Table of Contents

Lab Report 2

Batch Data (B20J001) 19

Raw Data (2008006) 24

Canister Certification 242

Standards PDFs 277

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street Building 201
Richmond, CA 94804

Date: **10/9/2020**

Subject: **Analytical Testing Results - Project R20S18**
WorkOrder **2009030**

From: **Peter Husby, Director**
EPA Region 9 Laboratory
EMD-3-1

To: **Alana Lee**
California Site Cleanup Section 3
SFD-7-3

Attached are the results from the analysis of samples from the **MEW OU1 FY2020 Vapor Intrusion Investigation** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Audrey Johnson at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Volatile Organic Compounds by GC/MS

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2009030**
Project Number: R20S18	**75 Hawthorne Street**	**Reported:** 10/09/20 11:55
Project: MEW OU1 FY2020 Vapor Intrusion Investigation	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
F6-019-3ft	2009030-02	Air	09/24/20 12:38	09/28/20 13:45
F6-025-3ft	2009030-03	Air	09/24/20 12:51	09/28/20 13:45
F6-029-3ft	2009030-04	Air	09/24/20 13:11	09/28/20 13:45
F6-031-3ft	2009030-05	Air	09/24/20 13:30	09/28/20 13:45
F6-055-3ft	2009030-06	Air	09/24/20 13:42	09/28/20 13:45
F6-033-3ft	2009030-07	Air	09/24/20 13:54	09/28/20 13:45

Work Order 2009030

Sample F6-010-3ft (in canister 896) was received and logged in as sample 2009030-01, however the initial check of canister pressure revealed the pressure at zero psi. The analysis was cancelled.

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Project Manager: Alana Lee
Project Number: R20S18
Project: MEW OU1 FY2020 Vapor Intrusion Investigation

California Site Cleanup Section 3
75 Hawthorne Street
San Francisco CA, 94105

WorkOrder: 2009030
Reported: 10/09/20 11:55

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2009030-02									**Air - Sampled: 09/24/20 12:38**
Sample ID: F6-019-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		4	C1, J	8	"	"	"	"	TO-15
Chloroform		20		10	"	"	"	"	TO-15
Trichloroethene		20		10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 2009030-03									**Air - Sampled: 09/24/20 12:51**
Sample ID: F6-025-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Trichloroethene		ND	U	10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 2009030-04									**Air - Sampled: 09/24/20 13:11**
Sample ID: F6-029-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Trichloroethene		10		10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 2009030-05									**Air - Sampled: 09/24/20 13:30**
Sample ID: F6-031-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		10		8	"	"	"	"	TO-15
Chloroform		20		10	"	"	"	"	TO-15
Trichloroethene		50		10	"	"	"	"	TO-15

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Project Manager: Alana Lee
Project Number: R20S18
Project: MEW OU1 FY2020 Vapor Intrusion Investigation

California Site Cleanup Section 3
75 Hawthorne Street
San Francisco CA, 94105

WorkOrder: 2009030
Reported: 10/09/20 11:55

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2009030-05									**Air - Sampled: 09/24/20 13:30**
Sample ID: F6-031-3ft									**Volatile Organic Compounds by TO-15**
Tetrachloroethene		7	C1, J	10	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
Lab ID: 2009030-06									**Air - Sampled: 09/24/20 13:42**
Sample ID: F6-055-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Trichloroethene		ND	U	10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 2009030-07									**Air - Sampled: 09/24/20 13:54**
Sample ID: F6-033-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20J001	09/29/20	10/01/20	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Trichloroethene		ND	U	10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15

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Volatile Organic Compounds by TO-15 - Quality Control

EPA Region 9 Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B20J001 - Air_Can_Pressure										
Blank (B20J001-BLK1)				Prepared & Analyzed: 10/01/20						
Vinyl chloride	ND	3	ug/m³ Air							U
1,1-Dichloroethene	ND	4	ug/m³ Air							U
trans-1,2-Dichloroethene	ND	4	ug/m³ Air							U
1,1-Dichloroethane	ND	4	ug/m³ Air							U
cis-1,2-Dichloroethene	ND	4	ug/m³ Air							U
Chloroform	ND	5	ug/m³ Air							U
Benzene	ND	3	ug/m³ Air							U
Trichloroethene	ND	5	ug/m³ Air							U
Tetrachloroethene	ND	7	ug/m³ Air							U
LCS (B20J001-BS1)				Prepared & Analyzed: 10/01/20						
1,2-Dichlorotetrafluoroethane	68	7	ug/m³ Air	67.1		101	74-116			
Chloromethane	22	2	ug/m³ Air	20.4		105	73-113			
Vinyl chloride	27	3	ug/m³ Air	26.3		103	68-119			
Bromomethane	40	4	ug/m³ Air	39.6		100	71-122			
Chloroethane	27	3	ug/m³ Air	26.6		103	73-116			
Trichlorofluoromethane	53	6	ug/m³ Air	52.2		101	74-120			
1,1,2-Trichloro-1,2,2-trifluoroethane	81	8	ug/m³ Air	81.9		99	63-126			
1,1-Dichloroethene	44	4	ug/m³ Air	42.0		105	69-119			
Dichloromethane	34	7	ug/m³ Air	35.7		95	76-110			
trans-1,2-Dichloroethene	41	4	ug/m³ Air	40.4		100	78-113			
1,1-Dichloroethane	40	4	ug/m³ Air	39.6		102	76-113			
cis-1,2-Dichloroethene	42	4	ug/m³ Air	40.8		103	74-116			
Chloroform	51	5	ug/m³ Air	50.7		100	77-115			
1,1,1-Trichloroethane	59	5	ug/m³ Air	57.8		102	77-117			
Carbon tetrachloride	63	6	ug/m³ Air	62.2		101	75-121			
1,2-Dichloroethane	43	4	ug/m³ Air	40.8		105	74-128			
Trichloroethene	59	5	ug/m³ Air	57.5		103	82-113			
1,2-Dichloropropane	50	5	ug/m³ Air	47.1		107	78-119			
cis-1,3-Dichloropropene	50	5	ug/m³ Air	47.2		105	82-117			
Toluene	41	4	ug/m³ Air	38.8		105	80-120			
trans-1,3-Dichloropropene	42	5	ug/m³ Air	41.7		100	81-122			
1,1,2-Trichloroethane	60	5	ug/m³ Air	57.2		104	81-121			
Tetrachloroethene	72	7	ug/m³ Air	69.8		104	69-122			
1,2-Dibromoethane (EDB)	80	8	ug/m³ Air	79.8		100	81-121			
Chlorobenzene	48	5	ug/m³ Air	47.8		99	80-122			
Ethylbenzene	47	4	ug/m³ Air	44.7		104	80-125			
m&p-Xylene	92	9	ug/m³ Air	88.5		104	80-128			
o-Xylene	47	4	ug/m³ Air	43.8		107	79-130			
Styrene	43	4	ug/m³ Air	43.0		99	76-133			
1,1,2,2-Tetrachloroethane	73	7	ug/m³ Air	69.3		105	78-132			

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Project: MEW OU1 FY2020 Vapor Intrusion Investigation	**San Francisco CA, 94105**	

Volatile Organic Compounds by TO-15 - Quality Control

EPA Region 9 Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B20J001 - Air_Can_Pressure										
LCS (B20J001-BS1)				Prepared & Analyzed: 10/01/20						
1,3,5-Trimethylbenzene	53	5	ug/m³ Air	49.6		107	78-133			
1,2,4-Trimethylbenzene	53	5	ug/m³ Air	49.1		108	78-133			
1,3-Dichlorobenzene	57	6	ug/m³ Air	58.9		97	76-133			
1,4-Dichlorobenzene	54	6	ug/m³ Air	58.9		92	75-134			
1,2-Dichlorobenzene	59	6	ug/m³ Air	58.9		101	77-134			
1,2,4-Trichlorobenzene	64	7	ug/m³ Air	71.9		89	70-133			
Hexachlorobutadiene	121	10	ug/m³ Air	110		110	74-130			
Duplicate (B20J001-DUP1)		**Source: 2009030-07**		Prepared: 10/01/20 Analyzed: 10/02/20						
Vinyl chloride	ND	5	ug/m³ Air		ND				20	U
1,1-Dichloroethene	ND	8	ug/m³ Air		ND				20	U
trans-1,2-Dichloroethene	ND	8	ug/m³ Air		ND				20	U
1,1-Dichloroethane	ND	8	ug/m³ Air		ND				20	U
cis-1,2-Dichloroethene	ND	8	ug/m³ Air		ND				20	U
Chloroform	ND	10	ug/m³ Air		ND				20	U
Trichloroethene	ND	10	ug/m³ Air		ND				20	U
Tetrachloroethene	ND	10	ug/m³ Air		ND				20	U
Batch S20J001 - B20J001										
Instrument Blank (S20J001-IBL1)				Prepared & Analyzed: 10/01/20						
1,2-Dichlorotetrafluoroethane	ND	7	ppbv							U
Chloromethane	ND	2	ppbv							U
Vinyl chloride	ND	3	ppbv							U
Bromomethane	ND	4	ppbv							U
Chloroethane	ND	3	ppbv							U
Trichlorofluoromethane	ND	6	ppbv							U
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8	ppbv							U
1,1-Dichloroethene	ND	4	ppbv							U
Dichloromethane	ND	7	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U

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Volatile Organic Compounds by TO-15 - Quality Control

EPA Region 9 Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch S20J001 - B20J001										
Instrument Blank (S20J001-IBL1)				Prepared & Analyzed: 10/01/20						
1,2-Dibromoethane (EDB)	ND	8	ppbv							U
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U
1,3,5-Trimethylbenzene	ND	5	ppbv							U
1,2,4-Trimethylbenzene	ND	5	ppbv							U
1,3-Dichlorobenzene	ND	6	ppbv							U
1,4-Dichlorobenzene	ND	6	ppbv							U
1,2-Dichlorobenzene	ND	6	ppbv							U
1,2,4-Trichlorobenzene	ND	7	ppbv							U
Hexachlorobutadiene	ND	10	ppbv							U
Instrument Blank (S20J001-IBL2)				Prepared: 10/01/20 Analyzed: 10/02/20						
1,2-Dichlorotetrafluoroethane	ND	7	ppbv							U
Chloromethane	ND	2	ppbv							U
Vinyl chloride	ND	3	ppbv							U
Bromomethane	ND	4	ppbv							U
Chloroethane	ND	3	ppbv							U
Trichlorofluoromethane	ND	6	ppbv							U
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8	ppbv							U
1,1-Dichloroethene	ND	4	ppbv							U
Dichloromethane	ND	7	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U
1,2-Dibromoethane (EDB)	ND	8	ppbv							U
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U

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Volatile Organic Compounds by TO-15 - Quality Control

EPA Region 9 Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch S20J001 - B20J001										
Instrument Blank (S20J001-IBL2)				Prepared: 10/01/20 Analyzed: 10/02/20						
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U
1,3,5-Trimethylbenzene	ND	5	ppbv							U
1,2,4-Trimethylbenzene	ND	5	ppbv							U
1,3-Dichlorobenzene	ND	6	ppbv							U
1,4-Dichlorobenzene	ND	6	ppbv							U
1,2-Dichlorobenzene	ND	6	ppbv							U
1,2,4-Trichlorobenzene	ND	7	ppbv							U
Hexachlorobutadiene	ND	10	ppbv							U
Instrument Blank (S20J001-IBL3)				Prepared: 10/01/20 Analyzed: 10/02/20						
1,2-Dichlorotetrafluoroethane	ND	7	ppbv							U
Chloromethane	ND	2	ppbv							U
Vinyl chloride	ND	3	ppbv							U
Bromomethane	ND	4	ppbv							U
Chloroethane	ND	3	ppbv							U
Trichlorofluoromethane	ND	6	ppbv							U
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8	ppbv							U
1,1-Dichloroethene	ND	4	ppbv							U
Dichloromethane	ND	7	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U
1,2-Dibromoethane (EDB)	ND	8	ppbv							U
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U
1,3,5-Trimethylbenzene	ND	5	ppbv							U

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Volatile Organic Compounds by TO-15 - Quality Control

EPA Region 9 Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch S20J001 - B20J001										
Instrument Blank (S20J001-IBL3)				Prepared: 10/01/20 Analyzed: 10/02/20						
1,2,4-Trimethylbenzene	ND	5	ppbv							U
1,3-Dichlorobenzene	ND	6	ppbv							U
1,4-Dichlorobenzene	ND	6	ppbv							U
1,2-Dichlorobenzene	ND	6	ppbv							U
1,2,4-Trichlorobenzene	ND	7	ppbv							U
Hexachlorobutadiene	ND	10	ppbv							U

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Project: MEW OU1 FY2020 Vapor Intrusion Investigation	**San Francisco CA, 94105**	

Qualifiers and Comments

J	The reported result for this analyte should be considered an estimated value.
C1	The reported concentration for this analyte is below the quantitation limit.
U	Not Detected
NR	Not Reported
RE1, RE2, etc:	Result is from a sample re-analysis.

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2009030**
Project Number: R20S18	**75 Hawthorne Street**	**Reported:** 10/09/20 11:55
Project: MEW OU1 FY2020 Vapor Intrusion Investigation	**San Francisco CA, 94105**	

Sample Receiving: Sample F6-031-3ft has can ID 867 on COC, actual can # is 887. Logged in as 887. TD 09/29/20

VOC, Soil Gas: Cans used for some samples had certifications passed 6mos hold, namely: 2009030-01 can#896; -03 can #1991; -05 can #887; -06 can #884; -07 can #1595. These cans were picked up on 09/09/20. Also, sample 2009030-01 can #896 with ID F6-010-3ft was received at zero psi, sample is cancelled. LLH 09/29/20

WORK ORDER

Printed: 9/30/2020 11:35:37AM

2009030

EPA Region 9 Laboratory

Client: **California Site Cleanup Section 3**
Project: **MEW OU1 FY2020 Vapor Intrusion Investigation**
Project Number: **R20S18**

Report To:
California Site Cleanup Section 3
Alana Lee
75 Hawthorne Street
San Francisco, CA 94105
Phone: (415) 972-3141
Fax: (415) 947-3526

Project Contact
California Site Cleanup Section 3
Alana Lee
75 Hawthorne Street
San Francisco, CA 94105
Phone :(415) 972-3141
Fax: (415) 947-3526

Shipping Containers	Description	Temp C	Custody Seals?	Containers Intact?	Labels COC Agree?	Preservation Confirmed?	Received on Ice?	Comments
Modified COVID-19	Modified COVID-19	22	No	Yes	No	No	No	

Date Due:	10/12/20 17:00 (14 day TAT)	SDG:	20272A
Received By:	Tatyana Dadiomov	Date Received:	09/28/20 13:45
Logged In By:	Tatyana Dadiomov	Date Logged In:	09/28/20 14:07

Analysis	Hold Time Expires	Comments
2009030-01 F6-010-3ft [Air] Sampled 09/24/20 12:28 (GMT-08:00) Pacific Time (US &		**Can #896, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes
2009030-02 F6-019-3ft [Air] Sampled 09/24/20 12:38 (GMT-08:00) Pacific Time (US &		**Can #630, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes
2009030-03 F6-025-3ft [Air] Sampled 09/24/20 12:51 (GMT-08:00) Pacific Time (US &		**Can #1991, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes
2009030-04 F6-029-3ft [Air] Sampled 09/24/20 13:11 (GMT-08:00) Pacific Time (US &		**Can #1587, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes
2009030-05 F6-031-3ft [Air] Sampled 09/24/20 13:30 (GMT-08:00) Pacific Time (US &		**Can #887, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes
2009030-06 F6-055-3ft [Air] Sampled 09/24/20 13:42 (GMT-08:00) Pacific Time (US &		**Can #884, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes

WORK ORDER

Printed: 9/30/2020 11:35:37AM

2009030

EPA Region 9 Laboratory

Client: **California Site Cleanup Section 3** **Project Number:** **R20S18**
Project: **MEW OU1 FY2020 Vapor Intrusion Investigation**

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
2009030-07 F6-033-3ft [Air] Sampled 09/24/20 13:54 (GMT-08:00) Pacific Time (US &		**Can #1595, 10-day TAT preliminary TCE requested**
VOCs, Soil Gas	10/24/20	check COC for requested analytes

Reviewed By

Date

Bauer, Richard

From: Lee, Alana
Sent: Wednesday, September 30, 2020 1:00 PM
To: Bauer, Richard
Subject: RE: Sample log discrepancies for second and third sample submissions

Thanks Rich.
My response are below in blue.
Please let me know if any questions.
Alana

From: Bauer, Richard <Bauer.Richard@epa.gov>
Sent: Wednesday, September 30, 2020 12:30 PM
To: Lee, Alana <lee.alana@epa.gov>
Subject: Sample log discrepancies for second and third sample submissions

I am in the lab now and have reviewed the log-in for the remaining MEW work orders. The comments for work order 2009030 are for your information and do not require a response. For the rest, please verify whether or not we have logged in the samples correctly. Note that in some cases the samples were logged in using the label info and in some cases the COC info.

Work order 2009029:

Sample ID listed on COC = Classiscs-185WT-Test Amb. Sample ID on canister label = 185WT-SCTest Amb. Logged in per canister label ID. Yes, use cam label ID.

Work order 2009030: Understood. Thank you.

Canister ID for sample F6-031-3ft is listed as 867 on COC. The actual can # is 887. Logged in as 887.

Cans 896 (2009030-01); 1991 (2009030-03); 887 (2009030-05); 884 (2009030-06); 1595 (2009030-07) were certified more than 6 months prior to sampling.

Sample 2009030-01 can #896 with ID: F6-010-3ft was received at zero psi, sample is cancelled.

Work order 2009031:

No issues.

Work order 2009032:

No issues.

Work order 2009033:

Samples Classics -WT-MH1-2ft-6d-R, Classics -WT-MH2-2ft-6d-R, and Classics -WT-MH3-2ft-6d-R have 09/22/20 listed for the end date on COC , date on containers 09/24/20. Logged in per container. Correct, should be 9/24/20

Also note that all sample IDs include "-6d-" imbedded in sample name but sample Classics-198WT-SC-1ft-6d-R has a sampling duration of 3 days. Is the sample ID incorrect or is the sample start date (9/21/20) incorrect? This is important for the final result calculation. Classics-198WT-SC-1ft-6d-R sample ID is correct as it is a 6-day sample. Should be Start date 9/18/20 16:15 / End date 9/24/20 16:15. This radiello sample is co-located with Beacon sample 1094146 which has same sample deployment and collection date/time.

Work order 2009034:

Sample 6Sixty-A8-SC-1ft-3d-R container label has start time 18:27 and end time 18:02. COC start time 17:01 and end 18:18. Logged in per COC. Yes COC start time 17:01 and end 18:18 is correct for Sample 6Sixty-A8-SC-1ft-3d-R (L980I) though I have a cross out on my notes from L987I. Please let me know if there is another container labeled L987I

Sample 6Sixty-B12-SC-1ft-3d-R end time on container label 18:36. COC end time 18:26. Logged in per COC. Yes. COC end time 18:26 is correct for Sample 6Sixty-B12-SC-1ft-3d-R (982I).

Work order 2009035

Sample Waverly-SF-RR-B2-6d has end 19:22 on container, COC end time 19:26. Logged in per COC. The COC is correct. For clarification: "Waverly-SF3-RR2-BZ-6d" (1704T) should have start time 9/18/20 19:29 and end date/time: 9/24/20 19:22 and : "Waverly-SF3-RR1-BZ-6d" (1705T) should have start time 9/18/20 19:36 and end date/time: 9/24/20 19:26.

Thanks.

_____

Richard Bauer
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804
(510) 412-2312

_____

U.S. Environmental Protection Agency	CHAIN OF CUSTODY RECORD	EPA REGION 9 75 Hawthorne Street San Francisco, California 94105
Project / Case Number: R20S18 - MEW (M6) OU1	Project Name: MEW OU1 Vapor Intrusion and Sewer Pathway	EPA Project Manager contact: Alana Lee, 415.972.3141 Lee.Alana@epa.gov
EPA R9 Richmond Laboratory	Samplers:Junn Masongsong, Ray Chavira, Michael Schulman	**10-day TAT preliminary TCE requested** **Analysis Requested:** TCE, PCE, cis/trans-1,2-DCE, 1,1 DCE, 1,1-DCA, vinyl choride, chloroform

Sample ID (Location)	Canister ID	Comp	Grab	Date	Time	Initial Pressure	Final Pressure	TCE Screen ($\mu g/m^3$)	COMMENTS
F6-010-3ft	896		X	9/24/2020	12:28	-30	0	200-1300	
F6-019-3ft	630		X	9/24/2020	12:38	-30	0	50-200	
F6-025-3ft	1991		X	9/24/2020	12:51	-30	0	100-500	
F6-029-3ft	1587		X	9/24/2020	13:11	-30	-2	100-500	
F6-031-3ft	867		X	9/24/2020	13:30	-30	0	100-500	
F6-055-3ft	884		X	9/24/2020	13:42	-30	0	100-500	
F6-033-3ft	1595		X	9/24/2020	13:54	-30	0	500-300	

Relinquished by: (Signature)	Date/Time	Received by: *(Signature)* Date/Time			
Received for Laboratory by: (Signature)	Date/Time		Temp	Custody Seals Intact?	
[illegible]	9-28-20	13:45	22°C		

Table of Contents

Cooler/Box/Env 1 of 1

1337 South 46th Street
Richmond, CA 94804

U.S. Environmental Protection Agency
Region 9 Richmond Laboratory

Sample Receipt Checklist

Note in WO memo any items outside acceptable limits.

Project No: 820518 Work Order No(s): 2009030 Date: 9/28/20 by TD

CUSTODY SEALS Are Intact? ☐ Yes ☐ No ☑ N/A-none

Check if applies: ☐ External Seals ☐ Internal Seals ☐ Hand Delivered

TEMPERATURE 22 °C

Within Acceptable Range? (If preservation is "store cool at 4°C," use 0-6°C for acceptable range.) ☐ Yes ☐ No ☑ Ambient OK

Measured by: ☑ IR thermometer ☐ Probe thermometer inserted in provided temp. blank

☐ Provided Temp Blank was not used because

Check if applies: ☐ No ice present ☐ Insufficient/Melted Ice ☐ Tissue Received Frozen

☐ Still cooling (sampled today & iced) ☐ Delivery Delay ☐ Previously Frozen

SAMPLE CONTAINERS Are Intact? ☑ Yes ☐ No

Check if applies and identify sample IDs in comments:

☐ Bottle/Jar/Vial broken ☐ Cap broken or loose ☐ Insufficient sample amount

☐ Other

CHAIN OF CUSTODY

COC forms are present? ☑ Yes ☐ No

COC forms are consistent with sample labels? ☑ Yes ☑ No ☐ N/A-no COC form

Check if applies: ☑ Missing "relinquished by" signature TD 9-28-20

TAT and analyses match TDF or scheduling? ☑ Yes ☐ No

Check if applies: ☐ Preliminary Results ☐ Rush Request ☐ 7-day TAT

Samples are received within hold times? ☑ Yes ☐ No ☐ N/A-no hold times

Check if applies: ☐ Expires soon; notify analyst ☐ Expired

All shipping and sample containers are accounted for? ☑ Yes ☐ No

PRESERVATION / FILTRATION

Samples were filtered in field? ☐ Yes ☐ No ☑ N/A

Filtration is correctly identified on samples? ☐ Yes ☐ No ☑ N/A

Check if applies: ☐ Analyst to filter

Check if applies: ☐ Notify analyst to check for methyl mercury analysis and low-level mercury analysis by 1631

Samples were preserved in field? ☐ Yes ☐ No ☑ N/A

Check if applies: ☐ Analyst to preserve ☐ Sample Receiving to preserve (see page 2)

Preservation is correctly identified on samples? ☐ Yes ☐ No ☑ N/A

Field-preserved samples (excluding VOA vials for VOC analyses) have correct pH? ☐ Yes ☐ No ☑ N/A

Check if verified:

☐ Sulfide: pH >9 NaOH/Zinc acetate

☐ Cyanide: pH >12 NaOH

☐ Metals: pH <2 HNO_3

☐ Ferrous Iron: pH <2 HCl

☐ TOC/DOC: pH <2 H_2SO_4/H_3PO_4 (not HCl)

☐ Ammonia / Nitrate/Nitrite / TKN / Phosphorus: pH <2 H2SO4

☐ Other:

FOLLOW-UP / COMMENTS / UNUSUAL CHARACTERISTICS OBSERVED (for example, sample is pink):

Sample F6-031-3ft has can ID on COC 867, actual can #is 887.

FORM #: Q016
REV #: 2
REV. DATE: 07/29/19

BATCH

B20J001

Batch Date: 10/01/2020

Batch Matrix: Air

Batch Analyses:

VOCs, Soil Gas

PREPARATION BENCH SHEET

B20J001

EPA Region 9 Laboratory

Project: R20S18

Printed: 10/2/2020 11:49:48AM

Matrix: Air **Analysis: VOCs, Soil Gas** **Prepared using: Air - Air_Can_Pressure**

Lab Number	Sample Name	Prepared	Initial	Final	Spike ID	Source ID	ul Spike	Can #	Initial PSI	Final PSI	Initial DF	Final DF	Prepared By	Extraction Comments
2009024-02RE1 A	Waverly-MH 2-1ft	09/30/20 09:03	50	200				1978	10.33	28.18	1.94	5.30	LLH	>LR repress
2009024-06RE1 A	Waverly-SGR 6-5ft	10/01/20 09:01	20	200				2002	16.52	30.24	2.14	3.92	LLH	>LR repress
2009024-08 A	Waverly-SGR 10-5ft	10/01/20 09:05	200	200				627	15.86	20.04	1.91	2.43	LLH	sample lost - repress
2009024-08RE1 A	Waverly-SGR 10-5ft	10/01/20 16:30	100	200				627	11.36	27.95	2.43	5.98	LLH	>LR re-repress
2009024-09 A	Waverly-SGR 11-5ft	09/24/20 16:03	200	200				1090	14.53	28.12	1	1.94	LLH	check COC for requested analytes
2009024-10 A	Waverly-SGR 13-5ft	09/24/20 16:05	200	200				1114	14.68	28.42	1	1.94	LLH	check COC for requested analytes
2009024-13 A	Waverly-SGR 2-5ft	09/28/20 15:51	200	200				1588	15.01	28.12	1	1.87	LLH	check COC for requested analytes
2009030-02 A	F6-019-3ft	09/29/20 11:54	200	200				630	14.08	28.37	1	2.01	LLH	check COC for requested analytes
2009030-03 A	F6-025-3ft	09/29/20 11:57	200	200				1991	14.39	28.16	1	1.96	LLH	check COC for requested analytes
2009030-04 A	F6-029-3ft	09/29/20 12:03	200	200				1587	13.66	28.08	1	2.06	LLH	check COC for requested analytes
2009030-05 A	F6-031-3ft	09/29/20 12:05	200	200				887	14.01	28.15	1	2.01	LLH	check COC for requested analytes
2009030-06 A	F6-055-3ft	09/29/20 12:08	200	200				884	14.00	28.30	1	2.02	LLH	check COC for requested analytes
2009030-07 A	F6-033-3ft	09/29/20 12:11	200	200				1595	14.05	28.09	1	2.00	LLH	check COC for requested analytes

PREPARATION BENCH SHEET

B20J001

EPA Region 9 Laboratory

Project: R20S18

Printed: 10/2/2020 11:49:48AM

Matrix: Air **Analysis: VOCs, Soil Gas** **Prepared using: Air - Air_Can_Pressure**

Lab Number	Sample Name	Prepared	Initial	Final	Spike ID	Source ID	ul Spike	Can #	Initial PSI	Final PSI	Initial DF	Final DF	Prepared By	Extraction Comments
2009031-01 A	6Sixty-A3-SC-1ft	09/29/20 12:14	200	200				1062	14.33	27.99	1	1.95	LLH	check COC for requested analytes
2009031-02 A	6Sixty-A7-SC-1ft	09/29/20 12:16	200	200				662	14.05	28.27	1	2.01	LLH	check COC for requested analytes
2009031-03 A	6Sixty-MH1-3ft	09/29/20 12:19	200	200				888	13.85	28.19	1	2.03	LLH	check COC for requested analytes
B20J001-BLK1	Blank	10/01/20 09:55	200	200									LLH	
B20J001-BS1	LCS	10/01/20 09:55	200	200	2040009		100000						LLH	
B20J001-DUP1	Duplicate	10/01/20 09:55	200	200		2009030-07		1595	14.05	28.09	1	2.00	LLH	
B20J001-DUP2	Duplicate	10/01/20 09:55	200	200		2009031-01		1062	14.33	27.99	1	1.95	LLH	

Batch Comments

Reagents

Reagent # **Description**

PREPARATION BENCH SHEET

B20J001

EPA Region 9 Laboratory

Project: R20S18

Printed: 10/2/2020 11:49:48AM

Matrix: Air **Analysis: QC** **Prepared using: Air - Air_Can_Pressure**

Lab Number	Sample Name	Prepared	Initial	Final	Spike ID	Source ID	ul Spike	Can #	Initial PSI	Final PSI	Initial DF	Final DF	Prepared By	Extraction Comments

TO15 DILUTION LOGBOOK

#19020

DATE/ INITIAL	TIME	LAB SAMPLE #	CLIENT SAMPLE #	CAN ID	INITIAL PRESSURE (PSI)	INITIAL VOL (mL)	FINAL VOL (mL)	FINAL PRESSURE (PSI)	AMBIENT PRESSURE Hg/(PSI)	DILUTION FACTOR
09/29/20	0921	2009029-01	Classics-182WT- SC-IFT	856	14.82	400	400	28.19	29.83/14.65	1.90
	0924	-02	-184WT-	1115	14.82			28.23		1.90
	0927	-03	-186WT-	628	14.76			28.42	29.85/14.66	1.93
	0931	-04	-187WT- DUP	1189	14.72			27.99		1.90
	0934	-05	-188WT- SC-IFT	649	14.80			28.10		1.90
	0937	-06	-192FCH-	1581	14.77			28.18		1.91
	0939	-07	-185FCH-	1107	14.18			27.99		1.97
	0949	-08	-189FCH-	854	14.41			28.15		1.95
	0952	-09	-191FCH-	860	14.46			28.24		1.95
	0958	-10	-193FCH-	1969	13.98			28.22		2.02
	1001	-11	-195FCH-	899	14.14			28.20		1.99
	1004	-12	-185WT- SC-TEST AMB	1087	14.43			28.19		1.95
	—	2009030-01	P6-010-3FT	896	0			—	—	—
	1154	-02	-49-	630	14.06			28.37	29.88/14.68	2.01
	1157	-03	-025-	1991	14.29			28.16		1.96
	1203	-04	-029-	1587	13.66			28.08		2.06
	1205	-05	-031-	887 ~~867~~	14.01			28.15		2.01
	1208	-06	-055-	884	14.02			28.20		2.02
	1211	-07	-033-	1595	14.05			28.09		2.00
	1214	2009031-01	68/XY-A3- SC-IFT	1062	14.33			27.99		1.95
	1216	-02	-A7-	662	14.05			28.27		2.01
	1219	-03	-MH1-3FT	888	13.85			28.19		2.03
			09/29/20							

USEPA REGION 9 LABORATORY

TO15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: _____

Date: 10-30-20

Table of Contents

Calibration

2008006

Calibration Date: 08/10/2020

Instrument: HP5973K

Calibration Analyses:

VOCs, Soil Gas

Table of Contents

Method Path : D:\msdchem\1\2020\METHOD\
Method File : 081020K_TO15AA.M
Title : TO15
Last Update : Wed Aug 12 16:12:13 2020
Response Via : Initial Calibration

REVIEWED
By EM at 4:21 pm, Aug 12, 2020

Calibration Files
1 =081020K05.D 2 =081020K06.D 5 =081020K07.D 10 =081020K08.D 15 =081020K09.D
20 =081020K10.D

		Compound	1	2	5	10	15	20	Avg	%RSD
1)	I	BROMOCHLOROMETHANE	----------ISTD----------							
2)	T	Propene	0.533	0.539	0.536	0.524	0.536	0.536	0.534	0.96
3)	T	Dichlorodifluo...	1.297	1.359	1.315	1.285	1.342	1.396	1.332	3.11
4)	T	1,2-Dichlorote...	1.454	1.483	1.444	1.428	1.490	1.551	1.475	2.99
5)	T	Chloromethane	0.517	0.553	0.539	0.520	0.532	0.544	0.534	2.63
6)	T	Vinyl chloride	0.523	0.576	0.559	0.532	0.533	0.535	0.543	3.67
7)	T	1,3-Butadiene	0.415	0.412	0.413	0.396	0.397	0.394	0.404	2.37
8)	T	Bromomethane	0.427	0.443	0.430	0.419	0.428	0.446	0.432	2.40
9)	T	Chloroethane	0.289	0.305	0.298	0.291	0.296	0.308	0.298	2.55
10)	T	Bromoethene	0.456	0.437	0.438	0.435	0.452	0.479	0.449	3.77
11)	T	Trichlorofluor...	1.286	1.327	1.272	1.230	1.265	1.310	1.282	2.69
12)	T	1,1,2-Trichlor...	0.815	0.842	0.805	0.785	0.817	0.858	0.820	3.16
13)	T	1,1-Dichloroet...	0.679	0.726	0.732	0.728	0.765	0.782	0.735	4.90
14)	T	Acetone	0.822	0.816	0.795	0.777	0.788	0.790	0.798	2.18
15)	T	Carbon disulfide	1.504	1.458	1.411	1.372	1.412	1.456	1.436	3.23
16)	T	2-Propanol	0.705	0.713	0.763	0.780	0.825	0.847	0.772	7.44
17)	T	Allyl chloride	0.592	0.611	0.643	0.637	0.660	0.665	0.635	4.47
18)	T	Dichloromethane	0.778	0.718	0.633	0.587	0.589	0.585	0.648	12.55
19)	T	tert-Butyl met...	1.208	1.252	1.312	1.334	1.401	1.466	1.329	7.13
20)	T	trans-1,2-Dich...	0.738	0.737	0.723	0.710	0.728	0.747	0.731	1.80
21)	T	Hexane	0.802	0.856	0.889	0.892	0.924	0.946	0.885	5.78
22)	T	1,1-Dichloroet...	0.909	0.969	0.945	0.923	0.945	0.971	0.944	2.58
23)	T	Vinyl acetate	1.003	1.070	1.206	1.229	1.278	1.302	1.181	10.10
24)	T	cis-1,2-Dichlo...	0.611	0.641	0.655	0.661	0.688	0.707	0.661	5.16
25)	T	2-Butanone (MEK)	0.265	0.281	0.284	0.280	0.292	0.306	0.285	4.82
26)	T	Ethyl acetate	0.173	0.174	0.175	0.171	0.174	0.181	0.175	2.03
27)	T	Tetrahydrofuran	0.641	0.652	0.681	0.677	0.690	0.688	0.672	2.99
28)	T	Chloroform	0.975	0.997	0.975	0.944	0.978	1.009	0.980	2.24
29)	T	Cyclohexane	0.812	0.837	0.861	0.850	0.879	0.898	0.856	3.55
30)	T	1,1,1-Trichlor...	0.916	0.968	0.954	0.926	0.964	0.997	0.954	3.09
31)	T	Carbon tetrach...	1.003	1.063	1.043	1.018	1.068	1.111	1.051	3.69
32)	I	1,4-DIFLUOROBENZENE	----------ISTD----------							
33)	T	Benzene	0.510	0.550	0.547	0.528	0.527	0.523	0.531	2.89
34)	T	2,2,4-Trimethy...	0.806	0.861	0.910	0.904	0.907	0.896	0.880	4.61
35)	T	1,2-Dichloroet...	0.205	0.223	0.224	0.217	0.218	0.215	0.217	3.26
36)	T	Heptane	0.306	0.328	0.348	0.343	0.340	0.327	0.332	4.62
37)	T	Trichloroethene	0.213	0.226	0.227	0.224	0.227	0.231	0.225	2.78
38)	T	1,2-Dichloropr...	0.190	0.200	0.203	0.201	0.202	0.199	0.199	2.50
39)	T	1,4-Dioxane	0.114	0.109	0.115	0.117	0.119	0.121	0.116	3.60
40)	T	Bromodichlorom...	0.359	0.365	0.367	0.363	0.370	0.369	0.366	1.11
41)	T	cis-1,3-Dichlo...	0.247	0.284	0.301	0.308	0.315	0.318	0.296	9.04
42)	T	4-Methyl-2-pen...	0.396	0.428	0.456	0.455	0.454	0.443	0.439	5.35
43)	I	CHLOROBENZENE-d5	----------ISTD----------							
44)	T	Toluene	0.626	0.698	0.706	0.688	0.685	0.683	0.681	4.12
45)	T	trans-1,3-Dich...	0.268	0.301	0.321	0.323	0.330	0.330	0.312	7.68
46)	T	1,1,2-Trichlor...	0.217	0.232	0.233	0.231	0.230	0.232	0.229	2.72
47)	T	Tetrachloroethene	0.340	0.368	0.366	0.365	0.371	0.375	0.364	3.39
48)	T	2-Hexanone	0.419	0.446	0.486	0.482	0.481	0.469	0.464	5.73
49)	T	Chlorodibromom...	0.401	0.404	0.409	0.406	0.417	0.422	0.410	2.02
50)	T	1,2-Dibromoeth...	0.304	0.329	0.332	0.328	0.335	0.338	0.328	3.72
51)	T	Chlorobenzene	0.541	0.583	0.571	0.556	0.557	0.562	0.562	2.55
52)	T	Ethylbenzene	0.852	0.933	0.935	0.917	0.919	0.927	0.914	3.42
53)	T	m&p-Xylene	0.627	0.698	0.707	0.700	0.704	0.705	0.690	4.50
54)	T	o-Xylene	0.596	0.686	0.719	0.718	0.723	0.727	0.695	7.26
55)	T	Styrene	0.478	0.561	0.589	0.590	0.597	0.598	0.569	8.17
56)	T	Bromoform	0.396	0.404	0.434	0.439	0.455	0.465	0.432	6.30
57)	T	1,1,2,2-Tetrac...	0.489	0.539	0.542	0.543	0.549	0.548	0.535	4.26
58)	T	4-Ethyltoluene	0.977	1.076	1.149	1.174	1.197	1.209	1.130	7.83
59)	T	1,3,5-Trimethy...	0.720	0.831	0.858	0.860	0.870	0.870	0.835	6.95

Table of Contents

Method Path : D:\msdchem\1\2020\METHOD\
Method File : 081020K_TO15AA.M
Title : TO15

60)	T	1,2,4-Trimethy...	0.675	0.797	0.870	0.882	0.896	0.893	0.835	10.37
61)	T	1,3-Dichlorobe...	0.540	0.604	0.640	0.650	0.665	0.667	0.628	7.76
62)	T	1,4-Dichlorobe...	0.514	0.593	0.632	0.646	0.660	0.660	0.618	9.12
63)	T	Benzyl chloride	0.670	0.737	0.845	0.889	0.903	0.902	0.824	11.91
64)	T	1,2-Dichlorobe...	0.526	0.588	0.619	0.630	0.640	0.639	0.607	7.30
65)	T	1,2,4-Trichlor...	0.380	0.449	0.513	0.565	0.611	0.631	0.525	18.49
66)	T	Hexachlorobuta...	0.476	0.538	0.568	0.605	0.649	0.660	0.583	12.02

(#) = Out of Range

REVIEWED
By EM at 4:21 pm, Aug 12, 2020

SCV REPORT

Instrument Name: HP5973K
Sample Name: S20H017-SCV1
Misc Info: 10ppbv 2033037
Date Acquired: 8/10/2020 23:40
QLast Update: Wed Aug 12 16:12:13 2020
Operator: EM

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	
1)	BROMOCHLOROMETHANE	16.31	#N/A	19.60	#N/A	70.0	130.0	#N/A	Internal
2)	Propene	5.00	10.00	9.51	95%	70.0	130.0	pass	Subset
3)	Dichlorodifluoromethane	5.10	11.00	11.07	101%	70.0	130.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	5.49	11.00	10.40	95%	70.0	130.0	pass	Primary
5)	Chloromethane	5.73	12.00	10.26	85%	70.0	130.0	pass	Primary
6)	Vinyl chloride	6.07	10.00	10.62	106%	70.0	130.0	pass	Primary
7)	1,3-Butadiene	6.18	10.00	10.43	104%	70.0	130.0	pass	Subset
8)	Bromomethane	7.24	11.00	11.55	105%	70.0	130.0	pass	Primary
9)	Chloroethane	7.61	11.00	11.46	104%	70.0	130.0	pass	Primary
10)	Bromoethene	8.26	11.00	11.73	107%	70.0	130.0	pass	Subset
11)	Trichlorofluoromethane	8.38	11.00	10.50	95%	70.0	130.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.38	11.00	12.24	111%	70.0	130.0	pass	Primary
13)	1,1-Dichloroethene	10.52	11.00	11.70	106%	70.0	130.0	pass	Primary
14)	Acetone	11.09	10.00	10.35	103%	70.0	130.0	pass	Subset
15)	Carbon disulfide	11.20	12.00	12.17	101%	70.0	130.0	pass	Subset
16)	2-Propanol	11.59	8.50	10.17	120%	70.0	130.0	pass	Subset
17)	Allyl chloride	11.96	12.00	11.57	96%	70.0	130.0	pass	Subset
18)	Dichloromethane	12.48	11.00	10.02	91%	70.0	130.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	13.02	11.00	12.34	112%	70.0	130.0	pass	Subset
20)	trans-1,2-Dichloroethene	13.11	10.00	10.48	105%	70.0	130.0	pass	Subset
21)	Hexane	13.59	11.00	11.17	102%	70.0	130.0	pass	Subset
22)	1,1-Dichloroethane	14.40	11.00	11.04	100%	70.0	130.0	pass	Primary
23)	Vinyl acetate	14.50	11.00	11.09	101%	70.0	130.0	pass	Subset
24)	cis-1,2-Dichloroethene	15.78	11.00	12.45	113%	70.0	130.0	pass	Primary
25)	2-Butanone (MEK)	15.86	11.00	11.55	105%	70.0	130.0	pass	Subset
26)	Ethyl acetate	15.87	11.00	11.16	101%	70.0	130.0	pass	Subset
27)	Tetrahydrofuran	16.29	9.50	8.98	94%	70.0	130.0	pass	Subset
28)	Chloroform	16.45	11.00	11.69	106%	70.0	130.0	pass	Primary
29)	Cyclohexane	16.62	11.00	11.68	106%	70.0	130.0	pass	Subset
30)	1,1,1-Trichloroethane	16.70	11.00	11.30	103%	70.0	130.0	pass	Primary
31)	Carbon tetrachloride	16.94	11.00	10.99	100%	70.0	130.0	pass	Primary
32)	1,4-DIFLUOROBENZENE	18.22	#N/A	19.60	#N/A	70.0	130.0	#N/A	Internal
33)	Benzene	17.44	10.00	11.17	112%	70.0	130.0	pass	Primary
34)	2,2,4-Trimethylpentane	17.32	11.00	11.04	100%	70.0	130.0	pass	Subset
35)	1,2-Dichloroethane	17.66	11.00	10.55	96%	70.0	130.0	pass	Primary
36)	Heptane	17.68	11.00	10.45	95%	70.0	130.0	pass	Subset
37)	Trichloroethene	18.63	11.00	11.52	105%	70.0	130.0	pass	Primary
38)	1,2-Dichloropropane	19.15	10.00	10.71	107%	70.0	130.0	pass	Primary
39)	1,4-Dioxane	19.32	11.00	11.72	107%	70.0	130.0	pass	Subset
40)	Bromodichloromethane	19.60	11.00	10.48	95%	70.0	130.0	pass	Subset
41)	cis-1,3-Dichloropropene	20.35	10.00	10.94	109%	70.0	130.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	20.55	11.00	9.05	82%	70.0	130.0	pass	Subset
43)	CHLOROBENZENE-d5	23.08	#N/A	19.60	#N/A	70.0	130.0	#N/A	Internal
44)	Toluene	20.81	10.00	11.40	114%	70.0	130.0	pass	Primary
45)	trans-1,3-Dichloropropene	21.29	10.00	9.63	96%	70.0	130.0	pass	Primary
46)	1,1,2-Trichloroethane	21.60	10.00	11.35	113%	70.0	130.0	pass	Primary
47)	Tetrachloroethene	21.64	11.00	11.24	102%	70.0	130.0	pass	Primary
48)	2-Hexanone	21.89	11.00	8.42	77%	70.0	130.0	pass	Subset
49)	Chlorodibromomethane	22.21	11.00	10.47	95%	70.0	130.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	22.45	10.00	11.20	112%	70.0	130.0	pass	Primary

51)	Chlorobenzene	23.13	11.00	11.07	101%	70.0	130.0	pass	Primary
52)	Ethylbenzene	23.20	11.00	11.24	102%	70.0	130.0	pass	Primary
53)	m&p-Xylene	23.38	22.00	21.96	100%	70.0	130.0	pass	Primary
54)	o-Xylene	24.03	10.00	11.19	112%	70.0	130.0	pass	Primary
55)	Styrene	24.08	10.00	10.82	108%	70.0	130.0	pass	Primary
56)	Bromoform	24.48	12.00	11.44	95%	70.0	130.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	25.16	9.90	11.07	112%	70.0	130.0	pass	Primary
58)	4-Ethyltoluene	25.37	11.00	10.63	97%	70.0	130.0	pass	Subset
59)	1,3,5-Trimethylbenzene	25.46	10.00	10.84	108%	70.0	130.0	pass	Primary
60)	1,2,4-Trimethylbenzene	26.07	10.00	11.15	112%	70.0	130.0	pass	Primary
61)	1,3-Dichlorobenzene	26.62	10.00	10.78	108%	70.0	130.0	pass	Primary
62)	1,4-Dichlorobenzene	26.77	9.90	10.82	109%	70.0	130.0	pass	Primary
63)	Benzyl chloride	27.00	11.00	10.46	95%	70.0	130.0	pass	Subset
64)	1,2-Dichlorobenzene	27.39	9.60	10.89	113%	70.0	130.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.85	9.30	10.35	111%	70.0	130.0	pass	Primary
66)	Hexachlorobutadiene	29.95	9.90	10.19	103%	70.0	130.0	pass	Primary

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RT DUPLICATE REPORT

Instrument Name: HP5973K
Sample Name: S20H017-CAL4
Misc Info: 10ppbv 2033030
Date Acquired: 8/10/2020 21:02
QLast Update: Wed Aug 12 16:12:13 2020
Operator: EM

#	Name	RT	CONC	Qion	
1)	BROMOCHLOROMETHANE	16.313	19.600	49	16.289
2)	Propene	4.998	9.327	41.1	
3)	Dichlorodifluoromethane	5.101	9.455	84.9	
4)	1,2-Dichlorotetrafluoroethane	5.490	9.294	84.9	
5)	Chloromethane	5.728	9.641	50	
6)	Vinyl chloride	6.074	10.101	62	
7)	1,3-Butadiene	6.172	10.187	54	
8)	Bromomethane	7.242	9.892	93.9	
9)	Chloroethane	7.607	9.857	64	
10)	Bromoethene	8.252	9.780	105.9	
11)	Trichlorofluoromethane	8.380	8.927	100.9	
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.382	10.243	150.9	
13)	1,1-Dichloroethene	10.509	10.489	61	
14)	Acetone	11.087	9.635	43.1	
15)	Carbon disulfide	11.203	9.942	75.9	
16)	2-Propanol	11.592	10.103	45.1	
17)	Allyl chloride	11.957	10.944	41.1	
18)	Dichloromethane	12.486	9.323	49	
19)	tert-Butyl methyl ether (MTBE)	13.028	10.945	73	
20)	trans-1,2-Dichloroethene	13.113	9.910	61	
21)	Hexane	13.594	10.179	57.1	
22)	1,1-Dichloroethane	14.397	9.586	63	
23)	Vinyl acetate	14.500	11.442	43.1	
24)	cis-1,2-Dichloroethene	15.784	10.309	61	
25)	2-Butanone (MEK)	15.863	9.837	72	
26)	Ethyl acetate	15.869	9.884	61	
27)	Tetrahydrofuran	16.289	9.278	42.1	
28)	Chloroform	16.447	10.027	82.9	
29)	Cyclohexane	16.617	10.720	56.1	
30)	1,1,1-Trichloroethane	16.702	10.284	96.9	
31)	Carbon tetrachloride	16.934	9.590	116.9	
32)	1,4-DIFLUOROBENZENE	18.223	19.600	114	17.682
33)	Benzene	17.438	10.349	78	17.317
34)	2,2,4-Trimethylpentane	17.317	10.981	57.1	
35)	1,2-Dichloroethane	17.657	10.109	62	
36)	Heptane	17.682	10.846	43.1	
37)	Trichloroethene	18.631	10.674	129.9	
38)	1,2-Dichloropropane	19.148	10.304	63	
39)	1,4-Dioxane	19.318	10.566	88	
40)	Bromodichloromethane	19.604	10.424	82.9	
41)	cis-1,3-Dichloropropene	20.352	10.838	75	
42)	4-Methyl-2-pentanone (MIBK)	20.559	10.166	43.1	

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43)	CHLOROBENZENE-d5	23.090	19.600	117	22.445
44)	Toluene	20.809	10.409	91	
45)	trans-1,3-Dichloropropene	21.289	9.522	75	
46)	1,1,2-Trichloroethane	21.600	10.562	96.9	
47)	Tetrachloroethene	21.642	10.311	165.8	
48)	2-Hexanone	21.892	9.560	43.1	
49)	Chlorodibromomethane	22.208	10.295	128.8	
50)	1,2-Dibromoethane (EDB)	22.445	10.402	106.9	
51)	Chlorobenzene	23.133	10.296	112	
52)	Ethylbenzene	23.200	10.335	91	
53)	m&p-Xylene	23.376	20.693	91	
54)	o-Xylene	24.027	10.438	91	
55)	Styrene	24.070	10.474	104	
56)	Bromoform	24.483	10.765	172.8	
57)	1,1,2,2-Tetrachloroethane	25.159	10.243	82.9	
58)	4-Ethyltoluene	25.365	10.286	105	
59)	1,3,5-Trimethylbenzene	25.457	10.408	105	
60)	1,2,4-Trimethylbenzene	26.065	10.564	105	
61)	1,3-Dichlorobenzene	26.625	10.149	145.9	
62)	1,4-Dichlorobenzene	26.771	10.248	145.9	
63)	Benzyl chloride	26.996	10.024	91	0.000
64)	1,2-Dichlorobenzene	27.385	10.169	145.9	0.000
65)	1,2,4-Trichlorobenzene	29.849	10.436	179.9	0.000
66)	Hexachlorobutadiene	29.952	10.696	224.8	0.000

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CHEMSTATION CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S20H017-SCV1
Misc Info: 10ppbv 2033037
Date Acquired: 8/10/2020 23:40
QLast Update: Wed Aug 12 16:12:13 2
Operator: EM

#	Name	L1	L2	L3	L4	L5	L6
1)	BROMOCHLOROMETHANE	19.60	19.60	19.60	19.60	19.60	19.60
2)	Propene	0.95	1.90	4.75	9.50	14.25	19.00
3)	Dichlorodifluoromethane	0.98	1.96	4.90	9.80	14.70	19.60
4)	1,2-Dichlorotetrafluoroethane	0.96	1.92	4.80	9.60	14.40	19.20
5)	Chloromethane	0.99	1.98	4.95	9.90	14.85	19.80
6)	Vinyl chloride	1.03	2.06	5.15	10.30	15.45	20.60
7)	1,3-Butadiene	1.04	2.08	5.20	10.40	15.60	20.80
8)	Bromomethane	1.02	2.04	5.10	10.20	15.30	20.40
9)	Chloroethane	1.01	2.02	5.05	10.10	15.15	20.20
10)	Bromoethene	1.01	2.02	5.05	10.10	15.15	20.20
11)	Trichlorofluoromethane	0.93	1.86	4.65	9.30	13.95	18.60
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	1.07	2.14	5.35	10.70	16.05	21.40
13)	1,1-Dichloroethene	1.06	2.12	5.30	10.60	15.90	21.20
14)	Acetone	0.99	1.98	4.95	9.90	14.85	19.80
15)	Carbon disulfide	1.04	2.08	5.20	10.40	15.60	20.80
16)	2-Propanol	1.00	2.00	5.00	10.00	15.00	20.00
17)	Allyl chloride	1.09	2.18	5.45	10.90	16.35	21.80
18)	Dichloromethane	1.03	2.06	5.15	10.30	15.45	20.60
19)	tert-Butyl methyl ether (MTBE)	1.09	2.18	5.45	10.90	16.35	21.80
20)	trans-1,2-Dichloroethene	1.02	2.04	5.10	10.20	15.30	20.40
21)	Hexane	1.01	2.02	5.05	10.10	15.15	20.20
22)	1,1-Dichloroethane	0.98	1.96	4.90	9.80	14.70	19.60
23)	Vinyl acetate	1.10	2.20	5.50	11.00	16.50	22.00
24)	cis-1,2-Dichloroethene	1.03	2.06	5.15	10.30	15.45	20.60
25)	2-Butanone (MEK)	1.00	2.00	5.00	10.00	15.00	20.00
26)	Ethyl acetate	1.01	2.02	5.05	10.10	15.15	20.20
27)	Tetrahydrofuran	0.92	1.84	4.60	9.20	13.80	18.40
28)	Chloroform	1.04	2.08	5.20	10.40	15.60	20.80
29)	Cyclohexane	1.08	2.16	5.40	10.80	16.20	21.60
30)	1,1,1-Trichloroethane	1.06	2.12	5.30	10.60	15.90	21.20
31)	Carbon tetrachloride	0.99	1.98	4.95	9.90	14.85	19.80
32)	1,4-DIFLUOROBENZENE	19.60	19.60	19.60	19.60	19.60	19.60
33)	Benzene	1.04	2.08	5.20	10.40	15.60	20.80
34)	2,2,4-Trimethylpentane	1.07	2.14	5.35	10.70	16.05	21.40
35)	1,2-Dichloroethane	1.01	2.02	5.05	10.10	15.15	20.20
36)	Heptane	1.05	2.10	5.25	10.50	15.75	21.00
37)	Trichloroethene	1.07	2.14	5.35	10.70	16.05	21.40
38)	1,2-Dichloropropane	1.02	2.04	5.10	10.20	15.30	20.40
39)	1,4-Dioxane	1.05	2.10	5.25	10.50	15.75	21.00
40)	Bromodichloromethane	1.05	2.10	5.25	10.50	15.75	21.00
41)	cis-1,3-Dichloropropene	1.04	2.08	5.20	10.40	15.60	20.80
42)	4-Methyl-2-pentanone (MIBK)	0.98	1.96	4.90	9.80	14.70	19.60

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43)	CHLOROBENZENE-d5	19.60	19.60	19.60	19.60	19.60	19.60
44)	Toluene	1.03	2.06	5.15	10.30	15.45	20.60
45)	trans-1,3-Dichloropropene	0.92	1.84	4.60	9.20	13.80	18.40
46)	1,1,2-Trichloroethane	1.05	2.10	5.25	10.50	15.75	21.00
47)	Tetrachloroethene	1.03	2.06	5.15	10.30	15.45	20.60
48)	2-Hexanone	0.92	1.84	4.60	9.20	13.80	18.40
49)	Chlorodibromomethane	1.04	2.08	5.20	10.40	15.60	20.80
50)	1,2-Dibromoethane (EDB)	1.04	2.08	5.20	10.40	15.60	20.80
51)	Chlorobenzene	1.04	2.08	5.20	10.40	15.60	20.80
52)	Ethylbenzene	1.03	2.06	5.15	10.30	15.45	20.60
53)	m&p-Xylene	2.04	4.08	10.20	20.40	30.60	40.80
54)	o-Xylene	1.01	2.02	5.05	10.10	15.15	20.20
55)	Styrene	1.01	2.02	5.05	10.10	15.15	20.20
56)	Bromoform	1.06	2.12	5.30	10.60	15.90	21.20
57)	1,1,2,2-Tetrachloroethane	1.01	2.02	5.05	10.10	15.15	20.20
58)	4-Ethyltoluene	0.99	1.98	4.95	9.90	14.85	19.80
59)	1,3,5-Trimethylbenzene	1.01	2.02	5.05	10.10	15.15	20.20
60)	1,2,4-Trimethylbenzene	1.00	2.00	5.00	10.00	15.00	20.00
61)	1,3-Dichlorobenzene	0.98	1.96	4.90	9.80	14.70	19.60
62)	1,4-Dichlorobenzene	0.98	1.96	4.90	9.80	14.70	19.60
63)	Benzyl chloride	0.93	1.86	4.65	9.30	13.95	18.60
64)	1,2-Dichlorobenzene	0.98	1.96	4.90	9.80	14.70	19.60
65)	1,2,4-Trichlorobenzene	0.97	1.94	4.85	9.70	14.55	19.40
66)	Hexachlorobutadiene	1.03	2.06	5.15	10.30	15.45	20.60

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CALIBRATION AREA REPORT

Instrument Name: HP5973K
Sample Name: S20H017-SCV1
Misc Info: 10ppbv 2033037
Date Acquired: 8/10/2020 23:40
QLast Update: Wed Aug 12 16:12:13 20
Operator: EM

#	Name	L1	L2	L3	L4	L5	L6
1)	BROMOCHLOROMETHANE	281592	270653	268463	275672	280258	288309
2)	Propene	7281	14150	34893	70081	109242	149674
3)	Dichlorodifluoromethane	18257	36774	88257	177160	282072	402358
4)	1,2-Dichlorotetrafluoroethane	20057	39321	94914	192805	306777	438062
5)	Chloromethane	7349	15127	36531	72411	112912	158326
6)	Vinyl chloride	7737	16371	39398	77121	117722	162111
7)	1,3-Butadiene	6194	11821	29425	57942	88526	120589
8)	Bromomethane	6258	12468	30007	60112	93568	133950
9)	Chloroethane	4191	8505	20601	41276	64203	91502
10)	Bromoethene	6613	12177	30269	61812	97919	142349
11)	Trichlorofluoromethane	17179	34089	81013	160929	252257	358533
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	12527	24874	59013	118175	187452	269979
13)	1,1-Dichloroethene	10335	21257	53137	108492	174028	243996
14)	Acetone	11688	22316	53877	108139	167403	230118
15)	Carbon disulfide	22476	41872	100504	200741	314950	445431
16)	2-Propanol	10125	19702	52280	109730	176892	249158
17)	Allyl chloride	9266	18389	48000	97674	154218	213231
18)	Dichloromethane	11510	20424	44684	85021	130098	177336
19)	tert-Butyl methyl ether (MTBE)	18921	37675	97937	204570	327456	470253
20)	trans-1,2-Dichloroethene	10815	20767	50530	101838	159308	224226
21)	Hexane	11633	23890	61504	126689	200204	281077
22)	1,1-Dichloroethane	12801	26214	63403	127204	198663	279836
23)	Vinyl acetate	15849	32505	90873	190135	301631	421478
24)	cis-1,2-Dichloroethene	9044	18235	46180	95777	152012	214347
25)	2-Butanone (MEK)	3802	7768	19476	39391	62614	90033
26)	Ethyl acetate	2507	4864	12077	24270	37618	53855
27)	Tetrahydrofuran	8478	16561	42914	87628	136081	186243
28)	Chloroform	14575	28624	69445	138156	218132	308586
29)	Cyclohexane	12602	24974	63705	129114	203669	285249
30)	1,1,1-Trichloroethane	13954	28346	69285	138020	219162	310795
31)	Carbon tetrachloride	14266	29066	70711	141782	226870	323667
32)	1,4-DIFLUOROBENZENE	867494	811827	799057	816632	853435	912121
33)	Benzene	23453	47393	116005	228886	**357708**	506593
34)	2,2,4-Trimethylpentane	38173	76306	198401	402829	633775	891896
35)	1,2-Dichloroethane	9160	18697	46216	91436	143629	201780
36)	Heptane	14205	28505	74537	149931	232910	319380
37)	Trichloroethene	10080	20020	49606	99963	158941	229929
38)	1,2-Dichloropropane	8558	16902	42271	85521	134701	188790
39)	1,4-Dioxane	5305	9506	24628	51037	81760	118443
40)	Bromodichloromethane	16694	31782	78528	158796	253844	360630
41)	cis-1,3-Dichloropropene	11378	24449	63891	133510	214080	308109
42)	4-Methyl-2-pentanone (MIBK)	17175	34727	91059	185753	290604	403916

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43)	CHLOROBENZENE-d5	762493	723249	719617	747567	790546	851980
44)	Toluene	25100	53043	133426	270348	426676	611727
45)	trans-1,3-Dichloropropene	9604	20427	54134	113347	183649	263927
46)	1,1,2-Trichloroethane	8850	17978	44978	92331	146407	211908
47)	Tetrachloroethene	13630	27964	69225	143204	231145	336030
48)	2-Hexanone	14982	30260	82162	169125	267505	375507
49)	Chlorodibromomethane	16205	31014	77992	160849	262611	381492
50)	1,2-Dibromoethane (EDB)	12305	25223	63444	130014	210692	306025
51)	Chlorobenzene	21890	44744	109061	220561	350450	507918
52)	Ethylbenzene	34135	70939	176806	360237	572930	830007
53)	m&p-Xylene	49778	105041	264728	544754	868945	1250963
54)	o-Xylene	23434	51155	133352	276708	441704	638522
55)	Styrene	18792	41832	109211	227323	364960	525366
56)	Bromoform	16324	31617	84410	177353	291500	428115
57)	1,1,2,2-Tetrachloroethane	19228	40185	100558	209093	335771	481352
58)	4-Ethyltoluene	37646	78629	208730	443462	716746	1040601
59)	1,3,5-Trimethylbenzene	28296	61907	159050	331400	531483	764172
60)	1,2,4-Trimethylbenzene	26256	58784	159626	336540	541846	776090
61)	1,3-Dichlorobenzene	20573	43711	115139	242917	393990	568280
62)	1,4-Dichlorobenzene	19609	42919	113775	241451	391203	562516
63)	Benzyl chloride	24247	50592	144309	315200	508352	729356
64)	1,2-Dichlorobenzene	20041	42509	111428	235441	379595	544613
65)	1,2,4-Trichlorobenzene	14341	32177	91317	208918	358746	531911
66)	Hexachlorobutadiene	19065	40880	107418	237683	404328	591013

CHEMSTATION VS LIMS CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S20H017-SCV1
Misc Info: 10ppbv 2033037
Date Acquired: 8/10/2020 23:40
QLast Update: Wed Aug 12 16:12:13 2
Operator: EM

		L1	L2	L3	L4	L5	L6
#	Name	1	2	5	10	15	20
1)	BROMOCHLOROMETHANE						
2)	Propene	OK	OK	OK	OK	OK	OK
3)	Dichlorodifluoromethane	OK	OK	OK	OK	OK	OK
4)	1,2-Dichlorotetrafluoroethane	OK	OK	OK	OK	OK	OK
5)	Chloromethane	OK	OK	OK	OK	OK	OK
6)	Vinyl chloride	OK	OK	OK	OK	OK	OK
7)	1,3-Butadiene	OK	OK	OK	OK	OK	OK
8)	Bromomethane	OK	OK	OK	OK	OK	OK
9)	Chloroethane	OK	OK	OK	OK	OK	OK
10)	Bromoethene	OK	OK	OK	OK	OK	OK
11)	Trichlorofluoromethane	OK	OK	OK	OK	OK	OK
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	OK	OK	OK	OK	OK	OK
13)	1,1-Dichloroethene	OK	OK	OK	OK	OK	OK
14)	Acetone	OK	OK	OK	OK	OK	OK
15)	Carbon disulfide	OK	OK	OK	OK	OK	OK
16)	2-Propanol	OK	OK	OK	OK	OK	OK
17)	Allyl chloride	OK	OK	OK	OK	OK	OK
18)	Dichloromethane	OK	OK	OK	OK	OK	OK
19)	tert-Butyl methyl ether (MTBE)	OK	OK	OK	OK	OK	OK
20)	trans-1,2-Dichloroethene	OK	OK	OK	OK	OK	OK
21)	Hexane	OK	OK	OK	OK	OK	OK
22)	1,1-Dichloroethane	OK	OK	OK	OK	OK	OK
23)	Vinyl acetate	OK	OK	OK	OK	OK	OK
24)	cis-1,2-Dichloroethene	OK	OK	OK	OK	OK	OK
25)	2-Butanone (MEK)	OK	OK	OK	OK	OK	OK
26)	Ethyl acetate	OK	OK	OK	OK	OK	OK
27)	Tetrahydrofuran	OK	OK	OK	OK	OK	OK
28)	Chloroform	OK	OK	OK	OK	OK	OK
29)	Cyclohexane	OK	OK	OK	OK	OK	OK
30)	1,1,1-Trichloroethane	OK	OK	OK	OK	OK	OK
31)	Carbon tetrachloride	OK	OK	OK	OK	OK	OK
32)	1,4-DIFLUOROBENZENE						
33)	Benzene	OK	OK	OK	OK	OK	OK
34)	2,2,4-Trimethylpentane	OK	OK	OK	OK	OK	OK
35)	1,2-Dichloroethane	OK	OK	OK	OK	OK	OK
36)	Heptane	OK	OK	OK	OK	OK	OK
37)	Trichloroethene	OK	OK	OK	OK	OK	OK
38)	1,2-Dichloropropane	OK	OK	OK	OK	OK	OK
39)	1,4-Dioxane	OK	OK	OK	OK	OK	OK
40)	Bromodichloromethane	OK	OK	OK	OK	OK	OK
41)	cis-1,3-Dichloropropene	OK	OK	OK	OK	OK	OK
42)	4-Methyl-2-pentanone (MIBK)	OK	OK	OK	OK	OK	OK
43)	CHLOROBENZENE-d5						
44)	Toluene	OK	OK	OK	OK	OK	OK
45)	trans-1,3-Dichloropropene	OK	OK	OK	OK	OK	OK
46)	1,1,2-Trichloroethane	OK	OK	OK	OK	OK	OK
47)	Tetrachloroethene	OK	OK	OK	OK	OK	OK

48)	2-Hexanone	OK	OK	OK	OK	OK	OK
49)	Chlorodibromomethane	OK	OK	OK	OK	OK	OK
50)	1,2-Dibromoethane (EDB)	OK	OK	OK	OK	OK	OK
51)	Chlorobenzene	OK	OK	OK	OK	OK	OK
52)	Ethylbenzene	OK	OK	OK	OK	OK	OK
53)	m&p-Xylene	OK	OK	OK	OK	OK	OK
54)	o-Xylene	OK	OK	OK	OK	OK	OK
55)	Styrene	OK	OK	OK	OK	OK	OK
56)	Bromoform	OK	OK	OK	OK	OK	OK
57)	1,1,2,2-Tetrachloroethane	OK	OK	OK	OK	OK	OK
58)	4-Ethyltoluene	OK	OK	OK	OK	OK	OK
59)	1,3,5-Trimethylbenzene	OK	OK	OK	OK	OK	OK
60)	1,2,4-Trimethylbenzene	OK	OK	OK	OK	OK	OK
61)	1,3-Dichlorobenzene	OK	OK	OK	OK	OK	OK
62)	1,4-Dichlorobenzene	OK	OK	OK	OK	OK	OK
63)	Benzyl chloride	OK	OK	OK	OK	OK	OK
64)	1,2-Dichlorobenzene	OK	OK	OK	OK	OK	OK
65)	1,2,4-Trichlorobenzene	OK	OK	OK	OK	OK	OK
66)	Hexachlorobutadiene	OK	OK	OK	OK	OK	OK

LIMS CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S20H017-SCV1
Misc Info: 10ppbv 2033037
Date Acquired: 8/10/2020 23:40
QLast Update: Wed Aug 12 16:12:13
Operator: EM

#	Name	Amount	L1 1	L2 2	L3 5	L4 10	L5 15	L6 20
1)	BROMOCHLOROMETHANE	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2)	Propene	0.019	0.95	1.90	4.75	9.50	14.25	19.00
3)	Dichlorodifluoromethane	0.0196	0.98	1.96	4.90	9.80	14.70	19.60
4)	1,2-Dichlorotetrafluoroethane	0.0192	0.96	1.92	4.80	9.60	14.40	19.20
5)	Chloromethane	0.0198	0.99	1.98	4.95	9.90	14.85	19.80
6)	Vinyl chloride	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
7)	1,3-Butadiene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
8)	Bromomethane	0.0204	1.02	2.04	5.10	10.20	15.30	20.40
9)	Chloroethane	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
10)	Bromoethene	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
11)	Trichlorofluoromethane	0.0186	0.93	1.86	4.65	9.30	13.95	18.60
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
13)	1,1-Dichloroethene	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
14)	Acetone	0.0198	0.99	1.98	4.95	9.90	14.85	19.80
15)	Carbon disulfide	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
16)	2-Propanol	0.02	1.00	2.00	5.00	10.00	15.00	20.00
17)	Allyl chloride	0.0218	1.09	2.18	5.45	10.90	16.35	21.80
18)	Dichloromethane	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
19)	tert-Butyl methyl ether (MTBE)	0.0218	1.09	2.18	5.45	10.90	16.35	21.80
20)	trans-1,2-Dichloroethene	0.0204	1.02	2.04	5.10	10.20	15.30	20.40
21)	Hexane	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
22)	1,1-Dichloroethane	0.0196	0.98	1.96	4.90	9.80	14.70	19.60
23)	Vinyl acetate	0.022	1.10	2.20	5.50	11.00	16.50	22.00
24)	cis-1,2-Dichloroethene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
25)	2-Butanone (MEK)	0.02	1.00	2.00	5.00	10.00	15.00	20.00
26)	Ethyl acetate	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
27)	Tetrahydrofuran	0.0184	0.92	1.84	4.60	9.20	13.80	18.40
28)	Chloroform	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
29)	Cyclohexane	0.0216	1.08	2.16	5.40	10.80	16.20	21.60
30)	1,1,1-Trichloroethane	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
31)	Carbon tetrachloride	0.0198	0.99	1.98	4.95	9.90	14.85	19.80
32)	1,4-DIFLUOROBENZENE	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
33)	Benzene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
34)	2,2,4-Trimethylpentane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
35)	1,2-Dichloroethane	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
36)	Heptane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
37)	Trichloroethene	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
38)	1,2-Dichloropropane	0.0204	1.02	2.04	5.10	10.20	15.30	20.40
39)	1,4-Dioxane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
40)	Bromodichloromethane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
41)	cis-1,3-Dichloropropene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
42)	4-Methyl-2-pentanone (MIBK)	0.0196	0.98	1.96	4.90	9.80	14.70	19.60
43)	CHLOROBENZENE-d5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
44)	Toluene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
45)	trans-1,3-Dichloropropene	0.0184	0.92	1.84	4.60	9.20	13.80	18.40
46)	1,1,2-Trichloroethane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
47)	Tetrachloroethene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
48)	2-Hexanone	0.0184	0.92	1.84	4.60	9.20	13.80	18.40
49)	Chlorodibromomethane	0.0208	1.04	2.08	5.20	10.40	15.60	20.80

50)	1,2-Dibromoethane (EDB)	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
51)	Chlorobenzene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
52)	Ethylbenzene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
53)	m&p-Xylene	0.0408	2.04	4.08	10.20	20.40	30.60	40.80
54)	o-Xylene	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
55)	Styrene	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
56)	Bromoform	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
57)	1,1,2,2-Tetrachloroethane	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
58)	4-Ethyltoluene	0.0198	0.99	1.98	4.95	9.90	14.85	19.80
59)	1,3,5-Trimethylbenzene	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
60)	1,2,4-Trimethylbenzene	0.02	1.00	2.00	5.00	10.00	15.00	20.00
61)	1,3-Dichlorobenzene	0.0196	0.98	1.96	4.90	9.80	14.70	19.60
62)	1,4-Dichlorobenzene	0.0196	0.98	1.96	4.90	9.80	14.70	19.60
63)	Benzyl chloride	0.0186	0.93	1.86	4.65	9.30	13.95	18.60
64)	1,2-Dichlorobenzene	0.0196	0.98	1.96	4.90	9.80	14.70	19.60
65)	1,2,4-Trichlorobenzene	0.0194	0.97	1.94	4.85	9.70	14.55	19.40
66)	Hexachlorobutadiene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60

SEQUENCE

S20H017

Sequence Date: 08/10/2020

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	N / A	SEQUENCE #:		S20H017	08/10/20
BATCH #:	INITIAL CALIBRATION	ANALYSIS:		TO15	HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
DOCUMENTATION	ANALYST: Bench sheet(s) attached? REVIEWER: Bench sheet(s) reviewed?	✔			
	ANALYST: Sequence log(s) attached? REVIEWER: Sequence log(s) reviewed?		Y	Y	
	ANALYST: Every run has a PDF in LIMS? REVIEWER: Every PDF reviewed?		Y	Y	
INITIAL CALIBRATION	Date of Initial Calibration used: If applicable, note date of "Last Update" in Comments.	08/10/20 Wed Aug 12, 2020 16:12:13			
	Initial Calibration ID (LIMS number):	2008006 / S20H017			
	ICAL within QC criteria?		Y	Y	OK
	SCV within QC criteria?		Y	Y	OK
INSTRUMENT / QC CHECKS	Tune or degradation checks within QC criteria?		Y	Y	PASSED
	CCV(s) within QC criteria?	✔			
	QLS(s) within QC criteria?	✔			
	CB(s) or storage blank(s) within QC criteria?	✔			
	Other instrument checks within QC criteria? Specify if applicable.	✔			
BATCH QCs	Method blanks < 1/2 QL?	✔			
	LCS(s) or SRM(s) within QC criteria?	✔			
	MSs/MSDs and/or DUPs within QC criteria?	✔			
	Other method-specific QCs within QC criteria? Specify if applicable.	✔			

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	N / A	SEQUENCE #:	S20H017	08/10/20
BATCH #:	INITIAL CALIBRATION	ANALYSIS:	TO15	HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
IS / SS	Internal standards within QC criteria?	☐	Y	Y	
	Surrogates within QC criteria?	✔			
SAMPLE DATA	Were samples prepared & analyzed within holding time?	✔			
	If samples need to be re-run, were RE(s) made in LIMS?	✔			
	Do any samples need to be re-digested or re-extracted?	✔			
	Were all data qualifiers appropriately applied?	✔			
	Are problems, anomalies, discrepancies documented in LIMS? Specify if applicable.	✔			
MANUAL INT	Were manual integrations performed and documented? Specify if applicable.	✔			

APPROVALS	ANALYST INITIALS & DATE:	EM 08/12/20
	REVIEWED BY:	ZIYAD RAJABI (Affiliate) Digitally signed by ZIYAD RAJABI (Affiliate) Date: 2020.10.08 12:34:51 -07'00' SIGN HERE

COMMENTS

Injection Log

Directory: d:\msdchem\1\2020\DATA\081020K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	35	081020K01.D	1.	PRIME1	PRIME	10 Aug 2020 15:06
2	36	081020K02.D	1.	PRIME2	PRIME	10 Aug 2020 15:57
3	37	081020K03.D	1.	PRIME3	PRIME	10 Aug 2020 16:50
4	35	081020K04.D	1.	S20H017-TUN1	BFB 1901028	10 Aug 2020 17:41
5	35	081020K05.D	1.	S20H017-CAL1	1.0ppbv 2033026	10 Aug 2020 18:31
6	36	081020K06.D	1.	S20H017-CAL2	2.0ppbv 2033027	10 Aug 2020 19:21
7	36	081020K07.D	1.	S20H017-CAL3	5.0ppbv 2033029	10 Aug 2020 20:11
8	36	081020K08.D	1.	S20H017-CAL4	10ppbv 2033030	10 Aug 2020 21:02
9	36	081020K09.D	1.	S20H017-CAL5	15ppbv 2033032	10 Aug 2020 21:54
10	36	081020K10.D	1.	S20H017-CAL6	20ppbv 2033033	10 Aug 2020 22:47
11	37	081020K11.D	1.	S20H017-SCV1	10ppbv 2033037	10 Aug 2020 23:40
12	37	081020K12.D	1.	S20H017-SCV1	10ppbv 2033027	11 Aug 2020 00:33
13	33	081020K13.D	1.	S20H017-IBL1	200mL IB	11 Aug 2020 01:26
14	35	081120K01.D	1.	S20H01X-TUN1	BFB 1901028	11 Aug 2020 02:18
15	36	081120K02.D	1.	S20H01X-CCV1	10ppbv 2033030	11 Aug 2020 03:09
16	35	081120K03.D	1.	S20H01X-CRL1	1.0ppbv 2033026	11 Aug 2020 03:59
17	33	081120K04.D	1.	B20H01X-BLK1	200mL BLANK	11 Aug 2020 04:52

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2020\DATA\081020K_FSAA\081020K04.D
Tune Time : 10 Aug 2020 5:41 pm

Daily Calibration File : D:\msdchem\1\2020\DATA\081020K_FSAA\081020K08.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		275672	816632	747567
081020K05.D	S20H017-CAL1	281592	867494	762493
081020K06.D	S20H017-CAL2	270653	811827	723249
081020K07.D	S20H017-CAL3	268463	799057	719617
081020K08.D	S20H017-CAL4	275672	816632	747567
081020K09.D	S20H017-CAL5	280258	853435	790546
081020K10.D	S20H017-CAL6	288309	912121	851980
081020K11.D	S20H017-SCV1	296520	954870	869802
081020K12.D	S20H017-SCV1	297984	968123	874718
081020K13.D	S20H017-IBL1	284283	963275	842819

(fails) - fails 24hr time check * - fails criteria

Created: Wed Aug 12 16:27:19 2020 HP5973K

Sequence

Name	Inlet	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
PRIME	Three	T5	40	40	200	TO-15_A.CTD3	8/10/2020 3:06:17 PM	Completed
PRIME	Three	T6	40	0	100	TO-15_A.CTD3	8/10/2020 3:57:12 PM	Completed
PRIME	Three	T7	40	0	200	TO-15_A.CTD3	8/10/2020 4:50:22 PM	Completed
BFB	Three	T5	40	40	50	TO-15_A.CTD3	8/10/2020 5:41:58 PM	Completed
CAL1	Three	T5	40	0	20	TO-15_A.CTD3	8/10/2020 6:31:47 PM	Completed
CAL2	Three	T6	40	0	20	TO-15_A.CTD3	8/10/2020 7:21:28 PM	Completed
CAL3	Three	T6	40	0	50	TO-15_A.CTD3	8/10/2020 8:11:37 PM	Completed
CAL4	Three	T6	40	0	100	TO-15_A.CTD3	8/10/2020 9:02:31 PM	Completed
CAL5	Three	T6	40	0	150	TO-15_A.CTD3	8/10/2020 9:54:23 PM	Completed
CAL6	Three	T6	40	0	200	TO-15_A.CTD3	8/10/2020 10:47:09 PM	Completed
SCV1	Three	T7	40	0	200	TO-15_A.CTD3	8/10/2020 11:40:22 PM	Completed
SCV1	Three	T7	40	0	200	TO-15_A.CTD3	8/11/2020 12:33:33 AM	Completed
BLANK	Three	T3	40	0	200	TO-15_A.CTD3	8/11/2020 1:26:17 AM	Completed
BFB	Three	T5	40	40	50	TO-15_A.CTD3	8/11/2020 2:18:02 AM	Completed
CCV1	Three	T6	40	0	100	TO-15_A.CTD3	8/11/2020 3:09:16 AM	Completed
CRL1	Three	T5	40	0	20	TO-15_A.CTD3	8/11/2020 3:59:17 AM	Completed
BLANK	Three	T3	40	0	200	TO-15_A.CTD3	8/11/2020 4:52:06 AM	Completed

SEQUENCE DATA

S20H017

S20H017-TUN1

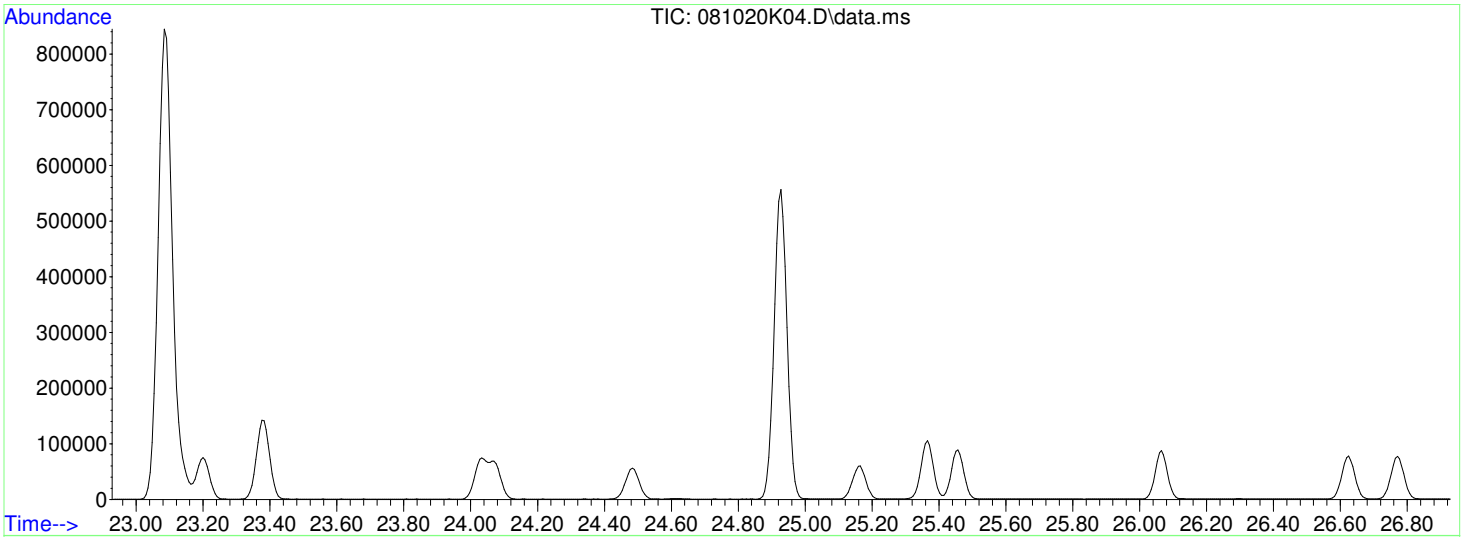
Table of Contents

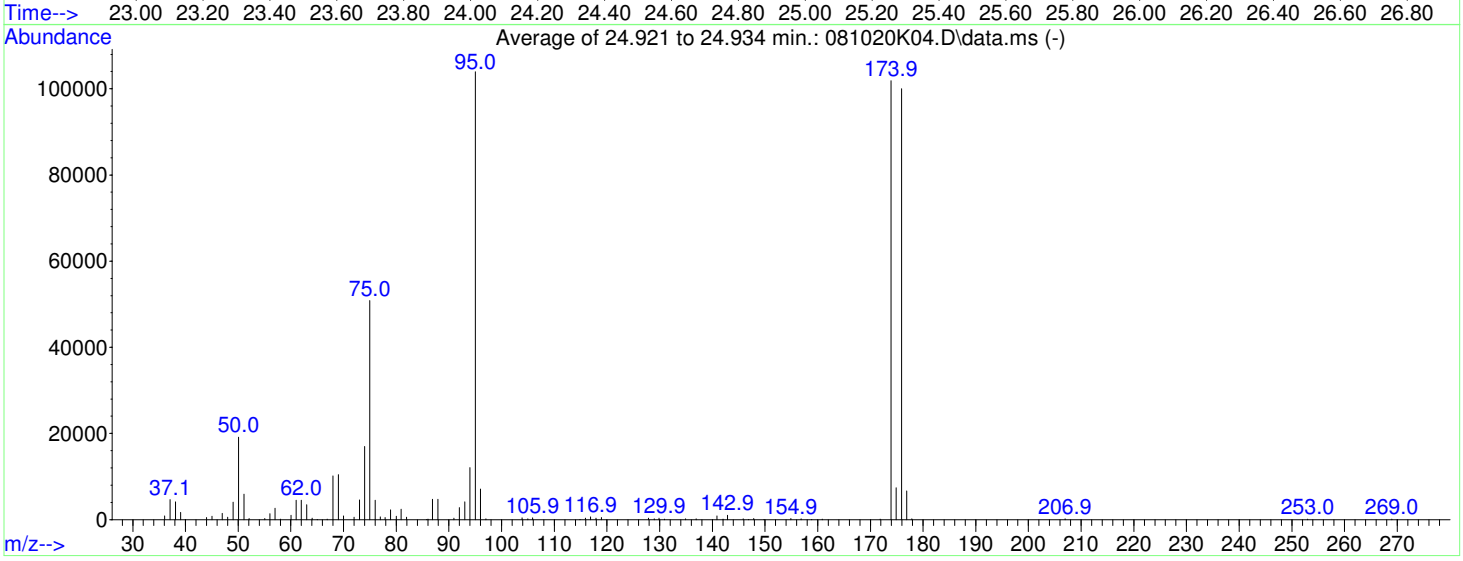
Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K04.D
InstName : HP5973K
Acq On : 10 Aug 2020 5:41 pm
Operator : EM
Sample : S20H017-TUN1
Misc : BFB 1901028
ALS Vial : 35 Sample Multiplier: 1

REVIEWED
By EM at 4:20 pm, Aug 12, 2020

Integration File: lscint.p

Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Title : TO15
Last Update : Wed Aug 12 16:12:13 2020





AutoFind: Scans 3327, 3328, 3329; Background Corrected with Scan 3312

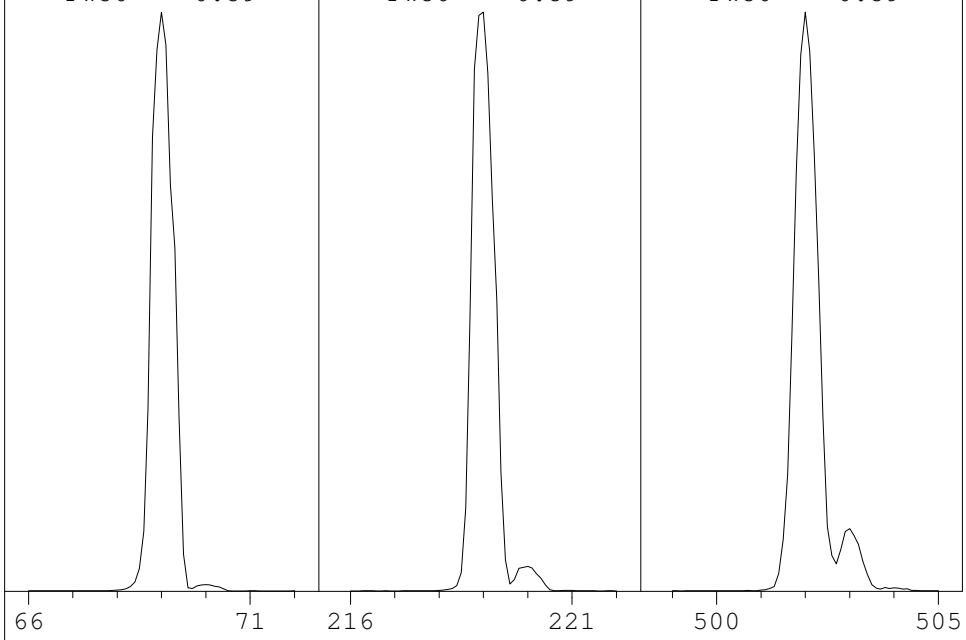
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.4	19160	PASS
75	95	30	66	48.9	50821	PASS
95	95	100	100	100.0	103997	PASS
96	95	5	9	6.8	7103	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	98.0	101912	PASS
175	174	4	9	7.2	7380	PASS
176	174	93	101	98.2	100032	PASS
177	176	5	9	6.7	6676	PASS

Autotune

Mon Aug 10 12:18:29 2020 Instrum

C:\MSDCHEM\1\5973N\atune.u US03960556

Mass	69.00	Mass	219.00	Mass	502.00
Ab	424536	Ab	313606	Ab	36731
Pw50	0.59	Pw50	0.59	Pw50	0.59



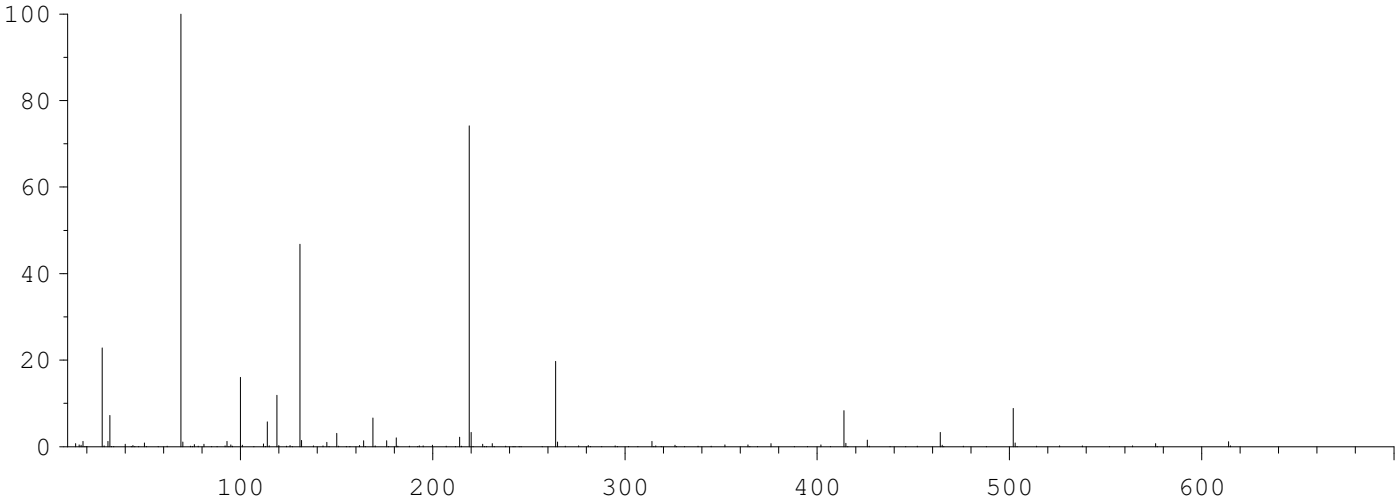
Ion Pol	Pos	MassGain	70
		MassOffs	-8
Emission	34.6	AmuGain	1987
EIEnrgy	69.9	AmuOffs	130
Filament	2	Wid219	-0.046
		DC Pol	Pos
Repeller	34.81		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1106
EntOffs	19.83		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10

143 peaks Base: 69.00 Abundance: 382784



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	382784	100.00	70.00	4166	1.09
219.00	283776	74.13	220.00	12706	4.48
502.00	33752	8.82	503.00	3146	9.32

Air/Water Check: H20~1.22% N2~22.83% O2~7.21% CO2~0.25% N2/H2O~1868.89%

Column(1) Flow: 0.873 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:

Ion Focus Maximum 90 volts using ion 502; EM Gain 97430

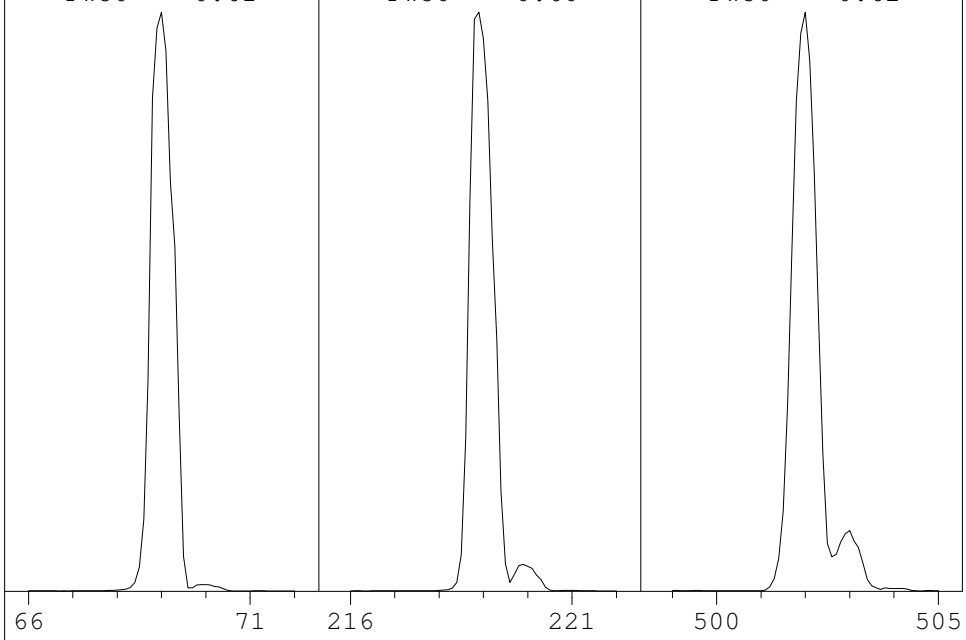
Repeller Maximum 35 volts using ion 219; Gain Factor 0.97

MassGain Values(Samples): 72(3) 72(2) 72(1) 69(0) 70(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	130.0	130.0	130.0	130.0	130.0	130.0	130.0
Entrance Lens Offset:	19.8	19.8	19.8	19.8	19.8	19.8	19.8

Mon Aug 10 12:26:05 2020 Instrum
C:\msdchem\1\5973N\bfb081020K.U US03960556

Mass	69.00	Mass	218.90	Mass	502.00
Ab	561093	Ab	367681	Ab	41637
Pw50	0.61	Pw50	0.60	Pw50	0.62

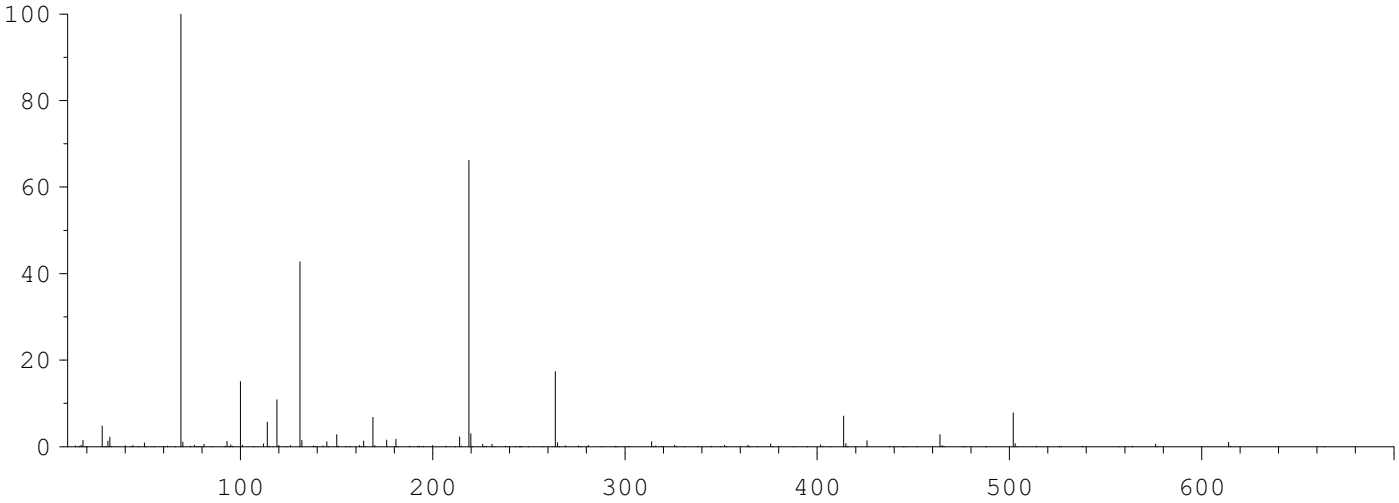


Ion Pol	Pos	MassGain	68
		MassOffs	-8
Emission	34.6	AmuGain	1984
EIEnrgy	69.9	AmuOffs	131
Filament	2	Wid219	-0.031
		DC Pol	Pos
Repeller	32.80		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1153
EntOffs	19.83		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
153 peaks Base: 69.00 Abundance: 507008



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	507008	100.00	70.00	5404	1.07
218.90	335488	66.17	219.90	15163	4.52
502.00	39472	7.79	503.00	3728	9.44

Air/Water Check: H20~1.42% N2~4.78% O2~2.19% CO2~0.25% N2/H2O~337.56%

Column(1) Flow: 0.873 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 124113
Repeller Maximum 35 volts using ion 219; Gain Factor 1.24

MassGain Values(Samples): 68(3) 68(2) 68(1) 68(0) 68(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Entrance Lens Offset:	19.8	19.8	19.8	19.8	19.8	19.8	19.8

S20H017-CAL1

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K05.D
InstName : HP5973K
Acq On : 10 Aug 2020 6:31 pm
Operator : EM
Sample : S20H017-CAL1
Misc : 1.0ppbv 2033026
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 16:10:45 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:10:33 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	281592	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	867494	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	762493	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.992	41	7281	0.95	ppbv		99
3) Dichlorodifluoromethane	5.095	85	18257	0.95	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.484	85	20057	0.95	ppbv		100
5) Chloromethane	5.722	50	7349	0.96	ppbv		100
6) Vinyl chloride	6.075	62	7737	0.99	ppbv		98
7) 1,3-Butadiene	6.172	54	6194	1.07	ppbv		94
8) Bromomethane	7.236	94	6258	1.01	ppbv		99
9) Chloroethane	7.614	64	4191	0.98	ppbv		99
10) Bromoethene	8.259	106	6613	1.02	ppbv		99
11) Trichlorofluoromethane	8.380	101	17179	0.93	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.370	151	12527	1.06	ppbv		100
13) 1,1-Dichloroethene	10.503	61	10335	0.98	ppbv		98
14) Acetone	11.100	43	11688	1.02	ppbv		99
15) Carbon disulfide	11.203	76	22476	1.09	ppbv		96
16) 2-Propanol	11.604	45	10125	0.91	ppbv		87
17) Allyl chloride	11.963	41	9266	1.02	ppbv		98
18) Dichloromethane	12.487	49	11510	1.24	ppbv		96
19) tert-Butyl methyl ethe...	13.040	73	18921	0.99	ppbv		100
20) trans-1,2-Dichloroethene	13.107	61	10815	1.03	ppbv		98
21) Hexane	13.594	57	11633	0.92	ppbv		96
22) 1,1-Dichloroethane	14.397	63	12801	0.94	ppbv		99
23) Vinyl acetate	14.500	43	15849	0.93	ppbv		99
24) cis-1,2-Dichloroethene	15.784	61	9044	0.95	ppbv	#	98
25) 2-Butanone (MEK)	15.875	72	3802	0.93	ppbv	#	96
26) Ethyl acetate	15.869	61	2507	1.00	ppbv	#	90
27) Tetrahydrofuran	16.295	42	8478	0.88	ppbv		100
28) Chloroform	16.447	83	14575	1.04	ppbv		97
29) Cyclohexane	16.617	56	12602	1.02	ppbv		98
30) 1,1,1-Trichloroethane	16.696	97	13954	1.02	ppbv		100
31) Carbon tetrachloride	16.940	117	14266	0.94	ppbv		99
33) Benzene	17.439	78	23453	1.00	ppbv		99
34) 2,2,4-Trimethylpentane	17.317	57	38173	0.98	ppbv		98
35) 1,2-Dichloroethane	17.658	62	9160	0.95	ppbv		99
36) Heptane	17.682	43	14205	0.97	ppbv		99
37) Trichloroethene	18.625	130	10080	1.01	ppbv		99
38) 1,2-Dichloropropane	19.142	63	8558	0.97	ppbv		98
39) 1,4-Dioxane	19.331	88	5305	1.03	ppbv		98
40) Bromodichloromethane	19.598	83	16694	1.03	ppbv		99
41) cis-1,3-Dichloropropene	20.353	75	11378	0.87	ppbv		99
42) 4-Methyl-2-pentanone (...	20.560	43	17175	0.88	ppbv		99
44) Toluene	20.809	91	25100	0.95	ppbv		99
45) trans-1,3-Dichloropropene	21.290	75	9604	0.79	ppbv		98
46) 1,1,2-Trichloroethane	21.594	97	8850	0.99	ppbv		96
47) Tetrachloroethene	21.642	166	13630	0.96	ppbv		99
48) 2-Hexanone	21.898	43	14982	0.83	ppbv		99
49) Chlorodibromomethane	22.208	129	16205	1.02	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	12305	0.97	ppbv		100
51) Chlorobenzene	23.133	112	21890	1.00	ppbv	#	76
52) Ethylbenzene	23.200	91	34135	0.96	ppbv		99
53) m&p-Xylene	23.376	91	49778	1.85	ppbv		99
54) o-Xylene	24.033	91	23434	0.87	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K05.D
InstName : HP5973K
Acq On : 10 Aug 2020 6:31 pm
Operator : EM
Sample : S20H017-CAL1
Misc : 1.0ppbv 2033026
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 16:10:45 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:10:33 2020
Response via : Initial Calibration

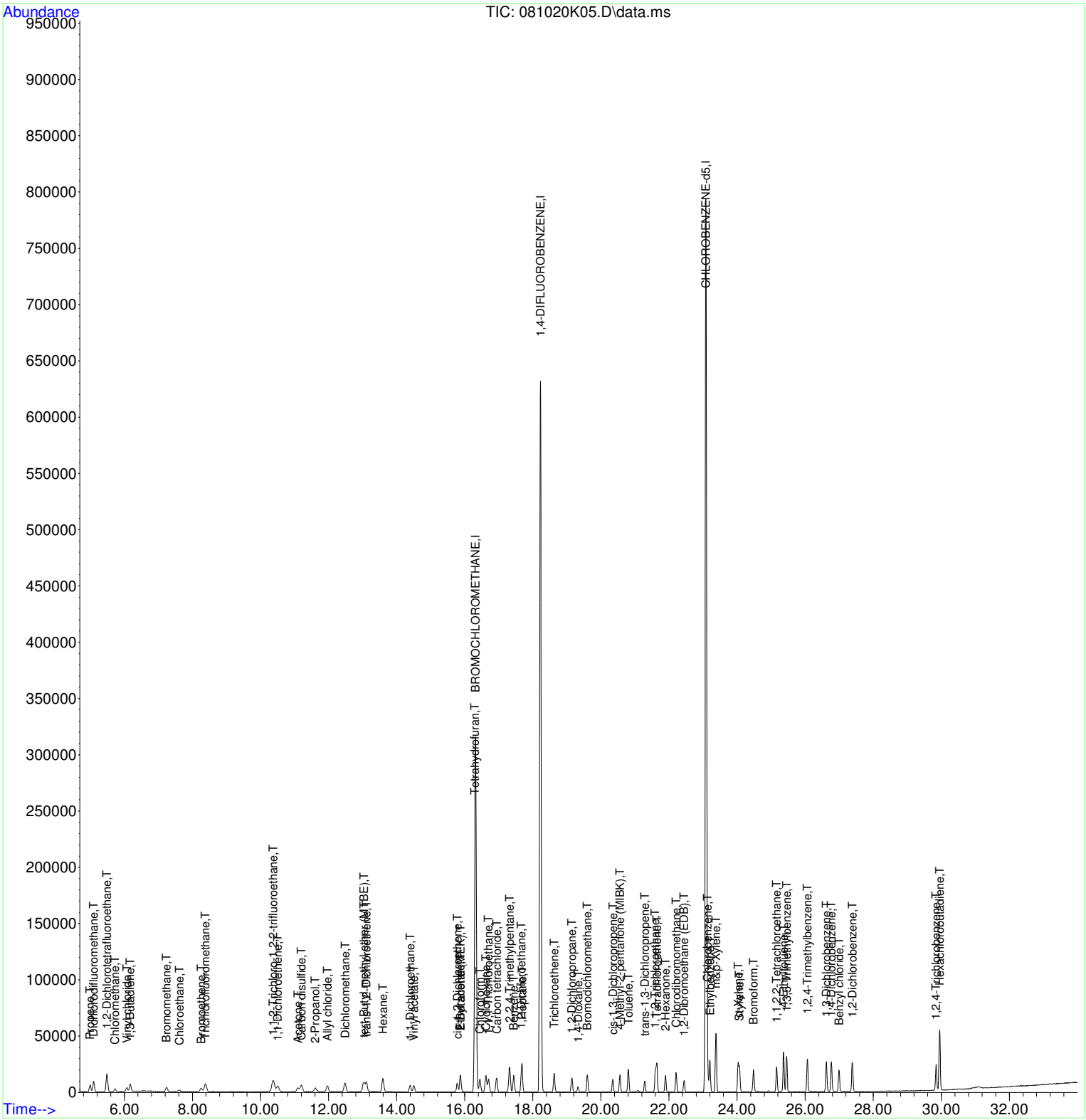
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	24.070	104	18792	0.85	ppbv	99
56)	Bromoform	24.483	173	16324	0.97	ppbv	98
57)	1,1,2,2-Tetrachloroethane	25.159	83	19228	0.92	ppbv	98
58)	4-Ethyltoluene	25.366	105	37646	0.86	ppbv	100
59)	1,3,5-Trimethylbenzene	25.457	105	28296	0.87	ppbv	99
60)	1,2,4-Trimethylbenzene	26.065	105	26256	0.81	ppbv	99
61)	1,3-Dichlorobenzene	26.625	146	20573	0.84	ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	19609	0.82	ppbv	99
63)	Benzyl chloride	26.996	91	24247	0.76	ppbv	99
64)	1,2-Dichlorobenzene	27.385	146	20041	0.85	ppbv	98
65)	1,2,4-Trichlorobenzene	29.843	180	14341	0.70	ppbv	99
66)	Hexachlorobutadiene	29.953	225	19065	0.84	ppbv	100

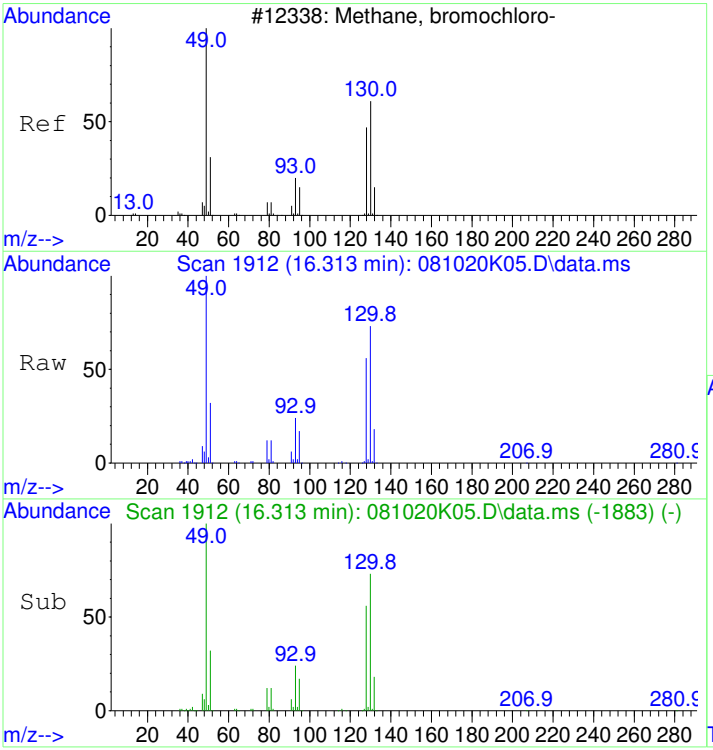
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K05.D
InstName : HP5973K
Acq On : 10 Aug 2020 6:31 pm
Operator : EM
Sample : S20H017-CAL1
Misc : 1.0ppbv 2033026
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 16:10:45 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:10:33 2020
Response via : Initial Calibration

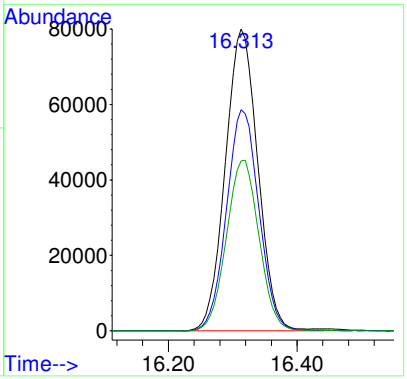


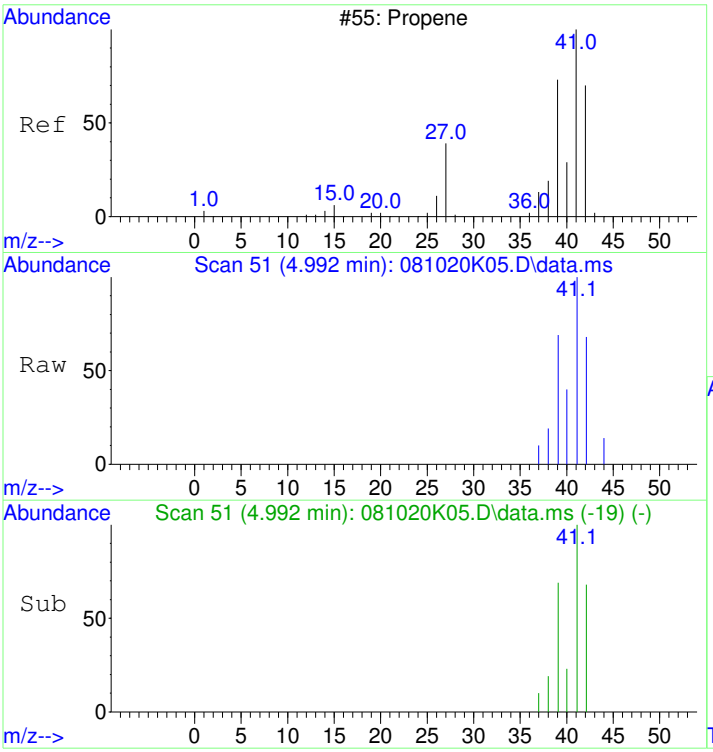


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 49 Resp: 281592

Ion	Ratio	Lower	Upper
49	100		
130	73.0	49.9	89.9
128	56.2	33.7	73.7

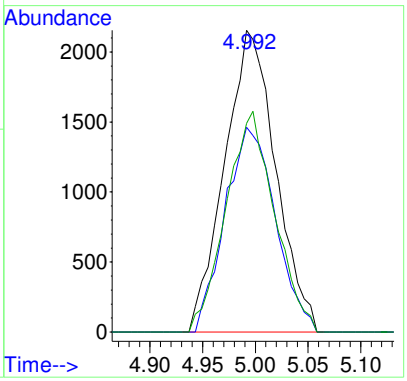


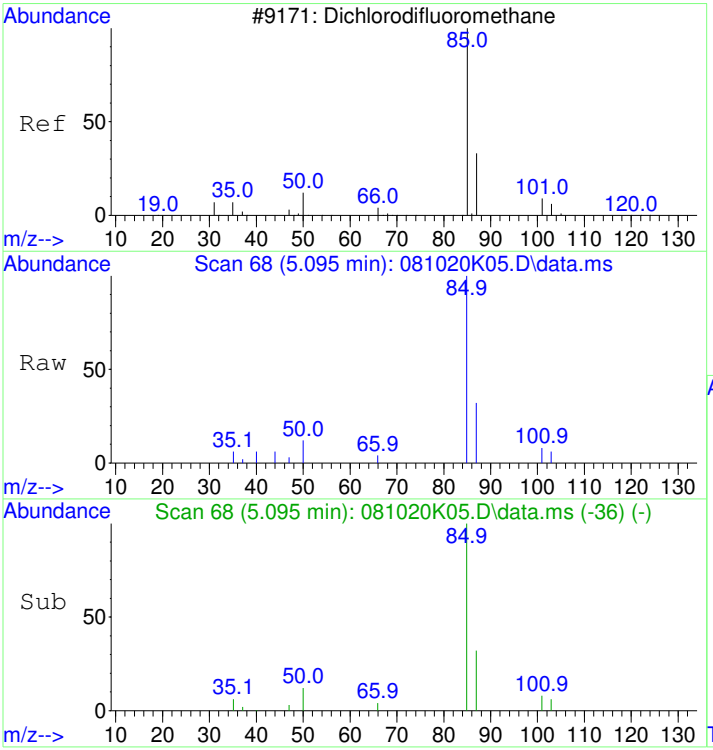


#2
Propene
Concen: 0.95 ppbv
RT: 4.992 min Scan# 51
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 41 Resp: 7281

Ion	Ratio	Lower	Upper
41	100		
42	66.9	47.0	87.0
39	69.5	47.7	87.7

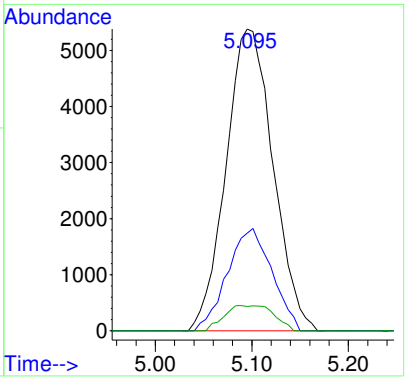


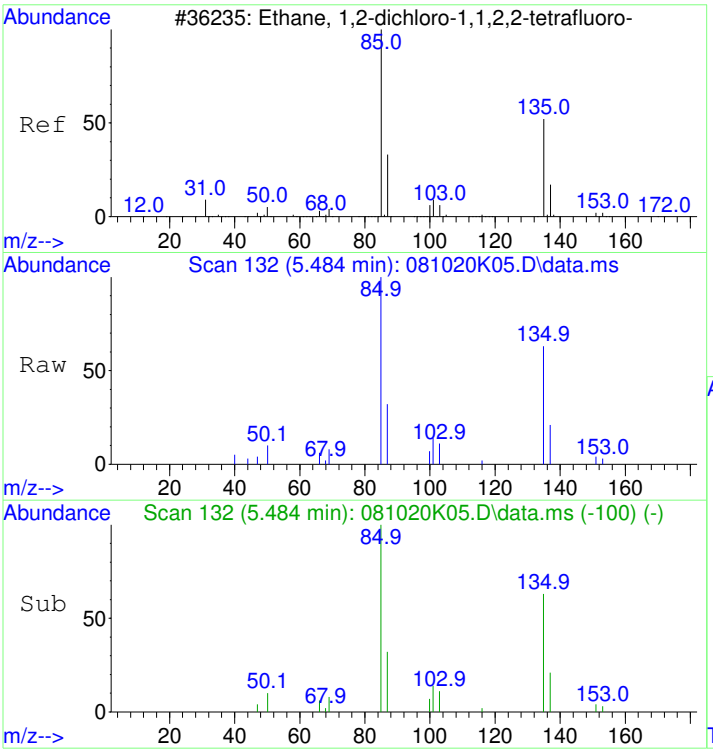


#3
Dichlorodifluoromethane
Concen: 0.95 ppbv
RT: 5.095 min Scan# 68
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 85 Resp: 18257

