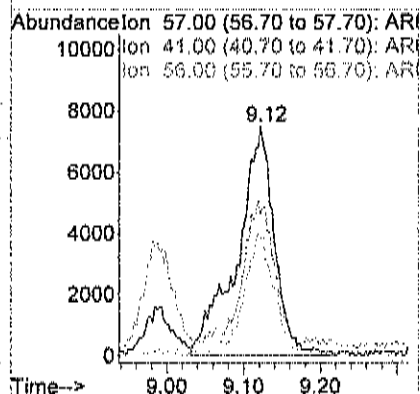
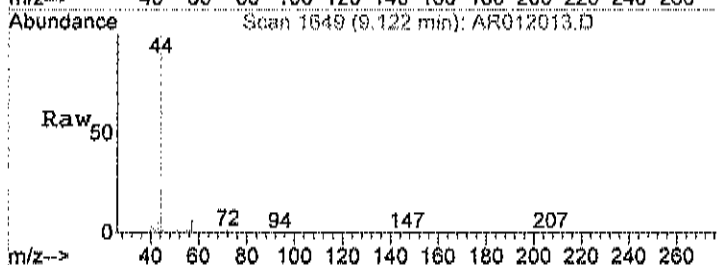
#28
Methyl Ethyl Ketone
Concen: 0.72 ppb
RT: 9.07 min Scan# 1630
Delta R.T. 0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

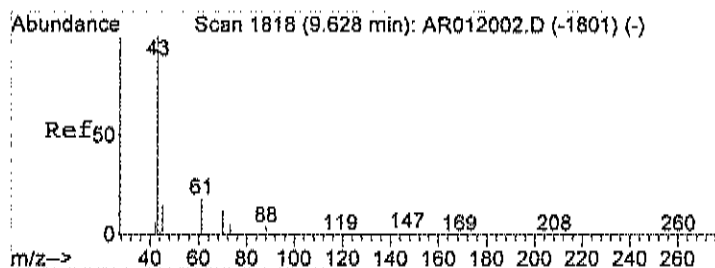
Tgt Ion: 72 Resp: 17445
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0



#30
Hexane
Concen: 0.30 ppb
RT: 9.12 min Scan# 1649
Delta R.T. 0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

Tgt Ion: 57 Resp: 25063
Ion Ratio Lower Upper
57 100
41 59.8 55.7 95.7
56 42.9 32.4 72.4

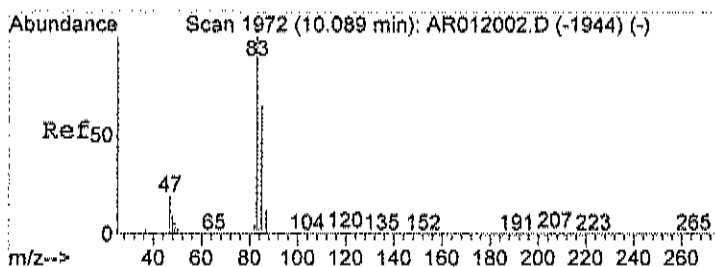
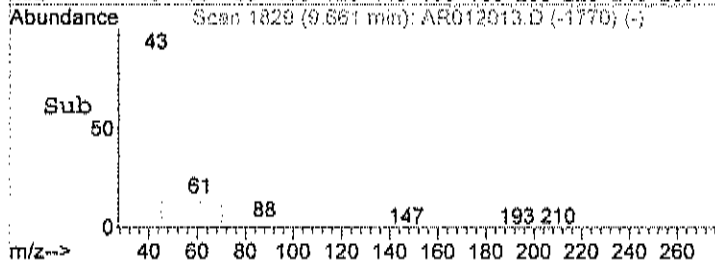
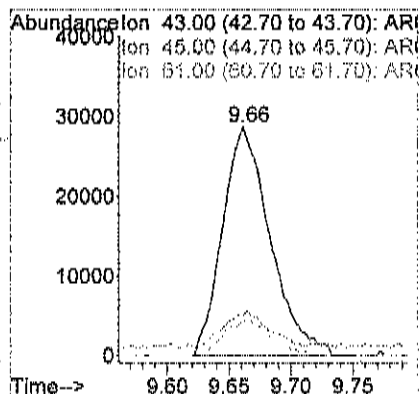
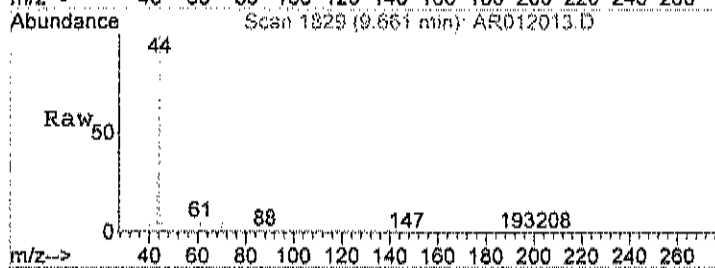




#31
Ethyl acetate
Concen: 0.71 ppb
RT: 9.66 min Scan# 1829
Delta R.T. 0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

Tgt Ion: 43 Resp: 76912

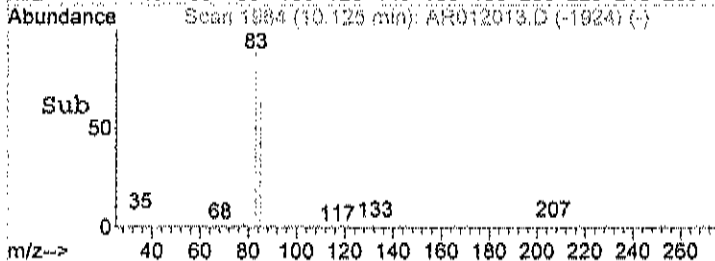
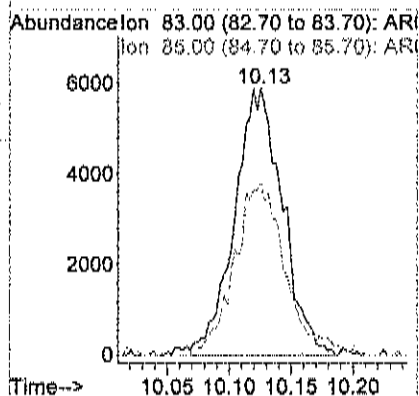
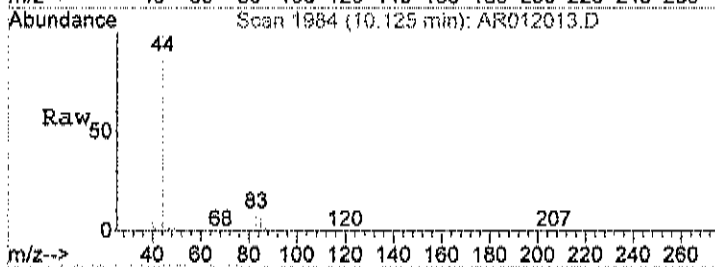
Ion	Ratio	Lower	Upper
43	100		
45	15.4	0.0	34.5
61	15.3	0.0	35.8

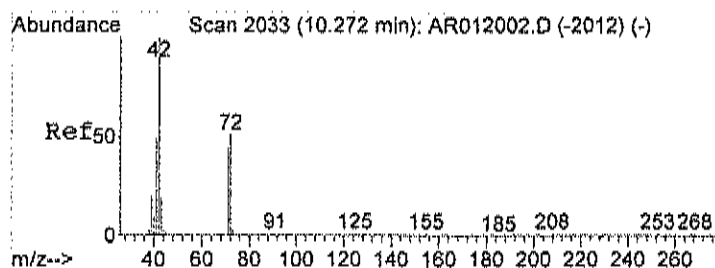


#32
Chloroform
Concen: 0.15 ppb
RT: 10.13 min Scan# 1984
Delta R.T. 0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

Tgt Ion: 83 Resp: 15756

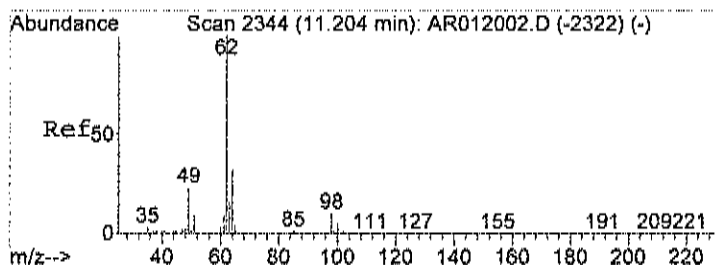
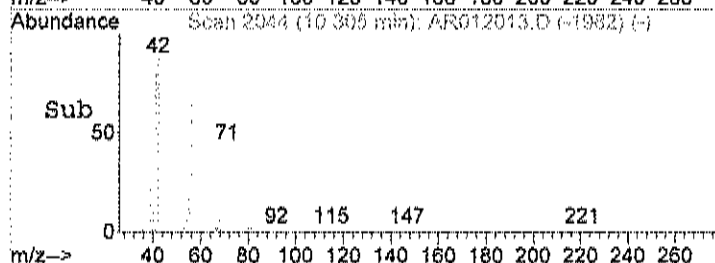
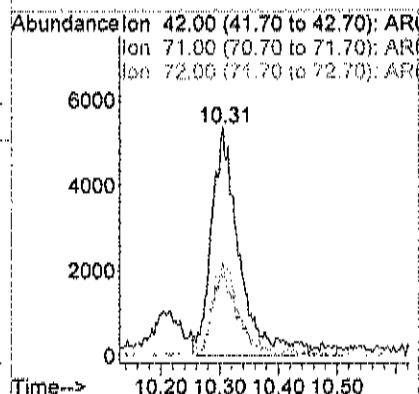
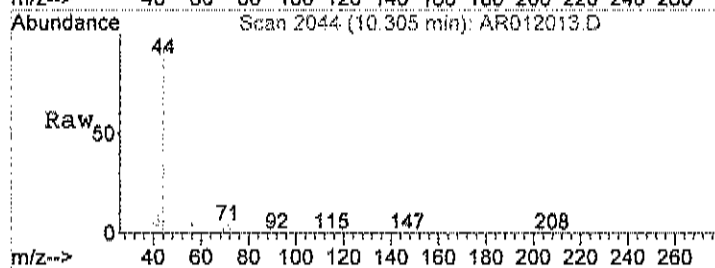
Ion	Ratio	Lower	Upper
83	100		
85	68.1	46.5	86.5





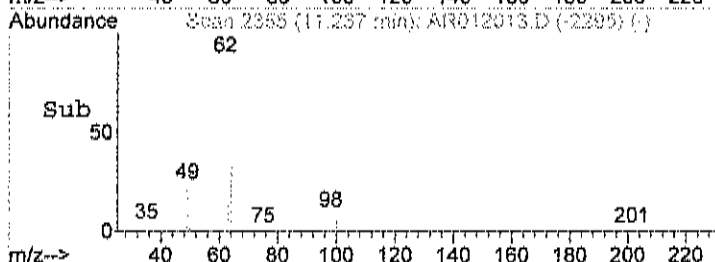
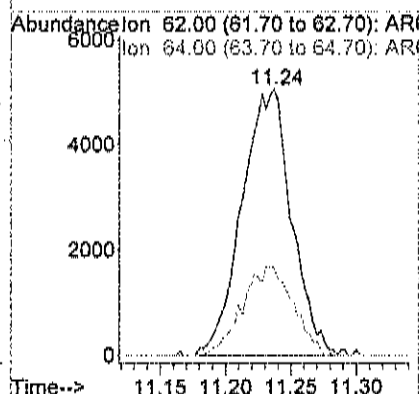
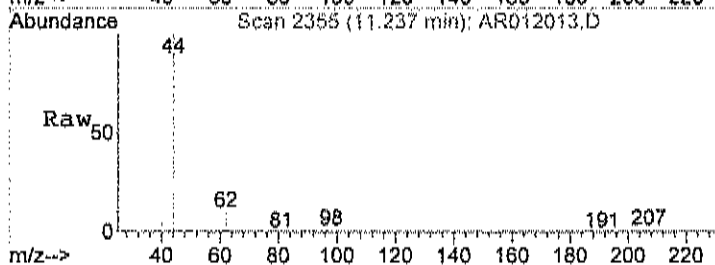
#33
Tetrahydrofuran
Concen: 0.37 ppb m
RT: 10.31 min Scan# 2044
Delta R.T. 0.04 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

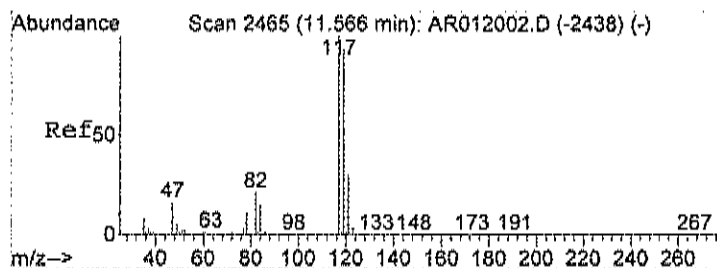
Tgt Ion: 42 Resp: 18462
Ion Ratio Lower Upper
42 100
71 33.0 25.1 65.1
72 35.1 23.3 63.3



#34
1,2-dichloroethane
Concen: 0.20 ppb
RT: 11.24 min Scan# 2355
Delta R.T. 0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

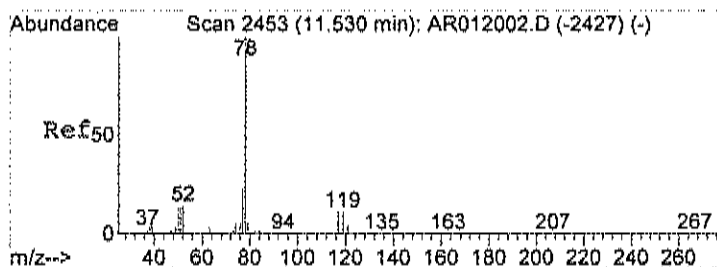
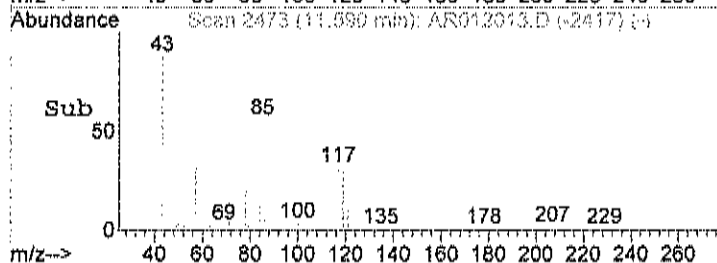
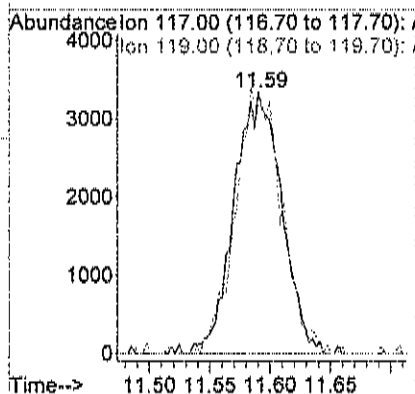
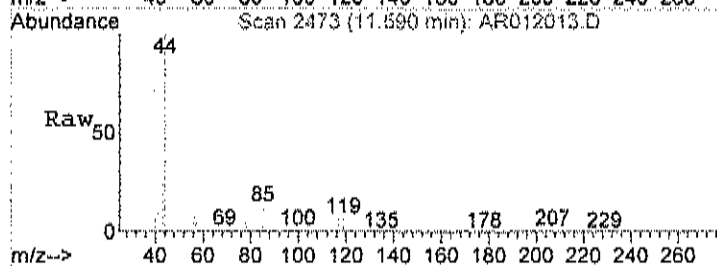
Tgt Ion: 62 Resp: 13295
Ion Ratio Lower Upper
62 100
64 34.1 13.5 53.5





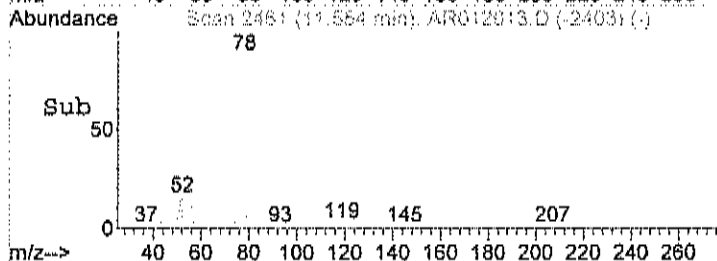
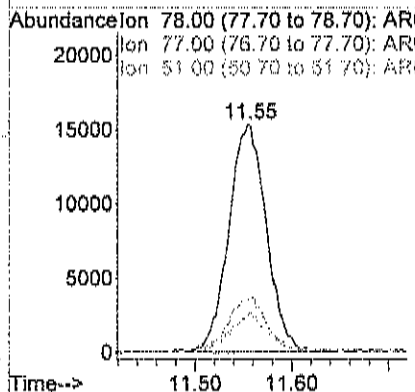
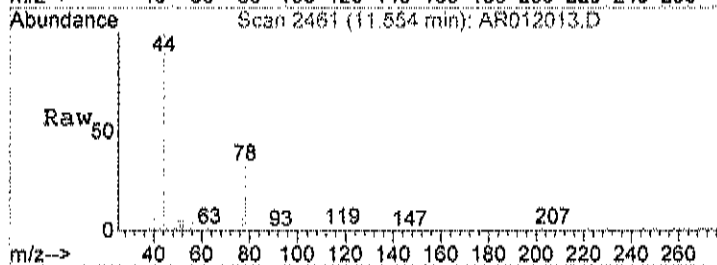
#38
Carbon tetrachloride
Concen: 0.08 ppb
RT: 11.59 min Scan# 2473
Delta R.T. 0.02 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

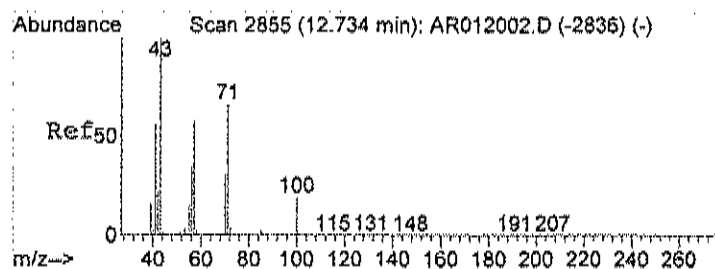
Tgt Ion: 117 Resp: 9145
Ion Ratio Lower Upper
117 100
119 98.3 75.6 115.6



#39
Benzene
Concen: 0.28 ppb
RT: 11.55 min Scan# 2461
Delta R.T. 0.02 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

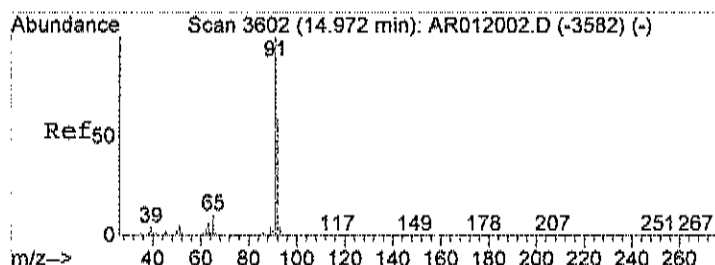
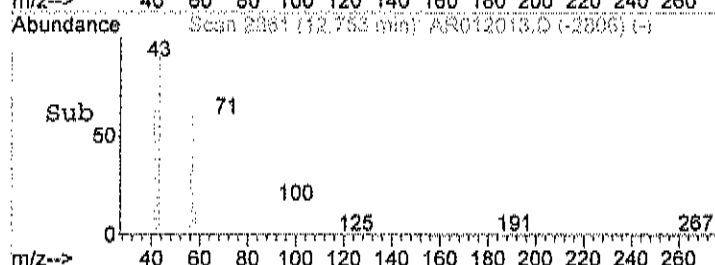
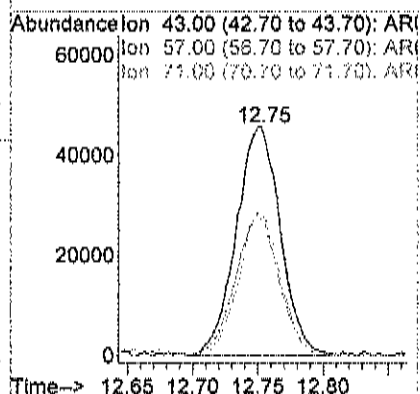
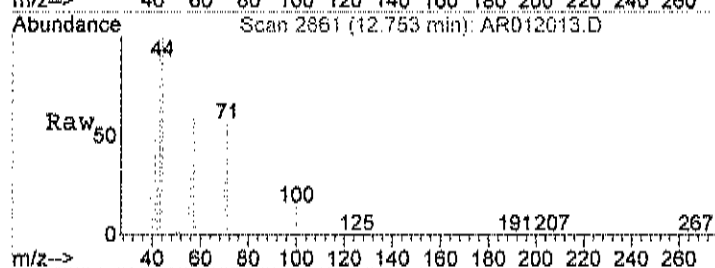
Tgt Ion: 78 Resp: 41570
Ion Ratio Lower Upper
78 100
77 24.4 4.1 44.1
51 18.7 0.0 36.8





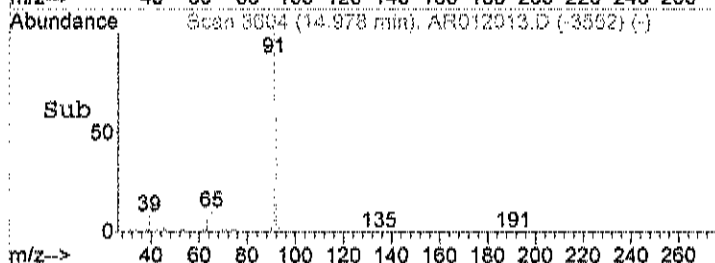
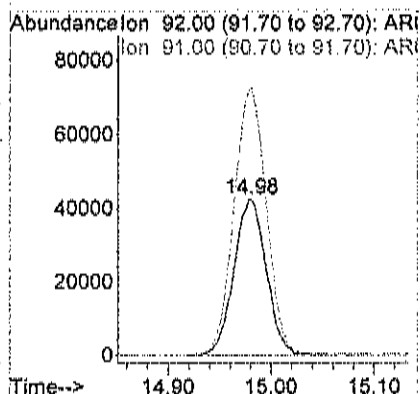
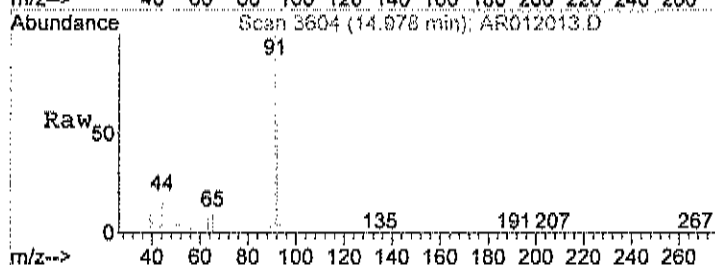
#43
Heptane
Concen: 1.21 ppb
RT: 12.75 min Scan# 2861
Delta R.T. 0.02 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

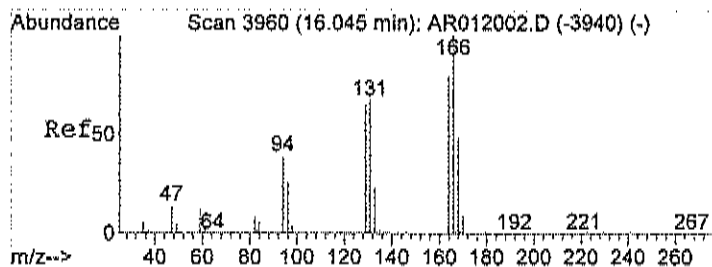
Tgt Ion: 43 Resp: 107016
Ion Ratio Lower Upper
43 100
57 62.0 36.0 76.0
71 58.7 42.5 82.5



#51
Toluene
Concen: 0.85 ppb
RT: 14.98 min Scan# 3604
Delta R.T. 0.01 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

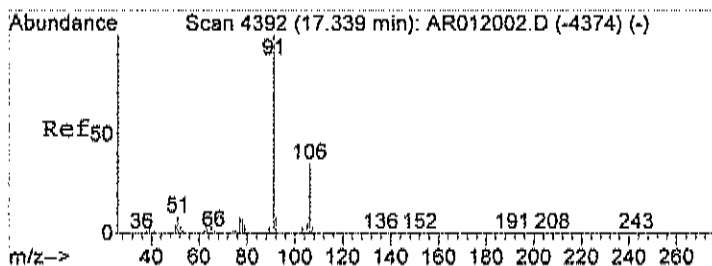
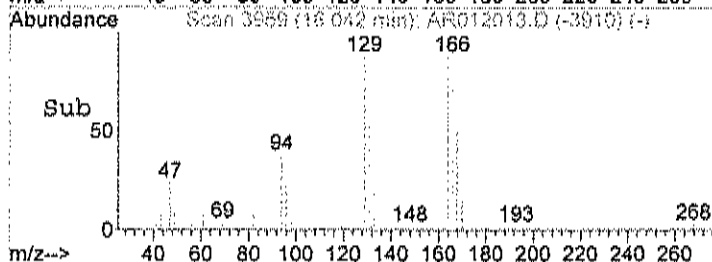
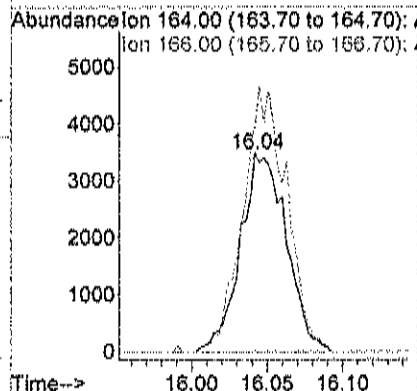
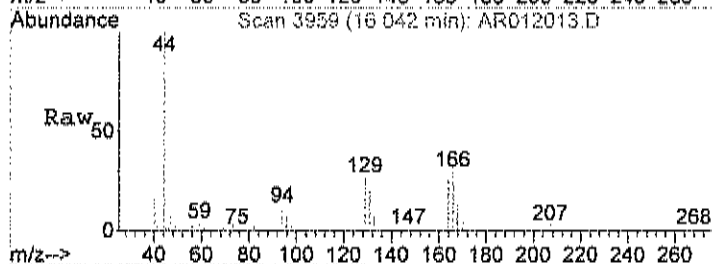
Tgt Ion: 92 Resp: 92187
Ion Ratio Lower Upper
92 100
91 172.4 154.5 194.5





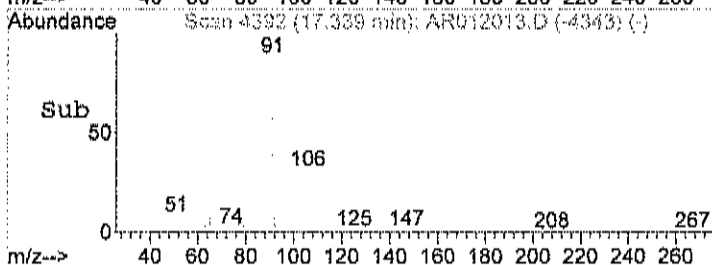
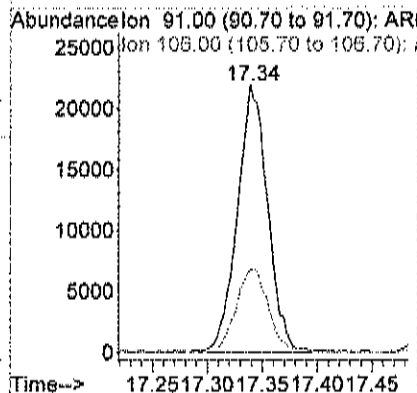
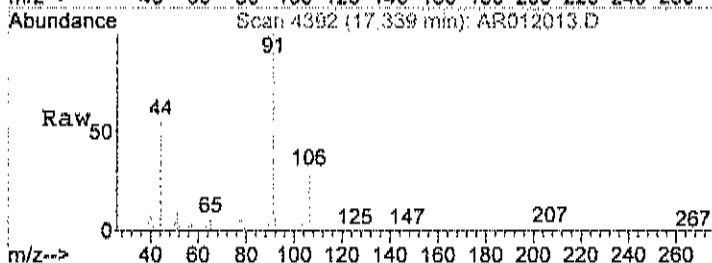
#56
Tetrachloroethylene
Concen: 0.10 ppb
RT: 16.04 min Scan# 3959
Delta R.T. -0.00 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

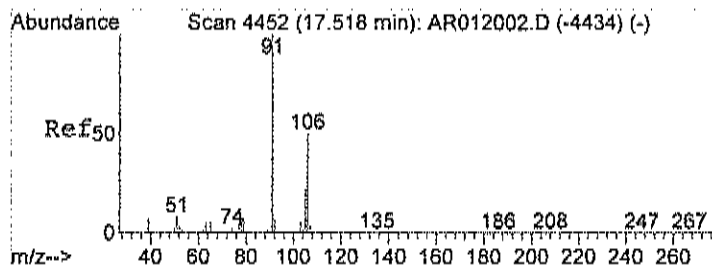
Tgt Ion: 164 Resp: 7347
Ion Ratio Lower Upper
164 100
166 126.6 106.4 146.4



#58
Ethylbenzene
Concen: 0.18 ppb
RT: 17.34 min Scan# 4392
Delta R.T. -0.00 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

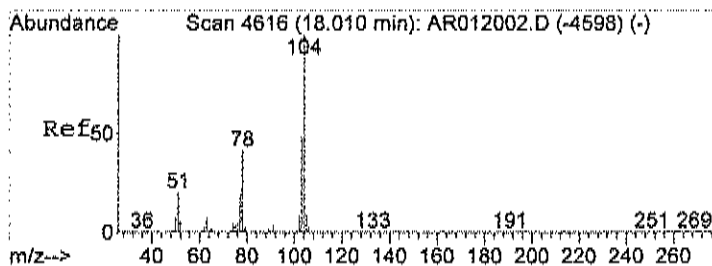
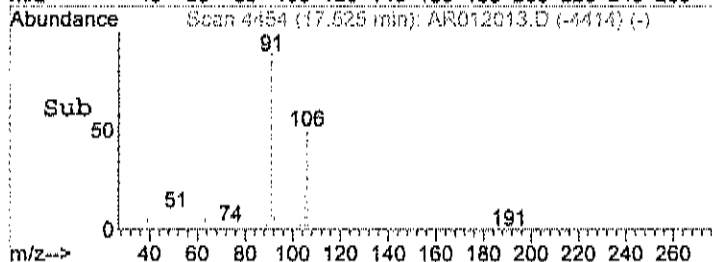
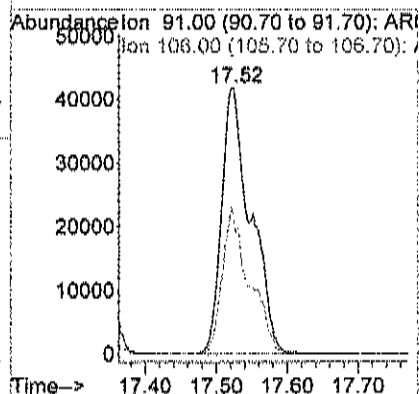
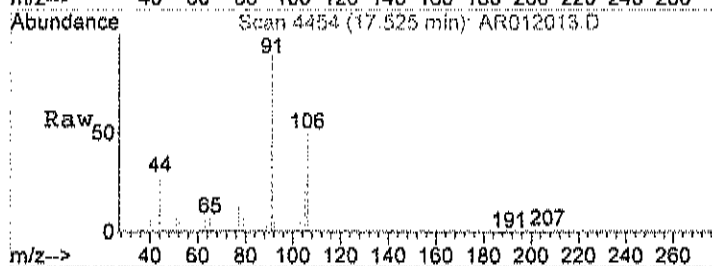
Tgt Ion: 91 Resp: 42041
Ion Ratio Lower Upper
91 100
106 33.0 11.7 51.7





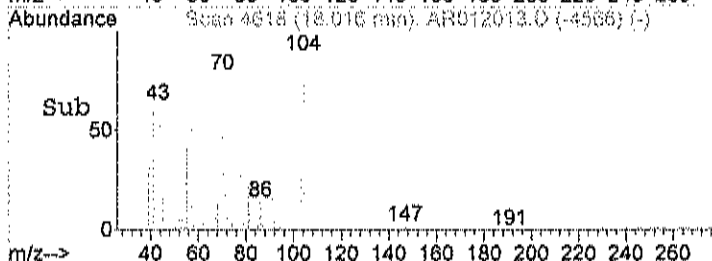
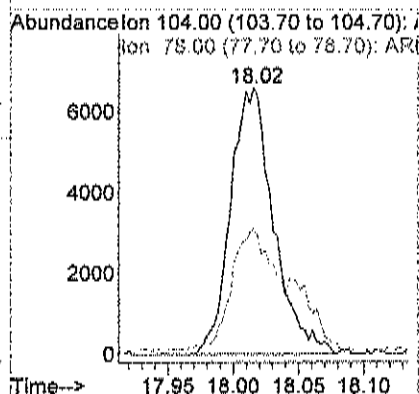
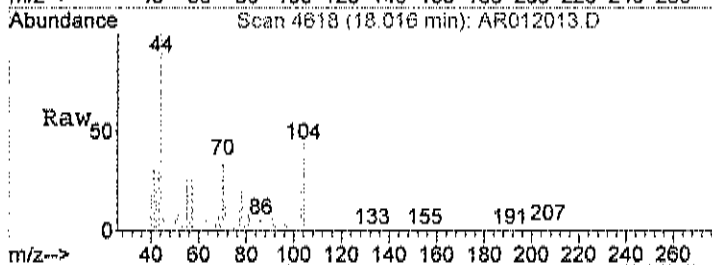
#59
m&p-xylene
Concen: 0.66 ppb
RT: 17.52 min Scan# 4454
Delta R.T. -0.03 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

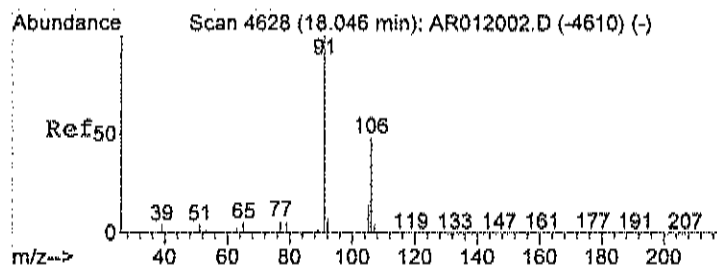
Tgt Ion: 91 Resp: 119827
Ion Ratio Lower Upper
91 100
106 51.0 29.0 69.0



#61
Styrene
Concen: 0.11 ppb
RT: 18.02 min Scan# 4618
Delta R.T. 0.01 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

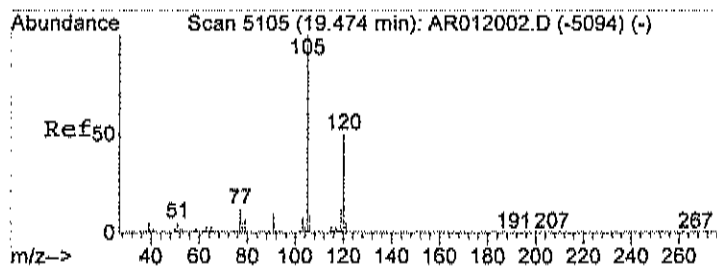
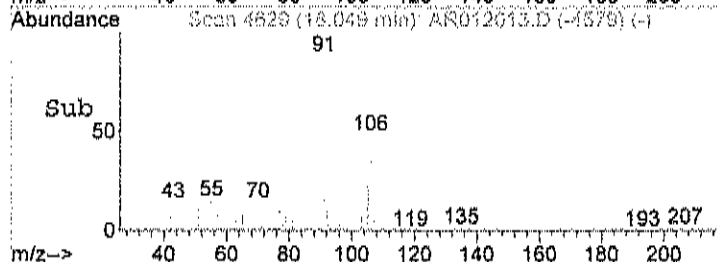
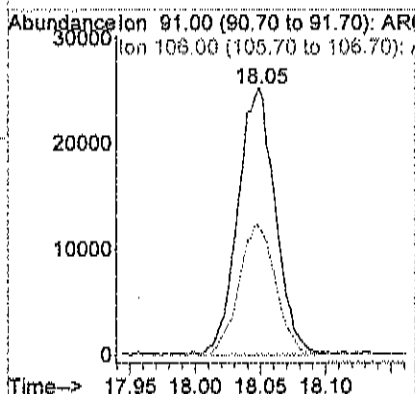
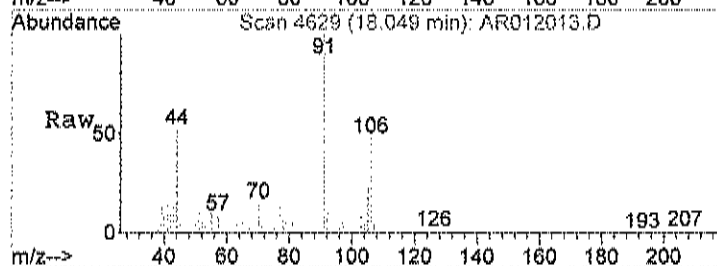
Tgt Ion: 104 Resp: 15071
Ion Ratio Lower Upper
104 100
78 67.1 34.7 74.7





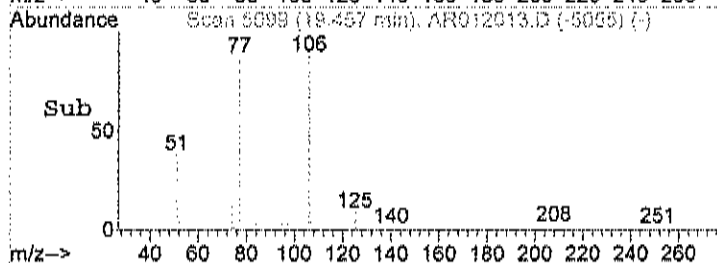
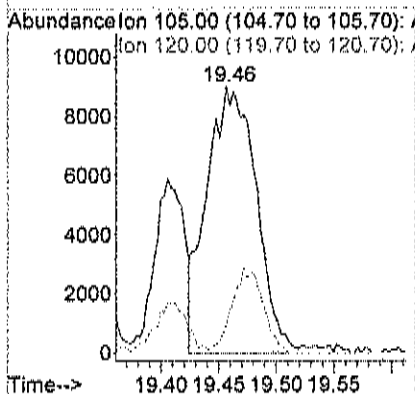
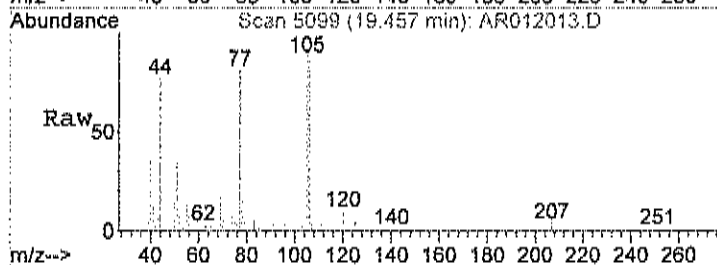
#63
o-xylene
Concen: 0.27 ppb
RT: 18.05 min Scan# 4629
Delta R.T. 0.00 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

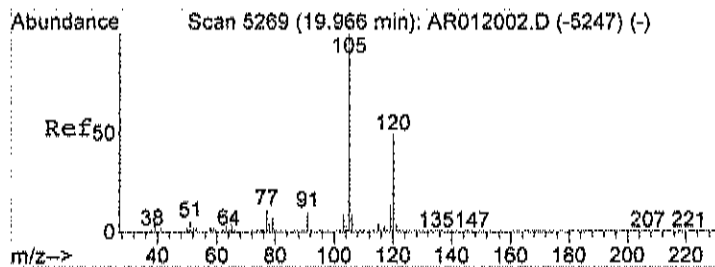
Tgt Ion: 91 Resp: 50396
Ion Ratio Lower Upper
91 100
106 48.0 26.2 66.2



#70
1,3,5-trimethylbenzene
Concen: 0.13 ppb m
RT: 19.46 min Scan# 5099
Delta R.T. -0.02 min
Lab File: AR012013.D
Acq: 20 Jan 2020 7:46 pm

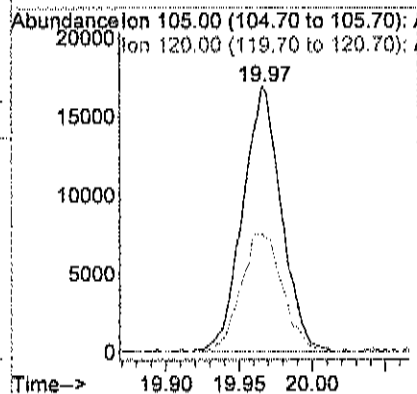
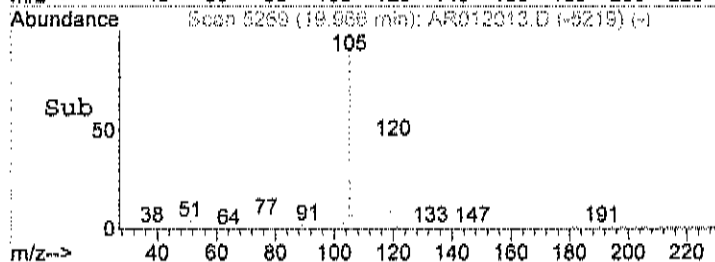
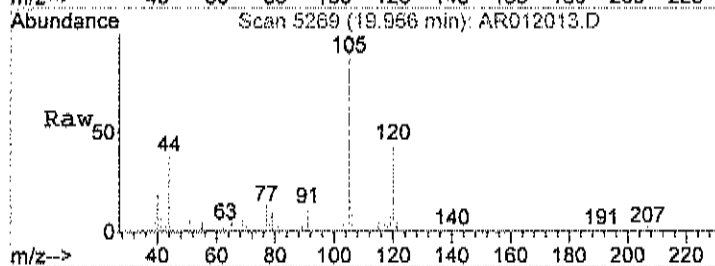
Tgt Ion: 105 Resp: 27339
Ion Ratio Lower Upper
105 100
120 19.6 28.2 68.2#





#71
 1,2,4-trimethylbenzene
 Concen: 0.15 ppb
 RT: 19.97 min Scan# 5269
 Delta R.T. 0.00 min
 Lab File: AR012013.D
 Acq: 20 Jan 2020 7:46 pm

Tgt Ion: 105 Resp: 31123
 Ion Ratio Lower Upper
 105 100
 120 48.2 24.9 64.9



Data File : C:\HPCHEM\1\DATA\AR012024.D

Vial: 24

Acq On : 21 Jan 2020 4:14 am

Operator: RJP

Sample : C2001030-004A 10x

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:30 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	37656	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	179942	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	152306	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	95395	0.94	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	94.00%

Target Compounds

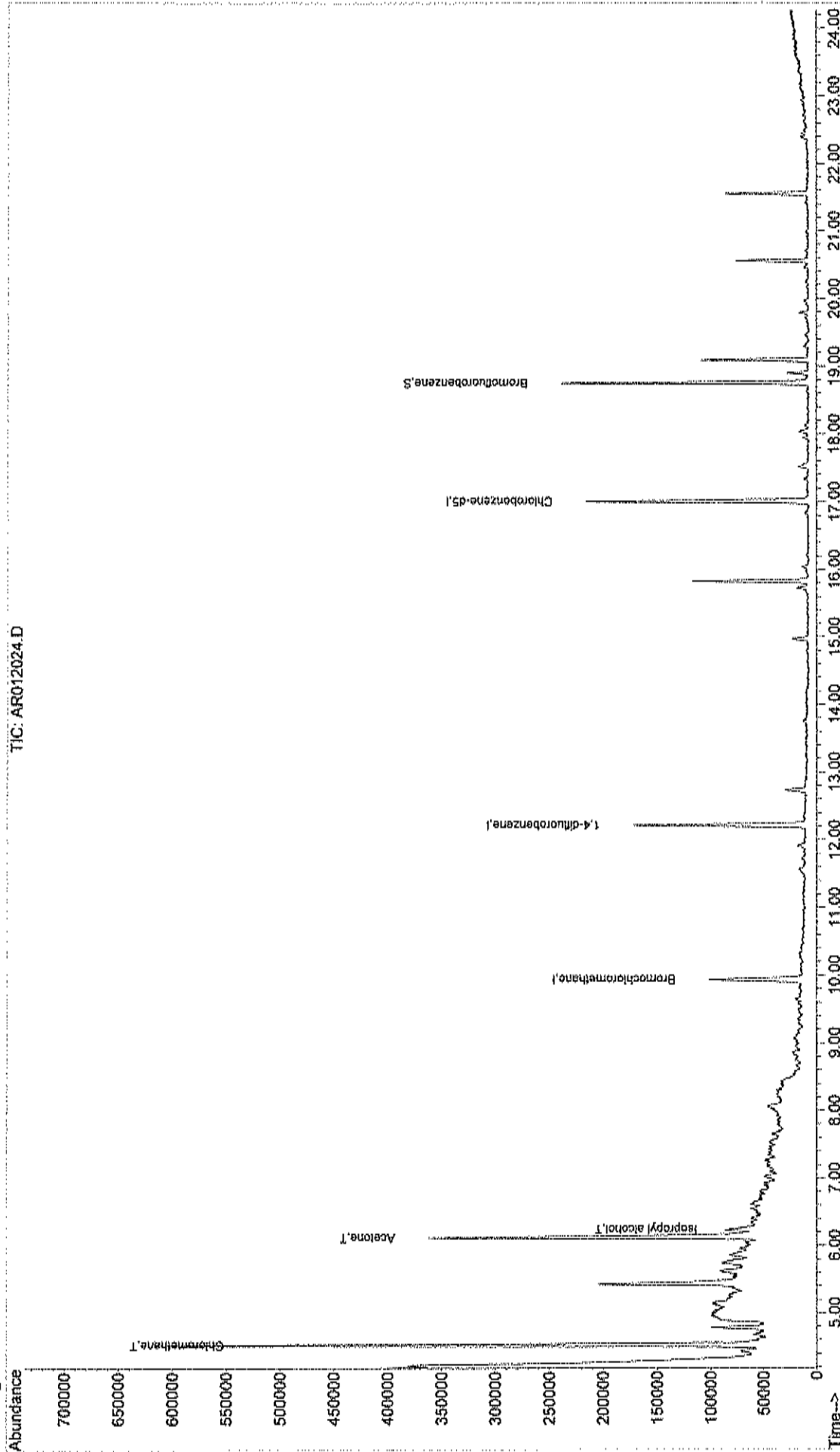
	R.T.	QIon	Response	Conc	Units	Qvalue
4) Chloromethane	4.52	50	11325m	0.50	ppb	
15) Acetone	6.11	58	181002	8.27	ppb	# 100
17) Isopropyl alcohol	6.24	45	41641	0.60	ppb	# 1

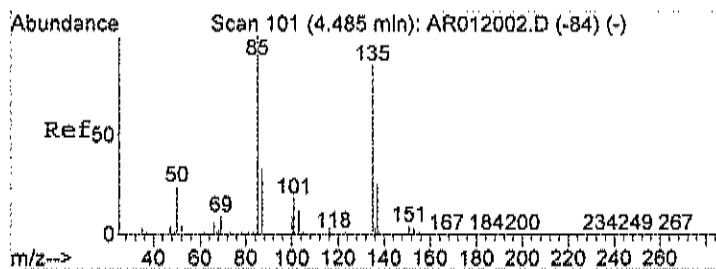
Data File : C:\HPCHEM\1\DATA\AR012024.D
Acq On : 21 Jan 2020 4:14 am
Sample : C2001030-004A 10x
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 12:21 2020

Vial: 24
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

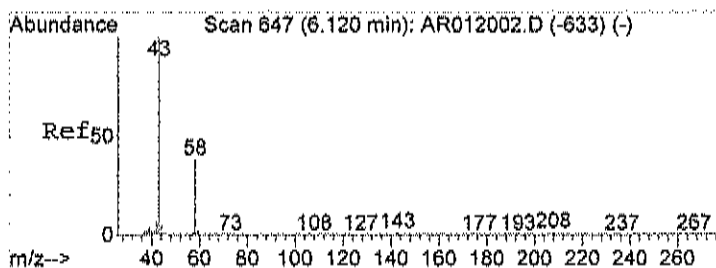
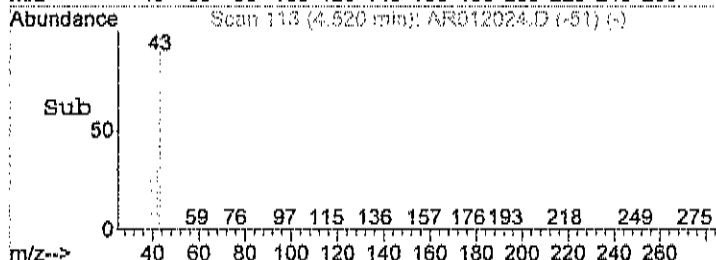
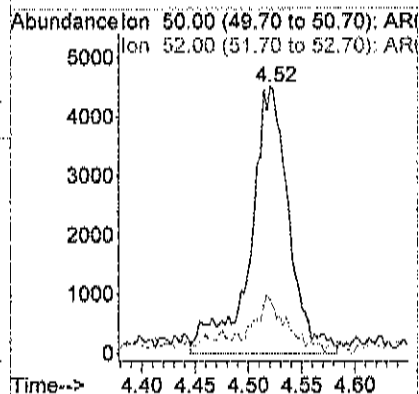
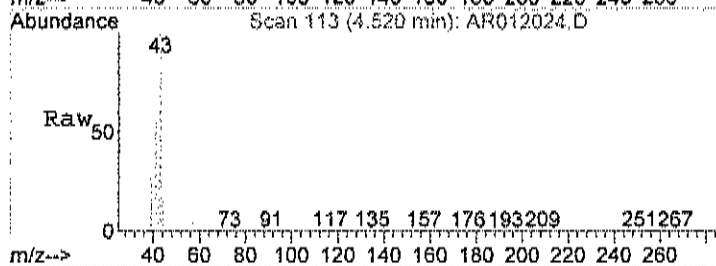
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





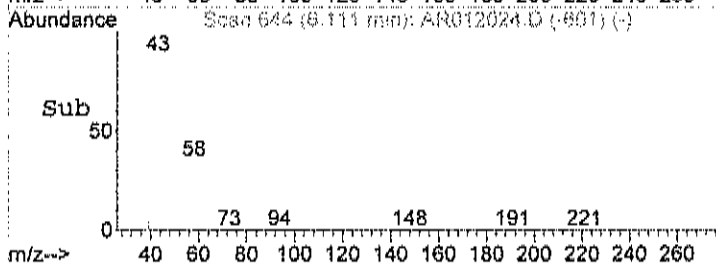
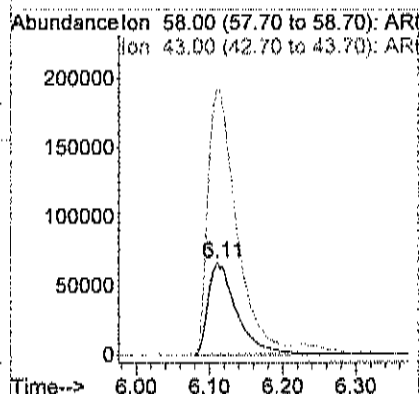
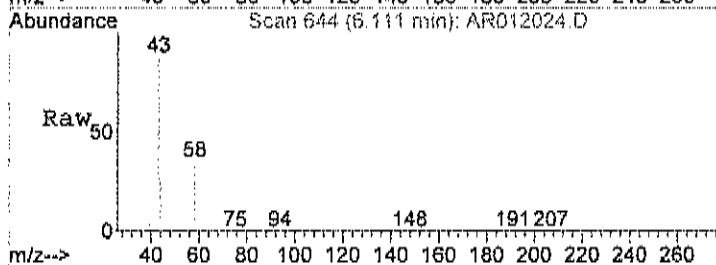
#4
Chloromethane
Concen: 0.50 ppb m
RT: 4.52 min Scan# 113
Delta R.T. 0.04 min
Lab File: AR012024.D
Acq: 21 Jan 2020 4:14 am

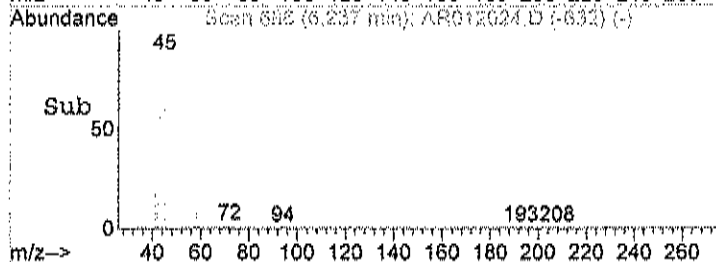
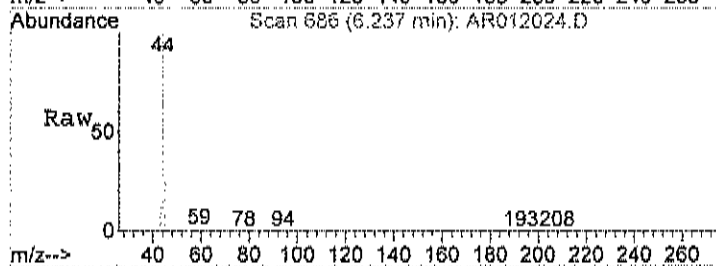
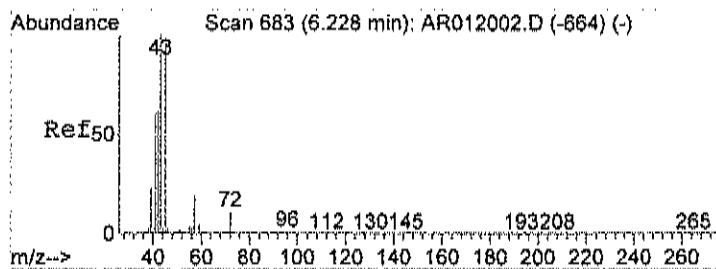
Tgt Ion: 50 Resp: 11325
Ion Ratio Lower Upper
50 100
52 0.0 6.1 46.1#



#15
Acetone
Concen: 8.27 ppb
RT: 6.11 min Scan# 644
Delta R.T. -0.02 min
Lab File: AR012024.D
Acq: 21 Jan 2020 4:14 am

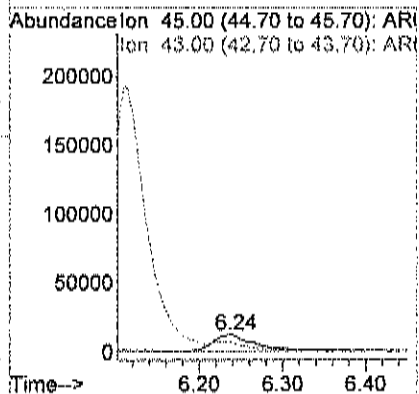
Tgt Ion: 58 Resp: 181002
Ion Ratio Lower Upper
58 100
43 298.7 0.0 30.0#





#17
 Isopropyl alcohol
 Concen: 0.60 ppb
 RT: 6.24 min Scan# 686
 Delta R.T. 0.01 min
 Lab File: AR012024.D
 Acq: 21 Jan 2020 4:14 am

Tgt Ion: 45 Resp: 41641
 Ion Ratio Lower Upper
 45 100
 43 0.0 196.5 236.5#



Data File : C:\HPCHEM\1\DATA\AR012025.D
 Acq On : 21 Jan 2020 4:59 am
 Sample : C2001030-004A 40x
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 21 08:35:31 2020

Vial: 25
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 17 11:14:36 2020
 Response via : Initial Calibration
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	36580	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	172505	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	143387	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.75	95	91014	0.95	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	95.00%

Target Compounds

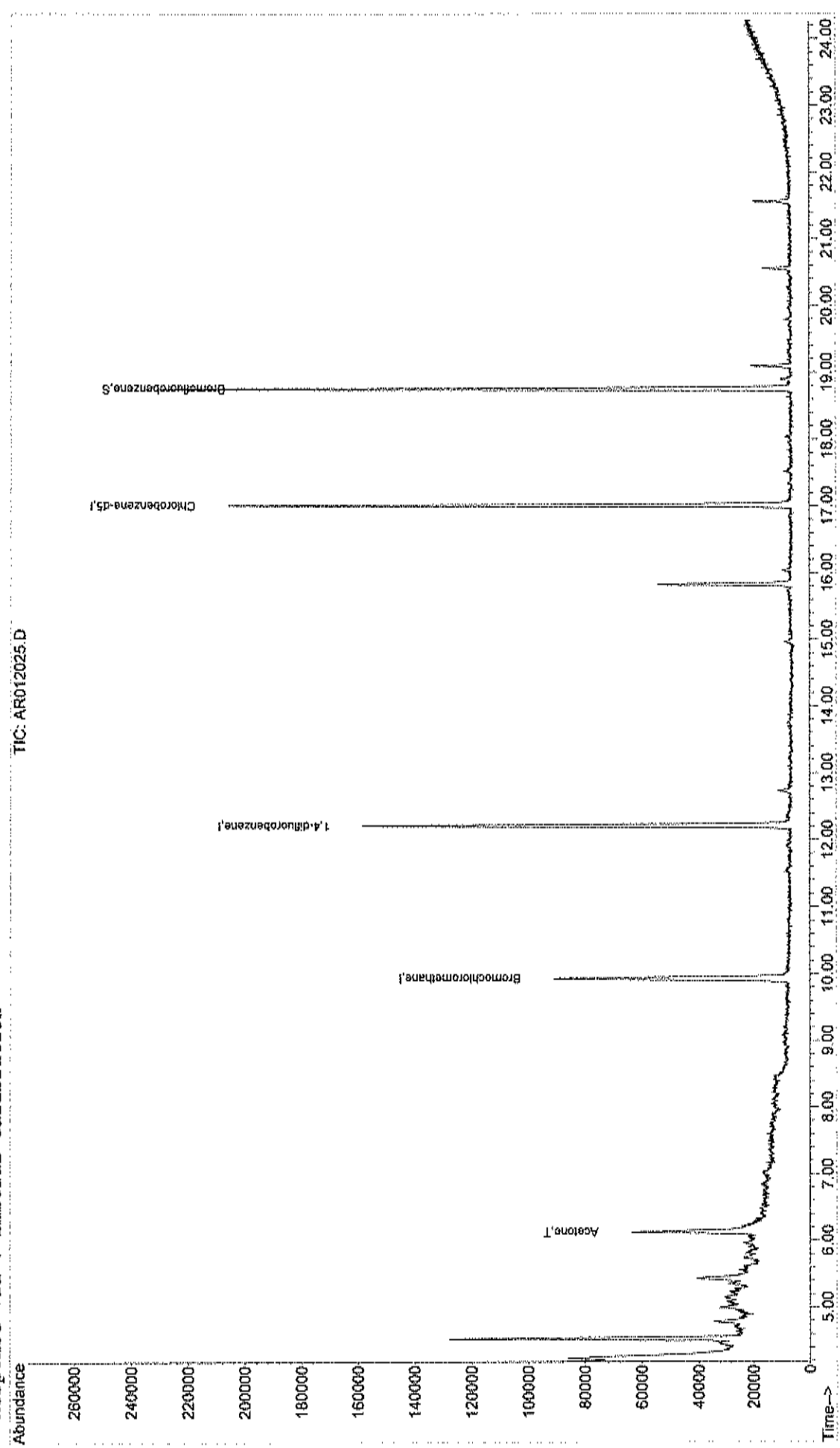
15) Acetone	6.12	58	29348	1.38	ppb	Qvalue # 100

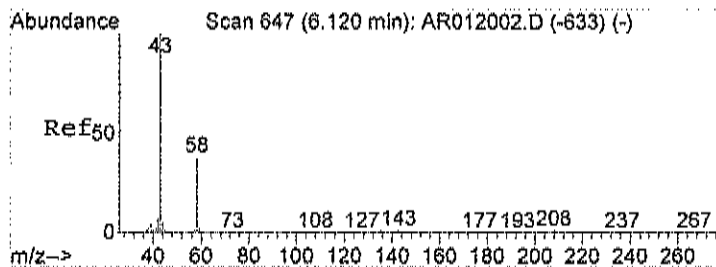
Data File : C:\HPCHEM\1\DATA\AR012025.D
Acq On : 21 Jan 2020 4:59 am
Sample : C2001030-004A 40x
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 12:22 2020

Vial: 25
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

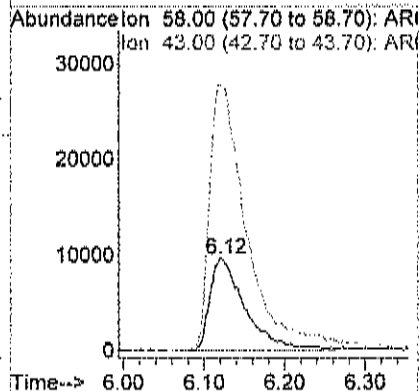
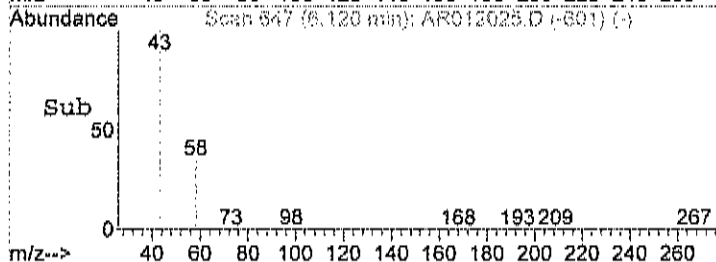
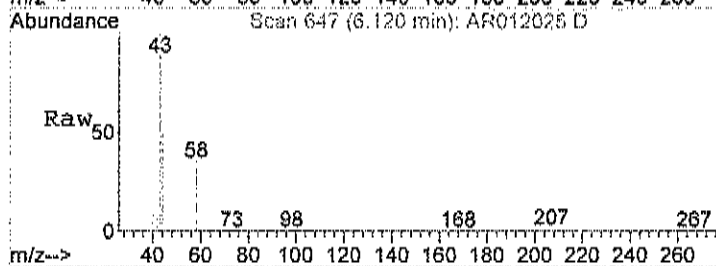
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





#15
 Acetone
 Concen: 1.38 ppb
 RT: 6.12 min Scan# 647
 Delta R.T. -0.01 min
 Lab File: AR012025.D
 Acq: 21 Jan 2020 4:59 am

Tgt Ion: 58 Resp: 29348
 Ion Ratio Lower Upper
 58 100
 43 303.9 0.0 30.0#



Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 8:33:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2,4-Trimethylbenzene	0.13	0.15	J	ppbV	1	1/20/2020 8:33:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 8:33:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Acetone	7.8	3.0		ppbV	10	1/21/2020 5:44:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Benzene	0.18	0.15		ppbV	1	1/20/2020 8:33:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 8:33:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Chloroform	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Chloromethane	0.44	0.15		ppbV	1	1/20/2020 8:33:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 8:33:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Ethyl acetate	0.18	0.15		ppbV	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 11	0.27	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Freon 12	0.59	0.15		ppbV	1	1/20/2020 8:33:00 PM
Heptane	0.11	0.15	J	ppbV	1	1/20/2020 8:33:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Hexane	0.16	0.15		ppbV	1	1/20/2020 8:33:00 PM
Isopropyl alcohol	1.3	0.15		ppbV	1	1/20/2020 8:33:00 PM
m&p-Xylene	0.24	0.30	J	ppbV	1	1/20/2020 8:33:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 8:33:00 PM
Methyl Ethyl Ketone	0.43	0.30		ppbV	1	1/20/2020 8:33:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 8:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Methylene chloride	0.16	0.15		ppbV	1	1/20/2020 8:33:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Styrene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Tetrachloroethylene	0.12	0.15	J	ppbV	1	1/20/2020 8:33:00 PM
Tetrahydrofuran	0.23	0.15		ppbV	1	1/20/2020 8:33:00 PM
Toluene	0.42	0.15		ppbV	1	1/20/2020 8:33:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Trichloroethane	< 0.030	0.030		ppbV	1	1/20/2020 8:33:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 8:33:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 8:33:00 PM
Surr: Bromofluorobenzene	102	70-130		%REC	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 8:33:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 8:33:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 8:33:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
1,2,4-Trimethylbenzene	0.64	0.74	J	ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 8:33:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 8:33:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 8:33:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 8:33:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 8:33:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 8:33:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 8:33:00 PM
Acetone	19	7.1		ug/m3	10	1/21/2020 5:44:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 8:33:00 PM
Benzene	0.57	0.48		ug/m3	1	1/20/2020 8:33:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 8:33:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 8:33:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 8:33:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 8:33:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 8:33:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 8:33:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 8:33:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 8:33:00 PM
Chloromethane	0.91	0.31		ug/m3	1	1/20/2020 8:33:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 8:33:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 8:33:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 8:33:00 PM
Ethyl acetate	0.65	0.54		ug/m3	1	1/20/2020 8:33:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 8:33:00 PM
Freon 11	1.5	0.84		ug/m3	1	1/20/2020 8:33:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 8:33:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-005A

Client Sample ID: Apartment A4-Indoor
Tag Number: 1183,372
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 8:33:00 PM
Heptane	0.45	0.61	J	ug/m3	1	1/20/2020 8:33:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 8:33:00 PM
Hexane	0.56	0.53		ug/m3	1	1/20/2020 8:33:00 PM
Isopropyl alcohol	3.1	0.37		ug/m3	1	1/20/2020 8:33:00 PM
m&p-Xylene	1.0	1.3	J	ug/m3	1	1/20/2020 8:33:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
Methyl Ethyl Ketone	1.3	0.88		ug/m3	1	1/20/2020 8:33:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 8:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 8:33:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	1/20/2020 8:33:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 8:33:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 8:33:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 8:33:00 PM
Tetrachloroethylene	0.81	1.0	J	ug/m3	1	1/20/2020 8:33:00 PM
Tetrahydrofuran	0.68	0.44		ug/m3	1	1/20/2020 8:33:00 PM
Toluene	1.6	0.57		ug/m3	1	1/20/2020 8:33:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 8:33:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 8:33:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 8:33:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 8:33:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Data File : C:\HPCHEM\1\DATA\AR012014.D

Vial: 14

Acq On : 20 Jan 2020 8:33 pm

Operator: RJP

Sample : C2001030-005A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:20 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.95	128	43265	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.23	114	199717	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	173549	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	118344	1.02	ppb	0.00
Spiked Amount	1.000	Range	70 ~ 130	Recovery	=	102.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.26	85	66608	0.59	ppb	99
4) Chloromethane	4.46	50	11431	0.44	ppb	87
14) Freon 11	5.93	101	32684	0.27	ppb	96
15) Acetone	6.13	58	193829	7.71	ppb	# 100
17) Isopropyl alcohol	6.25	45	100089	1.26	ppb	# 1
21) Methylene chloride	7.20	84	7046	0.16	ppb	99
28) Methyl Ethyl Ketone	9.06	72	10205	0.43	ppb	# 100
30) Hexane	9.11	57	13750	0.16	ppb	83
31) Ethyl acetate	9.65	43	18932	0.18	ppb	97
33) Tetrahydrofuran	10.30	42	11360m	0.23	ppb	
38) Carbon tetrachloride	11.58	117	8666	0.08	ppb	99
39) Benzene	11.55	78	26967	0.18	ppb	99
43) Heptane	12.75	43	9246	0.11	ppb	# 66
51) Toluene	14.98	92	44231	0.42	ppb	100
56) Tetrachloroethylene	16.04	164	8087	0.12	ppb	96
59) m&p-xylene	17.52	91	42285	0.24	ppb	98
60) Nonane	17.95	43	26039	0.21	ppb	97
71) 1,2,4-trimethylbenzene	19.96	105	25916	0.13	ppb	99

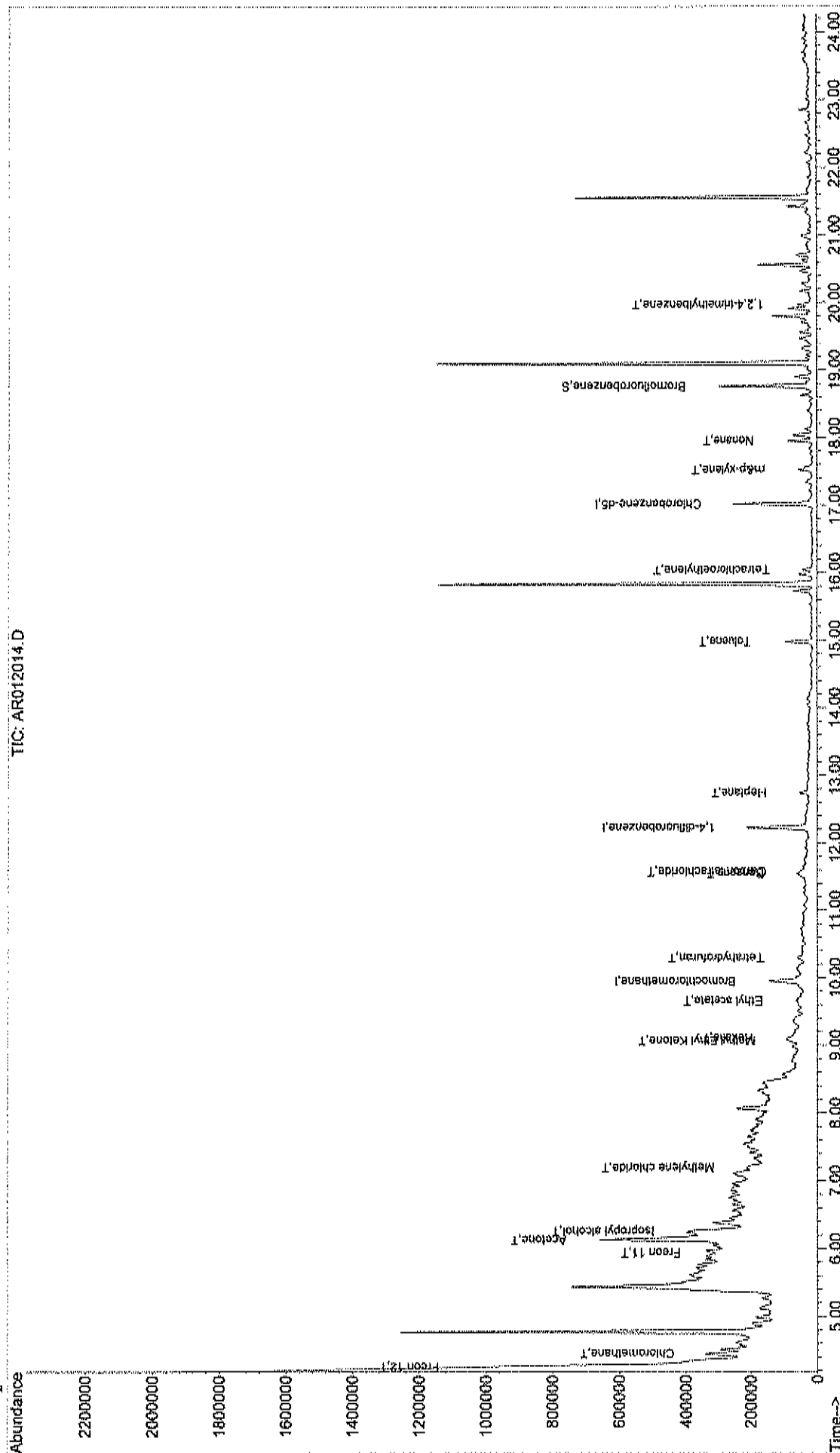
 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR012014.D A116_1UG.M Wed Feb 05 10:02:09 2020 MSD1

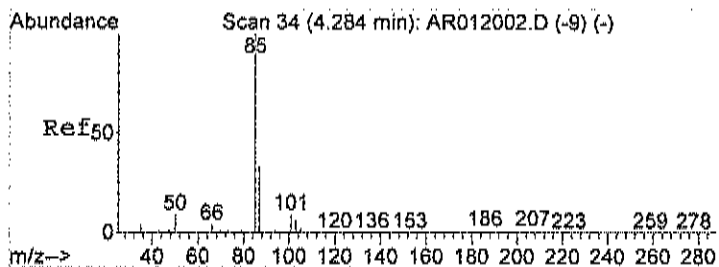
Data File : C:\HPCHEM\1\DATA\AR012014.D
 Acq On : 20 Jan 2020 8:33 pm
 Sample : C2001030-005A
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 23 8:51 2020

Vial: 14
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

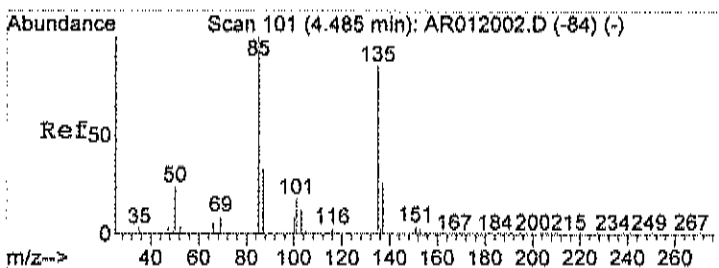
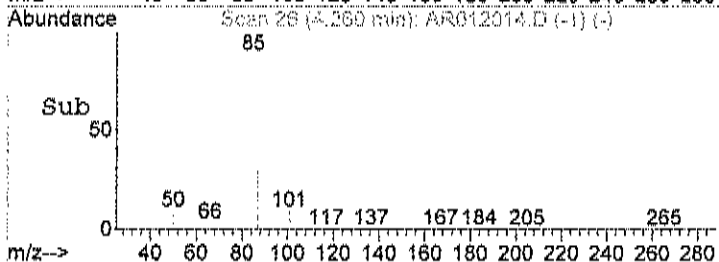
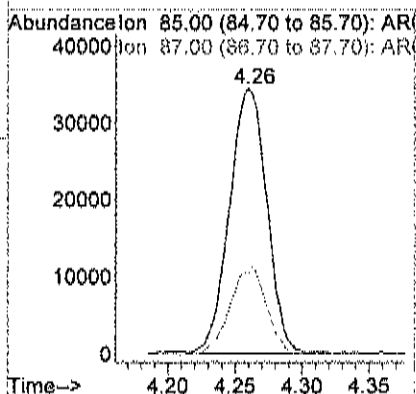
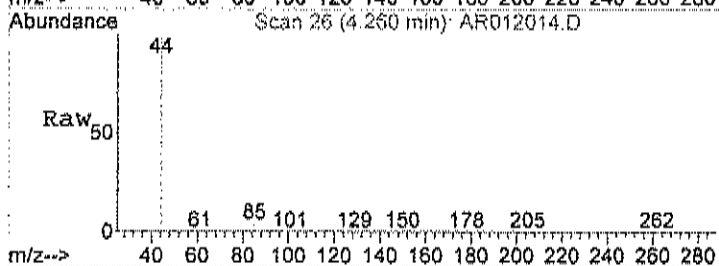
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration





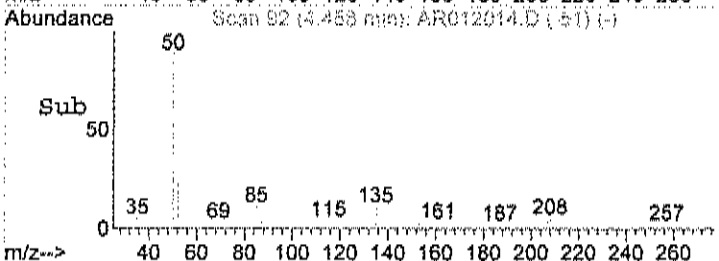
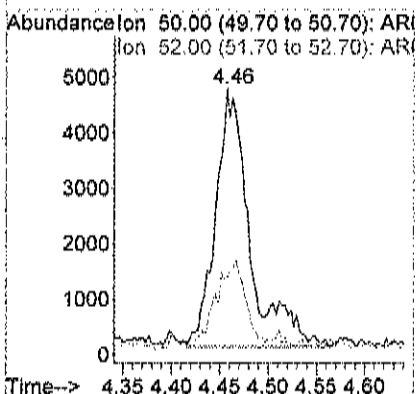
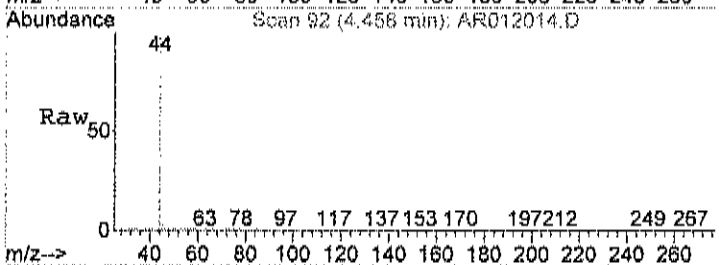
#3
Freon 12
Concen: 0.59 ppb
RT: 4.26 min Scan# 26
Delta R.T. -0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

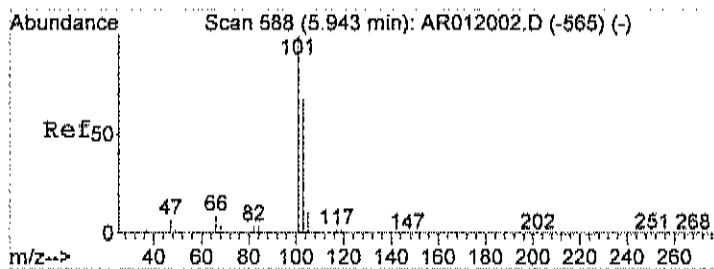
Tgt Ion: 85 Resp: 66608
Ion Ratio Lower Upper
85 100
87 32.6 11.9 51.9



#4
Chloromethane
Concen: 0.44 ppb
RT: 4.46 min Scan# 92
Delta R.T. -0.03 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 50 Resp: 11431
Ion Ratio Lower Upper
50 100
52 32.9 6.1 46.1

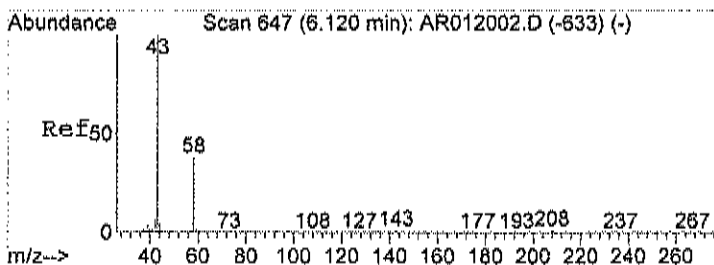
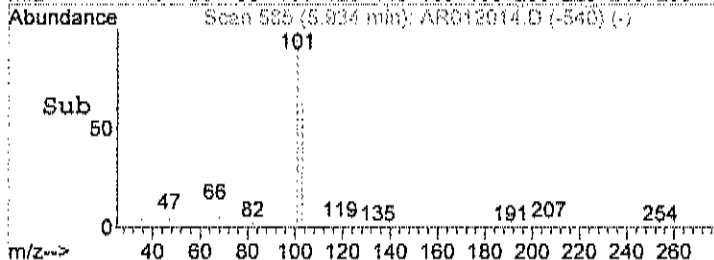
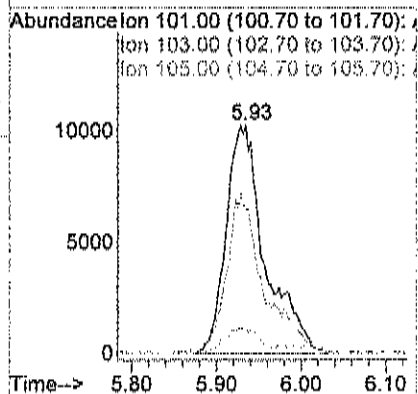
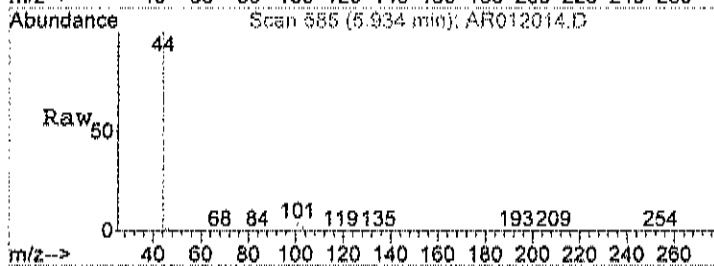




#14
Freon 11
Concen: 0.27 ppb
RT: 5.93 min Scan# 585
Delta R.T. -0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 101 Resp: 32684

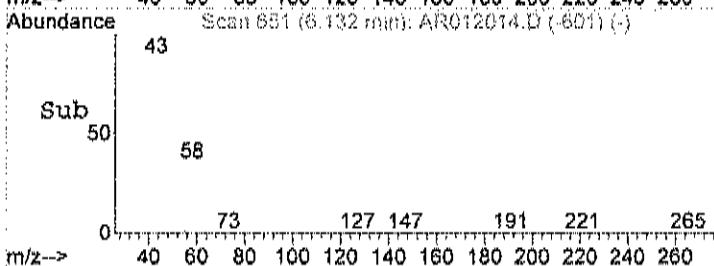
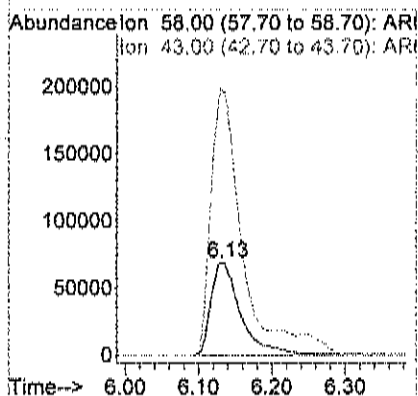
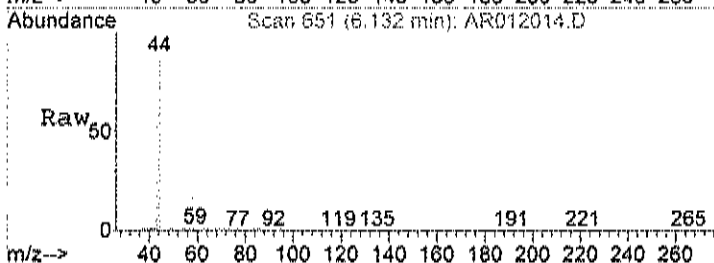
Ion	Ratio	Lower	Upper
101	100		
103	67.3	44.2	84.2
105	12.2	0.0	30.3

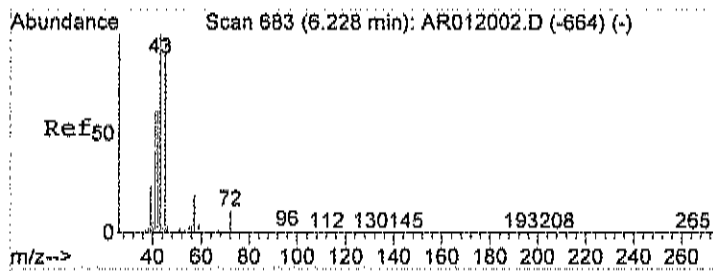


#15
Acetone
Concen: 7.71 ppb
RT: 6.13 min Scan# 651
Delta R.T. -0.00 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 58 Resp: 193829

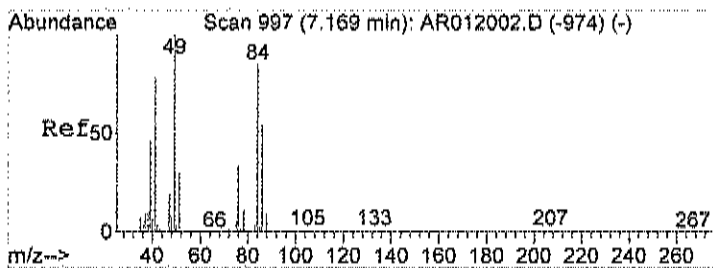
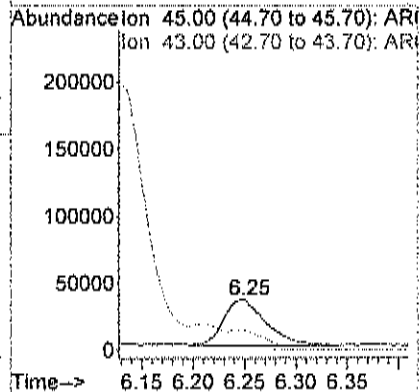
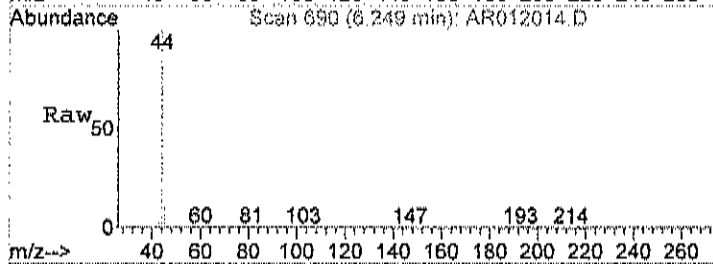
Ion	Ratio	Lower	Upper
58	100		
43	307.3	0.0	30.0#





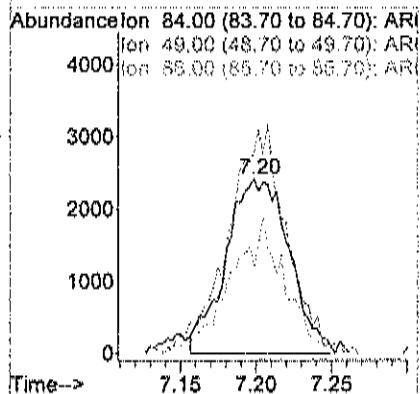
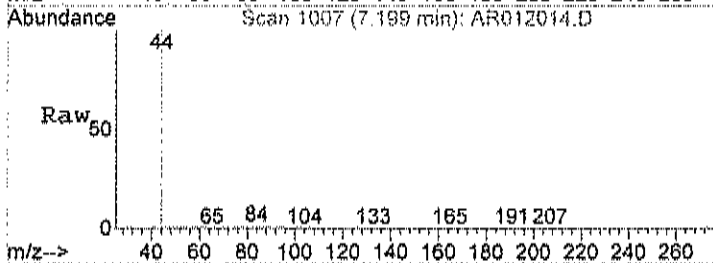
#17
Isopropyl alcohol
Concen: 1.26 ppb
RT: 6.25 min Scan# 690
Delta R.T. 0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

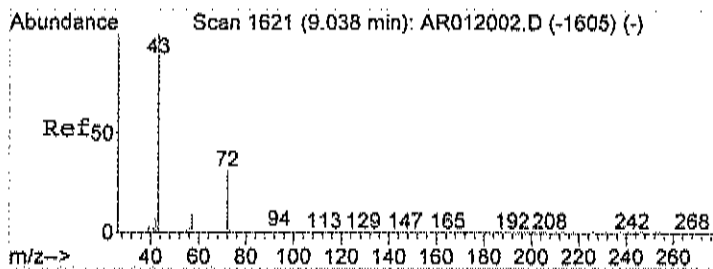
Tgt Ion: 45 Resp: 100089
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#



#21
Methylene chloride
Concen: 0.16 ppb
RT: 7.20 min Scan# 1007
Delta R.T. 0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

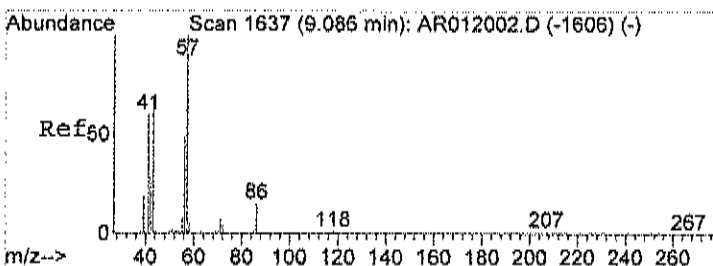
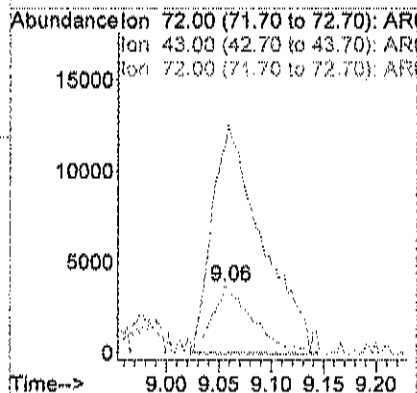
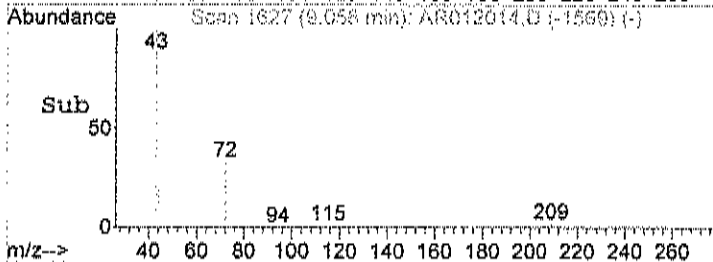
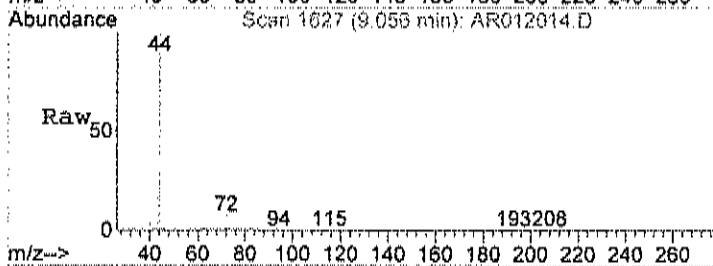
Tgt Ion: 84 Resp: 7046
Ion Ratio Lower Upper
84 100
49 119.3 101.4 141.4
86 65.3 45.4 85.4





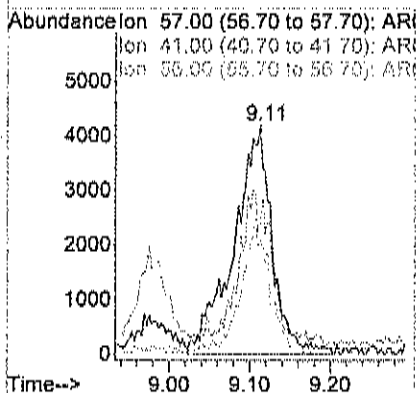
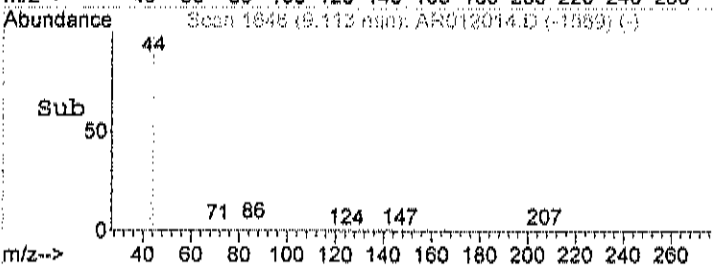
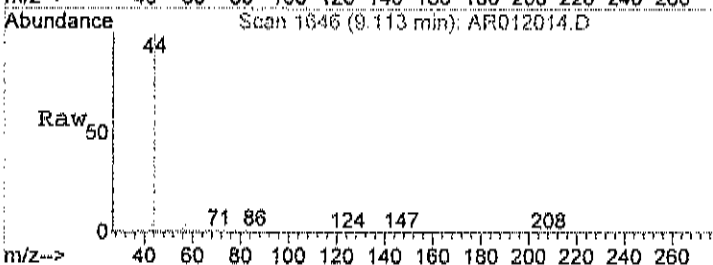
#28
Methyl Ethyl Ketone
Concen: 0.43 ppb
RT: 9.06 min Scan# 1627
Delta R.T. 0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

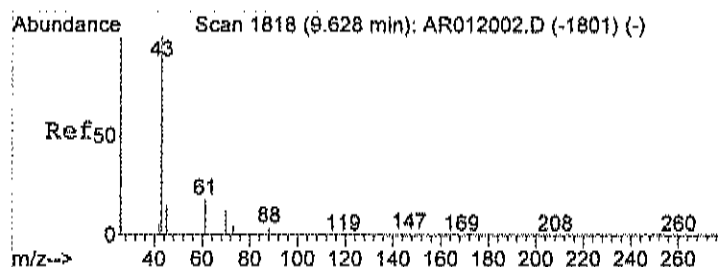
Tgt Ion: 72 Resp: 10205
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0



#30
Hexane
Concen: 0.16 ppb
RT: 9.11 min Scan# 1646
Delta R.T. 0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 57 Resp: 13750
Ion Ratio Lower Upper
57 100
41 58.9 55.7 95.7
56 42.3 32.4 72.4

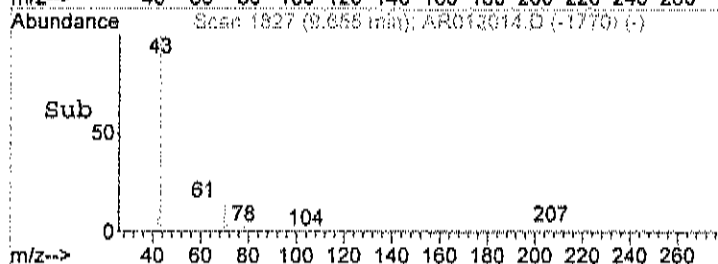
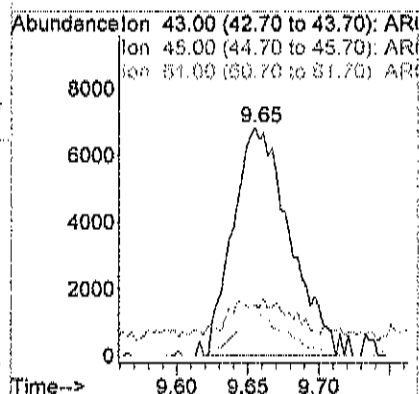
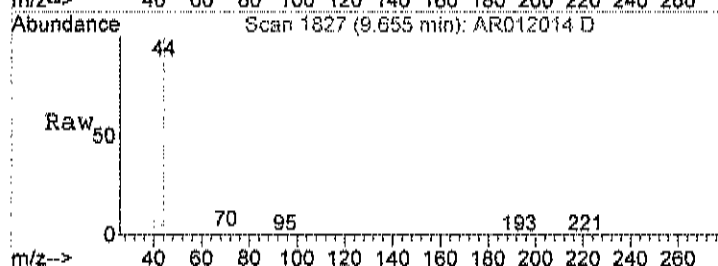




