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United States Environmental Protection Agency
Region 9 Laboratory

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

Date: **11/30/2020**

Subject: **Analytical Testing Results - Project R21S04**
WorkOrder **2011024**

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 FY2021 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: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 Vapor Intrusion Investigation	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
F6-037-3ft-G	2011024-01	Air	11/13/20 14:26	11/17/20 11:09
F6-033-3ft-G	2011024-02	Air	11/13/20 14:18	11/17/20 11:09
F6-031-3ft-G	2011024-03	Air	11/13/20 14:13	11/17/20 11:09
F6-029-3ft-G	2011024-04	Air	11/13/20 14:07	11/17/20 11:09
F6-010-3ft-G	2011024-05	Air	11/13/20 14:45	11/17/20 11:09
F6-006-3ft-G	2011024-06	Air	11/13/20 14:51	11/17/20 11:09
F6-055-3ft-G	2011024-07	Air	11/13/20 14:34	11/17/20 11:09
F6-021-3ft-G	2011024-08	Air	11/13/20 14:00	11/17/20 11:09

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Project Manager: Alana Lee
Project Number: R21S04
Project: MEW OU1 FY2021 Vapor Intrusion Investigation

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

WorkOrder: 2011024
Reported: 11/30/20 13:10

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2011024-01									**Air - Sampled: 11/13/20 14:26**
Sample ID: F6-037-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20K064	11/17/20	11/17/20	TO-15
1,1-Dichloroethene		4	C1, J	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		20		8	"	"	"	"	TO-15
1,1-Dichloroethane		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		50		8	"	"	"	"	TO-15
Chloroform		200		9	"	"	"	"	TO-15
Trichloroethene	RE1	300		100	"	"	11/17/20	11/18/20	TO-15
Tetrachloroethene		20		10	"	"	11/17/20	11/17/20	TO-15
Lab ID: 2011024-02									**Air - Sampled: 11/13/20 14:18**
Sample ID: F6-033-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		3	C1, J	5	ug/m³ Air	B20K064	11/17/20	11/17/20	TO-15
1,1-Dichloroethene		10		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		10		8	"	"	"	"	TO-15
1,1-Dichloroethane		9		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		70		8	"	"	"	"	TO-15
Chloroform		70		9	"	"	"	"	TO-15
Trichloroethene	RE1	300		50	"	"	"	11/18/20	TO-15
Tetrachloroethene		60		10	"	"	"	11/17/20	TO-15
Lab ID: 2011024-03									**Air - Sampled: 11/13/20 14:13**
Sample ID: F6-031-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		4	C1, J	5	ug/m³ Air	B20K064	11/17/20	11/17/20	TO-15
1,1-Dichloroethene		20		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		20		8	"	"	"	"	TO-15
1,1-Dichloroethane		20		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE1	100		40	"	"	"	11/18/20	TO-15
Chloroform		200		9	"	"	"	11/17/20	TO-15
Trichloroethene	RE1	500		50	"	"	"	11/18/20	TO-15
Tetrachloroethene		70		10	"	"	"	11/17/20	TO-15
Lab ID: 2011024-04									**Air - Sampled: 11/13/20 14:07**
Sample ID: F6-029-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		10		5	ug/m³ Air	B20K064	11/17/20	11/17/20	TO-15
1,1-Dichloroethene		30		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		30		8	"	"	"	"	TO-15
1,1-Dichloroethane		20		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE1	300		40	"	"	"	11/18/20	TO-15
Chloroform		90		10	"	"	"	11/17/20	TO-15
Trichloroethene	RE2	1,700		200	"	B20K073	11/18/20	11/18/20	TO-15
Tetrachloroethene		90		10	"	B20K064	11/17/20	11/17/20	TO-15
Lab ID: 2011024-05									**Air - Sampled: 11/13/20 14:45**
Sample ID: F6-010-3ft-G									**Volatile Organic Compounds by TO-15**

United States Environmental Protection Agency
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Project Manager: Alana Lee
Project Number: R21S04
Project: MEW OU1 FY2021 Vapor Intrusion Investigation