Ion	Ratio	Lower	Upper
85	100		
87	32.1	12.4	52.4
101	8.8	0.0	29.1

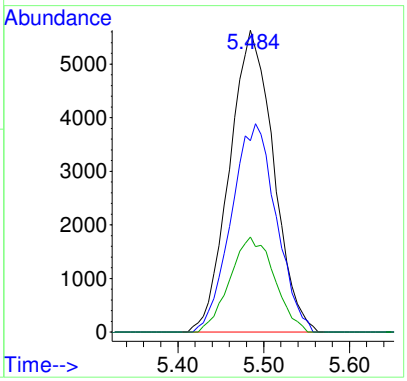


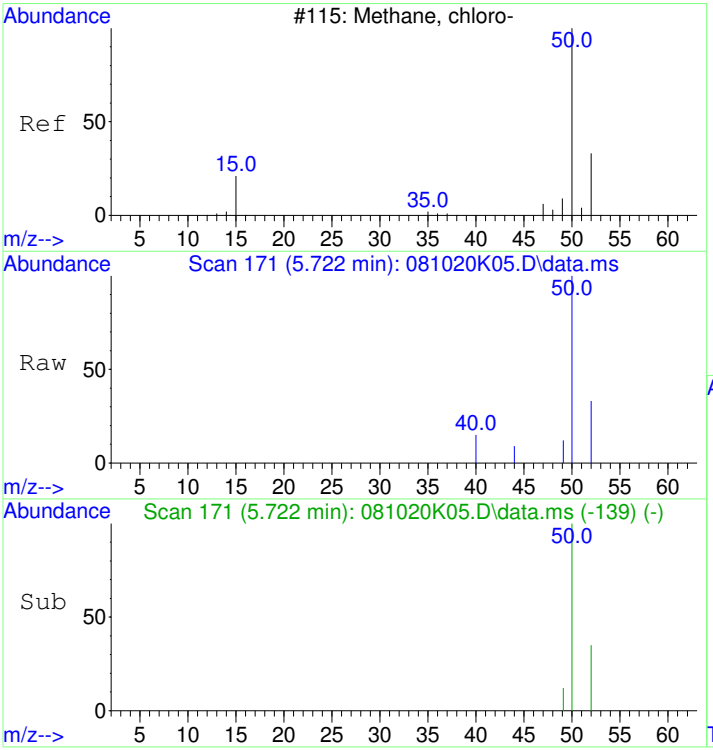


#4
1,2-Dichlorotetrafluoroethane
Concen: 0.95 ppbv
RT: 5.484 min Scan# 132
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 85 Resp: 20057

Ion	Ratio	Lower	Upper
85	100		
135	70.6	50.5	90.5
87	31.8	12.2	52.2

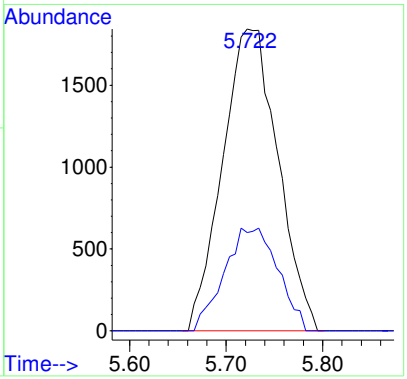


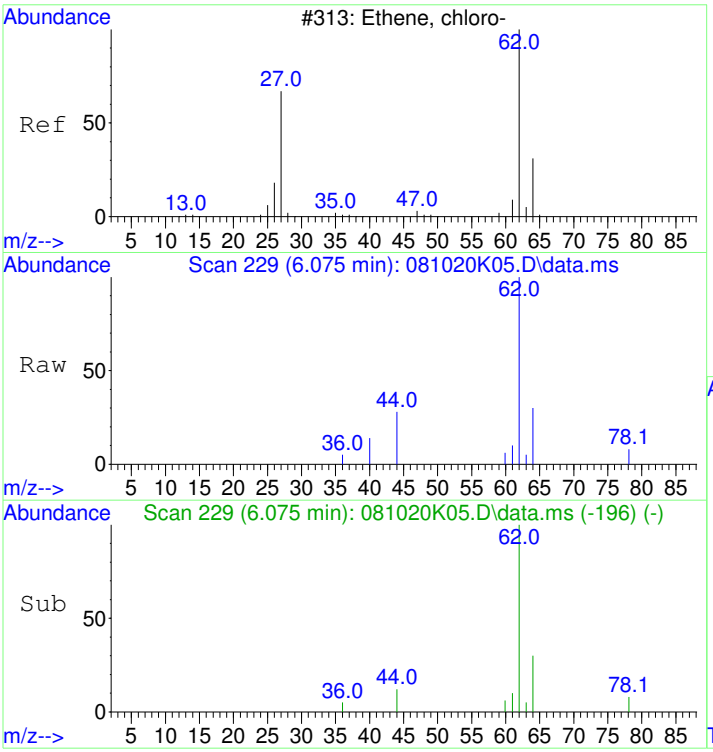


#5
Chloromethane
Concen: 0.96 ppbv
RT: 5.722 min Scan# 171
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 50 Resp: 7349

Ion	Ratio	Lower	Upper
50	100		
52	32.9	12.7	52.7

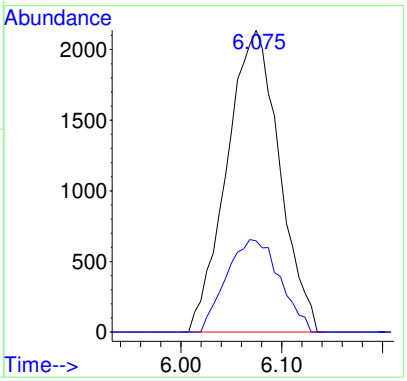


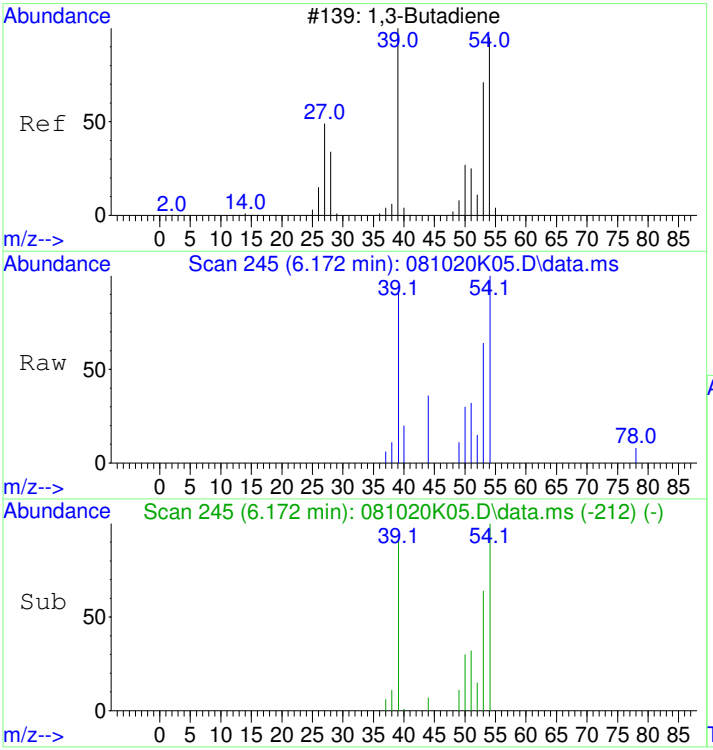


#6
Vinyl chloride
Concen: 0.99 ppbv
RT: 6.075 min Scan# 229
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 62 Resp: 7737

Ion	Ratio	Lower	Upper
62	100		
64	31.2	12.1	52.1

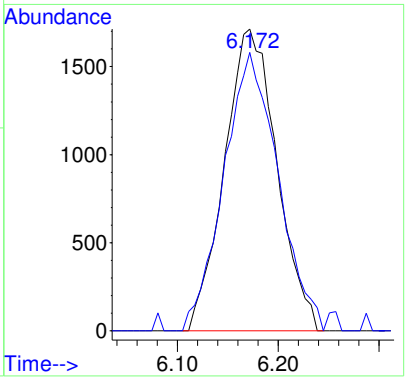


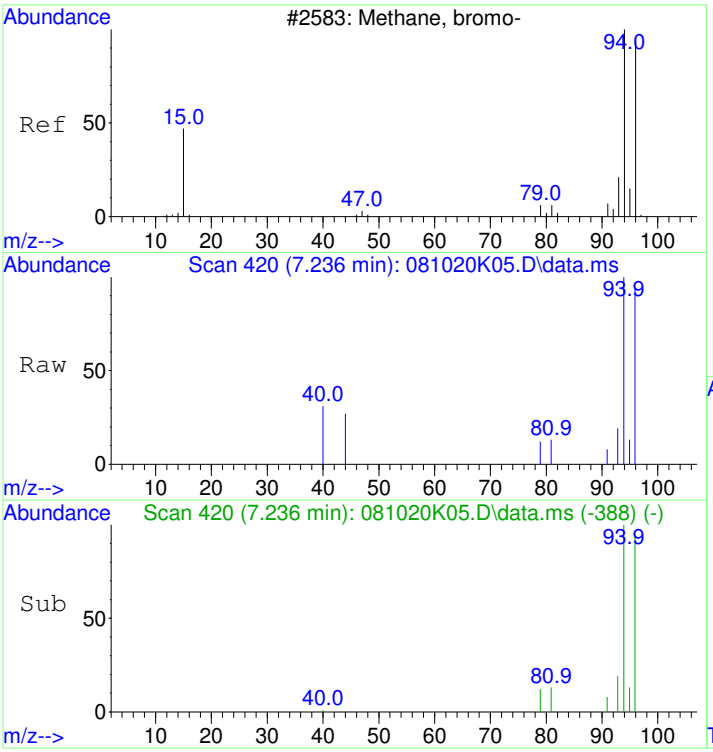


#7
1,3-Butadiene
Concen: 1.07 ppbv
RT: 6.172 min Scan# 245
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 54 Resp: 6194

Ion	Ratio	Lower	Upper
54	100		
39	95.6	70.2	110.2

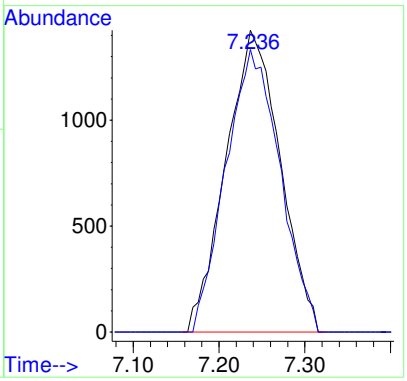


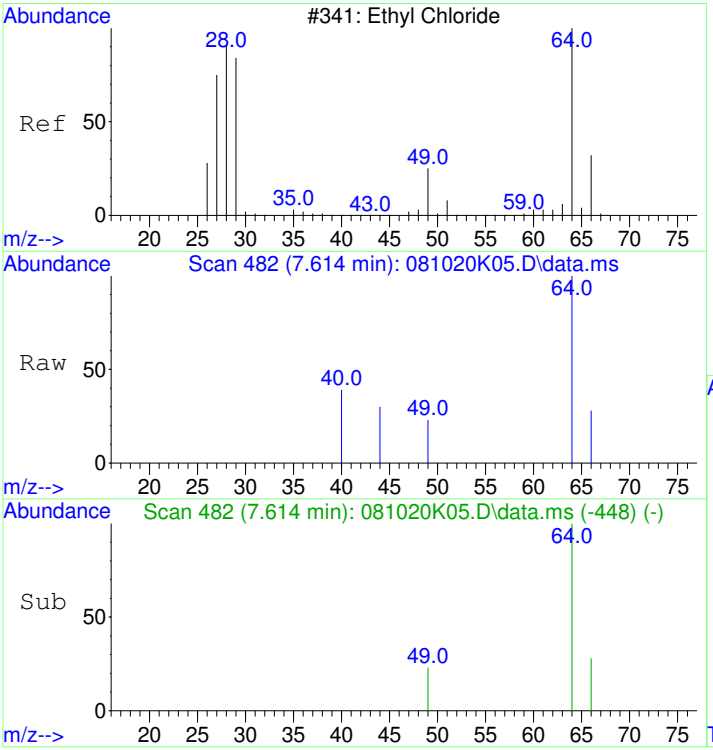


#8
Bromomethane
Concen: 1.01 ppbv
RT: 7.236 min Scan# 420
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 94 Resp: 6258

Ion	Ratio	Lower	Upper
94	100		
96	93.5	72.2	112.2

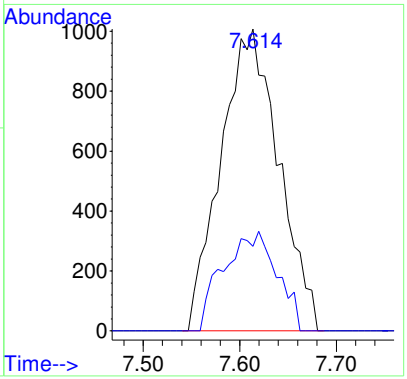


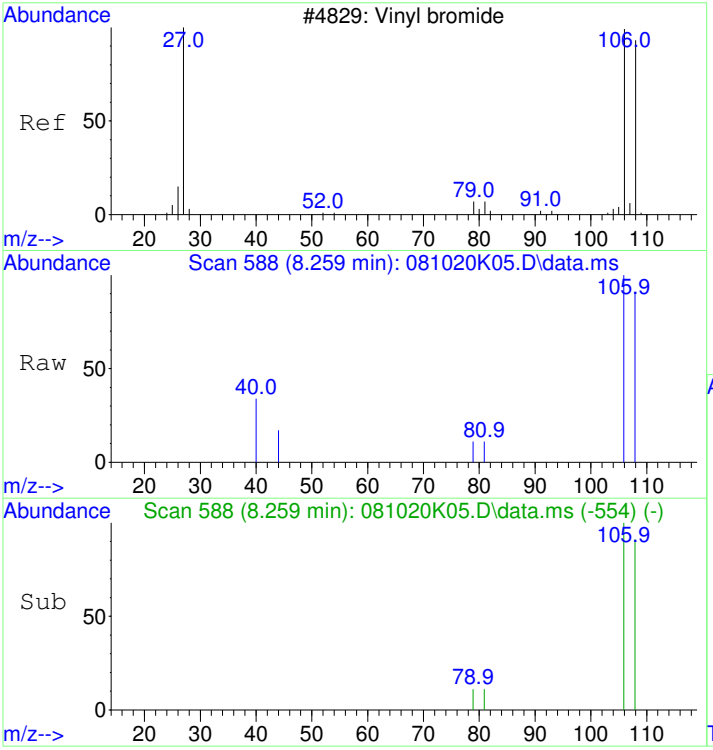


#9
Chloroethane
Concen: 0.98 ppbv
RT: 7.614 min Scan# 482
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 64 Resp: 4191

Ion	Ratio	Lower	Upper
64	100		
66	30.4	10.9	50.9

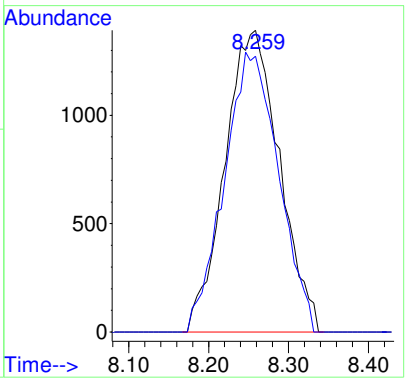


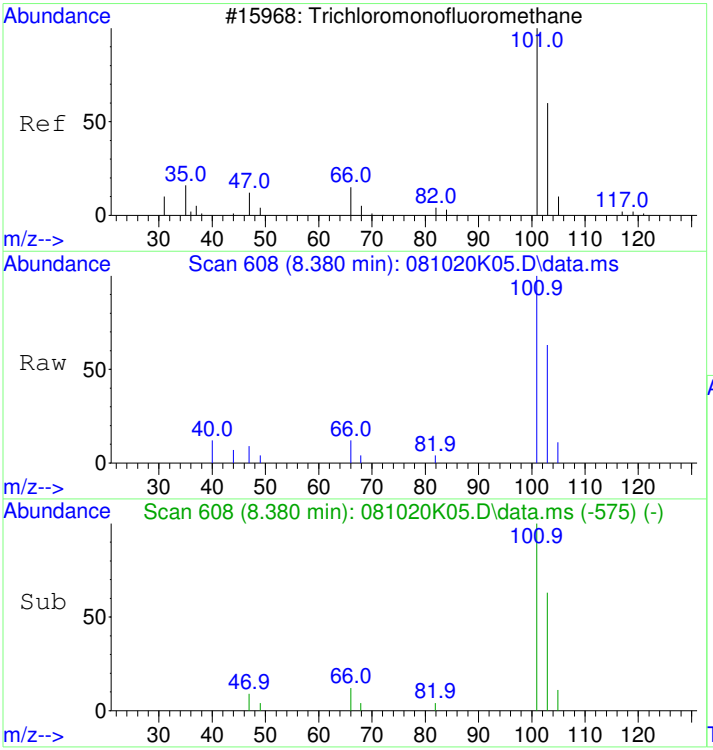


#10
Bromoethene
Concen: 1.02 ppbv
RT: 8.259 min Scan# 588
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:106 Resp: 6613

Ion	Ratio	Lower	Upper
106	100		
108	92.0	0.0	213.3

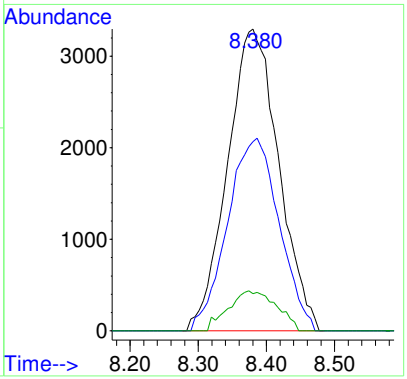


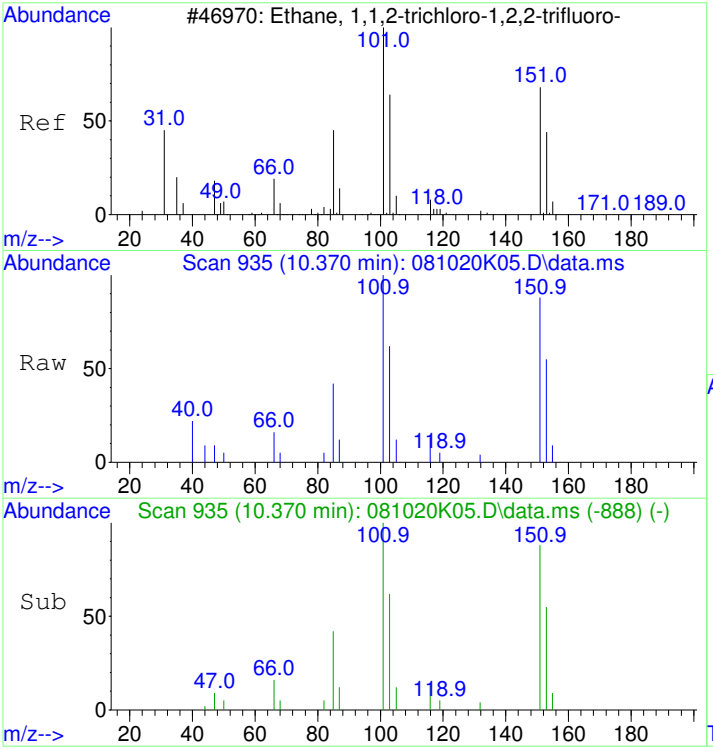


#11
Trichlorofluoromethane
Concen: 0.93 ppbv
RT: 8.380 min Scan# 608
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:101 Resp: 17179

Ion	Ratio	Lower	Upper
101	100		
103	64.3	44.9	84.9
66	12.4	0.0	32.8

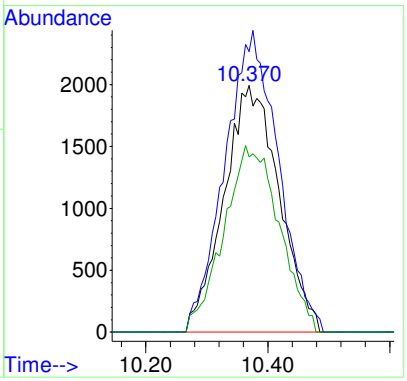


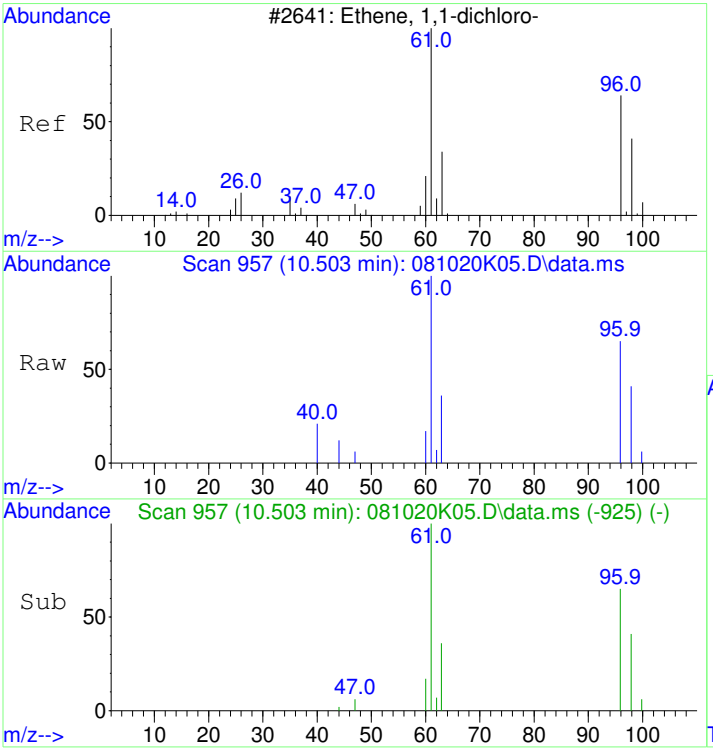


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.06 ppbv
RT: 10.370 min Scan# 935
Delta R.T. -0.012 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:151 Resp: 12527

Ion	Ratio	Lower	Upper
151	100		
101	118.7	98.7	138.7
103	75.8	56.2	96.2

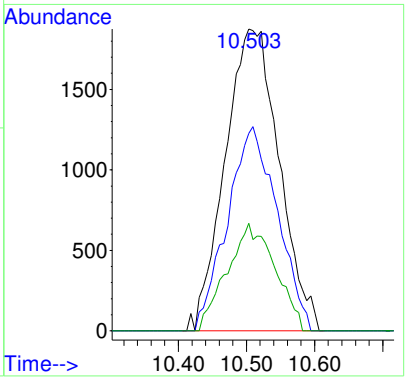


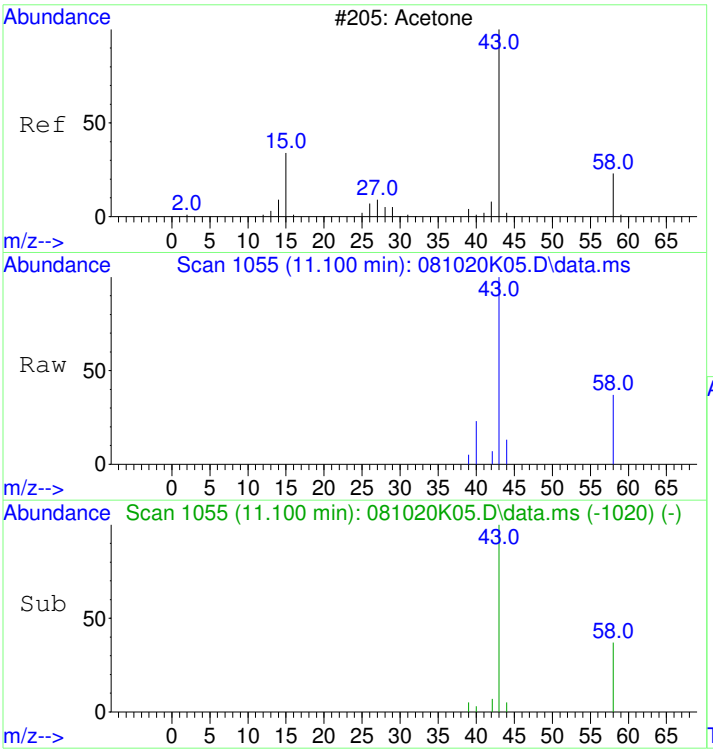


#13
1,1-Dichloroethene
Concen: 0.98 ppbv
RT: 10.503 min Scan# 957
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 61 Resp: 10335

Ion	Ratio	Lower	Upper
61	100		
96	62.4	40.7	80.7
63	31.5	12.2	52.2

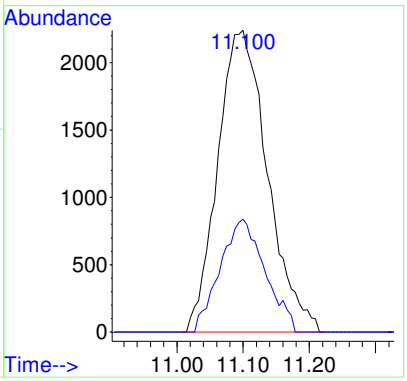


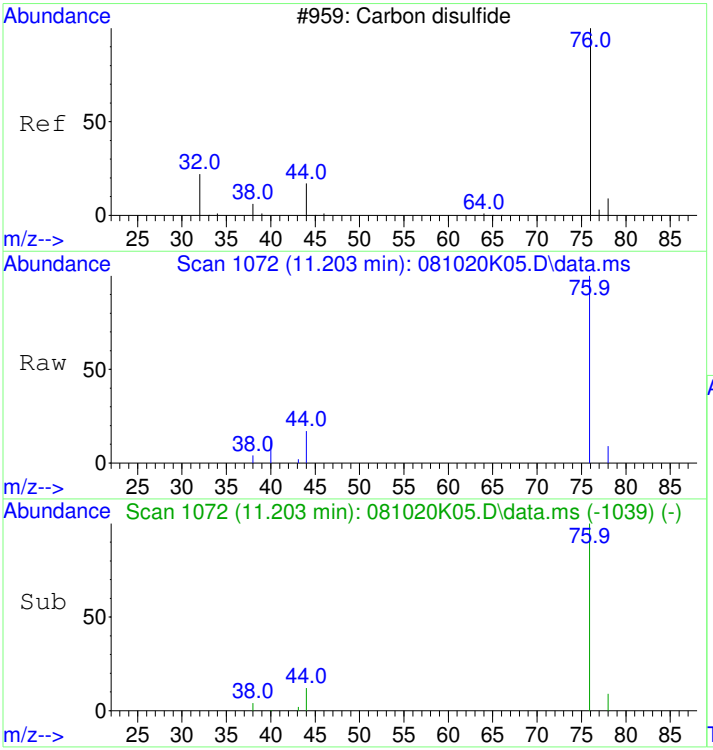


#14
Acetone
Concen: 1.02 ppbv
RT: 11.100 min Scan# 1055
Delta R.T. 0.012 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 43 Resp: 11688

Ion	Ratio	Lower	Upper
43	100		
58	33.7	13.4	53.4

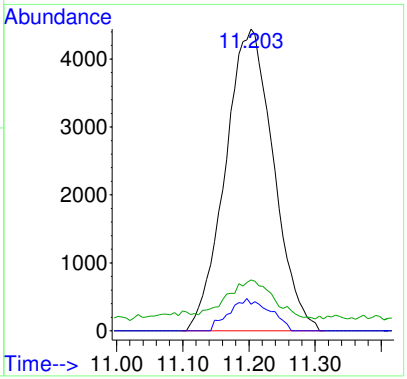


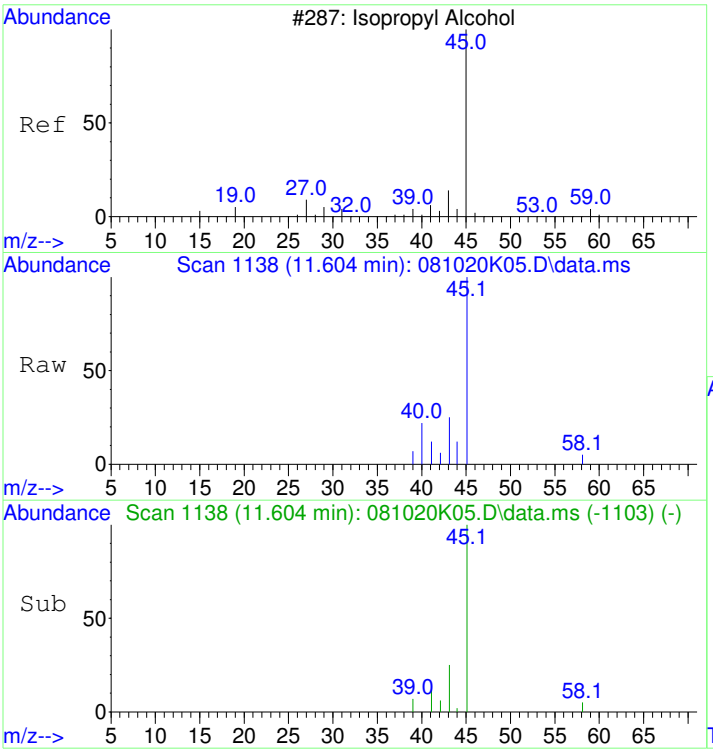


#15
Carbon disulfide
Concen: 1.09 ppbv
RT: 11.203 min Scan# 1072
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 76 Resp: 22476

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.0
44	10.7	0.0	33.6

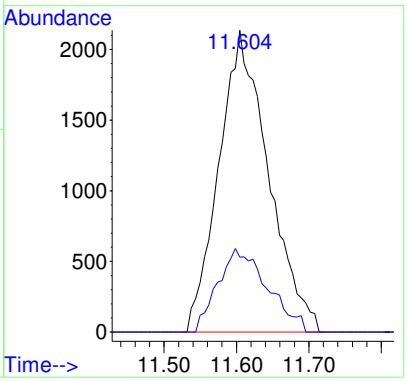


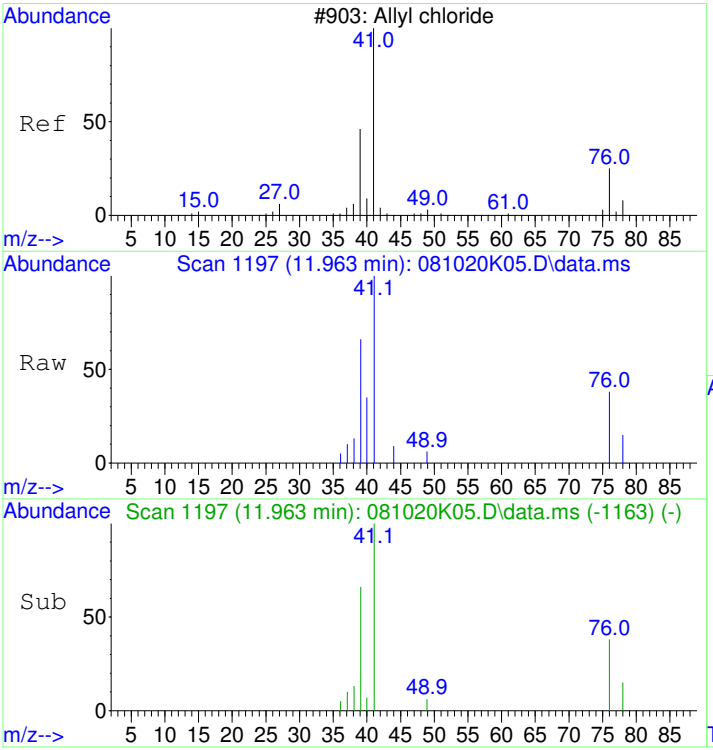


#16
2-Propanol
Concen: 0.91 ppbv
RT: 11.604 min Scan# 1138
Delta R.T. 0.012 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 45 Resp: 10125

Ion	Ratio	Lower	Upper
45	100		
43	27.6	1.5	41.5

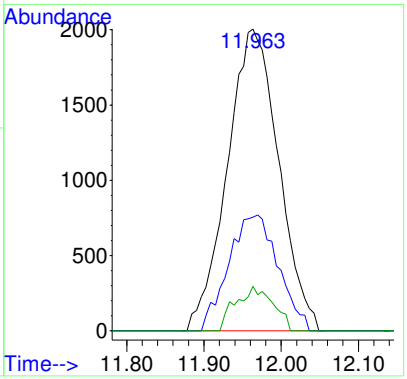


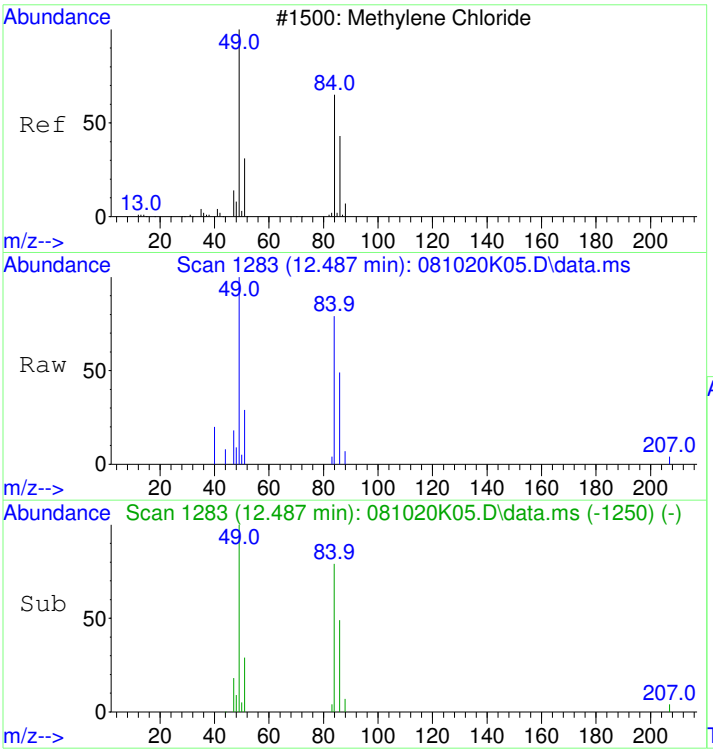


#17
Allyl chloride
Concen: 1.02 ppbv
RT: 11.963 min Scan# 1197
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 41 Resp: 9266

Ion	Ratio	Lower	Upper
41	100		
76	37.2	15.8	55.8
78	10.7	0.0	31.6

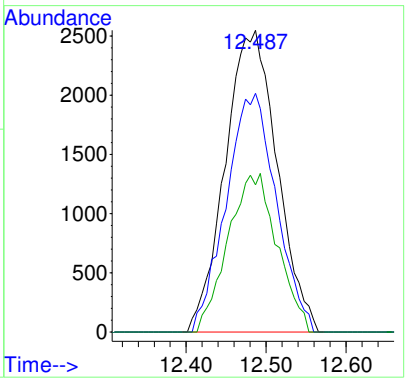


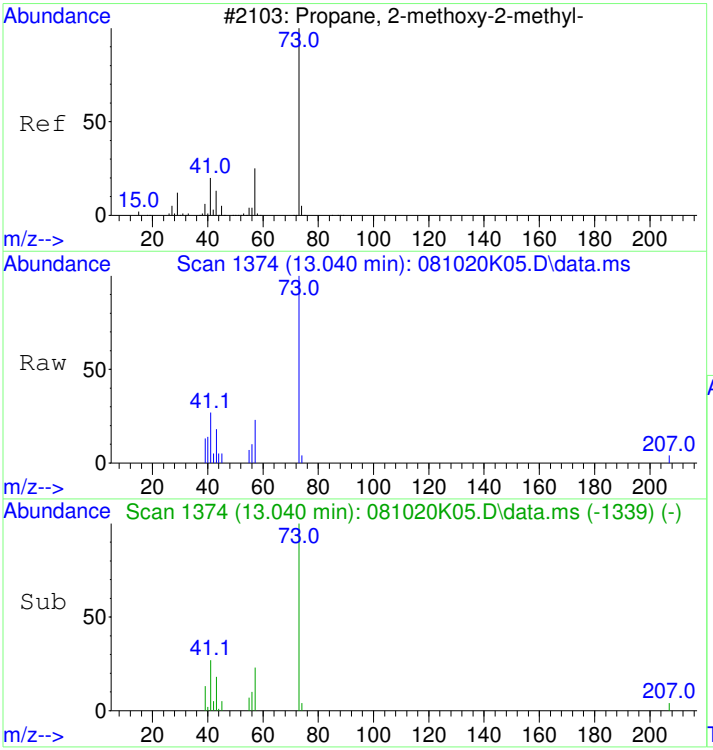


#18
Dichloromethane
Concen: 1.24 ppbv
RT: 12.487 min Scan# 1283
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 49 Resp: 11510

Ion	Ratio	Lower	Upper
49	100		
84	76.2	53.4	93.4
86	49.6	27.0	67.0

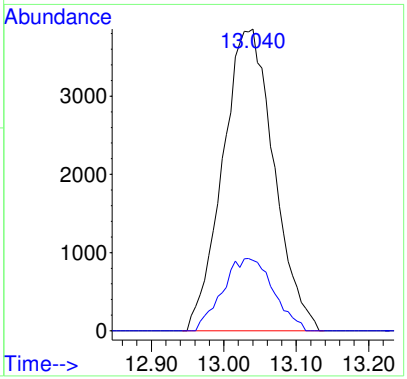


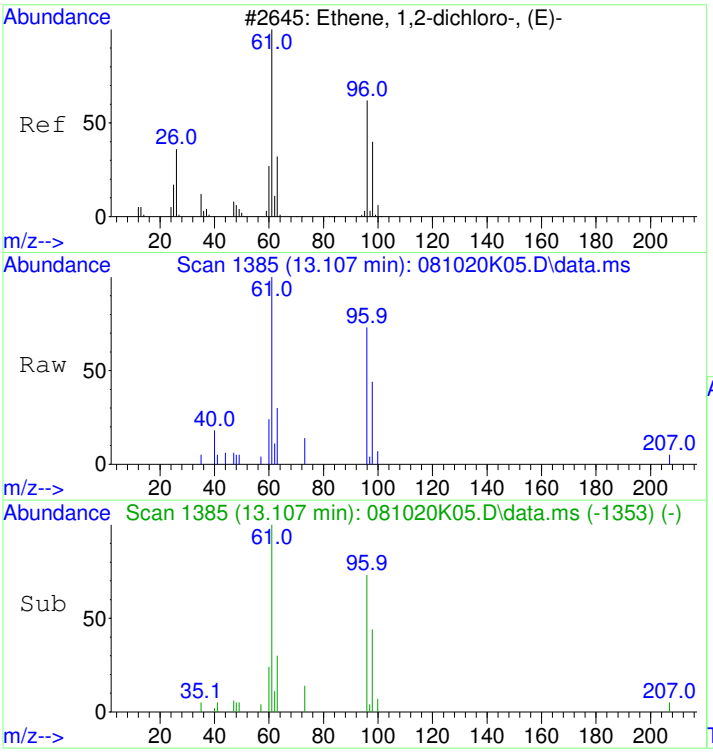


#19
tert-Butyl methyl ether (MTBE)
Concen: 0.99 ppbv
RT: 13.040 min Scan# 1374
Delta R.T. 0.012 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 73 Resp: 18921

Ion	Ratio	Lower	Upper
73	100		
57	23.8	3.8	43.8

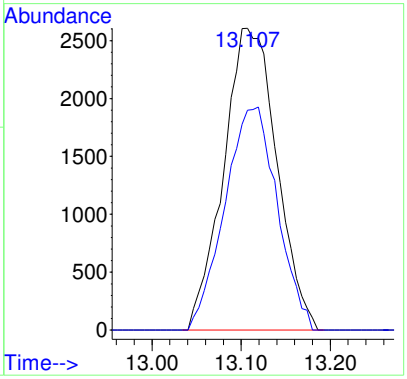


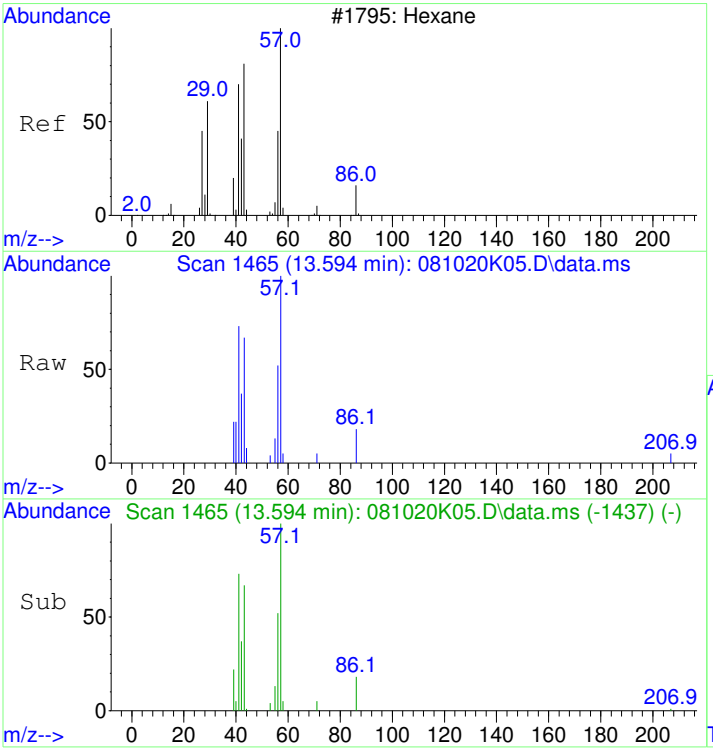


#20
trans-1,2-Dichloroethene
Concen: 1.03 ppbv
RT: 13.107 min Scan# 1385
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 61 Resp: 10815

Ion	Ratio	Lower	Upper
61	100		
96	72.7	50.7	90.7

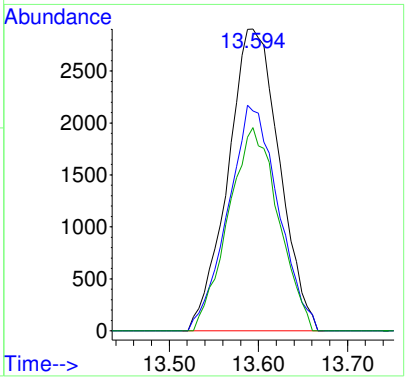


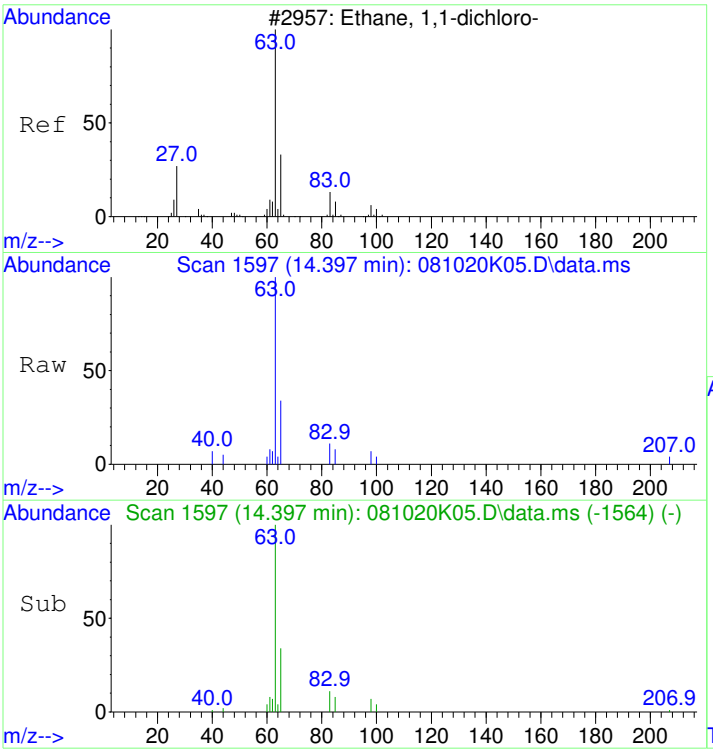


#21
Hexane
Concen: 0.92 ppbv
RT: 13.594 min Scan# 1465
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 57 Resp: 11633

Ion	Ratio	Lower	Upper
57	100		
41	73.0	47.8	87.8
43	65.5	44.7	84.7

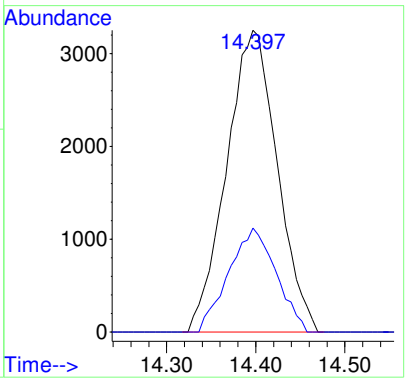


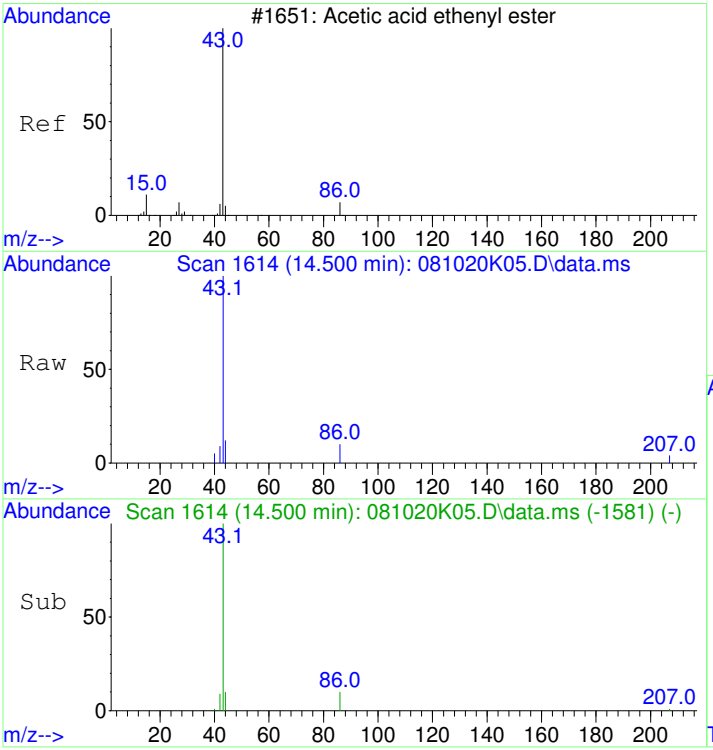


#22
1,1-Dichloroethane
Concen: 0.94 ppbv
RT: 14.397 min Scan# 1597
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 63 Resp: 12801

Ion	Ratio	Lower	Upper
63	100		
65	32.2	11.8	51.8

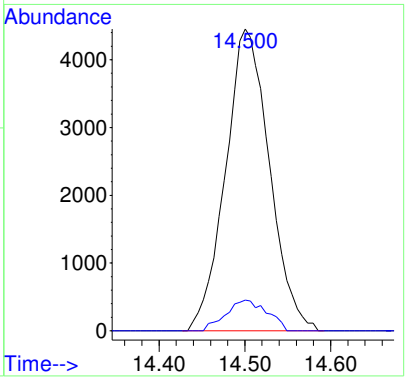


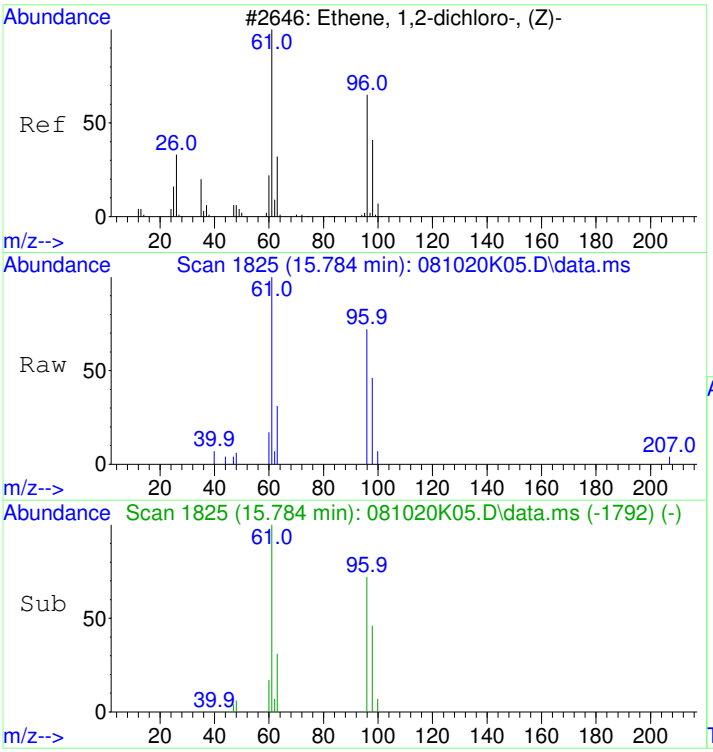


#23
Vinyl acetate
Concen: 0.93 ppbv
RT: 14.500 min Scan# 1614
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 43 Resp: 15849

Ion	Ratio	Lower	Upper
43	100		
86	9.6	0.0	29.9

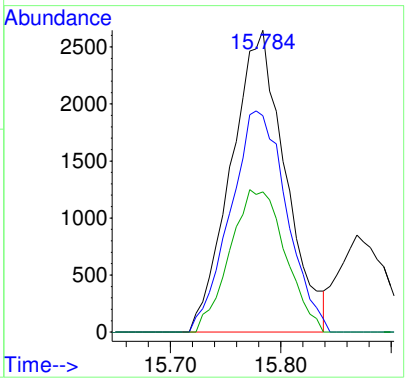


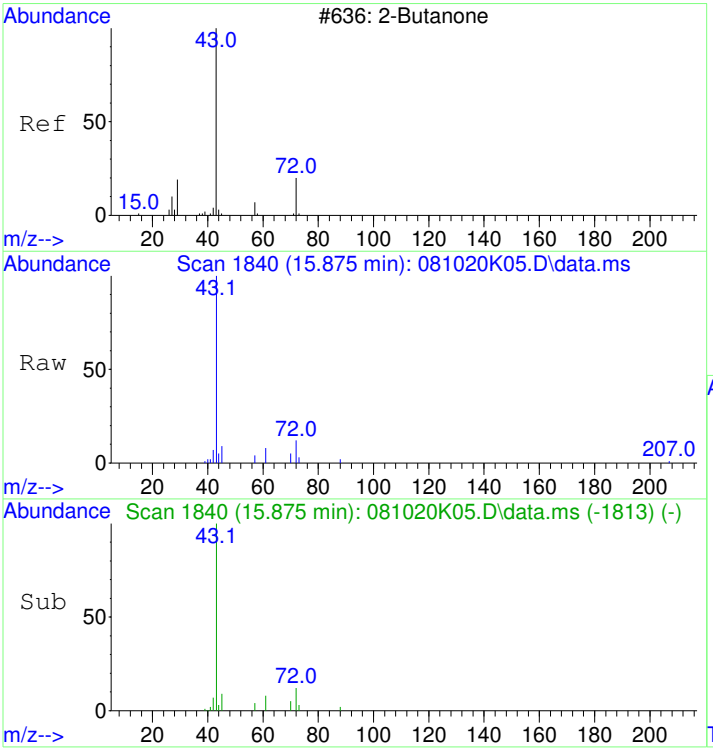


#24
cis-1,2-Dichloroethene
Concen: 0.95 ppbv
RT: 15.784 min Scan# 1825
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 61 Resp: 9044

Ion	Ratio	Lower	Upper
61	100		
96	76.3	55.0	95.0
98	0.0	0.0	20.0

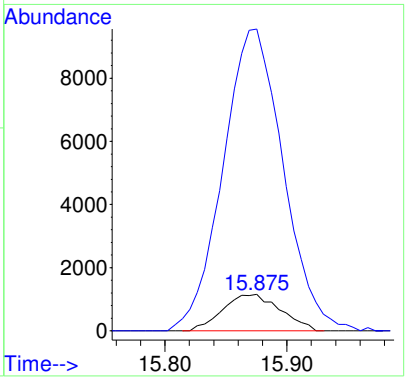


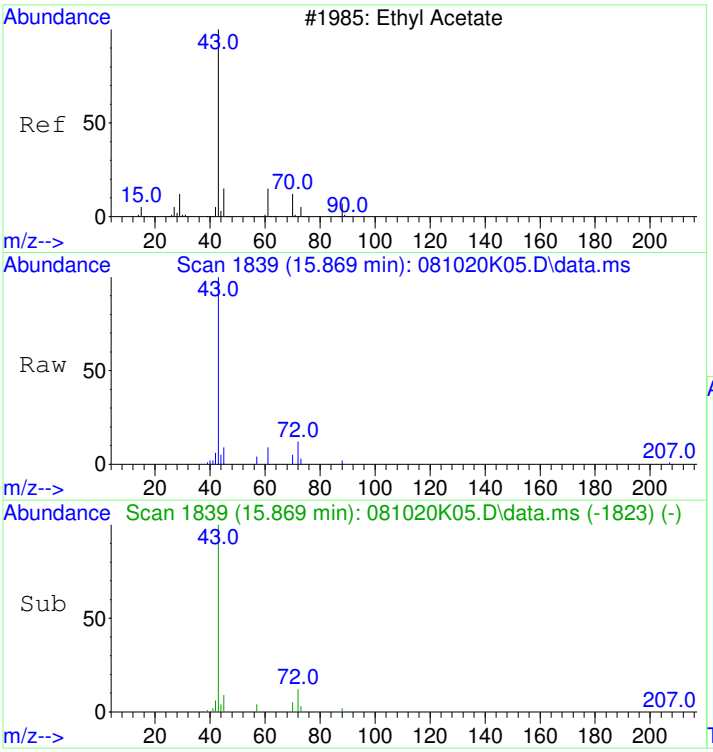


#25
2-Butanone (MEK)
Concen: 0.93 ppbv
RT: 15.875 min Scan# 1840
Delta R.T. 0.012 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 72 Resp: 3802

Ion	Ratio	Lower	Upper
72	100		
43	864.0	836.4	856.4#

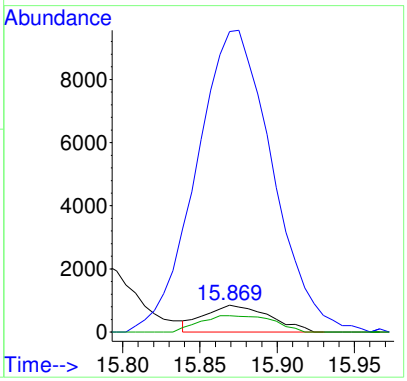


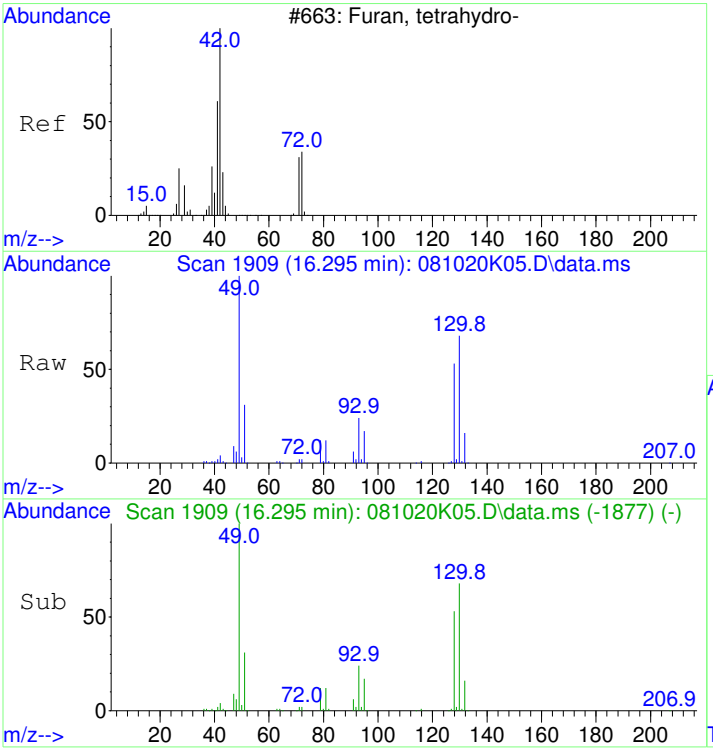


#26
Ethyl acetate
Concen: 1.00 ppbv
RT: 15.869 min Scan# 1839
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 61 Resp: 2507

Ion	Ratio	Lower	Upper
61	100		
43	1310.4	1355.9	1375.9#
70	68.2	64.9	84.9

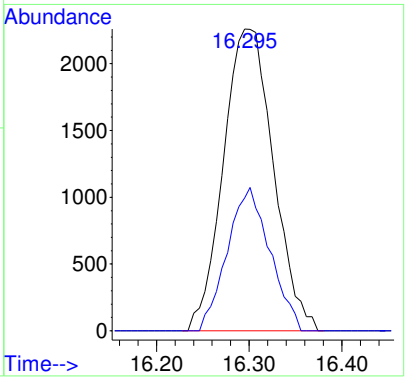


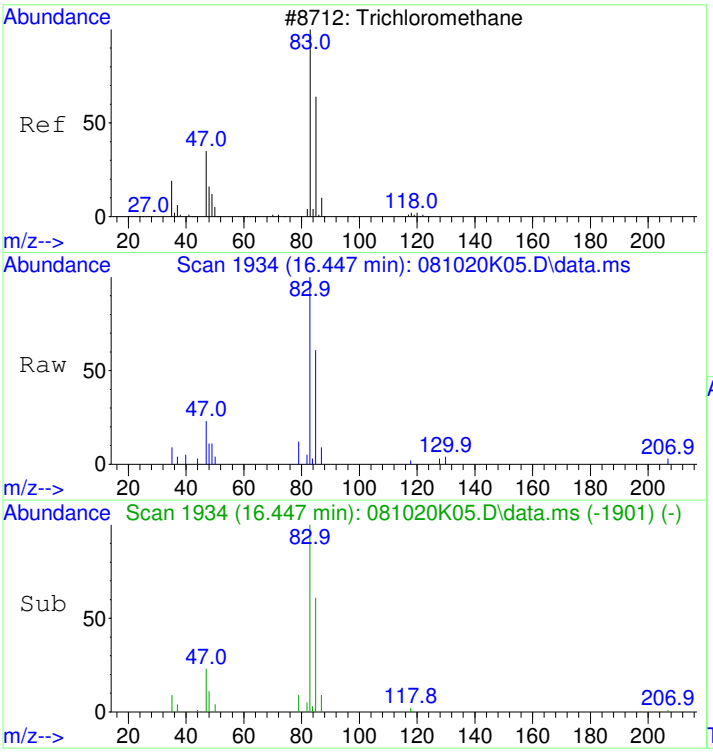


#27
Tetrahydrofuran
Concen: 0.88 ppbv
RT: 16.295 min Scan# 1909
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 42 Resp: 8478

Ion	Ratio	Lower	Upper
42	100		
72	40.4	20.5	60.5

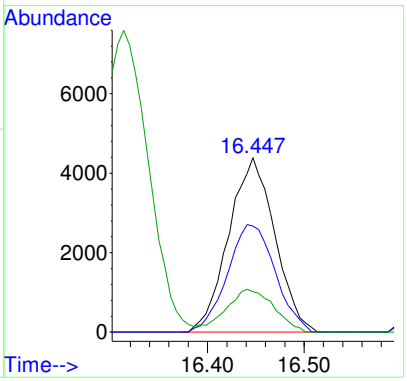


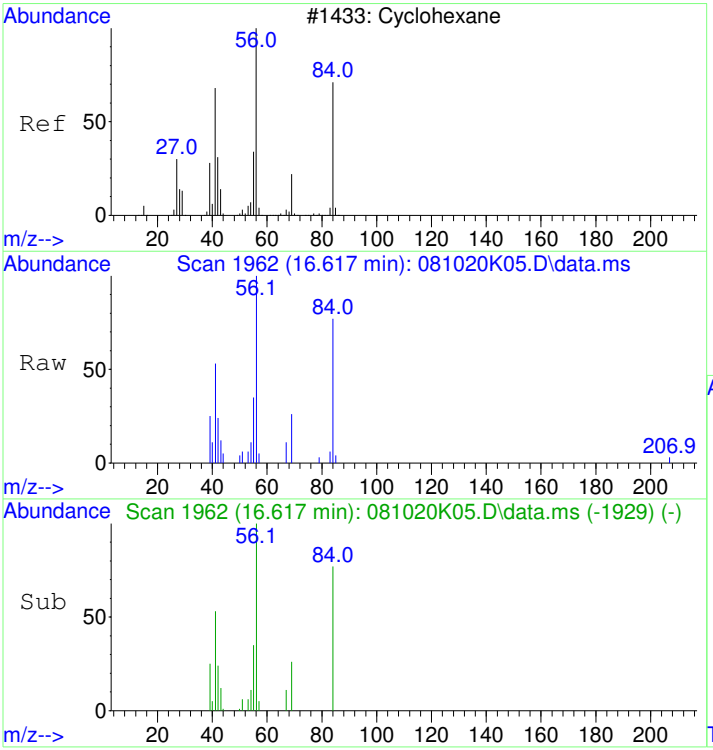


#28
Chloroform
Concen: 1.04 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 83 Resp: 14575

Ion	Ratio	Lower	Upper
83	100		
85	63.7	45.0	85.0
47	20.9	3.6	43.6

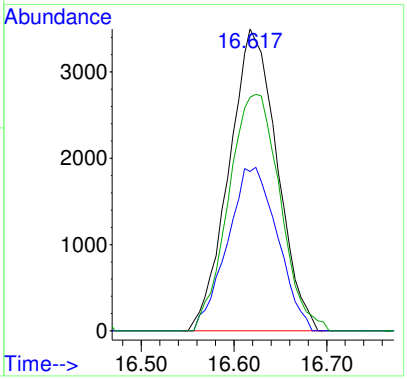


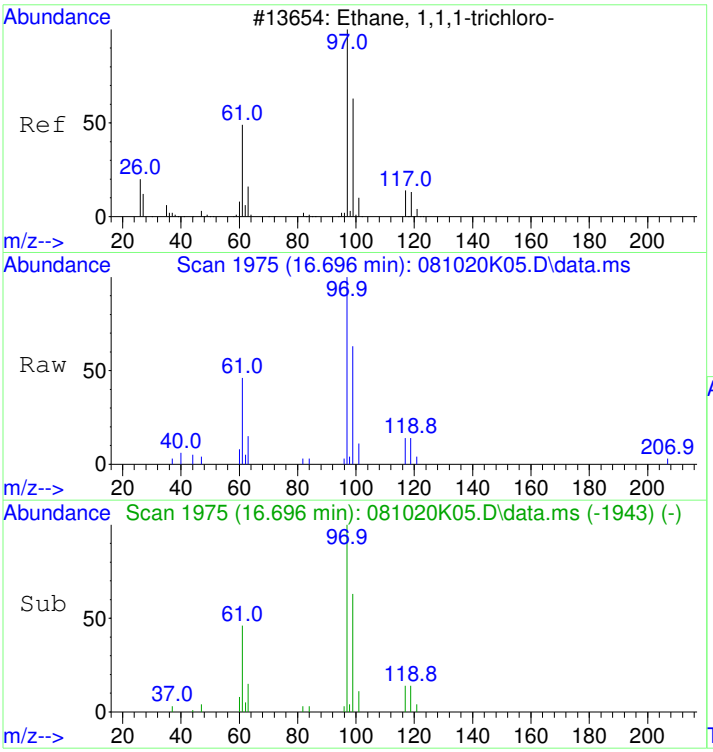


#29
Cyclohexane
Concen: 1.02 ppbv
RT: 16.617 min Scan# 1962
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 56 Resp: 12602

Ion	Ratio	Lower	Upper
56	100		
41	56.3	34.9	74.9
84	83.9	65.1	105.1

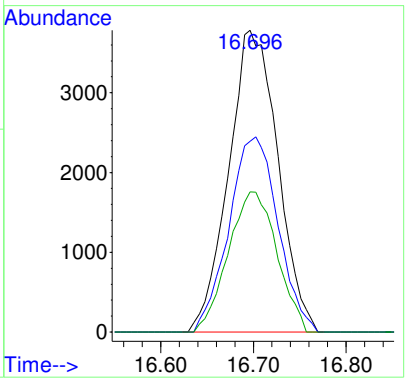


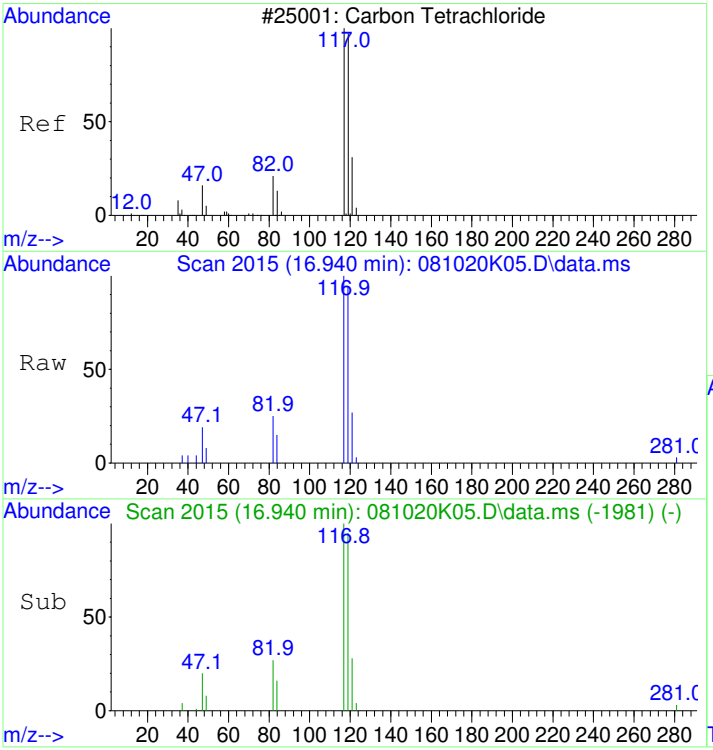


#30
1,1,1-Trichloroethane
Concen: 1.02 ppbv
RT: 16.696 min Scan# 1975
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 97 Resp: 13954

Ion	Ratio	Lower	Upper
97	100		
99	64.6	44.2	84.2
61	45.9	25.8	65.8

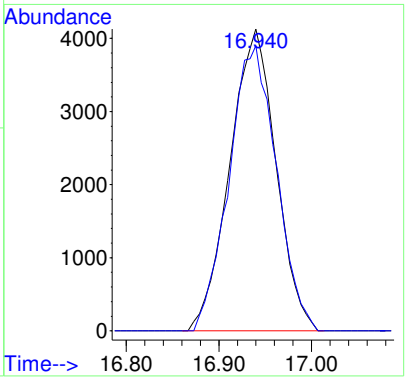


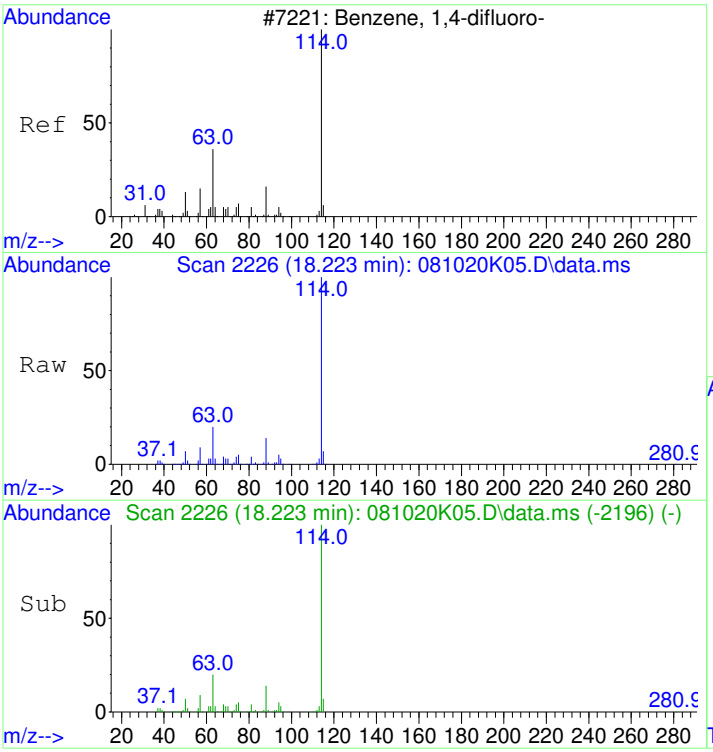


#31
Carbon tetrachloride
Concen: 0.94 ppbv
RT: 16.940 min Scan# 2015
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:117 Resp: 14266

Ion	Ratio	Lower	Upper
117	100		
119	96.9	76.3	116.3

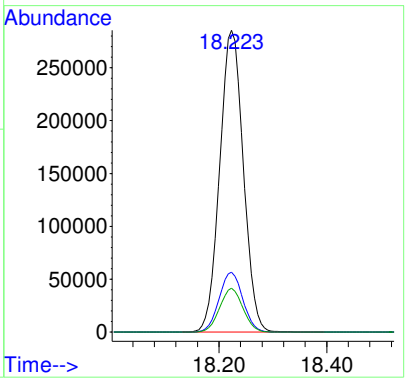


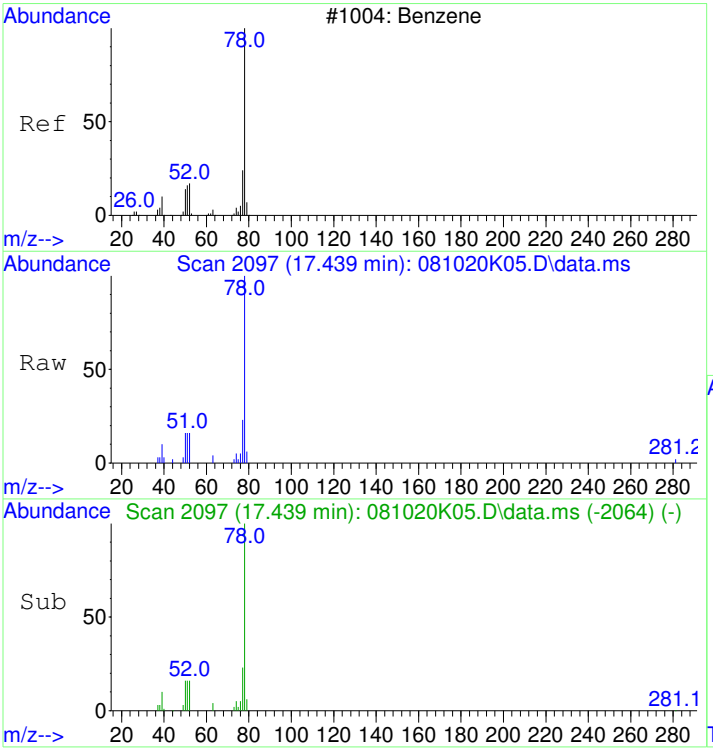


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:114 Resp: 867494

Ion	Ratio	Lower	Upper
114	100		
63	19.9	0.2	40.2
88	14.3	0.0	34.3

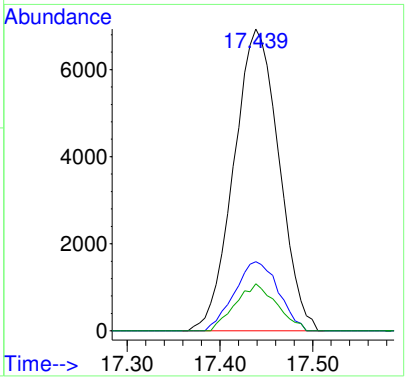


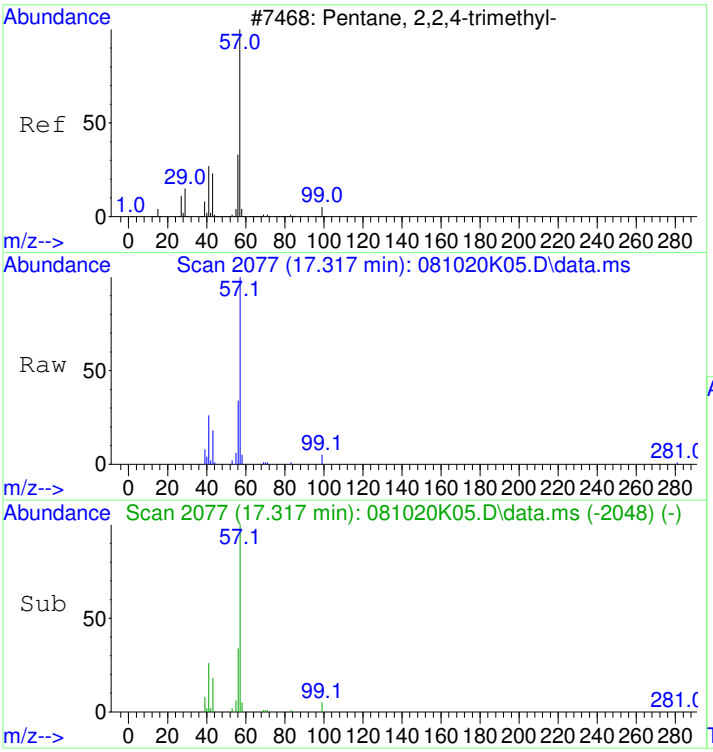


#33
Benzene
Concen: 1.00 ppbv
RT: 17.439 min Scan# 2097
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 78 Resp: 23453

Ion	Ratio	Lower	Upper
78	100		
77	22.3	2.7	42.7
50	14.3	0.0	34.8

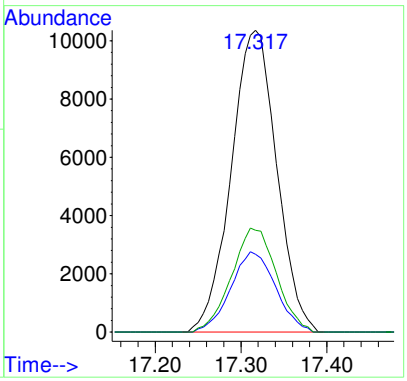


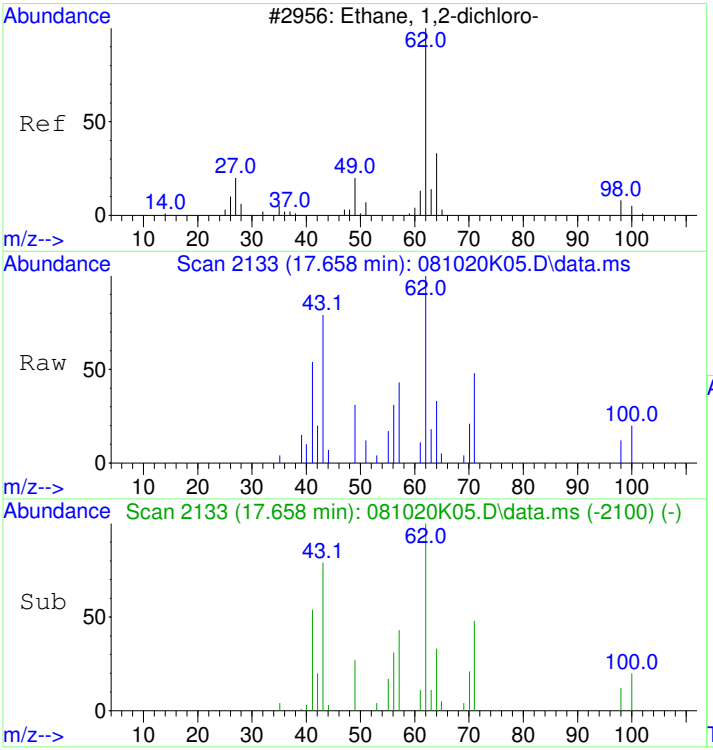


#34
2,2,4-Trimethylpentane
Concen: 0.98 ppbv
RT: 17.317 min Scan# 2077
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 57 Resp: 38173

Ion	Ratio	Lower	Upper
57	100		
41	26.2	4.7	44.7
56	34.0	13.6	53.6

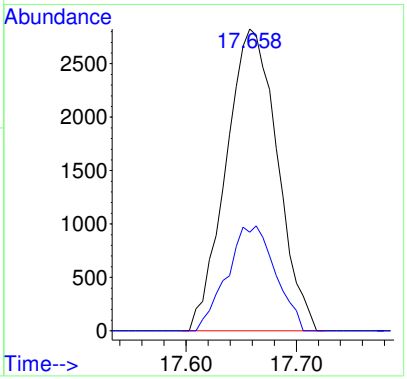


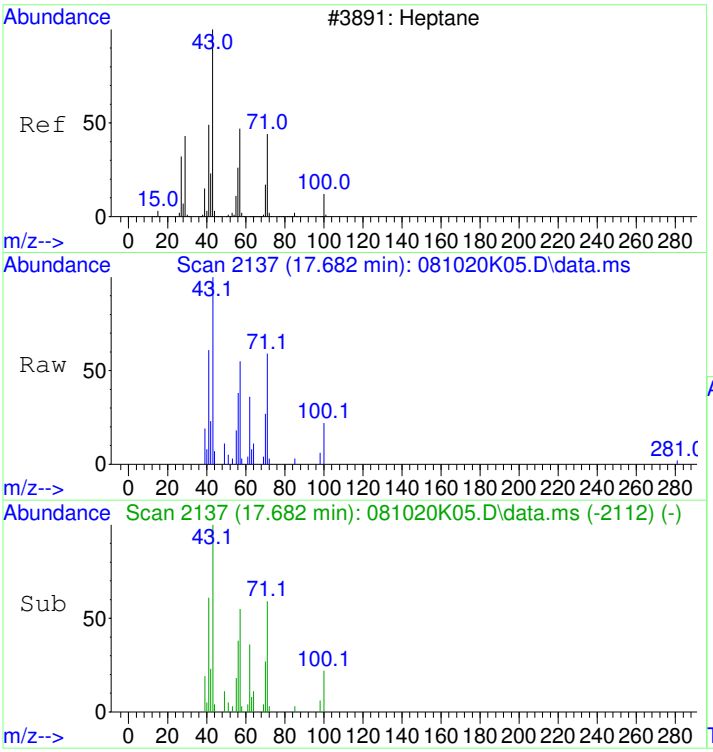


#35
1,2-Dichloroethane
Concen: 0.95 ppbv
RT: 17.658 min Scan# 2133
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 62 Resp: 9160

Ion	Ratio	Lower	Upper
62	100		
64	32.8	12.0	52.0

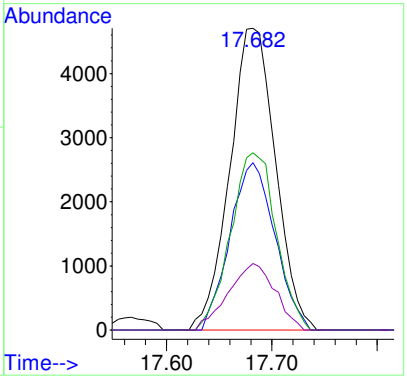


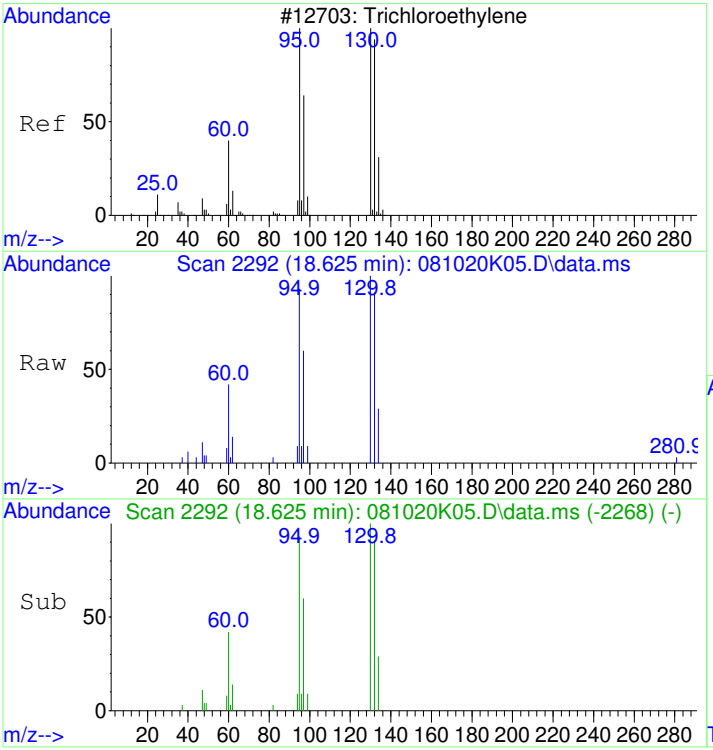


#36
Heptane
Concen: 0.97 ppbv
RT: 17.682 min Scan# 2137
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 43 Resp: 14205

Ion	Ratio	Lower	Upper
43	100		
57	54.6	34.7	74.7
71	58.5	39.4	79.4
100	22.6	3.0	43.0

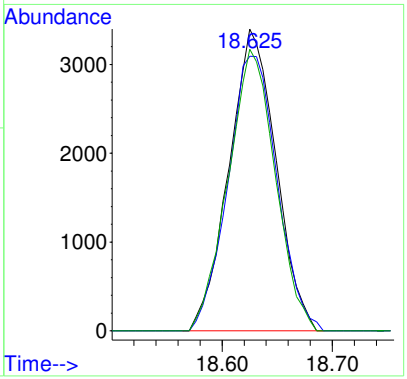


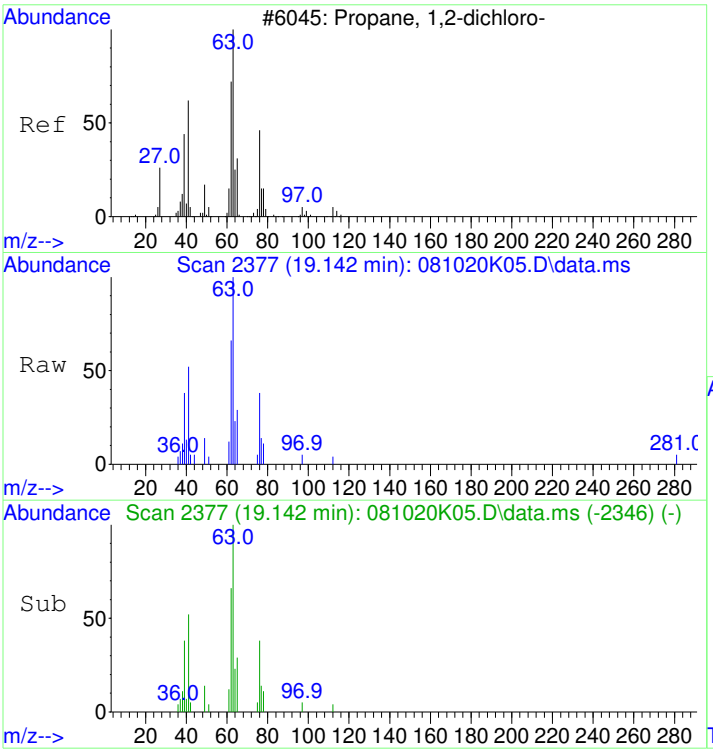


#37
Trichloroethene
Concen: 1.01 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:130 Resp: 10080

Ion	Ratio	Lower	Upper
130	100		
132	95.7	75.3	115.3
95	93.5	72.7	112.7

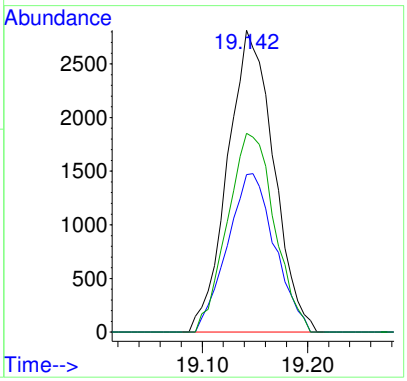


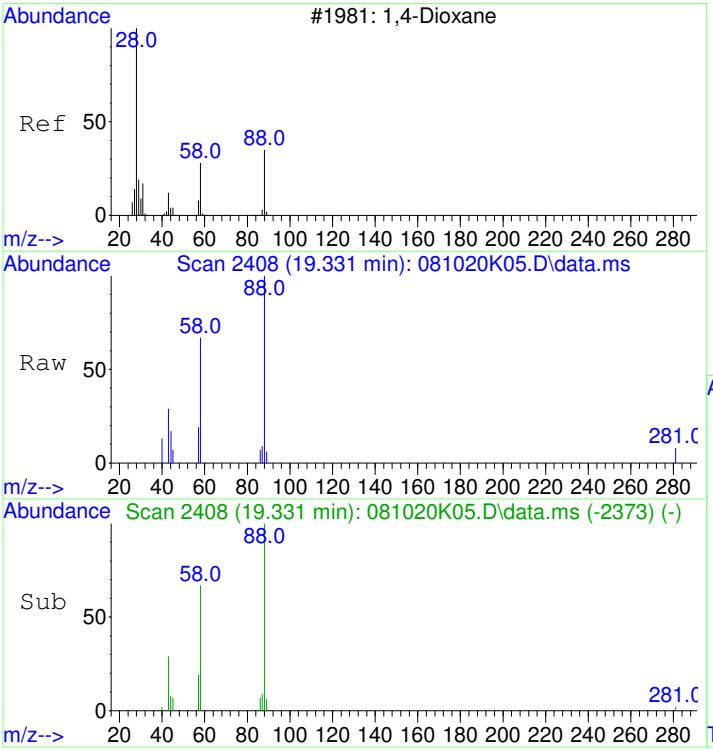


#38
1,2-Dichloropropane
Concen: 0.97 ppbv
RT: 19.142 min Scan# 2377
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 63 Resp: 8558

Ion	Ratio	Lower	Upper
63	100		
41	54.1	34.0	74.0
62	67.3	50.4	90.4

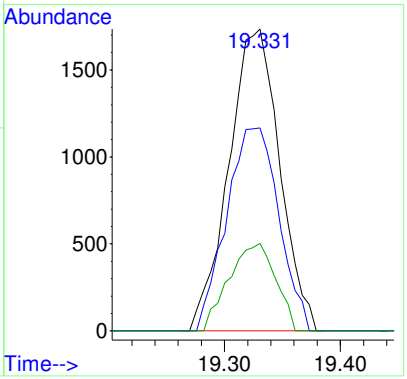


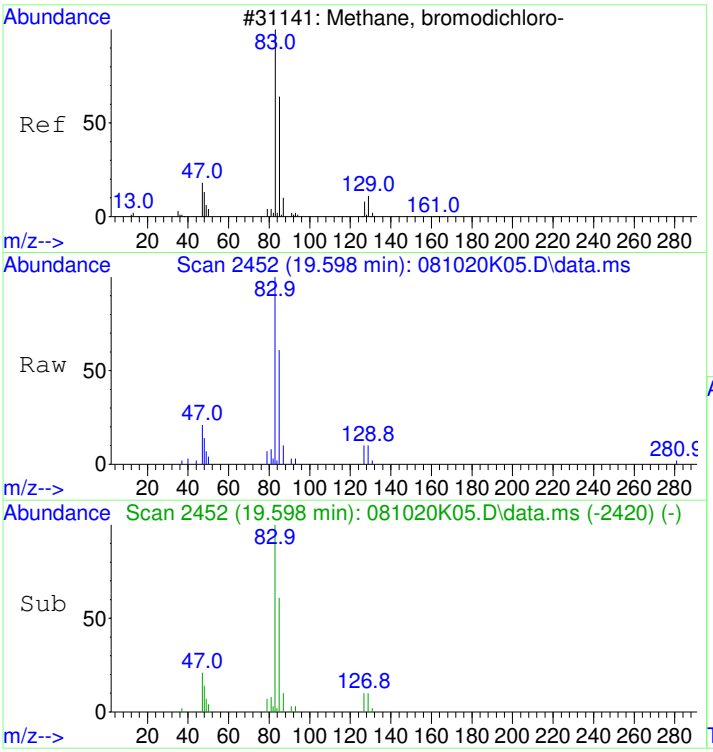


#39
1,4-Dioxane
Concen: 1.03 ppbv
RT: 19.331 min Scan# 2408
Delta R.T. 0.012 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 88 Resp: 5305

Ion	Ratio	Lower	Upper
88	100		
58	69.0	50.1	90.1
43	26.5	7.7	47.7

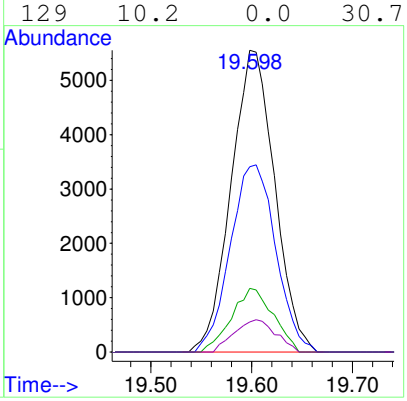


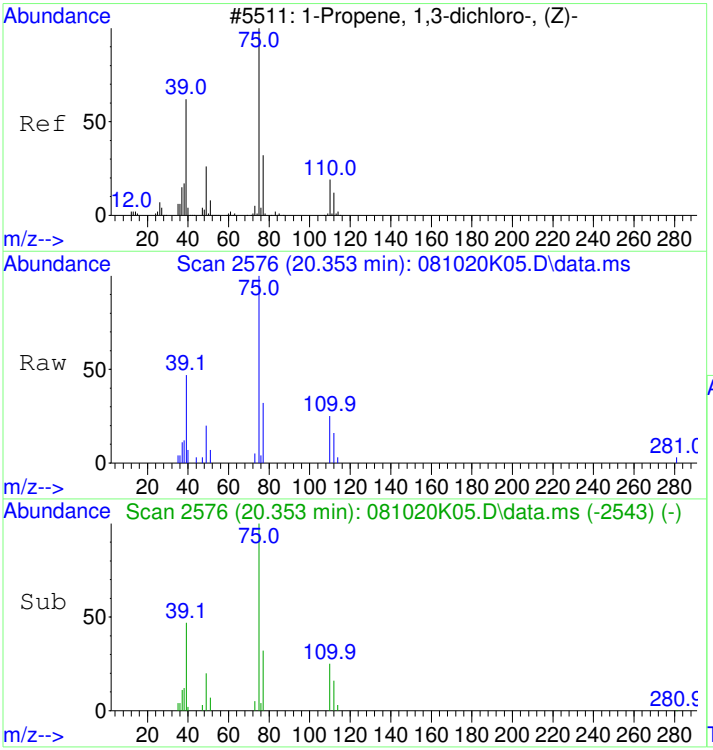


#40
Bromodichloromethane
Concen: 1.03 ppbv
RT: 19.598 min Scan# 2452
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 83 Resp: 16694

Ion	Ratio	Lower	Upper
83	100		
85	64.8	44.3	84.3
47	20.3	0.0	39.9
129	10.2	0.0	30.7

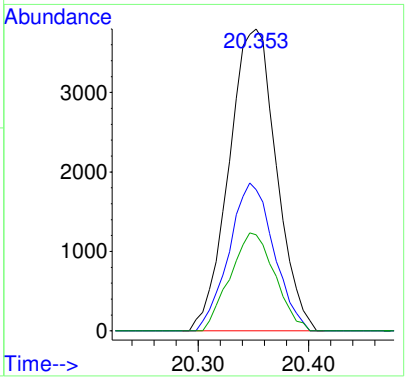


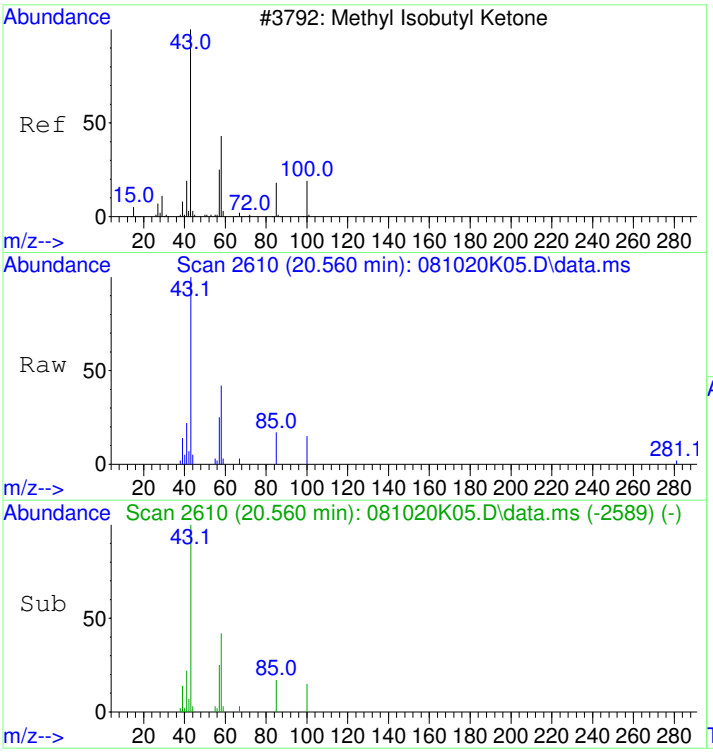


#41
cis-1,3-Dichloropropene
Concen: 0.87 ppbv
RT: 20.353 min Scan# 2576
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 75 Resp: 11378

Ion	Ratio	Lower	Upper
75	100		
39	46.2	27.1	67.1
77	30.7	11.4	51.4

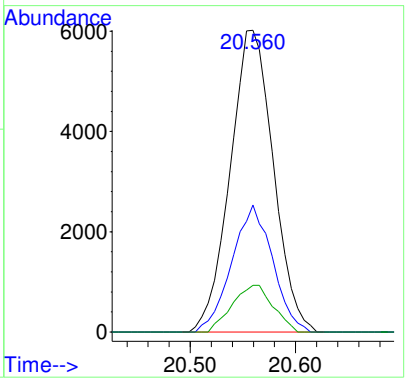


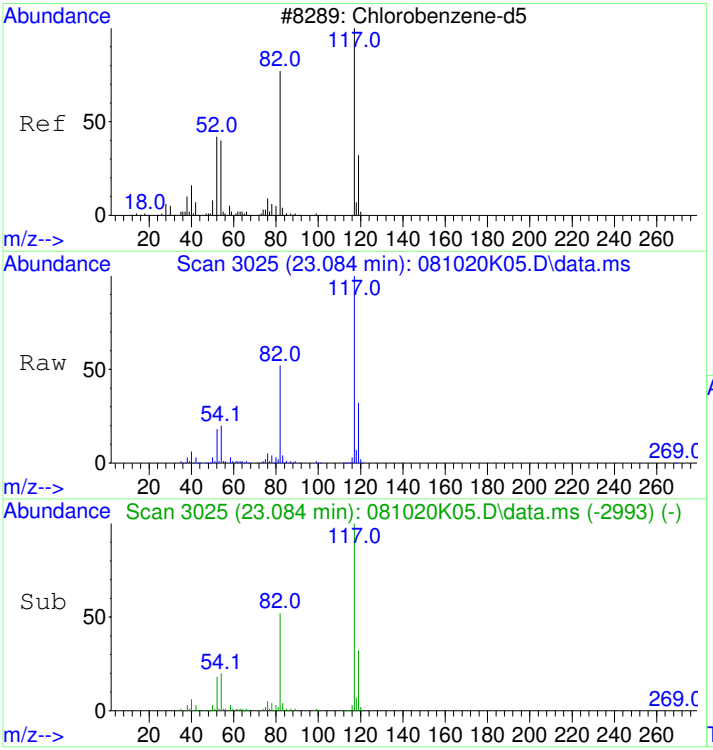


#42
4-Methyl-2-pentanone (MIBK)
Concen: 0.88 ppbv
RT: 20.560 min Scan# 2610
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 43 Resp: 17175

Ion	Ratio	Lower	Upper
43	100		
58	39.7	19.3	59.3
100	14.7	0.0	34.8

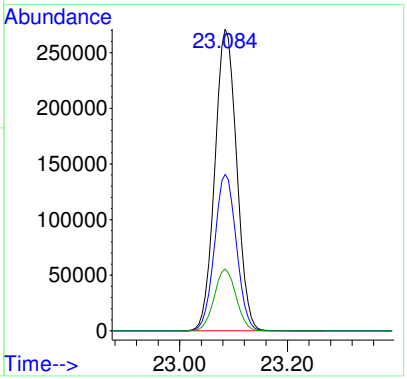


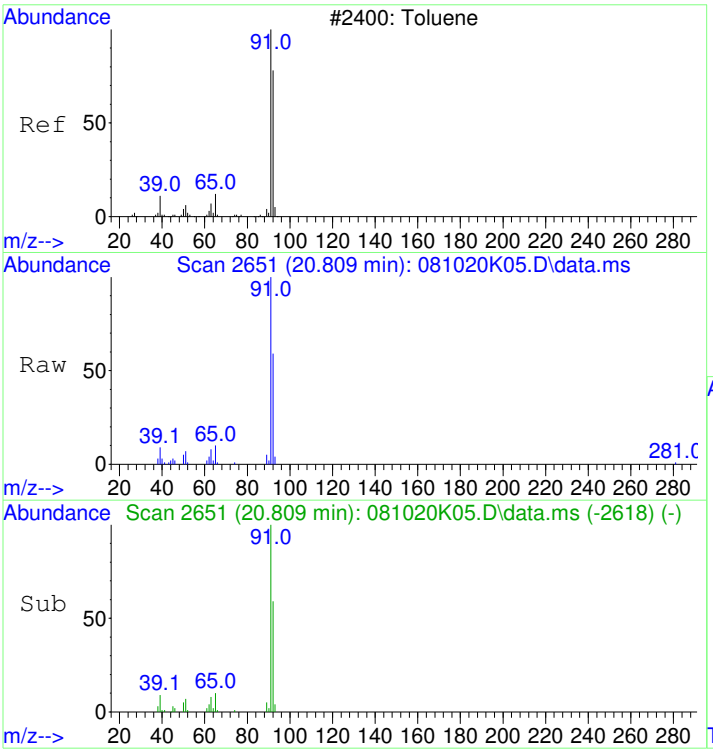


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:117 Resp: 762493

Ion	Ratio	Lower	Upper
117	100		
82	52.0	32.2	72.2
54	20.5	0.6	40.6

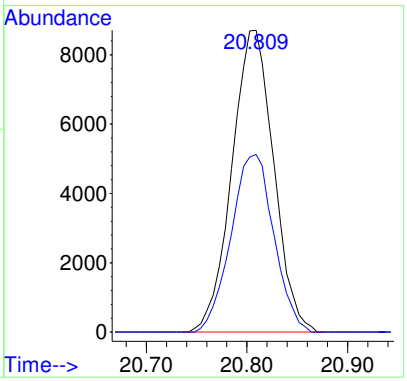


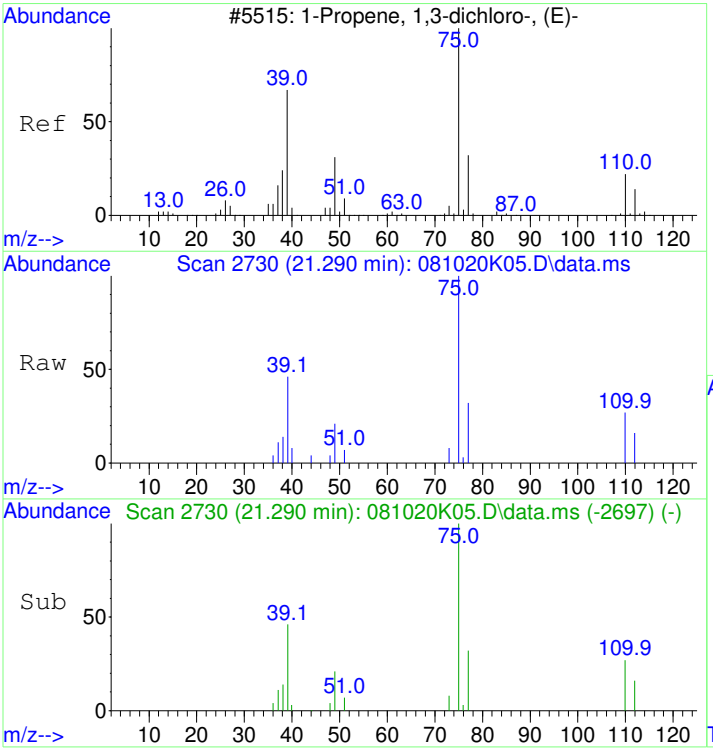


#44
Toluene
Concen: 0.95 ppbv
RT: 20.809 min Scan# 2651
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 91 Resp: 25100

Ion	Ratio	Lower	Upper
91	100		
92	60.2	40.7	80.7

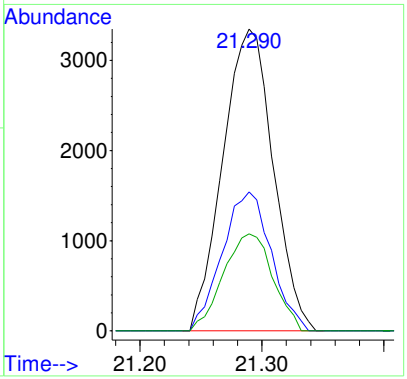


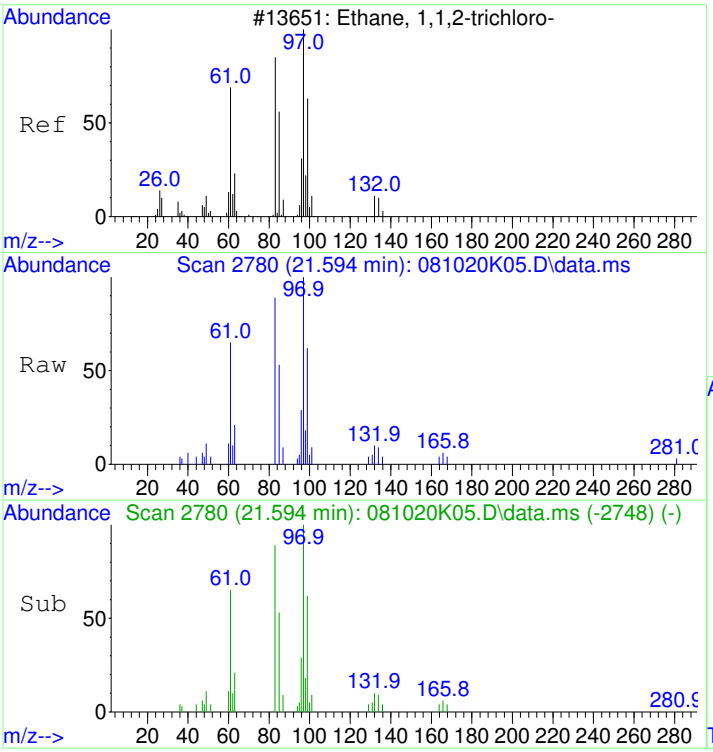


#45
trans-1,3-Dichloropropene
Concen: 0.79 ppbv
RT: 21.290 min Scan# 2730
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 75 Resp: 9604

Ion	Ratio	Lower	Upper
75	100		
39	44.6	26.9	66.9
77	31.4	11.3	51.3

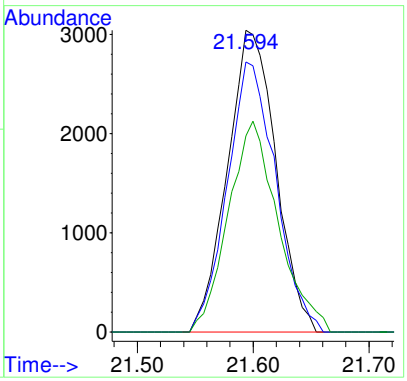


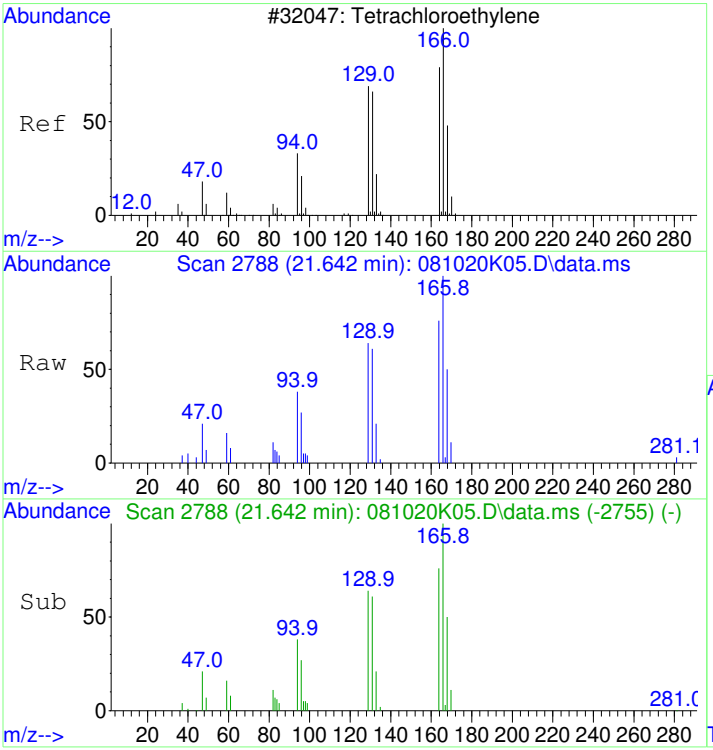


#46
1,1,2-Trichloroethane
Concen: 0.99 ppbv
RT: 21.594 min Scan# 2780
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 97 Resp: 8850

Ion	Ratio	Lower	Upper
97	100		
83	89.6	66.5	106.5
61	72.1	48.4	88.4

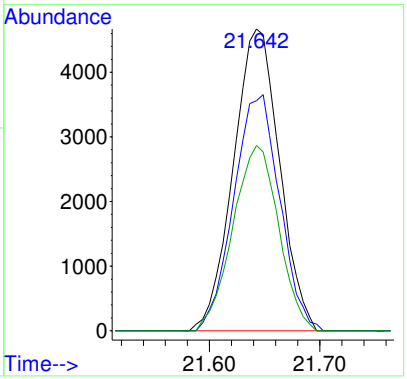


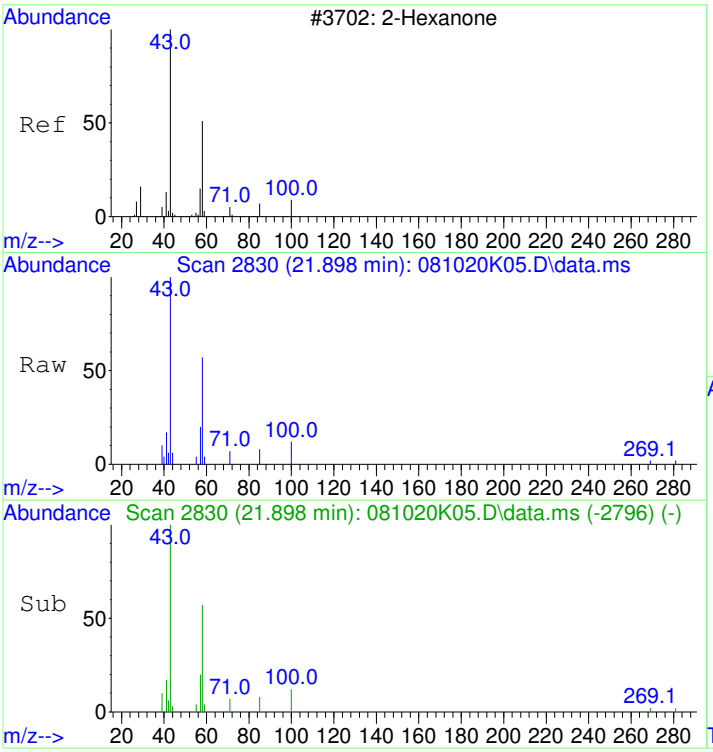


#47
Tetrachloroethene
Concen: 0.96 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:166 Resp: 13630

Ion	Ratio	Lower	Upper
166	100		
164	78.0	57.5	97.5
131	60.9	41.2	81.2

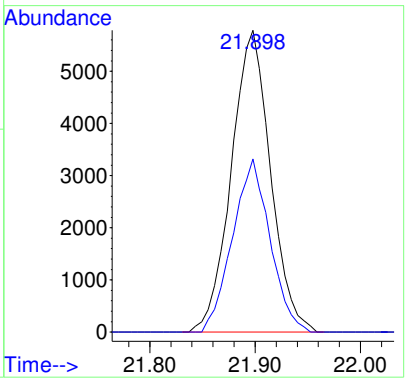


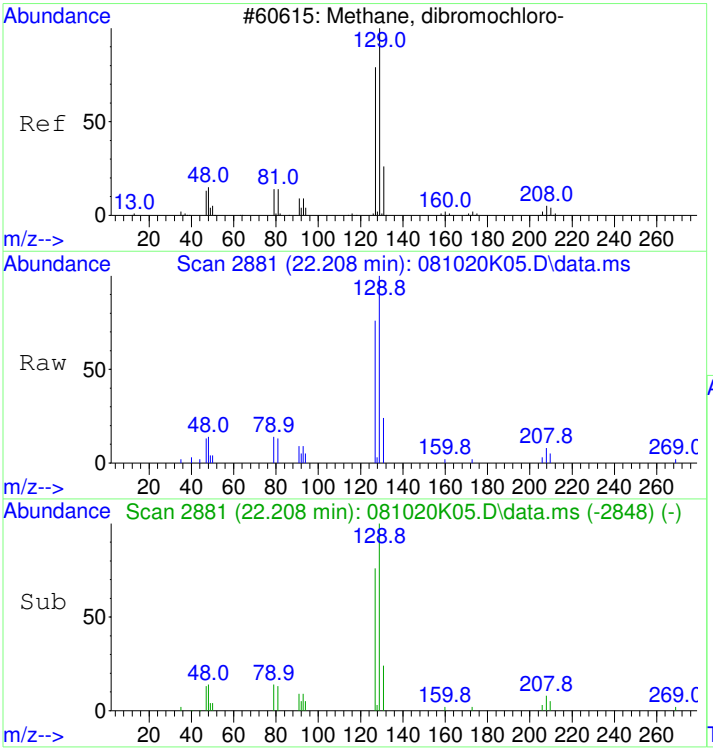


#48
2-Hexanone
Concen: 0.83 ppbv
RT: 21.898 min Scan# 2830
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 43 Resp: 14982

Ion	Ratio	Lower	Upper
43	100		
58	54.8	35.4	75.4

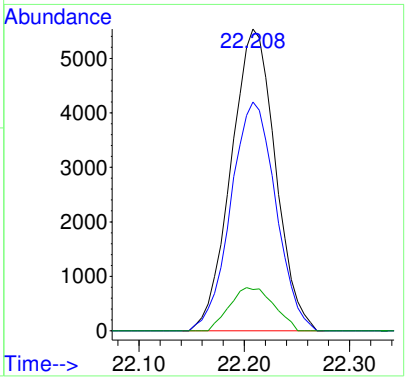


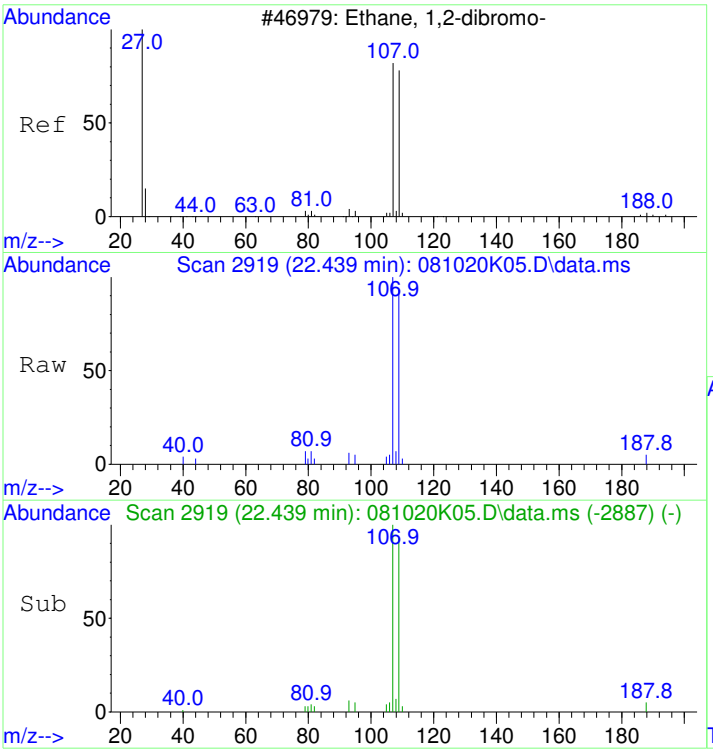


#49
Chlorodibromomethane
Concen: 1.02 ppbv
RT: 22.208 min Scan# 2881
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:129 Resp: 16205

Ion	Ratio	Lower	Upper
129	100		
127	76.9	56.9	96.9
79	14.3	0.0	34.7

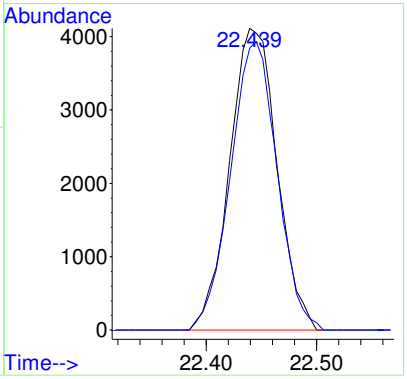


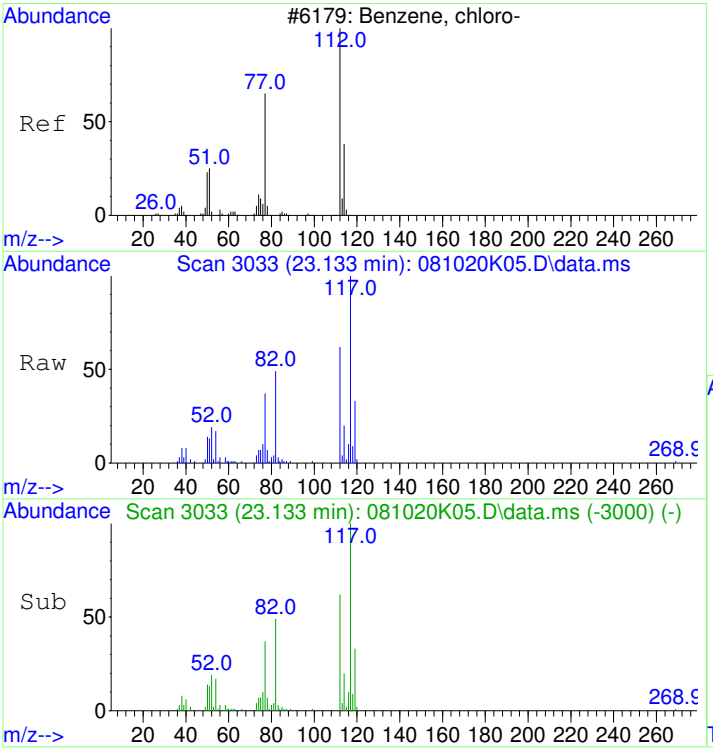


#50
1,2-Dibromoethane (EDB)
Concen: 0.97 ppbv
RT: 22.439 min Scan# 2919
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:107 Resp: 12305