#31
Ethyl acetate
Concen: 0.18 ppb
RT: 9.65 min Scan# 1827
Delta R.T. 0.02 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 43 Resp: 18932

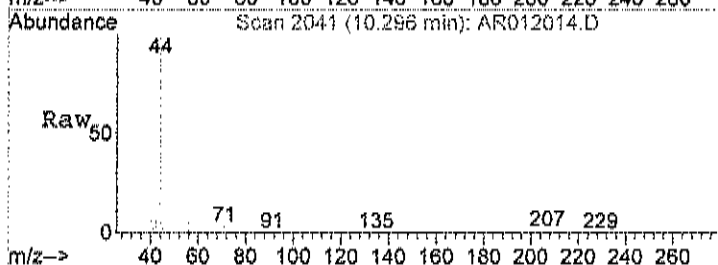
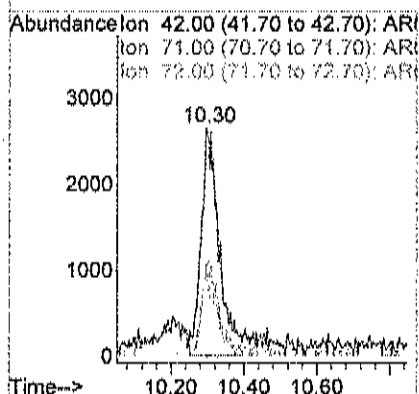
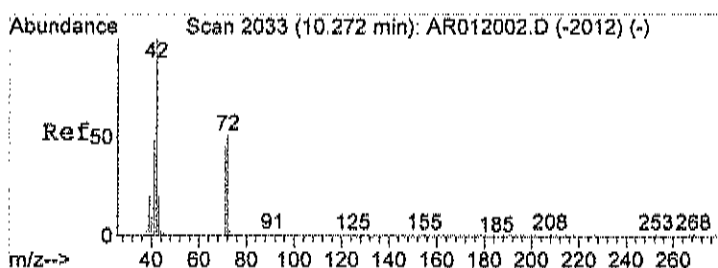
Ion	Ratio	Lower	Upper
43	100		
45	16.8	0.0	34.5
61	16.4	0.0	35.8

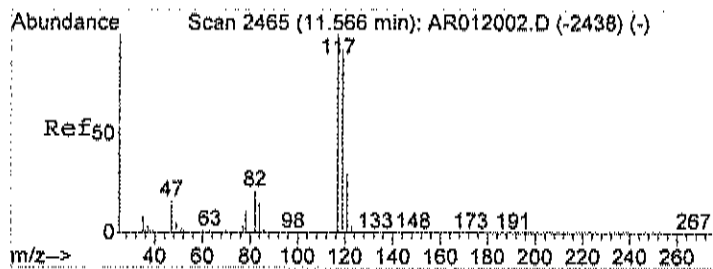


#33
Tetrahydrofuran
Concen: 0.23 ppb m
RT: 10.30 min Scan# 2041
Delta R.T. 0.03 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 42 Resp: 11360

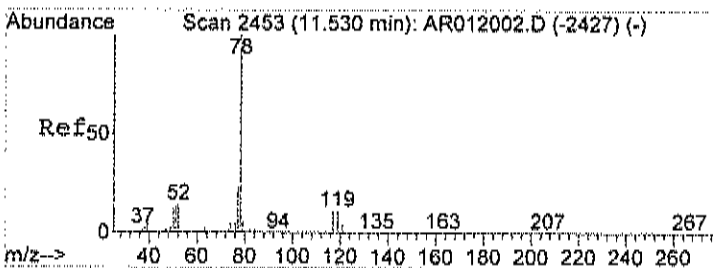
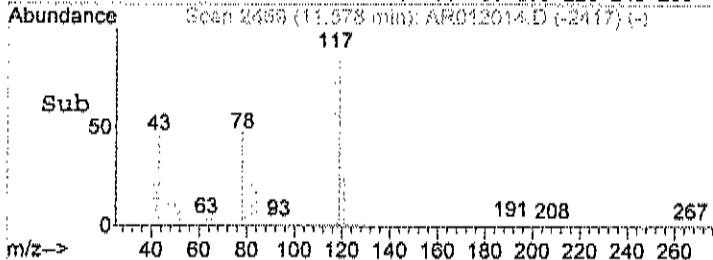
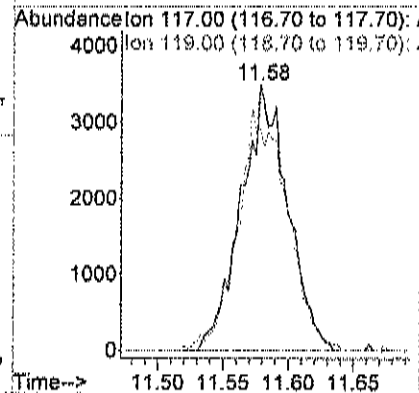
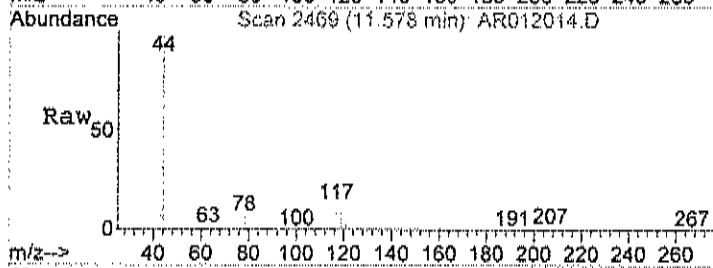
Ion	Ratio	Lower	Upper
42	100		
71	29.1	25.1	65.1
72	29.0	23.3	63.3





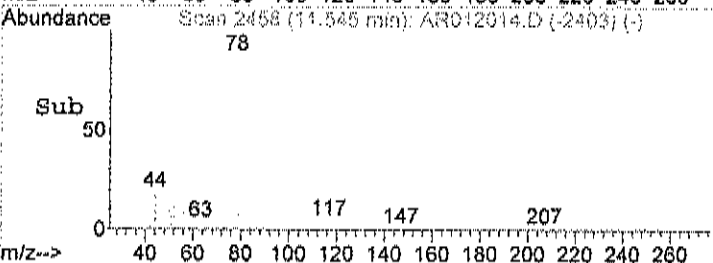
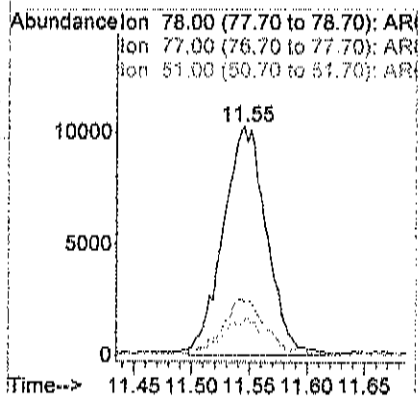
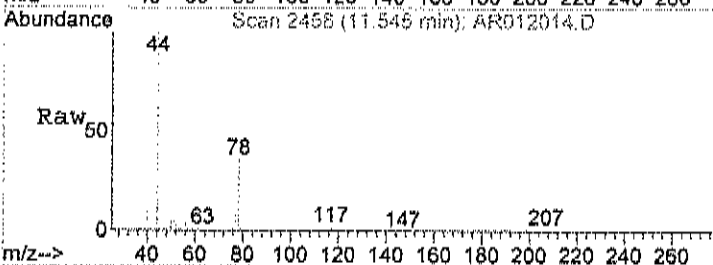
#38
Carbon tetrachloride
Concen: 0.08 ppb
RT: 11.58 min Scan# 2469
Delta R.T. 0.01 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

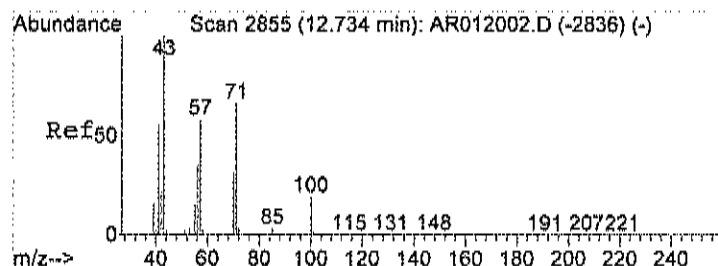
Tgt Ion: 117 Resp: 8666
Ion Ratio Lower Upper
117 100
119 96.9 75.6 115.6



#39
Benzene
Concen: 0.18 ppb
RT: 11.55 min Scan# 2458
Delta R.T. 0.01 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

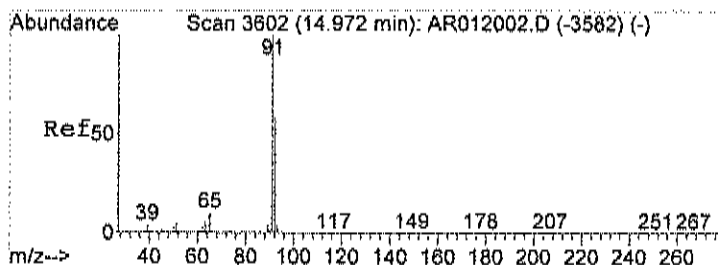
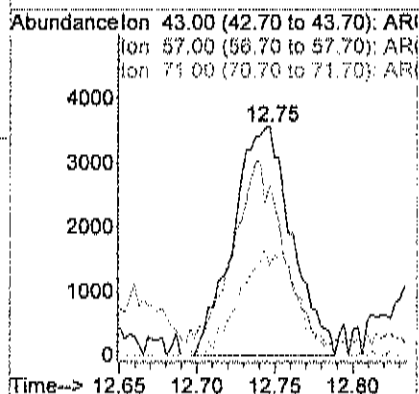
Tgt Ion: 78 Resp: 26967
Ion Ratio Lower Upper
78 100
77 24.3 4.1 44.1
51 16.1 0.0 36.8





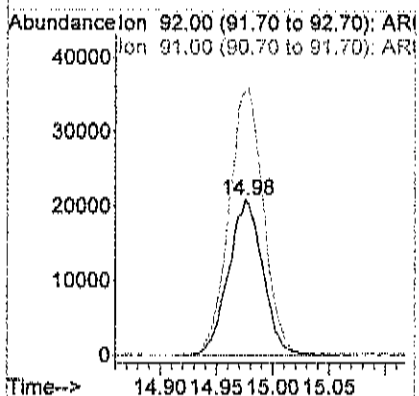
#43
Heptane
Concen: 0.11 ppb
RT: 12.75 min Scan# 2859
Delta R.T. 0.01 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

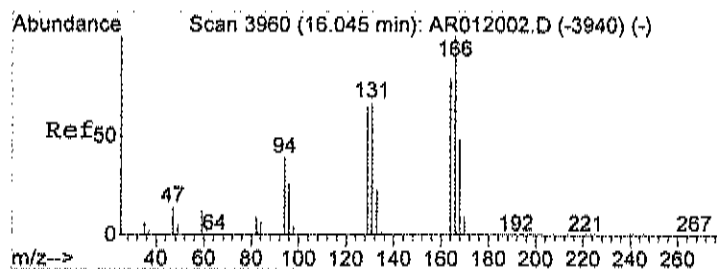
Tgt Ion: 43 Resp: 9246
Ion Ratio Lower Upper
43 100
57 89.2 36.0 76.0#
71 43.9 42.5 82.5



#51
Toluene
Concen: 0.42 ppb
RT: 14.98 min Scan# 3603
Delta R.T. 0.00 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

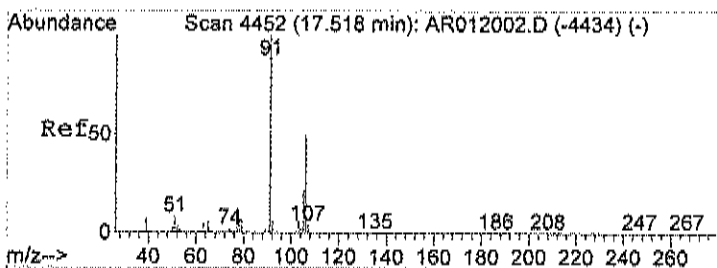
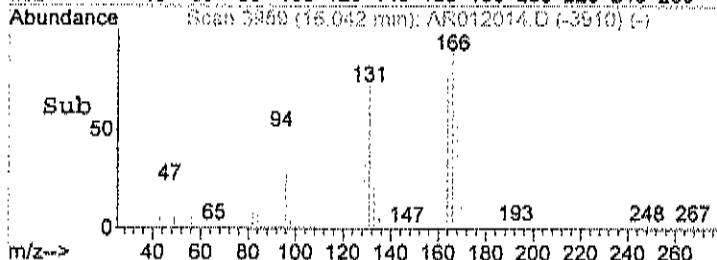
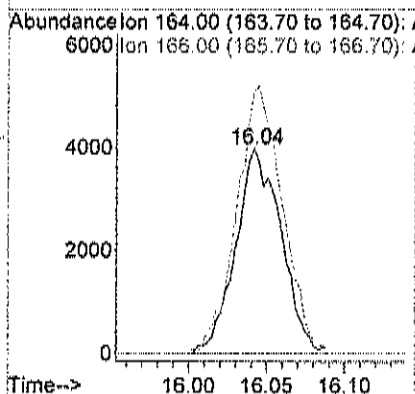
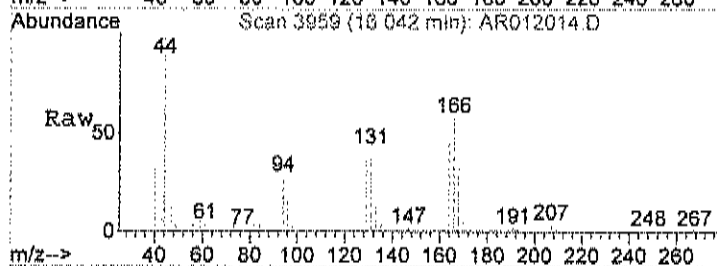
Tgt Ion: 92 Resp: 44231
Ion Ratio Lower Upper
92 100
91 174.4 154.5 194.5





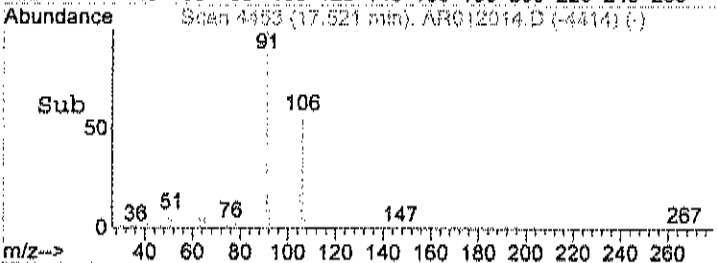
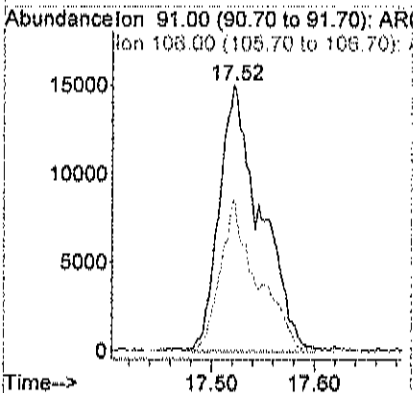
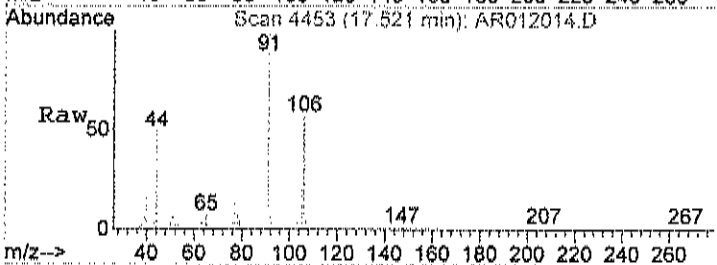
#56
Tetrachloroethylene
Concen: 0.12 ppb
RT: 16.04 min Scan# 3959
Delta R.T. -0.00 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

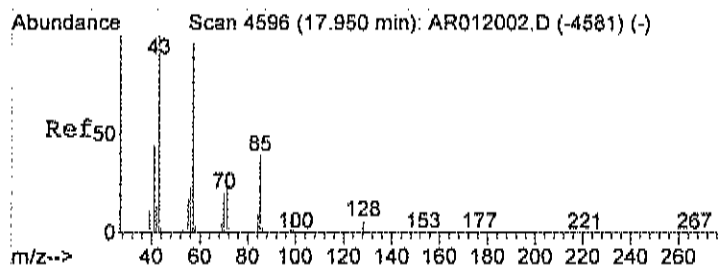
Tgt Ion: 164 Resp: 8087
Ion Ratio Lower Upper
164 100
166 131.0 106.4 146.4



#59
m&p-xylene
Concen: 0.24 ppb
RT: 17.52 min Scan# 4453
Delta R.T. -0.03 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

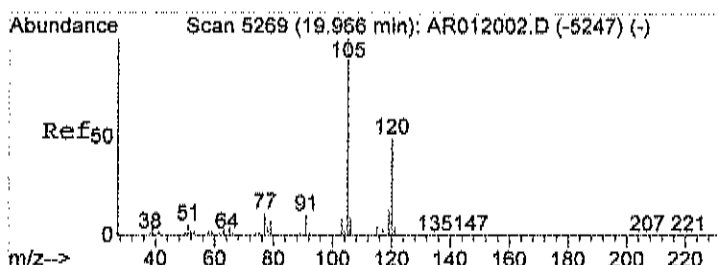
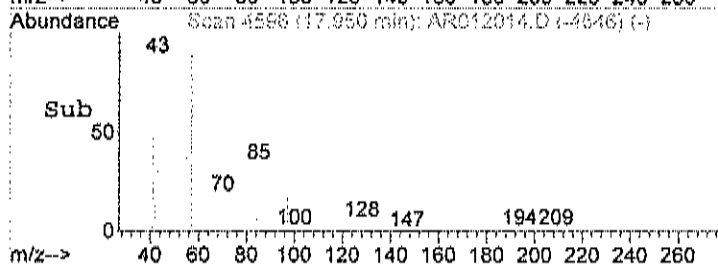
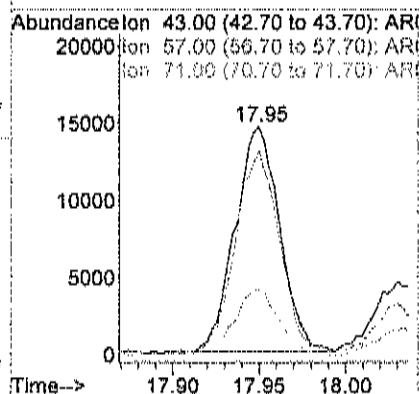
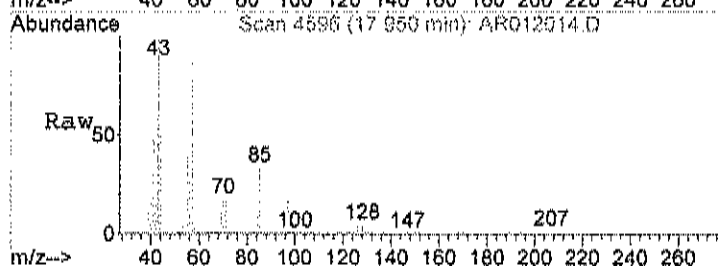
Tgt Ion: 91 Resp: 42285
Ion Ratio Lower Upper
91 100
106 50.6 29.0 69.0





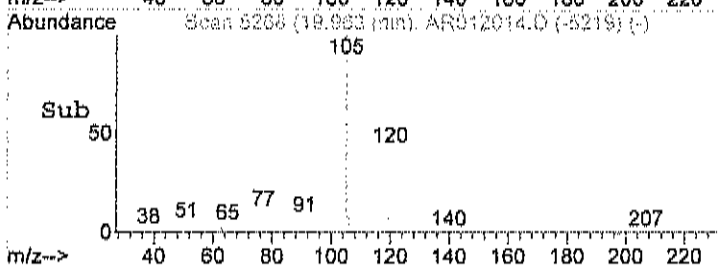
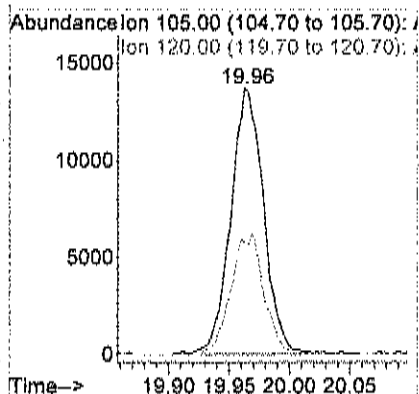
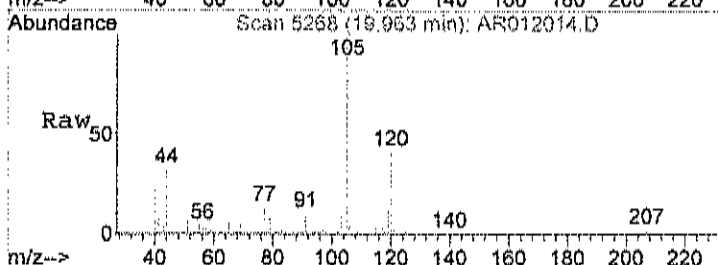
#60
Nonane
Concen: 0.21 ppb
RT: 17.95 min Scan# 4596
Delta R.T. -0.00 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 43 Resp: 26039
Ion Ratio Lower Upper
43 100
57 91.4 71.2 106.8
71 29.9 19.3 35.1



#71
1,2,4-trimethylbenzene
Concen: 0.13 ppb
RT: 19.96 min Scan# 5268
Delta R.T. -0.00 min
Lab File: AR012014.D
Acq: 20 Jan 2020 8:33 pm

Tgt Ion: 105 Resp: 25916
Ion Ratio Lower Upper
105 100
120 45.4 24.9 64.9



Data File : C:\HPCHEM\1\DATA\AR012026.D

Vial: 26

Acq On : 21 Jan 2020 5:44 am

Operator: RJP

Sample : C2001030-005A 10x

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:32 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	36105	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	171203	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	140720	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	88387	0.94	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	94.00%

Target Compounds

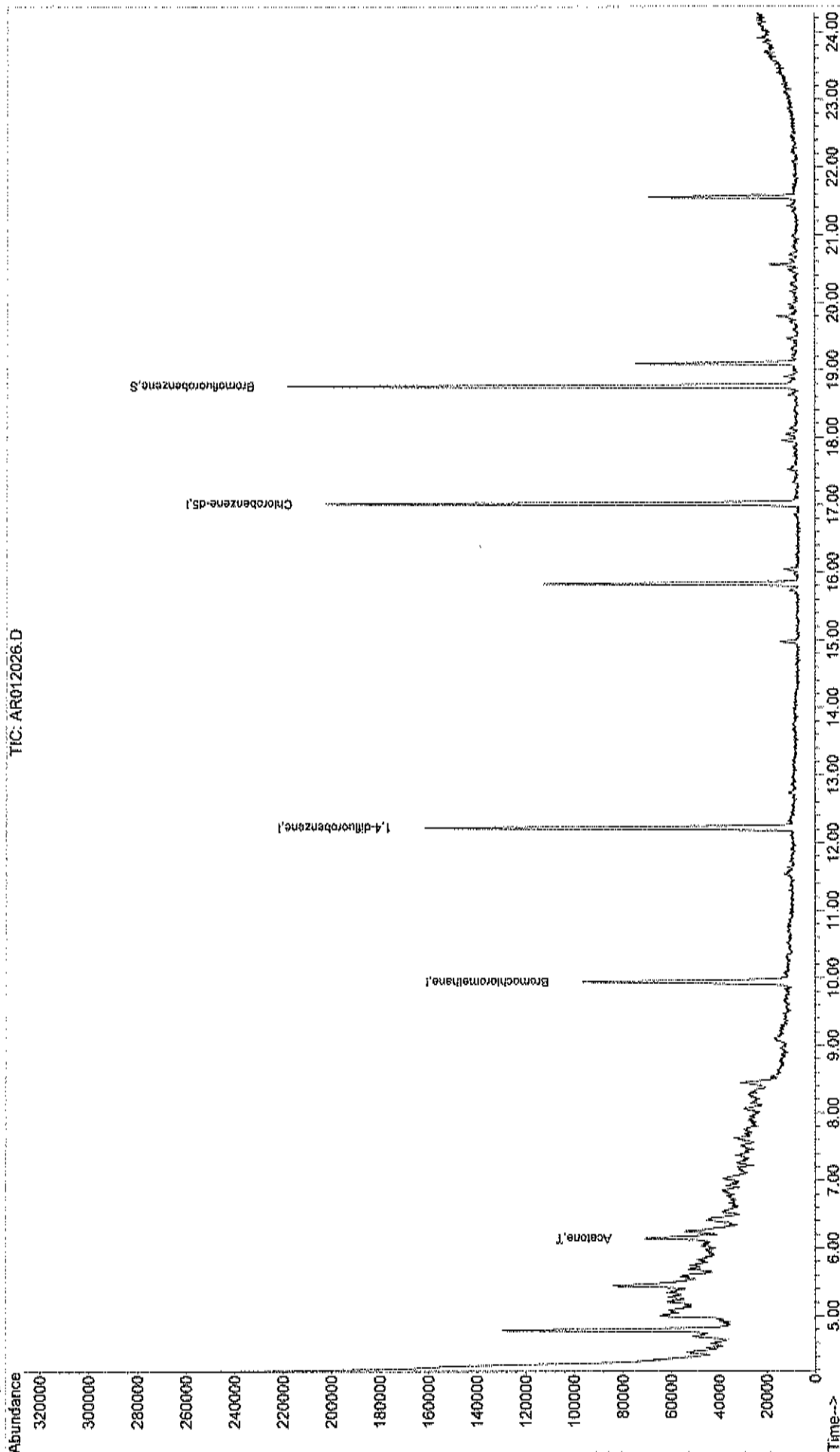
15) Acetone	6.14	58	16397	0.78	ppb	Qvalue # 100

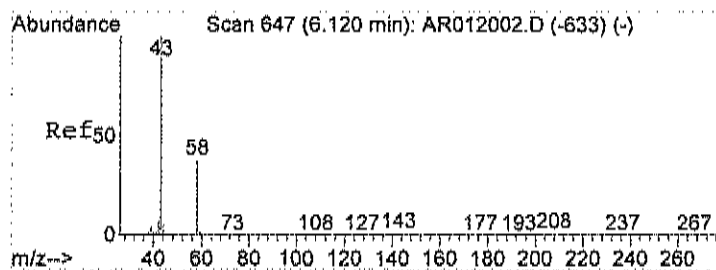
Data File : C:\HPCHEM\1\DATA\AR012026.D
 Acq On : 21 Jan 2020 5:44 am
 Sample : C2001030-005A 10x
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 23 12:23 2020

Vial: 26
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

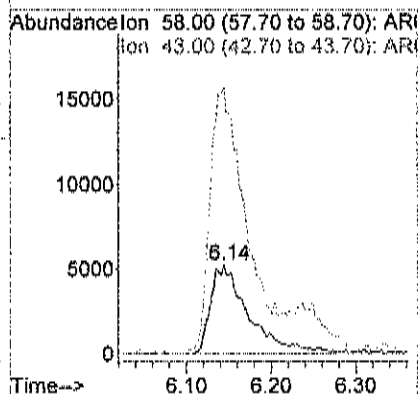
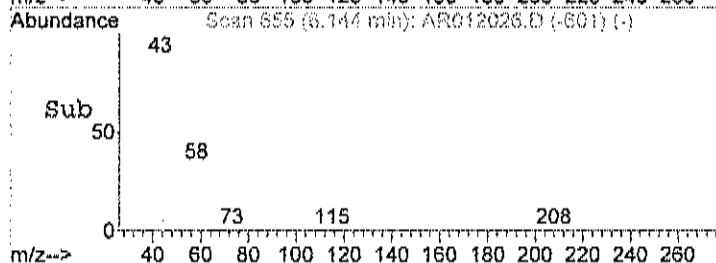
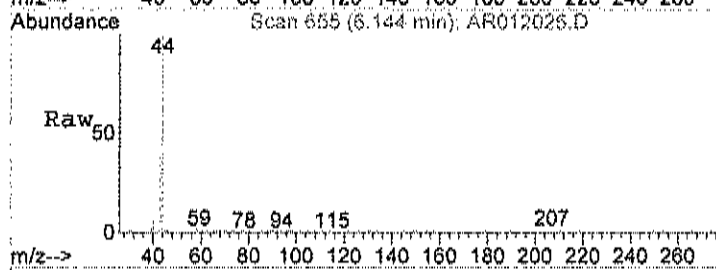
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration





#15
 Acetone
 Concen: 0.78 ppb
 RT: 6.14 min Scan# 655
 Delta R.T. 0.01 min
 Lab File: AR012026.D
 Acq: 21 Jan 2020 5:44 am

Tgt Ion: 58 Resp: 16397
 Ion Ratio Lower Upper
 58 100
 43 331.7 0.0 30.0#



Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 9:20:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2,4-Trimethylbenzene	0.12	0.15	J	ppbV	1	1/20/2020 9:20:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,3-Dichlorobenzene	0.18	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 9:20:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Acetone	7.4	3.0		ppbV	10	1/21/2020 6:30:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Benzene	0.18	0.15		ppbV	1	1/20/2020 9:20:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 9:20:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Chloroform	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 9:20:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Ethyl acetate	0.19	0.15		ppbV	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 11	0.28	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Freon 12	0.60	0.15		ppbV	1	1/20/2020 9:20:00 PM
Heptane	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Hexane	0.19	0.15		ppbV	1	1/20/2020 9:20:00 PM
Isopropyl alcohol	1.0	0.15		ppbV	1	1/20/2020 9:20:00 PM
m&p-Xylene	0.24	0.30	J	ppbV	1	1/20/2020 9:20:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 9:20:00 PM
Methyl Ethyl Ketone	0.38	0.30		ppbV	1	1/20/2020 9:20:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 9:20:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Methylene chloride	0.18	0.15		ppbV	1	1/20/2020 9:20:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Styrene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Tetrahydrofuran	0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Toluene	0.42	0.15		ppbV	1	1/20/2020 9:20:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 9:20:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 9:20:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 9:20:00 PM
Surr: Bromofluorobenzene	100	70-130		%REC	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 9:20:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 9:20:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
1,2,4-Trimethylbenzene	0.59	0.74	J	ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 9:20:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	1/20/2020 9:20:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 9:20:00 PM
1,3-Dichlorobenzene	1.1	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 9:20:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 9:20:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	1/20/2020 9:20:00 PM
Acetone	18	7.1		ug/m3	10	1/21/2020 6:30:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 9:20:00 PM
Benzene	0.57	0.48		ug/m3	1	1/20/2020 9:20:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 9:20:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 9:20:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 9:20:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 9:20:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 9:20:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 9:20:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 9:20:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	1/20/2020 9:20:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	1/20/2020 9:20:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 9:20:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	1/20/2020 9:20:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 9:20:00 PM
Ethyl acetate	0.68	0.54		ug/m3	1	1/20/2020 9:20:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	1/20/2020 9:20:00 PM
Freon 11	1.6	0.84		ug/m3	1	1/20/2020 9:20:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 9:20:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-006A

Client Sample ID: Apartment A4-Dup
Tag Number: 1189,378
Collection Date: 1/15/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	3.0	0.74		ug/m3	1	1/20/2020 9:20:00 PM
Heptane	< 0.61	0.61		ug/m3	1	1/20/2020 9:20:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 9:20:00 PM
Hexane	0.67	0.53		ug/m3	1	1/20/2020 9:20:00 PM
Isopropyl alcohol	2.6	0.37		ug/m3	1	1/20/2020 9:20:00 PM
m&p-Xylene	1.0	1.3	J	ug/m3	1	1/20/2020 9:20:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
Methyl Ethyl Ketone	1.1	0.88		ug/m3	1	1/20/2020 9:20:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 9:20:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 9:20:00 PM
Methylene chloride	0.63	0.52		ug/m3	1	1/20/2020 9:20:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	1/20/2020 9:20:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 9:20:00 PM
Styrene	< 0.64	0.64		ug/m3	1	1/20/2020 9:20:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 9:20:00 PM
Tetrahydrofuran	0.44	0.44		ug/m3	1	1/20/2020 9:20:00 PM
Toluene	1.6	0.57		ug/m3	1	1/20/2020 9:20:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 9:20:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 9:20:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 9:20:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 9:20:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Data File : C:\HPCHEM\1\DATA\AR012015.D

Vial: 15

Acq On : 20 Jan 2020 9:20 pm

Operator: RJP

Sample : C2001030-006A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:21 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.95	128	42084	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.23	114	197482	1.00	ppb	0.01
50) Chlorobenzene-d5	17.02	117	171778	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	114403	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

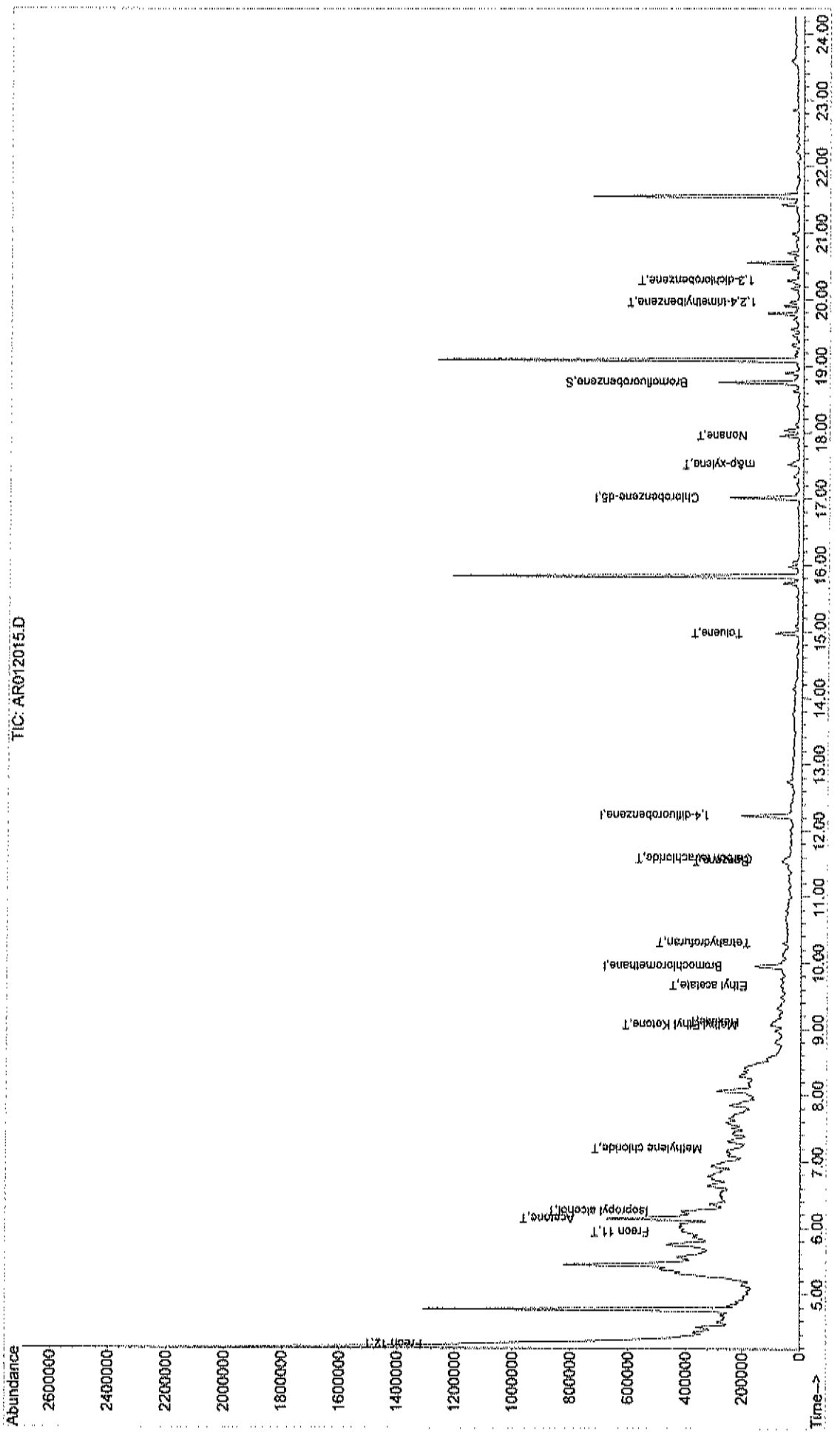
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.26	85	66401	0.60	ppb	100
14) Freon 11	5.93	101	32850	0.28	ppb	99
15) Acetone	6.14	58	183976	7.52	ppb	# 100
17) Isopropyl alcohol	6.25	45	80607	1.04	ppb	# 1
21) Methylene chloride	7.20	84	7723	0.18	ppb	98
28) Methyl Ethyl Ketone	9.06	72	8982	0.38	ppb	# 100
30) Hexane	9.11	57	15281	0.19	ppb	# 76
31) Ethyl acetate	9.66	43	20108	0.19	ppb	90
33) Tetrahydrofuran	10.31	42	7307	0.15	ppb	97
38) Carbon tetrachloride	11.59	117	7952	0.08	ppb	96
39) Benzene	11.55	78	26529	0.18	ppb	99
51) Toluene	14.98	92	43895	0.42	ppb	99
59) m&p-xylene	17.52	91	42430	0.24	ppb	98
60) Nonane	17.95	43	26320	0.21	ppb	100
71) 1,2,4-trimethylbenzene	19.96	105	24195	0.12	ppb	99
72) 1,3-dichlorobenzene	20.29	146	19206	0.18	ppb	91

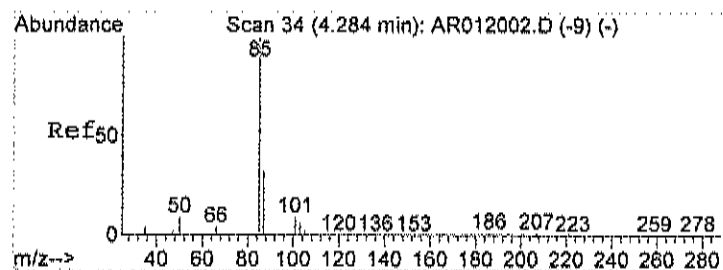
Data File : C:\HPCHEM\1\DATA\AR012015.D
Acq On : 20 Jan 2020 9:20 pm
Sample : C2001030-006A
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 8:51 2020

Vial: 15
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

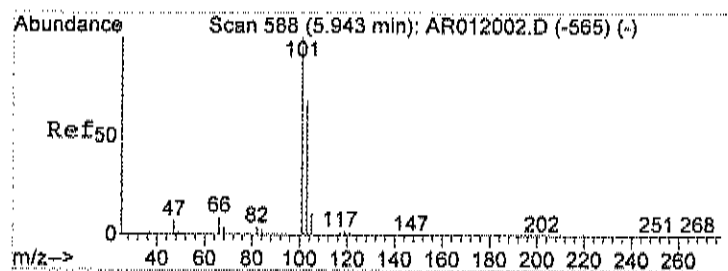
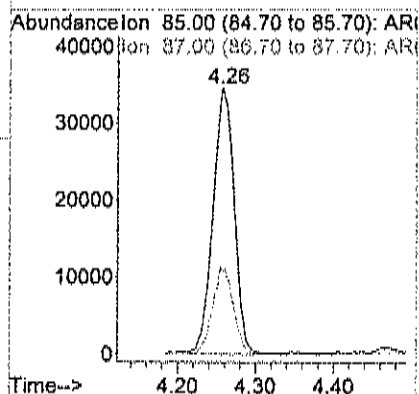
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





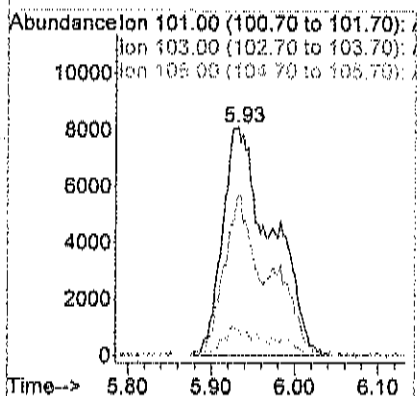
#3
Freon 12
Concen: 0.60 ppb
RT: 4.26 min Scan# 25
Delta R.T. -0.03 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

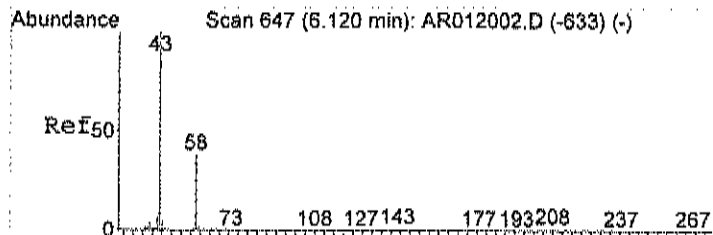
Tgt Ion: 85 Resp: 66401
Ion Ratio Lower Upper
85 100
87 31.8 11.9 51.9



#14
Freon 11
Concen: 0.28 ppb
RT: 5.93 min Scan# 584
Delta R.T. -0.02 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

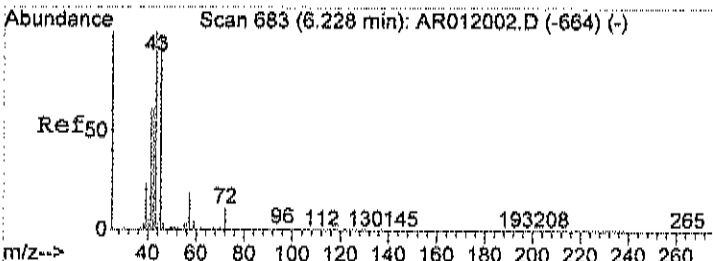
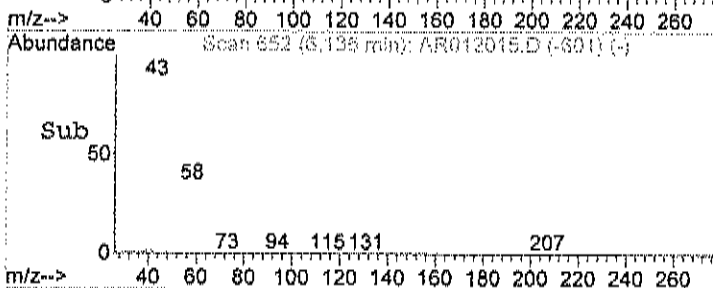
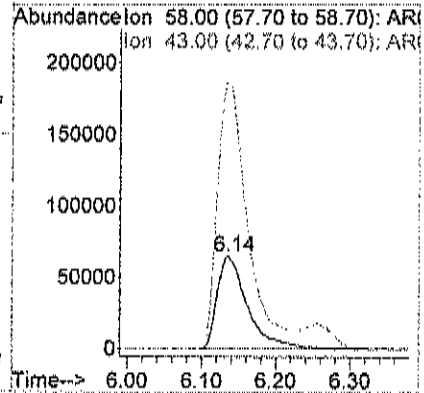
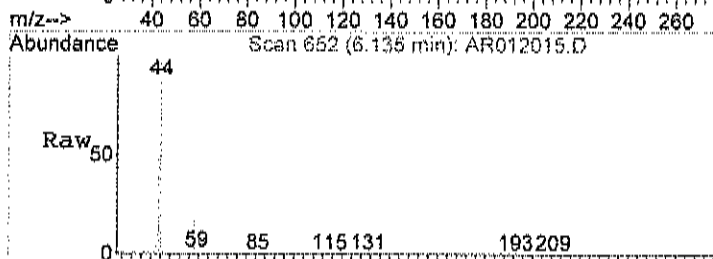
Tgt Ion: 101 Resp: 32850
Ion Ratio Lower Upper
101 100
103 64.2 44.2 84.2
105 12.0 0.0 30.3





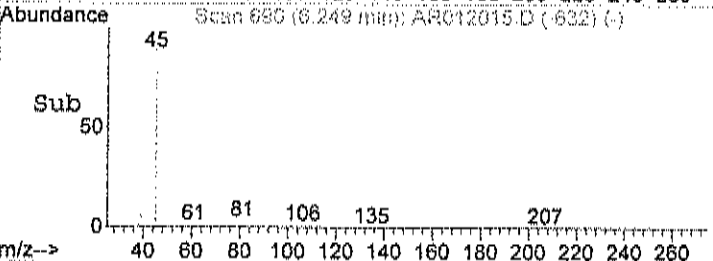
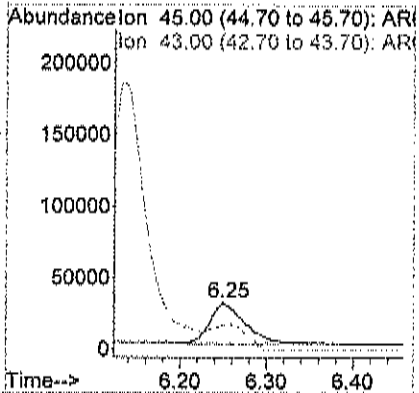
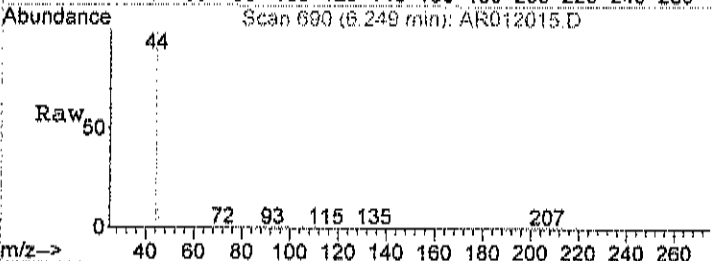
#15
Acetone
Concen: 7.52 ppb
RT: 6.14 min Scan# 652
Delta R.T. 0.00 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

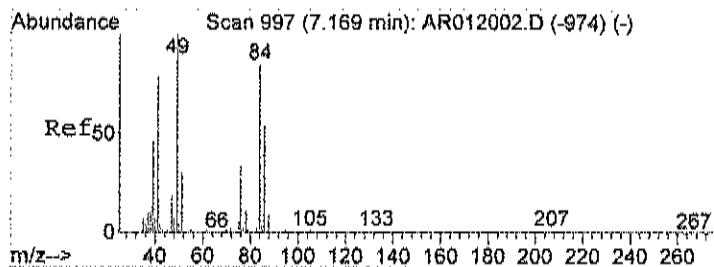
Tgt Ion: 58 Resp: 183976
Ion Ratio Lower Upper
58 100
43 311.8 0.0 30.0#



#17
Isopropyl alcohol
Concen: 1.04 ppb
RT: 6.25 min Scan# 690
Delta R.T. 0.02 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

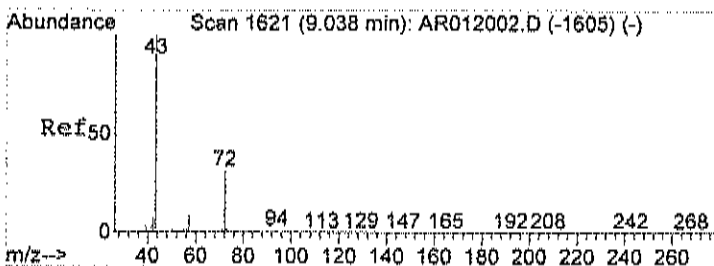
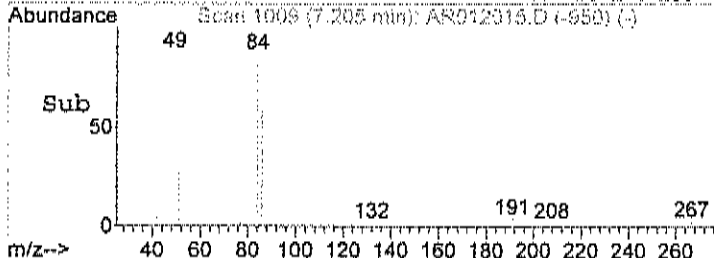
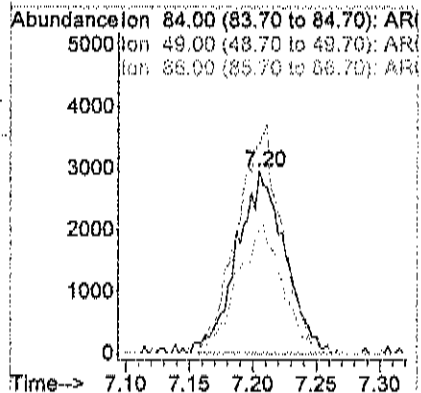
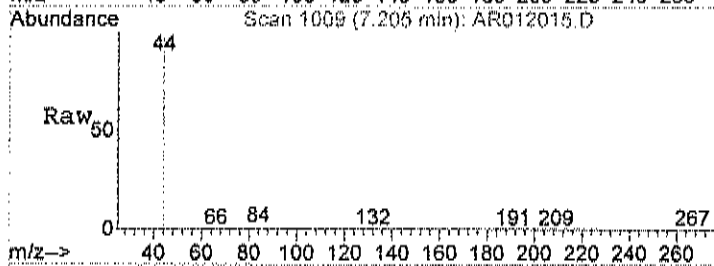
Tgt Ion: 45 Resp: 80607
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#





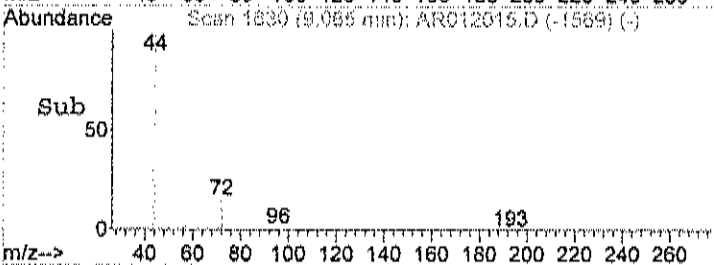
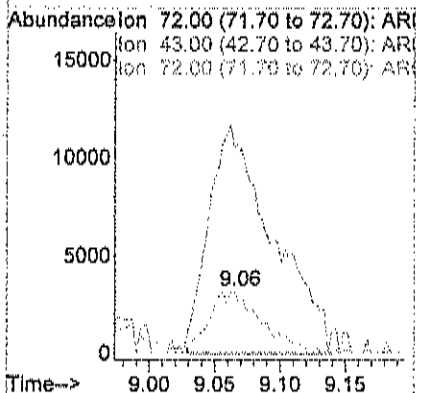
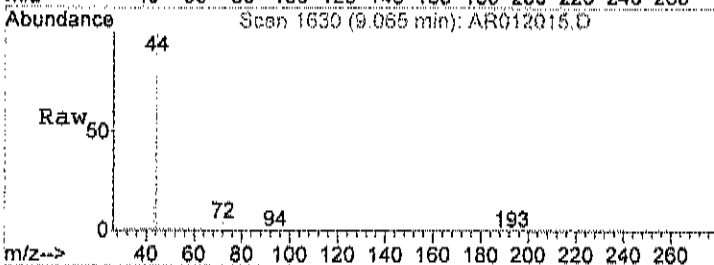
#21
Methylene chloride
Concen: 0.18 ppb
RT: 7.20 min Scan# 1009
Delta R.T. 0.03 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

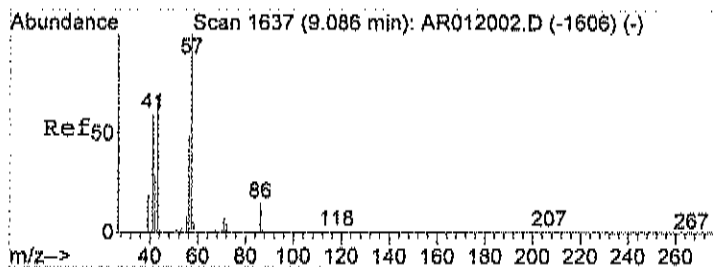
Tgt Ion	Ratio	Lower	Upper
84	100		
49	118.3	101.4	141.4
86	66.3	45.4	85.4



#28
Methyl Ethyl Ketone
Concen: 0.38 ppb
RT: 9.06 min Scan# 1630
Delta R.T. 0.03 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion	Ratio	Lower	Upper
72	100		
43	448.3	0.0	20.0#
72	100.0	80.0	120.0

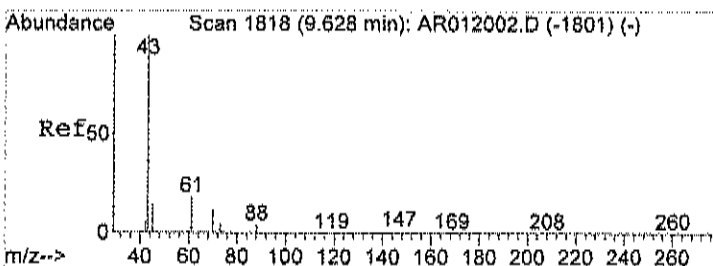
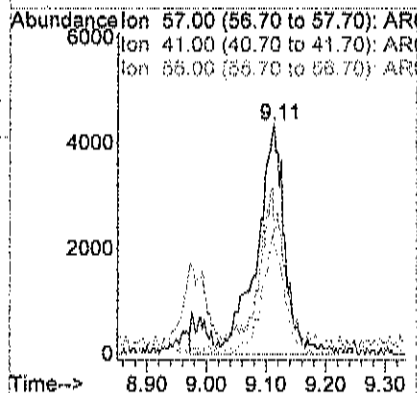
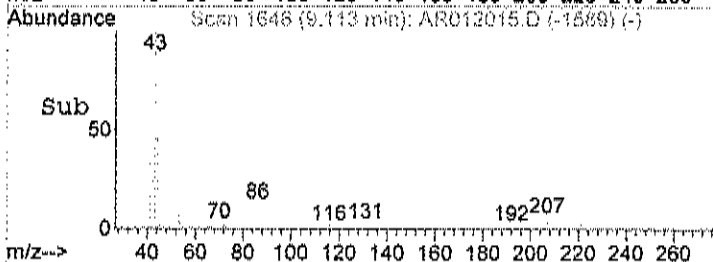
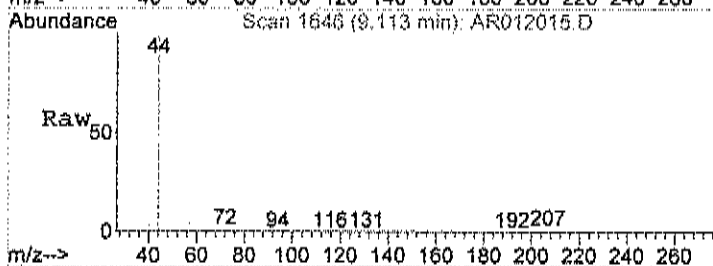




#30
Hexane
Concen: 0.19 ppb
RT: 9.11 min Scan# 1646
Delta R.T. 0.02 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 57 Resp: 15281

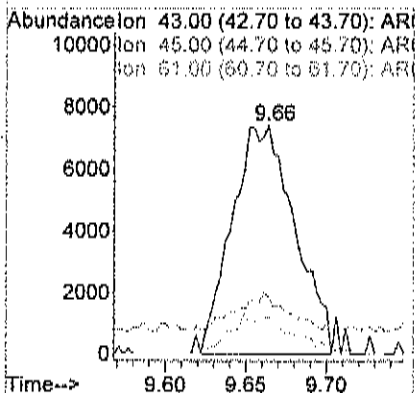
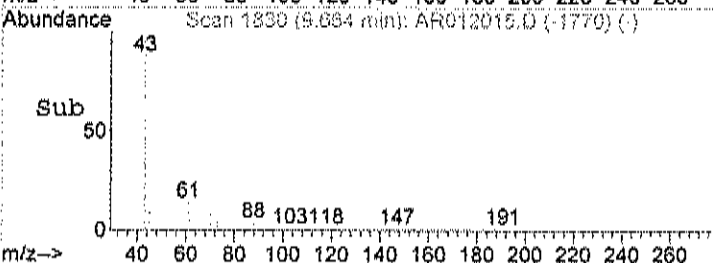
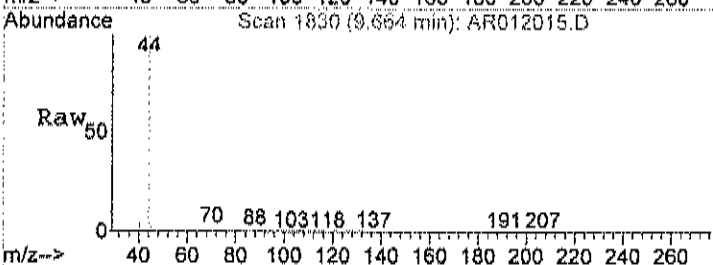
Ion	Ratio	Lower	Upper
57	100		
41	54.6	55.7	95.7#
56	35.7	32.4	72.4

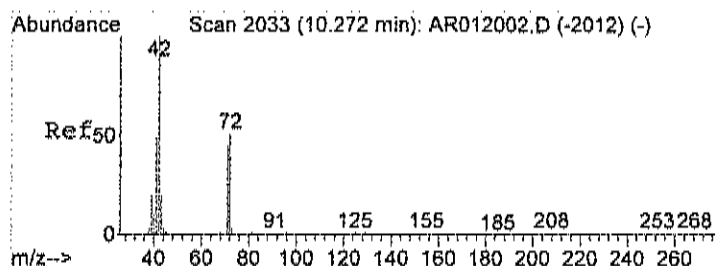


#31
Ethyl acetate
Concen: 0.19 ppb
RT: 9.66 min Scan# 1830
Delta R.T. 0.03 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 43 Resp: 20108

Ion	Ratio	Lower	Upper
43	100		
45	22.0	0.0	34.5
61	16.6	0.0	35.8

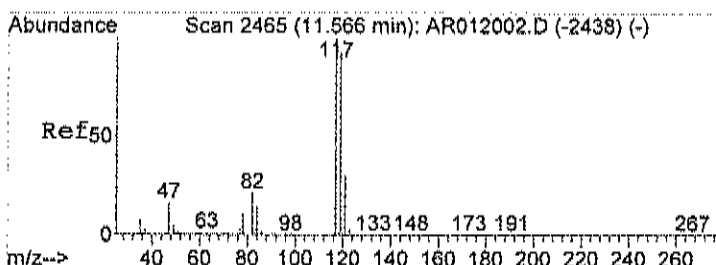
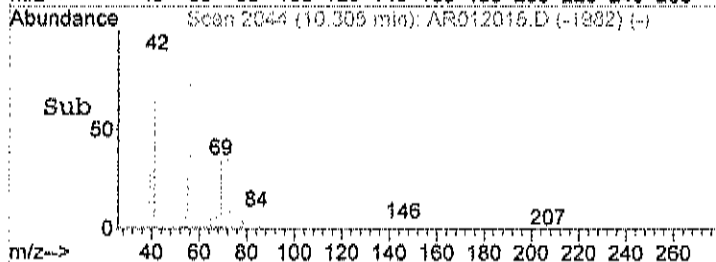
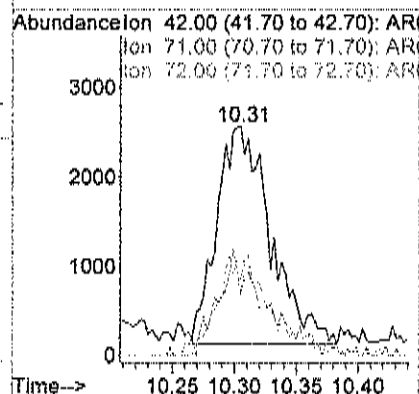
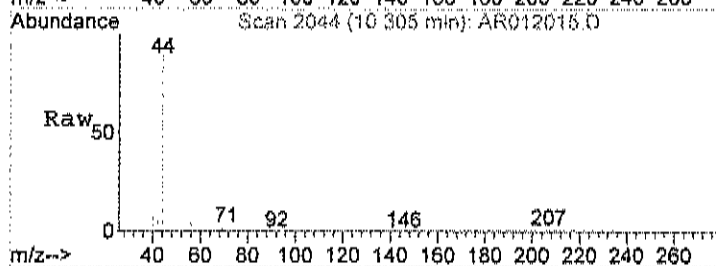




#33
Tetrahydrofuran
Concen: 0.15 ppb
RT: 10.31 min Scan# 2044
Delta R.T. 0.04 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 42 Resp: 7307

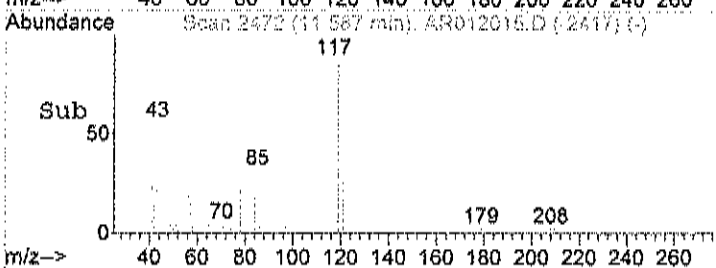
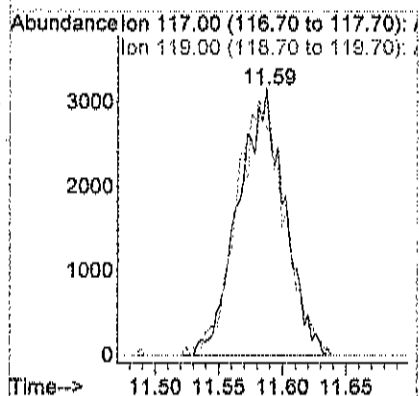
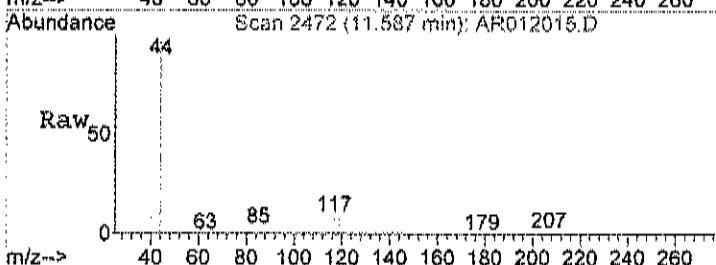
Ion	Ratio	Lower	Upper
42	100		
71	42.4	25.1	65.1
72	44.1	23.3	63.3

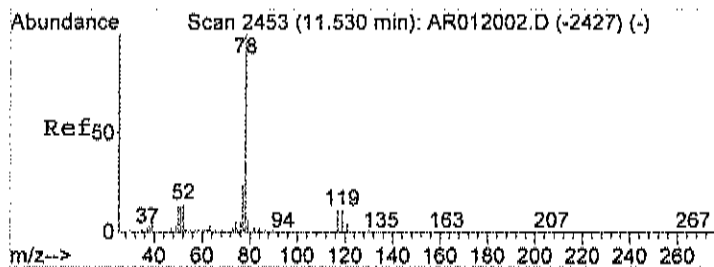


#38
Carbon tetrachloride
Concen: 0.08 ppb
RT: 11.59 min Scan# 2472
Delta R.T. 0.01 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 117 Resp: 7952

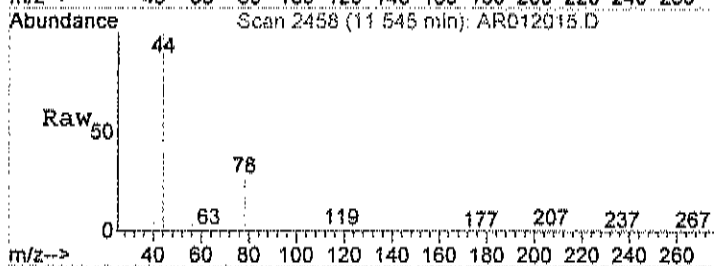
Ion	Ratio	Lower	Upper
117	100		
119	99.7	75.6	115.6



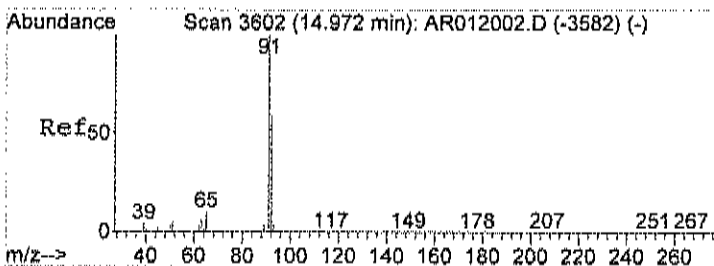
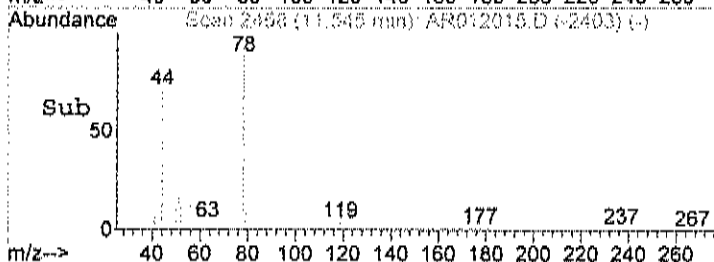
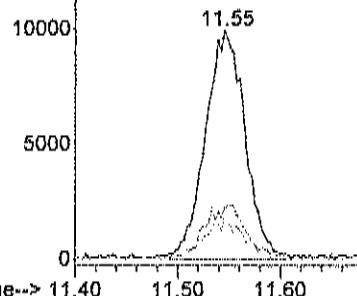


#39
Benzene
Concen: 0.18 ppb
RT: 11.55 min Scan# 2458
Delta R.T. 0.01 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 78 Resp: 26529
Ion Ratio Lower Upper
78 100
77 24.5 4.1 44.1
51 16.7 0.0 36.8

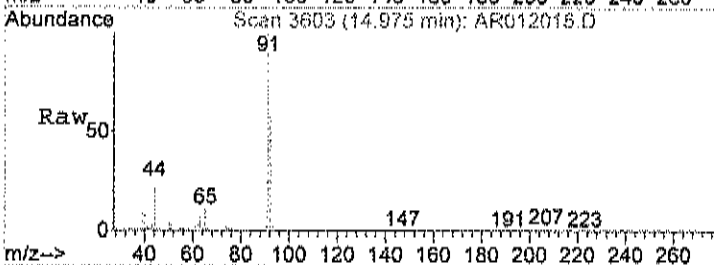


Abundance Ion 78.00 (77.70 to 78.70): AR012015.D
Ion 77.00 (76.70 to 77.70): AR012015.D
Ion 51.00 (50.70 to 51.70): AR012015.D

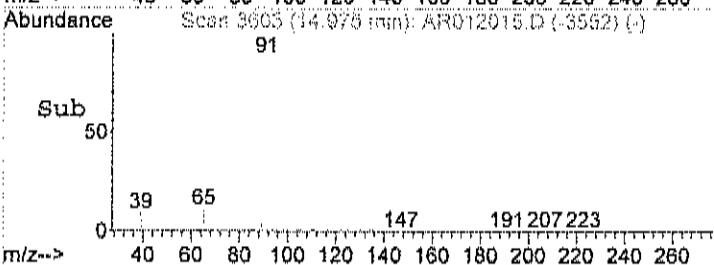
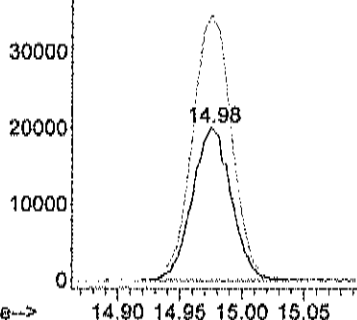


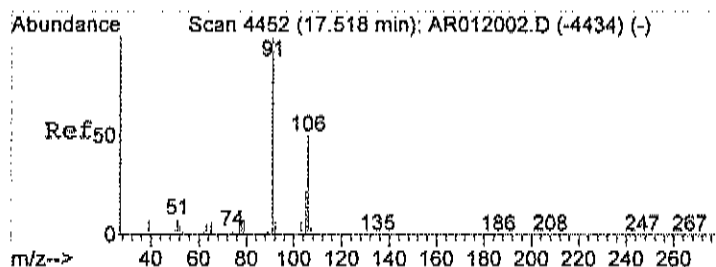
#51
Toluene
Concen: 0.42 ppb
RT: 14.98 min Scan# 3603
Delta R.T. 0.00 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 92 Resp: 43895
Ion Ratio Lower Upper
92 100
91 175.4 154.5 194.5



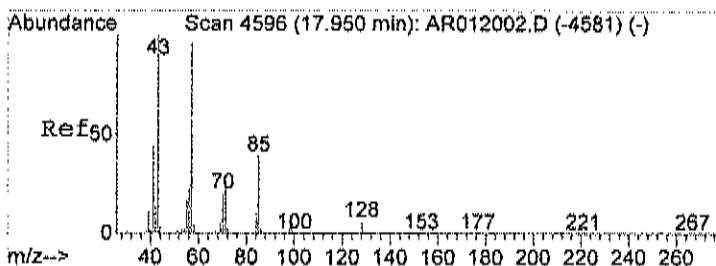
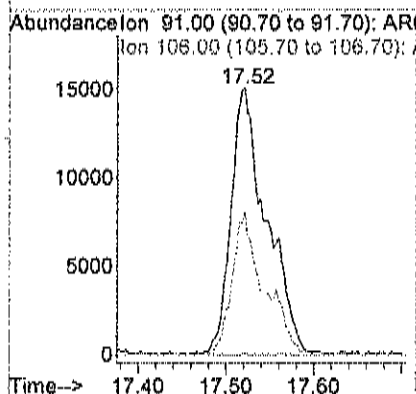
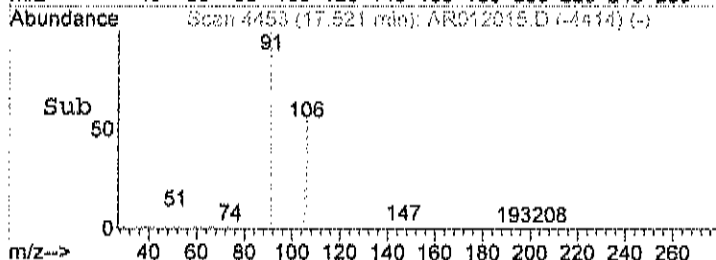
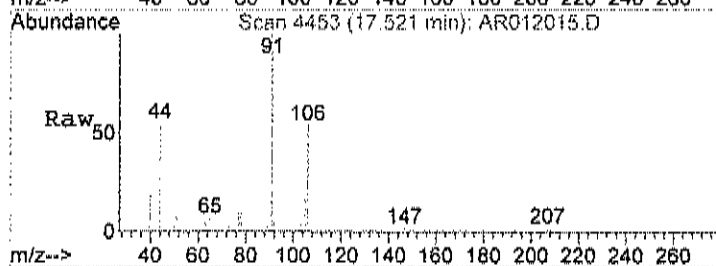
Abundance Ion 92.00 (91.70 to 92.70): AR012015.D
Ion 91.00 (90.70 to 91.70): AR012015.D





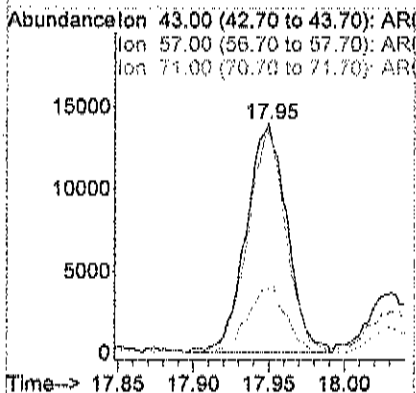
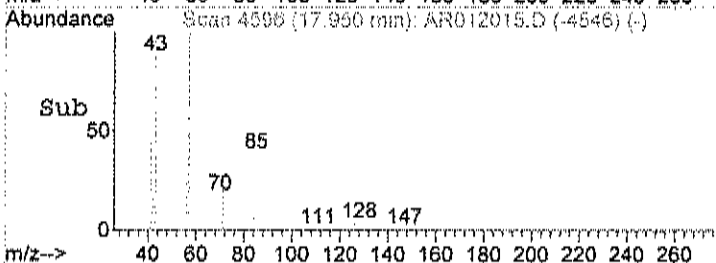
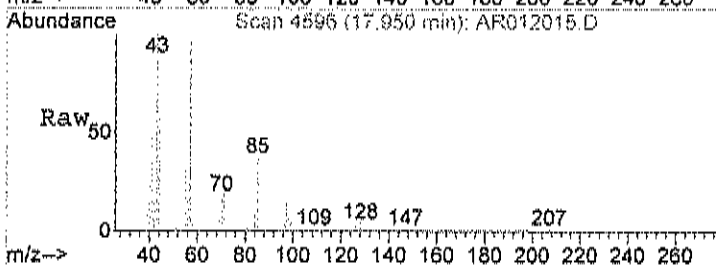
#59
m&p-xylene
Concen: 0.24 ppb
RT: 17.52 min Scan# 4453
Delta R.T. -0.03 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

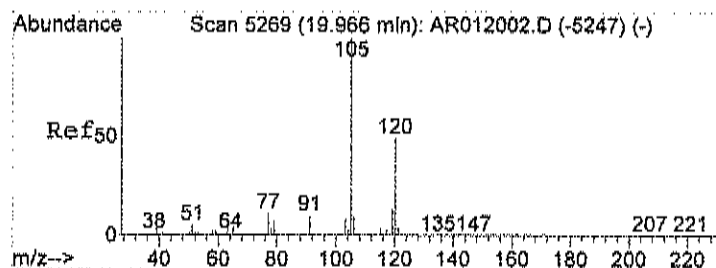
Tgt Ion: 91 Resp: 42430
Ion Ratio Lower Upper
91 100
106 47.9 29.0 69.0



#60
Nonane
Concen: 0.21 ppb
RT: 17.95 min Scan# 4596
Delta R.T. -0.00 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

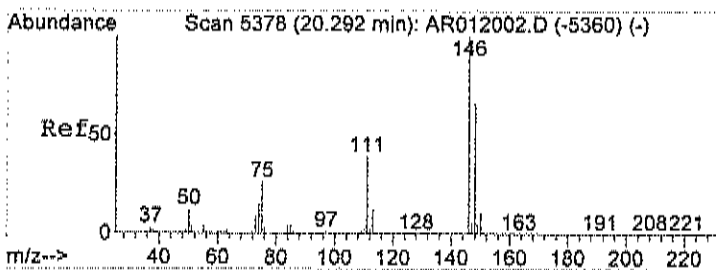
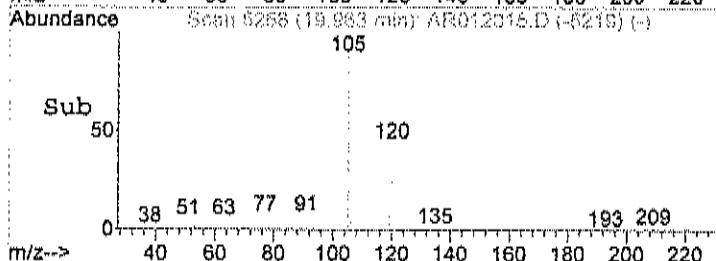
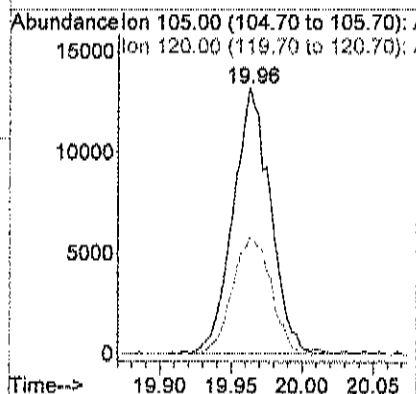
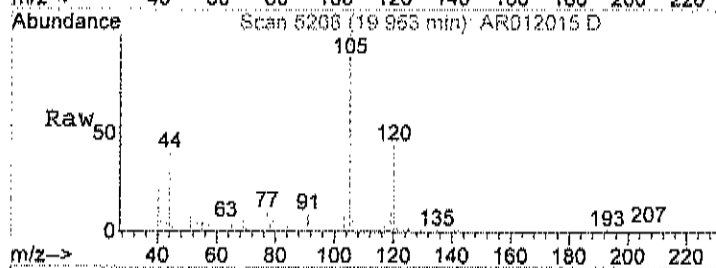
Tgt Ion: 43 Resp: 26320
Ion Ratio Lower Upper
43 100
57 89.2 71.2 106.8
71 27.7 19.3 35.1





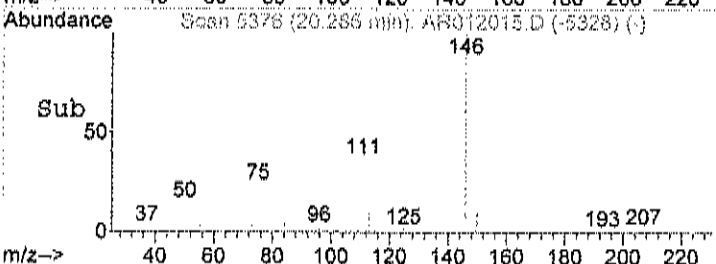
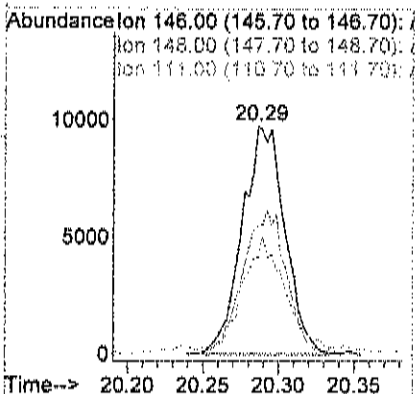
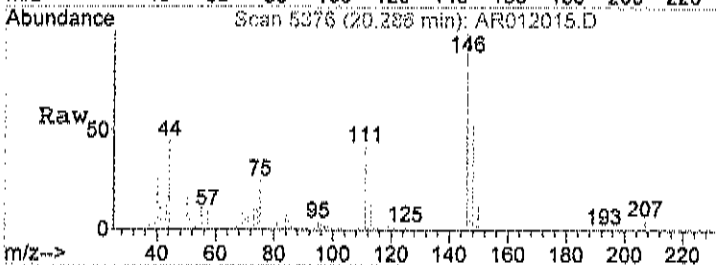
#71
1,2,4-trimethylbenzene
Concen: 0.12 ppb
RT: 19.96 min Scan# 5268
Delta R.T. -0.00 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 105 Resp: 24195
Ion Ratio Lower Upper
105 100
120 45.7 24.9 64.9



#72
1,3-dichlorobenzene
Concen: 0.18 ppb
RT: 20.29 min Scan# 5376
Delta R.T. -0.01 min
Lab File: AR012015.D
Acq: 20 Jan 2020 9:20 pm

Tgt Ion: 146 Resp: 19206
Ion Ratio Lower Upper
146 100
148 64.7 44.1 84.1
111 52.5 19.3 59.3



Data File : C:\HPCHEM\1\DATA\AR012027.D

Vial: 27

Acq On : 21 Jan 2020 6:30 am

Operator: RJP

Sample : C2001030-006A 10x

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:33 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	36339	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.23	114	168084	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	144667	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	92450	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

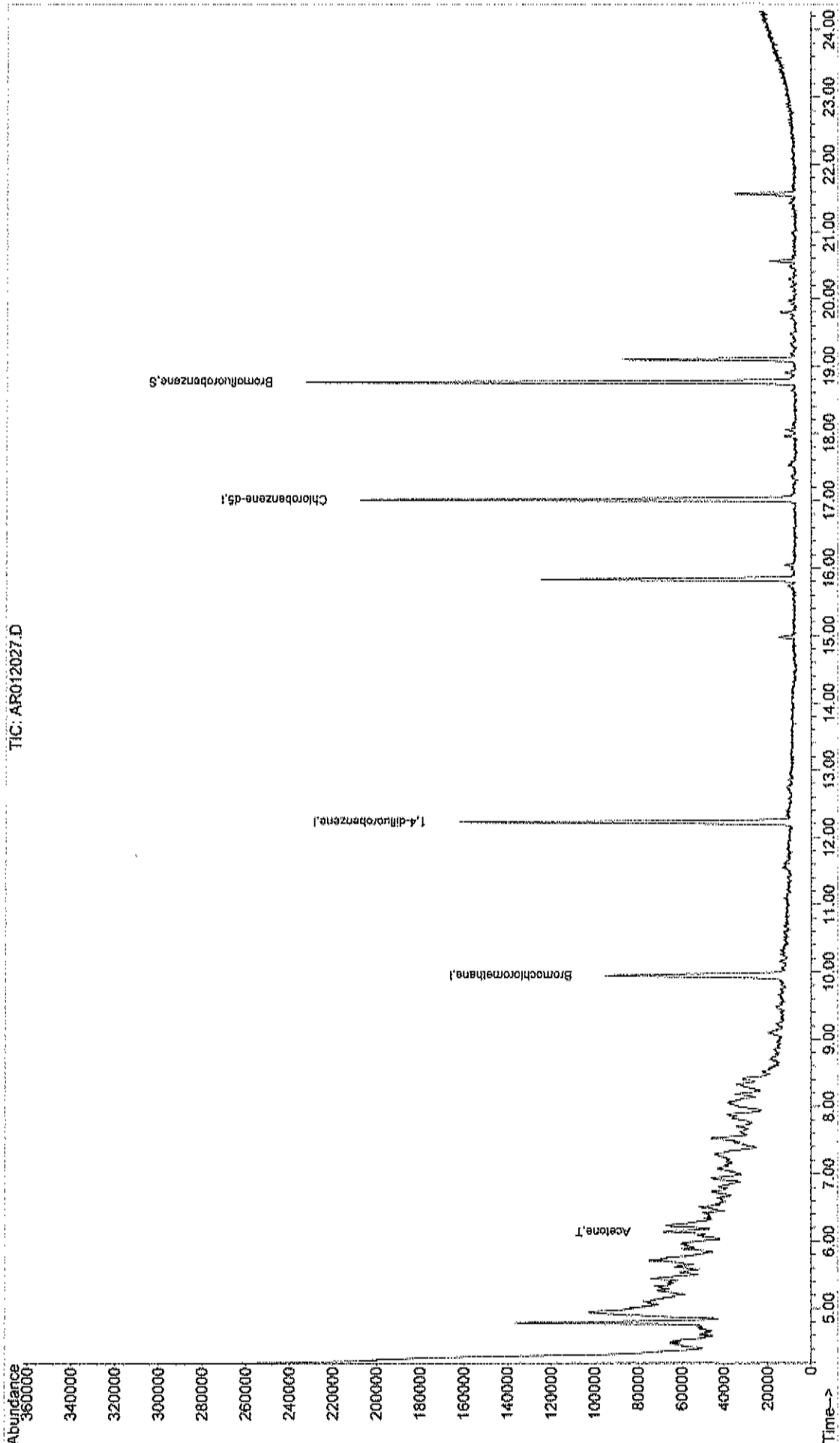
15) Acetone	6.15	58	15575	0.74	ppb	Qvalue # 100

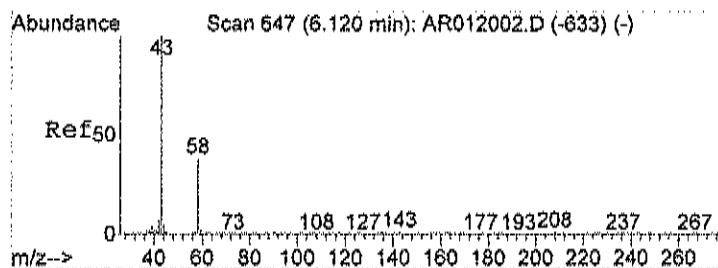
Data File : C:\HPCHEM\1\DATA\AR012027.D
Acq On : 21 Jan 2020 6:30 am
Sample : C2001030-006A 10x
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 12:23 2020

Vial: 27
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

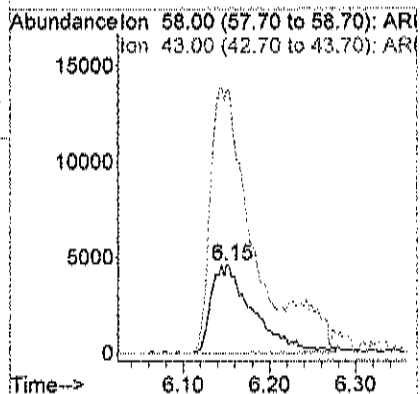
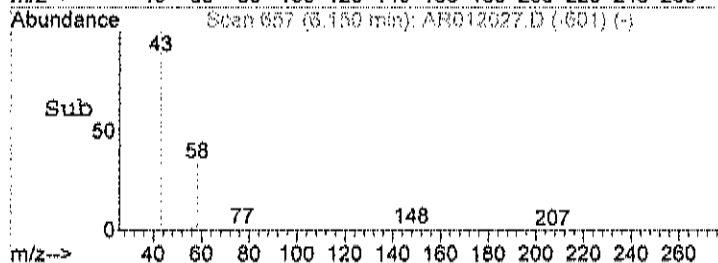
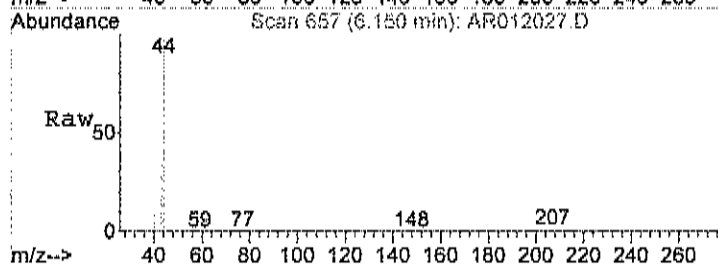
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





#15
Acetone
Concen: 0.74 ppb
RT: 6.15 min Scan# 657
Delta R.T. 0.02 min
Lab File: AR012027.D
Acq: 21 Jan 2020 6:30 am

Tgt Ion: 58 Resp: 15575
Ion Ratio Lower Upper
58 100
43 312.7 0.0 30.0#



Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	0			"Hg		1/20/2020
Lab Vacuum Out	-30			"Hg		1/20/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 10:06:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2,4-Trimethylbenzene	0.97	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,3,5-Trimethylbenzene	0.27	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	1/20/2020 10:06:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
4-ethyltoluene	0.28	0.15		ppbV	1	1/20/2020 10:06:00 PM
Acetone	20	3.0		ppbV	10	1/21/2020 7:15:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Benzene	0.86	0.15		ppbV	1	1/20/2020 10:06:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Bromoform	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Carbon tetrachloride	0.080	0.030		ppbV	1	1/20/2020 10:06:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Chloroform	0.11	0.15	J	ppbV	1	1/20/2020 10:06:00 PM
Chloromethane	0.89	0.15		ppbV	1	1/20/2020 10:06:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	1/20/2020 10:06:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Cyclohexane	0.61	0.15		ppbV	1	1/20/2020 10:06:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Ethyl acetate	0.61	0.15		ppbV	1	1/20/2020 10:06:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.62	0.15		ppbV	1	1/20/2020 10:06:00 PM
Fraon 11	0.30	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 113	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 114	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Freon 12	0.59	0.15		ppbV	1	1/20/2020 10:06:00 PM
Heptane	0.79	0.15		ppbV	1	1/20/2020 10:06:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Hexane	0.37	0.15		ppbV	1	1/20/2020 10:06:00 PM
Isopropyl alcohol	10	1.5		ppbV	10	1/21/2020 7:15:00 AM
m&p-Xylene	2.4	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl Ethyl Ketone	1.1	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	1/20/2020 10:06:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Methylene chloride	0.16	0.15		ppbV	1	1/20/2020 10:06:00 PM
o-Xylene	0.81	0.15		ppbV	1	1/20/2020 10:06:00 PM
Propylene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Styrene	0.30	0.15		ppbV	1	1/20/2020 10:06:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Tetrahydrofuran	0.46	0.15		ppbV	1	1/20/2020 10:06:00 PM
Toluene	3.3	1.5		ppbV	10	1/21/2020 7:15:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	1/20/2020 10:06:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	1/20/2020 10:06:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	1/20/2020 10:06:00 PM
Surr: Bromofluorobenzene	101	70-130		%REC	1	1/20/2020 10:06:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 10:06:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	1/20/2020 10:06:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 10:06:00 PM
1,1-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
1,2,4-Trimethylbenzene	4.8	0.74		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	1/20/2020 10:06:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	1/20/2020 10:06:00 PM
1,3,5-Trimethylbenzene	1.3	0.74		ug/m3	1	1/20/2020 10:06:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	1/20/2020 10:06:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	1/20/2020 10:06:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	1/20/2020 10:06:00 PM
4-ethyltoluene	1.4	0.74		ug/m3	1	1/20/2020 10:06:00 PM
Acetone	47	7.1		ug/m3	10	1/21/2020 7:15:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	1/20/2020 10:06:00 PM
Benzene	2.7	0.48		ug/m3	1	1/20/2020 10:06:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	1/20/2020 10:06:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	1/20/2020 10:06:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	1/20/2020 10:06:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	1/20/2020 10:06:00 PM
Carbon tetrachloride	0.50	0.19		ug/m3	1	1/20/2020 10:06:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	1/20/2020 10:06:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	1/20/2020 10:06:00 PM
Chloroform	0.54	0.73	J	ug/m3	1	1/20/2020 10:06:00 PM
Chloromethane	1.8	0.31		ug/m3	1	1/20/2020 10:06:00 PM
cis-1,2-Dichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 10:06:00 PM
Cyclohexane	2.1	0.52		ug/m3	1	1/20/2020 10:06:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	1/20/2020 10:06:00 PM
Ethyl acetate	2.2	0.54		ug/m3	1	1/20/2020 10:06:00 PM
Ethylbenzene	2.7	0.65		ug/m3	1	1/20/2020 10:06:00 PM
Freon 11	1.7	0.84		ug/m3	1	1/20/2020 10:06:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	1/20/2020 10:06:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM

Qualifiers: SC Sub-Contracted
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection
DL Detection Limit

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Centek Laboratories, LLC

Date: 05-Feb-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2001030
Project: Aquino Lake Ave Apts
Lab ID: C2001030-007A

Client Sample ID: Apartment A2-Indoor
Tag Number: 1316,440
Collection Date: 1/16/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	1/20/2020 10:06:00 PM
Heptane	3.2	0.61		ug/m3	1	1/20/2020 10:06:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	1/20/2020 10:06:00 PM
Hexane	1.3	0.53		ug/m3	1	1/20/2020 10:06:00 PM
Isopropyl alcohol	26	3.7		ug/m3	10	1/21/2020 7:15:00 AM
m&p-Xylene	11	1.3		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Ethyl Ketone	3.2	0.88		ug/m3	1	1/20/2020 10:06:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	1/20/2020 10:06:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	1/20/2020 10:06:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	1/20/2020 10:06:00 PM
o-Xylene	3.5	0.65		ug/m3	1	1/20/2020 10:06:00 PM
Propylene	< 0.26	0.26		ug/m3	1	1/20/2020 10:06:00 PM
Styrene	1.3	0.64		ug/m3	1	1/20/2020 10:06:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	1/20/2020 10:06:00 PM
Tetrahydrofuran	1.4	0.44		ug/m3	1	1/20/2020 10:06:00 PM
Toluene	12	5.7		ug/m3	10	1/21/2020 7:15:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	1/20/2020 10:06:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	1/20/2020 10:06:00 PM
Trichloroethene	< 0.16	0.16		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	1/20/2020 10:06:00 PM
Vinyl chloride	< 0.10	0.10		ug/m3	1	1/20/2020 10:06:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte, Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

Page 14 of 14

Data File : C:\HPCHEM\1\DATA\AR012016.D

Vial: 16

Acq On : 20 Jan 2020 10:06 pm

Operator: RJP

Sample : C2001030-007A

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:22 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.96	128	41768	1.00	ppb	0.03
35) 1,4-difluorobenzene	12.23	114	196706	1.00	ppb	0.02
50) Chlorobenzene-d5	17.01	117	172403	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	116382	1.01	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	101.00%