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

WorkOrder: 2011024
Reported: 11/30/20 13:10

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2011024-05									**Air - Sampled: 11/13/20 14:45**
Sample ID: F6-010-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		10		5	ug/m³ Air	B20K064	11/17/20	11/17/20	TO-15
1,1-Dichloroethene		30		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		20		8	"	"	"	"	TO-15
1,1-Dichloroethane		20		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE1	400		80	"	"	"	11/17/20	TO-15
Chloroform	RE1	300		90	"	"	"	"	TO-15
Trichloroethene	RE1	1,600		100	"	"	"	"	TO-15
Tetrachloroethene		70		10	"	"	"	11/17/20	TO-15
Lab ID: 2011024-06									**Air - Sampled: 11/13/20 14:51**
Sample ID: F6-006-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		20		5	ug/m³ Air	B20K064	11/17/20	11/17/20	TO-15
1,1-Dichloroethene		30		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		30		8	"	"	"	"	TO-15
1,1-Dichloroethane		30		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE1	500		80	"	"	"	11/17/20	TO-15
Chloroform	RE1	300		90	"	"	"	"	TO-15
Trichloroethene	RE1	2,100		100	"	"	"	"	TO-15
Tetrachloroethene		70		10	"	"	"	11/17/20	TO-15
Lab ID: 2011024-07									**Air - Sampled: 11/13/20 14:34**
Sample ID: F6-055-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20K064	11/17/20	11/17/20	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		30		9	"	"	"	"	TO-15
Trichloroethene		30		10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 2011024-08									**Air - Sampled: 11/13/20 14:00**
Sample ID: F6-021-3ft-G									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B20K064	11/17/20	11/17/20	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		100		9	"	"	"	"	TO-15
Trichloroethene		10		10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15

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Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 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 B20K064 - Air_Can_Pressure										
Blank (B20K064-BLK1)				Prepared & Analyzed: 11/17/20						
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 (B20K064-BS1)				Prepared & Analyzed: 11/17/20						
1,2-Dichlorotetrafluoroethane	56	7	ug/m³ Air	67.1		84	74-116			
Chloromethane	17	2	ug/m³ Air	20.4		81	73-113			
Vinyl chloride	25	3	ug/m³ Air	26.3		94	68-119			
Bromomethane	33	4	ug/m³ Air	39.6		83	71-122			
Chloroethane	22	3	ug/m³ Air	26.6		82	73-116			
Trichlorofluoromethane	45	6	ug/m³ Air	52.2		87	74-120			
1,1,2-Trichloro-1,2,2-trifluoroethane	70	8	ug/m³ Air	81.9		85	63-126			
1,1-Dichloroethene	34	4	ug/m³ Air	42.0		80	69-119			
Dichloromethane	28	7	ug/m³ Air	35.7		78	76-110			
1,1-Dichloroethane	33	4	ug/m³ Air	39.6		82	76-113			
cis-1,2-Dichloroethene	33	4	ug/m³ Air	40.8		80	74-116			
Chloroform	44	5	ug/m³ Air	50.7		86	77-115			
1,1,1-Trichloroethane	51	5	ug/m³ Air	57.8		88	77-117			
Carbon tetrachloride	55	6	ug/m³ Air	62.2		88	75-121			
Benzene	29	3	ug/m³ Air	33.2		87	81-115			
1,2-Dichloroethane	37	4	ug/m³ Air	40.8		90	74-128			
Trichloroethene	49	5	ug/m³ Air	57.5		86	82-113			
1,2-Dichloropropane	41	5	ug/m³ Air	47.1		86	78-119			
cis-1,3-Dichloropropene	40	5	ug/m³ Air	47.2		85	82-117			
Toluene	33	4	ug/m³ Air	38.8		85	80-120			
trans-1,3-Dichloropropene	35	5	ug/m³ Air	41.7		85	81-122			
1,1,2-Trichloroethane	50	5	ug/m³ Air	57.2		87	81-121			
Tetrachloroethene	61	7	ug/m³ Air	69.8		87	69-122			
1,2-Dibromoethane (EDB)	69	8	ug/m³ Air	79.8		86	81-121			
Chlorobenzene	41	5	ug/m³ Air	47.8		86	80-122			
Ethylbenzene	39	4	ug/m³ Air	44.7		87	80-125			
m&p-Xylene	79	9	ug/m³ Air	88.5		89	80-128			
o-Xylene	38	4	ug/m³ Air	43.8		87	79-130			
Styrene	38	4	ug/m³ Air	43.0		89	76-133			
1,1,2,2-Tetrachloroethane	62	7	ug/m³ Air	69.3		90	78-132			

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Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 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 B20K064 - Air_Can_Pressure										
LCS (B20K064-BS1)				Prepared & Analyzed: 11/17/20						
1,3,5-Trimethylbenzene	44	5	ug/m³ Air	49.6		89	78-133			
1,2,4-Trimethylbenzene	44	5	ug/m³ Air	49.1		89	78-133			
1,3-Dichlorobenzene	52	6	ug/m³ Air	58.9		88	76-133			
1,4-Dichlorobenzene	52	6	ug/m³ Air	58.9		88	75-134			
1,2-Dichlorobenzene	53	6	ug/m³ Air	58.9		90	77-134			
1,2,4-Trichlorobenzene	63	7	ug/m³ Air	71.9		87	70-133			
Hexachlorobutadiene	101	10	ug/m³ Air	110		92	74-130			
Duplicate (B20K064-DUP1)		**Source: 2011024-01**		Prepared & Analyzed: 11/17/20						
Vinyl chloride	ND	5	ug/m³ Air		ND				20	U
1,1-Dichloroethene	ND	8	ug/m³ Air		4				20	U
trans-1,2-Dichloroethene	20	8	ug/m³ Air		20			0.8	20	
1,1-Dichloroethane	ND	8	ug/m³ Air		ND				20	U
cis-1,2-Dichloroethene	50	8	ug/m³ Air		50			1	20	
Chloroform	200	9	ug/m³ Air		200			1	20	
Tetrachloroethene	20	10	ug/m³ Air		20			2	20	
Batch B20K073 - Air_Can_Pressure										
Blank (B20K073-BLK1)				Prepared & Analyzed: 11/18/20						
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