Ion	Ratio	Lower	Upper
107	100		
109	94.0	74.3	114.3

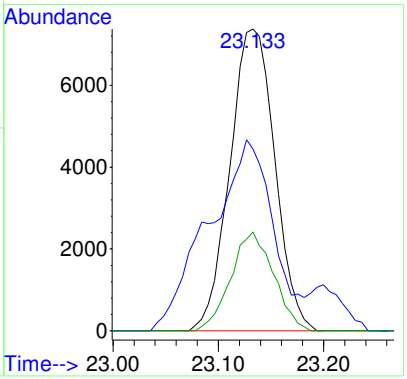


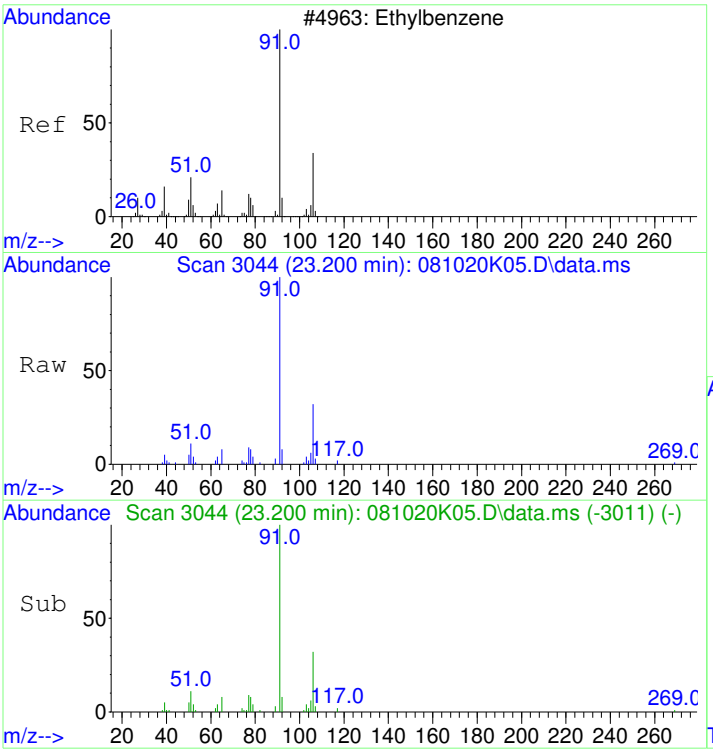


#51
Chlorobenzene
Concen: 1.00 ppbv
RT: 23.133 min Scan# 3033
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:112 Resp: 21890

Ion	Ratio	Lower	Upper
112	100		
77	102.0	53.3	93.3#
114	31.2	12.1	52.1

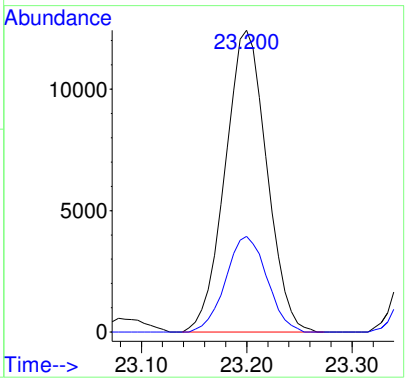


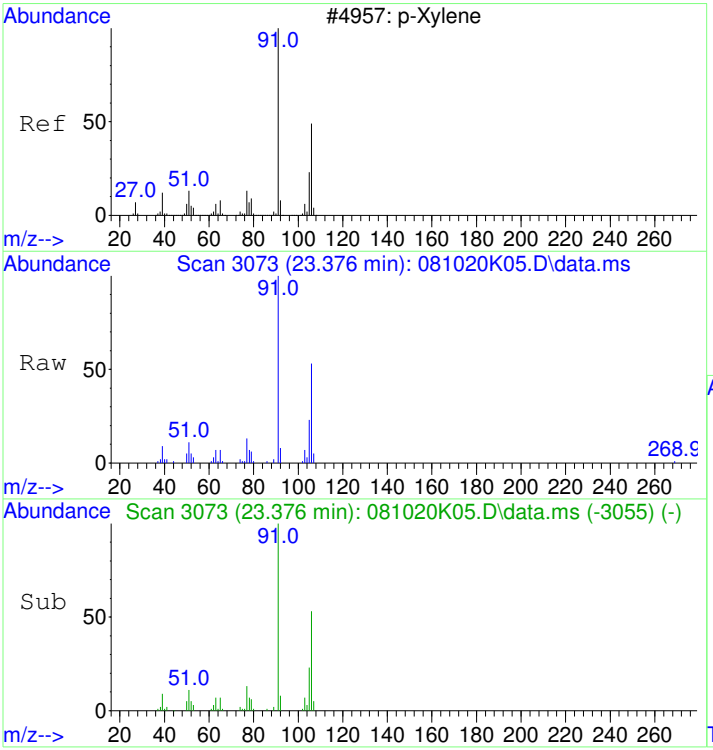


#52
Ethylbenzene
Concen: 0.96 ppbv
RT: 23.200 min Scan# 3044
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 91 Resp: 34135

Ion	Ratio	Lower	Upper
91	100		
106	31.5	11.9	51.9

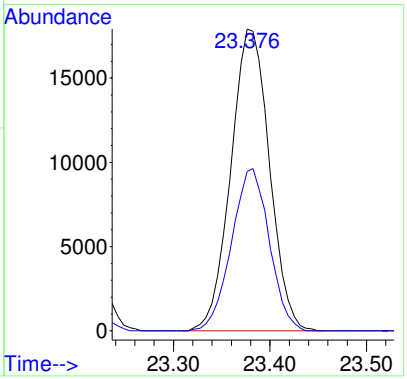


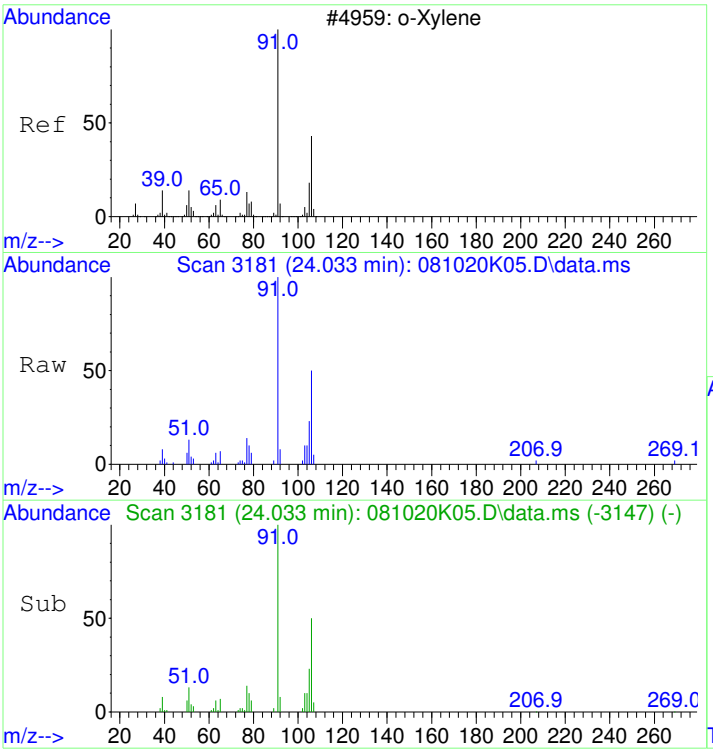


#53
m&p-Xylene
Concen: 1.85 ppbv
RT: 23.376 min Scan# 3073
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 91 Resp: 49778

Ion	Ratio	Lower	Upper
91	100		
106	52.5	32.9	72.9

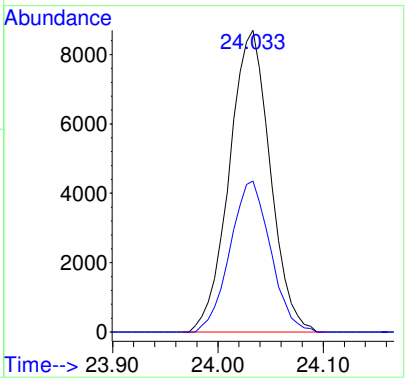


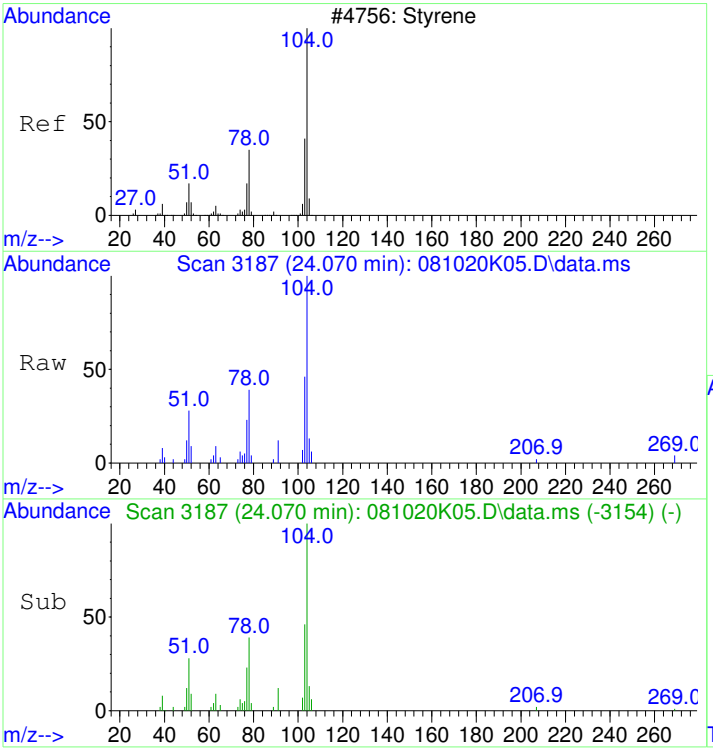


#54
o-Xylene
Concen: 0.87 ppbv
RT: 24.033 min Scan# 3181
Delta R.T. 0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 91 Resp: 23434

Ion	Ratio	Lower	Upper
91	100		
106	49.6	29.8	69.8

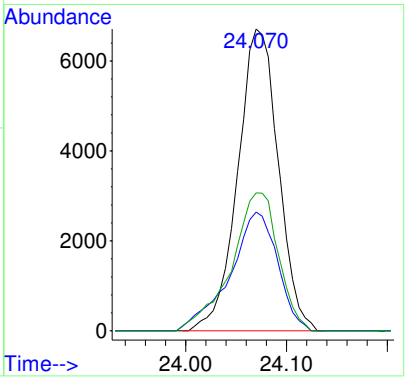


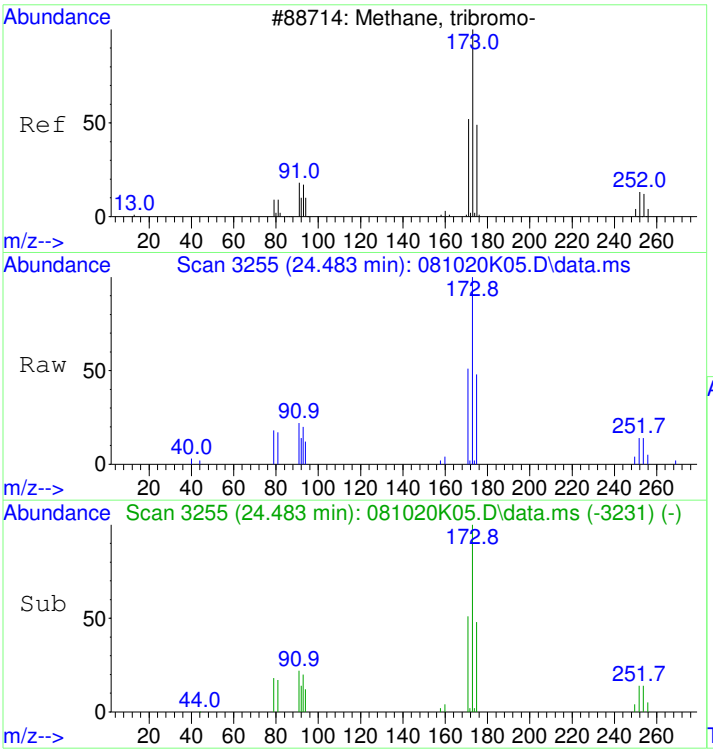


#55
Styrene
Concen: 0.85 ppbv
RT: 24.070 min Scan# 3187
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:104 Resp: 18792

Ion	Ratio	Lower	Upper
104	100		
78	46.1	25.3	65.3
103	53.0	32.8	72.8

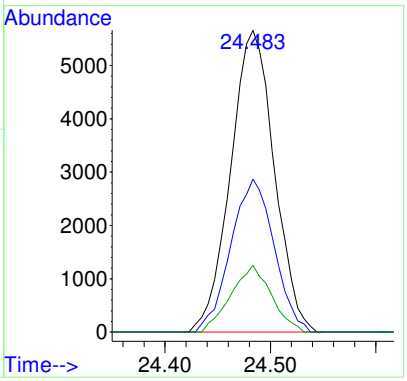


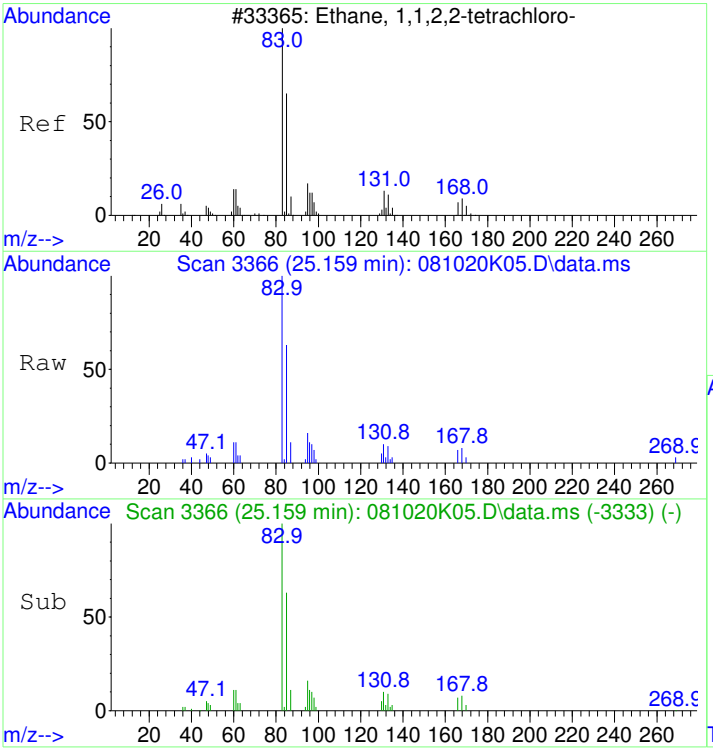


#56
Bromoform
Concen: 0.97 ppbv
RT: 24.483 min Scan# 3255
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:173 Resp: 16324

Ion	Ratio	Lower	Upper
173	100		
171	50.2	31.5	71.5
91	20.5	0.0	40.0

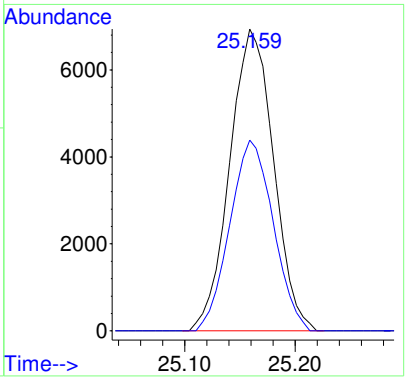


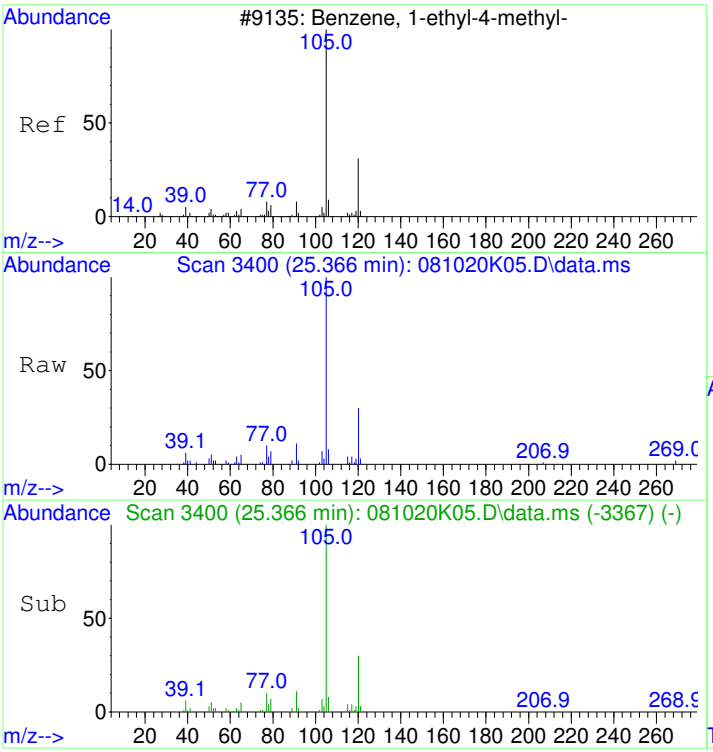


#57
1,1,2,2-Tetrachloroethane
Concen: 0.92 ppbv
RT: 25.159 min Scan# 3366
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 83 Resp: 19228

Ion	Ratio	Lower	Upper
83	100		
85	62.6	44.5	84.5

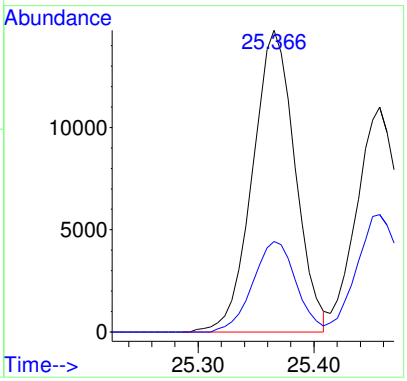


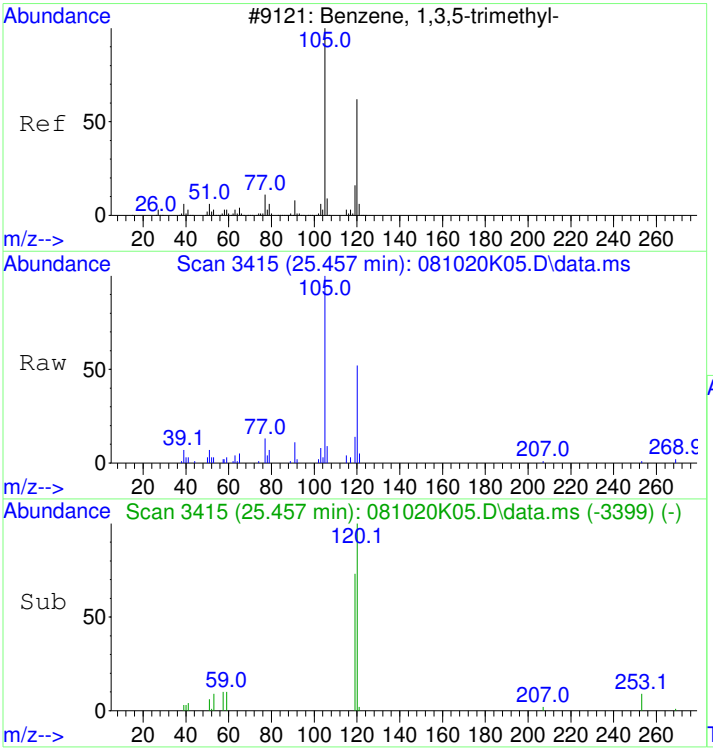


#58
4-Ethyltoluene
Concen: 0.86 ppbv
RT: 25.366 min Scan# 3400
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:105 Resp: 37646

Ion	Ratio	Lower	Upper
105	100		
120	30.5	10.3	50.3

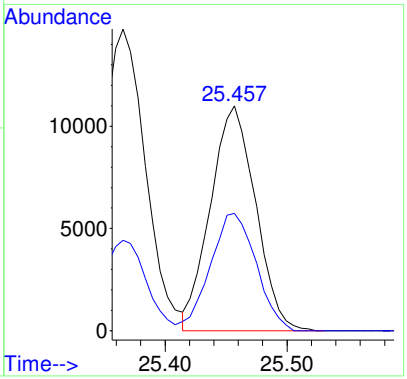


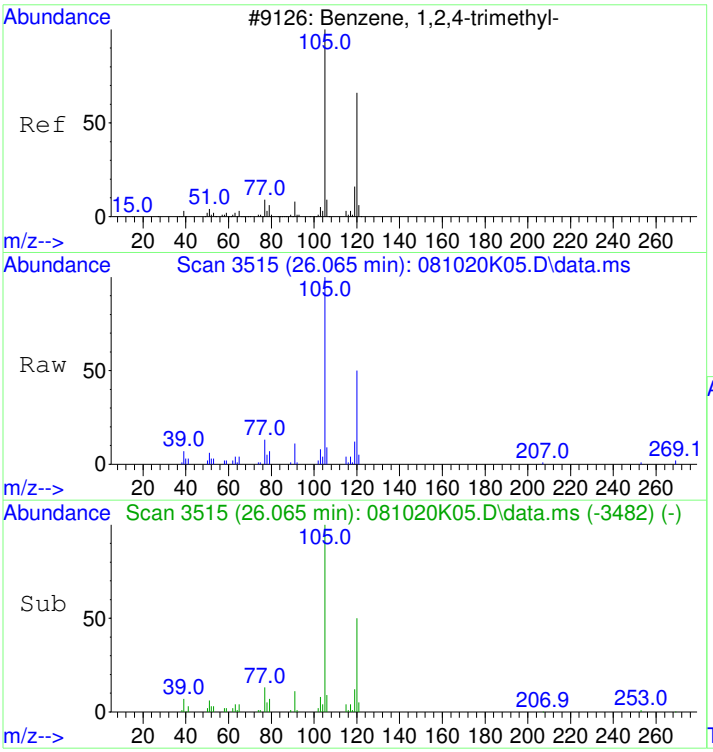


#59
1,3,5-Trimethylbenzene
Concen: 0.87 ppbv
RT: 25.457 min Scan# 3415
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:105 Resp: 28296

Ion	Ratio	Lower	Upper
105	100		
120	53.1	33.7	73.7

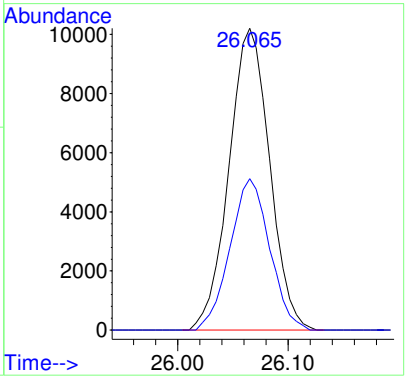


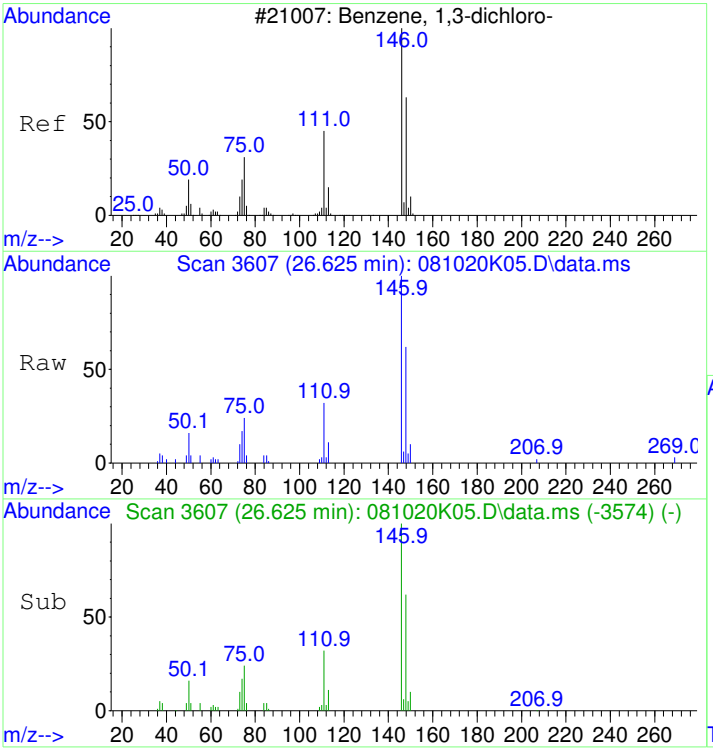


#60
1,2,4-Trimethylbenzene
Concen: 0.81 ppbv
RT: 26.065 min Scan# 3515
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:105 Resp: 26256

Ion	Ratio	Lower	Upper
105	100		
120	48.9	29.5	69.5

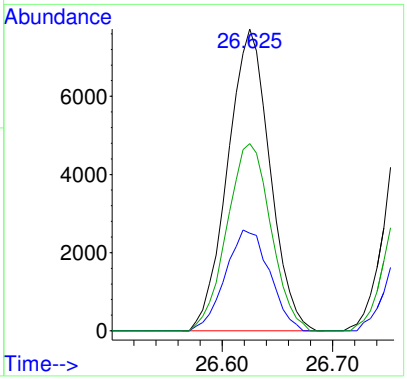


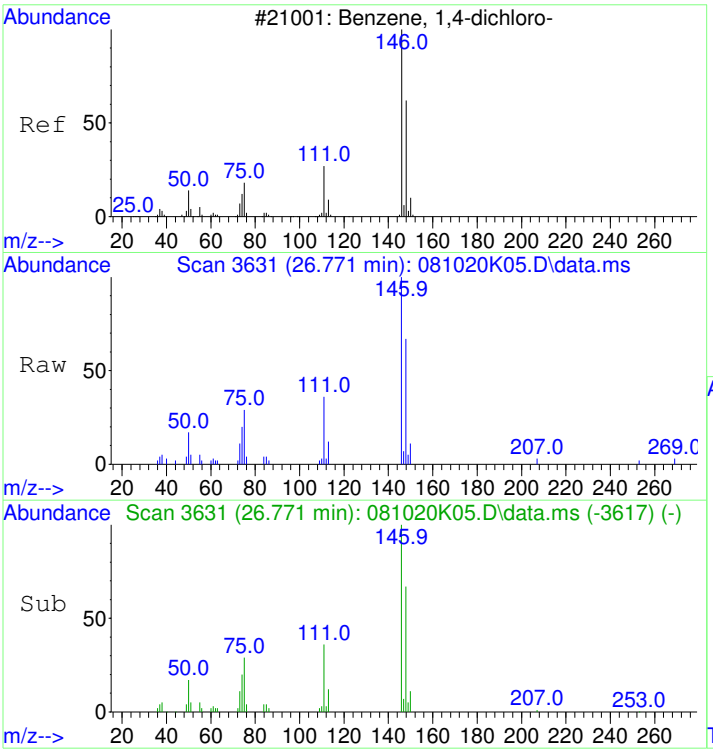


#61
1,3-Dichlorobenzene
Concen: 0.84 ppbv
RT: 26.625 min Scan# 3607
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:146 Resp: 20573

Ion	Ratio	Lower	Upper
146	100		
111	35.0	15.5	55.5
148	64.5	44.4	84.4

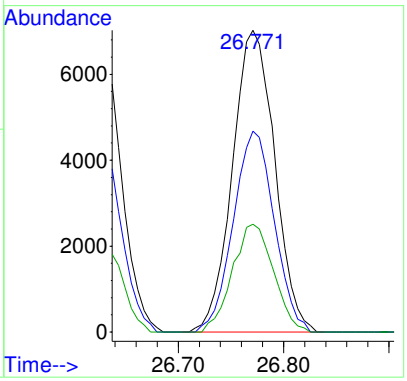


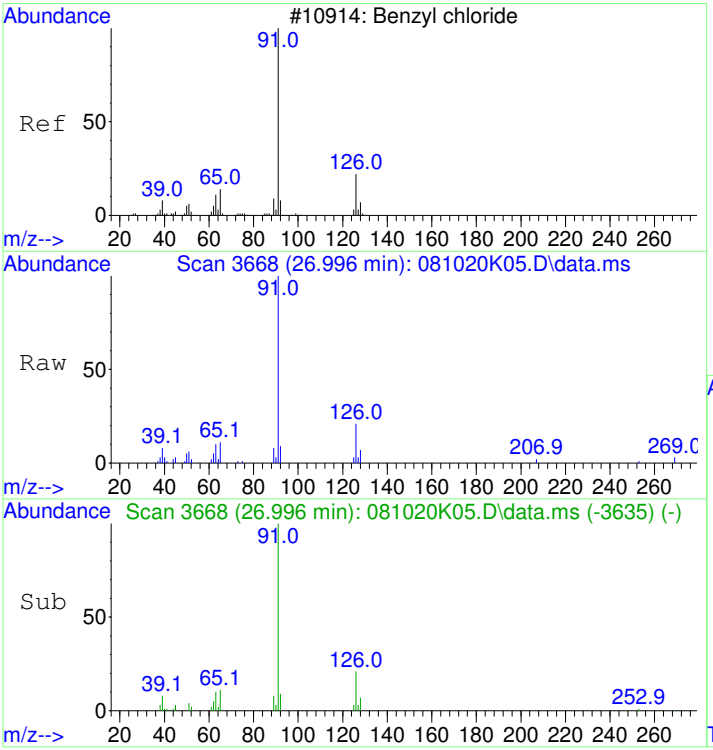


#62
1,4-Dichlorobenzene
Concen: 0.82 ppbv
RT: 26.771 min Scan# 3631
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:146 Resp: 19609

Ion	Ratio	Lower	Upper
146	100		
148	64.6	44.2	84.2
111	34.7	13.9	53.9

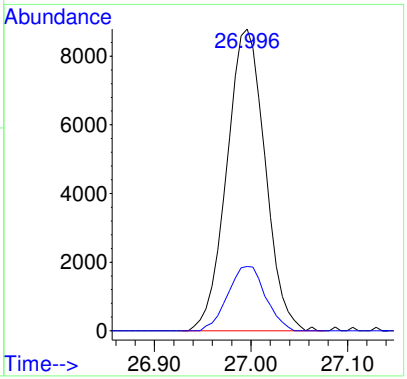


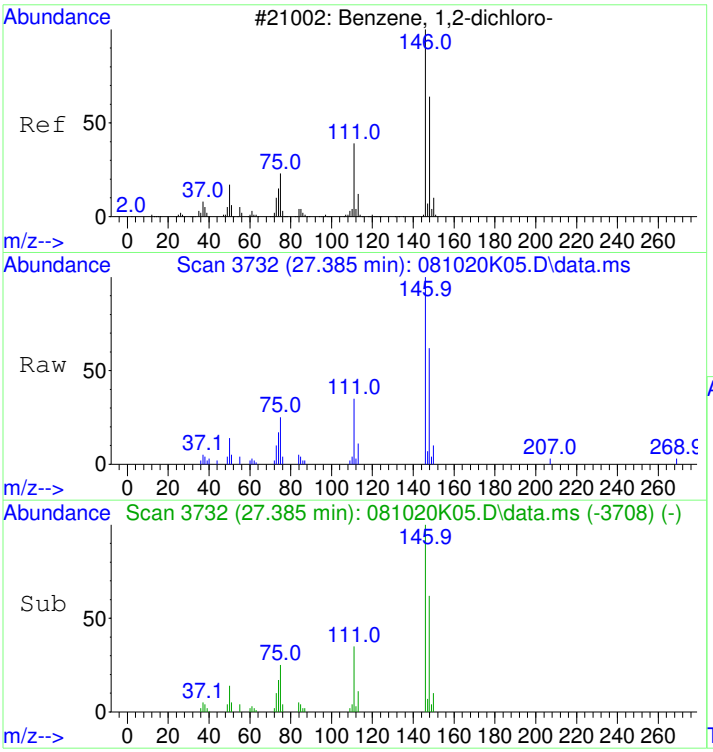


#63
Benzyl chloride
Concen: 0.76 ppbv
RT: 26.996 min Scan# 3668
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion: 91 Resp: 24247

Ion	Ratio	Lower	Upper
91	100		
126	21.0	1.5	41.5

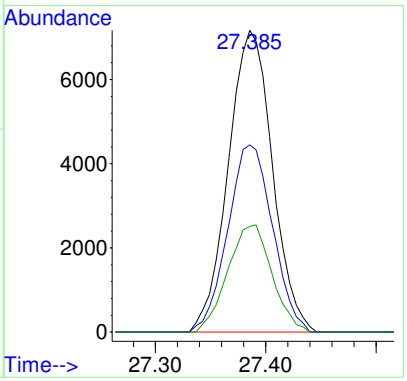


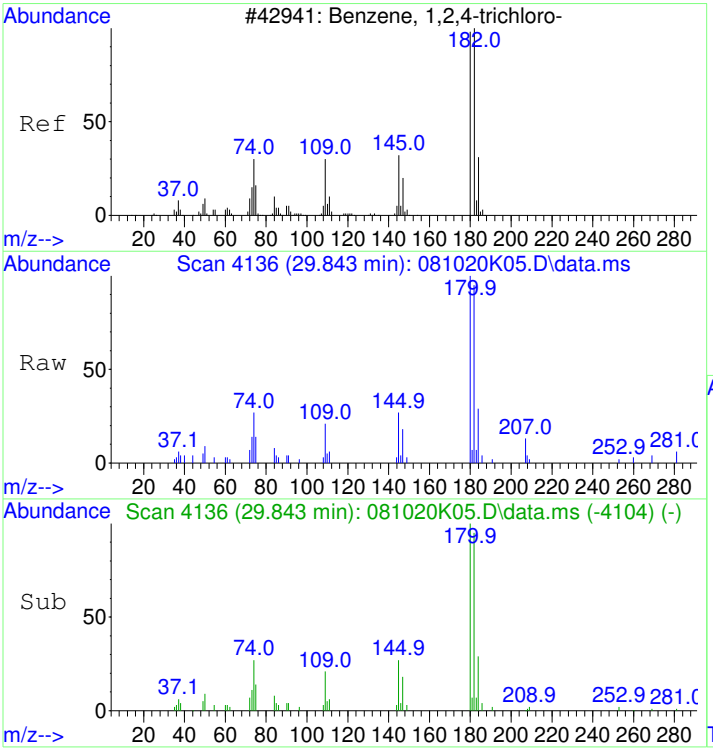


#64
1,2-Dichlorobenzene
Concen: 0.85 ppbv
RT: 27.385 min Scan# 3732
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:146 Resp: 20041

Ion	Ratio	Lower	Upper
146	100		
148	62.9	44.1	84.1
111	35.6	16.9	56.9

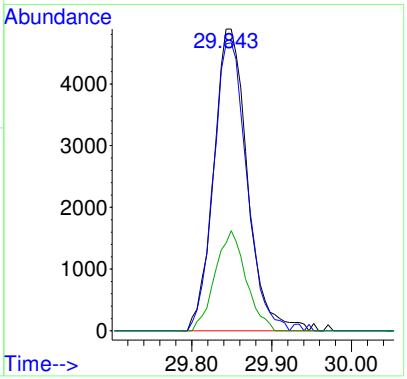


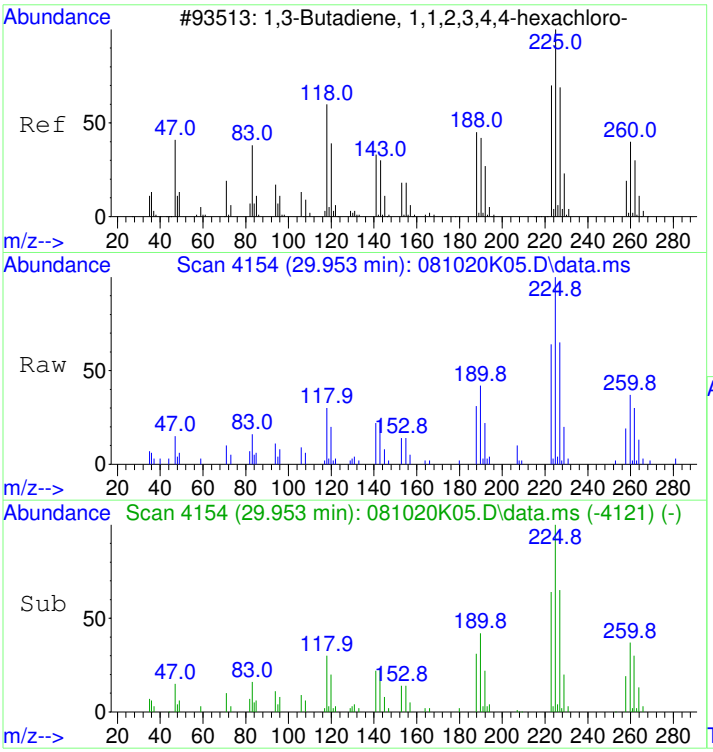


#65
1,2,4-Trichlorobenzene
Concen: 0.70 ppbv
RT: 29.843 min Scan# 4136
Delta R.T. -0.006 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:180 Resp: 14341

Ion	Ratio	Lower	Upper
180	100		
182	94.5	75.9	115.9
184	30.3	10.8	50.8

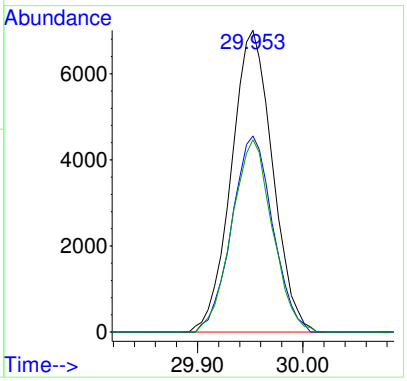




#66
Hexachlorobutadiene
Concen: 0.84 ppbv
RT: 29.953 min Scan# 4154
Delta R.T. 0.000 min
Lab File: 081020K05.D
Acq: 10 Aug 2020 6:31 pm

Tgt Ion:225 Resp: 19065

Ion	Ratio	Lower	Upper
225	100		
227	64.9	44.6	84.6
223	62.8	42.7	82.7



S20H017-CAL2

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K06.D
InstName : HP5973K
Acq On : 10 Aug 2020 7:21 pm
Operator : EM
Sample : S20H017-CAL2
Misc : 2.0ppbv 2033027
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:12 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:01 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	270653	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	811827	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	723249	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	14150	1.92	ppbv		100
3) Dichlorodifluoromethane	5.101	85	36774	2.00	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.484	85	39321	1.93	ppbv		99
5) Chloromethane	5.722	50	15127	2.05	ppbv		98
6) Vinyl chloride	6.068	62	16371	2.18	ppbv		99
7) 1,3-Butadiene	6.172	54	11821	2.12	ppbv		95
8) Bromomethane	7.243	94	12468	2.09	ppbv		97
9) Chloroethane	7.614	64	8505	2.07	ppbv		100
10) Bromoethene	8.252	106	12177	1.96	ppbv		99
11) Trichlorofluoromethane	8.380	101	34089	1.93	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.370	151	24874	2.20	ppbv		100
13) 1,1-Dichloroethene	10.503	61	21257	2.09	ppbv		100
14) Acetone	11.100	43	22316	2.03	ppbv		99
15) Carbon disulfide	11.203	76	41872	2.11	ppbv		98
16) 2-Propanol	11.611	45	19702	1.85	ppbv		89
17) Allyl chloride	11.963	41	18389	2.10	ppbv		100
18) Dichloromethane	12.481	49	20424	2.28	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	37675	2.05	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	20767	2.06	ppbv		100
21) Hexane	13.600	57	23890	1.96	ppbv		97
22) 1,1-Dichloroethane	14.397	63	26214	2.01	ppbv		99
23) Vinyl acetate	14.500	43	32505	1.99	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	18235	2.00	ppbv	#	99
25) 2-Butanone (MEK)	15.869	72	7768	1.98	ppbv		98
26) Ethyl acetate	15.869	61	4864	2.02	ppbv	#	95
27) Tetrahydrofuran	16.295	42	16561	1.79	ppbv		100
28) Chloroform	16.447	83	28624	2.12	ppbv		99
29) Cyclohexane	16.623	56	24974	2.11	ppbv		98
30) 1,1,1-Trichloroethane	16.696	97	28346	2.15	ppbv		100
31) Carbon tetrachloride	16.940	117	29066	2.00	ppbv		99
33) Benzene	17.439	78	47393	2.16	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	76306	2.09	ppbv		98
35) 1,2-Dichloroethane	17.664	62	18697	2.08	ppbv		100
36) Heptane	17.682	43	28505	2.07	ppbv		100
37) Trichloroethene	18.631	130	20020	2.15	ppbv		99
38) 1,2-Dichloropropane	19.148	63	16902	2.05	ppbv		97
39) 1,4-Dioxane	19.325	88	9506	1.98	ppbv		98
40) Bromodichloromethane	19.604	83	31782	2.10	ppbv		100
41) cis-1,3-Dichloropropene	20.353	75	24449	2.00	ppbv		100
42) 4-Methyl-2-pentanone (...	20.560	43	34727	1.91	ppbv		99
44) Toluene	20.809	91	53043	2.11	ppbv		99
45) trans-1,3-Dichloropropene	21.290	75	20427	1.77	ppbv		99
46) 1,1,2-Trichloroethane	21.600	97	17978	2.13	ppbv		97
47) Tetrachloroethene	21.642	166	27964	2.08	ppbv		99
48) 2-Hexanone	21.892	43	30260	1.77	ppbv		99
49) Chlorodibromomethane	22.208	129	31014	2.05	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.445	107	25223	2.09	ppbv		100
51) Chlorobenzene	23.133	112	44744	2.16	ppbv		89
52) Ethylbenzene	23.200	91	70939	2.10	ppbv		99
53) m&p-Xylene	23.382	91	105041	4.12	ppbv		100
54) o-Xylene	24.033	91	51155	1.99	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K06.D
InstName : HP5973K
Acq On : 10 Aug 2020 7:21 pm
Operator : EM
Sample : S20H017-CAL2
Misc : 2.0ppbv 2033027
ALS Vial : 36 Sample Multiplier: 1

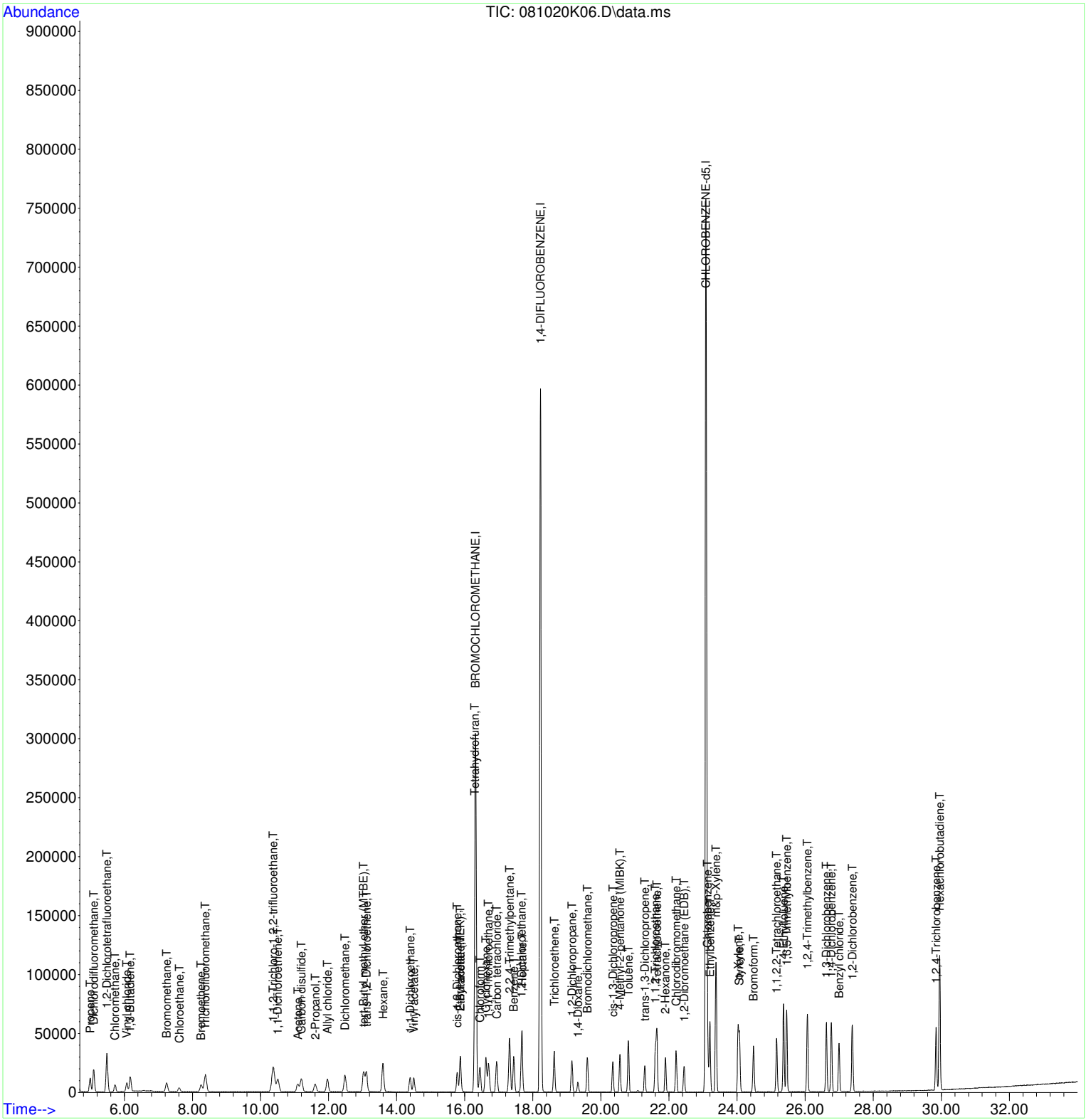
Quant Time: Aug 12 16:11:12 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:01 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	41832	1.99 ppbv	100
56) Bromoform	24.483	173	31617	1.98 ppbv	99
57) 1,1,2,2-Tetrachloroethane	25.159	83	40185	2.03 ppbv	98
58) 4-Ethyltoluene	25.366	105	78629	1.89 ppbv	99
59) 1,3,5-Trimethylbenzene	25.457	105	61907	2.01 ppbv	98
60) 1,2,4-Trimethylbenzene	26.065	105	58784	1.91 ppbv	99
61) 1,3-Dichlorobenzene	26.625	146	43711	1.89 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	42919	1.88 ppbv	100
63) Benzyl chloride	26.996	91	50592	1.66 ppbv	99
64) 1,2-Dichlorobenzene	27.385	146	42509	1.90 ppbv	100
65) 1,2,4-Trichlorobenzene	29.849	180	32177	1.66 ppbv	98
66) Hexachlorobutadiene	29.953	225	40880	1.90 ppbv	99

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

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K06.D
InstName : HP5973K
Acq On : 10 Aug 2020 7:21 pm
Operator : EM
Sample : S20H017-CAL2
Misc : 2.0ppbv 2033027
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:12 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:01 2020
Response via : Initial Calibration



S20H017-CAL3

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K07.D
InstName : HP5973K
Acq On : 10 Aug 2020 8:11 pm
Operator : EM
Sample : S20H017-CAL3
Misc : 5.0ppbv 2033029
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:30 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:21 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	268463	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	799057	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	719617	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	34893	4.77	ppbv		100
3) Dichlorodifluoromethane	5.101	85	88257	4.84	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.490	85	94914	4.70	ppbv		100
5) Chloromethane	5.728	50	36531	4.99	ppbv		100
6) Vinyl chloride	6.074	62	39398	5.30	ppbv		100
7) 1,3-Butadiene	6.178	54	29425	5.31	ppbv		99
8) Bromomethane	7.236	94	30007	5.07	ppbv		98
9) Chloroethane	7.614	64	20601	5.05	ppbv		99
10) Bromoethene	8.258	106	30269	4.92	ppbv		99
11) Trichlorofluoromethane	8.380	101	81013	4.61	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.376	151	59013	5.25	ppbv		99
13) 1,1-Dichloroethene	10.509	61	53137	5.28	ppbv		100
14) Acetone	11.087	43	53877	4.93	ppbv		99
15) Carbon disulfide	11.203	76	100504	5.11	ppbv		97
16) 2-Propanol	11.598	45	52280	4.94	ppbv		96
17) Allyl chloride	11.969	41	48000	5.52	ppbv		99
18) Dichloromethane	12.474	49	44684	5.03	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	97937	5.38	ppbv		100
20) trans-1,2-Dichloroethene	13.107	61	50530	5.05	ppbv		99
21) Hexane	13.594	57	61504	5.07	ppbv		98
22) 1,1-Dichloroethane	14.397	63	63403	4.91	ppbv		100
23) Vinyl acetate	14.500	43	90873	5.62	ppbv		100
24) cis-1,2-Dichloroethene	15.784	61	46180	5.10	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	19476	4.99	ppbv		98
26) Ethyl acetate	15.869	61	12077	5.05	ppbv		98
27) Tetrahydrofuran	16.295	42	42914	4.67	ppbv		100
28) Chloroform	16.447	83	69445	5.18	ppbv		100
29) Cyclohexane	16.617	56	63705	5.43	ppbv		99
30) 1,1,1-Trichloroethane	16.702	97	69285	5.30	ppbv		100
31) Carbon tetrachloride	16.934	117	70711	4.91	ppbv		99
33) Benzene	17.439	78	116005	5.36	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	198401	5.53	ppbv		99
35) 1,2-Dichloroethane	17.658	62	46216	5.22	ppbv		100
36) Heptane	17.682	43	74537	5.51	ppbv		99
37) Trichloroethene	18.631	130	49606	5.41	ppbv		100
38) 1,2-Dichloropropane	19.148	63	42271	5.21	ppbv		99
39) 1,4-Dioxane	19.324	88	24628	5.21	ppbv		99
40) Bromodichloromethane	19.604	83	78528	5.27	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	63891	5.30	ppbv		99
42) 4-Methyl-2-pentanone (...	20.559	43	91059	5.09	ppbv		100
44) Toluene	20.809	91	133426	5.34	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	54134	4.72	ppbv		99
46) 1,1,2-Trichloroethane	21.600	97	44978	5.35	ppbv		98
47) Tetrachloroethene	21.642	166	69225	5.18	ppbv		99
48) 2-Hexanone	21.892	43	82162	4.82	ppbv		99
49) Chlorodibromomethane	22.208	129	77992	5.19	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.445	107	63444	5.27	ppbv		100
51) Chlorobenzene	23.133	112	109061	5.29	ppbv		97
52) Ethylbenzene	23.200	91	176806	5.27	ppbv		100
53) m&p-Xylene	23.376	91	264728	10.45	ppbv		100
54) o-Xylene	24.033	91	133352	5.23	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K07.D
InstName : HP5973K
Acq On : 10 Aug 2020 8:11 pm
Operator : EM
Sample : S20H017-CAL3
Misc : 5.0ppbv 2033029
ALS Vial : 36 Sample Multiplier: 1

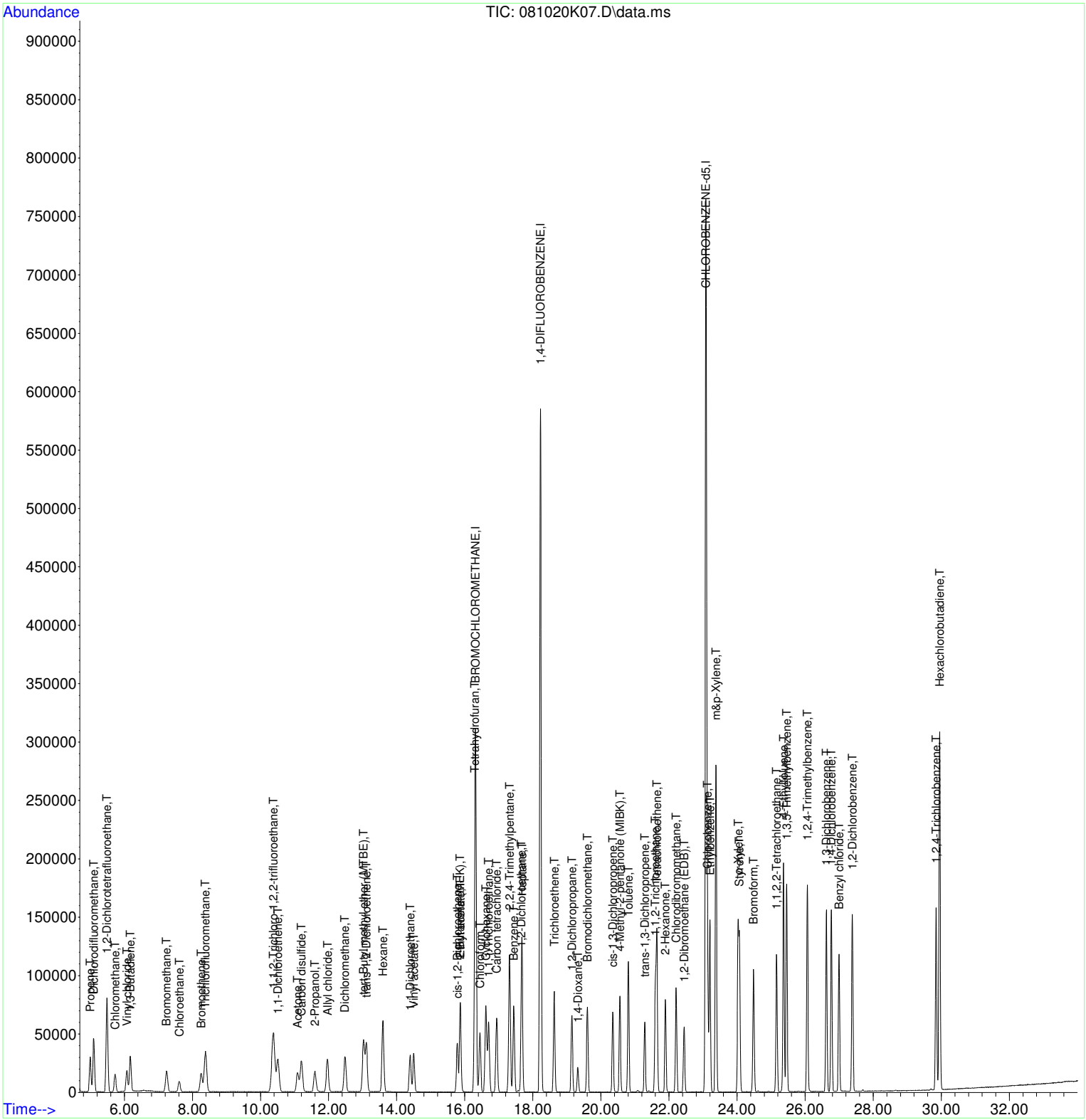
Quant Time: Aug 12 16:11:30 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:21 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	24.070	104	109211	5.23	ppbv	100
56)	Bromoform	24.483	173	84410	5.32	ppbv	100
57)	1,1,2,2-Tetrachloroethane	25.159	83	100558	5.12	ppbv	100
58)	4-Ethyltoluene	25.365	105	208730	5.03	ppbv	99
59)	1,3,5-Trimethylbenzene	25.457	105	159050	5.19	ppbv	100
60)	1,2,4-Trimethylbenzene	26.065	105	159626	5.21	ppbv	99
61)	1,3-Dichlorobenzene	26.625	146	115139	5.00	ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	113775	5.02	ppbv	100
63)	Benzyl chloride	26.996	91	144309	4.77	ppbv	99
64)	1,2-Dichlorobenzene	27.385	146	111428	5.00	ppbv	99
65)	1,2,4-Trichlorobenzene	29.849	180	91317	4.74	ppbv	100
66)	Hexachlorobutadiene	29.952	225	107418	5.02	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K07.D
InstName : HP5973K
Acq On : 10 Aug 2020 8:11 pm
Operator : EM
Sample : S20H017-CAL3
Misc : 5.0ppbv 2033029
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:30 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:21 2020
Response via : Initial Calibration



S20H017-CAL4

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
InstName : HP5973K
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:10:15 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:09:30 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	275672	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	816632	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.090	117	747567	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	70081	9.33	ppbv		100
3) Dichlorodifluoromethane	5.101	85	177160	9.45	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.490	85	192805	9.29	ppbv		100
5) Chloromethane	5.728	50	72411	9.64	ppbv		100
6) Vinyl chloride	6.074	62	77121	10.10	ppbv		100
7) 1,3-Butadiene	6.172	54	57942	10.19	ppbv		100
8) Bromomethane	7.242	94	60112	9.89	ppbv		100
9) Chloroethane	7.607	64	41276	9.86	ppbv		100
10) Bromoethene	8.252	106	61812	9.78	ppbv		100
11) Trichlorofluoromethane	8.380	101	160929	8.93	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	118175	10.24	ppbv		100
13) 1,1-Dichloroethene	10.509	61	108492	10.49	ppbv		100
14) Acetone	11.087	43	108139	9.64	ppbv		100
15) Carbon disulfide	11.203	76	200741	9.94	ppbv		100
16) 2-Propanol	11.592	45	109730	10.10	ppbv		100
17) Allyl chloride	11.957	41	97674	10.94	ppbv		100
18) Dichloromethane	12.486	49	85021	9.32	ppbv		100
19) tert-Butyl methyl ethe...	13.028	73	204570	10.95	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	101838	9.91	ppbv		100
21) Hexane	13.594	57	126689	10.18	ppbv		100
22) 1,1-Dichloroethane	14.397	63	127204	9.59	ppbv		100
23) Vinyl acetate	14.500	43	190135	11.44	ppbv		100
24) cis-1,2-Dichloroethene	15.784	61	95777	10.31	ppbv	#	100
25) 2-Butanone (MEK)	15.863	72	39391	9.84	ppbv		100
26) Ethyl acetate	15.869	61	24270	9.88	ppbv		100
27) Tetrahydrofuran	16.289	42	87628	9.28	ppbv		100
28) Chloroform	16.447	83	138156	10.03	ppbv		100
29) Cyclohexane	16.617	56	129114	10.72	ppbv		100
30) 1,1,1-Trichloroethane	16.702	97	138020	10.28	ppbv		100
31) Carbon tetrachloride	16.934	117	141782	9.59	ppbv		100
33) Benzene	17.438	78	228886	10.35	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	402829	10.98	ppbv		100
35) 1,2-Dichloroethane	17.657	62	91436	10.11	ppbv		100
36) Heptane	17.682	43	149931	10.85	ppbv		100
37) Trichloroethene	18.631	130	99963	10.67	ppbv		100
38) 1,2-Dichloropropane	19.148	63	85521	10.30	ppbv		100
39) 1,4-Dioxane	19.318	88	51037	10.57	ppbv		100
40) Bromodichloromethane	19.604	83	158796	10.42	ppbv		100
41) cis-1,3-Dichloropropene	20.352	75	133510	10.84	ppbv		100
42) 4-Methyl-2-pentanone (...	20.559	43	185753	10.17	ppbv		100
44) Toluene	20.809	91	270348	10.41	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	113347	9.52	ppbv		100
46) 1,1,2-Trichloroethane	21.600	97	92331	10.56	ppbv		100
47) Tetrachloroethene	21.642	166	143204	10.31	ppbv		100
48) 2-Hexanone	21.892	43	169125	9.56	ppbv		100
49) Chlorodibromomethane	22.208	129	160849	10.29	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.445	107	130014	10.40	ppbv		100
51) Chlorobenzene	23.133	112	220561	10.30	ppbv		100
52) Ethylbenzene	23.200	91	360237	10.33	ppbv		100
53) m&p-Xylene	23.376	91	544754	20.69	ppbv		100
54) o-Xylene	24.027	91	276708	10.44	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
InstName : HP5973K
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

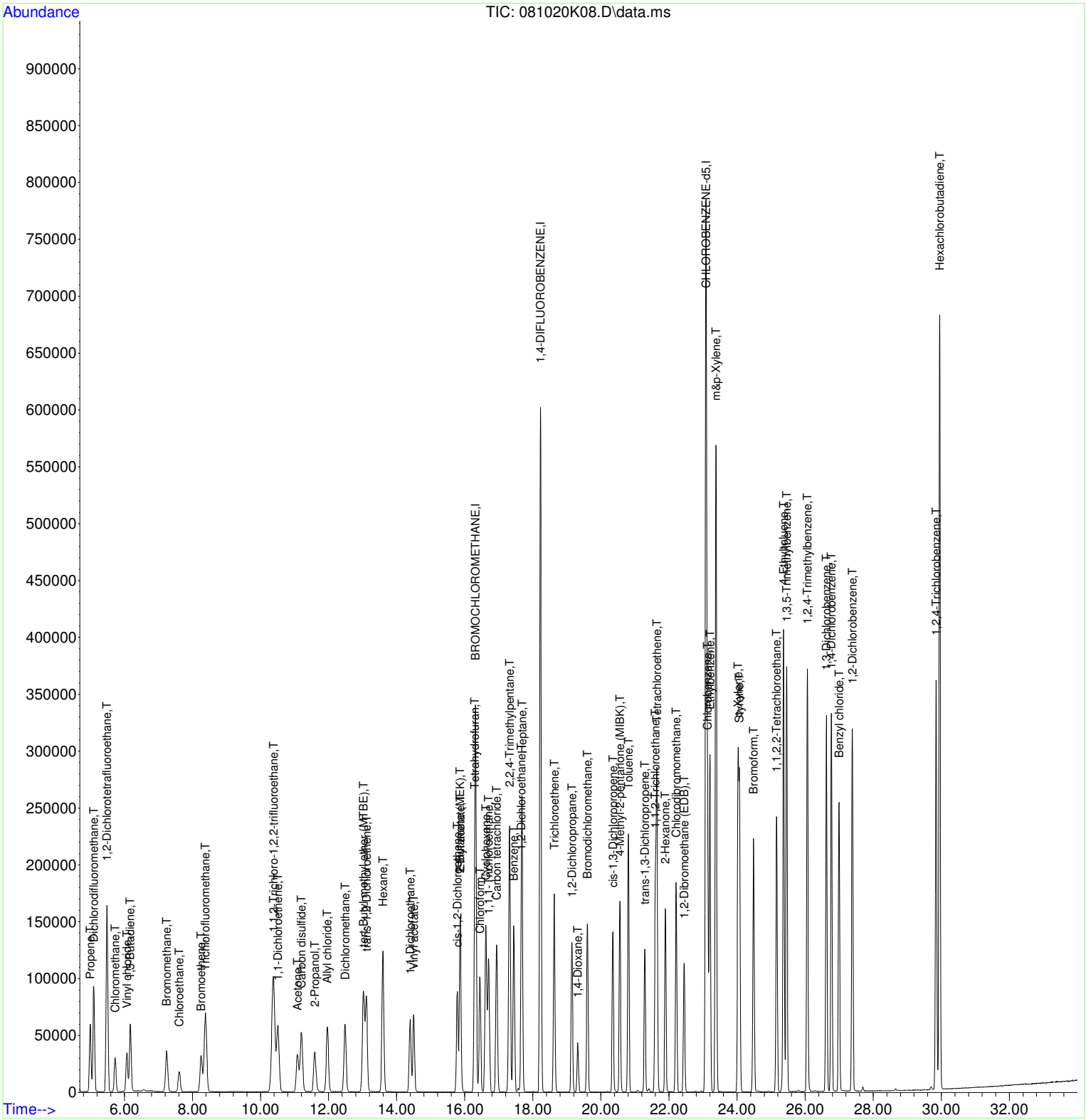
Quant Time: Aug 12 16:10:15 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:09:30 2020
Response via : Initial Calibration

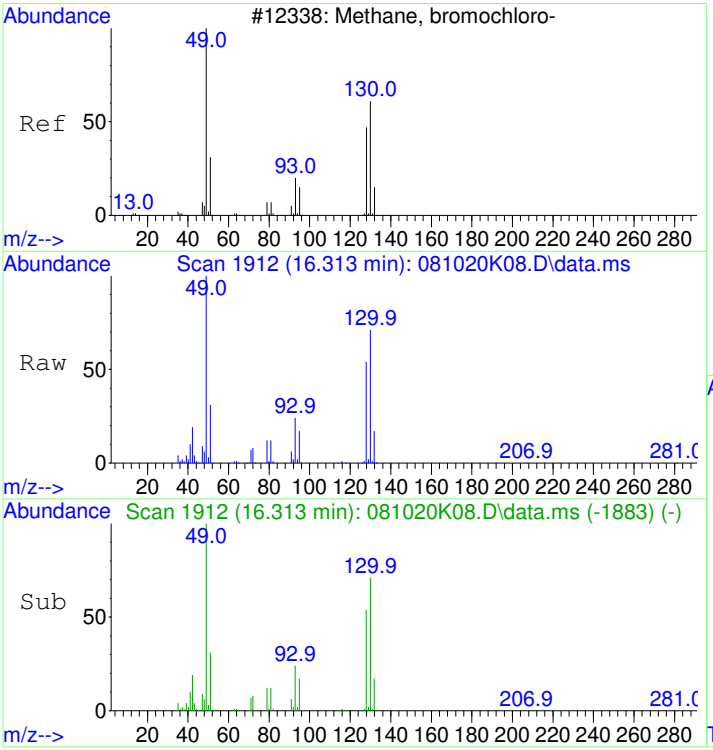
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	227323	10.47 ppbv	100
56) Bromoform	24.483	173	177353	10.77 ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	209093	10.24 ppbv	100
58) 4-Ethyltoluene	25.365	105	443462	10.29 ppbv	100
59) 1,3,5-Trimethylbenzene	25.457	105	331400	10.41 ppbv	100
60) 1,2,4-Trimethylbenzene	26.065	105	336540	10.56 ppbv	100
61) 1,3-Dichlorobenzene	26.625	146	242917	10.15 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	241451	10.25 ppbv	100
63) Benzyl chloride	26.996	91	315200	10.02 ppbv	100
64) 1,2-Dichlorobenzene	27.385	146	235441	10.17 ppbv	100
65) 1,2,4-Trichlorobenzene	29.849	180	208918	10.44 ppbv	100
66) Hexachlorobutadiene	29.952	225	237683	10.70 ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
InstName : HP5973K
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:10:15 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:09:30 2020
Response via : Initial Calibration

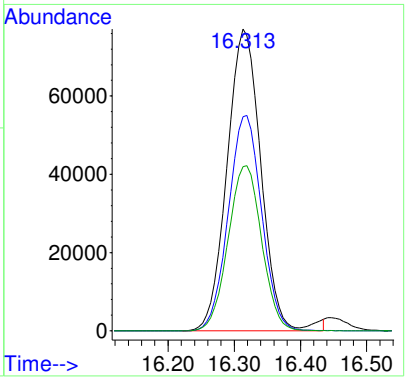


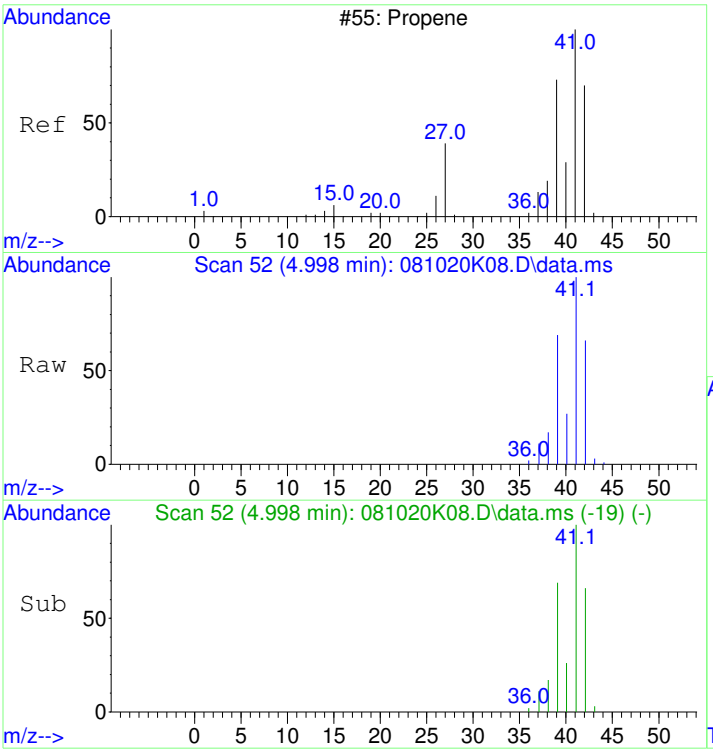


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 49 Resp: 275672

Ion	Ratio	Lower	Upper
49	100		
130	69.9	49.9	89.9
128	53.7	33.7	73.7

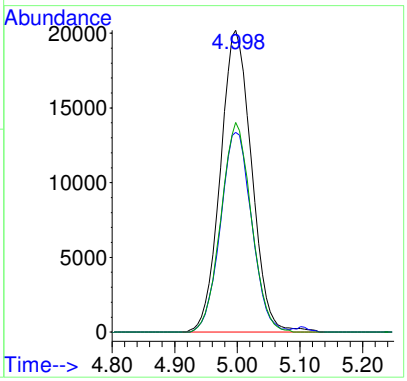


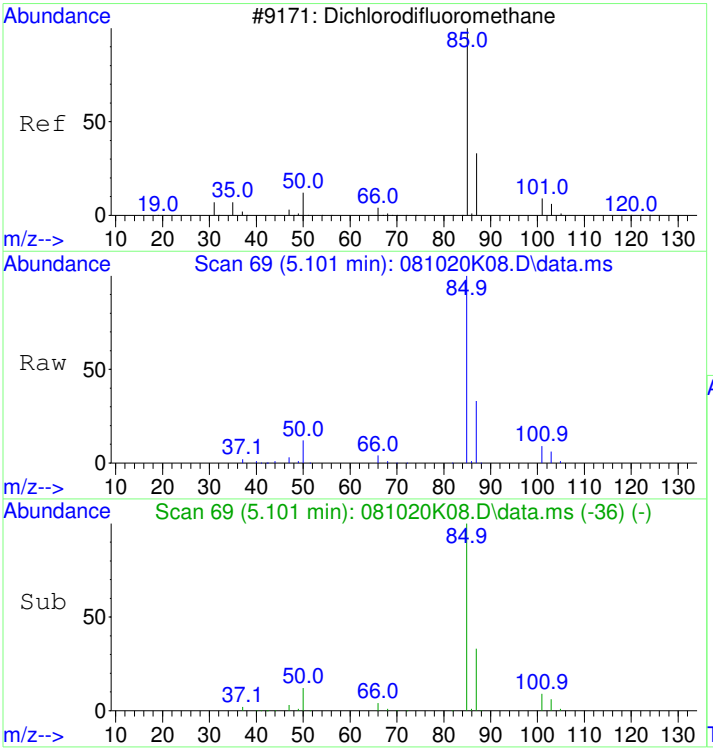


#2
Propene
Concen: 9.33 ppbv
RT: 4.998 min Scan# 52
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 41 Resp: 70081

Ion	Ratio	Lower	Upper
41	100		
42	67.0	47.0	87.0
39	67.7	47.7	87.7

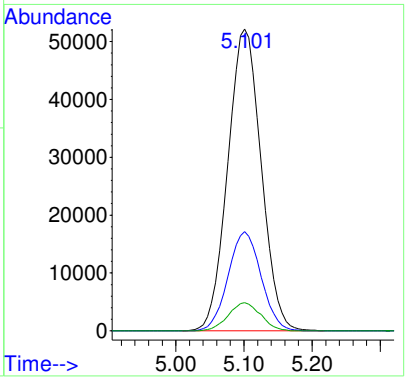


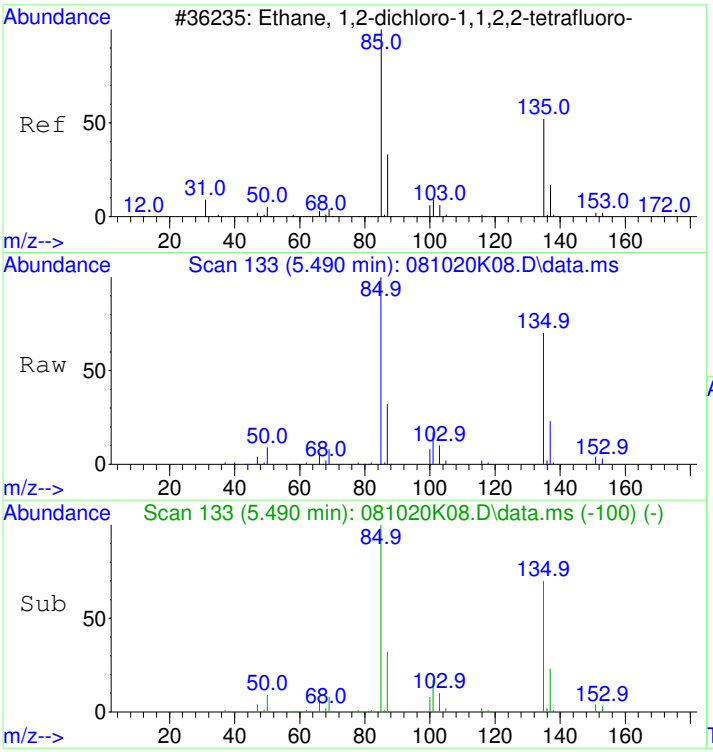


#3
Dichlorodifluoromethane
Concen: 9.45 ppbv
RT: 5.101 min Scan# 69
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 85 Resp: 177160

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.4	52.4
101	9.1	0.0	29.1

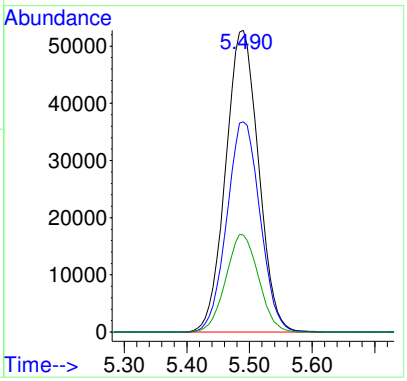


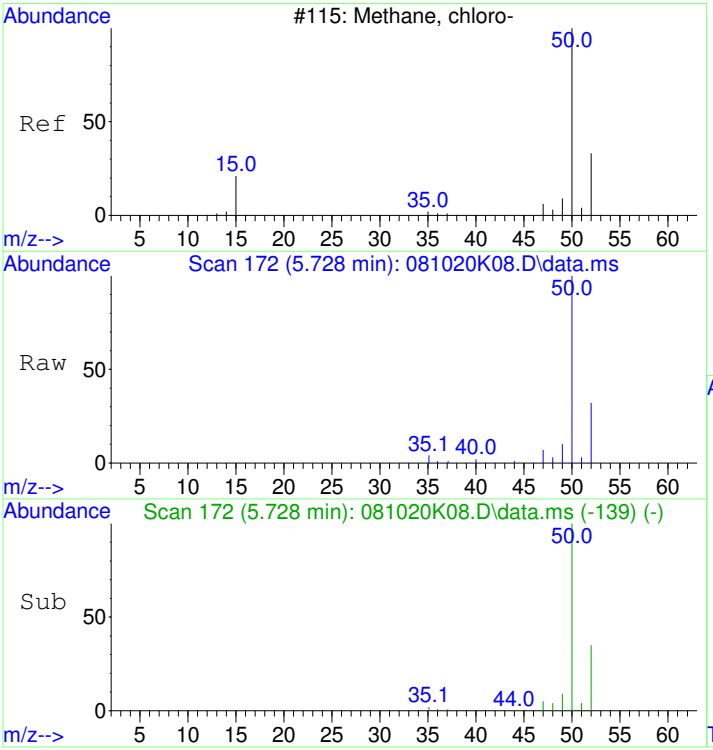


#4
1,2-Dichlorotetrafluoroethane
Concen: 9.29 ppbv
RT: 5.490 min Scan# 133
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 85 Resp: 192805

Ion	Ratio	Lower	Upper
85	100		
135	70.5	50.5	90.5
87	32.2	12.2	52.2

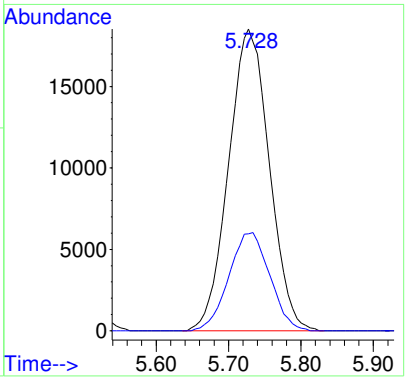


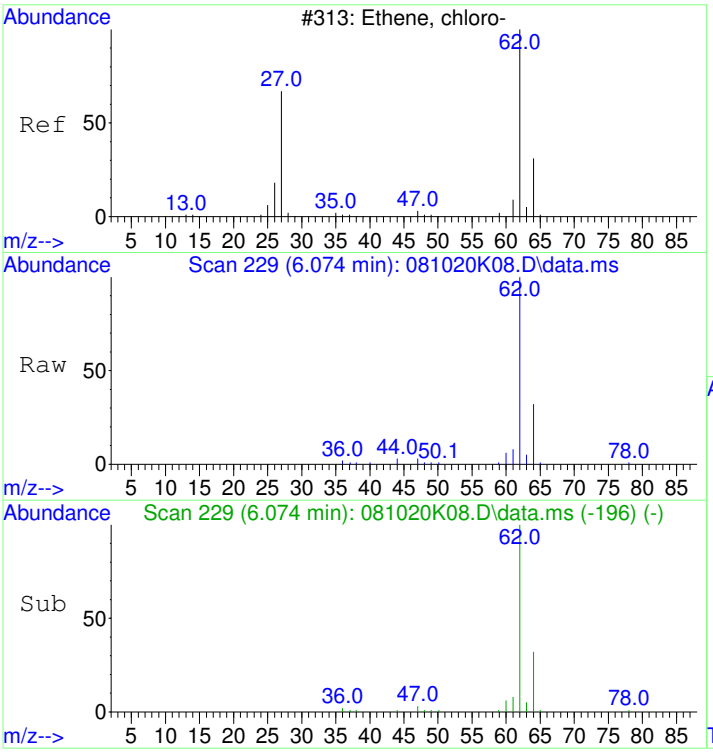


#5
Chloromethane
Concen: 9.64 ppbv
RT: 5.728 min Scan# 172
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 50 Resp: 72411

Ion	Ratio	Lower	Upper
50	100		
52	32.7	12.7	52.7

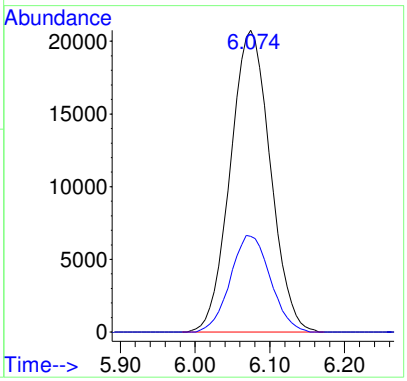


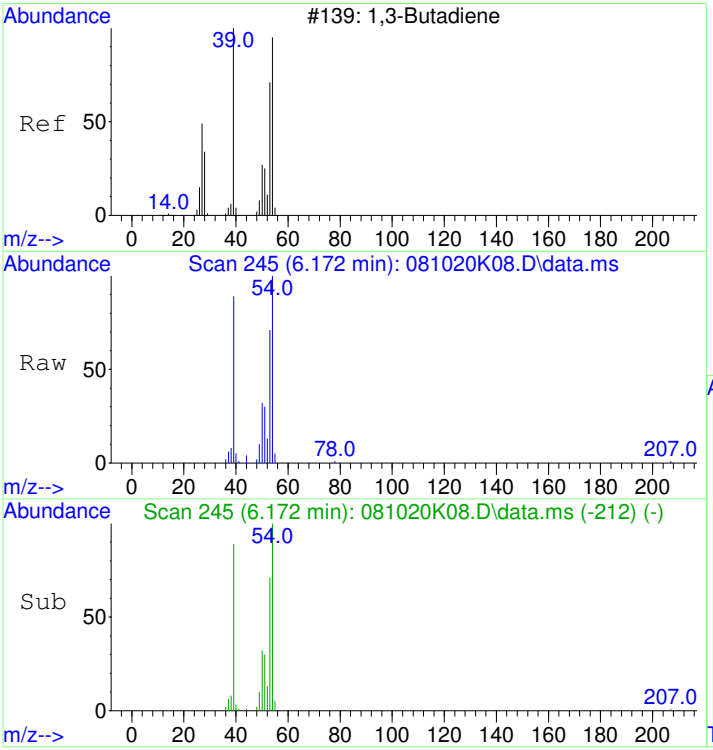


#6
Vinyl chloride
Concen: 10.10 ppbv
RT: 6.074 min Scan# 229
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 62 Resp: 77121

Ion	Ratio	Lower	Upper
62	100		
64	32.1	12.1	52.1

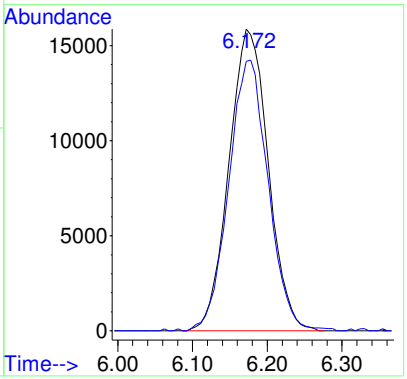


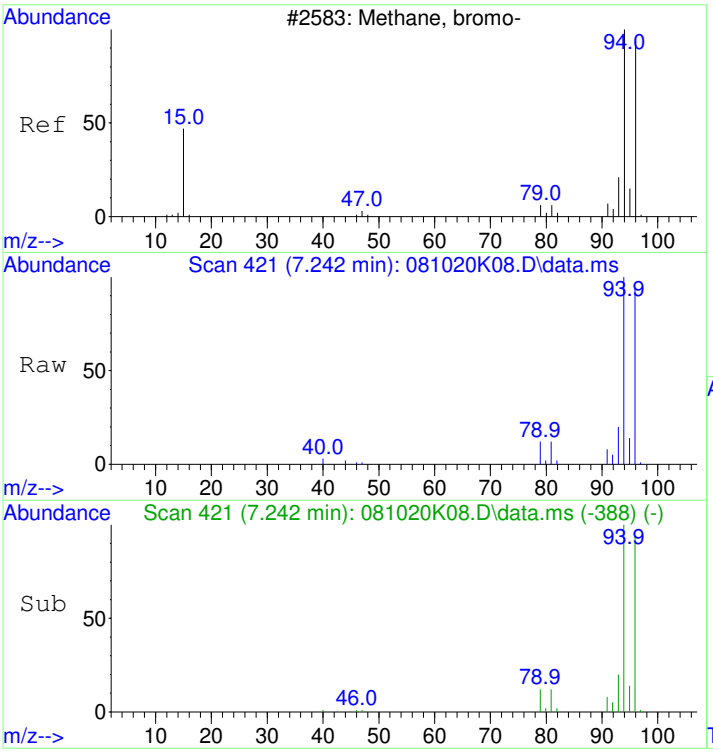


#7
1,3-Butadiene
Concen: 10.19 ppbv
RT: 6.172 min Scan# 245
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 54 Resp: 57942

Ion	Ratio	Lower	Upper
54	100		
39	90.2	70.2	110.2

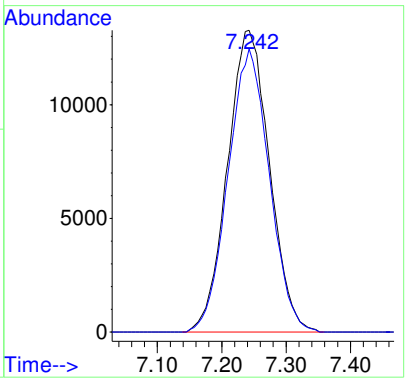


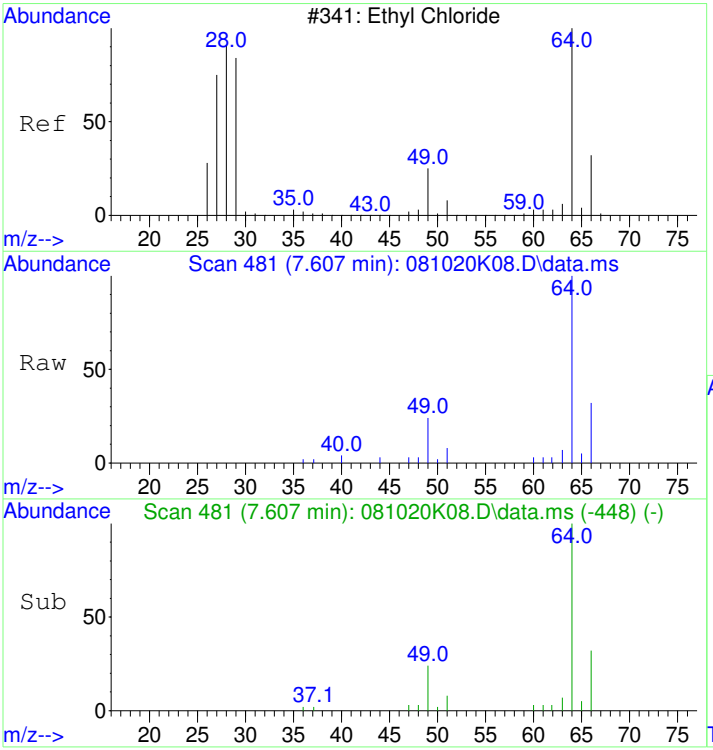


#8
Bromomethane
Concen: 9.89 ppbv
RT: 7.242 min Scan# 421
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 94 Resp: 60112

Ion	Ratio	Lower	Upper
94	100		
96	92.2	72.2	112.2

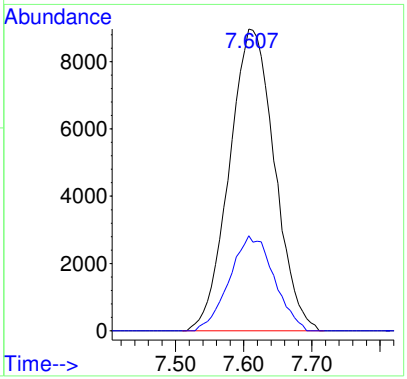


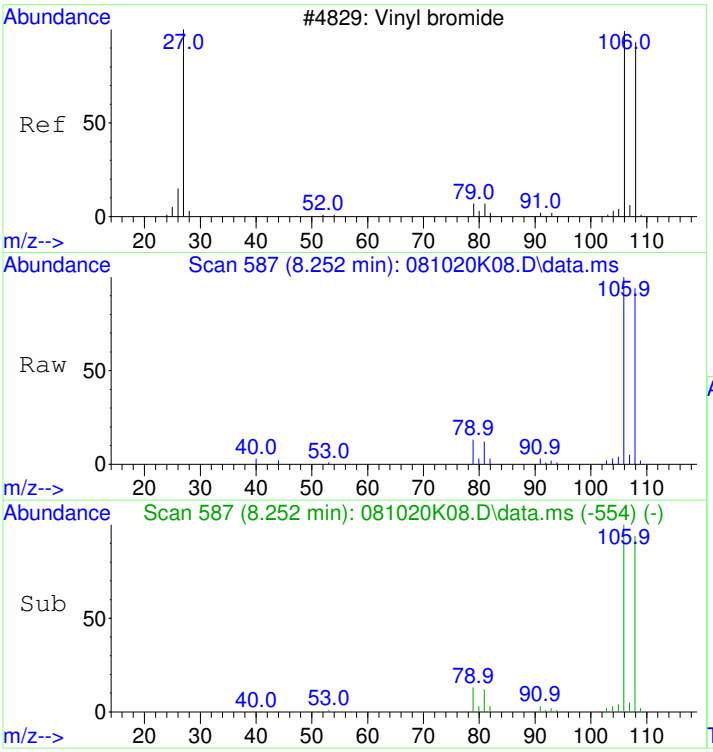


#9
Chloroethane
Concen: 9.86 ppbv
RT: 7.607 min Scan# 481
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 64 Resp: 41276

Ion	Ratio	Lower	Upper
64	100		
66	30.9	10.9	50.9

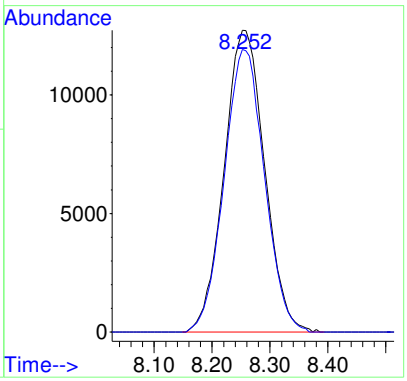


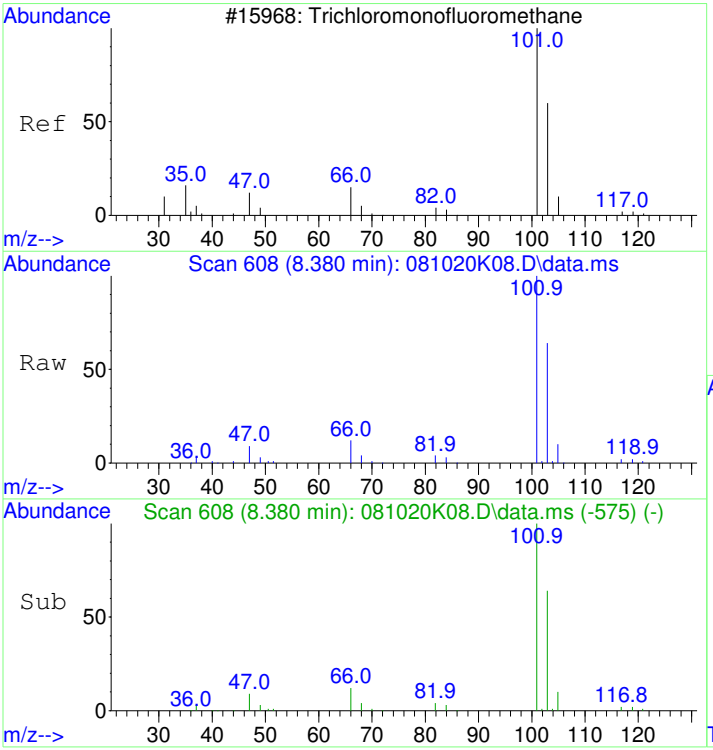


#10
Bromoethene
Concen: 9.78 ppbv
RT: 8.252 min Scan# 587
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:106 Resp: 61812

Ion	Ratio	Lower	Upper
106	100		
108	93.3	0.0	213.3

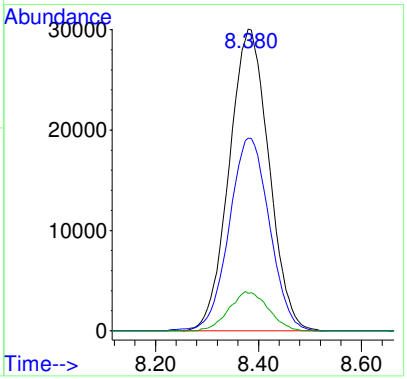


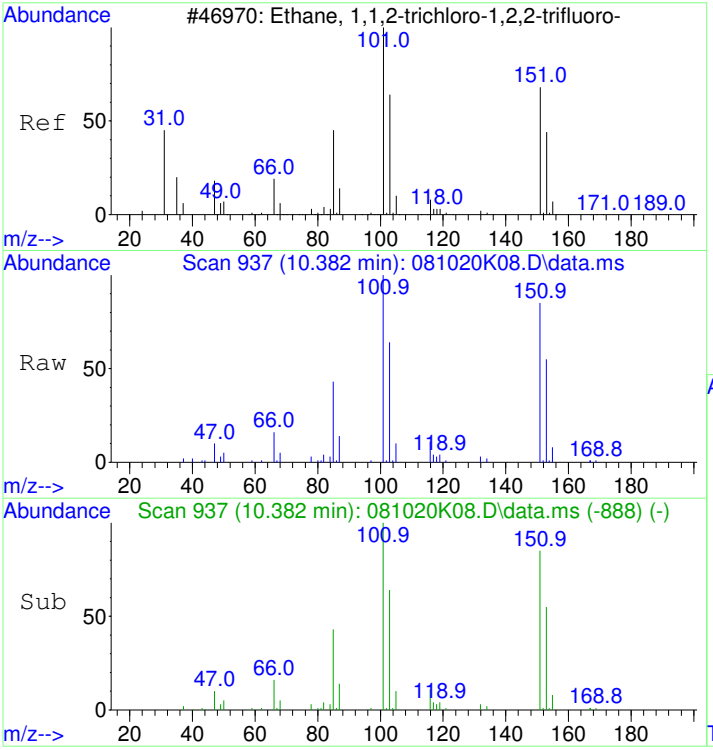


#11
Trichlorofluoromethane
Concen: 8.93 ppbv
RT: 8.380 min Scan# 608
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:101 Resp: 160929

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9
66	12.8	0.0	32.8

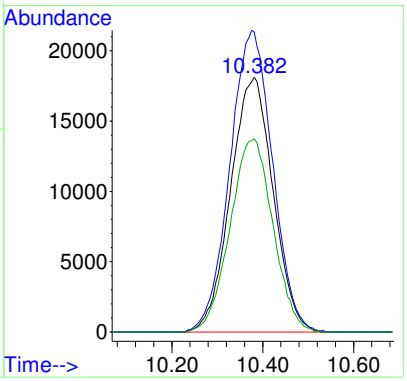


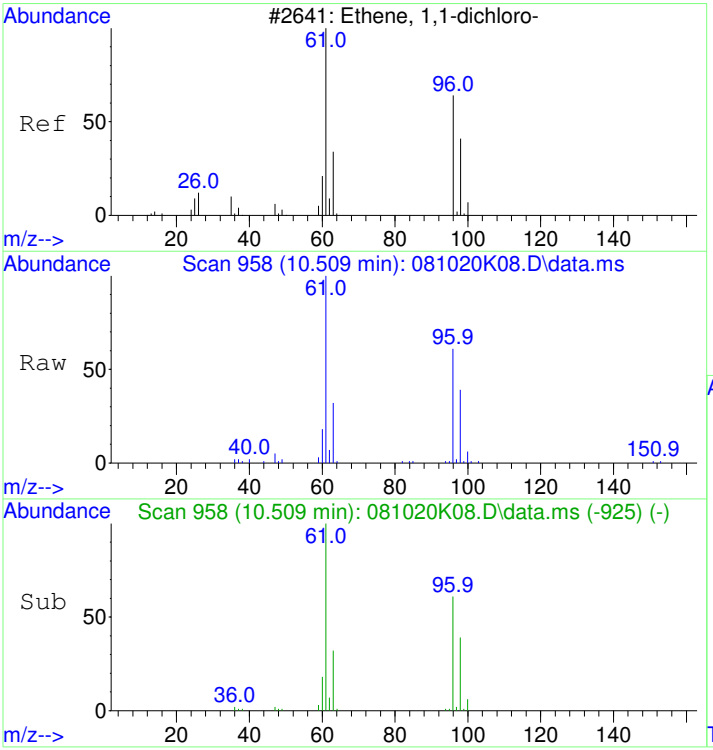


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 10.24 ppbv
RT: 10.382 min Scan# 937
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:151 Resp: 118175

Ion	Ratio	Lower	Upper
151	100		
101	118.7	98.7	138.7
103	76.2	56.2	96.2

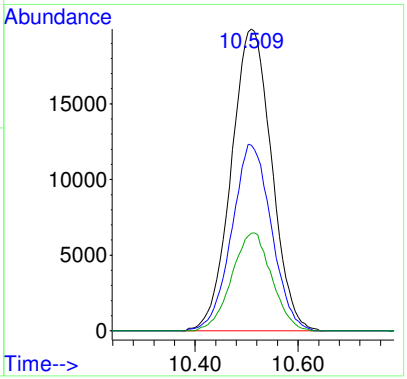


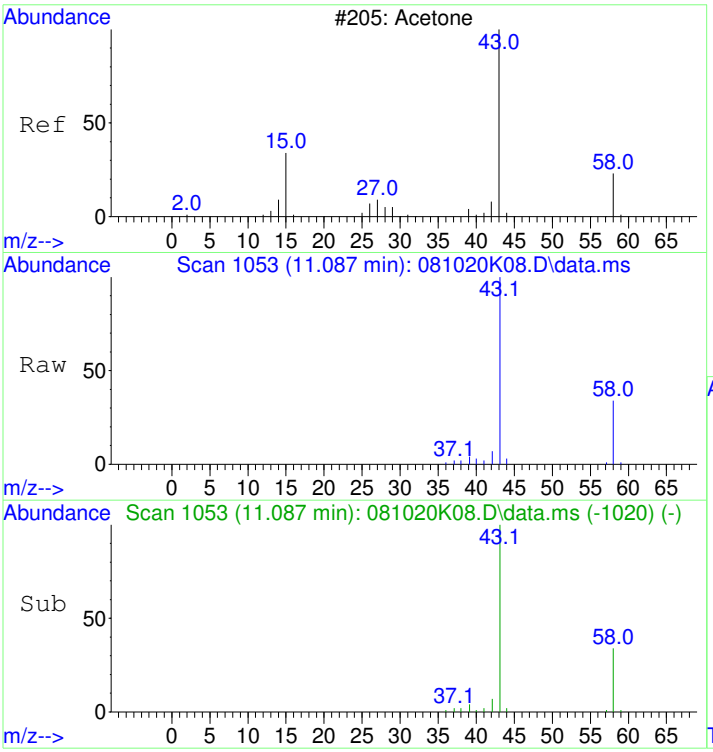


#13
1,1-Dichloroethene
Concen: 10.49 ppbv
RT: 10.509 min Scan# 958
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 61 Resp: 108492

Ion	Ratio	Lower	Upper
61	100		
96	60.7	40.7	80.7
63	32.2	12.2	52.2

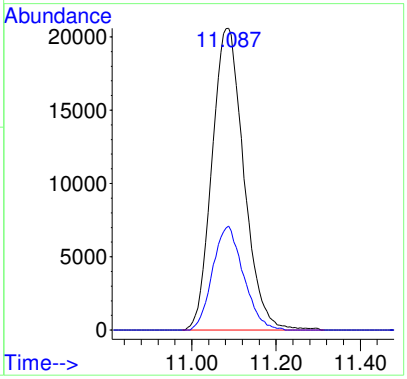


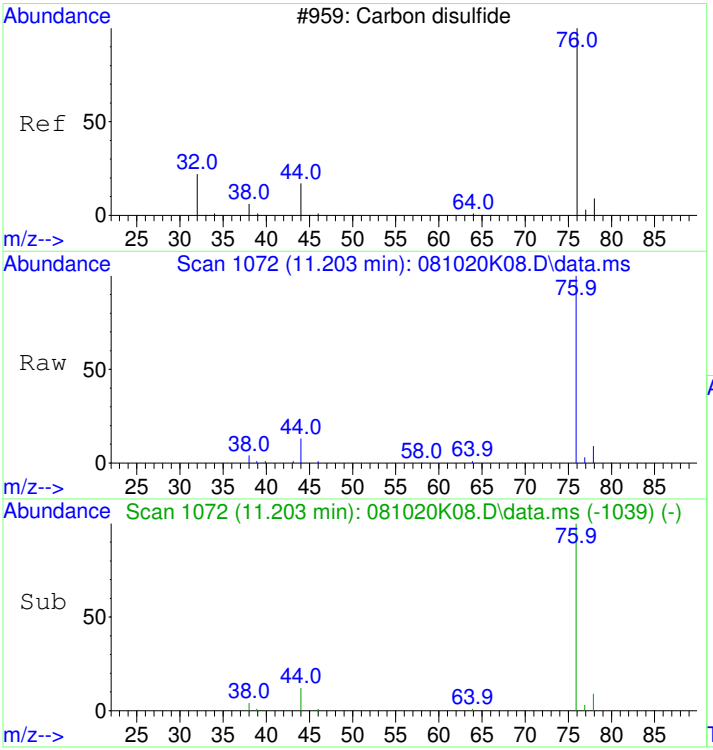


#14
Acetone
Concen: 9.64 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 43 Resp: 108139

Ion	Ratio	Lower	Upper
43	100		
58	33.4	13.4	53.4

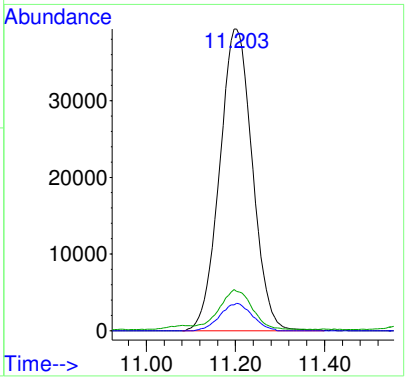


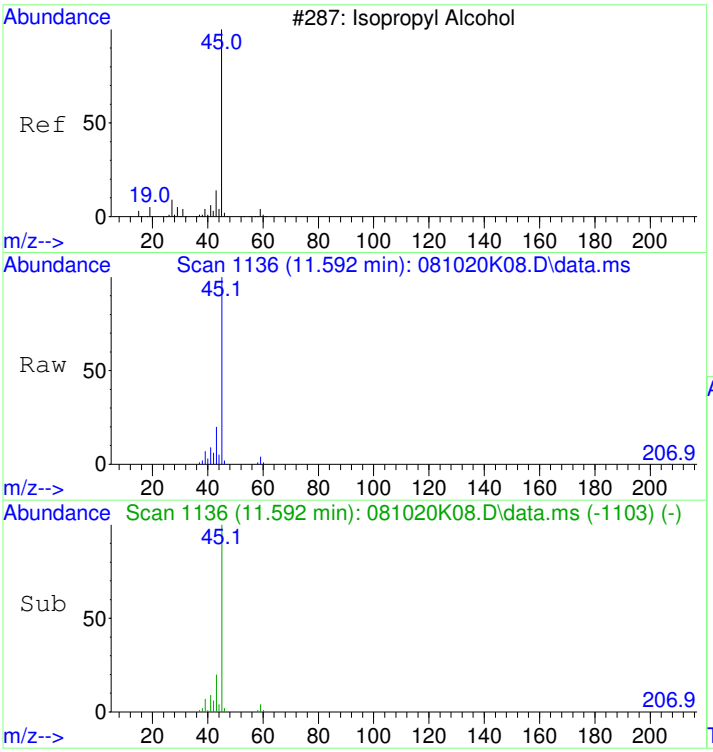


#15
Carbon disulfide
Concen: 9.94 ppbv
RT: 11.203 min Scan# 1072
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 76 Resp: 200741

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.0
44	13.6	0.0	33.6

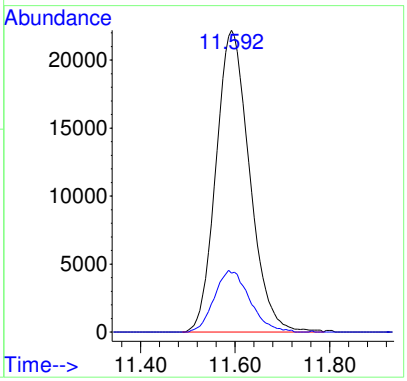


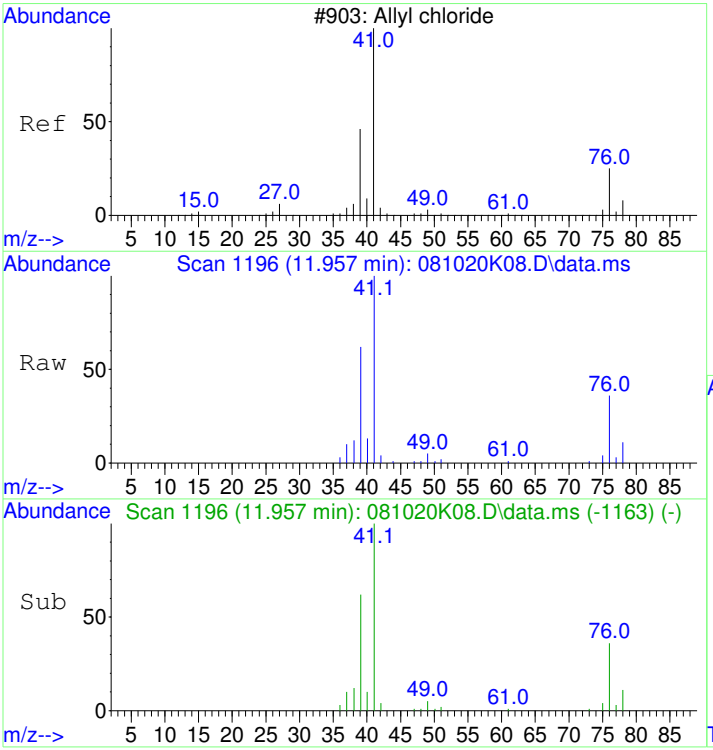


#16
2-Propanol
Concen: 10.10 ppbv
RT: 11.592 min Scan# 1136
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 45 Resp: 109730

Ion	Ratio	Lower	Upper
45	100		
43	21.5	1.5	41.5

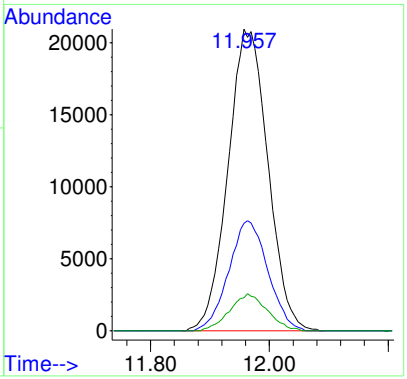


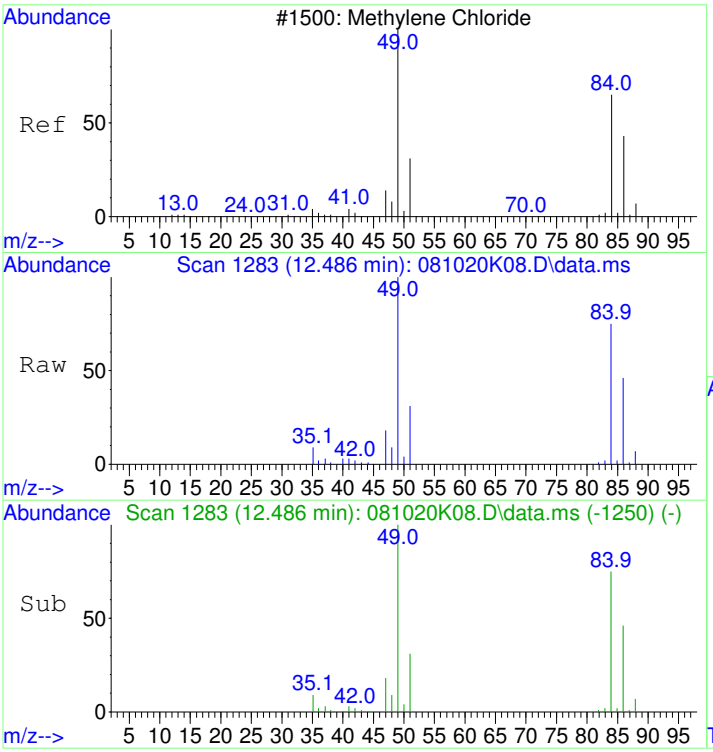


#17
Allyl chloride
Concen: 10.94 ppbv
RT: 11.957 min Scan# 1196
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 41 Resp: 97674

Ion	Ratio	Lower	Upper
41	100		
76	35.8	15.8	55.8
78	11.6	0.0	31.6

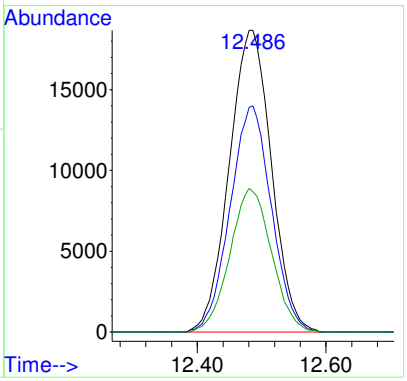


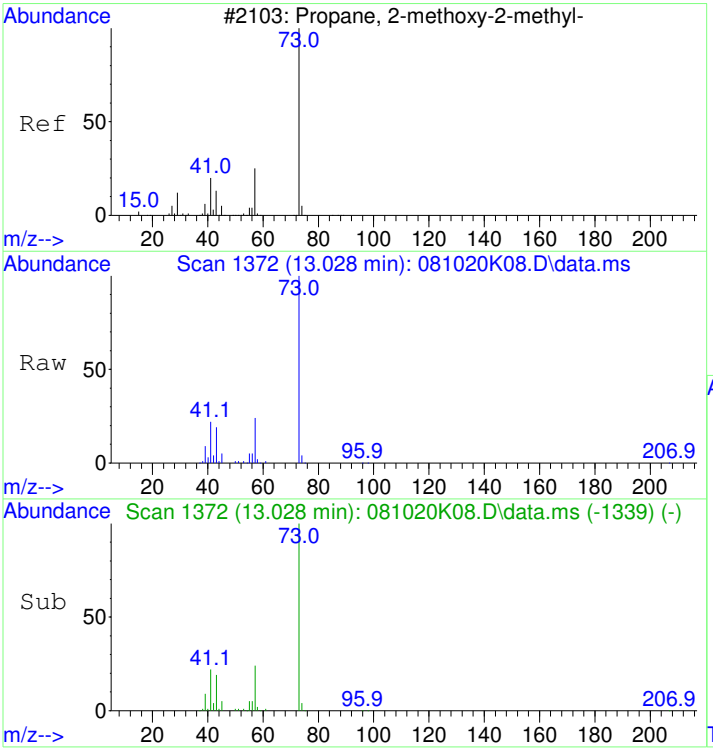


#18
Dichloromethane
Concen: 9.32 ppbv
RT: 12.486 min Scan# 1283
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 49 Resp: 85021

Ion	Ratio	Lower	Upper
49	100		
84	73.4	53.4	93.4
86	47.0	27.0	67.0

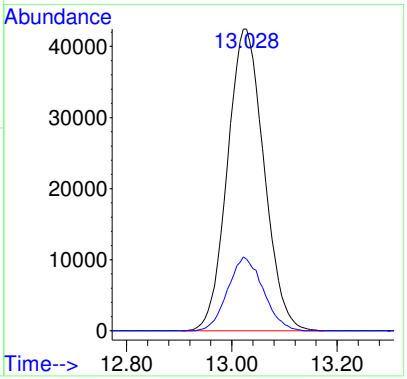


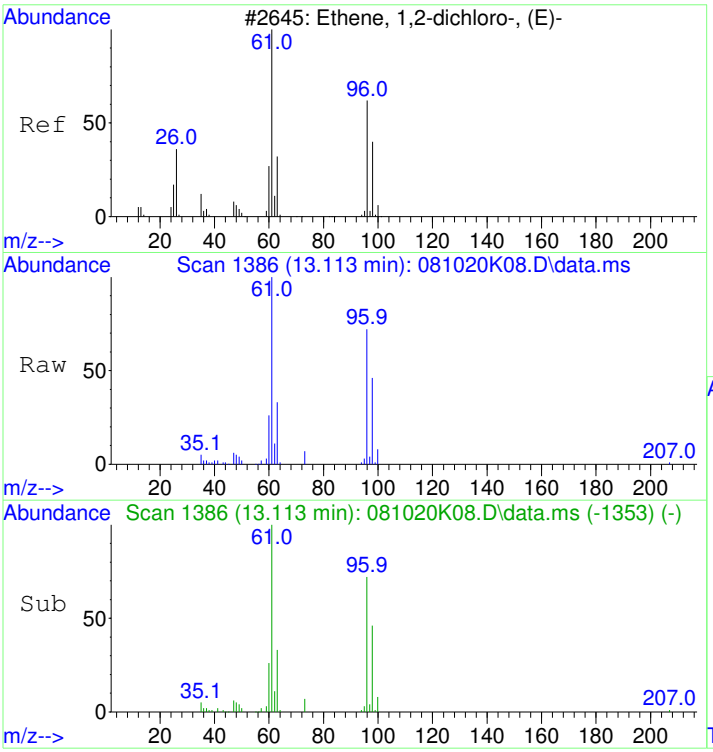


#19
tert-Butyl methyl ether (MTBE)
Concen: 10.95 ppbv
RT: 13.028 min Scan# 1372
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 73 Resp: 204570

Ion	Ratio	Lower	Upper
73	100		
57	23.8	3.8	43.8

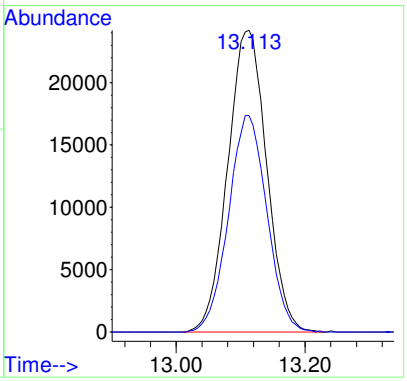


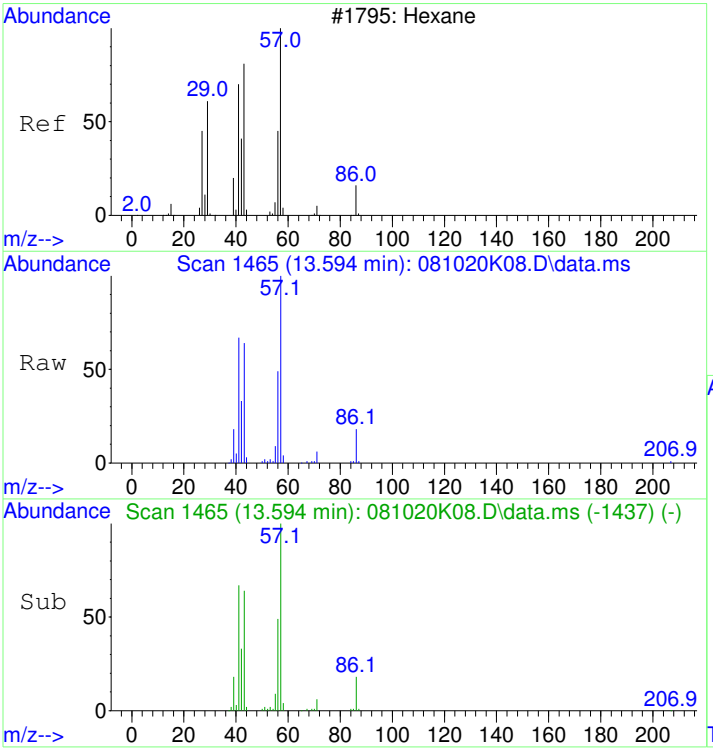


#20
trans-1,2-Dichloroethene
Concen: 9.91 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 61 Resp: 101838