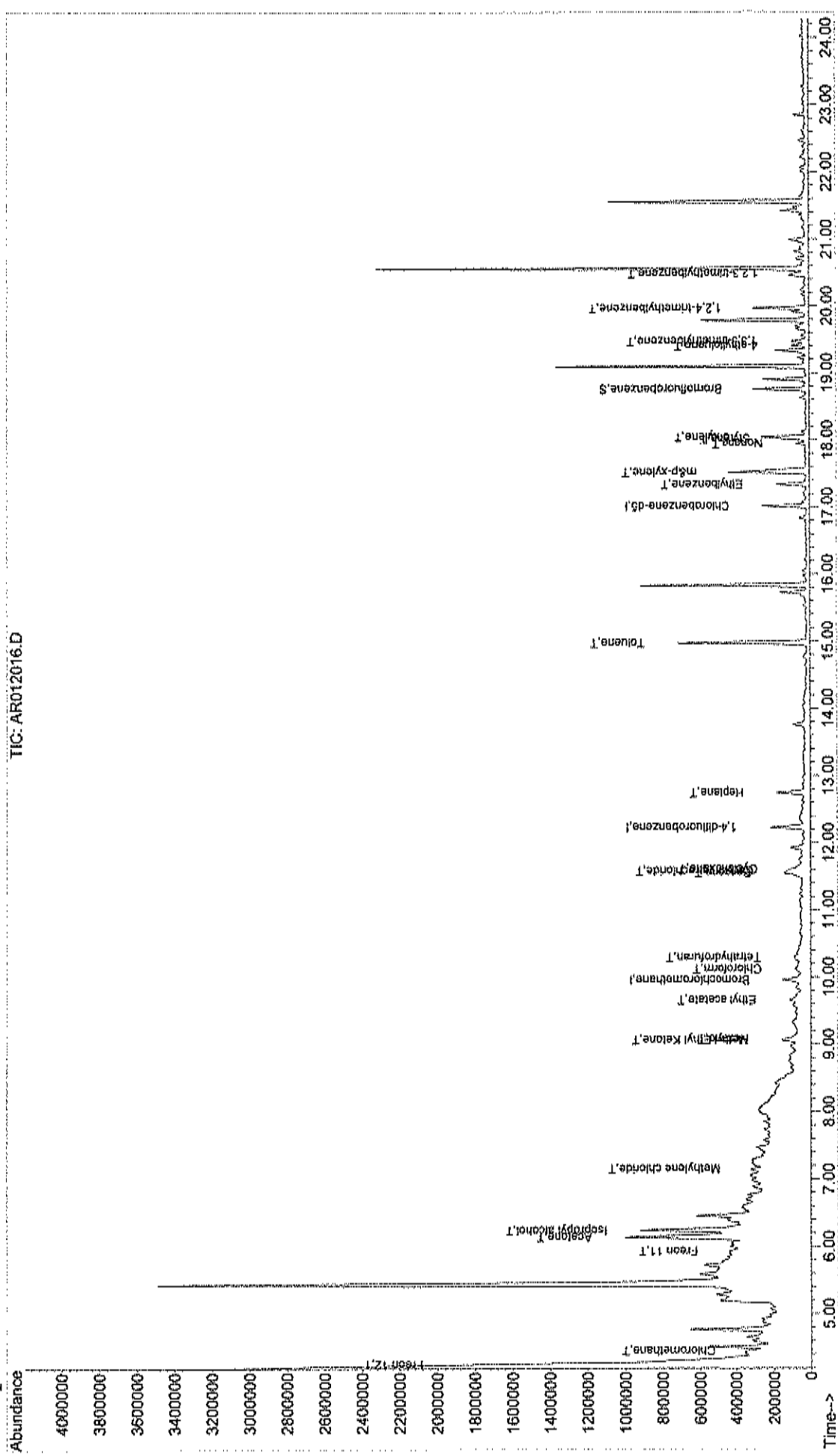
Target Compounds

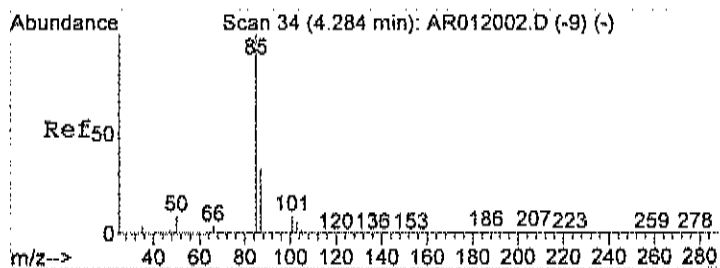
						Qvalue
3) Freon 12	4.25	85	64139	0.59	ppb	99
4) Chloromethane	4.45	50	22658	0.89	ppb	83
14) Freon 11	5.93	101	35009	0.30	ppb	98
15) Acetone	6.14	58	475906	19.60	ppb	# 100
17) Isopropyl alcohol	6.24	45	1046251	13.59	ppb	# 1
21) Methylene chloride	7.16	84	7036	0.16	ppb	98
28) Methyl Ethyl Ketone	9.06	72	25413	1.10	ppb	# 100
30) Hexane	9.08	57	30141	0.37	ppb	83
31) Ethyl acetate	9.66	43	63493	0.61	ppb	98
32) Chloroform	10.12	83	11366	0.11	ppb	96
33) Tetrahydrofuran	10.30	42	21668m	0.46	ppb	
37) Cyclohexane	11.62	56	45846m	0.61	ppb	
38) Carbon tetrachloride	11.59	117	8731	0.08	ppb	96
39) Benzene	11.55	78	123285	0.86	ppb	99
43) Heptane	12.75	43	67170	0.79	ppb	91
51) Toluene	14.98	92	374086	3.55	ppb	99
58) Ethylbenzene	17.34	91	143769	0.62	ppb	99
59) m&p-xylene	17.52	91	429862	2.42	ppb	98
60) Nonane	17.95	43	20709	0.17	ppb	94
61) Styrene	18.01	104	39335	0.30	ppb	87
63) o-xylene	18.04	91	147701	0.81	ppb	98
69) 4-ethyltoluene	19.41	105	63745m	0.28	ppb	
70) 1,3,5-trimethylbenzene	19.47	105	56002m	0.27	ppb	
71) 1,2,4-trimethylbenzene	19.96	105	196561	0.97	ppb	99
75) 1,2,3-trimethylbenzene	20.49	105	43642	0.21	ppb	84

Data File : C:\HPCHEM\1\DATA\AR012016.D
Acq On : 20 Jan 2020 10:06 pm
Sample : C2001030-007A
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 8:53 2020

Vial: 16
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: A116_1UG.RES

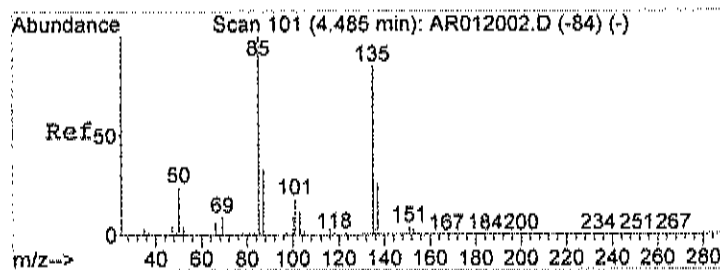
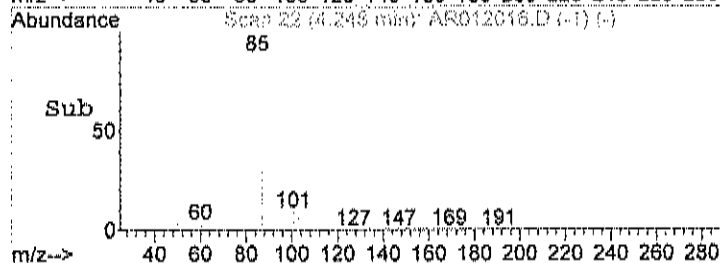
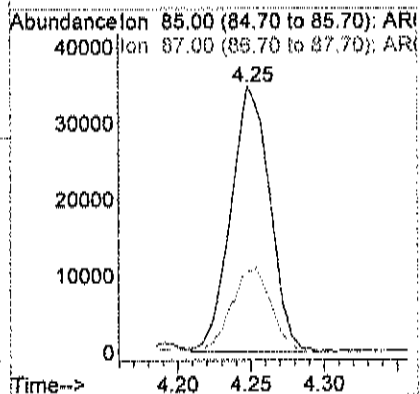
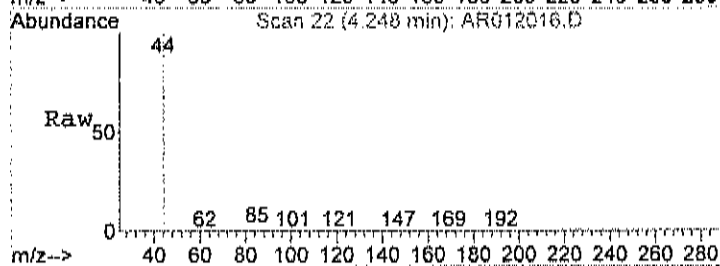
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





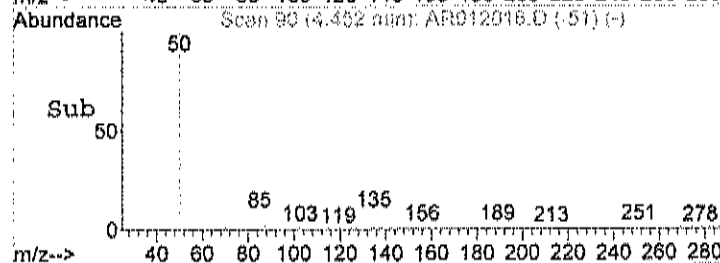
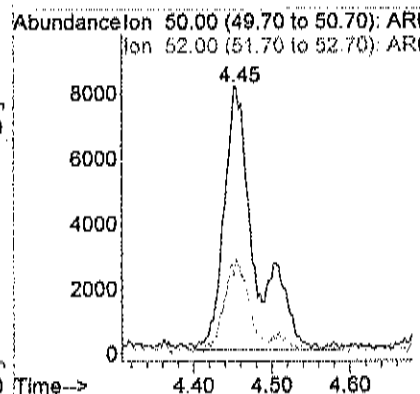
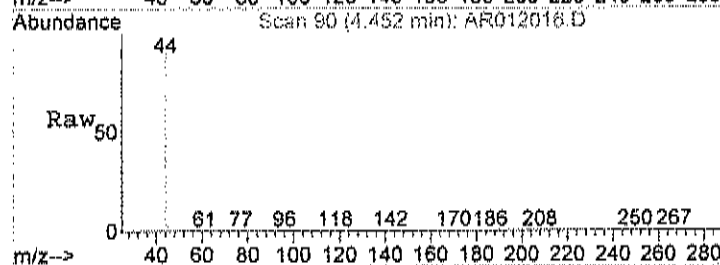
#3
 Freon 12
 Concen: 0.59 ppb
 RT: 4.25 min Scan# 22
 Delta R.T. -0.04 min
 Lab File: AR012016.D
 Acq: 20 Jan 2020 10:06 pm

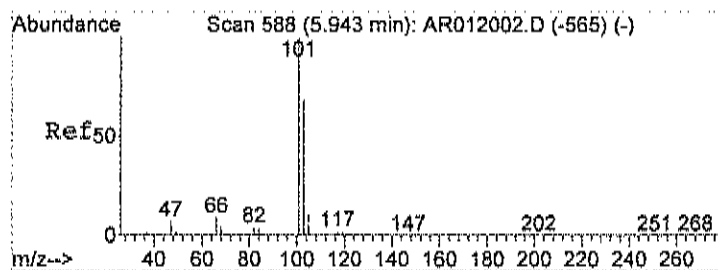
Tgt Ion: 85 Resp: 64139
 Ion Ratio Lower Upper
 85 100
 87 32.2 11.9 51.9



#4
 Chloromethane
 Concen: 0.89 ppb
 RT: 4.45 min Scan# 90
 Delta R.T. -0.03 min
 Lab File: AR012016.D
 Acq: 20 Jan 2020 10:06 pm

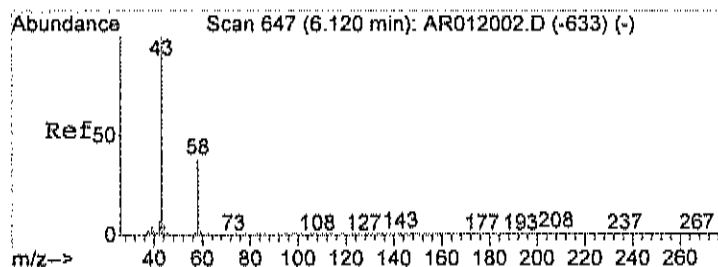
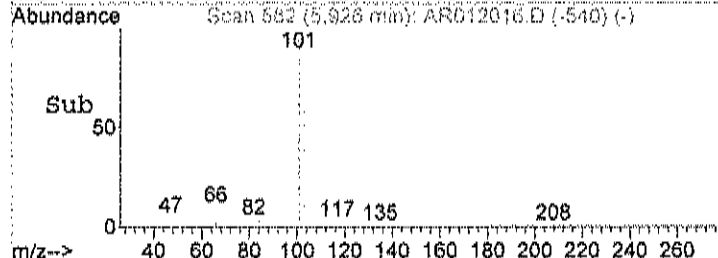
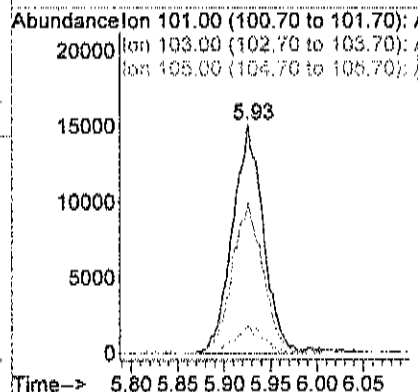
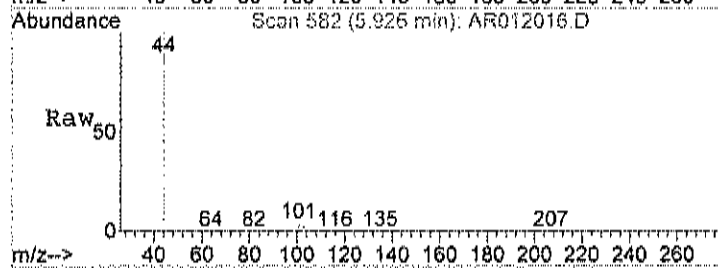
Tgt Ion: 50 Resp: 22658
 Ion Ratio Lower Upper
 50 100
 52 35.0 6.1 46.1





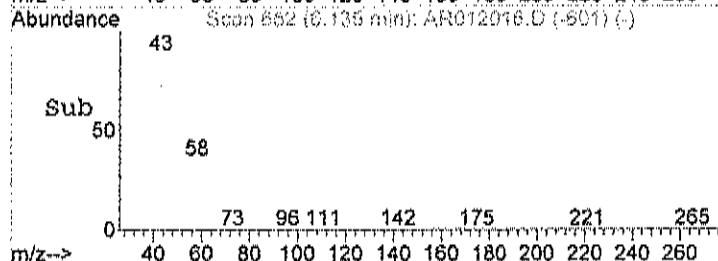
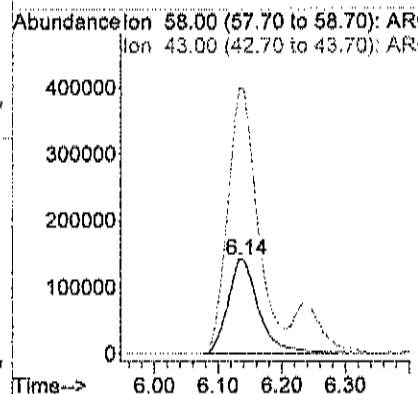
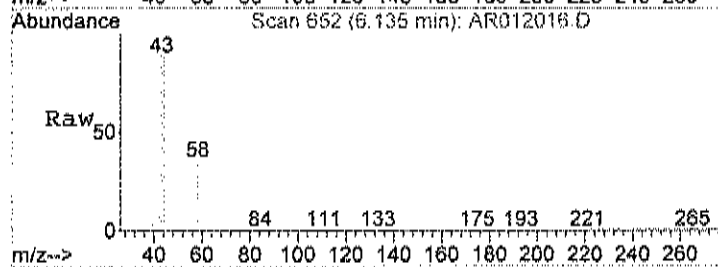
#14
 Freon 11
 Concen: 0.30 ppb
 RT: 5.93 min Scan# 582
 Delta R.T. -0.02 min
 Lab File: AR012016.D
 Acq: 20 Jan 2020 10:06 pm

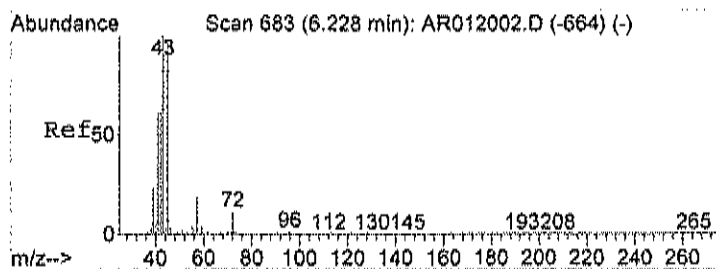
Tgt Ion	Ratio	Lower	Upper
101	100		
103	65.7	44.2	84.2
105	11.3	0.0	30.3



#15
 Acetone
 Concen: 19.60 ppb
 RT: 6.14 min Scan# 652
 Delta R.T. 0.00 min
 Lab File: AR012016.D
 Acq: 20 Jan 2020 10:06 pm

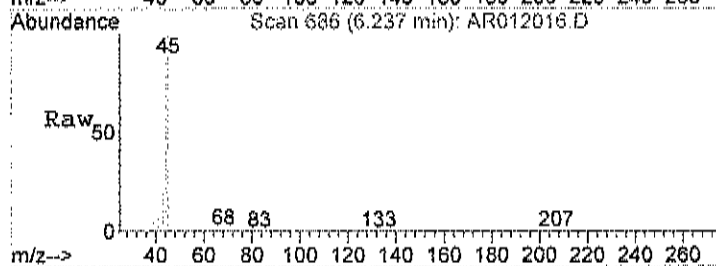
Tgt Ion	Ratio	Lower	Upper
58	100		
43	320.3	0.0	30.0#



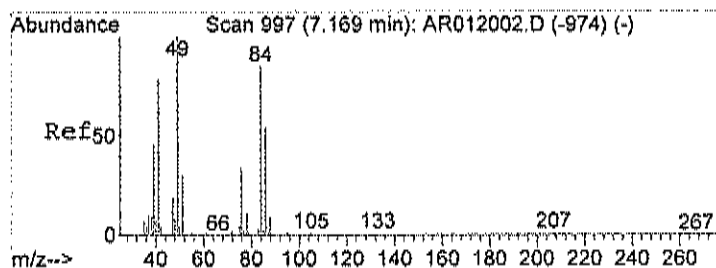
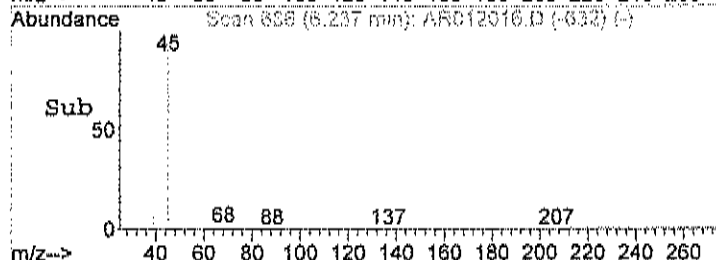
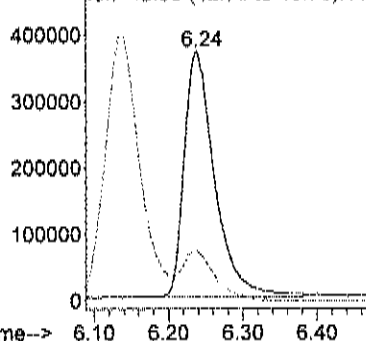


#17
Isopropyl alcohol
Concen: 13.59 ppb
RT: 6.24 min Scan# 686
Delta R.T. 0.01 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 45 Resp: 1046251
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#

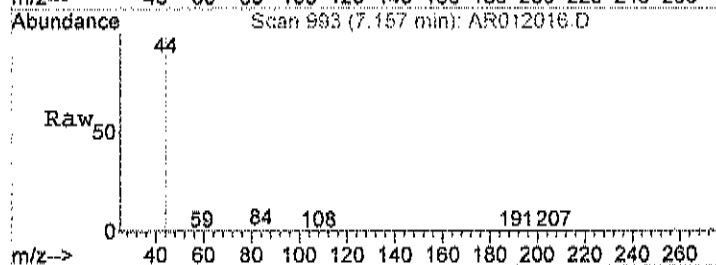


Abundance Ion 45.00 (44.70 to 45.70): AR012016.D
Ion 43.00 (42.70 to 43.70): AR012016.D

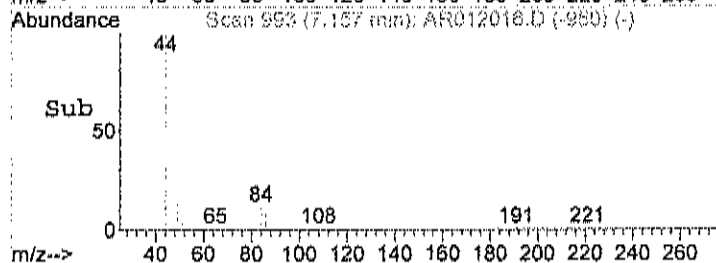
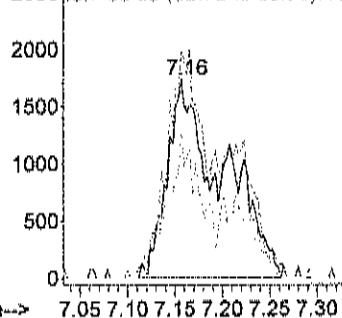


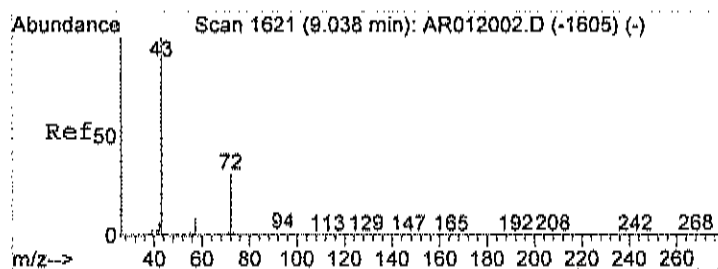
#21
Methylene chloride
Concen: 0.16 ppb
RT: 7.16 min Scan# 993
Delta R.T. -0.02 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 84 Resp: 7036
Ion Ratio Lower Upper
84 100
49 117.6 101.4 141.4
86 65.7 45.4 85.4



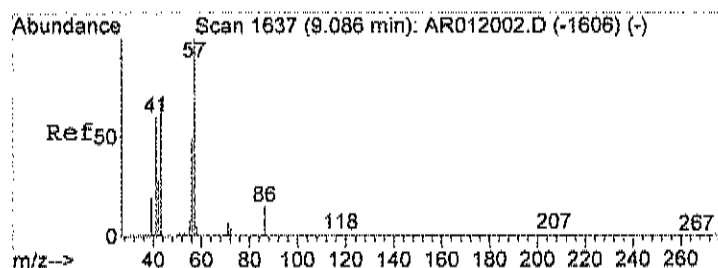
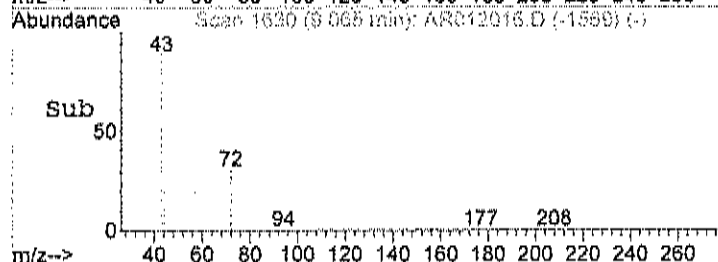
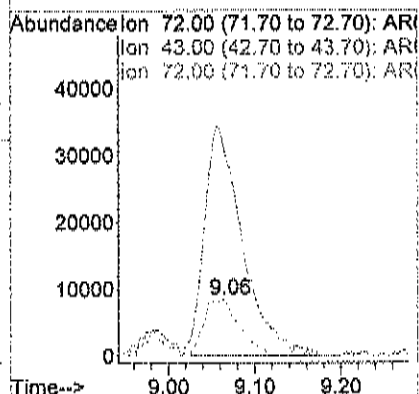
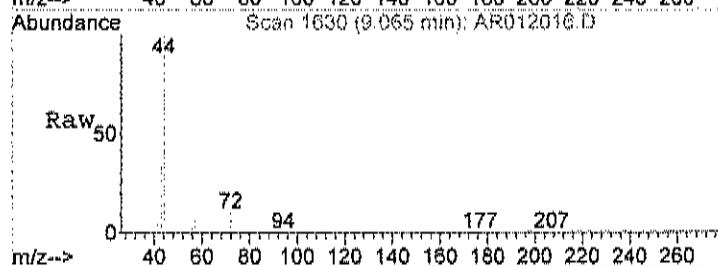
Abundance Ion 84.00 (83.70 to 84.70): AR012016.D
Ion 49.00 (48.70 to 49.70): AR012016.D
Ion 86.00 (85.70 to 86.70): AR012016.D





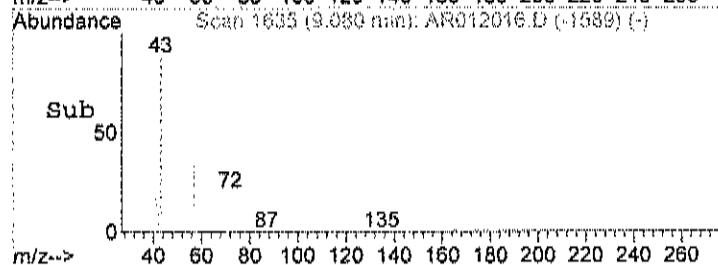
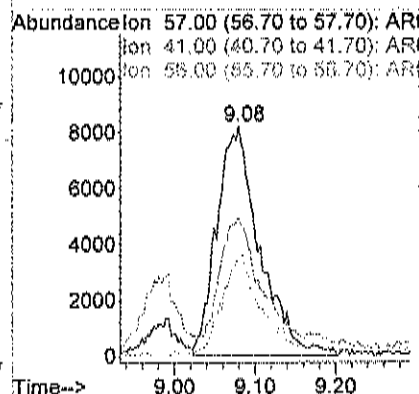
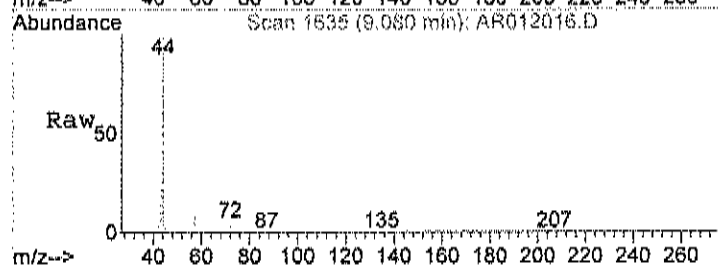
#28
Methyl Ethyl Ketone
Concen: 1.10 ppb
RT: 9.06 min Scan# 1630
Delta R.T. 0.03 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

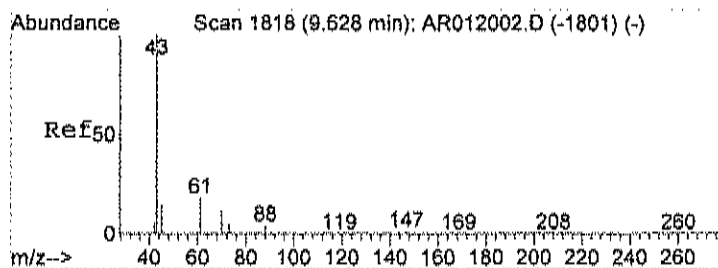
Tgt Ion	Ratio	Lower	Upper
72	100		
43	409.9	0.0	20.0#
72	100.0	80.0	120.0



#30
Hexane
Concen: 0.37 ppb
RT: 9.08 min Scan# 1635
Delta R.T. -0.01 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

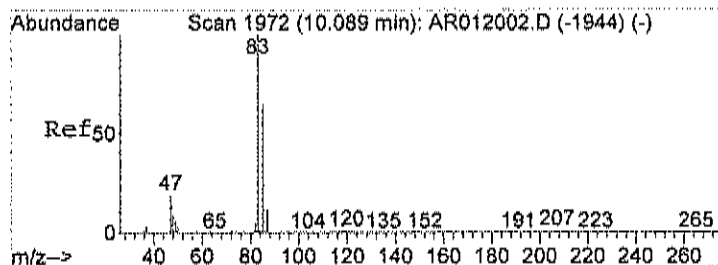
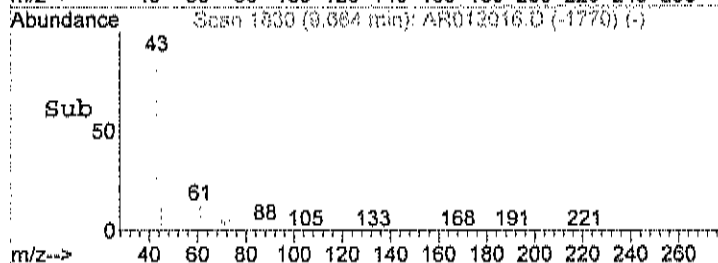
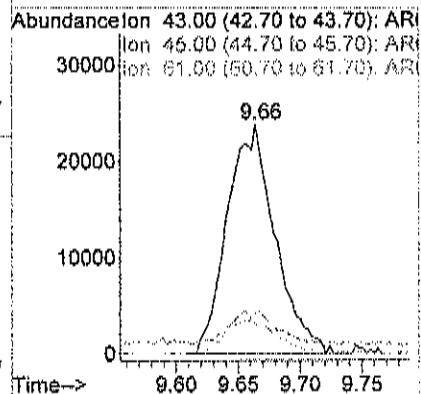
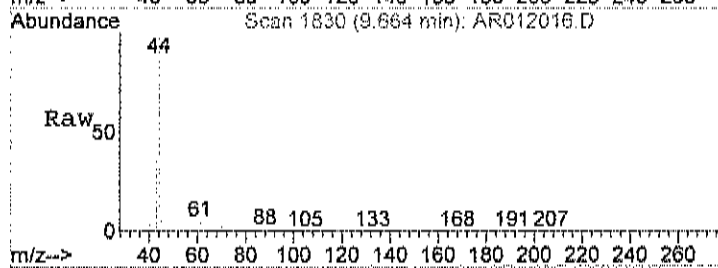
Tgt Ion	Ratio	Lower	Upper
57	100		
41	61.8	55.7	95.7
56	39.0	32.4	72.4





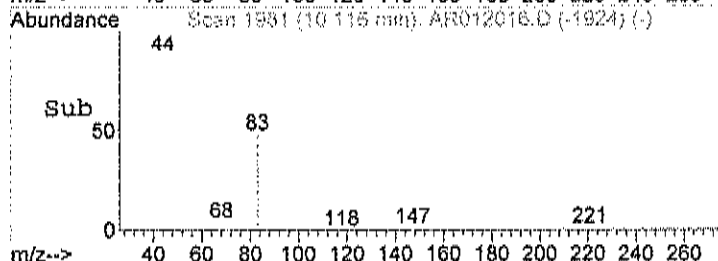
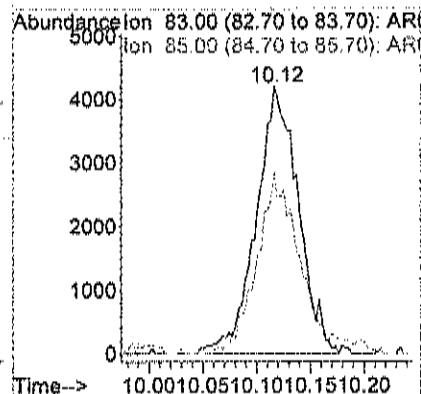
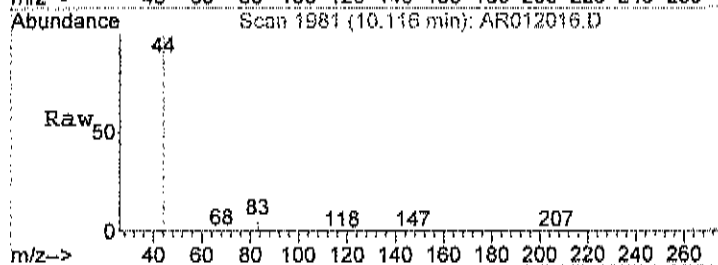
#31
Ethyl acetate
Concen: 0.61 ppb
RT: 9.66 min Scan# 1830
Delta R.T. 0.03 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

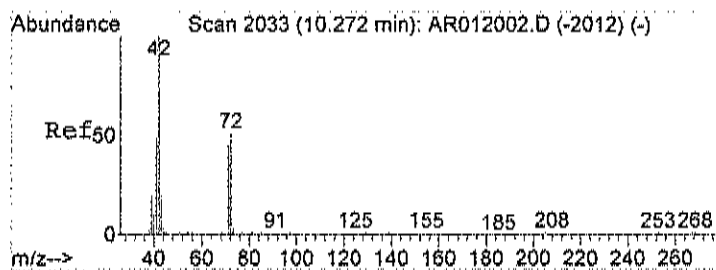
Tgt Ion: 43 Resp: 63493
Ion Ratio Lower Upper
43 100
45 16.0 0.0 34.5
61 15.7 0.0 35.8



#32
Chloroform
Concen: 0.11 ppb
RT: 10.12 min Scan# 1981
Delta R.T. 0.02 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 83 Resp: 11366
Ion Ratio Lower Upper
83 100
85 70.0 46.5 86.5

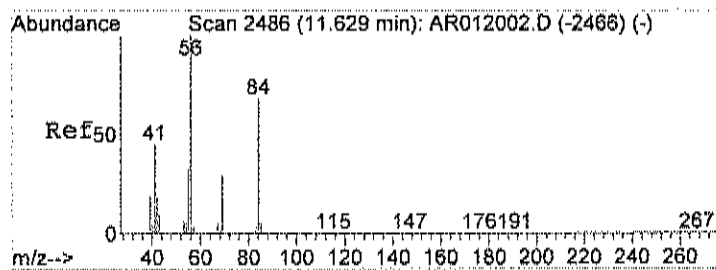
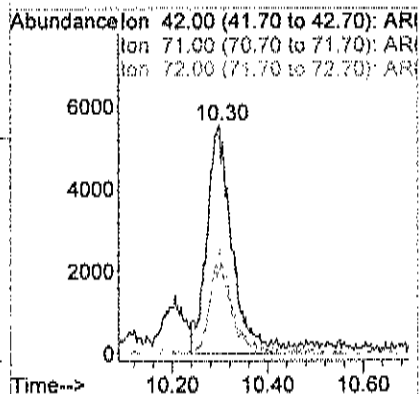




#33
Tetrahydrofuran
Concen: 0.46 ppb m
RT: 10.30 min Scan# 2042
Delta R.T. 0.03 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 42 Resp: 21668

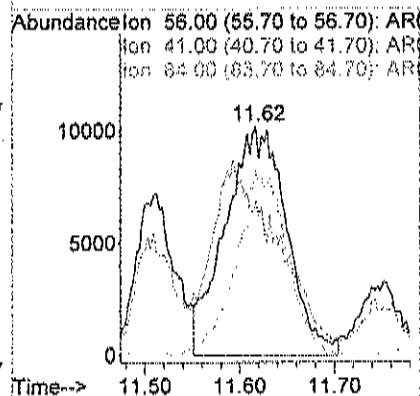
Ion	Ratio	Lower	Upper
42	100		
71	32.5	25.1	65.1
72	33.1	23.3	63.3

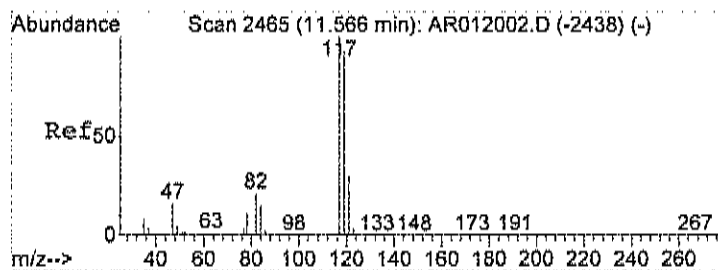


#37
Cyclohexane
Concen: 0.61 ppb m
RT: 11.62 min Scan# 2482
Delta R.T. -0.02 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 56 Resp: 45846

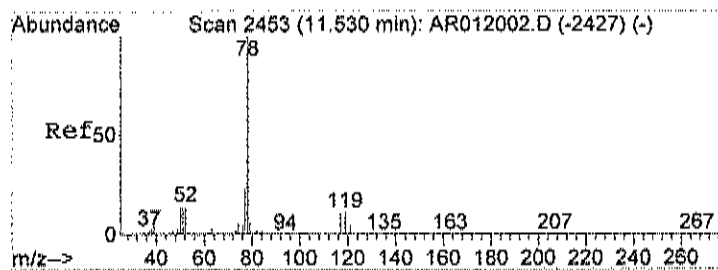
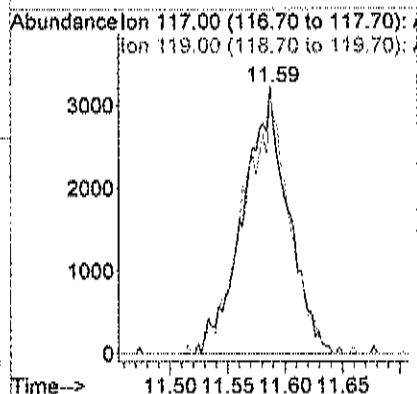
Ion	Ratio	Lower	Upper
56	100		
41	92.0	42.3	82.3#
84	66.0	107.7	147.7#





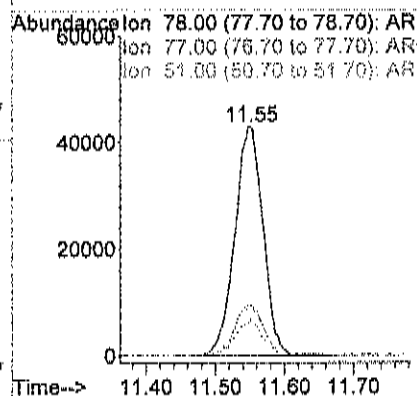
#38
Carbon tetrachloride
Concen: 0.08 ppb
RT: 11.59 min Scan# 2472
Delta R.T. 0.02 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

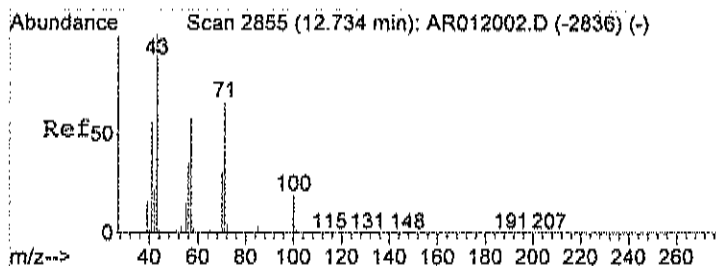
Tgt Ion: 117 Resp: 8731
Ion Ratio Lower Upper
117 100
119 99.3 75.6 115.6



#39
Benzene
Concen: 0.86 ppb
RT: 11.55 min Scan# 2459
Delta R.T. 0.02 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

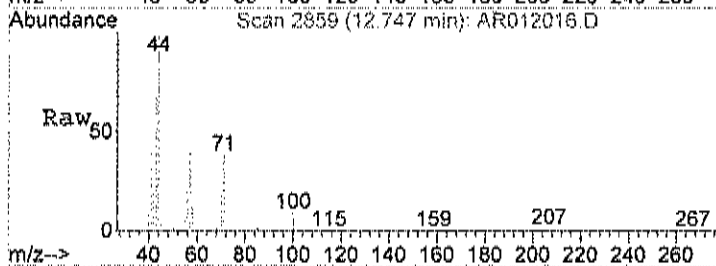
Tgt Ion: 78 Resp: 123285
Ion Ratio Lower Upper
78 100
77 23.3 4.1 44.1
51 16.8 0.0 36.8



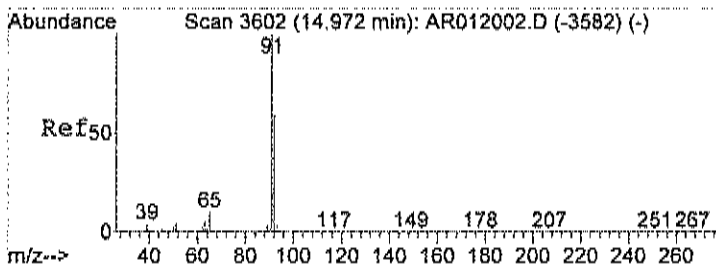
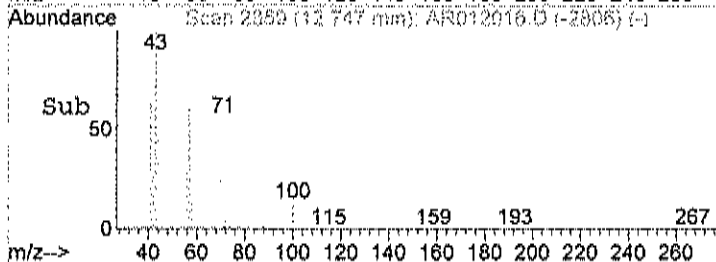
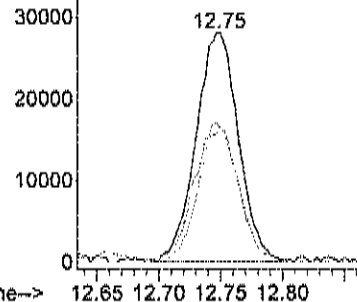


#43
Heptane
Concen: 0.79 ppb
RT: 12.75 min Scan# 2859
Delta R.T. 0.01 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 43 Resp: 67170
Ion Ratio Lower Upper
43 100
57 63.4 36.0 76.0
71 56.4 42.5 82.5

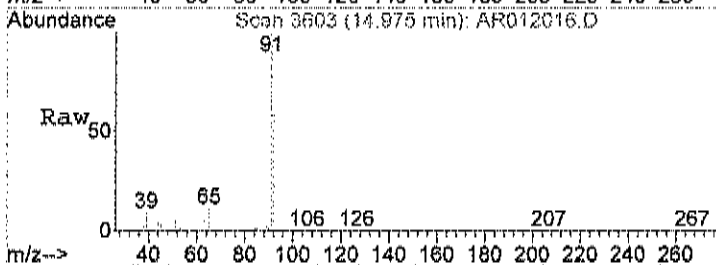


Abundance Ion 43.00 (42.70 to 43.70): AR012016.D
Ion 57.00 (56.70 to 57.70): AR012016.D
Ion 71.00 (70.70 to 71.70): AR012016.D

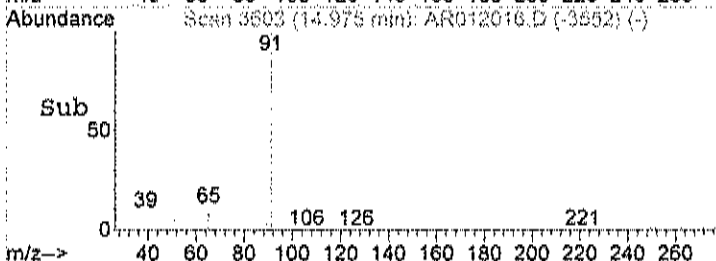
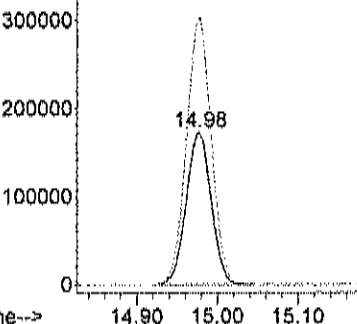


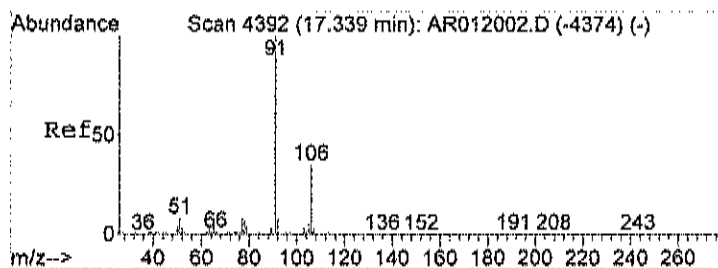
#51
Toluene
Concen: 3.55 ppb
RT: 14.98 min Scan# 3603
Delta R.T. 0.00 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 92 Resp: 374086
Ion Ratio Lower Upper
92 100
91 173.5 154.5 194.5



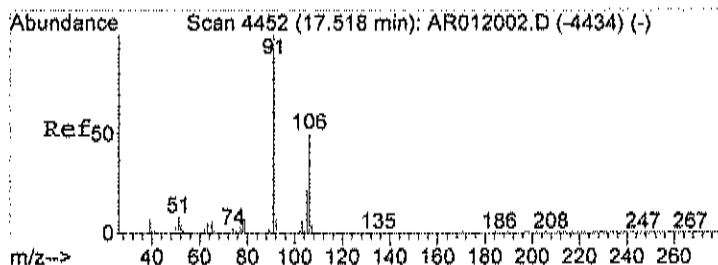
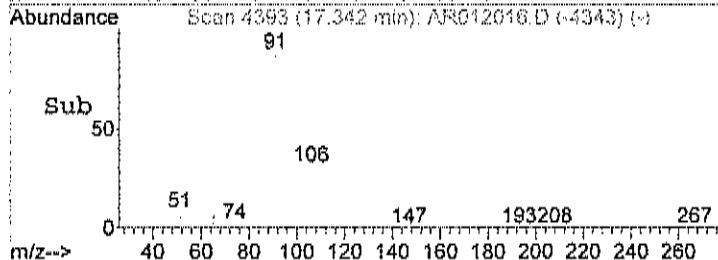
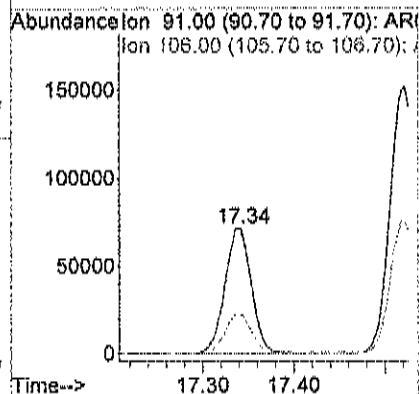
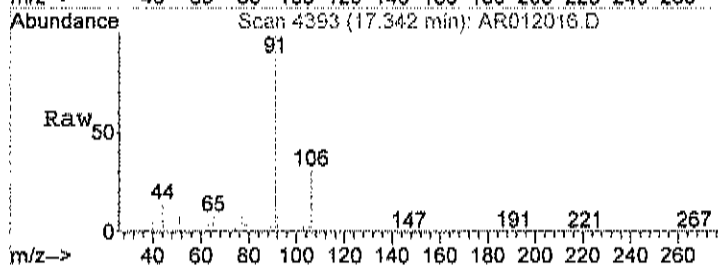
Abundance Ion 92.00 (91.70 to 92.70): AR012016.D
Ion 91.00 (90.70 to 91.70): AR012016.D





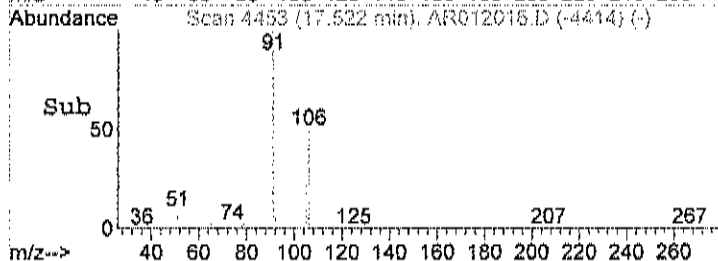
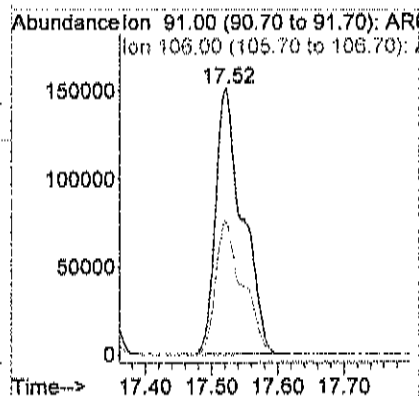
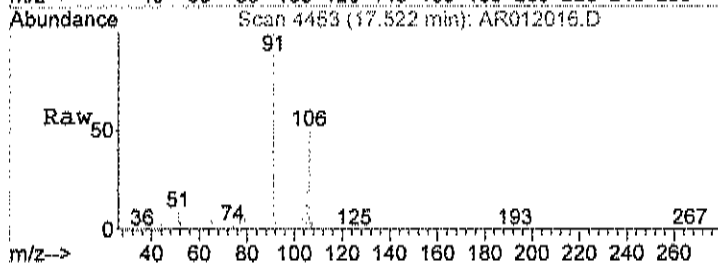
#58
Ethylbenzene
Concen: 0.62 ppb
RT: 17.34 min Scan# 4393
Delta R.T. 0.00 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

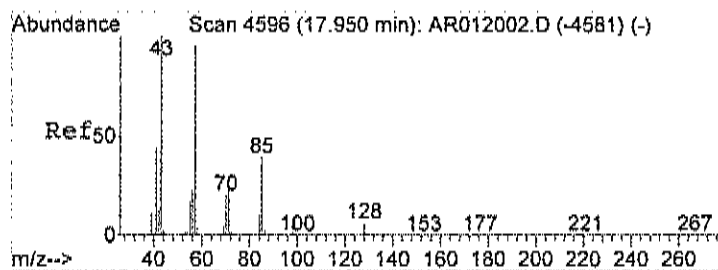
Tgt Ion: 91 Resp: 143769
Ion Ratio Lower Upper
91 100
106 32.0 11.7 51.7



#59
m&p-xylene
Concen: 2.42 ppb
RT: 17.52 min Scan# 4453
Delta R.T. -0.03 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

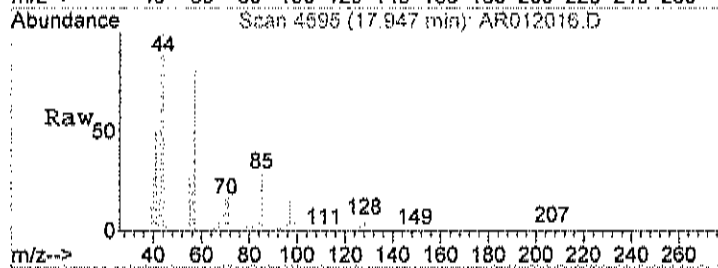
Tgt Ion: 91 Resp: 429862
Ion Ratio Lower Upper
91 100
106 50.3 29.0 69.0



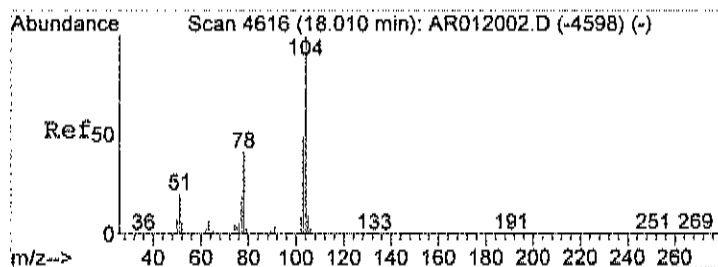
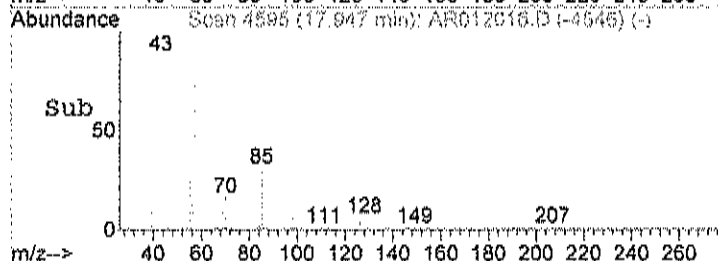
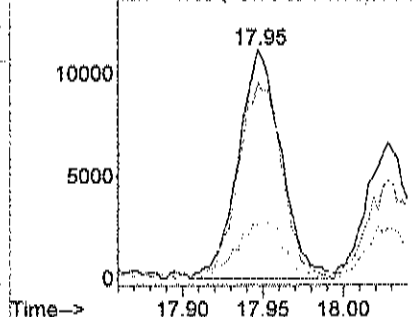


#60
Nonane
Concen: 0.17 ppb
RT: 17.95 min Scan# 4595
Delta R.T. -0.00 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 43 Resp: 20709
Ion Ratio Lower Upper
43 100
57 82.1 71.2 106.8
71 26.4 19.3 35.1

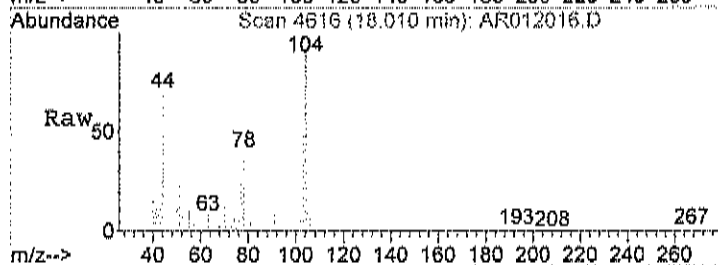


Abundance Ion 43.00 (42.70 to 43.70): AR
15000 Ion 57.00 (56.70 to 57.70): AR
Ion 71.00 (70.70 to 71.70): AR

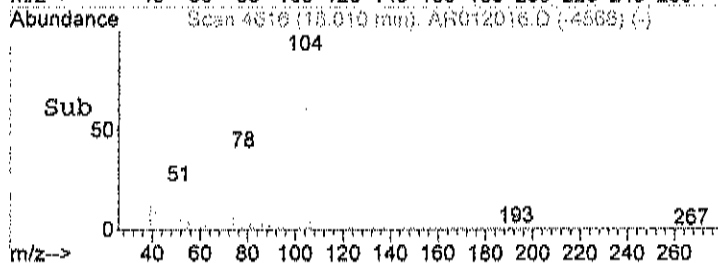
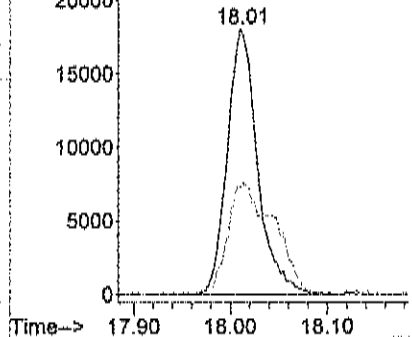


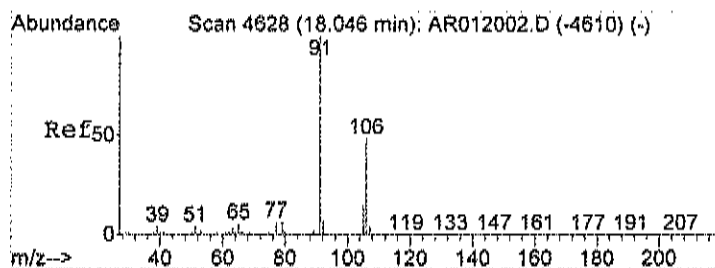
#61
Styrene
Concen: 0.30 ppb
RT: 18.01 min Scan# 4616
Delta R.T. 0.00 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 104 Resp: 39335
Ion Ratio Lower Upper
104 100
78 64.2 34.7 74.7



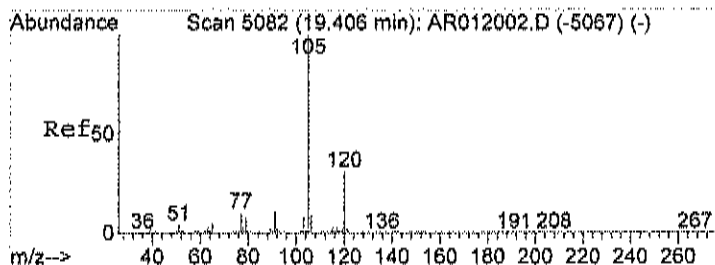
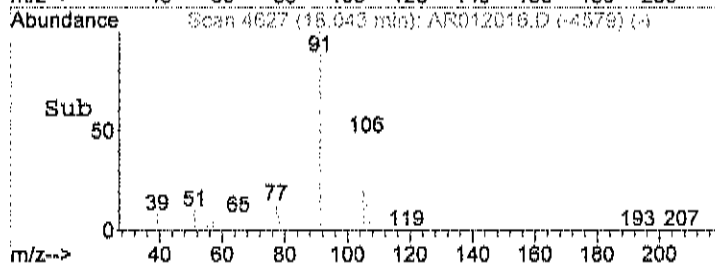
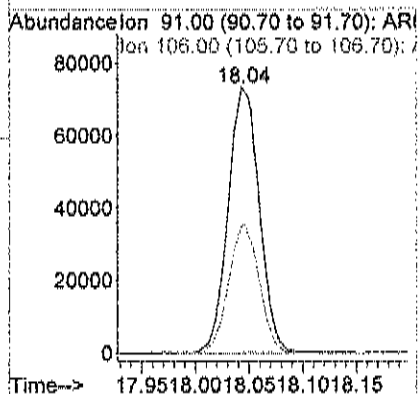
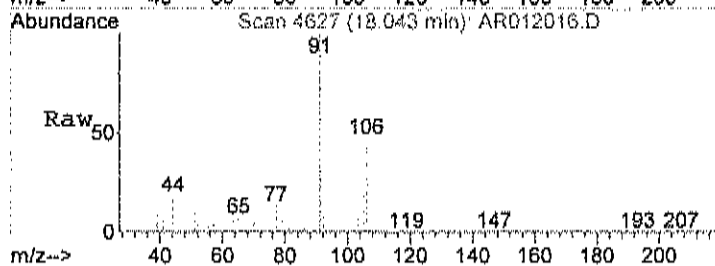
Abundance Ion 104.00 (103.70 to 104.70): AR
20000 Ion 78.00 (77.70 to 78.70): AR





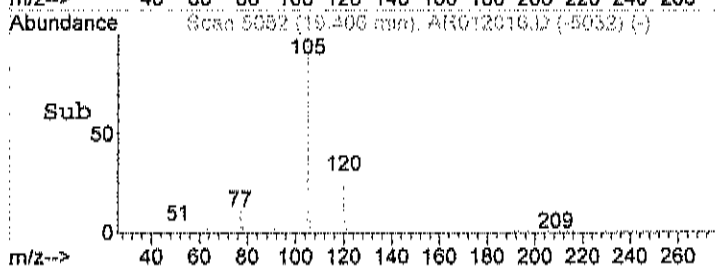
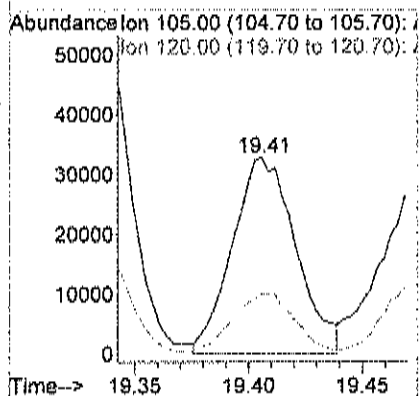
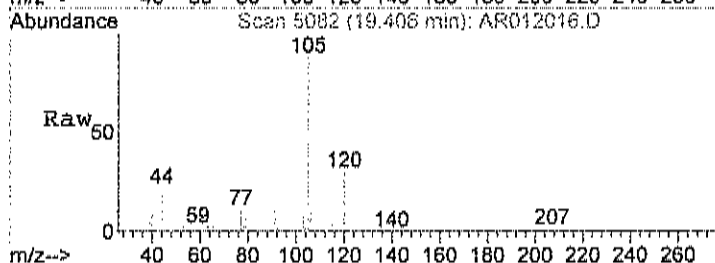
#63
o-xylene
Concen: 0.81 ppb
RT: 18.04 min Scan# 4627
Delta R.T. -0.01 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

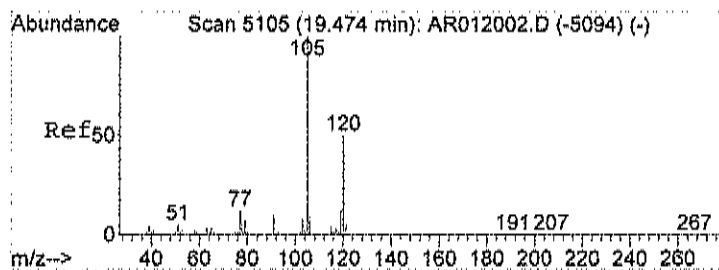
Tgt Ion: 91 Resp: 147701
Ion Ratio Lower Upper
91 100
106 47.7 26.2 66.2



#69
4-ethyltoluene
Concen: 0.28 ppb m
RT: 19.41 min Scan# 5082
Delta R.T. 0.00 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

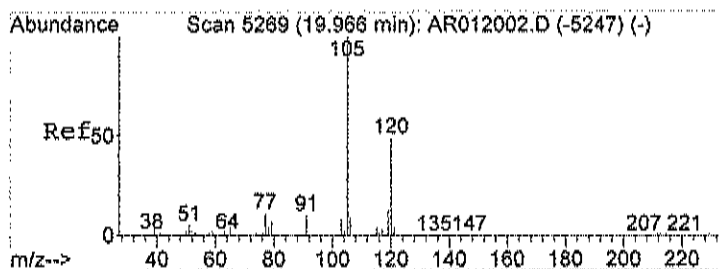
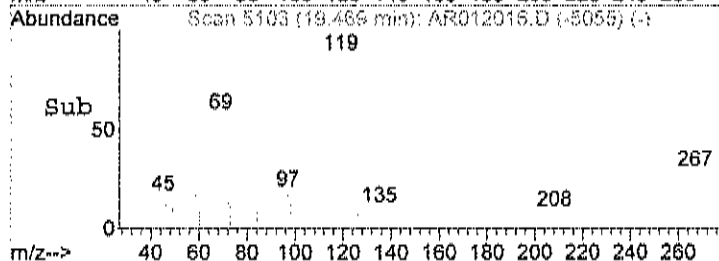
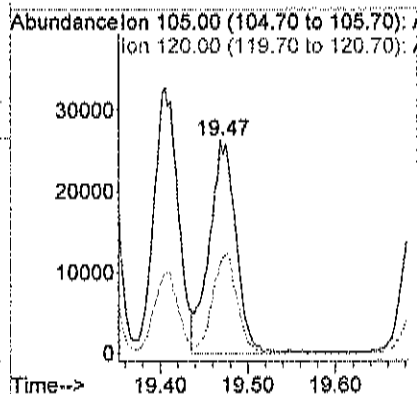
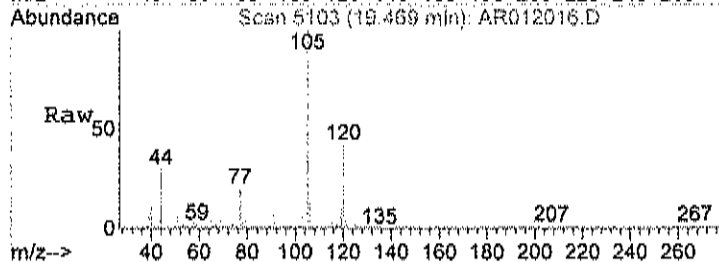
Tgt Ion: 105 Resp: 63745
Ion Ratio Lower Upper
105 100
120 30.5 10.1 50.1





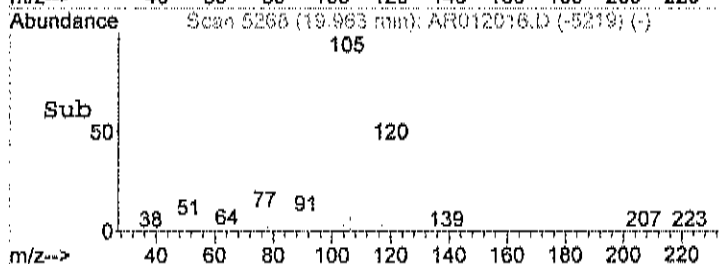
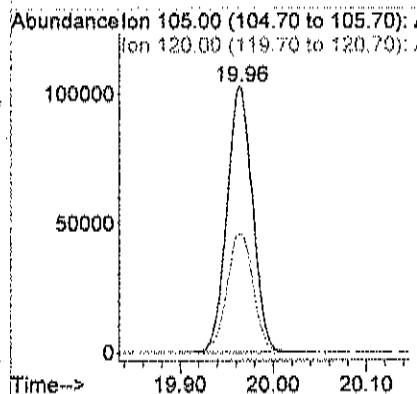
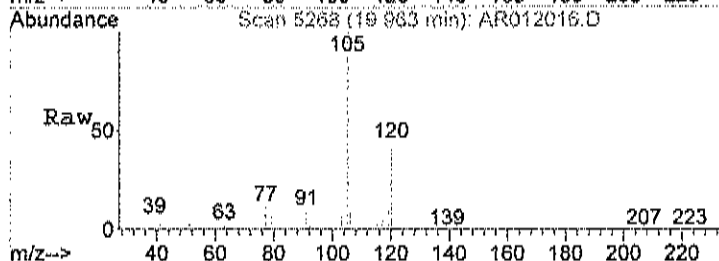
#70
1,3,5-trimethylbenzene
Concen: 0.27 ppb m
RT: 19.47 min Scan# 5103
Delta R.T. -0.01 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

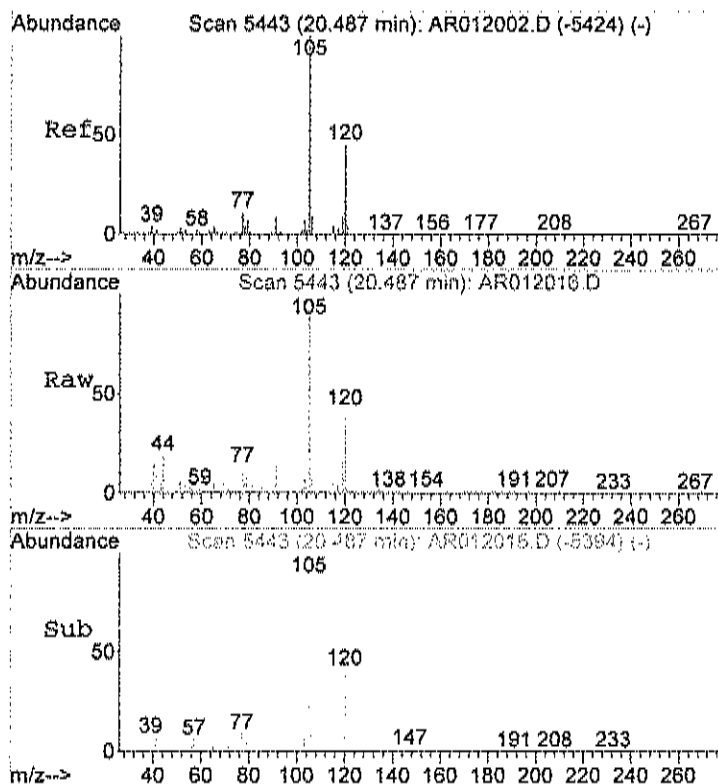
Tgt Ion:105 Resp: 56002
Ion Ratio Lower Upper
105 100
120 32.2 28.2 68.2



#71
1,2,4-trimethylbenzene
Concen: 0.97 ppb
RT: 19.96 min Scan# 5268
Delta R.T. -0.00 min
Lab File: AR012016.D
Acq: 20 Jan 2020 10:06 pm

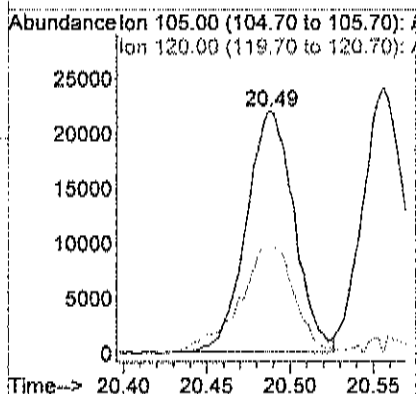
Tgt Ion:105 Resp: 196561
Ion Ratio Lower Upper
105 100
120 45.8 24.9 64.9





#75
 1,2,3-trimethylbenzene
 Concen: 0.21 ppb
 RT: 20.49 min Scan# 5443
 Delta R.T. -0.00 min
 Lab File: AR012016.D
 Acq: 20 Jan 2020 10:06 pm

Tgt Ion: 105 Resp: 43642
 Ion Ratio Lower Upper
 105 100
 120 53.0 32.0 53.4



Data File : C:\HPCHEM\1\DATA\AR012028.D

Vial: 28

Acq On : 21 Jan 2020 7:15 am

Operator: RJP

Sample : C2001030-007A 10x

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:34 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.95	128	35503	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.23	114	166360	1.00	ppb	0.01
50) Chlorobenzene-d5	17.02	117	144069	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	94512	0.98	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	98.00%

Target Compounds

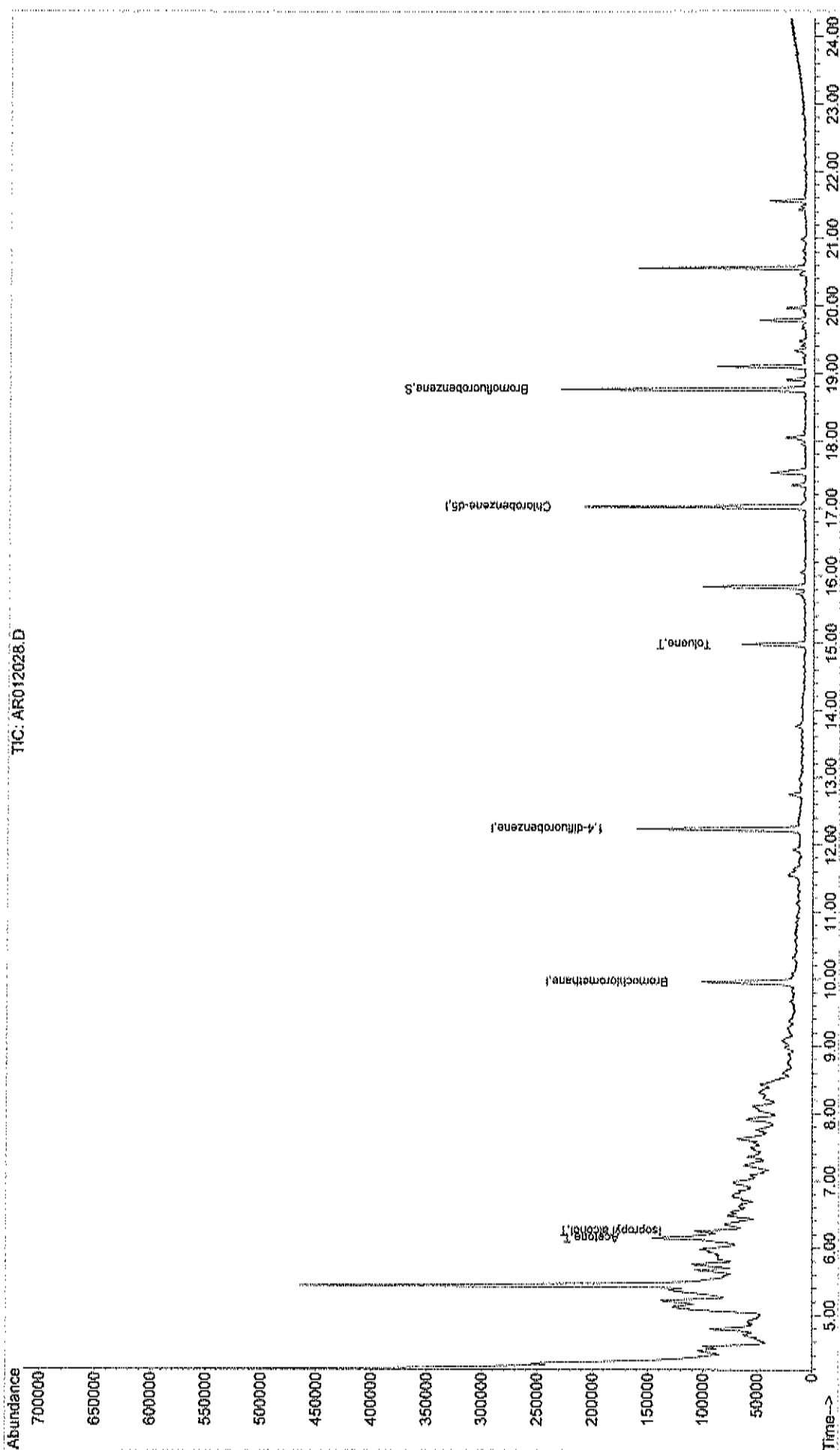
						Qvalue
15) Acetone	6.14	58	40574	1.97	ppb	# 100
17) Isopropyl alcohol	6.25	45	68889	1.05	ppb	# 1
51) Toluene	14.98	92	29101	0.33	ppb	99

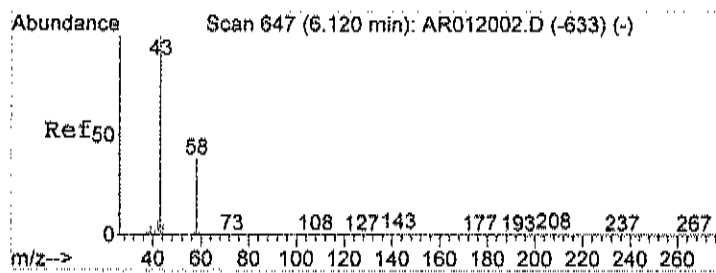
Data File : C:\HPCHEM\1\DATA\AR012028.D
Acq On : 21 Jan 2020 7:15 am
Sample : C2001030-007A 10x
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 23 12:24 2020

Vial: 28
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

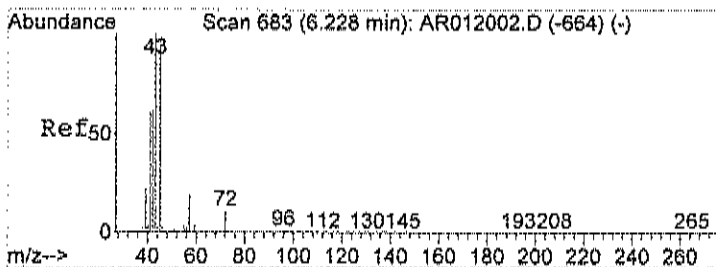
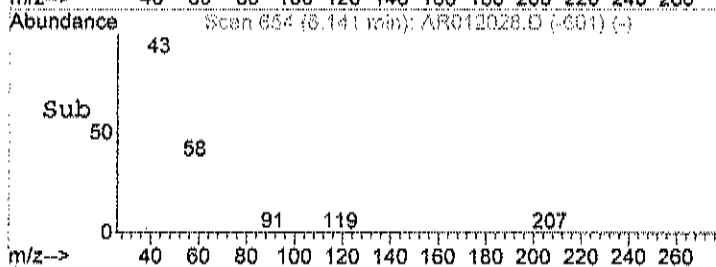
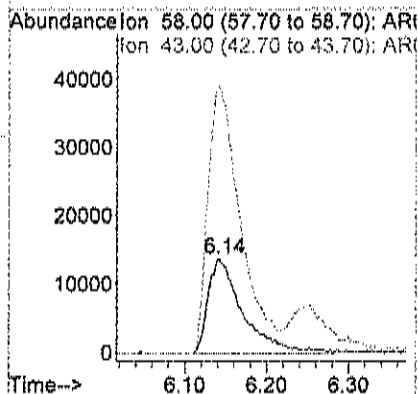
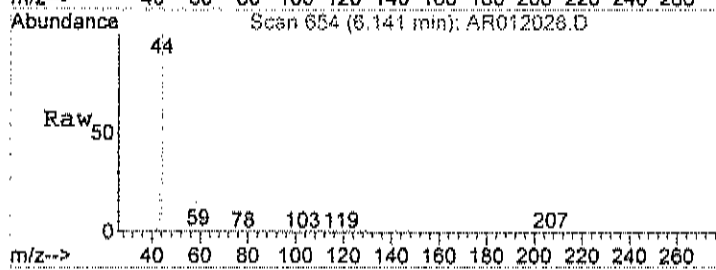
Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration





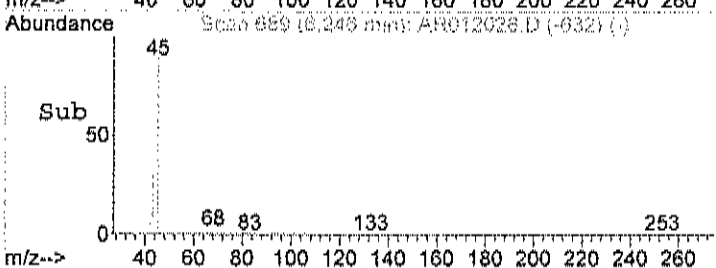
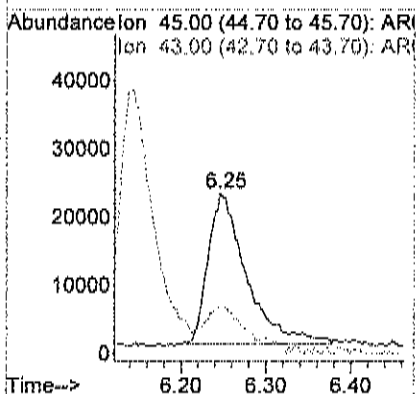
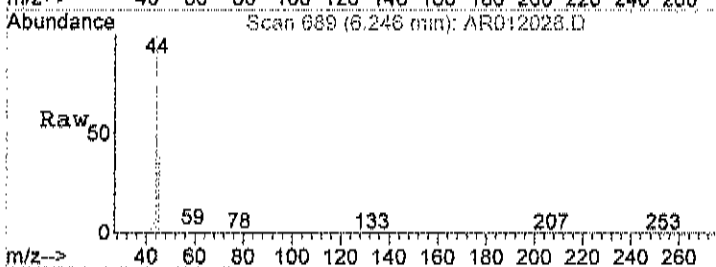
#15
Acetone
Concen: 1.97 ppb
RT: 6.14 min Scan# 654
Delta R.T. 0.01 min
Lab File: AR012028.D
Acq: 21 Jan 2020 7:15 am

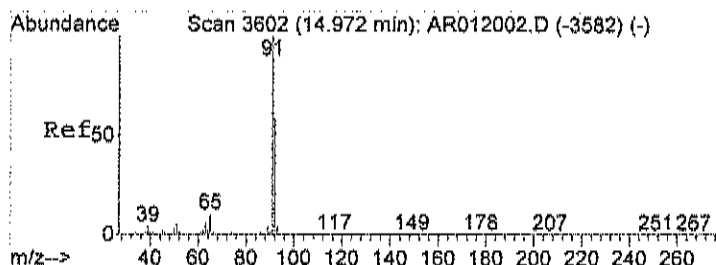
Tgt Ion: 58 Resp: 40574
Ion Ratio Lower Upper
58 100
43 315.9 0.0 30.0#



#17
Isopropyl alcohol
Concen: 1.05 ppb
RT: 6.25 min Scan# 689
Delta R.T. 0.02 min
Lab File: AR012028.D
Acq: 21 Jan 2020 7:15 am

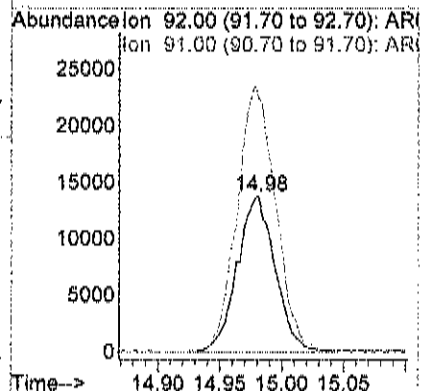
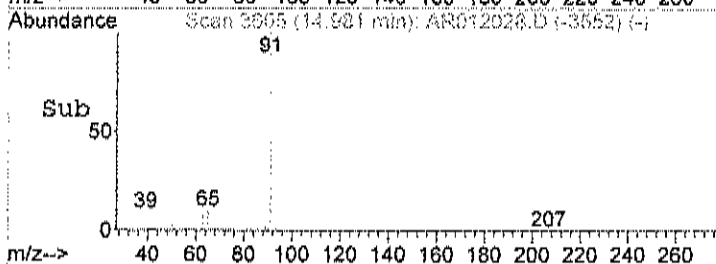
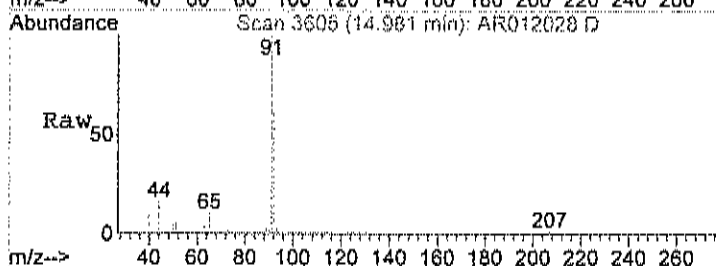
Tgt Ion: 45 Resp: 68889
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#





#51
Toluene
Concen: 0.33 ppb
RT: 14.98 min Scan# 3605
Delta R.T. 0.01 min
Lab File: AR012028.D
Acq: 21 Jan 2020 7:15 am

Tgt Ion: 92 Resp: 29101
Ion Ratio Lower Upper
92 100
91 176.1 154.5 194.5



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS DATA

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INITIAL CALIBRATION

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration

Calibration Files

2.0 =AR011504.D 1.50 =AR011505.D 1.25 =AR011506.D
 1.0 =AR011507.D 0.75 =AR011508.D 0.50 =AR011509.D

Compound	2.0	1.50	1.25	1.0	0.75	0.50	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----							
2) T Propylene	0.679	0.729	0.680	0.738	0.726	0.687	0.683	7.43
3) T Freon 12	2.612	2.567	2.551	2.636	2.632	2.571	2.620	2.13
4) T Chloromethane	0.637	0.626	0.658	0.602	0.597	0.569	0.607	5.01
5) T Freon 114	2.017	2.004	2.003	1.967	1.868	1.784	1.900	6.06
6) T Vinyl Chloride	0.648	0.650	0.634	0.636	0.610	0.582	0.638	5.96
7) T Butane	1.350	1.348	1.547	1.289	1.109	1.308	1.305	13.05
8) T 1,3-butadiene	0.758	0.742	0.785	0.833	0.660	0.823	0.765	7.00
9) T Bromomethane	1.086	1.068	1.044	1.088	1.110	1.043	1.064	2.72
10) T Chloroethane	0.563	0.552	0.549	0.573	0.578	0.552	0.564	2.04
11) T Ethanol	0.406	0.375	0.382	0.407	0.426	0.423	0.419	8.16
12) T Acrolein	0.433	0.435	0.404	0.453	0.412	0.426	0.421	5.69
13) T Vinyl Bromide	1.133	1.105	1.096	1.177	1.135	1.120	1.126	2.17
14) T Freon 11	2.895	2.830	2.742	2.905	2.825	2.737	2.770	4.31
15) T Acetone	0.570	0.555	0.557	0.587	0.587	0.619	0.581	3.65
16) T Pentane	1.183	1.174	1.141	1.204	1.214	1.298	1.207	3.94
17) T Isopropyl alcohol	1.889	1.782	1.769	1.848	1.904	1.730	1.843	4.84
18) T 1,1-dichloroeth	1.196	1.162	1.123	1.194	1.142	1.135	1.138	4.37
19) T Freon 113	2.432	2.376	2.311	2.444	2.374	2.320	2.338	3.80
20) t t-Butyl alcohol	2.462	2.251	2.272	2.402	2.476	2.247	2.327	4.74
21) T Methylene chlor	1.031	1.019	0.996	1.057	1.048	1.052	1.033	2.19
22) T Allyl chloride	1.477	1.400	1.404	1.491	1.509	1.494	1.465	2.80
23) T Carbon disulfid	3.399	3.300	3.213	3.381	3.328	3.224	3.266	3.35
24) T trans-1,2-dichl	1.705	1.648	1.613	1.690	1.652	1.595	1.636	2.77
25) T methyl tert-but	3.360	3.291	3.189	3.382	3.273	3.183	3.243	3.02
26) T 1,1-dichloroeth	2.094	2.053	2.005	2.105	2.049	1.999	2.042	2.00
27) T Vinyl acetate	2.584	2.543	2.449	2.595	2.590	2.405	2.514	2.92
28) T Methyl Ethyl Ke	0.576	0.550	0.540	0.554	0.587	0.549	0.555	5.31
29) T cis-1,2-dichlor	1.617	1.582	1.518	1.632	1.611	1.487	1.548	4.28
30) T Hexane	1.994	1.945	1.917	2.034	2.003	1.947	1.935	4.85
31) T Ethyl acetate	2.616	2.583	2.435	2.552	2.603	2.348	2.497	4.16
32) T Chloroform	2.520	2.459	2.380	2.529	2.446	2.402	2.419	3.88
33) T Tetrahydrofuran	1.159	1.101	1.129	1.140	1.160	1.114	1.139	2.73
34) T 1,2-dichloroeth	1.544	1.514	1.466	1.548	1.522	1.490	1.496	3.04
35) I 1,4-difluorobenzene	-----ISTD-----							
36) T 1,1,1-trichloro	0.518	0.520	0.517	0.518	0.524	0.512	0.513	2.35
37) T Cyclohexane	0.376	0.381	0.379	0.390	0.391	0.385	0.383	1.52
38) T Carbon tetrachl	0.541	0.547	0.542	0.546	0.549	0.525	0.524	4.76
39) T Benzene	0.740	0.755	0.739	0.746	0.745	0.739	0.733	3.15
40) T Methyl methacry	0.328	0.323	0.317	0.306	0.335	0.300	0.322	4.26
41) T 1,4-dioxane	0.155	0.149	0.150	0.151	0.159	0.145	0.151	2.86
42) T 2,2,4-trimethyl	1.177	1.203	1.198	1.200	1.223	1.200	1.189	2.15
43) T Heptane	0.419	0.431	0.427	0.431	0.439	0.439	0.432	2.24
44) T Trichloroethene	0.338	0.338	0.340	0.341	0.337	0.327	0.312	12.22
45) T 1,2-dichloropro	0.283	0.287	0.292	0.285	0.288	0.288	0.288	1.35
46) T Bromodichlorome	0.545	0.551	0.541	0.545	0.544	0.533	0.535	3.29
47) T cis-1,3-dichlor	0.461	0.459	0.457	0.455	0.466	0.438	0.446	4.95
48) T trans-1,3-dichl	0.395	0.394	0.387	0.378	0.395	0.371	0.378	5.70
49) T 1,1,2-trichloro	0.314	0.315	0.316	0.310	0.318	0.305	0.308	3.30
50) I Chlorobenzene-d5	-----ISTD-----							
51) T Toluene	0.607	0.630	0.623	0.618	0.608	0.604	0.611	1.92

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Initial Calibration

Calibration Files

2.0 =AR011504.D 1.50 =AR011505.D 1.25 =AR011506.D
 1.0 =AR011507.D 0.75 =AR011508.D 0.50 =AR011509.D

	Compound	2.0	1.50	1.25	1.0	0.75	0.50	Avg	%RSD
52) T	Methyl Isobutyl	0.608	0.610	0.613	0.618	0.637	0.614	0.620	1.80
53) T	Dibromochlorome	0.652	0.658	0.654	0.647	0.627	0.625	0.632	4.07
54) T	Methyl Butyl Ke	0.532	0.472	0.480	0.491	0.493	0.445	0.474	6.65
55) T	1,2-dibromoetha	0.546	0.550	0.548	0.552	0.542	0.513	0.534	3.84
56) T	Tetrachloroethy	0.401	0.410	0.411	0.402	0.400	0.399	0.397	3.76
57) T	Chlorobenzene	0.810	0.832	0.817	0.822	0.811	0.783	0.799	3.75
58) T	Ethylbenzene	1.358	1.377	1.373	1.363	1.357	1.332	1.341	2.81
59) T	m&p-xylene	1.049	1.069	1.060	1.049	1.035	1.021	1.030	3.76
60) T	Nonane	0.719	0.734	0.739	0.719	0.721	0.734	0.724	2.03
61) T	Styrene	0.802	0.816	0.799	0.776	0.786	0.726	0.766	6.08
62) T	Bromoform	0.618	0.622	0.614	0.603	0.598	0.560	0.587	6.00
63) T	o-xylene	1.072	1.094	1.091	1.074	1.075	1.037	1.057	3.34
64) T	Cumene	1.527	1.553	1.529	1.531	1.523	1.477	1.497	3.62
65) S	Bromofluorobenz	0.720	0.716	0.702	0.700	0.702	0.629	0.668	6.64
66) T	1,1,2,2-tetrach	0.783	0.783	0.766	0.750	0.773	0.728	0.759	2.72
67) T	Propylbenzene	0.431	0.426	0.420	0.401	0.411	0.374	0.402	5.95
68) T	2-Chlorotoluene	0.375	0.385	0.380	0.372	0.375	0.344	0.368	3.77
69) T	4-ethyltoluene	1.437	1.437	1.373	1.326	1.391	1.218	1.338	6.44
70) T	1,3,5-trimethyl	1.248	1.275	1.254	1.228	1.243	1.198	1.219	3.82
71) T	1,2,4-trimethyl	1.232	1.219	1.205	1.204	1.213	1.128	1.181	4.11
72) T	1,3-dichloroben	0.754	0.645	0.606	0.590	0.719	0.507	0.633	12.35
73) T	benzyl chloride	0.813	0.592	0.560	0.582	0.682	0.487	0.617	16.45
74) T	1,4-dichloroben	0.722	0.571	0.517	0.506	0.664	0.419	0.567	16.66
75) T	1,2,3-trimethyl	1.265	1.254	1.240	1.235	1.249	1.180	1.219	3.48
76) T	1,2-dichloroben	0.749	0.645	0.636	0.640	0.717	0.586	0.656	8.16
77) T	1,2,4-trichloro	0.310	0.217	0.209	0.223	0.216	0.178	0.215	19.60
78) T	Naphthalene	0.896	0.662	0.631	0.647	0.618	0.580	0.652	15.92
79) T	Hexachloro-1,3-	0.613	0.587	0.582	0.567	0.559	0.530	0.555	7.60

Data File : C:\HPCHEM\1\DATA\AR011504.D

Vial: 3

Acq On : 16 Jan 2020 10:26 pm

Operator: RJP

Sample : A1UG_2.0

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:52:44 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	51232	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	260767	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	228816	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	164775	1.03	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	103.00%

Target Compounds

						Qvalue
2) Propylene	4.24	41	69558m	2.01	ppb	
3) Freon 12	4.29	85	267597	1.99	ppb	98
4) Chloromethane	4.49	50	65306	2.13	ppb	99
5) Freon 114	4.49	85	206633	2.06	ppb	90
6) Vinyl Chloride	4.69	62	66409	2.05	ppb	96
7) Butane	4.80	43	138374m	1.84	ppb	
8) 1,3-butadiene	4.80	39	77690m	1.91	ppb	
9) Bromomethane	5.15	94	111313	2.01	ppb	97
10) Chloroethane	5.33	64	57658	1.98	ppb	99
11) Ethanol	5.43	45	41587	2.03	ppb	92
12) Acrolein	6.01	56	44381	1.92	ppb	96
13) Vinyl Bromide	5.67	106	116060	1.94	ppb	98
14) Freon 11	5.95	101	296643	2.01	ppb	99
15) Acetone	6.12	58	58358	1.95	ppb	# 100
16) Pentane	6.23	42	121221	1.98	ppb	93
17) Isopropyl alcohol	6.22	45	193591	2.06	ppb	89
18) 1,1-dichloroethene	6.72	96	122505	2.02	ppb	98
19) Freon 113	6.92	101	249191	2.00	ppb	97
20) t-Butyl alcohol	6.93	59	252235	2.06	ppb	# 86
21) Methylene chloride	7.18	84	105621	1.96	ppb	95
22) Allyl chloride	7.16	41	151375	1.99	ppb	98
23) Carbon disulfide	7.34	76	348224	2.02	ppb	99
24) trans-1,2-dichloroethene	8.12	61	174654	2.03	ppb	99
25) methyl tert-butyl ether	8.14	73	344284	2.00	ppb	88
26) 1,1-dichloroethane	8.55	63	214553	2.00	ppb	98
27) Vinyl acetate	8.53	43	264812	2.01	ppb	100
28) Methyl Ethyl Ketone	9.03	72	58971	2.09	ppb	# 100
29) cis-1,2-dichloroethene	9.49	61	165645	1.99	ppb	98
30) Hexane	9.09	57	204337	1.97	ppb	88
31) Ethyl acetate	9.63	43	268074	2.07	ppb	99
32) Chloroform	10.10	83	258217	2.01	ppb	98
33) Tetrahydrofuran	10.26	42	118759	2.05	ppb	97
34) 1,2-dichloroethane	11.21	62	158244	2.01	ppb	99
36) 1,1,1-trichloroethane	10.93	97	270215	2.00	ppb	97
37) Cyclohexane	11.64	56	196123	1.95	ppb	# 81
38) Carbon tetrachloride	11.57	117	282079	1.98	ppb	99
39) Benzene	11.54	78	385789	1.98	ppb	98
40) Methyl methacrylate	13.09	41	171161	2.14	ppb	99
41) 1,4-dioxane	13.11	88	80725	2.05	ppb	99
42) 2,2,4-trimethylpentane	12.39	57	614027	1.96	ppb	92
43) Heptane	12.74	43	218703	1.94	ppb	99
44) Trichloroethene	12.87	130	176310	1.98	ppb	99
45) 1,2-dichloropropane	12.97	63	147854	1.99	ppb	98

(#)=qualifier out of range (m)=manual integration

AR011504.D A116_1UG.M

Wed Feb 05 10:12:09 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011504.D

Vial: 3

Acq On : 16 Jan 2020 10:26 pm

Operator: RJP

Sample : A1UG_2.0

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:52:44 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