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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 B20K073 - Air_Can_Pressure										
LCS (B20K073-BS1)				Prepared & Analyzed: 11/18/20						
1,2-Dichlorotetrafluoroethane	57	7	ug/m³ Air	67.1		85	74-116			
Chloromethane	17	2	ug/m³ Air	20.4		84	73-113			
Vinyl chloride	26	3	ug/m³ Air	26.3		98	68-119			
Bromomethane	32	4	ug/m³ Air	39.6		81	71-122			
Chloroethane	21	3	ug/m³ Air	26.6		80	73-116			
Trichlorofluoromethane	45	6	ug/m³ Air	52.2		86	74-120			
1,1,2-Trichloro-1,2,2-trifluoroethane	67	8	ug/m³ Air	81.9		82	63-126			
1,1-Dichloroethene	33	4	ug/m³ Air	42.0		80	69-119			
Dichloromethane	28	7	ug/m³ Air	35.7		78	76-110			
1,1-Dichloroethane	32	4	ug/m³ Air	39.6		81	76-113			
cis-1,2-Dichloroethene	33	4	ug/m³ Air	40.8		80	74-116			
Chloroform	43	5	ug/m³ Air	50.7		84	77-115			
1,1,1-Trichloroethane	50	5	ug/m³ Air	57.8		87	77-117			
Carbon tetrachloride	54	6	ug/m³ Air	62.2		87	75-121			
Benzene	29	3	ug/m³ Air	33.2		87	81-115			
1,2-Dichloroethane	38	4	ug/m³ Air	40.8		93	74-128			
Trichloroethene	49	5	ug/m³ Air	57.5		84	82-113			
1,2-Dichloropropane	40	5	ug/m³ Air	47.1		86	78-119			
cis-1,3-Dichloropropene	40	5	ug/m³ Air	47.2		85	82-117			
Toluene	33	4	ug/m³ Air	38.8		85	80-120			
trans-1,3-Dichloropropene	35	5	ug/m³ Air	41.7		85	81-122			
1,1,2-Trichloroethane	50	5	ug/m³ Air	57.2		87	81-121			
Tetrachloroethene	60	7	ug/m³ Air	69.8		87	69-122			
1,2-Dibromoethane (EDB)	68	8	ug/m³ Air	79.8		85	81-121			
Chlorobenzene	40	5	ug/m³ Air	47.8		85	80-122			
Ethylbenzene	39	4	ug/m³ Air	44.7		87	80-125			
m&p-Xylene	79	9	ug/m³ Air	88.5		89	80-128			
o-Xylene	38	4	ug/m³ Air	43.8		87	79-130			
Styrene	38	4	ug/m³ Air	43.0		88	76-133			
1,1,2,2-Tetrachloroethane	62	7	ug/m³ Air	69.3		90	78-132			
1,3,5-Trimethylbenzene	44	5	ug/m³ Air	49.6		90	78-133			
1,2,4-Trimethylbenzene	44	5	ug/m³ Air	49.1		89	78-133			
1,3-Dichlorobenzene	51	6	ug/m³ Air	58.9		87	76-133			
1,4-Dichlorobenzene	51	6	ug/m³ Air	58.9		86	75-134			
1,2-Dichlorobenzene	52	6	ug/m³ Air	58.9		88	77-134			
1,2,4-Trichlorobenzene	62	7	ug/m³ Air	71.9		86	70-133			
Hexachlorobutadiene	101	10	ug/m³ Air	110		92	74-130			

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Project: MEW OU1 FY2021 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 S20K070 - B20K064										
Instrument Blank (S20K070-IBL1)				Prepared & Analyzed: 11/17/20						
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-Dichloroethene	ND	4	ppbv							U
Dichloromethane	ND	7	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
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
1,3,5-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

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: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 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 S20K070 - B20K064										
Instrument Blank (S20K070-IBL2)				Prepared: 11/17/20 Analyzed: 11/18/20						
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-Dichloroethene	ND	4	ppbv							U
Dichloromethane	ND	7	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
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
1,3,5-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

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Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 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 S20K070 - B20K064										
Instrument Blank (S20K070-IBL3)				Prepared: 11/17/20 Analyzed: 11/18/20						
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-Dichloroethene	ND	4	ppbv							U
Dichloromethane	ND	7	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
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
1,3,5-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