Ion	Ratio	Lower	Upper
61	100		
96	70.7	50.7	90.7

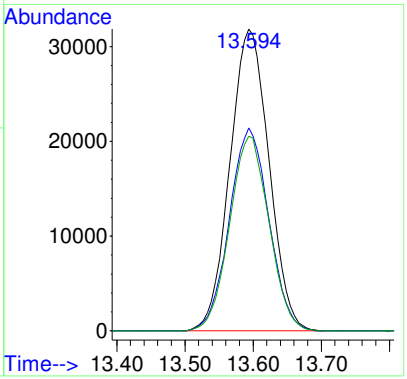


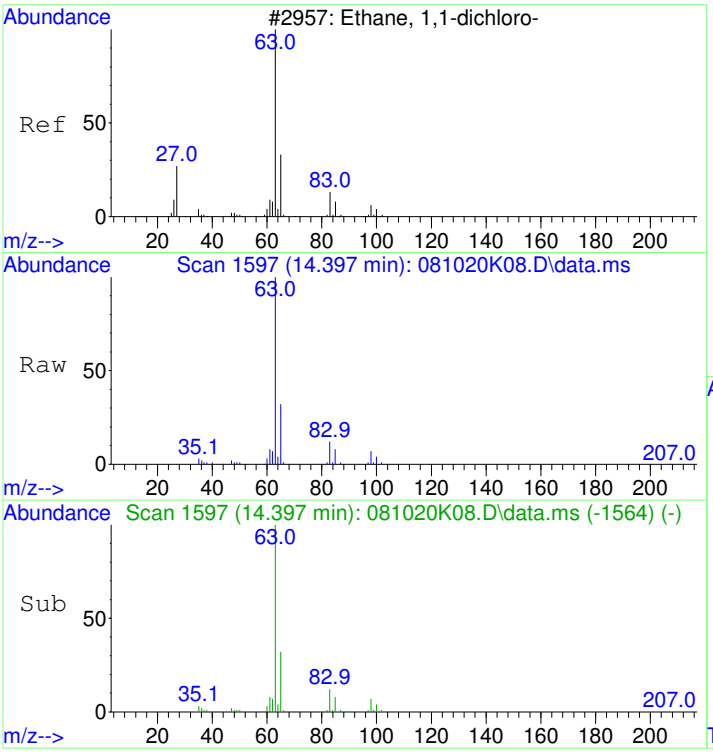


#21
Hexane
Concen: 10.18 ppbv
RT: 13.594 min Scan# 1465
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 57 Resp: 126689

Ion	Ratio	Lower	Upper
57	100		
41	67.8	47.8	87.8
43	64.7	44.7	84.7

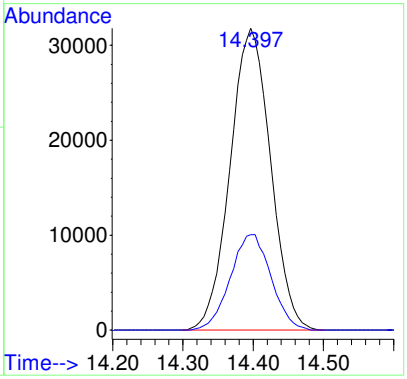


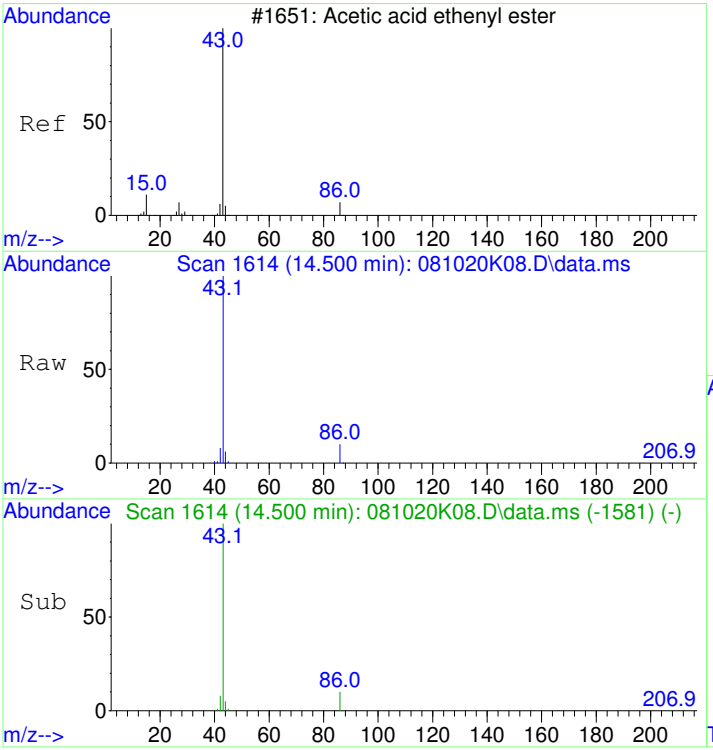


#22
1,1-Dichloroethane
Concen: 9.59 ppbv
RT: 14.397 min Scan# 1597
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 63 Resp: 127204

Ion	Ratio	Lower	Upper
63	100		
65	31.8	11.8	51.8

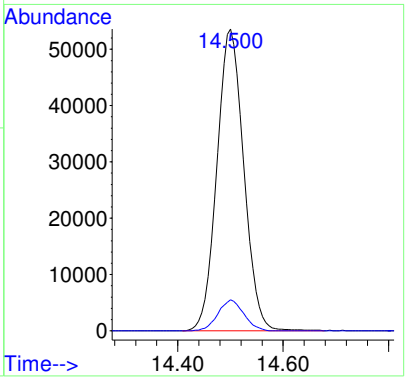


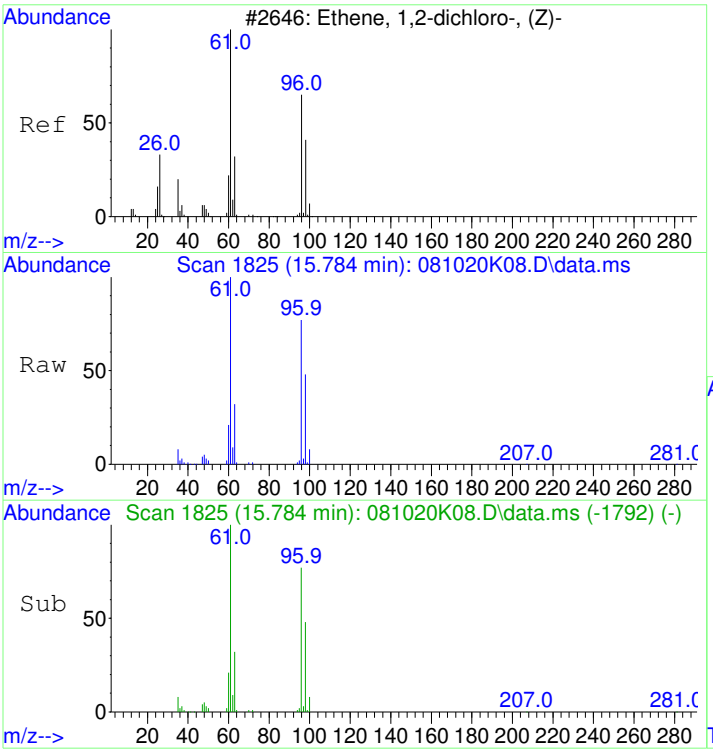


#23
Vinyl acetate
Concen: 11.44 ppbv
RT: 14.500 min Scan# 1614
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 43 Resp: 190135

Ion	Ratio	Lower	Upper
43	100		
86	9.9	0.0	29.9

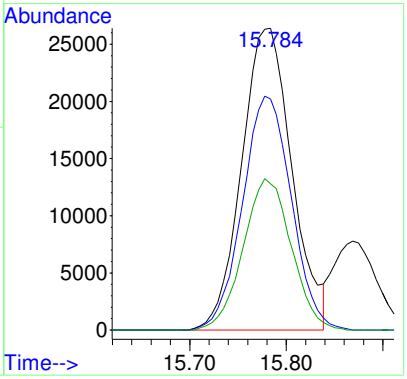


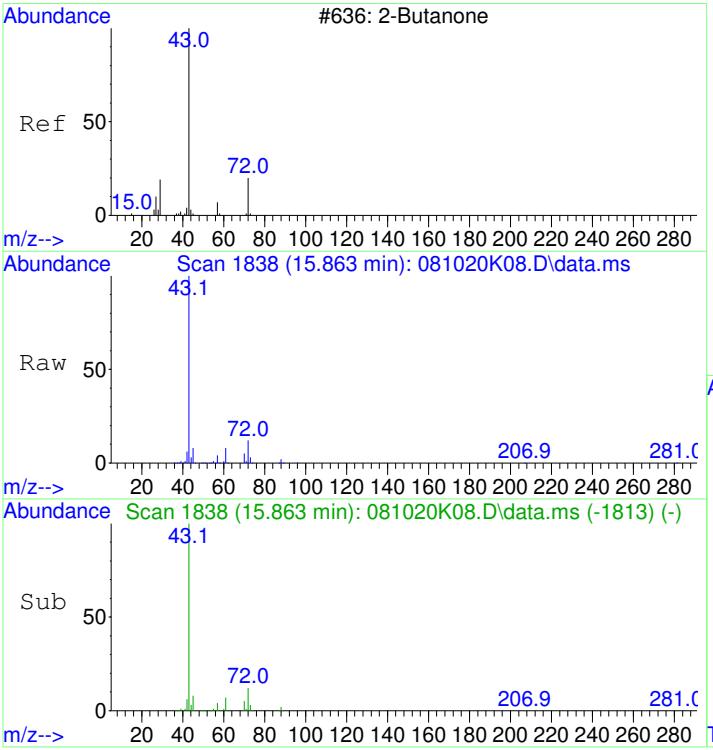


#24
cis-1,2-Dichloroethene
Concen: 10.31 ppbv
RT: 15.784 min Scan# 1825
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 61 Resp: 95777

Ion	Ratio	Lower	Upper
61	100		
96	75.0	55.0	95.0
98	0.0	0.0	20.0

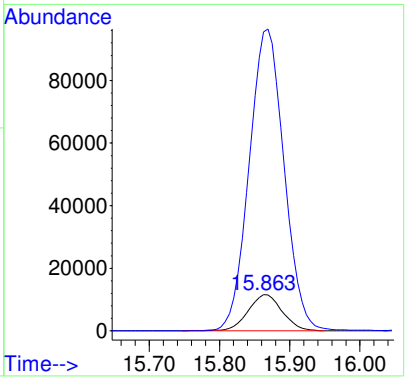


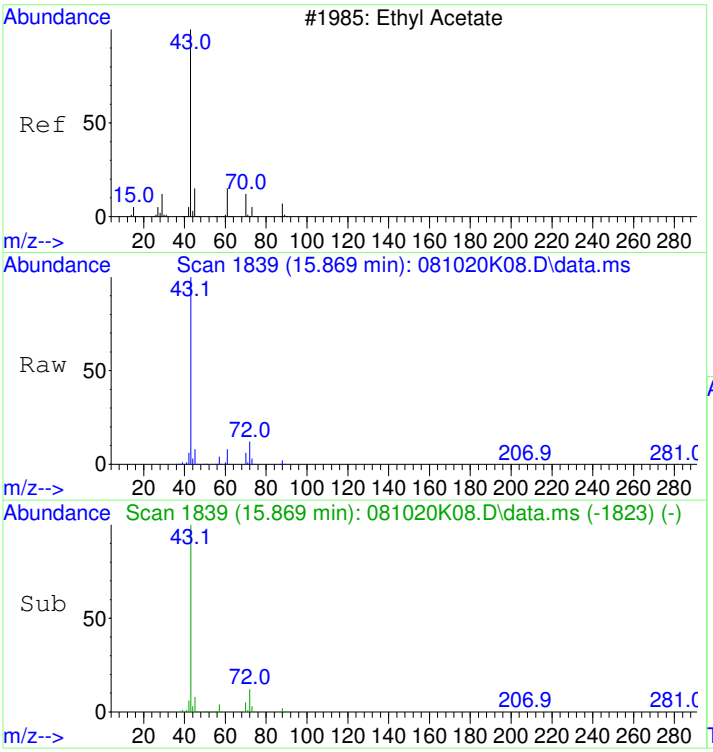


#25
2-Butanone (MEK)
Concen: 9.84 ppbv
RT: 15.863 min Scan# 1838
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 72 Resp: 39391

Ion	Ratio	Lower	Upper
72	100		
43	846.4	836.4	856.4

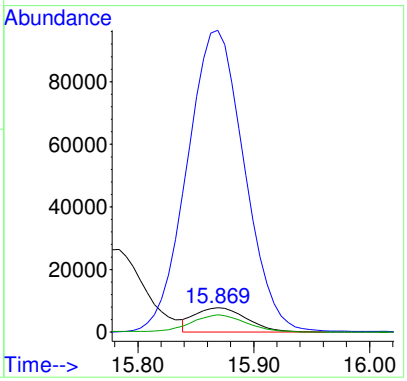


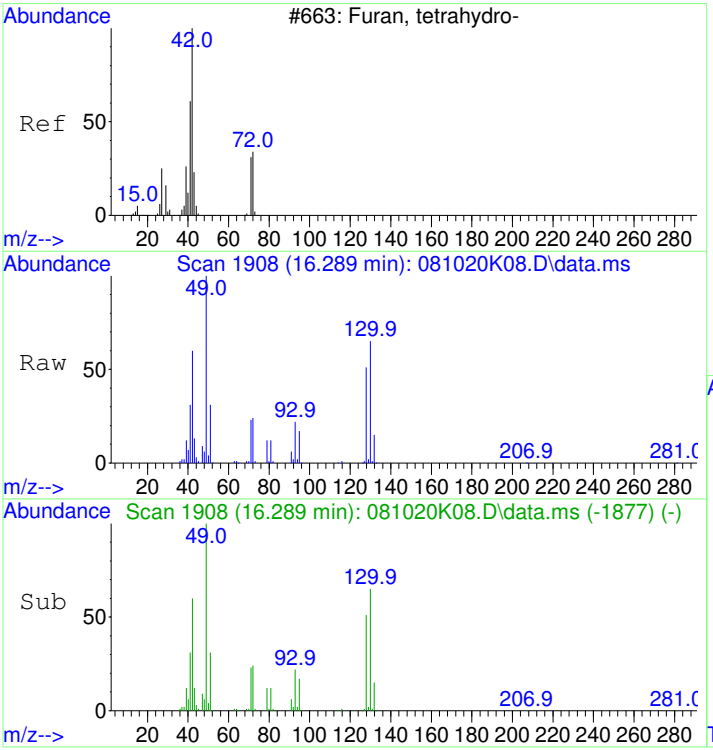


#26
Ethyl acetate
Concen: 9.88 ppbv
RT: 15.869 min Scan# 1839
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 61 Resp: 24270

Ion	Ratio	Lower	Upper
61	100		
43	1365.9	1355.9	1375.9
70	74.9	64.9	84.9

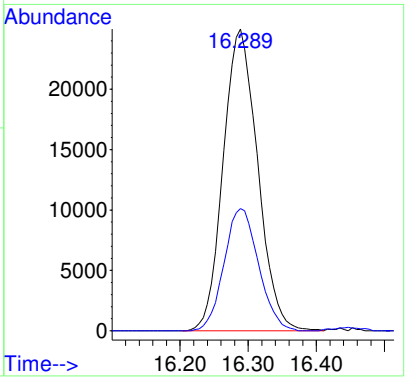


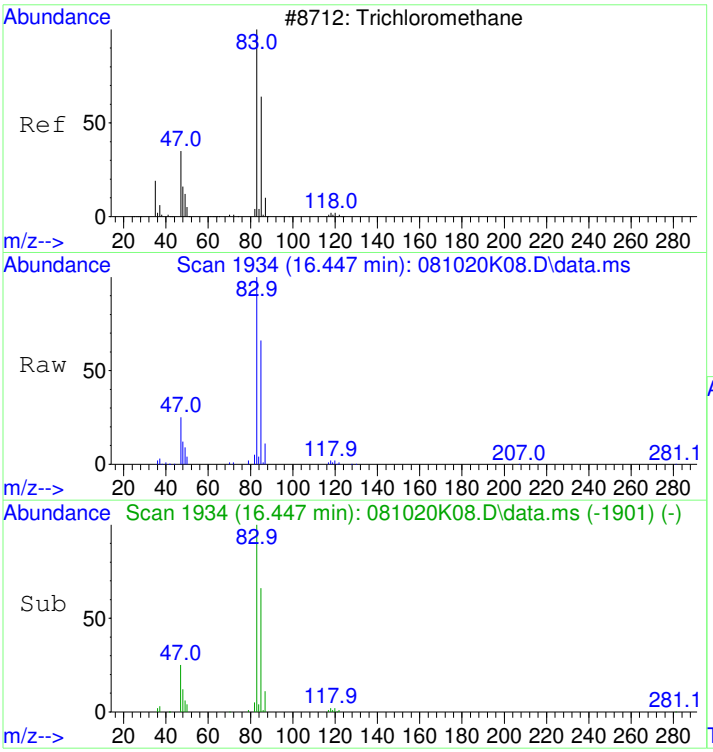


#27
Tetrahydrofuran
Concen: 9.28 ppbv
RT: 16.289 min Scan# 1908
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 42 Resp: 87628

Ion	Ratio	Lower	Upper
42	100		
72	40.5	20.5	60.5

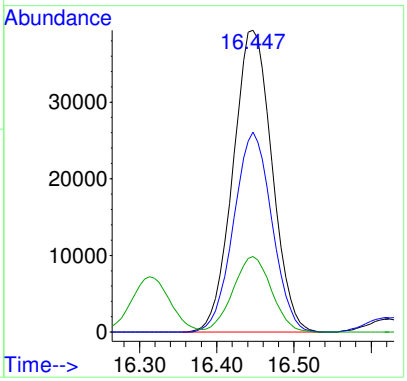


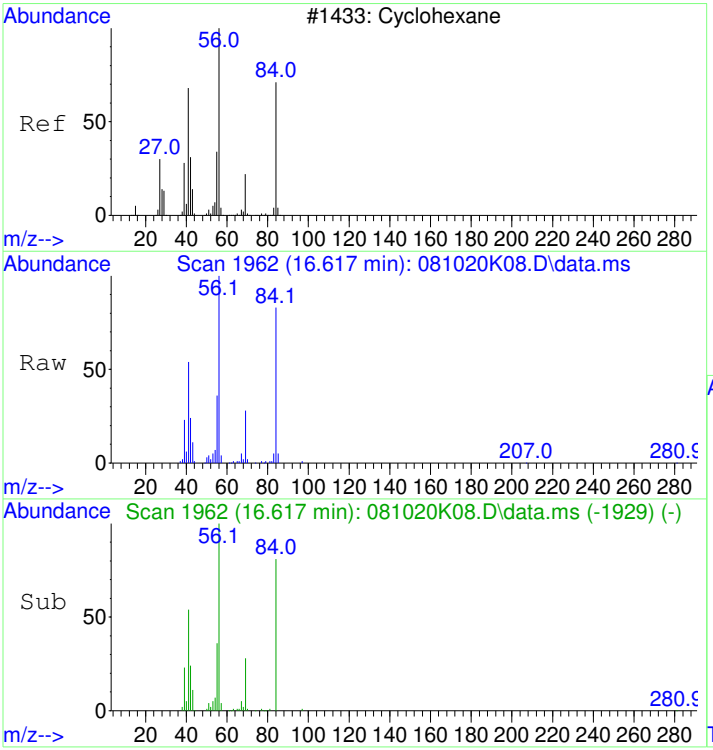


#28
Chloroform
Concen: 10.03 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 83 Resp: 138156

Ion	Ratio	Lower	Upper
83	100		
85	65.0	45.0	85.0
47	23.6	3.6	43.6

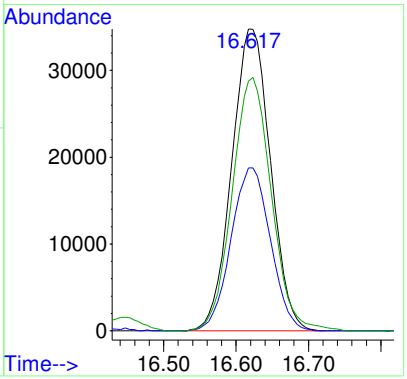


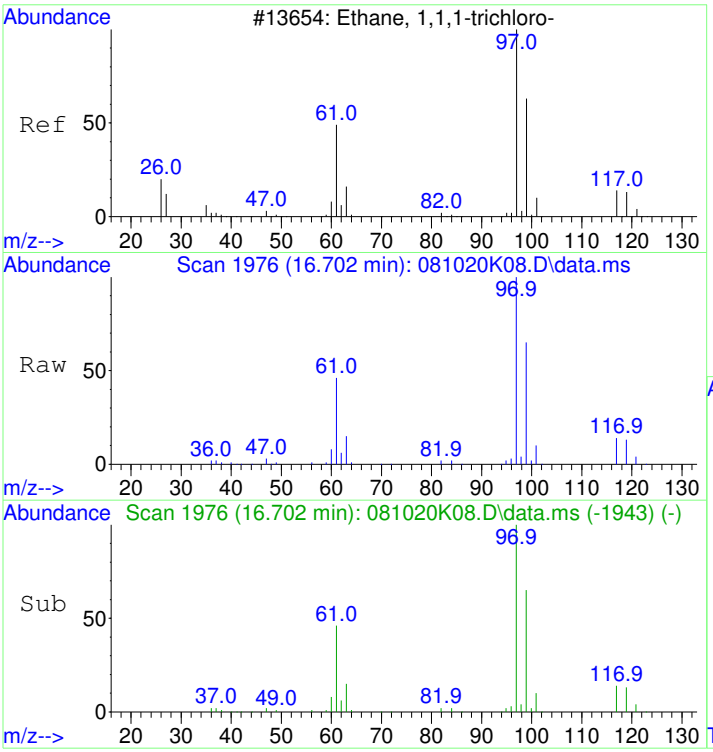


#29
Cyclohexane
Concen: 10.72 ppbv
RT: 16.617 min Scan# 1962
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 56 Resp: 129114

Ion	Ratio	Lower	Upper
56	100		
41	54.9	34.9	74.9
84	85.1	65.1	105.1

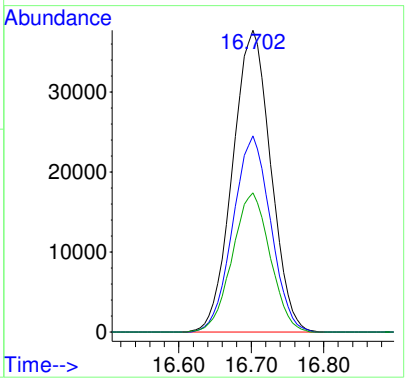


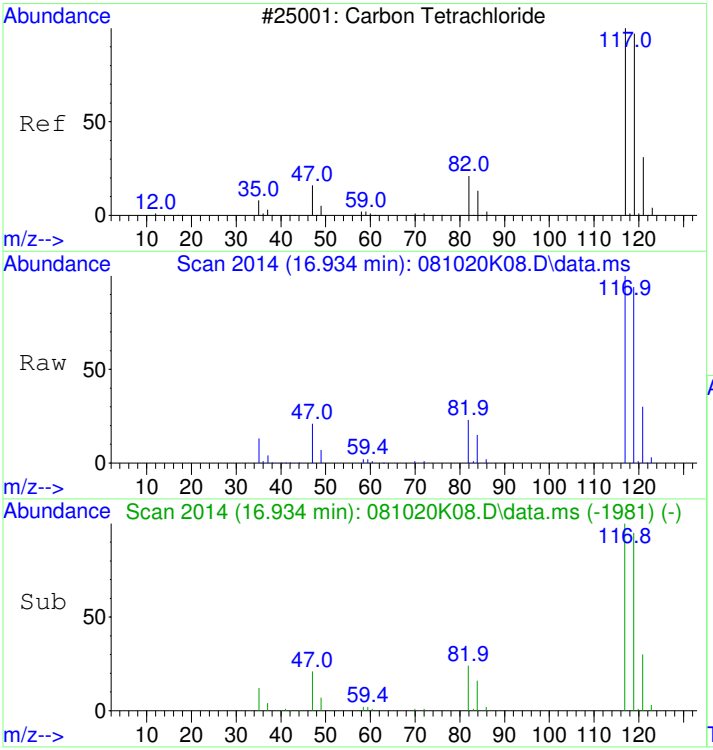


#30
1,1,1-Trichloroethane
Concen: 10.28 ppbv
RT: 16.702 min Scan# 1976
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 97 Resp: 138020

Ion	Ratio	Lower	Upper
97	100		
99	64.2	44.2	84.2
61	45.8	25.8	65.8

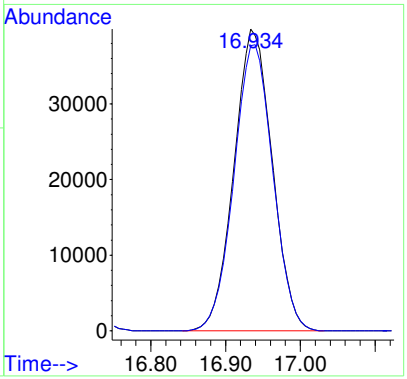


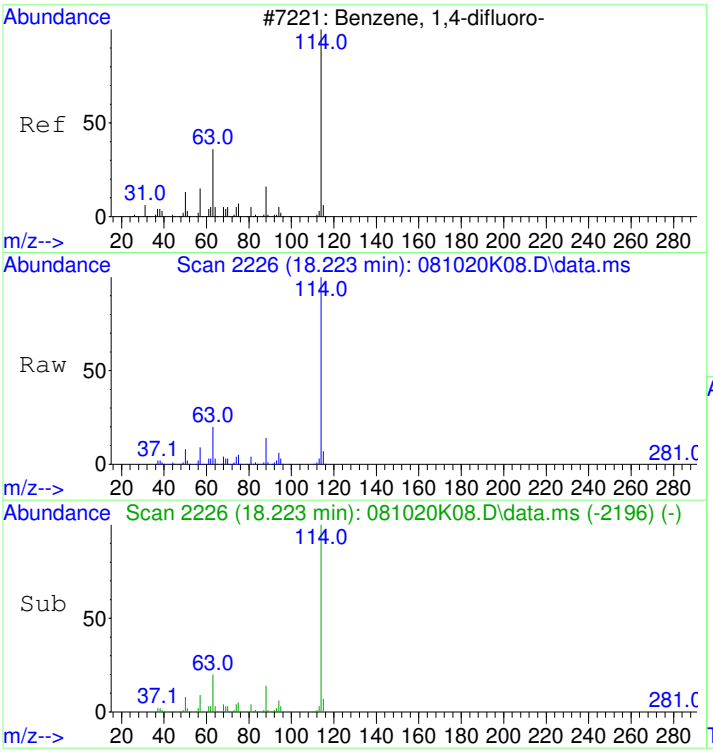


#31
Carbon tetrachloride
Concen: 9.59 ppbv
RT: 16.934 min Scan# 2014
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:117 Resp: 141782

Ion	Ratio	Lower	Upper
117	100		
119	96.3	76.3	116.3

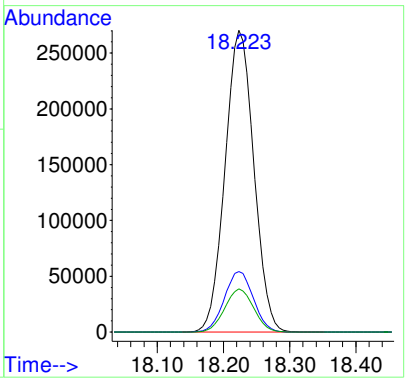


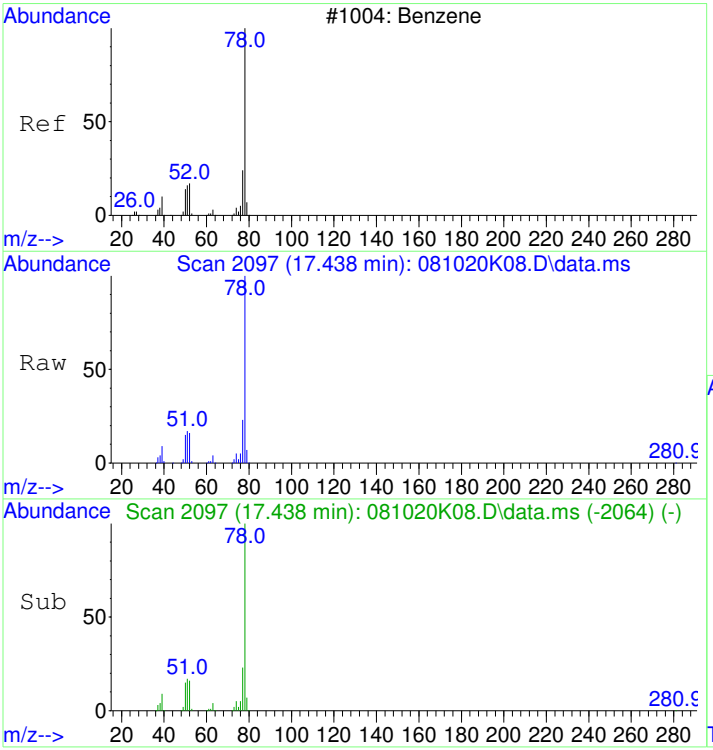


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:114 Resp: 816632

Ion	Ratio	Lower	Upper
114	100		
63	20.2	0.2	40.2
88	14.3	0.0	34.3

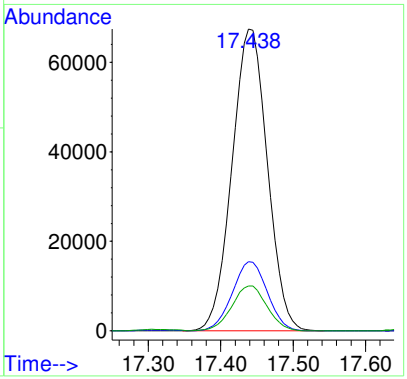


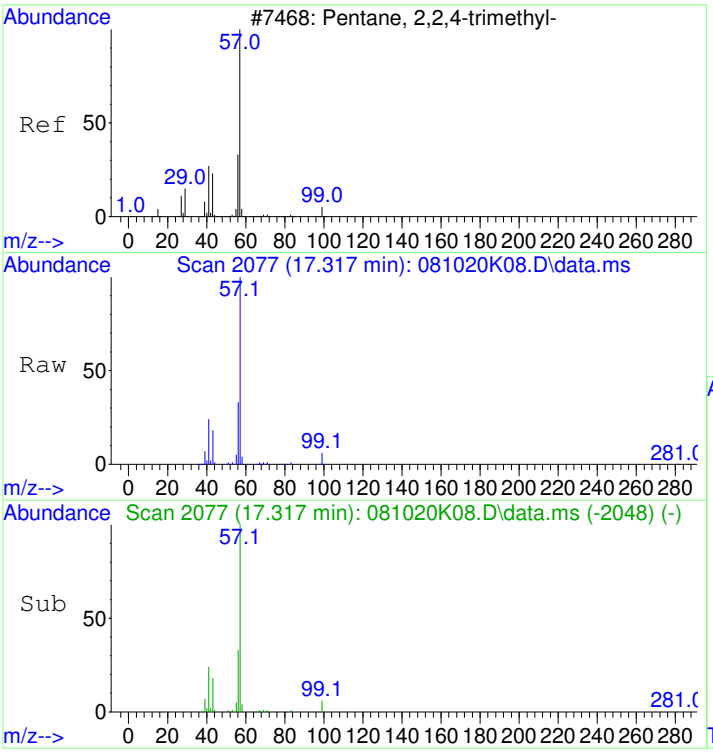


#33
Benzene
Concen: 10.35 ppbv
RT: 17.438 min Scan# 2097
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 78 Resp: 228886

Ion	Ratio	Lower	Upper
78	100		
77	22.7	2.7	42.7
50	14.8	0.0	34.8

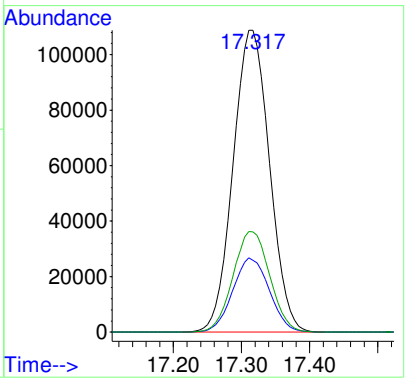


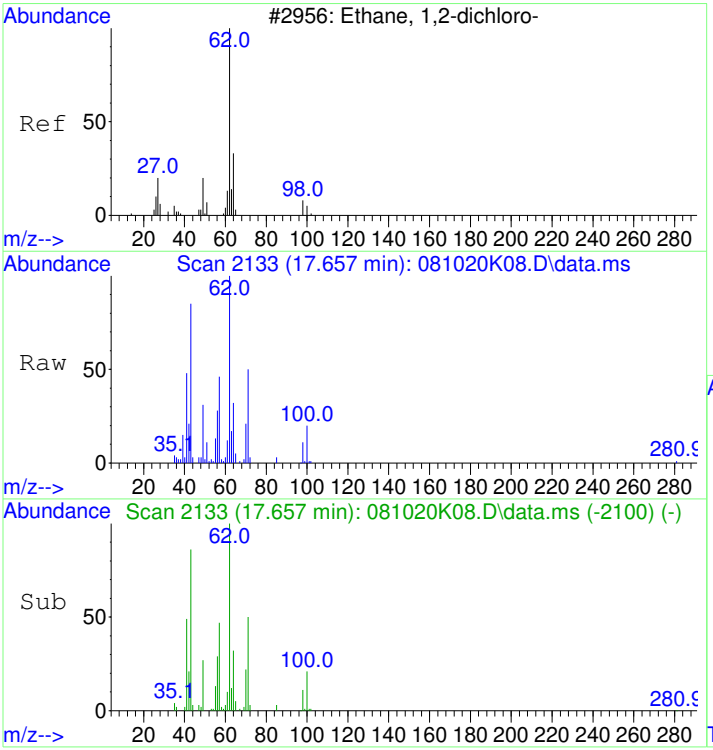


#34
2,2,4-Trimethylpentane
Concen: 10.98 ppbv
RT: 17.317 min Scan# 2077
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 57 Resp: 402829

Ion	Ratio	Lower	Upper
57	100		
41	24.7	4.7	44.7
56	33.6	13.6	53.6

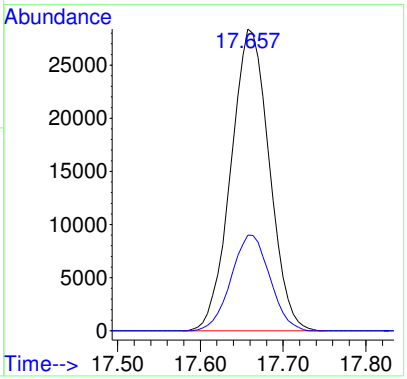


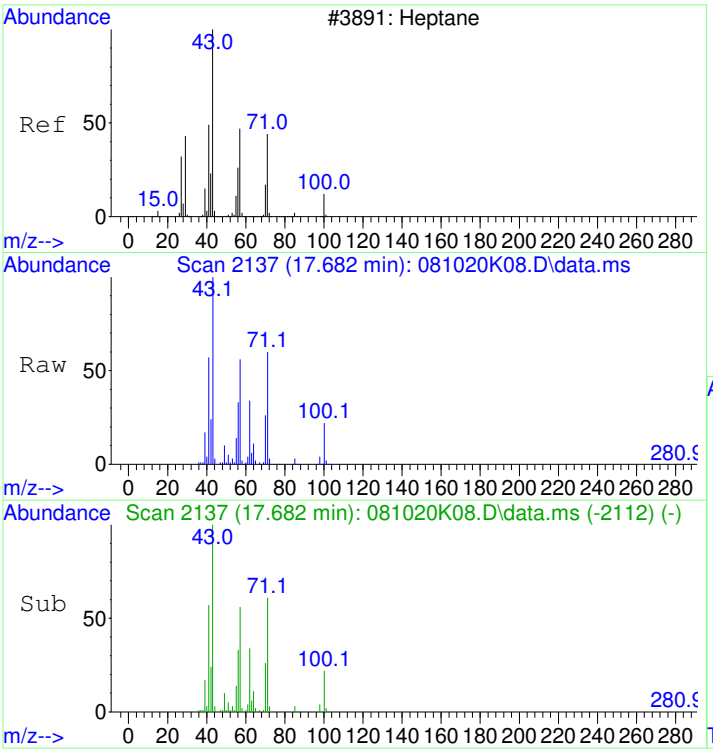


#35
1,2-Dichloroethane
Concen: 10.11 ppbv
RT: 17.657 min Scan# 2133
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 62 Resp: 91436

Ion	Ratio	Lower	Upper
62	100		
64	32.0	12.0	52.0

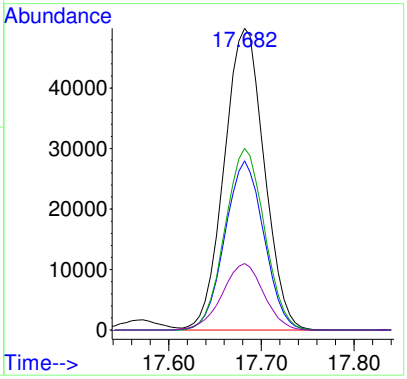


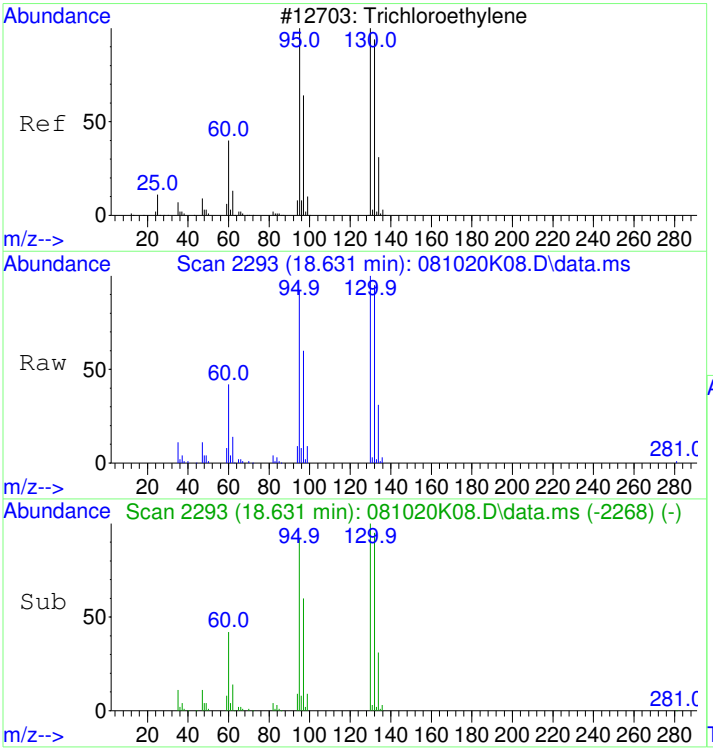


#36
Heptane
Concen: 10.85 ppbv
RT: 17.682 min Scan# 2137
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 43 Resp: 149931

Ion	Ratio	Lower	Upper
43	100		
57	54.7	34.7	74.7
71	59.4	39.4	79.4
100	23.0	3.0	43.0

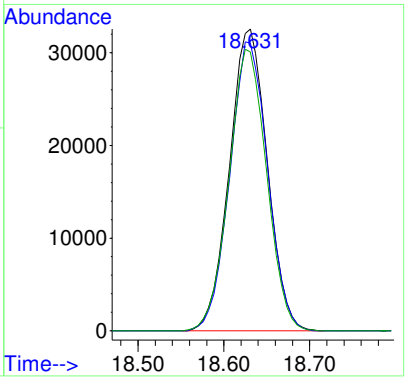


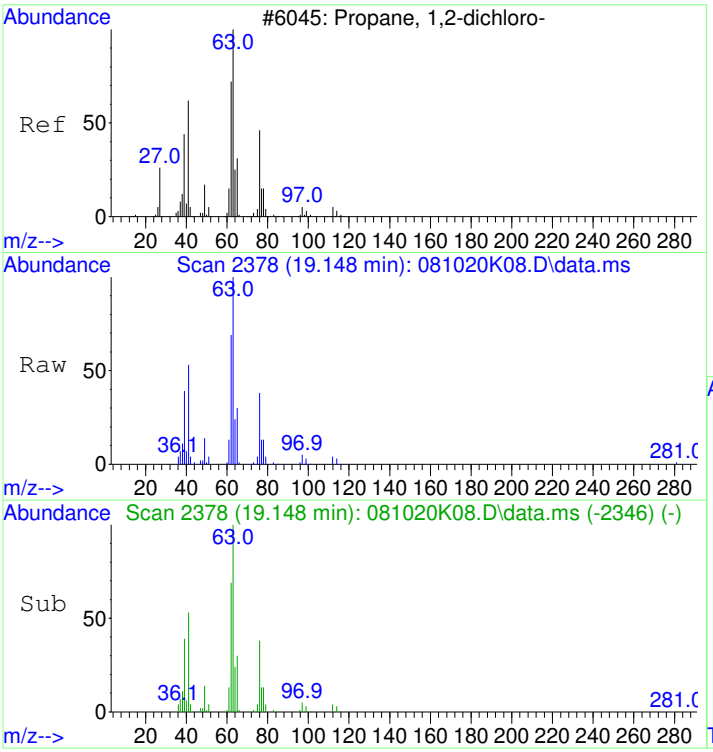


#37
Trichloroethene
Concen: 10.67 ppbv
RT: 18.631 min Scan# 2293
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:130 Resp: 99963

Ion	Ratio	Lower	Upper
130	100		
132	95.3	75.3	115.3
95	92.7	72.7	112.7

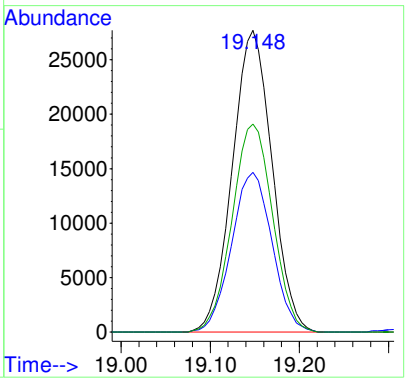


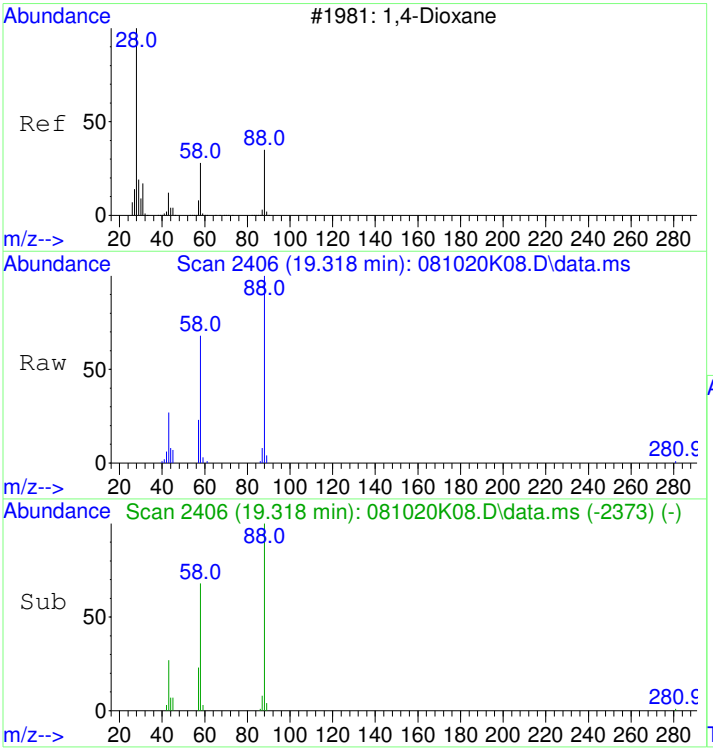


#38
1,2-Dichloropropane
Concen: 10.30 ppbv
RT: 19.148 min Scan# 2378
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 63 Resp: 85521

Ion	Ratio	Lower	Upper
63	100		
41	54.0	34.0	74.0
62	70.4	50.4	90.4

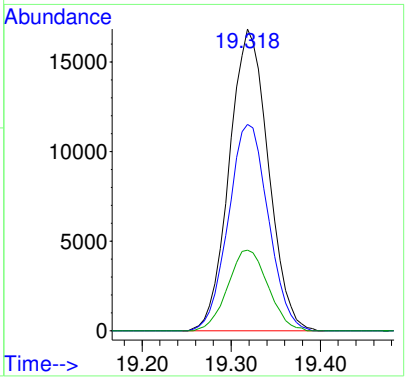


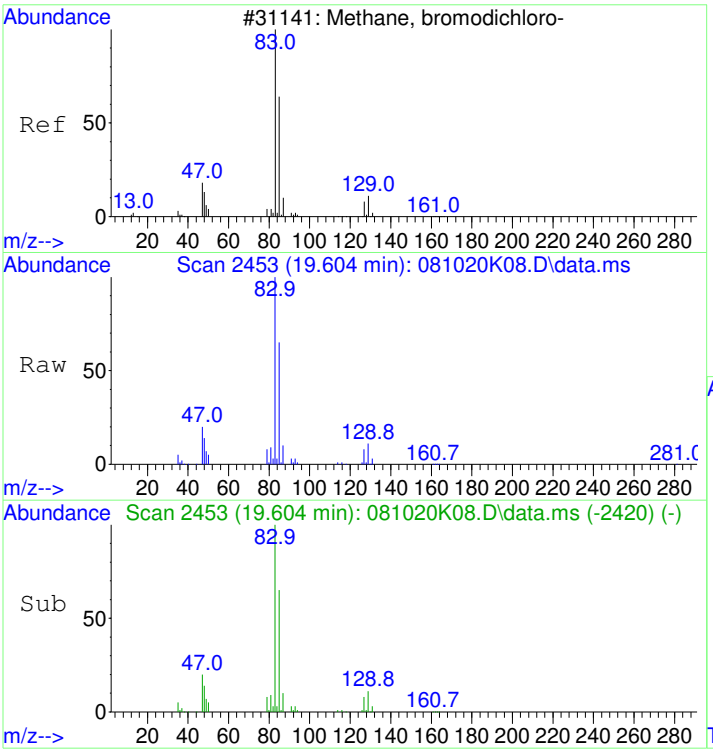


#39
1,4-Dioxane
Concen: 10.57 ppbv
RT: 19.318 min Scan# 2406
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 88 Resp: 51037

Ion	Ratio	Lower	Upper
88	100		
58	70.1	50.1	90.1
43	27.7	7.7	47.7

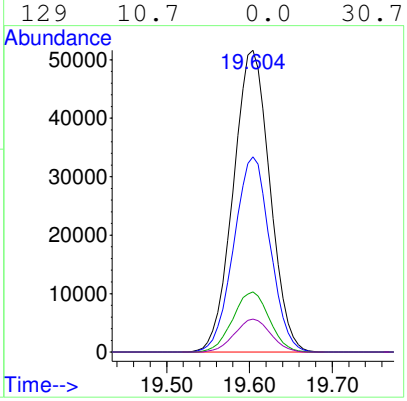


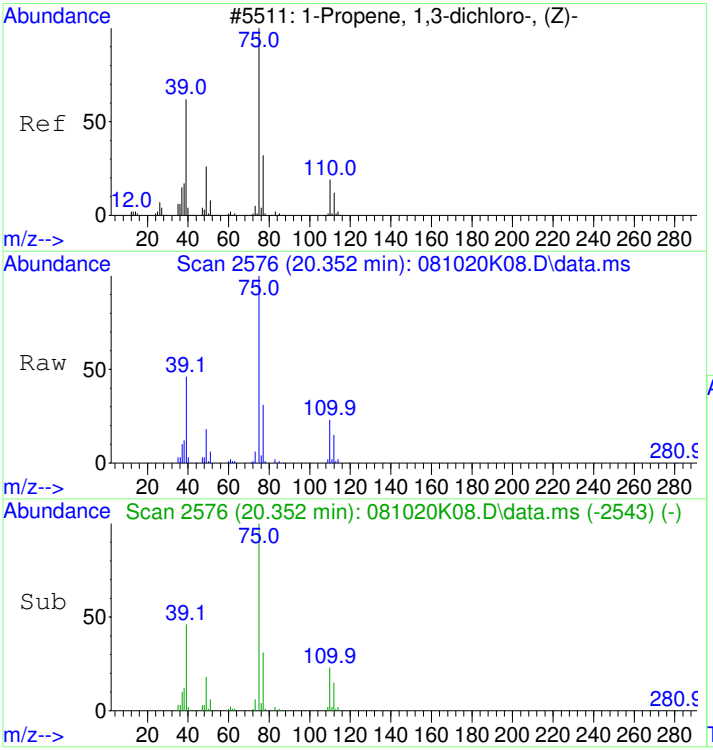


#40
Bromodichloromethane
Concen: 10.42 ppbv
RT: 19.604 min Scan# 2453
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 83 Resp: 158796

Ion	Ratio	Lower	Upper
83	100		
85	64.3	44.3	84.3
47	19.9	0.0	39.9
129	10.7	0.0	30.7

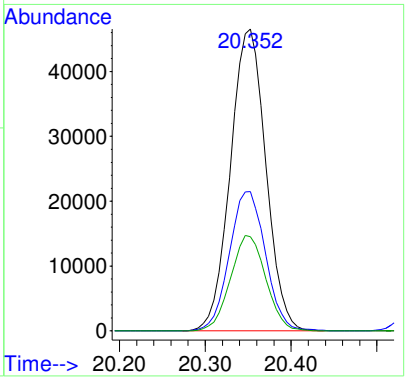


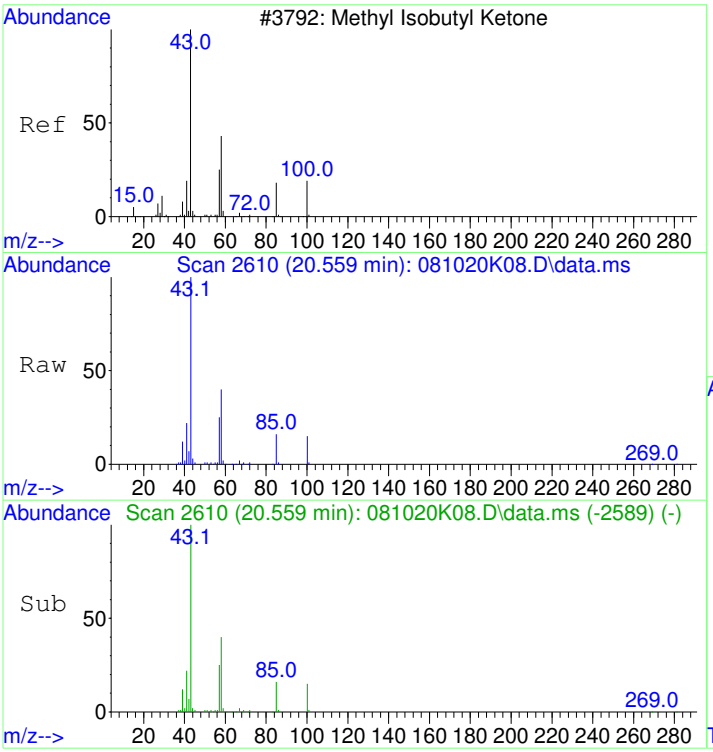


#41
cis-1,3-Dichloropropene
Concen: 10.84 ppbv
RT: 20.352 min Scan# 2576
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 75 Resp: 133510

Ion	Ratio	Lower	Upper
75	100		
39	47.1	27.1	67.1
77	31.4	11.4	51.4

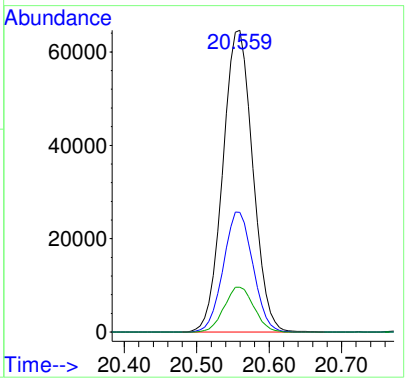


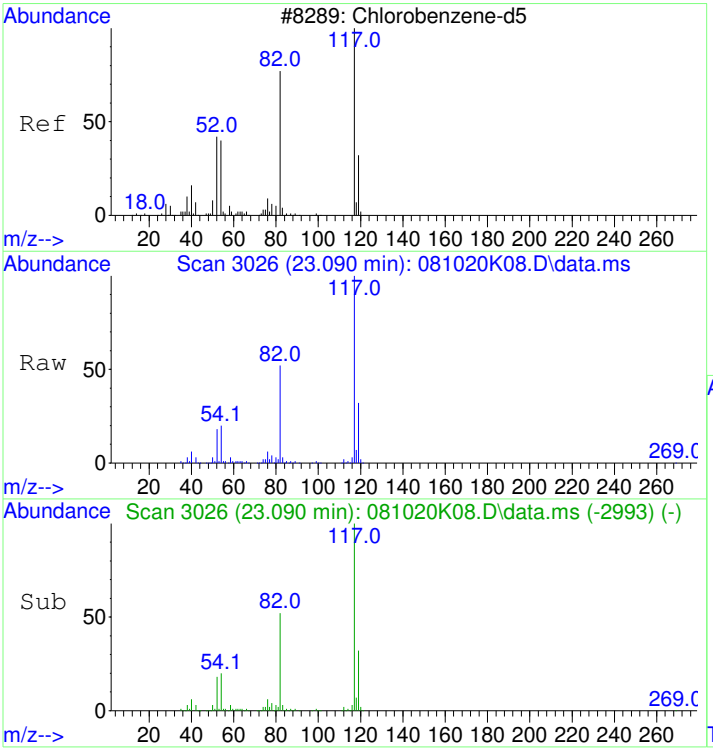


#42
4-Methyl-2-pentanone (MIBK)
Concen: 10.17 ppbv
RT: 20.559 min Scan# 2610
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 43 Resp: 185753

Ion	Ratio	Lower	Upper
43	100		
58	39.3	19.3	59.3
100	14.8	0.0	34.8

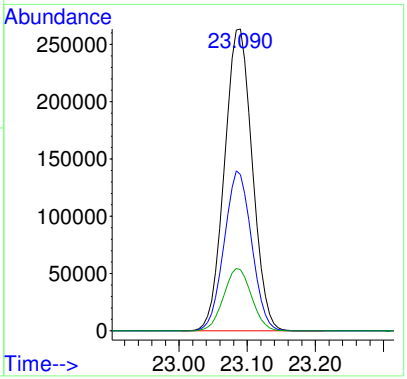


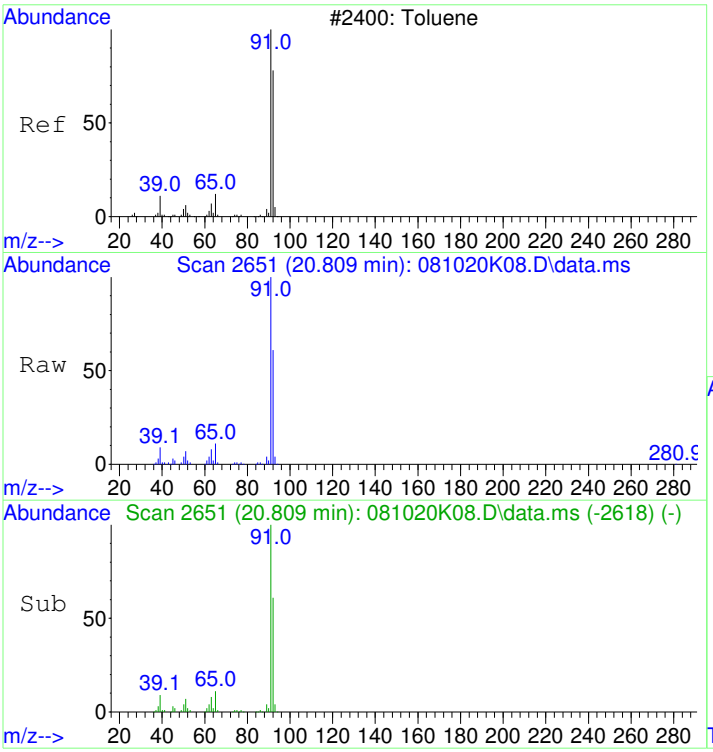


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:117 Resp: 747567

Ion	Ratio	Lower	Upper
117	100		
82	52.2	32.2	72.2
54	20.6	0.6	40.6

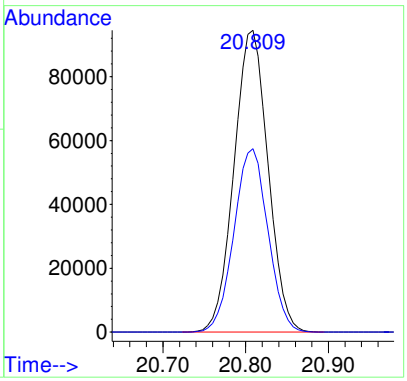


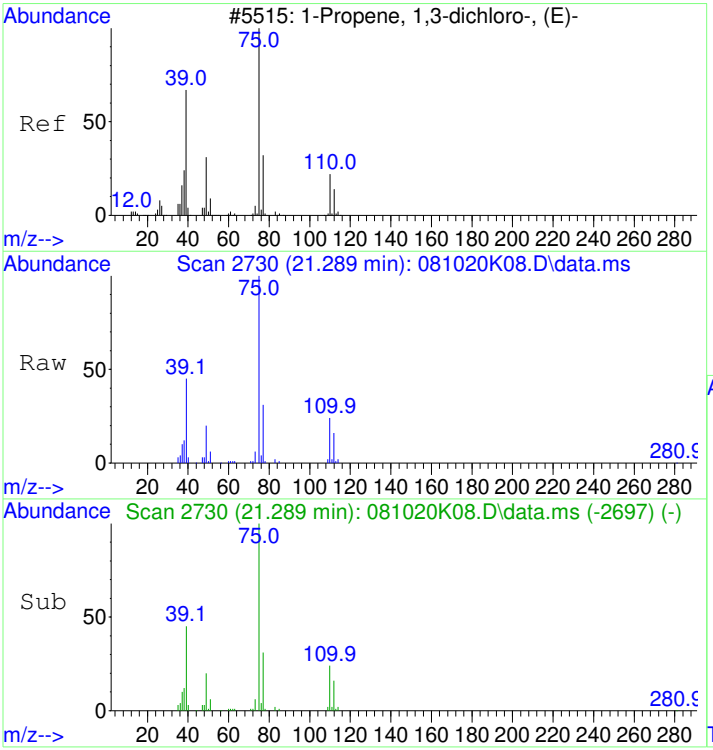


#44
Toluene
Concen: 10.41 ppbv
RT: 20.809 min Scan# 2651
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 91 Resp: 270348

Ion	Ratio	Lower	Upper
91	100		
92	60.7	40.7	80.7

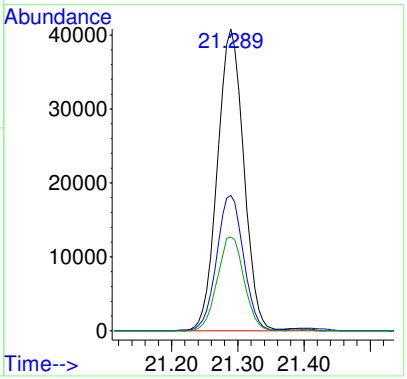


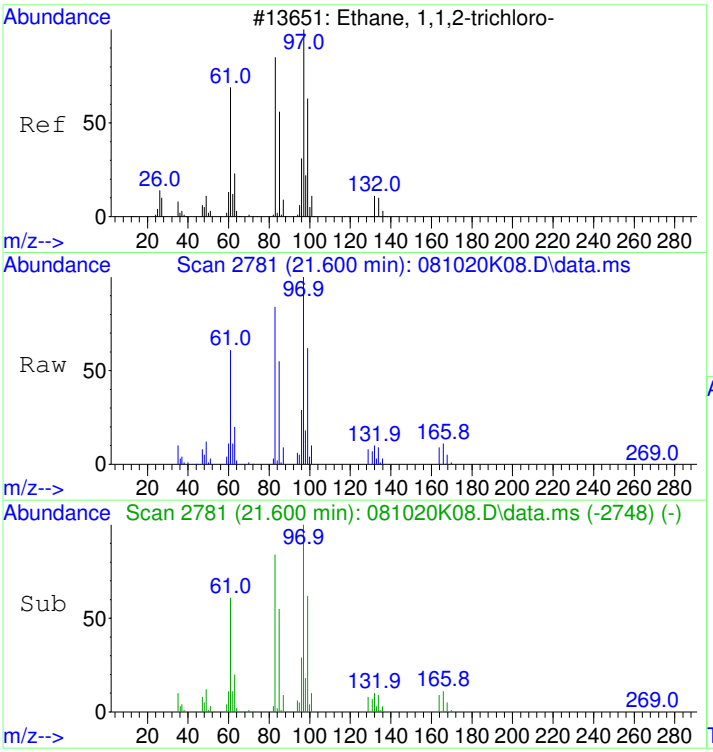


#45
trans-1,3-Dichloropropene
Concen: 9.52 ppbv
RT: 21.289 min Scan# 2730
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 75 Resp: 113347

Ion	Ratio	Lower	Upper
75	100		
39	46.9	26.9	66.9
77	31.3	11.3	51.3

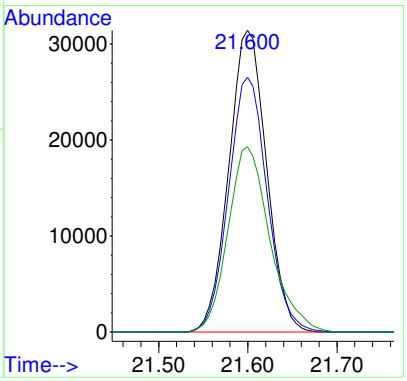


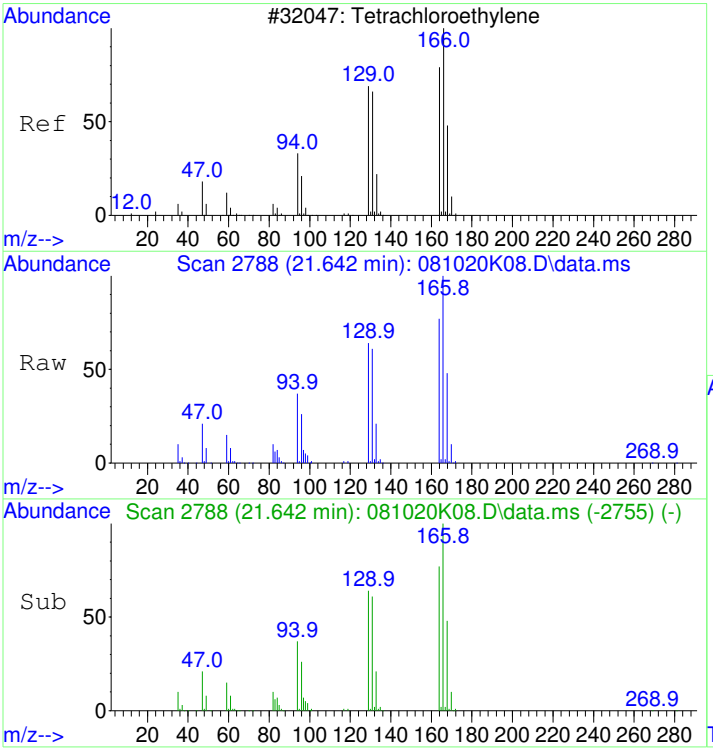


#46
1,1,2-Trichloroethane
Concen: 10.56 ppbv
RT: 21.600 min Scan# 2781
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 97 Resp: 92331

Ion	Ratio	Lower	Upper
97	100		
83	86.5	66.5	106.5
61	68.4	48.4	88.4

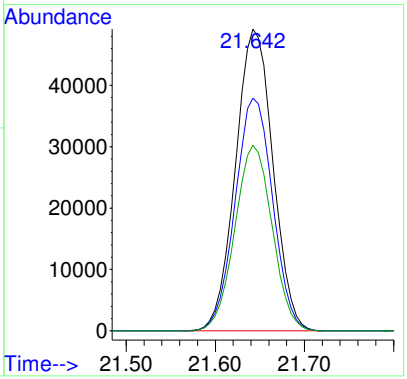


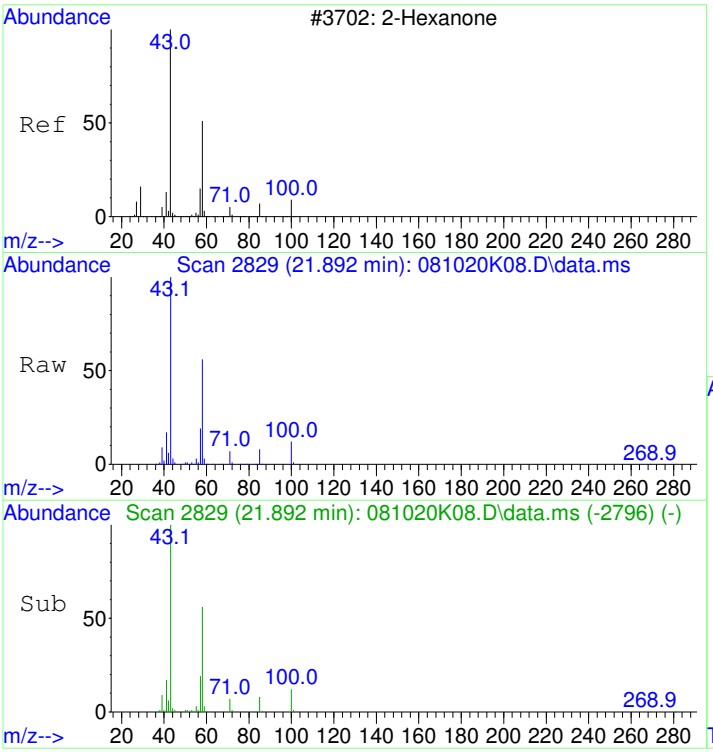


#47
Tetrachloroethene
Concen: 10.31 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:166 Resp: 143204

Ion	Ratio	Lower	Upper
166	100		
164	77.5	57.5	97.5
131	61.2	41.2	81.2

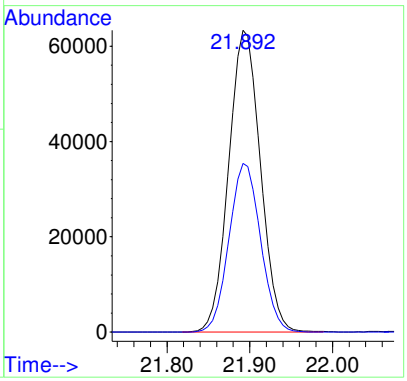


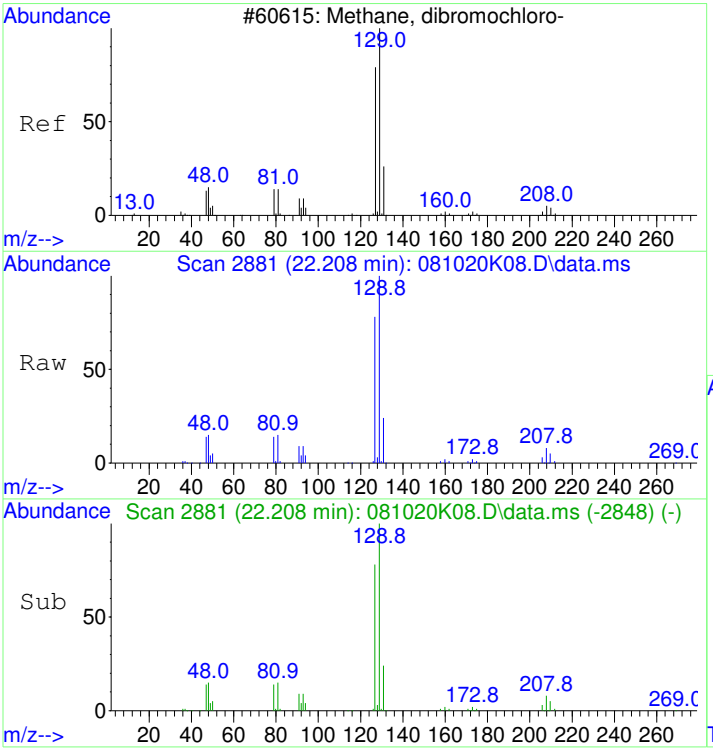


#48
2-Hexanone
Concen: 9.56 ppbv
RT: 21.892 min Scan# 2829
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 43 Resp: 169125

Ion	Ratio	Lower	Upper
43	100		
58	55.4	35.4	75.4

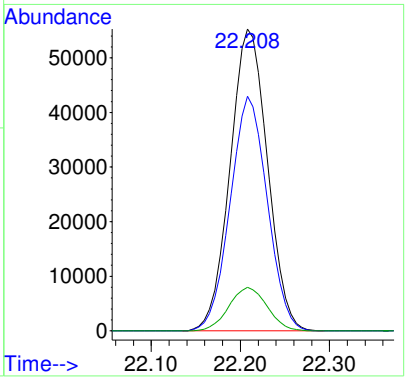


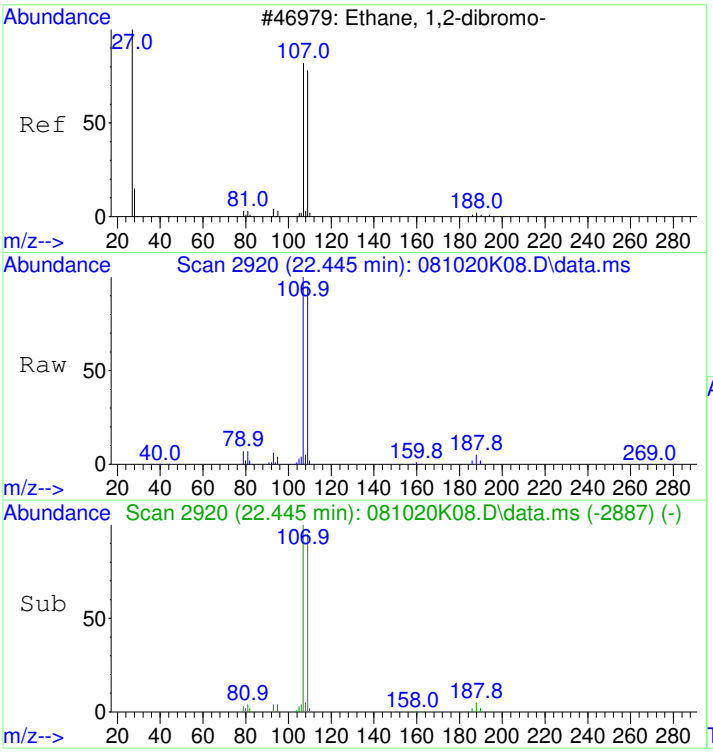


#49
Chlorodibromomethane
Concen: 10.29 ppbv
RT: 22.208 min Scan# 2881
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:129 Resp: 160849

Ion	Ratio	Lower	Upper
129	100		
127	76.9	56.9	96.9
79	14.7	0.0	34.7

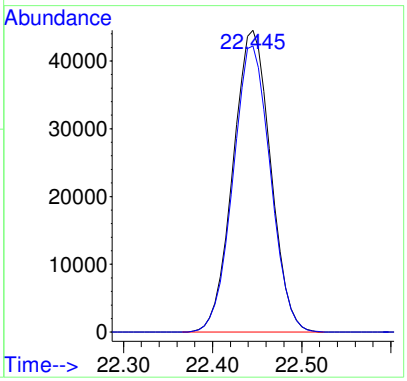


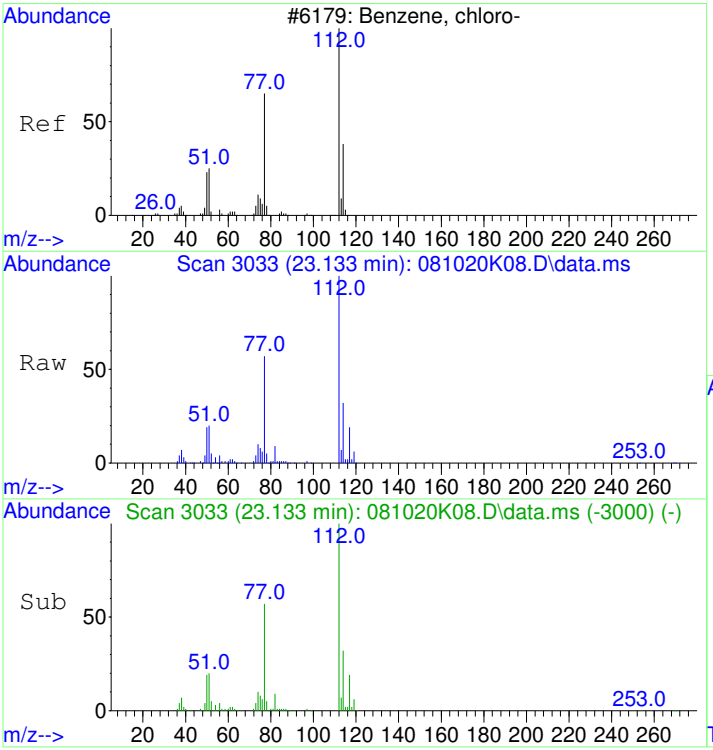


#50
1,2-Dibromoethane (EDB)
Concen: 10.40 ppbv
RT: 22.445 min Scan# 2920
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:107 Resp: 130014

Ion	Ratio	Lower	Upper
107	100		
109	94.3	74.3	114.3

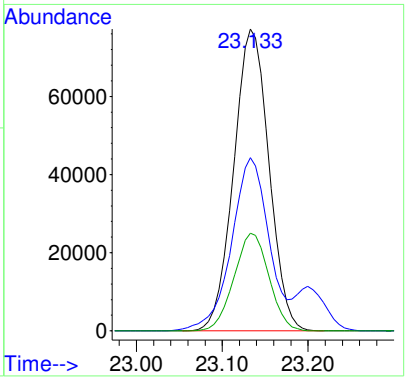


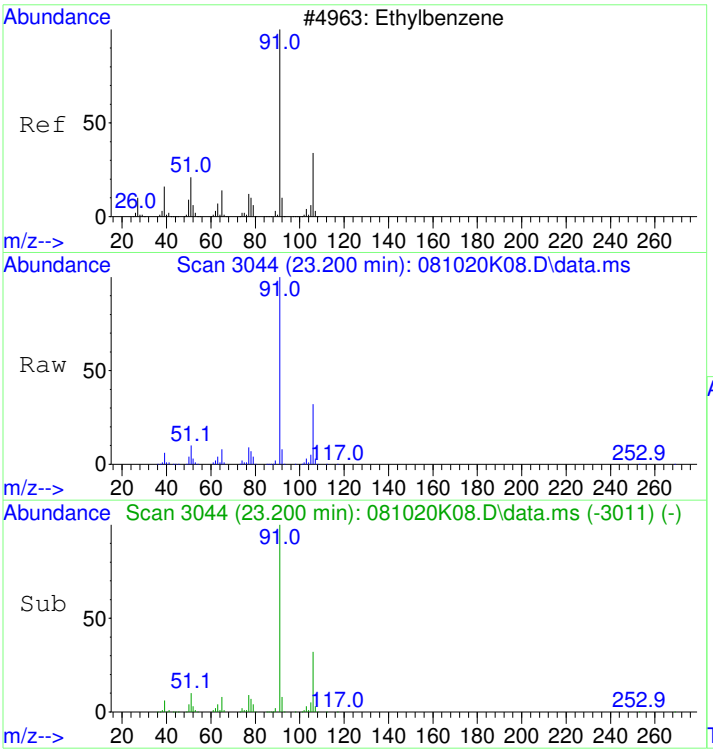


#51
Chlorobenzene
Concen: 10.30 ppbv
RT: 23.133 min Scan# 3033
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:112 Resp: 220561

Ion	Ratio	Lower	Upper
112	100		
77	73.3	53.3	93.3
114	32.1	12.1	52.1

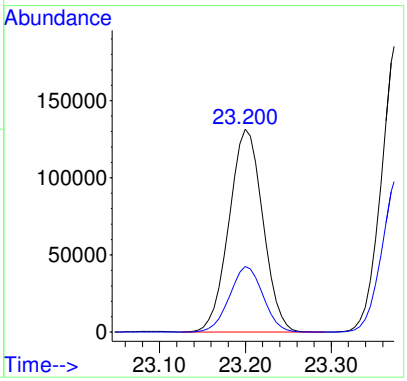


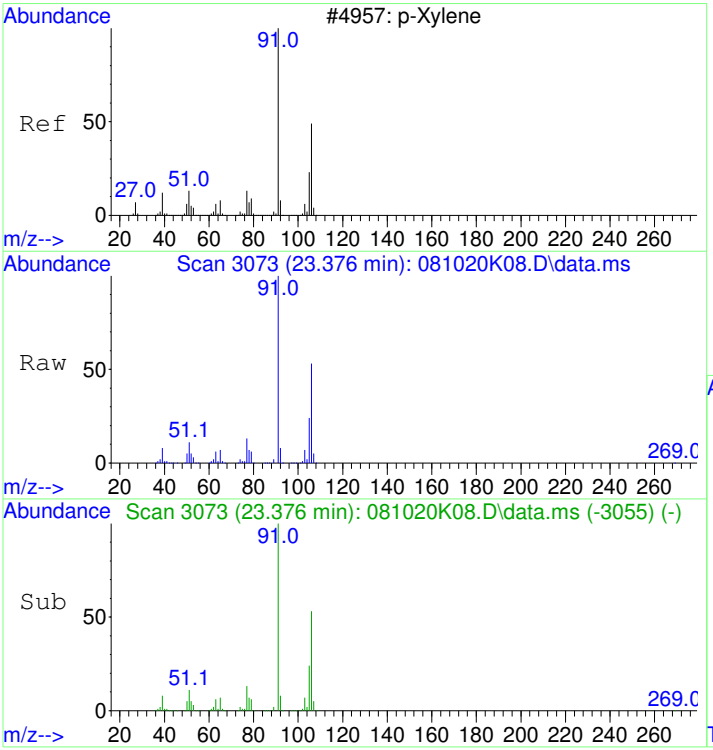


#52
Ethylbenzene
Concen: 10.33 ppbv
RT: 23.200 min Scan# 3044
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 91 Resp: 360237

Ion	Ratio	Lower	Upper
91	100		
106	31.9	11.9	51.9

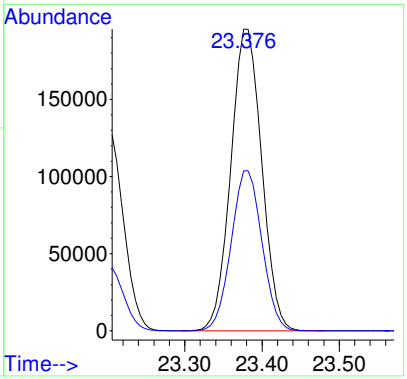


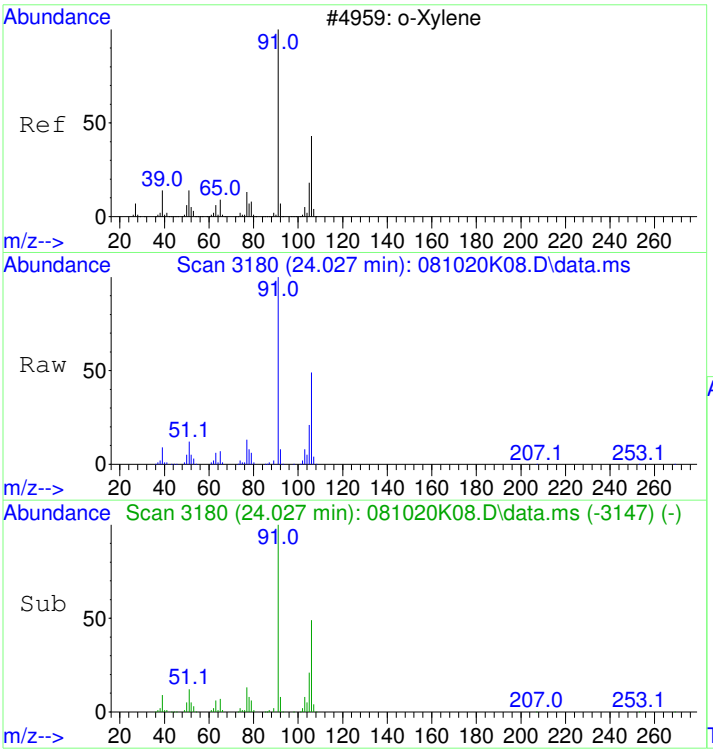


#53
m&p-Xylene
Concen: 20.69 ppbv
RT: 23.376 min Scan# 3073
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 91 Resp: 544754

Ion	Ratio	Lower	Upper
91	100		
106	52.9	32.9	72.9

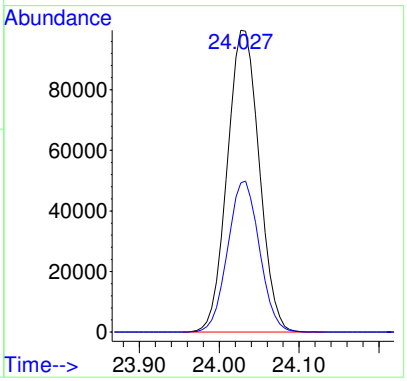


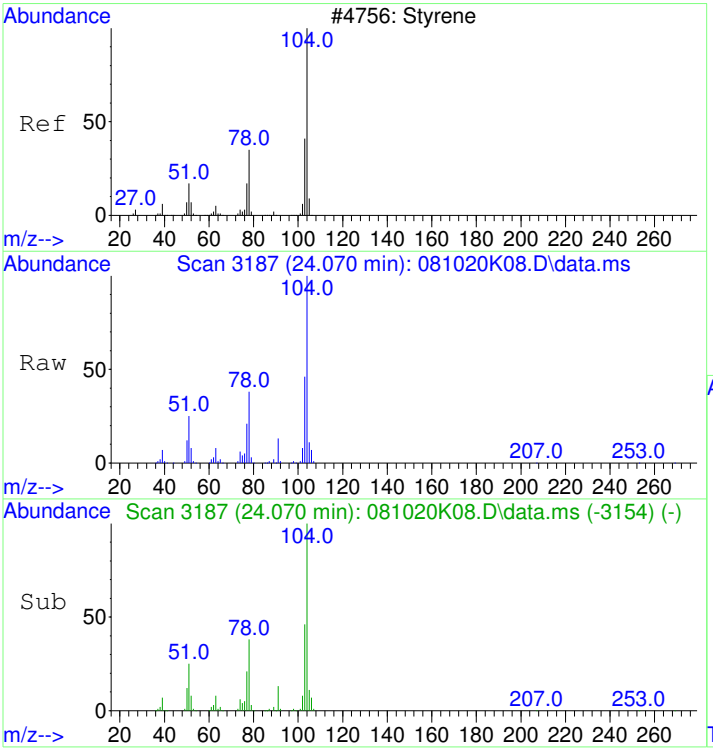


#54
o-Xylene
Concen: 10.44 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 91 Resp: 276708

Ion	Ratio	Lower	Upper
91	100		
106	49.8	29.8	69.8

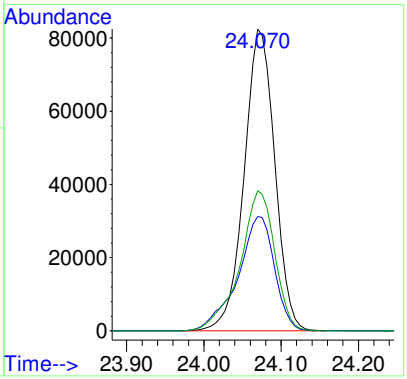


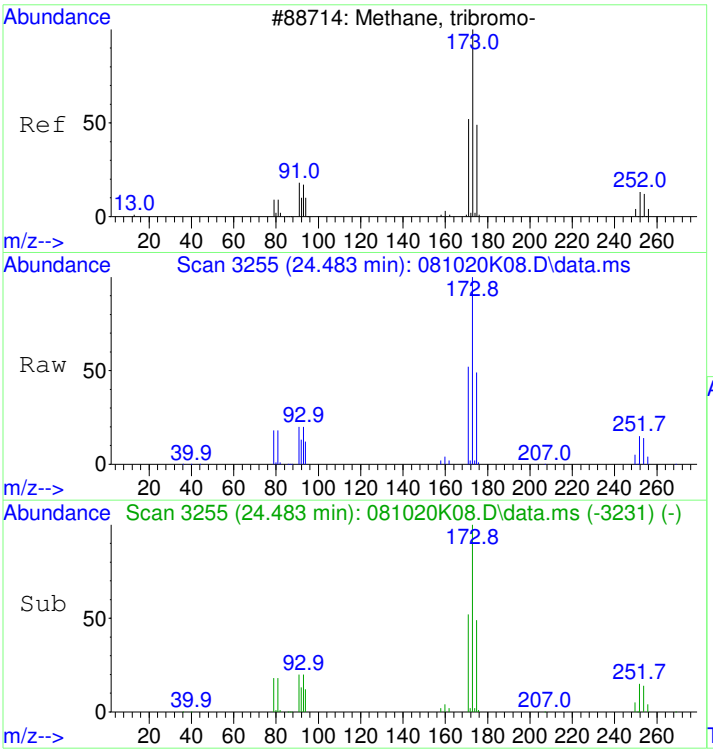


#55
Styrene
Concen: 10.47 ppbv
RT: 24.070 min Scan# 3187
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:104 Resp: 227323

Ion	Ratio	Lower	Upper
104	100		
78	45.3	25.3	65.3
103	52.8	32.8	72.8

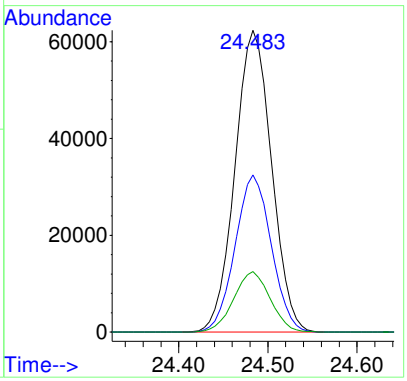


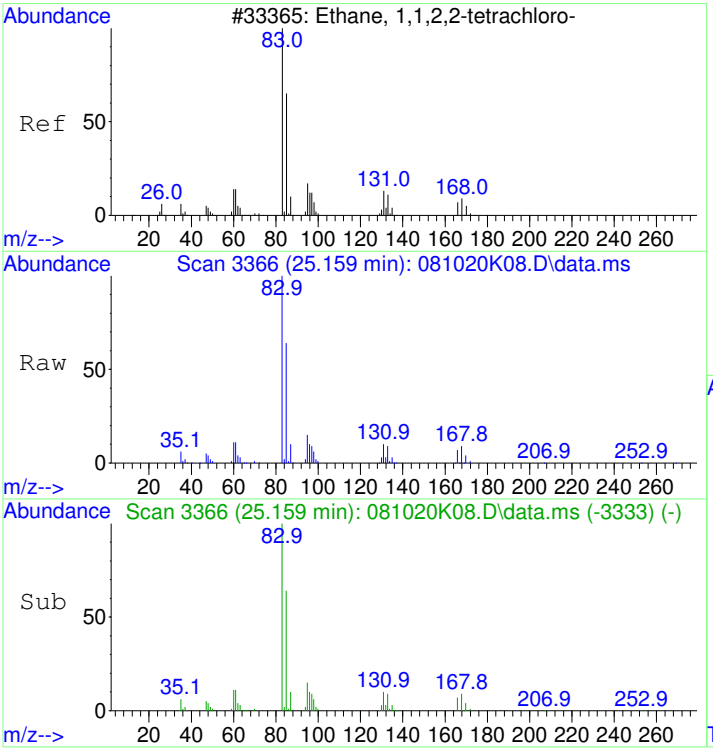


#56
Bromoform
Concen: 10.77 ppbv
RT: 24.483 min Scan# 3255
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:173 Resp: 177353

Ion	Ratio	Lower	Upper
173	100		
171	51.5	31.5	71.5
91	20.0	0.0	40.0

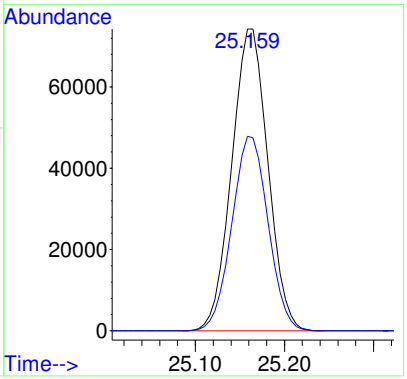


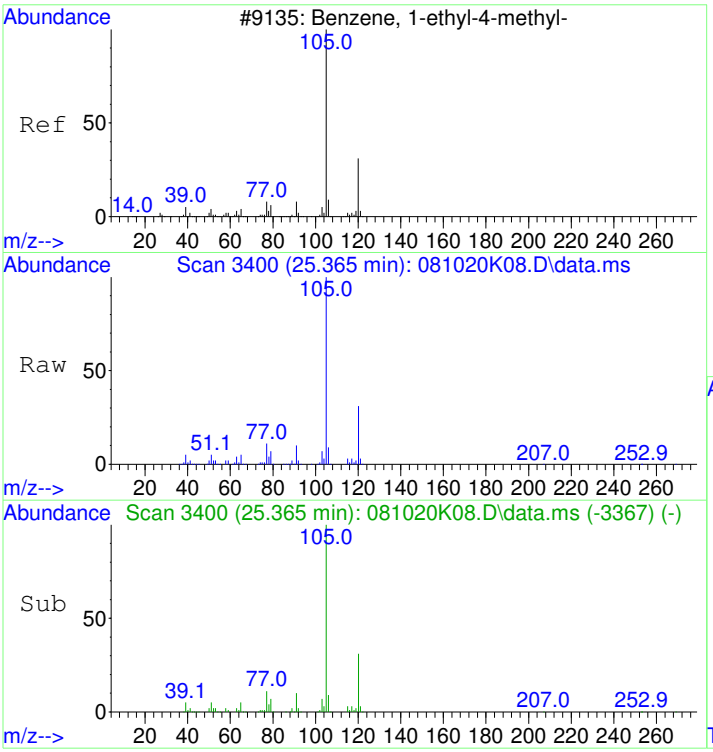


#57
1,1,2,2-Tetrachloroethane
Concen: 10.24 ppbv
RT: 25.159 min Scan# 3366
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 83 Resp: 209093

Ion	Ratio	Lower	Upper
83	100		
85	64.5	44.5	84.5

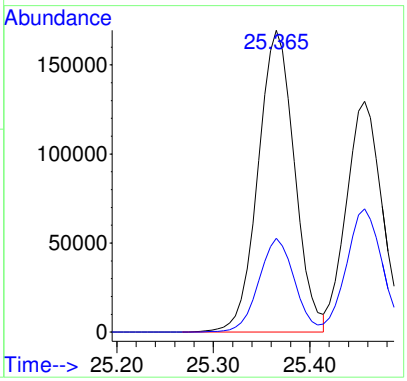


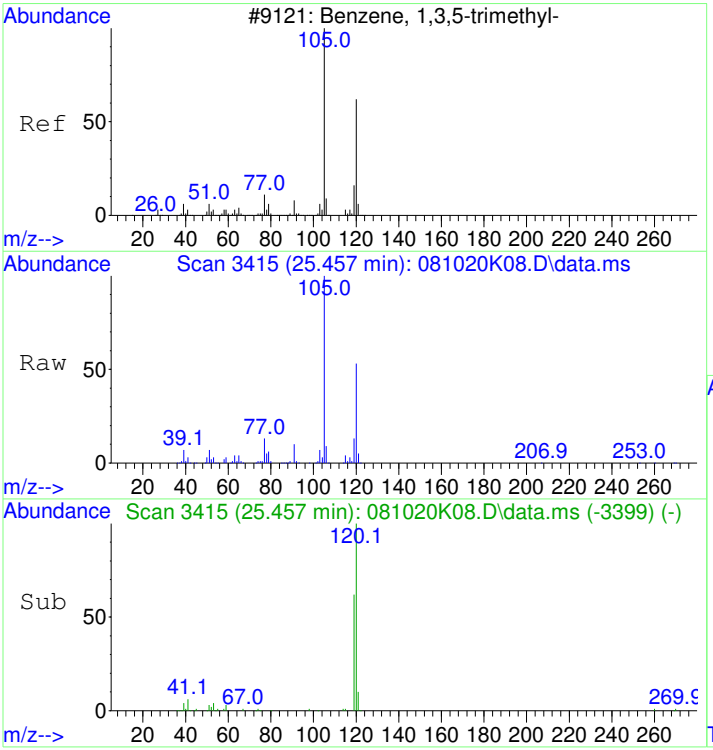


#58
4-Ethyltoluene
Concen: 10.29 ppbv
RT: 25.365 min Scan# 3400
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:105 Resp: 443462

Ion	Ratio	Lower	Upper
105	100		
120	30.3	10.3	50.3

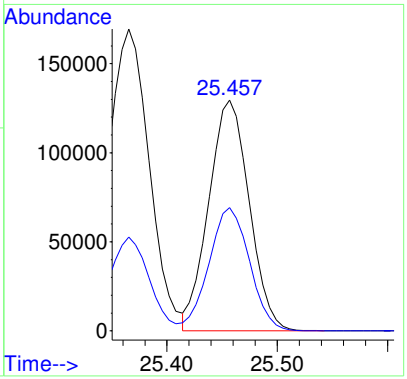


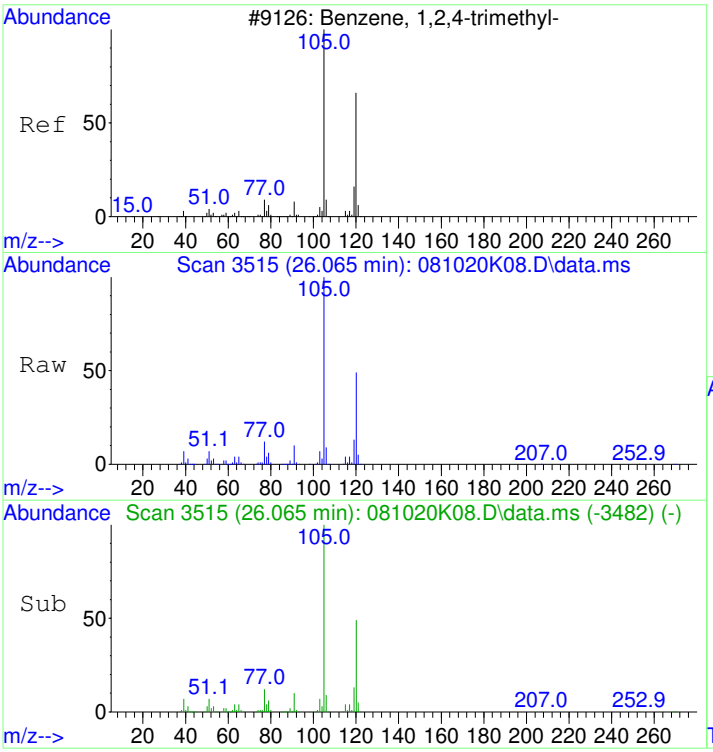


#59
1,3,5-Trimethylbenzene
Concen: 10.41 ppbv
RT: 25.457 min Scan# 3415
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:105 Resp: 331400

Ion	Ratio	Lower	Upper
105	100		
120	53.7	33.7	73.7

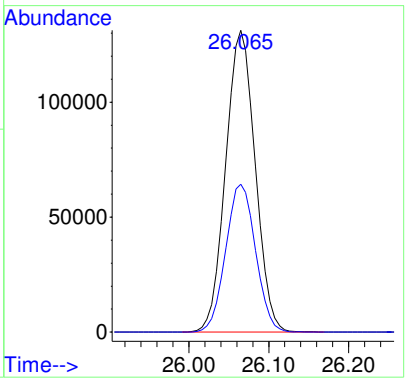


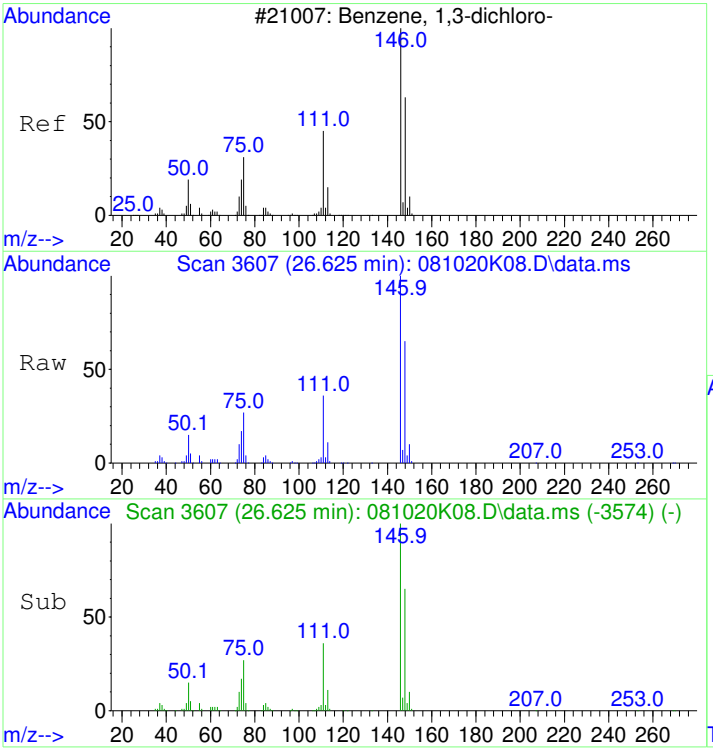


#60
1,2,4-Trimethylbenzene
Concen: 10.56 ppbv
RT: 26.065 min Scan# 3515
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:105 Resp: 336540

Ion	Ratio	Lower	Upper
105	100		
120	49.5	29.5	69.5

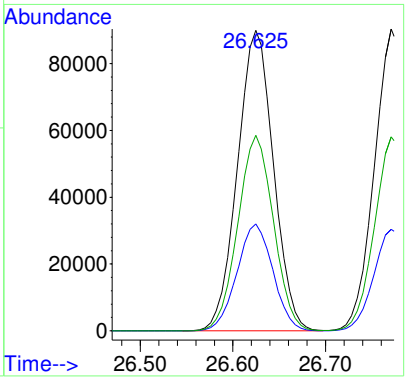


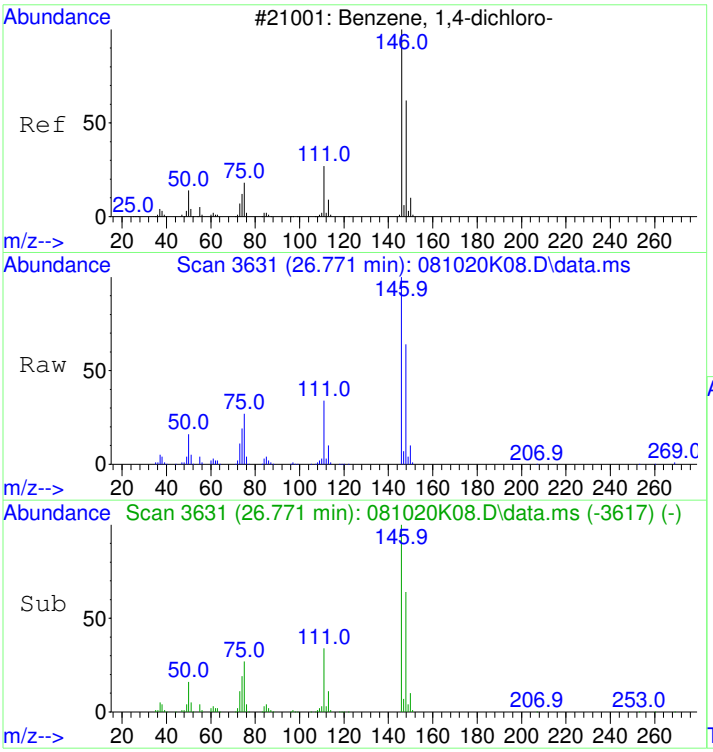


#61
1,3-Dichlorobenzene
Concen: 10.15 ppbv
RT: 26.625 min Scan# 3607
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:146 Resp: 242917

Ion	Ratio	Lower	Upper
146	100		
111	35.5	15.5	55.5
148	64.4	44.4	84.4

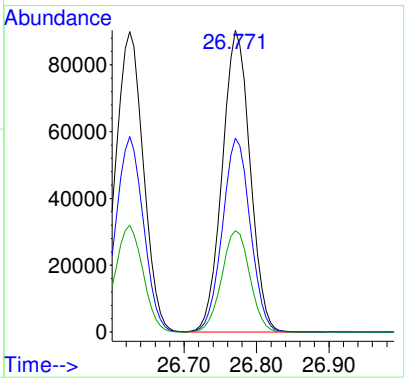


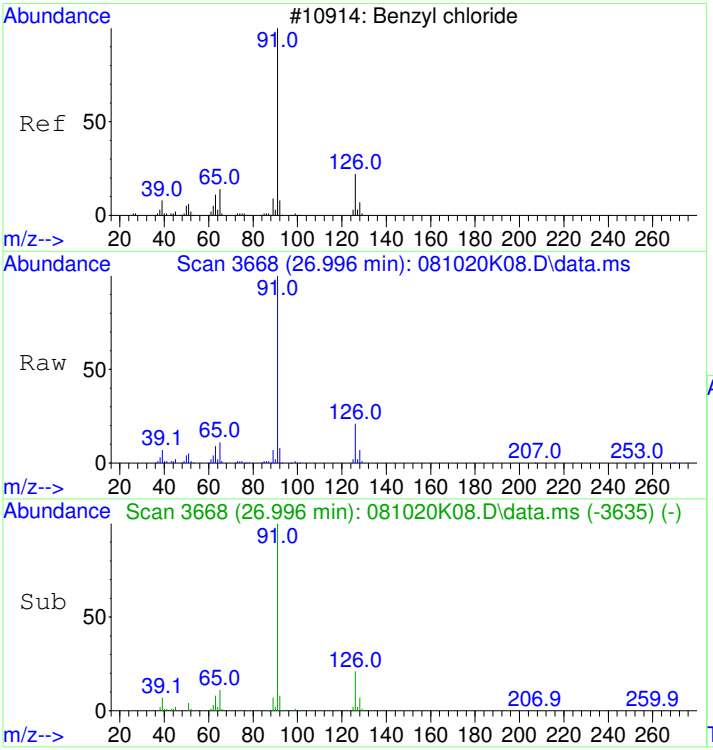


#62
1,4-Dichlorobenzene
Concen: 10.25 ppbv
RT: 26.771 min Scan# 3631
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:146 Resp: 241451

Ion	Ratio	Lower	Upper
146	100		
148	64.2	44.2	84.2
111	33.9	13.9	53.9

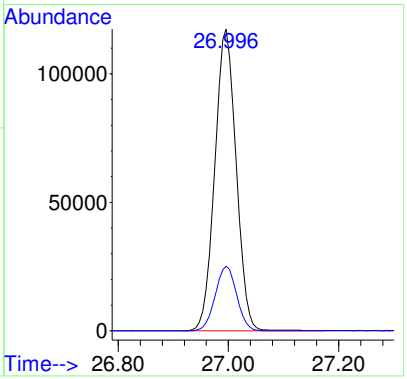


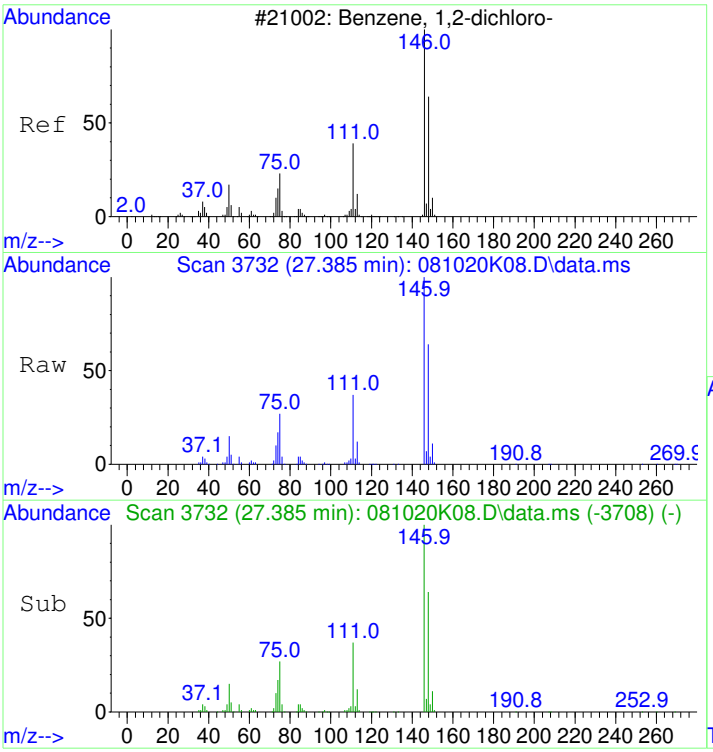


#63
Benzyl chloride
Concen: 10.02 ppbv
RT: 26.996 min Scan# 3668
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion: 91 Resp: 315200

Ion	Ratio	Lower	Upper
91	100		
126	21.5	1.5	41.5

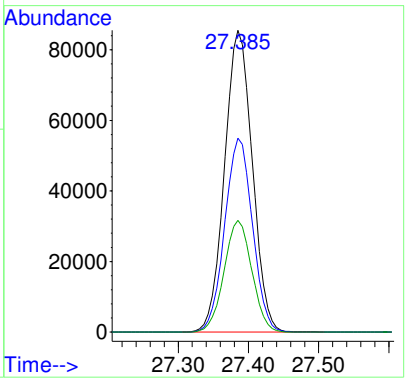


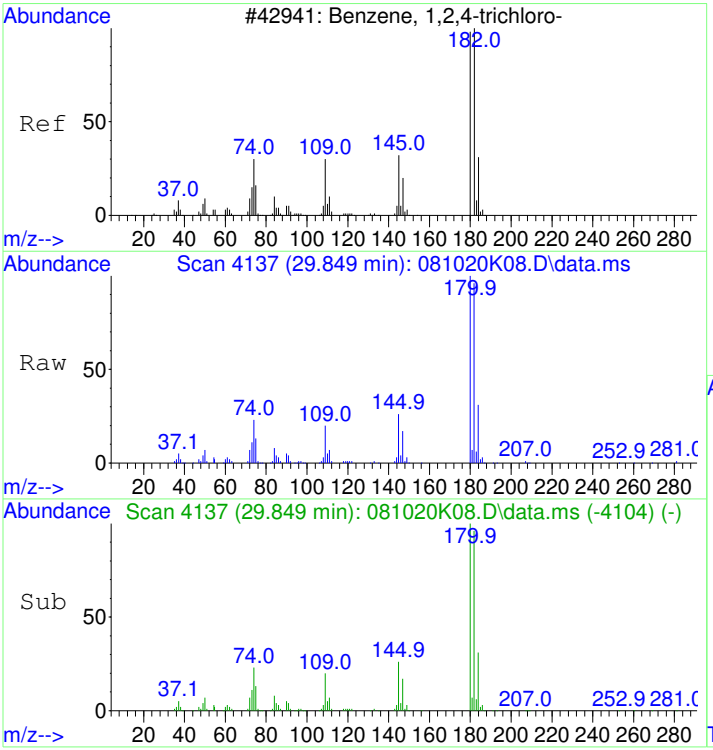


#64
1,2-Dichlorobenzene
Concen: 10.17 ppbv
RT: 27.385 min Scan# 3732
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:146 Resp: 235441

Ion	Ratio	Lower	Upper
146	100		
148	64.1	44.1	84.1
111	36.9	16.9	56.9

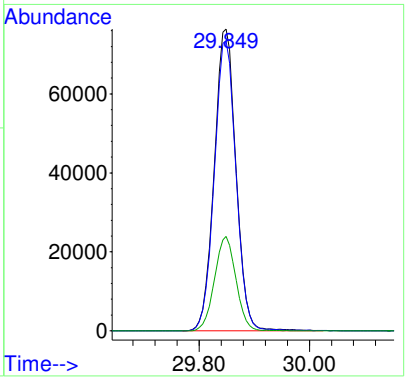


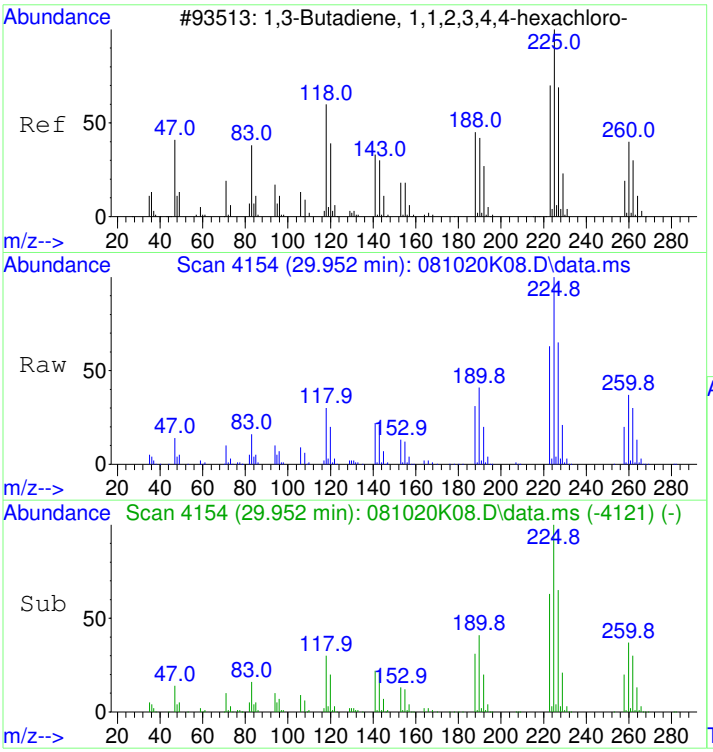


#65
1,2,4-Trichlorobenzene
Concen: 10.44 ppbv
RT: 29.849 min Scan# 4137
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:180 Resp: 208918

Ion	Ratio	Lower	Upper
180	100		
182	95.9	75.9	115.9
184	30.8	10.8	50.8

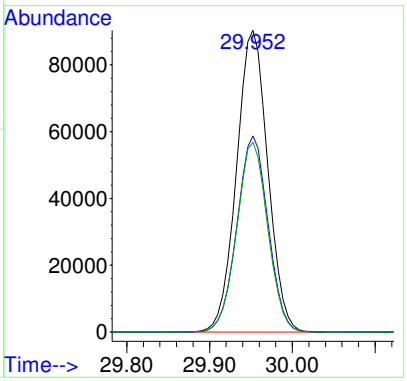




#66
Hexachlorobutadiene
Concen: 10.70 ppbv
RT: 29.952 min Scan# 4154
Delta R.T. 0.000 min
Lab File: 081020K08.D
Acq: 10 Aug 2020 9:02 pm

Tgt Ion:225 Resp: 237683

Ion	Ratio	Lower	Upper
225	100		
227	64.6	44.6	84.6
223	62.7	42.7	82.7



LSC Area Percent Report

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 2 Min Area: 1 % of largest Peak
Start Thrs: 0.6 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Tangent else baseline drop >
Peak separation: 5

Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Title : TO15

Signal : TIC: 081020K08.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.998	41	52	61	rBB	52582	160609	6.62%	0.497%
2	5.095	61	68	81	rBB	84738	263849	10.88%	0.817%
3	5.490	117	133	153	rBB	164083	600478	24.76%	1.859%
4	5.728	155	172	197	rBB2	30181	116041	4.78%	0.359%
5	6.074	218	229	237	rBB	27059	88955	3.67%	0.275%
6	7.242	405	421	451	rBB2	36059	160961	6.64%	0.498%
7	7.607	465	481	501	rBB2	17636	79331	3.27%	0.246%
8	8.258	575	588	597	rBB	21344	84394	3.48%	0.261%
9	10.375	911	936	1033	rBB4	101609	968256	39.92%	2.998%
10	11.081	1041	1052	1061	rBB	21381	83700	3.45%	0.259%
11	11.197	1063	1071	1087	rBB	37672	152935	6.31%	0.474%
12	11.592	1117	1136	1176	rBB2	35188	178249	7.35%	0.552%
13	11.963	1178	1197	1265	rBB2	57058	263661	10.87%	0.816%
14	12.480	1265	1282	1303	rBB2	59319	264294	10.90%	0.818%
15	13.022	1353	1371	1445	rBB2	88689	763494	31.48%	2.364%
16	13.594	1447	1465	1510	rBB	123735	497762	20.52%	1.541%
17	14.397	1585	1597	1605	rBB	54187	188054	7.75%	0.582%
18	14.500	1605	1614	1626	rBB	58446	178289	7.35%	0.552%
19	15.784	1815	1825	1831	rBB	64461	192404	7.93%	0.596%
20	15.869	1831	1839	1850	rBB	132522	390919	16.12%	1.211%
21	16.313	1896	1912	1925	rBB2	335624	1258464	51.89%	3.897%
22	16.441	1925	1933	1947	rBB	95713	313279	12.92%	0.970%
23	16.623	1952	1963	1971	rBB	100425	319498	13.17%	0.989%
24	16.934	1999	2014	2056	rBB	129543	463093	19.09%	1.434%
25	17.311	2062	2076	2087	rBB	223938	799967	32.98%	2.477%
26	17.438	2087	2097	2109	rBB	139642	441996	18.22%	1.369%
27	17.676	2123	2136	2152	rBB2	259815	860481	35.48%	2.665%
28	18.223	2211	2226	2266	rBB	601971	1826094	75.29%	5.655%
29	18.625	2279	2292	2308	rBB	174317	529414	21.83%	1.639%
30	19.148	2361	2378	2395	rBB	131672	410413	16.92%	1.271%
31	19.318	2395	2406	2439	rBB	43444	133469	5.50%	0.413%
32	19.604	2439	2453	2486	rBB	148087	449356	18.53%	1.391%
33	20.346	2561	2575	2597	rBB	141016	407753	16.81%	1.263%
34	20.559	2597	2610	2629	rBB	167994	480441	19.81%	1.488%
35	20.809	2635	2651	2679	rBB	226932	651536	26.86%	2.018%
36	21.289	2709	2730	2741	rBB	125320	347328	14.32%	1.076%
37	21.642	2769	2788	2803	rBB2	285759	1280208	52.79%	3.964%
38	21.892	2817	2829	2853	rBB	161101	431231	17.78%	1.335%
39	22.208	2867	2881	2897	rBB	184464	535825	22.09%	1.659%
40	22.445	2907	2920	2949	rBB	113355	332250	13.70%	1.029%