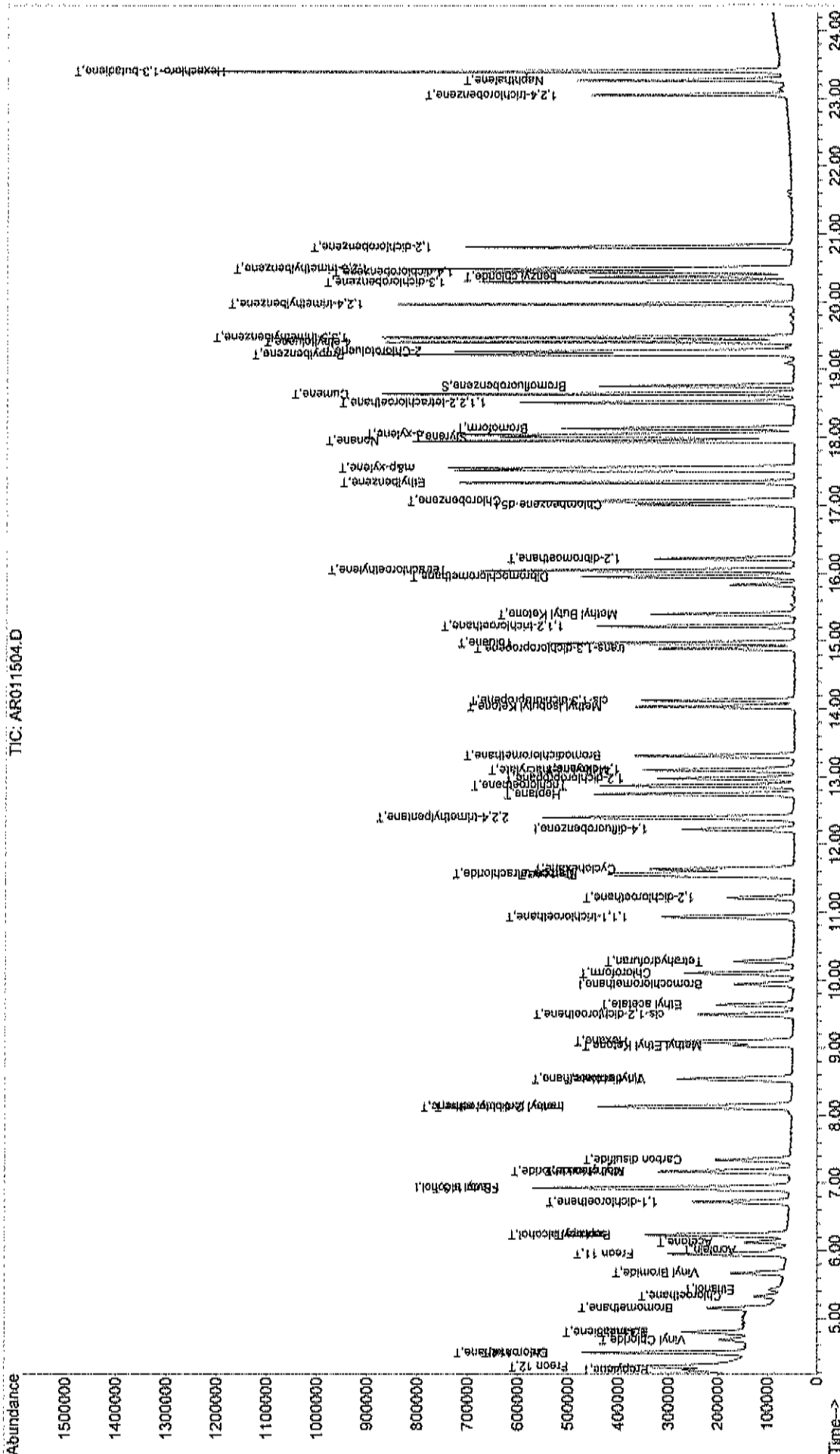
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	284044	2.00	ppb	99
47) cis-1,3-dichloropropene	14.12	75	240193	2.02	ppb	99
48) trans-1,3-dichloropropene	14.89	75	206259	2.09	ppb	95
49) 1,1,2-trichloroethane	15.22	97	163573	2.02	ppb	100
51) Toluene	14.97	92	277582	1.96	ppb	98
52) Methyl Isobutyl Ketone	14.03	43	278126	1.96	ppb	97
53) Dibromochloromethane	15.95	129	298251	2.01	ppb	100
54) Methyl Butyl Ketone	15.40	43	243289	2.16	ppb	92
55) 1,2-dibromoethane	16.22	107	249666	1.97	ppb	97
56) Tetrachloroethylene	16.04	164	183738	1.99	ppb	98
57) Chlorobenzene	17.07	112	370704	1.97	ppb	100
58) Ethylbenzene	17.34	91	621416	1.99	ppb	99
59) m&p-xylene	17.55	91	960539	3.99	ppb	98
60) Nonane	17.95	43	329175	2.00	ppb	97
61) Styrene	18.01	104	367166	2.06	ppb	95
62) Bromoform	18.14	173	282790	2.05	ppb	100
63) o-xylene	18.05	91	490542	1.99	ppb	97
64) Cumene	18.64	105	698860	1.99	ppb	98
66) 1,1,2,2-tetrachloroethane	18.52	83	358530	2.08	ppb	99
67) Propylbenzene	19.23	120	197189	2.14	ppb	87
68) 2-Chlorotoluene	19.27	126	171702	2.01	ppb	# 71
69) 4-ethyltoluene	19.41	105	657821	2.16	ppb	100
70) 1,3,5-trimethylbenzene	19.48	105	571154	2.03	ppb	99
71) 1,2,4-trimethylbenzene	19.97	105	563993	2.04	ppb	98
72) 1,3-dichlorobenzene	20.29	146	345258	2.55	ppb	99
73) benzyl chloride	20.37	91	372222m	2.79	ppb	
74) 1,4-dichlorobenzene	20.44	146	330199	2.85	ppb	99
75) 1,2,3-trimethylbenzene	20.49	105	578786	2.04	ppb	99
76) 1,2-dichlorobenzene	20.81	146	342795	2.34	ppb	100
77) 1,2,4-trichlorobenzene	23.06	180	141840m	2.78	ppb	
78) Naphthalene	23.27	128	409998	2.76	ppb	98
79) Hexachloro-1,3-butadiene	23.40	225	280427	2.16	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR011504.D A116_1UG.M Wed Feb 05 10:12:09 2020 MSD1

Quantitation Report

Quant Results File: A116 1UG.RES

TIC: AR011504.D



Data File : C:\HPCHEM\1\DATA\AR011505.D

Vial: 4

Acq On : 16 Jan 2020 11:15 pm

Operator: RJP

Sample : A1UG_1.50

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:52:26 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	52761	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	259456	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	225970	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	161749	1.02	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	102.00%

Target Compounds

						Qvalue
2) Propylene	4.24	41	57657m	1.61	ppb	
3) Freon 12	4.29	85	203176	1.47	ppb	97
4) Chloromethane	4.49	50	49551	1.57	ppb	97
5) Freon 114	4.49	85	158616	1.54	ppb	90
6) Vinyl Chloride	4.69	62	51429	1.54	ppb	97
7) Butane	4.80	43	106650m	1.38	ppb	
8) 1,3-butadiene	4.79	39	58758m	1.40	ppb	
9) Bromomethane	5.15	94	84523	1.48	ppb	97
10) Chloroethane	5.32	64	43667	1.46	ppb	99
11) Ethanol	5.44	45	29682	1.41	ppb	95
12) Acrolein	6.02	56	34435	1.45	ppb	99
13) Vinyl Bromide	5.67	106	87440	1.42	ppb	100
14) Freon 11	5.95	101	223952	1.47	ppb	99
15) Acetone	6.13	58	43948	1.43	ppb	# 100
16) Pentane	6.23	42	92904	1.47	ppb	92
17) Isopropyl alcohol	6.23	45	141030	1.46	ppb	94
18) 1,1-dichloroethene	6.72	96	91943	1.47	ppb	99
19) Freon 113	6.92	101	188004	1.47	ppb	97
20) t-Butyl alcohol	6.93	59	178145	1.41	ppb	# 87
21) Methylene chloride	7.18	84	80623	1.46	ppb	95
22) Allyl chloride	7.16	41	110820	1.42	ppb	100
23) Carbon disulfide	7.34	76	261144	1.47	ppb	99
24) trans-1,2-dichloroethene	8.12	61	130391	1.47	ppb	100
25) methyl tert-butyl ether	8.14	73	260419	1.47	ppb	89
26) 1,1-dichloroethane	8.55	63	162443	1.47	ppb	98
27) Vinyl acetate	8.53	43	201242	1.48	ppb	100
28) Methyl Ethyl Ketone	9.03	72	43490	1.50	ppb	# 100
29) cis-1,2-dichloroethene	9.49	61	125220	1.46	ppb	99
30) Hexane	9.09	57	153915	1.44	ppb	88
31) Ethyl acetate	9.63	43	204399	1.53	ppb	99
32) Chloroform	10.10	83	194613	1.47	ppb	99
33) Tetrahydrofuran	10.27	42	87149	1.46	ppb	96
34) 1,2-dichloroethane	11.21	62	119791	1.48	ppb	100
36) 1,1,1-trichloroethane	10.93	97	202314	1.50	ppb	98
37) Cyclohexane	11.63	56	148139	1.48	ppb	# 82
38) Carbon tetrachloride	11.57	117	212804	1.50	ppb	99
39) Benzene	11.53	78	293852	1.52	ppb	100
40) Methyl methacrylate	13.09	41	125729	1.58	ppb	97
41) 1,4-dioxane	13.11	88	57994	1.48	ppb	98
42) 2,2,4-trimethylpentane	12.39	57	468054	1.50	ppb	93
43) Heptane	12.74	43	167683	1.50	ppb	98
44) Trichloroethene	12.87	130	131454	1.49	ppb	100
45) 1,2-dichloropropane	12.97	63	111846	1.52	ppb	98

(#)=qualifier out of range (m)=manual integration

AR011505.D A116_1UG.M

Wed Feb 05 10:12:13 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011505.D

Vial: 4

Acq On : 16 Jan 2020 11:15 pm

Operator: RJP

Sample : A1UG_1.50

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:52:26 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

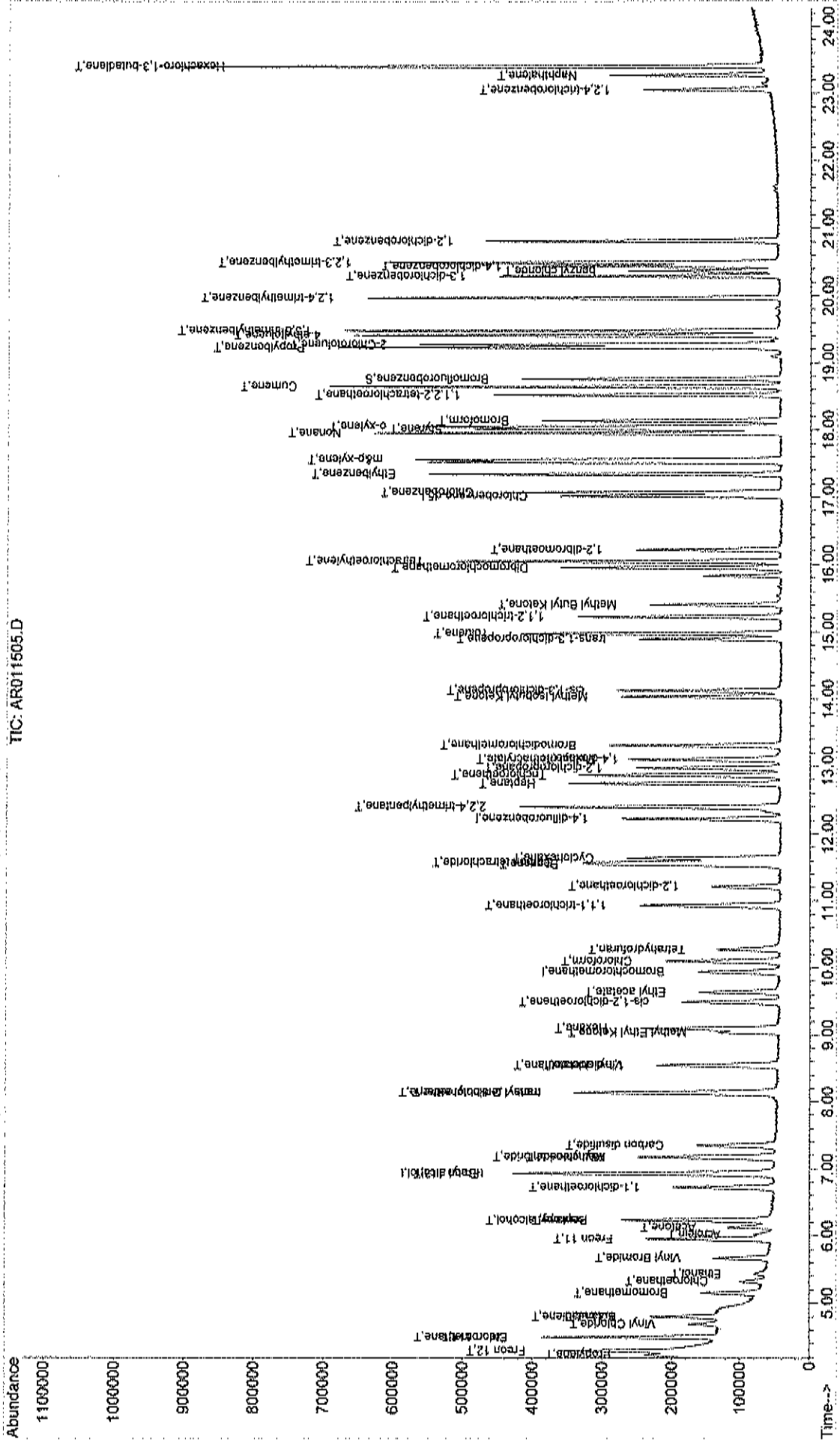
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	214444	1.51	ppb	99
47) cis-1,3-dichloropropene	14.12	75	178473	1.51	ppb	98
48) trans-1,3-dichloropropene	14.89	75	153381	1.56	ppb	93
49) 1,1,2-trichloroethane	15.22	97	122654	1.52	ppb	100
51) Toluene	14.97	92	213654	1.53	ppb	95
52) Methyl Isobutyl Ketone	14.03	43	206731	1.47	ppb	97
53) Dibromochloromethane	15.95	129	222874	1.52	ppb	100
54) Methyl Butyl Ketone	15.40	43	159948	1.44	ppb	89
55) 1,2-dibromoethane	16.22	107	186484	1.49	ppb	98
56) Tetrachloroethylene	16.04	164	138913	1.52	ppb	99
57) Chlorobenzene	17.07	112	281847	1.51	ppb	99
58) Ethylbenzene	17.34	91	466898	1.51	ppb	99
59) m&p-xylene	17.56	91	724510	3.05	ppb	99
60) Nonane	17.95	43	248638	1.53	ppb	97
61) Styrene	18.02	104	276460	1.57	ppb	95
62) Bromoform	18.14	173	210705	1.54	ppb	99
63) o-xylene	18.05	91	370716	1.52	ppb	98
64) Cumene	18.64	105	526459	1.52	ppb	98
66) 1,1,2,2-tetrachloroethane	18.52	83	265383	1.56	ppb	100
67) Propylbenzene	19.23	120	144423	1.59	ppb	91
68) 2-Chlorotoluene	19.27	126	130494	1.55	ppb	# 74
69) 4-ethyltoluene	19.41	105	486921	1.62	ppb	99
70) 1,3,5-trimethylbenzene	19.48	105	432160	1.55	ppb	99
71) 1,2,4-trimethylbenzene	19.97	105	413191	1.52	ppb	98
72) 1,3-dichlorobenzene	20.29	146	218656	1.64	ppb	99
73) benzyl chloride	20.37	91	200658	1.52	ppb	99
74) 1,4-dichlorobenzene	20.44	146	193703	1.69	ppb	99
75) 1,2,3-trimethylbenzene	20.49	105	424884	1.52	ppb	100
76) 1,2-dichlorobenzene	20.81	146	218477	1.51	ppb	100
77) 1,2,4-trichlorobenzene	23.05	180	73492	1.46	ppb	98
78) Naphthalene	23.27	128	224513	1.53	ppb	98
79) Hexachloro-1,3-butadiene	23.40	225	199038	1.55	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR011505.D A116_1UG.M Wed Feb 05 10:12:13 2020 MSD1

TIC: AR011505.D



Data File : C:\HPCHEM\1\DATA\AR011506.D

Vial: 5

Acq On : 17 Jan 2020 12:02 am

Operator: RJP

Sample : A1UG_1.25

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:52:06 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	53840	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.22	114	259798	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	224544	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	157533	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

						Qvalue
2) Propylene	4.24	41	45789m	1.26	ppb	
3) Freon 12	4.30	85	171686	1.22	ppb	98
4) Chloromethane	4.50	50	44273	1.37	ppb	98
5) Freon 114	4.50	85	134808	1.28	ppb	89
6) Vinyl Chloride	4.70	62	42694	1.25	ppb	98
7) Butane	4.80	43	104112m	1.32	ppb	
8) 1,3-butadiene	4.80	39	52840m	1.23	ppb	
9) Bromomethane	5.16	94	70290	1.21	ppb	98
10) Chloroethane	5.34	64	36932	1.21	ppb	99
11) Ethanol	5.44	45	25707	1.20	ppb	90
12) Acrolein	6.03	56	27180	1.12	ppb	98
13) Vinyl Bromide	5.68	106	73791	1.17	ppb	99
14) Freon 11	5.96	101	184532	1.19	ppb	98
15) Acetone	6.14	58	37505	1.19	ppb	# 100
16) Pentane	6.24	42	76760	1.19	ppb	92
17) Isopropyl alcohol	6.23	45	119043	1.20	ppb	91
18) 1,1-dichloroethene	6.73	96	75557	1.18	ppb	99
19) Freon 113	6.93	101	155531	1.19	ppb	97
20) t-Butyl alcohol	6.94	59	152915	1.19	ppb	# 87
21) Methylene chloride	7.19	84	67038	1.19	ppb	95
22) Allyl chloride	7.17	41	94505	1.19	ppb	99
23) Carbon disulfide	7.35	76	216237	1.20	ppb	100
24) trans-1,2-dichloroethene	8.13	61	108536	1.20	ppb	100
25) methyl tert-butyl ether	8.15	73	214639	1.19	ppb	89
26) 1,1-dichloroethane	8.55	63	134930	1.20	ppb	99
27) Vinyl acetate	8.53	43	164805	1.19	ppb	100
28) Methyl Ethyl Ketone	9.04	72	36327	1.23	ppb	# 100
29) cis-1,2-dichloroethene	9.49	61	102135	1.17	ppb	99
30) Hexane	9.09	57	129021	1.19	ppb	89
31) Ethyl acetate	9.64	43	163889	1.20	ppb	99
32) Chloroform	10.10	83	160196	1.19	ppb	99
33) Tetrahydrofuran	10.27	42	75951	1.25	ppb	97
34) 1,2-dichloroethane	11.22	62	98690	1.19	ppb	99
36) 1,1,1-trichloroethane	10.93	97	167955	1.25	ppb	98
37) Cyclohexane	11.64	56	122953	1.23	ppb	# 82
38) Carbon tetrachloride	11.58	117	176054	1.24	ppb	99
39) Benzene	11.54	78	240006	1.24	ppb	100
40) Methyl methacrylate	13.09	41	103043	1.29	ppb	97
41) 1,4-dioxane	13.12	88	48567	1.24	ppb	99
42) 2,2,4-trimethylpentane	12.39	57	389147	1.25	ppb	92
43) Heptane	12.74	43	138759	1.24	ppb	98
44) Trichloroethene	12.87	130	110407	1.25	ppb	99
45) 1,2-dichloropropane	12.97	63	94742	1.28	ppb	98

(#)=qualifier out of range (m)=manual integration

AR011506.D A116_1UG.M

Wed Feb 05 10:12:17 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011506.D

Vial: 5

Acq On : 17 Jan 2020 12:02 am

Operator: RJP

Sample : A1UG_1.25

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:52:06 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	175788	1.24	ppb	100
47) cis-1,3-dichloropropene	14.12	75	148544	1.26	ppb	99
48) trans-1,3-dichloropropene	14.89	75	125818	1.28	ppb	93
49) 1,1,2-trichloroethane	15.22	97	102568	1.27	ppb	100
51) Toluene	14.98	92	174939	1.26	ppb	96
52) Methyl Isobutyl Ketone	14.04	43	172042	1.23	ppb	96
53) Dibromochloromethane	15.95	129	183563	1.26	ppb	100
54) Methyl Butyl Ketone	15.40	43	134788	1.22	ppb	91
55) 1,2-dibromoethane	16.22	107	153942	1.24	ppb	98
56) Tetrachloroethylene	16.05	164	115428	1.28	ppb	99
57) Chlorobenzene	17.07	112	229400	1.24	ppb	99
58) Ethylbenzene	17.34	91	385319	1.26	ppb	99
59) m&p-xylene	17.56	91	594914	2.52	ppb	98
60) Nonane	17.95	43	207491	1.28	ppb	97
61) Styrene	18.02	104	224146	1.28	ppb	97
62) Bromoform	18.14	173	172356	1.27	ppb	100
63) o-xylene	18.05	91	306343	1.27	ppb	98
64) Cumene	18.64	105	429252	1.25	ppb	98
66) 1,1,2,2-tetrachloroethane	18.52	83	214948	1.27	ppb	99
67) Propylbenzene	19.23	120	117776	1.30	ppb	89
68) 2-Chlorotoluene	19.27	126	106629	1.27	ppb	# 77
69) 4-ethyltoluene	19.41	105	385319	1.29	ppb	99
70) 1,3,5-trimethylbenzene	19.47	105	351980	1.27	ppb	99
71) 1,2,4-trimethylbenzene	19.97	105	338195	1.25	ppb	99
72) 1,3-dichlorobenzene	20.30	146	170089	1.28	ppb	99
73) benzyl chloride	20.37	91	157221	1.20	ppb	100
74) 1,4-dichlorobenzene	20.44	146	145124	1.28	ppb	99
75) 1,2,3-trimethylbenzene	20.49	105	347920	1.25	ppb	98
76) 1,2-dichlorobenzene	20.81	146	178540	1.24	ppb	99
77) 1,2,4-trichlorobenzene	23.06	180	58781	1.17	ppb	99
78) Naphthalene	23.28	128	177060	1.22	ppb	98
79) Hexachloro-1,3-butadiene	23.40	225	163286	1.28	ppb	92

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR011506.D A116_1UG.M Wed Feb 05 10:12:17 2020 MSD1

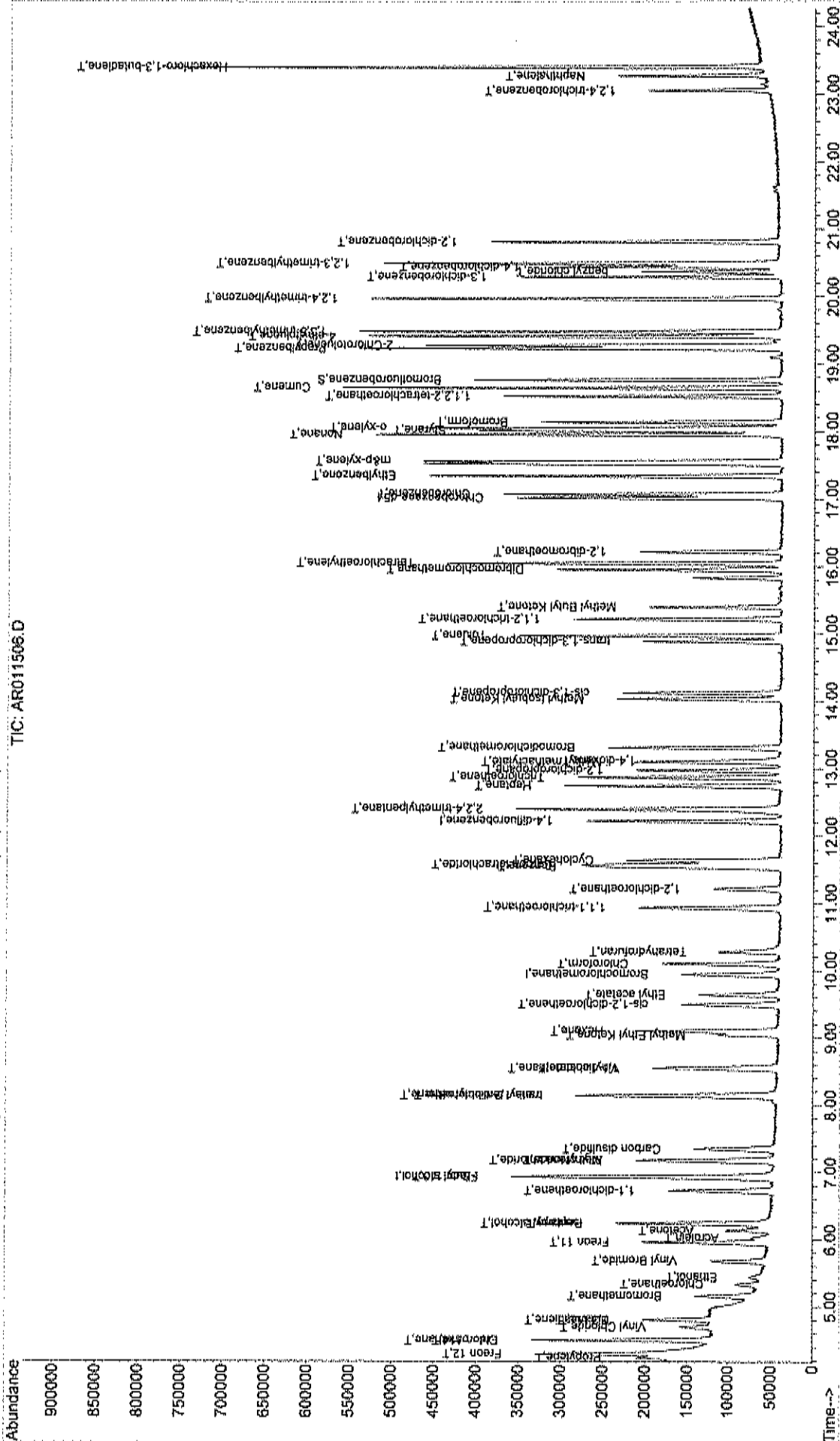
Data File : C:\HPCHEM\1\DATA\AR011506.D
Acq On : 17 Jan 2020 12:02 am
Sample : A1UG_1.25
Misc : A114_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 17 10:59 2020

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

TIC: AR011506.D



Data File : C:\HPCHEM\1\DATA\AR011507.D

Vial: 6

Acq On : 17 Jan 2020 12:49 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:51:41 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	50771	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	256527	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	223162	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	156195	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

						Qvalue
2) Propylene	4.23	41	37466m	1.09	ppb	
3) Freon 12	4.28	85	133844	1.01	ppb	98
4) Chloromethane	4.48	50	30568	1.01	ppb	99
5) Freon 114	4.49	85	99870	1.01	ppb	89
6) Vinyl Chloride	4.69	62	32301	1.01	ppb	95
7) Butane	4.80	43	65454m	0.88	ppb	
8) 1,3-butadiene	4.79	39	42314m	1.05	ppb	
9) Bromomethane	5.15	94	55254	1.01	ppb	99
10) Chloroethane	5.32	64	29069	1.01	ppb	99
11) Ethanol	5.45	45	20651	1.02	ppb	93
12) Acrolein	6.02	56	22999	1.01	ppb	94
13) Vinyl Bromide	5.67	106	59745	1.01	ppb	96
14) Freon 11	5.95	101	147475	1.01	ppb	99
15) Acetone	6.13	58	29802	1.01	ppb	# 100
16) Pentane	6.23	42	61151	1.01	ppb	92
17) Isopropyl alcohol	6.23	45	93810	1.01	ppb	93
18) 1,1-dichloroethene	6.72	96	60634	1.01	ppb	98
19) Freon 113	6.92	101	124076	1.01	ppb	97
20) t-Butyl alcohol	6.94	59	121940	1.00	ppb	89
21) Methylene chloride	7.18	84	53646	1.01	ppb	95
22) Allyl chloride	7.16	41	75701	1.01	ppb	100
23) Carbon disulfide	7.34	76	171633	1.01	ppb	100
24) trans-1,2-dichloroethene	8.12	61	85788	1.01	ppb	99
25) methyl tert-butyl ether	8.14	73	171691	1.01	ppb	89
26) 1,1-dichloroethane	8.55	63	106895	1.01	ppb	100
27) Vinyl acetate	8.53	43	131743	1.01	ppb	99
28) Methyl Ethyl Ketone	9.03	72	28110	1.01	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	82871	1.01	ppb	98
30) Hexane	9.09	57	103290	1.01	ppb	87
31) Ethyl acetate	9.63	43	129547	1.01	ppb	99
32) Chloroform	10.10	83	128406	1.01	ppb	97
33) Tetrahydrofuran	10.27	42	57879	1.01	ppb	96
34) 1,2-dichloroethane	11.21	62	78614	1.01	ppb	100
36) 1,1,1-trichloroethane	10.93	97	132996	1.00	ppb	100
37) Cyclohexane	11.64	56	100074	1.01	ppb	# 81
38) Carbon tetrachloride	11.57	117	140004	1.00	ppb	100
39) Benzene	11.53	78	191294	1.00	ppb	98
40) Methyl methacrylate	13.09	41	78505	1.00	ppb	96
41) 1,4-dioxane	13.12	88	38763	1.00	ppb	94
42) 2,2,4-trimethylpentane	12.39	57	307865	1.00	ppb	93
43) Heptane	12.74	43	110483	1.00	ppb	98
44) Trichloroethene	12.87	130	87353	1.00	ppb	99
45) 1,2-dichloropropane	12.97	63	73192	1.00	ppb	97

(#)= qualifier out of range (m) = manual integration

AR011507.D A116_1UG.M

Wed Feb 05 10:12:21 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011507.D

Vial: 6

Acq On : 17 Jan 2020 12:49 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:51:41 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	139808	1.00	ppb	99
47) cis-1,3-dichloropropene	14.12	75	116650	1.00	ppb	98
48) trans-1,3-dichloropropene	14.89	75	97051	1.00	ppb	95
49) 1,1,2-trichloroethane	15.22	97	79458	1.00	ppb	98
51) Toluene	14.97	92	137807	1.00	ppb	97
52) Methyl Isobutyl Ketone	14.03	43	137899	1.00	ppb	97
53) Dibromochloromethane	15.95	129	144423	1.00	ppb	100
54) Methyl Butyl Ketone	15.40	43	109462	1.00	ppb	89
55) 1,2-dibromoethane	16.22	107	123259	1.00	ppb	95
56) Tetrachloroethylene	16.04	164	89760	1.00	ppb	97
57) Chlorobenzene	17.07	112	183504	1.00	ppb	99
58) Ethylbenzene	17.34	91	304206	1.00	ppb	99
59) m&p-xylene	17.55	91	468343	2.00	ppb	99
60) Nonane	17.95	43	160476	1.00	ppb	97
61) Styrene	18.01	104	173179	1.00	ppb	97
62) Bromoform	18.14	173	134514	1.00	ppb	99
63) o-xylene	18.05	91	239739	1.00	ppb	97
64) Cumene	18.64	105	341707	1.00	ppb	98
66) 1,1,2,2-tetrachloroethane	18.52	83	167422	1.00	ppb	100
67) Propylbenzene	19.23	120	89579	1.00	ppb	92
68) 2-Chlorotoluene	19.27	126	82978	1.00	ppb	# 78
69) 4-ethyltoluene	19.41	105	295947	1.00	ppb	99
70) 1,3,5-trimethylbenzene	19.47	105	274033	1.00	ppb	99
71) 1,2,4-trimethylbenzene	19.97	105	268776	1.00	ppb	99
72) 1,3-dichlorobenzene	20.29	146	131749	1.00	ppb	99
73) benzyl chloride	20.37	91	129985	1.00	ppb	99
74) 1,4-dichlorobenzene	20.44	146	112821	1.00	ppb	98
75) 1,2,3-trimethylbenzene	20.49	105	275716	1.00	ppb	99
76) 1,2-dichlorobenzene	20.81	146	142784	1.00	ppb	100
77) 1,2,4-trichlorobenzene	23.05	180	49712	1.00	ppb	99
78) Naphthalene	23.27	128	144480	1.00	ppb	97
79) Hexachloro-1,3-butadiene	23.40	225	126595	1.00	ppb	90

Data File : C:\HPCHEM\1\DATA\AR011507.D
Acq On : 17 Jan 2020 12:49 am
Sample : ALUG 1.0
Misc : A114_1UG
MMS Integration Params: RTEINT.P
Quant Time: Jan 17 11:00 2020

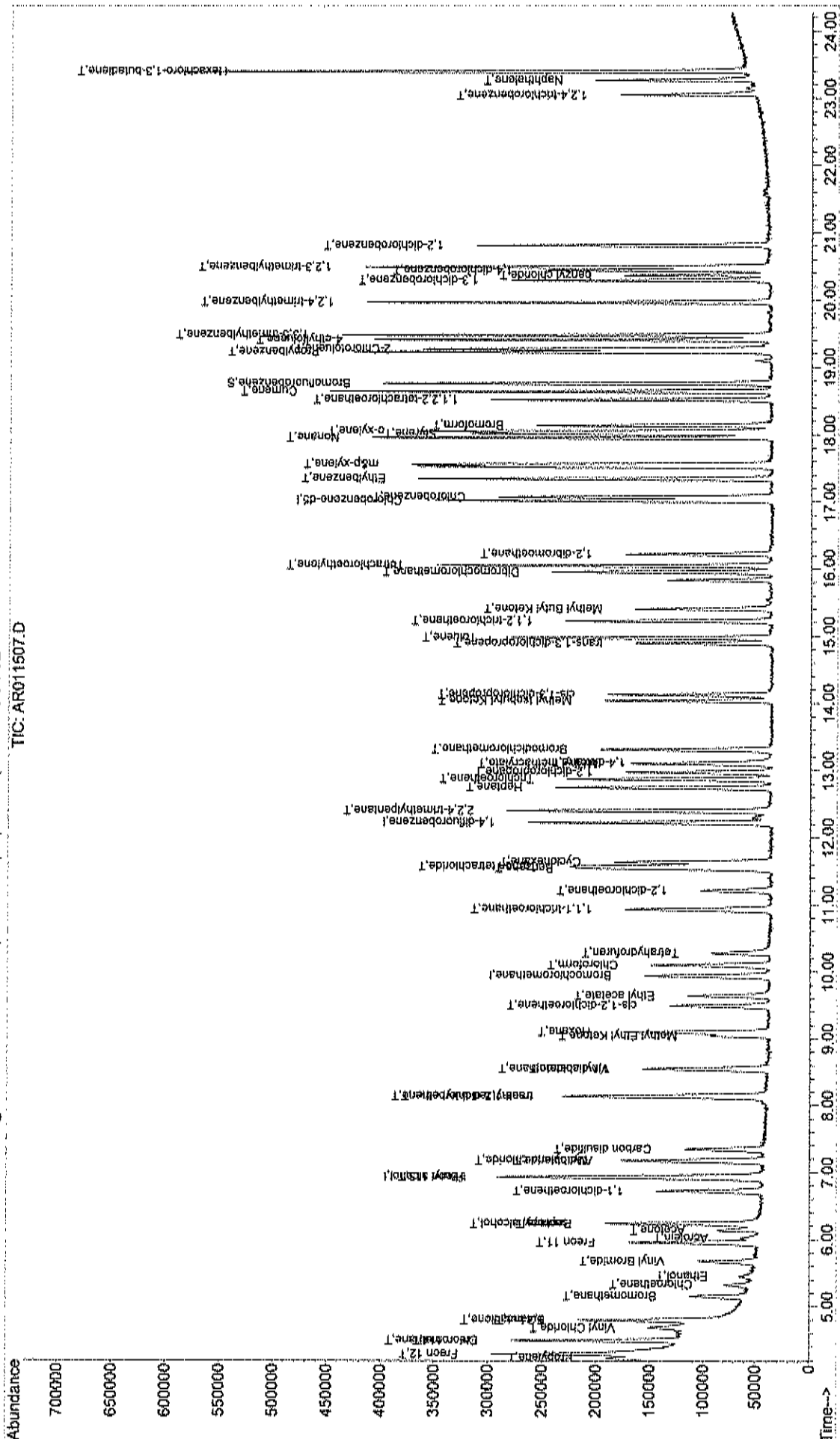
Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116 1UG.RES

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Method      : C:\HPCHEM\1\METHODS\AL16_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.M

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Data File : C:\HPCHEM\1\DATA\AR011508.D

Vial: 7

Acq On : 17 Jan 2020 1:35 am

Operator: RJP

Sample : A1UG_0.75

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:53:04 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	51340	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	251626	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	222547	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	156241	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.23	41	27947m	0.80	ppb	
3) Freon 12	4.28	85	101354	0.75	ppb	98
4) Chloromethane	4.49	50	22984	0.75	ppb	99
5) Freon 114	4.49	85	71938	0.72	ppb	92
6) Vinyl Chloride	4.69	62	23487	0.72	ppb	97
7) Butane	4.79	43	42701m	0.57	ppb	
8) 1,3-butadiene	4.80	39	25398m	0.62	ppb	
9) Bromomethane	5.14	94	42743	0.77	ppb	95
10) Chloroethane	5.32	64	22249	0.76	ppb	99
11) Ethanol	5.44	45	16403	0.80	ppb	92
12) Acrolein	6.01	56	15881	0.69	ppb	95
13) Vinyl Bromide	5.67	106	43697	0.73	ppb	100
14) Freon 11	5.95	101	108766	0.73	ppb	99
15) Acetone	6.13	58	22590	0.75	ppb	# 100
16) Pentane	6.23	42	46745	0.76	ppb	93
17) Isopropyl alcohol	6.23	45	73304	0.78	ppb	90
18) 1,1-dichloroethene	6.71	96	43964	0.72	ppb	98
19) Freon 113	6.92	101	91428	0.73	ppb	97
20) t-Butyl alcohol	6.93	59	95321	0.78	ppb	90
21) Methylene chloride	7.18	84	40343	0.75	ppb	96
22) Allyl chloride	7.16	41	58121	0.76	ppb	96
23) Carbon disulfide	7.34	76	128142	0.74	ppb	99
24) trans-1,2-dichloroethene	8.12	61	63616	0.74	ppb	99
25) methyl tert-butyl ether	8.14	73	126026	0.73	ppb	87
26) 1,1-dichloroethane	8.55	63	78902	0.73	ppb	100
27) Vinyl acetate	8.53	43	99716	0.75	ppb	99
28) Methyl Ethyl Ketone	9.03	72	22610	0.80	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	62039	0.75	ppb	98
30) Hexane	9.09	57	77110	0.74	ppb	87
31) Ethyl acetate	9.64	43	100225	0.77	ppb	98
32) Chloroform	10.09	83	94189	0.73	ppb	97
33) Tetrahydrofuran	10.27	42	44665	0.77	ppb	95
34) 1,2-dichloroethane	11.21	62	58614	0.74	ppb	99
36) 1,1,1-trichloroethane	10.93	97	98914	0.76	ppb	98
37) Cyclohexane	11.63	56	73786	0.76	ppb	# 80
38) Carbon tetrachloride	11.57	117	103680	0.75	ppb	98
39) Benzene	11.54	78	140523	0.75	ppb	99
40) Methyl methacrylate	13.09	41	63220	0.82	ppb	97
41) 1,4-dioxane	13.12	88	29942	0.79	ppb	96
42) 2,2,4-trimethylpentane	12.39	57	230721	0.76	ppb	92
43) Heptane	12.74	43	82910	0.76	ppb	98
44) Trichloroethene	12.87	130	63592	0.74	ppb	98
45) 1,2-dichloropropane	12.97	63	54274	0.76	ppb	97

(#)= qualifier out of range (m) = manual integration

AR011508.D A116_1UG.M

Wed Feb 05 10:12:25 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011508.D

Vial: 7

Acq On : 17 Jan 2020 1:35 am

Operator: RJP

Sample : A1UG_0.75

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:53:04 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	102713	0.75	ppb	99
47) cis-1,3-dichloropropene	14.12	75	87926	0.77	ppb	99
48) trans-1,3-dichloropropene	14.89	75	74527	0.78	ppb	94
49) 1,1,2-trichloroethane	15.22	97	59962	0.77	ppb	100
51) Toluene	14.97	92	101416	0.74	ppb	97
52) Methyl Isobutyl Ketone	14.03	43	106239	0.77	ppb	98
53) Dibromochloromethane	15.95	129	104717	0.73	ppb	98
54) Methyl Butyl Ketone	15.40	43	82204	0.75	ppb	89
55) 1,2-dibromoethane	16.22	107	90462	0.73	ppb	97
56) Tetrachloroethylene	16.04	164	66821	0.74	ppb	98
57) Chlorobenzene	17.07	112	135339	0.74	ppb	100
58) Ethylbenzene	17.34	91	226471	0.74	ppb	99
59) m&p-xylene	17.55	91	345616	1.48	ppb	98
60) Nonane	17.95	43	120413	0.75	ppb	96
61) Styrene	18.02	104	131202	0.76	ppb	99
62) Bromoform	18.14	173	99858	0.74	ppb	100
63) o-xylene	18.05	91	179371	0.75	ppb	98
64) Cumene	18.64	105	254186	0.74	ppb	99
66) 1,1,2,2-tetrachloroethane	18.52	83	129023	0.77	ppb	99
67) Propylbenzene	19.23	120	68674	0.77	ppb	92
68) 2-Chlorotoluene	19.27	126	62556	0.75	ppb	# 74
69) 4-ethyltoluene	19.41	105	232126	0.78	ppb	99
70) 1,3,5-trimethylbenzene	19.47	105	207401	0.76	ppb	100
71) 1,2,4-trimethylbenzene	19.97	105	202536	0.75	ppb	99
72) 1,3-dichlorobenzene	20.29	146	120010	0.91	ppb	99
73) benzyl chloride	20.37	91	113909m	0.88	ppb	
74) 1,4-dichlorobenzene	20.44	146	110809	0.98	ppb	99
75) 1,2,3-trimethylbenzene	20.49	105	208486	0.76	ppb	100
76) 1,2-dichlorobenzene	20.81	146	119610	0.84	ppb	99
77) 1,2,4-trichlorobenzene	23.05	180	36010	0.72	ppb	97
78) Naphthalene	23.27	128	103166m	0.72	ppb	
79) Hexachloro-1,3-butadiene	23.40	225	93380	0.74	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR011508.D A116_1UG.M Wed Feb 05 10:12:25 2020 MSD1

Data File : C:\HPCHEM\1\DATA\AR011508.D
Acq On : 17 Jan 2020 1:35 am
Sample : ALUG 0.75
Misc : ALL4_IUG
MMS Integration Params: RTEINT.P
Quant Time: Jan 17 11:01 2020

Vial: 7
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

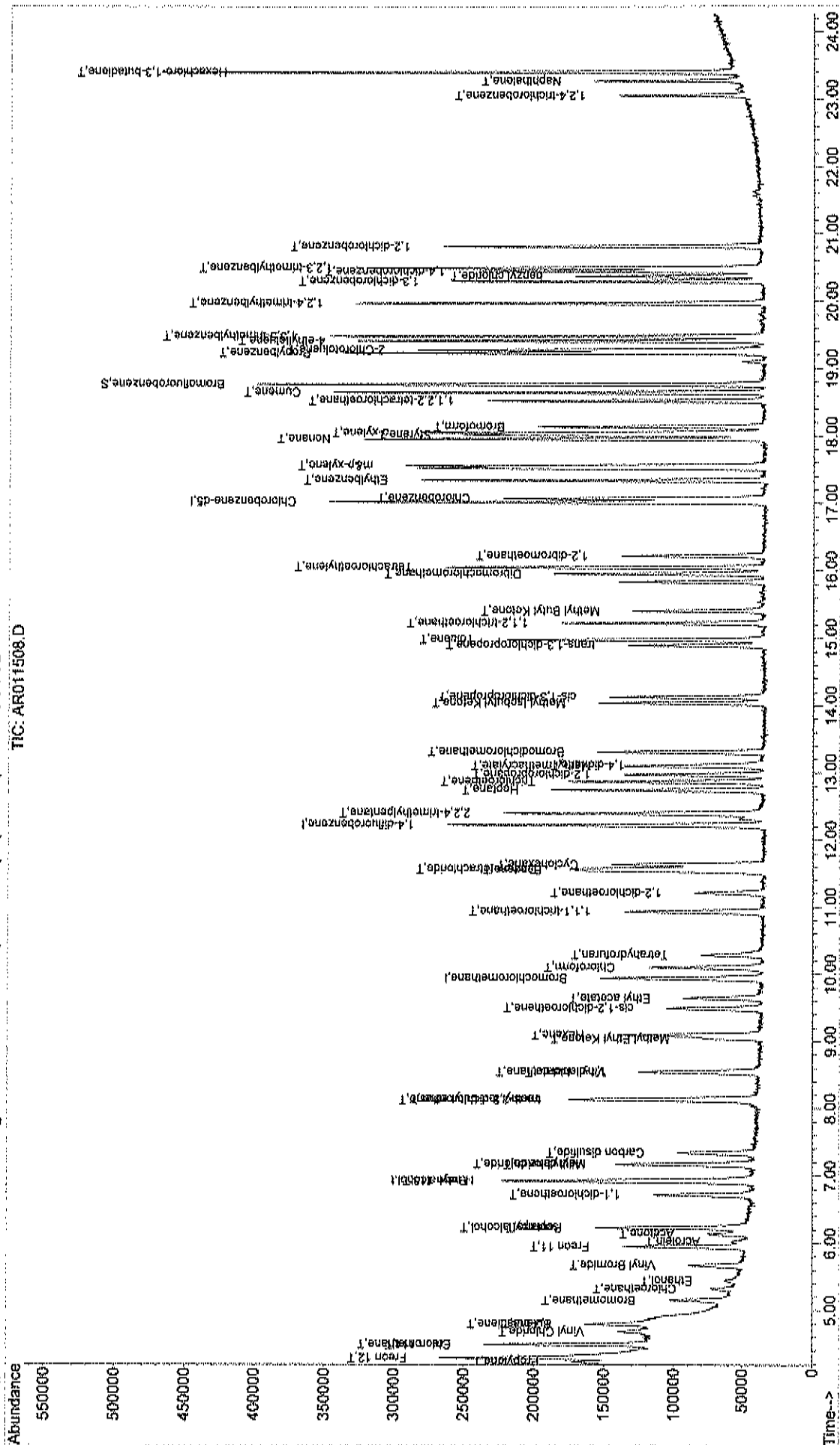
Quant Results File: A116 1UG.RES

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Method      : C:\HPCHEM\1\METHODS\A116_IUG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

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TIC: AR011508.D



Data File : C:\HPCHEM\1\DATA\AR011509.D

Vial: 8

Acq On : 17 Jan 2020 2:19 am

Operator: RJP

Sample : A1UG_0.50

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:53:28 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	52332	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	253729	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	219811	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	138339	0.90	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	90.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.23	41	17970m	0.51	ppb	
3) Freon 12	4.29	85	67272	0.49	ppb	98
4) Chloromethane	4.48	50	14876	0.48	ppb	91
5) Freon 114	4.49	85	46668	0.46	ppb	95
6) Vinyl Chloride	4.69	62	15236	0.46	ppb	99
7) Butane	4.79	43	34214	0.45	ppb	# 64
8) 1,3-butadiene	4.80	39	21525	0.52	ppb	94
9) Bromomethane	5.15	94	27304	0.48	ppb	97
10) Chloroethane	5.33	64	14447	0.49	ppb	99
11) Ethanol	5.45	45	11065	0.53	ppb	89
12) Acrolein	6.02	56	11137	0.47	ppb	92
13) Vinyl Bromide	5.67	106	29307	0.48	ppb	98
14) Freon 11	5.95	101	71606	0.47	ppb	97
15) Acetone	6.14	58	16202	0.53	ppb	# 100
16) Pentane	6.23	42	33961	0.54	ppb	78
17) Isopropyl alcohol	6.24	45	45268	0.47	ppb	96
18) 1,1-dichloroethene	6.72	96	29702	0.48	ppb	98
19) Freon 113	6.92	101	60703	0.48	ppb	95
20) t-Butyl alcohol	6.94	59	58787	0.47	ppb	91
21) Methylene chloride	7.18	84	27520	0.50	ppb	98
22) Allyl chloride	7.16	41	39086	0.50	ppb	96
23) Carbon disulfide	7.34	76	84361	0.48	ppb	98
24) trans-1,2-dichloroethene	8.12	61	41723	0.47	ppb	98
25) methyl tert-butyl ether	8.14	73	83280	0.47	ppb	93
26) 1,1-dichloroethane	8.55	63	52306	0.48	ppb	100
27) Vinyl acetate	8.53	43	62923	0.47	ppb	99
28) Methyl Ethyl Ketone	9.05	72	14376	0.50	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	38904	0.46	ppb	98
30) Hexane	9.09	57	50939	0.48	ppb	93
31) Ethyl acetate	9.64	43	61449	0.46	ppb	97
32) Chloroform	10.09	83	62846	0.48	ppb	98
33) Tetrahydrofuran	10.28	42	29137	0.49	ppb	99
34) 1,2-dichloroethane	11.21	62	38999	0.49	ppb	99
36) 1,1,1-trichloroethane	10.93	97	64980	0.49	ppb	99
37) Cyclohexane	11.63	56	48888	0.50	ppb	# 82
38) Carbon tetrachloride	11.57	117	66565	0.48	ppb	97
39) Benzene	11.54	78	93792	0.50	ppb	99
40) Methyl methacrylate	13.09	41	38049	0.49	ppb	98
41) 1,4-dioxane	13.12	88	18372	0.48	ppb	97
42) 2,2,4-trimethylpentane	12.40	57	152180	0.50	ppb	93
43) Heptane	12.74	43	55661	0.51	ppb	94
44) Trichloroethene	12.86	130	41475	0.48	ppb	99
45) 1,2-dichloropropane	12.97	63	36582	0.51	ppb	99

(#)=qualifier out of range (m)=manual integration

AR011509.D A116_1UG.M

Wed Feb 05 10:12:29 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011509.D
 Acq On : 17 Jan 2020 2:19 am
 Sample : A1UG_0.50
 Misc : A114_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 17 10:53:28 2020

Vial: 8
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 17 10:50:25 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D
 DataAcq Meth : 1UG_ENT

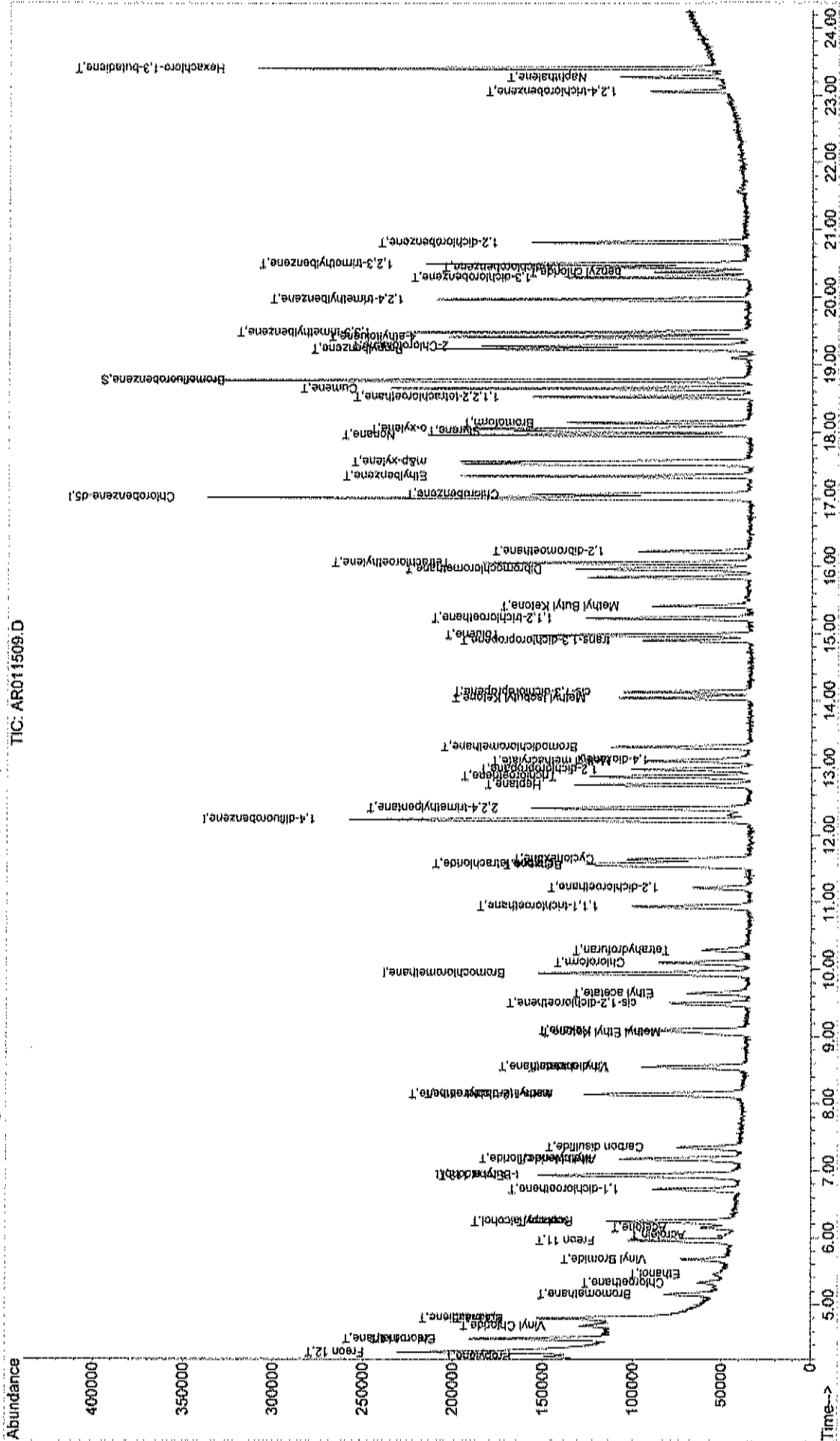
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.30	83	67656	0.49	ppb	100
47) cis-1,3-dichloropropene	14.12	75	55574	0.48	ppb	97
48) trans-1,3-dichloropropene	14.89	75	47091	0.49	ppb	93
49) 1,1,2-trichloroethane	15.22	97	38712	0.49	ppb	99
51) Toluene	14.97	92	66377	0.49	ppb	98
52) Methyl Isobutyl Ketone	14.04	43	67429	0.49	ppb	93
53) Dibromochloromethane	15.95	129	68741	0.48	ppb	99
54) Methyl Butyl Ketone	15.40	43	48877	0.45	ppb	88
55) 1,2-dibromoethane	16.22	107	56410	0.46	ppb	99
56) Tetrachloroethylene	16.05	164	43826	0.49	ppb	100
57) Chlorobenzene	17.07	112	86042	0.47	ppb	99
58) Ethylbenzene	17.34	91	146356	0.49	ppb	99
59) m&p-xylene	17.56	91	224435	0.97	ppb	99
60) Nonane	17.95	43	80623	0.51	ppb	96
61) Styrene	18.01	104	79804	0.47	ppb	98
62) Bromoform	18.13	173	61549	0.46	ppb	100
63) o-xylene	18.05	91	114013	0.48	ppb	96
64) Cumene	18.64	105	162333	0.48	ppb	99
66) 1,1,2,2-tetrachloroethane	18.52	83	80017	0.48	ppb	99
67) Propylbenzene	19.23	120	41128	0.47	ppb	93
68) 2-Chlorotoluene	19.27	126	37852	0.46	ppb	# 76
69) 4-ethyltoluene	19.41	105	133851	0.46	ppb	98
70) 1,3,5-trimethylbenzene	19.47	105	131635	0.49	ppb	98
71) 1,2,4-trimethylbenzene	19.97	105	123928	0.47	ppb	98
72) 1,3-dichlorobenzene	20.29	146	55689	0.43	ppb	99
73) benzyl chloride	20.37	91	53488m	0.42	ppb	
74) 1,4-dichlorobenzene	20.44	146	46036	0.41	ppb	99
75) 1,2,3-trimethylbenzene	20.49	105	129679	0.48	ppb	98
76) 1,2-dichlorobenzene	20.81	146	64440	0.46	ppb	99
77) 1,2,4-trichlorobenzene	23.06	180	19544m	0.40	ppb	
78) Naphthalene	23.27	128	63785m	0.45	ppb	
79) Hexachloro-1,3-butadiene	23.40	225	58203	0.47	ppb	90

Data File : C:\HPCHEM\1\DATA\AR011509.D
 Acq On : 17 Jan 2020 2:19 am
 Sample : A1UG_0.50
 Misc : A114_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 17 11:02 2020

Vial: 8
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D



Data File : C:\HPCHEM\1\DATA\AR011510.D

Vial: 9

Acq On : 17 Jan 2020 3:03 am

Operator: RJP

Sample : A1UG_0.30

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:53:47 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	51492	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	251117	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	219147	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	147050	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

						Qvalue
2) Propylene	4.22	41	9873m	0.28	ppb	
3) Freon 12	4.28	85	41842	0.31	ppb	98
4) Chloromethane	4.49	50	9098	0.30	ppb	70
5) Freon 114	4.48	85	28494	0.28	ppb	89
6) Vinyl Chloride	4.69	62	9614	0.30	ppb	96
7) Butane	4.79	43	15850m	0.21	ppb	
8) 1,3-butadiene	4.78	39	11742m	0.29	ppb	
9) Bromomethane	5.14	94	15825	0.28	ppb	96
10) Chloroethane	5.32	64	8891	0.30	ppb	97
11) Ethanol	5.43	45	7336m	0.36	ppb	
12) Acrolein	6.02	56	6639	0.29	ppb	90
13) Vinyl Bromide	5.66	106	17355	0.29	ppb	100
14) Freon 11	5.95	101	41463	0.28	ppb	96
15) Acetone	6.15	58	9230	0.31	ppb	# 100
16) Pentane	6.23	42	18554	0.30	ppb	93
17) Isopropyl alcohol	6.23	45	28038	0.30	ppb	97
18) 1,1-dichloroethene	6.72	96	17667	0.29	ppb	98
19) Freon 113	6.91	101	35097	0.28	ppb	96
20) t-Butyl alcohol	6.94	59	36128	0.29	ppb	97
21) Methylene chloride	7.17	84	15586	0.29	ppb	95
22) Allyl chloride	7.16	41	22852	0.30	ppb	97
23) Carbon disulfide	7.34	76	49735	0.29	ppb	99
24) trans-1,2-dichloroethene	8.12	61	24968	0.29	ppb	98
25) methyl tert-butyl ether	8.14	73	48131	0.28	ppb	94
26) 1,1-dichloroethane	8.55	63	31359	0.29	ppb	100
27) Vinyl acetate	8.53	43	38174	0.29	ppb	100
28) Methyl Ethyl Ketone	9.06	72	9046	0.32	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	23895	0.29	ppb	98
30) Hexane	9.09	57	29588	0.28	ppb	95
31) Ethyl acetate	9.64	43	37804	0.29	ppb	97
32) Chloroform	10.09	83	36707	0.28	ppb	96
33) Tetrahydrofuran	10.28	42	18481	0.32	ppb	92
34) 1,2-dichloroethane	11.21	62	22681	0.29	ppb	97
36) 1,1,1-trichloroethane	10.93	97	38136	0.29	ppb	97
37) Cyclohexane	11.63	56	29188	0.30	ppb	# 82
38) Carbon tetrachloride	11.57	117	40077	0.29	ppb	100
39) Benzene	11.53	78	54051	0.29	ppb	97
40) Methyl methacrylate	13.09	41	24705	0.32	ppb	96
41) 1,4-dioxane	13.13	88	11101	0.29	ppb	94
42) 2,2,4-trimethylpentane	12.39	57	88014	0.29	ppb	93
43) Heptane	12.74	43	33686	0.31	ppb	94
44) Trichloroethene	12.86	130	24484	0.29	ppb	98
45) 1,2-dichloropropane	12.97	63	21396	0.30	ppb	97

(#)=qualifier out of range (m)=manual integration

AR011510.D A116_1UG.M

Wed Feb 05 10:12:33 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR011510.D

Vial: 9

Acq On : 17 Jan 2020 3:03 am

Operator: RJP

Sample : A1UG_0.30

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:53:47 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	39540	0.29	ppb	100
47) cis-1,3-dichloropropene	14.12	75	32701	0.29	ppb	99
48) trans-1,3-dichloropropene	14.89	75	28174	0.30	ppb	97
49) 1,1,2-trichloroethane	15.22	97	21935	0.28	ppb	95
51) Toluene	14.98	92	39708	0.29	ppb	94
52) Methyl Isobutyl Ketone	14.04	43	41482	0.31	ppb	96
53) Dibromochloromethane	15.95	129	39259	0.28	ppb	98
54) Methyl Butyl Ketone	15.40	43	28732	0.27	ppb	87
55) 1,2-dibromoethane	16.22	107	34459	0.28	ppb	98
56) Tetrachloroethylene	16.04	164	25509	0.29	ppb	100
57) Chlorobenzene	17.07	112	50811	0.28	ppb	99
58) Ethylbenzene	17.34	91	84489	0.28	ppb	99
59) m&p-xylene	17.52	91	132033	0.57	ppb	99
60) Nonane	17.95	43	48259	0.31	ppb	98
61) Styrene	18.01	104	49369	0.29	ppb	100
62) Bromoform	18.13	173	36137	0.27	ppb	99
63) o-xylene	18.05	91	66456	0.28	ppb	96
64) Cumene	18.64	105	93650	0.28	ppb	99
66) 1,1,2,2-tetrachloroethane	18.52	83	49213	0.30	ppb	98
67) Propylbenzene	19.23	120	25642	0.29	ppb	89
68) 2-Chlorotoluene	19.27	126	23315	0.29	ppb	# 77
69) 4-ethyltoluene	19.41	105	84667	0.29	ppb	99
70) 1,3,5-trimethylbenzene	19.48	105	77010	0.29	ppb	98
71) 1,2,4-trimethylbenzene	19.97	105	75223	0.28	ppb	98
72) 1,3-dichlorobenzene	20.29	146	42723	0.33	ppb	97
73) benzyl chloride	20.37	91	43846	0.34	ppb	97
74) 1,4-dichlorobenzene	20.44	146	38988	0.35	ppb	97
75) 1,2,3-trimethylbenzene	20.49	105	77788	0.29	ppb	99
76) 1,2-dichlorobenzene	20.81	146	43801	0.31	ppb	99
77) 1,2,4-trichlorobenzene	23.05	180	12115m	0.25	ppb	
78) Naphthalene	23.27	128	37154m	0.26	ppb	
79) Hexachloro-1,3-butadiene	23.40	225	33694	0.27	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR011510.D A116_1UG.M Wed Feb 05 10:12:33 2020 MSD1

Data File : C:\HPCHEM\1\DATA\AR011510.D
Acq On : 17 Jan 2020 3:03 am
Sample : ALUG 0.30
Misc : AL14_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 17 11:03 2020

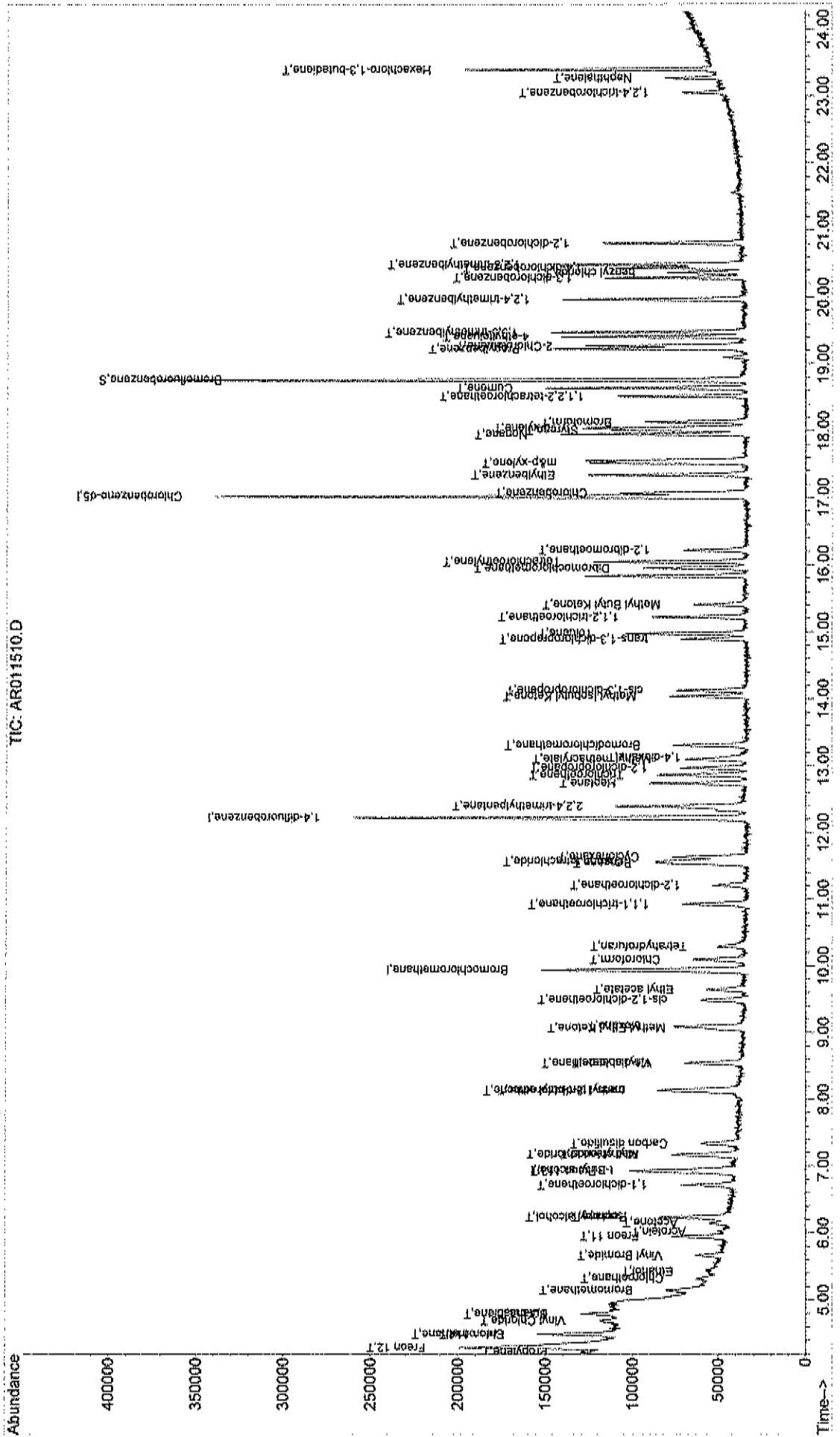
Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

```

Method      : C:\HPCHEM\1\METHODS\All6_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.1

```



Data File : C:\HPCHEM\1\DATA\AR011511.D

Vial: 10

Acq On : 17 Jan 2020 3:49 am

Operator: RJP

Sample : A1UG_0.15

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:54:10 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	52248	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	249518	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	211716	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	143174	0.96	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	96.00%

Target Compounds

						Qvalue
2) Propylene	4.23	41	4604m	0.13	ppb	
3) Freon 12	4.28	85	20999	0.15	ppb	96
4) Chloromethane	4.48	50	4552	0.15	ppb	97
5) Freon 114	4.49	85	13415	0.13	ppb	94
6) Vinyl Chloride	4.69	62	4889m	0.15	ppb	
7) Butane	4.79	43	11443m	0.15	ppb	
8) 1,3-butadiene	4.78	39	5966m	0.14	ppb	
9) Bromomethane	5.14	94	8210	0.15	ppb	# 70
10) Chloroethane	5.32	64	4442	0.15	ppb	94
11) Ethanol	5.43	45	3572m	0.17	ppb	
12) Acrolein	6.01	56	2934m	0.12	ppb	
13) Vinyl Bromide	5.67	106	8746	0.14	ppb	92
14) Freon 11	5.95	101	19951	0.13	ppb	92
15) Acetone	6.14	58	4538	0.15	ppb	# 100
16) Pentane	6.23	42	9749	0.16	ppb	96
17) Isopropyl alcohol	6.24	45	15734	0.16	ppb	92
18) 1,1-dichloroethene	6.72	96	7997m	0.13	ppb	
19) Freon 113	6.92	101	17034	0.13	ppb	95
20) t-Butyl alcohol	6.95	59	17025	0.14	ppb	# 77
21) Methylene chloride	7.18	84	8234	0.15	ppb	97
22) Allyl chloride	7.16	41	11451	0.15	ppb	98
23) Carbon disulfide	7.34	76	24002	0.14	ppb	98
24) trans-1,2-dichloroethene	8.12	61	12338	0.14	ppb	97
25) methyl tert-butyl ether	8.15	73	24697	0.14	ppb	90
26) 1,1-dichloroethane	8.55	63	15713	0.14	ppb	99
27) Vinyl acetate	8.54	43	19385	0.14	ppb	99
28) Methyl Ethyl Ketone	9.05	72	3894	0.14	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	11646	0.14	ppb	92
30) Hexane	9.09	57	13545	0.13	ppb	98
31) Ethyl acetate	9.64	43	18738	0.14	ppb	96
32) Chloroform	10.09	83	17526	0.13	ppb	99
33) Tetrahydrofuran	10.29	42	8756	0.15	ppb	100
34) 1,2-dichloroethane	11.22	62	11081	0.14	ppb	96
36) 1,1,1-trichloroethane	10.93	97	18191	0.14	ppb	99
37) Cyclohexane	11.63	56	14144	0.15	ppb	# 79
38) Carbon tetrachloride	11.56	117	18561	0.14	ppb	95
39) Benzene	11.54	78	25532	0.14	ppb	99
40) Methyl methacrylate	13.10	41	12710	0.17	ppb	90
41) 1,4-dioxane	13.14	88	5643	0.15	ppb	96
42) 2,2,4-trimethylpentane	12.39	57	42686	0.14	ppb	96
43) Heptane	12.73	43	15720	0.15	ppb	97
44) Trichloroethene	12.87	130	11567	0.14	ppb	96
45) 1,2-dichloropropane	12.97	63	11040	0.16	ppb	100

(#)=qualifier out of range (m)=manual integration

Data File : C:\HPCHEM\1\DATA\AR011511.D

Vial: 10

Acq On : 17 Jan 2020 3:49 am

Operator: RJP

Sample : A1UG_0.15

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:54:10 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.30	83	18577	0.14	ppb	96
47) cis-1,3-dichloropropene	14.12	75	14922	0.13	ppb	94
48) trans-1,3-dichloropropene	14.89	75	12371	0.13	ppb	93
49) 1,1,2-trichloroethane	15.22	97	11011	0.14	ppb	98
51) Toluene	14.97	92	18886	0.14	ppb	97
52) Methyl Isobutyl Ketone	14.03	43	20059	0.15	ppb	94
53) Dibromochloromethane	15.95	129	18801	0.14	ppb	98
54) Methyl Butyl Ketone	15.41	43	14174	0.14	ppb	86
55) 1,2-dibromoethane	16.22	107	15763	0.13	ppb	95
56) Tetrachloroethylene	16.05	164	11577	0.14	ppb	95
57) Chlorobenzene	17.07	112	23592	0.14	ppb	98
58) Ethylbenzene	17.34	91	40749	0.14	ppb	99
59) m&p-xylene	17.52	91	60277	0.27	ppb	96
60) Nonane	17.95	43	22017	0.14	ppb	94
61) Styrene	18.02	104	21477	0.13	ppb	88
62) Bromoform	18.13	173	16820	0.13	ppb	98
63) o-xylene	18.05	91	31876	0.14	ppb	97
64) Cumene	18.64	105	44712	0.14	ppb	100
66) 1,1,2,2-tetrachloroethane	18.52	83	23457	0.15	ppb	98
67) Propylbenzene	19.22	120	11628	0.14	ppb	95
68) 2-Chlorotoluene	19.27	126	11415	0.14	ppb	# 88
69) 4-ethyltoluene	19.41	105	39130	0.14	ppb	98
70) 1,3,5-trimethylbenzene	19.48	105	36133	0.14	ppb	98
71) 1,2,4-trimethylbenzene	19.97	105	35035	0.14	ppb	99
72) 1,3-dichlorobenzene	20.29	146	18796	0.15	ppb	93
73) benzyl chloride	20.37	91	17428	0.14	ppb	99
74) 1,4-dichlorobenzene	20.45	146	17381	0.16	ppb	95
75) 1,2,3-trimethylbenzene	20.49	105	36487	0.14	ppb	97
76) 1,2-dichlorobenzene	20.81	146	19421	0.14	ppb	95
77) 1,2,4-trichlorobenzene	23.06	180	5823m	0.12	ppb	
78) Naphthalene	23.28	128	19505m	0.14	ppb	
79) Hexachloro-1,3-butadiene	23.40	225	15442	0.13	ppb	93

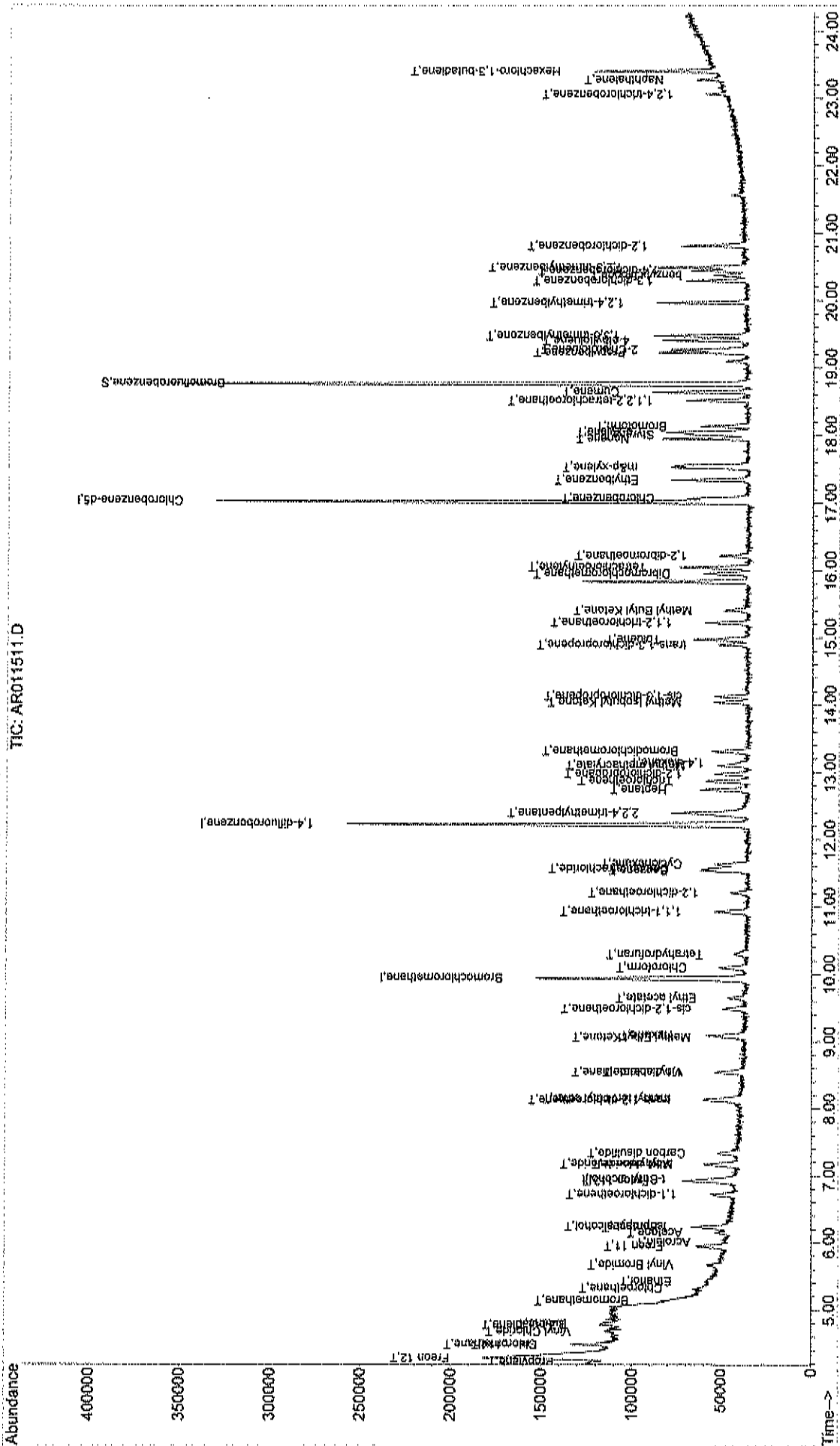
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR011511.D A116_1UG.M Wed Feb 05 10:12:37 2020 MSD1

Data File : C:\HPCHEM\1\DATA\AR011511.D
Acq On : 17 Jan 2020 3:49 am
Sample : ALUG 0.15
Misc : AL14_LUG
MMS Integration Params: RTEINT.P
Quant Time: Jan 17 11:05 2020

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116 LUG.RES

```
Method : C:\HPCHEM\1\METHODS\All6_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D
```



Data File : C:\HPCHEM\1\DATA\AR011512.D

Vial: 11

Acq On : 17 Jan 2020 4:34 am

Operator: RJP

Sample : A1UG_0.10

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:54:32 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	50970	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	249262	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	209258	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	127093m	0.87	ppb	0.00
Spiked Amount	1.000	Range	70 ~ 130	Recovery	=	87.00%

Target Compounds

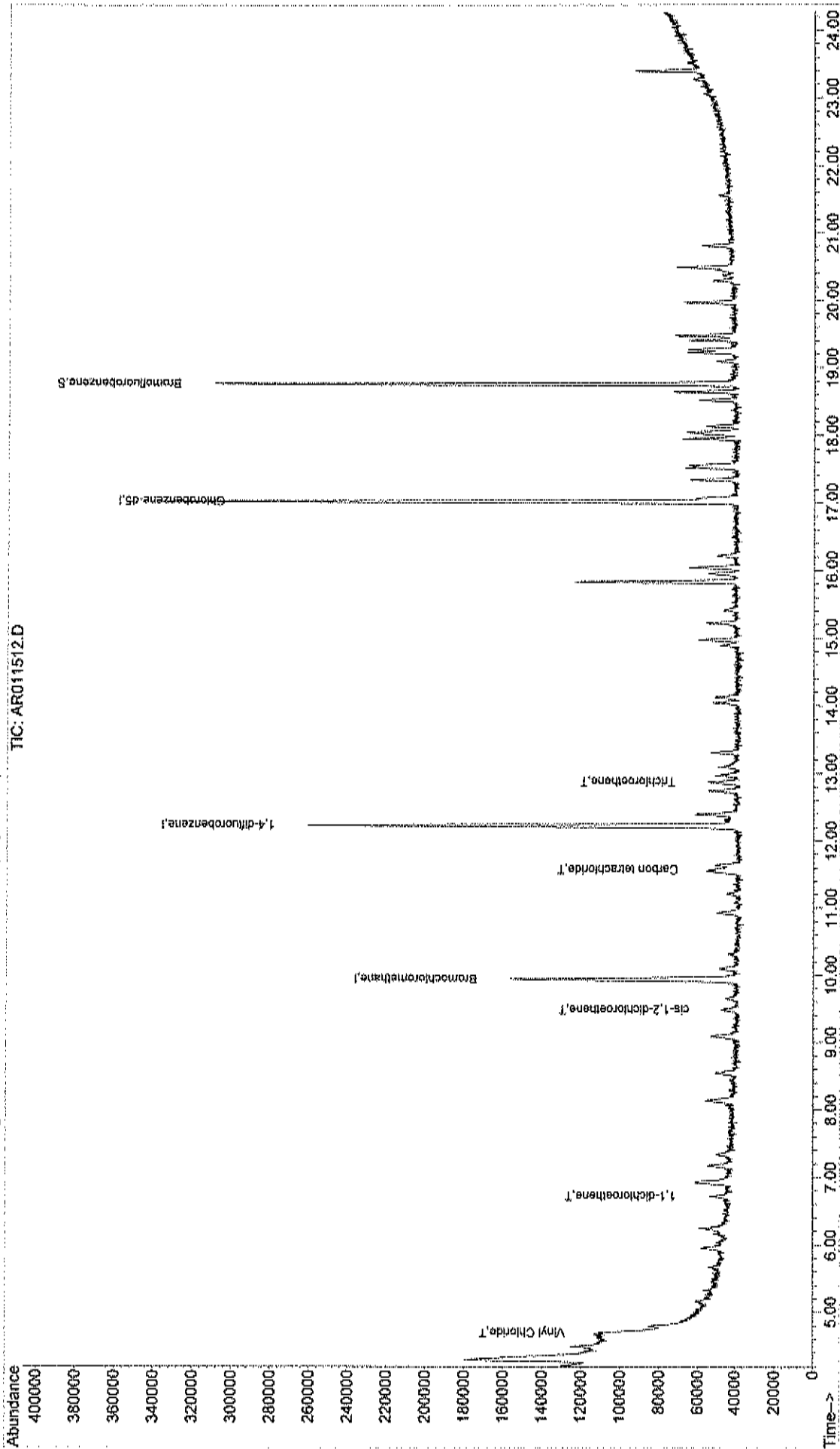
						Qvalue
6) Vinyl Chloride	4.69	62	3717m	0.12	ppb	
18) 1,1-dichloroethene	6.71	96	5650	0.09	ppb	92
29) cis-1,2-dichloroethene	9.48	61	7391	0.09	ppb	95
38) Carbon tetrachloride	11.58	117	12164	0.09	ppb	97
44) Trichloroethene	12.86	130	7239	0.09	ppb	93

Data File : C:\HPCHEM\1\DATA\AR011512.D
Acq On : 17 Jan 2020 4:34 am
Sample : A1UG 0.10
Misc : A114_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 17 11:06 2020

Vial: 11
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : 10-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D



Data File : C:\HPCHEM\1\DATA\AR011513.D

Vial: 12

Acq On : 17 Jan 2020 5:19 am

Operator: RJP

Sample : A1UG_0.04

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:54:51 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	52314	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	250904	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	212758	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	130289	0.87	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	87.00%

Target Compounds

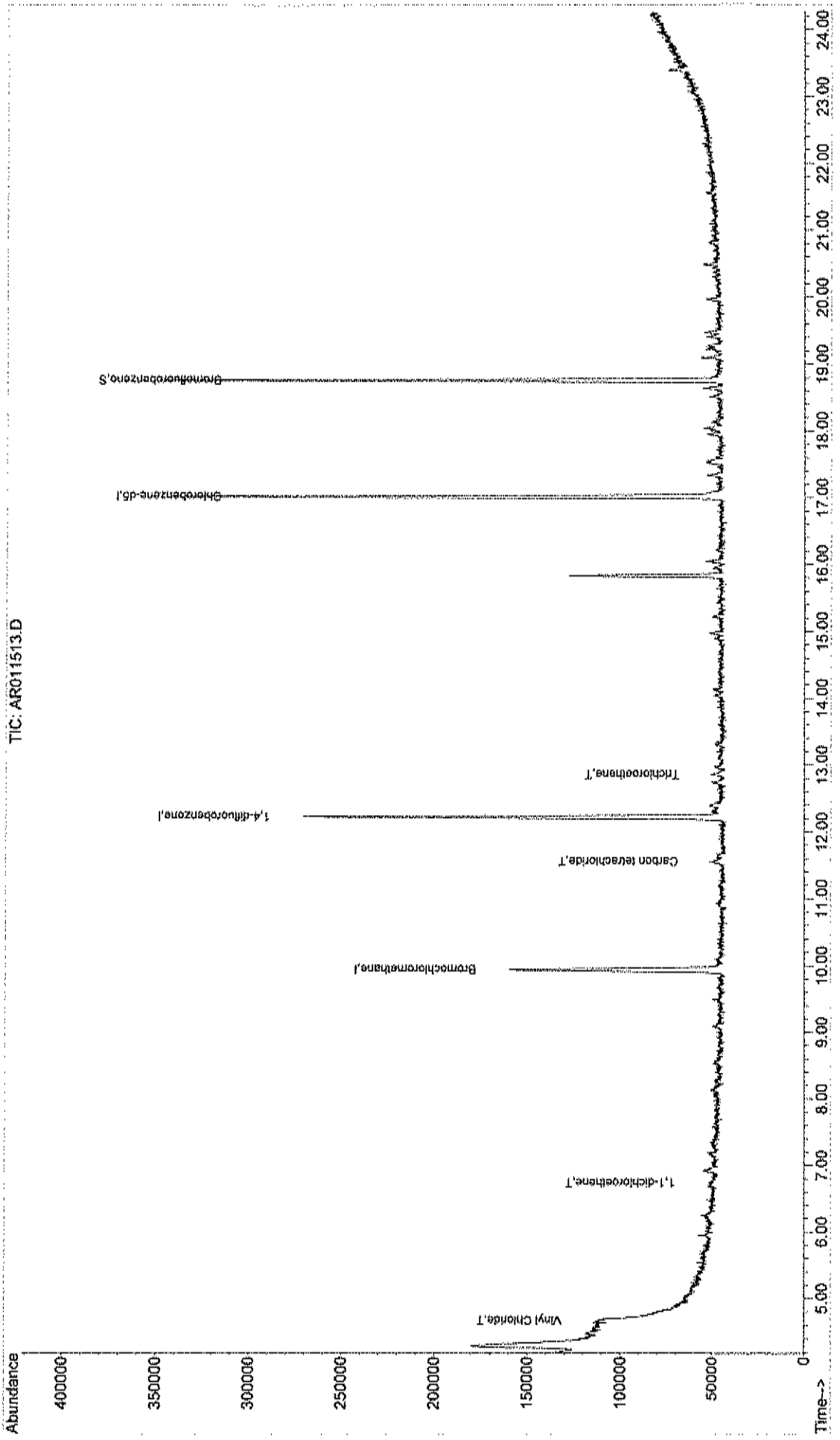
	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	4.68	62	1357m	0.04	ppb	
18) 1,1-dichloroethene	6.73	96	2415m	0.04	ppb	
38) Carbon tetrachloride	11.56	117	4848m	0.04	ppb	
44) Trichloroethene	12.86	130	2539m	0.03	ppb	

Data File : C:\HPCHEM\1\DATA\AR011513.D
Acq On : 17 Jan 2020 5:19 am
Sample : A1UG_0.04
Misc : A114_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 17 11:08 2020

Vial: 12
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D



Data File : C:\HPCHEM\1\DATA\AR011514.D

Vial: 13

Acq On : 17 Jan 2020 6:03 am

Operator: RJP

Sample : A1UG_0.03

Inst : MSD #1

Misc : A114_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 17 10:55:10 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 10:50:25 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.94	128	52646	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	251204	1.00	ppb	0.00
50) Chlorobenzene-d5	17.02	117	211927	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	129883	0.87	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	87.00%

Target Compounds

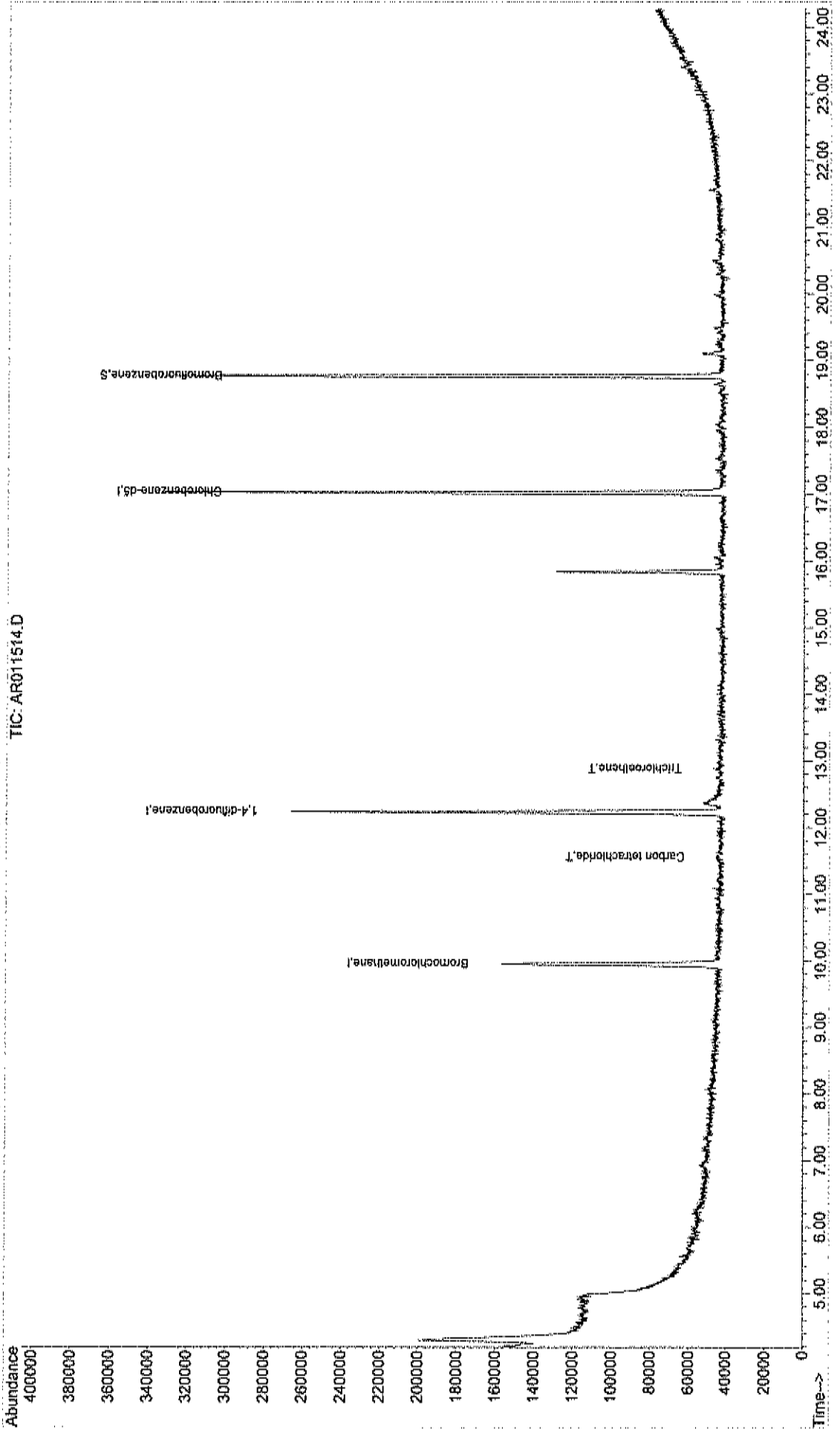
	R.T.	QIon	Response	Conc	Units	Qvalue
38) Carbon tetrachloride	11.56	117	3864m	0.03	ppb	
44) Trichloroethene	12.87	130	1739m	0.02	ppb	

Data File : C:\HPCHEM\1\DATA\AR011514.D
 Acq On : 17 Jan 2020 6:03 am
 Sample : AIUG_0.03
 Misc : AI14_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 17 11:09 2020

Vial: 13
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR011507.D



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CALIBRATION VERIFICATION

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AR012002.D
 Acq On : 20 Jan 2020 10:48 am
 Sample : A1UG_1.0
 Misc : A116_1UG
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	102	0.00
2 T	Propylene	0.683	0.654	4.2	90	0.00
3 T	Freon 12	2.620	2.660	-1.5	103	0.00
4 T	Chloromethane	0.607	0.482	20.6	82	0.00
5 T	Freon 114	1.900	1.838	3.3	95	0.00
6 T	Vinyl Chloride	0.638	0.551	13.6	88	0.00
7 T	Butane	1.305	0.536	58.9#	42#	0.00
8 T	1,3-butadiene	0.765	0.645	15.7	79	0.00
9 T	Bromomethane	1.064	0.881	17.2	83	0.00
10 T	Chloroethane	0.564	0.527	6.6	94	0.00
11 T	Ethanol	0.419	0.355	15.3	89	0.00
12 T	Acrolein	0.421	0.356	15.4	80	0.00
13 T	Vinyl Bromide	1.126	1.179	-4.7	102	0.00
14 T	Freon 11	2.770	2.849	-2.9	100	0.00
15 T	Acetone	0.581	0.552	5.0	96	0.00
16 T	Pentane	1.207	1.017	15.7	86	0.00
17 T	Isopropyl alcohol	1.843	1.646	10.7	91	0.00
18 T	1,1-dichloroethene	1.138	1.201	-5.5	103	0.00
19 T	Freon 113	2.338	2.444	-4.5	102	0.00
20 t	t-Butyl alcohol	2.327	2.075	10.8	88	0.00
21 T	Methylene chloride	1.033	1.040	-0.7	101	0.00
22 T	Allyl chloride	1.465	1.177	19.7	81	0.00
23 T	Carbon disulfide	3.266	3.221	1.4	97	0.00
24 T	trans-1,2-dichloroethene	1.636	1.534	6.2	93	0.00
25 T	methyl tert-butyl ether	3.243	3.022	6.8	91	0.00
26 T	1,1-dichloroethane	2.042	1.894	7.2	92	0.00
27 T	Vinyl acetate	2.514	2.039	18.9	80	0.00
28 T	Methyl Ethyl Ketone	0.555	0.543	2.2	100	0.00
29 T	cis-1,2-dichloroethene	1.548	1.439	7.0	90	0.00
30 T	Hexane	1.935	1.758	9.1	88	0.00
31 T	Ethyl acetate	2.497	2.152	13.8	86	0.00
32 T	Chloroform	2.419	2.418	0.0	98	0.00
33 T	Tetrahydrofuran	1.139	0.981	13.9	88	0.00
34 T	1,2-dichloroethane	1.496	1.354	9.5	89	0.00
35 I	1,4-difluorobenzene	1.000	1.000	0.0	98	0.00
36 T	1,1,1-trichloroethane	0.513	0.515	-0.4	97	0.00
37 T	Cyclohexane	0.383	0.353	7.8	89	0.00
38 T	Carbon tetrachloride	0.524	0.533	-1.7	96	0.00
39 T	Benzene	0.733	0.736	-0.4	96	0.00
40 T	Methyl methacrylate	0.322	0.270	16.1	86	0.00
41 T	1,4-dioxane	0.151	0.151	0.0	98	0.00
42 T	2,2,4-trimethylpentane	1.189	1.073	9.8	87	0.00
43 T	Heptane	0.432	0.361	16.4	82	0.00
44 T	Trichloroethene	0.312	0.370	-18.6	106	0.00
45 T	1,2-dichloropropane	0.288	0.266	7.6	91	0.00
46 T	Bromodichloromethane	0.535	0.523	2.2	94	0.00
47 T	cis-1,3-dichloropropene	0.446	0.443	0.7	95	0.00
48 T	trans-1,3-dichloropropene	0.378	0.375	0.8	97	0.00
49 T	1,1,2-trichloroethane	0.308	0.322	-4.5	102	0.00