United States Environmental Protection Agency
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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 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 S20K076 - B20K073										
Instrument Blank (S20K076-IBL1)				Prepared & Analyzed: 11/18/20						
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
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
Benzene	ND	3	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	3	5	ppbv							
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
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

United States Environmental Protection Agency
Region 9 Laboratory
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Project Manager: Alana Lee	**California Site Cleanup Section 3**	**WorkOrder: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 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: 2011024**
Project Number: R21S04	**75 Hawthorne Street**	**Reported:** 11/30/20 13:10
Project: MEW OU1 FY2021 Vapor Intrusion Investigation	**San Francisco CA, 94105**	

Sample Receiving: Samples disinfected using 2% bleach .

Sample F6-021-3ft-G has a can ID of 1971 on COC rather than 1979 . TD 11/17/20

WORK ORDER

Printed: 11/17/2020 11:50:06AM

2011024

EPA Region 9 Laboratory

Client: **California Site Cleanup Section 3** **Project Number:** **R21S04**
Project: **MEW OU1 FY2021 Vapor Intrusion Investigation**

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
Box 1	Modified COVID-19	22	No	Yes	No	No	No	

Date Due:	12/01/20 17:00 (14 day TAT)	SDG:	20322D
Received By:	Tatyana Dadiomov	Date Received:	11/17/20 11:09
Logged In By:	Tatyana Dadiomov	Date Logged In:	11/17/20 11:31

Analysis	Hold Time Expires	Comments
2011024-01 F6-037-3ft-G [Air] Sampled 11/13/20 14:26 (GMT-08:00) Pacific Time (US &		**Can 1093**
VOCs, Soil Gas	12/13/20	check COC for requested analytes
2011024-02 F6-033-3ft-G [Air] Sampled 11/13/20 14:18 (GMT-08:00) Pacific Time (US &		**Can 1983**
VOCs, Soil Gas	12/13/20	check COC for requested analytes
2011024-03 F6-031-3ft-G [Air] Sampled 11/13/20 14:13 (GMT-08:00) Pacific Time (US &		**Can 1998**
VOCs, Soil Gas	12/13/20	check COC for requested analytes
2011024-04 F6-029-3ft-G [Air] Sampled 11/13/20 14:07 (GMT-08:00) Pacific Time (US &		**Can 1994**
VOCs, Soil Gas	12/13/20	check COC for requested analytes
2011024-05 F6-010-3ft-G [Air] Sampled 11/13/20 14:45 (GMT-08:00) Pacific Time (US &		**Can 1059**
VOCs, Soil Gas	12/13/20	check COC for requested analytes
2011024-06 F6-006-3ft-G [Air] Sampled 11/13/20 14:51 (GMT-08:00) Pacific Time (US &		**Can 635**
VOCs, Soil Gas	12/13/20	check COC for requested analytes

WORK ORDER

Printed: 11/17/2020 11:50:06AM

2011024

EPA Region 9 Laboratory

Client: California Site Cleanup Section 3 **Project Number:** R21S04
Project: MEW OU1 FY2021 Vapor Intrusion Investigation

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
2011024-07 F6-055-3ft-G [Air] Sampled 11/13/20 14:34 (GMT-08:00) Pacific Time (US &		**Can 891**
VOCs, Soil Gas	12/13/20	check COC for requested analytes
2011024-08 F6-021-3ft-G [Air] Sampled 11/13/20 14:00 (GMT-08:00) Pacific Time (US &		**Can 1979**
VOCs, Soil Gas	12/13/20	check COC for requested analytes

Reviewed By Date

U.S. Environmental Protection Agency	CHAIN OF CUSTODY RECORD	EPA REGION 9 75 Hawthorne Street San Francisco, California 94105
Project / Case Number: R21S04 - MEW (M6) OU1	FY21 MEW OU1 Vapor Intrusion and Sewer Pathway	EPA Project Manager contact: Alana Lee, 415-972-3141 Lee.Alana@epa.gov
EPA R9 Laboratory - Richmond, CA	Ray Chavira / Junn Masongsong	Analysis: TCE, cis & trans 1,2-DCE, PCE, vinyl choride, 1,1 DCE, 1,1-DCA, chloroform **Preliminary 10 d TATrequested**