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 2 Min Area: 1 % of largest Peak
Start Thrs: 0.6 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Tangent else baseline drop >
Peak separation: 5

Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Title : TO15

41	23.090	3016	3026	3039	rBB2	734876	2425295	100.00%	7.510%
42	23.200	3039	3044	3052	rBB	226575	496157	20.46%	1.536%
43	23.376	3061	3073	3089	rBB	568430	1580870	65.18%	4.895%
44	24.033	3167	3181	3227	rBB2	303238	1475799	60.85%	4.570%
45	24.483	3239	3255	3301	rBB2	222862	640716	26.42%	1.984%
46	25.159	3355	3366	3385	rBB	242016	683861	28.20%	2.118%
47	25.365	3389	3400	3407	rBB	388111	955225	39.39%	2.958%
48	25.457	3407	3415	3424	rBB	357617	869862	35.87%	2.694%
49	26.065	3503	3515	3533	rBB	371461	958717	39.53%	2.969%
50	26.625	3595	3607	3619	rBB	330396	889205	36.66%	2.754%
51	26.771	3619	3631	3651	rBB	332073	885537	36.51%	2.742%
52	26.996	3657	3668	3706	rBB	253846	684943	28.24%	2.121%
53	27.385	3719	3732	3777	rBB	318555	878221	36.21%	2.720%
54	29.849	4126	4137	4145	rBB	350031	920018	37.93%	2.849%

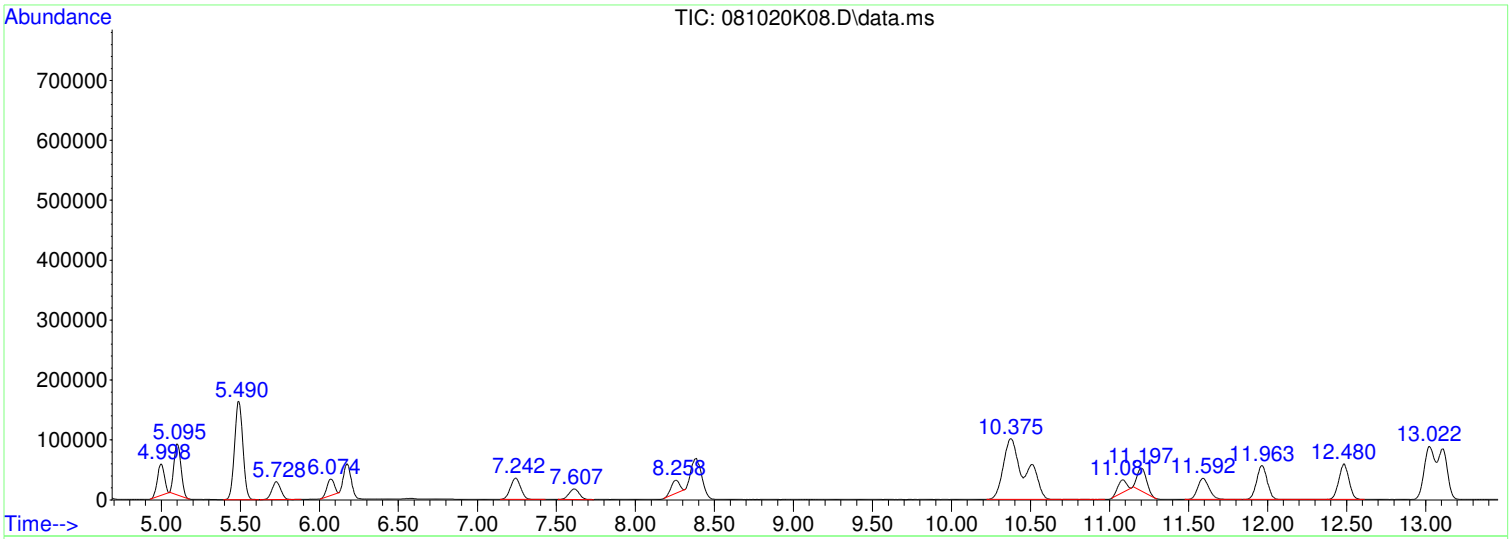
Sum of corrected areas: 32293157

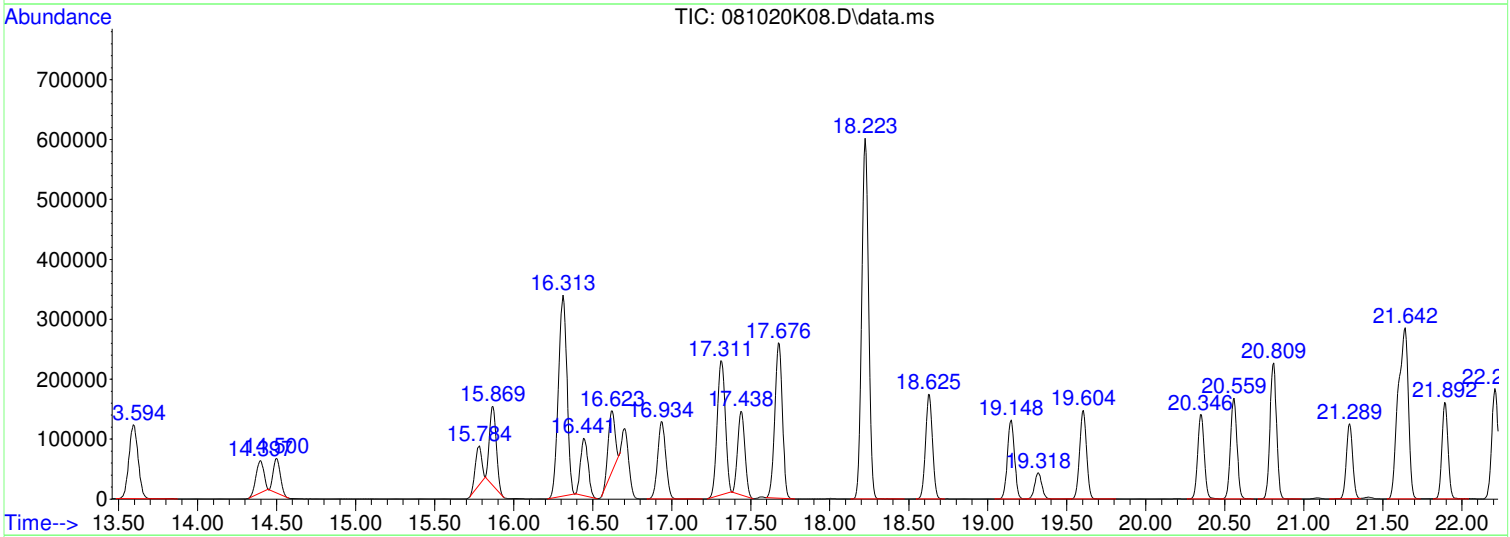
Table of Contents

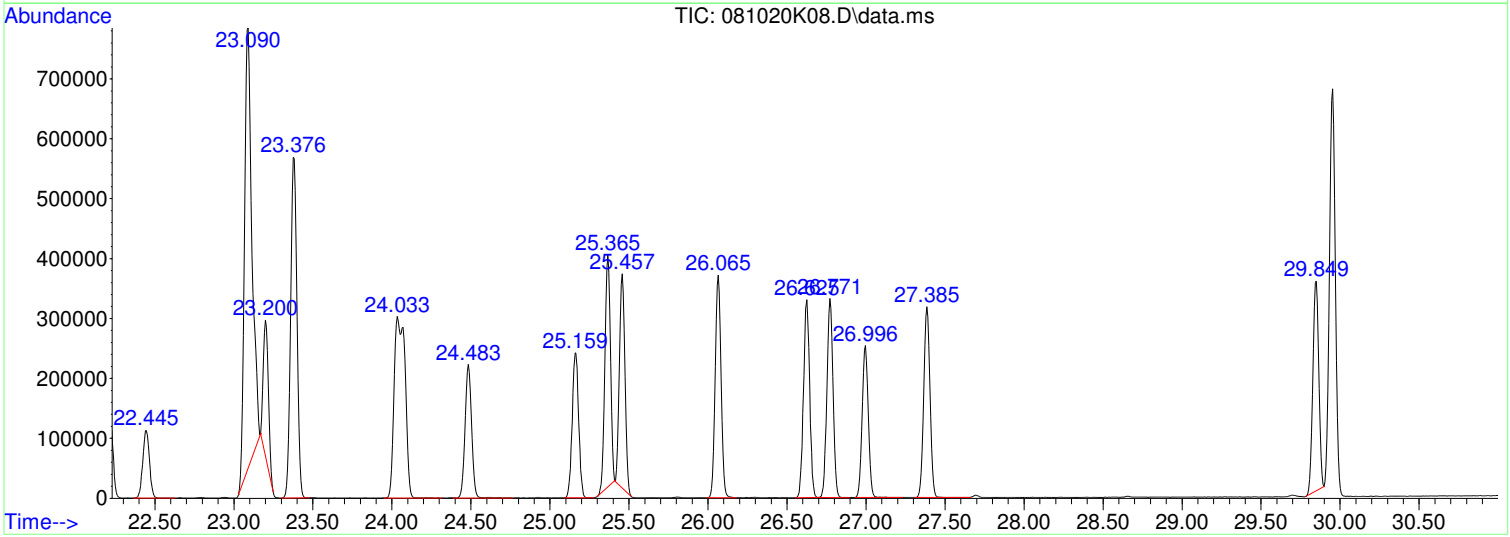
Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15

TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p







Library Search Compound Report

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15

TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
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Tentatively Identified Compound (LSC) summary

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K08.D
Acq On : 10 Aug 2020 9:02 pm
Operator : EM
Sample : S20H017-CAL4
Misc : 10ppbv 2033030
ALS Vial : 36 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15

TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc

S20H017-CAL5

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K09.D
InstName : HP5973K
Acq On : 10 Aug 2020 9:54 pm
Operator : EM
Sample : S20H017-CAL5
Misc : 15ppbv 2033032
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:46 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:37 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	280258	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	853435	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.090	117	790546	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	109242	14.30	ppbv		100
3) Dichlorodifluoromethane	5.101	85	282072	14.81	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.484	85	306777	14.55	ppbv		100
5) Chloromethane	5.728	50	112912	14.79	ppbv		100
6) Vinyl chloride	6.068	62	117722	15.17	ppbv		100
7) 1,3-Butadiene	6.172	54	88526	15.31	ppbv		97
8) Bromomethane	7.236	94	93568	15.15	ppbv		98
9) Chloroethane	7.613	64	64203	15.08	ppbv		99
10) Bromoethene	8.252	106	97919	15.24	ppbv		99
11) Trichlorofluoromethane	8.386	101	252257	13.76	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.375	151	187452	15.98	ppbv		99
13) 1,1-Dichloroethene	10.503	61	174028	16.55	ppbv		100
14) Acetone	11.081	43	167403	14.67	ppbv		99
15) Carbon disulfide	11.197	76	314950	15.34	ppbv		96
16) 2-Propanol	11.592	45	176892	16.02	ppbv		98
17) Allyl chloride	11.963	41	154218	17.00	ppbv		99
18) Dichloromethane	12.480	49	130098	14.03	ppbv		99
19) tert-Butyl methyl ethe...	13.022	73	327456	17.23	ppbv		100
20) trans-1,2-Dichloroethene	13.107	61	159308	15.25	ppbv		100
21) Hexane	13.594	57	200204	15.82	ppbv		98
22) 1,1-Dichloroethane	14.397	63	198663	14.73	ppbv		100
23) Vinyl acetate	14.500	43	301631	17.85	ppbv		99
24) cis-1,2-Dichloroethene	15.778	61	152012	16.09	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	62614	15.38	ppbv	#	94
26) Ethyl acetate	15.869	61	37618	15.07	ppbv		100
27) Tetrahydrofuran	16.289	42	136081	14.17	ppbv		98
28) Chloroform	16.447	83	218132	15.57	ppbv		100
29) Cyclohexane	16.623	56	203669	16.63	ppbv		99
30) 1,1,1-Trichloroethane	16.702	97	219162	16.06	ppbv		99
31) Carbon tetrachloride	16.940	117	226870	15.09	ppbv		100
33) Benzene	17.438	78	357708	15.48	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	633775	16.53	ppbv		100
35) 1,2-Dichloroethane	17.657	62	143629	15.19	ppbv		99
36) Heptane	17.682	43	232910	16.12	ppbv		99
37) Trichloroethene	18.625	130	158941	16.24	ppbv		99
38) 1,2-Dichloropropane	19.148	63	134701	15.53	ppbv		100
39) 1,4-Dioxane	19.318	88	81760	16.20	ppbv		99
40) Bromodichloromethane	19.604	83	253844	15.95	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	214080	16.63	ppbv		99
42) 4-Methyl-2-pentanone (...	20.559	43	290604	15.22	ppbv		99
44) Toluene	20.809	91	426676	15.53	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	183649	14.59	ppbv		98
46) 1,1,2-Trichloroethane	21.600	97	146407	15.84	ppbv		99
47) Tetrachloroethene	21.642	166	231145	15.74	ppbv		100
48) 2-Hexanone	21.892	43	267505	14.30	ppbv		99
49) Chlorodibromomethane	22.208	129	262611	15.89	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.445	107	210692	15.94	ppbv		100
51) Chlorobenzene	23.133	112	350450	15.47	ppbv		99
52) Ethylbenzene	23.200	91	572930	15.54	ppbv		100
53) m&p-Xylene	23.382	91	868945	31.21	ppbv		100
54) o-Xylene	24.027	91	441704	15.76	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K09.D
InstName : HP5973K
Acq On : 10 Aug 2020 9:54 pm
Operator : EM
Sample : S20H017-CAL5
Misc : 15ppbv 2033032
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:46 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:37 2020
Response via : Initial Calibration

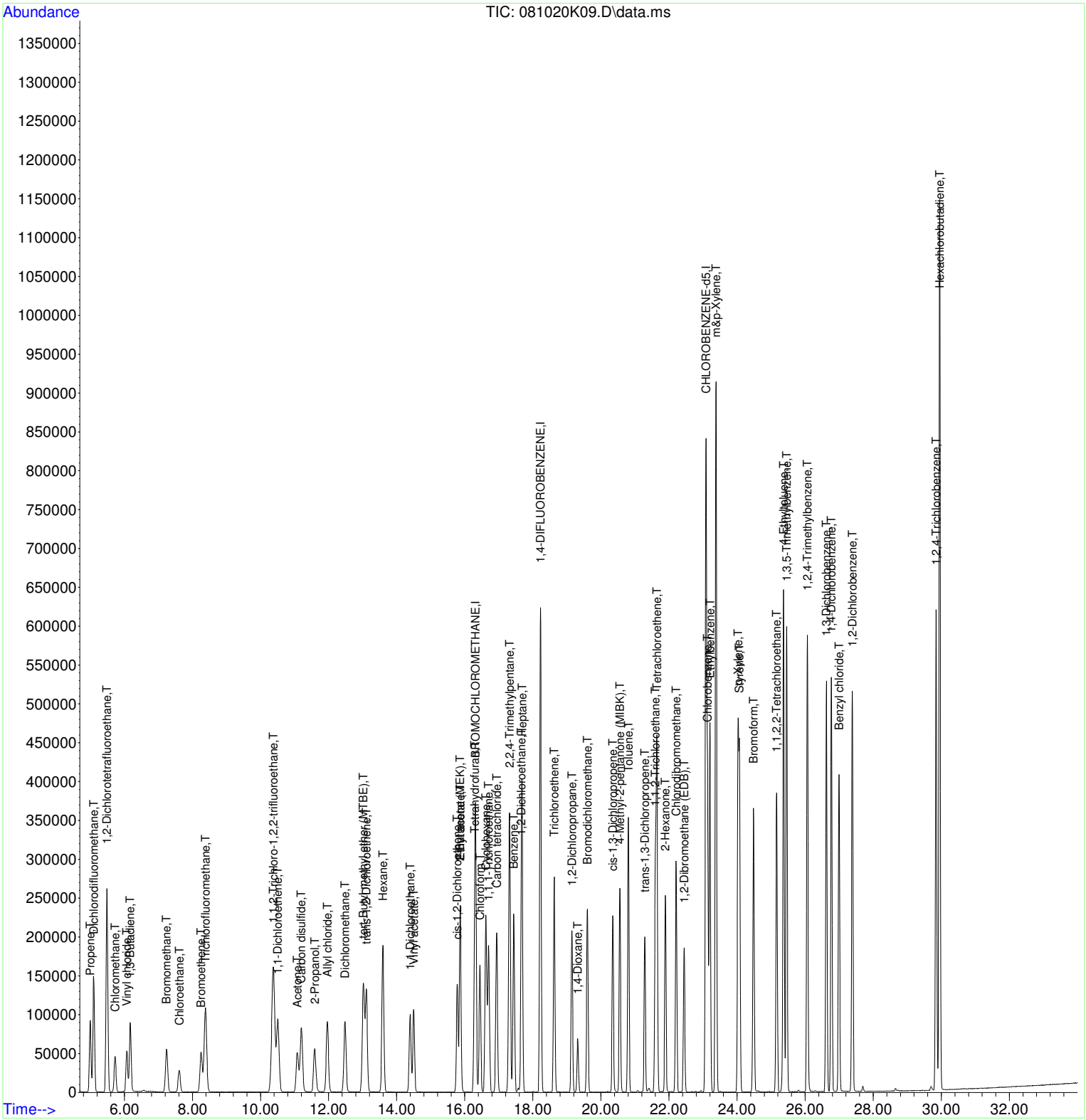
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55)	Styrene	24.070	104	364960	15.90 ppbv	100
56)	Bromoform	24.483	173	291500	16.73 ppbv	99
57)	1,1,2,2-Tetrachloroethane	25.158	83	335771	15.55 ppbv	99
58)	4-Ethyltoluene	25.365	105	716746	15.72 ppbv	100
59)	1,3,5-Trimethylbenzene	25.457	105	531483	15.78 ppbv	100
60)	1,2,4-Trimethylbenzene	26.065	105	541846	16.08 ppbv	100
61)	1,3-Dichlorobenzene	26.625	146	393990	15.57 ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	391203	15.70 ppbv	100
63)	Benzyl chloride	26.996	91	508352	15.29 ppbv	100
64)	1,2-Dichlorobenzene	27.385	146	379595	15.50 ppbv	100
65)	1,2,4-Trichlorobenzene	29.849	180	358746	16.95 ppbv	100
66)	Hexachlorobutadiene	29.952	225	404328	17.21 ppbv	100

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

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K09.D
InstName : HP5973K
Acq On : 10 Aug 2020 9:54 pm
Operator : EM
Sample : S20H017-CAL5
Misc : 15ppbv 2033032
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:11:46 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:37 2020
Response via : Initial Calibration



S20H017-CAL6

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K10.D
InstName : HP5973K
Acq On : 10 Aug 2020 10:47 pm
Operator : EM
Sample : S20H017-CAL6
Misc : 20ppbv 2033033
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:12:04 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:55 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	288309	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	912121	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.090	117	851980	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	149674	19.05	ppbv		99
3) Dichlorodifluoromethane	5.101	85	402358	20.53	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.484	85	438062	20.19	ppbv		98
5) Chloromethane	5.728	50	158326	20.16	ppbv		99
6) Vinyl chloride	6.068	62	162111	20.30	ppbv		100
7) 1,3-Butadiene	6.172	54	120589	20.27	ppbv		96
8) Bromomethane	7.243	94	133950	21.08	ppbv		98
9) Chloroethane	7.614	64	91502	20.89	ppbv		98
10) Bromoethene	8.252	106	142349	21.54	ppbv		99
11) Trichlorofluoromethane	8.380	101	358533	19.02	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.376	151	269979	22.38	ppbv		99
13) 1,1-Dichloroethene	10.509	61	243996	22.56	ppbv		99
14) Acetone	11.081	43	230118	19.61	ppbv		98
15) Carbon disulfide	11.197	76	445431	21.09	ppbv		96
16) 2-Propanol	11.592	45	249158	21.93	ppbv		97
17) Allyl chloride	11.963	41	213231	22.84	ppbv		97
18) Dichloromethane	12.480	49	177336	18.59	ppbv		96
19) tert-Butyl methyl ethe...	13.022	73	470253	24.06	ppbv		99
20) trans-1,2-Dichloroethene	13.113	61	224226	20.86	ppbv		98
21) Hexane	13.594	57	281077	21.59	ppbv		96
22) 1,1-Dichloroethane	14.397	63	279836	20.16	ppbv		99
23) Vinyl acetate	14.500	43	421478	24.25	ppbv		98
24) cis-1,2-Dichloroethene	15.778	61	214347	22.06	ppbv	#	98
25) 2-Butanone (MEK)	15.863	72	90033	21.50	ppbv	#	85
26) Ethyl acetate	15.869	61	53855	20.97	ppbv	#	90
27) Tetrahydrofuran	16.283	42	186243	18.85	ppbv		96
28) Chloroform	16.447	83	308586	21.41	ppbv		99
29) Cyclohexane	16.623	56	285249	22.65	ppbv		97
30) 1,1,1-Trichloroethane	16.703	97	310795	22.14	ppbv		99
31) Carbon tetrachloride	16.940	117	323667	20.93	ppbv		100
33) Benzene	17.439	78	506593	20.51	ppbv		99
34) 2,2,4-Trimethylpentane	17.317	57	891896	21.77	ppbv		99
35) 1,2-Dichloroethane	17.664	62	201780	19.97	ppbv		99
36) Heptane	17.682	43	319380	20.68	ppbv		97
37) Trichloroethene	18.631	130	229929	21.98	ppbv		100
38) 1,2-Dichloropropane	19.148	63	188790	20.37	ppbv		98
39) 1,4-Dioxane	19.318	88	118443	21.95	ppbv		97
40) Bromodichloromethane	19.604	83	360630	21.20	ppbv		99
41) cis-1,3-Dichloropropene	20.347	75	308109	22.39	ppbv		98
42) 4-Methyl-2-pentanone (...	20.553	43	403916	19.79	ppbv		97
44) Toluene	20.809	91	611727	20.67	ppbv		100
45) trans-1,3-Dichloropropene	21.290	75	263927	19.45	ppbv		97
46) 1,1,2-Trichloroethane	21.600	97	211908	21.27	ppbv		98
47) Tetrachloroethene	21.642	166	336030	21.23	ppbv		100
48) 2-Hexanone	21.892	43	375507	18.63	ppbv		97
49) Chlorodibromomethane	22.208	129	381492	21.42	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.445	107	306025	21.48	ppbv		99
51) Chlorobenzene	23.133	112	507918	20.80	ppbv		98
52) Ethylbenzene	23.200	91	830007	20.89	ppbv		100
53) m&p-Xylene	23.382	91	1250963	41.69	ppbv		99
54) o-Xylene	24.027	91	638522	21.13	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K10.D
InstName : HP5973K
Acq On : 10 Aug 2020 10:47 pm
Operator : EM
Sample : S20H017-CAL6
Misc : 20ppbv 2033033
ALS Vial : 36 Sample Multiplier: 1

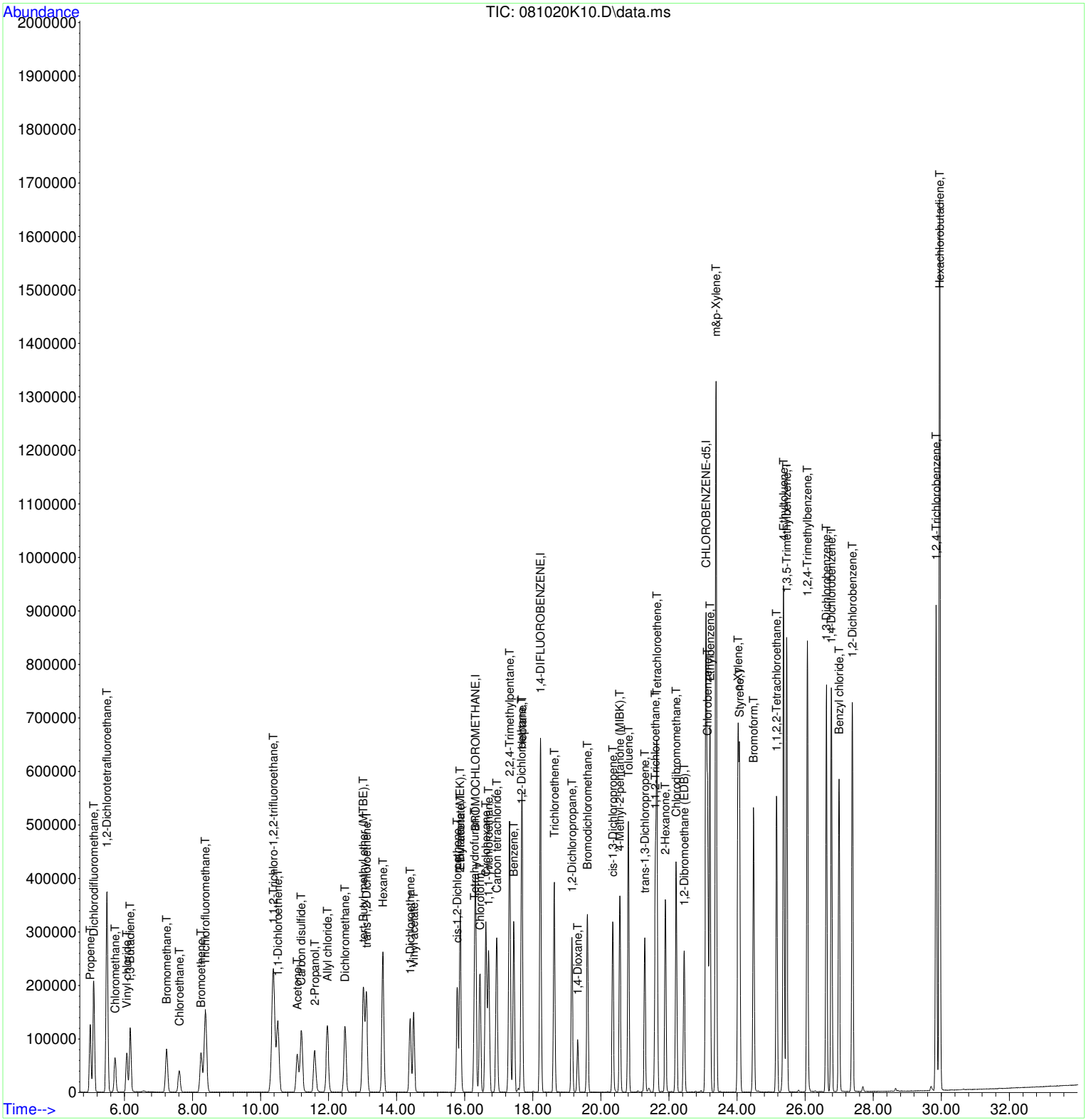
Quant Time: Aug 12 16:12:04 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:55 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	24.076	104	525366	21.24	ppbv	100
56)	Bromoform	24.483	173	428115	22.80	ppbv	99
57)	1,1,2,2-Tetrachloroethane	25.159	83	481352	20.69	ppbv	100
58)	4-Ethyltoluene	25.366	105	1040601	21.18	ppbv	99
59)	1,3,5-Trimethylbenzene	25.457	105	764172	21.06	ppbv	99
60)	1,2,4-Trimethylbenzene	26.065	105	776090	21.38	ppbv	100
61)	1,3-Dichlorobenzene	26.625	146	568280	20.83	ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	562516	20.95	ppbv	100
63)	Benzyl chloride	26.996	91	729356	20.35	ppbv	99
64)	1,2-Dichlorobenzene	27.385	146	544613	20.64	ppbv	100
65)	1,2,4-Trichlorobenzene	29.849	180	531911	23.31	ppbv	100
66)	Hexachlorobutadiene	29.953	225	591013	23.34	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K10.D
InstName : HP5973K
Acq On : 10 Aug 2020 10:47 pm
Operator : EM
Sample : S20H017-CAL6
Misc : 20ppbv 2033033
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 12 16:12:04 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:11:55 2020
Response via : Initial Calibration



S20H017-SCV1

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K11.D
InstName : HP5973K
Acq On : 10 Aug 2020 11:40 pm
Operator : EM
Sample : S20H017-SCV1
Misc : 10ppbv 2033037
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Aug 12 16:15:13 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	296520	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	954870	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	869802	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	76863	9.51	ppbv		99
3) Dichlorodifluoromethane	5.101	85	223073	11.07	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.490	85	231992	10.40	ppbv		92
5) Chloromethane	5.728	50	82858	10.26	ppbv		100
6) Vinyl chloride	6.074	62	87197	10.62	ppbv		100
7) 1,3-Butadiene	6.178	54	63821	10.43	ppbv		96
8) Bromomethane	7.242	94	75489	11.55	ppbv		98
9) Chloroethane	7.607	64	51611	11.46	ppbv		97
10) Bromoethene	8.258	106	79742	11.73	ppbv		99
11) Trichlorofluoromethane	8.380	101	203631	10.50	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.375	151	151951	12.24	ppbv		97
13) 1,1-Dichloroethene	10.515	61	130178	11.70	ppbv		97
14) Acetone	11.087	43	124921	10.35	ppbv		97
15) Carbon disulfide	11.197	76	264244	12.17	ppbv		95
16) 2-Propanol	11.592	45	118762	10.17	ppbv		99
17) Allyl chloride	11.963	41	111090	11.57	ppbv		95
18) Dichloromethane	12.480	49	98243	10.02	ppbv		92
19) tert-Butyl methyl ethe...	13.022	73	248082	12.34	ppbv		99
20) trans-1,2-Dichloroethene	13.107	61	115875	10.48	ppbv		96
21) Hexane	13.594	57	149481	11.17	ppbv		95
22) 1,1-Dichloroethane	14.397	63	157568	11.04	ppbv		99
23) Vinyl acetate	14.500	43	198253	11.09	ppbv		98
24) cis-1,2-Dichloroethene	15.778	61	124461	12.45	ppbv	#	96
25) 2-Butanone (MEK)	15.863	72	49755	11.55	ppbv	#	77
26) Ethyl acetate	15.869	61	29467	11.16	ppbv	#	83
27) Tetrahydrofuran	16.289	42	91185	8.98	ppbv		94
28) Chloroform	16.447	83	173291	11.69	ppbv		99
29) Cyclohexane	16.617	56	151310	11.68	ppbv		96
30) 1,1,1-Trichloroethane	16.696	97	163163	11.30	ppbv		98
31) Carbon tetrachloride	16.940	117	174721	10.99	ppbv		99
33) Benzene	17.439	78	288970	11.17	ppbv		99
34) 2,2,4-Trimethylpentane	17.317	57	473517	11.04	ppbv		99
35) 1,2-Dichloroethane	17.658	62	111625	10.55	ppbv		99
36) Heptane	17.682	43	168841	10.45	ppbv		95
37) Trichloroethene	18.631	130	126177	11.52	ppbv		99
38) 1,2-Dichloropropane	19.148	63	103916	10.71	ppbv		98
39) 1,4-Dioxane	19.324	88	66213	11.72	ppbv		96
40) Bromodichloromethane	19.604	83	186626	10.48	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	157630	10.94	ppbv		97
42) 4-Methyl-2-pentanone (...	20.553	43	193305	9.05	ppbv		96
44) Toluene	20.809	91	344360	11.40	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	133435	9.63	ppbv		96
46) 1,1,2-Trichloroethane	21.600	97	115398	11.35	ppbv		98
47) Tetrachloroethene	21.642	166	181647	11.24	ppbv		100
48) 2-Hexanone	21.892	43	173403	8.42	ppbv		97
49) Chlorodibromomethane	22.208	129	190263	10.47	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.445	107	162884	11.20	ppbv		100
51) Chlorobenzene	23.133	112	275877	11.07	ppbv		99
52) Ethylbenzene	23.200	91	455820	11.24	ppbv		100
53) m&p-Xylene	23.382	91	672539	21.96	ppbv		99
54) o-Xylene	24.027	91	345109	11.19	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K11.D
InstName : HP5973K
Acq On : 10 Aug 2020 11:40 pm
Operator : EM
Sample : S20H017-SCV1
Misc : 10ppbv 2033037
ALS Vial : 37 Sample Multiplier: 1

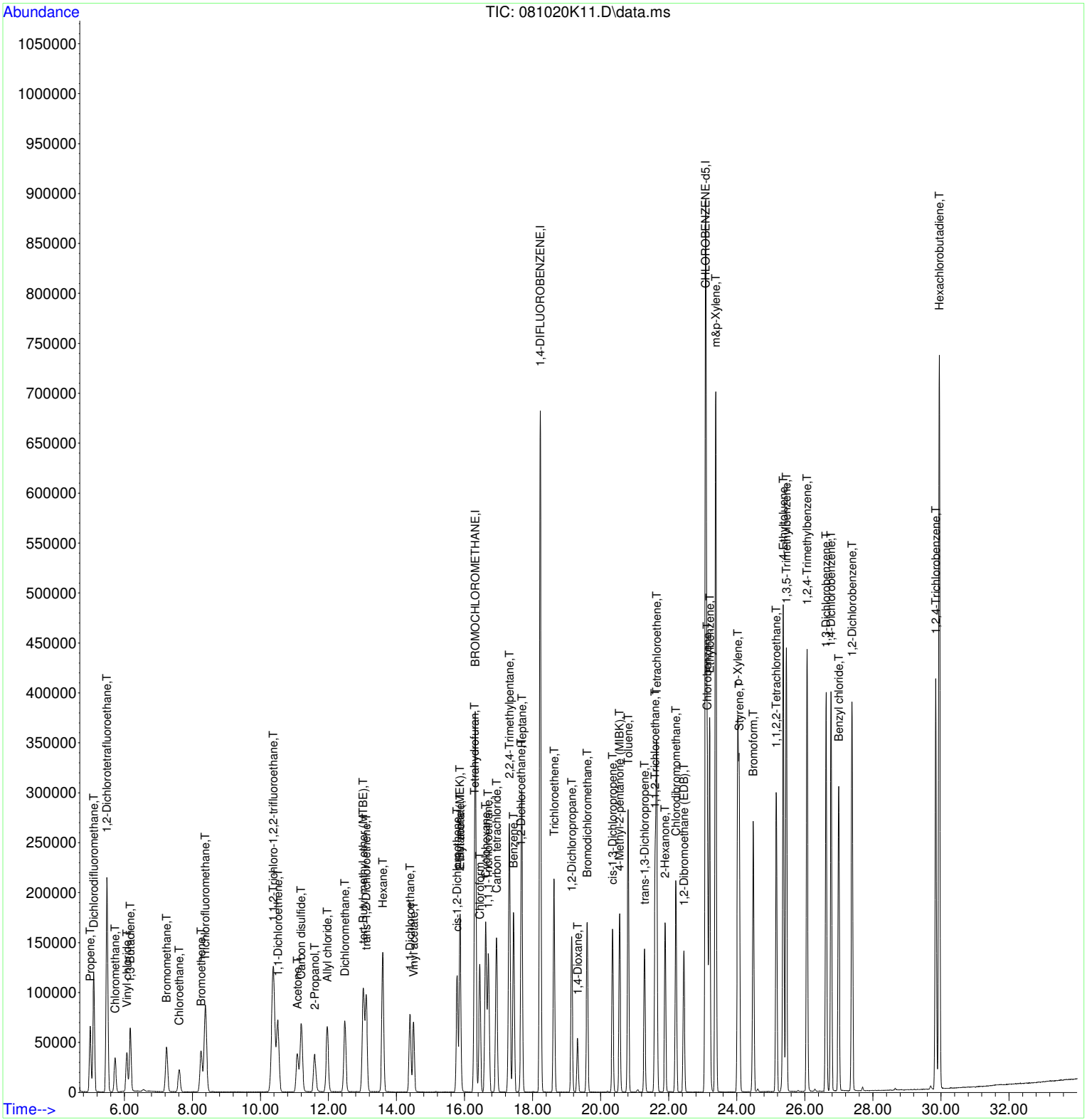
Quant Time: Aug 12 16:15:13 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.076	104	273192	10.82 ppbv	100
56) Bromoform	24.483	173	219296	11.44 ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	262834	11.07 ppbv	100
58) 4-Ethyltoluene	25.365	105	533262	10.63 ppbv	99
59) 1,3,5-Trimethylbenzene	25.457	105	401759	10.84 ppbv	100
60) 1,2,4-Trimethylbenzene	26.065	105	413312	11.15 ppbv	100
61) 1,3-Dichlorobenzene	26.625	146	300132	10.78 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	296595	10.82 ppbv	100
63) Benzyl chloride	26.996	91	382618	10.46 ppbv	99
64) 1,2-Dichlorobenzene	27.385	146	293224	10.89 ppbv	100
65) 1,2,4-Trichlorobenzene	29.849	180	241117	10.35 ppbv	100
66) Hexachlorobutadiene	29.952	225	263507	10.19 ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\081020K_FSAA\
Data File : 081020K11.D
InstName : HP5973K
Acq On : 10 Aug 2020 11:40 pm
Operator : EM
Sample : S20H017-SCV1
Misc : 10ppbv 2033037
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Aug 12 16:15:13 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration



SEQUENCE

S20J001

Sequence Date: 10/01/2020

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B20J001	SEQUENCE #:	S20J001 10/01/20
BATCH #:	N / A	ANALYSIS:	TO15 HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
DOCUMENTATION	ANALYST: Bench sheet(s) attached? REVIEWER: Bench sheet(s) reviewed?	☐	Y	Y	
	ANALYST: Sequence log(s) attached? REVIEWER: Sequence log(s) reviewed?	☐	Y	Y	
	ANALYST: Every run has a PDF in LIMS? REVIEWER: Every PDF reviewed?	☐	Y	Y	
INITIAL CALIBRATION	Date of Initial Calibration used: If applicable, note date of "Last Update" in Comments.	08/10/20 Wed Aug 12, 2020 16:12:13			
	Initial Calibration ID (LIMS number):	2008006 / S20H017			
	ICAL within QC criteria?	☑			OK
	SCV within QC criteria?	☑			OK
INSTRUMENT / QC CHECKS	Tune or degradation checks within QC criteria?	☐	Y	Y	PASSED
	CCV(s) within QC criteria?	☐	Y	Y	OK
	QLS(s) within QC criteria?	☐	Y	Y	Propene = 144% DCM = 147%
	CB(s) or storage blank(s) within QC criteria?	☑			
	Other instrument checks within QC criteria? Specify if applicable.	☑			
BATCH QCs	Method blanks < 1/2 QL?	☐	Y	Y	CLEAN
	LCS(s) or SRM(s) within QC criteria?	☐	Y	Y	OK
	MSs/MSDs and/or DUPs within QC criteria?	☐	Y	Y	OK
	Other method-specific QCs within QC criteria? Specify if applicable.	☑			

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B20J001	SEQUENCE #:	S20J001	10/01/20
BATCH #:	N / A	ANALYSIS:	TO15	HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
IS / SS	Internal standards within QC criteria?	☐	Y	Y	
	Surrogates within QC criteria?	☑			
SAMPLE DATA	Were samples prepared & analyzed within holding time?	☐	Y	Y	
	If samples need to be re-run, were RE(s) made in LIMS?	☐	Y	Y	for >LR
	Do any samples need to be re-digested or re-extracted?	☑			
	Were all data qualifiers appropriately applied?	☐	Y	Y	
	Are problems, anomalies, discrepancies documented in LIMS? Specify if applicable.	☑			
MANUAL INT	Were manual integrations performed and documented? Specify if applicable.	☑			

APPROVALS	ANALYST INITIALS & DATE:	LLH 10/02/20
	REVIEWED BY:	Estrellita Manuel (affiliate) Digitally signed by Estrellita Manuel (affiliate) Date: 2020.10.05 11:38:26 -07'00' SIGN HERE

COMMENTS

Injection Log

Directory: d:\msdchem\1\2020\DATA\100120K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	36	100120K01.D	1.	S20J001-TUN1	BFB 1901028	1 Oct 2020 09:55
2	37	100120K02.D	1.	S20J001-CCV1@B20J001-BS1	10ppbv 2040005@2040009	1 Oct 2020 10:45
3	36	100120K03.D	1.	S20J001-CRL1	1.0ppbv 2040002	1 Oct 2020 11:35
4	33	100120K04.D	1.	B20J001-BLK1	200mL BLANK	1 Oct 2020 12:27
5	15	100120K05.D	5.3	2009024-02RE1	50ml >LR REPRESS	1 Oct 2020 13:17
6	19	100120K06.D	3.92	2009024-06RE1	20ml >LR REPRESS	1 Oct 2020 14:06
7	11	100120K07.D	2.43	2009024-08	200ml WAVERLY-SGR10-5FT REPRESS	1 Oct 2020 14:59
8	12	100120K08.D	1.94	2009024-09	200ml WAVERLY-SGR11-5FT	1 Oct 2020 15:51
9	21	100120K09.D	1.94	2009024-10	200ml WAVERLY-SGR13-5FT	1 Oct 2020 16:43
10	22	100120K10.D	1.87	2009024-13	200ml WAVERLY-SGR2-5FT	1 Oct 2020 17:36
11	33	100120K11.D	1.	S20J001-IBL1	200mL BLANK	1 Oct 2020 18:28
12	23	100120K12.D	2.01	2009030-02	200ml F6-019-3FT	1 Oct 2020 19:21
13	24	100120K13.D	1.96	2009030-03	200ml F6-025-3FT	1 Oct 2020 20:13
14	25	100120K14.D	2.06	2009030-04	200ml F6-029-3FT	1 Oct 2020 21:05
15	26	100120K15.D	2.01	2009030-05	200ml F6-031-3FT	1 Oct 2020 21:58
16	27	100120K16.D	2.02	2009030-06	200ml F6-055-3FT	1 Oct 2020 22:51
17	28	100120K17.D	2.	2009030-07	200ml F6-033-3FT	1 Oct 2020 23:43
18	28	100120K18.D	2.	B20J001-DUP1	200ml 2009030-07	2 Oct 2020 00:35
19	33	100120K19.D	1.	S20J001-IBL2	200mL BLANK	2 Oct 2020 01:27
20	29	100120K20.D	1.95	2009031-01	200ml 6SIXTY-A3-SC-1FT	2 Oct 2020 02:20
21	29	100120K21.D	1.95	B20J001-DUP2	200ml 2009031-01	2 Oct 2020 03:12
22	11	100120K22.D	2.01	2009031-02	200ml 6SIXTY-A7-SC-1FT	2 Oct 2020 04:05
23	12	100120K23.D	2.03	2009031-03	200ml 6SIXTY-MH1-3FT	2 Oct 2020 04:57
24	11	100120K24.D	5.98	2009024-08RE1	100ml >LR RE-REPRESS	2 Oct 2020 05:48
25	33	100120K25.D	1.	S20J001-IBL3	200mL BLANK	2 Oct 2020 06:40

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2020\DATA\100120K_FSAA\100120K01.D
Tune Time : 1 Oct 2020 9:55 am

Daily Calibration File : D:\msdchem\1\2020\DATA\100120K_FSAA\100120K02.D

File	Sample	Surrogate Recovery %		Internal Standard Responses	
		251911	737734	675742	
100120K02.D	S20J001-CCV1	251911	737734	675742	
100120K03.D	S20J001-CRL1	258190	810807	715425	
100120K04.D	B20J001-BLK1	253655	803285	697504	
100120K05.D	2009024-02RE1	261582	801336	702014	
100120K06.D	2009024-06RE1	257532	784150	684809	
100120K07.D	2009024-08	256087	762904	672588	
100120K08.D	2009024-09	257909	769283	677739	
100120K09.D	2009024-10	256310	764336	672552	
100120K10.D	2009024-13	253551	750811	660757	
100120K11.D	S20J001-IBL1	244555	738598	643868	
100120K12.D	2009030-02	249703	740239	652996	
100120K13.D	2009030-03	250596	751575	660203	
100120K14.D	2009030-04	255342	764344	673954	
100120K15.D	2009030-05	258221	767167	676885	
100120K16.D	2009030-06	251223	749194	660330	
100120K17.D	2009030-07	245321	736785	647678	
100120K18.D	B20J001-DUP1	241854	723475	637022	
100120K19.D	S20J001-IBL2	241493	723536	631519	
100120K20.D	2009031-01	253027	744837	663313	