(#) = Out of Range

AR012002.D A116_1UG.M

Wed Feb 05 10:13:18 2020

MSD1

Page 1

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AR012002.D
 Acq On : 20 Jan 2020 10:48 am
 Sample : A1UG_1.0
 Misc : A116_1UG
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Feb 05 10:00:22 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51 T	Toluene	0.611	0.615	-0.7	99	0.00
52 T	Methyl Isobutyl Ketone	0.620	0.504	18.7	81	0.00
53 T	Dibromochloromethane	0.632	0.648	-2.5	99	0.00
54 T	Methyl Butyl Ketone	0.474	0.432	8.9	87	0.00
55 T	1,2-dibromoethane	0.534	0.570	-6.7	102	0.00
56 T	Tetrachloroethylene	0.397	0.432	-8.8	106	0.00
57 T	Chlorobenzene	0.799	0.852	-6.6	103	0.00
58 T	Ethylbenzene	1.341	1.329	0.9	97	0.00
59 T	m&p-xylene	1.030	1.025	0.5	97	0.00
60 T	Nonane	0.724	0.602	16.9	83	0.00
61 T	Styrene	0.766	0.797	-4.0	102	0.00
62 T	Bromoform	0.587	0.589	-0.3	97	0.00
63 T	o-xylene	1.057	1.051	0.6	97	0.00
64 T	Cumene	1.497	1.538	-2.7	100	0.00
65 S	Bromofluorobenzene	0.668	0.677	-1.3	96	0.00
66 T	1,1,2,2-tetrachloroethane	0.759	0.769	-1.3	102	0.00
67 T	Propylbenzene	0.402	0.428	-6.5	106	0.00
68 T	2-Chlorotoluene	0.368	0.394	-7.1	105	0.00
69 T	4-ethyltoluene	1.338	1.419	-6.1	106	0.00
70 T	1,3,5-trimethylbenzene	1.219	1.242	-1.9	100	0.00
71 T	1,2,4-trimethylbenzene	1.181	1.207	-2.2	99	0.00
72 T	1,3-dichlorobenzene	0.633	0.795	-25.6	134	0.00
73 T	benzyl chloride	0.617	0.746	-20.9	127	0.00
74 T	1,4-dichlorobenzene	0.567	0.754	-33.0#	148	0.00
75 T	1,2,3-trimethylbenzene	1.219	1.240	-1.7	99	0.00
76 T	1,2-dichlorobenzene	0.656	0.765	-16.6	118	0.00
77 T	1,2,4-trichlorobenzene	0.215	0.300	-39.5#	133	0.00
78 T	Naphthalene	0.652	0.807	-23.8	123	0.00
79 T	Hexachloro-1,3-butadiene	0.555	0.653	-17.7	114	0.00

Data File : C:\HPCHEM\1\DATA\AR012002.D

Vial: 2

Acq On : 20 Jan 2020 10:48 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:08 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	51836	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	250647	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	221226	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	149833	1.01	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	101.00%

Target Compounds

						Qvalue
2) Propylene	4.23	41	33897	0.96	ppb	96
3) Freon 12	4.28	85	137891	1.02	ppb	97
4) Chloromethane	4.48	50	25010	0.79	ppb	97
5) Freon 114	4.49	85	95290	0.97	ppb	96
6) Vinyl Chloride	4.68	62	28552	0.86	ppb	98
7) Butane	4.79	43	27809	0.41	ppb	94
8) 1,3-butadiene	4.79	39	33453m	0.84	ppb	
9) Bromomethane	5.15	94	45661	0.83	ppb	93
10) Chloroethane	5.31	64	27298	0.93	ppb	94
11) Ethanol	5.42	45	18408	0.85	ppb	88
12) Acrolein	6.01	56	18474	0.85	ppb	97
13) Vinyl Bromide	5.66	106	61089	1.05	ppb	100
14) Freon 11	5.94	101	147670	1.03	ppb	98
15) Acetone	6.12	58	28591	0.95	ppb	# 100
16) Pentane	6.23	42	52714	0.84	ppb	92
17) Isopropyl alcohol	6.23	45	85337	0.89	ppb	# 86
18) 1,1-dichloroethene	6.72	96	62278	1.06	ppb	# 89
19) Freon 113	6.91	101	126675	1.05	ppb	98
20) t-Butyl alcohol	6.94	59	107536	0.89	ppb	# 90
21) Methylene chloride	7.17	84	53922	1.01	ppb	94
22) Allyl chloride	7.16	41	61031	0.80	ppb	90
23) Carbon disulfide	7.33	76	166989	0.99	ppb	99
24) trans-1,2-dichloroethene	8.12	61	79513	0.94	ppb	91
25) methyl tert-butyl ether	8.13	73	156661	0.93	ppb	85
26) 1,1-dichloroethane	8.55	63	98188	0.93	ppb	99
27) Vinyl acetate	8.53	43	105671	0.81	ppb	98
28) Methyl Ethyl Ketone	9.04	72	28126	0.98	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	74600	0.93	ppb	88
30) Hexane	9.09	57	91103	0.91	ppb	87
31) Ethyl acetate	9.63	43	111570	0.86	ppb	96
32) Chloroform	10.09	83	125340	1.00	ppb	97
33) Tetrahydrofuran	10.27	42	50839	0.86	ppb	93
34) 1,2-dichloroethane	11.20	62	70179	0.91	ppb	99
36) 1,1,1-trichloroethane	10.92	97	129027	1.00	ppb	98
37) Cyclohexane	11.63	56	88592	0.92	ppb	83
38) Carbon tetrachloride	11.57	117	133713	1.02	ppb	99
39) Benzene	11.53	78	184594	1.00	ppb	98
40) Methyl methacrylate	13.09	41	67784	0.84	ppb	88
41) 1,4-dioxane	13.12	88	37870	1.00	ppb	93
42) 2,2,4-trimethylpentane	12.39	57	269052	0.90	ppb	92
43) Heptane	12.73	43	90551	0.84	ppb	95
44) Trichloroethene	12.86	130	92701	1.19	ppb	97
45) 1,2-dichloropropane	12.97	63	66771	0.93	ppb	96

(#)=qualifier out of range (m)=manual integration

AR012002.D A116_1UG.M

Wed Feb 05 10:13:25 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR012002.D
 Acq On : 20 Jan 2020 10:48 am
 Sample : A1UG_1.0
 Misc : A116_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Jan 21 08:35:08 2020

Vial: 2
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 17 11:14:36 2020
 Response via : Initial Calibration
 DataAcq Meth : 1UG_ENT

Compound	R.T.	Qion	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.30	83	131187	0.98	ppb	99
47) cis-1,3-dichloropropene	14.12	75	111013	0.99	ppb	98
48) trans-1,3-dichloropropene	14.89	75	94032	0.99	ppb	94
49) 1,1,2-trichloroethane	15.22	97	80789	1.05	ppb	99
51) Toluene	14.97	92	135950	1.01	ppb	97
52) Methyl Isobutyl Ketone	14.03	43	111587	0.81	ppb	94
53) Dibromochloromethane	15.95	129	143292	1.03	ppb	99
54) Methyl Butyl Ketone	15.40	43	95676	0.91	ppb	87
55) 1,2-dibromoethane	16.22	107	126111	1.07	ppb	98
56) Tetrachloroethylene	16.04	164	95572	1.09	ppb	97
57) Chlorobenzene	17.07	112	188500	1.07	ppb	97
58) Ethylbenzene	17.34	91	294006	0.99	ppb	97
59) m&p-xylene	17.52	91	453490	1.99	ppb	96
60) Nonane	17.95	43	133284	0.83	ppb	93
61) Styrene	18.01	104	176292	1.04	ppb	90
62) Bromoform	18.13	173	130371	1.00	ppb	100
63) o-xylene	18.05	91	232475	0.99	ppb	95
64) Cumene	18.64	105	340311	1.03	ppb	97
66) 1,1,2,2-tetrachloroethane	18.52	83	170097	1.01	ppb	100
67) Propylbenzene	19.23	120	94705	1.06	ppb	83
68) 2-Chlorotoluene	19.27	126	87256	1.07	ppb	# 88
69) 4-ethyltoluene	19.41	105	313869	1.06	ppb	98
70) 1,3,5-trimethylbenzene	19.47	105	274730	1.02	ppb	97
71) 1,2,4-trimethylbenzene	19.97	105	267114	1.02	ppb	96
72) 1,3-dichlorobenzene	20.29	146	175958	1.26	ppb	99
73) benzyl chloride	20.37	91	165041	1.21	ppb	99
74) 1,4-dichlorobenzene	20.44	146	166817	1.33	ppb	97
75) 1,2,3-trimethylbenzene	20.49	105	274318	1.02	ppb	98
76) 1,2-dichlorobenzene	20.80	146	169194	1.17	ppb	98
77) 1,2,4-trichlorobenzene	22.96	180	66296m	1.39	ppb	
78) Naphthalene	23.17	128	178428	1.24	ppb	98
79) Hexachloro-1,3-butadiene	23.30	225	144561	1.18	ppb	91

Data File : C:\HPCHEM\1\DATA\ARC12002.D
Acq On : 20 Jan 2020 10:48 am
Sample : AUG_1.0
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 21 9:08 2020

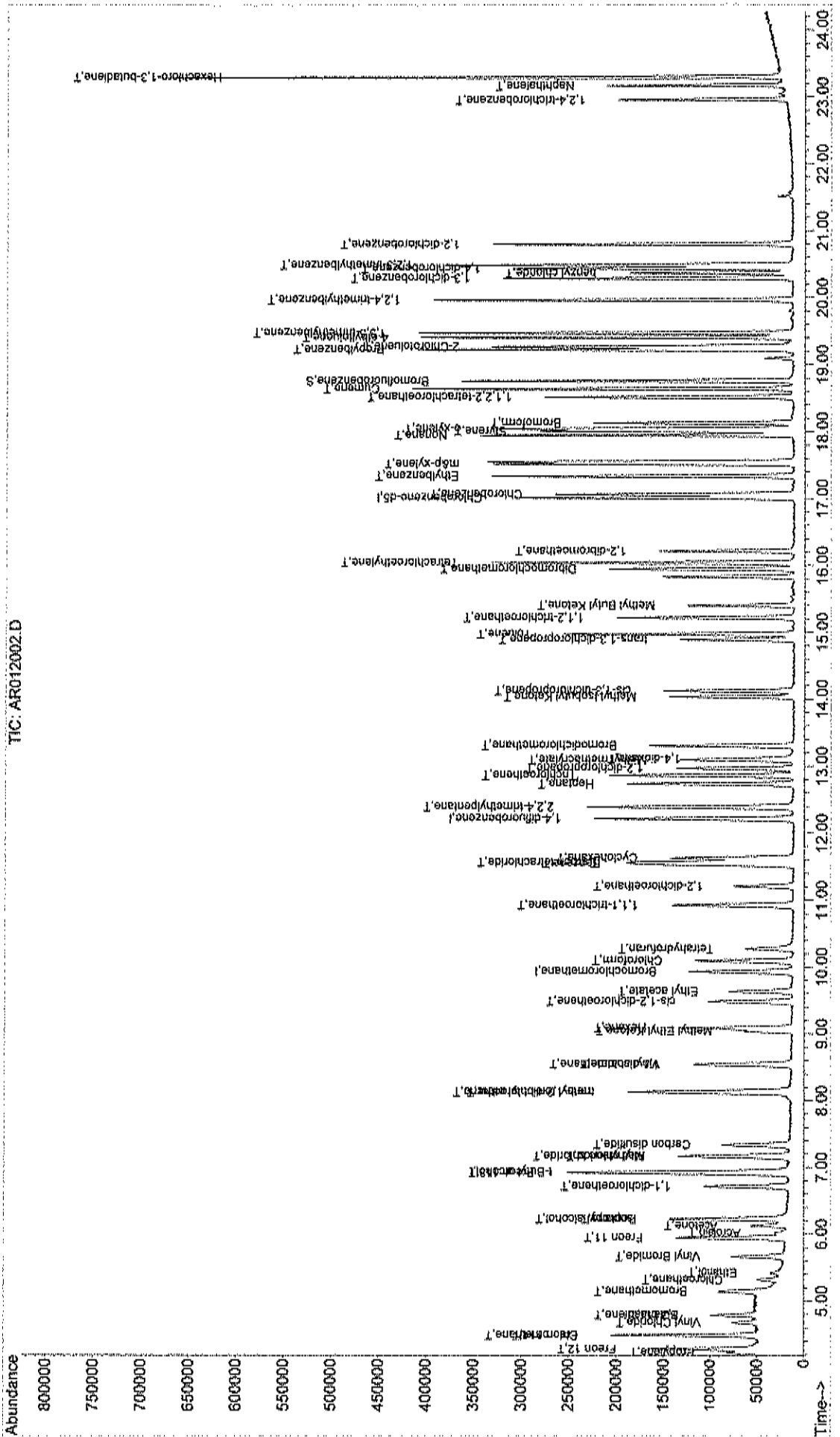
Vial: 2
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

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Method      : C:\HPCHEM\1\METHODS\All6_IUG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Feb 05 10:00:22 2020
Response via : Initial Calibration

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AR012002.D A116_1UG.M Wed Feb 05 10:13:27 2020 MSD1

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW DATA

Data File : C:\HPCHEM\1\DATA\AR011501.D

Vial: 1

Acq On : 16 Jan 2020 7:48 pm

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

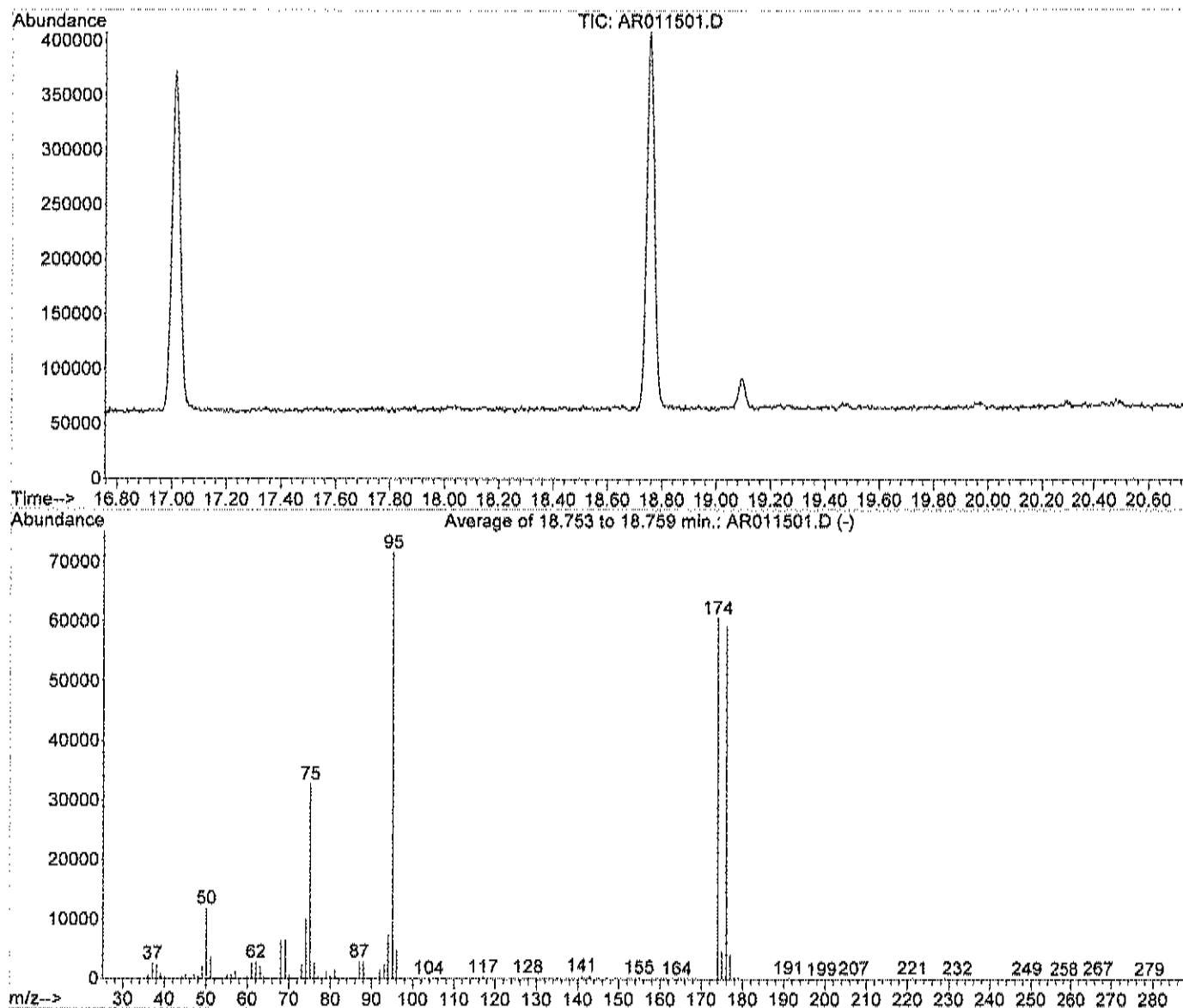
Misc : A114 1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 18.753 to 18.759 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	16.6	11893	PASS
75	95	30	66	45.8	32824	PASS
95	95	100	100	100.0	71688	PASS
96	95	5	9	6.9	4913	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	84.7	60690	PASS
175	174	4	9	7.8	4730	PASS
176	174	95	101	97.8	59371	PASS
177	176	5	9	7.0	4178	PASS

Data File : C:\HPCHEM\1\DATA\AR012001.D

Vial: 1

Acq On : 20 Jan 2020 10:01 am

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

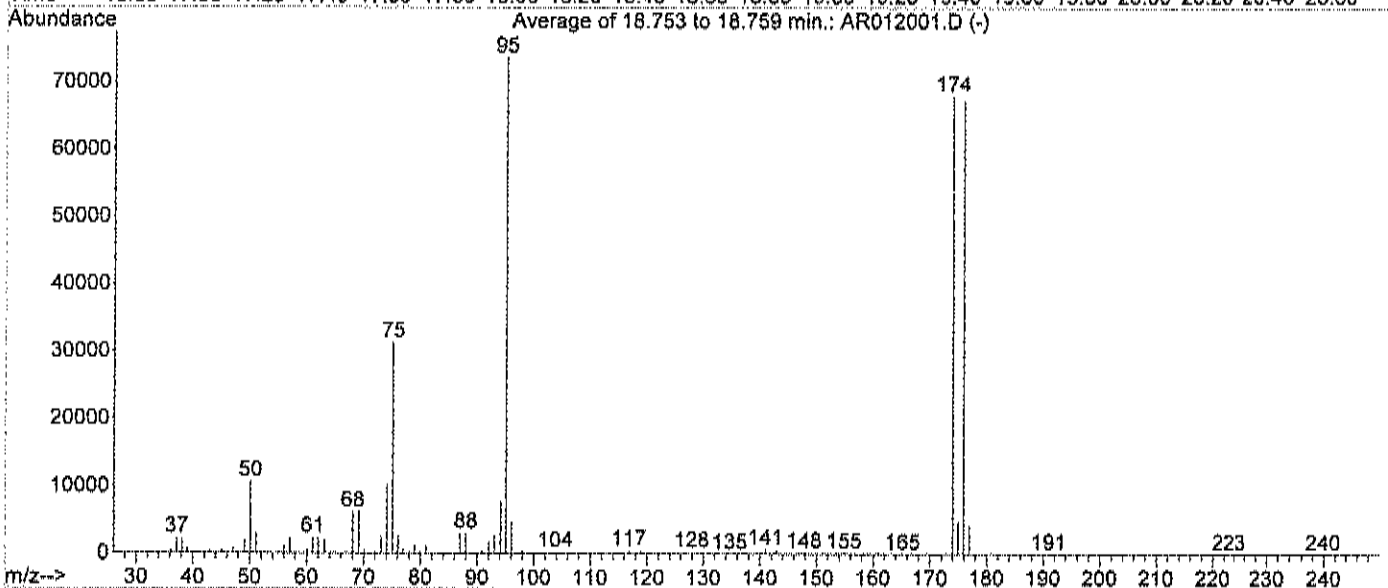
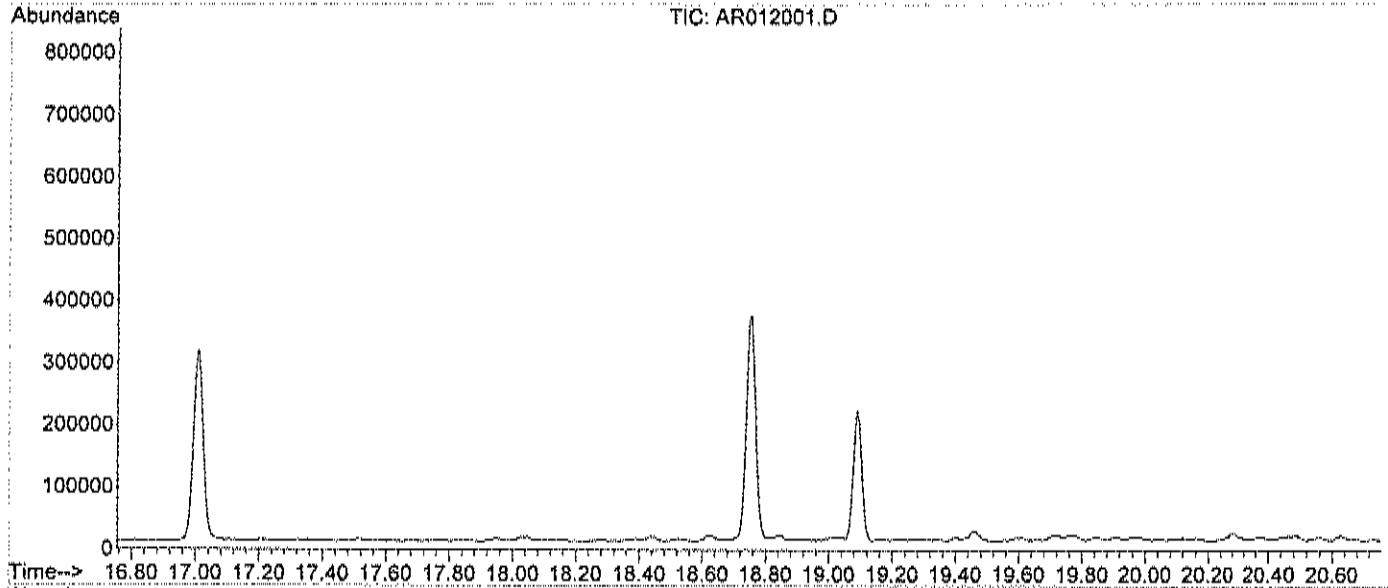
Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 18.753 to 18.759 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.4	10650	PASS
75	95	30	66	42.5	31315	PASS
95	95	100	100	100.0	73743	PASS
96	95	5	9	6.4	4702	PASS
173	174	0.00	2	0.3	178	PASS
174	95	50	120	92.4	68104	PASS
175	174	4	9	7.0	4736	PASS
176	174	95	101	98.8	67317	PASS
177	176	5	9	6.2	4193	PASS

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW QC DATA



CENTEK LABORATORIES, LLC

Date: 05-Feb-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc

Work Order: C2001030

Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: AMB1UG-012020	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.040	0.040									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									

Qualifiers:	J	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
	S	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
		Spike Recovery outside accepted recovery limits	DL	Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: AMB1UG-012020	SampleType: MBLK	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.030	0.030									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.040	0.040									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

Qualifiers:	J	S	Results reported are not blank corrected	Analyte detected below quantitation limit	Spike Recovery outside accepted recovery limits	E	Estimated Value above quantitation range	ND	Not Detected at the Limit of Detection	DL	Detection Limit	H	Holding times for preparation or analysis exceeded	R	RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apis

TestCode: 0.20_NYS

Sample ID: AMB1UG-012020	SampleType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.030	0.030									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.040	0.040									

Qualifiers:

.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

Data File : C:\HPCHEM\1\DATA\AR012004.D

Vial: 4

Acq On : 20 Jan 2020 12:39 pm

Operator: RJP

Sample : AMB1UG-012020

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:10 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	49286	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.21	114	235568	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	203879	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	132382	0.97	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	97.00%

Target Compounds

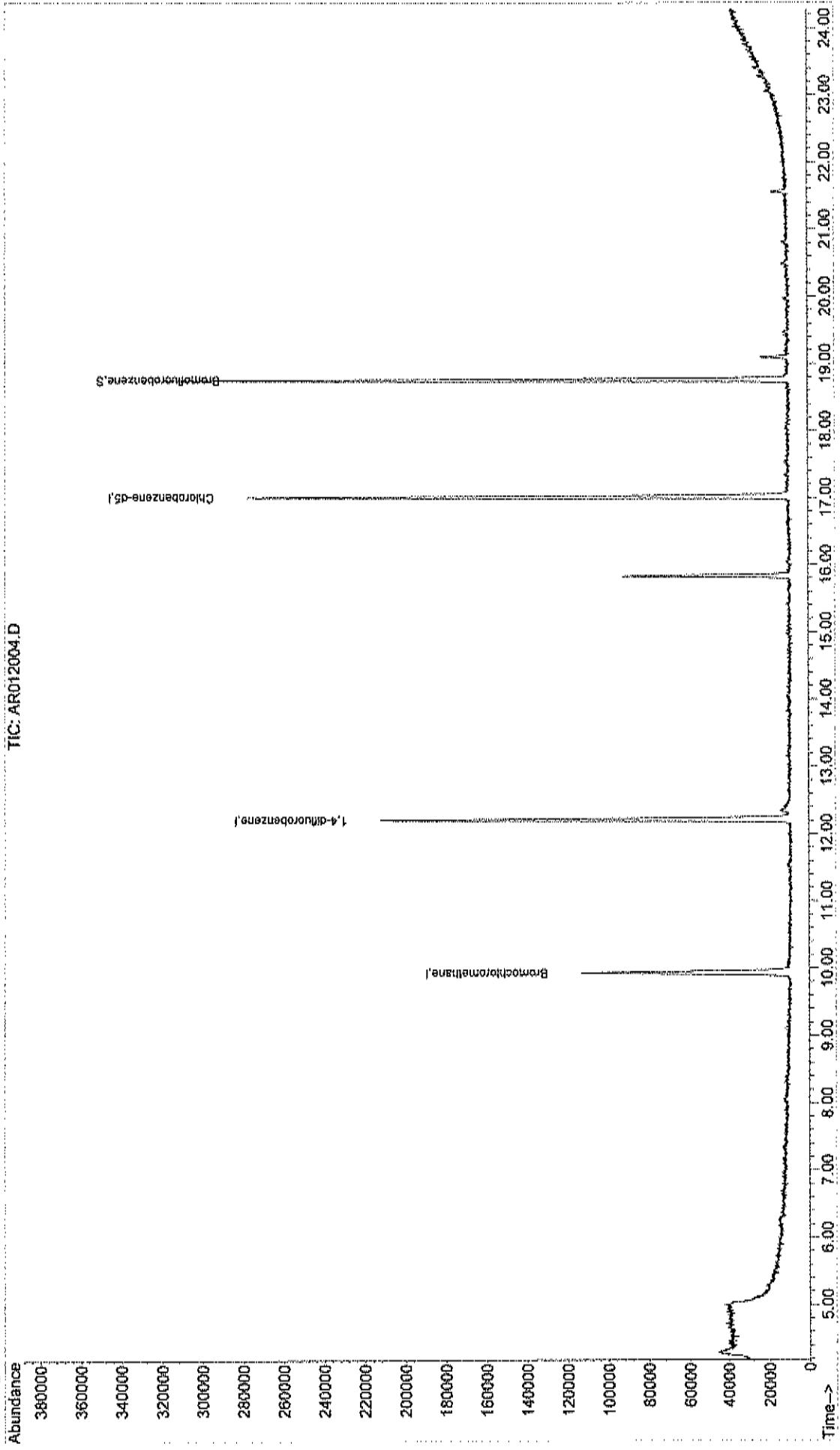
Qvalue

Data File : C:\HPCHEM\1\DATA\AR012004.D
Acq On : 20 Jan 2020 12:39 pm
Sample : AMB1UG-012020
Misc : A116_1UG
MS Integration Params: RTEINT.P
Quant Time: Jan 21 9:09 2020

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A116_1UG.RES

Method : C:\HPCHEM\1\METHODS\A124_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Feb 10 14:09:25 2020
Response via : Initial Calibration





Date: 05-Feb-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALCS1UG-012020	Sample Type: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181776						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0	100	70	130				
1,1,2,2-Tetrachloroethane	1.010	0.15	1	0	101	70	130				
1,1,2-Trichloroethane	1.040	0.15	1	0	104	70	130				
1,1-Dichloroethane	0.9100	0.15	1	0	91.0	70	130				
1,1-Dichloroethene	1.020	0.040	1	0	102	70	130				
1,2,4-Trichlorobenzene	1.620	0.15	1	0	162	70	130				
1,2,4-Trimethylbenzene	1.020	0.15	1	0	102	70	130				
1,2-Dibromoethane	1.060	0.15	1	0	106	70	130				
1,2-Dichlorobenzene	1.180	0.15	1	0	118	70	130				
1,2-Dichloroethane	0.8900	0.15	1	0	89.0	70	130				
1,2-Dichloropropane	0.9300	0.15	1	0	93.0	70	130				
1,3,5-Trimethylbenzene	1.010	0.15	1	0	101	70	130				
1,3-butadiene	0.7400	0.15	1	0	74.0	70	130				
1,3-Dichlorobenzene	1.270	0.15	1	0	127	70	130				
1,4-Dichlorobenzene	1.290	0.15	1	0	129	70	130				
1,4-Dioxane	1.000	0.30	1	0	100	70	130				
2,2,4-trimethylpentane	0.9000	0.15	1	0	90.0	70	130				
4-ethyltoluene	1.060	0.15	1	0	106	70	130				
Acetone	0.9100	0.30	1	0	91.0	70	130				
Allyl chloride	0.8000	0.15	1	0	80.0	70	130				
Benzene	1.000	0.15	1	0	100	70	130				
Benzyl chloride	1.210	0.15	1	0	121	70	130				
Bromodichloromethane	0.9600	0.15	1	0	96.0	70	130				
Bromoform	0.9800	0.15	1	0	98.0	70	130				
Bromomethane	0.7900	0.15	1	0	79.0	70	130				

Qualifiers: - Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
DL Detection Limit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALCS1UG-012020		SampType: LCS		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 15921	
Client ID: ZZZZZ		Batch ID: R15921		TestNo: TO-15				Analysis Date: 1/20/2020		SeqNo: 181776	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.9600	0.15	1	0	96.0	70	130				
Carbon tetrachloride	1.000	0.030	1	0	100	70	130				
Chlorobenzene	1.040	0.15	1	0	104	70	130				
Chloroethane	0.5100	0.15	1	0	51.0	70	130				S
Chloroform	0.9600	0.15	1	0	96.0	70	130				
Chloromethane	0.8000	0.15	1	0	80.0	70	130				
cis-1,2-Dichloroethene	0.9100	0.040	1	0	91.0	70	130				
cis-1,3-Dichloropropene	0.9800	0.15	1	0	98.0	70	130				
Cyclohexane	0.9000	0.15	1	0	90.0	70	130				
Dibromochloromethane	1.000	0.15	1	0	100	70	130				
Ethyl acetate	0.8500	0.15	1	0	85.0	70	130				
Ethylbenzene	0.9800	0.15	1	0	98.0	70	130				
Freon 11	1.010	0.15	1	0	101	70	130				
Freon 113	1.020	0.15	1	0	102	70	130				
Freon 114	0.9700	0.15	1	0	97.0	70	130				
Freon 12	0.9900	0.15	1	0	99.0	70	130				
Heptane	0.8500	0.15	1	0	85.0	70	130				
Hexachloro-1,3-butadiene	1.170	0.15	1	0	117	70	130				
Hexane	0.8900	0.15	1	0	89.0	70	130				
Isopropyl alcohol	0.8600	0.15	1	0	86.0	70	130				
m&p-Xylene	1.970	0.30	2	0	98.5	70	130				
Methyl Butyl Ketone	0.9100	0.30	1	0	91.0	70	130				
Methyl Ethyl Ketone	0.9500	0.30	1	0	95.0	70	130				
Methyl Isobutyl Ketone	0.8400	0.30	1	0	84.0	70	130				
Methyl tert-butyl ether	0.9100	0.15	1	0	91.0	70	130				
Methylene chloride	0.9800	0.15	1	0	98.0	70	130				
o-Xylene	0.9800	0.15	1	0	98.0	70	130				
Propylene	1.000	0.15	1	0	100	70	130				
Styrene	1.030	0.15	1	0	103	70	130				
Tetrachloroethylene	1.080	0.15	1	0	108	70	130				
Tetrahydrofuran	0.8300	0.15	1	0	83.0	70	130				

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 R Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALCS1UG-012020	SampleType: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/20/2020	SeqNo: 181776						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	0.9800	0.15	1	0	98.0	70	130				
trans-1,2-Dichloroethene	0.9100	0.15	1	0	91.0	70	130				
trans-1,3-Dichloropropene	0.9600	0.15	1	0	96.0	70	130				
Trichloroethene	1.160	0.030	1	0	116	70	130				
Vinyl acetate	0.7900	0.15	1	0	79.0	70	130				
Vinyl Bromide	1.020	0.15	1	0	102	70	130				
Vinyl chloride	0.8100	0.040	1	0	81.0	70	130				

Sample ID: ALSC1UGD-012020	Sample Type: LCSD	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 15921						
Client ID: ZZZZZ	Batch ID: R15921	TestNo: TO-15		Analysis Date: 1/21/2020	SeqNo: 181777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.9600	0.15	1	0	96.0	70	130	1	4.08	30	
1,1,2,2-Tetrachloroethane	0.9900	0.15	1	0	99.0	70	130	1.01	2.00	30	
1,1,2-Trichloroethane	1.050	0.15	1	0	105	70	130	1.04	0.957	30	
1,1-Dichloroethane	0.9200	0.15	1	0	92.0	70	130	0.91	1.09	30	
1,1-Dichloroethene	1.050	0.040	1	0	105	70	130	1.02	2.90	30	
1,2,4-Trichlorobenzene	1.520	0.15	1	0	152	70	130	1.62	6.37	30	S
1,2,4-Trimethylbenzene	1.020	0.15	1	0	102	70	130	1.02			
1,2-Dibromethane	1.060	0.15	1	0	106	70	130	1.06	0	30	
1,2-Dichlorobenzene	1.180	0.15	1	0	118	70	130	1.18	0	30	
1,2-Dichloroethane	0.9100	0.15	1	0	91.0	70	130	0.89	2.22	30	
1,2-Dichloropropane	0.9300	0.15	1	0	93.0	70	130	0.93	0	30	
1,3,5-Trimethylbenzene	1.010	0.15	1	0	101	70	130	1.01	0	30	
1,3-butadiene	0.7600	0.15	1	0	76.0	70	130	0.74	2.67	30	
1,3-Dichlorobenzene	1.250	0.15	1	0	125	70	130	1.27	1.59	30	
1,4-Dichlorobenzene	1.290	0.15	1	0	129	70	130	1.29	0	30	
1,4-Dioxane	1.000	0.30	1	0	100	70	130	1	0	30	
2,2,4-trimethylpentane	0.9100	0.15	1	0	91.0	70	130	0.9	1.10	30	
4-ethyltoluene	1.070	0.15	1	0	107	70	130	1.06	0.939	30	

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 R Spike Recovery outside accepted recovery limits
 H RPD outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 DL Detection Limit

Holding times for preparation or analysis exceeded

CLIENT: Matrix Environmental Technologies, Inc
 Work Order: C2001030
 Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALSC1UGD-012020		SampType: LCSD		TestCode: 0.20_NYS		Units: ppbv		Prep Date:		RunNo: 15921	
Client ID: ZZZZZ		Batch ID: R15921		TestNo: TO-15		Analysis Date: 1/21/2020		SeqNo: 181777			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	1.020	0.30	1	0	102	70	130	0.91	11.4	30	
Allyl chloride	0.8000	0.15	1	0	80.0	70	130	0.8	0	30	
Benzene	0.9900	0.15	1	0	99.0	70	130	1	1.01	30	
Benzyl chloride	0.9800	0.15	1	0	98.0	70	130	1.21	21.0	30	
Bromodichloromethane	0.9100	0.15	1	0	91.0	70	130	0.96	5.35	30	
Bromoform	0.7800	0.15	1	0	78.0	70	130	0.98	22.7	30	
Bromomethane	0.7200	0.15	1	0	72.0	70	130	0.79	9.27	30	
Carbon disulfide	0.9500	0.15	1	0	95.0	70	130	0.96	1.05	30	
Carbon tetrachloride	0.8600	0.030	1	0	86.0	70	130	1	15.1	30	
Chlorobenzene	1.070	0.15	1	0	107	70	130	1.04	2.84	30	
Chloroethane	0.8700	0.15	1	0	87.0	70	130	0.51	52.2	30	R
Chloroform	0.9900	0.15	1	0	99.0	70	130	0.96	3.08	30	
Chloromethane	0.7400	0.15	1	0	74.0	70	130	0.8	7.79	30	
cis-1,2-Dichloroethane	0.9300	0.040	1	0	93.0	70	130	0.91	2.17	30	
cis-1,3-Dichloropropene	0.9600	0.15	1	0	96.0	70	130	0.98	2.06	30	
Cyclohexane	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Dibromochloromethane	0.8800	0.15	1	0	88.0	70	130	1	12.8	30	
Ethyl acetate	0.8400	0.15	1	0	84.0	70	130	0.85	1.18	30	
Ethylbenzene	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
Freon 11	1.020	0.15	1	0	102	70	130	1.01	0.985	30	
Freon 113	1.040	0.15	1	0	104	70	130	1.02	1.94	30	
Freon 114	0.9200	0.15	1	0	92.0	70	130	0.97	5.29	30	
Freon 12	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	
Heptane	0.8700	0.15	1	0	87.0	70	130	0.85	2.33	30	
Hexachloro-1,3-butadiene	1.180	0.15	1	0	118	70	130	1.17	0.851	30	
Hexane	0.9100	0.15	1	0	91.0	70	130	0.89	2.22	30	
Isopropyl alcohol	0.8000	0.15	1	0	80.0	70	130	0.86	7.23	30	
m&p-Xylene	2.000	0.30	2	0	100	70	130	1.97	1.51	30	
Methyl Butyl Ketone	0.9200	0.30	1	0	92.0	70	130	0.91	1.09	30	
Methyl Ethyl Ketone	0.9900	0.30	1	0	99.0	70	130	0.95	4.12	30	
Methyl Isobutyl Ketone	0.8400	0.30	1	0	84.0	70	130	0.84	0	30	

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 R Spike Recovery outside accepted recovery limits
 H RPD outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 DL Detection Limit

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2001030
Project: Aquino Lake Ave Apts

TestCode: 0.20_NYS

Sample ID: ALSC1UGD-012020		SampType: LCSD		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 15921			
Client ID: ZZZZZ		Batch ID: R15921		TestNo: TO-15		Analysis Date: 1/21/2020						SeqNo: 181777	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Methyl tert-butyl ether	0.9200	0.15	1	0	92.0	70	130	0.91	1.09	30			
Methylene chloride	0.9900	0.15	1	0	99.0	70	130	0.98	1.02	30			
o-Xylene	1.000	0.15	1	0	100	70	130	0.98	2.02	30			
Propylene	0.9400	0.15	1	0	94.0	70	130	1	6.19	30			
Styrene	1.050	0.15	1	0	105	70	130	1.03	1.92	30			
Tetrachloroethylene	1.110	0.15	1	0	111	70	130	1.08	2.74	30			
Tetrahydrofuran	0.8400	0.15	1	0	84.0	70	130	0.83	1.20	30			
Toluene	1.000	0.15	1	0	100	70	130	0.98	2.02	30			
trans-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130	0.91	2.17	30			
trans-1,3-Dichloropropene	0.9200	0.15	1	0	92.0	70	130	0.96	4.26	30			
Trichloroethene	1.180	0.030	1	0	118	70	130	1.16	1.71	30			
Vinyl acetate	0.7400	0.15	1	0	74.0	70	130	0.79	6.54	30			
Vinyl Bromide	1.020	0.15	1	0	102	70	130	1.02	0	30			
Vinyl chloride	0.7700	0.040	1	0	77.0	70	130	0.81	5.06	30			

Qualifiers:
 J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 DL Detection Limit

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Data File : C:\HPCHEM\1\DATA\AR012003.D

Vial: 3

Acq On : 20 Jan 2020 11:57 am

Operator: RJP

Sample : ALCS1UG-012020

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:09 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	50859	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	240167	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	212617	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.76	95	144718	1.02	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	102.00%

Target Compounds

						Qvalue
2) Propylene	4.24	41	34844	1.00	ppb	96
3) Freon 12	4.29	85	132500	0.99	ppb	99
4) Chloromethane	4.50	50	24818	0.80	ppb	99
5) Freon 114	4.50	85	93308	0.97	ppb	95
6) Vinyl Chloride	4.69	62	26307	0.81	ppb	95
7) Butane	4.80	43	27937	0.42	ppb	96
8) 1,3-butadiene	4.80	39	28768m	0.74	ppb	
9) Bromomethane	5.15	94	42684m	0.79	ppb	
10) Chloroethane	5.33	64	14635m	0.51	ppb	
11) Ethanol	5.43	45	23894m	1.12	ppb	
12) Acrolein	6.01	56	19024	0.89	ppb	91
13) Vinyl Bromide	5.67	106	58400	1.02	ppb	100
14) Freon 11	5.95	101	142321	1.01	ppb	98
15) Acetone	6.13	58	27029	0.91	ppb	# 100
16) Pentane	6.23	42	49473	0.81	ppb	92
17) Isopropyl alcohol	6.23	45	81021	0.86	ppb	# 85
18) 1,1-dichloroethene	6.72	96	58765	1.02	ppb	90
19) Freon 113	6.91	101	121035	1.02	ppb	99
20) t-Butyl alcohol	6.95	59	102036	0.86	ppb	# 86
21) Methylene chloride	7.17	84	51585	0.98	ppb	94
22) Allyl chloride	7.16	41	59562	0.80	ppb	93
23) Carbon disulfide	7.34	76	159624	0.96	ppb	99
24) trans-1,2-dichloroethene	8.12	61	75624	0.91	ppb	91
25) methyl tert-butyl ether	8.14	73	150856	0.91	ppb	86
26) 1,1-dichloroethane	8.55	63	94260	0.91	ppb	99
27) Vinyl acetate	8.53	43	101082	0.79	ppb	98
28) Methyl Ethyl Ketone	9.04	72	26766	0.95	ppb	# 100
29) cis-1,2-dichloroethene	9.49	61	71694	0.91	ppb	90
30) Hexane	9.09	57	87763	0.89	ppb	86
31) Ethyl acetate	9.64	43	108514	0.85	ppb	97
32) Chloroform	10.09	83	118283	0.96	ppb	98
33) Tetrahydrofuran	10.27	42	47980	0.83	ppb	93
34) 1,2-dichloroethane	11.21	62	67814	0.89	ppb	100
36) 1,1,1-trichloroethane	10.93	97	122548	1.00	ppb	98
37) Cyclohexane	11.63	56	83120	0.90	ppb	83
38) Carbon tetrachloride	11.57	117	125204	1.00	ppb	98
39) Benzene	11.53	78	175892	1.00	ppb	98
40) Methyl methacrylate	13.09	41	66369	0.86	ppb	91
41) 1,4-dioxane	13.12	88	36111	1.00	ppb	92
42) 2,2,4-trimethylpentane	12.39	57	256637	0.90	ppb	91
43) Heptane	12.74	43	88376	0.85	ppb	96
44) Trichloroethene	12.87	130	87023	1.16	ppb	98
45) 1,2-dichloropropane	12.97	63	64274	0.93	ppb	96

(#) = qualifier out of range (m) = manual integration

AR012003.D A124_1UG.M

Wed Feb 12 14:29:52 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR012003.D

Vial: 3

Acq On : 20 Jan 2020 11:57 am

Operator: RJP

Sample : ALCS1UG-012020

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:09 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

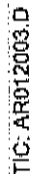
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.31	83	123681	0.96	ppb	100
47) cis-1,3-dichloropropene	14.12	75	104765	0.98	ppb	99
48) trans-1,3-dichloropropene	14.89	75	87502	0.96	ppb	95
49) 1,1,2-trichloroethane	15.22	97	76925	1.04	ppb	100
51) Toluene	14.97	92	126702	0.98	ppb	100
52) Methyl Isobutyl Ketone	14.03	43	110110	0.84	ppb	95
53) Dibromochloromethane	15.95	129	134167	1.00	ppb	99
54) Methyl Butyl Ketone	15.40	43	92058	0.91	ppb	87
55) 1,2-dibromoethane	16.21	107	120141	1.06	ppb	99
56) Tetrachloroethylene	16.04	164	91114	1.08	ppb	99
57) Chlorobenzene	17.07	112	175975	1.04	ppb	98
58) Ethylbenzene	17.34	91	279442	0.98	ppb	98
59) m&p-xylene	17.55	91	430926	1.97	ppb	96
60) Nonane	17.95	43	128491	0.83	ppb	93
61) Styrene	18.01	104	168403	1.03	ppb	91
62) Bromoform	18.13	173	121932	0.98	ppb	100
63) o-xylene	18.05	91	221346	0.98	ppb	96
64) Cumene	18.64	105	321825	1.01	ppb	98
66) 1,1,2,2-tetrachloroethane	18.52	83	162149	1.01	ppb	99
67) Propylbenzene	19.23	120	90182	1.05	ppb	83
68) 2-Chlorotoluene	19.27	126	81676	1.04	ppb	# 83
69) 4-ethyltoluene	19.41	105	302198	1.06	ppb	99
70) 1,3,5-trimethylbenzene	19.47	105	261854	1.01	ppb	98
71) 1,2,4-trimethylbenzene	19.96	105	255816	1.02	ppb	98
72) 1,3-dichlorobenzene	20.29	146	170235	1.27	ppb	99
73) benzyl chloride	20.37	91	159218	1.21	ppb	100
74) 1,4-dichlorobenzene	20.44	146	155964m	1.29	ppb	
75) 1,2,3-trimethylbenzene	20.49	105	260716	1.01	ppb	97
76) 1,2-dichlorobenzene	20.81	146	164700	1.18	ppb	98
77) 1,2,4-trichlorobenzene	23.05	180	74237	1.62	ppb	99
78) Naphthalene	23.27	128	169891m	1.23	ppb	
79) Hexachloro-1,3-butadiene	23.40	225	138104	1.17	ppb	92

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR012003.D A124_1UG.M Wed Feb 12 14:29:53 2020 MSD1

{QT Reviewed}

Quant Results File: A116 IUG.RES

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\AR012019.D

Vial: 19

Acq On : 21 Jan 2020 12:27 am

Operator: RJP

Sample : ALSC1UGD-012020

Inst : MSD #1

Misc : A116_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Jan 21 08:35:25 2020

Quant Results File: A116_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 17 11:14:36 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.93	128	47277	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.22	114	225678	1.00	ppb	0.00
50) Chlorobenzene-d5	17.01	117	198991	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.75	95	134623	1.01	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	101.00%

Target Compounds

						Qvalue
2) Propylene	4.24	41	30460	0.94	ppb	99
3) Freon 12	4.29	85	118997	0.96	ppb	97
4) Chloromethane	4.49	50	21186	0.74	ppb	94
5) Freon 114	4.49	85	82886	0.92	ppb	98
6) Vinyl Chloride	4.69	62	23192	0.77	ppb	99
7) Butane	4.79	43	22972	0.37	ppb	96
8) 1,3-butadiene	4.80	39	27379m	0.76	ppb	
9) Bromomethane	5.15	94	36164	0.72	ppb	94
10) Chloroethane	5.32	64	23136	0.87	ppb	98
11) Ethanol	5.43	45	15755	0.80	ppb	77
12) Acrolein	6.02	56	16919	0.85	ppb	97
13) Vinyl Bromide	5.67	106	54457	1.02	ppb	99
14) Freon 11	5.95	101	134198	1.02	ppb	99
15) Acetone	6.13	58	27990	1.02	ppb	# 100
16) Pentane	6.23	42	46082	0.81	ppb	97
17) Isopropyl alcohol	6.23	45	70005	0.80	ppb	96
18) 1,1-dichloroethene	6.72	96	56260	1.05	ppb	# 88
19) Freon 113	6.91	101	115192	1.04	ppb	98
20) t-Butyl alcohol	6.94	59	90290	0.82	ppb	# 87
21) Methylene chloride	7.17	84	48158	0.99	ppb	94
22) Allyl chloride	7.17	41	55192	0.80	ppb	93
23) Carbon disulfide	7.34	76	147378	0.95	ppb	99
24) trans-1,2-dichloroethene	8.12	61	72204	0.93	ppb	93
25) methyl tert-butyl ether	8.14	73	141637	0.92	ppb	86
26) 1,1-dichloroethane	8.55	63	89024	0.92	ppb	100
27) Vinyl acetate	8.53	43	87810m	0.74	ppb	
28) Methyl Ethyl Ketone	9.04	72	25935	0.99	ppb	# 100
29) cis-1,2-dichloroethene	9.48	61	68225	0.93	ppb	91
30) Hexane	9.09	57	83435	0.91	ppb	86
31) Ethyl acetate	9.63	43	99657	0.84	ppb	97
32) Chloroform	10.09	83	112912	0.99	ppb	98
33) Tetrahydrofuran	10.28	42	45454	0.84	ppb	92
34) 1,2-dichloroethane	11.20	62	64582	0.91	ppb	100
36) 1,1,1-trichloroethane	10.93	97	111467	0.96	ppb	99
37) Cyclohexane	11.62	56	77658	0.90	ppb	83
38) Carbon tetrachloride	11.57	117	101945	0.86	ppb	98
39) Benzene	11.53	78	164172	0.99	ppb	97
40) Methyl methacrylate	13.09	41	59450	0.82	ppb	92
41) 1,4-dioxane	13.12	88	34034	1.00	ppb	95
42) 2,2,4-trimethylpentane	12.38	57	244757	0.91	ppb	91
43) Heptane	12.73	43	84570	0.87	ppb	97
44) Trichloroethene	12.86	130	82994	1.18	ppb	98
45) 1,2-dichloropropane	12.97	63	60196	0.93	ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\AR012019.D Vial: 19
 Acq On : 21 Jan 2020 12:27 am Operator: RJP
 Sample : ALSC1UGD-012020 Inst : MSD #1
 Misc : A116_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Jan 21 08:35:25 2020 Quant Results File: A116_1UG.RES

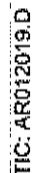
Quant Method : C:\HPCHEM\1\METHODS\A116_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 17 11:14:36 2020
 Response via : Initial Calibration
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.30	83	109584	0.91	ppb	100
47) cis-1,3-dichloropropene	14.12	75	96230	0.96	ppb	99
48) trans-1,3-dichloropropene	14.89	75	78902	0.92	ppb	94
49) 1,1,2-trichloroethane	15.21	97	72756	1.05	ppb	100
51) Toluene	14.97	92	121263	1.00	ppb	99
52) Methyl Isobutyl Ketone	14.03	43	103340	0.84	ppb	94
53) Dibromochloromethane	15.95	129	110767	0.88	ppb	98
54) Methyl Butyl Ketone	15.39	43	87051	0.92	ppb	88
55) 1,2-dibromoethane	16.21	107	112408	1.06	ppb	97
56) Tetrachloroethylene	16.04	164	87639	1.11	ppb	100
57) Chlorobenzene	17.06	112	169989	1.07	ppb	97
58) Ethylbenzene	17.34	91	266111	1.00	ppb	98
59) m&p-xylene	17.52	91	409205	2.00	ppb	96
60) Nonane	17.95	43	120952	0.84	ppb	94
61) Styrene	18.01	104	159924	1.05	ppb	91
62) Bromoform	18.13	173	91200	0.78	ppb	99
63) o-xylene	18.04	91	209883	1.00	ppb	94
64) Cumene	18.64	105	303834	1.02	ppb	98
66) 1,1,2,2-tetrachloroethane	18.51	83	149435	0.99	ppb	99
67) Propylbenzene	19.22	120	83531	1.04	ppb	86
68) 2-Chlorotoluene	19.27	126	78615	1.07	ppb	# 88
69) 4-ethyltoluene	19.40	105	283671	1.07	ppb	99
70) 1,3,5-trimethylbenzene	19.47	105	245842	1.01	ppb	96
71) 1,2,4-trimethylbenzene	19.96	105	239300	1.02	ppb	97
72) 1,3-dichlorobenzene	20.29	146	158021	1.25	ppb	99
73) benzyl chloride	20.36	91	120390	0.98	ppb	99
74) 1,4-dichlorobenzene	20.44	146	145182m	1.29	ppb	
75) 1,2,3-trimethylbenzene	20.48	105	245768	1.01	ppb	97
76) 1,2-dichlorobenzene	20.80	146	153591	1.18	ppb	98
77) 1,2,4-trichlorobenzene	23.05	180	64908	1.52	ppb	99
78) Naphthalene	23.27	128	156921	1.21	ppb	97
79) Hexachloro-1,3-butadiene	23.40	225	129785	1.18	ppb	93

Quantitation Report

Quant Results File: A116 1UG.RES

Last Update : Mon Feb 10 14:09:25 2020
Response via : Initial Calibration



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INJECTION LOG

Injection Log

Directory: C:\HPCHEM\1\DATA2

Instrument # 1
 Internal Standard Stock # A3582
 Standard Stock # A3583
 LGC Stock # A3584 Injected
 Method Ref: EPA TO-15 / Jan. 1997

ne	Vial	FileName	Multiplier	SampleName		
1	13	Ar011717.d	1.	C2001022-003A 40X	A116_1UG	18 Jan 2020 00:36
2	14	Ar011718.d	1.	ALCS1UGD-011720	A116_1UG	18 Jan 2020 01:22
3		Ar011719.d	1.	No MS or GC data present		
4	1	Ar012001.d	1.	BFB1UG	A116_1UG	20 Jan 2020 10:01
5	2	Ar012002.d	1.	A1UG_1.0	A116_1UG	20 Jan 2020 10:48
6	3	Ar012003.d	1.	ALCS1UG-012020	A116_1UG	20 Jan 2020 11:57
7	4	Ar012004.d	1.	AMB1UG-012020	A116_1UG	20 Jan 2020 12:39
8	5	Ar012005.d	1.	C2001022-003A 2X	A116_1UG	20 Jan 2020 13:26
9	6	Ar012006.d	1.	C2001023-001A 90X	A116_1UG	20 Jan 2020 14:21
10	7	Ar012007.d	1.	C2001023-002A 90X	A116_1UG	20 Jan 2020 15:06
11	8	Ar012008.d	1.	C2001022-003A 180X	A116_1UG	20 Jan 2020 15:51
12	9	Ar012009.d	1.	C2001029-001A	A116_1UG	20 Jan 2020 16:38
13	10	Ar012010.d	1.	C2001030-001A	A116_1UG	20 Jan 2020 17:25
14	11	Ar012011.d	1.	C2001030-002A	A116_1UG	20 Jan 2020 18:12
15	12	Ar012012.d	1.	C2001030-003A	A116_1UG	20 Jan 2020 18:59
16	13	Ar012013.d	1.	C2001030-004A	A116_1UG	20 Jan 2020 19:46
17	14	Ar012014.d	1.	C2001030-005A	A116_1UG	20 Jan 2020 20:33
18	15	Ar012015.d	1.	C2001030-006A	A116_1UG	20 Jan 2020 21:20
19	16	Ar012016.d	1.	C2001030-007A	A116_1UG	20 Jan 2020 22:06
20	17	Ar012017.d	1.	C2001031-001A	A116_1UG	20 Jan 2020 22:53
21	18	Ar012018.d	1.	C2001031-002A	A116_1UG	20 Jan 2020 23:40
22	19	Ar012019.d	1.	ALSC1UGD-012020	A116_1UG	21 Jan 2020 00:27
23	20	Ar012020.d	1.	C2001029-001A 10x	A116_1UG	21 Jan 2020 01:12
24	21	Ar012021.d	1.	C2001029-001A 40x	A116_1UG	21 Jan 2020 01:57
25	22	Ar012022.d	1.	C2001030-002A 10x	A116_1UG	21 Jan 2020 02:43
26	23	Ar012023.d	1.	C2001030-003A 10x	A116_1UG	21 Jan 2020 03:28
27	24	Ar012024.d	1.	C2001030-004A 10x	A116_1UG	21 Jan 2020 04:14
28	25	Ar012025.d	1.	C2001030-004A 40x	A116_1UG	21 Jan 2020 04:59
29	26	Ar012026.d	1.	C2001030-005A 10x	A116_1UG	21 Jan 2020 05:44
30	27	Ar012027.d	1.	C2001030-006A 10x	A116_1UG	21 Jan 2020 06:30
31	28	Ar012028.d	1.	C2001030-007A 10x	A116_1UG	21 Jan 2020 07:15
32	29	Ar012029.d	1.	C2001031-001A 10x	A116_1UG	21 Jan 2020 08:01
33	30	Ar012030.d	1.	C2001031-001A 40x	A116_1UG	21 Jan 2020 08:45
34	30	Ar012031.d	1.	C2001031-002A 9x	A116_1UG	21 Jan 2020 09:32
35	32	Ar012032.d	1.	C2001031-002A 90x	A116_1UG	21 Jan 2020 10:18
36	33	Ar012033.d	1.	C2001029-001A 270x	A116_1UG	21 Jan 2020 11:03
37	1	Ar012201.d	1.	BFB1UG	A116_1UG	22 Jan 2020 10:29
38	2	Ar012202.d	1.	A1UG_1.0	A116_1UG	22 Jan 2020 11:30
39	3	Ar012203.d	1.	ALCS1UG-012220	A116_1UG	22 Jan 2020 12:34
40	4	Ar012204.d	1.	AMB1UG-012220	A116_1UG	22 Jan 2020 13:16
41	5	Ar012205.d	1.	C2001031-002A 180X	A116_1UG	22 Jan 2020 14:34
42	6	Ar012206.d	1.	C2001035-001A	A116_1UG	22 Jan 2020 15:39
43	7	Ar012207.d	1.	C2001035	A116_1UG-001A 10X	22 Jan 2020 16:25
44	8	Ar012208.d	1.	C2001032-001A 10X	A116_1UG	22 Jan 2020 17:10
45	9	Ar012209.d	1.	C2001032-002A 10X	A116_1UG	22 Jan 2020 17:56
46	10	Ar012210.d	1.	C2001032-003A 10X	A116_1UG	22 Jan 2020 18:41
47	7	Ar012211.d	1.	C2001035-001A 40X	A116_1UG	22 Jan 2020 21:48
48	8	Ar012212.d	1.	C2001032-001A	A116_1UG	22 Jan 2020 22:35
49	9	Ar012213.d	1.	C2001032-002A	A116_1UG	22 Jan 2020 23:22
50	10	Ar012214.d	1.	C2001032-003A	A116_1UG	23 Jan 2020 00:09
51		Ar012215.d	1.	No MS or GC data present		
52	1	Ar012301.d	1.	BFB1UG	A116_1UG	23 Jan 2020 09:02
53	2	Ar012302.d	1.	A1UG	A116_1UG	23 Jan 2020 10:00
54	3	Ar012303.d	1.	ALCS1UG-012320	A116_1UG	23 Jan 2020 10:52
55	4	Ar012304.d	1.	AMB1UG-012320	A116_1UG	23 Jan 2020 11:34

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS LOG

GC/MS Calibration Standards Logbook

Centek Laboratories, LLC

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-2311	12/08/17	12/15/17	TO15 SULF	A0270	1 ppm	1.5	30	50	ZZ	
A-2312			H2S	A0269	10 ppm	↓	↓	500		
A-2313			TO15 10G IS	A2304	50 ppb	0.9	45	1.0		
A-2314			STD	A2305	↓	↓	↓	↓		
A-2315			LCS	A2306	↓	↓	↓	↓		
A-2316	12/04/17	12/04/18	TO15 IS	FF-8482	1 ppm	LINDE	2000 psig	1 PPM	ZZ	
A-2317	12/12/17	12/12/18	STOCK TO15 STD	FF-47281	1 ppm	LINDE	2200 psig	1 PPM	ZZ	
A-2318	12/18/17	12/18/18	TO15 LCS	A1807	1 ppm	A1807	STD IS NOW LCS	50	ZZ	
A-2319	12/16/17	12/21/17	IS	A2316	1 ppm	1.5	30	50	M	
A-2320			STD	A2317	↓	↓	↓	↓		
A-2321			LCS	P2318	↓	↓	↓	↓		
A-2322			4 PCA	9519	1 ppm	1.5	↓	50		
A-2323			4 PCA	A2322	50 ppb	3.0	↓	5		
A-2324			FORM	A0974	11.5 ppm	0.20	45	50		
A-2325			SILOX	A1018/00	500 ppb	3.0	30	↓		
A-2326			SULF	A0269	10 ppm	1.5	↓	500		
A-2327			H2S	A0269	10 ppm	↓	↓	↓		
A-2328			TO15 10G IS	A2317	50 ppb	0.9	45	1.0		
A-2329			STD	A2320	↓	↓	↓	↓		
A-2330			LCS	A2321	↓	↓	↓	↓		
A-2331			M							

Page # 34

GC/MS Calibration Standards Logbook

Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd b
12/3/19	12/10/19	TO15	SOLF	A2573	1 ppm	1.5	30	50	WD
		↓	H2S	A2572	10.2 ppm	1.47	30	500	
		TO15 1461	IS	A3498	50 ppb	0.9	45	1	
		↓	STD	A3499					
		↓	LCS	A3500					
12/10/19	12/17/19	TO15	IS	A2927	1 ppm	1.5	30	50	WD
		↓	STD	A2928					
		↓	LCS	A2929					
		4PCH		A3305	10.29 ppm	1.46	30	50	
		4PCH		A3513	50 ppb	3.0	30	5	
		FORM		A2926	10.8 ppm	0.21	45	50	
		SILX		A2574	449 ppb	3.34	30	50	
				A2573	500 ppb	3.0	30	50	
		SOLF		A2573	1 ppm	1.5	30	50	
		H2S		A2572	10.2 ppm	1.47	30	500	
		H2S25		A3518	500 ppb	1.5	30	25	
		TO15 1461	IS	A3510	50 ppb	0.9	45	1	
		↓	STD	A3511					
		↓	LCS	A3512					
11/20/19	11/20/2020	TO15 IS	FF-5014	LINDE	2000 ppb	2000	1.0 ppm	22	
12/03/19	12/03/2020	TO15 STD	FF-11174	LINDE	2200 ppb	2200	1.0 ppm	22	
12/17/19	12/24/19	TO15	IS	A3523	1 ppm	1.5	30	50	WD

FORM 153

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-3568	11/7/20	11/14/20	TO15	A2573	1 ppm	1.5	30	50	WD	
A-3569			↓	A2572	10.2 ppm	1.47	30	500		
A-3570			TO15ING	A3561	50 ppb	0.9	45	1		
A-3571			STD	A3562	↓	↓	↓	↓		
A-3572			↓	A3563	↓	↓	↓	↓		
A-3573	11/14/20	11/21/20	TO15	A3523	1 ppm	1.5	30	50	WD	
A-3574			↓	A2928	↓	↓	↓	↓		
A-3575			↓	A2929	↓	↓	↓	↓		
A-3576			↓	A3305	10.29 ppm	1.46	30	50		
A-3577			↓	A3576	50 ppb	3.0	30	5		
A-3578			↓	A2926	10.8 ppm	0.21	45	50		
A-3579			↓	~~A2577~~ A2577	449 ppb	3.34	30	50		
A-3580			↓	~~A2577~~ A2577	500 ppb	3.0	30	50		
A-3581			↓	A2573	1 ppm	1.5	30	50		
A-3582			↓	A2572	10.2 ppm	1.47	30	500		
A-3583			TO15ING	A3573	50 ppb	0.9	45	1		
A-3584			↓	A3574	↓	↓	↓	↓		
A-3585	11/21/20	11/28/20	TO15	A3575	1 ppm	1.5	30	50	WD	
A-3586			↓	A3523	↓	↓	↓	↓		
A-3587			↓	A2928	↓	↓	↓	↓		
A-3588			↓	A2929	↓	↓	↓	↓		
A-3589			↓	A3305	10.29 ppm	1.46	30	50		

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CANISTER CLEANING LOG

Instrument: Entech 3100

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date
1182	1L	362	20	12/6/17	WA4209194	1g ± 0.20	+ 30 12/27/19
1195		↓					+ 30
1318							+ 30
322							+ 30
362		↓					+ 30
87		285			D		+ 30
475							+ 30
236		↓					+ 30
1316							+ 30
285		↓					+ 30
1189		365			C		+ 30
1183							+ 30
458		↓					+ 30
1178							+ 30
365		↓					+ 30
139		1193			D		+ 30
159							+ 30
465		↓					+ 30
170							+ 30
1193		↓					+ 30
163		128			E		+ 30
95							+ 30
552		↓					+ 30
83							+ 30
128		↓					+ 30

Data File : C:\HPCHEM\1\DATA2\2019DATA\2019DEC\AQ120905.D Vial: 1
Acq On : 9 Dec 2019 12:30 pm Operator: RJP
Sample : WAC120919A Inst : MSD #1
Misc : AN26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 13 10:39:07 2019 Quant Results File: AN26_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AN26_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Dec 12 13:29:26 2019
Response via : Initial Calibration
DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.97	128	51197	1.00	ppb	-0.03
35) 1,4-difluorobenzene	12.25	114	217196	1.00	ppb	-0.02
50) Chlorobenzene-d5	17.05	117	193053	1.00	ppb	-0.02

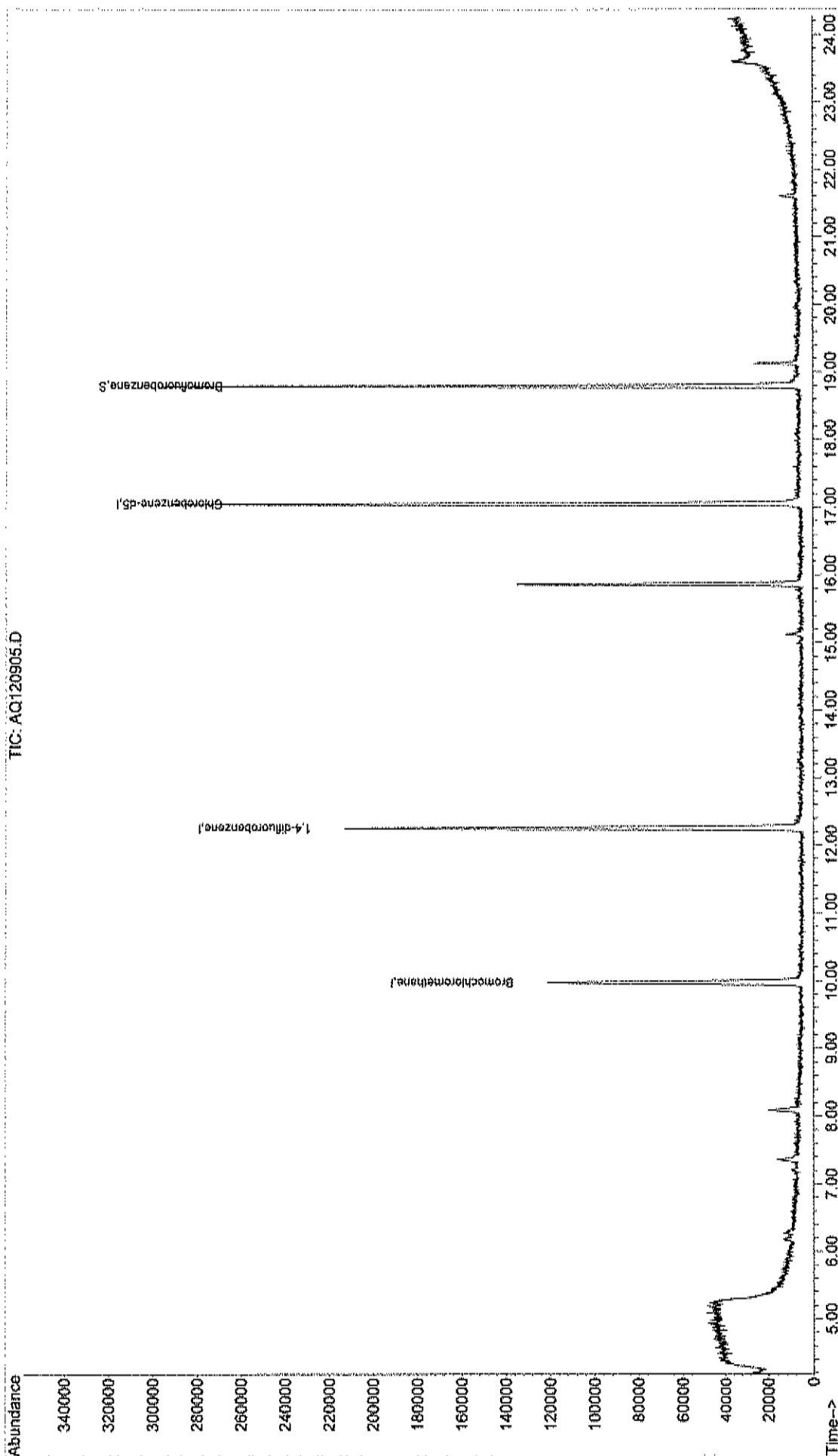
System Monitoring Compounds

65) Bromofluorobenzene	18.80	95	117284	0.90	ppb	-0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	90.00%

Target Compounds	Qvalue

Data File : C:\HPCHEM\1\DATA2\2019DATA\AQ120905.D Vial: 1
 Acq On : 9 Dec 2019 12:30 pm Operator: RJP
 Sample : WAC120919A Inst : MSD #1
 Misc : AN26_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 13 10:39 2019 Quant Results File: AN26_1UG.RES

Method : C:\HPCHEM\1\METHODS\A124_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Feb 10 14:09:25 2020
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\2019DATA\2019DEC\AQ120906.D Vial: 2
Acq On : 9 Dec 2019 1:15 pm Operator: RJP
Sample : WAC120919B Inst : MSD #1
Misc : AN26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 13 10:39:08 2019 Quant Results File: AN26_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AN26_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Dec 12 13:29:26 2019
Response via : Initial Calibration
DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.98	128	48697	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.26	114	200981	1.00	ppb	-0.02
50) Chlorobenzene-d5	17.05	117	178338	1.00	ppb	-0.01

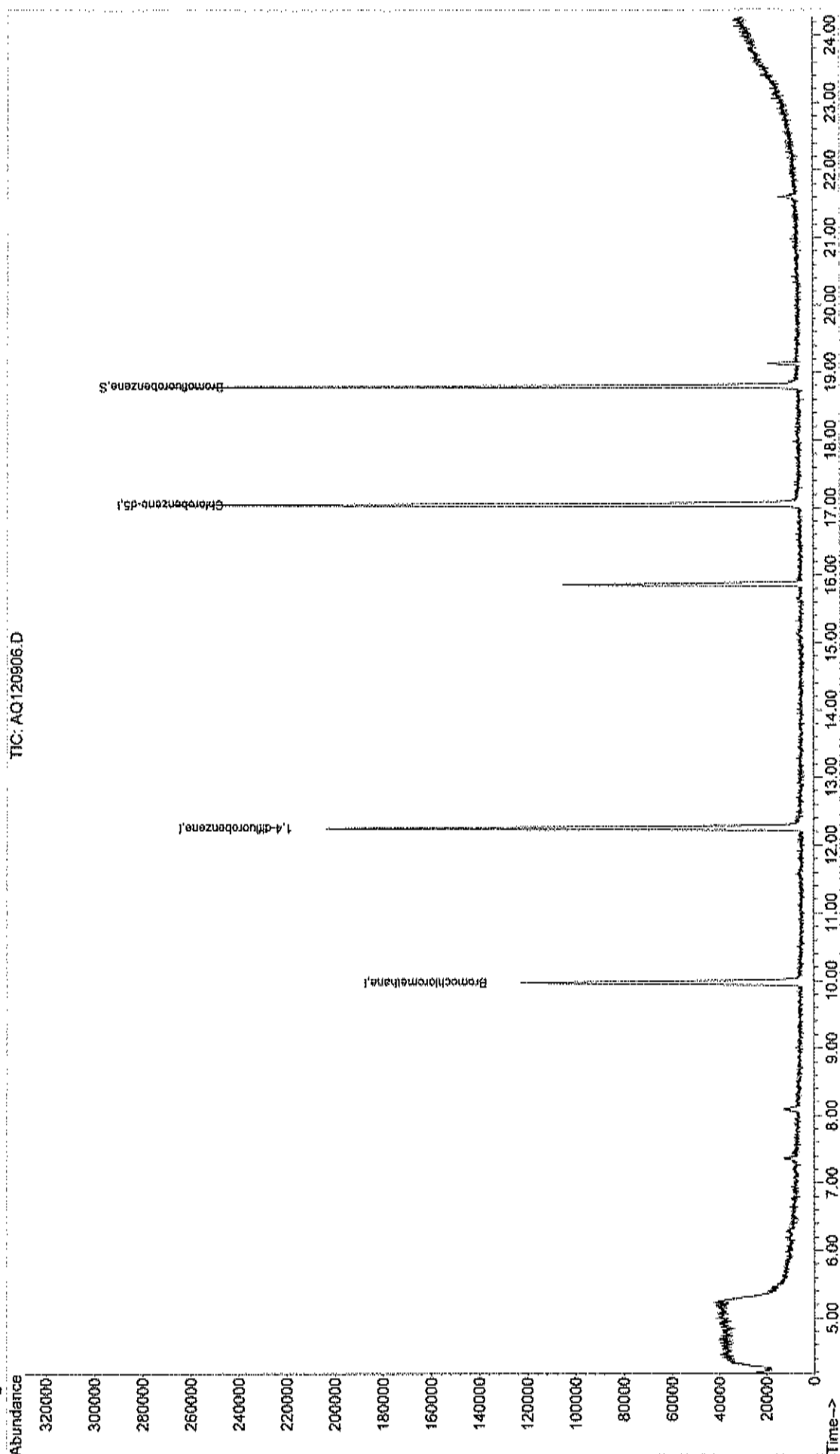
System Monitoring Compounds

65) Bromofluorobenzene	18.80	95	105035	0.88	ppb	-0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	88.00%

Target Compounds	Qvalue

Data File : C:\HPCHEM\1\DATA2\2019DATA\AQ120906.D Vial: 2
 Acq On : 9 Dec 2019 1:15 pm Operator: RJP
 Sample : WAC120919B Inst : MSD #1
 Misc : AN26_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 13 10:41 2019 Quant Results File: AN26_1UG.RES

Method : C:\HPCHEM\1\METHODS\A124_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Feb 10 14:09:25 2020
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\2019DATA\2019DEC\AQ120907.D Vial: 3
Acq On : 9 Dec 2019 1:59 pm Operator: RJP
Sample : WAC120919C Inst : MSD #1
Misc : AN26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 13 10:39:09 2019 Quant Results File: AN26_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AN26_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Dec 12 13:29:26 2019
Response via : Initial Calibration
DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.98	128	47934	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.26	114	194097	1.00	ppb	-0.02
50) Chlorobenzene-d5	17.05	117	168955	1.00	ppb	-0.01

System Monitoring Compounds

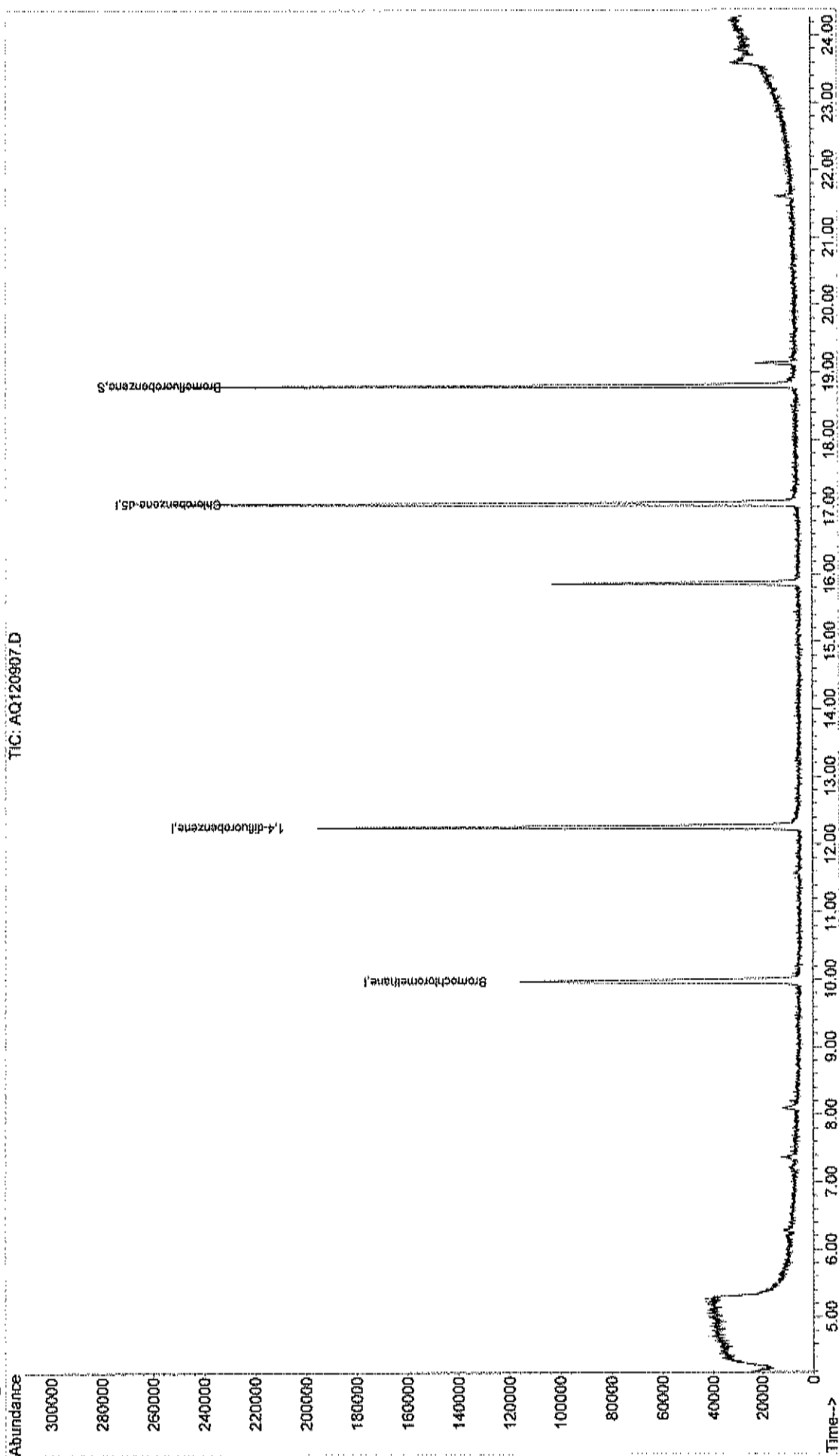
65) Bromofluorobenzene	18.80	95	99365	0.87	ppb	-0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	87.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\2019DATA\AQ120907.D Vial: 3
 Acq On : 9 Dec 2019 1:59 pm Operator: RJP
 Sample : WAC120919C Inst : MSD #1
 Misc : AN26_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 13 10:39 2019 Quant Results File: AN26_1UG.RES

Method : C:\HPCHEM\1\METHODS\A124_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Feb 10 14:09:25 2020
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\2019DATA\2019DEC\AQ120908.D Vial: 4
Acq On : 9 Dec 2019 2:44 pm Operator: RJP
Sample : WAC120919D Inst : MSD #1
Misc : AN26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 13 10:39:10 2019 Quant Results File: AN26_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AN26_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Dec 12 13:29:26 2019
Response via : Initial Calibration
DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.98	128	45389	1.00	ppb	-0.02
35) 1,4-difluorobenzene	12.26	114	183099	1.00	ppb	-0.02
50) Chlorobenzene-d5	17.05	117	162889	1.00	ppb	-0.01

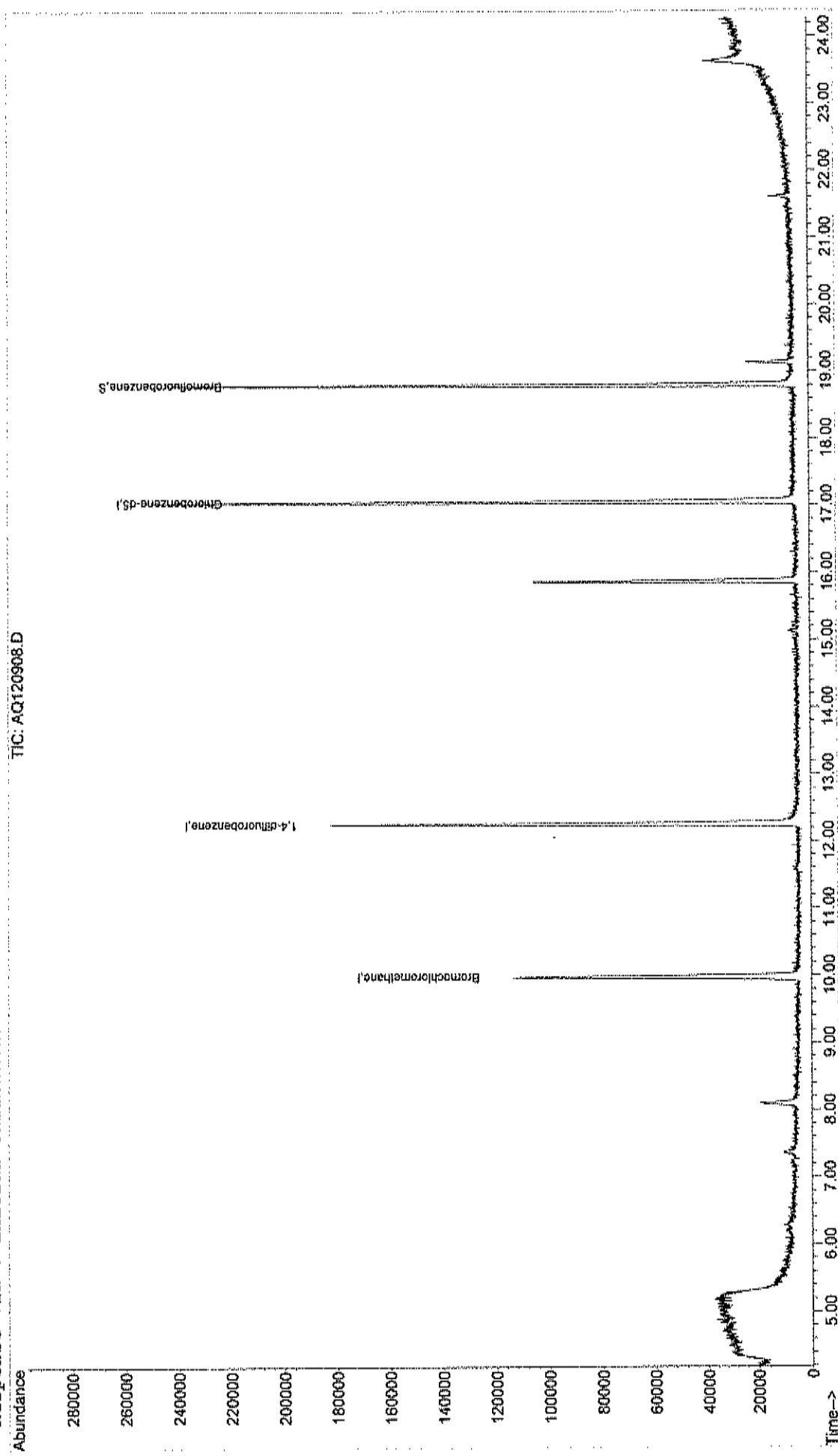
System Monitoring Compounds

65) Bromofluorobenzene	18.79	95	93829	0.86	ppb	-0.01
Spiked Amount	1.000	Range 70 - 130	Recovery	=	86.00%	

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\2019DATA\2019DEC\AQ120908.D Vial: 4
Acq On : 9 Dec 2019 2:44 pm Operator: RJP
Sample : WAC120919D Inst : MSD #1
Misc : AN26_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Dec 13 10:39 2019 Quant Results File: AN26_1UG.RES
Method : C:\HPCHEM\1\METHODS\A124_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Mon Feb 10 14:09:25 2020
Response via : Initial Calibration





Centek Laboratories TO-15 Package Review Checklist

Client: Matrix Environmental **Project:** Aquino 65-67 Lake SDG: C2004010

		<u>YES</u>	<u>NO</u>	<u>NA</u>
Analytical Results	Present and Complete	☒	☐	☐
TIC's Present	Present and Complete	☒	☐	☐
	Holdin Times Met	☒	☐	☐

Comments:

Chain of Custody	Present and Complete	☒	☐	☐
Surrogate	Present and Complete	☒	☐	☐
	Recoveries within Limits	☒	☐	☐
	Sample(s) reanalyzed	☐	☐	☒
Internal Standards	Present and Complete	☒	☐	☐
Recovery	Recoveries within Limits	☒	☐	☐
	Sample(s) reanalyzed	☐	☐	☒

Comments:

Lab Control Sample (LCS)	Present and Complete	☒	☐	☐
	Recoveries within Limits	☒	☐	☐
Lab Control Sample Dupe (LCSD)	Present and Complete	☒	☐	☐
	Recoveries within Limits	☒	☐	☐
MS/MSD	Present and Complete	☐	☐	☒
	Recoveries within Limits	☐	☐	☒

Comments:

No MS/MSD

Sample Raw Data	Present and Complete	☒	☐	☐
	Spectra present	☒	☐	☐

Comments:

Centek Laboratories TO-15 Package Review Checklist

Client: Matrix Environmental **Project:** Aquino 65-67 Lake **SDG:** C2004010

		<u>YES</u>	<u>NO</u>	<u>NA</u>
<u>Standards Data</u>				
Initial Calibration	Present and Complete	/	—	—
	Calibration meets criteria	/	—	—
Continuing Calibration	Present and Complete	/	—	—
	Calibration meets criteria	/	—	—
Standards Raw Data	Present and Complete	/	—	—
Comments:				

<u>Raw Quality Control Data</u>				
Tune Criteria Report	Present and Complete	/	—	—
Method Blank Data	MB Results <PQL	/	—	—
	Associated results flagged "B"	—	—	/
LCS Sample Data	Present and Complete	/	—	—
LCSD Sample Data	Present and Complete	/	—	—
MS/MSD Sample Data	Present and Complete	—	—	/
Comments:				

<u>Logbooks</u>				
Injection Log		/	—	—
Standards Log		/	—	—
Can Cleaning Log		/	—	—
Calculation Sheet		/	—	—
IDL's		/	—	—
Canister Order Form		/	—	—
Sample Tracking Form		/	—	—
Additional Comments:				

Section Supervisor: Will Doherty

Date: 4/24/20

QC Supervisor: Ant Chaudhary

Date: 4/24/20



CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, NY 13206

Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752

NYSDOH ELAP

Certificate No. 11830

Analytical Report

Steve Marchetti
Matrix Environmental Technologies, Inc
3730 California Rd.
Orchard Park, NY 14127

Wednesday, April 15, 2020
Order No.: C2004010

TEL: (585) 770-4332

FAX

RE: Aquino 65-67 Lake Ave.

Dear Steve Marchetti:

Centek Laboratories, LLC received 1 sample(s) on 4/9/2020 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

This report cannot be reproduced except in its entirety, without prior written authorization.

Sincerely,



William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, tetrahydrofuran, 4-PCH, sulfur derived and silicon series compounds.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:

Same day TAT = 200%

Next business day TAT by Noon = 150%

Next business day TAT by 6:00pm = 100%

Second business day TAT by 6:00pm = 75%

Third business day TAT by 6:00pm = 50%

Fourth business day TAT by 6:00pm = 35%

Fifth business day = Standard

Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of

liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.

ASP CAT B DELIVERABLE PACKAGE Table of Contents

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 - c. MB Summary Report
 - d. LCS Summary Report
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Date: 24-Apr-20

CLIENT: Matrix Environmental Technologies, Inc

Project: Aquino 65-67 Lake Ave.

Lab Order: C2004010

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

NYSDEC ASP samples:

Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg (± 2 ", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg (± 1 ", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg, ± 1 ". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

[illegible]

**CEN TEK LABORATORIES, LLC****Date: 24-Apr-20**

CLIENT: Matrix Environmental Technologies, Inc
Project: Aquino 65-67 Lake Ave.
Lab Order: C2004010

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C2004010-001A	Building 1- Indoor Air	287,173	4/6/2020	4/9/2020



CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name MATRIX ENVIRONMENTAL

Date and Time Receive

4/9/2020

Work Order Number C2004010

Received by: DH

Checklist completed by

4/9/2020

Signature

Date

Reviewed by

WD

4/9/20

Initials

Date

Matrix:

Carrier name: FedEx Ground

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
COC signed when relinquished and received?	Yes ☒	No ☐	
COC agrees with sample labels?	Yes ☒	No ☐	
COC completely filled out?	Yes ☐	No ☒	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☒	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☒	

Adjusted?

Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted

Yes

Date contacted:

4/9/2020

Person contacted

Steve Marchetti

Contacted by:

DH

Regarding:

Incomplete COC

Comments:

Steve didn't label "Company:" on the COC.

Corrective Action

Called Steve, left voicemail. Steve called back and asked me to write in "Matrix Environmental Tech. Inc." into "Company:" category on the COC. I wrote the company's name on the COC and initialed and wrote the date next to the company name.

DATE:

Centek Laboratories, LLC

24-Apr-20

Lab Order: C2004010
Client: Matrix Environmental Technologies, Inc
Project: Aquino 65-67 Lake Ave.