Sample ID	Canister ID	Comp	Grab	Date	Time	Initial Pressure	Final Pressure	TCE Screen ($\mu g/m^3$)	COMMENTS
F6-037-3ft-G	1093		X	11/13/2020	14:26	-30	-2	5-50	Fairchild main - upstream
F6-033-3ft-G	1983		X	11/13/2020	14:18	-30	-2	5-50	
F6-031-3ft-G	1998		X	11/13/2020	14:13	-30	-2	10-500	
F6-029-3ft-G	1994		X	11/13/2020	14:07	-30	-2	10-500	
F6-010-3ft-G	1059		X	11/13/2020	14:45	-30	-2	500-1400	
F6-006-3ft-G	635		X	11/13/2020	14:51	-30	-2	800-1400	
F6-055-3ft-G	891		X	11/13/2020	14:34	-30	-2	10-400	Lateral- National
F6-021-3ft-G	1971		X	11/13/2020	14:00	-30	-2	10-300	Lateral- Whisman

11/13/2020

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time		Relinquished by: (Signature)
Alana Lee	11/13/2020 1500				
Received by Laboratory by: (Signature)	Date/Time		Temp	(Y/N/None)	
	11-17-20 11:09		22°C		

Table of Contents

Cooler/Box/Env 1 of 1

U.S. Environmental Protection Agency
Region 9 Richmond Laboratory

1337 South 46th Street
Richmond, CA 94804

Sample Receipt Checklist

Note in WO memo any items outside acceptable limits.

Project No: R21804 **Work Order No(s):** 2011024 **Date:** 11/17/20 **by** TJ

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

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):

samples disinfected using 2% bleach.

F6-021-3ft-G canister ID on COC 1971, ID on sample container 1979. Logged in for container ID

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

BATCH

B20K064

Batch Date: 11/17/2020

Batch Matrix: Air

Batch Analyses:

VOCs, Soil Gas

PREPARATION BENCH SHEET

B20K064

EPA Region 9 Laboratory

Project: R21S04

Printed: 11/18/2020 2:55:57PM

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
2011024-01 A	F6-037-3ft-G	11/17/20 12:33	200	200				1093	14.81	28.18	1	1.90	EM	check COC for requested analytes
2011024-01RE1 A	F6-037-3ft-G	11/17/20 15:37	50	200				1093	12.18	28.52	1.90 X 2.34	4.45	EM	for >LR
2011024-02 A	F6-033-3ft-G	11/17/20 12:36	200	200				1983	14.89	28.24	1	1.90	EM	check COC for requested analytes
2011024-02RE1 A	F6-033-3ft-G	11/17/20 12:36	40	200				1983	14.89	28.24	1	1.90	EM	for >LR
2011024-03 A	F6-031-3ft-G	11/17/20 12:46	200	200				1998	14.77	28.10	1	1.90	EM	check COC for requested analytes
2011024-03RE1 A	F6-031-3ft-G	11/17/20 12:46	40	200				1998	14.77	28.10	1	1.90	EM	for >LR
2011024-04 A	F6-029-3ft-G	11/17/20 12:50	200	200				1994	14.27	28.03	1	1.96	EM	check COC for requested analytes
2011024-04RE1 A	F6-029-3ft-G	11/17/20 12:50	40	200				1994	14.27	28.03	1	1.96	EM	for >LR
2011024-05 A	F6-010-3ft-G	11/17/20 13:02	200	200				1059	14.72	28.19	1	1.92	EM	check COC for requested analytes
2011024-05RE1 A	F6-010-3ft-G	11/17/20 13:02	20	200				1059	14.72	28.19	1	1.92	EM	for >LR
2011024-06 A	F6-006-3ft-G	11/17/20 13:06	200	200				635	14.57	28.00	1	1.92	EM	check COC for requested analytes
2011024-06RE1 A	F6-006-3ft-G	11/17/20 13:06	20	200				635	14.57	28.00	1	1.92	EM	for >LR
2011024-07 A	F6-055-3ft-G	11/17/20 12:54	200	200				891	14.62	28.21	1	1.93	EM	check COC for requested analytes

PREPARATION BENCH SHEET

B20K064

EPA Region 9 Laboratory

Project: R21S04

Printed: 11/18/2020 2:55:57PM

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
2011024-07RE1 A	F6-055-3ft-G	11/17/20 12:54	40	200				891	14.62	28.21	1	1.93	EM	for >LR
2011024-08 A	F6-021-3ft-G	11/17/20 12:57	200	200				1979	14.66	28.21	1	1.92	EM	check COC for requested analytes
2011024-08RE1 A	F6-021-3ft-G	11/17/20 12:57	40	200				1979	14.66	28.21	1	1.92	EM	for >LR
B20K064-BLK1	Blank	11/17/20 10:18	200	200									EM	
B20K064-BS1	LCS	11/17/20 10:18	200	200	2045036		100000						EM	
B20K064-DUP1	Duplicate	11/17/20 10:18	200	200		2011024-01		1093	14.81	28.18	1	1.90	EM	