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100120K21.D
         B20J001-DUP2        263516     782018     693203
---------------------------------------------------------------------------
100120K22.D
         2009031-02          266866     799929     701887
---------------------------------------------------------------------------
100120K23.D
         2009031-03          256187     808783     707843
---------------------------------------------------------------------------
100120K24.D
         2009024-08RE1       258924     810442     705663
---------------------------------------------------------------------------
100120K25.D
         S20J001-IBL3        255166     787326     681189
---------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Fri Oct 02 08:51:42 2020  HP5973K
```

Analysis Sequence

S20J001

Project: R20S18
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 2008006 Printed: 10/02/2020 9:44 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S20J001-TUN1	BFB Tune	1	10/1/20 9:55	1901028		LLH	100120K01.D	
S20J001-CCV1	CCV - TO15	2	10/1/20 10:45	2040005		LLH	100120K02.D	
B20J001-BS1	LCS	3	10/1/20 10:45			LLH	100120K02.D	
S20J001-CRL1	QLS - TO15	4	10/1/20 11:35	2040002		LLH	100120K03.D	
B20J001-BLK1	Blank	5	10/1/20 12:27		2006148	LLH	100120K04.D	
2009024-02RE1 A	Waverly-MH2-1ft	6	10/1/20 13:17		2006148	LLH	100120K05.D	
2009024-06RE1 A	Waverly-SGR6-5ft	7	10/1/20 14:06		2006148	LLH	100120K06.D	
2009024-08 A	Waverly-SGR10-5ft	8	10/1/20 14:59		2006148	LLH	100120K07.D	
2009024-09 A	Waverly-SGR11-5ft	9	10/1/20 15:51		2006148	LLH	100120K08.D	
2009024-10 A	Waverly-SGR13-5ft	10	10/1/20 16:43		2006148	LLH	100120K09.D	
2009024-13 A	Waverly-SGR2-5ft	11	10/1/20 17:36		2006148	LLH	100120K10.D	
S20J001-IBL1	Instrument Blank	12	10/1/20 18:28		2006148	LLH	100120K11.D	
2009030-02 A	F6-019-3ft	13	10/1/20 19:21		2006148	LLH	100120K12.D	
2009030-03 A	F6-025-3ft	14	10/1/20 20:13		2006148	LLH	100120K13.D	
2009030-04 A	F6-029-3ft	15	10/1/20 21:05		2006148	LLH	100120K14.D	
2009030-05 A	F6-031-3ft	16	10/1/20 21:58		2006148	LLH	100120K15.D	
2009030-06 A	F6-055-3ft	17	10/1/20 22:51		2006148	LLH	100120K16.D	
2009030-07 A	F6-033-3ft	18	10/1/20 23:43		2006148	LLH	100120K17.D	
B20J001-DUP1	Duplicate	19	10/2/20 0:35		2006148	LLH	100120K18.D	
S20J001-IBL2	Instrument Blank	20	10/2/20 1:27		2006148	LLH	100120K19.D	
2009031-01 A	6Sixty-A3-SC-1ft	21	10/2/20 2:20		2006148	LLH	100120K20.D	
B20J001-DUP2	Duplicate	22	10/2/20 3:12		2006148	LLH	100120K21.D	

Analysis Sequence

S20J001

(Continued)

Project: R20S18
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 2008006 Printed: 10/02/2020 9:44 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
2009031-02 A	6Sixty-A7-SC-1ft	23	10/2/20 4:05		2006148	LLH	100120K22.D	
2009031-03 A	6Sixty-MH1-3ft	24	10/2/20 4:57		2006148	LLH	100120K23.D	
2009024-08RE1 A	Waverly-SGR10-5ft	25	10/2/20 5:48		2006148	LLH	100120K24.D	
S20J001-IBL3	Instrument Blank	26	10/2/20 6:40		2006148	LLH	100120K25.D	

Sequence Comments

Reagents

Reagent #	Description

Sequence Report

I	Name	Inlet	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
	BFB	Three	T6	40	40	50	TO-15_A.CTD3	10/1/2020 9:55:06 AM	Completed
	CCV	Three	T7	40	0	100	TO-15_A.CTD3	10/1/2020 10:45:40 AM	Completed
	CRL	Three	T6	40	0	20	TO-15_A.CTD3	10/1/2020 11:35:16 AM	Completed
	BLANK	Three	T3	40	0	200	TO-15_A.CTD3	10/1/2020 12:27:13 PM	Completed
	2009024-02RE1	One	T5	40	0	50	TO-15_A.CTD3	10/1/2020 1:17:08 PM	Completed
	2009024-06RE1	One	T9	40	0	20	TO-15_A.CTD3	10/1/2020 2:06:32 PM	Completed
	2009024-08	One	T11	40	0	200	TO-15_A.CTD3	10/1/2020 2:59:01 PM	Completed
	2009024-09	One	T12	40	0	200	TO-15_A.CTD3	10/1/2020 3:51:26 PM	Completed
	2009024-10	Two	T1	40	0	200	TO-15_A.CTD3	10/1/2020 4:43:56 PM	Completed
	2009024-13	Two	T2	40	0	200	TO-15_A.CTD3	10/1/2020 5:36:27 PM	Completed
	IBL	Three	T3	40	0	200	TO-15_A.CTD3	10/1/2020 6:28:24 PM	Completed
	2009030-02	Two	T3	40	0	200	TO-15_A.CTD3	10/1/2020 7:21:07 PM	Completed
	2009030-03	Two	T4	40	0	200	TO-15_A.CTD3	10/1/2020 8:13:30 PM	Completed
	2009030-04	Two	T5	40	0	200	TO-15_A.CTD3	10/1/2020 9:05:55 PM	Completed
	2009030-05	Two	T6	40	0	200	TO-15_A.CTD3	10/1/2020 9:58:14 PM	Completed
	2009030-06	Two	T7	40	0	200	TO-15_A.CTD3	10/1/2020 10:51:00 PM	Completed
	2009030-07	Two	T8	40	0	200	TO-15_A.CTD3	10/1/2020 11:43:18 PM	Completed
	2009030-07 DUP	Two	T8	40	0	200	TO-15_A.CTD3	10/2/2020 12:35:47 AM	Completed
	IBL	Three	T3	40	0	200	TO-15_A.CTD3	10/2/2020 1:27:54 AM	Completed
	2009031-01	Two	T9	40	0	200	TO-15_A.CTD3	10/2/2020 2:20:10 AM	Completed
	2009031-01 DUP	Two	T9	40	0	200	TO-15_A.CTD3	10/2/2020 3:12:52 AM	Completed
	2009031-02	One	T1	40	0	200	TO-15_A.CTD3	10/2/2020 4:05:21 AM	Completed
	2009031-03	One	T2	40	0	200	TO-15_A.CTD3	10/2/2020 4:57:49 AM	Completed
	2009024-08RE1	One	T11	40	0	100	TO-15_A.CTD3	10/2/2020 5:48:17 AM	Completed
	IBL	Three	T3	40	0	200	TO-15_A.CTD3	10/2/2020 6:40:09 AM	Completed

SEQUENCE DATA

S20J001

S20J001-TUN1

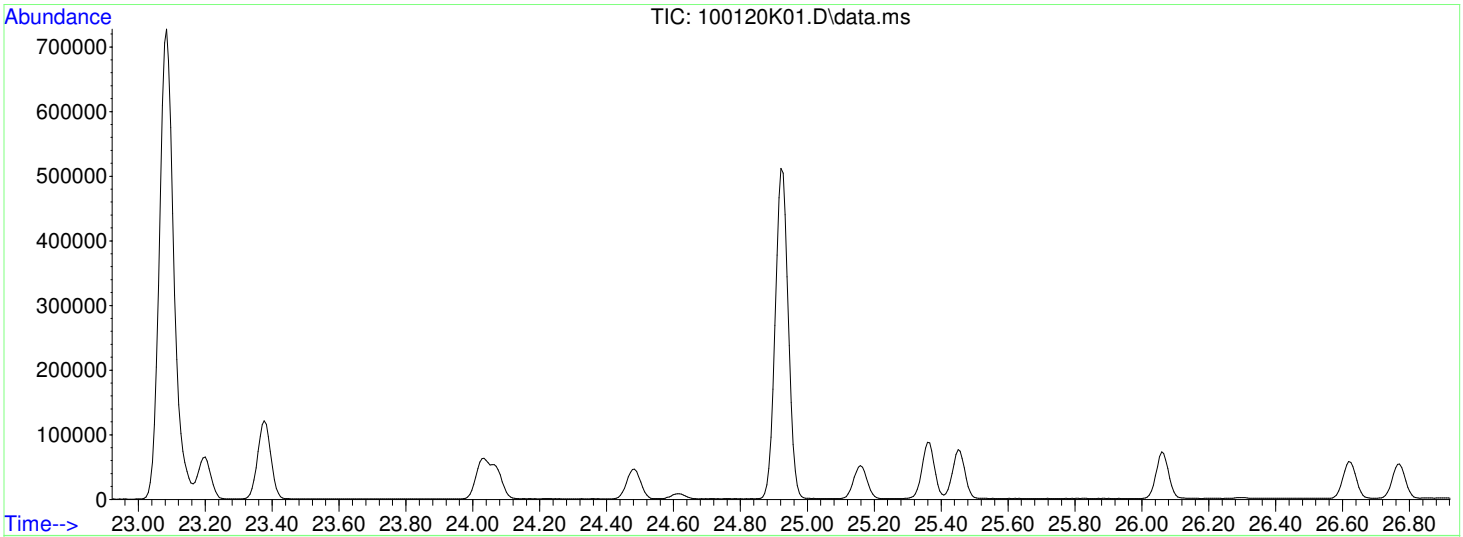
Table of Contents

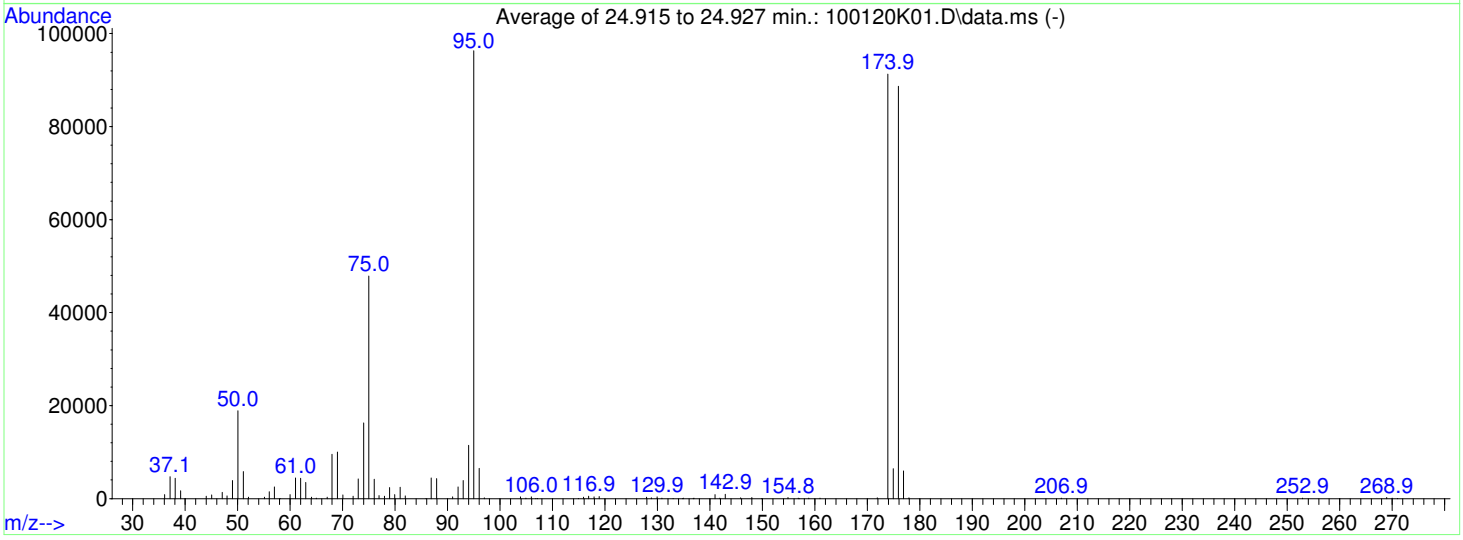
Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K01.D
InstName : HP5973K
Acq On : 1 Oct 2020 9:55 am
Operator : LLH
Sample : S20J001-TUN1
Misc : BFB 1901028
ALS Vial : 36 Sample Multiplier: 1

REVIEWED
By LLH at 11:33 am, Oct 01, 2020

Integration File: lscint.p

Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Title : TO15
Last Update : Wed Aug 12 16:12:13 2020



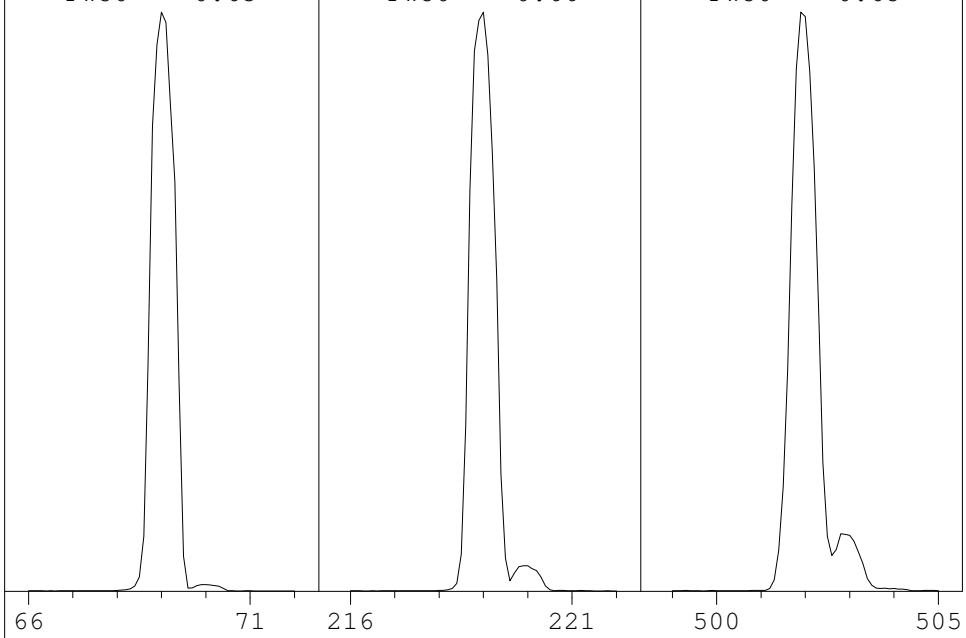


AutoFind: Scans 3326, 3327, 3328; Background Corrected with Scan 3312

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.6	18869	PASS
75	95	30	66	49.7	47883	PASS
95	95	100	100	100.0	96344	PASS
96	95	5	9	6.8	6528	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	94.8	91315	PASS
175	174	4	9	7.0	6424	PASS
176	174	93	101	97.1	88701	PASS
177	176	5	9	6.7	5929	PASS

Thu Oct 01 09:24:15 2020 Instrum
C:\msdchem\1\5973N\bfb100120K.U US03960556

Mass	69.00	Mass	219.00	Mass	501.90
Ab	828959	Ab	453629	Ab	46425
Pw50	0.63	Pw50	0.66	Pw50	0.65

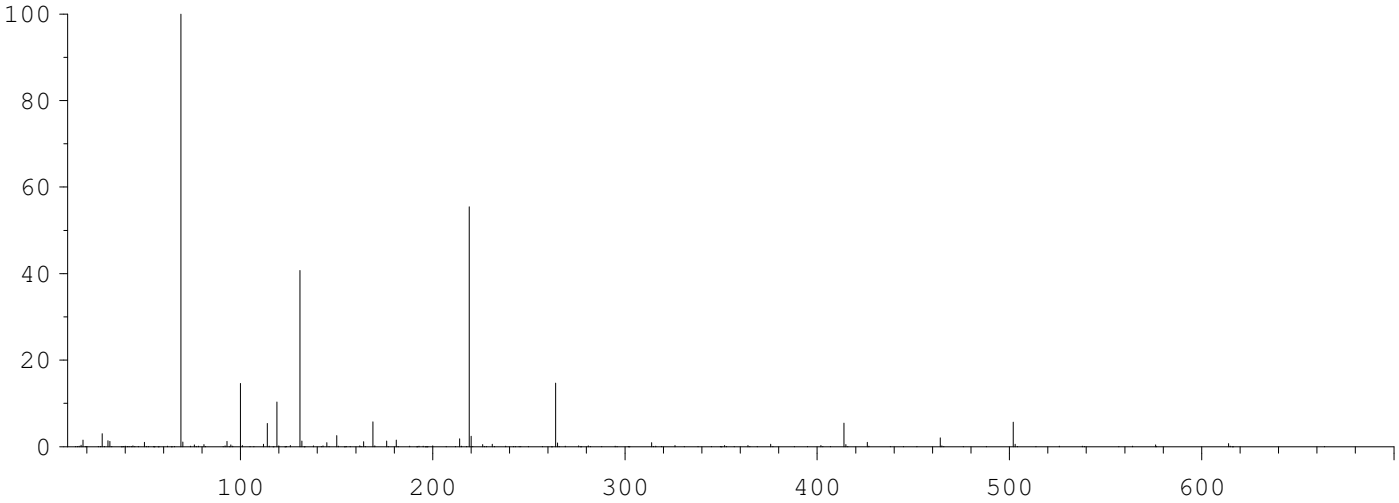


Ion Pol	Pos	MassGain	68
		MassOffs	-8
Emission	34.6	AmuGain	1984
EIEnrgy	69.9	AmuOffs	131
Filament	2	Wid219	-0.031
		DC Pol	Pos
Repeller	32.80		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1153
EntOffs	19.83		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
174 peaks Base: 69.00 Abundance: 760384



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	760384	100.00	70.00	8195	1.08
219.00	421248	55.40	220.00	18376	4.36
502.00	43008	5.66	503.00	4538	10.55

Air/Water Check: H20~1.54% N2~3.03% O2~1.25% CO2~0.21% N2/H2O~197.01%

Column(1) Flow: 0.873 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 138273
Repeller Maximum 35 volts using ion 219; Gain Factor 1.38

MassGain Values(Samples): 68(3) 68(2) 68(1) 68(0) 68(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Entrance Lens Offset:	19.8	19.8	19.8	19.8	19.8	19.8	19.8

S20J001-CCV1

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

REVIEWED
By LLH at 11:36 am, Oct 01, 2020

Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	BROMOCHLOROMETHANE	1.000	1.000	0.0	91	0.00
2	T	Propene	0.534	0.572	-7.1	100	0.00
3	T	Dichlorodifluoromethane	1.332	1.357	-1.9	97	0.00
4	T	1,2-Dichlorotetrafluoroetha	1.475	1.495	-1.4	96	0.00
5	T	Chloromethane	0.534	0.563	-5.4	99	0.00
6	T	Vinyl chloride	0.543	0.558	-2.8	96	0.00
7	T	1,3-Butadiene	0.404	0.422	-4.5	97	0.00
8	T	Bromomethane	0.432	0.434	-0.5	95	0.00
9	T	Chloroethane	0.298	0.306	-2.7	96	0.01
10	T	Bromoethene	0.449	0.445	0.9	93	0.01
11	T	Trichlorofluoromethane	1.282	1.297	-1.2	96	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	0.820	0.810	1.2	94	0.00
13	T	1,1-Dichloroethene	0.735	0.774	-5.3	97	0.00
14	T	Acetone	0.798	0.810	-1.5	95	0.00
15	T	Carbon disulfide	1.436	1.433	0.2	95	0.00
16	T	2-Propanol	0.772	0.829	-7.4	97	0.00
17	T	Allyl chloride	0.635	0.664	-4.6	95	0.00
18	T	Dichloromethane	0.648	0.619	4.5	96	0.00
19	T	tert-Butyl methyl ether (MT	1.329	1.377	-3.6	94	0.00
20	T	trans-1,2-Dichloroethene	0.731	0.732	-0.1	94	0.00
21	T	Hexane	0.885	0.928	-4.9	95	0.00
22	T	1,1-Dichloroethane	0.944	0.958	-1.5	95	0.00
23	T	Vinyl acetate	1.181	1.192	-0.9	89	0.00
24	T	cis-1,2-Dichloroethene	0.661	0.683	-3.3	94	0.00
25	T	2-Butanone (MEK)	0.285	0.288	-1.1	94	0.00
26	T	Ethyl acetate	0.175	0.174	0.6	93	0.00
27	T	Tetrahydrofuran	0.672	0.695	-3.4	94	0.00
28	T	Chloroform	0.980	0.985	-0.5	95	0.00
29	T	Cyclohexane	0.856	0.888	-3.7	95	0.00
30	T	1,1,1-Trichloroethane	0.954	0.971	-1.8	96	0.00
31	T	Carbon tetrachloride	1.051	1.064	-1.2	95	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	90	0.00
33	T	Benzene	0.531	0.557	-4.9	95	0.00
34	T	2,2,4-Trimethylpentane	0.880	0.949	-7.8	95	0.00
35	T	1,2-Dichloroethane	0.217	0.228	-5.1	95	0.00
36	T	Heptane	0.332	0.362	-9.0	95	0.00
37	T	Trichloroethene	0.225	0.232	-3.1	93	0.00
38	T	1,2-Dichloropropane	0.199	0.213	-7.0	95	0.00
39	T	1,4-Dioxane	0.116	0.112	3.4	87	0.00
40	T	Bromodichloromethane	0.366	0.381	-4.1	95	0.00
41	T	cis-1,3-Dichloropropene	0.296	0.311	-5.1	91	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.439	0.462	-5.2	92	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	90	0.00
44	T	Toluene	0.681	0.713	-4.7	94	0.00
45	T	trans-1,3-Dichloropropene	0.312	0.312	0.0	87	0.00
46	T	1,1,2-Trichloroethane	0.229	0.238	-3.9	93	0.00
47	T	Tetrachloroethene	0.364	0.377	-3.6	94	0.00
48	T	2-Hexanone	0.464	0.476	-2.6	89	0.00
49	T	Chlorodibromomethane	0.410	0.418	-2.0	93	0.00
50	T	1,2-Dibromoethane (EDB)	0.328	0.326	0.6	90	0.00
51	T	Chlorobenzene	0.562	0.559	0.5	91	0.00

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52 T	Ethylbenzene	0.914	0.952	-4.2	94	0.00
53 T	m&p-Xylene	0.690	0.719	-4.2	93	0.00
54 T	o-Xylene	0.695	0.744	-7.1	94	0.00
55 T	Styrene	0.569	0.565	0.7	87	0.00
56 T	Bromoform	0.432	0.446	-3.2	92	0.00
57 T	1,1,2,2-Tetrachloroethane	0.535	0.563	-5.2	94	0.00
58 T	4-Ethyltoluene	1.130	1.218	-7.8	94	0.00
59 T	1,3,5-Trimethylbenzene	0.835	0.896	-7.3	94	0.00
60 T	1,2,4-Trimethylbenzene	0.835	0.901	-7.9	92	0.00
61 T	1,3-Dichlorobenzene	0.628	0.607	3.3	84	0.00
62 T	1,4-Dichlorobenzene	0.618	0.571	7.6	80	0.00
63 T	Benzyl chloride	0.824	0.742	10.0	76	0.00
64 T	1,2-Dichlorobenzene	0.607	0.612	-0.8	88	0.00
65 T	1,2,4-Trichlorobenzene	0.525	0.468	10.9	75	0.00
66 T	Hexachlorobutadiene	0.583	0.642	-10.1	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	251911	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	737734	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	675742	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	69785	10.16	ppbv		100
3) Dichlorodifluoromethane	5.101	85	170968	9.99	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.490	85	184472	9.73	ppbv		98
5) Chloromethane	5.728	50	71648	10.44	ppbv		99
6) Vinyl chloride	6.081	62	73916	10.59	ppbv		99
7) 1,3-Butadiene	6.178	54	56474	10.87	ppbv		98
8) Bromomethane	7.243	94	56908	10.25	ppbv		98
9) Chloroethane	7.620	64	39703	10.38	ppbv		98
10) Bromoethene	8.265	106	57736	10.00	ppbv		98
11) Trichlorofluoromethane	8.386	101	155057	9.41	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	111431	10.57	ppbv		99
13) 1,1-Dichloroethene	10.516	61	105417	11.15	ppbv		99
14) Acetone	11.081	43	103096	10.05	ppbv		100
15) Carbon disulfide	11.203	76	191489	10.38	ppbv		97
16) 2-Propanol	11.598	45	106599	10.74	ppbv		99
17) Allyl chloride	11.963	41	93068	11.41	ppbv		99
18) Dichloromethane	12.487	49	81953	9.83	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	192874	11.29	ppbv		99
20) trans-1,2-Dichloroethene	13.107	61	96022	10.23	ppbv		100
21) Hexane	13.594	57	120428	10.59	ppbv		99
22) 1,1-Dichloroethane	14.403	63	120632	9.95	ppbv		100
23) Vinyl acetate	14.500	43	168585	11.10	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	90432	10.65	ppbv	#	100
25) 2-Butanone (MEK)	15.863	72	37073	10.13	ppbv		99
26) Ethyl acetate	15.869	61	22585	10.07	ppbv	#	97
27) Tetrahydrofuran	16.289	42	82225	9.53	ppbv		100
28) Chloroform	16.447	83	131606	10.45	ppbv		99
29) Cyclohexane	16.617	56	123300	11.20	ppbv		99
30) 1,1,1-Trichloroethane	16.696	97	132223	10.78	ppbv		100
31) Carbon tetrachloride	16.940	117	135331	10.02	ppbv		99
33) Benzene	17.439	78	217850	10.90	ppbv		100
34) 2,2,4-Trimethylpentane	17.311	57	382389	11.54	ppbv		100
35) 1,2-Dichloroethane	17.658	62	86539	10.59	ppbv		99
36) Heptane	17.682	43	143091	11.46	ppbv		99
37) Trichloroethene	18.631	130	93346	11.03	ppbv		99
38) 1,2-Dichloropropane	19.148	63	81611	10.88	ppbv		100
39) 1,4-Dioxane	19.318	88	44345	10.16	ppbv		99
40) Bromodichloromethane	19.604	83	150463	10.93	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	121656	10.93	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	170511	10.33	ppbv		100
44) Toluene	20.803	91	253133	10.78	ppbv		100
45) trans-1,3-Dichloropropene	21.283	75	99087	9.21	ppbv		100
46) 1,1,2-Trichloroethane	21.600	97	86287	10.92	ppbv		99
47) Tetrachloroethene	21.642	166	134007	10.67	ppbv		99
48) 2-Hexanone	21.892	43	150879	9.44	ppbv		100
49) Chlorodibromomethane	22.208	129	150015	10.62	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	117051	10.36	ppbv		100
51) Chlorobenzene	23.133	112	200305	10.34	ppbv		99
52) Ethylbenzene	23.200	91	337946	10.73	ppbv		100
53) m&p-Xylene	23.376	91	505636	21.25	ppbv		100
54) o-Xylene	24.027	91	259054	10.81	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

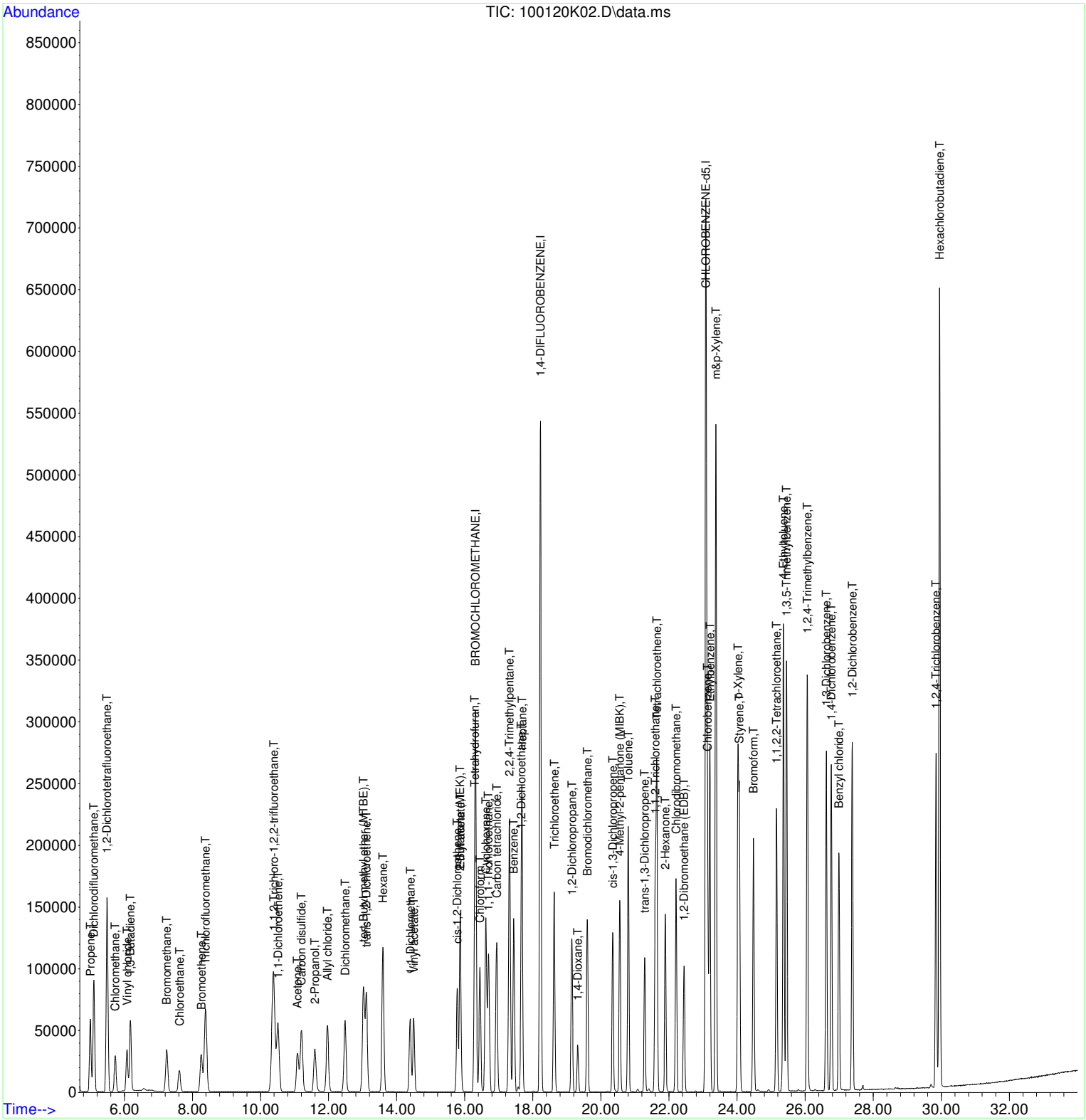
Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	196814	10.03 ppbv	99
56) Bromoform	24.483	173	162886	10.94 ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	195937	10.62 ppbv	100
58) 4-Ethyltoluene	25.359	105	415788	10.67 ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	311858	10.84 ppbv	99
60) 1,2,4-Trimethylbenzene	26.065	105	310651	10.79 ppbv	100
61) 1,3-Dichlorobenzene	26.625	146	204930	9.47 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	192842	9.06 ppbv	100
63) Benzyl chloride	26.990	91	238048	8.37 ppbv	99
64) 1,2-Dichlorobenzene	27.385	146	206684	9.88 ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	156568	8.65 ppbv	99
66) Hexachlorobutadiene	29.953	225	228143	11.36 ppbv	99

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

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration



B20J001-BS1

REVIEWED
By LLH at 11:36 am, Oct 01, 2020

LCS REPORT

Instrument Name: HP5973K
Sample Name: S20J001-CCV1@B20J001-BS1
Misc Info: 10ppbv 2040005@2040009
Date Acquired: 10/1/2020 10:45
QLast Update: Wed Aug 12 16:12:13 2020
Operator: LLH

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS
1)	BROMOCHLOROMETHANE	16.31	#N/A	19.60	#N/A	70.0	130.0	#N/A
2)	Propene	5.00	9.50	10.16	107%	72.0	114.0	pass
3)	Dichlorodifluoromethane	5.10	9.80	9.99	102%	73.0	120.0	pass
4)	1,2-Dichlorotetrafluoroethane	5.49	9.60	9.73	101%	74.0	116.0	pass
5)	Chloromethane	5.73	9.90	10.44	105%	73.0	113.0	pass
6)	Vinyl chloride	6.08	10.30	10.59	103%	68.0	119.0	pass
7)	1,3-Butadiene	6.18	10.40	10.87	104%	68.0	120.0	pass
8)	Bromomethane	7.24	10.20	10.25	100%	71.0	122.0	pass
9)	Chloroethane	7.62	10.10	10.38	103%	73.0	116.0	pass
10)	Bromoethene	8.26	10.10	10.00	99%	64.0	123.0	pass
11)	Trichlorofluoromethane	8.39	9.30	9.41	101%	74.0	120.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.39	10.70	10.57	99%	63.0	126.0	pass
13)	1,1-Dichloroethene	10.52	10.60	11.15	105%	69.0	119.0	pass
14)	Acetone	11.08	9.90	10.05	102%	79.0	114.0	pass
15)	Carbon disulfide	11.20	10.40	10.38	100%	75.0	120.0	pass
16)	2-Propanol	11.60	10.00	10.74	107%	66.0	119.0	pass
17)	Allyl chloride	11.96	10.90	11.41	105%	72.0	116.0	pass
18)	Dichloromethane	12.49	10.30	9.83	95%	76.0	110.0	pass
19)	tert-Butyl methyl ether (MTBE)	13.03	10.90	11.29	104%	61.0	124.0	pass
20)	trans-1,2-Dichloroethene	13.11	10.20	10.23	100%	78.0	113.0	pass
21)	Hexane	13.59	10.10	10.59	105%	76.0	116.0	pass
22)	1,1-Dichloroethane	14.40	9.80	9.95	102%	76.0	113.0	pass
23)	Vinyl acetate	14.50	11.00	11.10	101%	71.0	117.0	pass
24)	cis-1,2-Dichloroethene	15.78	10.30	10.65	103%	74.0	116.0	pass
25)	2-Butanone (MEK)	15.86	10.00	10.13	101%	73.0	124.0	pass
26)	Ethyl acetate	15.87	10.10	10.07	100%	71.0	122.0	pass
27)	Tetrahydrofuran	16.29	9.20	9.53	104%	79.0	119.0	pass
28)	Chloroform	16.45	10.40	10.45	101%	77.0	115.0	pass
29)	Cyclohexane	16.62	10.80	11.20	104%	76.0	114.0	pass
30)	1,1,1-Trichloroethane	16.70	10.60	10.78	102%	77.0	117.0	pass
31)	Carbon tetrachloride	16.94	9.90	10.02	101%	75.0	121.0	pass
32)	1,4-DIFLUOROBENZENE	18.22	#N/A	19.60	#N/A	70.0	130.0	#N/A
33)	Benzene	17.44	10.40	10.90	105%	81.0	115.0	pass
34)	2,2,4-Trimethylpentane	17.31	10.70	11.54	108%	77.0	120.0	pass
35)	1,2-Dichloroethane	17.66	10.10	10.59	105%	74.0	128.0	pass
36)	Heptane	17.68	10.50	11.46	109%	73.0	128.0	pass
37)	Trichloroethene	18.63	10.70	11.03	103%	82.0	113.0	pass
38)	1,2-Dichloropropane	19.15	10.20	10.88	107%	78.0	119.0	pass
39)	1,4-Dioxane	19.32	10.50	10.16	97%	73.0	120.0	pass
40)	Bromodichloromethane	19.60	10.50	10.93	104%	79.0	124.0	pass
41)	cis-1,3-Dichloropropene	20.35	10.40	10.93	105%	82.0	117.0	pass
42)	4-Methyl-2-pentanone (MIBK)	20.55	9.80	10.33	105%	67.0	136.0	pass
43)	CHLOROBENZENE-d5	23.08	#N/A	19.60	#N/A	70.0	130.0	#N/A
44)	Toluene	20.80	10.30	10.78	105%	80.0	120.0	pass
45)	trans-1,3-Dichloropropene	21.28	9.20	9.21	100%	81.0	122.0	pass
46)	1,1,2-Trichloroethane	21.60	10.50	10.92	104%	81.0	121.0	pass
47)	Tetrachloroethene	21.64	10.30	10.67	104%	69.0	122.0	pass

48)	2-Hexanone	21.89	9.20	9.44	103%	61.0	140.0	pass
49)	Chlorodibromomethane	22.21	10.40	10.62	102%	82.0	128.0	pass
50)	1,2-Dibromoethane (EDB)	22.44	10.40	10.36	100%	80.0	121.0	pass
51)	Chlorobenzene	23.13	10.40	10.34	99%	80.0	122.0	pass
52)	Ethylbenzene	23.20	10.30	10.73	104%	80.0	125.0	pass
53)	m&p-Xylene	23.38	20.40	21.25	104%	80.0	128.0	pass
54)	o-Xylene	24.03	10.10	10.81	107%	79.0	130.0	pass
55)	Styrene	24.07	10.10	10.03	99%	76.0	133.0	pass
56)	Bromoform	24.48	10.60	10.94	103%	82.0	136.0	pass
57)	1,1,2,2-Tetrachloroethane	25.16	10.10	10.62	105%	78.0	132.0	pass
58)	4-Ethyltoluene	25.36	9.90	10.67	108%	77.0	133.0	pass
59)	1,3,5-Trimethylbenzene	25.45	10.10	10.84	107%	78.0	133.0	pass
60)	1,2,4-Trimethylbenzene	26.07	10.00	10.79	108%	78.0	133.0	pass
61)	1,3-Dichlorobenzene	26.62	9.80	9.47	97%	76.0	133.0	pass
62)	1,4-Dichlorobenzene	26.77	9.80	9.06	92%	75.0	134.0	pass
63)	Benzyl chloride	26.99	9.30	8.37	90%	73.0	144.0	pass
64)	1,2-Dichlorobenzene	27.39	9.80	9.88	101%	77.0	134.0	pass
65)	1,2,4-Trichlorobenzene	29.84	9.70	8.65	89%	70.0	133.0	pass
66)	Hexachlorobutadiene	29.95	10.30	11.36	110%	74.0	130.0	pass

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	251911	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	737734	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	675742	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	69785	10.16	ppbv		100
3) Dichlorodifluoromethane	5.101	85	170968	9.99	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.490	85	184472	9.73	ppbv		98
5) Chloromethane	5.728	50	71648	10.44	ppbv		99
6) Vinyl chloride	6.081	62	73916	10.59	ppbv		99
7) 1,3-Butadiene	6.178	54	56474	10.87	ppbv		98
8) Bromomethane	7.243	94	56908	10.25	ppbv		98
9) Chloroethane	7.620	64	39703	10.38	ppbv		98
10) Bromoethene	8.265	106	57736	10.00	ppbv		98
11) Trichlorofluoromethane	8.386	101	155057	9.41	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	111431	10.57	ppbv		99
13) 1,1-Dichloroethene	10.516	61	105417	11.15	ppbv		99
14) Acetone	11.081	43	103096	10.05	ppbv		100
15) Carbon disulfide	11.203	76	191489	10.38	ppbv		97
16) 2-Propanol	11.598	45	106599	10.74	ppbv		99
17) Allyl chloride	11.963	41	93068	11.41	ppbv		99
18) Dichloromethane	12.487	49	81953	9.83	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	192874	11.29	ppbv		99
20) trans-1,2-Dichloroethene	13.107	61	96022	10.23	ppbv		100
21) Hexane	13.594	57	120428	10.59	ppbv		99
22) 1,1-Dichloroethane	14.403	63	120632	9.95	ppbv		100
23) Vinyl acetate	14.500	43	168585	11.10	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	90432	10.65	ppbv	#	100
25) 2-Butanone (MEK)	15.863	72	37073	10.13	ppbv		99
26) Ethyl acetate	15.869	61	22585	10.07	ppbv	#	97
27) Tetrahydrofuran	16.289	42	82225	9.53	ppbv		100
28) Chloroform	16.447	83	131606	10.45	ppbv		99
29) Cyclohexane	16.617	56	123300	11.20	ppbv		99
30) 1,1,1-Trichloroethane	16.696	97	132223	10.78	ppbv		100
31) Carbon tetrachloride	16.940	117	135331	10.02	ppbv		99
33) Benzene	17.439	78	217850	10.90	ppbv		100
34) 2,2,4-Trimethylpentane	17.311	57	382389	11.54	ppbv		100
35) 1,2-Dichloroethane	17.658	62	86539	10.59	ppbv		99
36) Heptane	17.682	43	143091	11.46	ppbv		99
37) Trichloroethene	18.631	130	93346	11.03	ppbv		99
38) 1,2-Dichloropropane	19.148	63	81611	10.88	ppbv		100
39) 1,4-Dioxane	19.318	88	44345	10.16	ppbv		99
40) Bromodichloromethane	19.604	83	150463	10.93	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	121656	10.93	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	170511	10.33	ppbv		100
44) Toluene	20.803	91	253133	10.78	ppbv		100
45) trans-1,3-Dichloropropene	21.283	75	99087	9.21	ppbv		100
46) 1,1,2-Trichloroethane	21.600	97	86287	10.92	ppbv		99
47) Tetrachloroethene	21.642	166	134007	10.67	ppbv		99
48) 2-Hexanone	21.892	43	150879	9.44	ppbv		100
49) Chlorodibromomethane	22.208	129	150015	10.62	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	117051	10.36	ppbv		100
51) Chlorobenzene	23.133	112	200305	10.34	ppbv		99
52) Ethylbenzene	23.200	91	337946	10.73	ppbv		100
53) m&p-Xylene	23.376	91	505636	21.25	ppbv		100
54) o-Xylene	24.027	91	259054	10.81	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

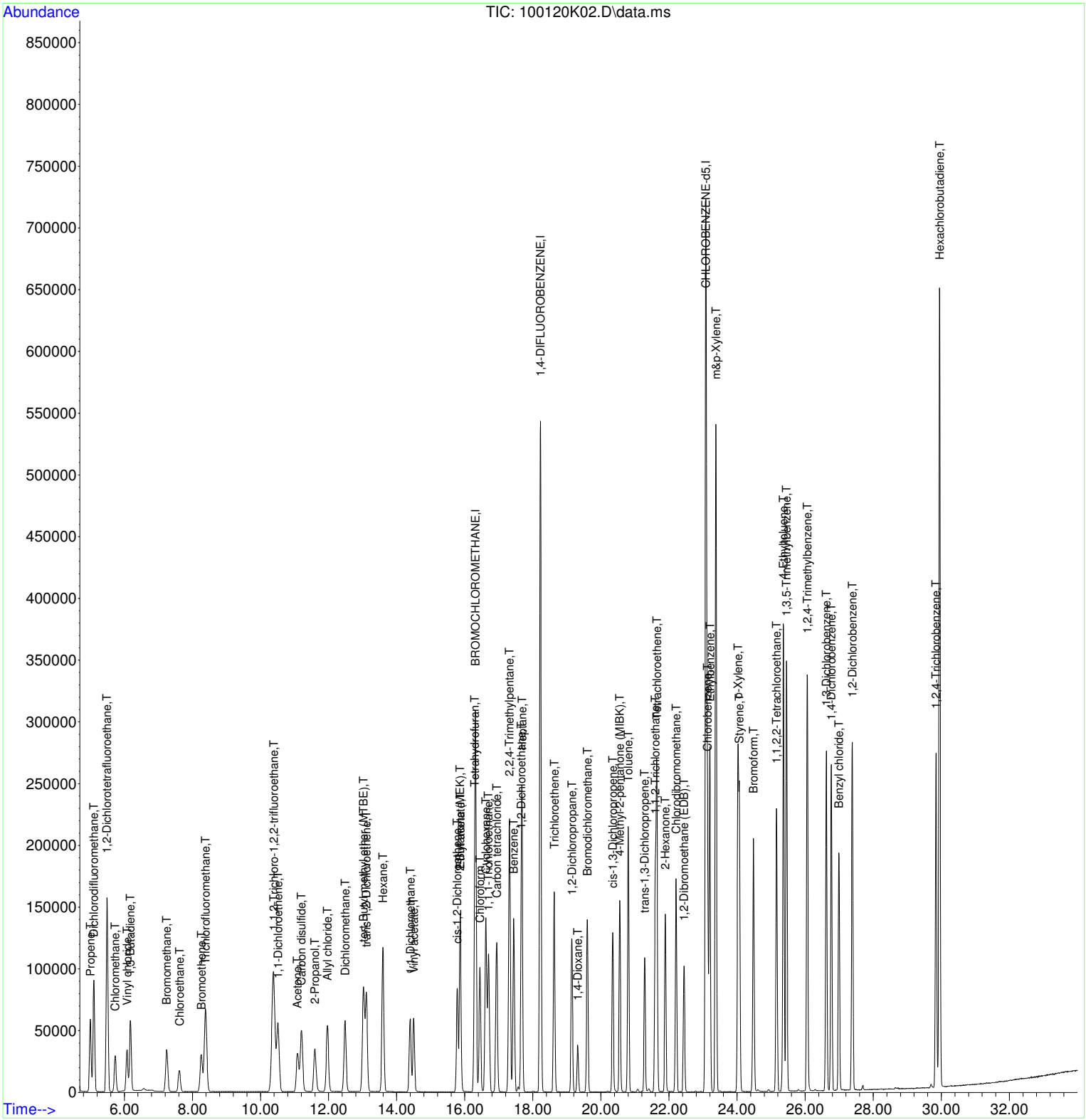
Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	196814	10.03 ppbv	99
56) Bromoform	24.483	173	162886	10.94 ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	195937	10.62 ppbv	100
58) 4-Ethyltoluene	25.359	105	415788	10.67 ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	311858	10.84 ppbv	99
60) 1,2,4-Trimethylbenzene	26.065	105	310651	10.79 ppbv	100
61) 1,3-Dichlorobenzene	26.625	146	204930	9.47 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	192842	9.06 ppbv	100
63) Benzyl chloride	26.990	91	238048	8.37 ppbv	99
64) 1,2-Dichlorobenzene	27.385	146	206684	9.88 ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	156568	8.65 ppbv	99
66) Hexachlorobutadiene	29.953	225	228143	11.36 ppbv	99

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

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K02.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:45 am
Operator : LLH
Sample : S20J001-CCV1@B20J001-BS1
Misc : 10ppbv 2040005@2040009
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Oct 01 11:34:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration



S20J001-CRL1

REVIEWED
By LLH at 12:11 pm, Oct 01, 2020

QLS REPORT

Instrument Name: HP5973K
Sample Name: S20J001-CRL1
Misc Info: 1.0ppbv 2040002
Date Acquired: 10/1/2020 11:35
QLast Update: Wed Aug 12 16:12:13 202(
Operator: LLH

2 OUT

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	TYPE
1)	BROMOCHLOROMETHANE	16.32	#N/A	19.60	#N/A	60.0	140.0	#N/A	Internal
2)	Propene	5.01	0.95	1.36	144%	60.0	140.0	FAIL	Subset
3)	Dichlorodifluoromethane	5.11	0.98	1.33	136%	60.0	140.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	5.50	0.96	1.31	137%	60.0	140.0	pass	Primary
5)	Chloromethane	5.74	0.99	1.34	135%	60.0	140.0	pass	Primary
6)	Vinyl chloride	6.08	1.03	1.33	129%	60.0	140.0	pass	Primary
7)	1,3-Butadiene	6.18	1.04	1.38	133%	60.0	140.0	pass	Subset
8)	Bromomethane	7.25	1.02	1.27	125%	60.0	140.0	pass	Primary
9)	Chloroethane	7.62	1.01	1.26	125%	60.0	140.0	pass	Primary
10)	Bromoethene	8.27	1.01	1.29	127%	60.0	140.0	pass	Subset
11)	Trichlorofluoromethane	8.39	0.93	1.15	124%	60.0	140.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.39	1.07	1.33	124%	60.0	140.0	pass	Primary
13)	1,1-Dichloroethene	10.52	1.06	1.27	120%	60.0	140.0	pass	Primary
14)	Acetone	11.10	0.99	1.28	129%	60.0	140.0	pass	Subset
15)	Carbon disulfide	11.21	1.04	1.34	129%	60.0	140.0	pass	Subset
16)	2-Propanol	11.62	1.00	1.17	117%	60.0	140.0	pass	Subset
17)	Allyl chloride	11.97	1.09	1.25	115%	60.0	140.0	pass	Subset
18)	Dichloromethane	12.49	1.03	1.52	147%	60.0	140.0	FAIL	Primary
19)	tert-Butyl methyl ether (MTBE)	13.04	1.09	1.27	116%	60.0	140.0	pass	Subset
20)	trans-1,2-Dichloroethene	13.11	1.02	1.28	125%	60.0	140.0	pass	Subset
21)	Hexane	13.60	1.01	1.18	117%	60.0	140.0	pass	Subset
22)	1,1-Dichloroethane	14.40	0.98	1.20	122%	60.0	140.0	pass	Primary
23)	Vinyl acetate	14.51	1.10	1.08	98%	60.0	140.0	pass	Subset
24)	cis-1,2-Dichloroethene	15.78	1.03	1.17	114%	60.0	140.0	pass	Primary
25)	2-Butanone (MEK)	15.87	1.00	1.17	117%	60.0	140.0	pass	Subset
26)	Ethyl acetate	15.88	1.01	1.27	125%	60.0	140.0	pass	Subset
27)	Tetrahydrofuran	16.30	0.92	1.05	114%	60.0	140.0	pass	Subset
28)	Chloroform	16.45	1.04	1.27	122%	60.0	140.0	pass	Primary
29)	Cyclohexane	16.63	1.08	1.30	121%	60.0	140.0	pass	Subset
30)	1,1,1-Trichloroethane	16.70	1.06	1.30	122%	60.0	140.0	pass	Primary
31)	Carbon tetrachloride	16.94	0.99	1.19	120%	60.0	140.0	pass	Primary
32)	1,4-DIFLUOROBENZENE	18.22	#N/A	19.60	#N/A	60.0	140.0	#N/A	Internal
33)	Benzene	17.44	1.04	1.21	116%	60.0	140.0	pass	Primary
34)	2,2,4-Trimethylpentane	17.32	1.07	1.21	113%	60.0	140.0	pass	Subset
35)	1,2-Dichloroethane	17.66	1.01	1.17	116%	60.0	140.0	pass	Primary
36)	Heptane	17.68	1.05	1.17	112%	60.0	140.0	pass	Subset
37)	Trichloroethene	18.63	1.07	1.23	115%	60.0	140.0	pass	Primary
38)	1,2-Dichloropropane	19.14	1.02	1.13	111%	60.0	140.0	pass	Primary
39)	1,4-Dioxane	19.32	1.05	1.08	103%	60.0	140.0	pass	Subset
40)	Bromodichloromethane	19.60	1.05	1.24	118%	60.0	140.0	pass	Subset
41)	cis-1,3-Dichloropropene	20.35	1.04	1.05	101%	60.0	140.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	20.56	0.98	1.03	105%	60.0	140.0	pass	Subset
43)	CHLOROBENZENE-d5	23.08	#N/A	19.60	#N/A	60.0	140.0	#N/A	Internal
44)	Toluene	20.80	1.03	1.16	113%	60.0	140.0	pass	Primary
45)	trans-1,3-Dichloropropene	21.29	0.92	0.88	96%	60.0	140.0	pass	Primary
46)	1,1,2-Trichloroethane	21.59	1.05	1.18	113%	60.0	140.0	pass	Primary
47)	Tetrachloroethene	21.64	1.03	1.18	114%	60.0	140.0	pass	Primary
48)	2-Hexanone	21.89	0.92	0.91	99%	60.0	140.0	pass	Subset
49)	Chlorodibromomethane	22.21	1.04	1.19	115%	60.0	140.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	22.44	1.04	1.11	107%	60.0	140.0	pass	Primary

51)	Chlorobenzene	23.13	1.04	1.16	111%	60.0	140.0	pass	Primary
52)	Ethylbenzene	23.20	1.03	1.16	113%	60.0	140.0	pass	Primary
53)	m&p-Xylene	23.38	2.04	2.21	108%	60.0	140.0	pass	Primary
54)	o-Xylene	24.03	1.01	1.08	107%	60.0	140.0	pass	Primary
55)	Styrene	24.07	1.01	0.92	91%	60.0	140.0	pass	Primary
56)	Bromoform	24.48	1.06	1.14	107%	60.0	140.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	25.16	1.01	1.11	110%	60.0	140.0	pass	Primary
58)	4-Ethyltoluene	25.36	0.99	1.07	108%	60.0	140.0	pass	Subset
59)	1,3,5-Trimethylbenzene	25.45	1.01	1.07	105%	60.0	140.0	pass	Primary
60)	1,2,4-Trimethylbenzene	26.07	1.00	1.01	101%	60.0	140.0	pass	Primary
61)	1,3-Dichlorobenzene	26.62	0.98	0.92	94%	60.0	140.0	pass	Primary
62)	1,4-Dichlorobenzene	26.77	0.98	0.84	86%	60.0	140.0	pass	Primary
63)	Benzyl chloride	27.00	0.93	0.76	82%	60.0	140.0	pass	Subset
64)	1,2-Dichlorobenzene	27.38	0.98	0.98	100%	60.0	140.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.85	0.97	0.64	66%	60.0	140.0	pass	Primary
66)	Hexachlorobutadiene	29.95	1.03	1.07	104%	60.0	140.0	pass	Primary

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K03.D
InstName : HP5973K
Acq On : 1 Oct 2020 11:35 am
Operator : LLH
Sample : S20J001-CRL1
Misc : 1.0ppbv 2040002
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Oct 01 12:09:32 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.319	49	258190	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	810807	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	715425	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.010	41	9596	1.36	ppbv		98
3) Dichlorodifluoromethane	5.107	85	23388	1.33	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.497	85	25465	1.31	ppbv		100
5) Chloromethane	5.740	50	9401	1.34	ppbv		98
6) Vinyl chloride	6.081	62	9536	1.33	ppbv		97
7) 1,3-Butadiene	6.184	54	7348	1.38	ppbv		90
8) Bromomethane	7.249	94	7253	1.27	ppbv		98
9) Chloroethane	7.620	64	4946	1.26	ppbv		99
10) Bromoethene	8.271	106	7618	1.29	ppbv		99
11) Trichlorofluoromethane	8.386	101	19453	1.15	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	14320	1.33	ppbv		100
13) 1,1-Dichloroethene	10.522	61	12290	1.27	ppbv		98
14) Acetone	11.100	43	13407	1.28	ppbv		99
15) Carbon disulfide	11.209	76	25412	1.34	ppbv		98
16) 2-Propanol	11.623	45	11926	1.17	ppbv		86
17) Allyl chloride	11.970	41	10438	1.25	ppbv		99
18) Dichloromethane	12.487	49	12950	1.52	ppbv		96
19) tert-Butyl methyl ethe...	13.040	73	22187	1.27	ppbv		98
20) trans-1,2-Dichloroethene	13.113	61	12304	1.28	ppbv		96
21) Hexane	13.600	57	13740	1.18	ppbv		99
22) 1,1-Dichloroethane	14.397	63	14901	1.20	ppbv		98
23) Vinyl acetate	14.506	43	16799	1.08	ppbv		99
24) cis-1,2-Dichloroethene	15.784	61	10174	1.17	ppbv	#	95
25) 2-Butanone (MEK)	15.869	72	4393	1.17	ppbv		99
26) Ethyl acetate	15.875	61	2915	1.27	ppbv	#	83
27) Tetrahydrofuran	16.301	42	9313	1.05	ppbv		97
28) Chloroform	16.447	83	16402	1.27	ppbv		99
29) Cyclohexane	16.630	56	14714	1.30	ppbv		99
30) 1,1,1-Trichloroethane	16.696	97	16290	1.30	ppbv		99
31) Carbon tetrachloride	16.940	117	16464	1.19	ppbv		99
33) Benzene	17.439	78	26476	1.21	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	43964	1.21	ppbv		98
35) 1,2-Dichloroethane	17.664	62	10492	1.17	ppbv		99
36) Heptane	17.682	43	16127	1.17	ppbv		100
37) Trichloroethene	18.631	130	11477	1.23	ppbv		99
38) 1,2-Dichloropropane	19.142	63	9323	1.13	ppbv		97
39) 1,4-Dioxane	19.318	88	5188	1.08	ppbv		98
40) Bromodichloromethane	19.604	83	18786	1.24	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	12785	1.05	ppbv		99
42) 4-Methyl-2-pentanone (...	20.560	43	18738	1.03	ppbv		100
44) Toluene	20.803	91	28914	1.16	ppbv		97
45) trans-1,3-Dichloropropene	21.290	75	10039	0.88	ppbv		99
46) 1,1,2-Trichloroethane	21.594	97	9906	1.18	ppbv		96
47) Tetrachloroethene	21.642	166	15626	1.18	ppbv		98
48) 2-Hexanone	21.892	43	15435	0.91	ppbv		99
49) Chlorodibromomethane	22.208	129	17822	1.19	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	13262	1.11	ppbv		99
51) Chlorobenzene	23.133	112	23706	1.16	ppbv	#	79
52) Ethylbenzene	23.200	91	38666	1.16	ppbv		99
53) m&p-Xylene	23.376	91	55655	2.21	ppbv		99
54) o-Xylene	24.027	91	27517	1.08	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K03.D
InstName : HP5973K
Acq On : 1 Oct 2020 11:35 am
Operator : LLH
Sample : S20J001-CRL1
Misc : 1.0ppbv 2040002
ALS Vial : 36 Sample Multiplier: 1

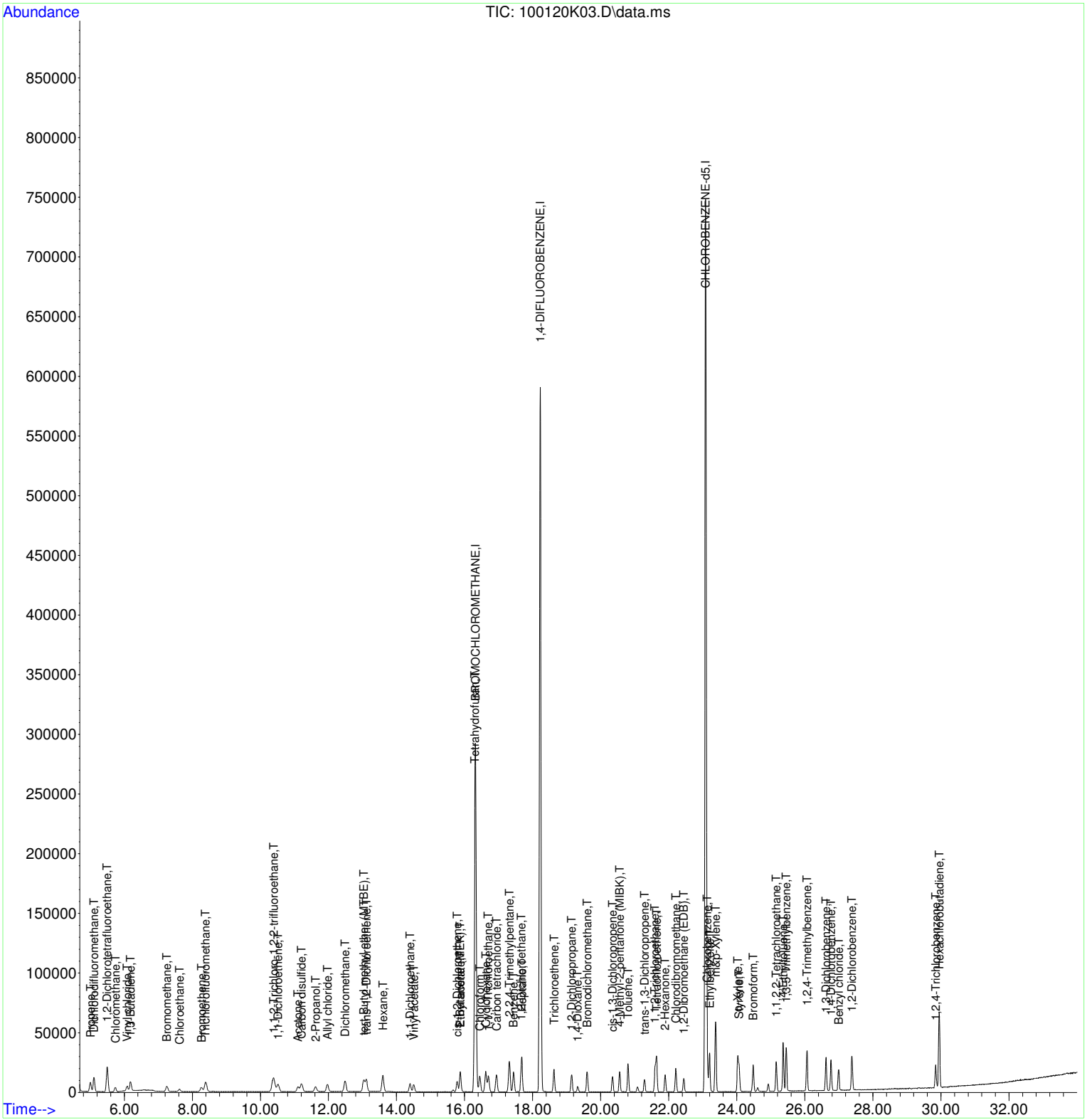
Quant Time: Oct 01 12:09:32 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	19047	0.92 ppbv	97
56) Bromoform	24.477	173	17905	1.14 ppbv	98
57) 1,1,2,2-Tetrachloroethane	25.159	83	21622	1.11 ppbv	100
58) 4-Ethyltoluene	25.359	105	44132	1.07 ppbv	100
59) 1,3,5-Trimethylbenzene	25.451	105	32455	1.07 ppbv	99
60) 1,2,4-Trimethylbenzene	26.065	105	30942	1.01 ppbv	100
61) 1,3-Dichlorobenzene	26.619	146	21090	0.92 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	18926	0.84 ppbv	99
63) Benzyl chloride	26.996	91	22943	0.76 ppbv	98
64) 1,2-Dichlorobenzene	27.379	146	21666	0.98 ppbv	99
65) 1,2,4-Trichlorobenzene	29.849	180	12343	0.64 ppbv	97
66) Hexachlorobutadiene	29.953	225	22826	1.07 ppbv	99

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

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K03.D
InstName : HP5973K
Acq On : 1 Oct 2020 11:35 am
Operator : LLH
Sample : S20J001-CRL1
Misc : 1.0ppbv 2040002
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Oct 01 12:09:32 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration



B20J001-BLK1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K04.D
InstName : HP5973K
Acq On : 1 Oct 2020 12:27 pm
Operator : LLH
Sample : B20J001-BLK1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 01 13:55:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	253655	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	803285	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	697504	19.60 ppbv	0.00

Target Compounds Qvalue

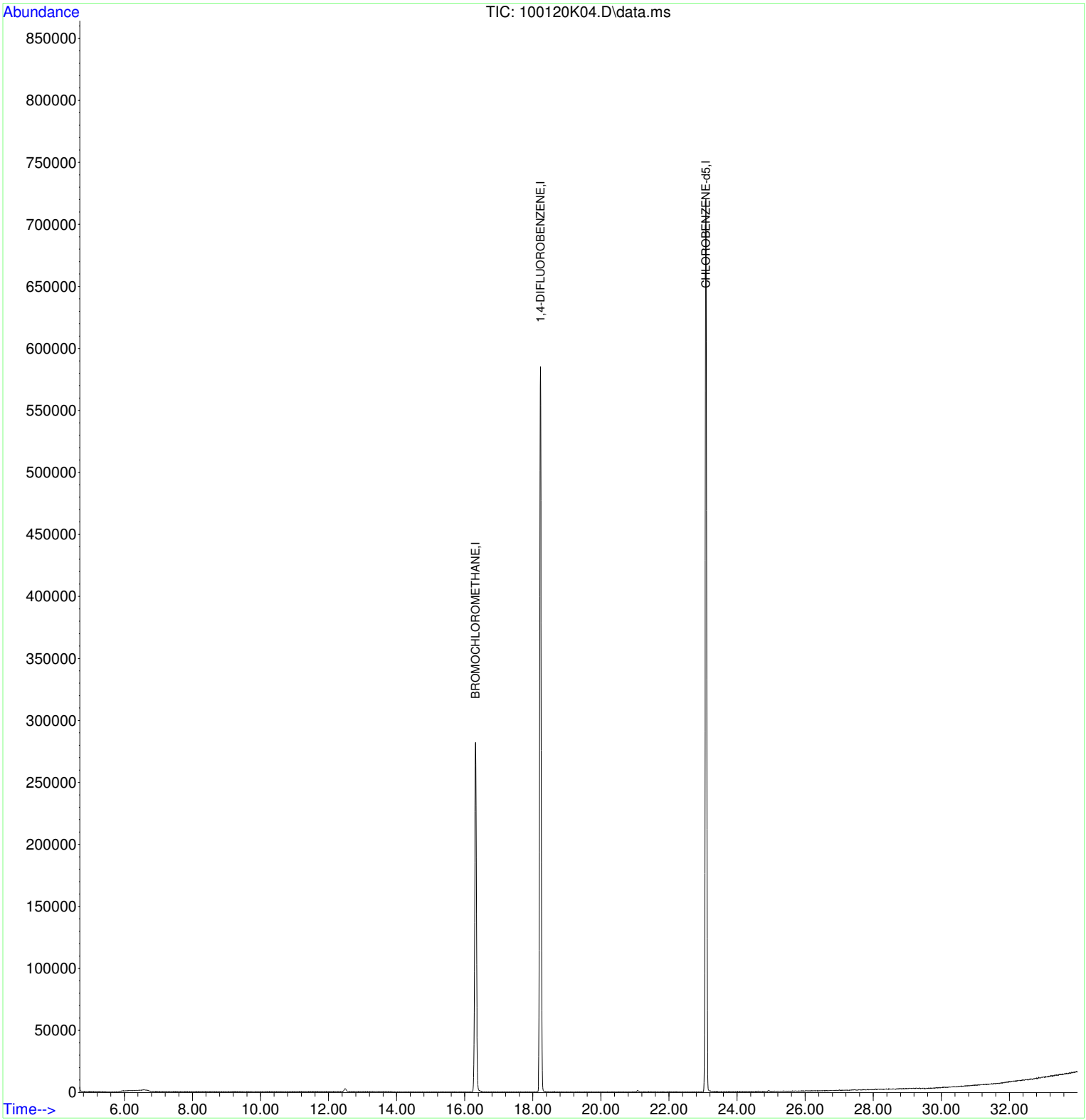
(#) = qualifier out of range (m) = manual integration (+) = signals summed

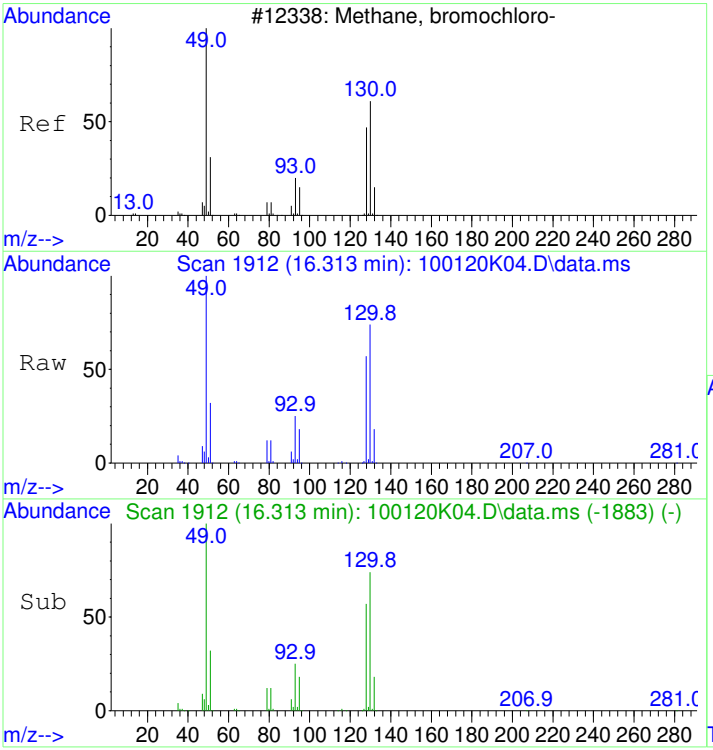
REVIEWED
By LLH at 1:55 pm, Oct 01, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K04.D
InstName : HP5973K
Acq On : 1 Oct 2020 12:27 pm
Operator : LLH
Sample : B20J001-BLK1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 01 13:55:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

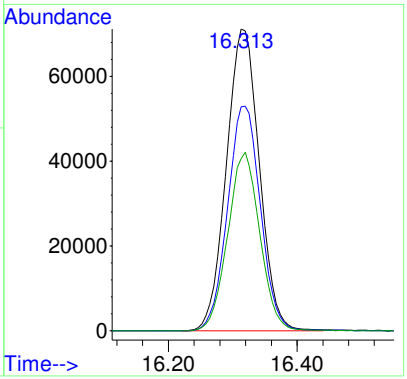


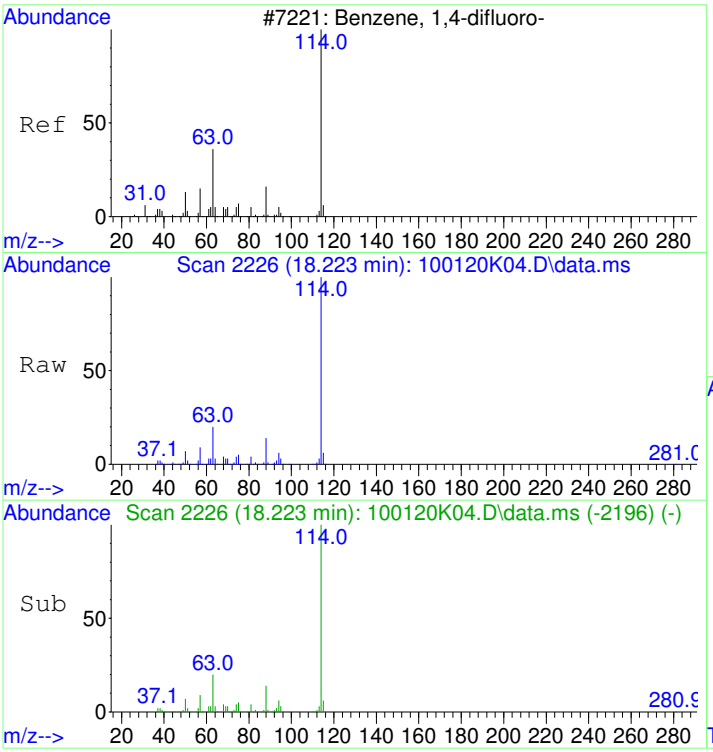


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 100120K04.D
Acq: 1 Oct 2020 12:27 pm

Tgt Ion: 49 Resp: 253655

Ion	Ratio	Lower	Upper
49	100		
130	74.2	49.9	89.9
128	56.7	33.7	73.7

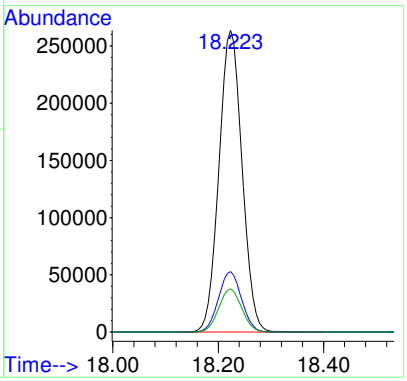


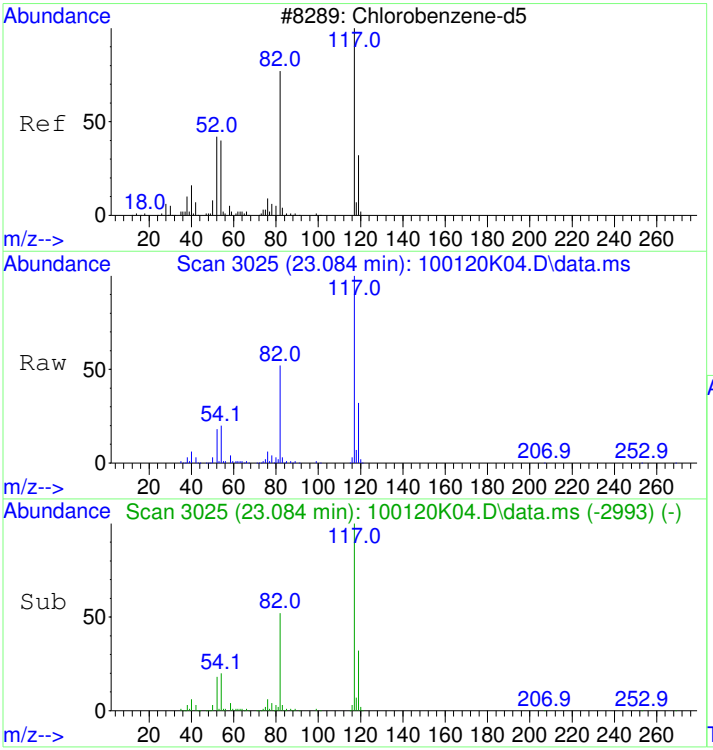


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K04.D
Acq: 1 Oct 2020 12:27 pm

Tgt Ion:114 Resp: 803285

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.2	40.2
88	14.3	0.0	34.3

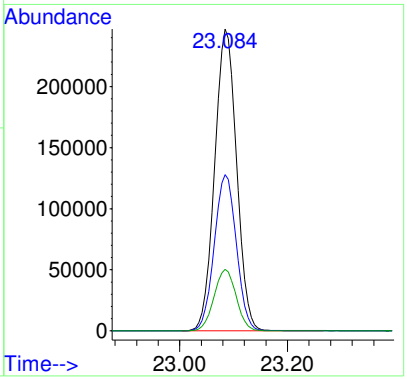




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K04.D
Acq: 1 Oct 2020 12:27 pm

Tgt Ion:117 Resp: 697504

Ion	Ratio	Lower	Upper
117	100		
82	52.2	32.2	72.2
54	20.6	0.6	40.6



S20J001-IBL1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K11.D
InstName : HP5973K
Acq On : 1 Oct 2020 6:28 pm
Operator : LLH
Sample : S20J001-IBL1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 02 08:43:28 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.313	49	244555	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	738598	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	643868	19.60	ppbv	0.00

Target Compounds Qvalue

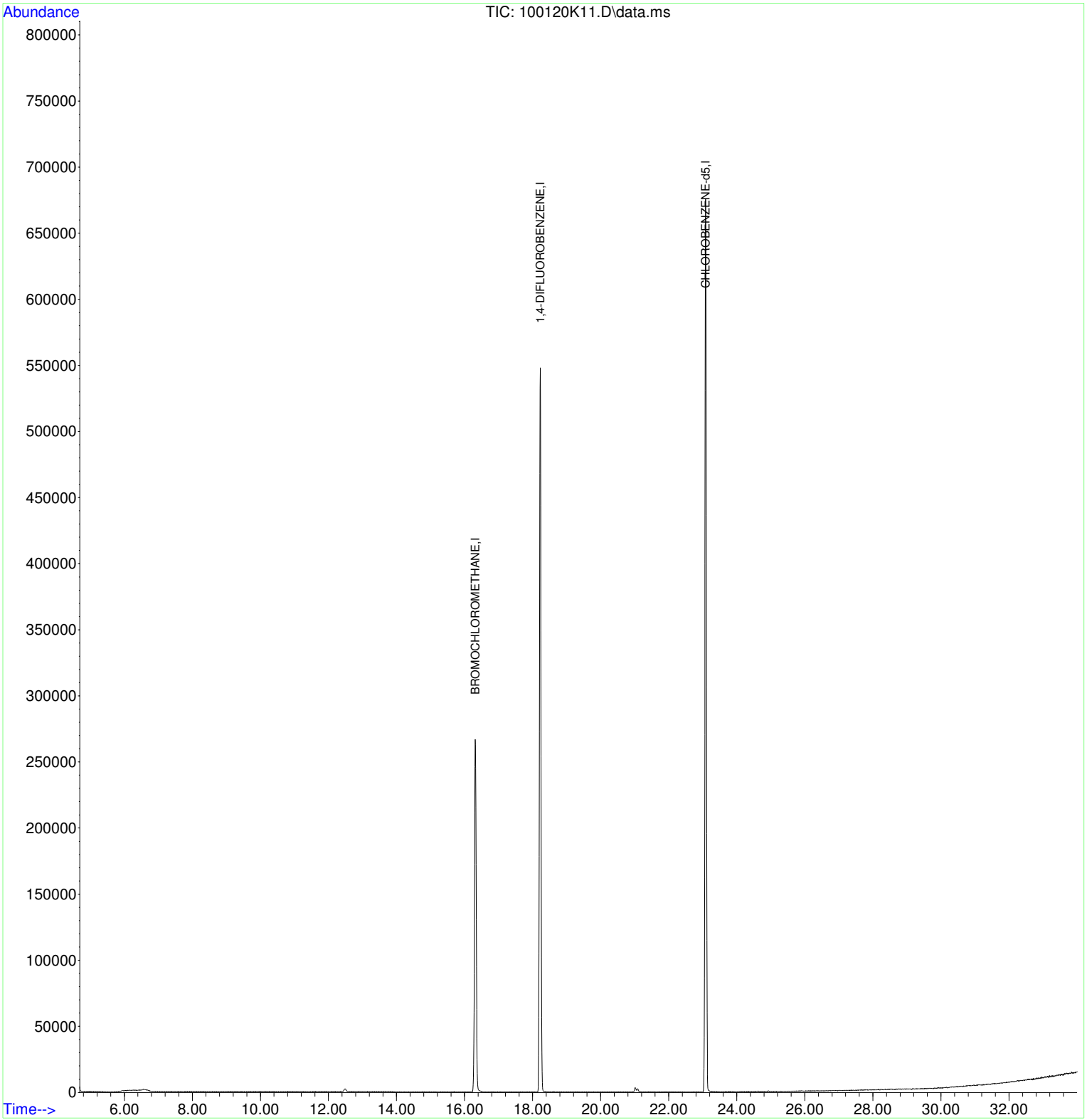
(#) = qualifier out of range (m) = manual integration (+) = signals summed

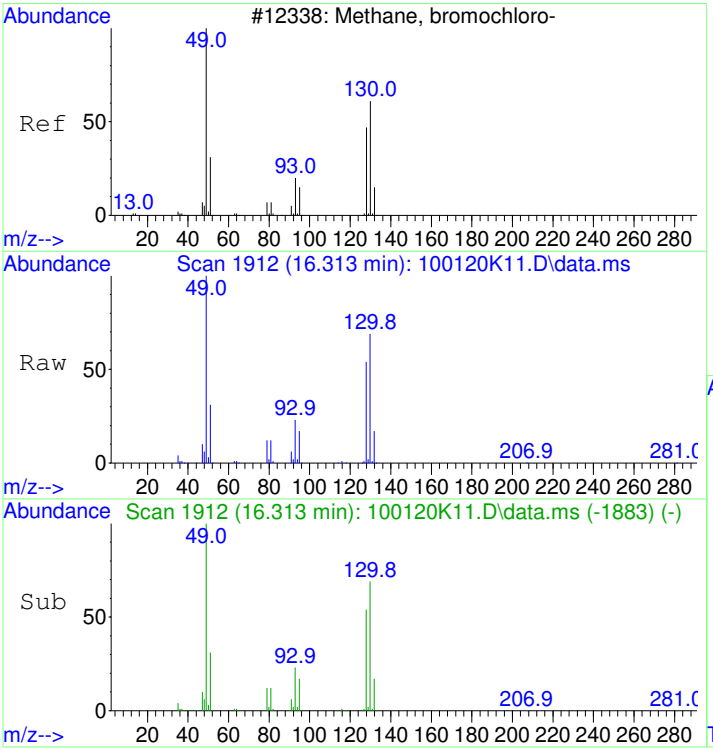
REVIEWED
By LLH at 8:43 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K11.D
InstName : HP5973K
Acq On : 1 Oct 2020 6:28 pm
Operator : LLH
Sample : S20J001-IBL1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 02 08:43:28 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

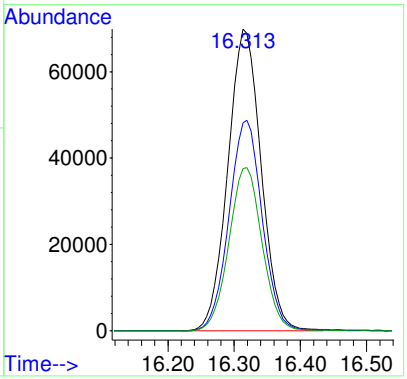


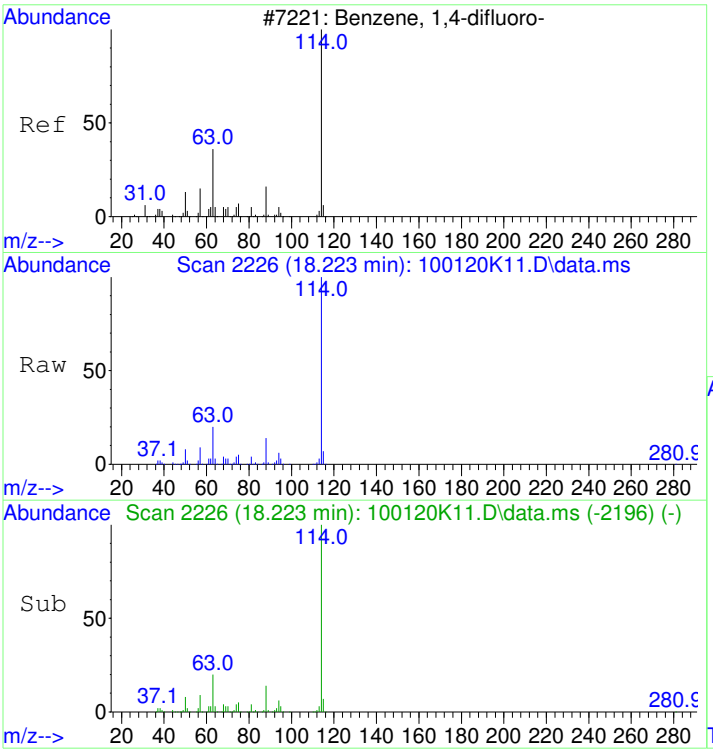


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 100120K11.D
Acq: 1 Oct 2020 6:28 pm

Tgt Ion: 49 Resp: 244555

Ion	Ratio	Lower	Upper
49	100		
130	69.6	49.9	89.9
128	53.4	33.7	73.7

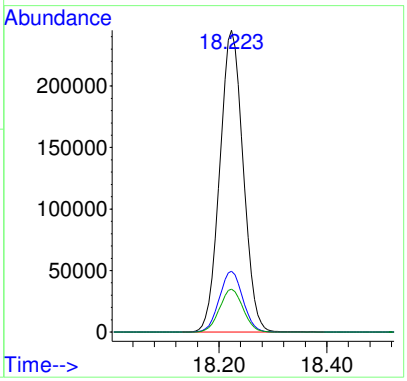


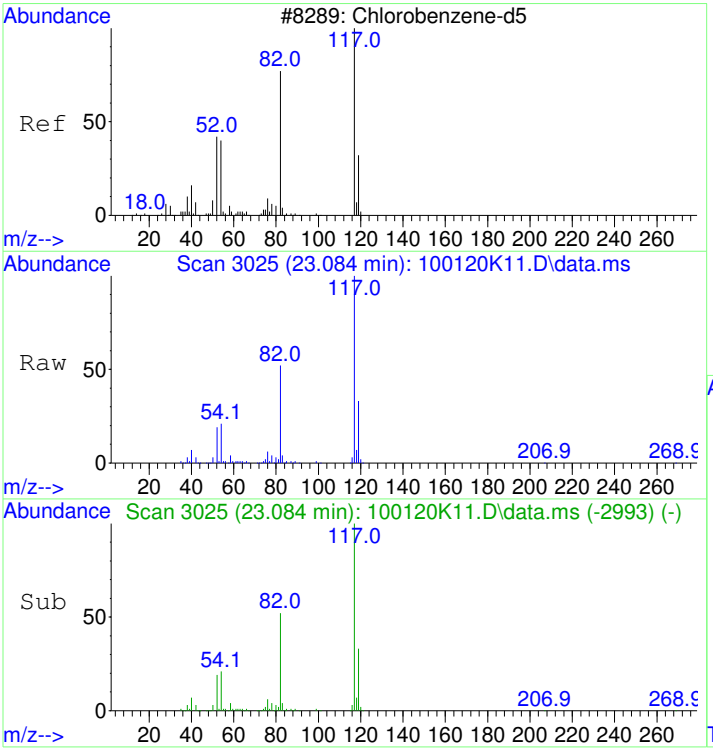


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K11.D
Acq: 1 Oct 2020 6:28 pm

Tgt Ion:114 Resp: 738598

Ion	Ratio	Lower	Upper
114	100		
63	20.2	0.2	40.2
88	14.3	0.0	34.3

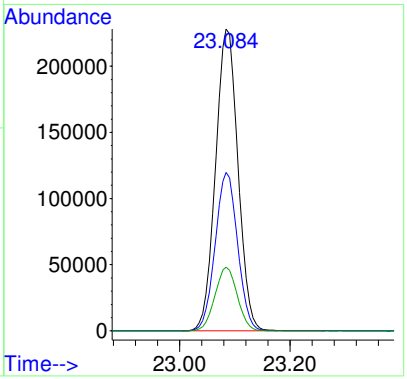




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K11.D
Acq: 1 Oct 2020 6:28 pm

Tgt Ion:117 Resp: 643868

Ion	Ratio	Lower	Upper
117	100		
82	52.4	32.2	72.2
54	21.0	0.6	40.6



2009030-02

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K12.D
InstName : HP5973K
Acq On : 1 Oct 2020 7:21 pm
Operator : LLH
Sample : 2009030-02
Misc : 200ml F6-019-3FT
ALS Vial : 23 Sample Multiplier: 2.01

REPORT

Quant Time: Oct 02 08:43:43 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.313	49	249703	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	740239	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	652996	19.60	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	11.093	43	80009	7.87	ppbv	100
18) Dichloromethane	12.480	49	3921	0.47	ppbv	94
24) cis-1,2-Dichloroethene	15.784	61	3955	0.47	ppbv #	97
28) Chloroform	16.447	83	25394	2.03	ppbv	99
37) Trichloroethene	18.625	130	17730	2.09	ppbv	98

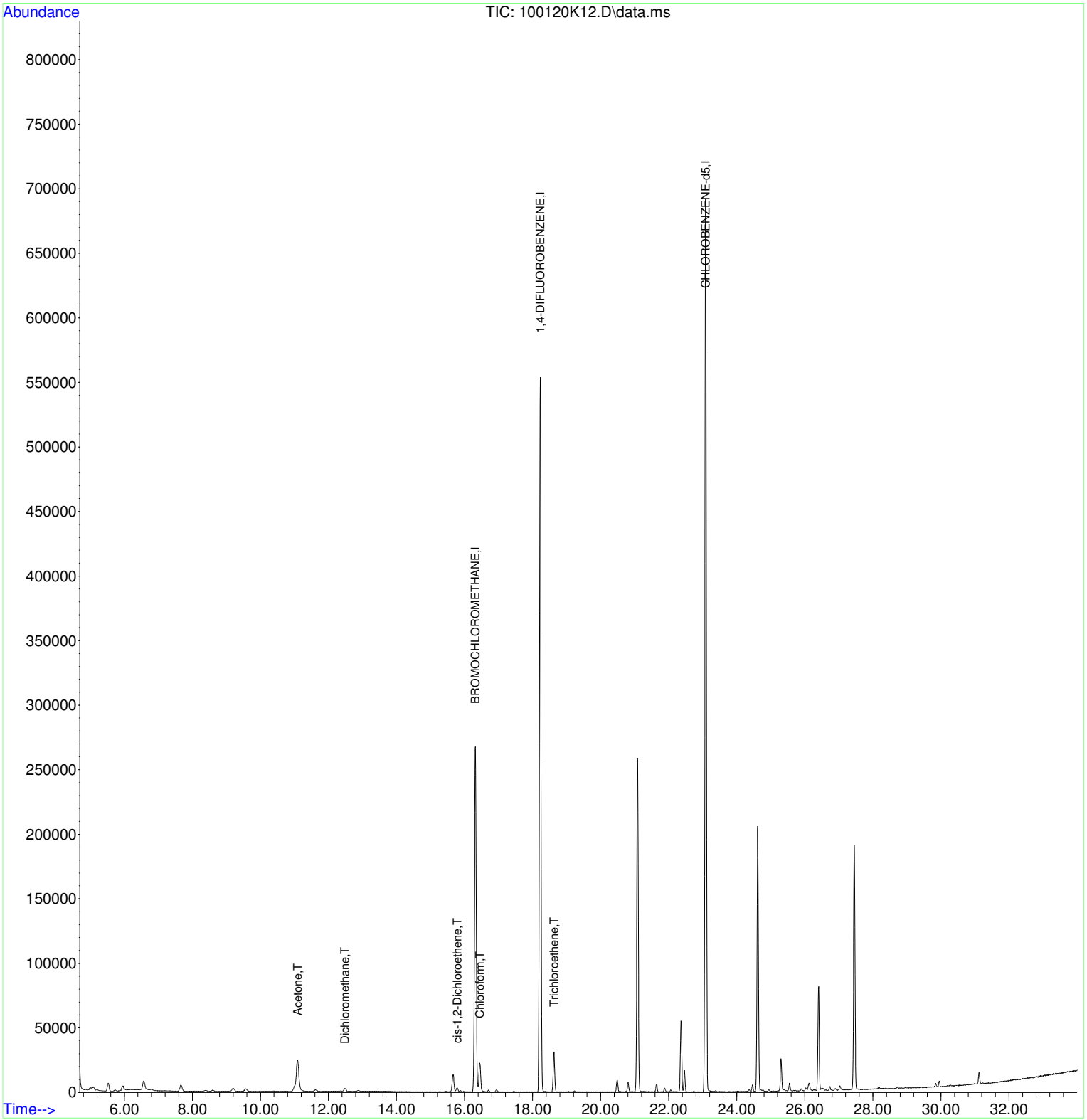
(#) = qualifier out of range (m) = manual integration (+) = signals summed

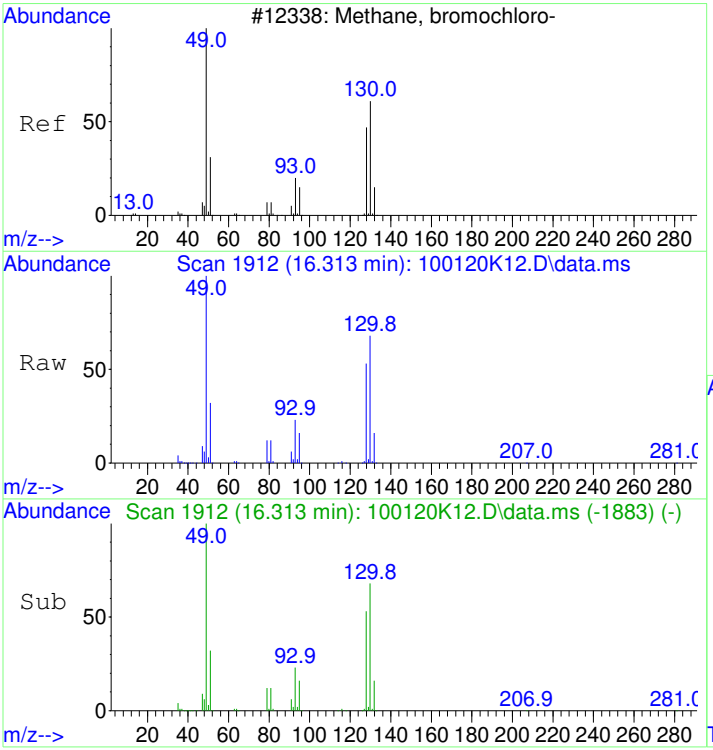
REVIEWED
By LLH at 9:31 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K12.D
InstName : HP5973K
Acq On : 1 Oct 2020 7:21 pm
Operator : LLH
Sample : 2009030-02
Misc : 200ml F6-019-3FT
ALS Vial : 23 Sample Multiplier: 2.01

Quant Time: Oct 02 08:43:43 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

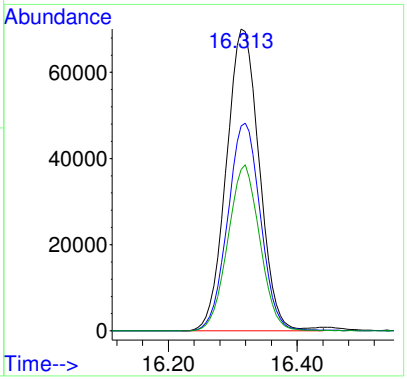


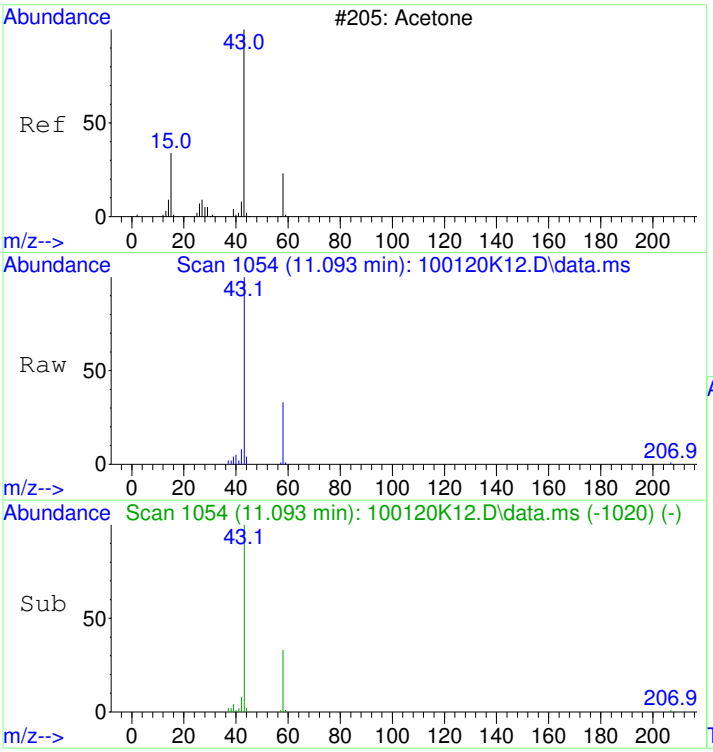


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion: 49 Resp: 249703

Ion	Ratio	Lower	Upper
49	100		
130	68.2	49.9	89.9
128	52.6	33.7	73.7

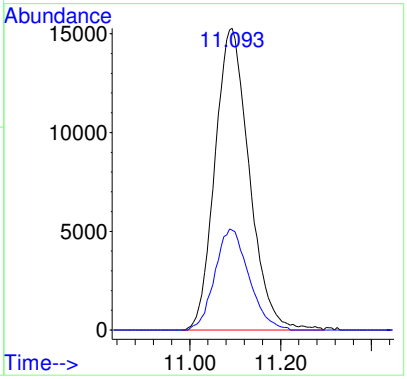


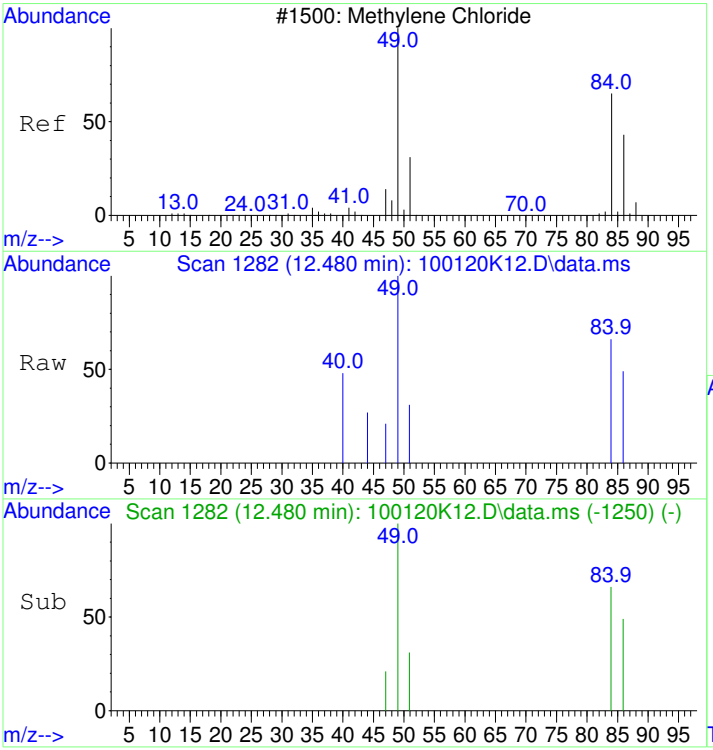


#14
Acetone
Concen: 7.87 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion: 43 Resp: 80009

Ion	Ratio	Lower	Upper
43	100		
58	33.3	13.4	53.4

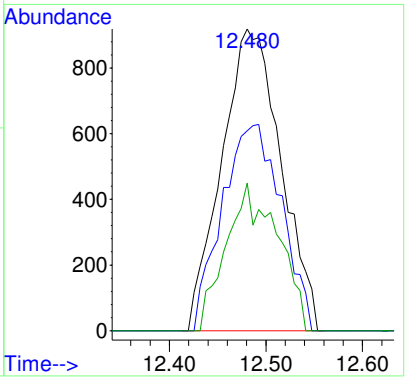


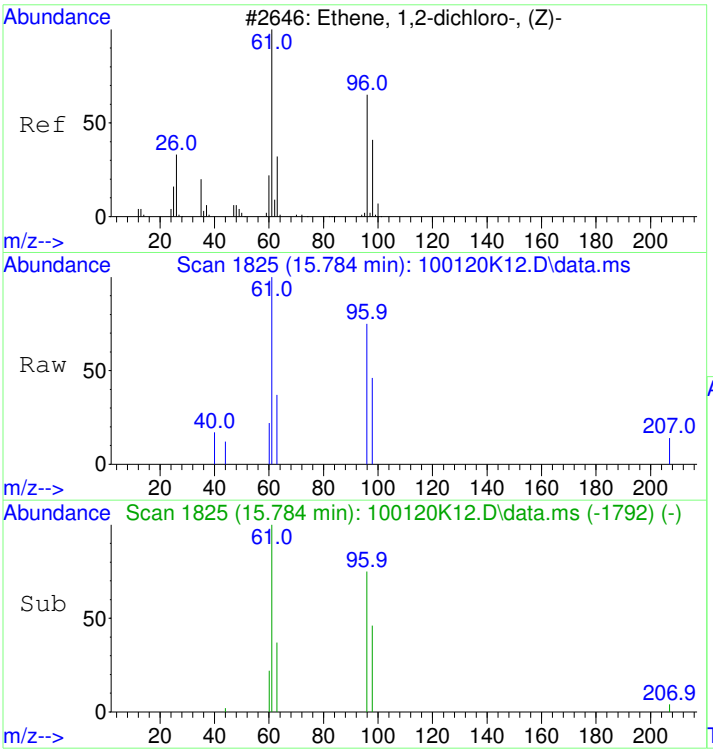


#18
Dichloromethane
Concen: 0.47 ppbv
RT: 12.480 min Scan# 1282
Delta R.T. -0.006 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion: 49 Resp: 3921

Ion	Ratio	Lower	Upper
49	100		
84	68.3	53.4	93.4
86	42.6	27.0	67.0

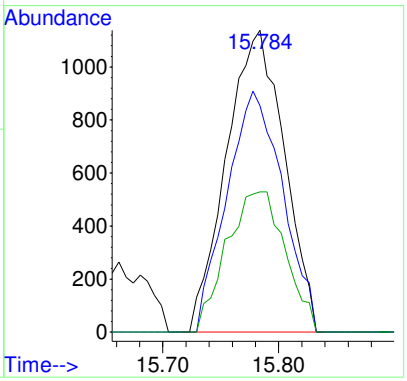


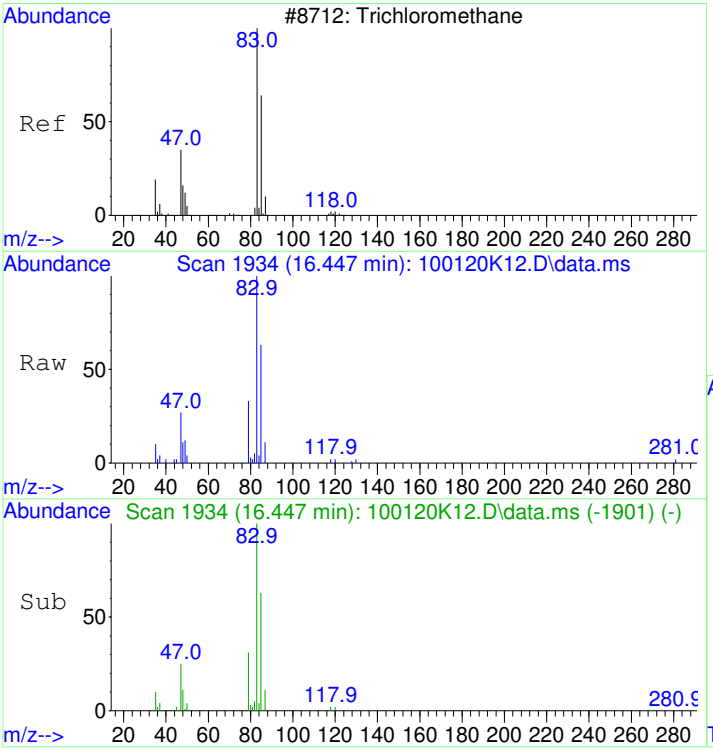


#24
cis-1,2-Dichloroethene
Concen: 0.47 ppbv
RT: 15.784 min Scan# 1825
Delta R.T. -0.000 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion: 61 Resp: 3955

Ion	Ratio	Lower	Upper
61	100		
96	77.2	55.0	95.0
98	0.0	0.0	20.0

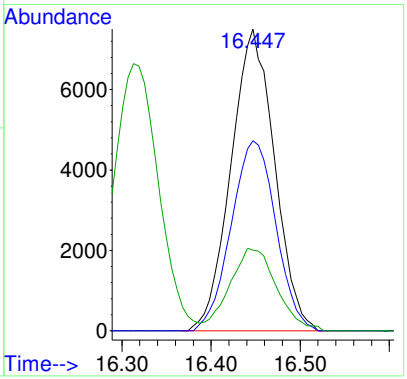


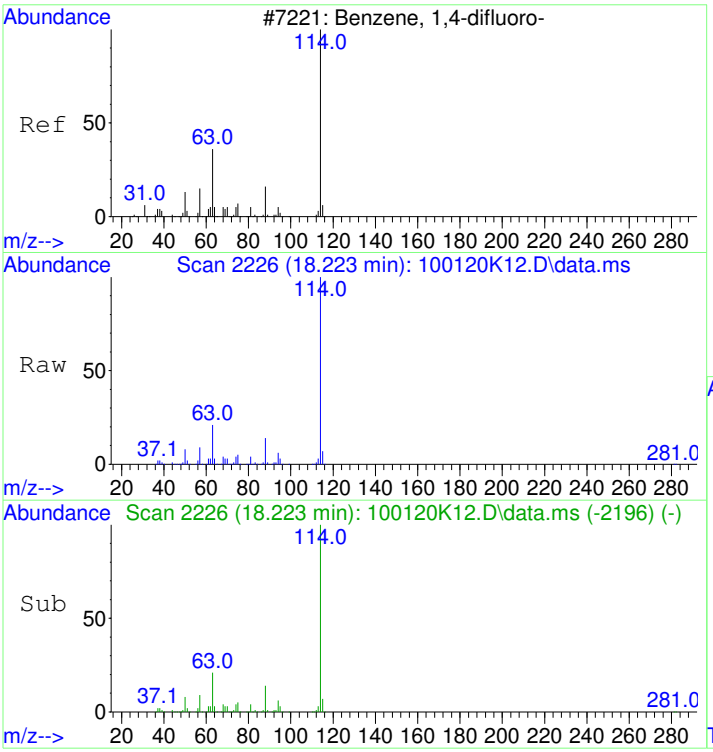


#28
Chloroform
Concen: 2.03 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. 0.000 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion: 83 Resp: 25394

Ion	Ratio	Lower	Upper
83	100		
85	64.8	45.0	85.0
47	25.8	3.6	43.6

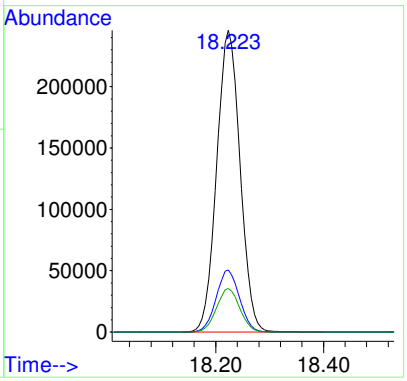


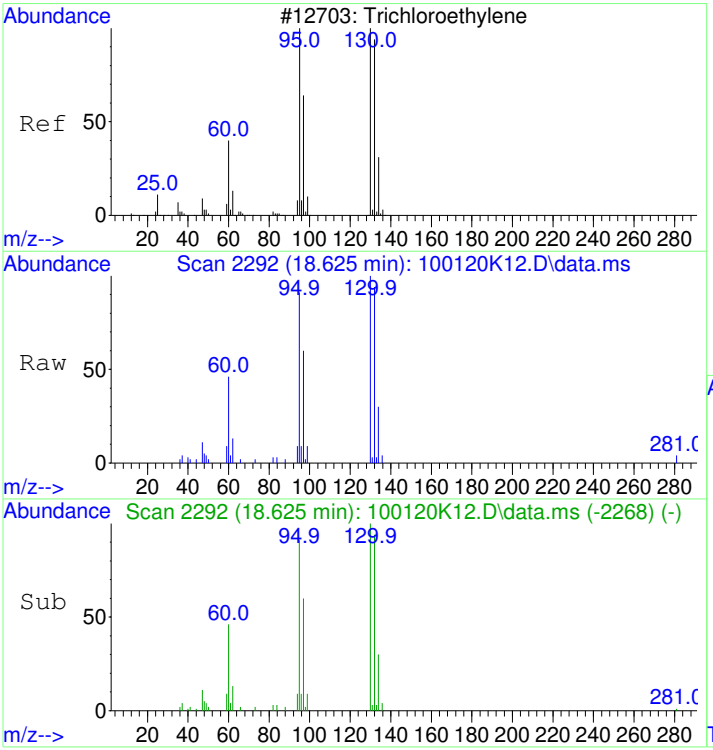


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion:114 Resp: 740239

Ion	Ratio	Lower	Upper
114	100		
63	20.5	0.2	40.2
88	14.4	0.0	34.3

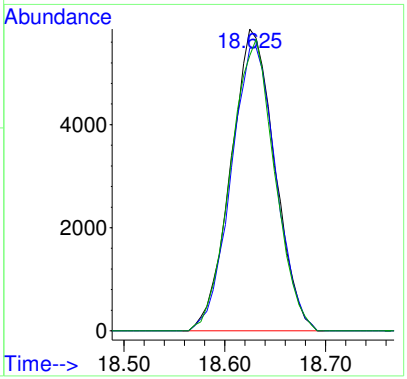


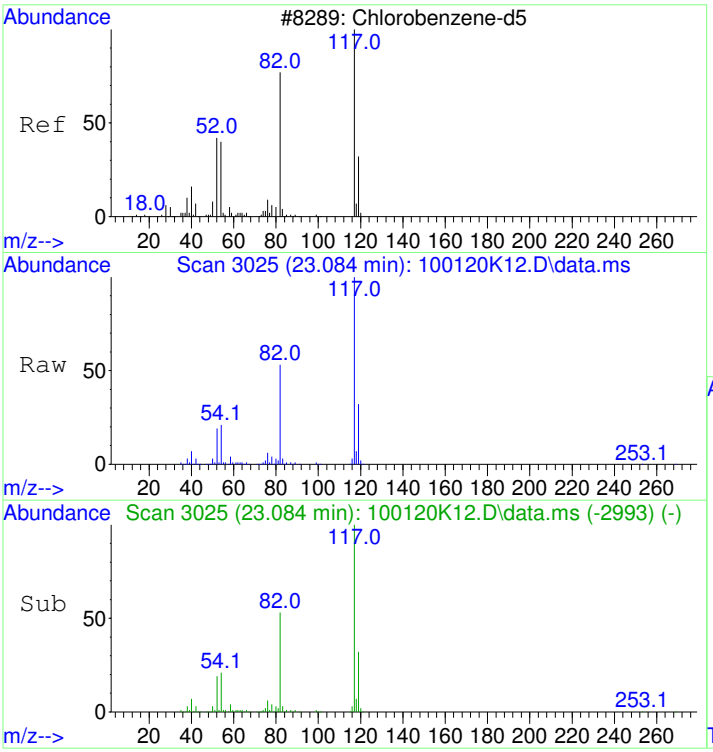


#37
Trichloroethene
Concen: 2.09 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.006 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion:130 Resp: 17730

Ion	Ratio	Lower	Upper
130	100		
132	96.0	75.3	115.3
95	96.5	72.7	112.7

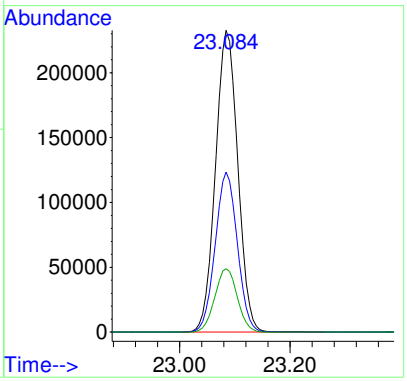




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K12.D
Acq: 1 Oct 2020 7:21 pm

Tgt Ion:117 Resp: 652996

Ion	Ratio	Lower	Upper
117	100		
82	52.6	32.2	72.2
54	21.2	0.6	40.6



2009030-03

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K13.D
InstName : HP5973K
Acq On : 1 Oct 2020 8:13 pm
Operator : LLH
Sample : 2009030-03
Misc : 200ml F6-025-3FT
ALS Vial : 24 Sample Multiplier: 1.96

REPORT

Quant Time: Oct 02 08:43:54 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.319	49	250596	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	751575	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	660203	19.60 ppbv	0.00
Target Compounds					Qvalue
14) Acetone	11.099	43	47177	4.62 ppbv	100

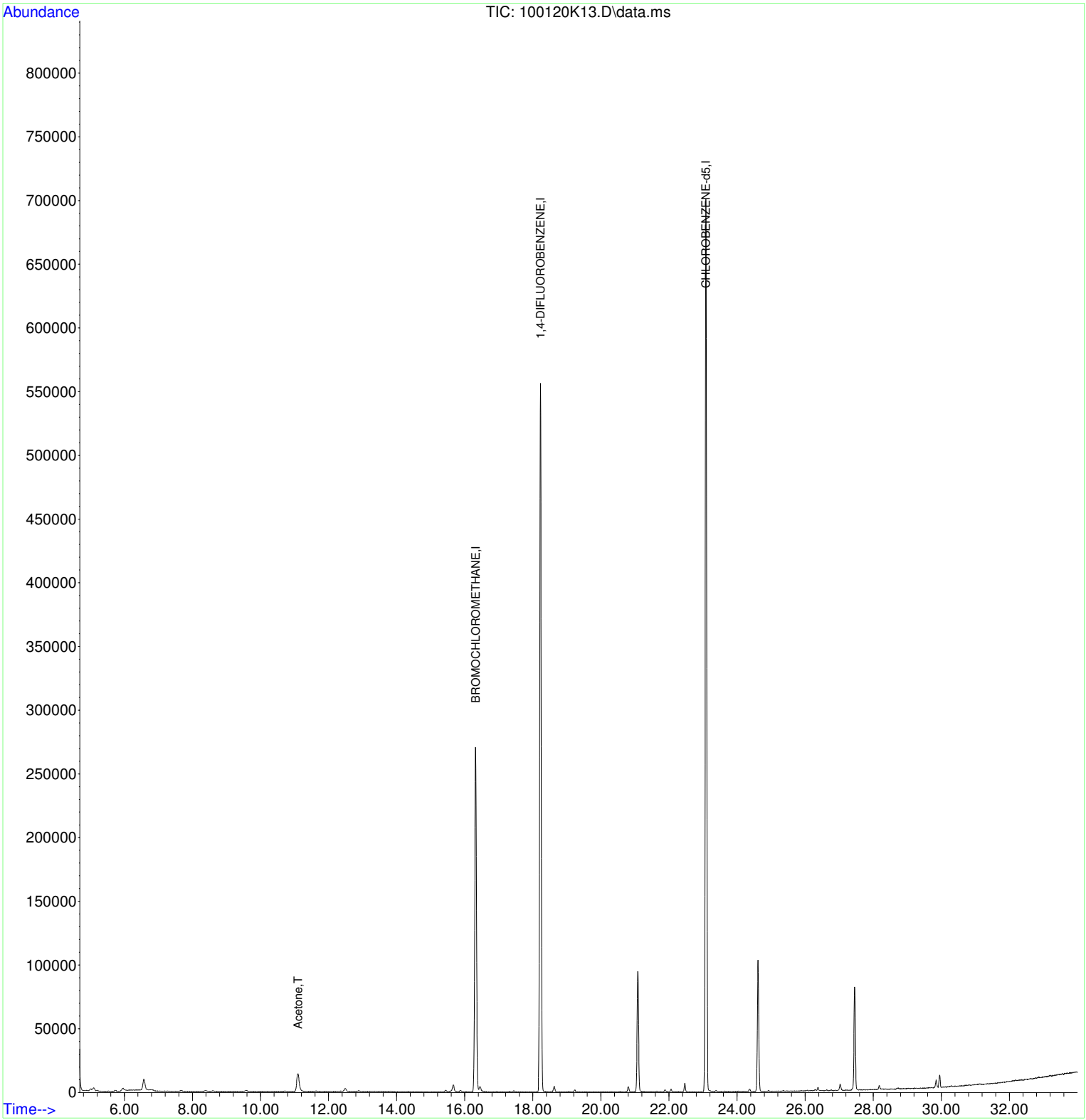
(#) = qualifier out of range (m) = manual integration (+) = signals summed

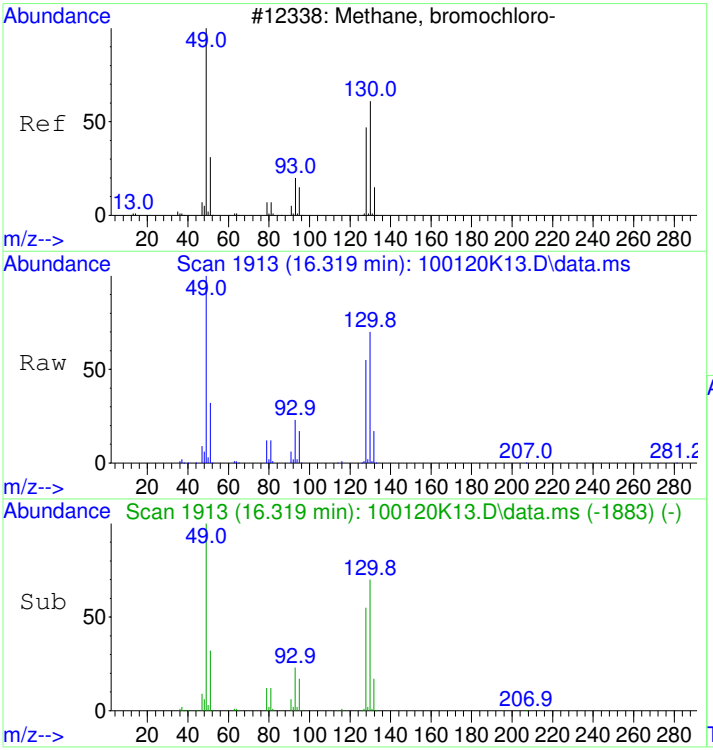
REVIEWED
By LLH at 9:31 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K13.D
InstName : HP5973K
Acq On : 1 Oct 2020 8:13 pm
Operator : LLH
Sample : 2009030-03
Misc : 200ml F6-025-3FT
ALS Vial : 24 Sample Multiplier: 1.96

Quant Time: Oct 02 08:43:54 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

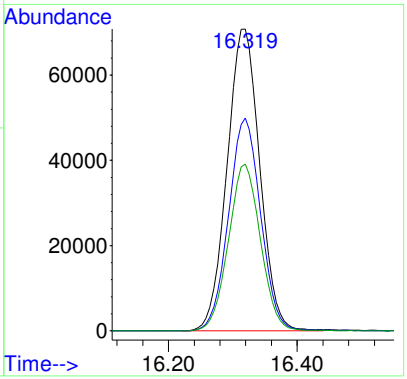


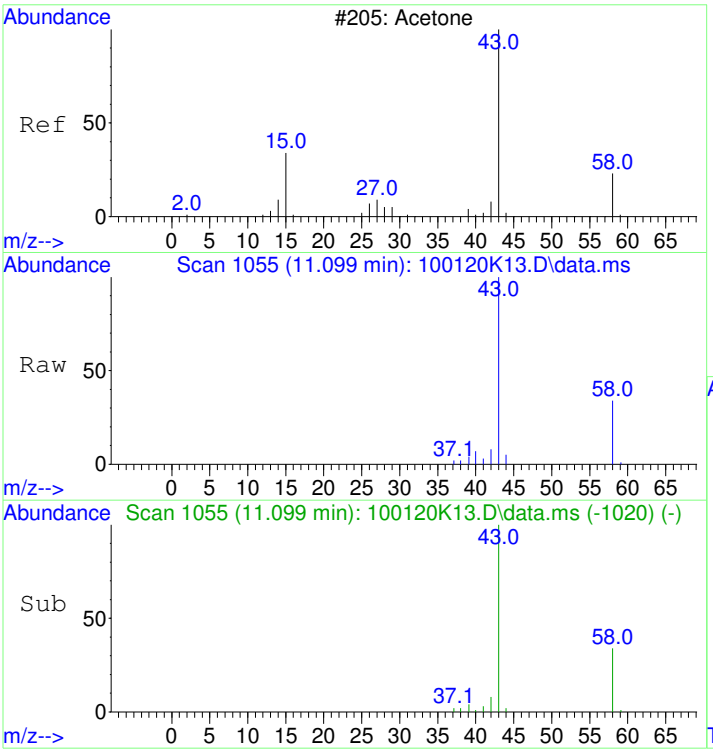


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 100120K13.D
Acq: 1 Oct 2020 8:13 pm

Tgt Ion: 49 Resp: 250596

Ion	Ratio	Lower	Upper
49	100		
130	69.0	49.9	89.9
128	53.4	33.7	73.7

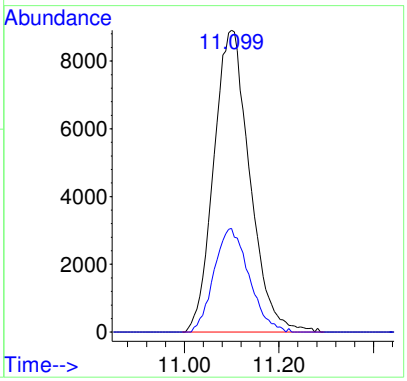


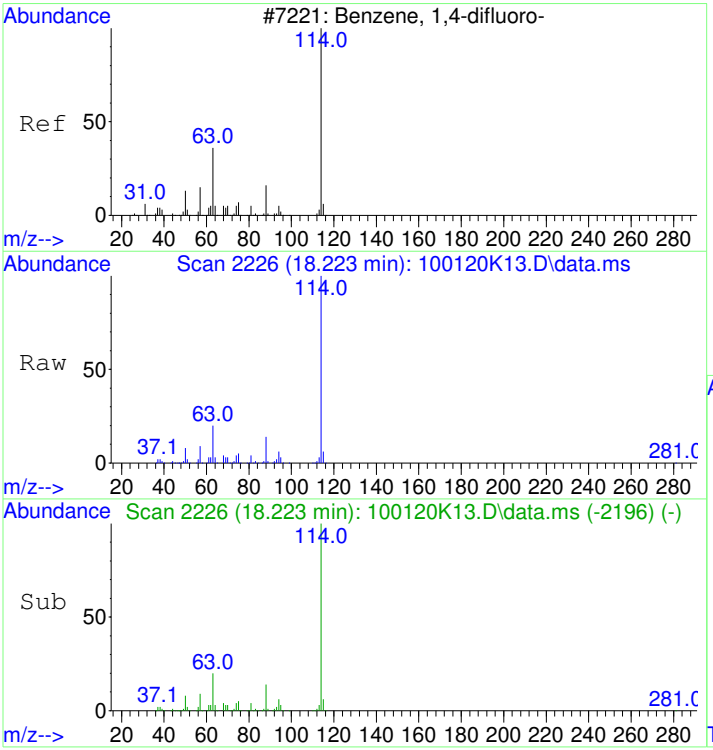


#14
Acetone
Concen: 4.62 ppbv
RT: 11.099 min Scan# 1055
Delta R.T. 0.012 min
Lab File: 100120K13.D
Acq: 1 Oct 2020 8:13 pm

Tgt Ion: 43 Resp: 47177

Ion	Ratio	Lower	Upper
43	100		
58	33.4	13.4	53.4

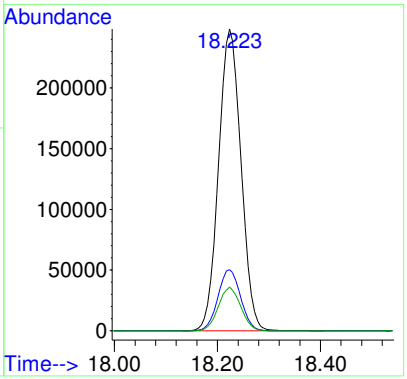


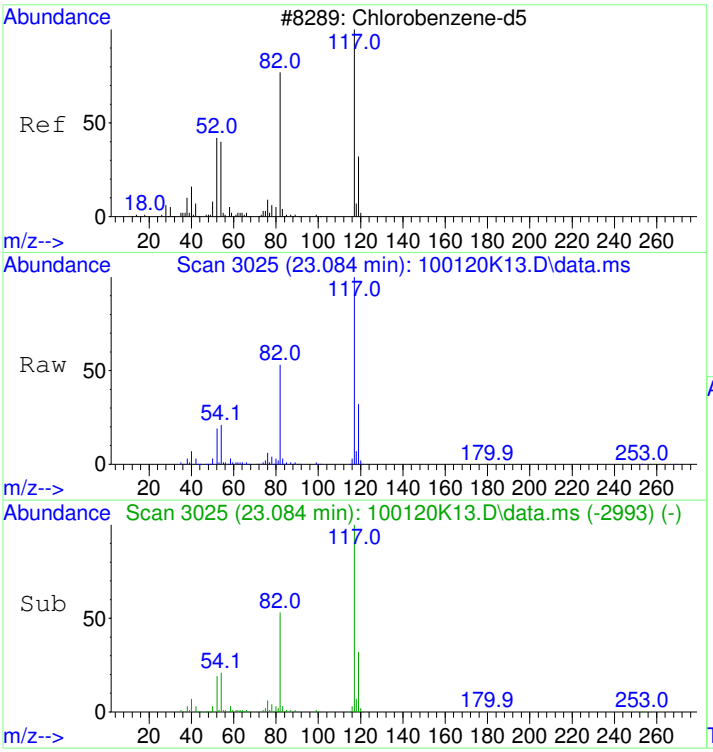


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K13.D
Acq: 1 Oct 2020 8:13 pm

Tgt Ion:114 Resp: 751575

Ion	Ratio	Lower	Upper
114	100		
63	20.4	0.2	40.2
88	14.4	0.0	34.3

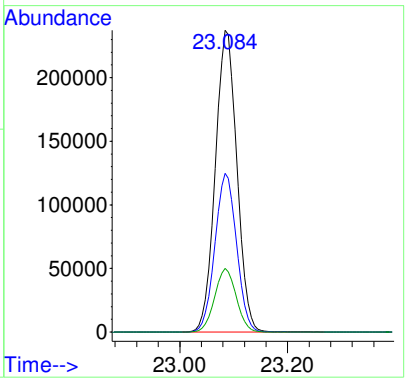




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K13.D
Acq: 1 Oct 2020 8:13 pm

Tgt Ion:117 Resp: 660203

Ion	Ratio	Lower	Upper
117	100		
82	52.7	32.2	72.2
54	21.1	0.6	40.6



2009030-04

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K14.D
InstName : HP5973K
Acq On : 1 Oct 2020 9:05 pm
Operator : LLH
Sample : 2009030-04
Misc : 200ml F6-029-3FT
ALS Vial : 25 Sample Multiplier: 2.06

REPORT

Quant Time: Oct 02 08:44:07 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	255342	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	764344	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	673954	19.60 ppbv	0.00
Target Compounds					Qvalue
14) Acetone	11.100	43	27972	2.69 ppbv	99
37) Trichloroethene	18.631	130	8944	1.02 ppbv	99

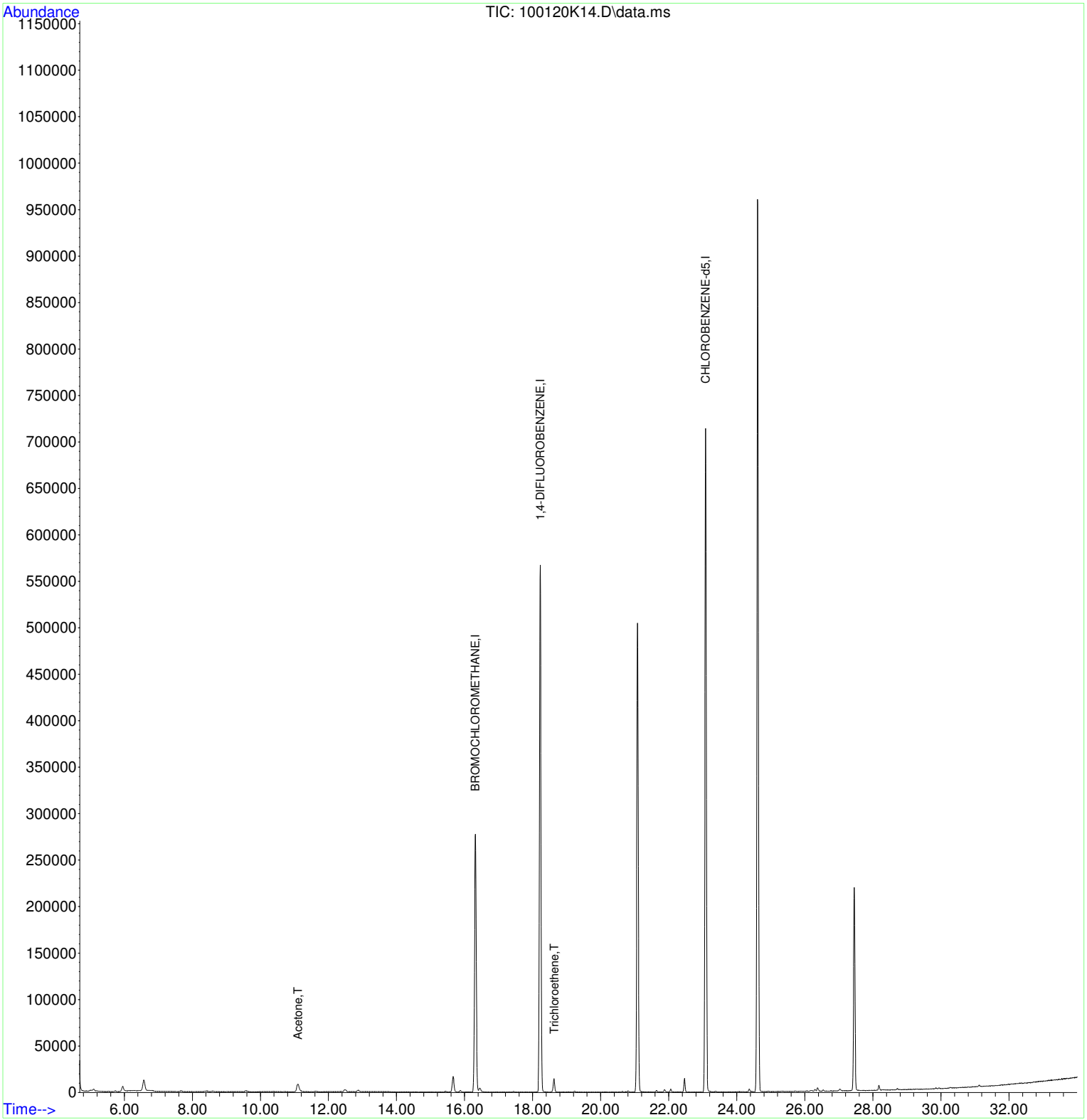
(#) = qualifier out of range (m) = manual integration (+) = signals summed

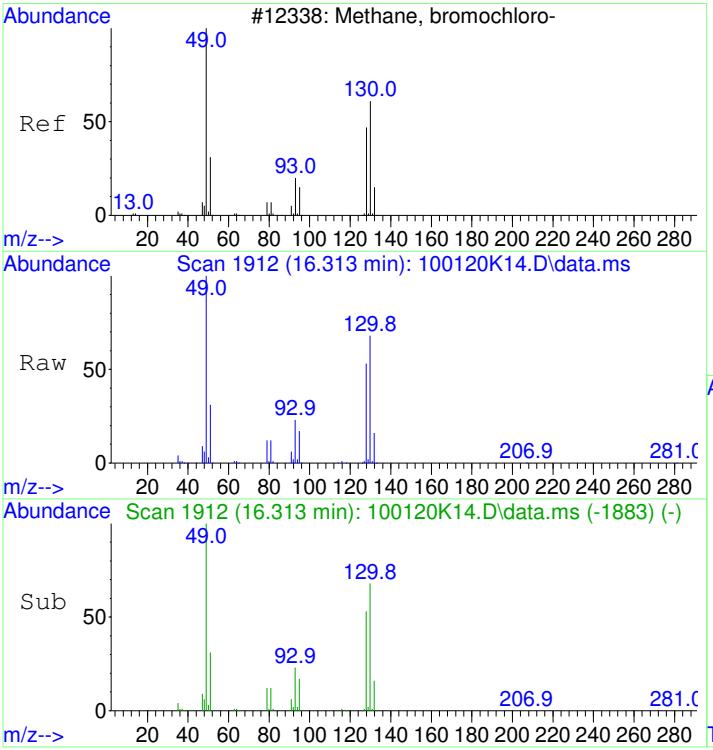
REVIEWED
By LLH at 9:31 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K14.D
InstName : HP5973K
Acq On : 1 Oct 2020 9:05 pm
Operator : LLH
Sample : 2009030-04
Misc : 200ml F6-029-3FT
ALS Vial : 25 Sample Multiplier: 2.06

Quant Time: Oct 02 08:44:07 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

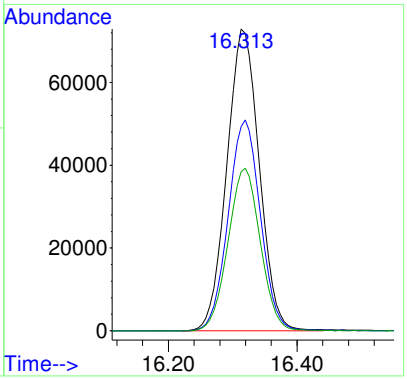


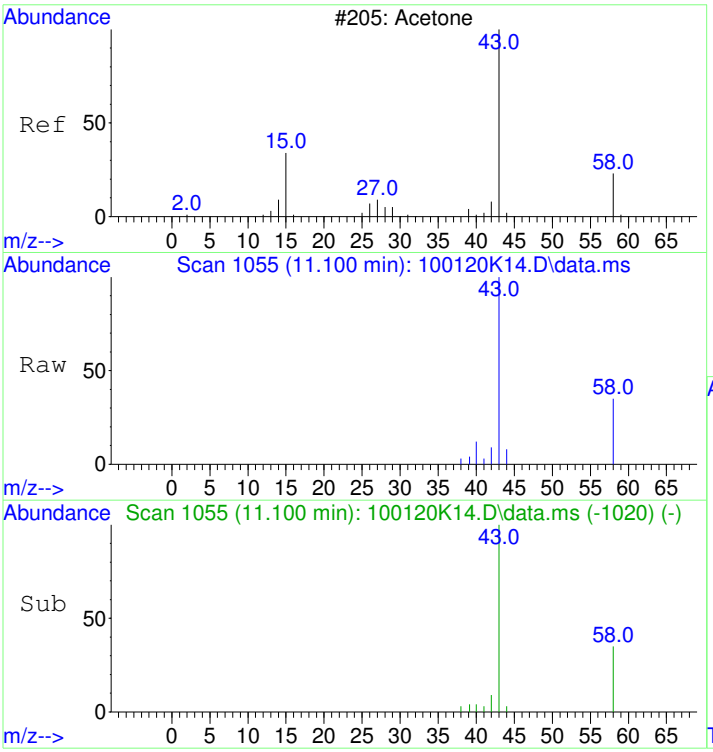


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 100120K14.D
Acq: 1 Oct 2020 9:05 pm

Tgt Ion: 49 Resp: 255342

Ion	Ratio	Lower	Upper
49	100		
130	69.3	49.9	89.9
128	53.1	33.7	73.7

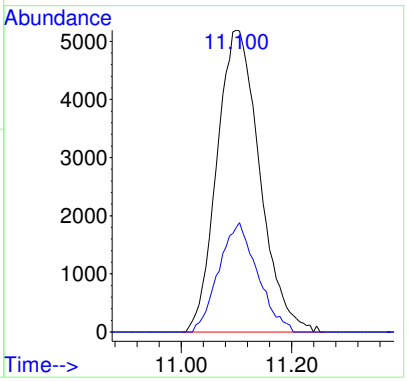


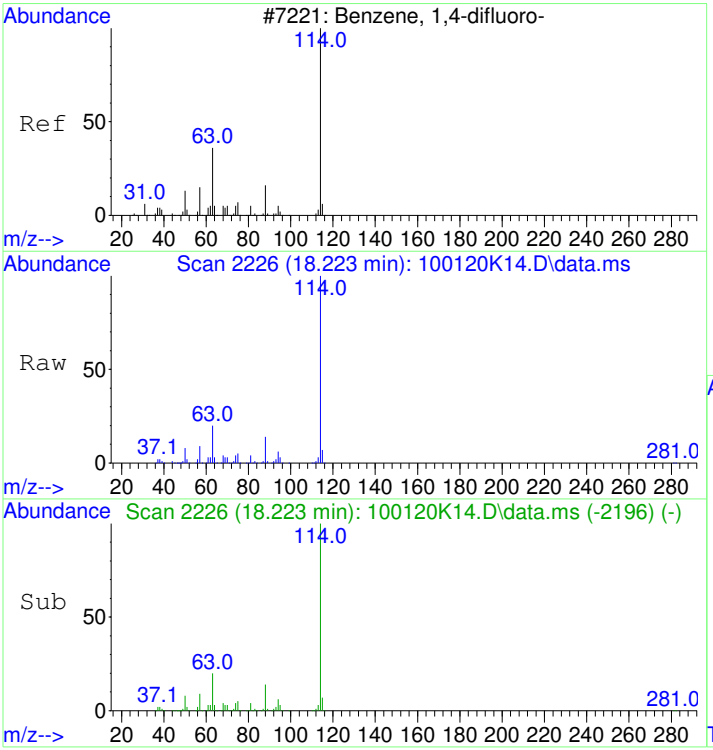


#14
Acetone
Concen: 2.69 ppbv
RT: 11.100 min Scan# 1055
Delta R.T. 0.012 min
Lab File: 100120K14.D
Acq: 1 Oct 2020 9:05 pm

Tgt Ion: 43 Resp: 27972

Ion	Ratio	Lower	Upper
43	100		
58	32.8	13.4	53.4

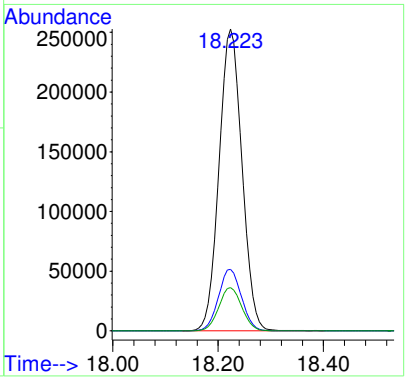


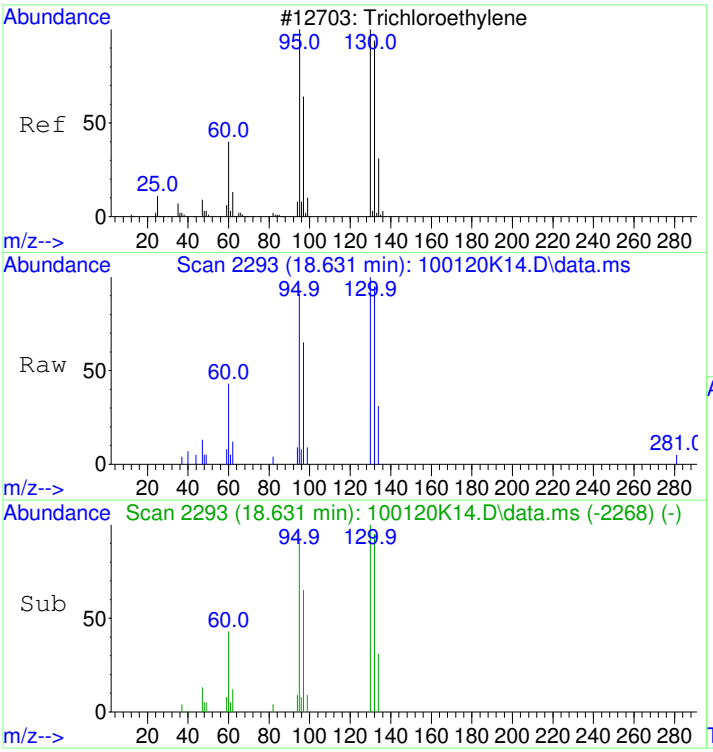


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K14.D
Acq: 1 Oct 2020 9:05 pm

Tgt Ion:114 Resp: 764344

Ion	Ratio	Lower	Upper
114	100		
63	20.5	0.2	40.2
88	14.4	0.0	34.3

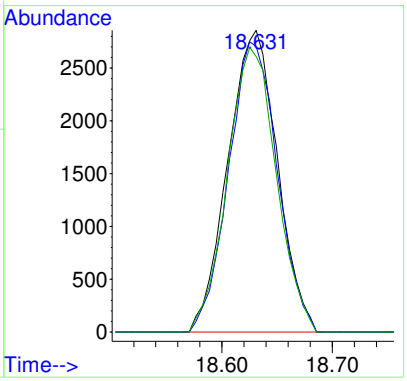


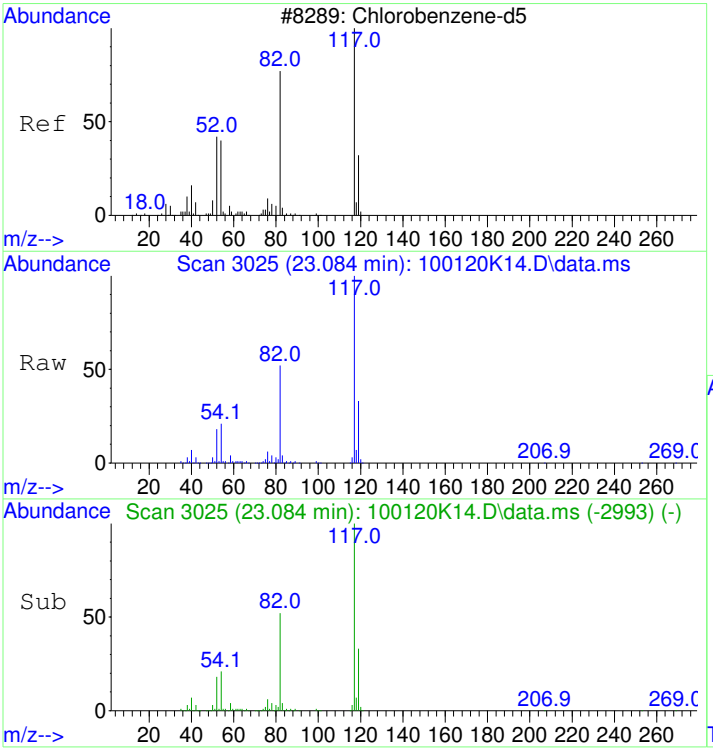


#37
Trichloroethene
Concen: 1.02 ppbv
RT: 18.631 min Scan# 2293
Delta R.T. 0.000 min
Lab File: 100120K14.D
Acq: 1 Oct 2020 9:05 pm

Tgt Ion:130 Resp: 8944

Ion	Ratio	Lower	Upper
130	100		
132	94.6	75.3	115.3
95	93.1	72.7	112.7

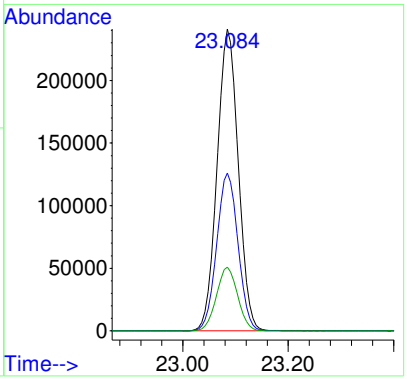




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K14.D
Acq: 1 Oct 2020 9:05 pm

Tgt Ion:117 Resp: 673954

Ion	Ratio	Lower	Upper
117	100		
82	52.6	32.2	72.2
54	21.1	0.6	40.6



2009030-05

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K15.D
InstName : HP5973K
Acq On : 1 Oct 2020 9:58 pm
Operator : LLH
Sample : 2009030-05
Misc : 200ml F6-031-3FT
ALS Vial : 26 Sample Multiplier: 2.01

REPORT

Quant Time: Oct 02 08:44:22 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.319	49	258221	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	767167	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	676885	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.093	43	36824	3.50	ppbv		100
16) 2-Propanol	11.616	45	12172	1.20	ppbv		85
18) Dichloromethane	12.493	49	4080	0.48	ppbv		96
24) cis-1,2-Dichloroethene	15.778	61	11041	1.27	ppbv	#	98
28) Chloroform	16.447	83	21919	1.70	ppbv		97
37) Trichloroethene	18.625	130	43183	4.91	ppbv		99
47) Tetrachloroethene	21.648	166	6127	0.49	ppbv		99

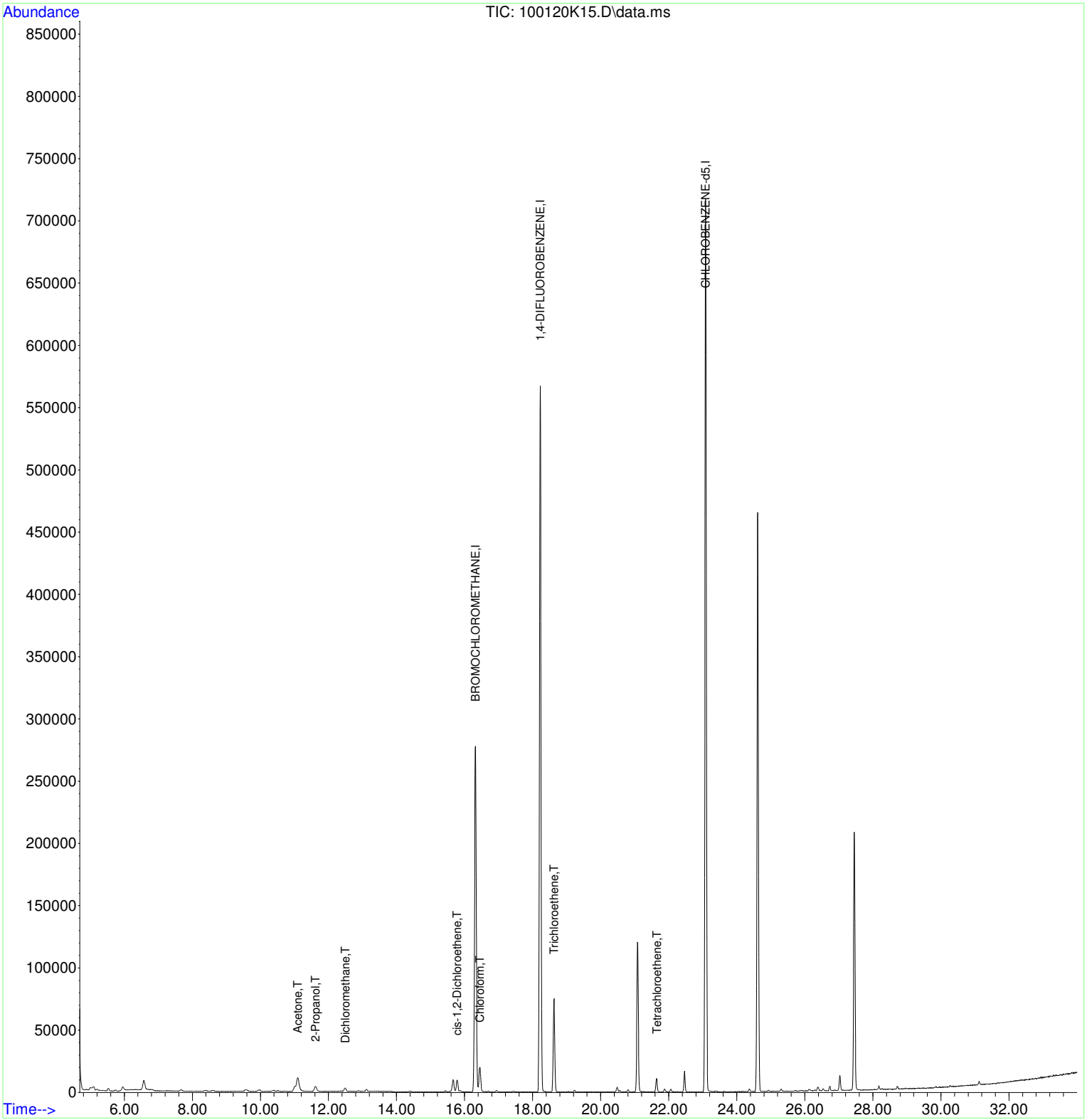
(#) = qualifier out of range (m) = manual integration (+) = signals summed

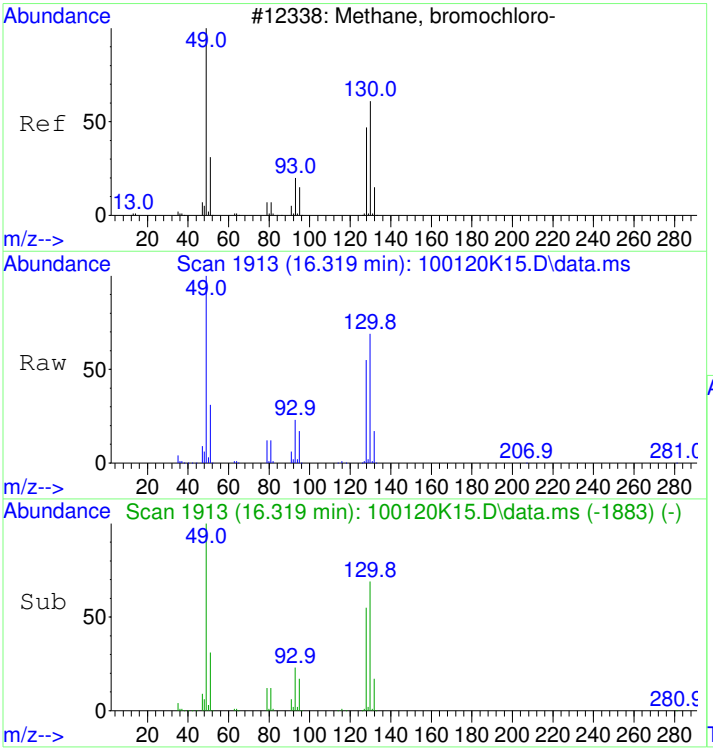
REVIEWED
By LLH at 9:32 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K15.D
InstName : HP5973K
Acq On : 1 Oct 2020 9:58 pm
Operator : LLH
Sample : 2009030-05
Misc : 200ml F6-031-3FT
ALS Vial : 26 Sample Multiplier: 2.01

Quant Time: Oct 02 08:44:22 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

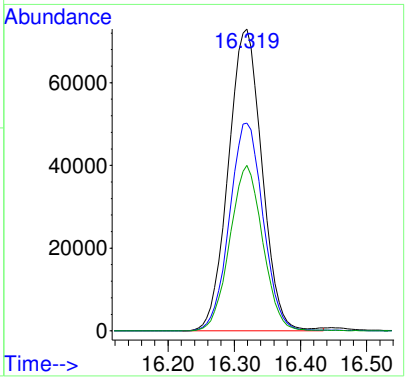


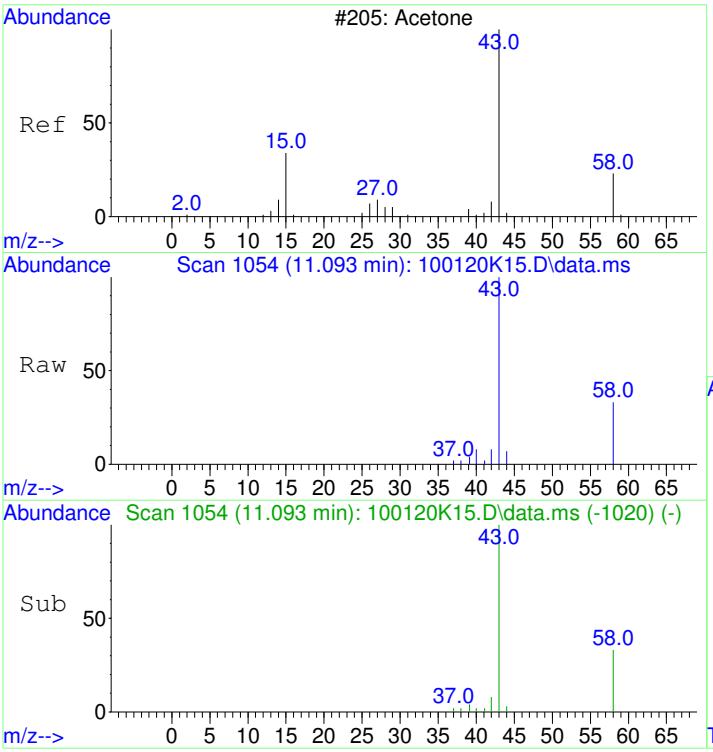


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion: 49 Resp: 258221

Ion	Ratio	Lower	Upper
49	100		
130	68.7	49.9	89.9
128	52.9	33.7	73.7

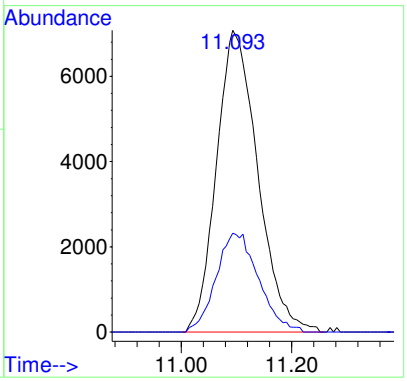


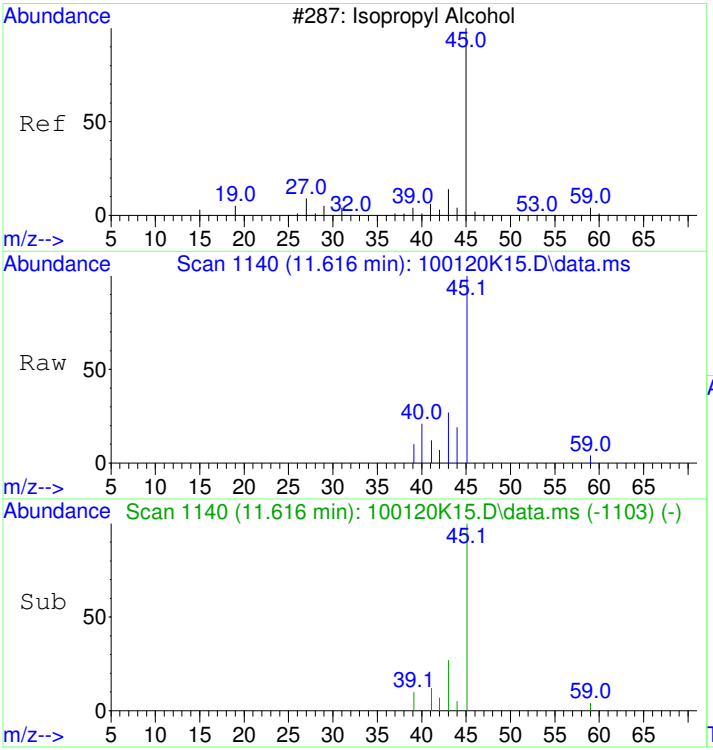


#14
Acetone
Concen: 3.50 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion: 43 Resp: 36824