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C2004010-001A	Building 1- Indoor Air	4/6/2020	Air	1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/10/2020
				1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DCE-1,1DCE			4/9/2020

**CEN TEK LABORATORIES, LLC***Air Quality Testing...It's a Gas*

143 Midler Park Drive * Syracuse, NY 13206

TEL: 315-431-9730 * FAX: 315-431-9731

CANISTER ORDER**8307**

24-Apr-20

SHIPPED TO:

Company: Matrix Environmental Technologies, Inc
 Contact: Steve Marchetti
 Address: 3730 California Rd.
 Orchard Park, NY 14127
 Phone: (716) 662-0745
 Quote ID: 0
 Project:
 PO:

Submitted By:

MadeBy: rjp

Ship Date: 3/20/2020

VIA: UPS - Ground

Due Date: 3/25/2020

Bottle Code	Bottle Type	TEST(s)	QTY
MC1000CC	1L Mini-Can	1ug/m3 w/ 0.2ug/M3 CT-TCE-VC-DC	2

Can / Reg ID	Description
173	Time-Set Reg - 666 VI
180	Time-Set Reg - 654 VI
287	1L Mini-Can - 255 VI
1177	1L Mini-Can - 1240 VI

Comments: (2) 1 L @ 24 Hours SHIP TO:
 Steve MarchettiWAC 030920 D-J
 4570 Green Road,
 Lockport, NY 14094
 585-770-4332

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

ANALYTICAL RESULTS

Centek Laboratories, LLC

Date: 17-Apr-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2004010
Project: Aquino 65-67 Lake Ave.
Lab ID: C2004010-001A

Client Sample ID: Building 1- Indoor Air
Tag Number: 287,173
Collection Date: 4/6/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		4/9/2020
Lab Vacuum Out	-30			"Hg		4/9/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/9/2020 4:26:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2,4-Trimethylbenzene	0.24	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,3,5-Trimethylbenzene	0.10	0.15	J	ppbV	1	4/9/2020 4:26:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/9/2020 4:26:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Acetone	14	3.0		ppbV	10	4/10/2020 12:14:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Benzene	0.30	0.15		ppbV	1	4/9/2020 4:26:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Bromofom	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Carbon disulfide	0.10	0.15	J	ppbV	1	4/9/2020 4:26:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/9/2020 4:26:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Chloroform	0.18	0.15		ppbV	1	4/9/2020 4:26:00 PM
Chloromethane	0.71	0.15		ppbV	1	4/9/2020 4:26:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/9/2020 4:26:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Ethyl acetate	0.21	0.15		ppbV	1	4/9/2020 4:26:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

, Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

Page 1 of 2

Centek Laboratories, LLC

Date: 17-Apr-20

CLIENT: Matrix Environmental Technologies, Inc
Lab Order: C2004010
Project: Aquino 65-67 Lake Ave.
Lab ID: C2004010-001A

Client Sample ID: Building 1- Indoor Air
Tag Number: 287,173
Collection Date: 4/6/2020
Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 11	0.22	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 12	0.46	0.15		ppbV	1	4/9/2020 4:26:00 PM
Heptane	0.11	0.15	J	ppbV	1	4/9/2020 4:26:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Isopropyl alcohol	4.1	1.5		ppbV	10	4/10/2020 12:14:00 AM
m&p-Xylene	0.33	0.30		ppbV	1	4/9/2020 4:26:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/9/2020 4:26:00 PM
Methyl Ethyl Ketone	2.7	3.0	J	ppbV	10	4/10/2020 12:14:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/9/2020 4:26:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Methylene chloride	0.19	0.15		ppbV	1	4/9/2020 4:26:00 PM
o-Xylene	0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Tetrachloroethylene	0.27	0.15		ppbV	1	4/9/2020 4:26:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Toluene	0.74	0.15		ppbV	1	4/9/2020 4:26:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/9/2020 4:26:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/9/2020 4:26:00 PM
Surr: Bromofluorobenzene	112	70-130		%REC	1	4/9/2020 4:26:00 PM

Qualifiers:	SC	Sub-Contracted	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

QUALITY CONTROL SUMMARY



CENTEK LABORATORIES, LLC

Date: 17-Apr-20

QC SUMMARY REPORT SURROGATE RECOVERIES

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.
Test No: TO-15 **Matrix:** A

Sample ID

BR4FBZ

ALCS1UG-040920	112							
ALCS1UGD-040920	110							
AMBIUG-040920	71.0							
C2004010-001A	112							

Acronym

Surrogate

QC Limits

BR4FBZ

= Bromofluorobenzene

70-130

* Surrogate recovery outside acceptance limits

1

Centek Laboratories, LLC
GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AR040902.D
Tune Time : 9 Apr 2020 9:56 am

Daily Calibration File : C:\HPCHEM\1\DATA\AR040902.D

	(BFB)	(IS1)	(IS2)	(IS3)
		40948	133862	121631

File	Sample	DL	Surrogate Recovery %	Internal Standard Responses		
AR040903.D	ALCS1UG-040920	112		41190	134311	124990
AR040904.D	AMB1UG-040920	71		37267	118206	106322
AR040910.D	C2004010-001A	112		48211	171509	163761
AR040918.D	ALCS1UGD-040920	110		45167	155577	141178
AR040919.D	C2004010-001A 10x	79		41215	130825	117209

t - fails 24hr time check * - fails criteria

Created: Fri Apr 17 11:41:02 2020 MSD #1/



Date: 17-Apr-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UG-040920		Samp Type: LCS		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 16240	
Client ID: ZZZZZ		Batch ID: R16240		TestNo: TO-15				Analysis Date: 4/9/2020		SeqNo: 184806	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.120	0.15	1	0	112	70	130				
1,1,2,2-Tetrachloroethane	1.160	0.15	1	0	116	70	130				
1,1,2-Trichloroethane	1.170	0.15	1	0	117	70	130				
1,1-Dichloroethane	1.020	0.15	1	0	102	70	130				
1,1-Dichloroethene	1.000	0.040	1	0	100	70	130				
1,2,4-Trichlorobenzene	0.9200	0.15	1	0	92.0	70	130				
1,2,4-Trimethylbenzene	0.9800	0.15	1	0	98.0	70	130				
1,2-Dibromoethane	1.130	0.15	1	0	113	70	130				
1,2-Dichlorobenzene	1.070	0.15	1	0	107	70	130				
1,2-Dichloroethane	0.9300	0.15	1	0	93.0	70	130				
1,2-Dichloropropane	1.160	0.15	1	0	116	70	130				
1,3,5-Trimethylbenzene	1.150	0.15	1	0	115	70	130				
1,3-butadiene	0.7900	0.15	1	0	79.0	70	130				
1,3-Dichlorobenzene	1.070	0.15	1	0	107	70	130				
1,4-Dichlorobenzene	1.030	0.15	1	0	103	70	130				
1,4-Dioxane	1.090	0.30	1	0	109	70	130				
2,2,4-trimethylpentane	1.110	0.15	1	0	111	70	130				
4-ethyltoluene	1.090	0.15	1	0	109	70	130				
Acetone	1.100	0.30	1	0	110	70	130				
Allyl chloride	0.9500	0.15	1	0	95.0	70	130				
Benzene	1.110	0.15	1	0	111	70	130				
Benzyl chloride	0.8500	0.15	1	0	85.0	70	130				
Bromodichloromethane	1.080	0.15	1	0	108	70	130				
Bromoform	0.8300	0.15	1	0	83.0	70	130				
Bromomethane	1.080	0.15	1	0	108	70	130				

Qualifiers:
 J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 DL Detection Limit

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UG-040920	Sample Type: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184806						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.040	0.15	1	0	104	70	130				
Carbon tetrachloride	1.080	0.030	1	0	108	70	130				
Chlorobenzene	1.080	0.15	1	0	108	70	130				
Chloroethane	1.120	0.15	1	0	112	70	130				
Chloroform	0.9900	0.15	1	0	99.0	70	130				
Chloromethane	0.8600	0.15	1	0	86.0	70	130				
cis-1,2-Dichloroethene	0.9600	0.040	1	0	96.0	70	130				
cis-1,3-Dichloropropene	1.130	0.15	1	0	113	70	130				
Cyclohexane	1.090	0.15	1	0	109	70	130				
Dibromochloromethane	0.9900	0.15	1	0	99.0	70	130				
Ethyl acetate	0.9500	0.15	1	0	95.0	70	130				
Ethylbenzene	1.000	0.15	1	0	100	70	130				
Freon 11	0.9700	0.15	1	0	97.0	70	130				
Freon 113	1.030	0.15	1	0	103	70	130				
Freon 114	0.9300	0.15	1	0	93.0	70	130				
Freon 12	0.9700	0.15	1	0	97.0	70	130				
Heptane	1.100	0.15	1	0	110	70	130				
Hexachloro-1,3-butadiene	1.120	0.15	1	0	112	70	130				
Hexane	0.8800	0.15	1	0	88.0	70	130				
Isopropyl alcohol	0.9500	0.15	1	0	95.0	70	130				
m&p-Xylene	2.200	0.30	2	0	110	70	130				
Methyl Butyl Ketone	0.9900	0.30	1	0	99.0	70	130				
Methyl Ethyl Ketone	0.9200	0.30	1	0	92.0	70	130				
Methyl Isobutyl Ketone	0.9500	0.30	1	0	95.0	70	130				
Methyl tert-butyl ether	0.9200	0.15	1	0	92.0	70	130				
Methylene chloride	1.010	0.15	1	0	101	70	130				
o-Xylene	1.170	0.15	1	0	117	70	130				
Propylene	1.030	0.15	1	0	103	70	130				
Styrene	1.180	0.15	1	0	118	70	130				
Tetrachloroethylene	1.160	0.15	1	0	116	70	130				
Tetrahydrofuran	0.8900	0.15	1	0	89.0	70	130				

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
DL Detection Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UG-040920	SampleType: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184806						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	1.080	0.15	1	0	108	70	130				
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
trans-1,3-Dichloropropene	0.9900	0.15	1	0	99.0	70	130				
Trichloroethene	1.290	0.030	1	0	129	70	130				
Vinyl acetate	0.7900	0.15	1	0	79.0	70	130				
Vinyl Bromide	1.010	0.15	1	0	101	70	130				
Vinyl chloride	0.9100	0.040	1	0	91.0	70	130				
Surr: Bromofluorobenzene	1.120	0	1	0	112	70	130				

Sample ID: ALCS1UGD-040920		Sample Type: LCSD	TestCode: 0.20_NYS		Units: ppbV	Prep Date:		RunNo: 16240			
Client ID: ZZZZZ		Batch ID: R16240	TestNo: TO-15			Analysis Date: 4/9/2020		SeqNo: 184807			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.040	0.15	1	0	104	70	130	1.12	7.41	30	
1,1,2,2-Tetrachloroethane	1.120	0.15	1	0	112	70	130	1.16	3.51	30	
1,1,2-Trichloroethane	1.120	0.15	1	0	112	70	130	1.17	4.37	30	
1,1-Dichloroethane	1.020	0.15	1	0	102	70	130	1.02	0	30	
1,1-Dichloroethene	1.090	0.040	1	0	109	70	130	1	8.61	30	
1,2,4-Trichlorobenzene	1.000	0.15	1	0	100	70	130	0.92	8.33	30	
1,2,4-Trimethylbenzene	0.9700	0.15	1	0	97.0	70	130	0.98	1.03	30	
1,2-Dibromoethane	1.100	0.15	1	0	110	70	130	1.13	2.69	30	
1,2-Dichlorobenzene	1.140	0.15	1	0	114	70	130	1.07	6.33	30	
1,2-Dichloroethane	0.9100	0.15	1	0	91.0	70	130	0.93	2.17	30	
1,2-Dichloropropane	1.110	0.15	1	0	111	70	130	1.16	4.41	30	
1,3,5-Trimethylbenzene	1.130	0.15	1	0	113	70	130	1.15	1.75	30	
1,3-butadiene	0.7200	0.15	1	0	72.0	70	130	0.79	9.27	30	
1,3-Dichlorobenzene	1.160	0.15	1	0	116	70	130	1.07	8.07	30	
1,4-Dichlorobenzene	1.190	0.15	1	0	119	70	130	1.03	14.4	30	
1,4-Dioxane	1.090	0.30	1	0	109	70	130	1.09	0	30	
2,2,4-Trimethylpentane	1.050	0.15	1	0	105	70	130	1.11	5.56	30	

Qualifiers: J Results reported are not blank, corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
DL Detection Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UGD-040920	SampType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-ethyltoluene	1.070	0.15	1	0	107	70	130	1.09	1.85	30	
Acetone	1.160	0.30	1	0	116	70	130	1.1	5.31	30	
Allyl chloride	0.9700	0.15	1	0	97.0	70	130	0.95	2.08	30	
Benzene	1.120	0.15	1	0	112	70	130	1.11	0.897	30	
Benzyl chloride	1.040	0.15	1	0	104	70	130	0.85	20.1	30	
Bromodichloromethane	1.000	0.15	1	0	100	70	130	1.08	7.69	30	
Bromoform	0.8000	0.15	1	0	80.0	70	130	0.83	3.68	30	
Bromomethane	0.8400	0.15	1	0	84.0	70	130	1.08	25.0	30	
Carbon disulfide	1.020	0.15	1	0	102	70	130	1.04	1.94	30	
Carbon tetrachloride	1.010	0.030	1	0	101	70	130	1.08	6.70	30	
Chlorobenzene	1.060	0.15	1	0	106	70	130	1.08	1.87	30	
Chloroethane	0.7400	0.15	1	0	74.0	70	130	1.12	40.9	30	R
Chloroform	1.000	0.15	1	0	100	70	130	0.99	1.01	30	
Chloromethane	0.8200	0.15	1	0	82.0	70	130	0.86	4.76	30	
cis-1,2-Dichloroethene	1.020	0.040	1	0	102	70	130	0.96	6.06	30	
cis-1,3-Dichloropropene	1.080	0.15	1	0	108	70	130	1.13	4.52	30	
Cyclohexane	1.050	0.15	1	0	105	70	130	1.09	3.74	30	
Dibromochloromethane	0.9500	0.15	1	0	95.0	70	130	0.99	4.12	30	
Ethyl acetate	0.9700	0.15	1	0	97.0	70	130	0.95	2.08	30	
Ethylbenzene	0.9900	0.15	1	0	99.0	70	130	1	1.01	30	
Freon 11	0.9800	0.15	1	0	98.0	70	130	0.97	1.03	30	
Freon 113	1.050	0.15	1	0	105	70	130	1.03	1.92	30	
Freon 114	0.8900	0.15	1	0	89.0	70	130	0.93	4.40	30	
Freon 12	0.9400	0.15	1	0	94.0	70	130	0.97	3.14	30	
Heptane	1.060	0.15	1	0	106	70	130	1.1	3.70	30	
Hexachloro-1,3-butadiene	1.120	0.15	1	0	112	70	130	1.12	0	30	
Hexane	0.9300	0.15	1	0	93.0	70	130	0.88	5.52	30	
Isopropyl alcohol	1.060	0.15	1	0	106	70	130	0.95	10.9	30	
m&p-Xylene	2.140	0.30	2	0	107	70	130	2.2	2.76	30	
Methyl Butyl Ketone	1.020	0.30	1	0	102	70	130	0.99	2.99	30	
Methyl Ethyl Ketone	0.9400	0.30	1	0	94.0	70	130	0.92	2.15	30	

Qualifiers:

- J Results reported are not blank corrected
- S Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- DL Detection Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UGD-040920	SampleType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Isobutyl Ketone	0.9300	0.30	1	0	93.0	70	130	0.95	2.13	30	
Methyl tert-butyl ether	1.020	0.15	1	0	102	70	130	0.92	10.3	30	
Methylene chloride	0.9900	0.15	1	0	99.0	70	130	1.01	2.00	30	
o-Xylene	1.120	0.15	1	0	112	70	130	1.17	4.37	30	
Propylene	1.020	0.15	1	0	102	70	130	1.03	0.976	30	
Styrene	1.160	0.15	1	0	116	70	130	1.18	1.71	30	
Tetrachloroethylene	1.140	0.15	1	0	114	70	130	1.16	1.74	30	
Tetrahydrofuran	0.9400	0.15	1	0	94.0	70	130	0.89	5.46	30	
Toluene	1.070	0.15	1	0	107	70	130	1.08	0.930	30	
trans-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130	0.98	1.02	30	
trans-1,3-Dichloropropene	1.000	0.15	1	0	100	70	130	0.99	1.01	30	
Trichloroethene	1.220	0.030	1	0	122	70	130	1.29	5.58	30	
Vinyl acetate	0.8300	0.15	1	0	83.0	70	130	0.79	4.94	30	
Vinyl Bromide	1.110	0.15	1	0	111	70	130	1.01	9.43	30	
Vinyl chloride	0.8700	0.040	1	0	87.0	70	130	0.91	4.49	30	
Surr: Bromofluorobenzene	1.100	0	1	0	110	70	130	0	0	30	

Qualifiers:

J	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
S	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
	Spike Recovery outside accepted recovery limits	DL	Detection Limit		



Date: 17-Apr-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc

Work Order: C2004010

Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: AMB1UG-040920	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 15240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	<0.15	0.15									
1,1,2,2-Tetrachloroethane	<0.15	0.15									
1,1,2-Trichloroethane	<0.15	0.15									
1,1-Dichloroethane	<0.15	0.15									
1,1-Dichloroethene	<0.040	0.040									
1,2,4-Trichlorobenzene	<0.15	0.15									
1,2,4-Trimethylbenzene	<0.15	0.15									
1,2-Dibromoethane	<0.15	0.15									
1,2-Dichlorobenzene	<0.15	0.15									
1,2-Dichloroethane	<0.15	0.15									
1,2-Dichloropropane	<0.15	0.15									
1,3,5-Trimethylbenzene	<0.15	0.15									
1,3-butadiene	<0.15	0.15									
1,3-Dichlorobenzene	<0.15	0.15									
1,4-Dichlorobenzene	<0.15	0.15									
1,4-Dioxane	<0.30	0.30									
2,2,4-trimethylpentane	<0.15	0.15									
4-ethyltoluene	<0.15	0.15									
Acetone	<0.30	0.30									
Allyl chloride	<0.15	0.15									
Benzene	<0.15	0.15									
Benzyl chloride	<0.15	0.15									
Bromodichloromethane	<0.15	0.15									
Bromoform	<0.15	0.15									
Bromomethane	<0.15	0.15									

Qualifiers:

J Results reported are not blank corrected

S Analyte detected below quantitation limit

S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range

ND Not Detected at the Limit of Detection

DL Detection Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: AMB1UG-040920	SampType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.030	0.030									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.040	0.040									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

Qualifiers: . Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
DL Detection Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: AMB1UG-040920	SampleType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.030	0.030									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.040	0.040									
Surr: Bromofluorobenzene	0.7100	0	1	0	71.0	70	130				

Qualifiers:

J	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
S	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

Centek Laboratories
IDL Study1ug/m3 Detection Limit
July 2019Method TO-15
Units=ppb

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Propylene	0.30	0.34	0.34	0.33	0.36	0.37	0.34	0.28	0.34	0.03	112.4%	0.090
Freon 12	0.30	0.34	0.34	0.33	0.37	0.37	0.37	0.28	0.34	0.03	114.3%	0.102
Chloromethane	0.30	0.36	0.36	0.36	0.35	0.37	0.37	0.30	0.35	0.02	117.6%	0.076
Freon 114	0.30	0.34	0.33	0.35	0.39	0.38	0.38	0.28	0.35	0.04	116.7%	0.120
Vinyl Chloride	0.30	0.36	0.34	0.33	0.38	0.37	0.37	0.28	0.35	0.03	115.7%	0.108
Butane	0.30	0.38	0.33	0.37	0.39	0.38	0.39	0.27	0.36	0.04	119.5%	0.139
1,3-butadiene	0.30	0.33	0.33	0.36	0.38	0.40	0.38	0.34	0.36	0.03	120.0%	0.087
Bromomethane	0.30	0.34	0.38	0.35	0.40	0.41	0.39	0.34	0.37	0.03	124.3%	0.092
Chloroethane	0.30	0.36	0.38	0.37	0.42	0.37	0.41	0.31	0.37	0.04	124.8%	0.113
Ethanol	0.30	0.34	0.34	0.32	0.33	0.32	0.30	0.34	0.33	0.01	109.0%	0.047
Acrolein	0.30	0.31	0.32	0.30	0.35	0.34	0.36	0.26	0.32	0.03	106.7%	0.107
Vinyl Bromide	0.30	0.35	0.32	0.33	0.40	0.33	0.37	0.29	0.34	0.04	113.8%	0.112
Freon 11	0.30	0.38	0.30	0.33	0.35	0.33	0.35	0.32	0.34	0.03	112.4%	0.081
Acetone	0.30	0.38	0.35	0.32	0.30	0.36	0.35	0.26	0.33	0.04	110.5%	0.129
Pentane	0.30	0.34	0.31	0.33	0.36	0.34	0.35	0.27	0.33	0.03	109.5%	0.095
Isopropyl alcohol	0.30	0.38	0.34	0.36	0.35	0.34	0.35	0.33	0.35	0.02	116.7%	0.051
1,1-dichloroethene	0.30	0.30	0.30	0.32	0.35	0.33	0.32	0.25	0.31	0.03	103.3%	0.099
Freon 113	0.30	0.32	0.32	0.32	0.36	0.34	0.36	0.27	0.33	0.03	109.0%	0.097
t-Butyl alcohol	0.30	0.31	0.28	0.30	0.34	0.31	0.31	0.23	0.30	0.03	99.0%	0.108
Methylene chloride	0.30	0.33	0.32	0.32	0.34	0.35	0.35	0.25	0.32	0.03	107.6%	0.108
Allyl chloride	0.30	0.31	0.31	0.30	0.36	0.34	0.33	0.26	0.32	0.03	105.2%	0.101
Carbon disulfide	0.30	0.34	0.32	0.32	0.35	0.34	0.35	0.26	0.33	0.03	108.6%	0.099
trans-1,2-dichloroethene	0.30	0.32	0.31	0.30	0.33	0.34	0.32	0.24	0.31	0.03	102.9%	0.103
methyl tert-butyl ether	0.30	0.28	0.29	0.28	0.31	0.30	0.31	0.23	0.29	0.03	95.2%	0.087
1,1-dichloroethane	0.30	0.31	0.31	0.32	0.35	0.35	0.33	0.25	0.32	0.03	105.7%	0.107
Vinyl acetate	0.30	0.28	0.30	0.28	0.30	0.29	0.30	0.20	0.28	0.04	92.9%	0.112
Methyl Ethyl Ketone	0.30	0.31	0.31	0.30	0.31	0.30	0.31	0.21	0.29	0.04	97.6%	0.116
cis-1,2-dichloroethene	0.30	0.30	0.30	0.30	0.32	0.30	0.30	0.22	0.29	0.03	97.1%	0.102
Hexane	0.30	0.30	0.29	0.29	0.29	0.30	0.30	0.20	0.28	0.04	93.8%	0.114
Ethyl acetate	0.30	0.29	0.30	0.29	0.29	0.28	0.28	0.20	0.28	0.03	91.9%	0.107
Chloroform	0.30	0.33	0.32	0.32	0.35	0.34	0.34	0.25	0.32	0.03	107.1%	0.105
Tetrahydrofuran	0.30	0.30	0.29	0.31	0.31	0.31	0.32	0.25	0.30	0.02	99.5%	0.074
1,2-dichloroethane	0.30	0.31	0.33	0.31	0.36	0.35	0.35	0.25	0.32	0.04	107.6%	0.119
1,1,1-trichloroethane	0.30	0.33	0.33	0.32	0.39	0.39	0.38	0.28	0.35	0.04	115.2%	0.132
Cyclohexane	0.30	0.30	0.30	0.29	0.31	0.32	0.31	0.23	0.29	0.03	98.1%	0.094
Carbon tetrachloride	0.30	0.29	0.30	0.30	0.35	0.35	0.35	0.26	0.31	0.04	104.8%	0.113
Benzene	0.30	0.31	0.32	0.33	0.36	0.35	0.34	0.26	0.32	0.03	108.1%	0.104
Methyl methacrylate	0.30	0.29	0.30	0.30	0.32	0.30	0.31	0.23	0.29	0.03	97.6%	0.092

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Compound	Amt	1ug/m3 Detection Limit July 2019										Method TO-15 Units=ppb	
		IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL	
1,4-dioxane	0.30	0.31	0.30	0.30	0.34	0.32	0.33	0.22	0.30	0.04	101.0%	0.124	
2,2,4-trimethylpentane	0.30	0.30	0.30	0.31	0.34	0.33	0.34	0.24	0.31	0.03	102.9%	0.110	
Heptane	0.30	0.30	0.29	0.30	0.31	0.31	0.33	0.22	0.29	0.04	98.1%	0.110	
Trichloroethene	0.30	0.30	0.29	0.29	0.32	0.34	0.33	0.24	0.30	0.03	100.5%	0.105	
1,2-dichloropropane	0.30	0.33	0.33	0.32	0.38	0.39	0.37	0.28	0.34	0.04	114.3%	0.123	
Bromodichloromethane	0.30	0.34	0.33	0.34	0.38	0.40	0.38	0.28	0.35	0.04	116.7%	0.127	
cis-1,3-dichloropropene	0.30	0.32	0.33	0.33	0.34	0.35	0.34	0.25	0.32	0.03	107.6%	0.105	
trans-1,3-dichloropropene	0.30	0.33	0.33	0.33	0.34	0.34	0.32	0.24	0.32	0.04	106.2%	0.111	
1,1,2-trichloroethane	0.30	0.35	0.33	0.33	0.36	0.38	0.38	0.27	0.35	0.04	115.2%	0.127	
Toluene	0.30	0.29	0.35	0.29	0.29	0.29	0.28	0.20	0.28	0.04	94.8%	0.138	
Methyl isobutyl Ketone	0.30	0.29	0.36	0.29	0.30	0.29	0.28	0.20	0.29	0.05	95.7%	0.147	
Dibromochloromethane	0.30	0.30	0.36	0.31	0.35	0.34	0.35	0.26	0.32	0.04	108.1%	0.113	
Methyl Butyl Ketone	0.30	0.28	0.31	0.27	0.27	0.28	0.26	0.23	0.27	0.02	90.5%	0.076	
1,2-dibromoethane	0.30	0.30	0.35	0.30	0.34	0.33	0.34	0.24	0.31	0.04	104.8%	0.120	
Tetrachloroethylene	0.30	0.30	0.36	0.29	0.33	0.31	0.32	0.26	0.31	0.03	103.3%	0.099	
Chlorobenzene	0.30	0.31	0.31	0.31	0.34	0.33	0.34	0.24	0.31	0.03	103.8%	0.108	
Ethylbenzene	0.30	0.31	0.28	0.31	0.32	0.30	0.30	0.20	0.29	0.04	96.2%	0.129	
m&p-xylene	0.60	0.60	0.55	0.58	0.62	0.61	0.60	0.40	0.57	0.08	94.3%	0.241	
Nonane	0.30	0.30	0.27	0.22	0.31	0.30	0.31	0.21	0.27	0.04	91.4%	0.134	
Styrene	0.30	0.29	0.30	0.25	0.32	0.30	0.32	0.21	0.28	0.04	94.8%	0.127	
Bromoform	0.30	0.31	0.33	0.28	0.34	0.34	0.34	0.23	0.31	0.04	103.3%	0.131	
o-xylene	0.30	0.30	0.31	0.25	0.33	0.34	0.33	0.22	0.30	0.05	99.0%	0.143	
Cumene	0.30	0.23	0.27	0.22	0.31	0.30	0.30	0.20	0.26	0.04	87.1%	0.140	
Bromofluorobenzene	1.00	0.88	1.03	0.89	1.08	1.06	1.09	1.08	1.02	0.09	101.6%	0.287	
1,1,2,2-tetrachloroethane	0.30	0.30	0.35	0.30	0.37	0.35	0.36	0.25	0.33	0.04	108.6%	0.137	
Propylbenzene	0.30	0.24	0.27	0.22	0.31	0.28	0.29	0.24	0.26	0.03	88.1%	0.101	
2-Chlorotoluene	0.30	0.26	0.32	0.25	0.33	0.29	0.34	0.24	0.29	0.04	96.7%	0.128	
4-ethyltoluene	0.30	0.23	0.28	0.22	0.31	0.28	0.30	0.21	0.26	0.04	87.1%	0.128	
1,3,5-trimethylbenzene	0.30	0.24	0.28	0.24	0.32	0.32	0.31	0.20	0.27	0.05	91.0%	0.148	
1,2,4-trimethylbenzene	0.30	0.22	0.26	0.22	0.29	0.28	0.29	0.19	0.25	0.04	83.3%	0.126	
1,3-dichlorobenzene	0.30	0.27	0.31	0.26	0.34	0.25	0.33	0.21	0.28	0.05	93.8%	0.148	
benzyl chloride	0.30	0.26	0.31	0.26	0.32	0.28	0.31	0.24	0.28	0.03	94.3%	0.097	
1,4-dichlorobenzene	0.30	0.25	0.30	0.26	0.33	0.22	0.33	0.19	0.27	0.05	88.5%	0.170	
1,2,3-trimethylbenzene	0.30	0.24	0.26	0.23	0.29	0.28	0.29	0.18	0.25	0.04	84.3%	0.125	
1,2-dichlorobenzene	0.30	0.27	0.32	0.26	0.34	0.29	0.32	0.21	0.29	0.04	95.7%	0.140	
1,2,4-trichlorobenzene	0.30	0.20	0.22	0.20	0.24	0.25	0.24	0.15	0.21	0.03	71.4%	0.109	
Naphthalene	0.30	0.20	0.23	0.19	0.24	0.26	0.25	0.13	0.21	0.05	71.4%	0.142	
Hexachloro-1,3-butadiene	0.30	0.28	0.35	0.27	0.35	0.33	0.34	0.22	0.31	0.05	101.9%	0.157	

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GC/MS-Whole Air Calculations

Relative Response Factor (RRF)

$$RRF = \frac{A_x * C_{is}}{A_{is} * C_x}$$

where: A_x = area of the characteristic ion for the compound being measured
 A_{is} = area of the characteristic ion for the specific internal standard of the compound being measured
 C_x = concentration of the compound being measured (ppbv)
 C_{is} = concentration of the internal standard (ppbv)

Percent Relative Standard Deviation (%RSD)

$$\% RSD = \frac{\text{Standard deviation of RRF values} * 100}{\text{mean RRF}}$$

Percent Difference (%D)

$$\% D = \frac{(RRF_c - \text{mean RRF}_i) * 100}{\text{mean RRF}_i}$$

where: RRF_c = relative response factor from the continuing calibration
 mean RRF_i = mean relative response factor from the initial calibration

Sample Calculations

$$\text{ppbv} = \frac{A_x * I_s * D_f}{A_{is} * RRF}$$

where: A_x = area of the characteristic ion for the compound being measured
 A_{is} = area of the characteristic ion for the specific internal standard of the compound being measured
 I_s = Concentration of the internal standard injected (ppbv)
 RRF = relative response factor for the compound being measured
 D_f = Dilution factor

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

SAMPLE DATA

Centek Laboratories, LLC

Date: 17-Apr-20

CLIENT: Matrix Environmental Technologies, Inc
 Lab Order: C2004010
 Project: Aquino 65-67 Lake Ave.
 Lab ID: C2004010-001A

Client Sample ID: Building 1- Indoor Air
 Tag Number: 287,173
 Collection Date: 4/6/2020
 Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		4/9/2020
Lab Vacuum Out	-30			"Hg		4/9/2020
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,1-Dichloroethene	< 0.040	0.040		ppbV	1	4/9/2020 4:26:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2,4-Trimethylbenzene	0.24	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,3,5-Trimethylbenzene	0.10	0.15	J	ppbV	1	4/9/2020 4:26:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	4/9/2020 4:26:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Acetone	14	3.0		ppbV	10	4/10/2020 12:14:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Benzene	0.30	0.15		ppbV	1	4/9/2020 4:26:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Bromoform	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Carbon disulfide	0.10	0.15	J	ppbV	1	4/9/2020 4:26:00 PM
Carbon tetrachloride	< 0.030	0.030		ppbV	1	4/9/2020 4:26:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Chloroform	0.18	0.15		ppbV	1	4/9/2020 4:26:00 PM
Chloromethane	0.71	0.15		ppbV	1	4/9/2020 4:26:00 PM
cis-1,2-Dichloroethene	< 0.040	0.040		ppbV	1	4/9/2020 4:26:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Ethyl acetate	0.21	0.15		ppbV	1	4/9/2020 4:26:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

Page 1 of 2

Centek Laboratories, LLC

Date: 17-Apr-20

CLIENT: Matrix Environmental Technologies, Inc
 Lab Order: C2004010
 Project: Aquino 65-67 Lake Ave.
 Lab ID: C2004010-001A

Client Sample ID: Building 1- Indoor Air
 Tag Number: 287,173
 Collection Date: 4/6/2020
 Matrix: AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.2UG/M3 CT-TCE-VC-DCE-1,1DCE		TO-15		Analyst: RJP		
Ethylbenzene	0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 11	0.22	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 113	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 114	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Freon 12	0.46	0.15		ppbV	1	4/9/2020 4:26:00 PM
Heptane	0.11	0.15	J	ppbV	1	4/9/2020 4:26:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Hexane	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Isopropyl alcohol	4.1	1.5		ppbV	10	4/10/2020 12:14:00 AM
m&p-Xylene	0.33	0.30		ppbV	1	4/9/2020 4:26:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	4/9/2020 4:26:00 PM
Methyl Ethyl Ketone	2.7	3.0	J	ppbV	10	4/10/2020 12:14:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	4/9/2020 4:26:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Methylene chloride	0.19	0.15		ppbV	1	4/9/2020 4:26:00 PM
o-Xylene	0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Propylene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Styrene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Tetrachloroethylene	0.27	0.15		ppbV	1	4/9/2020 4:26:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Toluene	0.74	0.15		ppbV	1	4/9/2020 4:26:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Trichloroethene	< 0.030	0.030		ppbV	1	4/9/2020 4:26:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	4/9/2020 4:26:00 PM
Vinyl chloride	< 0.040	0.040		ppbV	1	4/9/2020 4:26:00 PM
Surr: Bromofluorobenzene	112	70-130		%REC	1	4/9/2020 4:26:00 PM

Qualifiers: SC Sub-Contracted
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection
 DL Detection Limit

Page 2 of 2

Data File : C:\HPCHEM\1\DATA\AR040910.D

Vial: 10

Acq On : 9 Apr 2020 4:26 pm

Operator: RJP

Sample : C2004010-001A

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:40 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	48211	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.20	114	171509	1.00	ppb	0.01
50) Chlorobenzene-d5	17.00	117	163761	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	131094	1.12	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	112.00%

Target Compounds

						Qvalue
3) Freon 12	4.26	85	98523	0.46	ppb	97
4) Chloromethane	4.47	50	33008	0.71	ppb	98
14) Freon 11	5.92	101	50144	0.22	ppb	98
15) Acetone	6.08	58	400871	15.25	ppb	# 100
17) Isopropyl alcohol	6.20	45	300696	4.87	ppb	# 1
21) Methylene chloride	7.16	84	10203	0.19	ppb	92
23) Carbon disulfide	7.31	76	16870	0.10	ppb	95
28) Methyl Ethyl Ketone	9.01	72	80422	3.65	ppb	# 100
31) Ethyl acetate	9.62	43	21390	0.21	ppb	91
32) Chloroform	10.08	83	25670	0.18	ppb	100
38) Carbon tetrachloride	11.55	117	14839	0.09	ppb	94
39) Benzene	11.51	78	42453	0.30	ppb	99
43) Heptane	12.73	43	6424	0.11	ppb	# 78
51) Toluene	14.96	92	71229	0.74	ppb	98
56) Tetrachloroethylene	16.02	164	22229	0.27	ppb	97
58) Ethylbenzene	17.32	91	30591	0.15	ppb	98
59) m&p-xylene	17.50	91	59588	0.33	ppb	100
63) o-xylene	18.03	91	31525	0.15	ppb	98
70) 1,3,5-trimethylbenzene	19.45	105	23454m	0.10	ppb	
71) 1,2,4-trimethylbenzene	19.95	105	45283	0.24	ppb	100

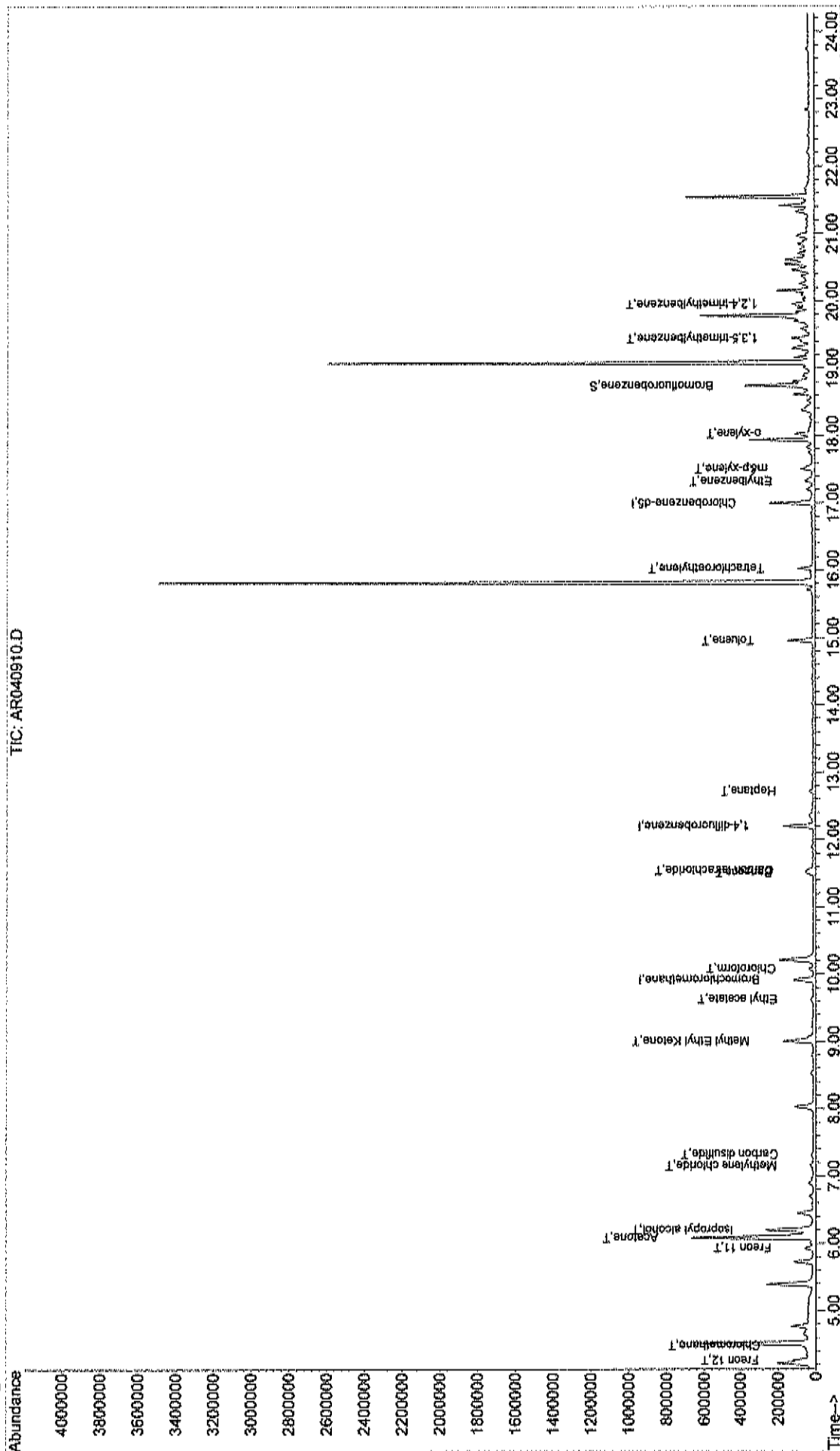
Quantitation Report (QT Reviewed)

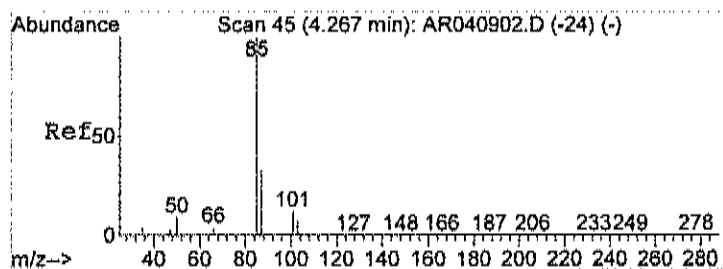
Data File : C:\HPCHEM\1\DATA\AR040910.D
 Acq On : 9 Apr 2020 4:26 pm
 Sample : C2004010-001A
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Apr 15 11:39 2020

Vial: 10
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

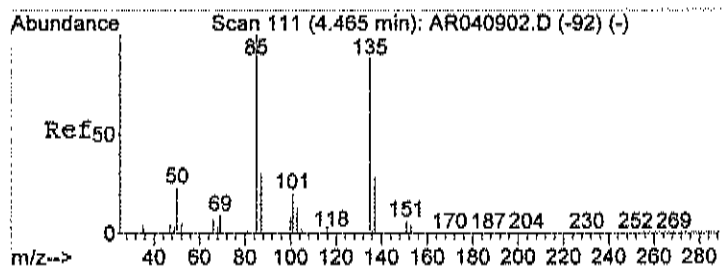
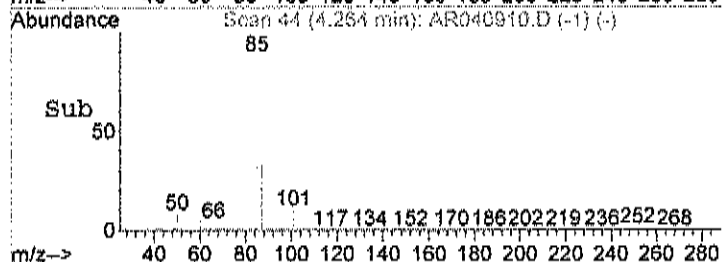
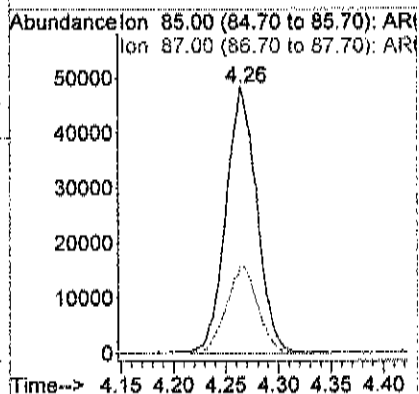
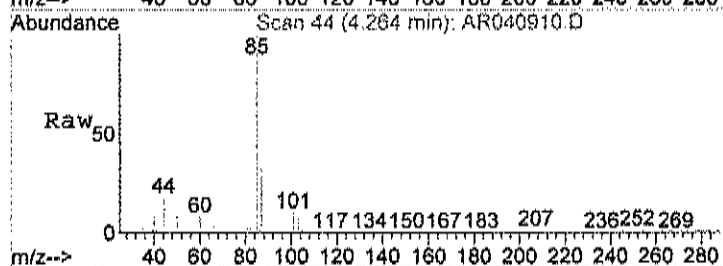
Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Apr 17 11:38:02 2020
 Response via : Initial Calibration





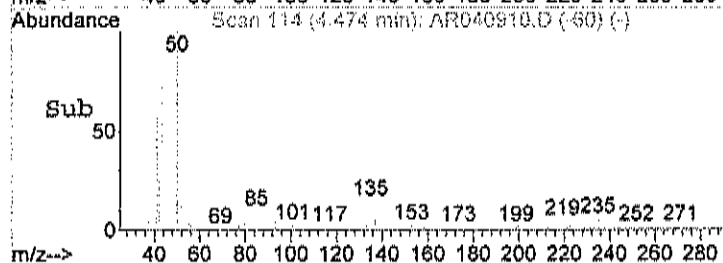
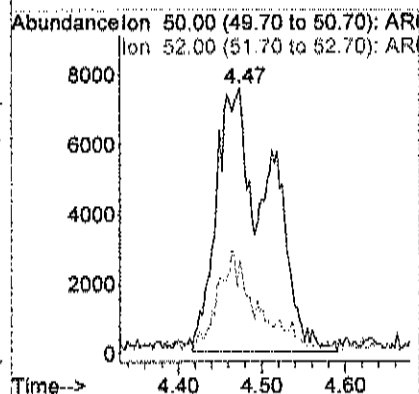
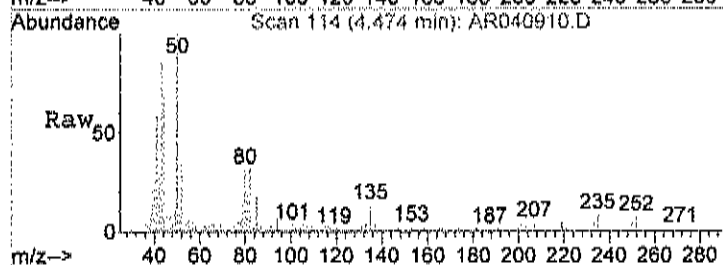
#3
Freon 12
Concen: 0.46 ppb
RT: 4.26 min Scan# 44
Delta R.T. 0.00 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

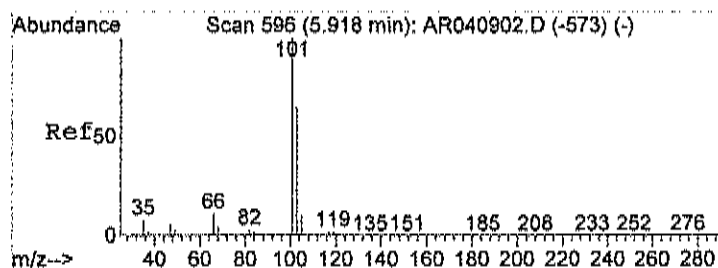
Tgt Ion: 85 Resp: 98523
Ion Ratio Lower Upper
85 100
87 33.6 11.9 51.9



#4
Chloromethane
Concen: 0.71 ppb
RT: 4.47 min Scan# 114
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

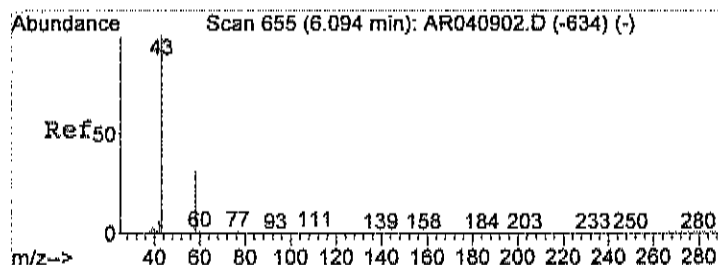
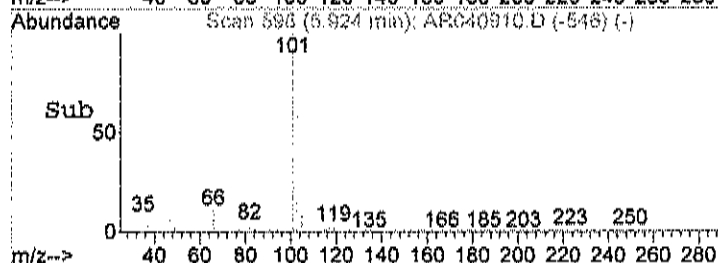
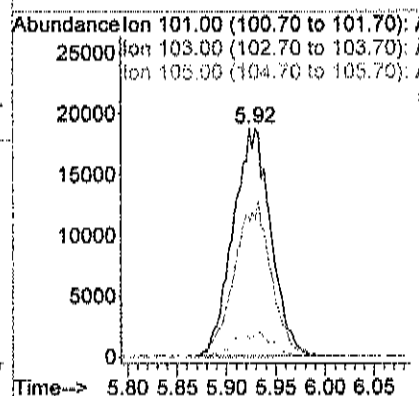
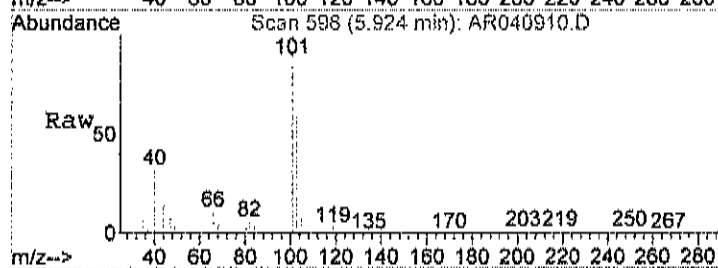
Tgt Ion: 50 Resp: 33008
Ion Ratio Lower Upper
50 100
52 27.3 6.1 46.1





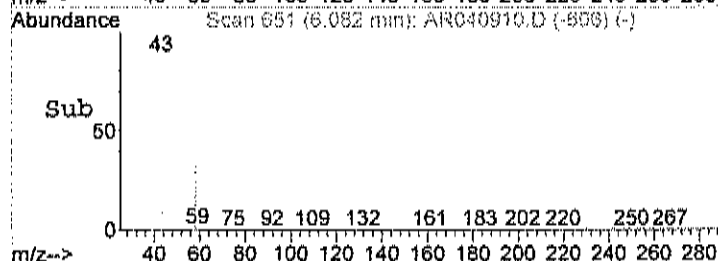
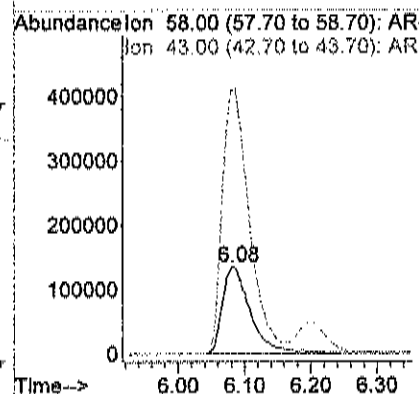
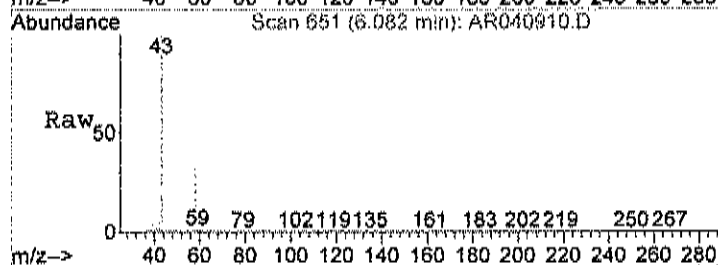
#14
Freon 11
Concen: 0.22 ppb
RT: 5.92 min Scan# 598
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

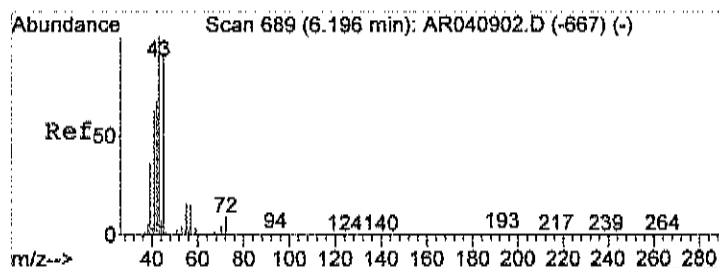
Tgt Ion	Ratio	Lower	Upper
101	100		
103	65.7	44.2	84.2
105	10.8	0.0	30.3



#15
Acetone
Concen: 15.25 ppb
RT: 6.08 min Scan# 651
Delta R.T. -0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

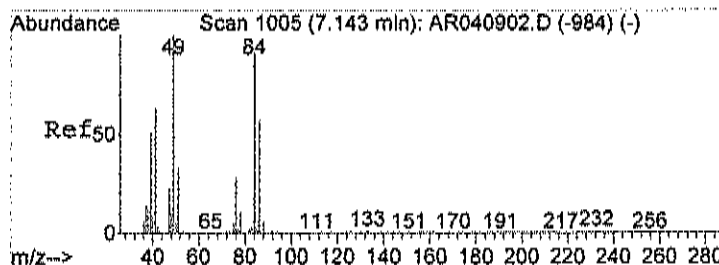
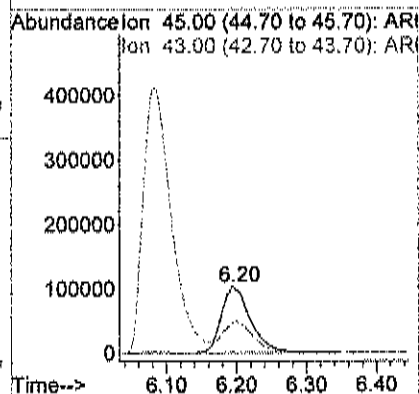
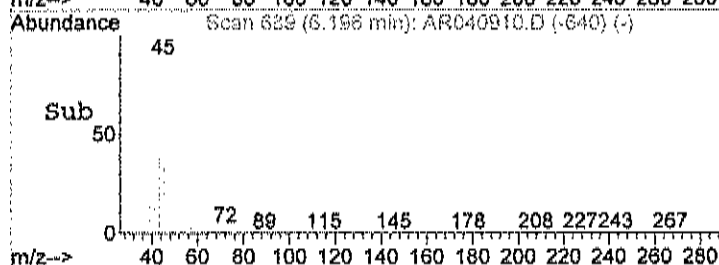
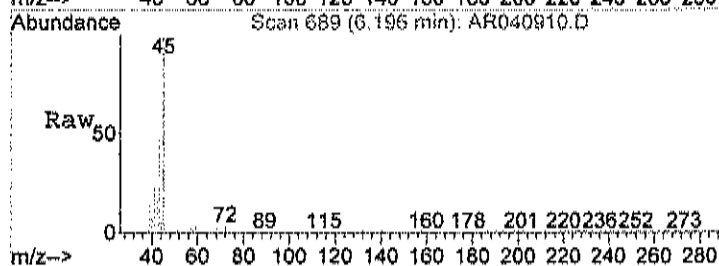
Tgt Ion	Ratio	Lower	Upper
58	100		
43	327.1	0.0	30.0#





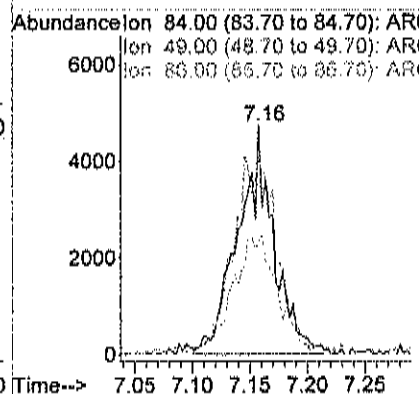
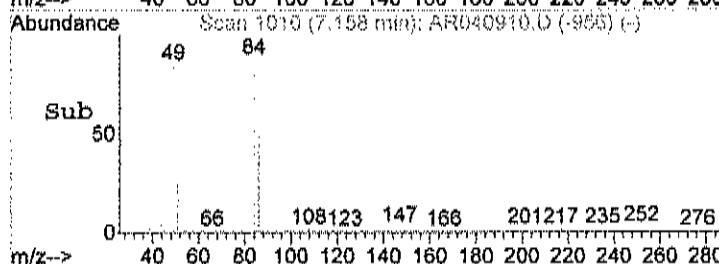
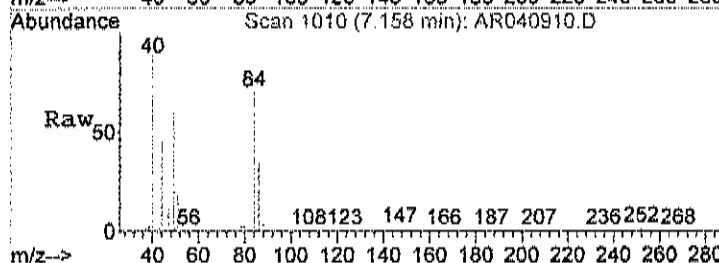
#17
Isopropyl alcohol
Concen: 4.87 ppb
RT: 6.20 min Scan# 689
Delta R.T. -0.00 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

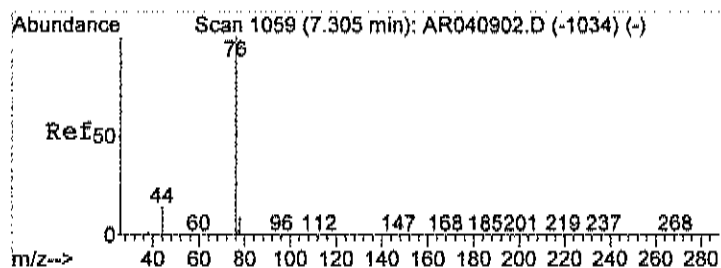
Tgt Ion: 45 Resp: 300696
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#



#21
Methylene chloride
Concen: 0.19 ppb
RT: 7.16 min Scan# 1010
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

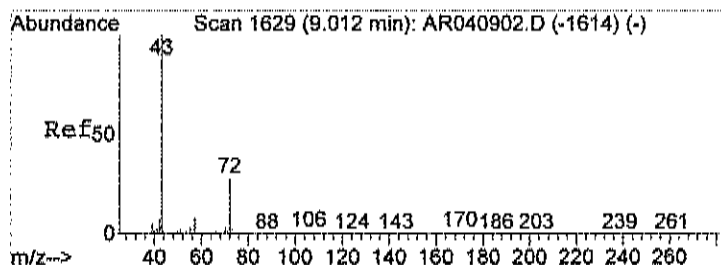
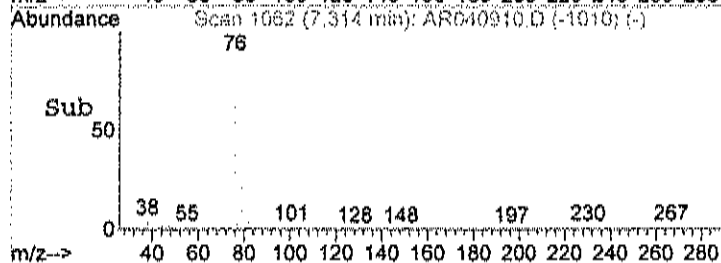
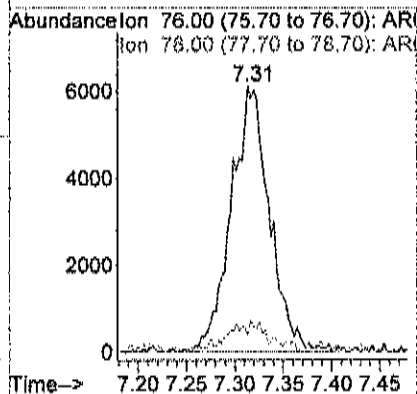
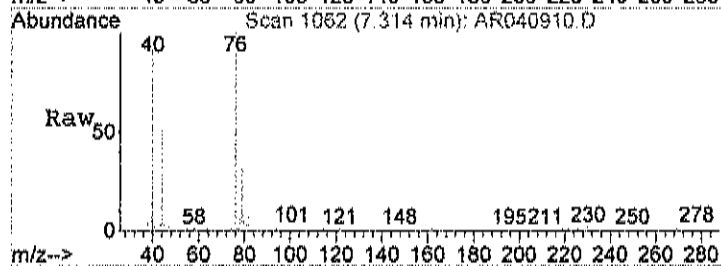
Tgt Ion: 84 Resp: 10203
Ion Ratio Lower Upper
84 100
49 107.2 101.4 141.4
86 65.9 45.4 85.4





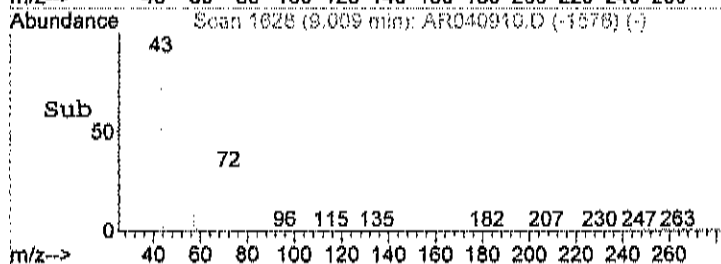
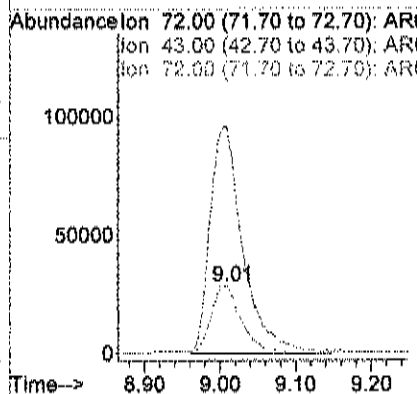
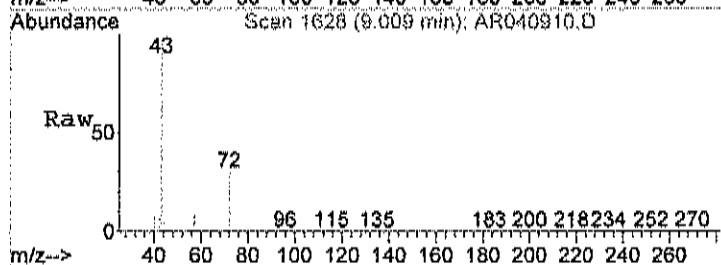
#23
Carbon disulfide
Concen: 0.10 ppb
RT: 7.31 min Scan# 1062
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

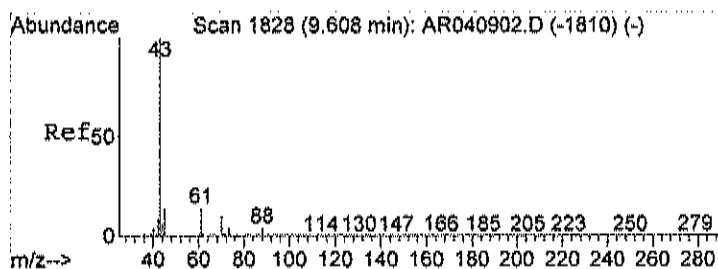
Tgt Ion: 76 Resp: 16870
Ion Ratio Lower Upper
76 100
78 11.4 0.0 29.7



#28
Methyl Ethyl Ketone
Concen: 3.65 ppb
RT: 9.01 min Scan# 1628
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

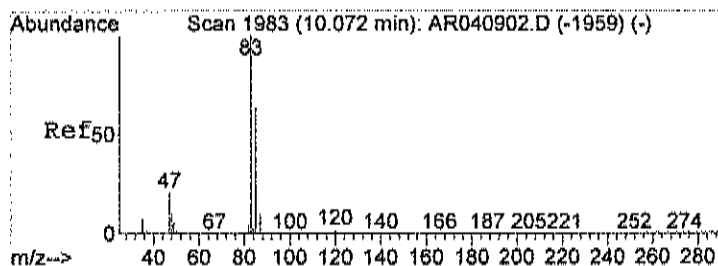
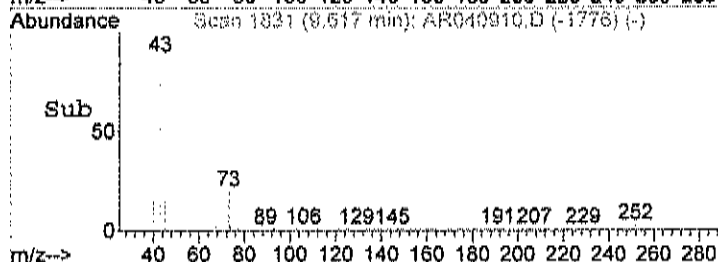
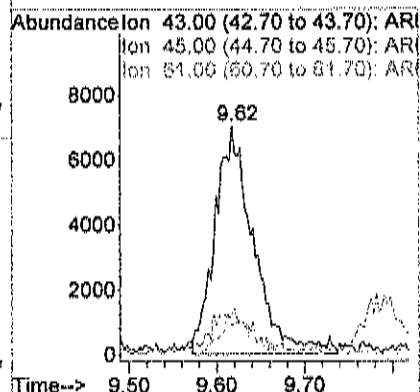
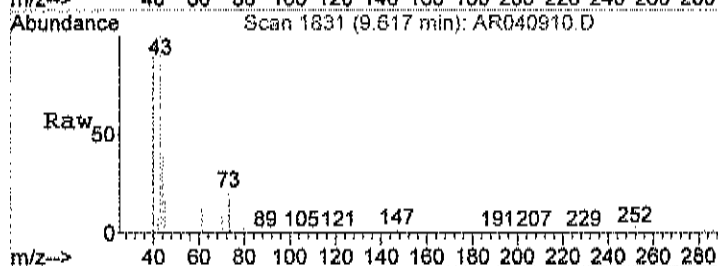
Tgt Ion: 72 Resp: 80422
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0





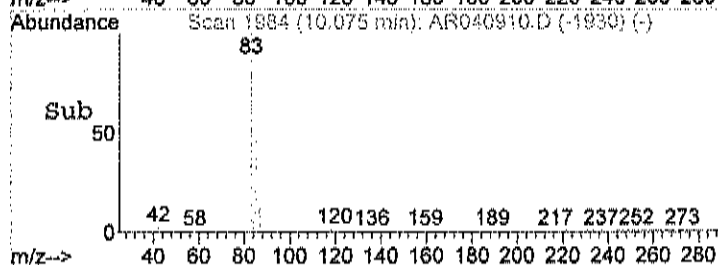
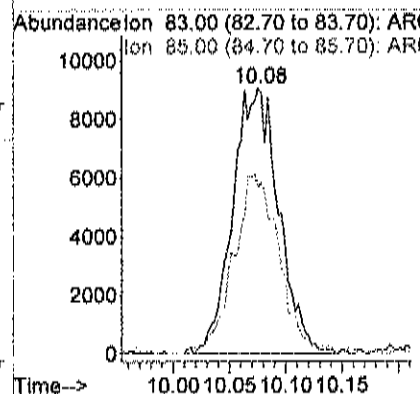
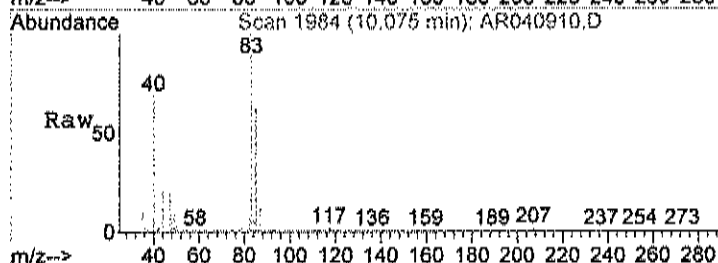
#31
Ethyl acetate
Concen: 0.21 ppb
RT: 9.62 min Scan# 1831
Delta R.T. 0.02 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

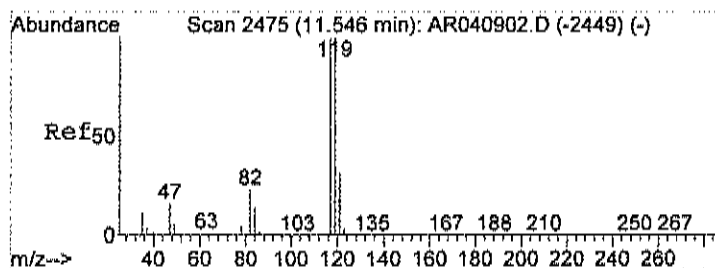
Tgt Ion	Ratio	Lower	Upper
43	100		
45	20.0	0.0	34.5
61	13.5	0.0	35.8



#32
Chloroform
Concen: 0.18 ppb
RT: 10.08 min Scan# 1984
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

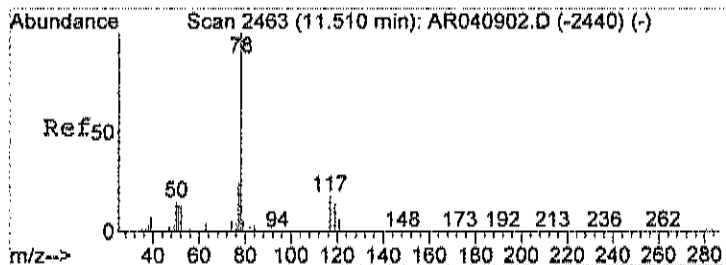
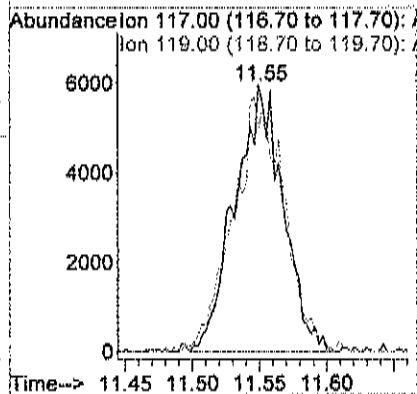
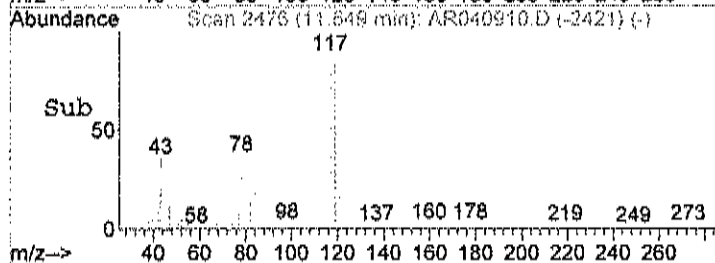
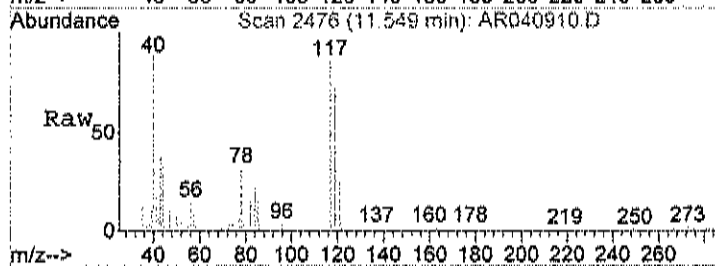
Tgt Ion	Ratio	Lower	Upper
83	100		
85	66.8	46.5	86.5





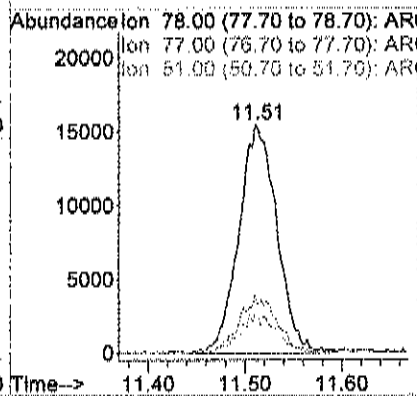
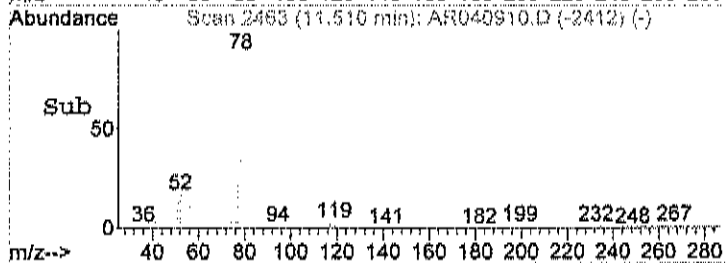
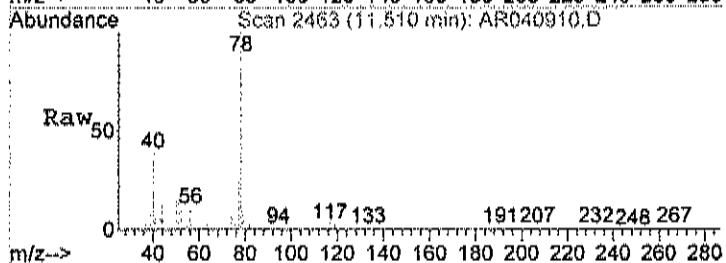
#38
Carbon tetrachloride
Concen: 0.09 ppb
RT: 11.55 min Scan# 2476
Delta R.T. 0.02 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

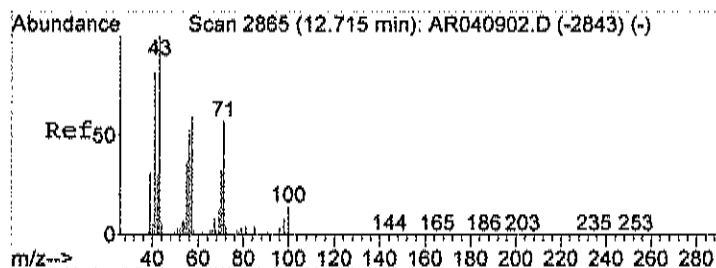
Tgt Ion: 117 Resp: 14839
Ion Ratio Lower Upper
117 100
119 101.1 75.6 115.6



#39
Benzene
Concen: 0.30 ppb
RT: 11.51 min Scan# 2463
Delta R.T. 0.00 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

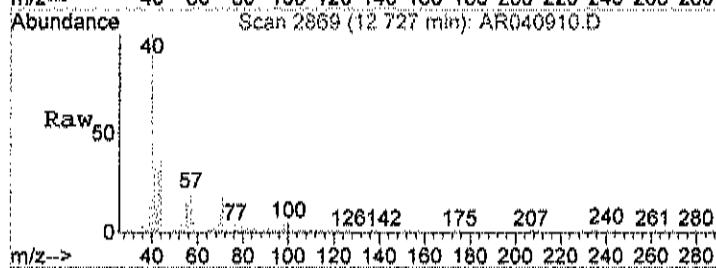
Tgt Ion: 78 Resp: 42453
Ion Ratio Lower Upper
78 100
77 24.4 4.1 44.1
51 17.2 0.0 36.8



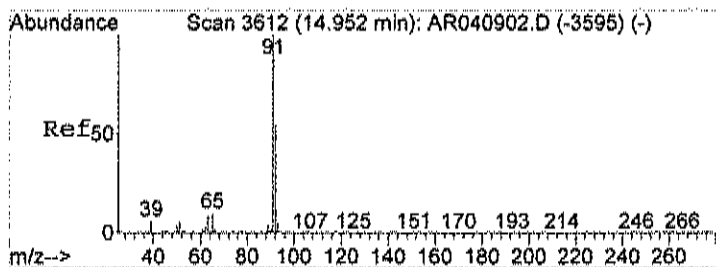
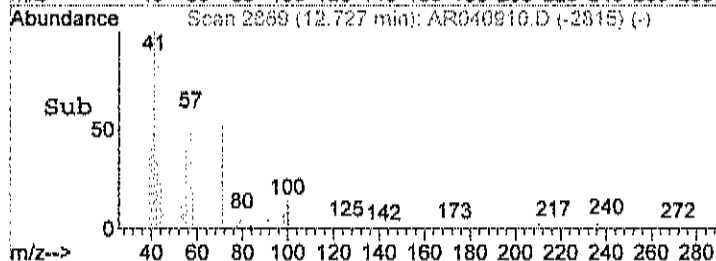
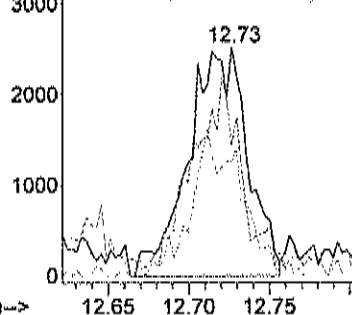


#43
Heptane
Concen: 0.11 ppb
RT: 12.73 min Scan# 2869
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

Tgt Ion: 43 Resp: 6424
Ion Ratio Lower Upper
43 100
57 77.1 36.0 76.0#
71 49.9 42.5 82.5

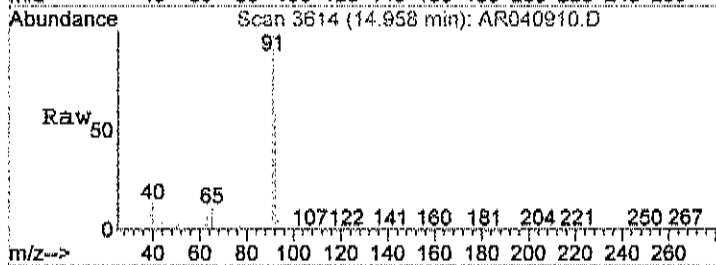


Abundance Ion 43.00 (42.70 to 43.70): AR
Ion 57.00 (56.70 to 57.70): AR
Ion 71.00 (70.70 to 71.70): AR

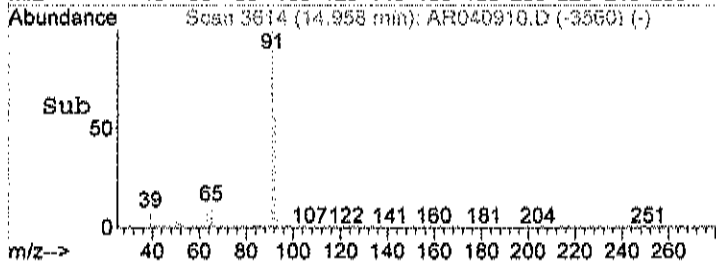
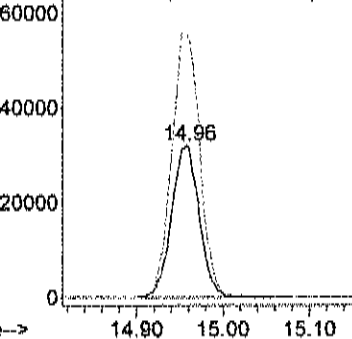


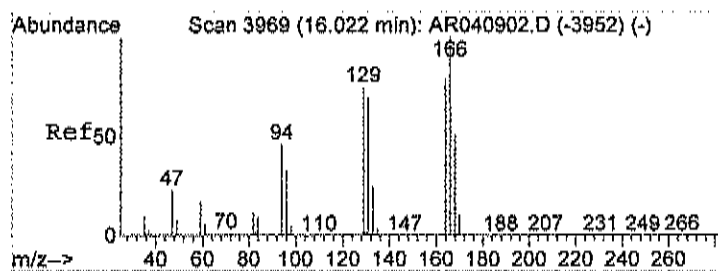
#51
Toluene
Concen: 0.74 ppb
RT: 14.96 min Scan# 3614
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

Tgt Ion: 92 Resp: 71229
Ion Ratio Lower Upper
92 100
91 177.7 154.5 194.5



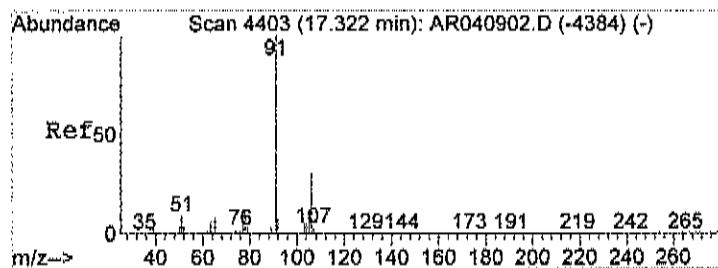
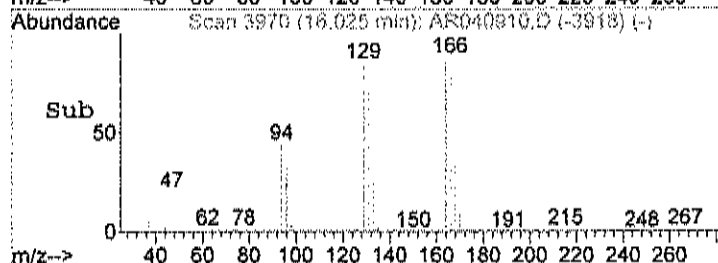
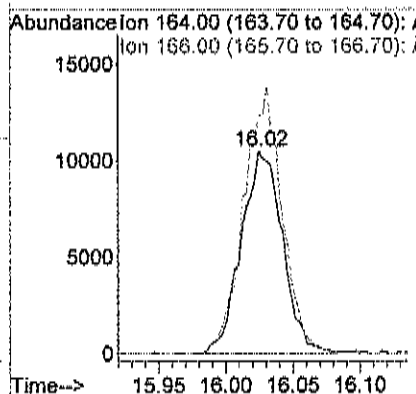
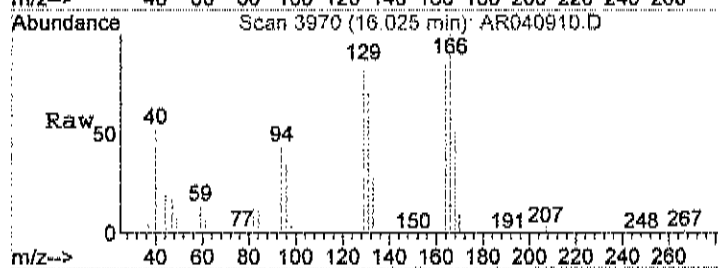
Abundance Ion 92.00 (91.70 to 92.70): AR
Ion 91.00 (90.70 to 91.70): AR





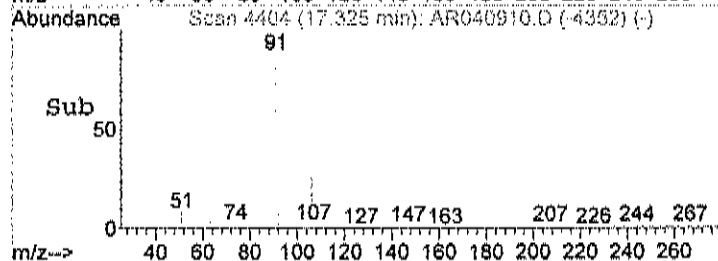
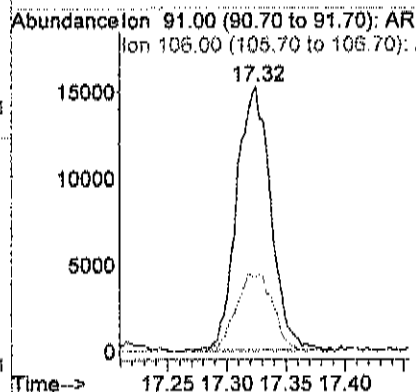
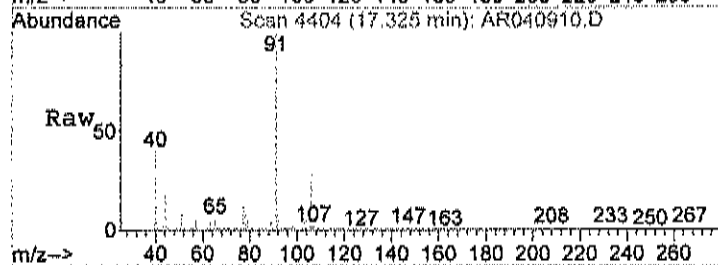
#56
Tetrachloroethylene
Concen: 0.27 ppb
RT: 16.02 min Scan# 3970
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

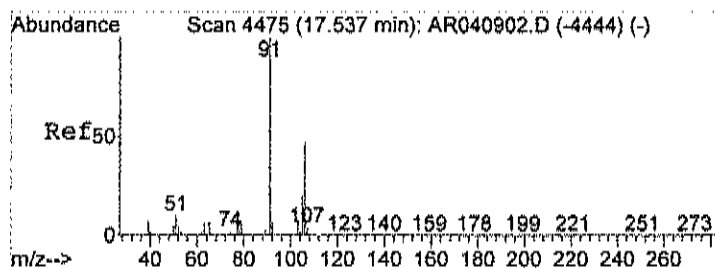
Tgt Ion: 164 Resp: 22229
Ion Ratio Lower Upper
164 100
166 122.9 106.4 146.4



#58
Ethylbenzene
Concen: 0.15 ppb
RT: 17.32 min Scan# 4404
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

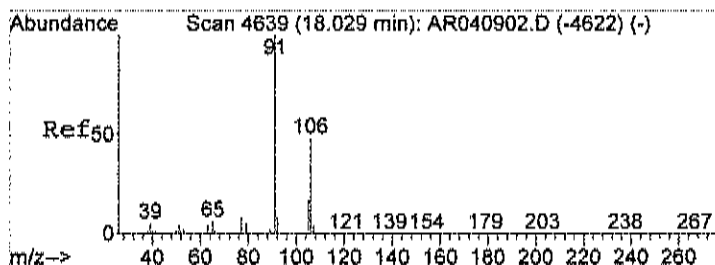
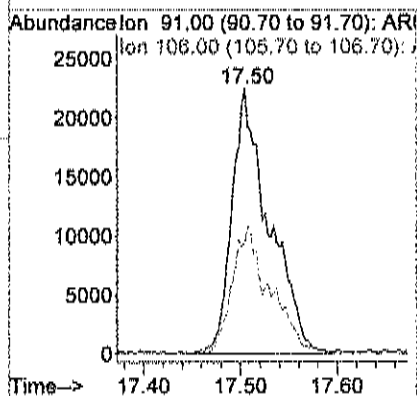
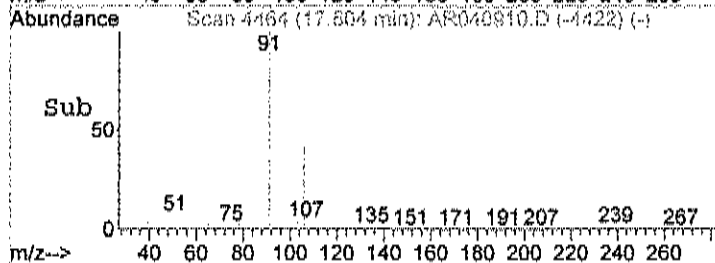
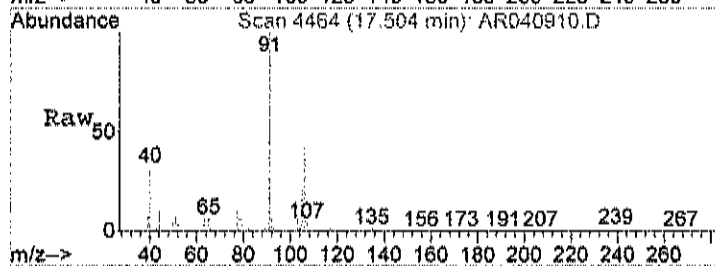
Tgt Ion: 91 Resp: 30591
Ion Ratio Lower Upper
91 100
106 32.6 11.7 51.7





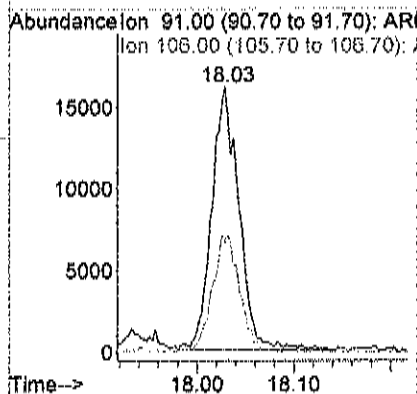
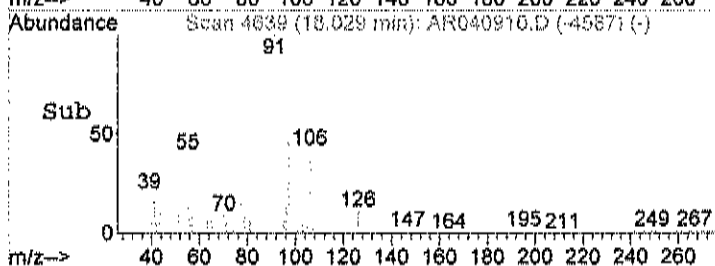
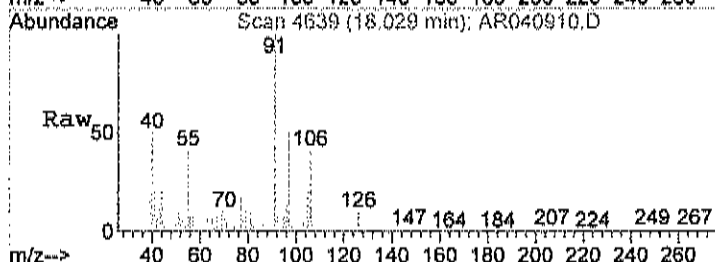
#59
m&p-xylene
Concen: 0.33 ppb
RT: 17.50 min Scan# 4464
Delta R.T. -0.02 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

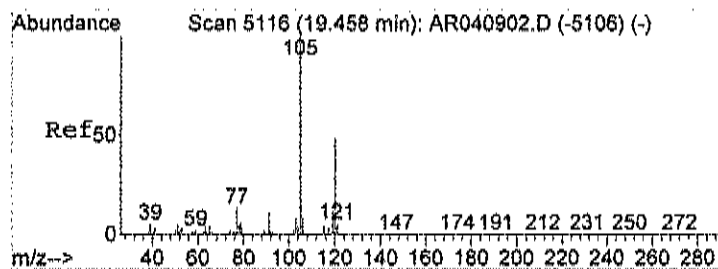
Tgt Ion: 91 Resp: 59588
Ion Ratio Lower Upper
91 100
106 49.2 29.0 69.0



#63
o-xylene
Concen: 0.15 ppb
RT: 18.03 min Scan# 4639
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

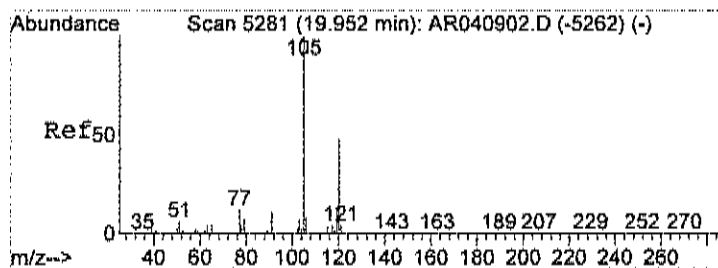
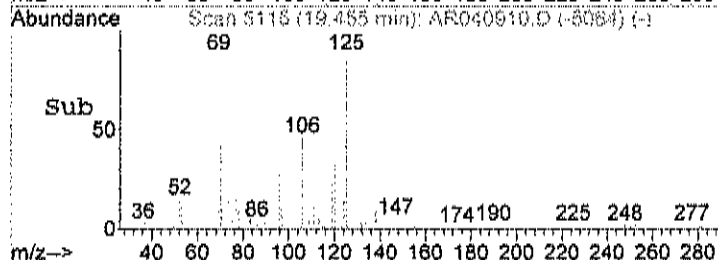
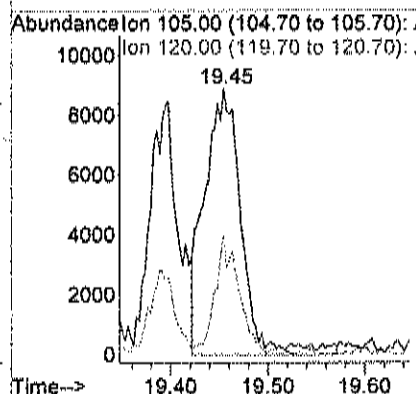
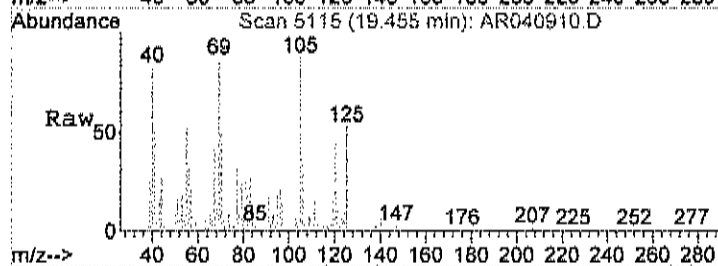
Tgt Ion: 91 Resp: 31525
Ion Ratio Lower Upper
91 100
106 44.9 26.2 66.2





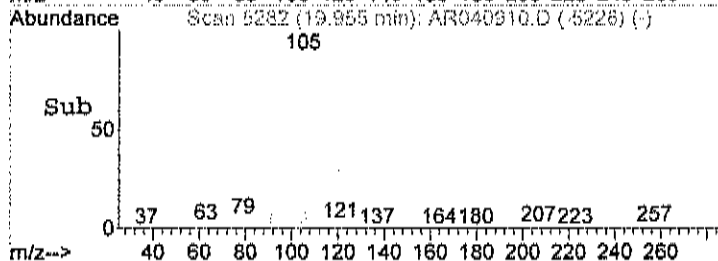
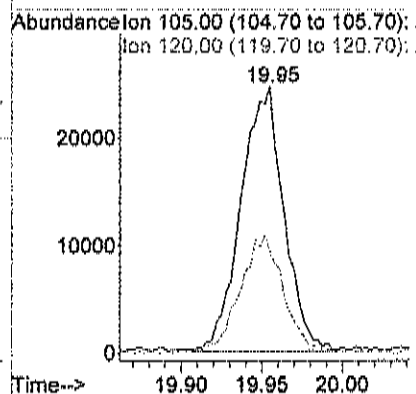
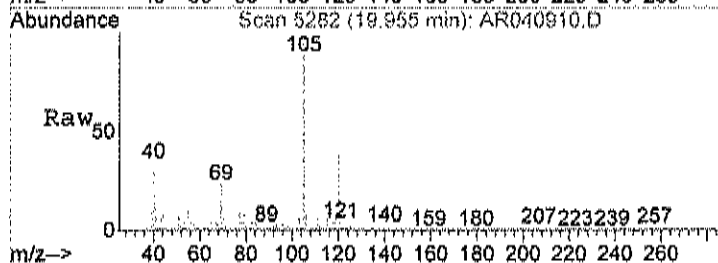
#70
1,3,5-trimethylbenzene
Concen: 0.10 ppb m
RT: 19.45 min Scan# 5115
Delta R.T. 0.00 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

Tgt Ion:105 Resp: 23454
Ion Ratio Lower Upper
105 100
120 28.1 28.2 68.2#



#71
1,2,4-trimethylbenzene
Concen: 0.24 ppb
RT: 19.95 min Scan# 5282
Delta R.T. 0.01 min
Lab File: AR040910.D
Acq: 9 Apr 2020 4:26 pm

Tgt Ion:105 Resp: 45283
Ion Ratio Lower Upper
105 100
120 44.7 24.9 64.9



Data File : C:\HPCHEM\1\DATA\AR040919.D

Vial: 19

Acq On : 10 Apr 2020 12:14 am

Operator: RJP

Sample : C2004010-001A 10x

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:49 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	41215	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.20	114	130825	1.00	ppb	0.00
50) Chlorobenzene-d5	17.00	117	117209	1.00	ppb	0.00

System Monitoring Compounds

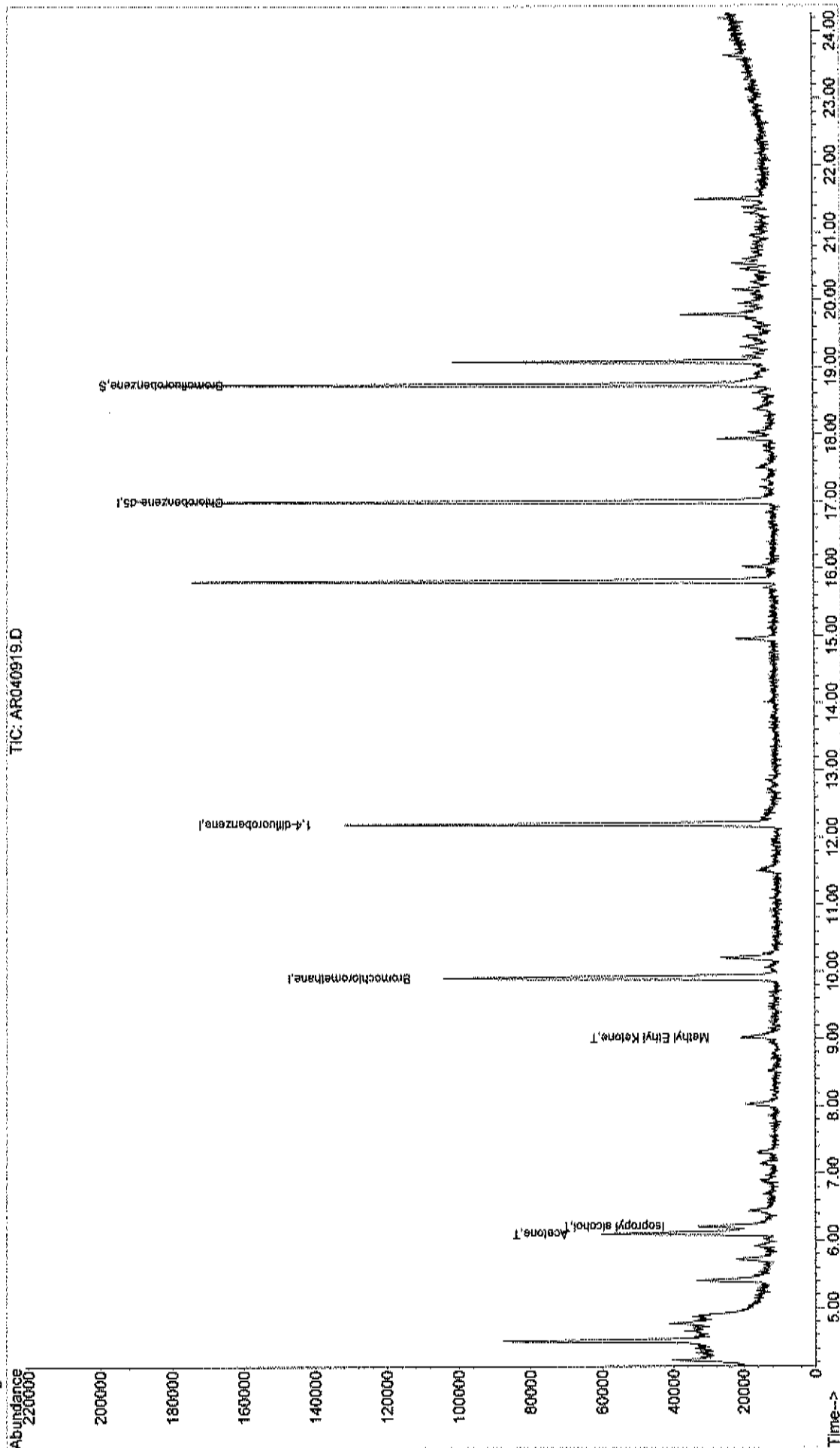
65) Bromofluorobenzene	18.74	95	66587	0.79	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	79.00%

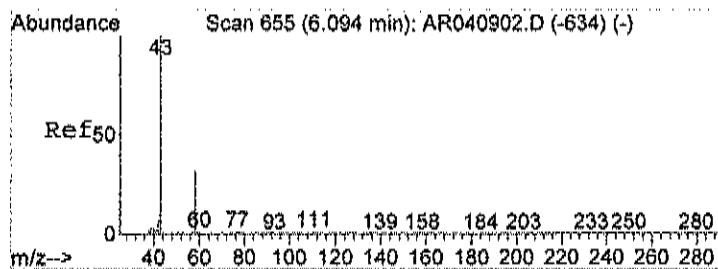
Target Compounds

						Qvalue
15) Acetone	6.09	58	31925	1.42	ppb	# 100
17) Isopropyl alcohol	6.21	45	21798	0.41	ppb	# 1
28) Methyl Ethyl Ketone	9.01	72	5158	0.27	ppb	# 100

Data File : C:\HPCHEM\1\DATA\AR040919.D
Acq On : 10 Apr 2020 12:14 am
Sample : C2004010-001A 10x
Misc : A311_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 15 11:40 2020
Quant Results File: A320_1UG.RES