Batch Comments

Reagents

Reagent #	Description

PREPARATION BENCH SHEET

B20K064

EPA Region 9 Laboratory

Project: R21S04

Printed: 11/18/2020 2:55:57PM

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

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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
11/17/20 EM	1233	2011024-01	FG-037-3ft-G	1093	14.81	400	400	28.18	29.74/14.61	1.90
	1236	-02	FG-035-3ft-G	1983	14.89	400	400	28.24	—	1.90
	1240	-03	FG-031-3ft-G	1998	14.77	400	400	28.10	—	1.90
	1250	-04	FG-029-3ft-G	1994	14.27	400	400	28.03	—	1.96
	1302	-05	FG-010-3ft-G	1059	14.72	400	400	28.19	—	1.92
	1306	-06	FG-006-3ft-G	635	14.57	400	400	28.00	—	1.92
	12:54	-07	FG-055-3ft-G	891	14.62	400	400	28.21	—	1.93
	12:57	-08	FG-021-3ft-G	1979	14.66	400	400	28.21	—	1.92
	15:37	2011024-01RE1	REPRESS	1093	12.18	400	400	28.52	29.77/14.62	2.34
11/18/20 EM	10:17	2011024-04RE2	REPRESS	1994	13.71	400	400	28.07	29.85/14.66	2.05

EM 11/18/20

USEPA REGION 9 LABORATORY

TO15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: ZM

Date: 11-18-20

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BATCH

B20K073

Batch Date: 11/17/2020

Batch Matrix: Air

Batch Analyses:

VOCs, Soil Gas

PREPARATION BENCH SHEET

B20K073

EPA Region 9 Laboratory

Project: R21S04

Printed: 11/18/2020 2:58:20PM

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
2011024-04RE2 A	F6-029-3ft-G	11/18/20 10:17	20	200				1994	13.71	28.07	1.96 x 2.05	4.02	EM	for TCE only
B20K073-BLK1	Blank	11/18/20 07:29	200	200									EM	
B20K073-BS1	LCS	11/18/20 07:29	200	200	2045036		100000						EM	

Batch Comments

Reagents

Reagent #	Description

Calibration

2011004

Calibration Date: 11/09/2020

Instrument: HP5973K

Calibration Analyses:

VOCs, Soil Gas

Table of Contents

Method Path : D:\msdchem\1\2020\METHOD\
Method File : 110920K_TO15AA.M
Title : TO15
Last Update : Tue Nov 10 08:55:42 2020
Response Via : Initial Calibration

REVIEWED
By LLH at 8:56 am, Nov 10, 2020

Calibration Files
1 =110920K05.D 2 =110920K06.D 5 =110920K07.D 10 =110920K08.D 15 =110920K09.D
20 =110920K10.D