Ion	Ratio	Lower	Upper
43	100		
58	33.7	13.4	53.4

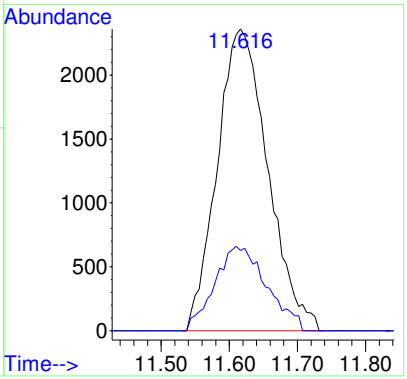


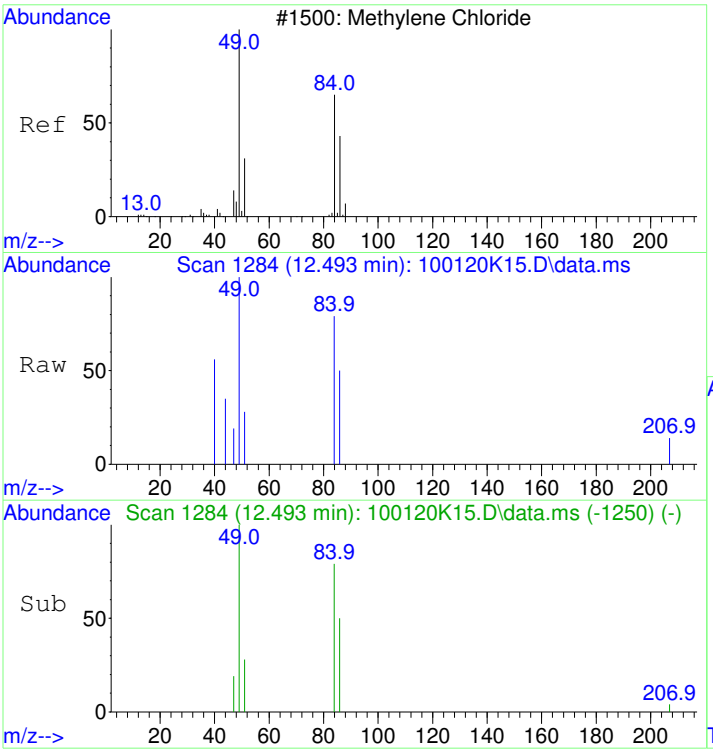


#16
2-Propanol
Concen: 1.20 ppbv
RT: 11.616 min Scan# 1140
Delta R.T. 0.024 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion: 45 Resp: 12172

Ion	Ratio	Lower	Upper
45	100		
43	28.7	1.5	41.5

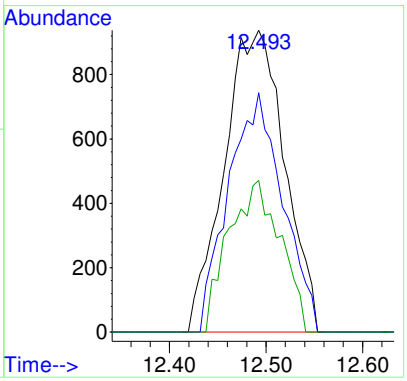


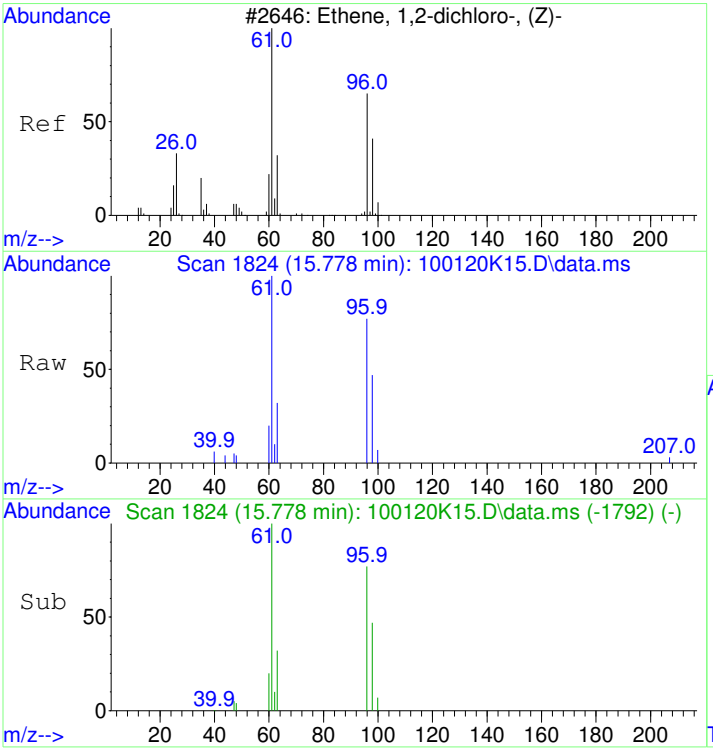


#18
Dichloromethane
Concen: 0.48 ppbv
RT: 12.493 min Scan# 1284
Delta R.T. 0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion: 49 Resp: 4080

Ion	Ratio	Lower	Upper
49	100		
84	71.1	53.4	93.4
86	42.8	27.0	67.0

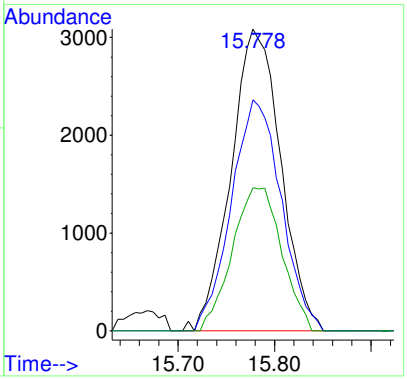


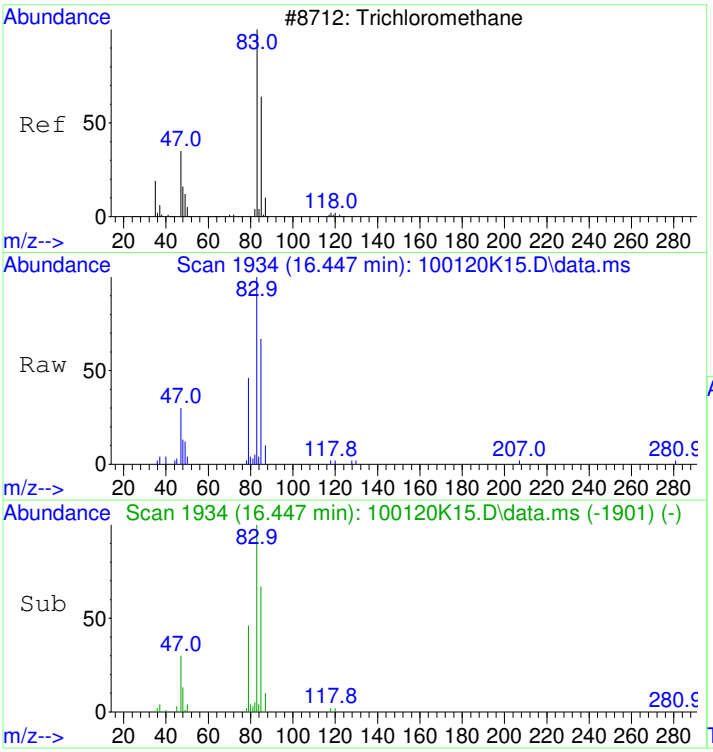


#24
cis-1,2-Dichloroethene
Concen: 1.27 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion: 61 Resp: 11041

Ion	Ratio	Lower	Upper
61	100		
96	76.9	55.0	95.0
98	0.0	0.0	20.0

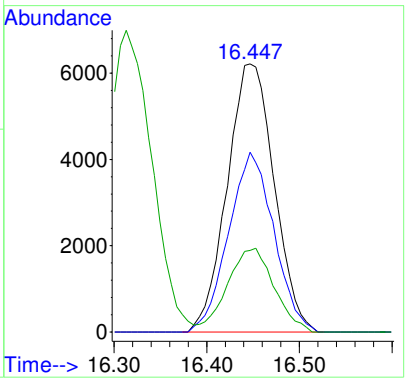


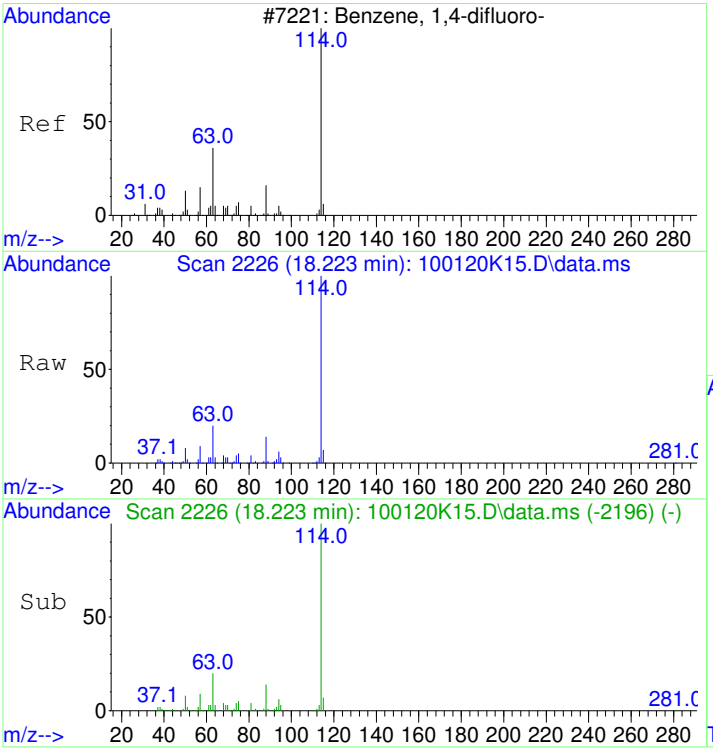


#28
Chloroform
Concen: 1.70 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion: 83 Resp: 21919

Ion	Ratio	Lower	Upper
83	100		
85	64.7	45.0	85.0
47	28.2	3.6	43.6

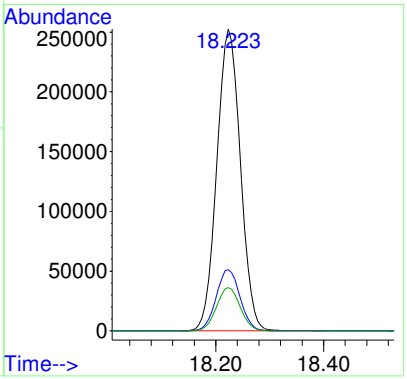


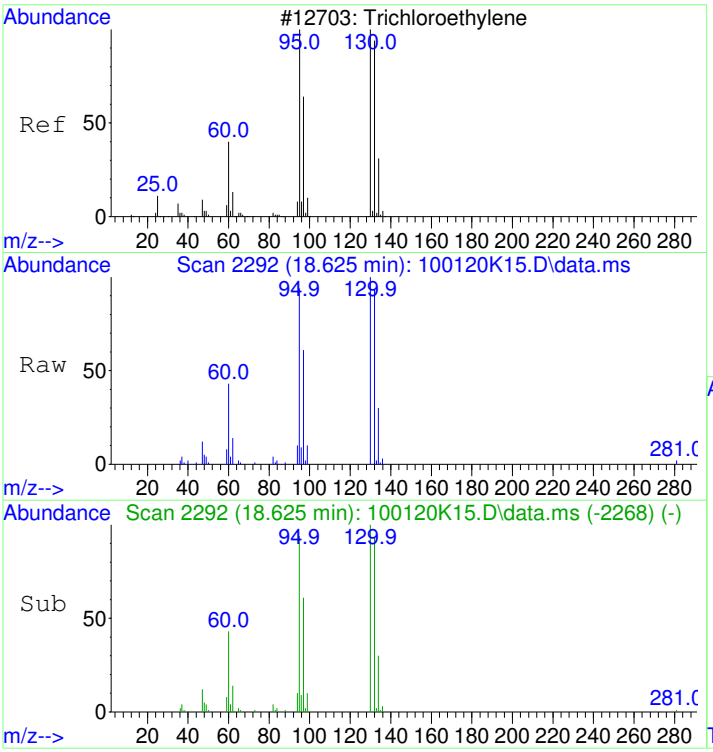


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion:114 Resp: 767167

Ion	Ratio	Lower	Upper
114	100		
63	20.4	0.2	40.2
88	14.4	0.0	34.3

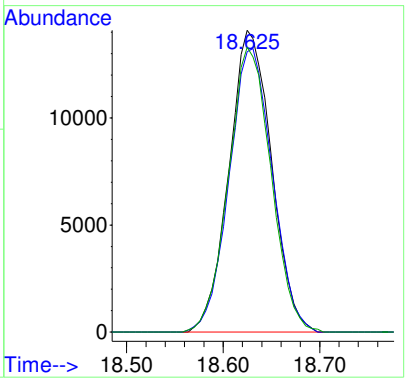


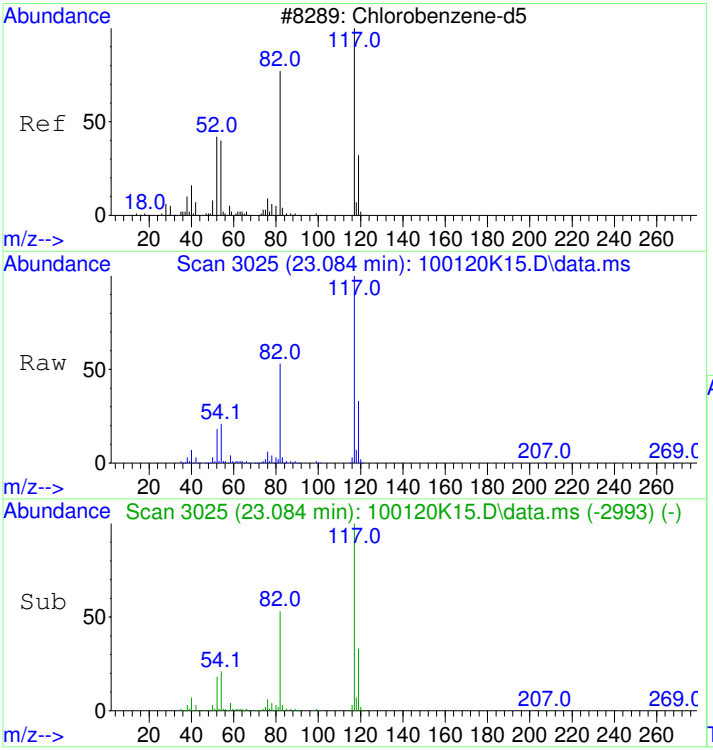


#37
Trichloroethene
Concen: 4.91 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion:130 Resp: 43183

Ion	Ratio	Lower	Upper
130	100		
132	95.4	75.3	115.3
95	94.3	72.7	112.7

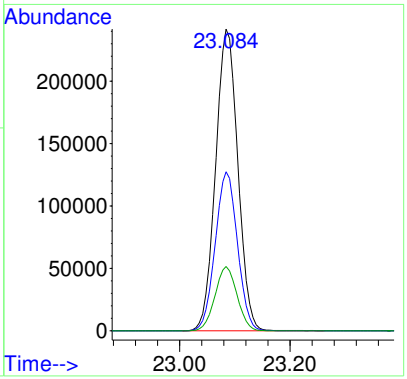


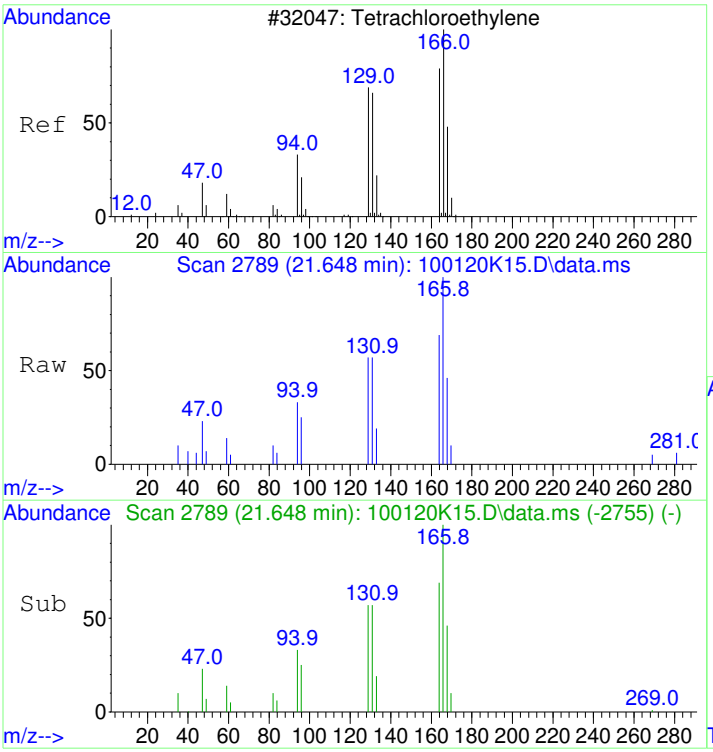


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion:117 Resp: 676885

Ion	Ratio	Lower	Upper
117	100		
82	52.6	32.2	72.2
54	21.1	0.6	40.6

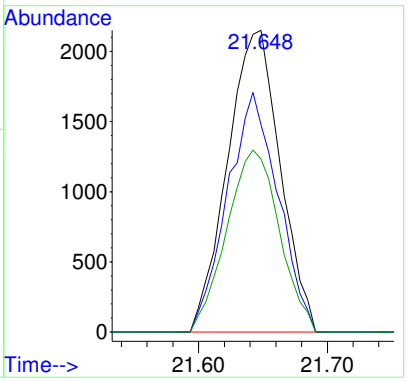




#47
Tetrachloroethene
Concen: 0.49 ppbv
RT: 21.648 min Scan# 2789
Delta R.T. 0.006 min
Lab File: 100120K15.D
Acq: 1 Oct 2020 9:58 pm

Tgt Ion:166 Resp: 6127

Ion	Ratio	Lower	Upper
166	100		
164	76.4	57.5	97.5
131	60.2	41.2	81.2



2009030-06

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K16.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:51 pm
Operator : LLH
Sample : 2009030-06
Misc : 200ml F6-055-3FT
ALS Vial : 27 Sample Multiplier: 2.02

REPORT

Quant Time: Oct 02 08:44:33 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.319	49	251223	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	749194	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	660330	19.60 ppbv	0.00
Target Compounds					Qvalue
14) Acetone	11.093	43	44653	4.37 ppbv	99
16) 2-Propanol	11.616	45	24957	2.52 ppbv	88
18) Dichloromethane	12.486	49	3746	0.45 ppbv	92

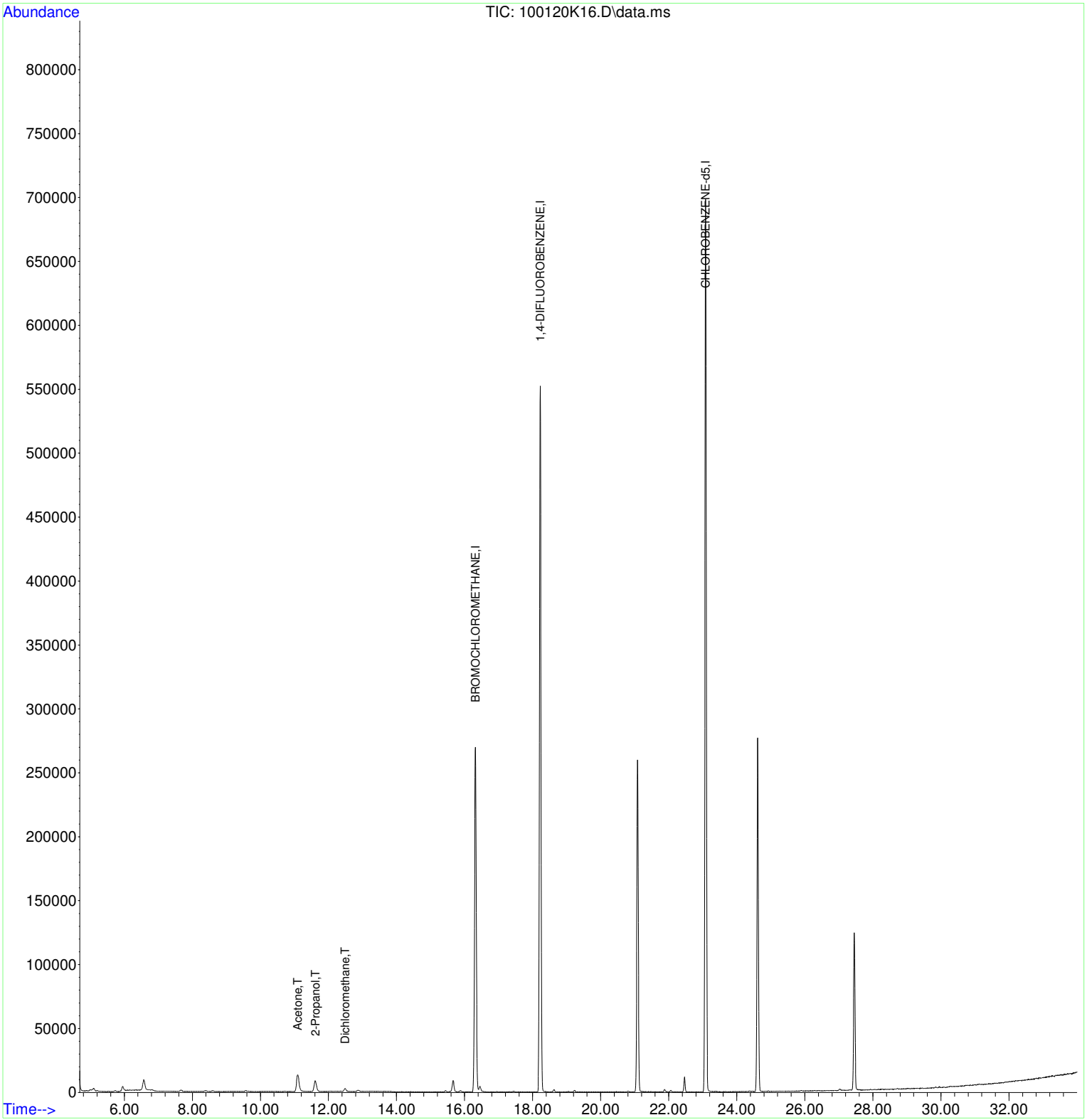
(#) = qualifier out of range (m) = manual integration (+) = signals summed

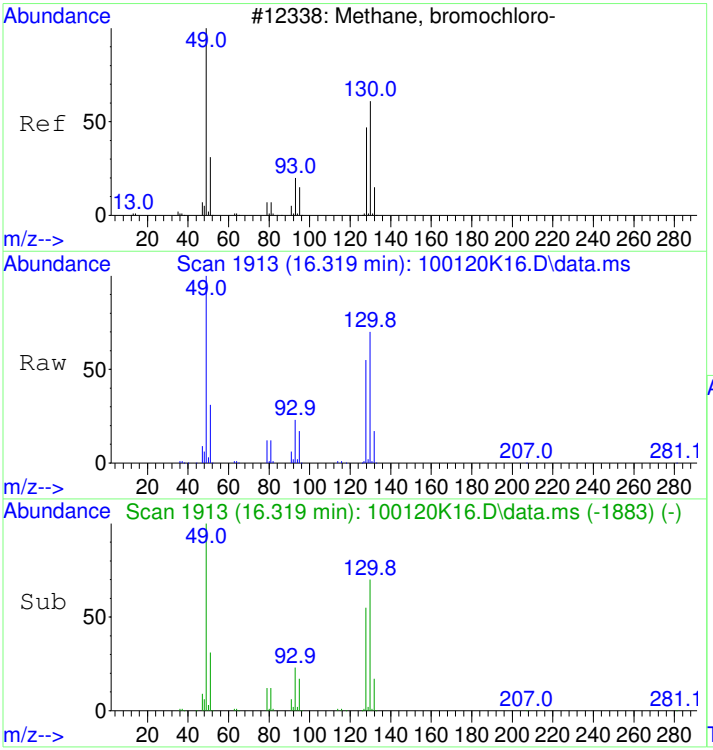
REVIEWED
By LLH at 9:32 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K16.D
InstName : HP5973K
Acq On : 1 Oct 2020 10:51 pm
Operator : LLH
Sample : 2009030-06
Misc : 200ml F6-055-3FT
ALS Vial : 27 Sample Multiplier: 2.02

Quant Time: Oct 02 08:44:33 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

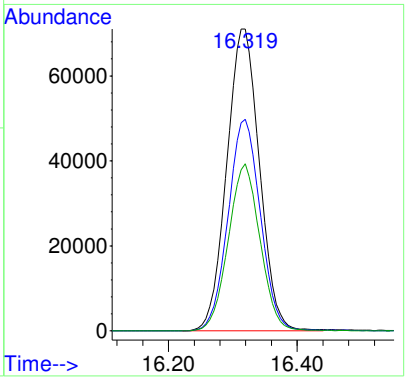


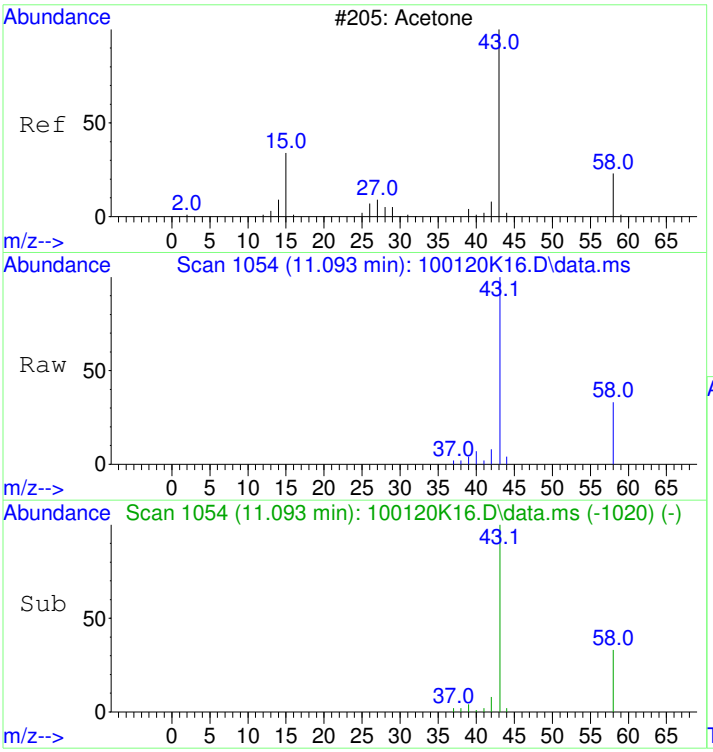


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 100120K16.D
Acq: 1 Oct 2020 10:51 pm

Tgt Ion: 49 Resp: 251223

Ion	Ratio	Lower	Upper
49	100		
130	69.1	49.9	89.9
128	53.0	33.7	73.7

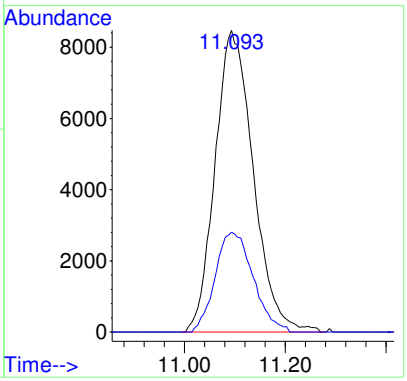


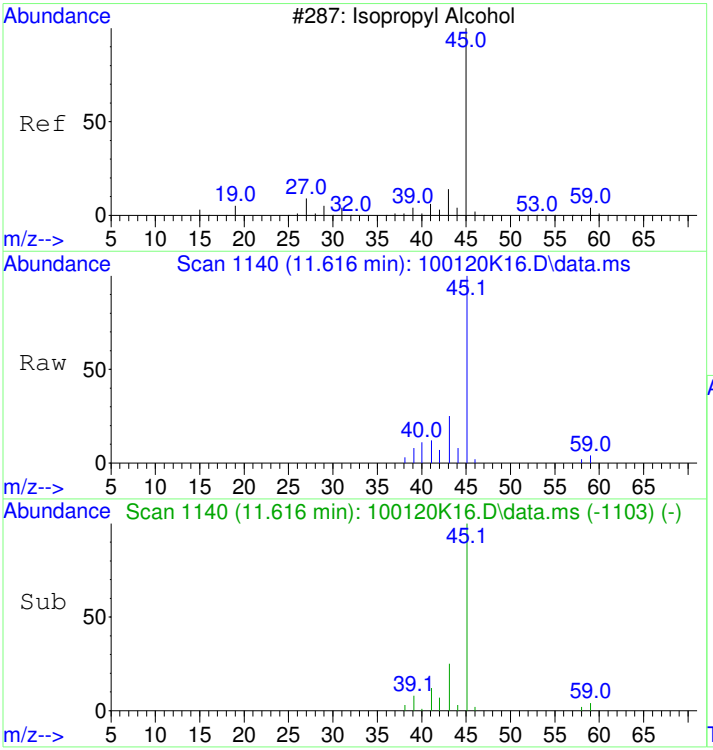


#14
Acetone
Concen: 4.37 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 100120K16.D
Acq: 1 Oct 2020 10:51 pm

Tgt Ion: 43 Resp: 44653

Ion	Ratio	Lower	Upper
43	100		
58	32.9	13.4	53.4

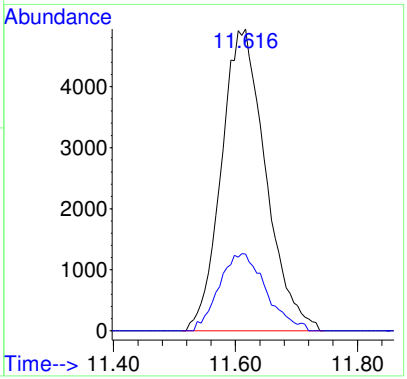


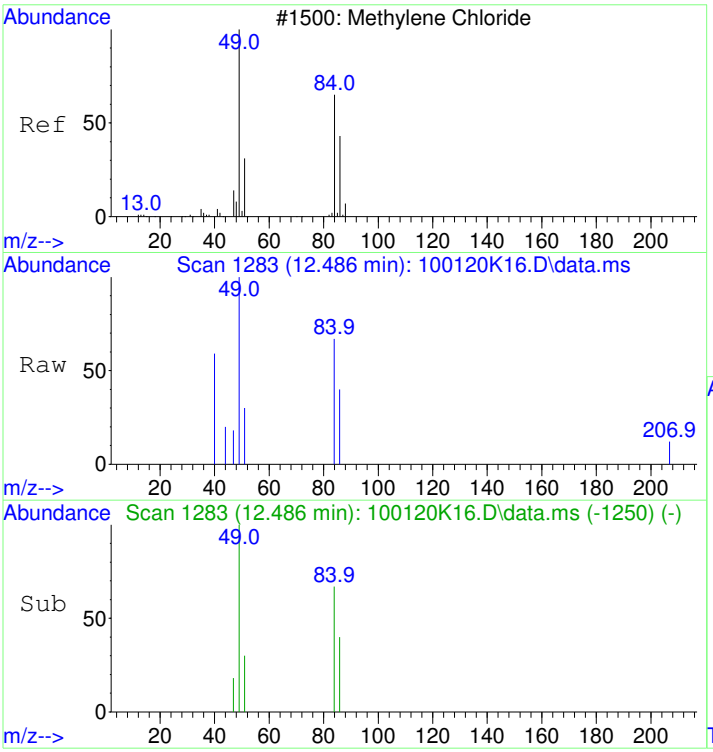


#16
2-Propanol
Concen: 2.52 ppbv
RT: 11.616 min Scan# 1140
Delta R.T. 0.024 min
Lab File: 100120K16.D
Acq: 1 Oct 2020 10:51 pm

Tgt Ion: 45 Resp: 24957

Ion	Ratio	Lower	Upper
45	100		
43	27.1	1.5	41.5

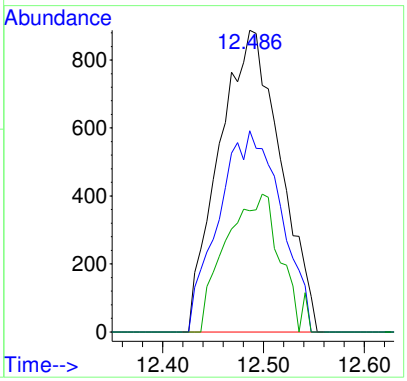


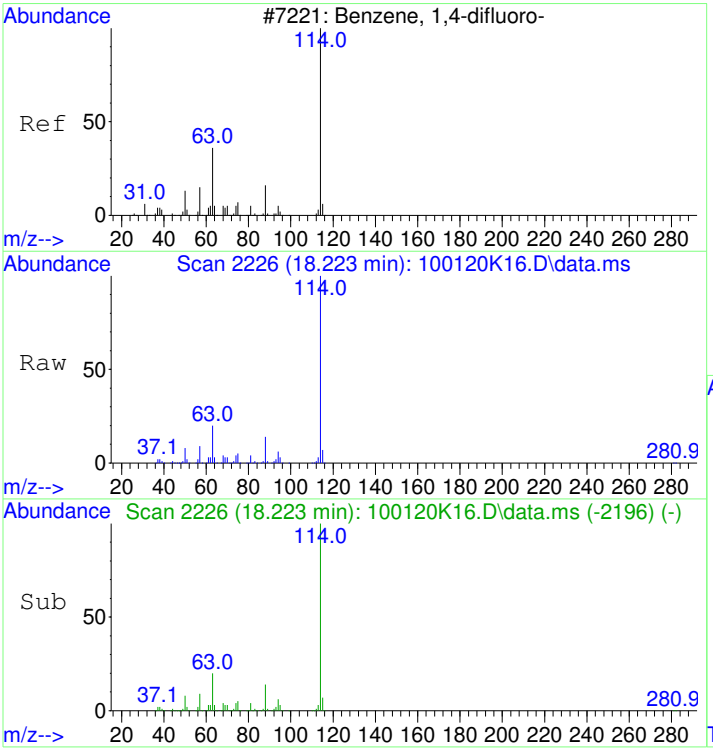


#18
Dichloromethane
Concen: 0.45 ppbv
RT: 12.486 min Scan# 1283
Delta R.T. 0.000 min
Lab File: 100120K16.D
Acq: 1 Oct 2020 10:51 pm

Tgt Ion: 49 Resp: 3746

Ion	Ratio	Lower	Upper
49	100		
84	67.8	53.4	93.4
86	40.9	27.0	67.0

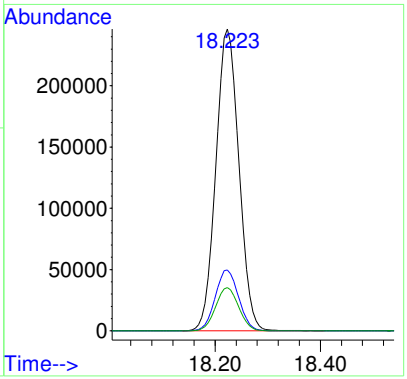


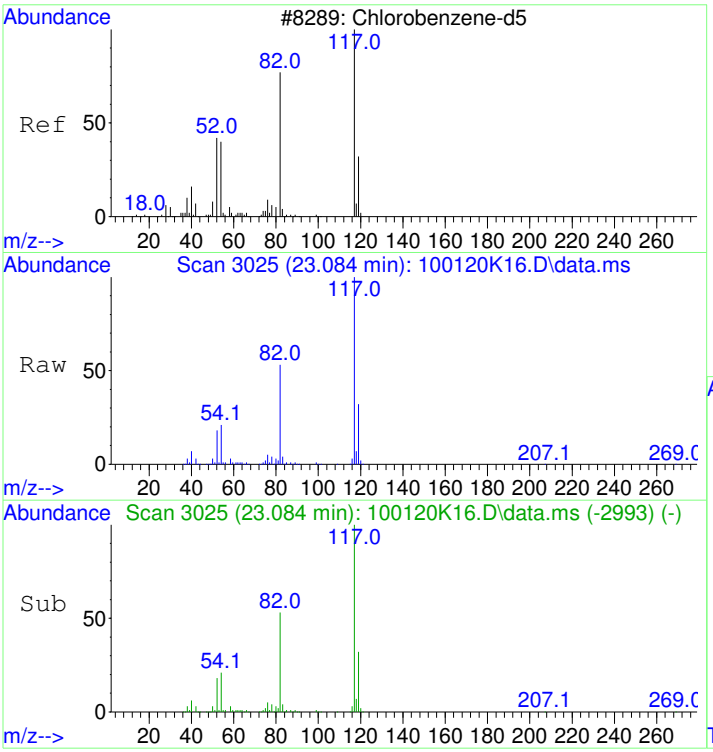


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K16.D
Acq: 1 Oct 2020 10:51 pm

Tgt Ion:114 Resp: 749194

Ion	Ratio	Lower	Upper
114	100		
63	20.4	0.2	40.2
88	14.4	0.0	34.3

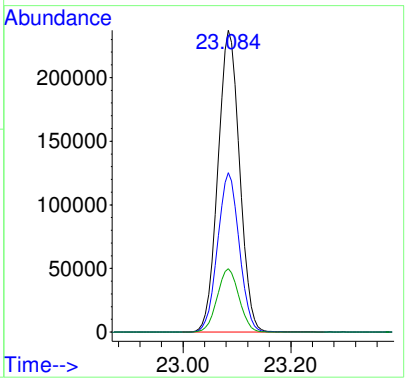




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K16.D
Acq: 1 Oct 2020 10:51 pm

Tgt Ion:117 Resp: 660330

Ion	Ratio	Lower	Upper
117	100		
82	52.8	32.2	72.2
54	21.2	0.6	40.6



2009030-07

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K17.D
InstName : HP5973K
Acq On : 1 Oct 2020 11:43 pm
Operator : LLH
Sample : 2009030-07
Misc : 200ml F6-033-3FT
ALS Vial : 28 Sample Multiplier: 2

REPORT

Quant Time: Oct 02 08:44:47 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.313	49	245321	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	736785	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	647678	19.60	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	11.105	43	20137	2.02	ppbv	100

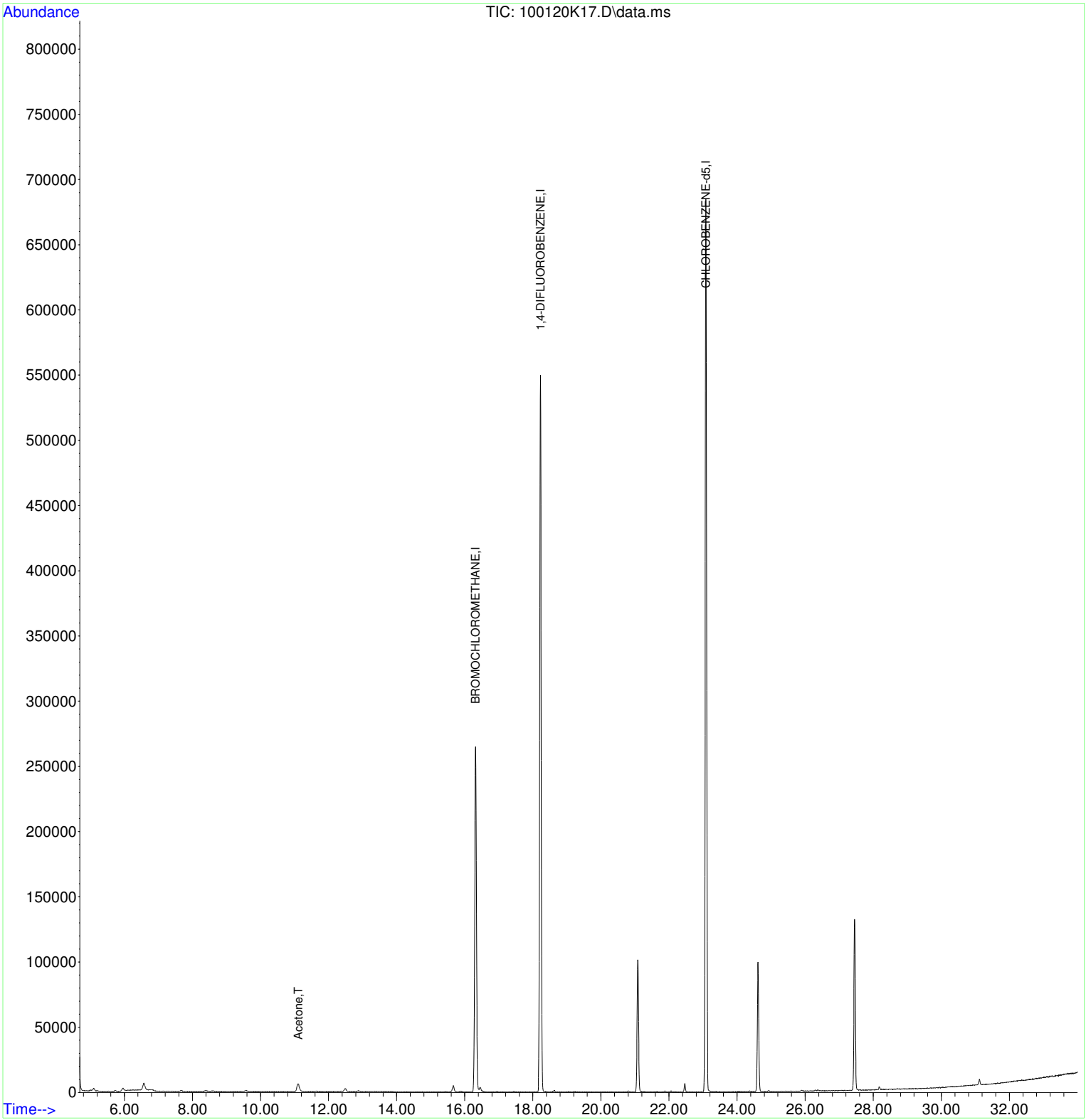
(#) = qualifier out of range (m) = manual integration (+) = signals summed

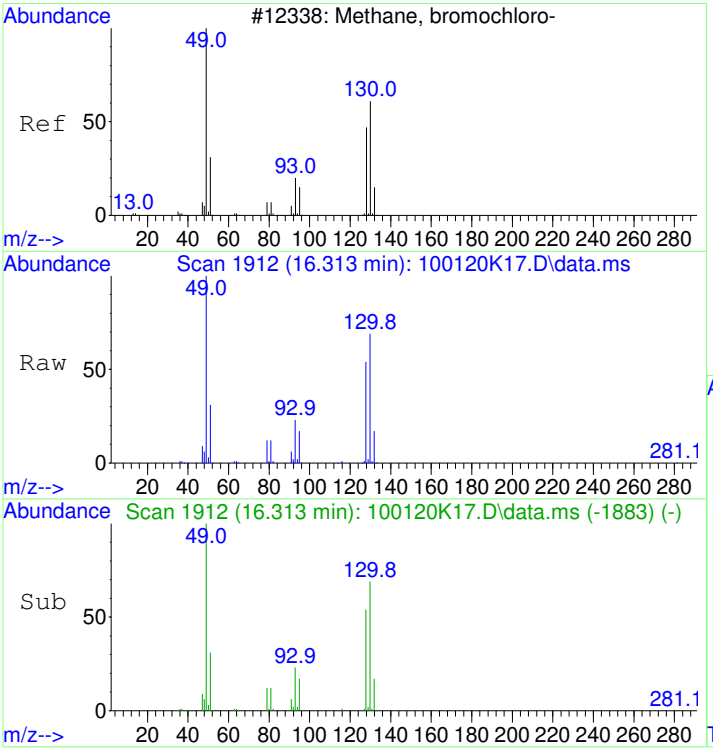
REVIEWED
By LLH at 9:32 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K17.D
InstName : HP5973K
Acq On : 1 Oct 2020 11:43 pm
Operator : LLH
Sample : 2009030-07
Misc : 200ml F6-033-3FT
ALS Vial : 28 Sample Multiplier: 2

Quant Time: Oct 02 08:44:47 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

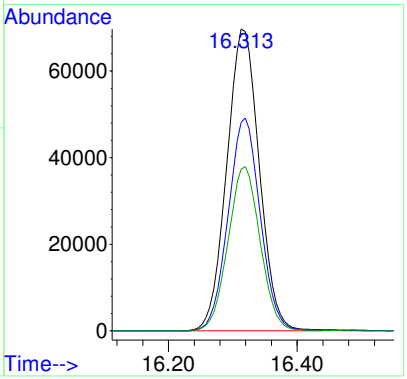


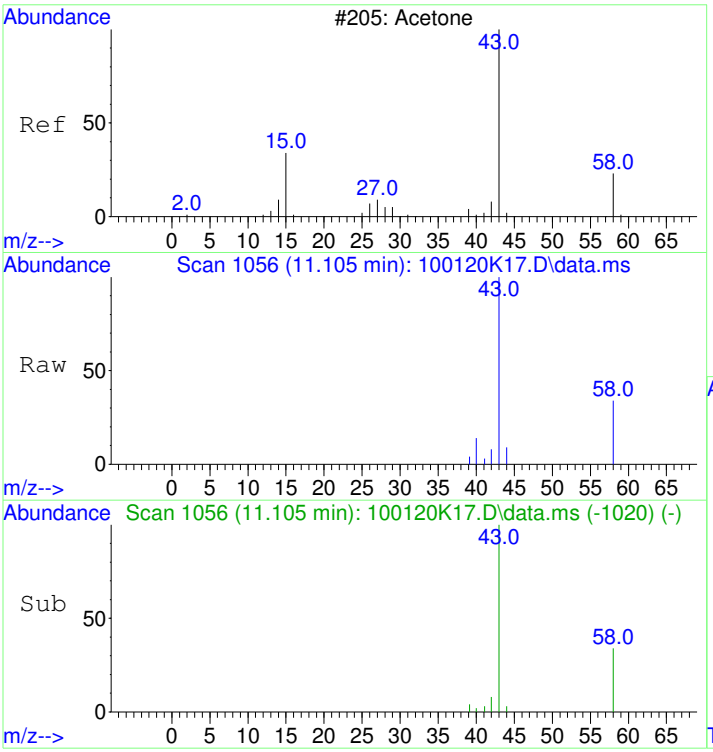


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 100120K17.D
Acq: 1 Oct 2020 11:43 pm

Tgt Ion: 49 Resp: 245321

Ion	Ratio	Lower	Upper
49	100		
130	69.4	49.9	89.9
128	53.2	33.7	73.7

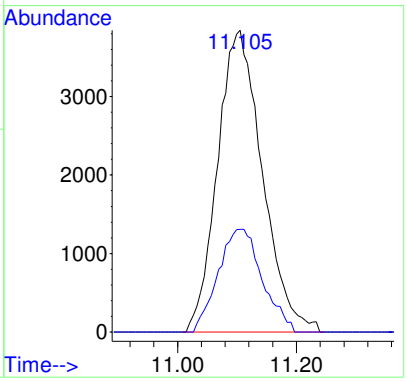


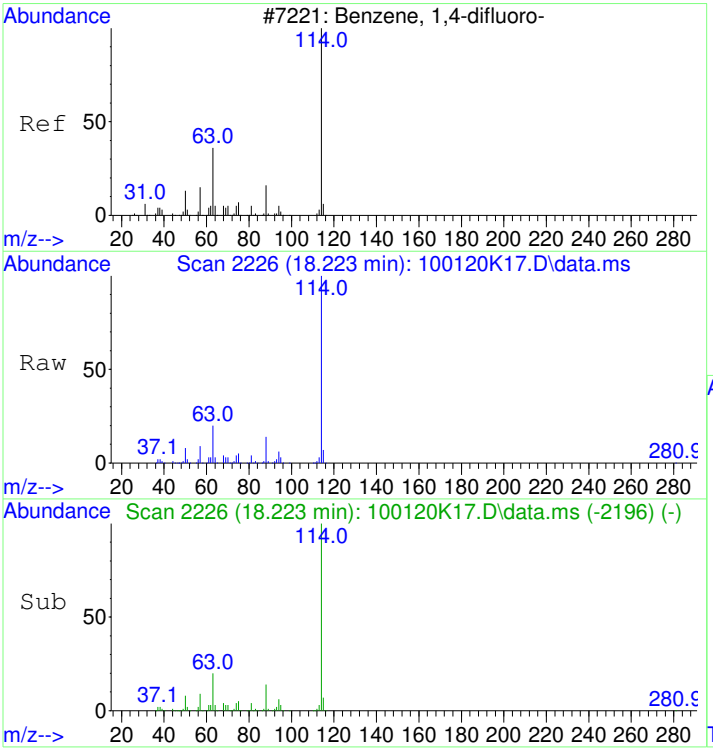


#14
Acetone
Concen: 2.02 ppbv
RT: 11.105 min Scan# 1056
Delta R.T. 0.018 min
Lab File: 100120K17.D
Acq: 1 Oct 2020 11:43 pm

Tgt Ion: 43 Resp: 20137

Ion	Ratio	Lower	Upper
43	100		
58	33.5	13.4	53.4

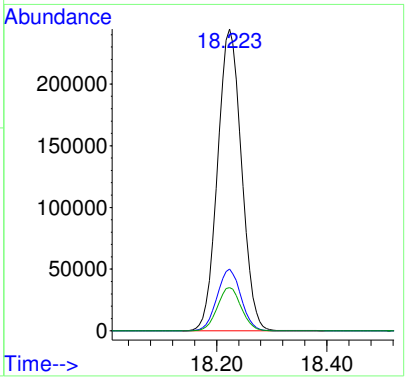


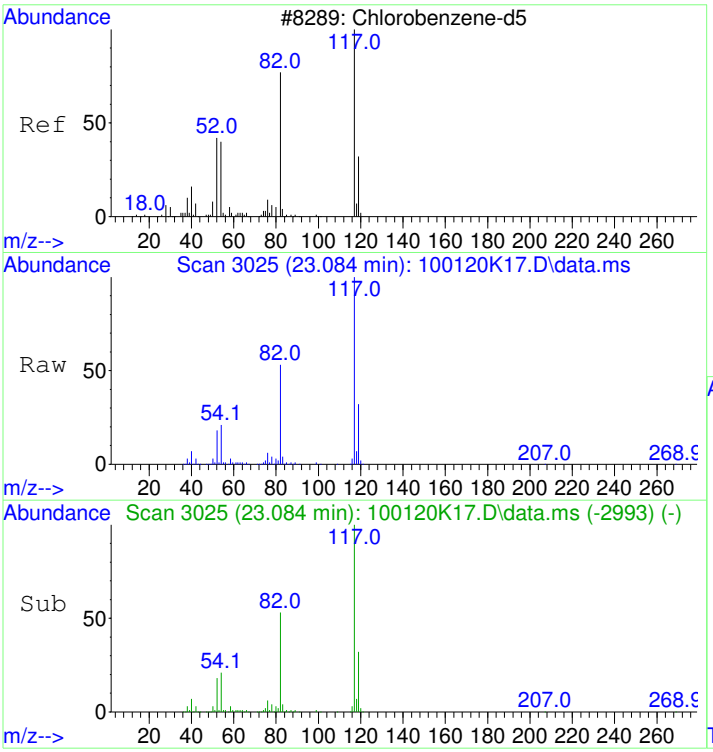


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K17.D
Acq: 1 Oct 2020 11:43 pm

Tgt Ion:114 Resp: 736785

Ion	Ratio	Lower	Upper
114	100		
63	20.3	0.2	40.2
88	14.2	0.0	34.3

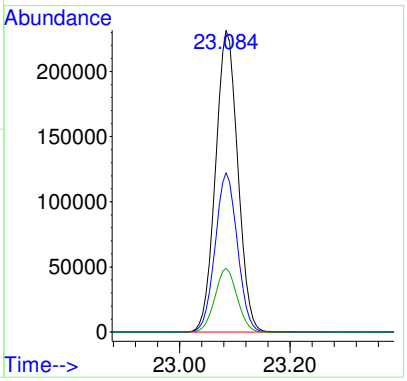




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K17.D
Acq: 1 Oct 2020 11:43 pm

Tgt Ion:117 Resp: 647678

Ion	Ratio	Lower	Upper
117	100		
82	52.6	32.2	72.2
54	21.1	0.6	40.6



B20J001-DUP1

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K18.D
InstName : HP5973K
Acq On : 2 Oct 2020 12:35 am
Operator : LLH
Sample : B20J001-DUP1
Misc : 200ml 2009030-07
ALS Vial : 28 Sample Multiplier: 2

REPORT

Quant Time: Oct 02 08:44:59 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.319	49	241854	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	723475	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	637022	19.60	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	11.093	43	19704	2.00	ppbv	100

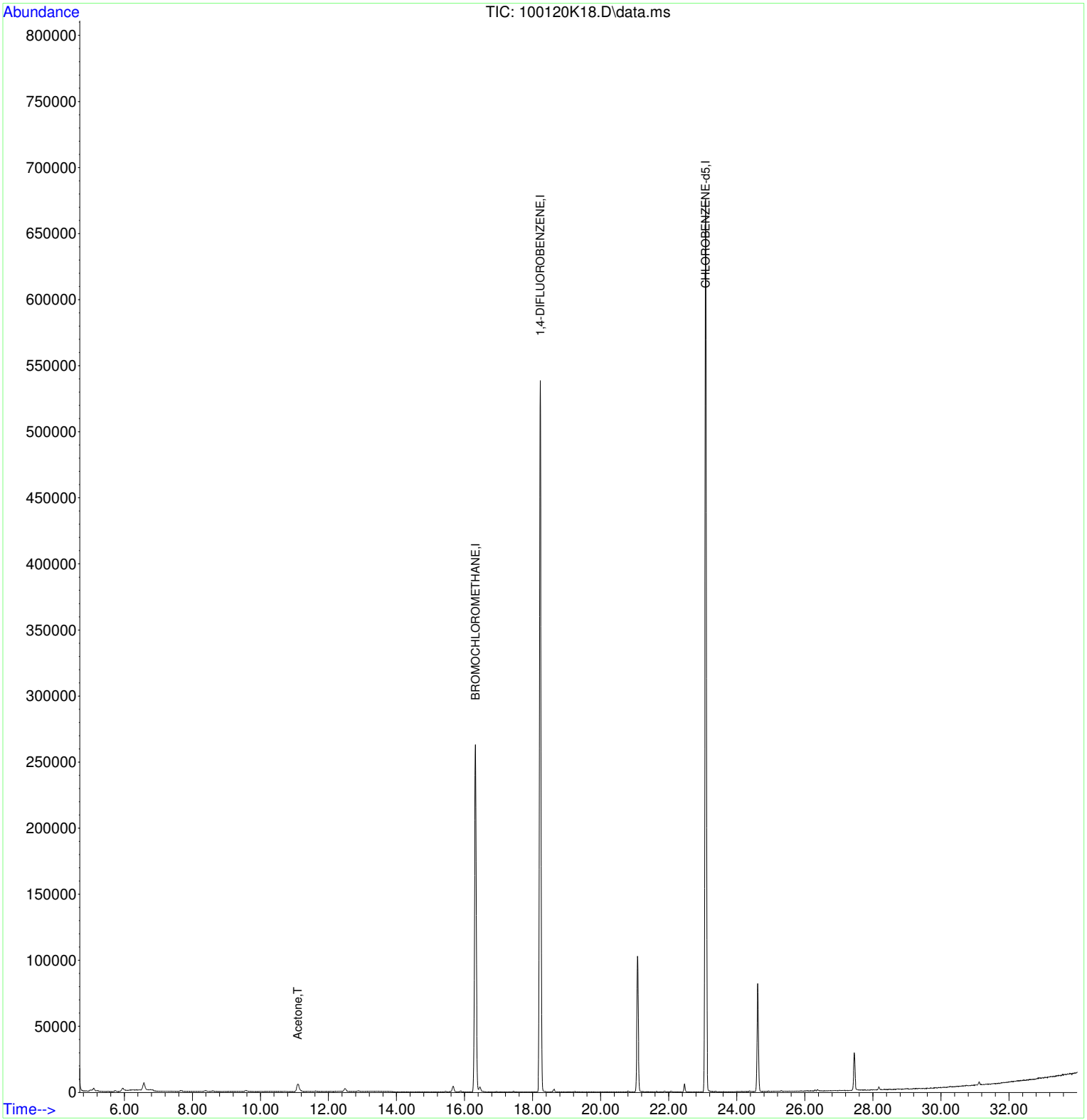
(#) = qualifier out of range (m) = manual integration (+) = signals summed

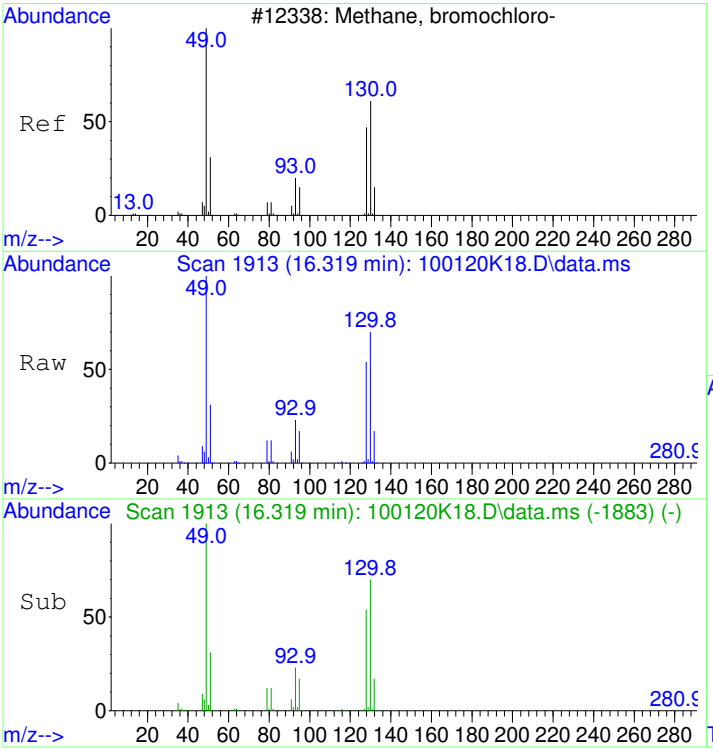
REVIEWED
By LLH at 9:32 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K18.D
InstName : HP5973K
Acq On : 2 Oct 2020 12:35 am
Operator : LLH
Sample : B20J001-DUP1
Misc : 200ml 2009030-07
ALS Vial : 28 Sample Multiplier: 2

Quant Time: Oct 02 08:44:59 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

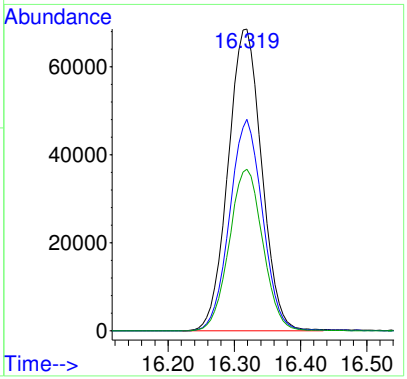


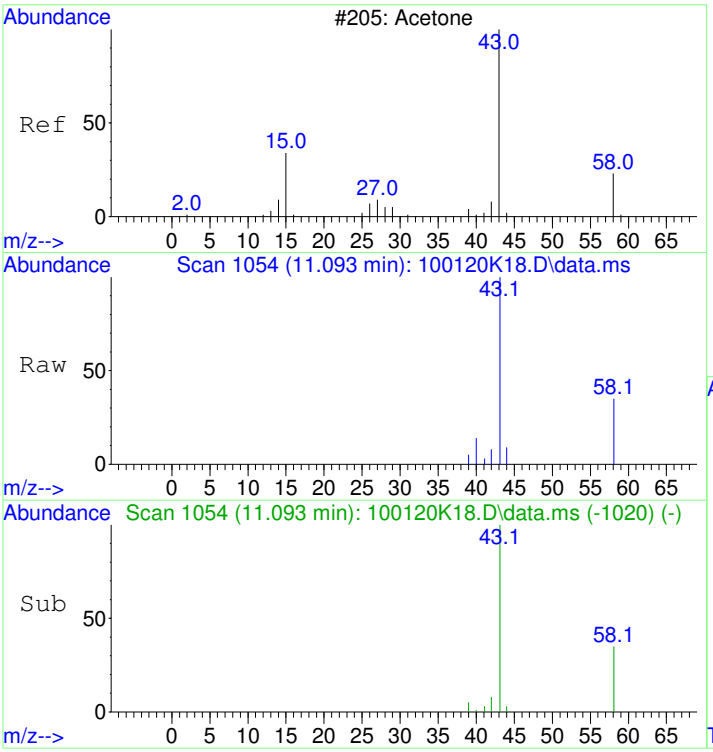


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 100120K18.D
Acq: 2 Oct 2020 12:35 am

Tgt Ion: 49 Resp: 241854

Ion	Ratio	Lower	Upper
49	100		
130	68.6	49.9	89.9
128	53.0	33.7	73.7

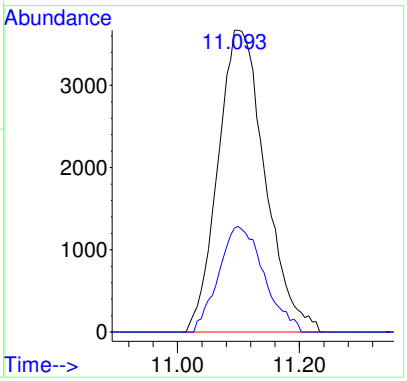


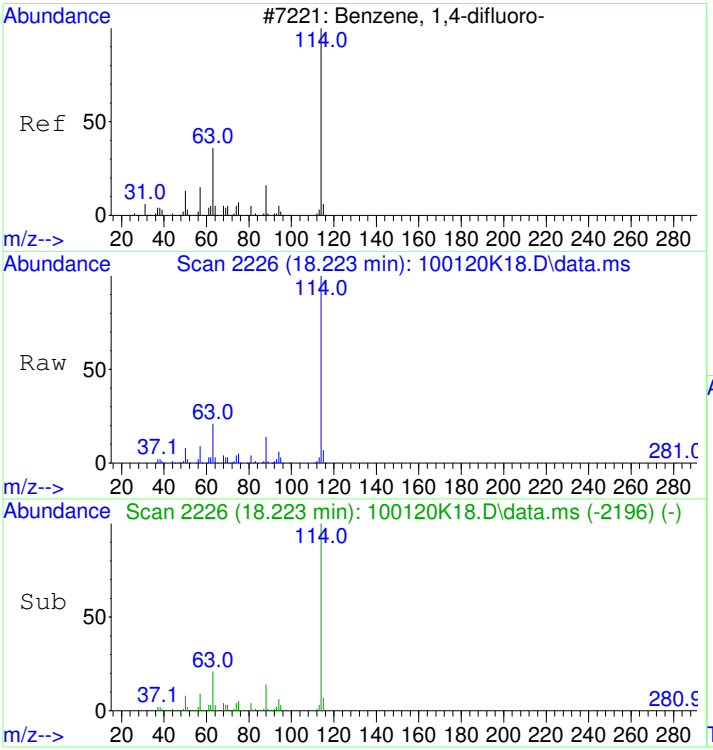


#14
Acetone
Concen: 2.00 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 100120K18.D
Acq: 2 Oct 2020 12:35 am

Tgt Ion: 43 Resp: 19704

Ion	Ratio	Lower	Upper
43	100		
58	33.7	13.4	53.4

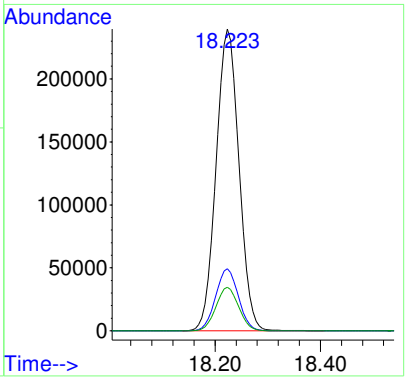


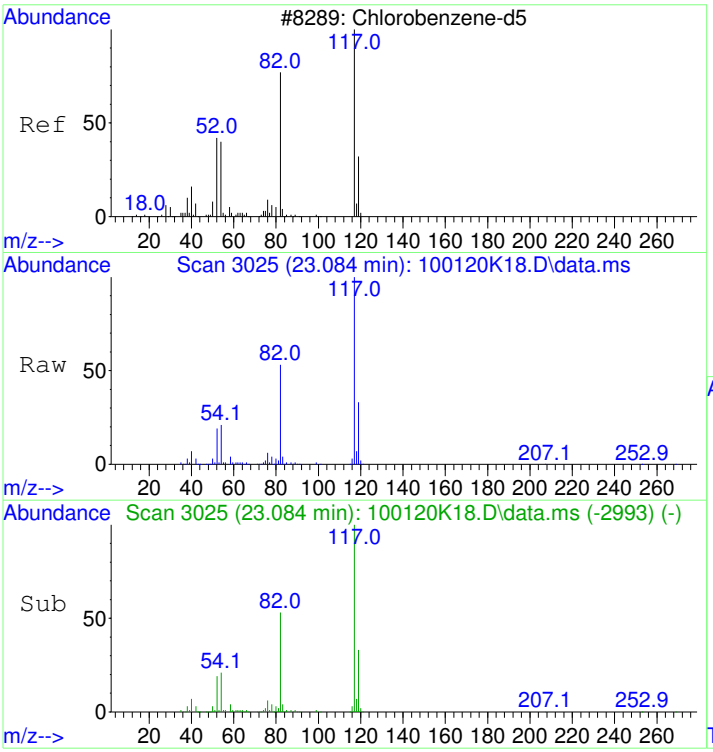


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 100120K18.D
Acq: 2 Oct 2020 12:35 am

Tgt Ion:114 Resp: 723475

Ion	Ratio	Lower	Upper
114	100		
63	20.4	0.2	40.2
88	14.3	0.0	34.3

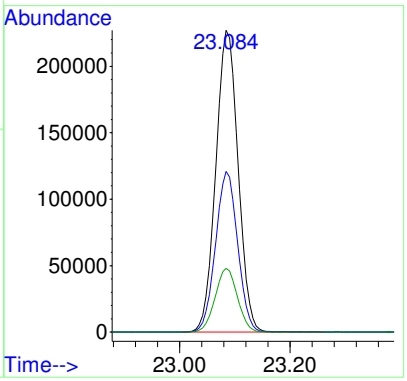




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K18.D
Acq: 2 Oct 2020 12:35 am

Tgt Ion:117 Resp: 637022

Ion	Ratio	Lower	Upper
117	100		
82	52.7	32.2	72.2
54	21.1	0.6	40.6



S20J001-IBL2

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K19.D
InstName : HP5973K
Acq On : 2 Oct 2020 1:27 am
Operator : LLH
Sample : S20J001-IBL2
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 02 08:45:10 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	241493	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	723536	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	631519	19.60 ppbv	0.00

Target Compounds Qvalue

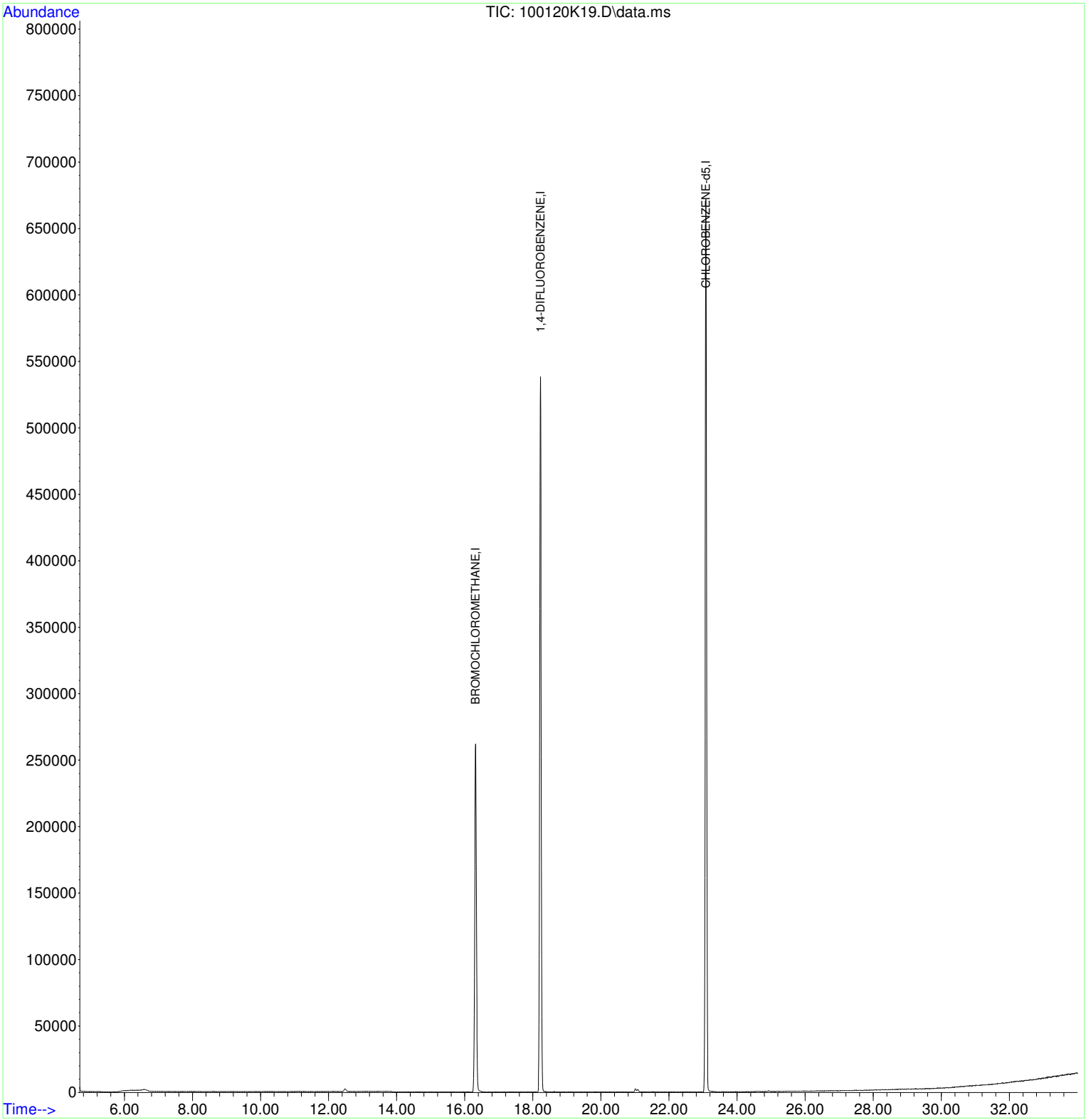
(#) = qualifier out of range (m) = manual integration (+) = signals summed

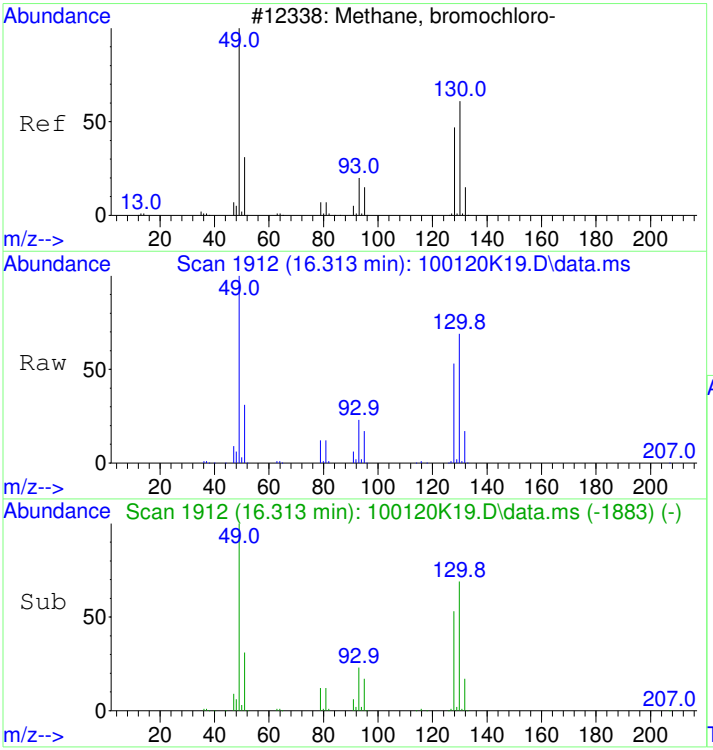
REVIEWED
By LLH at 8:45 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K19.D
InstName : HP5973K
Acq On : 2 Oct 2020 1:27 am
Operator : LLH
Sample : S20J001-IBL2
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 02 08:45:10 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

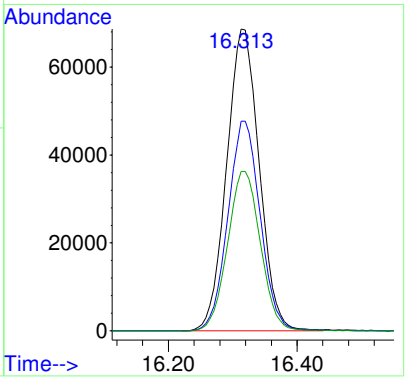


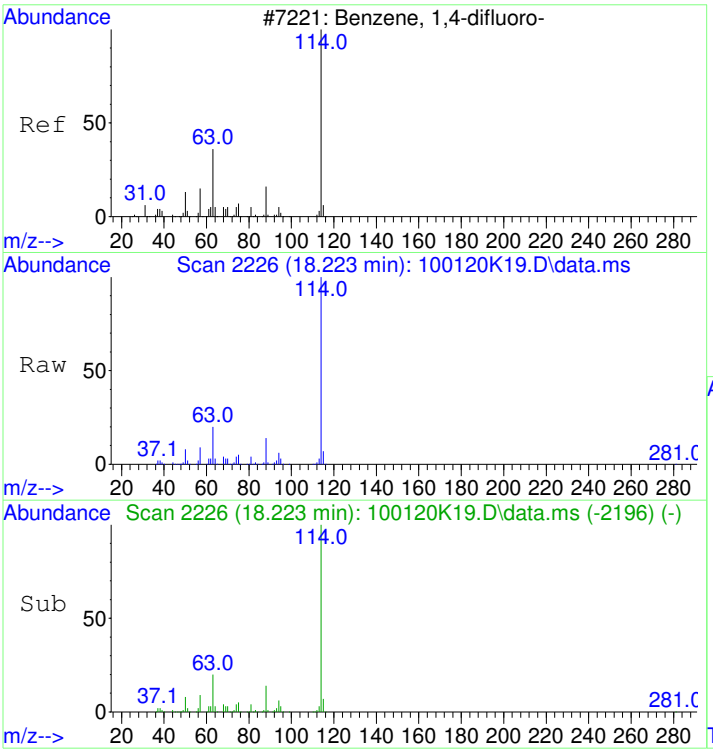


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 100120K19.D
Acq: 2 Oct 2020 1:27 am

Tgt Ion: 49 Resp: 241493

Ion	Ratio	Lower	Upper
49	100		
130	68.8	49.9	89.9
128	52.7	33.7	73.7

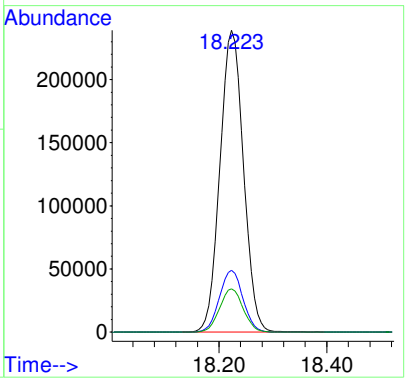


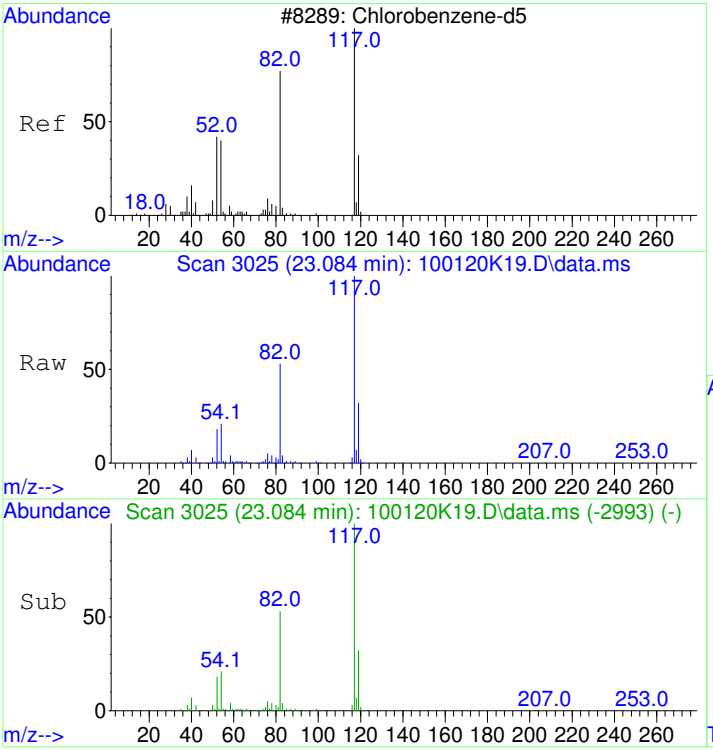


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K19.D
Acq: 2 Oct 2020 1:27 am

Tgt Ion:114 Resp: 723536

Ion	Ratio	Lower	Upper
114	100		
63	20.4	0.2	40.2
88	14.3	0.0	34.3

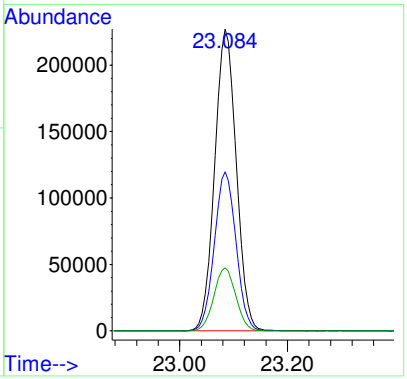




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K19.D
Acq: 2 Oct 2020 1:27 am

Tgt Ion:117 Resp: 631519

Ion	Ratio	Lower	Upper
117	100		
82	52.9	32.2	72.2
54	21.2	0.6	40.6



S20J001-IBL3

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K25.D
InstName : HP5973K
Acq On : 2 Oct 2020 6:40 am
Operator : LLH
Sample : S20J001-IBL3
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 02 09:39:49 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.313	49	255166	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	787326	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	681189	19.60	ppbv	0.00

Target Compounds Qvalue

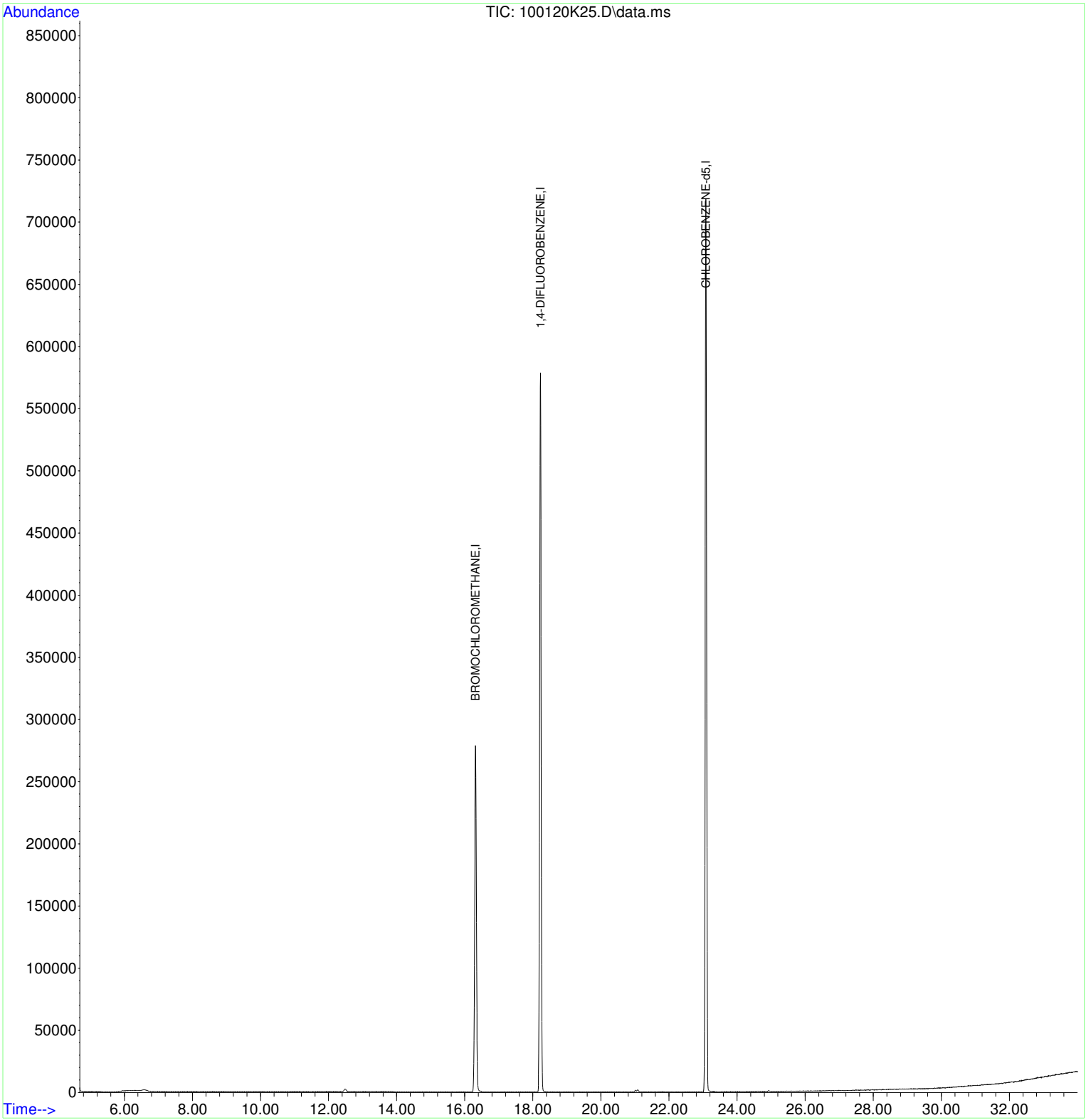
(#) = qualifier out of range (m) = manual integration (+) = signals summed

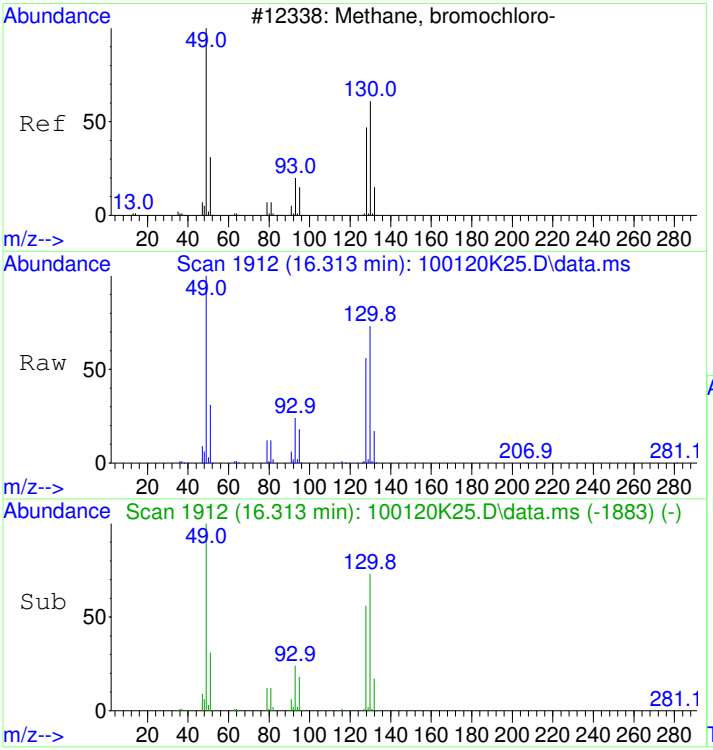
REVIEWED
By LLH at 9:39 am, Oct 02, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\100120K_FSAA\
Data File : 100120K25.D
InstName : HP5973K
Acq On : 2 Oct 2020 6:40 am
Operator : LLH
Sample : S20J001-IBL3
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Oct 02 09:39:49 2020
Quant Method : D:\msdchem\1\2020\METHOD\081020K_TO15AA.M
Quant Title : TO15
QLast Update : Wed Aug 12 16:12:13 2020
Response via : Initial Calibration

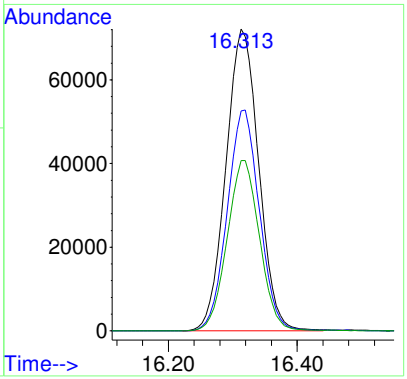


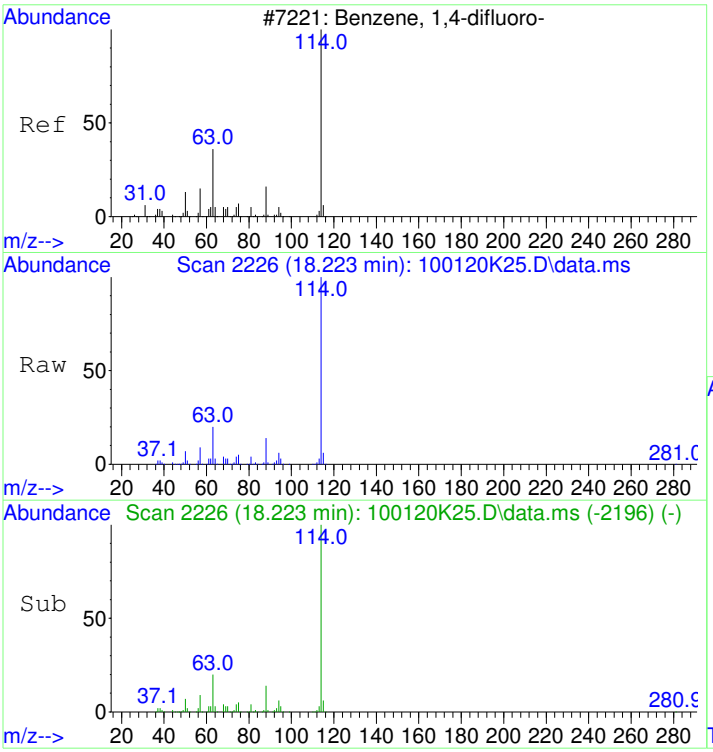


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 100120K25.D
Acq: 2 Oct 2020 6:40 am

Tgt Ion: 49 Resp: 255166

Ion	Ratio	Lower	Upper
49	100		
130	71.7	49.9	89.9
128	55.0	33.7	73.7

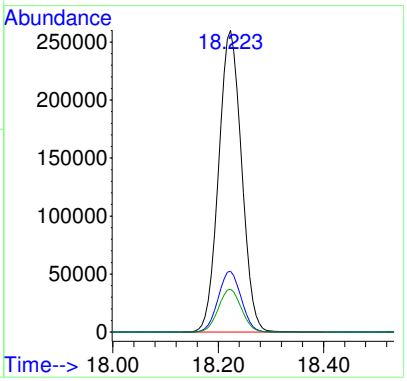


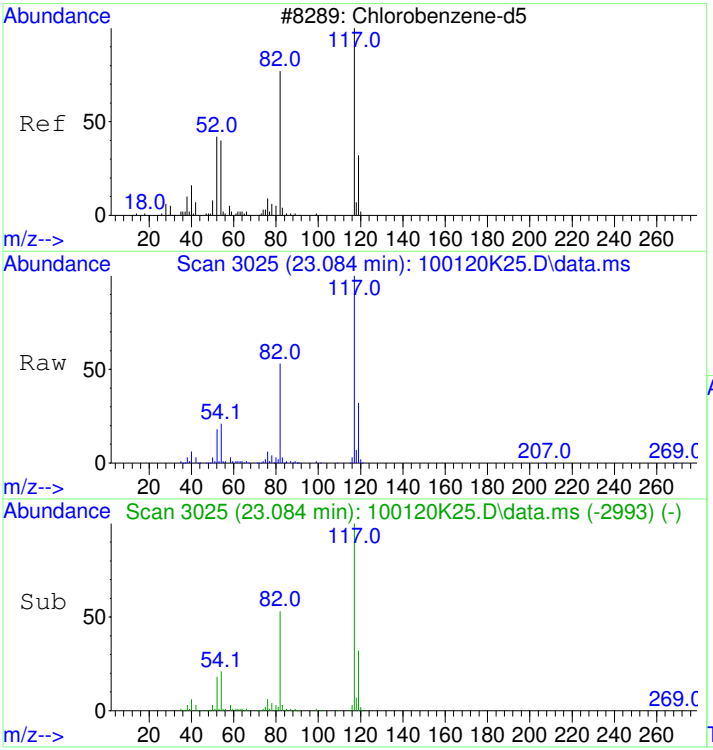


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 100120K25.D
Acq: 2 Oct 2020 6:40 am

Tgt Ion:114 Resp: 787326

Ion	Ratio	Lower	Upper
114	100		
63	20.3	0.2	40.2
88	14.3	0.0	34.3

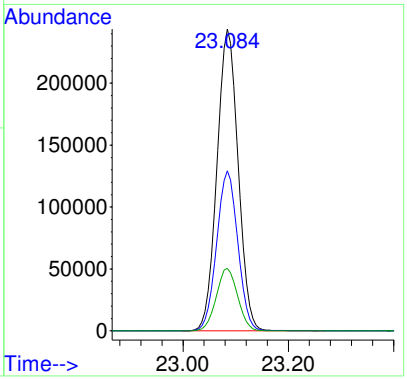




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.006 min
Lab File: 100120K25.D
Acq: 2 Oct 2020 6:40 am

Tgt Ion:117 Resp: 681189

Ion	Ratio	Lower	Upper
117	100		
82	52.9	32.2	72.2
54	20.9	0.6	40.6



Cannister Certifications

2009030-01

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\030320K_FSAA\
Data File : 030320K13.D
InstName : HP5973K
Acq On : 3 Mar 2020 11:26 pm
Operator : LLH
Sample : CAN #896
Misc : 200ml RECERTIFICATION
ALS Vial : 17 Sample Multiplier: 1

CLEAN

Quant Time: Mar 04 09:26:40 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.319	49	348031	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	1166432	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.090	117	1029347	19.60 ppbv	0.00

Target Compounds Qvalue

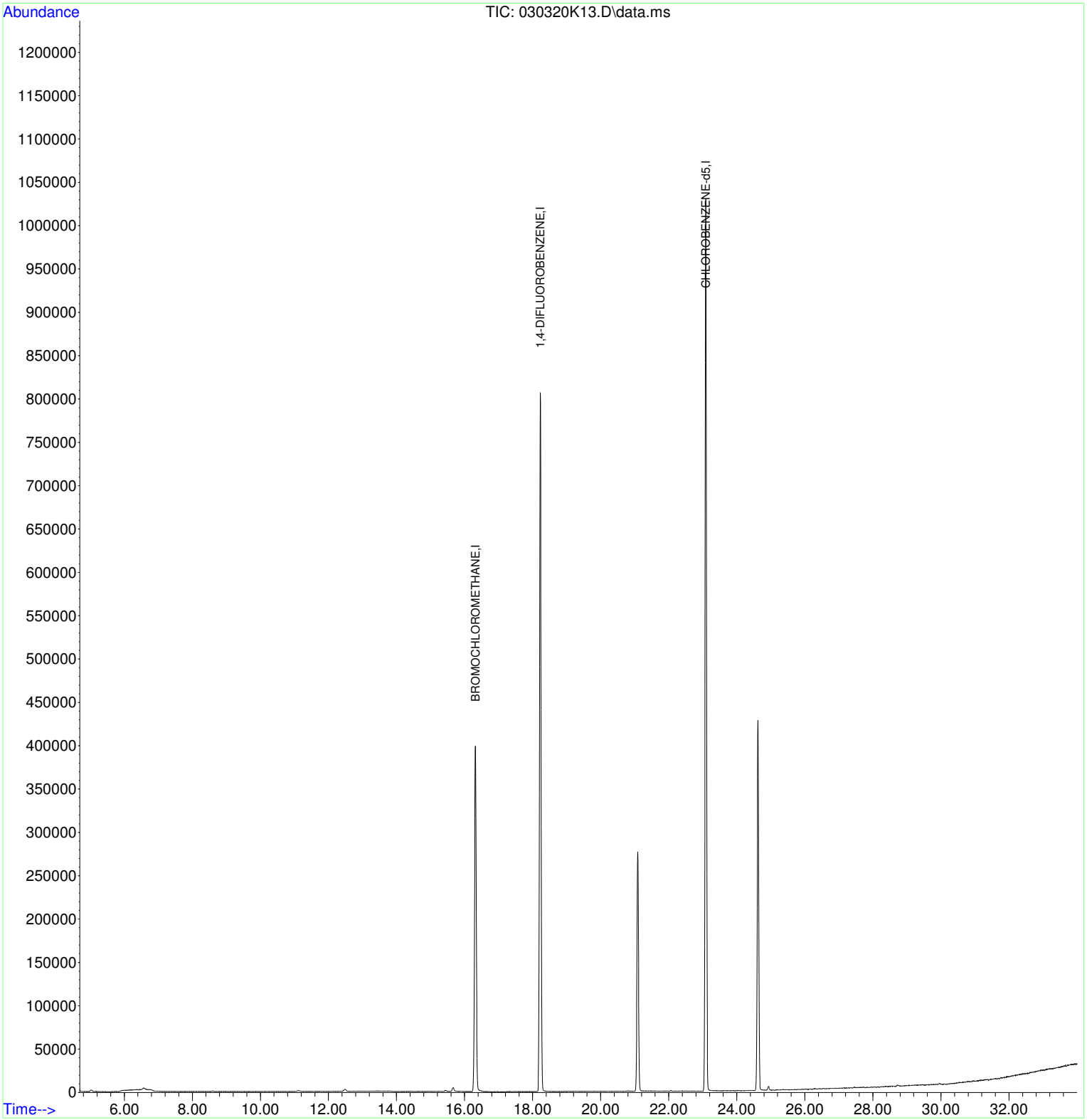
(#) = qualifier out of range (m) = manual integration (+) = signals summed

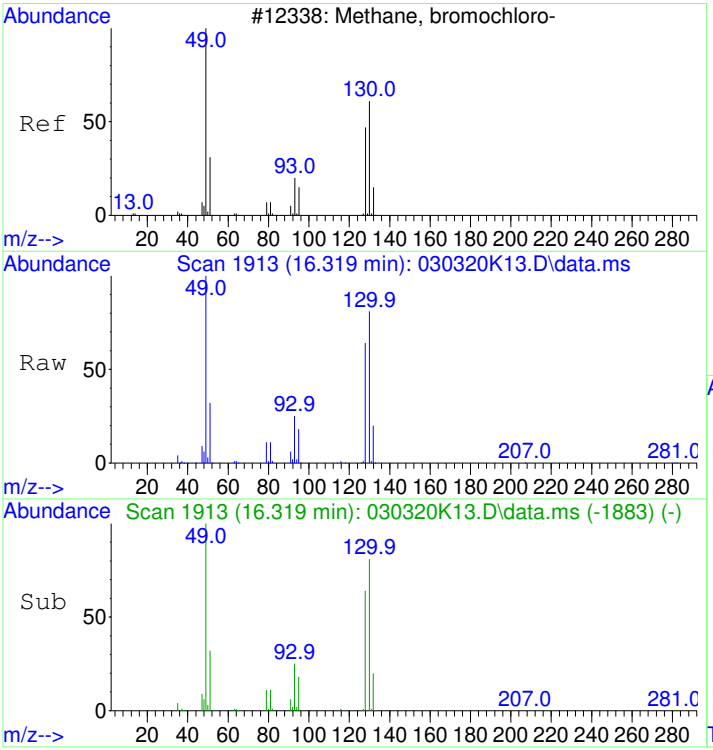
REVIEWED
By LLH at 9:26 am, Mar 04, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\030320K_FSAA\
Data File : 030320K13.D
InstName : HP5973K
Acq On : 3 Mar 2020 11:26 pm
Operator : LLH
Sample : CAN #896
Misc : 200ml RECERTIFICATION
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 04 09:26:40 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

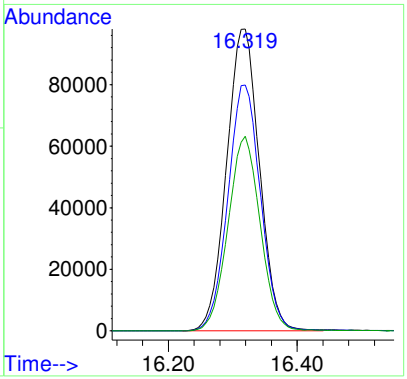


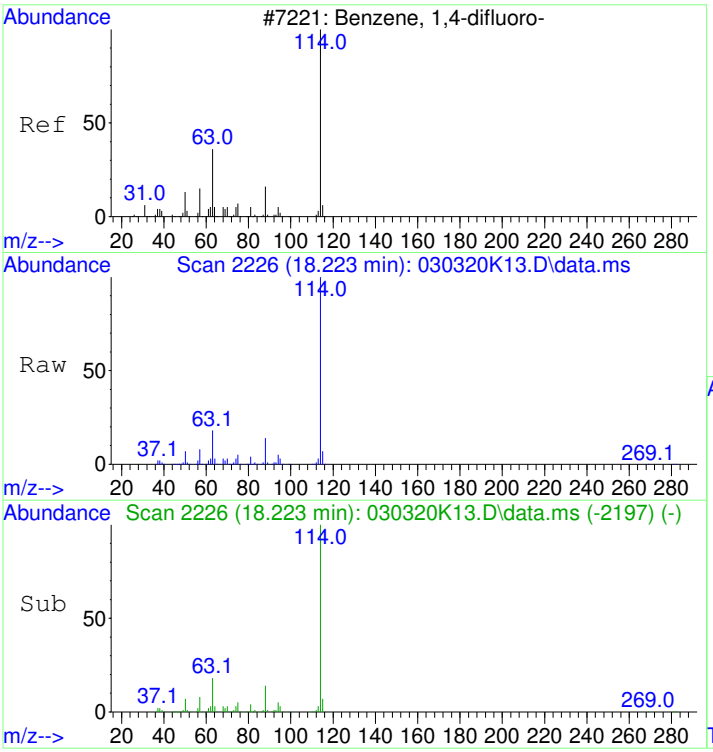


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 030320K13.D
Acq: 3 Mar 2020 11:26 pm

Tgt Ion: 49 Resp: 348031

Ion	Ratio	Lower	Upper
49	100		
130	80.9	61.8	101.8
128	62.3	42.9	82.9

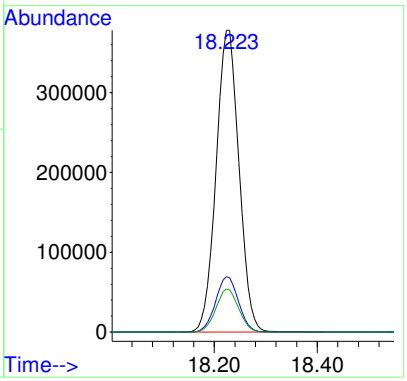


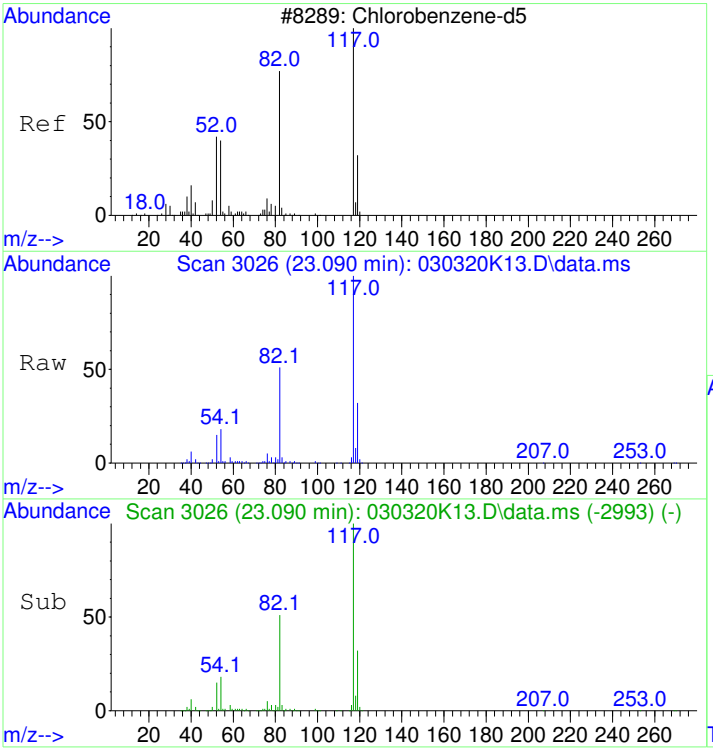


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.006 min
Lab File: 030320K13.D
Acq: 3 Mar 2020 11:26 pm

Tgt Ion:114 Resp: 1166432

Ion	Ratio	Lower	Upper
114	100		
63	18.3	0.0	38.4
88	14.2	0.0	34.4

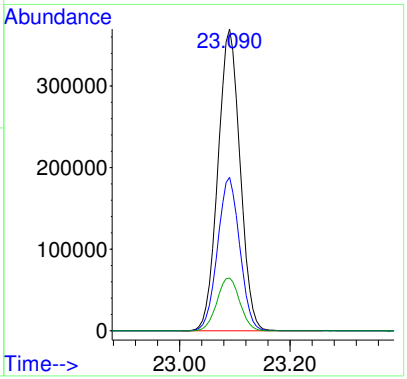




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.000 min
Lab File: 030320K13.D
Acq: 3 Mar 2020 11:26 pm

Tgt Ion:117 Resp: 1029347

Ion	Ratio	Lower	Upper
117	100		
82	50.9	30.7	70.7
54	18.2	0.0	37.8



2009030-02

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\051920K_FSAA\
Data File : 051920K07.D
InstName : HP5973K
Acq On : 19 May 2020 4:23 pm
Operator : EM
Sample : CAN #630
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

CLEAN

Quant Time: May 21 09:25:35 2020
Quant Method : D:\msdchem\1\2020\METHOD\040120K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 02 09:57:00 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	240635	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	744033	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	667311	19.60 ppbv	0.00

Target Compounds Qvalue

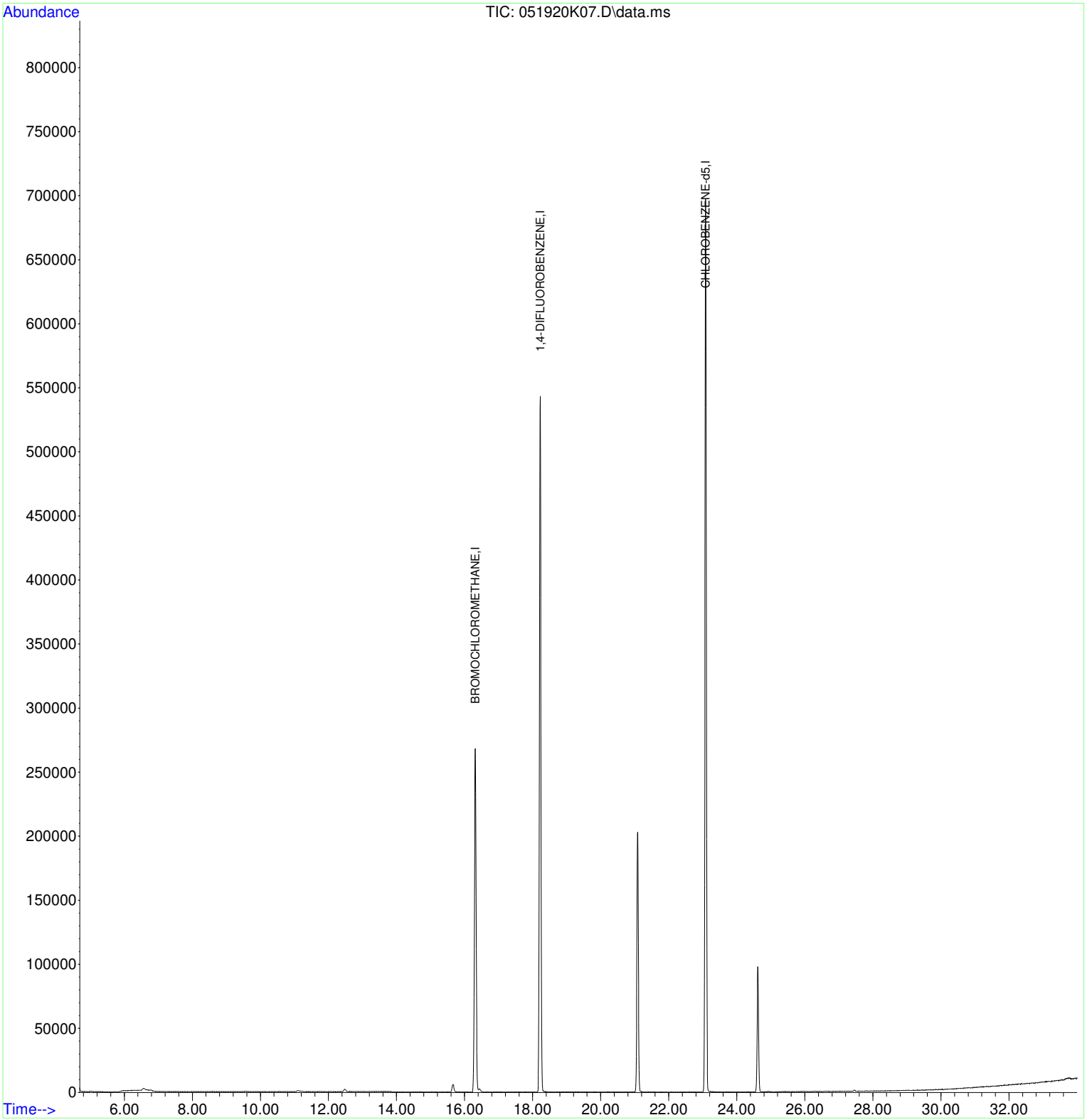
(#) = qualifier out of range (m) = manual integration (+) = signals summed

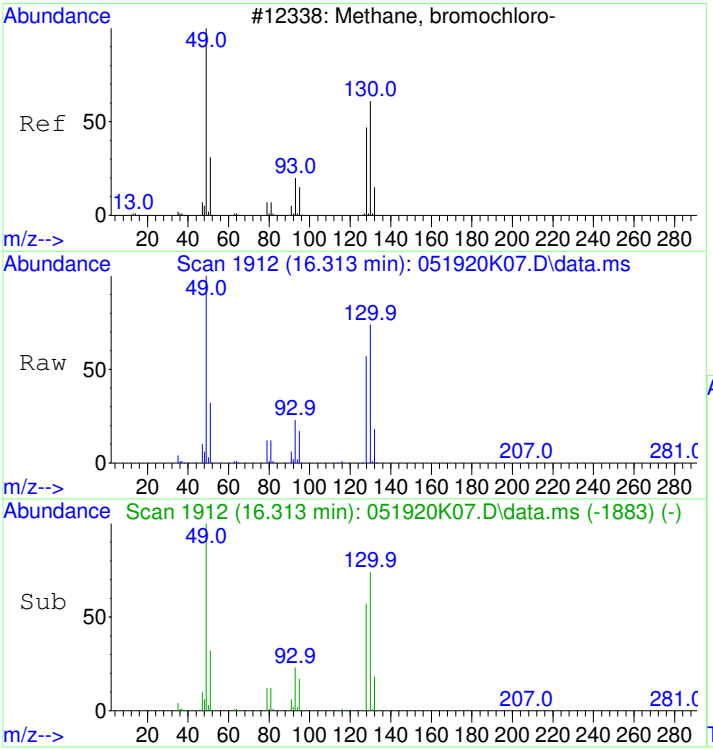
REVIEWED
By EM at 9:57 am, May 21, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\051920K_FSAA\
Data File : 051920K07.D
InstName : HP5973K
Acq On : 19 May 2020 4:23 pm
Operator : EM
Sample : CAN #630
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 21 09:25:35 2020
Quant Method : D:\msdchem\1\2020\METHOD\040120K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 02 09:57:00 2020
Response via : Initial Calibration

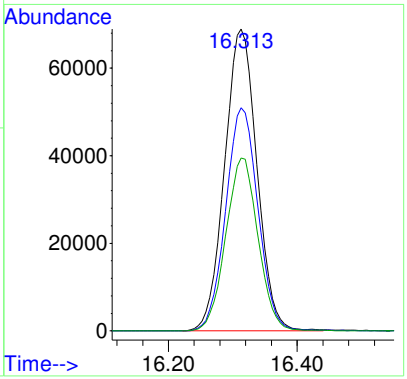


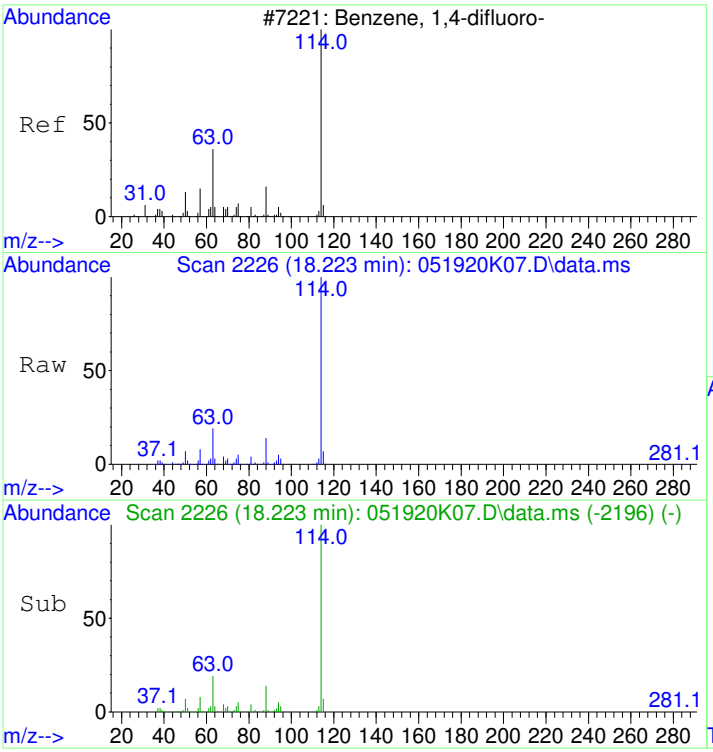


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 051920K07.D
Acq: 19 May 2020 4:23 pm

Tgt Ion: 49 Resp: 240635

Ion	Ratio	Lower	Upper
49	100		
130	73.8	51.1	91.1
128	56.6	35.0	75.0

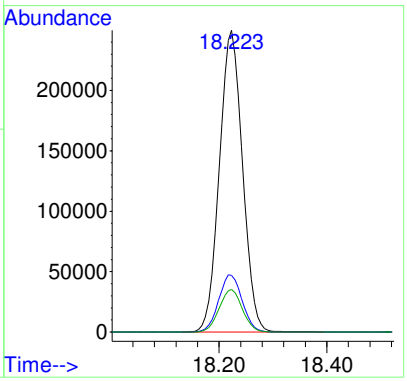


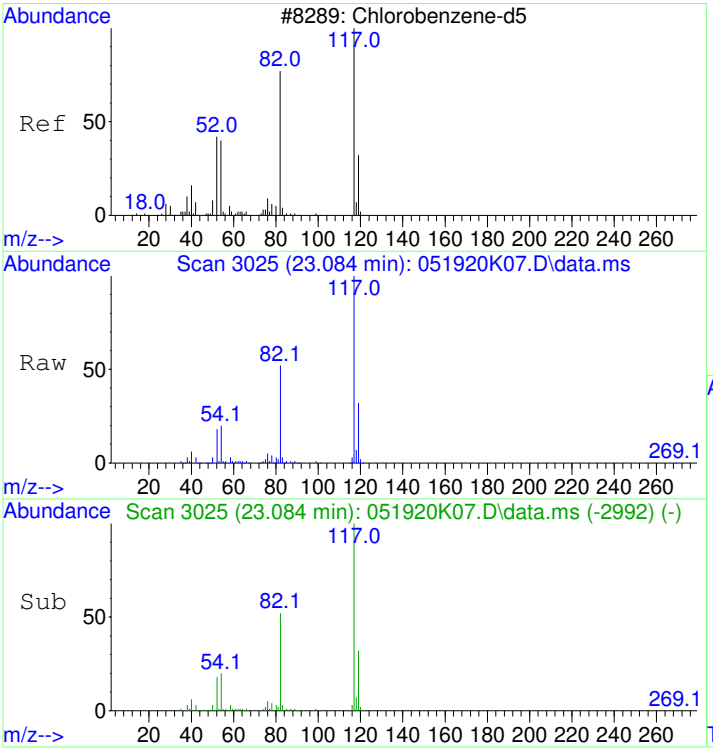


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 051920K07.D
Acq: 19 May 2020 4:23 pm

Tgt Ion:114 Resp: 744033

Ion	Ratio	Lower	Upper
114	100		
63	19.2	0.0	39.6
88	14.1	0.0	34.5

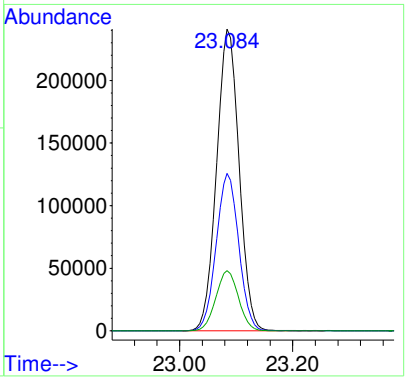




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 051920K07.D
Acq: 19 May 2020 4:23 pm

Tgt Ion:117 Resp: 667311

Ion	Ratio	Lower	Upper
117	100		
82	52.1	32.5	72.5
54	20.0	0.0	39.6



2009030-03

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\030320K_FSAA\
Data File : 030320K16.D
InstName : HP5973K
Acq On : 4 Mar 2020 2:04 am
Operator : LLH
Sample : CAN #1991
Misc : 200ml RECERTIFICATION
ALS Vial : 10 Sample Multiplier: 1

CLEAN

Quant Time: Mar 04 09:27:38 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.319	49	353094	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.229	114	1182333	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.090	117	1046279	19.60 ppbv	0.00

Target Compounds Qvalue

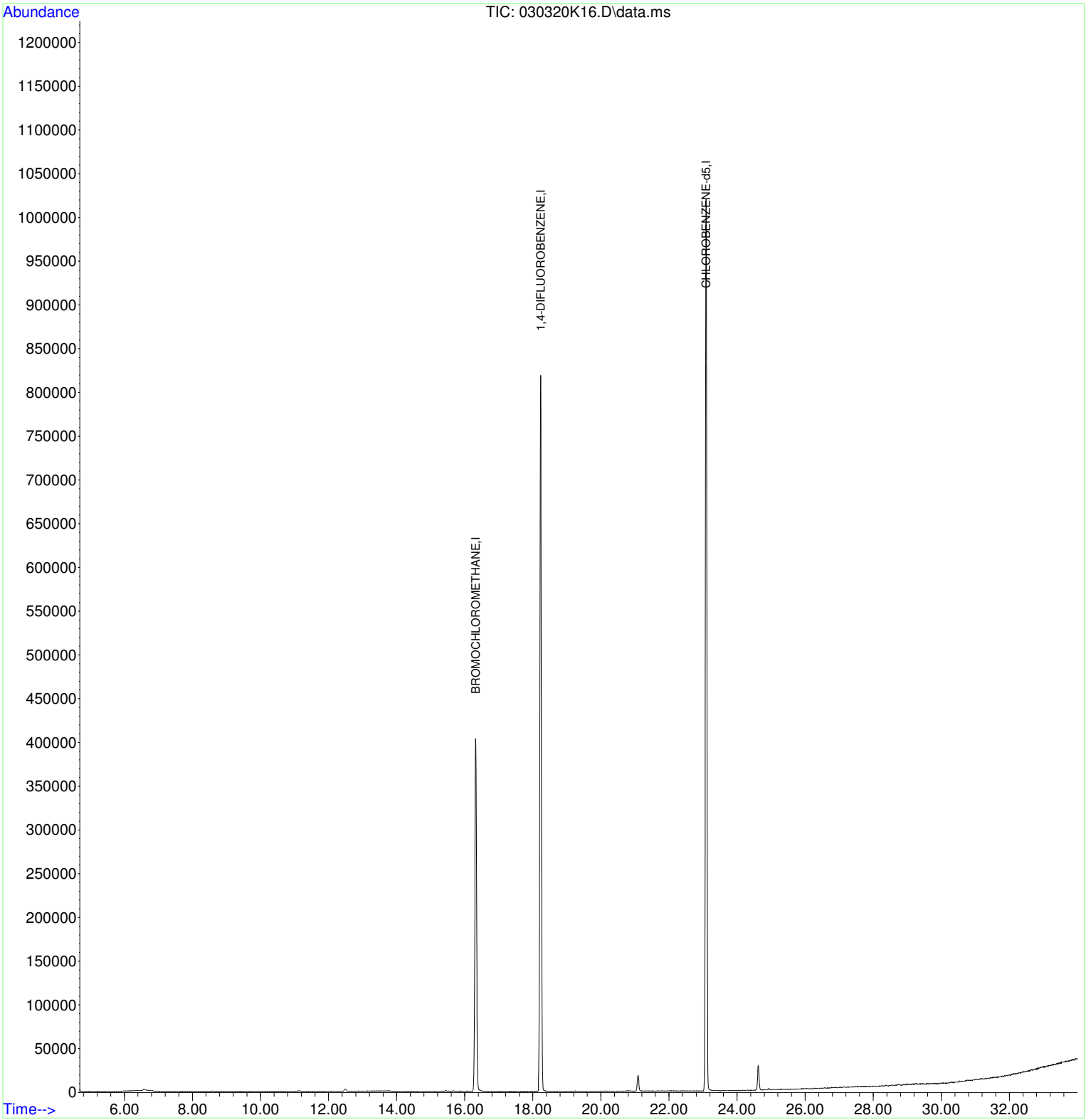
(#) = qualifier out of range (m) = manual integration (+) = signals summed

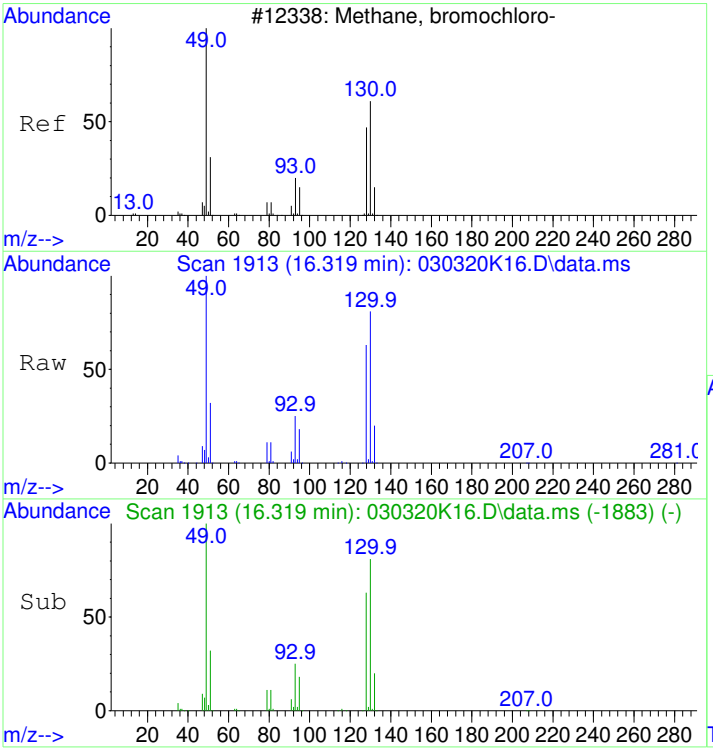
REVIEWED
By LLH at 9:27 am, Mar 04, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\030320K_FSAA\
Data File : 030320K16.D
InstName : HP5973K
Acq On : 4 Mar 2020 2:04 am
Operator : LLH
Sample : CAN #1991
Misc : 200ml RECERTIFICATION
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 04 09:27:38 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

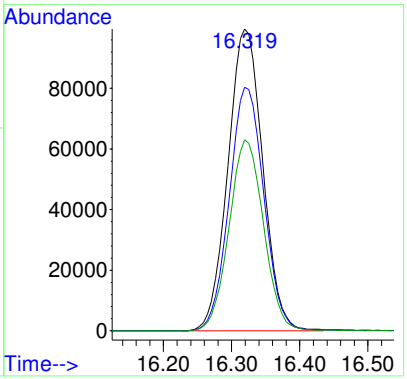


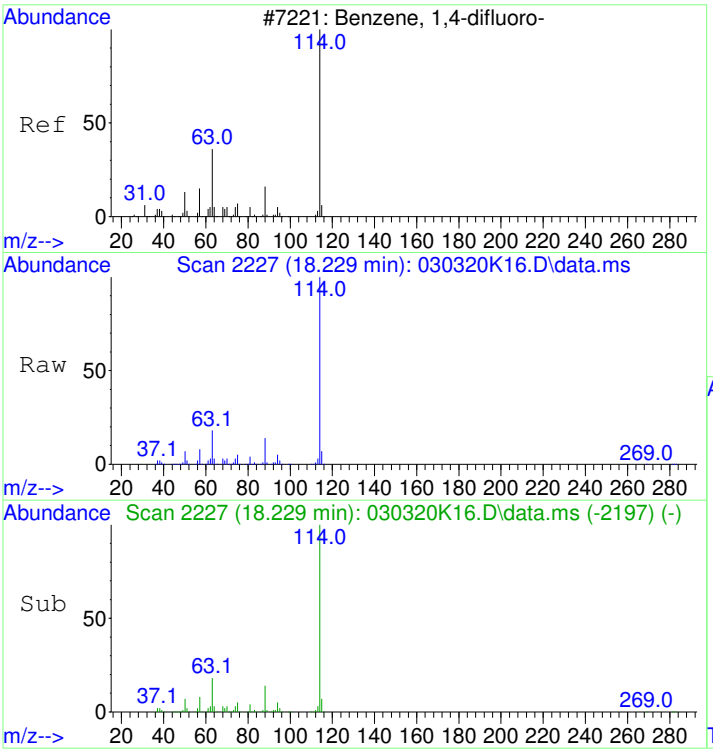


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 030320K16.D
Acq: 4 Mar 2020 2:04 am

Tgt Ion: 49 Resp: 353094

Ion	Ratio	Lower	Upper
49	100		
130	80.3	61.8	101.8
128	62.0	42.9	82.9

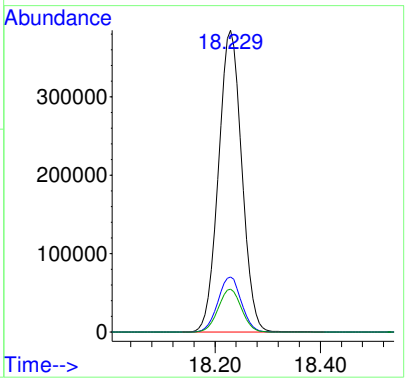


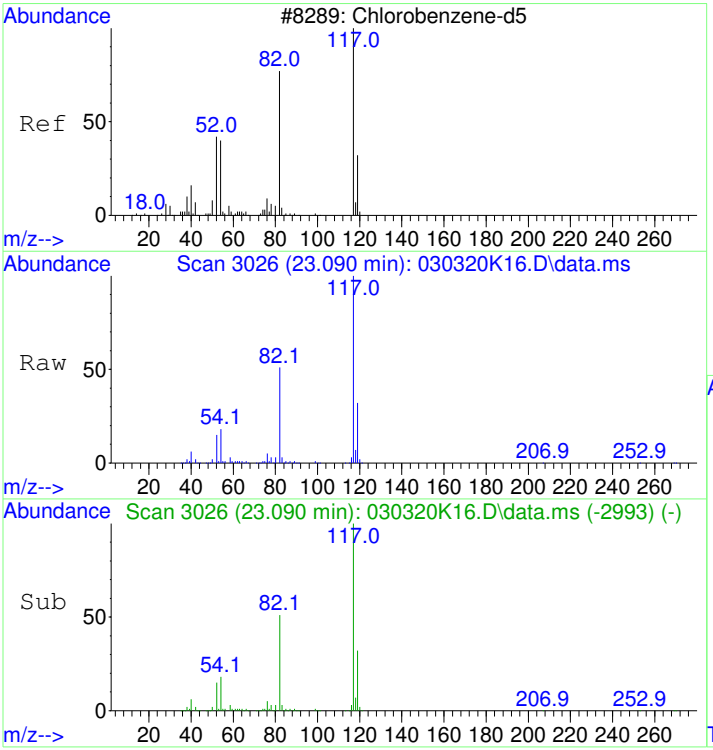


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.229 min Scan# 2227
Delta R.T. 0.000 min
Lab File: 030320K16.D
Acq: 4 Mar 2020 2:04 am

Tgt Ion:114 Resp: 1182333

Ion	Ratio	Lower	Upper
114	100		
63	18.4	0.0	38.4
88	14.2	0.0	34.4

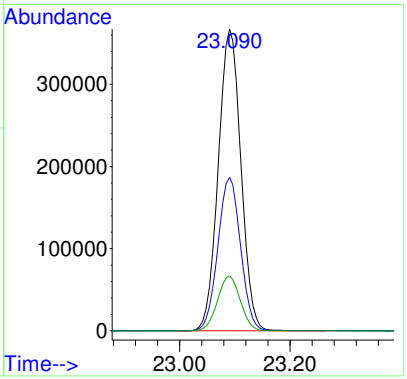




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.000 min
Lab File: 030320K16.D
Acq: 4 Mar 2020 2:04 am

Tgt Ion:117 Resp: 1046279

Ion	Ratio	Lower	Upper
117	100		
82	51.0	30.7	70.7
54	18.3	0.0	37.8



2009030-04

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\052120K_FSAA\
Data File : 052120K15.D
InstName : HP5973K
Acq On : 21 May 2020 11:29 pm
Operator : EM
Sample : CAN #1587
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: May 26 09:18:49 2020
Quant Method : D:\msdchem\1\2020\METHOD\040120K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 02 09:57:00 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	243524	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	741698	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.090	117	665827	19.60 ppbv	0.00

Target Compounds Qvalue

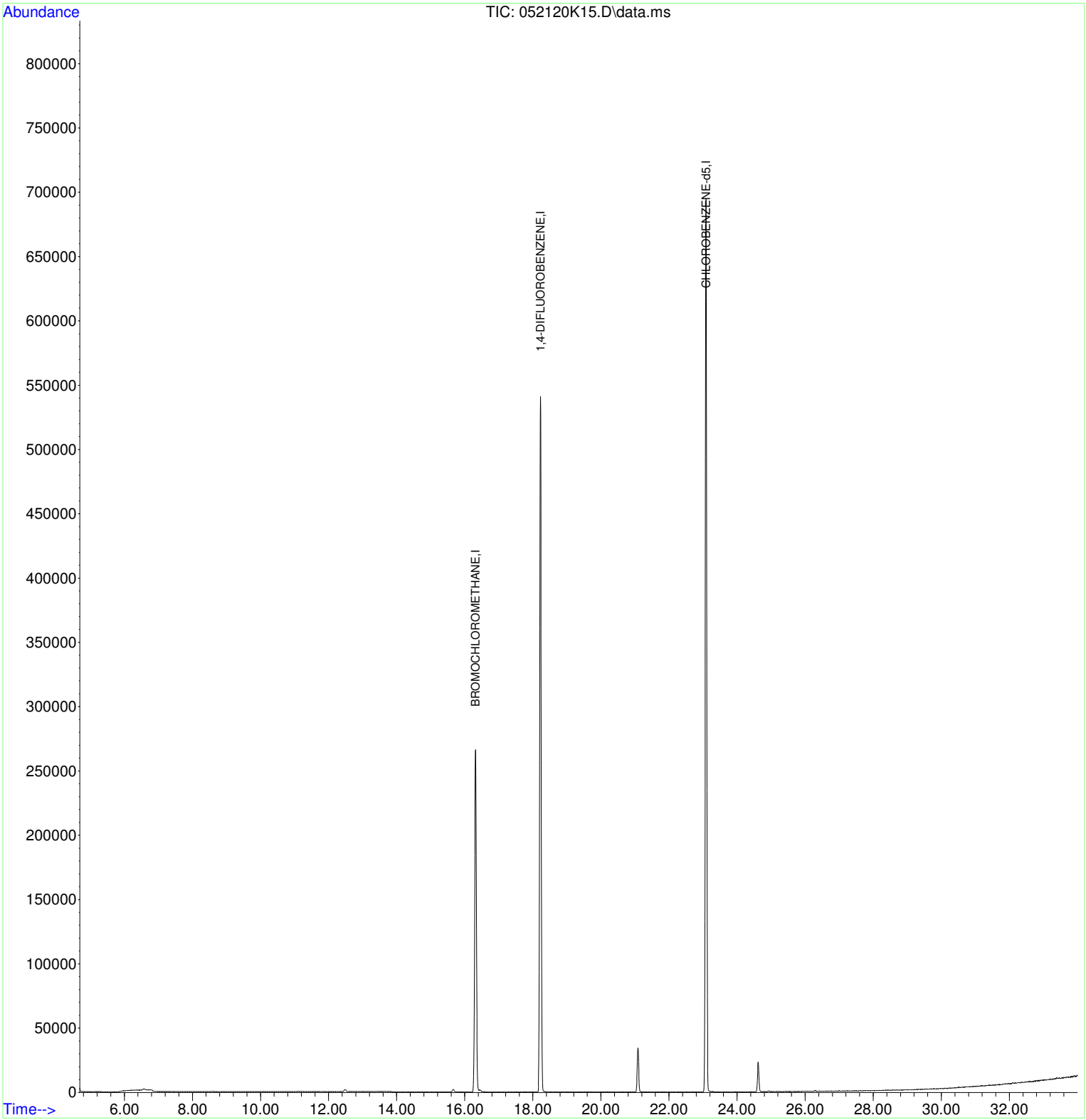
(#) = qualifier out of range (m) = manual integration (+) = signals summed

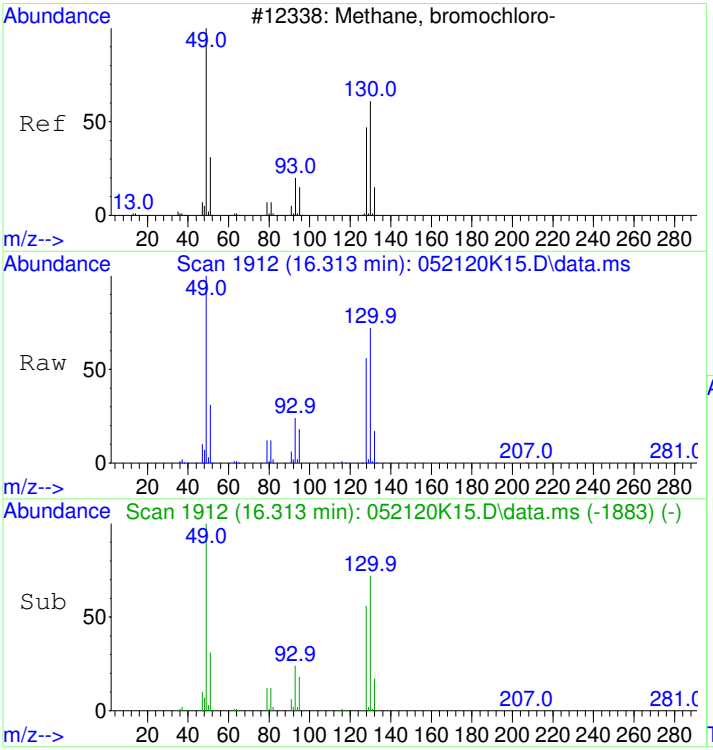
REVIEWED
By EM at 9:23 am, May 26, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\052120K_FSAA\
Data File : 052120K15.D
InstName : HP5973K
Acq On : 21 May 2020 11:29 pm
Operator : EM
Sample : CAN #1587
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 26 09:18:49 2020
Quant Method : D:\msdchem\1\2020\METHOD\040120K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 02 09:57:00 2020
Response via : Initial Calibration

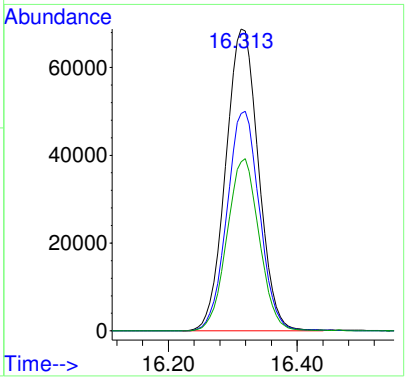


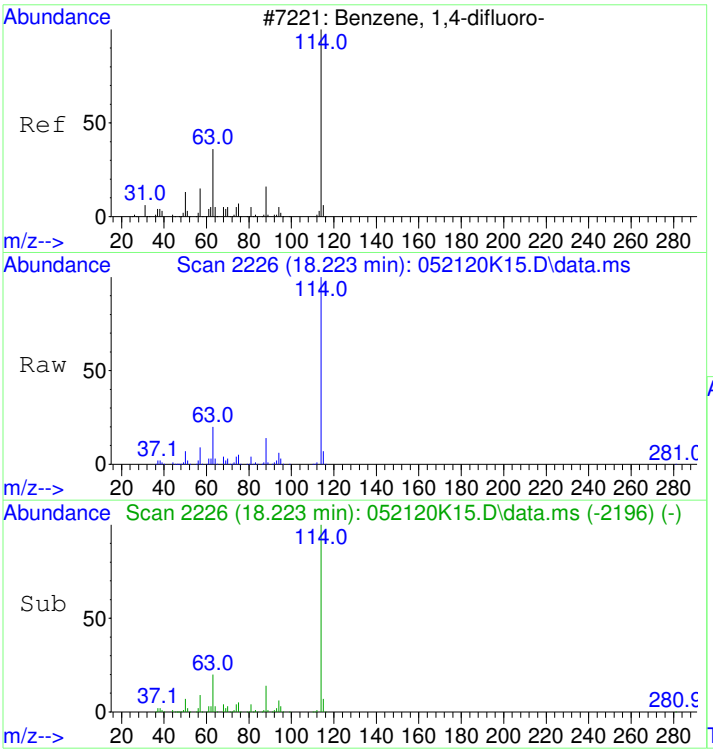


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 052120K15.D
Acq: 21 May 2020 11:29 pm

Tgt Ion: 49 Resp: 243524

Ion	Ratio	Lower	Upper
49	100		
130	72.1	51.1	91.1
128	55.6	35.0	75.0

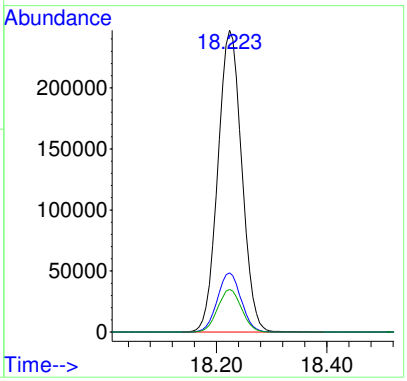


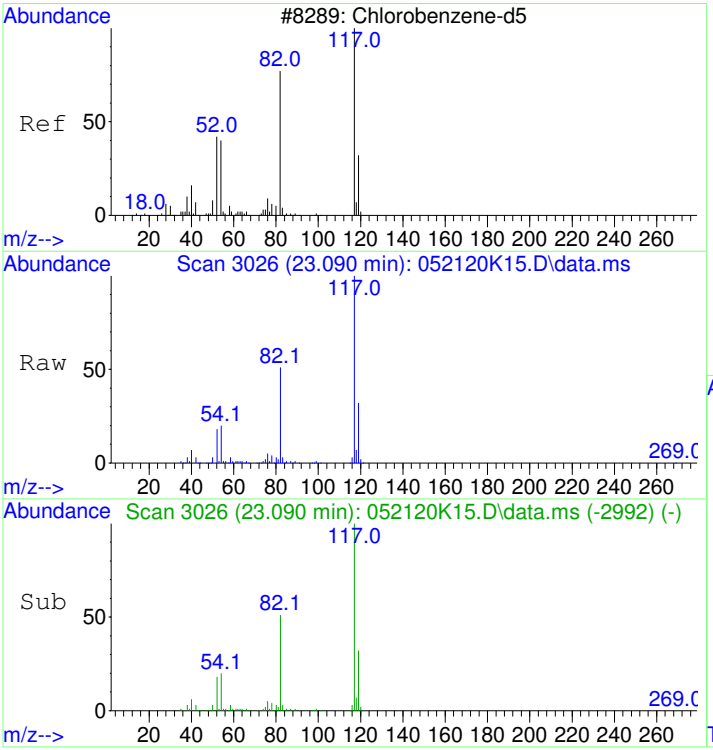


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 052120K15.D
Acq: 21 May 2020 11:29 pm

Tgt Ion:114 Resp: 741698

Ion	Ratio	Lower	Upper
114	100		
63	19.5	0.0	39.6
88	14.1	0.0	34.5

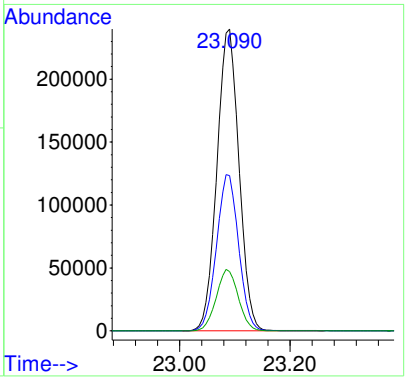




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.006 min
Lab File: 052120K15.D
Acq: 21 May 2020 11:29 pm

Tgt Ion:117 Resp: 665827

Ion	Ratio	Lower	Upper
117	100		
82	51.8	32.5	72.5
54	20.3	0.0	39.6



2009030-05

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2019\DATA\111519K_FSAA\
Data File : 111519K17.D
InstName : HP5973K
Acq On : 16 Nov 2019 12:57 am
Operator : LLH
Sample : CAN #887
Misc : 200ml RECERTIFICATION
ALS Vial : 17 Sample Multiplier: 1

CLEAN

Quant Time: Nov 18 09:42:12 2019
Quant Method : D:\msdchem\1\2019\METHOD\110119K_TO15AA.M
Quant Title : TO15
QLast Update : Mon Nov 04 09:55:10 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.316	49	239625	20.00 ppbv	-0.01
32) 1,4-DIFLUOROBENZENE	18.227	114	669990	20.00 ppbv	-0.02
43) CHLOROBENZENE-d5	23.093	117	586003	22.00 ppbv	0.00

Target Compounds	Qvalue

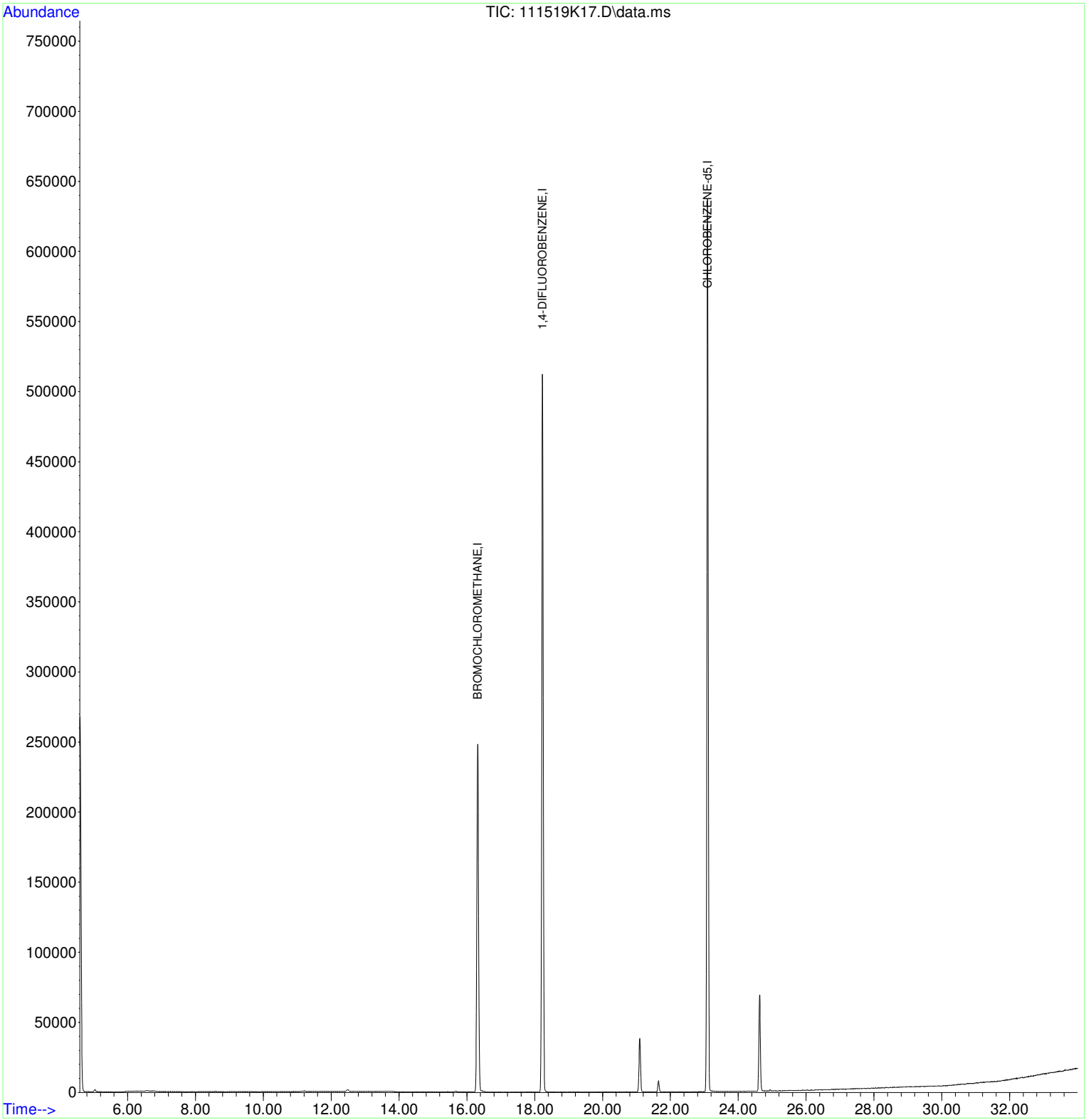
(#) = qualifier out of range (m) = manual integration (+) = signals summed

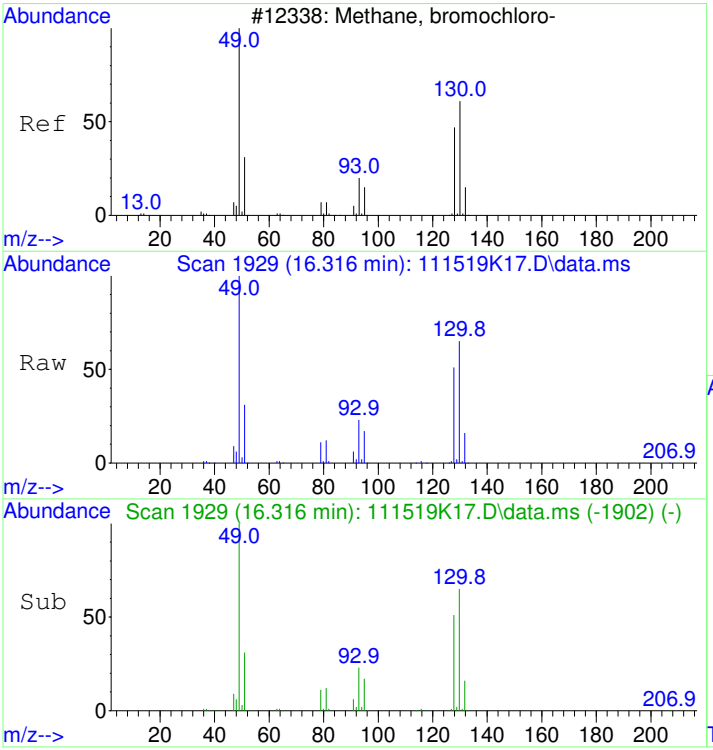
REVIEWED
By LLH at 9:42 am, Nov 18, 2019

Table of Contents

Data Path : D:\msdchem\1\2019\DATA\111519K_FSAA\
Data File : 111519K17.D
InstName : HP5973K
Acq On : 16 Nov 2019 12:57 am
Operator : LLH
Sample : CAN #887
Misc : 200ml RECERTIFICATION
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 18 09:42:12 2019
Quant Method : D:\msdchem\1\2019\METHOD\110119K_TO15AA.M
Quant Title : TO15
QLast Update : Mon Nov 04 09:55:10 2019
Response via : Initial Calibration

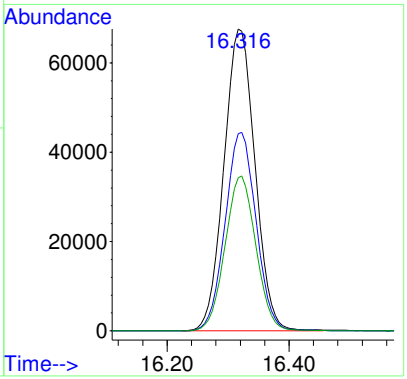


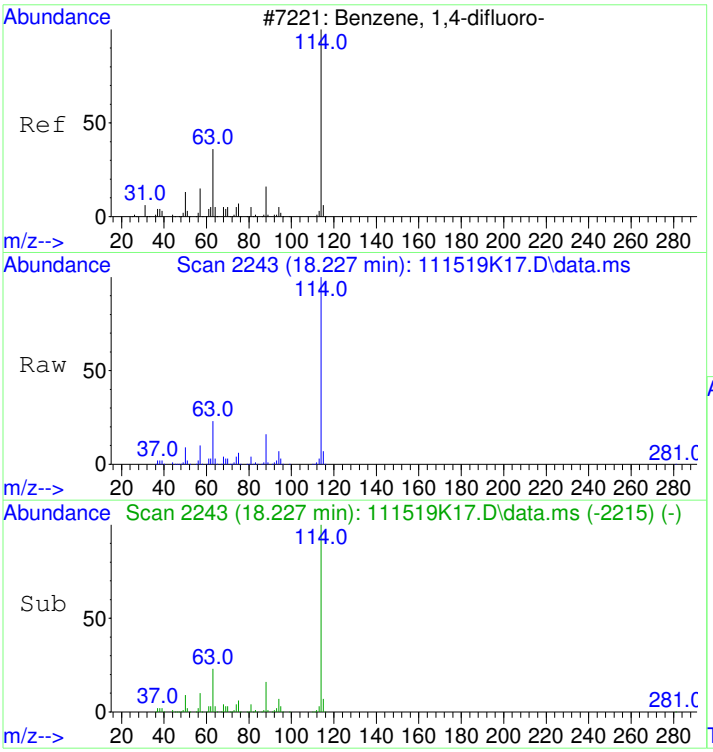


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 16.316 min Scan# 1929
Delta R.T. -0.015 min
Lab File: 111519K17.D
Acq: 16 Nov 2019 12:57 am

Tgt Ion: 49 Resp: 239625

Ion	Ratio	Lower	Upper
49	100		
130	65.4	54.8	94.8
128	50.8	38.0	78.0

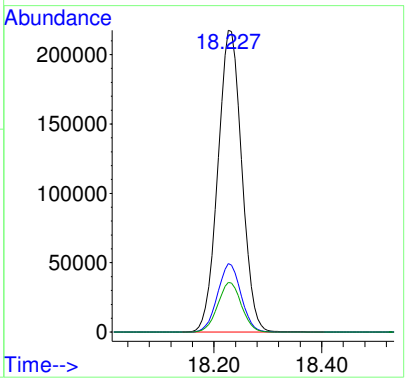


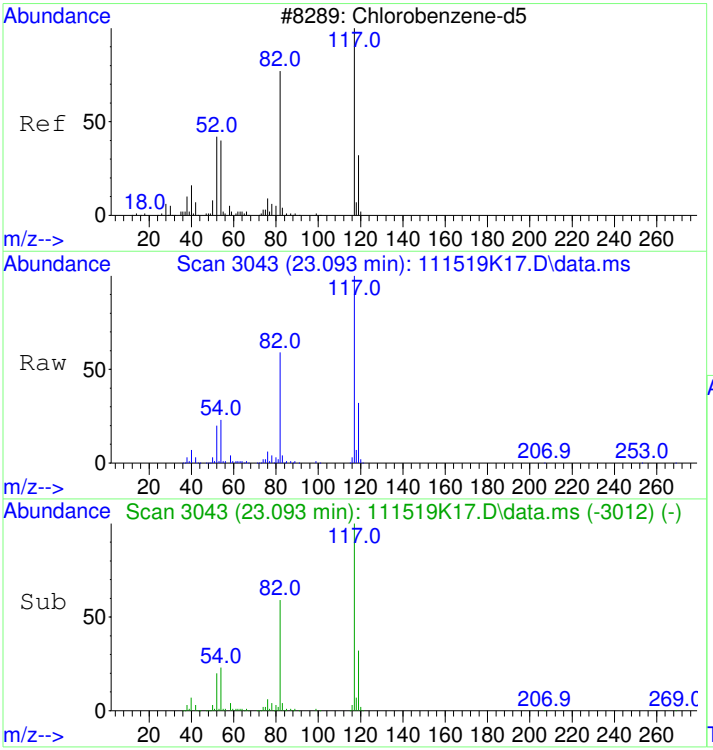


#32
1,4-DIFLUOROBENZENE
Concen: 20.00 ppbv
RT: 18.227 min Scan# 2243
Delta R.T. -0.015 min
Lab File: 111519K17.D
Acq: 16 Nov 2019 12:57 am

Tgt Ion:114 Resp: 669990

Ion	Ratio	Lower	Upper
114	100		
63	22.2	0.1	40.1
88	16.3	0.0	35.6

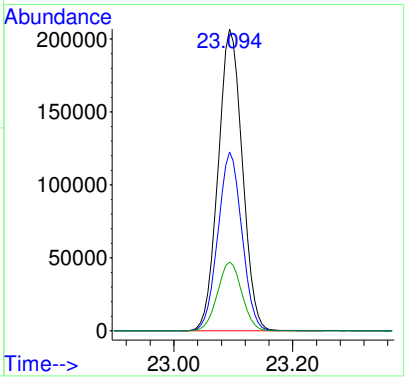




#43
CHLOROBENZENE-d5
Concen: 22.00 ppbv
RT: 23.093 min Scan# 3043
Delta R.T. -0.009 min
Lab File: 111519K17.D
Acq: 16 Nov 2019 12:57 am

Tgt Ion:117 Resp: 586003

Ion	Ratio	Lower	Upper
117	100		
82	58.7	34.5	74.5
54	22.9	0.0	39.9



2009030-06

Data Path : D:\msdchem\1\2020\DATA\031220K_FSAA\
Data File : 031220K06.D
InstName : HP5973K
Acq On : 12 Mar 2020 4:09 pm
Operator : LLH
Sample : CAN #884
Misc : 200ml RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

CLEAN

Quant Time: Mar 12 16:47:49 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	351276	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	1047533	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.090	117	931189	19.60 ppbv	0.00

Target Compounds	Qvalue

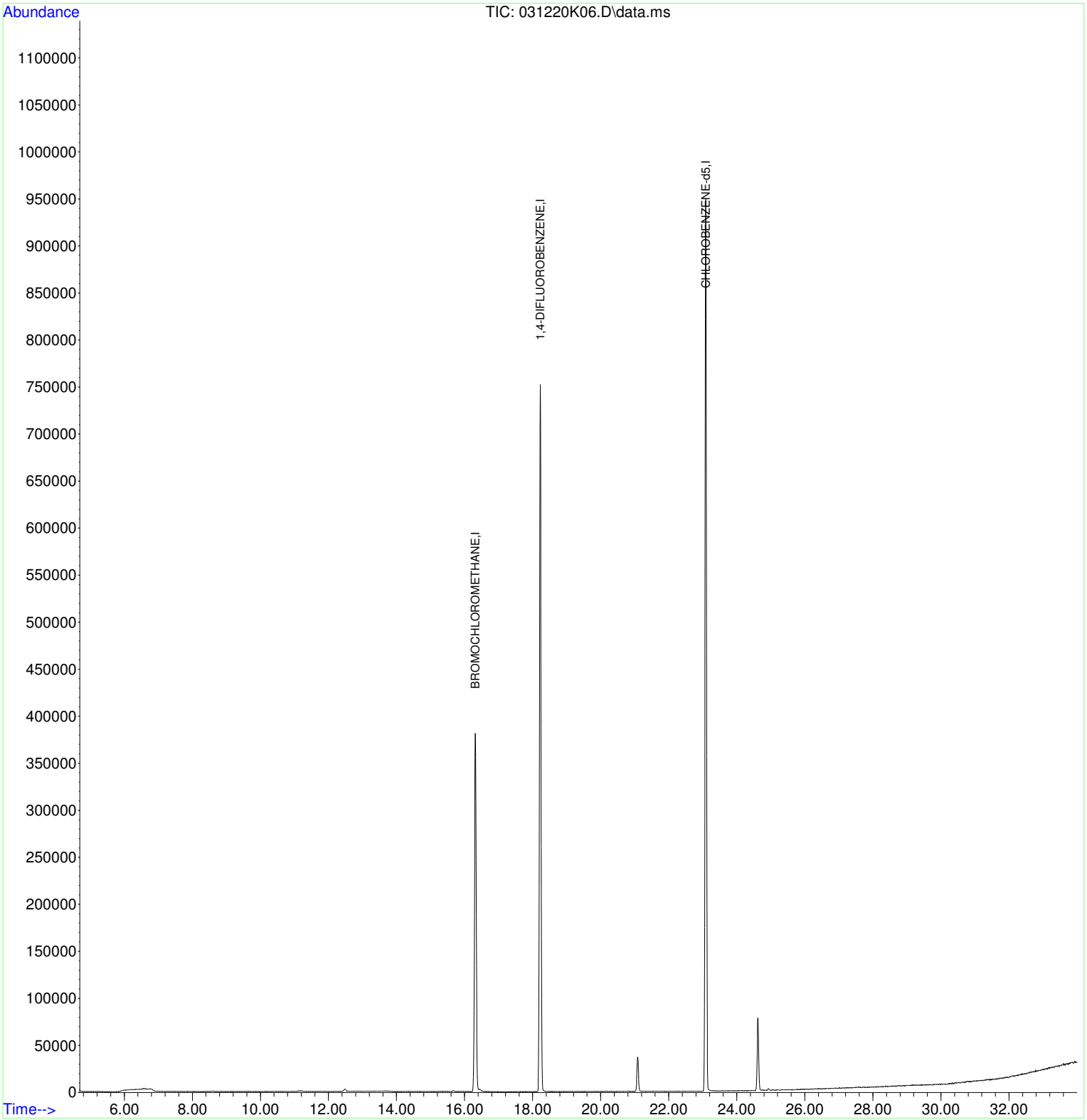
(#) = qualifier out of range (m) = manual integration (+) = signals summed

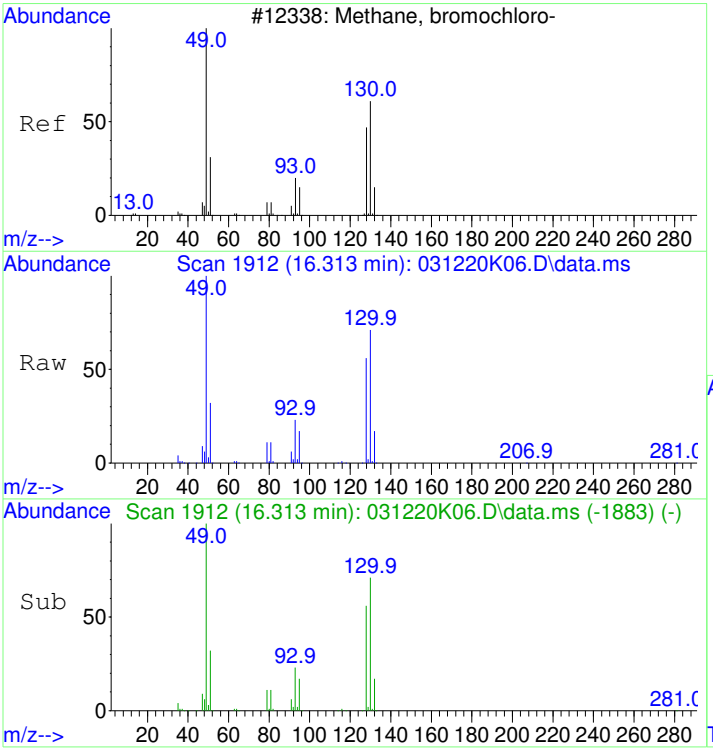
REVIEWED
By LLH at 4:48 pm, Mar 12, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\031220K_FSAA\
Data File : 031220K06.D
InstName : HP5973K
Acq On : 12 Mar 2020 4:09 pm
Operator : LLH
Sample : CAN #884
Misc : 200ml RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 12 16:47:49 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

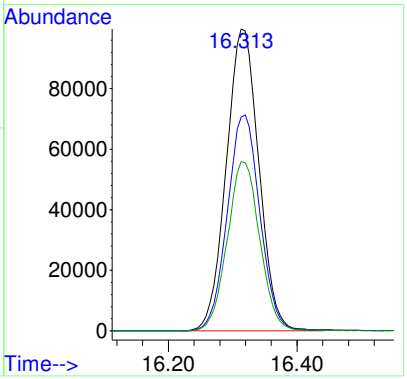


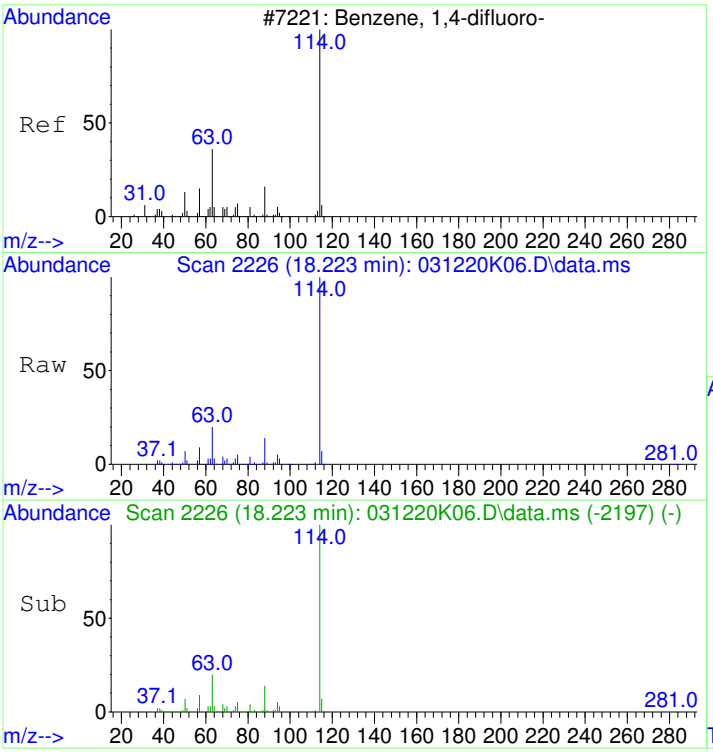


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 031220K06.D
Acq: 12 Mar 2020 4:09 pm

Tgt Ion: 49 Resp: 351276

Ion	Ratio	Lower	Upper
49	100		
130	71.3	61.8	101.8
128	55.1	42.9	82.9

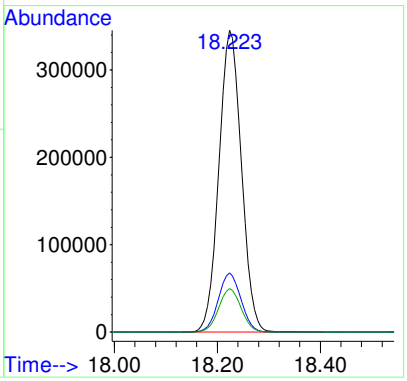


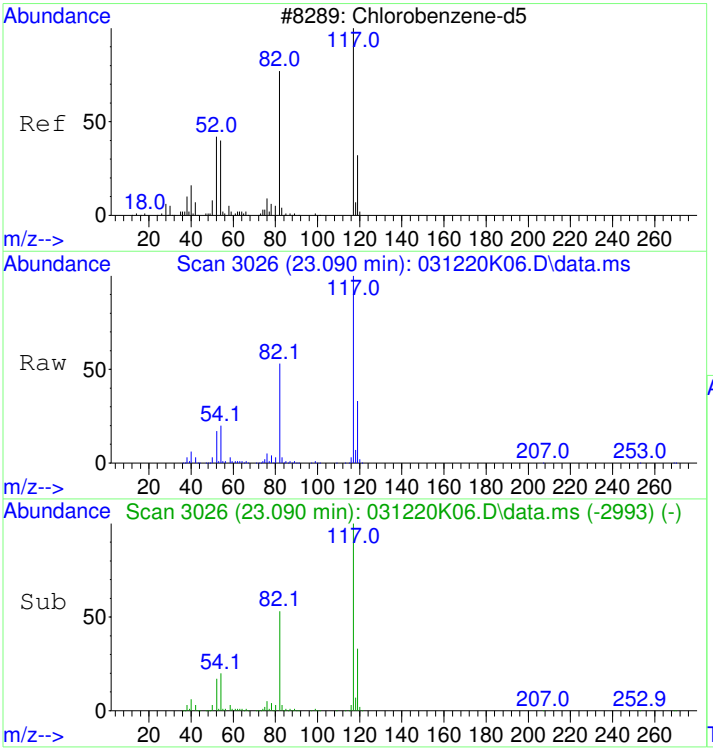


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.006 min
Lab File: 031220K06.D
Acq: 12 Mar 2020 4:09 pm

Tgt Ion:114 Resp: 1047533

Ion	Ratio	Lower	Upper
114	100		
63	19.6	0.0	38.4
88	14.3	0.0	34.4

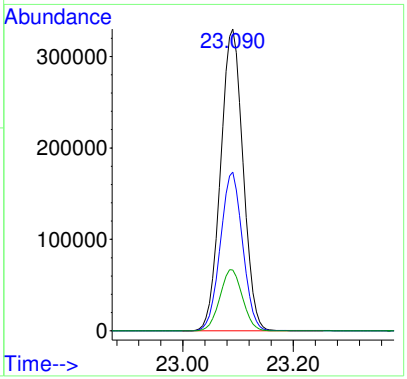




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.000 min
Lab File: 031220K06.D
Acq: 12 Mar 2020 4:09 pm

Tgt Ion:117 Resp: 931189

Ion	Ratio	Lower	Upper
117	100		
82	52.3	30.7	70.7
54	20.4	0.0	37.8



2009030-07

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\031020K_FSAA\
Data File : 031020K15.D
InstName : HP5973K
Acq On : 11 Mar 2020 1:16 am
Operator : LLH
Sample : CAN #1595
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: Mar 11 09:47:56 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	363017	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	1117554	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.090	117	991629	19.60 ppbv	0.00

Target Compounds Qvalue

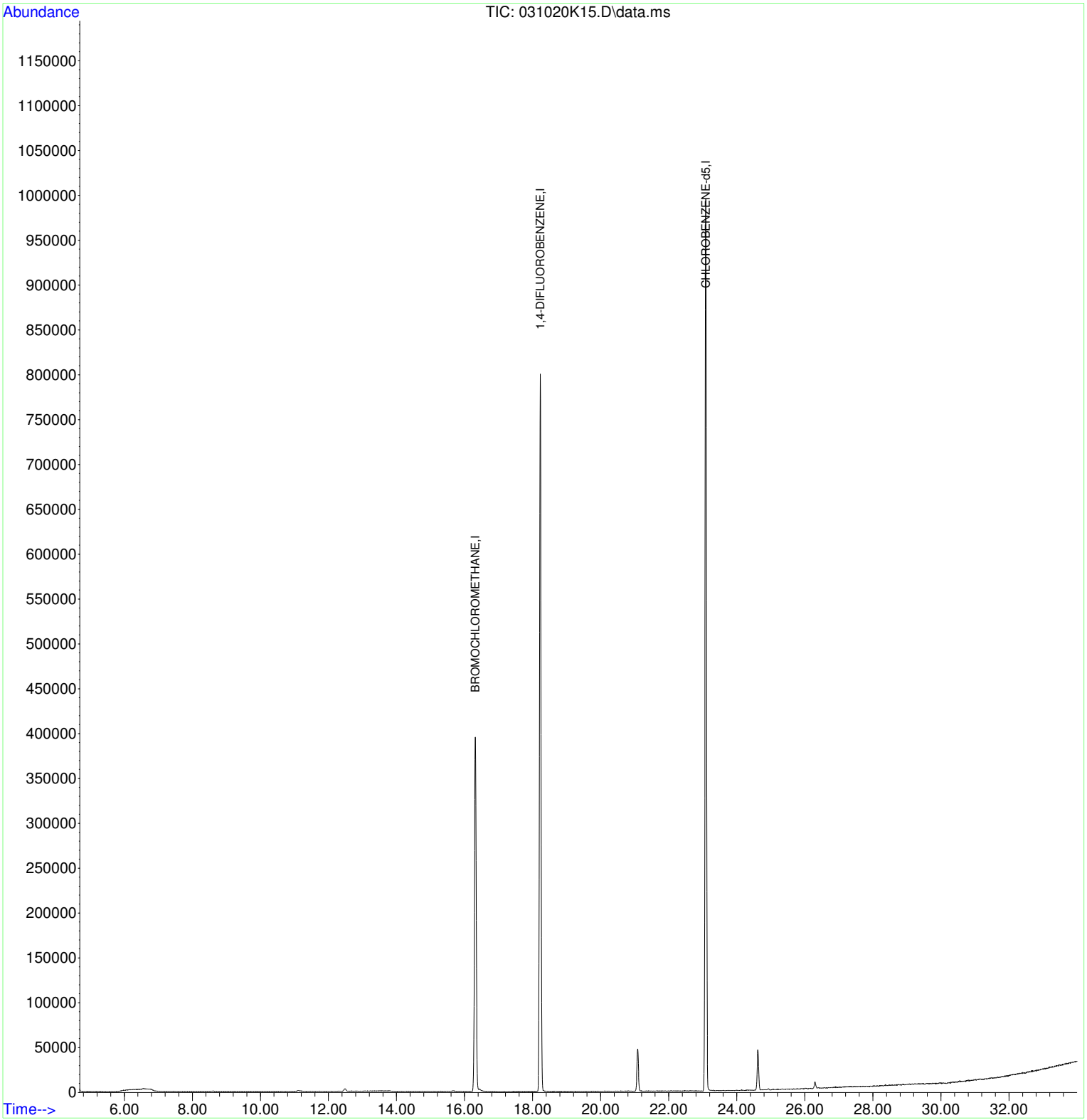
(#) = qualifier out of range (m) = manual integration (+) = signals summed

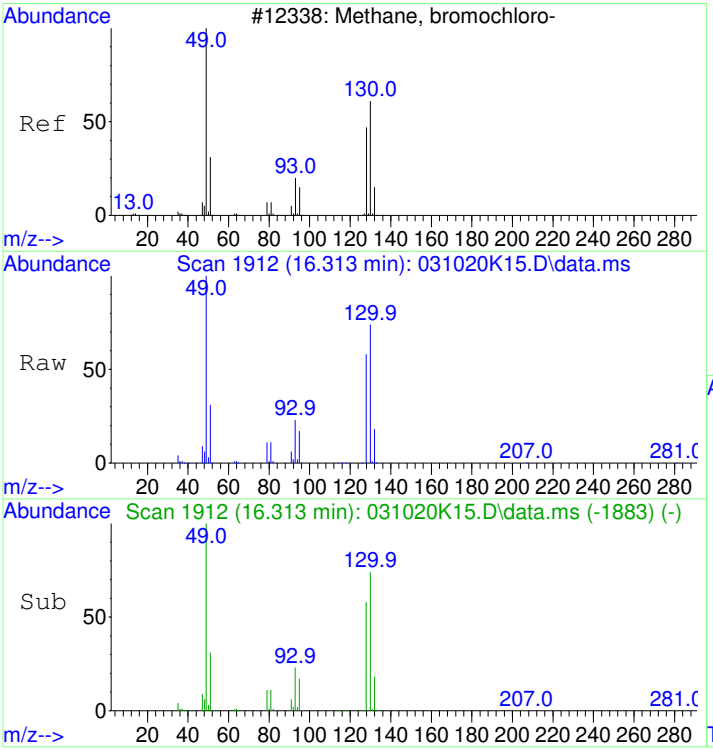
REVIEWED
By LLH at 9:48 am, Mar 11, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\031020K_FSAA\
Data File : 031020K15.D
InstName : HP5973K
Acq On : 11 Mar 2020 1:16 am
Operator : LLH
Sample : CAN #1595
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 11 09:47:56 2020
Quant Method : D:\msdchem\1\2020\METHOD\021320K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 14 10:34:59 2020
Response via : Initial Calibration

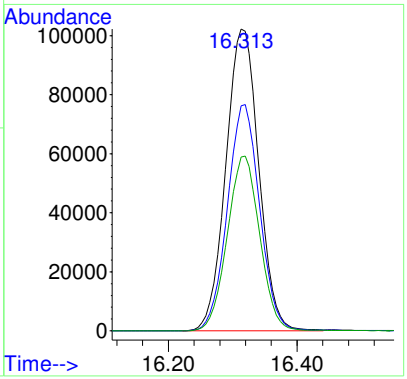


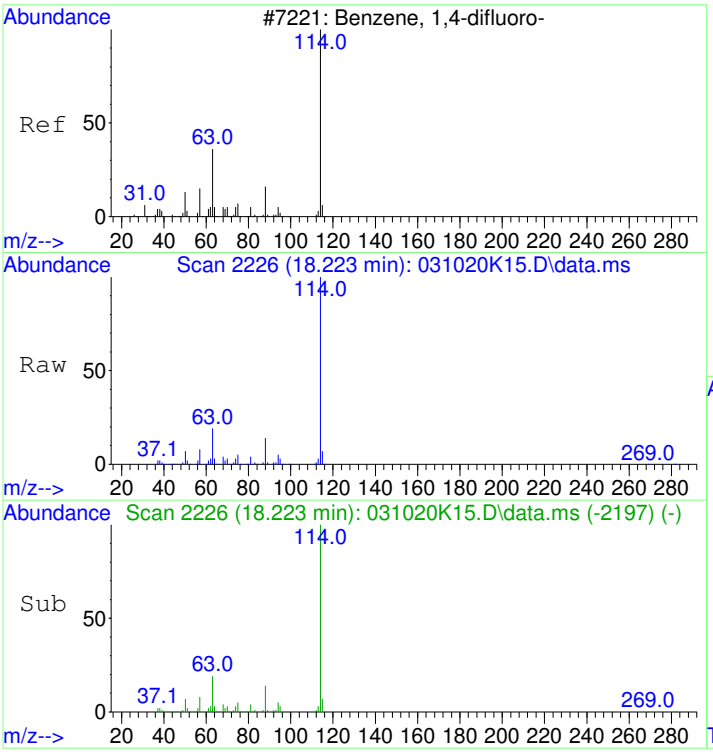


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 031020K15.D
Acq: 11 Mar 2020 1:16 am

Tgt Ion: 49 Resp: 363017

Ion	Ratio	Lower	Upper
49	100		
130	73.6	61.8	101.8
128	56.6	42.9	82.9

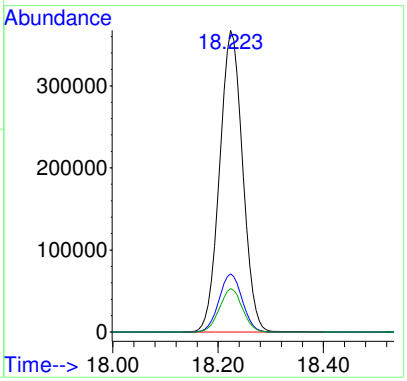


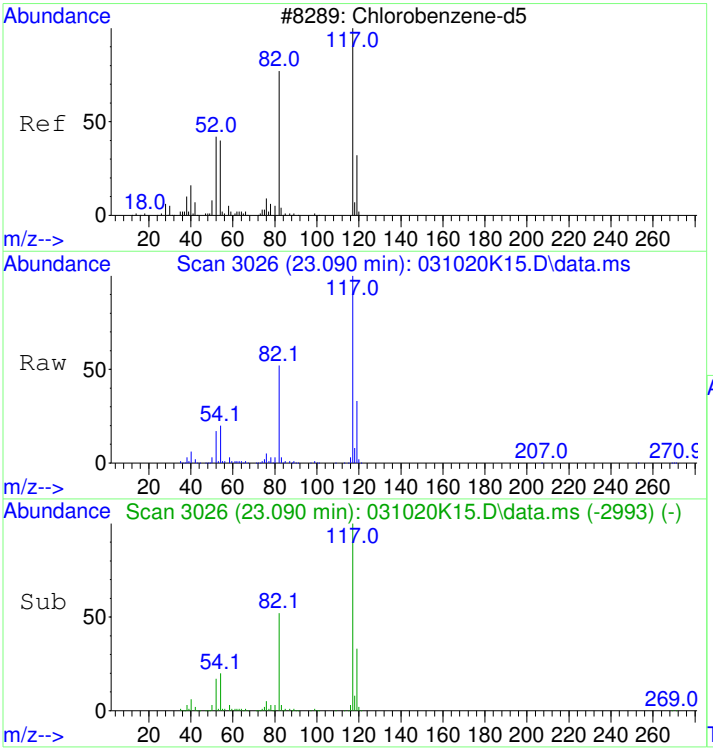


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.006 min
Lab File: 031020K15.D
Acq: 11 Mar 2020 1:16 am

Tgt Ion:114 Resp: 1117554

Ion	Ratio	Lower	Upper
114	100		
63	19.4	0.0	38.4
88	14.3	0.0	34.4

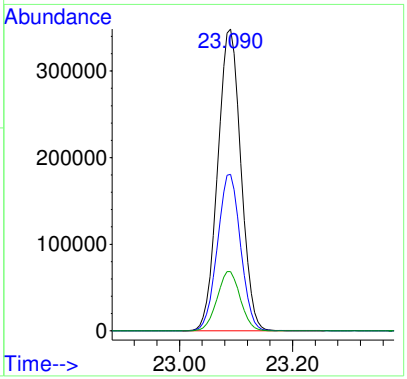




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.000 min
Lab File: 031020K15.D
Acq: 11 Mar 2020 1:16 am

Tgt Ion:117 Resp: 991629

Ion	Ratio	Lower	Upper
117	100		
82	51.9	30.7	70.7
54	19.7	0.0	37.8



Analytical Standard Record

EPA Region 9 Laboratory

1901028

Description:	TO/14A GC/MS Tuning Mix, Stock 100pp	**Expires:**	12/14/20
Standard Type:	Other Solution	**Prepared:**	12/14/18
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	12/24/19 09:40 by LLH
Vendor:	Linde Spectra	**Lot Numbe**	1477592

Part #34424 Bar Code# AU010656 Cylinder # AB-110190
Do not use under 150psig. Original expiration date: 12/14/2019.
Extended expiration date: 12/14/2020

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	0.09

THE LINDE GROUP

Linde

SHIPPED TO: GSS Warehouse
258 Lindbergh Ave.
Livermore, CA 94551-9512

PAGE: 1 of 1

1901028
AU010656

CERTIFICATE OF ANALYSIS

Sales#:	116997676	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1477592	**Cylinder # :**	AB-110190
Certification Date:	Dec-14-2018	**Cylinder Pressure:**	1700 psig
P.O.# :	136993-RESTEK	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24087971	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Dec-14-2019	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	10% Relative
Part Number:	34424	**NIST Traceable Certificate#:**	17-67149

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Bromofluorobenzene	460-00-4	100 ppb	90 ppb
Nitrogen	7727-37-9	Balance	Balance

Recd 1/4/19

Source Identification Number: 279475

ANALYST: Brian Bramkamp

DATE: Dec-14-2018

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

APPENDIX C.
DOCUMENTATION OF EXTENDED USE

	LIMS ID	Manu. Expiration Date	Reagent LIMS ID
Material, Expired	1901028	12/14/19	—
Analysis: 8015	SOP # 311	Rev. 4	

Analysis Date: 11/27/19	Instrument: K	H15973K	Analyst: UH
Criteria: refer to SOP 893 R0 section 4.4			

Analyte	Ave Response, Expired	Comparison (explain in criteria section)	Fail criteria?
Bromofluorobenzene (BFB)	1206300	—	No
File ID (1)	112719K01	Req: 519K118	
File ID (2)			
File ID (3)			

Notes: See attached TIC report for BFB.

Approval Signatures	Approve (Y/N)	Signature	Print Name
Group Leader/Supervisor	Y	[signature]	Ziyad Rajabi
Technical Director	Y	[signature]	R. Bone
Lab QAO	Y	Barbara Bates	B Bates
		LAB QAO Signature Date	12-30-19

The use of this exact layout is not required; however, the form title must be used. Clarity of the criteria and notes are of particular importance for extended due to the variety of materials and their intended use.

New expiration date = 12/14/20

Library Search Compound Report

Data Path : D:\msdchem\1\2019\DATA\112719K_FSAA\
Data File : 112719K01.D
Acq On : 27 Nov 2019 10:01 am
Operator : LLH
Sample : S19K118-TUN1
Misc : BFB 1901028
ALS Vial : 27 Sample Multiplier: 1

40 ngs – good response AS 12/23/19

Quant Method : D:\msdchem\1\2019\METHOD\110119K_TO15AA.M
Quant Title : TO15

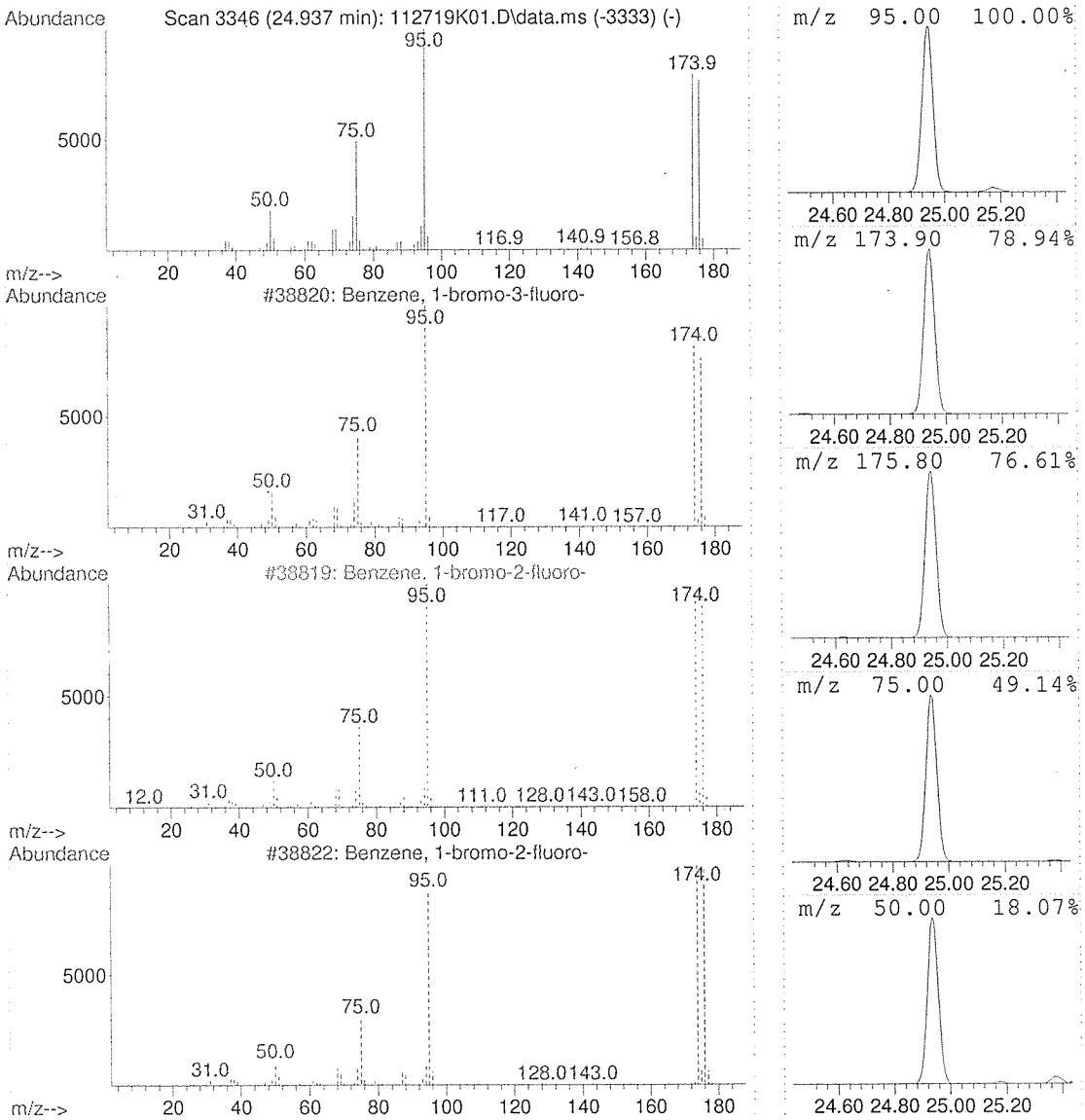
TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p

****

Peak Number 3 Benzene, 1-bromo-3-fluoro- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.937	12.79 ppbv	1206300	CHLOROBENZENE-d5	23.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-bromo-3-fluoro-	174	C6H4BrF	001073-06-9	98
2	Benzene, 1-bromo-2-fluoro-	174	C6H4BrF	001072-85-1	96
3	Benzene, 1-bromo-2-fluoro-	174	C6H4BrF	001072-85-1	94
4	p-Bromofluorobenzene	174	C6H4BrF	000460-00-4	93
5	Benzene, 1-bromo-3-fluoro-	174	C6H4BrF	001073-06-9	93



Analytical Standard Record

EPA Region 9 Laboratory

1901028

Description:	TO/14A GC/MS Tuning Mix, Stock 100pp	**Expires:**	12/14/19
Standard Type:	Other Solution	**Prepared:**	12/14/18
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	01/04/19 15:54 by EM
Vendor:	Linde Spectra	**Lot Numbe**	1477592

Part #34424 Bar Code# AU010656 Cylinder # AB-110190
Do not use under 150psig.

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	0.09

Analytical Standard Record

EPA Region 9 Laboratory

2006146

Description:	TO-14A Internal Standard Mix, Stock(100	**Expires:**	01/29/22
Standard Type:	Other Solution	**Prepared:**	01/29/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	110000	**Department:**	Air
Vials:	1	**Last Edit:**	02/06/20 15:46 by LLH
Vendor:	Scott/Air Liquide	**Lot Numbe**	160-401699356-1

Restek Part # 26353, Cylinder #: ST0000248715 AU011653
Orig exp date: 01/29/22

Analyte	CAS Number	Concentration (ppm)
Chlorobenzene-d5	3114-55-4	0.098
Bromochloromethane	74-97-5	0.098
1,4-Difluorobenzene	540-36-3	0.098

Airgas
an Air Liquide company

I Std

AU011653/54/55

Airgas Specialty Gases
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04NI99CA98C000	Reference Number:	160-401699356-1
Cylinder Number:	ST0000248717 /15/16	Cylinder Volume:	98.0 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	Jan 29, 2020	Valve Outlet:	180
Lot Number:	160-401699356-1		

Expiration Date: Jan 29, 2022

02/06/20

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
1,4 DIFLUOROBENZENE	100.000 PPB	98.000 PPB	+/- 10%
BROMOCHLOROMETHANE	100.000 PPB	98.000 PPB	+/- 10%
CHLOROBENZENE-D5	100.000 PPB	96.000 PPB	+/- 10%
NITROGEN	Balance		

Permanent Notes: RESTEK P/N 26353

Notes: PO number: P6624

AU011653 - 2006146
654 - 2006147
655 - 2006148

Approved for Release

Analytical Standard Record

EPA Region 9 Laboratory

2006148

Description:	TO-14A Internal Standard Mix, Stock(100	**Expires:**	01/29/22
Standard Type:	Other Solution	**Prepared:**	01/29/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	110000	**Department:**	Air
Vials:	1	**Last Edit:**	02/06/20 15:55 by LLH
Vendor:	Scott/Air Liquide	**Lot Numbe**	160-401699356-1

Restek Part # 26353, Cylinder #: ST0000248717 AU011655
Original expiration: 01/29/22

Analyte	CAS Number	Concentration (ppm)
Chlorobenzene-d5	3114-55-4	0.098
Bromochloromethane	74-97-5	0.098
1,4-Difluorobenzene	540-36-3	0.098

Airgas
an Air Liquide company

I Std

AU011653/54/55

Airgas Specialty Gases
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04NI99CA98C000	Reference Number:	160-401699356-1
Cylinder Number:	ST0000248717 /15/16	Cylinder Volume:	98.0 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	Jan 29, 2020	Valve Outlet:	180
Lot Number:	160-401699356-1		

Expiration Date: Jan 29, 2022

02/06/20

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
1,4 DIFLUOROBENZENE	100.000 PPB	98.000 PPB	+/- 10%
BROMOCHLOROMETHANE	100.000 PPB	98.000 PPB	+/- 10%
CHLOROBENZENE-D5	100.000 PPB	96.000 PPB	+/- 10%
NITROGEN	Balance		

Permanent Notes: RESTEK P/N 26353

Notes: PO number: P6624

AU011653 - 2006146
654 - 2006147
655 - 2006148

Approved for Release

Analytical Standard Record

EPA Region 9 Laboratory

2011030

Description:	TO-14A 39 Component Mix Standard, 1.0	**Expires:**	02/24/21
Standard Type:	Other Solution	**Prepared:**	02/24/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	03/10/20 15:15 by LLH
Vendor:	Linde Spectra	**Lot Numbe**	1507079

Cylinder # AB-113214
Part # 34400 AU011826
Original expiration date: 02/24/21

Analyte	CAS Number	Concentration (ppm)
1,2-Dibromoethane (EDB)	106-93-4	1.04
1,1,1-Trichloroethane	71-55-6	1.06
Benzene	71-43-2	1.04
1,4-Dichlorobenzene	106-46-7	0.98
1,3-Dichlorobenzene	541-73-1	0.98
1,3,5-Trimethylbenzene	108-67-8	1.01
1,2-Dichlorotetrafluoroethane	76-14-2	0.96
1,2-Dichloropropane	78-87-5	1.02
Carbon tetrachloride	56-23-5	0.99
1,2-Dichlorobenzene	95-50-1	0.98
Chlorobenzene	108-90-7	1.04
1,2,4-Trimethylbenzene	95-63-6	1
1,2,4-Trichlorobenzene	120-82-1	0.97
1,1-Dichloroethene	75-35-4	1.06
1,1-Dichloroethane	75-34-3	0.98
1,1,2-Trichloroethane	79-00-5	1.05
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1.07
1,1,2,2-Tetrachloroethane	79-34-5	1.01
1,2-Dichloroethane	107-06-2	1.01
Ethylbenzene	100-41-4	1.03
Trichlorofluoromethane	75-69-4	0.93
Trichloroethene	79-01-6	1.07
trans-1,3-Dichloropropene	10061-02-6	0.92
Toluene	108-88-3	1.03
Tetrachloroethene	127-18-4	1.03
Styrene	100-42-5	1.01
o-Xylene	95-47-6	1.01
Bromomethane	74-83-9	1.02
Hexachlorobutadiene	87-68-3	1.03
Vinyl chloride	75-01-4	1.03

Analytical Standard Record

EPA Region 9 Laboratory

2011030

Dichloromethane	75-09-2	1.03
Dichlorodifluoromethane	75-71-8	0.98
cis-1,3-Dichloropropene	10061-01-5	1.04
cis-1,2-Dichloroethene	156-59-2	1.03
Chloromethane	74-87-3	0.99
Chloroform	67-66-3	1.04
Chloroethane	75-00-3	1.01
m&p-Xylene	179601-23-1	2.04

Analytical Standard Record

EPA Region 9 Laboratory

2014018

Description:	TO-14A 39 Component Mix Standard	**Expires:**	03/11/23
Standard Type:	Analyte Spike	**Prepared:**	03/02/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	04/01/20 10:13 by LLH
Vendor:	Scott/Air Liquide	**Lot Numb**	160-401747861-1

Supelco: 41900-U Cylinder # ST0000248893 AU011833
Part No. X40NI99CA98C000 Scott/Air Liquide Exp date: 03/11/23

Analyte	CAS Number	Concentration (ppm)
1,2-Dibromoethane (EDB)	106-93-4	0.1
1,1,1-Trichloroethane	71-55-6	0.11
Benzene	71-43-2	0.1
1,4-Dichlorobenzene	106-46-7	0.099
1,3-Dichlorobenzene	541-73-1	0.1
1,3,5-Trimethylbenzene	108-67-8	0.1
1,2-Dichlorotetrafluoroethane	76-14-2	0.11
1,2-Dichloropropane	78-87-5	0.1
Carbon tetrachloride	56-23-5	0.11
1,2-Dichlorobenzene	95-50-1	0.096
Chlorobenzene	108-90-7	0.11
1,2,4-Trimethylbenzene	95-63-6	0.1
1,2,4-Trichlorobenzene	120-82-1	0.093
1,1-Dichloroethene	75-35-4	0.11
1,1-Dichloroethane	75-34-3	0.11
1,1,2-Trichloroethane	79-00-5	0.1
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.11
1,1,2,2-Tetrachloroethane	79-34-5	0.099
1,2-Dichloroethane	107-06-2	0.11
Ethylbenzene	100-41-4	0.11
Trichlorofluoromethane	75-69-4	0.11
Trichloroethene	79-01-6	0.11
trans-1,3-Dichloropropene	10061-02-6	0.1
Toluene	108-88-3	0.1
Tetrachloroethene	127-18-4	0.11
Styrene	100-42-5	0.1
o-Xylene	95-47-6	0.1
Bromomethane	74-83-9	0.11
Hexachlorobutadiene	87-68-3	0.099
Vinyl chloride	75-01-4	0.1

Analytical Standard Record

EPA Region 9 Laboratory

2014018

Dichloromethane	75-09-2	0.11
Dichlorodifluoromethane	75-71-8	0.11
cis-1,3-Dichloropropene	10061-01-5	0.1
cis-1,2-Dichloroethene	156-59-2	0.11
Chloromethane	74-87-3	0.12
Chloroform	67-66-3	0.11
Chloroethane	75-00-3	0.11
m&p-Xylene	179601-23-1	0.22

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Airgas Specialty Gases
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6141 Easton Road
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Plumsteadville, PA 18949
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AU0118353

CERTIFICATE OF BATCH ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X40NI99CA98C000	Reference Number:	160-401747861-1
		Cylinder Volume:	98.0 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	Mar 11, 2020	Valve Outlet:	180
Lot Number:	160-401747861-1		

Exp 03/31/20

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
1,1 DICHLOROETHANE	100.000 PPB	110.000 PPB	+/- 10%
1,1 DICHLOROETHYLENE	100.000 PPB	110.000 PPB	+/- 10%
1,1,1 TRICHLOROETHANE	100.000 PPB	110.000 PPB	+/- 10%
1,1,2 TRICHLORO ETHANE	100.000 PPB	100.000 PPB	+/- 10%
1,1,2,2 TETRACHLOROETHANE	100.000 PPB	99.000 PPB	+/- 10%
1,2 DIBROMO ETHANE EDB	100.000 PPB	100.000 PPB	+/- 10%
1,2 DICHLORO PROPANE	100.000 PPB	100.000 PPB	+/- 10%
1,2 DICHLOROBENZENE	100.000 PPB	96.000 PPB	+/- 10%
1,2 DICHLOROETHANE	100.000 PPB	110.000 PPB	+/- 10%
1,2,4 TRICHLOROBENZENE	100.000 PPB	93.000 PPB	+/- 10%
1,2,4 TRIMETHYLBENZENE	100.000 PPB	100.000 PPB	+/- 10%
1,3 DICHLORO BENZENE	100.000 PPB	100.000 PPB	+/- 10%
1,3,5 TRIMETHYL BENZENE	100.000 PPB	100.000 PPB	+/- 10%
1,4 DICHLOROBENZENE	100.000 PPB	99.000 PPB	+/- 10%
BENZENE	100.000 PPB	100.000 PPB	+/- 10%
BROMOMETHANE	100.000 PPB	110.000 PPB	+/- 10%
CARBON TETRACHLORIDE	100.000 PPB	110.000 PPB	+/- 10%
CHLOROBENZENE	100.000 PPB	110.000 PPB	+/- 10%
CHLOROFORM	100.000 PPB	110.000 PPB	+/- 10%
CIS 1,2 DICHLOROETHYLENE	100.000 PPB	110.000 PPB	+/- 10%
CIS 1,3 DICHLOROPROPENE	100.000 PPB	100.000 PPB	+/- 10%
ETHYL BENZENE	100.000 PPB	110.000 PPB	+/- 10%
ETHYL CHLORIDE chloroethane	100.000 PPB	110.000 PPB	+/- 10%
HEXACHLORO 1,3 BUTADIENE	100.000 PPB	99.000 PPB	+/- 10%
M XYLENE	100.000 PPB	110.000 PPB	+/- 10%
METHYL CHLORIDE chloromethane	100.000 PPB	120.000 PPB	+/- 10%
METHYLENE CHLORIDE	100.000 PPB	110.000 PPB	+/- 10%
O XYLENE	100.000 PPB	100.000 PPB	+/- 10%
P XYLENE	100.000 PPB	110.000 PPB	+/- 10%
PERCHLOROETHYLENE	100.000 PPB	110.000 PPB	+/- 10%
R11 TRICHLOROFLUOROMETHANE	100.000 PPB	110.000 PPB	+/- 10%
R113 TRICHLOROTRIFLUOROETHANE	100.000 PPB	110.000 PPB	+/- 10%
R114 DICHLOROTETRAFLUOROETHANE	100.000 PPB	110.000 PPB	+/- 10%
R12 DICHLORODIFLUOROMETHANE	100.000 PPB	110.000 PPB	+/- 10%

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STYRENE	100.000 PPB	100.000 PPB	+/- 10%
TOLUENE	100.000 PPB	100.000 PPB	+/- 10%
TRANS 1,3 DICHLOROPROPENE	100.000 PPB	100.000 PPB	+/- 10%
TRICHLOROETHYLENE	100.000 PPB	110.000 PPB	+/- 10%
VINYL CHLORIDE	100.000 PPB	100.000 PPB	+/- 10%
NITROGEN	Balance		

Permanent Notes: SIGMA-ALDRICH P/N 41900-U

Notes: Cylinder number: ST0000248893

PO number: P487467
Date of manufacture: 02-March-2020

Approved for Release

Analytical Standard Record

EPA Region 9 Laboratory

2026038

Description:	TO-15 25 Compound Subset Standard, 10(	**Expires:**	05/27/22
Standard Type:	Other Solution	**Prepared:**	05/27/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	110000	**Department:**	Air
Vials:	1	**Last Edit:**	06/23/20 14:23 by EM
Vendor:	Scott/Air Liquide	**Lot Numbe**	160-401807593-1

Scott/Air Liquide Cylinder# ST0000227102; Bar code: AU011866 Supelco Cat No. 41979-U

Analyte	CAS Number	Concentration (ppm)
Bromoform	75-25-2	0.12
1,4-Dioxane	123-91-1	0.12
2,2,4-Trimethylpentane	540-84-1	0.11
2-Butanone (MEK)	78-93-3	0.11
2-Hexanone	591-78-6	0.11
2-Propanol	67-63-0	0.1
4-Ethyltoluene	622-96-8	0.11
4-Methyl-2-pentanone (MIBK)	108-10-1	0.11
Acetone	67-64-1	0.11
Allyl chloride	107-05-1	0.12
Benzyl chloride	100-44-7	0.1
1,3-Butadiene	106-99-0	0.096
Bromoethene	593-60-2	0.11
Vinyl acetate	108-05-4	0.1
Carbon disulfide	75-15-0	0.12
Chlorodibromomethane	124-48-1	0.11
Cyclohexane	110-82-7	0.11
Ethyl acetate	141-78-6	0.11
Heptane	142-82-5	0.11
Hexane	110-54-3	0.11
Propene	115-07-1	0.11
tert-Butyl methyl ether (MTBE)	1634-04-4	0.11
Tetrahydrofuran	109-99-9	0.099
trans-1,2-Dichloroethene	156-60-5	0.1
Bromodichloromethane	75-27-4	0.11

Scott

Airgas Specialty Gases
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
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AU011866
2026038

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED HYDROCARBON

Part Number:	X26NI99CA98C005	Reference Number:	160-401807593-1
Cylinder Number:	ST0000227102	Cylinder Volume:	110.0 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	May 27, 2020	Valve Outlet:	180
Lot Number:	160-401807593-1	Expiration Date:	May 27, 2022

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

CERTIFIED CONCENTRATIONS

Component	Requested Concentration	Reported Mole %	Accuracy
1,2 TRANS DICHLOROETHYLENE	100.000 PPB	100.000 PPB	+/- 10%
1,3 BUTADIENE	100.000 PPB	96.000 PPB	+/- 10%
1,4 DIOXANE	100.000 PPB	120.000 PPB	+/- 10%
4 ETHYL TOLUENE	100.000 PPB	110.000 PPB	+/- 10%
ACETONE	100.000 PPB	110.000 PPB	+/- 10%
ALLYL CHLORIDE	100.000 PPB	120.000 PPB	+/- 10%
BENZYL CHLORIDE	100.000 PPB	100.000 PPB	+/- 10%
BROMO DICHLORO METHANE	100.000 PPB	110.000 PPB	+/- 10%
BROMOFORM	100.000 PPB	120.000 PPB	+/- 10%
CARBON DISULFIDE	100.000 PPB	120.000 PPB	+/- 10%
CHLORO DIBROMO METHANE	100.000 PPB	110.000 PPB	+/- 10%
CYCLOHEXANE	100.000 PPB	110.000 PPB	+/- 10%
ETHYL ACETATE	100.000 PPB	110.000 PPB	+/- 10%
HEXANE	100.000 PPB	110.000 PPB	+/- 10%
ISOOCTANE	100.000 PPB	110.000 PPB	+/- 10%
ISOPROPYL ALCOHOL	100.000 PPB	100.000 PPB	+/- 10%
METHYL BUTYL KETONE	100.000 PPB	110.000 PPB	+/- 10%
METHYL ETHYL KETONE	100.000 PPB	110.000 PPB	+/- 10%
METHYL ISOBUTYL KETONE	100.000 PPB	110.000 PPB	+/- 10%
METHYL TERT BUTYL ETHER	100.000 PPB	110.000 PPB	+/- 10%
N HEPTANE	100.000 PPB	110.000 PPB	+/- 10%
PROPYLENE	100.000 PPB	110.000 PPB	+/- 10%
TETRAHYDROFURAN	100.000 PPB	99.000 PPB	+/- 10%
VINYL ACETATE	100.000 PPB	100.000 PPB	+/- 10%
VINYL BROMIDE	100.000 PPB	110.000 PPB	+/- 10%
NITROGEN	Balance	Balance	

Permanent Notes: SIGMA ALDRICH P/N 41979-U

Notes: PO number: P488794
Date of manufacture: 18-May-2020

Recd 6/15/20
SIM/SCAN SCN SUBSET
VVem 6/25/20

Approved for Release

Analytical Standard Record

EPA Region 9 Laboratory

2028010

Description:	TO-15 25 Compound Subset Standard, 1pp	**Expires:**	05/05/21
Standard Type:	Other Solution	**Prepared:**	05/05/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	07/06/20 11:01 by EM
Vendor:	Linde Spectra	**Lot Numbe**	1511807

Linde Spectra via Restek; Cylinder# AB-113317; Bar code: AU011843
Part #34434.

Analyte	CAS Number	Concentration (ppm)
Bromoform	75-25-2	1.06
1,4-Dioxane	123-91-1	1.05
2,2,4-Trimethylpentane	540-84-1	1.07
2-Butanone (MEK)	78-93-3	1
2-Hexanone	591-78-6	0.92
2-Propanol	67-63-0	1
4-Ethyltoluene	622-96-8	0.99
4-Methyl-2-pentanone (MIBK)	108-10-1	0.98
Acetone	67-64-1	0.99
Allyl chloride	107-05-1	1.09
Benzyl chloride	100-44-7	0.93
1,3-Butadiene	106-99-0	1.04
Bromoethene	593-60-2	1.01
Vinyl acetate	108-05-4	1.1
Carbon disulfide	75-15-0	1.04
Chlorodibromomethane	124-48-1	1.04
Cyclohexane	110-82-7	1.08
Ethyl acetate	141-78-6	1.01
Heptane	142-82-5	1.05
Hexane	110-54-3	1.01
Propene	115-07-1	0.95
tert-Butyl methyl ether (MTBE)	1634-04-4	1.09
Tetrahydrofuran	109-99-9	0.92
trans-1,2-Dichloroethene	156-60-5	1.02
Bromodichloromethane	75-27-4	1.05

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Herndon, VA 20171-3208

SCAN SUBSET CAL 2028010

PAGE: 1 of 2

ANALYSIS REPORT

A40118 43

Sales#:	117388805	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1511807	**Cylinder # :**	AB-113317
Report Date:	May-05-2020	**Cylinder Pressure:**	1700 psig
P.O.# :	P11057-RESTEK	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	QUALIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24086373	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	May-05-2021	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative
Part Number:	34434	**NIST Traceable Certificate#:**	19-79403

COMPONENT	CAS NUMBER	REQUESTED CONC	QUALIFIED CONC
Propylene	115-07-1	1.00 ppm	0.95 ppm
1,3-Butadiene	106-99-0	1.00 ppm	1.04 ppm
Vinyl Bromide	593-60-2	1.00 ppm	1.01 ppm
Acetone	67-64-1	1.00 ppm	0.99 ppm
Isopropyl Alcohol	67-63-0	1.00 ppm	1.00 ppm
Carbon Disulfide (Analytical Accuracy ± 10%)	75-15-0	1.00 ppm	1.04 ppm
Allyl Chloride	107-05-1	1.00 ppm	1.09 ppm
Trans-1,2-Dichloroethene	156-60-5	1.00 ppm	1.02 ppm