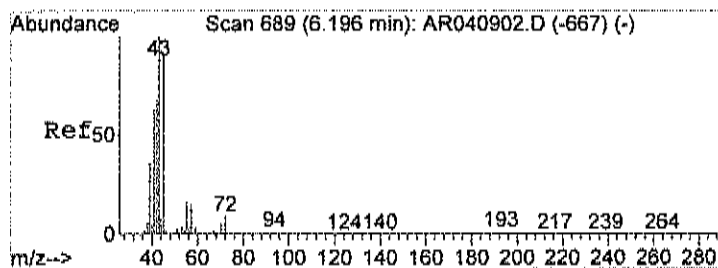
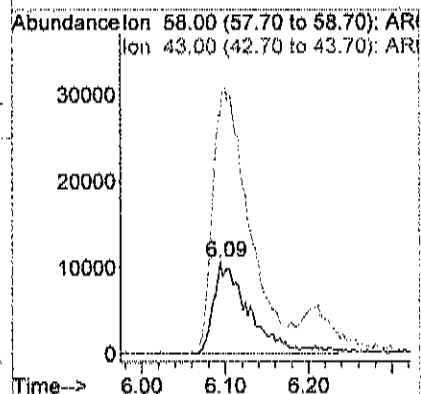
Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 17 11:38:02 2020
Response via : Initial Calibration





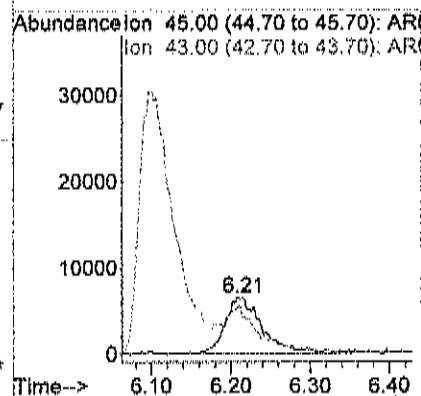
#15
Acetone
Concen: 1.42 ppb
RT: 6.09 min Scan# 655
Delta R.T. -0.00 min
Lab File: AR040919.D
Acq: 10 Apr 2020 12:14 am

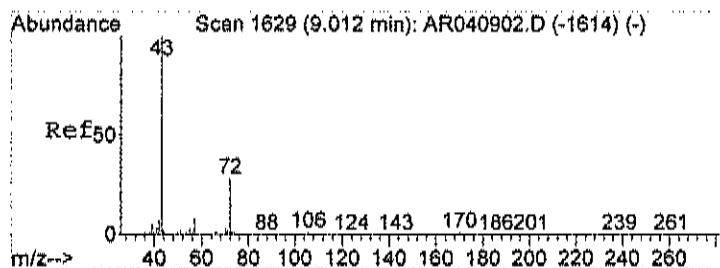
Tgt Ion: 58 Resp: 31925
Ion Ratio Lower Upper
58 100
43 335.3 0.0 30.0#



#17
Isopropyl alcohol
Concen: 0.41 ppb
RT: 6.21 min Scan# 693
Delta R.T. 0.01 min
Lab File: AR040919.D
Acq: 10 Apr 2020 12:14 am

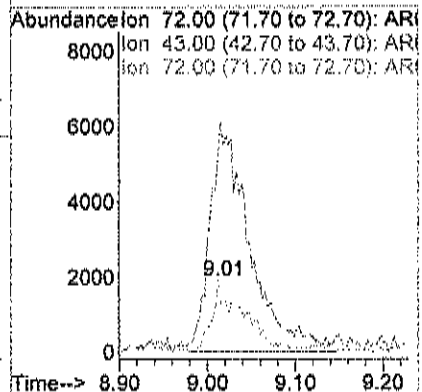
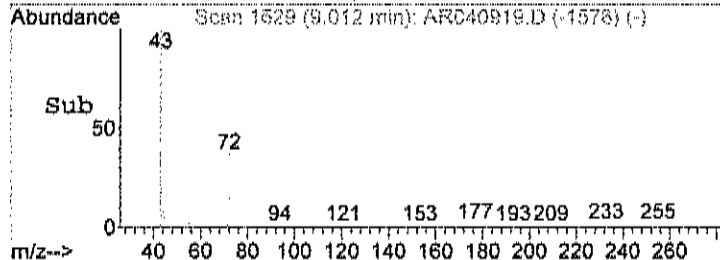
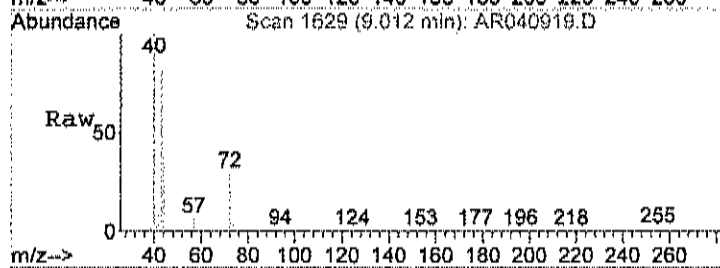
Tgt Ion: 45 Resp: 21798
Ion Ratio Lower Upper
45 100
43 0.0 196.5 236.5#





#28
Methyl Ethyl Ketone
Concen: 0.27 ppb
RT: 9.01 min Scan# 1629
Delta R.T. 0.01 min
Lab File: AR040919.D
Acq: 10 Apr 2020 12:14 am

Tgt Ion: 72 Resp: 5158
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS DATA

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INITIAL CALIBRATION

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Apr 10 08:22:44 2020
 Response via : Initial Calibration

Calibration Files

2.0 =AR032004.D 1.5 =AR032005.D 1.25 =AR032006.D
 1.0 =AR032007.D 0.75 =AR032008.D 0.50 =AR032009.D

Compound	2.0	1.5	1.25	1.0	0.75	0.50	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----							
2) T Propylene	0.673	0.704	0.732	0.711	0.712	0.678	0.720	5.99
3) T Freon 12	4.504	4.566	4.523	4.523	4.451	4.366	4.461	1.77
4) T Chloromethane	0.949	0.934	0.929	0.982	0.969	0.947	0.968	5.88
5) T Freon 114	3.497	3.502	3.471	3.528	3.429	3.385	3.454	1.54
6) T Vinyl Chloride	0.910	0.923	0.913	0.891	0.903	0.934	0.909	4.47
7) T Butane	0.905	0.929	0.933	1.001	0.960	0.922	0.961	4.81
8) T 1,3-butadiene	0.723	0.777	0.766	0.778	0.730	0.784	0.798	9.93
9) T Bromomethane	1.257	1.380	1.354	1.386	1.366	1.291	1.340	3.50
10) T Chloroethane	0.471	0.583	0.563	0.587	0.580	0.585	0.545	9.66
11) T Ethanol	0.232	0.249	0.267	0.240	0.231	0.231	0.255	12.12
12) T Acrolein	0.290	0.287	0.288	0.297	0.293	0.285	0.285	3.53
13) T Vinyl Bromide	1.165	1.136	1.139	1.100	1.107	1.091	1.127	2.23
14) T Freon 11	4.810	4.767	4.758	4.738	4.693	4.629	4.692	2.30
15) T Acetone	0.551	0.555	0.555	0.544	0.550	0.538	0.545	2.46
16) T Pentane	0.976	1.004	1.015	0.957	0.982	0.926	0.982	3.72
17) T Isopropyl alcoh	1.347	1.343	1.333	1.221	1.153	1.205	1.280	6.95
18) T 1,1-dichloroeth	1.025	1.054	1.061	1.035	1.035	1.023	1.033	2.97
19) T Freon 113	2.821	2.795	2.785	2.778	2.768	2.736	2.758	2.26
20) t t-Butyl alcohol	1.591	1.559	1.549	1.469	1.382	1.464	1.464	6.57
21) T Methylene chlor	1.087	1.115	1.114	1.113	1.146	1.083	1.141	5.97
22) T Allyl chloride	1.040	1.036	1.044	1.048	1.001	0.915	0.993	5.99
23) T Carbon disulfid	3.272	3.299	3.381	3.378	3.441	3.382	3.485	7.97
24) T trans-1,2-dichl	1.537	1.534	1.542	1.539	1.483	1.477	1.490	3.96
25) T methyl tert-but	2.442	2.360	2.345	2.294	2.168	2.052	2.216	7.54
26) T 1,1-dichloroeth	2.068	2.088	2.121	2.098	2.048	2.092	2.058	2.76
27) T Vinyl acetate	1.455	1.489	1.485	1.422	1.410	1.313	1.405	5.19
28) T Methyl Ethyl Ke	0.462	0.456	0.465	0.454	0.429	0.406	0.457	9.00
29) T cis-1,2-dichlor	1.380	1.416	1.379	1.402	1.366	1.320	1.374	6.01
30) T Hexane	1.461	1.452	1.444	1.418	1.176	1.196	1.294	12.70
31) T Ethyl acetate	2.183	2.192	2.160	2.121	2.036	1.895	2.073	5.27
32) T Chloroform	2.985	2.989	2.998	2.988	2.971	2.858	2.941	2.30
33) T Tetrahydrofuran	0.779	0.746	0.757	0.760	0.689	0.707	0.725	6.26
34) T 1,2-dichloroeth	1.922	1.886	1.920	1.924	1.896	1.844	1.889	1.88
35) I 1,4-difluorobenzene	-----ISTD-----							
36) T 1,1,1-trichloro	0.893	0.869	0.864	0.852	0.831	0.842	0.856	2.55
37) T Cyclohexane	0.363	0.345	0.343	0.322	0.310	0.290	0.316	10.57
38) T Carbon tetrachl	1.043	1.022	1.013	1.007	0.994	1.003	0.963	12.84
39) T Benzene	0.889	0.876	0.868	0.840	0.806	0.795	0.831	5.31
40) T Methyl methacry	0.337	0.316	0.307	0.288	0.281	0.266	0.292	9.84
41) T 1,4-dioxane	0.220	0.216	0.205	0.194	0.184	0.171	0.188	13.28
42) T 2,2,4-trimethyl	1.178	1.157	1.132	1.075	1.056	0.995	1.067	7.90
43) T Heptane	0.394	0.385	0.373	0.352	0.345	0.309	0.340	13.41
44) T Trichloroethene	0.465	0.464	0.462	0.440	0.441	0.440	0.422	13.02
45) T 1,2-dichloropro	0.336	0.332	0.323	0.321	0.317	0.317	0.325	2.93
46) T Bromodichlorome	0.920	0.904	0.889	0.866	0.864	0.874	0.880	2.51
47) T cis-1,3-dichlor	0.591	0.571	0.547	0.537	0.510	0.490	0.519	10.41
48) T trans-1,3-dichl	0.454	0.452	0.430	0.429	0.409	0.380	0.413	8.20
49) T 1,1,2-trichloro	0.445	0.441	0.437	0.428	0.426	0.415	0.425	4.55
50) I Chlorobenzene-d5	-----ISTD-----							
51) T Toluene	0.673	0.657	0.646	0.598	0.594	0.532	0.585	12.60

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Apr 10 08:22:44 2020
 Response via : Initial Calibration

Calibration Files

2.0 =AR032004.D 1.5 =AR032005.D 1.25 =AR032006.D
 1.0 =AR032007.D 0.75 =AR032008.D 0.50 =AR032009.D

	Compound	2.0	1.5	1.25	1.0	0.75	0.50	Avg	%RSD
52) T	Methyl Isobutyl	0.588	0.559	0.534	0.517	0.496	0.476	0.524	8.10
53) T	Dibromochlorome	1.004	1.011	0.993	0.950	0.967	0.950	0.976	2.54
54) T	Methyl Butyl Ke	0.519	0.473	0.456	0.450	0.436	0.387	0.447	11.03
55) T	1,2-dibromoetha	0.741	0.728	0.732	0.698	0.697	0.687	0.706	3.66
56) T	Tetrachloroethy	0.520	0.521	0.509	0.500	0.492	0.498	0.500	3.08
57) T	Chlorobenzene	0.987	0.986	0.971	0.923	0.927	0.897	0.935	4.65
58) T	Ethylbenzene	1.514	1.445	1.371	1.286	1.256	1.141	1.258	14.72
59) T	m&p-xylene	1.334	1.280	1.246	1.158	1.100	0.953	1.089	18.86
60) T	Nonane	0.670	0.641	0.619	0.571	0.550	0.468	0.558	14.61
61) T	Styrene	1.021	0.986	0.966	0.911	0.854	0.746	0.853	16.61
62) T	Bromoform	1.005	0.985	0.976	0.938	0.945	0.883	0.940	5.16
63) T	o-xylene	1.502	1.448	1.428	1.376	1.315	1.206	1.313	11.64
64) T	Cumene	1.743	1.634	1.580	1.460	1.357	1.200	1.402	17.19
65) S	Bromofluorobenz	0.827	0.820	0.798	0.778	0.769	0.710	0.718	11.87
66) T	1,1,2,2-tetrach	1.066	1.051	1.038	1.003	0.988	0.964	1.014	3.50
67) T	Propylbenzene	0.477	0.450	0.436	0.393	0.368	0.318	0.377	19.90
68) T	2-Chlorotoluene	0.503	0.475	0.470	0.453	0.432	0.380	0.424	15.19
69) T	4-ethyltoluene	1.851	1.773	1.688	1.588	1.422	1.191	1.486	18.71
70) T	1,3,5-trimethyl	1.707	1.632	1.578	1.478	1.402	1.227	1.399	17.70
71) T	1,2,4-trimethyl	1.485	1.385	1.303	1.188	1.064	0.952	1.146	20.05
72) T	1,3-dichloroben	1.089	1.040	1.018	0.940	0.822	0.711	0.893	16.86
73) T	benzyl chloride	1.005	0.923	0.872	0.805	0.771	0.559	0.801	17.72
74) T	1,4-dichloroben	1.130	1.052	1.027	0.964	0.751	0.663	0.875	21.69
75) T	1,2,3-trimethyl	1.662	1.542	1.503	1.374	1.226	1.039	1.286	21.23
76) T	1,2-dichloroben	1.103	1.038	1.015	0.958	0.841	0.790	0.909	15.46
77) T	1,2,4-trichloro	0.537	0.434	0.420	0.375	0.314	0.306	0.373	22.90
78) T	Naphthalene	1.175	0.986	0.900	0.800	0.661	0.571	0.792	27.05
79) T	Hexachloro-1,3-	0.889	0.842	0.831	0.791	0.790	0.744	0.797	6.81

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032004.D
 Acq On : 20 Mar 2020 6:04 pm
 Sample : A1UG_2.0
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:02:53 2020

Vial: 4
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	40365	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	146150	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	137131	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.73	95	113450	1.06	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	106.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.21	41	54355	1.89	ppb	90
3) Freon 12	4.26	85	363605	1.99	ppb	99
4) Chloromethane	4.46	50	76615	1.93	ppb	95
5) Freon 114	4.46	85	282350	1.98	ppb	95
6) Vinyl Chloride	4.66	62	73492	2.04	ppb	98
7) Butane	4.77	43	73085	1.81	ppb	94
8) 1,3-butadiene	4.76	39	58386	1.86	ppb	98
9) Bromomethane	5.11	94	101472	1.81	ppb	99
10) Chloroethane	5.29	64	38001m	1.60	ppb	
11) Ethanol	5.38	45	18695m	1.93	ppb	
12) Acrolein	5.97	56	23385	1.95	ppb	95
13) Vinyl Bromide	5.64	106	94081	2.12	ppb	99
14) Freon 11	5.91	101	388291	2.03	ppb	99
15) Acetone	6.08	58	44444	2.03	ppb	# 100
16) Pentane	6.20	42	78809	2.04	ppb	# 43
17) Isopropyl alcohol	6.19	45	108761	2.21	ppb	# 46
18) 1,1-dichloroethene	6.68	96	82714	1.98	ppb	95
19) Freon 113	6.88	101	227722	2.03	ppb	96
20) t-Butyl alcohol	6.91	59	128414	2.16	ppb	# 89
21) Methylene chloride	7.14	84	87790	1.95	ppb	100
22) Allyl chloride	7.12	41	83941	1.98	ppb	94
23) Carbon disulfide	7.31	76	264145	1.94	ppb	100
24) trans-1,2-dichloroethene	8.08	61	124065	2.00	ppb	99
25) methyl tert-butyl ether	8.10	73	197125	2.13	ppb	95
26) 1,1-dichloroethane	8.51	63	166954	1.97	ppb	99
27) Vinyl acetate	8.50	43	117487	2.05	ppb	98
28) Methyl Ethyl Ketone	9.00	72	37334	2.04	ppb	# 100
29) cis-1,2-dichloroethene	9.45	61	111412	1.97	ppb	98
30) Hexane	9.05	57	117908	2.06	ppb	98
31) Ethyl acetate	9.60	43	176246	2.06	ppb	98
32) Chloroform	10.06	83	240965	2.00	ppb	99
33) Tetrahydrofuran	10.23	42	62873	2.05	ppb	94
34) 1,2-dichloroethane	11.17	62	155156	2.00	ppb	100
36) 1,1,1-trichloroethane	10.89	97	260991	2.10	ppb	97
37) Cyclohexane	11.60	56	106212	2.26	ppb	95
38) Carbon tetrachloride	11.54	117	304914	2.07	ppb	98
39) Benzene	11.50	78	259908	2.12	ppb	98
40) Methyl methacrylate	13.06	41	98562	2.34	ppb	97
41) 1,4-dioxane	13.08	88	64289	2.27	ppb	95
42) 2,2,4-trimethylpentane	12.36	57	344317	2.19	ppb	99
43) Heptane	12.71	43	115122	2.23	ppb	96
44) Trichloroethene	12.83	130	136029	2.11	ppb	97
45) 1,2-dichloropropane	12.94	63	98085	2.09	ppb	99

(#) = qualifier out of range (m) = manual integration

AR032004.D A320_1UG.M

Fri Apr 10 08:26:39 2020

MSD1

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032004.D
 Acq On : 20 Mar 2020 6:04 pm
 Sample : A1UG_2.0
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:02:53 2020

Vial: 4
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	268913	2.12	ppb	99
47) cis-1,3-dichloropropene	14.10	75	172624	2.20	ppb	99
48) trans-1,3-dichloropropene	14.87	75	132615	2.11	ppb	99
49) 1,1,2-trichloroethane	15.19	97	130013	2.08	ppb	99
51) Toluene	14.94	92	184515	2.25	ppb	97
52) Methyl Isobutyl Ketone	14.01	43	161401	2.28	ppb	99
53) Dibromochloromethane	15.93	129	275423	2.12	ppb	100
54) Methyl Butyl Ketone	15.37	43	142401m	2.33	ppb	
55) 1,2-dibromoethane	16.19	107	203215	2.12	ppb	98
56) Tetrachloroethylene	16.02	164	142580	2.08	ppb	98
57) Chlorobenzene	17.04	112	270703	2.14	ppb	99
58) Ethylbenzene	17.31	91	415296	2.35	ppb	99
59) m&p-xylene	17.53	91	731553	4.61	ppb	97
60) Nonane	17.92	43	183652	2.34	ppb	98
61) Styrene	17.98	104	280049	2.24	ppb	99
62) Bromoform	18.11	173	275733	2.14	ppb	99
63) o-xylene	18.02	91	411983	2.18	ppb	97
64) Cumene	18.62	105	478077	2.39	ppb	99
66) 1,1,2,2-tetrachloroethane	18.49	83	292494	2.13	ppb	100
67) Propylbenzene	19.20	120	130808	2.43	ppb	89
68) 2-Chlorotoluene	19.24	126	138059	2.23	ppb	# 86
69) 4-ethyltoluene	19.39	105	507598	2.33	ppb	98
70) 1,3,5-trimethylbenzene	19.45	105	468078	2.31	ppb	97
71) 1,2,4-trimethylbenzene	19.94	105	407396	2.50	ppb	99
72) 1,3-dichlorobenzene	20.27	146	298538	2.32	ppb	99
73) benzyl chloride	20.34	91	275580	2.50	ppb	97
74) 1,4-dichlorobenzene	20.41	146	309922	2.35	ppb	99
75) 1,2,3-trimethylbenzene	20.46	105	455862	2.42	ppb	97
76) 1,2-dichlorobenzene	20.78	146	302526	2.30	ppb	99
77) 1,2,4-trichlorobenzene	23.03	180	147151	2.86	ppb	99
78) Naphthalene	23.25	128	322288m	2.94	ppb	
79) Hexachloro-1,3-butadiene	23.38	225	243943	2.25	ppb	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032004.D A320_1UG.M Fri Apr 10 08:26:40 2020 MSD1

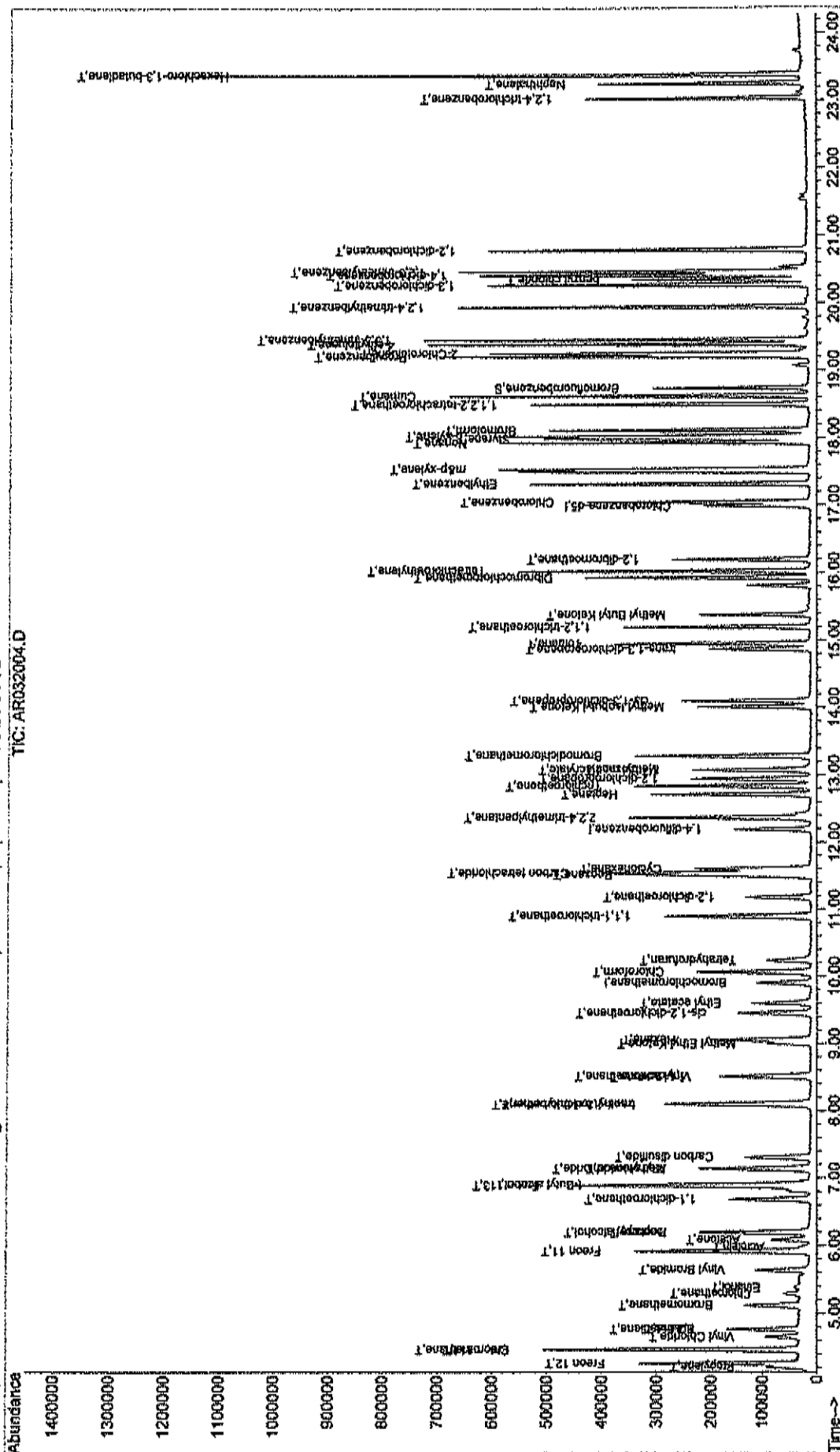
Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A320 1UG.RES

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Method      : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.1

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MSD1

Fri Apr 10 08:26:41 2020

AR032004.D A320 IUG.M

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032005.D
 Acq On : 20 Mar 2020 6:53 pm
 Sample : A1UG_1.50
 Misc : A311_1UG

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 21 09:02:15 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	40432	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	148606	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	136983	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	112341	1.05	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	105.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.20	41	42692	1.48	ppb	92
3) Freon 12	4.26	85	276922	1.51	ppb	98
4) Chloromethane	4.46	50	56664	1.43	ppb	97
5) Freon 114	4.46	85	212389	1.49	ppb	95
6) Vinyl Chloride	4.66	62	55962	1.55	ppb	99
7) Butane	4.76	43	56322m	1.39	ppb	
8) 1,3-butadiene	4.76	39	47146m	1.50	ppb	
9) Bromomethane	5.11	94	83721	1.49	ppb	99
10) Chloroethane	5.29	64	35347	1.49	ppb	98
11) Ethanol	5.40	45	15119	1.56	ppb	86
12) Acrolein	5.98	56	17423	1.45	ppb	97
13) Vinyl Bromide	5.64	106	68886	1.55	ppb	99
14) Freon 11	5.91	101	289112	1.51	ppb	99
15) Acetone	6.09	58	33666	1.53	ppb	# 100
16) Pentane	6.19	42	60873	1.57	ppb	97
17) Isopropyl alcohol	6.20	45	81456	1.65	ppb	# 82
18) 1,1-dichloroethene	6.69	96	63951	1.53	ppb	98
19) Freon 113	6.89	101	169509	1.51	ppb	96
20) t-Butyl alcohol	6.90	59	94558	1.59	ppb	# 88
21) Methylene chloride	7.14	84	67607	1.50	ppb	97
22) Allyl chloride	7.12	41	62816	1.48	ppb	92
23) Carbon disulfide	7.31	76	200058	1.46	ppb	99
24) trans-1,2-dichloroethene	8.09	61	93014	1.50	ppb	98
25) methyl tert-butyl ether	8.10	73	143137	1.54	ppb	94
26) 1,1-dichloroethane	8.51	63	126649	1.49	ppb	99
27) Vinyl acetate	8.50	43	90317	1.57	ppb	98
28) Methyl Ethyl Ketone	9.00	72	27647	1.51	ppb	# 100
29) cis-1,2-dichloroethene	9.46	61	85905	1.52	ppb	99
30) Hexane	9.06	57	88051	1.54	ppb	99
31) Ethyl acetate	9.60	43	132966	1.55	ppb	99
32) Chloroform	10.06	83	181271	1.50	ppb	97
33) Tetrahydrofuran	10.24	42	45257	1.48	ppb	91
34) 1,2-dichloroethane	11.18	62	114388	1.47	ppb	99
36) 1,1,1-trichloroethane	10.89	97	193702	1.53	ppb	98
37) Cyclohexane	11.60	56	76866	1.61	ppb	92
38) Carbon tetrachloride	11.54	117	227751	1.52	ppb	99
39) Benzene	11.50	78	195213	1.56	ppb	98
40) Methyl methacrylate	13.07	41	70373	1.64	ppb	95
41) 1,4-dioxane	13.09	88	48155	1.67	ppb	93
42) 2,2,4-trimethylpentane	12.37	57	257931	1.61	ppb	100
43) Heptane	12.71	43	85876	1.64	ppb	97
44) Trichloroethene	12.84	130	103337	1.58	ppb	97
45) 1,2-dichloropropane	12.94	63	74049	1.55	ppb	97

(#)=qualifier out of range (m)=manual integration

AR032005.D A320_1UG.M

Fri Apr 10 08:26:43 2020

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032005.D
 Acq On : 20 Mar 2020 6:53 pm
 Sample : A1UG_1.50
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:02:15 2020

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	201513	1.57	ppb	99
47) cis-1,3-dichloropropene	14.10	75	127327	1.59	ppb	100
48) trans-1,3-dichloropropene	14.87	75	100842	1.58	ppb	90
49) 1,1,2-trichloroethane	15.19	97	98341	1.55	ppb	100
51) Toluene	14.95	92	134931	1.65	ppb	99
52) Methyl Isobutyl Ketone	14.01	43	114830	1.62	ppb	100
53) Dibromochloromethane	15.93	129	207659	1.60	ppb	99
54) Methyl Butyl Ketone	15.38	43	97109m	1.59	ppb	
55) 1,2-dibromoethane	16.19	107	149507	1.56	ppb	99
56) Tetrachloroethylene	16.02	164	107029	1.56	ppb	100
57) Chlorobenzene	17.04	112	202635	1.60	ppb	100
58) Ethylbenzene	17.31	91	296828	1.69	ppb	98
59) m&p-xylene	17.53	91	526058	3.32	ppb	98
60) Nonane	17.93	43	131690	1.68	ppb	98
61) Styrene	17.99	104	202600	1.62	ppb	98
62) Bromoform	18.11	173	202344	1.57	ppb	100
63) o-xylene	18.02	91	297431	1.58	ppb	98
64) Cumene	18.62	105	335767	1.68	ppb	99
66) 1,1,2,2-tetrachloroethane	18.49	83	215868	1.57	ppb	100
67) Propylbenzene	19.20	120	92458	1.72	ppb	86
68) 2-Chlorotoluene	19.25	126	97561	1.57	ppb	# 83
69) 4-ethyltoluene	19.39	105	364286	1.68	ppb	98
70) 1,3,5-trimethylbenzene	19.45	105	335430	1.66	ppb	97
71) 1,2,4-trimethylbenzene	19.94	105	284662	1.75	ppb	98
72) 1,3-dichlorobenzene	20.27	146	213660	1.66	ppb	99
73) benzyl chloride	20.35	91	189653	1.72	ppb	96
74) 1,4-dichlorobenzene	20.41	146	216219	1.64	ppb	98
75) 1,2,3-trimethylbenzene	20.47	105	316833	1.68	ppb	97
76) 1,2-dichlorobenzene	20.78	146	213279	1.63	ppb	100
77) 1,2,4-trichlorobenzene	23.03	180	89096	1.73	ppb	99
78) Naphthalene	23.25	128	202549	1.85	ppb	98
79) Hexachloro-1,3-butadiene	23.38	225	173103	1.60	ppb	90

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

AR032005.D A320_1UG.M Fri Apr 10 08:26:44 2020 MSD1

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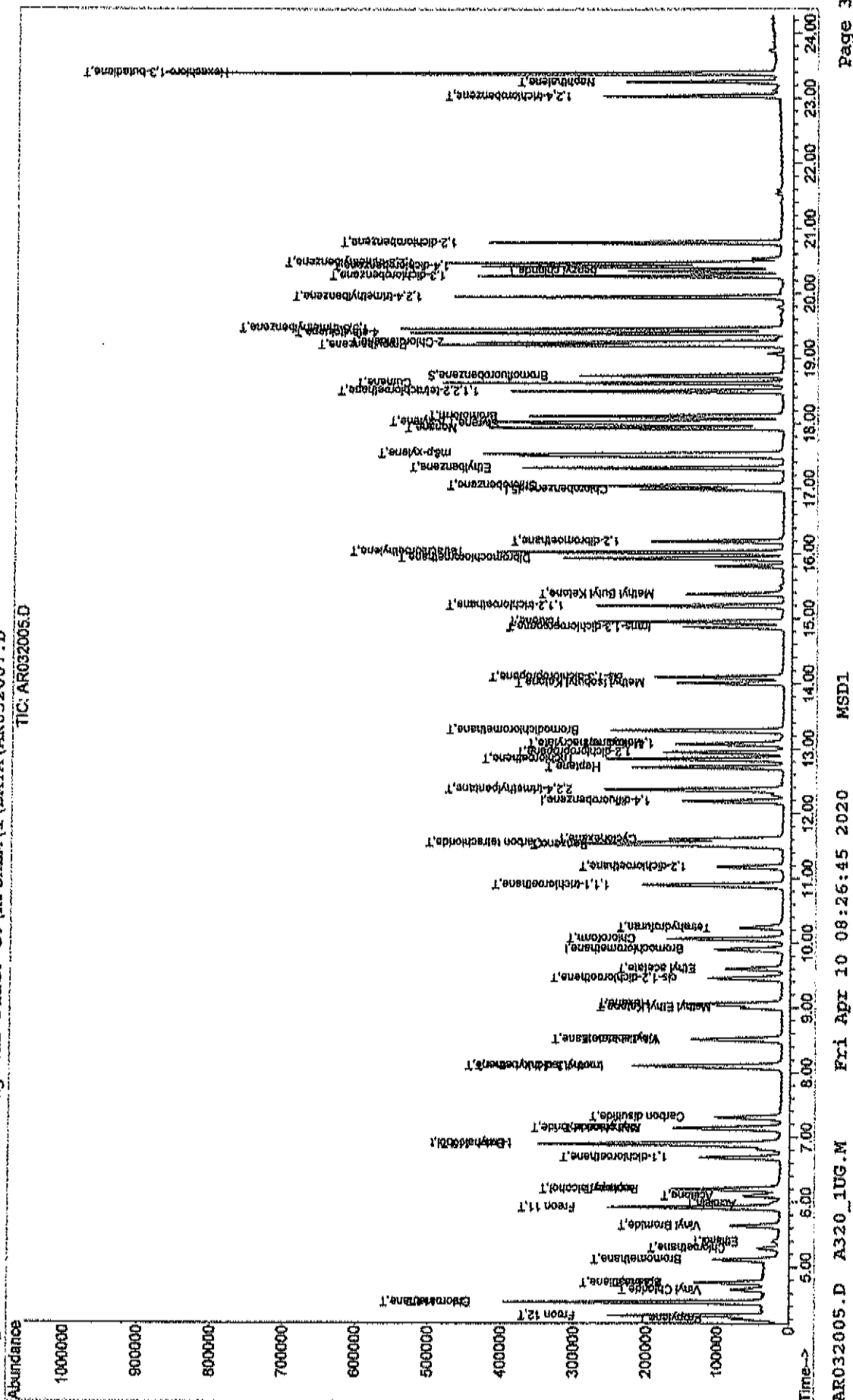
Data File : C:\HPCHEM\1\DATA\AR032005.D
Acq On : 20 Mar 2020 6:53 pm
Sample : A1UG 1.50
Misc : A311_1UG
WMS Integration Params: RTEINT.P
Quant Time: Mar 23 8:17 2020

Quant Results File: A320 1UG.RES

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Method      : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.P

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032006.D
 Acq On : 20 Mar 2020 7:40 pm
 Sample : A1UG_1.25
 Misc : A311_1UG

Vial: 6
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 21 09:01:38 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	40069	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	149361	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	136800	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.73	95	109138	1.03	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	103.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.22	41	36688	1.29	ppb	92
3) Freon 12	4.26	85	226564	1.25	ppb	99
4) Chloromethane	4.46	50	46548	1.18	ppb	100
5) Freon 114	4.46	85	173855	1.23	ppb	96
6) Vinyl Chloride	4.66	62	45738	1.28	ppb	99
7) Butane	4.77	43	46727	1.16	ppb	94
8) 1,3-butadiene	4.76	39	38390m	1.23	ppb	
9) Bromomethane	5.12	94	67792m	1.22	ppb	
10) Chloroethane	5.29	64	28195	1.20	ppb	97
11) Ethanol	5.40	45	13384	1.39	ppb	97
12) Acrolein	5.99	56	14402	1.21	ppb	99
13) Vinyl Bromide	5.63	106	57057	1.29	ppb	99
14) Freon 11	5.92	101	238301	1.26	ppb	99
15) Acetone	6.09	58	27792	1.28	ppb	# 100
16) Pentane	6.21	42	50815	1.33	ppb	98
17) Isopropyl alcohol	6.20	45	66789	1.37	ppb	# 79
18) 1,1-dichloroethene	6.69	96	53144	1.28	ppb	96
19) Freon 113	6.89	101	139512	1.25	ppb	96
20) t-Butyl alcohol	6.91	59	77572	1.32	ppb	# 86
21) Methylene chloride	7.15	84	55779	1.25	ppb	98
22) Allyl chloride	7.13	41	52302	1.25	ppb	93
23) Carbon disulfide	7.31	76	169342	1.25	ppb	100
24) trans-1,2-dichloroethene	8.09	61	77212	1.25	ppb	99
25) methyl tert-butyl ether	8.11	73	117428	1.28	ppb	93
26) 1,1-dichloroethane	8.52	63	106220	1.26	ppb	99
27) Vinyl acetate	8.51	43	74403	1.31	ppb	99
28) Methyl Ethyl Ketone	9.01	72	23296	1.28	ppb	# 100
29) cis-1,2-dichloroethene	9.46	61	69084	1.23	ppb	97
30) Hexane	9.06	57	72312	1.27	ppb	98
31) Ethyl acetate	9.61	43	108204	1.27	ppb	99
32) Chloroform	10.07	83	150181	1.25	ppb	98
33) Tetrahydrofuran	10.24	42	37916	1.25	ppb	94
34) 1,2-dichloroethane	11.18	62	96169	1.25	ppb	100
36) 1,1,1-trichloroethane	10.89	97	161347	1.27	ppb	97
37) Cyclohexane	11.60	56	63955	1.33	ppb	93
38) Carbon tetrachloride	11.54	117	189133	1.26	ppb	99
39) Benzene	11.51	78	162113	1.29	ppb	98
40) Methyl methacrylate	13.07	41	57275	1.33	ppb	97
41) 1,4-dioxane	13.08	88	38357	1.33	ppb	95
42) 2,2,4-trimethylpentane	12.36	57	211406	1.32	ppb	99
43) Heptane	12.71	43	69602	1.32	ppb	97
44) Trichloroethene	12.83	130	86225	1.31	ppb	98
45) 1,2-dichloropropane	12.94	63	60286	1.26	ppb	96

(#) = qualifier out of range (m) = manual integration

AR032006.D A320_1UG.M

Fri Apr 10 08:26:47 2020

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032006.D
 Acq On : 20 Mar 2020 7:40 pm
 Sample : A1UG_1.25
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:01:38 2020

Vial: 6
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	165991	1.28	ppb	98
47) cis-1,3-dichloropropene	14.10	75	102118	1.27	ppb	98
48) trans-1,3-dichloropropene	14.87	75	80304	1.25	ppb	98
49) 1,1,2-trichloroethane	15.19	97	81635	1.28	ppb	99
51) Toluene	14.95	92	110542	1.35	ppb	100
52) Methyl Isobutyl Ketone	14.01	43	91325	1.29	ppb	97
53) Dibromochloromethane	15.93	129	169862	1.31	ppb	100
54) Methyl Butyl Ketone	15.38	43	77978m	1.28	ppb	
55) 1,2-dibromoethane	16.19	107	125123	1.31	ppb	99
56) Tetrachloroethylene	16.02	164	87108	1.27	ppb	100
57) Chlorobenzene	17.04	112	165983	1.31	ppb	100
58) Ethylbenzene	17.32	91	234448	1.33	ppb	99
59) m&p-xylene	17.53	91	426148	2.69	ppb	97
60) Nonane	17.93	43	105790	1.35	ppb	98
61) Styrene	17.99	104	165101	1.33	ppb	98
62) Bromoform	18.11	173	166940	1.30	ppb	99
63) o-xylene	18.02	91	244173	1.30	ppb	98
64) Cumene	18.62	105	270109	1.35	ppb	98
66) 1,1,2,2-tetrachloroethane	18.49	83	177550	1.29	ppb	100
67) Propylbenzene	19.21	120	74526	1.39	ppb	88
68) 2-Chlorotoluene	19.24	126	80374	1.30	ppb	# 90
69) 4-ethyltoluene	19.39	105	288577	1.33	ppb	99
70) 1,3,5-trimethylbenzene	19.45	105	269886	1.34	ppb	96
71) 1,2,4-trimethylbenzene	19.94	105	222847	1.37	ppb	98
72) 1,3-dichlorobenzene	20.27	146	174162	1.35	ppb	99
73) benzyl chloride	20.34	91	149073	1.35	ppb	97
74) 1,4-dichlorobenzene	20.42	146	175618	1.33	ppb	100
75) 1,2,3-trimethylbenzene	20.46	105	256934	1.37	ppb	96
76) 1,2-dichlorobenzene	20.78	146	173606	1.33	ppb	100
77) 1,2,4-trichlorobenzene	23.03	180	71841	1.40	ppb	99
78) Naphthalene	23.25	128	153952	1.41	ppb	98
79) Hexachloro-1,3-butadiene	23.38	225	142144	1.31	ppb	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032006.D A320_1UG.M Fri Apr 10 08:26:48 2020 MSD1

Quantitation Report (QT Reviewed)

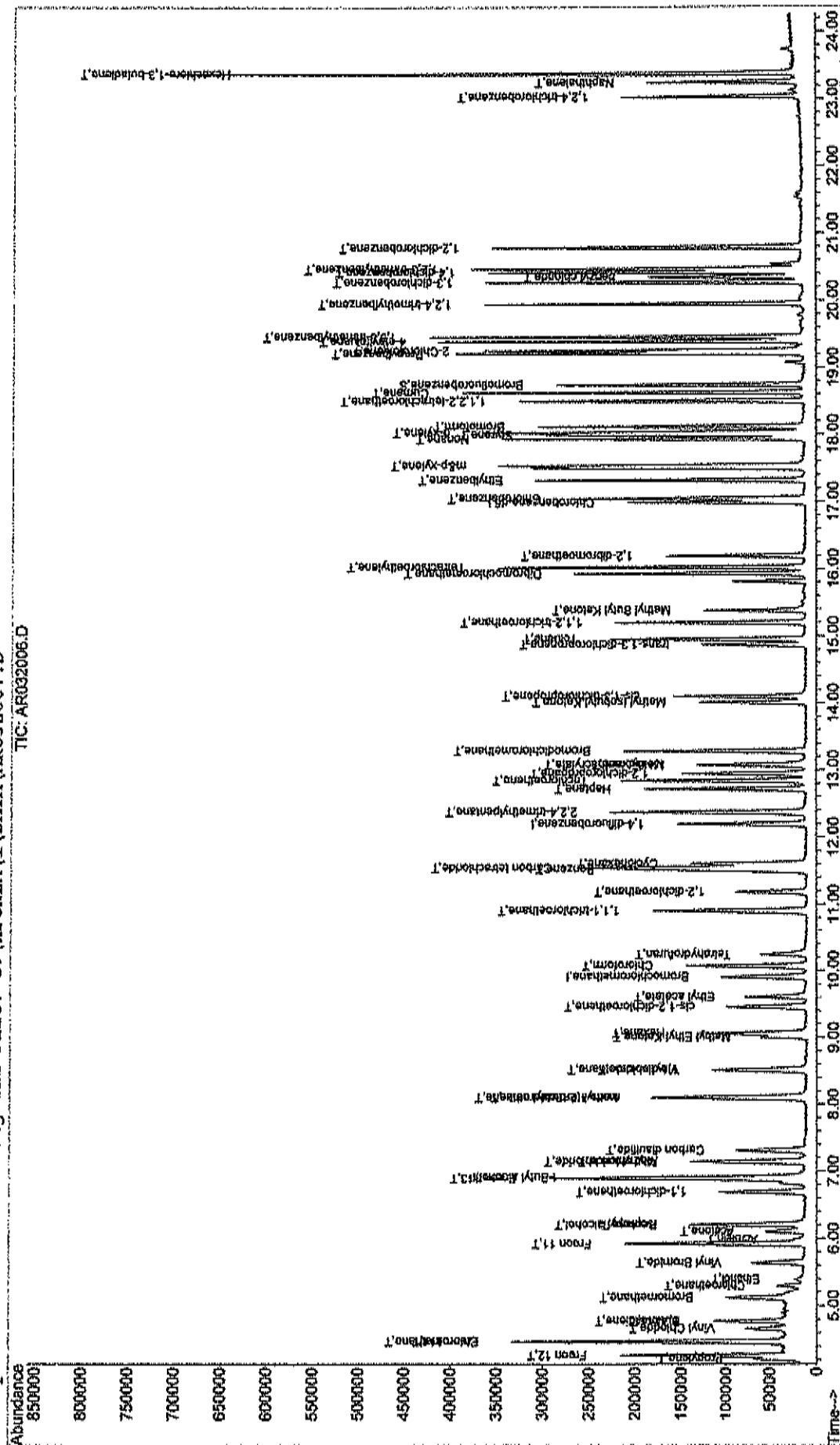
Data File : C:\HPCHEM\1\DATA\AR032006.D
Acq On : 20 Mar 2020 7:40 pm
Sample : A10G 1.25
Misc : A311_IUG
MMS Integration Params: RTEINT.P
Quant Time: Mar 23 8:18 2020

Quant Results File: A320 1UG.RES

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: C:\HPCHEM\1\METHODS\A320_IUG.M (RTE Integrator)
: TO-15 VOA Standards for 5 point calibration
: Last Update : Fri Apr 10 08:22:44 2020
: Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032007.D

Vial: 7

Acq On : 20 Mar 2020 8:27 pm

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 23 08:18:51 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Sat Mar 21 09:01:02 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	39385	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	150208	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	139425	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	108476	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

						Qvalue
2) Propylene	4.20	41	28020	1.00	ppb	86
3) Freon 12	4.26	85	178133	1.00	ppb	97
4) Chloromethane	4.46	50	38689	1.00	ppb	95
5) Freon 114	4.46	85	138948	1.00	ppb	96
6) Vinyl Chloride	4.66	62	35085	1.00	ppb	96
7) Butane	4.76	43	39423	1.00	ppb	99
8) 1,3-butadiene	4.76	39	30645	1.00	ppb	99
9) Bromomethane	5.12	94	54570	1.00	ppb	99
10) Chloroethane	5.29	64	23130	1.00	ppb	99
11) Ethanol	5.41	45	9466	1.00	ppb	87
12) Acrolein	5.99	56	11702	1.00	ppb	91
13) Vinyl Bromide	5.64	106	43325	1.00	ppb	100
14) Freon 11	5.92	101	186619	1.00	ppb	98
15) Acetone	6.10	58	21406	1.00	ppb	# 100
16) Pentane	6.20	42	37679	1.00	ppb	92
17) Isopropyl alcohol	6.20	45	48078	1.00	ppb	# 62
18) 1,1-dichloroethene	6.69	96	40749	1.00	ppb	96
19) Freon 113	6.89	101	109404	1.00	ppb	95
20) t-Butyl alcohol	6.90	59	57875	1.00	ppb	# 84
21) Methylene chloride	7.15	84	43823	1.00	ppb	99
22) Allyl chloride	7.13	41	41261	1.00	ppb	94
23) Carbon disulfide	7.31	76	133056	1.00	ppb	98
24) trans-1,2-dichloroethene	8.09	61	60598	1.00	ppb	99
25) methyl tert-butyl ether	8.10	73	90331	1.00	ppb	91
26) 1,1-dichloroethane	8.51	63	82613	1.00	ppb	98
27) Vinyl acetate	8.50	43	56025	1.00	ppb	97
28) Methyl Ethyl Ketone	9.00	72	17886	1.00	ppb	# 100
29) cis-1,2-dichloroethene	9.46	61	55221	1.00	ppb	97
30) Hexane	9.05	57	55850	1.00	ppb	99
31) Ethyl acetate	9.60	43	83531	1.00	ppb	99
32) Chloroform	10.06	83	117697	1.00	ppb	99
33) Tetrahydrofuran	10.24	42	29935	1.00	ppb	96
34) 1,2-dichloroethane	11.17	62	75778	1.00	ppb	97
36) 1,1,1-trichloroethane	10.89	97	127932	1.00	ppb	98
37) Cyclohexane	11.60	56	48339	1.00	ppb	91
38) Carbon tetrachloride	11.53	117	151246	1.00	ppb	99
39) Benzene	11.51	78	126207	1.00	ppb	98
40) Methyl methacrylate	13.07	41	43312	1.00	ppb	96
41) 1,4-dioxane	13.09	88	29116	1.00	ppb	94
42) 2,2,4-trimethylpentane	12.36	57	161481	1.00	ppb	99
43) Heptane	12.71	43	52936	1.00	ppb	96
44) Trichloroethene	12.84	130	66157	1.00	ppb	96
45) 1,2-dichloropropane	12.95	63	48250	1.00	ppb	98

(#) = qualifier out of range (m) = manual integration

AR032007.D A320_1UG.M

Fri Apr 10 08:26:51 2020

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032007.D
 Acq On : 20 Mar 2020 8:27 pm
 Sample : A1UG_1.0
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 23 08:18:51 2020

Vial: 7
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	130032	1.00	ppb	99
47) cis-1,3-dichloropropene	14.09	75	80679	1.00	ppb	99
48) trans-1,3-dichloropropene	14.87	75	64500	1.00	ppb	99
49) 1,1,2-trichloroethane	15.19	97	64260	1.00	ppb	100
51) Toluene	14.95	92	83335	1.00	ppb	97
52) Methyl Isobutyl Ketone	14.01	43	72126	1.00	ppb	99
53) Dibromochloromethane	15.92	129	132406	1.00	ppb	100
54) Methyl Butyl Ketone	15.37	43	62690m	1.01	ppb	
55) 1,2-dibromoethane	16.19	107	97298	1.00	ppb	98
56) Tetrachloroethylene	16.02	164	69754	1.00	ppb	100
57) Chlorobenzene	17.04	112	128754	1.00	ppb	100
58) Ethylbenzene	17.32	91	179355	1.00	ppb	98
59) m&p-xylene	17.53	91	323022	2.00	ppb	98
60) Nonane	17.93	43	79661	1.00	ppb	98
61) Styrene	17.99	104	126976	1.00	ppb	98
62) Bromoform	18.11	173	130806	1.00	ppb	99
63) o-xylene	18.02	91	191832	1.00	ppb	98
64) Cumene	18.62	105	203504	1.00	ppb	98
66) 1,1,2,2-tetrachloroethane	18.49	83	139822	1.00	ppb	99
67) Propylbenzene	19.20	120	54834	1.00	ppb	82
68) 2-Chlorotoluene	19.24	126	63097	1.00	ppb	97
69) 4-ethyltoluene	19.38	105	221398	1.00	ppb	98
70) 1,3,5-trimethylbenzene	19.45	105	206004	1.00	ppb	97
71) 1,2,4-trimethylbenzene	19.94	105	165671	1.00	ppb	100
72) 1,3-dichlorobenzene	20.27	146	131078	1.00	ppb	98
73) benzyl chloride	20.34	91	112282	1.00	ppb	96
74) 1,4-dichlorobenzene	20.42	146	134355	1.00	ppb	99
75) 1,2,3-trimethylbenzene	20.47	105	191514	1.00	ppb	96
76) 1,2-dichlorobenzene	20.78	146	133535	1.00	ppb	99
77) 1,2,4-trichlorobenzene	23.03	180	52335	1.00	ppb	99
78) Naphthalene	23.25	128	111570	1.00	ppb	98
79) Hexachloro-1,3-butadiene	23.38	225	110260	1.00	ppb	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032007.D A320_1UG.M Fri Apr 10 08:26:52 2020 MSD1

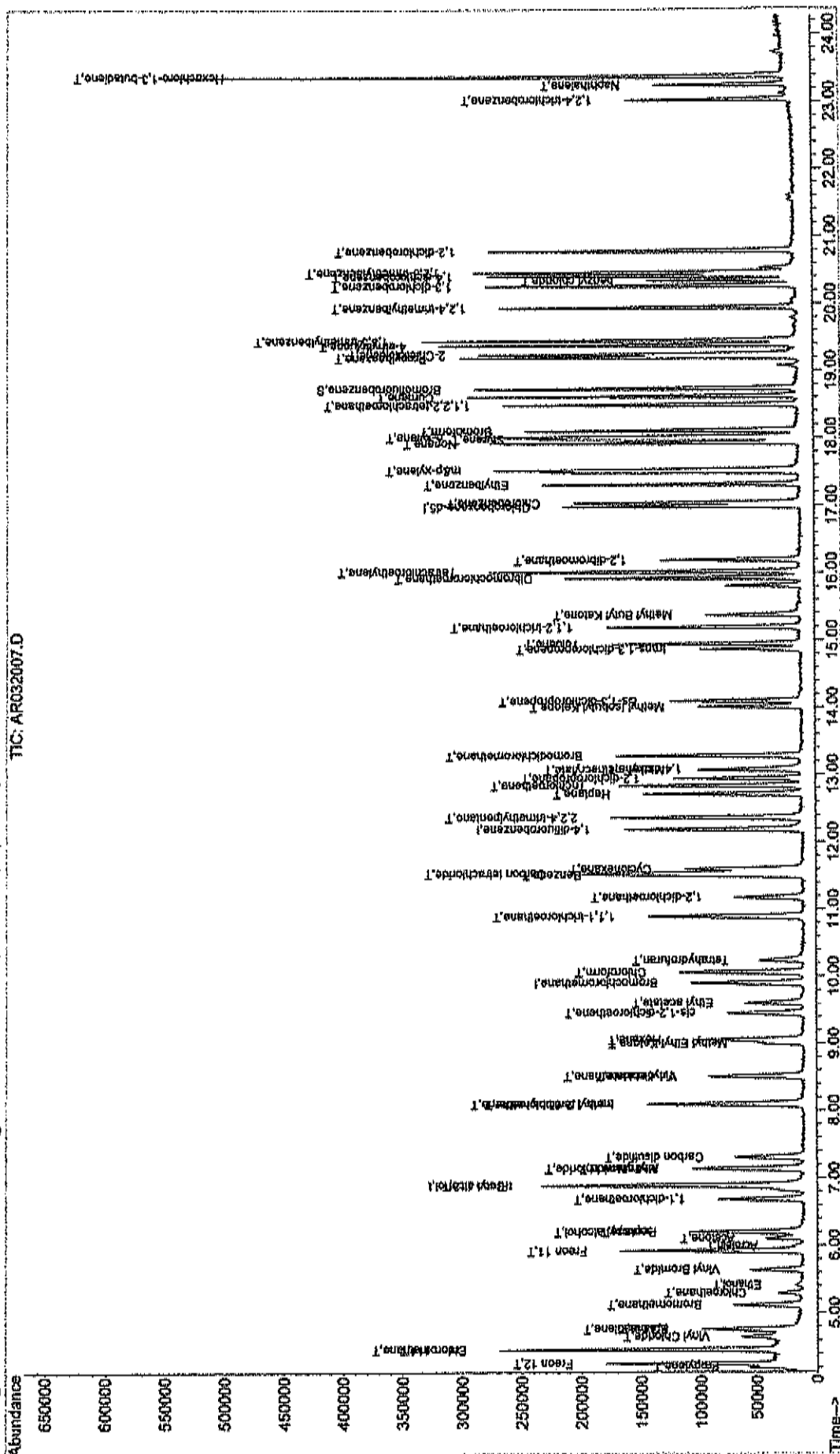
Data File : C:\HECHEM\1\DATA\AR032007.D
Acq On : 20 Mar 2020 8:27 pm
Sample : AUG 1.0
Misc : A311_1UG
MMS Integration Params: RTEINT.P
Quant Time: Mar 23 8:19 2020

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Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title  : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.1

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Quant Results File: A320 1UG.RES



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MSDL

Fri Apr 10 08:26:53 2020

AR032007.D A320 1UG.M

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032008.D
 Acq On : 20 Mar 2020 9:12 pm
 Sample : A1UG_0.75
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:03:30 2020

Vial: 8
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	39846	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	149207	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	135074	1.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
65) Bromofluorobenzene	18.73	95	103881	0.99	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	99.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.22	41	21270	0.75	ppb	88
3) Freon 12	4.26	85	133030	0.74	ppb	99
4) Chloromethane	4.46	50	28949	0.74	ppb	99
5) Freon 114	4.47	85	102469	0.73	ppb	97
6) Vinyl Chloride	4.66	62	26993	0.76	ppb	100
7) Butane	4.77	43	28687m	0.72	ppb	
8) 1,3-butadiene	4.77	39	21824	0.70	ppb	92
9) Bromomethane	5.13	94	40827	0.74	ppb	99
10) Chloroethane	5.30	64	17340	0.74	ppb	99
11) Ethanol	5.43	45	6913	0.72	ppb	92
12) Acrolein	5.99	56	8768m	0.74	ppb	
13) Vinyl Bromide	5.64	106	33072	0.75	ppb	98
14) Freon 11	5.92	101	140246	0.74	ppb	98
15) Acetone	6.10	58	16422	0.76	ppb	# 100
16) Pentane	6.20	42	29353	0.77	ppb	99
17) Isopropyl alcohol	6.21	45	34469	0.71	ppb	# 57
18) 1,1-dichloroethene	6.69	96	30935	0.75	ppb	95
19) Freon 113	6.89	101	82713	0.75	ppb	95
20) t-Butyl alcohol	6.91	59	41313	0.71	ppb	# 84
21) Methylene chloride	7.15	84	34233	0.77	ppb	97
22) Allyl chloride	7.13	41	29921	0.72	ppb	94
23) Carbon disulfide	7.31	76	102843	0.76	ppb	99
24) trans-1,2-dichloroethene	8.09	61	44309	0.72	ppb	98
25) methyl tert-butyl ether	8.11	73	64798	0.71	ppb	89
26) 1,1-dichloroethane	8.52	63	61212	0.73	ppb	98
27) Vinyl acetate	8.50	43	42147	0.74	ppb	99
28) Methyl Ethyl Ketone	9.01	72	12813	0.71	ppb	# 100
29) cis-1,2-dichloroethene	9.45	61	40824	0.73	ppb	97
30) Hexane	9.06	57	35151	0.62	ppb	90
31) Ethyl acetate	9.60	43	60833	0.72	ppb	100
32) Chloroform	10.07	83	88797	0.75	ppb	97
33) Tetrahydrofuran	10.24	42	20581	0.68	ppb	92
34) 1,2-dichloroethane	11.18	62	56660	0.74	ppb	99
36) 1,1,1-trichloroethane	10.89	97	93006	0.73	ppb	99
37) Cyclohexane	11.60	56	34740	0.72	ppb	92
38) Carbon tetrachloride	11.54	117	111289	0.74	ppb	98
39) Benzene	11.51	78	90221	0.72	ppb	99
40) Methyl methacrylate	13.06	41	31418m	0.73	ppb	
41) 1,4-dioxane	13.09	88	20637	0.71	ppb	95
42) 2,2,4-trimethylpentane	12.36	57	118167	0.74	ppb	98
43) Heptane	12.71	43	38584	0.73	ppb	97
44) Trichloroethene	12.84	130	49299	0.75	ppb	97
45) 1,2-dichloropropane	12.94	63	35428	0.74	ppb	98

(#) = qualifier out of range (m) = manual integration

AR032008.D A320_1UG.M

Fri Apr 10 08:26:55 2020

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032008.D
 Acq On : 20 Mar 2020 9:12 pm
 Sample : A1UG_0.75
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:03:30 2020

Vial: 8
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

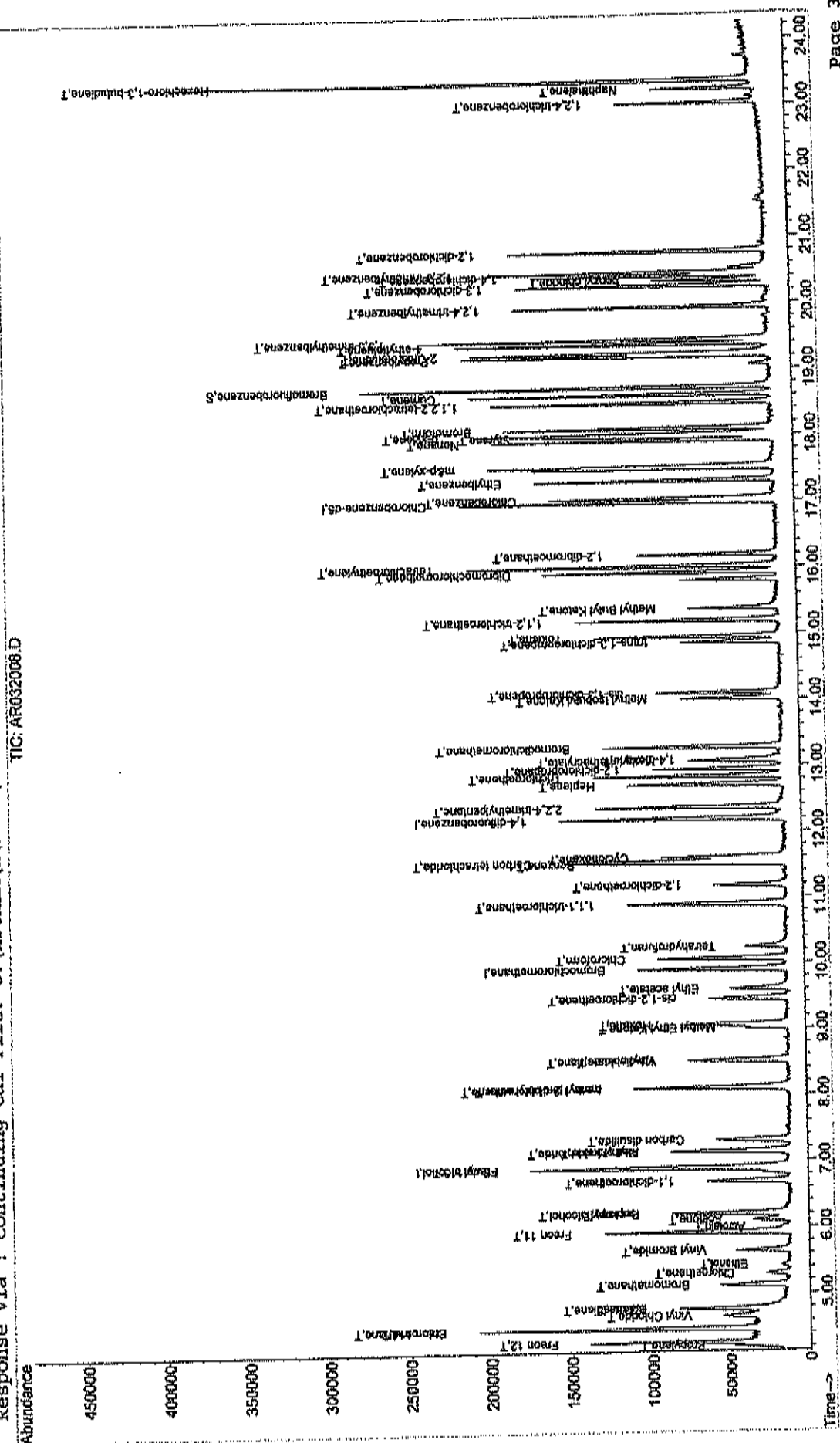
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	96735	0.75	ppb	98
47) cis-1,3-dichloropropene	14.10	75	57127	0.71	ppb	99
48) trans-1,3-dichloropropene	14.87	75	45724	0.71	ppb	98
49) 1,1,2-trichloroethane	15.19	97	47702	0.75	ppb	99
51) Toluene	14.95	92	60216	0.75	ppb	99
52) Methyl Isobutyl Ketone	14.01	43	50280	0.72	ppb	100
53) Dibromochloromethane	15.93	129	97935	0.76	ppb	100
54) Methyl Butyl Ketone	15.38	43	44182	0.74	ppb	100
55) 1,2-dibromoethane	16.19	107	70639	0.75	ppb	97
56) Tetrachloroethylene	16.02	164	49857	0.74	ppb	96
57) Chlorobenzene	17.04	112	93885	0.75	ppb	100
58) Ethylbenzene	17.32	91	127253	0.73	ppb	97
59) m&p-xylene	17.53	91	222943	1.43	ppb	98
60) Nonane	17.93	43	55681	0.72	ppb	98
61) Styrene	17.99	104	86543	0.70	ppb	97
62) Bromoform	18.11	173	95734	0.76	ppb	99
63) o-xylene	18.02	91	133203	0.72	ppb	98
64) Cumene	18.62	105	137453	0.70	ppb	99
66) 1,1,2,2-tetrachloroethane	18.50	83	100137	0.74	ppb	99
67) Propylbenzene	19.20	120	37247	0.70	ppb	80
68) 2-Chlorotoluene	19.25	126	43807	0.72	ppb	99
69) 4-ethyltoluene	19.39	105	144090	0.67	ppb	98
70) 1,3,5-trimethylbenzene	19.45	105	142070	0.71	ppb	97
71) 1,2,4-trimethylbenzene	19.94	105	107830	0.67	ppb	99
72) 1,3-dichlorobenzene	20.26	146	83274	0.66	ppb	99
73) benzyl chloride	20.34	91	78082m	0.72	ppb	
74) 1,4-dichlorobenzene	20.42	146	76103	0.58	ppb	100
75) 1,2,3-trimethylbenzene	20.46	105	124155	0.67	ppb	98
76) 1,2-dichlorobenzene	20.79	146	85228	0.66	ppb	97
77) 1,2,4-trichlorobenzene	23.03	180	31802	0.63	ppb	95
78) Naphthalene	23.25	128	66931	0.62	ppb	98
79) Hexachloro-1,3-butadiene	23.38	225	80059	0.75	ppb	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032008.D A320_1UG.M Fri Apr 10 08:26:56 2020 MSD1

Data File : C:\HPCHEM\1\DATA\AR032008.D
Acq On : 20 Mar 2020 9:12 pm
Sample : AUG 0.75
Misc : A311_IUG
MS Integration Params: RTEINT.P
Quant Time: Mar 23 8:20 2020

Quant Results File: A320_IDG.RES

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Method      : C:\HPCHEM\1\METHODS\A320_IUG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.
```



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032009.D
 Acq On : 20 Mar 2020 9:57 pm
 Sample : A1UG_0.50
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:04:31 2020

Vial: 9
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	40026	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	145805	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	132358	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	93983	0.91	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	91.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.22	41	13574	0.48	ppb	81
3) Freon 12	4.26	85	87384	0.48	ppb	98
4) Chloromethane	4.46	50	18957	0.48	ppb	94
5) Freon 114	4.46	85	67736	0.48	ppb	97
6) Vinyl Chloride	4.66	62	18699	0.52	ppb	98
7) Butane	4.77	43	18443	0.46	ppb	97
8) 1,3-butadiene	4.76	39	15683	0.50	ppb	90
9) Bromomethane	5.11	94	25830	0.47	ppb	99
10) Chloroethane	5.29	64	11710	0.50	ppb	99
11) Ethanol	5.41	45	4623	0.48	ppb	81
12) Acrolein	5.99	56	5706	0.48	ppb	95
13) Vinyl Bromide	5.64	106	21830	0.50	ppb	99
14) Freon 11	5.92	101	92642	0.49	ppb	99
15) Acetone	6.11	58	10774	0.50	ppb	# 100
16) Pentane	6.19	42	18527	0.48	ppb	95
17) Isopropyl alcohol	6.20	45	24125	0.49	ppb	# 71
18) 1,1-dichloroethene	6.70	96	20480	0.49	ppb	97
19) Freon 113	6.89	101	54757	0.49	ppb	96
20) t-Butyl alcohol	6.91	59	29303	0.50	ppb	# 85
21) Methylene chloride	7.15	84	21675	0.49	ppb	97
22) Allyl chloride	7.13	41	18321	0.44	ppb	91
23) Carbon disulfide	7.31	76	67675	0.50	ppb	99
24) trans-1,2-dichloroethene	8.09	61	29564	0.48	ppb	99
25) methyl tert-butyl ether	8.11	73	41072	0.45	ppb	88
26) 1,1-dichloroethane	8.51	63	41874	0.50	ppb	95
27) Vinyl acetate	8.50	43	26281	0.46	ppb	94
28) Methyl Ethyl Ketone	9.01	72	8125	0.45	ppb	# 100
29) cis-1,2-dichloroethene	9.45	61	26421	0.47	ppb	97
30) Hexane	9.06	57	23933	0.42	ppb	95
31) Ethyl acetate	9.60	43	37930	0.45	ppb	100
32) Chloroform	10.06	83	57191	0.48	ppb	99
33) Tetrahydrofuran	10.25	42	14155	0.47	ppb	94
34) 1,2-dichloroethane	11.18	62	36897	0.48	ppb	99
36) 1,1,1-trichloroethane	10.90	97	61413	0.49	ppb	100
37) Cyclohexane	11.60	56	21164	0.45	ppb	# 88
38) Carbon tetrachloride	11.54	117	73090	0.50	ppb	98
39) Benzene	11.51	78	57956	0.47	ppb	99
40) Methyl methacrylate	13.07	41	19376	0.46	ppb	99
41) 1,4-dioxane	13.10	88	12485	0.44	ppb	99
42) 2,2,4-trimethylpentane	12.37	57	72508	0.46	ppb	96
43) Heptane	12.71	43	22502	0.44	ppb	94
44) Trichloroethene	12.83	130	32106	0.50	ppb	97
45) 1,2-dichloropropane	12.94	63	23078	0.49	ppb	99

(#) = qualifier out of range (m) = manual integration

AR032009.D A320_1UG.M

Fri Apr 10 08:26:59 2020

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032009.D
 Acq On : 20 Mar 2020 9:57 pm
 Sample : A1UG_0.50
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:04:31 2020

Vial: 9
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	63720	0.50	ppb	100
47) cis-1,3-dichloropropene	14.10	75	35706	0.46	ppb	98
48) trans-1,3-dichloropropene	14.87	75	27684	0.44	ppb	98
49) 1,1,2-trichloroethane	15.19	97	30288	0.49	ppb	100
51) Toluene	14.95	92	35222	0.45	ppb	97
52) Methyl Isobutyl Ketone	14.01	43	31501	0.46	ppb	99
53) Dibromochloromethane	15.93	129	62885	0.50	ppb	99
54) Methyl Butyl Ketone	15.38	43	25588	0.43	ppb	97
55) 1,2-dibromoethane	16.19	107	45451	0.49	ppb	99
56) Tetrachloroethylene	16.02	164	32947	0.50	ppb	100
57) Chlorobenzene	17.04	112	59388	0.49	ppb	98
58) Ethylbenzene	17.31	91	75509	0.44	ppb	97
59) m&p-xylene	17.53	91	126099	0.82	ppb	98
60) Nonane	17.93	43	30966	0.41	ppb	96
61) Styrene	17.99	104	49364	0.41	ppb	98
62) Bromoform	18.11	173	58465	0.47	ppb	99
63) o-xylene	18.02	91	79820	0.44	ppb	99
64) Cumene	18.62	105	79388	0.41	ppb	98
66) 1,1,2,2-tetrachloroethane	18.49	83	63824	0.48	ppb	100
67) Propylbenzene	19.21	120	21037	0.40	ppb	78
68) 2-Chlorotoluene	19.25	126	25121	0.42	ppb	99
69) 4-ethyltoluene	19.39	105	78806	0.38	ppb	100
70) 1,3,5-trimethylbenzene	19.45	105	81192	0.42	ppb	98
71) 1,2,4-trimethylbenzene	19.94	105	63034	0.40	ppb	98
72) 1,3-dichlorobenzene	20.27	146	47045	0.38	ppb	96
73) benzyl chloride	20.34	91	36997m/	0.35	ppb	
74) 1,4-dichlorobenzene	20.42	146	43903	0.34	ppb	98
75) 1,2,3-trimethylbenzene	20.47	105	68793	0.38	ppb	97
76) 1,2-dichlorobenzene	20.78	146	52280	0.41	ppb	99
77) 1,2,4-trichlorobenzene	23.03	180	20263	0.41	ppb	99
78) Naphthalene	23.24	128	37771	0.36	ppb	97
79) Hexachloro-1,3-butadiene	23.38	225	49268	0.47	ppb	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032009.D A320_1UG.M Fri Apr 10 08:27:00 2020 MSD1

Data File : C:\HFICHEM\1\DATA\AR032009.D
Acq On : 20 Mar 2020 9:57 PM
Sample : A1UG 0.50
Misc : A311_1UG
MMS Integration Params: RTEINT.P
Quant Time: Mar 23 8:21 2020

MS Integration Params: RTEINT.P

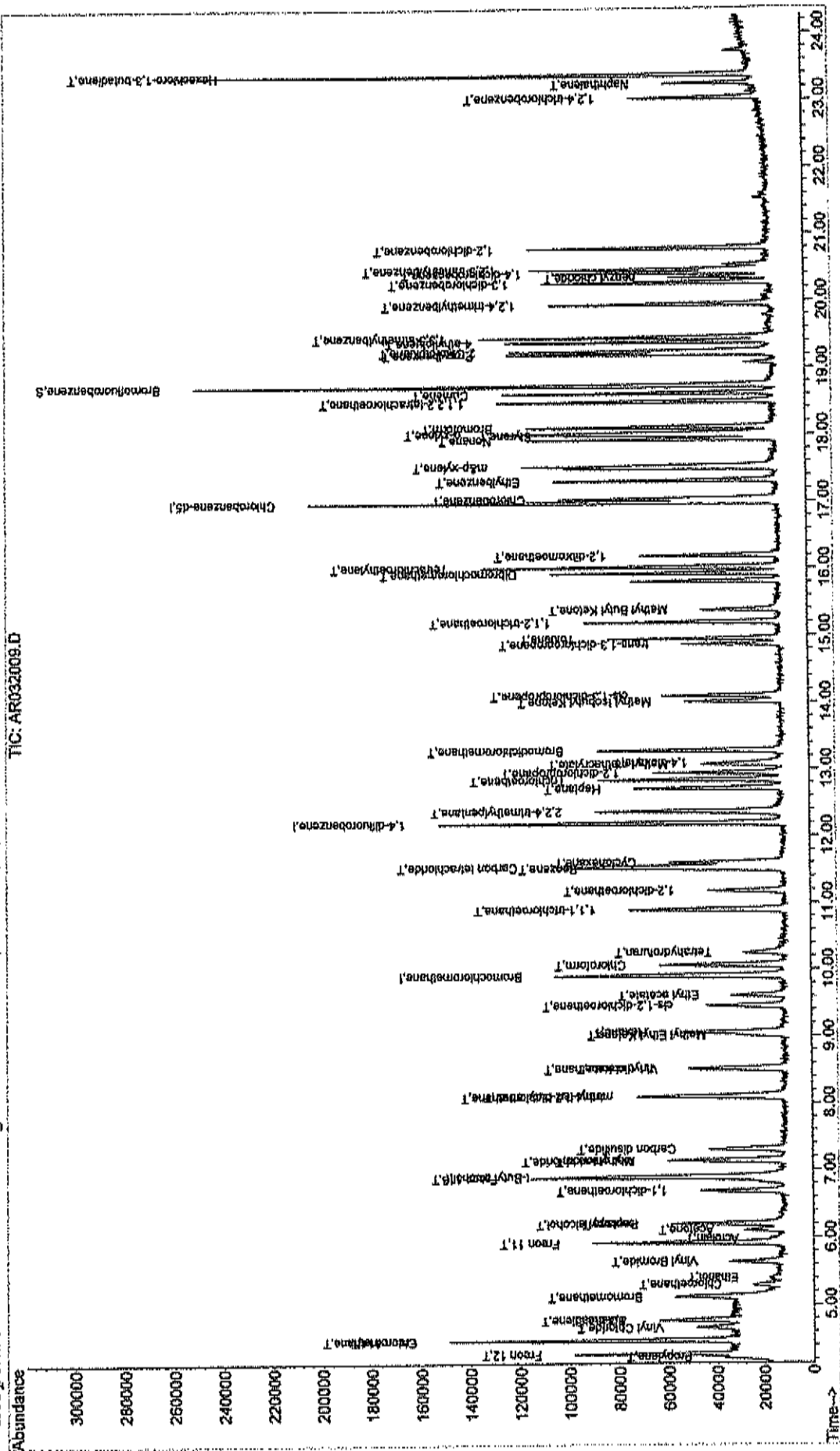
Quant Time; Mar 23 8:21 2020

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Method      : C:\HPCHEM\1\METHODS\A320_IUG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.1

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TIC: AR032009.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032010.D
 Acq On : 20 Mar 2020 10:41 pm
 Sample : A1UG_0.30
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:05:03 2020

Vial: 10
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	39159	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	139239	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	126520	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.73	95	87825	0.89	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	89.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.21	41	8619	0.31	ppb	75
3) Freon 12	4.26	85	51536	0.29	ppb	100
4) Chloromethane	4.47	50	10933	0.28	ppb	99
5) Freon 114	4.46	85	40201	0.29	ppb	97
6) Vinyl Chloride	4.66	62	10889	0.31	ppb	94
7) Butane	4.76	43	11984	0.31	ppb	# 91
8) 1,3-butadiene	4.76	39	11354	0.37	ppb	80
9) Bromomethane	5.12	94	15478	0.29	ppb	98
10) Chloroethane	5.29	64	5390	0.23	ppb	# 82
11) Ethanol	5.38	45	3097m	0.33	ppb	
12) Acrolein	6.00	56	3209	0.28	ppb	93
13) Vinyl Bromide	5.63	106	13340	0.31	ppb	93
14) Freon 11	5.92	101	54899	0.30	ppb	100
15) Acetone	6.10	58	6055	0.28	ppb	# 100
16) Pentane	6.20	42	11255	0.30	ppb	98
17) Isopropyl alcohol	6.21	45	14441	0.30	ppb	# 71
18) 1,1-dichloroethene	6.69	96	12600	0.31	ppb	96
19) Freon 113	6.88	101	32478	0.30	ppb	94
20) t-Butyl alcohol	6.92	59	15775	0.27	ppb	# 78
21) Methylene chloride	7.14	84	13840	0.32	ppb	97
22) Allyl chloride	7.13	41	11124	0.27	ppb	92
23) Carbon disulfide	7.30	76	42260	0.32	ppb	100
24) trans-1,2-dichloroethene	8.09	61	16591	0.28	ppb	93
25) methyl tert-butyl ether	8.11	73	24616	0.27	ppb	90
26) 1,1-dichloroethane	8.52	63	23460	0.29	ppb	99
27) Vinyl acetate	8.51	43	15306	0.27	ppb	99
28) Methyl Ethyl Ketone	9.01	72	5109	0.29	ppb	# 100
29) cis-1,2-dichloroethene	9.45	61	15194	0.28	ppb	96
30) Hexane	9.06	57	13105	0.24	ppb	91
31) Ethyl acetate	9.61	43	23005	0.28	ppb	98
32) Chloroform	10.07	83	34286	0.29	ppb	97
33) Tetrahydrofuran	10.25	42	7524	0.25	ppb	88
34) 1,2-dichloroethane	11.18	62	22235	0.30	ppb	100
36) 1,1,1-trichloroethane	10.90	97	36236	0.31	ppb	99
37) Cyclohexane	11.60	56	12397	0.28	ppb	# 87
38) Carbon tetrachloride	11.54	117	42968	0.31	ppb	100
39) Benzene	11.51	78	33827	0.29	ppb	98
40) Methyl methacrylate	13.06	41	10279	0.26	ppb	94
41) 1,4-dioxane	13.10	88	6692	0.25	ppb	99
42) 2,2,4-trimethylpentane	12.36	57	41688	0.28	ppb	97
43) Heptane	12.71	43	12348	0.25	ppb	95
44) Trichloroethene	12.83	130	18467	0.30	ppb	98
45) 1,2-dichloropropane	12.94	63	14241	0.32	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032010.D

Acq On : 20 Mar 2020 10:41 pm

Sample : A1UG_0.30

Misc : A311_1UG

MS Integration Params: RTEINT.P

Quant Time: Mar 21 09:05:03 2020

Vial: 10

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Sat Mar 21 09:01:02 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	36172	0.30	ppb	98
47) cis-1,3-dichloropropene	14.10	75	20161	0.27	ppb	99
48) trans-1,3-dichloropropene	14.87	75	16069	0.27	ppb	91
49) 1,1,2-trichloroethane	15.20	97	17730	0.30	ppb	100
51) Toluene	14.95	92	19449	0.26	ppb	94
52) Methyl Isobutyl Ketone	14.01	43	17760	0.27	ppb	97
53) Dibromochloromethane	15.93	129	37215	0.31	ppb	99
54) Methyl Butyl Ketone	15.38	43	14109	0.25	ppb	99
55) 1,2-dibromoethane	16.19	107	26800	0.30	ppb	95
56) Tetrachloroethylene	16.02	164	18359	0.29	ppb	98
57) Chlorobenzene	17.04	112	34979	0.30	ppb	100
58) Ethylbenzene	17.31	91	40520	0.25	ppb	98
59) m&p-xylene	17.53	91	65980	0.45	ppb	95
60) Nonane	17.92	43	17135m	0.24	ppb	
61) Styrene	17.99	104	26611m	0.23	ppb	
62) Bromoform	18.11	173	34697	0.29	ppb	100
63) o-xylene	18.02	91	41036	0.24	ppb	98
64) Cumene	18.62	105	43867	0.24	ppb	98
66) 1,1,2,2-tetrachloroethane	18.49	83	38665	0.30	ppb	100
67) Propylbenzene	19.20	120	11801	0.24	ppb	86
68) 2-Chlorotoluene	19.24	126	13901	0.24	ppb	# 94
69) 4-ethyltoluene	19.39	105	47038m	0.23	ppb	
70) 1,3,5-trimethylbenzene	19.45	105	44211m	0.24	ppb	
71) 1,2,4-trimethylbenzene	19.94	105	33587	0.22	ppb	99
72) 1,3-dichlorobenzene	20.27	146	31234	0.26	ppb	98
73) benzyl chloride	20.34	91	25032	0.25	ppb	99
74) 1,4-dichlorobenzene	20.41	146	29035	0.24	ppb	97
75) 1,2,3-trimethylbenzene	20.46	105	36588	0.21	ppb	93
76) 1,2-dichlorobenzene	20.79	146	31292	0.26	ppb	97
77) 1,2,4-trichlorobenzene	23.04	180	11014	0.23	ppb	96
78) Naphthalene	23.25	128	22964m //	0.23	ppb	
79) Hexachloro-1,3-butadiene	23.38	225	28231	0.28	ppb	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032010.D A320_1UG.M Fri Apr 10 08:27:04 2020 MSD1

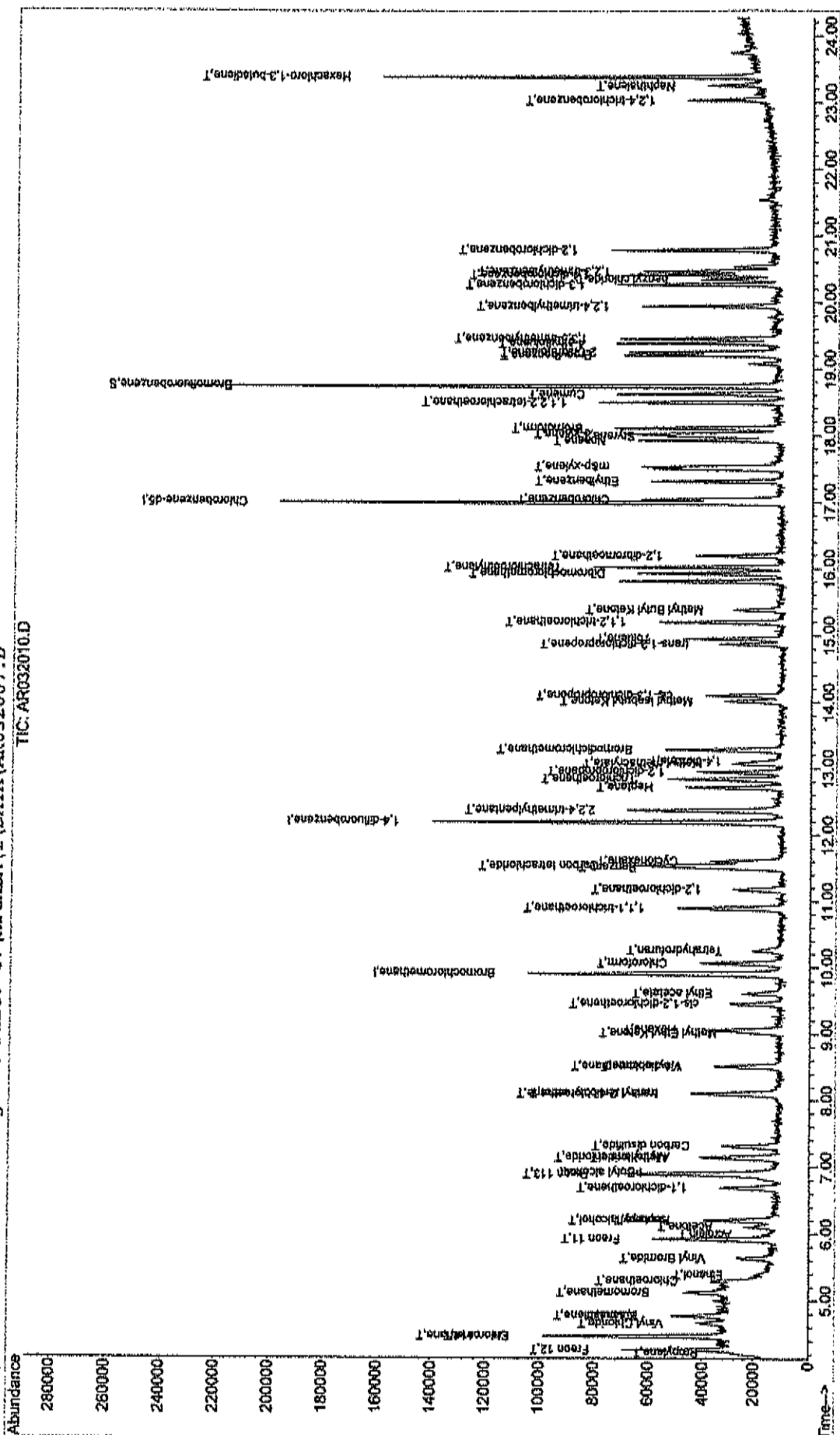
Quantitation Report (QT Reviewed)

Data File : C:\NPCHEM\1\DATA\AR032010.D
Acq On : 20 Mar 2020 10:41 pm
Sample : AUG 0.30
Misc : A311_1UG
MMS Integration Params: RTEINT.P
Quant Time: Mar 23 8:22 2020

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Method      : C:\HPCHEM\1\METHODS\A320_IUG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.1

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032011.D
 Acq On : 20 Mar 2020 11:26 pm
 Sample : A1UG_0.15
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:05:32 2020

Vial: 11
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	38653	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	134135	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	119607	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.73	95	79846	0.86	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	86.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.22	41	4704	0.17	ppb	89
3) Freon 12	4.26	85	25328	0.14	ppb	100
4) Chloromethane	4.47	50	6382	0.17	ppb	95
5) Freon 114	4.46	85	19691	0.14	ppb	92
6) Vinyl Chloride	4.67	62	5423	0.16	ppb	93
7) Butane	4.76	43	5908m	0.15	ppb	
8) 1,3-butadiene	4.77	39	4960	0.16	ppb	86
9) Bromomethane	5.13	94	7952	0.15	ppb	95
10) Chloroethane	5.29	64	3103	0.14	ppb	# 88
11) Ethanol	5.41	45	1868m	0.20	ppb	
12) Acrolein	5.98	56	1549	0.13	ppb	98
13) Vinyl Bromide	5.63	106	6614	0.16	ppb	96
14) Freon 11	5.92	101	25894	0.14	ppb	97
15) Acetone	6.11	58	3214	0.15	ppb	# 100
16) Pentane	6.19	42	6031	0.16	ppb	90
17) Isopropyl alcohol	6.21	45	8162	0.17	ppb	# 72
18) 1,1-dichloroethene	6.69	96	5688	0.14	ppb	93
19) Freon 113	6.89	101	15166	0.14	ppb	98
20) t-Butyl alcohol	6.93	59	7875	0.14	ppb	# 73
21) Methylene chloride	7.14	84	7487	0.17	ppb	98
22) Allyl chloride	7.13	41	5276	0.13	ppb	94
23) Carbon disulfide	7.30	76	23927	0.18	ppb	99
24) trans-1,2-dichloroethene	8.09	61	8090	0.14	ppb	95
25) methyl tert-butyl ether	8.12	73	11455	0.13	ppb	88
26) 1,1-dichloroethane	8.52	63	11324	0.14	ppb	98
27) Vinyl acetate	8.51	43	7892m	0.14	ppb	
28) Methyl Ethyl Ketone	9.02	72	3163m	0.18	ppb	
29) cis-1,2-dichloroethene	9.45	61	7278	0.13	ppb	96
30) Hexane	9.05	57	6298	0.11	ppb	94
31) Ethyl acetate	9.61	43	11823m	0.14	ppb	
32) Chloroform	10.06	83	16370	0.14	ppb	98
33) Tetrahydrofuran	10.26	42	4166	0.14	ppb	98
34) 1,2-dichloroethane	11.19	62	10614	0.14	ppb	98
36) 1,1,1-trichloroethane	10.89	97	16657	0.15	ppb	97
37) Cyclohexane	11.60	56	5264	0.12	ppb	# 80
38) Carbon tetrachloride	11.54	117	20421	0.15	ppb	99
39) Benzene	11.50	78	15385	0.14	ppb	97
40) Methyl methacrylate	13.07	41	5999m	0.16	ppb	
41) 1,4-dioxane	13.10	88	3098	0.12	ppb	94
42) 2,2,4-trimethylpentane	12.37	57	19021	0.13	ppb	95
43) Heptane	12.71	43	5364	0.11	ppb	89
44) Trichloroethene	12.83	130	8308	0.14	ppb	98
45) 1,2-dichloropropane	12.94	63	6383	0.15	ppb	95

(#) = qualifier out of range (m) = manual integration

AR032011.D A320_1UG.M

Fri Apr 10 08:27:07 2020

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032011.D
 Acq On : 20 Mar 2020 11:26 pm
 Sample : A1UG_0.15
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:05:32 2020

Vial: 11
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	17263	0.15	ppb	99
47) cis-1,3-dichloropropene	14.09	75	8509	0.12	ppb	94
48) trans-1,3-dichloropropene	14.87	75	7339	0.13	ppb	96
49) 1,1,2-trichloroethane	15.20	97	7718	0.13	ppb	96
51) Toluene	14.95	92	8438	0.12	ppb	97
52) Methyl Isobutyl Ketone	14.01	43	9937m	0.16	ppb	
53) Dibromochloromethane	15.93	129	17097	0.15	ppb	98
54) Methyl Butyl Ketone	15.38	43	8752m	0.16	ppb	
55) 1,2-dibromoethane	16.19	107	11902	0.14	ppb	95
56) Tetrachloroethylene	16.02	164	8608	0.14	ppb	100
57) Chlorobenzene	17.04	112	15528	0.14	ppb	99
58) Ethylbenzene	17.31	91	17625	0.11	ppb	100
59) m&p-xylene	17.53	91	27606	0.20	ppb	97
60) Nonane	17.92	43	8899m	0.13	ppb	
61) Styrene	17.99	104	11530m	0.11	ppb	
62) Bromoform	18.11	173	15598	0.14	ppb	100
63) o-xylene	18.02	91	20589m	0.13	ppb	
64) Cumene	18.62	105	19538m	0.11	ppb	
66) 1,1,2,2-tetrachloroethane	18.50	83	17666	0.15	ppb	99
67) Propylbenzene	19.20	120	4761	0.10	ppb	75
68) 2-Chlorotoluene	19.25	126	5652	0.10	ppb	# 1
69) 4-ethyltoluene	19.38	105	20376m	0.11	ppb	
70) 1,3,5-trimethylbenzene	19.45	105	17990m	0.10	ppb	
71) 1,2,4-trimethylbenzene	19.94	105	16231m	0.11	ppb	
72) 1,3-dichlorobenzene	20.27	146	12537	0.11	ppb	96
73) benzyl chloride	20.34	91	14661m	0.15	ppb	
74) 1,4-dichlorobenzene	20.41	146	11592	0.10	ppb	96
75) 1,2,3-trimethylbenzene	20.47	105	17613m	0.11	ppb	
76) 1,2-dichlorobenzene	20.78	146	12537	0.11	ppb	100
77) 1,2,4-trichlorobenzene	23.03	180	5593m	0.12	ppb	
78) Naphthalene	23.25	128	11436m	0.12	ppb	
79) Hexachloro-1,3-butadiene	23.38	225	13297	0.14	ppb	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032011.D A320_1UG.M Fri Apr 10 08:27:08 2020 MSD1

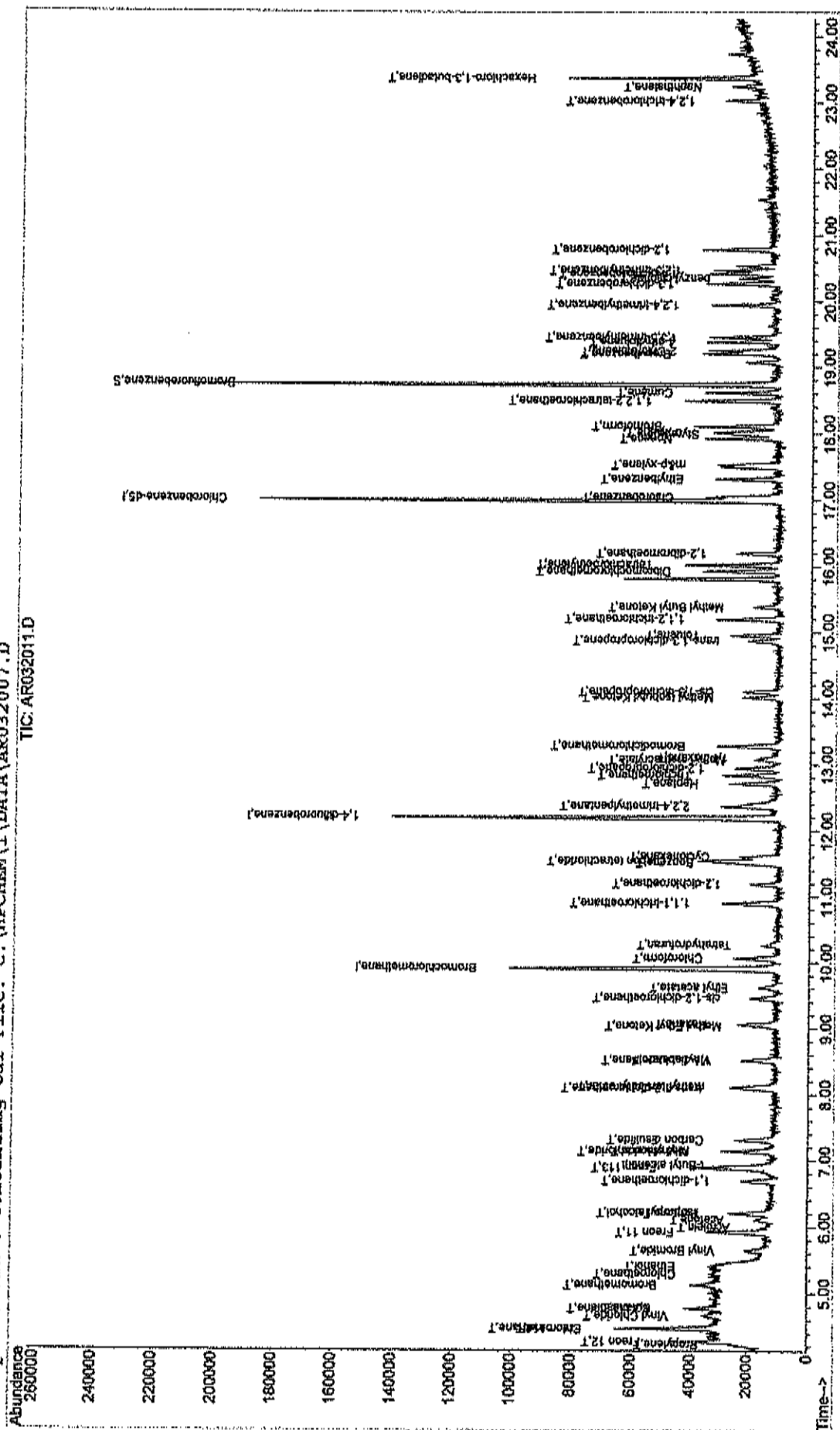
Data File : C:\HPCHEM\1\DATA\AR032011.D
Acq On : 20 Mar 2020 11:26 pm
Sample : A1UG 0.15
Misc : A311_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 23 8:25 2020

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Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title  : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.F

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TIC: AR032014.D



AR032011.D A320_IUG.M Fri Apr 10 08:27:09 2020

MSDI

Page 3

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032012.D Vial: 12
 Acq On : 21 Mar 2020 12:11 am Operator: RJP
 Sample : A1UG 0.10 Inst : MSD #1
 Misc : A311_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:06:03 2020 Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	36328	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.18	114	124353	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	114644	1.00	ppb	0.00

System Monitoring Compounds						
65) Bromofluorobenzene	18.73	95	71236m	0.80	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	80.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	4.65	62	3437m	0.11	ppb	
18) 1,1-dichloroethene	6.68	96	3587m	0.10	ppb	
29) cis-1,2-dichloroethene	9.44	61	5673m	0.11	ppb	
38) Carbon tetrachloride	11.53	117	12902	0.10	ppb	100
44) Trichloroethene	12.84	130	5341	0.10	ppb	99

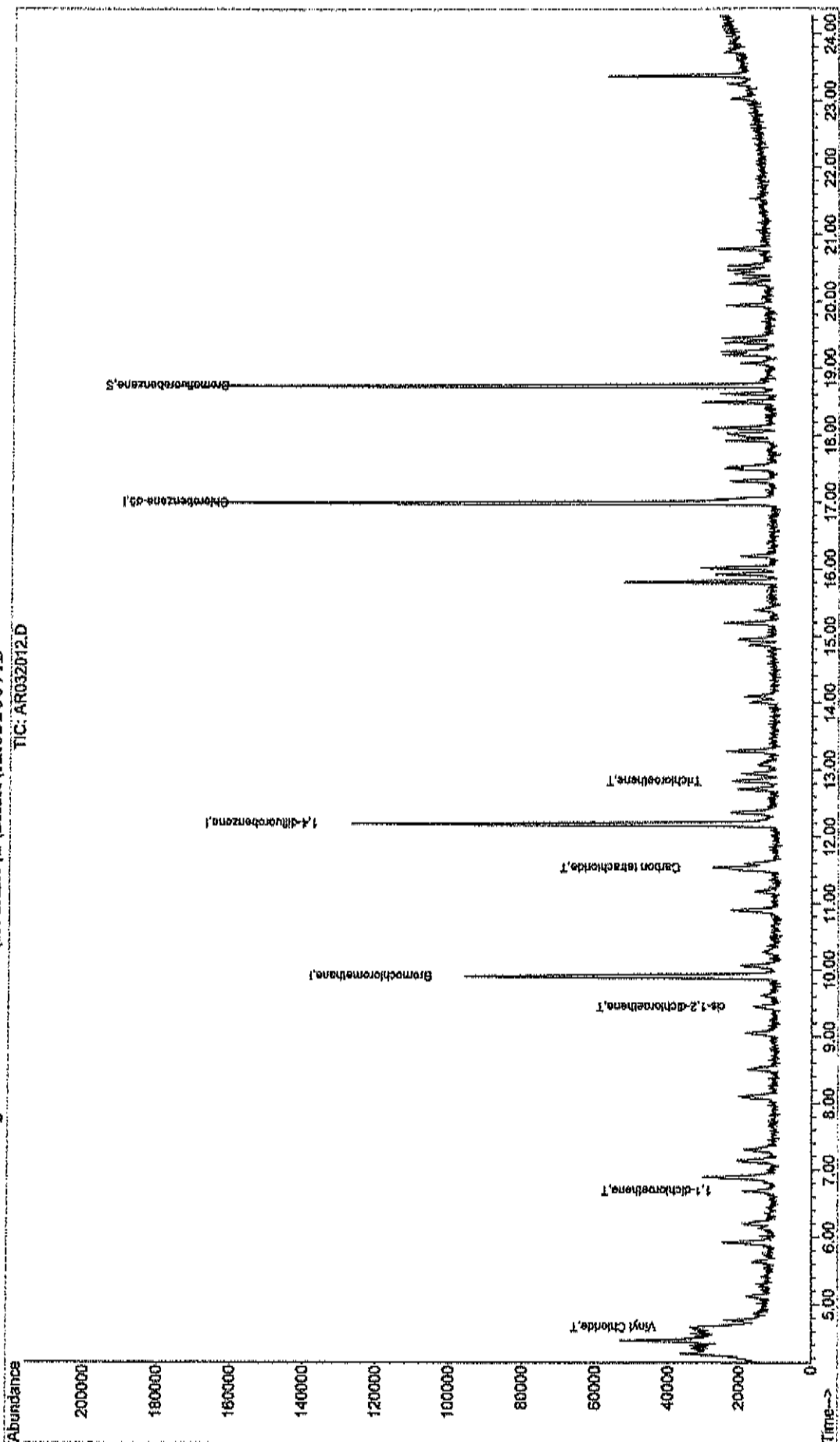
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032012.D
Acq On : 21 Mar 2020 12:11 am
Sample : A1UG 0.10
Misc : A311_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 23 8:27 2020

Vial: 12
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A320_1UG.RES

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032013.D
 Acq On : 21 Mar 2020 12:55 am
 Sample : A1UG_0.04
 Misc : A311_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:06:34 2020

Vial: 13
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	36459	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	125596	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	111181	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	67348m	0.78	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	78.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	4.66	62	1171m	0.04	ppb	
18) 1,1-dichloroethene	6.70	96	1546m	0.04	ppb	
29) cis-1,2-dichloroethene	9.47	61	1992m	0.04	ppb	
38) Carbon tetrachloride	11.53	117	3402	0.03	ppb	87
44) Trichloroethene	12.84	130	1790m	0.03	ppb	
78) Naphthalene	23.25	128	1739m	0.02	ppb	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR032013.D A320_1UG.M Fri Apr 10 08:27:14 2020 MSD1

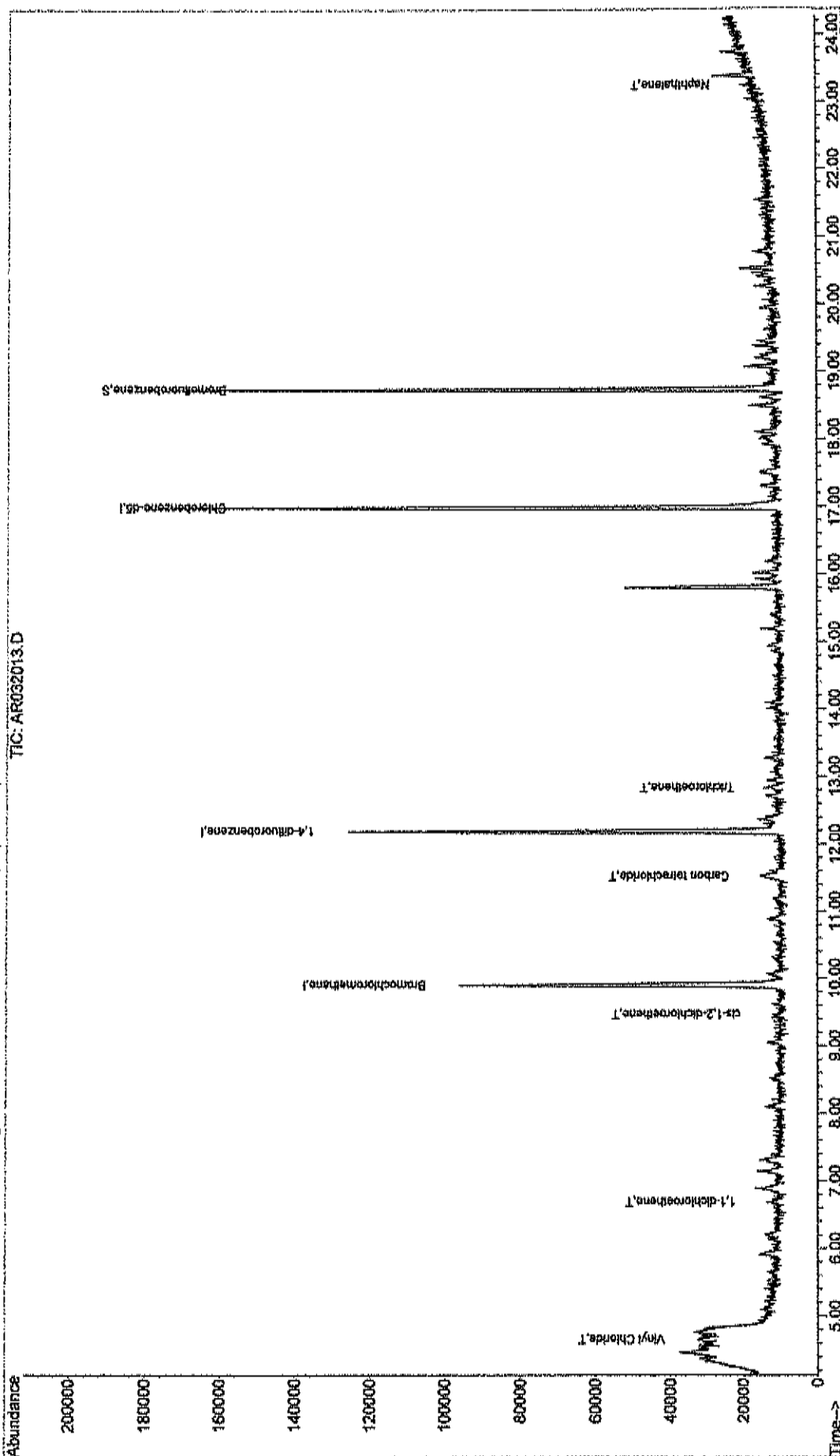
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032013.D
Acq On : 21 Mar 2020 12:55 am
Sample : ALUG 0.04
Misc : A311_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 23 8:28 2020

Vial: 13
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A320_1UG.RES

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 10 08:22:44 2020
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032014.D Vial: 14
 Acq On : 21 Mar 2020 1:39 am Operator: RJP
 Sample : A1UG_0.03 Inst : MSD #1
 Misc : A311_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Mar 21 09:07:03 2020 Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Sat Mar 21 09:01:02 2020
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D
 DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.90	128	35039	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	118330	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	109216	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.73	95	66173m ^p	0.78	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	78.00%

Target Compounds

38) Carbon tetrachloride	11.53	117	2692m ^g	0.02	ppb	Qvalue

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AR032014.D

Acq On : 21 Mar 2020 1:39 am

Sample : A1UG_0.03

Misc : A311_1UG

MS Integration Params: RTEINT.P

Quant Time: Mar 23 8:29 2020

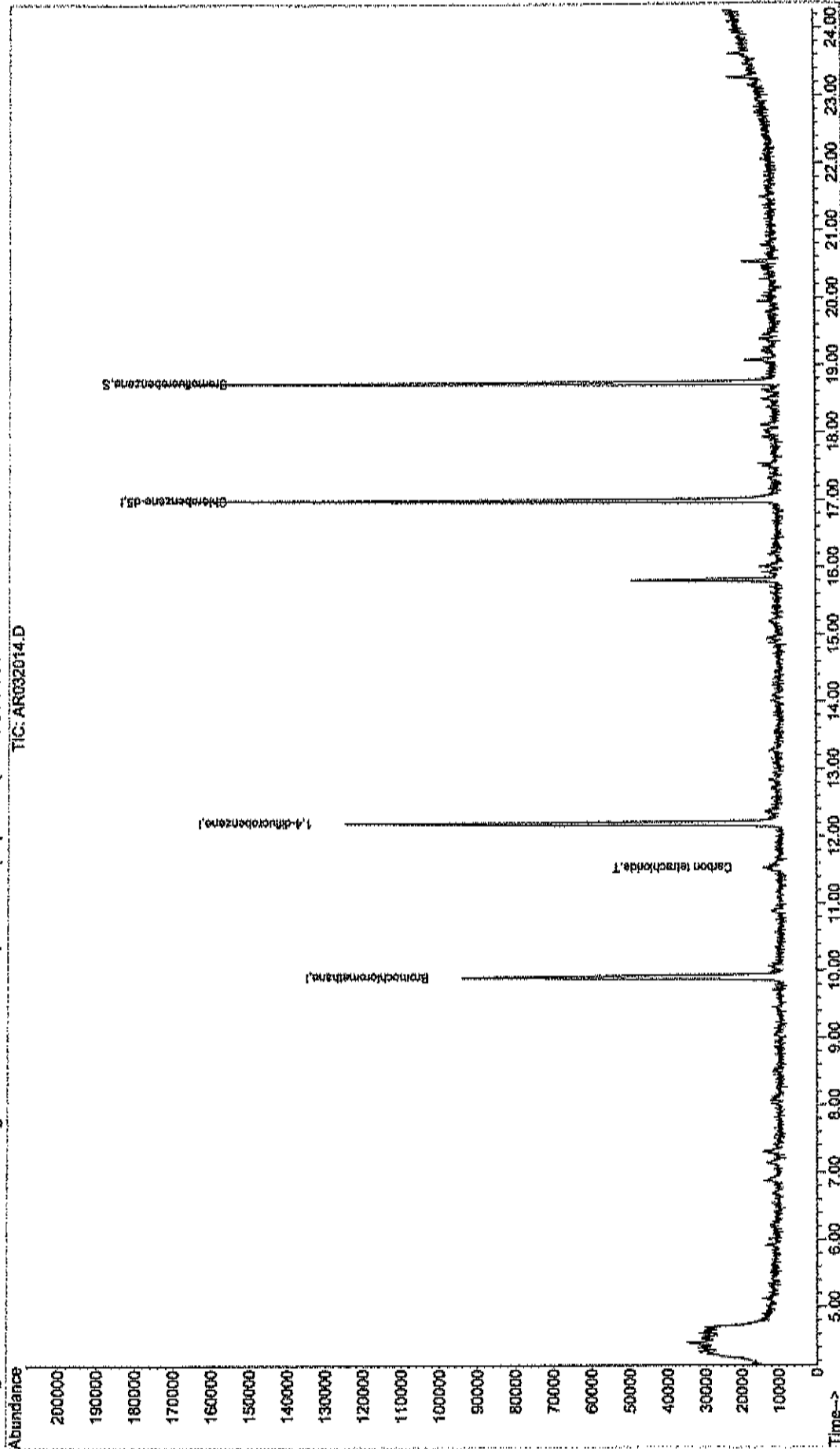
Quant Results File: A320_1UG.RES

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Apr 10 08:22:44 2020

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AR032007.D



GC/MS VOLATILES-WHOLE AIR
METHOD TO-15
CALIBRATION VERIFICATION

Data File : C:\HPCHEM\1\DATA\AR040902.D

Vial: 2

Acq On : 9 Apr 2020 9:56 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Apr 17 11:38:02 2020

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	104	0.00
2 T	Propylene	0.720	0.720	0.0	105	0.00
3 T	Freon 12	4.461	4.308	3.4	99	0.00
4 T	Chloromethane	0.968	0.810	16.3	86	0.00
5 T	Freon 114	3.454	3.217	6.9	95	0.00
6 T	Vinyl Chloride	0.909	0.841	7.5	98	0.00
7 T	Butane	0.961	0.801	16.6	83	0.00
8 T	1,3-butadiene	0.798	0.608	23.8	81	0.00
9 T	Bromomethane	1.340	1.178	12.1	88	0.00
10 T	Chloroethane	0.545	0.401	26.4	71	0.00
11 T	Ethanol	0.255	0.209	18.0	91	0.00
12 T	Acrolein	0.285	0.260	8.8	91	0.00
13 T	Vinyl Bromide	1.127	1.139	-1.1	108	0.00
14 T	Freon 11	4.692	4.827	-2.9	106	0.00
15 T	Acetone	0.545	0.572	-5.0	109	0.00
16 T	Pentane	0.982	1.025	-4.4	111	0.00
17 T	Isopropyl alcohol	1.280	1.486	-16.1	127	0.00
18 T	1,1-dichloroethene	1.033	1.068	-3.4	107	0.00
19 T	Freon 113	2.758	2.938	-6.5	110	0.00
20 t	t-Butyl alcohol	1.464	1.525	-4.2	108	0.00
21 T	Methylene chloride	1.141	1.208	-5.9	113	0.00
22 T	Allyl chloride	0.993	1.010	-1.7	100	0.00
23 T	Carbon disulfide	3.485	3.769	-8.1	116	0.00
24 T	trans-1,2-dichloroethene	1.490	1.498	-0.5	101	0.00
25 T	methyl tert-butyl ether	2.216	2.201	0.7	100	0.00
26 T	1,1-dichloroethane	2.058	2.107	-2.4	104	0.00
27 T	Vinyl acetate	1.405	1.177	16.2	86	0.00
28 T	Methyl Ethyl Ketone	0.457	0.430	5.9	98	0.00
29 T	cis-1,2-dichloroethene	1.374	1.340	2.5	99	0.00
30 T	Hexane	1.294	1.312	-1.4	96	0.00
31 T	Ethyl acetate	2.073	2.093	-1.0	103	0.00
32 T	Chloroform	2.941	3.020	-2.7	105	0.00
33 T	Tetrahydrofuran	0.725	0.664	8.4	91	0.00
34 T	1,2-dichloroethane	1.889	1.783	5.6	96	0.00
35 I	1,4-difluorobenzene	1.000	1.000	0.0	89	0.00
36 T	1,1,1-trichloroethane	0.856	0.968	-13.1	101	0.00
37 T	Cyclohexane	0.316	0.349	-10.4	97	0.00
38 T	Carbon tetrachloride	0.963	1.071	-11.2	95	0.00
39 T	Benzene	0.831	0.974	-17.2	103	0.00
40 T	Methyl methacrylate	0.292	0.308	-5.5	95	0.00
41 T	1,4-dioxane	0.188	0.215	-14.4	99	0.00
42 T	2,2,4-trimethylpentane	1.067	1.213	-13.7	101	0.00
43 T	Heptane	0.340	0.385	-13.2	97	0.00
44 T	Trichloroethene	0.422	0.542	-28.4	110	0.00
45 T	1,2-dichloropropane	0.325	0.388	-19.4	108	0.00
46 T	Bromodichloromethane	0.880	0.962	-9.3	99	0.00
47 T	cis-1,3-dichloropropene	0.519	0.608	-17.1	101	0.00
48 T	trans-1,3-dichloropropene	0.413	0.425	-2.9	88	0.00
49 T	1,1,2-trichloroethane	0.425	0.511	-20.2	106	0.00

(#) = Out of Range

AR040902.D A320_1UG.M

Fri Apr 17 11:40:23 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR040902.D

Vial: 2

Acq On : 9 Apr 2020 9:56 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Apr 17 11:38:02 2020

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51 T	Toluene	0.585	0.662	-13.2	97	0.00
52 T	Methyl Isobutyl Ketone	0.524	0.543	-3.6	92	0.00
53 T	Dibromochloromethane	0.976	1.020	-4.5	94	0.00
54 T	Methyl Butyl Ketone	0.447	0.514	-15.0	100	0.00
55 T	1,2-dibromoethane	0.706	0.837	-18.6	105	0.00
56 T	Tetrachloroethylene	0.500	0.600	-20.0	105	0.00
57 T	Chlorobenzene	0.935	1.048	-12.1	99	0.00
58 T	Ethylbenzene	1.258	1.310	-4.1	89	0.00
59 T	m&p-xylene	1.089	1.245	-14.3	94	0.00
60 T	Nonane	0.558	0.659	-18.1	101	0.00
61 T	Styrene	0.853	1.068	-25.2	102	0.00
62 T	Bromoform	0.940	0.838	10.9	78	0.00
63 T	o-xylene	1.313	1.585	-20.7	100	0.00
64 T	Cumene	1.402	1.508	-7.6	90	0.00
65 S	Bromofluorobenzene	0.718	0.818	-13.9	92	0.00
66 T	1,1,2,2-tetrachloroethane	1.014	1.259	-24.2	110	0.00
67 T	Propylbenzene	0.377	0.417	-10.6	92	0.00
68 T	2-Chlorotoluene	0.424	0.530	-25.0	102	0.00
69 T	4-ethyltoluene	1.486	1.718	-15.6	94	0.00
70 T	1,3,5-trimethylbenzene	1.399	1.672	-19.5	99	0.00
71 T	1,2,4-trimethylbenzene	1.146	1.230	-7.3	90	0.00
72 T	1,3-dichlorobenzene	0.893	1.140	-27.7	106	0.00
73 T	benzyl chloride	0.801	0.923	-15.2	100	0.00
74 T	1,4-dichlorobenzene	0.875	1.108	-26.6	100	0.00
75 T	1,2,3-trimethylbenzene	1.286	1.484	-15.4	94	0.00
76 T	1,2-dichlorobenzene	0.909	1.141	-25.5	104	0.00
77 T	1,2,4-trichlorobenzene	0.373	0.439	-17.7	102	0.00
78 T	Naphthalene	0.792	0.792	0.0	86	0.00
79 T	Hexachloro-1,3-butadiene	0.797	0.964	-21.0	106	0.00

Data File : C:\HPCHEM\1\DATA\AR040902.D

Vial: 2

Acq On : 9 Apr 2020 9:56 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 10:24:38 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	40948	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	133862	1.00	ppb	0.00
50) Chlorobenzene-d5	16.99	117	121631	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	99549	1.14	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	114.00%

Target Compounds

						Qvalue
2) Propylene	4.21	41	29487	1.00	ppb	96
3) Freon 12	4.27	85	176423	0.97	ppb	98
4) Chloromethane	4.46	50	33151	0.84	ppb	96
5) Freon 114	4.47	85	131710	0.93	ppb	99
6) Vinyl Chloride	4.66	62	34445	0.93	ppb	98
7) Butane	4.77	43	32807	0.83	ppb	96
8) 1,3-butadiene	4.77	39	24889	0.76	ppb	91
9) Bromomethane	5.12	94	48240	0.88	ppb	97
10) Chloroethane	5.29	64	16409	0.73	ppb	94
11) Ethanol	5.38	45	8574m	0.82	ppb	
12) Acrolein	5.98	56	10649	0.91	ppb	97
13) Vinyl Bromide	5.63	106	46621	1.01	ppb	97
14) Freon 11	5.92	101	197647	1.03	ppb	99
15) Acetone	6.09	58	23411	1.05	ppb	# 100
16) Pentane	6.20	42	41973	1.04	ppb	# 43
17) Isopropyl alcohol	6.20	45	60835	1.16	ppb	# 42
18) 1,1-dichloroethene	6.69	96	43744	1.03	ppb	97
19) Freon 113	6.89	101	120304	1.07	ppb	97
20) t-Butyl alcohol	6.92	59	62449	1.04	ppb	# 86
21) Methylene chloride	7.14	84	49446	1.06	ppb	96
22) Allyl chloride	7.14	41	41365	1.02	ppb	93
23) Carbon disulfide	7.30	76	154347	1.08	ppb	99
24) trans-1,2-dichloroethene	8.10	61	61340	1.01	ppb	97
25) methyl tert-butyl ether	8.12	73	90113	0.99	ppb	91
26) 1,1-dichloroethane	8.52	63	86292	1.02	ppb	100
27) Vinyl acetate	8.50	43	48210	0.84	ppb	97
28) Methyl Ethyl Ketone	9.01	72	17599	0.94	ppb	# 100
29) cis-1,2-dichloroethene	9.46	61	54860	0.98	ppb	95
30) Hexane	9.06	57	53734	1.01	ppb	99
31) Ethyl acetate	9.61	43	85699	1.01	ppb	99
32) Chloroform	10.07	83	123654	1.03	ppb	99
33) Tetrahydrofuran	10.25	42	27203	0.92	ppb	91
34) 1,2-dichloroethane	11.19	62	73012	0.94	ppb	99
36) 1,1,1-trichloroethane	10.90	97	129525	1.13	ppb	99
37) Cyclohexane	11.60	56	46713	1.10	ppb	95
38) Carbon tetrachloride	11.55	117	143362	1.11	ppb	98
39) Benzene	11.51	78	130382	1.17	ppb	96
40) Methyl methacrylate	13.08	41	41259	1.05	ppb	94
41) 1,4-dioxane	13.09	88	28767	1.14	ppb	98
42) 2,2,4-trimethylpentane	12.37	57	162338	1.14	ppb	99
43) Heptane	12.71	43	51564	1.13	ppb	97
44) Trichloroethene	12.84	130	72591m	1.29	ppb	
45) 1,2-dichloropropane	12.95	63	51903	1.19	ppb	96

(#)=qualifier out of range (m)=manual integration

AR040902.D A320_1UG.M

Fri Apr 17 11:40:29 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR040902.D

Vial: 2

Acq On : 9 Apr 2020 9:56 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 09 10:24:38 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	128760	1.09	ppb	100
47) cis-1,3-dichloropropene	14.10	75	81348	1.17	ppb	100
48) trans-1,3-dichloropropene	14.87	75	56932	1.03	ppb	99
49) 1,1,2-trichloroethane	15.20	97	68373	1.20	ppb	98
51) Toluene	14.95	92	80530	1.13	ppb	98
52) Methyl Isobutyl Ketone	14.01	43	66098	1.04	ppb	99
53) Dibromochloromethane	15.93	129	124095	1.05	ppb	99
54) Methyl Butyl Ketone	15.39	43	62478	1.15	ppb	98
55) 1,2-dibromoethane	16.20	107	101818	1.18	ppb	97
56) Tetrachloroethylene	16.02	164	72924	1.20	ppb	99
57) Chlorobenzene	17.05	112	127459	1.12	ppb	97
58) Ethylbenzene	17.32	91	159370	1.04	ppb	100
59) m&p-xylene	17.54	91	302917	2.29	ppb	100
60) Nonane	17.94	43	80200	1.18	ppb	97
61) Styrene	18.00	104	129913	1.25	ppb	97
62) Bromoform	18.12	173	101963	0.89	ppb	100
63) o-xylene	18.03	91	192757	1.21	ppb	99
64) Cumene	18.63	105	183362	1.08	ppb	99
66) 1,1,2,2-tetrachloroethane	18.50	83	153135	1.24	ppb	99
67) Propylbenzene	19.21	120	50668	1.10	ppb	78
68) 2-Chlorotoluene	19.26	126	64421	1.25	ppb	# 86
69) 4-ethyltoluene	19.39	105	208959	1.16	ppb	100
70) 1,3,5-trimethylbenzene	19.46	105	203416	1.20	ppb	99
71) 1,2,4-trimethylbenzene	19.95	105	149593	1.07	ppb	99
72) 1,3-dichlorobenzene	20.28	146	138649	1.28	ppb	99
73) benzyl chloride	20.35	91	112236	1.15	ppb	99
74) 1,4-dichlorobenzene	20.42	146	134720m	1.27	ppb	
75) 1,2,3-trimethylbenzene	20.47	105	180485	1.15	ppb	100
76) 1,2-dichlorobenzene	20.78	146	138740	1.26	ppb	98
77) 1,2,4-trichlorobenzene	22.99	180	53389	1.18	ppb	98
78) Naphthalene	23.21	128	96302	1.00	ppb	97
79) Hexachloro-1,3-butadiene	23.34	225	117290	1.21	ppb	90