		Compound	1	2	5	10	15	20	Avg	%RSD
1)	I	BROMOCHLOROMETHANE	----------ISTD----------							
2)	T	Propene	0.725	0.741	0.588	0.548	0.536	0.526	0.611	15.94
3)	T	Dichlorodifluo...	1.535	1.776	1.429	1.336	1.309	1.292	1.446	12.80
4)	T	1,2-Dichlorote...	1.729	1.997	1.604	1.515	1.488	1.471	1.634	12.34
5)	T	Chloromethane	0.633	0.745	0.594	0.554	0.538	0.530	0.599	13.60
6)	T	Vinyl chloride	0.686	0.799	0.655	0.607	0.596	0.585	0.655	12.32
7)	T	1,3-Butadiene	0.556	0.585	0.471	0.441	0.435	0.423	0.485	14.15
8)	T	Bromomethane	0.526	0.618	0.496	0.467	0.463	0.459	0.505	12.06
9)	T	Chloroethane	0.368	0.428	0.343	0.323	0.319	0.317	0.350	12.24
10)	T	Bromoethene	0.622	0.634	0.519	0.485	0.487	0.484	0.539	13.10
11)	T	Trichlorofluor...	1.469	1.717	1.361	1.281	1.264	1.253	1.391	12.88
12)	T	1,1,2-Trichlor...	0.943	1.098	0.880	0.827	0.821	0.822	0.899	12.09
13)	T	1,1-Dichloroet...	0.900	1.050	0.841	0.792	0.782	0.776	0.857	12.33
14)	T	Acetone	1.004	1.054	0.846	0.802	0.783	0.768	0.876	13.93
15)	T	Carbon disulfide	1.926	1.973	1.596	1.495	1.479	1.467	1.656	14.03
16)	T	2-Propanol	1.001	1.113	0.911	0.872	0.873	0.867	0.939	10.54
17)	T	Allyl chloride	0.872	0.918	0.743	0.696	0.687	0.676	0.765	13.59
18)	T	Dichloromethane	0.948	0.927	0.691	0.622	0.598	0.588	0.729	22.72
19)	T	tert-Butyl met...	1.882	1.949	1.584	1.504	1.492	1.487	1.650	12.73
20)	T	trans-1,2-Dich...	0.943	0.993	0.811	0.763	0.749	0.742	0.834	12.95
21)	T	Hexane	1.272	1.338	1.079	1.008	0.997	0.989	1.114	13.74
22)	T	1,1-Dichloroet...	1.155	1.340	1.070	1.000	0.985	0.976	1.088	12.95
23)	T	Vinyl acetate	1.304	1.614	1.336	1.276	1.267	1.252	1.341	10.19
24)	T	cis-1,2-Dichlo...	0.834	0.949	0.766	0.721	0.718	0.721	0.785	11.71
25)	T	2-Butanone (MEK)	0.365	0.393	0.326	0.310	0.311	0.309	0.336	10.52
26)	T	Ethyl acetate	0.230	0.250	0.199	0.192	0.186	0.188	0.208	12.68
27)	T	Tetrahydrofuran	0.889	0.955	0.777	0.727	0.720	0.703	0.795	12.99
28)	T	Chloroform	1.165	1.350	1.076	1.008	0.996	0.985	1.097	12.87
29)	T	Cyclohexane	1.222	1.282	1.020	0.962	0.943	0.936	1.061	14.33
30)	T	1,1,1-Trichlor...	1.126	1.302	1.051	0.982	0.970	0.959	1.065	12.39
31)	T	Carbon tetrach...	1.214	1.434	1.163	1.094	1.075	1.065	1.174	11.89
32)	I	1,4-DIFLUOROBENZENE	----------ISTD----------							
33)	T	Benzene	0.631	0.733	0.591	0.557	0.536	0.530	0.596	12.88
34)	T	2,2,4-Trimethy...	1.192	1.255	1.014	0.960	0.922	0.911	1.043	14.02
35)	T	1,2-Dichloroet...	0.222	0.264	0.213	0.203	0.194	0.191	0.214	12.49
36)	T	Heptane	0.427	0.456	0.369	0.346	0.332	0.326	0.376	14.24
37)	T	Trichloroethene	0.264	0.297	0.240	0.226	0.221	0.219	0.245	12.60
38)	T	1,2-Dichloropr...	0.236	0.274	0.221	0.209	0.202	0.200	0.224	12.48
39)	T	1,4-Dioxane	0.150	0.146	0.124	0.117	0.114	0.112	0.127	13.23
40)	T	Bromodichlorom...	0.428	0.455	0.374	0.358	0.348	0.343	0.384	12.04
41)	T	cis-1,3-Dichlo...	0.328	0.402	0.335	0.321	0.314	0.312	0.335	10.09
42)	T	4-Methyl-2-pen...	0.534	0.550	0.456	0.436	0.422	0.414	0.469	12.55
43)	I	CHLOROBENZENE-d5	----------ISTD----------							
44)	T	Toluene	0.822	0.956	0.772	0.727	0.703	0.691	0.778	12.75
45)	T	trans-1,3-Dich...	0.312	0.398	0.335	0.317	0.310	0.306	0.330	10.63
46)	T	1,1,2-Trichlor...	0.258	0.301	0.243	0.234	0.228	0.224	0.248	11.52
47)	T	Tetrachloroethene	0.391	0.457	0.374	0.354	0.347	0.344	0.378	11.30
48)	T	2-Hexanone	0.528	0.561	0.471	0.450	0.434	0.423	0.478	11.54
49)	T	Chlorodibromom...	0.461	0.514	0.430	0.410	0.404	0.400	0.436	10.15
50)	T	1,2-Dibromoeth...	0.358	0.431	0.353	0.335	0.326	0.323	0.354	11.30
51)	T	Chlorobenzene	0.634	0.749	0.602	0.570	0.555	0.546	0.609	12.43
52)	T	Ethylbenzene	1.066	1.247	1.018	0.959	0.928	0.914	1.022	12.16
53)	T	m&p-Xylene	0.791	0.938	0.769	0.727	0.703	0.692	0.770	11.78
54)	T	o-Xylene	0.822	0.970	0.787	0.745	0.724	0.714	0.794	12.00
55)	T	Styrene	0.581	0.736	0.618	0.602	0.589	0.583	0.618	9.56
56)	T	Bromoform	0.419	0.518	0.443	0.430	0.426	0.426	0.444	8.39
57)	T	1,1,2,2-Tetrac...	0.572	0.692	0.572	0.545	0.530	0.522	0.572	10.89
58)	T	4-Ethyltoluene	1.378	1.499	1.244	1.182	1.155	1.136	1.266	11.35
59)	T	1,3,5-Trimethy...	0.959	1.134	0.935	0.886	0.862	0.849	0.938	11.23

Table of Contents

Method Path : D:\msdchem\1\2020\METHOD\
Method File : 110920K_TO15AA.M
Title : TO15