Methyl Tert-Butyl Ether	1634-04-4	1.00 ppm	1.09 ppm
Vinyl Acetate	108-05-4	1.00 ppm	1.10 ppm
Methyl Ethyl Ketone	78-93-3	1.00 ppm	1.00 ppm
n-Hexane	110-54-3	1.00 ppm	1.01 ppm
Ethyl Acetate	141-78-6	1.00 ppm	1.01 ppm
Tetrahydrofuran	109-99-9	1.00 ppm	0.92 ppm
Cyclohexane	110-82-7	1.00 ppm	1.08 ppm
Bromodichloromethane	75-27-4	1.00 ppm	1.05 ppm
1,4-Dioxane	123-91-1	1.00 ppm	1.05 ppm
2,2,4-Trimethylpentane	540-84-1	1.00 ppm	1.07 ppm
n-Heptane	142-82-5	1.00 ppm	1.05 ppm
Methyl Isobutyl Ketone	108-10-1	1.00 ppm	0.98 ppm
Methyl Butyl Ketone	591-78-6	1.00 ppm	0.92 ppm
Dibromochloromethane	124-48-1	1.00 ppm	1.04 ppm
Bromoform	75-25-2	1.00 ppm	1.06 ppm

Recd 5/29/20

Linde Gas North America LLC

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SHIPPED TO: GSS Warehouse
13890 Redskin Dr.
Herndon, VA 20171-3208

PAGE: 2 of 2

AU011843/2028010

ANALYSIS REPORT

Sales#:	117388805	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1511807	**Cylinder # :**	AB-113317
Report Date:	May-05-2020	**Cylinder Pressure:**	1700 psig
P.O.# :	P11057-RESTEK	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	QUALIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24086373	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	May-05-2021	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative
Part Number:	34434	**NIST Traceable Certificate#:**	19-79403

COMPONENT	CAS NUMBER	REQUESTED CONC	QUALIFIED CONC
4-Ethyltoluene	622-96-8	1.00 ppm	0.99 ppm
Benzyl Chloride (Analytical Accuracy ± 10%)	100-44-7	1.00 ppm	0.93 ppm
Nitrogen	7727-37-9	Balance	Balance

Reviewed by: EM 7/6/20

Source Identification Number: 311318

ANALYST: Brian Bramkamp

DATE: May-05-2020

Linde Gas North America LLC

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Analytical Standard Record

EPA Region 9 Laboratory

2033012

Description:	TO-15 CAL Std 20 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Analyte Spike	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:31 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0208
Bromoethene	593-60-2	0.0202
Bromodichloromethane	75-27-4	0.021
Benzyl chloride	100-44-7	0.0186
Benzene	71-43-2	0.0208
Allyl chloride	107-05-1	0.0218
Acetone	67-64-1	0.0198
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0196
4-Ethyltoluene	622-96-8	0.0198
2-Propanol	67-63-0	0.02
2-Hexanone	591-78-6	0.0184
2-Butanone (MEK)	78-93-3	0.02
2,2,4-Trimethylpentane	540-84-1	0.0214
1,4-Dioxane	123-91-1	0.021
1,1,1-Trichloroethane	71-55-6	0.0212
1,2-Dibromoethane (EDB)	106-93-4	0.0208
1,1,2,2-Tetrachloroethane	79-34-5	0.0202
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0214
1,1,2-Trichloroethane	79-00-5	0.021
1,1-Dichloroethane	75-34-3	0.0196
1,1-Dichloroethene	75-35-4	0.0212
1,4-Dichlorobenzene	106-46-7	0.0196
1,2,4-Trimethylbenzene	95-63-6	0.02
1,3-Dichlorobenzene	541-73-1	0.0196
1,2-Dichlorobenzene	95-50-1	0.0196
1,2-Dichloroethane	107-06-2	0.0202
1,2-Dichloropropane	78-87-5	0.0204
1,2-Dichlorotetrafluoroethane	76-14-2	0.0192
1,3,5-Trimethylbenzene	108-67-8	0.0202
Carbon disulfide	75-15-0	0.0208

Analytical Standard Record

EPA Region 9 Laboratory

2033012

1,2,4-Trichlorobenzene	120-82-1	0.0194
Tetrahydrofuran	109-99-9	0.0184
Bromoform	75-25-2	0.0212
m&p-Xylene	179601-23-1	0.0408
o-Xylene	95-47-6	0.0202
Propene	115-07-1	0.019
Styrene	100-42-5	0.0202
Hexachlorobutadiene	87-68-3	0.0206
Tetrachloroethene	127-18-4	0.0206
Heptane	142-82-5	0.021
Toluene	108-88-3	0.0206
trans-1,2-Dichloroethene	156-60-5	0.0204
trans-1,3-Dichloropropene	10061-02-6	0.0184
Trichloroethene	79-01-6	0.0214
Trichlorofluoromethane	75-69-4	0.0186
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0218
cis-1,2-Dichloroethene	156-59-2	0.0206
Vinyl chloride	75-01-4	0.0206
Carbon tetrachloride	56-23-5	0.0198
Chlorobenzene	108-90-7	0.0208
Chlorodibromomethane	124-48-1	0.0208
Chloroethane	75-00-3	0.0202
Hexane	110-54-3	0.0202
Chloromethane	74-87-3	0.0198
Bromomethane	74-83-9	0.0204
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0216
Dichlorodifluoromethane	75-71-8	0.0196
Dichloromethane	75-09-2	0.0206
Ethyl acetate	141-78-6	0.0202
Ethylbenzene	100-41-4	0.0206
Chloroform	67-66-3	0.0208

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2028010	TO-15 25 Compound Subset Standard,	05/05/20	** Vendor **	05/05/21	07/06/20 11:01 by EM	50
2011030	TO-14A 39 Component Mix Standard,	02/24/20	** Vendor **	02/24/21	03/10/20 15:15 by LLH	50

Analytical Standard Record

EPA Region 9 Laboratory

2033012

Description:	TO-15 CAL Std 20 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Analyte Spike	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0208
Bromoethene	593-60-2	0.0202
Bromodichloromethane	75-27-4	0.021
Benzyl chloride	100-44-7	0.0186
Benzene	71-43-2	0.0208
Allyl chloride	107-05-1	0.0218
Acetone	67-64-1	0.0198
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0196
4-Ethyltoluene	622-96-8	0.0198
2-Propanol	67-63-0	0.02
2-Hexanone	591-78-6	0.0184
2-Butanone (MEK)	78-93-3	0.02
2,2,4-Trimethylpentane	540-84-1	0.0214
1,4-Dioxane	123-91-1	0.021
1,1,1-Trichloroethane	71-55-6	0.0212
1,2-Dibromoethane (EDB)	106-93-4	0.0208
1,1,2,2-Tetrachloroethane	79-34-5	0.0202
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0214
1,1,2-Trichloroethane	79-00-5	0.021
1,1-Dichloroethane	75-34-3	0.0196
1,1-Dichloroethene	75-35-4	0.0212
1,4-Dichlorobenzene	106-46-7	0.0196
1,2,4-Trimethylbenzene	95-63-6	0.02
1,3-Dichlorobenzene	541-73-1	0.0196
1,2-Dichlorobenzene	95-50-1	0.0196
1,2-Dichloroethane	107-06-2	0.0202
1,2-Dichloropropane	78-87-5	0.0204
1,2-Dichlorotetrafluoroethane	76-14-2	0.0192
1,3,5-Trimethylbenzene	108-67-8	0.0202
Carbon disulfide	75-15-0	0.0208

Analytical Standard Record

EPA Region 9 Laboratory

2033012

1,2,4-Trichlorobenzene	120-82-1	0.0194
Tetrahydrofuran	109-99-9	0.0184
Bromoform	75-25-2	0.0212
m&p-Xylene	179601-23-1	0.0408
o-Xylene	95-47-6	0.0202
Propene	115-07-1	0.019
Styrene	100-42-5	0.0202
Hexachlorobutadiene	87-68-3	0.0206
Tetrachloroethene	127-18-4	0.0206
Heptane	142-82-5	0.021
Toluene	108-88-3	0.0206
trans-1,2-Dichloroethene	156-60-5	0.0204
trans-1,3-Dichloropropene	10061-02-6	0.0184
Trichloroethene	79-01-6	0.0214
Trichlorofluoromethane	75-69-4	0.0186
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0218
cis-1,2-Dichloroethene	156-59-2	0.0206
Vinyl chloride	75-01-4	0.0206
Carbon tetrachloride	56-23-5	0.0198
Chlorobenzene	108-90-7	0.0208
Chlorodibromomethane	124-48-1	0.0208
Chloroethane	75-00-3	0.0202
Hexane	110-54-3	0.0202
Chloromethane	74-87-3	0.0198
Bromomethane	74-83-9	0.0204
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0216
Dichlorodifluoromethane	75-71-8	0.0196
Dichloromethane	75-09-2	0.0206
Ethyl acetate	141-78-6	0.0202
Ethylbenzene	100-41-4	0.0206
Chloroform	67-66-3	0.0208

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2028010	TO-15 25 Compound Subset Standard,	05/05/20	** Vendor **	05/05/21	08/10/20 11:55 by EM	50
2011030	TO-14A 39 Component Mix Standard,	02/24/20	** Vendor **	02/24/21	08/10/20 11:54 by EM	50

Analytical Standard Record

EPA Region 9 Laboratory

2033014

Description:	TO-15 LOW Std 10 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Analyte Spike	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0104
Bromoethene	593-60-2	0.0101
Bromodichloromethane	75-27-4	0.0105
Benzyl chloride	100-44-7	0.0093
Benzene	71-43-2	0.0104
Allyl chloride	107-05-1	0.0109
Acetone	67-64-1	0.0099
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0098
4-Ethyltoluene	622-96-8	0.0099
2-Propanol	67-63-0	0.01
2-Hexanone	591-78-6	0.0092
2-Butanone (MEK)	78-93-3	0.01
2,2,4-Trimethylpentane	540-84-1	0.0107
1,4-Dioxane	123-91-1	0.0105
1,1,1-Trichloroethane	71-55-6	0.0106
1,2-Dibromoethane (EDB)	106-93-4	0.0104
1,1,2,2-Tetrachloroethane	79-34-5	0.0101
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0107
1,1,2-Trichloroethane	79-00-5	0.0105
1,1-Dichloroethane	75-34-3	0.0098
1,1-Dichloroethene	75-35-4	0.0106
1,4-Dichlorobenzene	106-46-7	0.0098
1,2,4-Trimethylbenzene	95-63-6	0.01
1,3-Dichlorobenzene	541-73-1	0.0098
1,2-Dichlorobenzene	95-50-1	0.0098
1,2-Dichloroethane	107-06-2	0.0101
1,2-Dichloropropane	78-87-5	0.0102
1,2-Dichlorotetrafluoroethane	76-14-2	0.0096
1,3,5-Trimethylbenzene	108-67-8	0.0101
Carbon disulfide	75-15-0	0.0104

Analytical Standard Record

EPA Region 9 Laboratory

2033014

1,2,4-Trichlorobenzene	120-82-1	0.0097
Tetrahydrofuran	109-99-9	0.0092
Bromoform	75-25-2	0.0106
m&p-Xylene	179601-23-1	0.0204
o-Xylene	95-47-6	0.0101
Propene	115-07-1	0.0095
Styrene	100-42-5	0.0101
Hexachlorobutadiene	87-68-3	0.0103
Tetrachloroethene	127-18-4	0.0103
Heptane	142-82-5	0.0105
Toluene	108-88-3	0.0103
trans-1,2-Dichloroethene	156-60-5	0.0102
trans-1,3-Dichloropropene	10061-02-6	0.0092
Trichloroethene	79-01-6	0.0107
Trichlorofluoromethane	75-69-4	0.0093
Vinyl acetate	108-05-4	0.011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0109
cis-1,2-Dichloroethene	156-59-2	0.0103
Vinyl chloride	75-01-4	0.0103
Carbon tetrachloride	56-23-5	0.0099
Chlorobenzene	108-90-7	0.0104
Chlorodibromomethane	124-48-1	0.0104
Chloroethane	75-00-3	0.0101
Hexane	110-54-3	0.0101
Chloromethane	74-87-3	0.0099
Bromomethane	74-83-9	0.0102
cis-1,3-Dichloropropene	10061-01-5	0.0104
Cyclohexane	110-82-7	0.0108
Dichlorodifluoromethane	75-71-8	0.0098
Dichloromethane	75-09-2	0.0103
Ethyl acetate	141-78-6	0.0101
Ethylbenzene	100-41-4	0.0103
Chloroform	67-66-3	0.0104

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2028010	TO-15 25 Compound Subset Standard,	05/05/20	** Vendor **	05/05/21	08/10/20 11:55 by EM	25
2011030	TO-14A 39 Component Mix Standard,	02/24/20	** Vendor **	02/24/21	08/10/20 11:54 by EM	25

Analytical Standard Record

EPA Region 9 Laboratory

2033017

Description:	TO-15 SCV (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2000	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:35 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0096
Bromoethene	593-60-2	0.011
Bromodichloromethane	75-27-4	0.011
Benzyl chloride	100-44-7	0.01
Benzene	71-43-2	0.01
Allyl chloride	107-05-1	0.012
Acetone	67-64-1	0.011
4-Methyl-2-pentanone (MIBK)	108-10-1	0.011
4-Ethyltoluene	622-96-8	0.011
2-Propanol	67-63-0	0.01
2-Hexanone	591-78-6	0.011
2-Butanone (MEK)	78-93-3	0.011
2,2,4-Trimethylpentane	540-84-1	0.011
1,4-Dioxane	123-91-1	0.012
1,1,1-Trichloroethane	71-55-6	0.011
1,2-Dibromoethane (EDB)	106-93-4	0.01
1,1,2,2-Tetrachloroethane	79-34-5	0.0099
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.011
1,1,2-Trichloroethane	79-00-5	0.01
1,1-Dichloroethane	75-34-3	0.011
1,1-Dichloroethene	75-35-4	0.011
1,4-Dichlorobenzene	106-46-7	0.0099
1,2,4-Trimethylbenzene	95-63-6	0.01
1,3-Dichlorobenzene	541-73-1	0.01
1,2-Dichlorobenzene	95-50-1	0.0096
1,2-Dichloroethane	107-06-2	0.011
1,2-Dichloropropane	78-87-5	0.01
1,2-Dichlorotetrafluoroethane	76-14-2	0.011
1,3,5-Trimethylbenzene	108-67-8	0.01
Carbon disulfide	75-15-0	0.012

Analytical Standard Record

EPA Region 9 Laboratory

2033017

1,2,4-Trichlorobenzene	120-82-1	0.0093
Tetrahydrofuran	109-99-9	0.0099
Bromoform	75-25-2	0.012
m&p-Xylene	179601-23-1	0.022
o-Xylene	95-47-6	0.01
Propene	115-07-1	0.011
Styrene	100-42-5	0.01
Hexachlorobutadiene	87-68-3	0.0099
Tetrachloroethene	127-18-4	0.011
Heptane	142-82-5	0.011
Toluene	108-88-3	0.01
trans-1,2-Dichloroethene	156-60-5	0.01
trans-1,3-Dichloropropene	10061-02-6	0.01
Trichloroethene	79-01-6	0.011
Trichlorofluoromethane	75-69-4	0.011
Vinyl acetate	108-05-4	0.01
tert-Butyl methyl ether (MTBE)	1634-04-4	0.011
cis-1,2-Dichloroethene	156-59-2	0.011
Vinyl chloride	75-01-4	0.01
Carbon tetrachloride	56-23-5	0.011
Chlorobenzene	108-90-7	0.011
Chlorodibromomethane	124-48-1	0.011
Chloroethane	75-00-3	0.011
Hexane	110-54-3	0.011
Chloromethane	74-87-3	0.012
Bromomethane	74-83-9	0.011
cis-1,3-Dichloropropene	10061-01-5	0.01
Cyclohexane	110-82-7	0.011
Dichlorodifluoromethane	75-71-8	0.011
Dichloromethane	75-09-2	0.011
Ethyl acetate	141-78-6	0.011
Ethylbenzene	100-41-4	0.011
Chloroform	67-66-3	0.011

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2026038	TO-15 25 Compound Subset Standard,	05/27/20	** Vendor **	05/27/22	06/23/20 14:23 by EM	200
2014018	TO-14A 39 Component Mix Standard,	03/02/20	** Vendor **	03/11/23	04/01/20 10:13 by LLH	200

Analytical Standard Record

EPA Region 9 Laboratory

2033026

Description:	TO-15 CAL1 1.0 ppbv (VIRTUAL) - CR	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.00099
1,4-Dioxane	123-91-1	0.00105
2,2,4-Trimethylpentane	540-84-1	0.00107
2-Butanone (MEK)	78-93-3	0.001
2-Hexanone	591-78-6	0.00092
2-Propanol	67-63-0	0.001
Bromoform	75-25-2	0.00106
4-Methyl-2-pentanone (MIBK)	108-10-1	0.00098
1,3-Dichlorobenzene	541-73-1	0.00098
Allyl chloride	107-05-1	0.00109
Benzene	71-43-2	0.00104
Benzyl chloride	100-44-7	0.00093
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.00105
1,1,1-Trichloroethane	71-55-6	0.00106
4-Ethyltoluene	622-96-8	0.00099
1,2-Dichlorobenzene	95-50-1	0.00098
1,1,2,2-Tetrachloroethane	79-34-5	0.00101
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.00107
1,1,2-Trichloroethane	79-00-5	0.00105
1,1-Dichloroethane	75-34-3	0.00098
1,1-Dichloroethene	75-35-4	0.00106
1,2,4-Trichlorobenzene	120-82-1	0.00097
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.00104
1,4-Dichlorobenzene	106-46-7	0.00098
1,2-Dichloroethane	107-06-2	0.00101
1,2-Dichloropropane	78-87-5	0.00102
1,2-Dichlorotetrafluoroethane	76-14-2	0.00096
1,3,5-Trimethylbenzene	108-67-8	0.00101

Analytical Standard Record

EPA Region 9 Laboratory

2033026

1,3-Butadiene	106-99-0	0.00104
Bromomethane	74-83-9	0.00102
1,2,4-Trimethylbenzene	95-63-6	0.001
Tetrahydrofuran	109-99-9	0.00092
Hexane	110-54-3	0.00101
m&p-Xylene	179601-23-1	0.00204
o-Xylene	95-47-6	0.00101
Propene	115-07-1	0.00095
Styrene	100-42-5	0.00101
Bromoethene	593-60-2	0.00101
Tetrachloroethene	127-18-4	0.00103
Ethylbenzene	100-41-4	0.00103
Toluene	108-88-3	0.00103
trans-1,2-Dichloroethene	156-60-5	0.00102
trans-1,3-Dichloropropene	10061-02-6	0.00092
Trichloroethene	79-01-6	0.00107
Trichlorofluoromethane	75-69-4	0.00093
Vinyl acetate	108-05-4	0.0011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.00109
cis-1,2-Dichloroethene	156-59-2	0.00103
Carbon disulfide	75-15-0	0.00104
Carbon tetrachloride	56-23-5	0.00099
Chlorobenzene	108-90-7	0.00104
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.00104
Chloroethane	75-00-3	0.00101
Hexachlorobutadiene	87-68-3	0.00103
Chloromethane	74-87-3	0.00099
Heptane	142-82-5	0.00105
cis-1,3-Dichloropropene	10061-01-5	0.00104
Cyclohexane	110-82-7	0.00108
Dichlorodifluoromethane	75-71-8	0.00098
Dichloromethane	75-09-2	0.00103
Ethyl acetate	141-78-6	0.00101
Vinyl chloride	75-01-4	0.00103
Chloroform	67-66-3	0.00104

Analytical Standard Record

EPA Region 9 Laboratory

2033026

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033014	TO-15 LOW Std 10 ppbv (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:55 by EM	20

Analytical Standard Record

EPA Region 9 Laboratory

2033027

Description:	TO-15 CAL2 2.0 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.00198
1,4-Dioxane	123-91-1	0.0021
2,2,4-Trimethylpentane	540-84-1	0.00214
2-Butanone (MEK)	78-93-3	0.002
2-Hexanone	591-78-6	0.00184
2-Propanol	67-63-0	0.002
Bromoform	75-25-2	0.00212
4-Methyl-2-pentanone (MIBK)	108-10-1	0.00196
1,3-Dichlorobenzene	541-73-1	0.00196
Allyl chloride	107-05-1	0.00218
Benzene	71-43-2	0.00208
Benzyl chloride	100-44-7	0.00186
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.0021
1,1,1-Trichloroethane	71-55-6	0.00212
4-Ethyltoluene	622-96-8	0.00198
1,2-Dichlorobenzene	95-50-1	0.00196
1,1,2,2-Tetrachloroethane	79-34-5	0.00202
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.00214
1,1,2-Trichloroethane	79-00-5	0.0021
1,1-Dichloroethane	75-34-3	0.00196
1,1-Dichloroethene	75-35-4	0.00212
1,2,4-Trichlorobenzene	120-82-1	0.00194
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.00208
1,4-Dichlorobenzene	106-46-7	0.00196
1,2-Dichloroethane	107-06-2	0.00202
1,2-Dichloropropane	78-87-5	0.00204
1,2-Dichlorotetrafluoroethane	76-14-2	0.00192
1,3,5-Trimethylbenzene	108-67-8	0.00202

Analytical Standard Record

EPA Region 9 Laboratory

2033027

1,3-Butadiene	106-99-0	0.00208
Bromomethane	74-83-9	0.00204
1,2,4-Trimethylbenzene	95-63-6	0.002
Tetrahydrofuran	109-99-9	0.00184
Hexane	110-54-3	0.00202
m&p-Xylene	179601-23-1	0.00408
o-Xylene	95-47-6	0.00202
Propene	115-07-1	0.0019
Styrene	100-42-5	0.00202
Bromoethene	593-60-2	0.00202
Tetrachloroethene	127-18-4	0.00206
Ethylbenzene	100-41-4	0.00206
Toluene	108-88-3	0.00206
trans-1,2-Dichloroethene	156-60-5	0.00204
trans-1,3-Dichloropropene	10061-02-6	0.00184
Trichloroethene	79-01-6	0.00214
Trichlorofluoromethane	75-69-4	0.00186
Vinyl acetate	108-05-4	0.0022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.00218
cis-1,2-Dichloroethene	156-59-2	0.00206
Carbon disulfide	75-15-0	0.00208
Carbon tetrachloride	56-23-5	0.00198
Chlorobenzene	108-90-7	0.00208
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.00208
Chloroethane	75-00-3	0.00202
Hexachlorobutadiene	87-68-3	0.00206
Chloromethane	74-87-3	0.00198
Heptane	142-82-5	0.0021
cis-1,3-Dichloropropene	10061-01-5	0.00208
Cyclohexane	110-82-7	0.00216
Dichlorodifluoromethane	75-71-8	0.00196
Dichloromethane	75-09-2	0.00206
Ethyl acetate	141-78-6	0.00202
Vinyl chloride	75-01-4	0.00206
Chloroform	67-66-3	0.00208

Analytical Standard Record

EPA Region 9 Laboratory

2033027

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033012	TO-15 CAL Std 20 ppbv (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:55 by EM	20

Analytical Standard Record

EPA Region 9 Laboratory

2033029

Description:	TO-15 CAL3 5.0 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.00495
1,4-Dioxane	123-91-1	0.00525
2,2,4-Trimethylpentane	540-84-1	0.00535
2-Butanone (MEK)	78-93-3	0.005
2-Hexanone	591-78-6	0.0046
2-Propanol	67-63-0	0.005
Bromoform	75-25-2	0.0053
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0049
1,3-Dichlorobenzene	541-73-1	0.0049
Allyl chloride	107-05-1	0.00545
Benzene	71-43-2	0.0052
Benzyl chloride	100-44-7	0.00465
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.00525
1,1,1-Trichloroethane	71-55-6	0.0053
4-Ethyltoluene	622-96-8	0.00495
1,2-Dichlorobenzene	95-50-1	0.0049
1,1,2,2-Tetrachloroethane	79-34-5	0.00505
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.00535
1,1,2-Trichloroethane	79-00-5	0.00525
1,1-Dichloroethane	75-34-3	0.0049
1,1-Dichloroethene	75-35-4	0.0053
1,2,4-Trichlorobenzene	120-82-1	0.00485
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.0052
1,4-Dichlorobenzene	106-46-7	0.0049
1,2-Dichloroethane	107-06-2	0.00505
1,2-Dichloropropane	78-87-5	0.0051
1,2-Dichlorotetrafluoroethane	76-14-2	0.0048
1,3,5-Trimethylbenzene	108-67-8	0.00505

Analytical Standard Record

EPA Region 9 Laboratory

2033029

1,3-Butadiene	106-99-0	0.0052
Bromomethane	74-83-9	0.0051
1,2,4-Trimethylbenzene	95-63-6	0.005
Tetrahydrofuran	109-99-9	0.0046
Hexane	110-54-3	0.00505
m&p-Xylene	179601-23-1	0.0102
o-Xylene	95-47-6	0.00505
Propene	115-07-1	0.00475
Styrene	100-42-5	0.00505
Bromoethene	593-60-2	0.00505
Tetrachloroethene	127-18-4	0.00515
Ethylbenzene	100-41-4	0.00515
Toluene	108-88-3	0.00515
trans-1,2-Dichloroethene	156-60-5	0.0051
trans-1,3-Dichloropropene	10061-02-6	0.0046
Trichloroethene	79-01-6	0.00535
Trichlorofluoromethane	75-69-4	0.00465
Vinyl acetate	108-05-4	0.0055
tert-Butyl methyl ether (MTBE)	1634-04-4	0.00545
cis-1,2-Dichloroethene	156-59-2	0.00515
Carbon disulfide	75-15-0	0.0052
Carbon tetrachloride	56-23-5	0.00495
Chlorobenzene	108-90-7	0.0052
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.0052
Chloroethane	75-00-3	0.00505
Hexachlorobutadiene	87-68-3	0.00515
Chloromethane	74-87-3	0.00495
Heptane	142-82-5	0.00525
cis-1,3-Dichloropropene	10061-01-5	0.0052
Cyclohexane	110-82-7	0.0054
Dichlorodifluoromethane	75-71-8	0.0049
Dichloromethane	75-09-2	0.00515
Ethyl acetate	141-78-6	0.00505
Vinyl chloride	75-01-4	0.00515
Chloroform	67-66-3	0.0052

Analytical Standard Record

EPA Region 9 Laboratory

2033029

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033012	TO-15 CAL Std 20 ppbv (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:55 by EM	50

Analytical Standard Record

EPA Region 9 Laboratory

2033030

Description:	TO-15 CAL4 10 ppbv (VIRTUAL) - CC	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0099
1,4-Dioxane	123-91-1	0.0105
2,2,4-Trimethylpentane	540-84-1	0.0107
2-Butanone (MEK)	78-93-3	0.01
2-Hexanone	591-78-6	0.0092
2-Propanol	67-63-0	0.01
Bromoform	75-25-2	0.0106
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0098
1,3-Dichlorobenzene	541-73-1	0.0098
Allyl chloride	107-05-1	0.0109
Benzene	71-43-2	0.0104
Benzyl chloride	100-44-7	0.0093
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.0105
1,1,1-Trichloroethane	71-55-6	0.0106
4-Ethyltoluene	622-96-8	0.0099
1,2-Dichlorobenzene	95-50-1	0.0098
1,1,2,2-Tetrachloroethane	79-34-5	0.0101
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0107
1,1,2-Trichloroethane	79-00-5	0.0105
1,1-Dichloroethane	75-34-3	0.0098
1,1-Dichloroethene	75-35-4	0.0106
1,2,4-Trichlorobenzene	120-82-1	0.0097
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.0104
1,4-Dichlorobenzene	106-46-7	0.0098
1,2-Dichloroethane	107-06-2	0.0101
1,2-Dichloropropane	78-87-5	0.0102
1,2-Dichlorotetrafluoroethane	76-14-2	0.0096
1,3,5-Trimethylbenzene	108-67-8	0.0101

Analytical Standard Record

EPA Region 9 Laboratory

2033030

1,3-Butadiene	106-99-0	0.0104
Bromomethane	74-83-9	0.0102
1,2,4-Trimethylbenzene	95-63-6	0.01
Tetrahydrofuran	109-99-9	0.0092
Hexane	110-54-3	0.0101
m&p-Xylene	179601-23-1	0.0204
o-Xylene	95-47-6	0.0101
Propene	115-07-1	0.0095
Styrene	100-42-5	0.0101
Bromoethene	593-60-2	0.0101
Tetrachloroethene	127-18-4	0.0103
Ethylbenzene	100-41-4	0.0103
Toluene	108-88-3	0.0103
trans-1,2-Dichloroethene	156-60-5	0.0102
trans-1,3-Dichloropropene	10061-02-6	0.0092
Trichloroethene	79-01-6	0.0107
Trichlorofluoromethane	75-69-4	0.0093
Vinyl acetate	108-05-4	0.011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0109
cis-1,2-Dichloroethene	156-59-2	0.0103
Carbon disulfide	75-15-0	0.0104
Carbon tetrachloride	56-23-5	0.0099
Chlorobenzene	108-90-7	0.0104
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.0104
Chloroethane	75-00-3	0.0101
Hexachlorobutadiene	87-68-3	0.0103
Chloromethane	74-87-3	0.0099
Heptane	142-82-5	0.0105
cis-1,3-Dichloropropene	10061-01-5	0.0104
Cyclohexane	110-82-7	0.0108
Dichlorodifluoromethane	75-71-8	0.0098
Dichloromethane	75-09-2	0.0103
Ethyl acetate	141-78-6	0.0101
Vinyl chloride	75-01-4	0.0103
Chloroform	67-66-3	0.0104

Analytical Standard Record

EPA Region 9 Laboratory

2033030

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033012	TO-15 CAL Std 20 ppbv (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:55 by EM	100

Analytical Standard Record

EPA Region 9 Laboratory

2033032

Description:	TO-15 CAL5 15 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0148
1,4-Dioxane	123-91-1	0.0158
2,2,4-Trimethylpentane	540-84-1	0.016
2-Butanone (MEK)	78-93-3	0.015
2-Hexanone	591-78-6	0.0138
2-Propanol	67-63-0	0.015
Bromoform	75-25-2	0.0159
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0147
1,3-Dichlorobenzene	541-73-1	0.0147
Allyl chloride	107-05-1	0.0164
Benzene	71-43-2	0.0156
Benzyl chloride	100-44-7	0.014
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.0158
1,1,1-Trichloroethane	71-55-6	0.0159
4-Ethyltoluene	622-96-8	0.0148
1,2-Dichlorobenzene	95-50-1	0.0147
1,1,2,2-Tetrachloroethane	79-34-5	0.0152
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.016
1,1,2-Trichloroethane	79-00-5	0.0158
1,1-Dichloroethane	75-34-3	0.0147
1,1-Dichloroethene	75-35-4	0.0159
1,2,4-Trichlorobenzene	120-82-1	0.0146
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.0156
1,4-Dichlorobenzene	106-46-7	0.0147
1,2-Dichloroethane	107-06-2	0.0152
1,2-Dichloropropane	78-87-5	0.0153
1,2-Dichlorotetrafluoroethane	76-14-2	0.0144
1,3,5-Trimethylbenzene	108-67-8	0.0152

Analytical Standard Record

EPA Region 9 Laboratory

2033032

1,3-Butadiene	106-99-0	0.0156
Bromomethane	74-83-9	0.0153
1,2,4-Trimethylbenzene	95-63-6	0.015
Tetrahydrofuran	109-99-9	0.0138
Hexane	110-54-3	0.0152
m&p-Xylene	179601-23-1	0.0306
o-Xylene	95-47-6	0.0152
Propene	115-07-1	0.0142
Styrene	100-42-5	0.0152
Bromoethene	593-60-2	0.0152
Tetrachloroethene	127-18-4	0.0154
Ethylbenzene	100-41-4	0.0154
Toluene	108-88-3	0.0154
trans-1,2-Dichloroethene	156-60-5	0.0153
trans-1,3-Dichloropropene	10061-02-6	0.0138
Trichloroethene	79-01-6	0.016
Trichlorofluoromethane	75-69-4	0.014
Vinyl acetate	108-05-4	0.0165
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0164
cis-1,2-Dichloroethene	156-59-2	0.0154
Carbon disulfide	75-15-0	0.0156
Carbon tetrachloride	56-23-5	0.0148
Chlorobenzene	108-90-7	0.0156
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.0156
Chloroethane	75-00-3	0.0152
Hexachlorobutadiene	87-68-3	0.0154
Chloromethane	74-87-3	0.0148
Heptane	142-82-5	0.0158
cis-1,3-Dichloropropene	10061-01-5	0.0156
Cyclohexane	110-82-7	0.0162
Dichlorodifluoromethane	75-71-8	0.0147
Dichloromethane	75-09-2	0.0154
Ethyl acetate	141-78-6	0.0152
Vinyl chloride	75-01-4	0.0154
Chloroform	67-66-3	0.0156

Analytical Standard Record

EPA Region 9 Laboratory

2033032

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033012	TO-15 CAL Std 20 ppbv (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:55 by EM	150

Analytical Standard Record

EPA Region 9 Laboratory

2033033

Description:	TO-15 CAL6 20 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:55 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0198
1,4-Dioxane	123-91-1	0.021
2,2,4-Trimethylpentane	540-84-1	0.0214
2-Butanone (MEK)	78-93-3	0.02
2-Hexanone	591-78-6	0.0184
2-Propanol	67-63-0	0.02
Bromoform	75-25-2	0.0212
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0196
1,3-Dichlorobenzene	541-73-1	0.0196
Allyl chloride	107-05-1	0.0218
Benzene	71-43-2	0.0208
Benzyl chloride	100-44-7	0.0186
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.021
1,1,1-Trichloroethane	71-55-6	0.0212
4-Ethyltoluene	622-96-8	0.0198
1,2-Dichlorobenzene	95-50-1	0.0196
1,1,2,2-Tetrachloroethane	79-34-5	0.0202
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0214
1,1,2-Trichloroethane	79-00-5	0.021
1,1-Dichloroethane	75-34-3	0.0196
1,1-Dichloroethene	75-35-4	0.0212
1,2,4-Trichlorobenzene	120-82-1	0.0194
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.0208
1,4-Dichlorobenzene	106-46-7	0.0196
1,2-Dichloroethane	107-06-2	0.0202
1,2-Dichloropropane	78-87-5	0.0204
1,2-Dichlorotetrafluoroethane	76-14-2	0.0192
1,3,5-Trimethylbenzene	108-67-8	0.0202

Analytical Standard Record

EPA Region 9 Laboratory

2033033

1,3-Butadiene	106-99-0	0.0208
Bromomethane	74-83-9	0.0204
1,2,4-Trimethylbenzene	95-63-6	0.02
Tetrahydrofuran	109-99-9	0.0184
Hexane	110-54-3	0.0202
m&p-Xylene	179601-23-1	0.0408
o-Xylene	95-47-6	0.0202
Propene	115-07-1	0.019
Styrene	100-42-5	0.0202
Bromoethene	593-60-2	0.0202
Tetrachloroethene	127-18-4	0.0206
Ethylbenzene	100-41-4	0.0206
Toluene	108-88-3	0.0206
trans-1,2-Dichloroethene	156-60-5	0.0204
trans-1,3-Dichloropropene	10061-02-6	0.0184
Trichloroethene	79-01-6	0.0214
Trichlorofluoromethane	75-69-4	0.0186
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0218
cis-1,2-Dichloroethene	156-59-2	0.0206
Carbon disulfide	75-15-0	0.0208
Carbon tetrachloride	56-23-5	0.0198
Chlorobenzene	108-90-7	0.0208
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.0208
Chloroethane	75-00-3	0.0202
Hexachlorobutadiene	87-68-3	0.0206
Chloromethane	74-87-3	0.0198
Heptane	142-82-5	0.021
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0216
Dichlorodifluoromethane	75-71-8	0.0196
Dichloromethane	75-09-2	0.0206
Ethyl acetate	141-78-6	0.0202
Vinyl chloride	75-01-4	0.0206
Chloroform	67-66-3	0.0208

Analytical Standard Record

EPA Region 9 Laboratory

2033033

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033012	TO-15 CAL Std 20 ppbv (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:55 by EM	200

Analytical Standard Record

EPA Region 9 Laboratory

2033037

Description:	TO-15 SCV 10 ppbv (VIRTUAL)	**Expires:**	09/09/20
Standard Type:	Other Solution	**Prepared:**	08/10/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	08/10/20 11:44 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.011
1,4-Dioxane	123-91-1	0.012
2,2,4-Trimethylpentane	540-84-1	0.011
2-Butanone (MEK)	78-93-3	0.011
2-Hexanone	591-78-6	0.011
2-Propanol	67-63-0	0.01
Bromoform	75-25-2	0.012
4-Methyl-2-pentanone (MIBK)	108-10-1	0.011
1,3-Dichlorobenzene	541-73-1	0.01
Allyl chloride	107-05-1	0.012
Benzene	71-43-2	0.01
Benzyl chloride	100-44-7	0.01
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.011
1,1,1-Trichloroethane	71-55-6	0.011
4-Ethyltoluene	622-96-8	0.011
1,2-Dichlorobenzene	95-50-1	0.0096
1,1,2,2-Tetrachloroethane	79-34-5	0.0099
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.011
1,1,2-Trichloroethane	79-00-5	0.01
1,1-Dichloroethane	75-34-3	0.011
1,1-Dichloroethene	75-35-4	0.011
1,2,4-Trichlorobenzene	120-82-1	0.0093
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.01
1,4-Dichlorobenzene	106-46-7	0.0099
1,2-Dichloroethane	107-06-2	0.011
1,2-Dichloropropane	78-87-5	0.01
1,2-Dichlorotetrafluoroethane	76-14-2	0.011
1,3,5-Trimethylbenzene	108-67-8	0.01

Analytical Standard Record

EPA Region 9 Laboratory

2033037

1,3-Butadiene	106-99-0	0.0096
Bromomethane	74-83-9	0.011
1,2,4-Trimethylbenzene	95-63-6	0.01
Tetrahydrofuran	109-99-9	0.0099
Hexane	110-54-3	0.011
m&p-Xylene	179601-23-1	0.022
o-Xylene	95-47-6	0.01
Propene	115-07-1	0.011
Styrene	100-42-5	0.01
Bromoethene	593-60-2	0.011
Tetrachloroethene	127-18-4	0.011
Ethylbenzene	100-41-4	0.011
Toluene	108-88-3	0.01
trans-1,2-Dichloroethene	156-60-5	0.01
trans-1,3-Dichloropropene	10061-02-6	0.01
Trichloroethene	79-01-6	0.011
Trichlorofluoromethane	75-69-4	0.011
Vinyl acetate	108-05-4	0.01
tert-Butyl methyl ether (MTBE)	1634-04-4	0.011
cis-1,2-Dichloroethene	156-59-2	0.011
Carbon disulfide	75-15-0	0.012
Carbon tetrachloride	56-23-5	0.011
Chlorobenzene	108-90-7	0.011
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.011
Chloroethane	75-00-3	0.011
Hexachlorobutadiene	87-68-3	0.0099
Chloromethane	74-87-3	0.012
Heptane	142-82-5	0.011
cis-1,3-Dichloropropene	10061-01-5	0.01
Cyclohexane	110-82-7	0.011
Dichlorodifluoromethane	75-71-8	0.011
Dichloromethane	75-09-2	0.011
Ethyl acetate	141-78-6	0.011
Vinyl chloride	75-01-4	0.01
Chloroform	67-66-3	0.011

Analytical Standard Record

EPA Region 9 Laboratory

2033037

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006146	TO-14A Internal Standard Mix, Stock(	01/29/20	** Vendor **	01/29/22	02/06/20 15:46 by LLH	40
2033017	TO-15 SCV (VIRTUAL)	08/10/20	Estrellita Manuel	09/09/20	08/10/20 11:35 by EM	200

Analytical Standard Record

EPA Region 9 Laboratory

2038012

Description:	TO-15 CAL Std 20 ppbv (VIRTUAL)	**Expires:**	10/14/20
Standard Type:	Analyte Spike	**Prepared:**	09/14/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	09/14/20 14:18 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0208
Bromoethene	593-60-2	0.0202
Bromodichloromethane	75-27-4	0.021
Benzyl chloride	100-44-7	0.0186
Benzene	71-43-2	0.0208
Allyl chloride	107-05-1	0.0218
Acetone	67-64-1	0.0198
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0196
4-Ethyltoluene	622-96-8	0.0198
2-Propanol	67-63-0	0.02
2-Hexanone	591-78-6	0.0184
2-Butanone (MEK)	78-93-3	0.02
2,2,4-Trimethylpentane	540-84-1	0.0214
1,4-Dioxane	123-91-1	0.021
1,1,1-Trichloroethane	71-55-6	0.0212
1,2-Dibromoethane (EDB)	106-93-4	0.0208
1,1,2,2-Tetrachloroethane	79-34-5	0.0202
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0214
1,1,2-Trichloroethane	79-00-5	0.021
1,1-Dichloroethane	75-34-3	0.0196
1,1-Dichloroethene	75-35-4	0.0212
1,4-Dichlorobenzene	106-46-7	0.0196
1,2,4-Trimethylbenzene	95-63-6	0.02
1,3-Dichlorobenzene	541-73-1	0.0196
1,2-Dichlorobenzene	95-50-1	0.0196
1,2-Dichloroethane	107-06-2	0.0202
1,2-Dichloropropane	78-87-5	0.0204
1,2-Dichlorotetrafluoroethane	76-14-2	0.0192
1,3,5-Trimethylbenzene	108-67-8	0.0202
Carbon disulfide	75-15-0	0.0208

Analytical Standard Record

EPA Region 9 Laboratory

2038012

1,2,4-Trichlorobenzene	120-82-1	0.0194
Tetrahydrofuran	109-99-9	0.0184
Bromoform	75-25-2	0.0212
m&p-Xylene	179601-23-1	0.0408
o-Xylene	95-47-6	0.0202
Propene	115-07-1	0.019
Styrene	100-42-5	0.0202
Hexachlorobutadiene	87-68-3	0.0206
Tetrachloroethene	127-18-4	0.0206
Heptane	142-82-5	0.021
Toluene	108-88-3	0.0206
trans-1,2-Dichloroethene	156-60-5	0.0204
trans-1,3-Dichloropropene	10061-02-6	0.0184
Trichloroethene	79-01-6	0.0214
Trichlorofluoromethane	75-69-4	0.0186
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0218
cis-1,2-Dichloroethene	156-59-2	0.0206
Vinyl chloride	75-01-4	0.0206
Carbon tetrachloride	56-23-5	0.0198
Chlorobenzene	108-90-7	0.0208
Chlorodibromomethane	124-48-1	0.0208
Chloroethane	75-00-3	0.0202
Hexane	110-54-3	0.0202
Chloromethane	74-87-3	0.0198
Bromomethane	74-83-9	0.0204
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0216
Dichlorodifluoromethane	75-71-8	0.0196
Dichloromethane	75-09-2	0.0206
Ethyl acetate	141-78-6	0.0202
Ethylbenzene	100-41-4	0.0206
Chloroform	67-66-3	0.0208

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2028010	TO-15 25 Compound Subset Standard,	05/05/20	** Vendor **	05/05/21	08/10/20 11:55 by EM	50
2011030	TO-14A 39 Component Mix Standard,	02/24/20	** Vendor **	02/24/21	08/10/20 11:54 by EM	50

Analytical Standard Record

EPA Region 9 Laboratory

2038013

Description:	TO-15 LOW Std 10 ppbv (VIRTUAL)	**Expires:**	10/14/20
Standard Type:	Analyte Spike	**Prepared:**	09/14/20
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	09/14/20 14:18 by EM
Vendor:	*Prepared*	**Lot Numbe**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0104
Bromoethene	593-60-2	0.0101
Bromodichloromethane	75-27-4	0.0105
Benzyl chloride	100-44-7	0.0093
Benzene	71-43-2	0.0104
Allyl chloride	107-05-1	0.0109
Acetone	67-64-1	0.0099
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0098
4-Ethyltoluene	622-96-8	0.0099
2-Propanol	67-63-0	0.01
2-Hexanone	591-78-6	0.0092
2-Butanone (MEK)	78-93-3	0.01
2,2,4-Trimethylpentane	540-84-1	0.0107
1,4-Dioxane	123-91-1	0.0105
1,1,1-Trichloroethane	71-55-6	0.0106
1,2-Dibromoethane (EDB)	106-93-4	0.0104
1,1,2,2-Tetrachloroethane	79-34-5	0.0101
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0107
1,1,2-Trichloroethane	79-00-5	0.0105
1,1-Dichloroethane	75-34-3	0.0098
1,1-Dichloroethene	75-35-4	0.0106
1,4-Dichlorobenzene	106-46-7	0.0098
1,2,4-Trimethylbenzene	95-63-6	0.01
1,3-Dichlorobenzene	541-73-1	0.0098
1,2-Dichlorobenzene	95-50-1	0.0098
1,2-Dichloroethane	107-06-2	0.0101
1,2-Dichloropropane	78-87-5	0.0102
1,2-Dichlorotetrafluoroethane	76-14-2	0.0096
1,3,5-Trimethylbenzene	108-67-8	0.0101
Carbon disulfide	75-15-0	0.0104

Analytical Standard Record

EPA Region 9 Laboratory

2038013

1,2,4-Trichlorobenzene	120-82-1	0.0097
Tetrahydrofuran	109-99-9	0.0092
Bromoform	75-25-2	0.0106
m&p-Xylene	179601-23-1	0.0204
o-Xylene	95-47-6	0.0101
Propene	115-07-1	0.0095
Styrene	100-42-5	0.0101
Hexachlorobutadiene	87-68-3	0.0103
Tetrachloroethene	127-18-4	0.0103
Heptane	142-82-5	0.0105
Toluene	108-88-3	0.0103
trans-1,2-Dichloroethene	156-60-5	0.0102
trans-1,3-Dichloropropene	10061-02-6	0.0092
Trichloroethene	79-01-6	0.0107
Trichlorofluoromethane	75-69-4	0.0093
Vinyl acetate	108-05-4	0.011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0109
cis-1,2-Dichloroethene	156-59-2	0.0103
Vinyl chloride	75-01-4	0.0103
Carbon tetrachloride	56-23-5	0.0099
Chlorobenzene	108-90-7	0.0104
Chlorodibromomethane	124-48-1	0.0104
Chloroethane	75-00-3	0.0101
Hexane	110-54-3	0.0101
Chloromethane	74-87-3	0.0099
Bromomethane	74-83-9	0.0102
cis-1,3-Dichloropropene	10061-01-5	0.0104
Cyclohexane	110-82-7	0.0108
Dichlorodifluoromethane	75-71-8	0.0098
Dichloromethane	75-09-2	0.0103
Ethyl acetate	141-78-6	0.0101
Ethylbenzene	100-41-4	0.0103
Chloroform	67-66-3	0.0104

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2011030	TO-14A 39 Component Mix Standard,	02/24/20	** Vendor **	02/24/21	08/10/20 11:54 by EM	25
2028010	TO-15 25 Compound Subset Standard,	05/05/20	** Vendor **	05/05/21	08/10/20 11:55 by EM	25

Analytical Standard Record

EPA Region 9 Laboratory

2040002

Description:	TO-15 CRL1 1.0 ppbv (VIRTUAL)	**Expires:**	10/14/20
Standard Type:	Other Solution	**Prepared:**	09/28/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	09/28/20 09:51 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.00099
1,4-Dioxane	123-91-1	0.00105
2,2,4-Trimethylpentane	540-84-1	0.00107
2-Butanone (MEK)	78-93-3	0.001
2-Hexanone	591-78-6	0.00092
2-Propanol	67-63-0	0.001
Bromoform	75-25-2	0.00106
4-Methyl-2-pentanone (MIBK)	108-10-1	0.00098
1,3-Dichlorobenzene	541-73-1	0.00098
Allyl chloride	107-05-1	0.00109
Benzene	71-43-2	0.00104
Benzyl chloride	100-44-7	0.00093
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.00105
1,1,1-Trichloroethane	71-55-6	0.00106
4-Ethyltoluene	622-96-8	0.00099
1,2-Dichlorobenzene	95-50-1	0.00098
1,1,2,2-Tetrachloroethane	79-34-5	0.00101
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.00107
1,1,2-Trichloroethane	79-00-5	0.00105
1,1-Dichloroethane	75-34-3	0.00098
1,1-Dichloroethene	75-35-4	0.00106
1,2,4-Trichlorobenzene	120-82-1	0.00097
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.00104
1,4-Dichlorobenzene	106-46-7	0.00098
1,2-Dichloroethane	107-06-2	0.00101
1,2-Dichloropropane	78-87-5	0.00102
1,2-Dichlorotetrafluoroethane	76-14-2	0.00096
1,3,5-Trimethylbenzene	108-67-8	0.00101

Analytical Standard Record

EPA Region 9 Laboratory

2040002

1,3-Butadiene	106-99-0	0.00104
Bromomethane	74-83-9	0.00102
1,2,4-Trimethylbenzene	95-63-6	0.001
Tetrahydrofuran	109-99-9	0.00092
Hexane	110-54-3	0.00101
m&p-Xylene	179601-23-1	0.00204
o-Xylene	95-47-6	0.00101
Propene	115-07-1	0.00095
Styrene	100-42-5	0.00101
Bromoethene	593-60-2	0.00101
Tetrachloroethene	127-18-4	0.00103
Ethylbenzene	100-41-4	0.00103
Toluene	108-88-3	0.00103
trans-1,2-Dichloroethene	156-60-5	0.00102
trans-1,3-Dichloropropene	10061-02-6	0.00092
Trichloroethene	79-01-6	0.00107
Trichlorofluoromethane	75-69-4	0.00093
Vinyl acetate	108-05-4	0.0011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.00109
cis-1,2-Dichloroethene	156-59-2	0.00103
Carbon disulfide	75-15-0	0.00104
Carbon tetrachloride	56-23-5	0.00099
Chlorobenzene	108-90-7	0.00104
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.00104
Chloroethane	75-00-3	0.00101
Hexachlorobutadiene	87-68-3	0.00103
Chloromethane	74-87-3	0.00099
Heptane	142-82-5	0.00105
cis-1,3-Dichloropropene	10061-01-5	0.00104
Cyclohexane	110-82-7	0.00108
Dichlorodifluoromethane	75-71-8	0.00098
Dichloromethane	75-09-2	0.00103
Ethyl acetate	141-78-6	0.00101
Vinyl chloride	75-01-4	0.00103
Chloroform	67-66-3	0.00104

Analytical Standard Record

EPA Region 9 Laboratory

2040002

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2038013	TO-15 LOW Std 10 ppbv (VIRTU	09/14/20	Estrellita Manuel	10/14/20	09/14/20 14:18 by EM	20
2006148	TO-14A Internal Standard Mix, Sto	01/29/20	** Vendor **	01/29/22	09/28/20 09:50 by LLH	40

Analytical Standard Record

EPA Region 9 Laboratory

2040005

Description:	TO-15 CCV1 10 ppbv (VIRTUAL)	**Expires:**	10/14/20
Standard Type:	Other Solution	**Prepared:**	09/28/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	09/28/20 09:53 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0099
1,4-Dioxane	123-91-1	0.0105
2,2,4-Trimethylpentane	540-84-1	0.0107
2-Butanone (MEK)	78-93-3	0.01
2-Hexanone	591-78-6	0.0092
2-Propanol	67-63-0	0.01
Bromoform	75-25-2	0.0106
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0098
1,3-Dichlorobenzene	541-73-1	0.0098
Allyl chloride	107-05-1	0.0109
Benzene	71-43-2	0.0104
Benzyl chloride	100-44-7	0.0093
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.0105
1,1,1-Trichloroethane	71-55-6	0.0106
4-Ethyltoluene	622-96-8	0.0099
1,2-Dichlorobenzene	95-50-1	0.0098
1,1,2,2-Tetrachloroethane	79-34-5	0.0101
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0107
1,1,2-Trichloroethane	79-00-5	0.0105
1,1-Dichloroethane	75-34-3	0.0098
1,1-Dichloroethene	75-35-4	0.0106
1,2,4-Trichlorobenzene	120-82-1	0.0097
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.0104
1,4-Dichlorobenzene	106-46-7	0.0098
1,2-Dichloroethane	107-06-2	0.0101
1,2-Dichloropropane	78-87-5	0.0102
1,2-Dichlorotetrafluoroethane	76-14-2	0.0096
1,3,5-Trimethylbenzene	108-67-8	0.0101

Analytical Standard Record

EPA Region 9 Laboratory

2040005

1,3-Butadiene	106-99-0	0.0104
Bromomethane	74-83-9	0.0102
1,2,4-Trimethylbenzene	95-63-6	0.01
Tetrahydrofuran	109-99-9	0.0092
Hexane	110-54-3	0.0101
m&p-Xylene	179601-23-1	0.0204
o-Xylene	95-47-6	0.0101
Propene	115-07-1	0.0095
Styrene	100-42-5	0.0101
Bromoethene	593-60-2	0.0101
Tetrachloroethene	127-18-4	0.0103
Ethylbenzene	100-41-4	0.0103
Toluene	108-88-3	0.0103
trans-1,2-Dichloroethene	156-60-5	0.0102
trans-1,3-Dichloropropene	10061-02-6	0.0092
Trichloroethene	79-01-6	0.0107
Trichlorofluoromethane	75-69-4	0.0093
Vinyl acetate	108-05-4	0.011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0109
cis-1,2-Dichloroethene	156-59-2	0.0103
Carbon disulfide	75-15-0	0.0104
Carbon tetrachloride	56-23-5	0.0099
Chlorobenzene	108-90-7	0.0104
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.0104
Chloroethane	75-00-3	0.0101
Hexachlorobutadiene	87-68-3	0.0103
Chloromethane	74-87-3	0.0099
Heptane	142-82-5	0.0105
cis-1,3-Dichloropropene	10061-01-5	0.0104
Cyclohexane	110-82-7	0.0108
Dichlorodifluoromethane	75-71-8	0.0098
Dichloromethane	75-09-2	0.0103
Ethyl acetate	141-78-6	0.0101
Vinyl chloride	75-01-4	0.0103
Chloroform	67-66-3	0.0104

Analytical Standard Record

EPA Region 9 Laboratory

2040005

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2006148	TO-14A Internal Standard Mix, Sto	01/29/20	** Vendor **	01/29/22	09/28/20 09:50 by LLH	40
2038012	TO-15 CAL Std 20 ppbv (VIRTUA	09/14/20	Estrellita Manuel	10/14/20	09/14/20 14:18 by EM	100

Analytical Standard Record

EPA Region 9 Laboratory

2040009

Description:	TO-15 BS1 10 ppbv (VIRTUAL)	**Expires:**	10/14/20
Standard Type:	Analyte Spike	**Prepared:**	09/28/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	09/28/20 09:54 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0198
1,4-Dioxane	123-91-1	0.021
2,2,4-Trimethylpentane	540-84-1	0.0214
2-Butanone (MEK)	78-93-3	0.02
2-Hexanone	591-78-6	0.0184
2-Propanol	67-63-0	0.02
Bromoform	75-25-2	0.0212
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0196
1,3-Dichlorobenzene	541-73-1	0.0196
Allyl chloride	107-05-1	0.0218
Benzene	71-43-2	0.0208
Benzyl chloride	100-44-7	0.0186
Bromochloromethane	74-97-5	0.0196
Bromodichloromethane	75-27-4	0.021
1,1,1-Trichloroethane	71-55-6	0.0212
4-Ethyltoluene	622-96-8	0.0198
1,2-Dichlorobenzene	95-50-1	0.0196
1,1,2,2-Tetrachloroethane	79-34-5	0.0202
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0214
1,1,2-Trichloroethane	79-00-5	0.021
1,1-Dichloroethane	75-34-3	0.0196
1,1-Dichloroethene	75-35-4	0.0212
1,2,4-Trichlorobenzene	120-82-1	0.0194
1,4-Difluorobenzene	540-36-3	0.0196
1,2-Dibromoethane (EDB)	106-93-4	0.0208
1,4-Dichlorobenzene	106-46-7	0.0196
1,2-Dichloroethane	107-06-2	0.0202
1,2-Dichloropropane	78-87-5	0.0204
1,2-Dichlorotetrafluoroethane	76-14-2	0.0192
1,3,5-Trimethylbenzene	108-67-8	0.0202

Analytical Standard Record

EPA Region 9 Laboratory

2040009

1,3-Butadiene	106-99-0	0.0208
Bromomethane	74-83-9	0.0204
1,2,4-Trimethylbenzene	95-63-6	0.02
Tetrahydrofuran	109-99-9	0.0184
Hexane	110-54-3	0.0202
m&p-Xylene	179601-23-1	0.0408
o-Xylene	95-47-6	0.0202
Propene	115-07-1	0.019
Styrene	100-42-5	0.0202
Bromoethene	593-60-2	0.0202
Tetrachloroethene	127-18-4	0.0206
Ethylbenzene	100-41-4	0.0206
Toluene	108-88-3	0.0206
trans-1,2-Dichloroethene	156-60-5	0.0204
trans-1,3-Dichloropropene	10061-02-6	0.0184
Trichloroethene	79-01-6	0.0214
Trichlorofluoromethane	75-69-4	0.0186
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0218
cis-1,2-Dichloroethene	156-59-2	0.0206
Carbon disulfide	75-15-0	0.0208
Carbon tetrachloride	56-23-5	0.0198
Chlorobenzene	108-90-7	0.0208
Chlorobenzene-d5	3114-55-4	0.0196
Chlorodibromomethane	124-48-1	0.0208
Chloroethane	75-00-3	0.0202
Hexachlorobutadiene	87-68-3	0.0206
Chloromethane	74-87-3	0.0198
Heptane	142-82-5	0.021
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0216
Dichlorodifluoromethane	75-71-8	0.0196
Dichloromethane	75-09-2	0.0206
Ethyl acetate	141-78-6	0.0202
Vinyl chloride	75-01-4	0.0206
Chloroform	67-66-3	0.0208

Analytical Standard Record

EPA Region 9 Laboratory

2040009

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2038012	TO-15 CAL Std 20 ppbv (VIRTUA	09/14/20	Estrellita Manuel	10/14/20	09/14/20 14:18 by EM	200
2006148	TO-14A Internal Standard Mix, Sto	01/29/20	** Vendor **	01/29/22	09/28/20 09:50 by LLH	40