```

Data File : C:\HPCHEM\1\DATA\AR040902.D
Acq On    : 9 Apr 2020 9:56 am
Sample    : ALUG 1.0
Misc      : A311_1UG
           : A311_1UG
Integration Params: RTEINT.P
Quant Time: Apr 10 10:24 2020

```

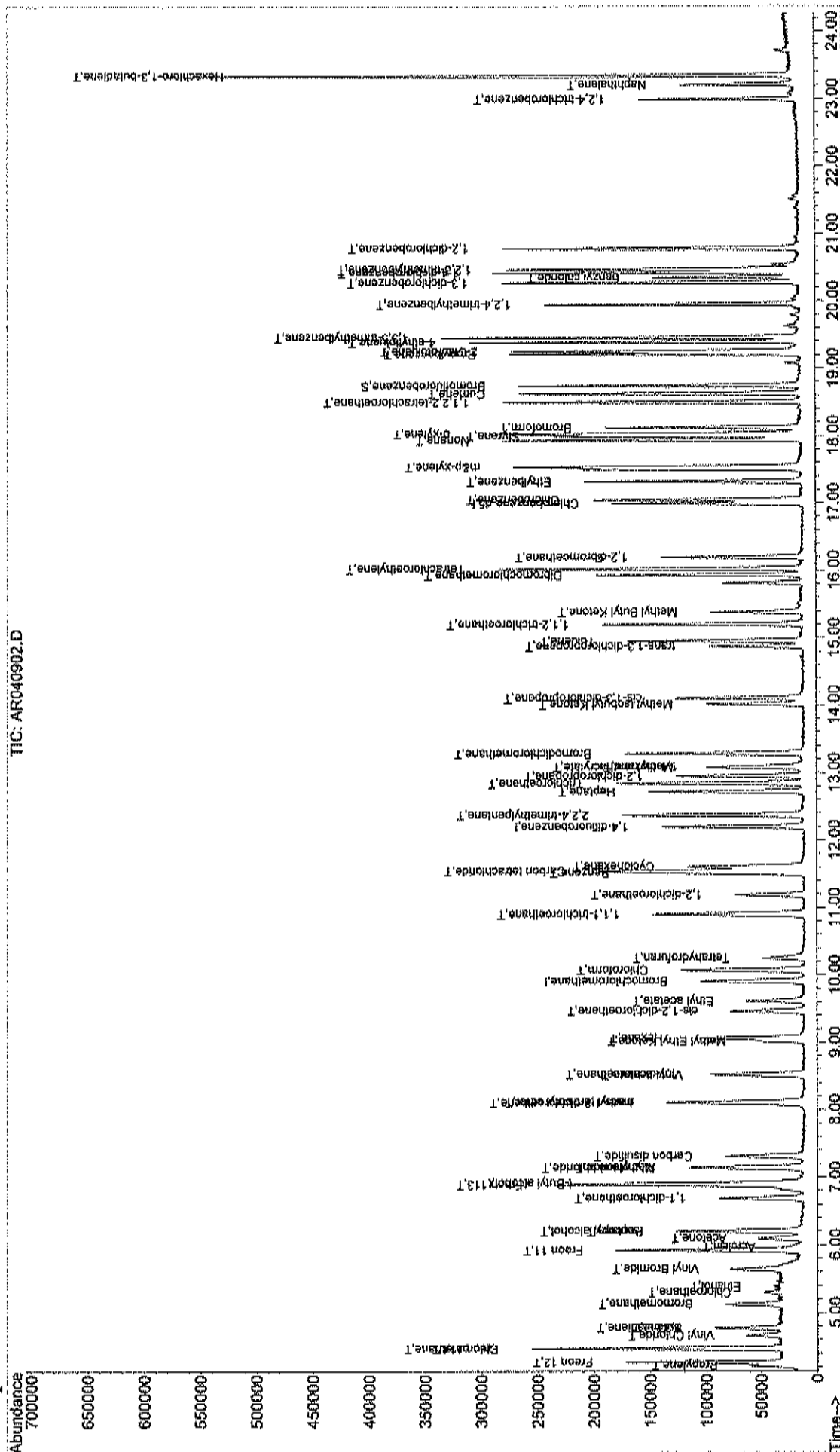
Vial: 2
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A320 1UG.RES

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: C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
: TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 17 11:38:03 2020
Response via : Initial Calibration

```



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW DATA

BFB

Data File : C:\HPCHEM\1\DATA\AR032001.D

Acq On : 20 Mar 2020 11:13 am

Sample : BFB1UG

Misc : A311_1UG

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

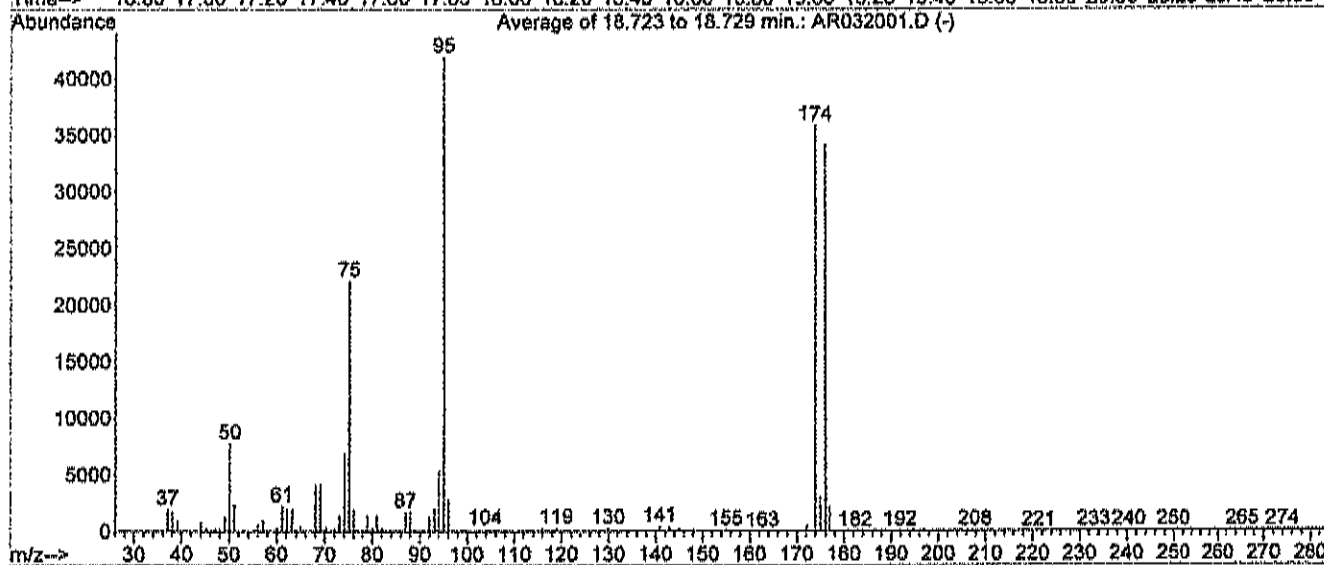
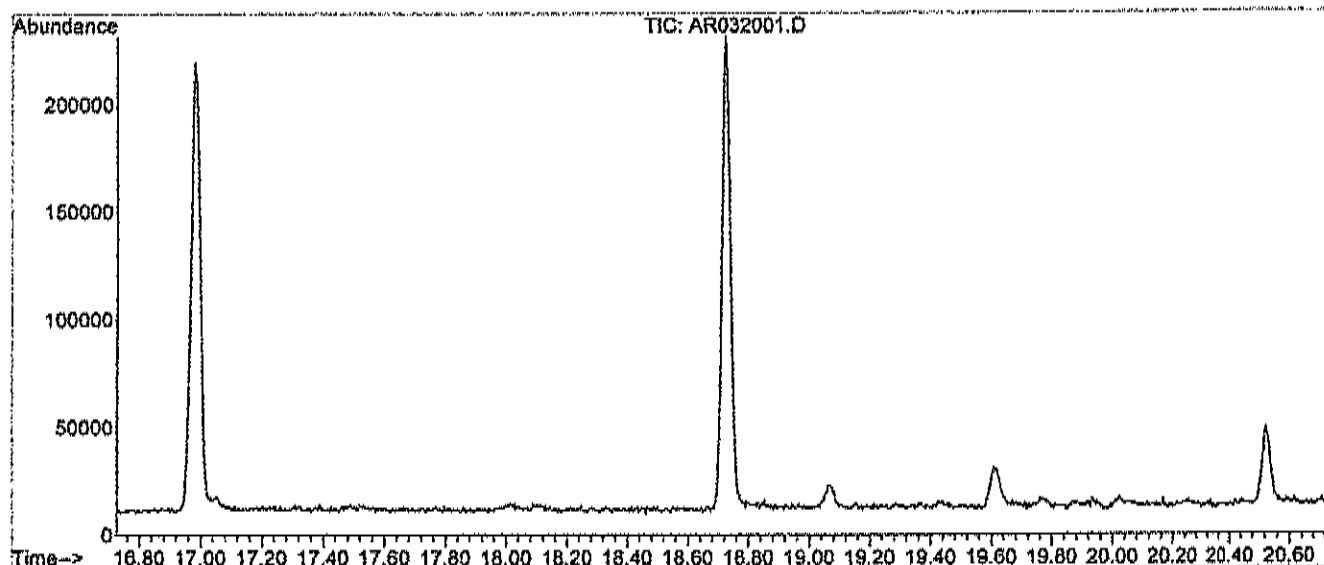
Title : TO-15 VOA Standards for 5 point calibration

Vial: 1

Operator: RJP

Inst : MSD #1

Multiplr: 1.00



Spectrum Information: Average of 18.723 to 18.729 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.6	7790	PASS
75	95	30	66	52.7	22128	PASS
95	95	100	100	100.0	41964	PASS
96	95	5	9	6.7	2794	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	85.5	35877	PASS
175	174	4	9	8.4	3014	PASS
176	174	95	101	95.6	34290	PASS
177	176	5	9	6.5	2241	PASS

BFB

Data File : C:\HPCHEM\1\DATA\AR040901.D

Vial: 1

Acq On : 9 Apr 2020 9:06 am

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

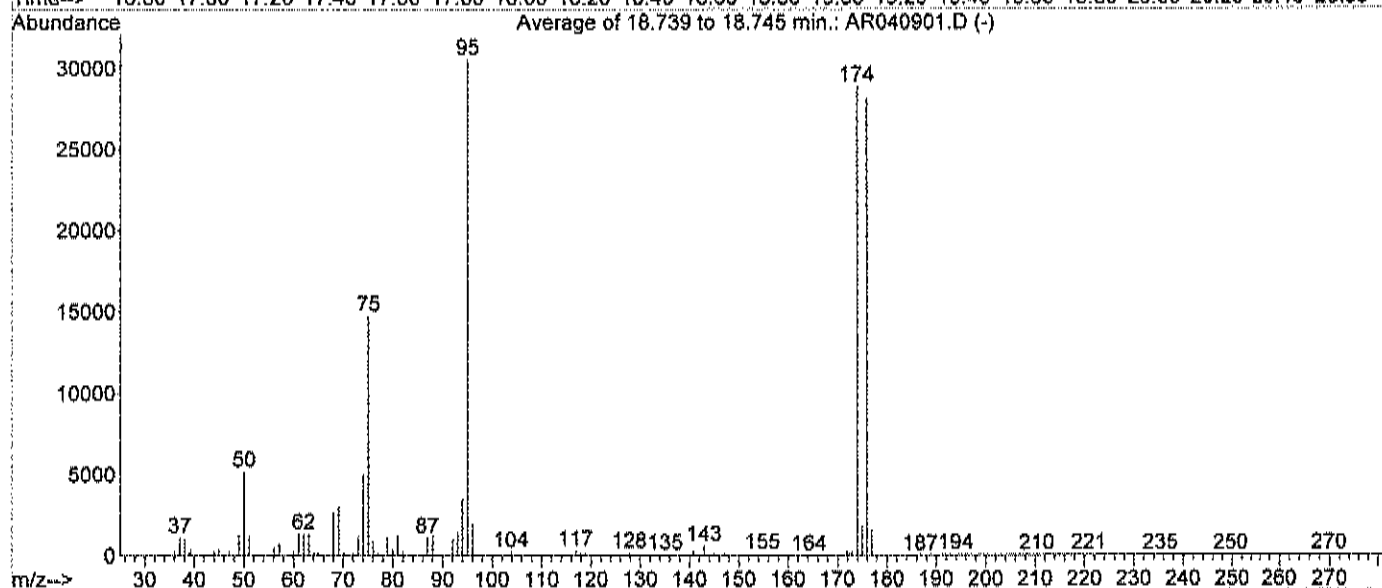
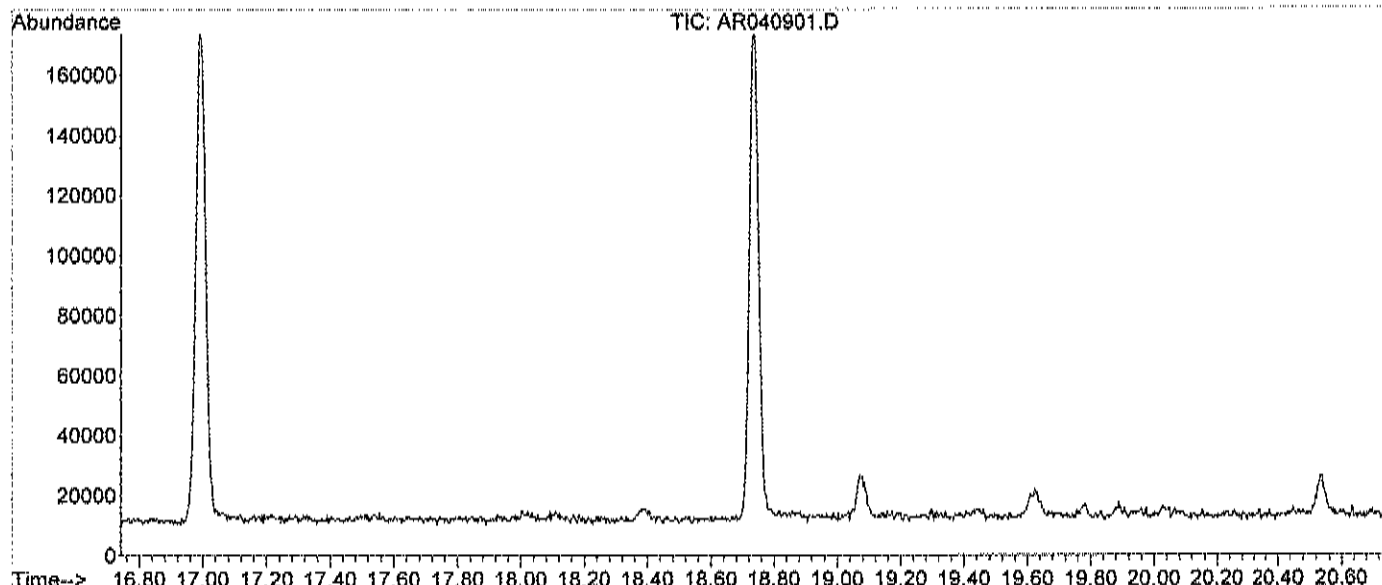
Misc : A311 1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 18.739 to 18.745 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.0	5203	PASS
75	95	30	66	48.3	14766	PASS
95	95	100	100	100.0	30544	PASS
96	95	5	9	6.6	2005	PASS
173	174	0.00	2	0.8	232	PASS
174	95	50	120	94.5	28872	PASS
175	174	4	9	6.4	1859	PASS
176	174	95	101	97.5	28136	PASS
177	176	5	9	5.7	1591	PASS

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW QC DATA



Date: 17-Apr-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc

Work Order: C2004010

Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: AMB1UG-040920	Sample Type: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	<0.15	0.15									
1,1,2,2-Tetrachloroethane	<0.15	0.15									
1,1,2-Trichloroethane	<0.15	0.15									
1,1-Dichloroethane	<0.15	0.15									
1,1-Dichloroethene	<0.040	0.040									
1,2,4-Trichlorobenzene	<0.15	0.15									
1,2,4-Trimethylbenzene	<0.15	0.15									
1,2-Dibromoethane	<0.15	0.15									
1,2-Dichlorobenzene	<0.15	0.15									
1,2-Dichloroethane	<0.15	0.15									
1,2-Dichloropropane	<0.15	0.15									
1,3,5-Trimethylbenzene	<0.15	0.15									
1,3-butadiene	<0.15	0.15									
1,3-Dichlorobenzene	<0.15	0.15									
1,4-Dichlorobenzene	<0.15	0.15									
1,4-Dioxane	<0.30	0.30									
2,2,4-trimethylpentane	<0.15	0.15									
4-ethyltoluene	<0.15	0.15									
Acetone	<0.30	0.30									
Allyl chloride	<0.15	0.15									
Benzene	<0.15	0.15									
Benzyl chloride	<0.15	0.15									
Bromodichloromethane	<0.15	0.15									
Bromoform	<0.15	0.15									
Bromomethane	<0.15	0.15									

Qualifiers:		Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection		R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit			

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: AMB1UG-040920		SampType: MBLK		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 16240	
Client ID: ZZZZZ		Batch ID: R16240		TestNo: TO-15				Analysis Date: 4/9/2020		SeqNo: 184805	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.030	0.030									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.040	0.040									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

Qualifiers:

J	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
S	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: AMB1UG-040920	SampleType: MBLK	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.030	0.030									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.040	0.040									
Surr: Bromofluorobenzene	0.7100	0	1	0	71.0	70	130				

Qualifiers:	Results reported are not blank corrected			Estimated Value above quantitation range			Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limit		ND	Not Detected at the Limit of Detection		R	RPD outside accepted recovery limits	
	S	Spike Recovery outside accepted recovery limits		DL	Detection Limit				

Data File : C:\HPCHEM\1\DATA\AR040904.D

Vial: 4

Acq On : 9 Apr 2020 11:26 am

Operator: RJP

Sample : AMB1UG-040920

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:34 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	37267	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.20	114	118206	1.00	ppb	0.01
50) Chlorobenzene-d5	17.00	117	106322	1.00	ppb	0.01

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	54184m	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA\AR040904.D
Acq On : 9 Apr 2020 11:26 am
Sample : AMB1UG-040920
Misc : A311_1UG
MS Integration Params: RTEINT.P
Quant Time: Apr 17 11:14 2020

Vial: 4

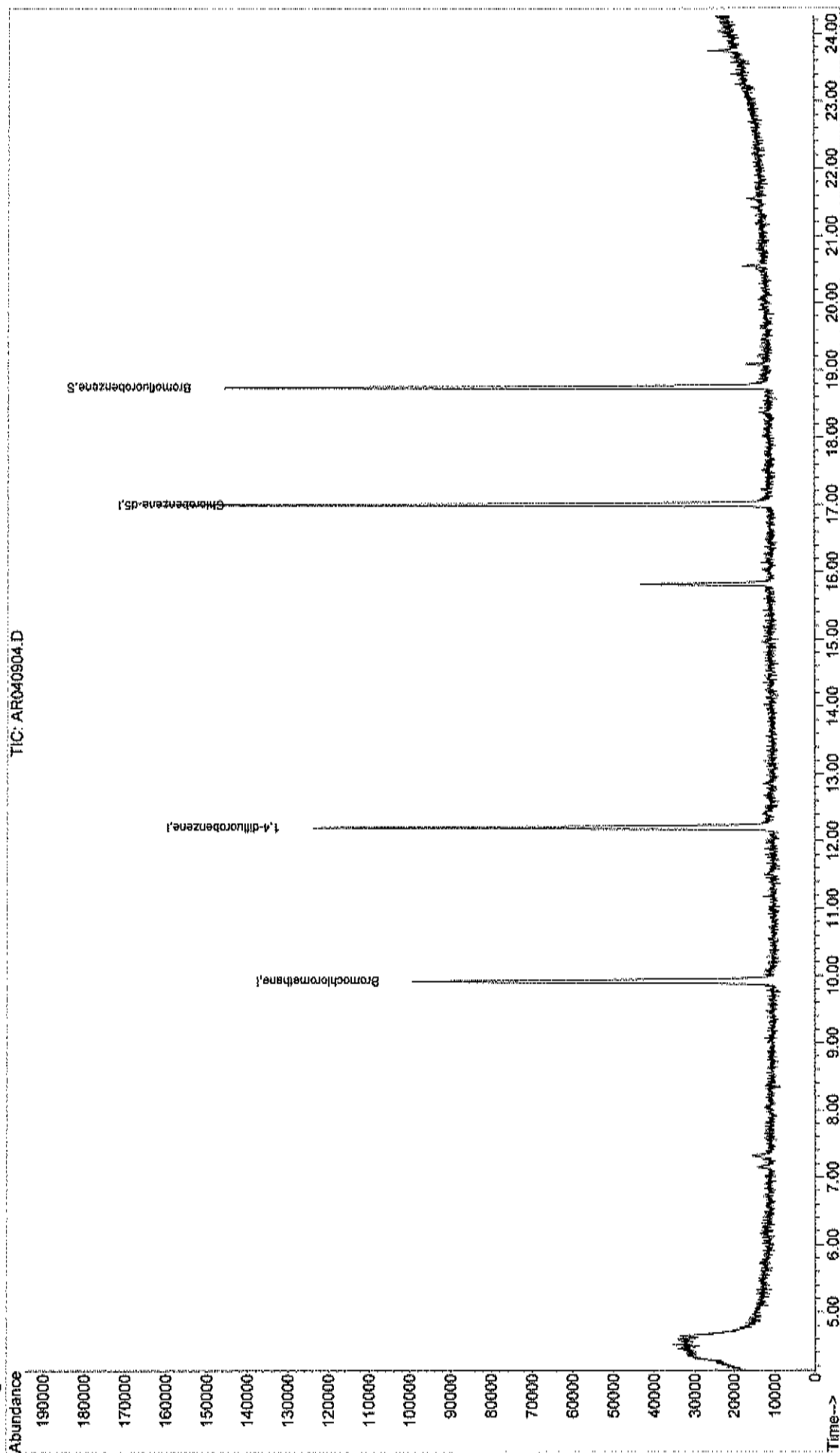
Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: A320_1UG.RES

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 17 11:38:02 2020
Response via : Initial Calibration





Date: 17-Apr-20

ANALYTICAL QC SUMMARY REPORT

CLIENT: Matrix Environmental Technologies, Inc

Work Order: C2004010

Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UG-040920	SampType: LCS	TestCode: 0.20_NYS	Units: ppbv	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184806						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.120	0.15	1	0	112	70	130				
1,1,2,2-Tetrachloroethane	1.160	0.15	1	0	116	70	130				
1,1,2-Trichloroethane	1.170	0.15	1	0	117	70	130				
1,1-Dichloroethane	1.020	0.15	1	0	102	70	130				
1,1-Dichloroethene	1.000	0.040	1	0	100	70	130				
1,2,4-Trichlorobenzene	0.9200	0.15	1	0	92.0	70	130				
1,2,4-Trimethylbenzene	0.9800	0.15	1	0	98.0	70	130				
1,2-Dibromoethane	1.130	0.15	1	0	113	70	130				
1,2-Dichlorobenzene	1.070	0.15	1	0	107	70	130				
1,2-Dichloroethane	0.9300	0.15	1	0	93.0	70	130				
1,2-Dichloropropane	1.160	0.15	1	0	116	70	130				
1,3,5-Trimethylbenzene	1.150	0.15	1	0	115	70	130				
1,3-butadiene	0.7900	0.15	1	0	79.0	70	130				
1,3-Dichlorobenzene	1.070	0.15	1	0	107	70	130				
1,4-Dichlorobenzene	1.030	0.15	1	0	103	70	130				
1,4-Dioxane	1.090	0.30	1	0	109	70	130				
2,2,4-trimethylpentane	1.110	0.15	1	0	111	70	130				
4-ethyltoluene	1.090	0.15	1	0	109	70	130				
Acetone	1.100	0.30	1	0	110	70	130				
Allyl chloride	0.9500	0.15	1	0	95.0	70	130				
Benzene	1.110	0.15	1	0	111	70	130				
Benzyl chloride	0.8500	0.15	1	0	85.0	70	130				
Bromodichloromethane	1.080	0.15	1	0	108	70	130				
Bromoform	0.8300	0.15	1	0	83.0	70	130				
Bromomethane	1.080	0.15	1	0	108	70	130				

Qualifiers:	J	S	F	E	ND	DL	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
							Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
							Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UG-040920		SampType: LCS		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 16240	
Client ID: ZZZZZ		Batch ID: R16240		TestNo: TO-15				Analysis Date: 4/9/2020		SeqNo: 184806	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.040	0.15	1	0	104	70	130				
Carbon tetrachloride	1.080	0.030	1	0	108	70	130				
Chlorobenzene	1.080	0.15	1	0	108	70	130				
Chloroethane	1.120	0.15	1	0	112	70	130				
Chloroform	0.9900	0.15	1	0	99.0	70	130				
Chloromethane	0.8600	0.15	1	0	86.0	70	130				
cis-1,2-Dichloroethene	0.9600	0.040	1	0	96.0	70	130				
cis-1,3-Dichloropropene	1.130	0.15	1	0	113	70	130				
Cyclohexane	1.090	0.15	1	0	109	70	130				
Dibromochloromethane	0.9900	0.15	1	0	99.0	70	130				
Ethyl acetate	0.9500	0.15	1	0	95.0	70	130				
Ethylbenzene	1.000	0.15	1	0	100	70	130				
Freon 11	0.9700	0.15	1	0	97.0	70	130				
Freon 113	1.030	0.15	1	0	103	70	130				
Freon 114	0.9300	0.15	1	0	93.0	70	130				
Freon 12	0.9700	0.15	1	0	97.0	70	130				
Heptane	1.100	0.15	1	0	110	70	130				
Hexachloro-1,3-butadiene	1.120	0.15	1	0	112	70	130				
Hexane	0.8800	0.15	1	0	88.0	70	130				
Isopropyl alcohol	0.9500	0.15	1	0	95.0	70	130				
m&p-Xylene	2.200	0.30	2	0	110	70	130				
Methyl Butyl Ketone	0.9900	0.30	1	0	99.0	70	130				
Methyl Ethyl Ketone	0.9200	0.30	1	0	92.0	70	130				
Methyl Isobutyl Ketone	0.9500	0.30	1	0	95.0	70	130				
Methyl tert-butyl ether	0.9200	0.15	1	0	92.0	70	130				
Methylene chloride	1.010	0.15	1	0	101	70	130				
o-Xylene	1.170	0.15	1	0	117	70	130				
Propylene	1.030	0.15	1	0	103	70	130				
Styrene	1.180	0.15	1	0	118	70	130				
Tetrachloroethylene	1.160	0.15	1	0	116	70	130				
Tetrahydrofuran	0.8900	0.15	1	0	89.0	70	130				

Qualifiers:	Results reported are not blank corrected		Estimated Value above quantitation range		Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S		Spike Recovery outside accepted recovery limits	DL	Detection Limit		

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UG-040920	SampleType: LCS	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184806						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	1.080	0.15	1	0	108	70	130				
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130				
trans-1,3-Dichloropropene	0.9900	0.15	1	0	99.0	70	130				
Trichloroethene	1.290	0.030	1	0	129	70	130				
Vinyl acetate	0.7900	0.15	1	0	79.0	70	130				
Vinyl Bromide	1.010	0.15	1	0	101	70	130				
Vinyl chloride	0.9100	0.040	1	0	91.0	70	130				
Surr: Bromofluorobenzene	1.120	0	1	0	112	70	130				

Sample ID: ALCS1UGD-040920	SampleType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	1.040	0.15	1	0	104	70	130	1.12	7.41	30	
1,1,2,2-Tetrachloroethane	1.120	0.15	1	0	112	70	130	1.16	3.51	30	
1,1,2-Trichloroethane	1.120	0.15	1	0	112	70	130	1.17	4.37	30	
1,1-Dichloroethane	1.020	0.15	1	0	102	70	130	1.02	0	30	
1,1-Dichloroethene	1.090	0.040	1	0	109	70	130	1	8.61	30	
1,2,4-Trichlorobenzene	1.000	0.15	1	0	100	70	130	0.92	8.33	30	
1,2,4-Trimethylbenzene	0.9700	0.15	1	0	97.0	70	130	0.98	1.03	30	
1,2-Dibromoethane	1.100	0.15	1	0	110	70	130	1.13	2.69	30	
1,2-Dichlorobenzene	1.140	0.15	1	0	114	70	130	1.07	6.33	30	
1,2-Dichloroethane	0.9100	0.15	1	0	91.0	70	130	0.93	2.17	30	
1,2-Dichloropropane	1.110	0.15	1	0	111	70	130	1.16	4.41	30	
1,3,5-Trimethylbenzene	1.130	0.15	1	0	113	70	130	1.15	1.75	30	
1,3-butadiene	0.7200	0.15	1	0	72.0	70	130	0.79	9.27	30	
1,3-Dichlorobenzene	1.160	0.15	1	0	116	70	130	1.07	8.07	30	
1,4-Dichlorobenzene	1.190	0.15	1	0	119	70	130	1.03	14.4	30	
1,4-Dioxane	1.090	0.30	1	0	109	70	130	1.09	0	30	
2,2,4-trimethylpentane	1.050	0.15	1	0	105	70	130	1.11	5.56	30	

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
DL Detection Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UGD-040920	SampType: LCSD	TestCode: 0.20_NYS	Units: ppbV	Prep Date:	RunNo: 16240						
Client ID: ZZZZZ	Batch ID: R16240	TestNo: TO-15		Analysis Date: 4/9/2020	SeqNo: 184807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-ethyltoluene	1.070	0.15	1	0	107	70	130	1.09	1.85	30	
Acetone	1.160	0.30	1	0	116	70	130	1.1	5.31	30	
Allyl chloride	0.9700	0.15	1	0	97.0	70	130	0.95	2.08	30	
Benzene	1.120	0.15	1	0	112	70	130	1.11	0.897	30	
Benzyl chloride	1.040	0.15	1	0	104	70	130	0.85	20.1	30	
Bromodichloromethane	1.000	0.15	1	0	100	70	130	1.08	7.69	30	
Bromoform	0.8000	0.15	1	0	80.0	70	130	0.83	3.68	30	
Bromomethane	0.8400	0.15	1	0	84.0	70	130	1.08	25.0	30	
Carbon disulfide	1.020	0.15	1	0	102	70	130	1.04	1.94	30	
Carbon tetrachloride	1.010	0.030	1	0	101	70	130	1.08	6.70	30	
Chlorobenzene	1.060	0.15	1	0	106	70	130	1.08	1.87	30	
Chloroethane	0.7400	0.15	1	0	74.0	70	130	1.12	40.9	30	R
Chloroform	1.000	0.15	1	0	100	70	130	0.99	1.01	30	
Chloromethane	0.8200	0.15	1	0	82.0	70	130	0.86	4.76	30	
cis-1,2-Dichloroethene	1.020	0.040	1	0	102	70	130	0.96	6.06	30	
cis-1,3-Dichloropropene	1.080	0.15	1	0	108	70	130	1.13	4.52	30	
Cyclohexane	1.050	0.15	1	0	105	70	130	1.09	3.74	30	
Dibromochloromethane	0.9500	0.15	1	0	95.0	70	130	0.99	4.12	30	
Ethyl acetate	0.9700	0.15	1	0	97.0	70	130	0.95	2.08	30	
Ethylbenzene	0.9900	0.15	1	0	99.0	70	130	1	1.01	30	
Freon 11	0.9800	0.15	1	0	98.0	70	130	0.97	1.03	30	
Freon 113	1.050	0.15	1	0	105	70	130	1.03	1.92	30	
Freon 114	0.8900	0.15	1	0	89.0	70	130	0.93	4.40	30	
Freon 12	0.9400	0.15	1	0	94.0	70	130	0.97	3.14	30	
Heptane	1.060	0.15	1	0	106	70	130	1.1	3.70	30	
Hexachloro-1,3-butadiene	1.120	0.15	1	0	112	70	130	1.12	0	30	
Hexane	0.9300	0.15	1	0	93.0	70	130	0.88	5.52	30	
Isopropyl alcohol	1.060	0.15	1	0	106	70	130	0.95	10.9	30	
m&p-Xylene	2.140	0.30	2	0	107	70	130	2.2	2.76	30	
Methyl Butyl Ketone	1.020	0.30	1	0	102	70	130	0.99	2.99	30	
Methyl Ethyl Ketone	0.9400	0.30	1	0	94.0	70	130	0.92	2.15	30	

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
DL Detection Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: Matrix Environmental Technologies, Inc
Work Order: C2004010
Project: Aquino 65-67 Lake Ave.

TestCode: 0.20_NYS

Sample ID: ALCS1UGD-040920		SampType: LCSD		TestCode: 0.20_NYS		Units: ppbV		Prep Date:		RunNo: 16240	
Client ID: ZZZZZ		Batch ID: R16240		TestNo: TO-15				Analysis Date: 4/9/2020		SeqNo: 184807	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Isobutyl Ketone	0.9300	0.30	1	0	93.0	70	130	0.95	2.13	30	30
Methyl tert-butyl ether	1.020	0.15	1	0	102	70	130	0.92	10.3	30	30
Methylene chloride	0.9900	0.15	1	0	99.0	70	130	1.01	2.00	30	30
o-Xylene	1.120	0.15	1	0	112	70	130	1.17	4.37	30	30
Propylene	1.020	0.15	1	0	102	70	130	1.03	0.976	30	30
Styrene	1.160	0.15	1	0	116	70	130	1.18	1.71	30	30
Tetrachloroethylene	1.140	0.15	1	0	114	70	130	1.16	1.74	30	30
Tetrahydrofuran	0.9400	0.15	1	0	94.0	70	130	0.89	5.46	30	30
Toluene	1.070	0.15	1	0	107	70	130	1.08	0.930	30	30
trans-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130	0.98	1.02	30	30
trans-1,3-Dichloropropene	1.000	0.15	1	0	100	70	130	0.99	1.01	30	30
Trichloroethene	1.220	0.030	1	0	122	70	130	1.29	5.58	30	30
Vinyl acetate	0.8300	0.15	1	0	83.0	70	130	0.79	4.94	30	30
Vinyl Bromide	1.110	0.15	1	0	111	70	130	1.01	9.43	30	30
Vinyl chloride	0.8700	0.040	1	0	87.0	70	130	0.91	4.49	30	30
Surr: Bromofluorobenzene	1.100	0	1	0	110	70	130	0	0	30	30

Qualifiers:

J	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
S	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
	Spike Recovery outside accepted recovery limits	DL	Detection Limit		

Data File : C:\HPCHEM\1\DATA\AR040903.D

Vial: 3

Acq On : 9 Apr 2020 10:44 am

Operator: RJP

Sample : ALCS1UG-040920

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:33 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.92	128	41190	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.20	114	134311	1.00	ppb	0.01
50) Chlorobenzene-d5	17.00	117	124990	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	100382	1.12	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	112.00%

Target Compounds

						Qvalue
2) Propylene	4.22	41	30609	1.03	ppb	99
3) Freon 12	4.27	85	177456	0.97	ppb	99
4) Chloromethane	4.47	50	34364	0.86	ppb	96
5) Freon 114	4.47	85	132438	0.93	ppb	99
6) Vinyl Chloride	4.67	62	34135	0.91	ppb	96
7) Butane	4.78	43	32478	0.82	ppb	98
8) 1,3-butadiene	4.78	39	25849	0.79	ppb	100
9) Bromomethane	5.13	94	59671	1.08	ppb	98
10) Chloroethane	5.30	64	25169	1.12	ppb	98
11) Ethanol	5.42	45	10002	0.95	ppb	93
12) Acrolein	6.00	56	9787	0.83	ppb	96
13) Vinyl Bromide	5.65	106	46653	1.01	ppb	98
14) Freon 11	5.93	101	188207	0.97	ppb	98
15) Acetone	6.11	58	24768	1.10	ppb	# 100
16) Pentane	6.21	42	40982	1.01	ppb	98
17) Isopropyl alcohol	6.21	45	49974	0.95	ppb	# 63
18) 1,1-dichloroethene	6.70	96	42618	1.00	ppb	99
19) Freon 113	6.90	101	117360	1.03	ppb	98
20) t-Butyl alcohol	6.92	59	55250	0.92	ppb	# 82
21) Methylene chloride	7.15	84	47453	1.01	ppb	98
22) Allyl chloride	7.14	41	39010	0.95	ppb	95
23) Carbon disulfide	7.32	76	148564	1.04	ppb	99
24) trans-1,2-dichloroethene	8.10	61	60187	0.98	ppb	97
25) methyl tert-butyl ether	8.12	73	84228	0.92	ppb	88
26) 1,1-dichloroethane	8.53	63	86247	1.02	ppb	97
27) Vinyl acetate	8.51	43	45678	0.79	ppb	96
28) Methyl Ethyl Ketone	9.01	72	17313	0.92	ppb	# 100
29) cis-1,2-dichloroethene	9.46	61	54436	0.96	ppb	95
30) Hexane	9.07	57	46863	0.88	ppb	86
31) Ethyl acetate	9.61	43	81537	0.95	ppb	98
32) Chloroform	10.07	83	119921	0.99	ppb	99
33) Tetrahydrofuran	10.26	42	26431	0.89	ppb	94
34) 1,2-dichloroethane	11.19	62	72574	0.93	ppb	100
36) 1,1,1-trichloroethane	10.91	97	128607	1.12	ppb	97
37) Cyclohexane	11.62	56	46165	1.09	ppb	94
38) Carbon tetrachloride	11.56	117	140384	1.08	ppb	99
39) Benzene	11.52	78	124098	1.11	ppb	95
40) Methyl methacrylate	13.07	41	40065	1.02	ppb	93
41) 1,4-dioxane	13.09	88	27621	1.09	ppb	100
42) 2,2,4-trimethylpentane	12.38	57	159055	1.11	ppb	98
43) Heptane	12.72	43	50348	1.10	ppb	94
44) Trichloroethene	12.85	130	72784	1.29	ppb	99
45) 1,2-dichloropropane	12.95	63	50786	1.16	ppb	98

(#)=qualifier out of range (m)=manual integration

AR040903.D A320_1UG.M

Fri Apr 17 11:39:17 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR040903.D

Vial: 3

Acq On : 9 Apr 2020 10:44 am

Operator: RJP

Sample : ALCS1UG-040920

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:33 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

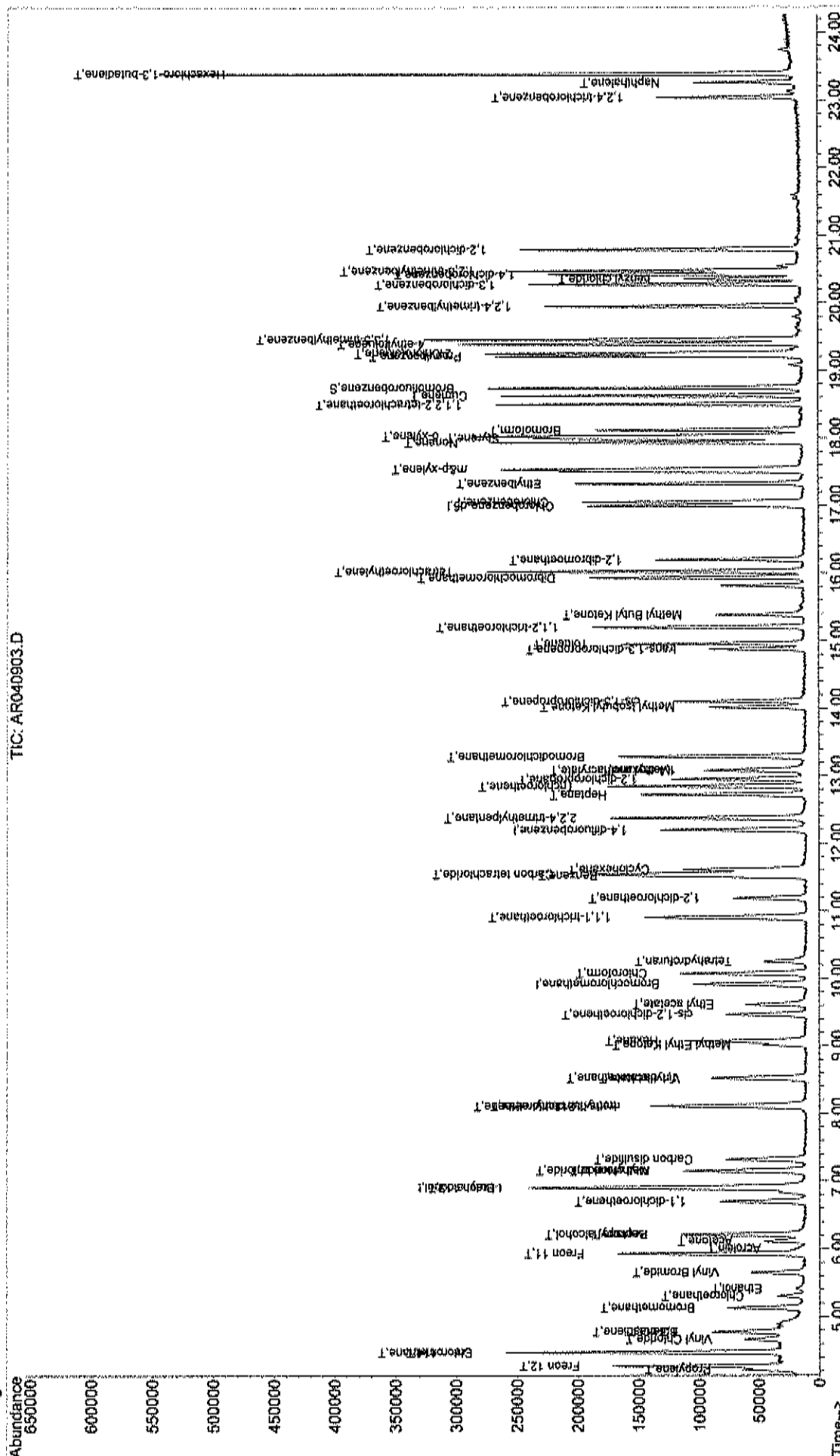
DataAcq Meth : 1UG_ENT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.29	83	127996	1.08	ppb	99
47) cis-1,3-dichloropropene	14.11	75	78438	1.13	ppb	100
48) trans-1,3-dichloropropene	14.87	75	55029	0.99	ppb	88
49) 1,1,2-trichloroethane	15.21	97	66942	1.17	ppb	100
51) Toluene	14.96	92	78993	1.08	ppb	100
52) Methyl Isobutyl Ketone	14.02	43	62408	0.95	ppb	98
53) Dibromochloromethane	15.93	129	120635	0.99	ppb	99
54) Methyl Butyl Ketone	15.39	43	55164	0.99	ppb	99
55) 1,2-dibromoethane	16.20	107	99656	1.13	ppb	98
56) Tetrachloroethylene	16.02	164	72653	1.16	ppb	98
57) Chlorobenzene	17.05	112	126336	1.08	ppb	100
58) Ethylbenzene	17.33	91	157376	1.00	ppb	99
59) m&p-xylene	17.54	91	298991	2.20	ppb	98
60) Nonane	17.94	43	77735	1.11	ppb	99
61) Styrene	18.00	104	125560	1.18	ppb	99
62) Bromoform	18.12	173	97771	0.83	ppb	99
63) o-xylene	18.03	91	192278	1.17	ppb	100
64) Cumene	18.63	105	181571	1.04	ppb	99
66) 1,1,2,2-tetrachloroethane	18.50	83	147644	1.16	ppb	100
67) Propylbenzene	19.21	120	49244	1.04	ppb	77
68) 2-Chlorotoluene	19.26	126	63275	1.19	ppb	# 85
69) 4-ethyltoluene	19.39	105	202002	1.09	ppb	100
70) 1,3,5-trimethylbenzene	19.46	105	201761	1.15	ppb	98
71) 1,2,4-trimethylbenzene	19.95	105	140058	0.98	ppb	100
72) 1,3-dichlorobenzene	20.27	146	119838	1.07	ppb	99
73) benzyl chloride	20.35	91	84715	0.85	ppb	97
74) 1,4-dichlorobenzene	20.42	146	112716	1.03	ppb	99
75) 1,2,3-trimethylbenzene	20.48	105	166952	1.04	ppb	100
76) 1,2-dichlorobenzene	20.79	146	121212	1.07	ppb	99
77) 1,2,4-trichlorobenzene	23.04	180	43038	0.92	ppb	98
78) Naphthalene	23.26	128	80659	0.81	ppb	95
79) Hexachloro-1,3-butadiene	23.39	225	111815	1.12	ppb	90

Quantitation Report

Quant Results File: A320 IUG.RES

```
Method : C:\HPCHEM\1\METHODS\A320 1UG.M (RTE Integrator)
```



Data File : C:\HPCHEM\1\DATA\AR040918.D

Vial: 18

Acq On : 9 Apr 2020 11:29 pm

Operator: RJP

Sample : ALCS1UGD-040920

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:48 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.91	128	45167	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.19	114	155577	1.00	ppb	0.00
50) Chlorobenzene-d5	17.00	117	141178	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	18.74	95	111146	1.10	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	110.00%

Target Compounds

						Qvalue
2) Propylene	4.21	41	33309	1.02	ppb	91
3) Freon 12	4.26	85	188737	0.94	ppb	97
4) Chloromethane	4.46	50	35842	0.82	ppb	99
5) Freon 114	4.46	85	138104	0.89	ppb	98
6) Vinyl Chloride	4.67	62	35786	0.87	ppb	97
7) Butane	4.77	43	35662	0.82	ppb	95
8) 1,3-butadiene	4.77	39	26085	0.72	ppb	96
9) Bromomethane	5.13	94	51041	0.84	ppb	98
10) Chloroethane	5.30	64	18323m	0.74	ppb	
11) Ethanol	5.40	45	9563	0.83	ppb	# 46
12) Acrolein	5.99	56	11814	0.92	ppb	96
13) Vinyl Bromide	5.64	106	56429	1.11	ppb	100
14) Freon 11	5.92	101	208167	0.98	ppb	99
15) Acetone	6.09	58	28672	1.16	ppb	# 100
16) Pentane	6.20	42	44369	1.00	ppb	94
17) Isopropyl alcohol	6.20	45	61400	1.06	ppb	# 78
18) 1,1-dichloroethene	6.69	96	50849	1.09	ppb	95
19) Freon 113	6.89	101	131367	1.05	ppb	99
20) t-Butyl alcohol	6.91	59	70908	1.07	ppb	92
21) Methylene chloride	7.15	84	50788	0.99	ppb	97
22) Allyl chloride	7.14	41	43582	0.97	ppb	93
23) Carbon disulfide	7.31	76	161211	1.02	ppb	99
24) trans-1,2-dichloroethene	8.10	61	66700	0.99	ppb	93
25) methyl tert-butyl ether	8.12	73	101721	1.02	ppb	95
26) 1,1-dichloroethane	8.52	63	94753	1.02	ppb	99
27) Vinyl acetate	8.51	43	52752	0.83	ppb	97
28) Methyl Ethyl Ketone	9.01	72	19396	0.94	ppb	# 100
29) cis-1,2-dichloroethene	9.46	61	63509	1.02	ppb	95
30) Hexane	9.06	57	54336	0.93	ppb	87
31) Ethyl acetate	9.61	43	90467	0.97	ppb	100
32) Chloroform	10.07	83	133334	1.00	ppb	97
33) Tetrahydrofuran	10.25	42	30849	0.94	ppb	91
34) 1,2-dichloroethane	11.18	62	77590	0.91	ppb	100
36) 1,1,1-trichloroethane	10.91	97	137821	1.04	ppb	99
37) Cyclohexane	11.60	56	51927	1.05	ppb	95
38) Carbon tetrachloride	11.55	117	151380	1.01	ppb	99
39) Benzene	11.51	78	145198	1.12	ppb	98
40) Methyl methacrylate	13.07	41	45585	1.00	ppb	91
41) 1,4-dioxane	13.10	88	31803	1.09	ppb	98
42) 2,2,4-trimethylpentane	12.37	57	174719	1.05	ppb	97
43) Heptane	12.71	43	55886	1.06	ppb	96
44) Trichloroethene	12.84	130	79766	1.22	ppb	99
45) 1,2-dichloropropane	12.95	63	56109	1.11	ppb	97

(#)=qualifier out of range (m)=manual integration

AR040918.D A320_1UG.M

Fri Apr 17 11:39:24 2020

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AR040918.D

Vial: 18

Acq On : 9 Apr 2020 11:29 pm

Operator: RJP

Sample : ALCS1UGD-040920

Inst : MSD #1

Misc : A311_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 13 11:53:48 2020

Quant Results File: A320_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Mar 23 08:34:44 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

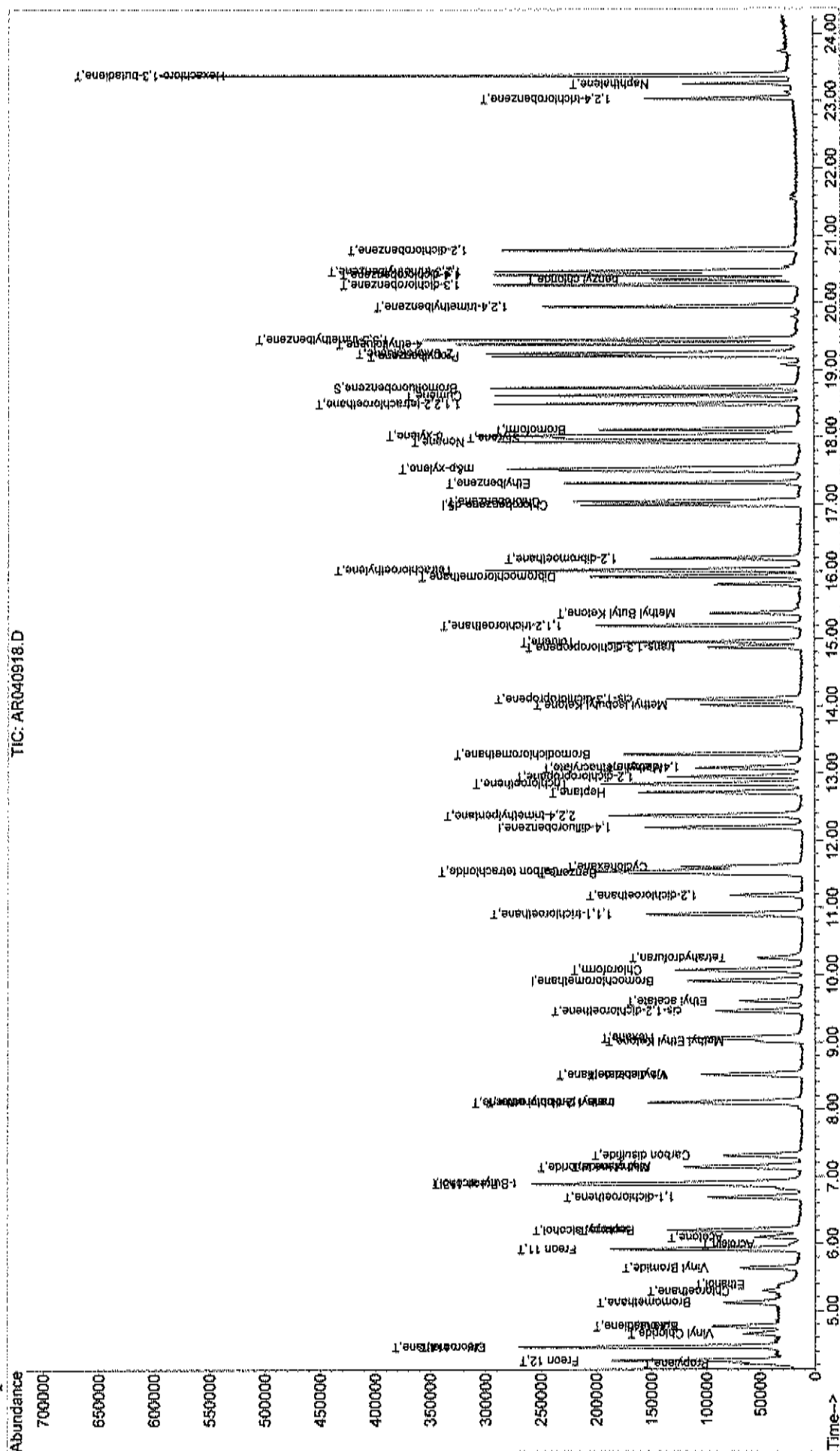
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.28	83	136904	1.00	ppb	100
47) cis-1,3-dichloropropene	14.10	75	86952	1.08	ppb	98
48) trans-1,3-dichloropropene	14.87	75	63928	1.00	ppb	99
49) 1,1,2-trichloroethane	15.20	97	73903	1.12	ppb	99
51) Toluene	14.96	92	88514	1.07	ppb	99
52) Methyl Isobutyl Ketone	14.01	43	68870	0.93	ppb	99
53) Dibromochloromethane	15.93	129	131273	0.95	ppb	100
54) Methyl Butyl Ketone	15.38	43	64262	1.02	ppb	99
55) 1,2-dibromoethane	16.20	107	110003	1.10	ppb	98
56) Tetrachloroethylene	16.02	164	80611	1.14	ppb	99
57) Chlorobenzene	17.05	112	140211	1.06	ppb	99
58) Ethylbenzene	17.32	91	176558	0.99	ppb	99
59) m&p-xylene	17.53	91	328435	2.14	ppb	99
60) Nonane	17.94	43	82847	1.05	ppb	100
61) Styrene	17.99	104	139510	1.16	ppb	95
62) Bromoform	18.11	173	105883	0.80	ppb	100
63) o-xylene	18.03	91	207087	1.12	ppb	100
64) Cumene	18.62	105	202279	1.02	ppb	100
66) 1,1,2,2-tetrachloroethane	18.50	83	160607	1.12	ppb	100
67) Propylbenzene	19.21	120	54607	1.03	ppb	78
68) 2-Chlorotoluene	19.25	126	69017	1.15	ppb	# 88
69) 4-ethyltoluene	19.39	105	224448	1.07	ppb	100
70) 1,3,5-trimethylbenzene	19.46	105	223275	1.13	ppb	98
71) 1,2,4-trimethylbenzene	19.95	105	156396	0.97	ppb	100
72) 1,3-dichlorobenzene	20.28	146	146530	1.16	ppb	99
73) benzyl chloride	20.35	91	117763	1.04	ppb	97
74) 1,4-dichlorobenzene	20.43	146	147378	1.19	ppb	98
75) 1,2,3-trimethylbenzene	20.47	105	191227	1.05	ppb	99
76) 1,2-dichlorobenzene	20.79	146	146454	1.14	ppb	100
77) 1,2,4-trichlorobenzene	23.04	180	52661	1.00	ppb	99
78) Naphthalene	23.26	128	95974	0.86	ppb	98
79) Hexachloro-1,3-butadiene	23.38	225	126032	1.12	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AR040918.D A320_1UG.M Fri Apr 17 11:39:24 2020 MSD1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\AR040918.D
Acq On : 9 Apr 2020 11:29 pm
Sample : ALCS1UGD-040920
Misc : A311_IUG
MMS Integration Params: RTEINT.P
Quant Time: Apr 14 9:59 2020

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Method      : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 17 11:38:02 2020
Response via : Initial Calibration
```



AR040918.D	A320	1UG.M	Fri Apr 17 11:39:25 2020	MSD1

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INJECTION LOG

Injection Log

Instrument # 1
 Internal Standard Stock # A3729
 Standard Stock # A3780
 LCS Stock # A3731
 Method Ref: EPA TO-15 / Jan. 1999

Directory: C:\HPCHEM\1\DATA

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
11	20	Ar040724.d	1.	C2004007	A311_1UG-003A 40x	8 Apr 2020 05:14
12	21	Ar040725.d	1.	C2004007-005A 10x	A311_1UG	8 Apr 2020 05:59
13	22	Ar040726.d	1.	C2004007-005A 40x	A311_1UG	8 Apr 2020 06:44
14	23	Ar040727.d	1.	C2004007	A311_1UG-004A 40x	8 Apr 2020 08:35
15	24	Ar040728.d	1.	C2004007-006A 40x	A311_1UG	8 Apr 2020 09:20
16		Ar040729.d	1.	No MS or GC data present		
17	1	Ar040901.d	1.	BFB1UG	A311_1UG	9 Apr 2020 09:06
18	2	Ar040902.d	1.	A1UG_1.0	A311_1UG	9 Apr 2020 09:56
19	3	Ar040903.d	1.	ALCS1UG-040920	A311_1UG	9 Apr 2020 10:44
20	4	Ar040904.d	1.	AMB1UG-040920	A311_1UG	9 Apr 2020 11:26
21	5	Ar040905.d	1.	C2004007-002A 81X	A311_1UG	9 Apr 2020 12:12
22	6	Ar040906.d	1.	C2004007-002A 810X	A311_1UG	9 Apr 2020 12:58
23	7	Ar040907.d	1.	C2004007-004A RE	A311_1UG	9 Apr 2020 13:46
24	8	Ar040908.d	1.	C2004007-001A 90X	A311_1UG	9 Apr 2020 14:52
25	9	Ar040909.d	1.	C2004007-003A RE	A311_1UG	9 Apr 2020 15:39
26	10	Ar040910.d	1.	C2004010-001A	A311_1UG	9 Apr 2020 16:26
27	11	Ar040911.d	1.	C2004011-002A	A311_1UG	9 Apr 2020 17:29
28	12	Ar040912.d	1.	C2004011-004A	A311_1UG	9 Apr 2020 18:46
29	13	Ar040913.d	1.	C2004011-006A	A311_1UG	9 Apr 2020 19:33
30	14	Ar040914.d	1.	C2004011-007A	A311_1UG	9 Apr 2020 20:21
31	15	Ar040915.d	1.	C2004011-001A	A311_1UG	9 Apr 2020 21:08
32	16	Ar040916.d	1.	C2004011-003A	A311_1UG	9 Apr 2020 21:55
33	17	Ar040917.d	1.	C2004011-005A	A311_1UG	9 Apr 2020 22:42
34	18	Ar040918.d	1.	ALCS1UGD-040920	A311_1UG	9 Apr 2020 23:29
35	19	Ar040919.d	1.	C2004010-001A 10x	A311_1UG	10 Apr 2020 00:14
36		Ar040920.d	1.	No MS or GC data present		
37	1	Ar041001.d	1.	BFB1UG	A311_1UG	10 Apr 2020 08:23
38	2	Ar041002.d	1.	A1UG	A311_1UG	10 Apr 2020 09:10
39	3	Ar041003.d	1.	ALCS1UG-041020	A311_1UG	10 Apr 2020 10:05
40	4	Ar041004.d	1.	AMB1UG-041020	A311_1UG	10 Apr 2020 10:47
41	5	Ar041005.d	1.	C2004011-004A	A311_1UG	10 Apr 2020 11:34
42	6	Ar041006.d	1.	C2004011-001A 9X	A311_1UG	10 Apr 2020 12:21
43	5	Ar041007.d	1.	C2004011-001A 90X	A311_1UG	10 Apr 2020 14:01
44	1	Ar041008.d	1.		A311_1UG	10 Apr 2020 15:01
45	2	Ar041009.d	1.	C2004011-002A 90X	A311_1UG	10 Apr 2020 15:47
46	3	Ar041010.d	1.	C2004011-004A 10X	A311_1UG	10 Apr 2020 16:33
47	4	Ar041011.d	1.	C2004011-004A 40X	A311_1UG	10 Apr 2020 17:18
48	5	Ar041012.d	1.	C2004011-006A 10X	A311_1UG	10 Apr 2020 18:03
49	6	Ar041013.d	1.	C2004011-006A 40X	A311_1UG	10 Apr 2020 18:48
50	8	Ar041014.d	1.	C2004011-007A 10X	A311_1UG	10 Apr 2020 19:34
51	9	Ar041015.d	1.	C2004011-001A 729X	A311_1UG	10 Apr 2020 20:22
52	10	Ar041016.d	1.	C2004011-001A 7290X	A311_1UG	10 Apr 2020 21:08
53	11	Ar041017.d	1.	C2004011-003A 10X	A311_1UG	10 Apr 2020 21:54
54	12	Ar041018.d	1.	C2004011-003A 40X	A311_1UG	10 Apr 2020 22:39
55	13	Ar041019.d	1.	C2004011-005A 10X	A311_1UG	10 Apr 2020 23:25
56	14	Ar041020.d	1.	C2004011-005A 40X	A311_1UG	11 Apr 2020 00:10
57	15	Ar041021.d	1.	ALCS1UGD-041020	A311_1UG	11 Apr 2020 00:57
58		Ar041301.d	1.	No MS or GC data present		
59	2	Ar041302.d	1.	BFB1UG	A311_1UG	13 Apr 2020 09:37

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS LOG

Centek Laboratories, LLC

GC/MS Calibration Standards Logbook

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psig)	Final Conc (ppb)	Prep by	Chkd by
A-3505	12/3/19	12/10/19	TO15	A2573	1 ppm	1.5	30	50	WD	
A-3506			↓	A2572	10.2 ppm	1.47	30	500		
A-3507			TO15 146	A3498	50 ppb	0.9	45	1		
A-3508			STD	A3499	↓	↓	↓	↓		
A-3509			↓	A3500	↓	↓	↓	↓		
A-3510	12/10/19	12/17/19	TO15	A2927	1 ppm	1.5	30	50	WD	
A-3511			STD	A2928	↓	↓	↓	↓		
A-3512			LCS	A2929	↓	↓	↓	↓		
A-3513			4PCH	A3305	10.2 ppm	1.46	30	50		
A-3514			4PCH	A3513	50 ppb	3.0	30	5		
A-3515			Form	A2926	10.8 ppm	0.21	45	50		
A-3516			514X	A2574	149 ppb	3.34	30	50		
A-3517			514X	A2673	500 ppb	3.0	30	50		
A-3518			50LF	A2573	1 ppm	1.5	30	50		
A-3519			H2S	A2572	10.2 ppm	1.47	30	500		
A-3520			H2S25	A3518	500 ppb	1.5	30	25		
A-3521			TO15 146	A3510	50 ppb	0.9	45	1		
A-3522			STD	A3511	↓	↓	↓	↓		
A-3523			↓	A3512	↓	↓	↓	↓		
A-3524	11/20/19	11/20/2020	TO15 IS	FF-5014	5014	LINDE	2000 psig	1.0 ppm	22	
A-3525	12/03/19	12/03/2020	TO15 SID	FF-11174	11174	LINDE	2200 psig	1.0 ppm	22	
A-3526	12/17/19	12/17/19	TO15	IS A3523	1 ppm	1.5	30	50	WD	

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Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-3715	3/31/20	4/17/20	TO15	A2573	1 ppm	1.5	30	50	WD	
A-3716			↓	A2572	10.2 ppm	1.47	30	500		
A-3717			TO15146 IS	A3708	50 ppb	0.9	45	1		
A-3718			STD	A3709	↓	↓	↓	↓		
A-3719			↓	A3710	↓	↓	↓	↓		
A-3720	4/7/20	4/14/20	TO15	A3523	1 ppm	1.5	30	50	WD	
A-3721			STD	A3621	↓	↓	↓	↓		
A-3722			LCS	A3658	↓	↓	↓	↓		
A-3723			4PC4	A3305	1.029 ppm	1.46	30	50		
A-3724			4PC4S	A3723	50 ppb	3.0	30	5		
A-3725			FORM	A2926	10.8 ppm	0.21	45	50		
A-3726			SILOX	A2574	449 ppb	3.34	30	50		
A-3727			SULF	A2573	500 ppb	3.0	30	50		
A-3728			↓	A2572	1 ppm	1.5	30	50		
A-3729			TO15146 IS	A3720	10.2 ppm	1.47	30	500		
A-3730			↓	A3721	50 ppb	0.9	45	1		
A-3731			STD	A3721	↓	↓	↓	↓		
A-3732			LCS	A3722	↓	↓	↓	↓		
A-										
A-										
A-										
A-										

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CANISTER CLEANING LOG

QC Canister Cleaning Logbook

Centek Laboratories, LLC

Instrument: Entech 3100

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date
210	1L	360	20	3/6/20	WAC030920A	1/2g ± 0.20	+ 30 3/14/20
1180		↓					+ 30
93							+ 30
130							+ 30
360							+ 30
1184		1191			B		+ 30
352							+ 30
358 ⁴							+ 30
544							+ 30
1191							+ 30
353		351			C		+ 30
539							+ 30
239							+ 30
207							+ 30
351							+ 30
287		141			D		+ 30
1174							+ 30
1177							+ 30
1190							+ 30
141							+ 30
106		274			E		+ 30
541							+ 30
167							+ 30
243							+ 30
274							+ 30

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Data File : C:\HPCHEM\1\DATA2\AR030921.D

Vial: 4

Acq On : 10 Mar 2020 1:49 am

Operator: RJP

Sample : WAC030920D

Inst : MSD #1

Misc : A218_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 10 06:35:08 2020

Quant Results File: A218_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A218_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Tue Feb 18 17:28:19 2020

Response via : Initial Calibration

DataAcq Meth : 1UG_ENT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	9.95	128	39108	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.23	114	100950	1.00	ppb	0.02
50) Chlorobenzene-d5	17.02	117	80616m	1.00	ppb	0.01

System Monitoring Compounds

65) Bromofluorobenzene	18.77	95	41194m	0.74	ppb	0.01
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

Target Compounds

Qvalue

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA2\AR030921.D
Acq On : 10 Mar 2020 1:49 am
Sample : WAC030920D
Misc : A218_1UG
MS Integration Params: RTEINT.P
Quant Time: Mar 11 13:32 2020

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A218_1UG.RES

Method : C:\HPCHEM\1\METHODS\A320_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Apr 17 11:00:38 2020
Response via : Initial Calibration