60)	T	1,2,4-Trimethy...	0.946	1.130	0.938	0.894	0.869	0.858	0.939	10.66
61)	T	1,3-Dichlorobe...	0.618	0.732	0.614	0.587	0.575	0.571	0.616	9.73
62)	T	1,4-Dichlorobe...	0.573	0.693	0.587	0.567	0.556	0.550	0.588	9.03
63)	T	Benzyl chloride	0.615	0.937	0.826	0.797	0.783	0.771	0.788	13.15
64)	T	1,2-Dichlorobe...	0.612	0.730	0.612	0.584	0.568	0.561	0.611	10.11
65)	T	1,2,4-Trichlor...	0.406	0.494	0.457	0.460	0.462	0.465	0.457	6.23
66)	T	Hexachlorobuta...	0.561	0.664	0.557	0.544	0.542	0.547	0.569	8.25

(#) = Out of Range

REVIEWED
By LLH at 8:59 am, Nov 10, 2020

SCV REPORT

Instrument Name: HP5973K
Sample Name: S20K037-SCV1
Misc Info: 10ppbv 2046024
Date Acquired: 11/10/2020 0:41
QLast Update: Tue Nov 10 08:55:42 2020
Operator: LLH

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	
1)	BROMOCHLOROMETHANE	16.31	19.60	19.60	100%	70.0	130.0	pass	Internal
2)	Propene	5.00	11.00	8.74	79%	70.0	130.0	pass	Subset
3)	Dichlorodifluoromethane	5.11	10.00	9.52	95%	70.0	130.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	5.50	11.00	8.90	81%	70.0	130.0	pass	Primary
5)	Chloromethane	5.73	9.90	9.74	98%	70.0	130.0	pass	Primary
6)	Vinyl chloride	6.08	11.00	10.01	91%	70.0	130.0	pass	Primary
7)	1,3-Butadiene	6.18	9.60	9.90	103%	70.0	130.0	pass	Subset
8)	Bromomethane	7.25	11.00	9.82	89%	70.0	130.0	pass	Primary
9)	Chloroethane	7.62	9.90	10.25	104%	70.0	130.0	pass	Primary
10)	Bromoethene	8.26	11.00	10.01	91%	70.0	130.0	pass	Subset
11)	Trichlorofluoromethane	8.39	10.00	9.25	93%	70.0	130.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.39	11.00	10.73	98%	70.0	130.0	pass	Primary
13)	1,1-Dichloroethene	10.52	11.00	10.32	94%	70.0	130.0	pass	Primary
14)	Acetone	11.09	11.00	10.05	91%	70.0	130.0	pass	Subset
15)	Carbon disulfide	11.21	12.00	10.70	89%	70.0	130.0	pass	Subset
16)	2-Propanol	11.60	10.00	8.73	87%	70.0	130.0	pass	Subset
17)	Allyl chloride	11.97	12.00	10.22	85%	70.0	130.0	pass	Subset
18)	Dichloromethane	12.49	11.00	9.33	85%	70.0	130.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	13.03	11.00	10.34	94%	70.0	130.0	pass	Subset
20)	trans-1,2-Dichloroethene	13.11	10.00	9.28	93%	70.0	130.0	pass	Subset
21)	Hexane	13.59	11.00	9.53	87%	70.0	130.0	pass	Subset
22)	1,1-Dichloroethane	14.40	11.00	9.90	90%	70.0	130.0	pass	Primary
23)	Vinyl acetate	14.50	10.00	7.95	80%	70.0	130.0	pass	Subset
24)	cis-1,2-Dichloroethene	15.78	11.00	10.77	98%	70.0	130.0	pass	Primary
25)	2-Butanone (MEK)	15.86	11.00	10.07	92%	70.0	130.0	pass	Subset
26)	Ethyl acetate	15.87	11.00	9.63	88%	70.0	130.0	pass	Subset
27)	Tetrahydrofuran	16.29	9.90	8.06	81%	70.0	130.0	pass	Subset
28)	Chloroform	16.44	10.00	10.17	102%	70.0	130.0	pass	Primary
29)	Cyclohexane	16.62	11.00	10.03	91%	70.0	130.0	pass	Subset
30)	1,1,1-Trichloroethane	16.70	9.10	9.24	102%	70.0	130.0	pass	Primary
31)	Carbon tetrachloride	16.94	10.00	9.56	96%	70.0	130.0	pass	Primary
32)	1,4-DIFLUOROBENZENE	18.22	19.80	19.60	99%	70.0	130.0	pass	Internal
33)	Benzene	17.44	10.00	10.30	103%	70.0	130.0	pass	Primary
34)	2,2,4-Trimethylpentane	17.31	11.00	9.99	91%	70.0	130.0	pass	Subset
35)	1,2-Dichloroethane	17.66	10.00	9.90	99%	70.0	130.0	pass	Primary
36)	Heptane	17.68	11.00	9.78	89%	70.0	130.0	pass	Subset
37)	Trichloroethene	18.62	10.00	11.59	116%	70.0	130.0	pass	Primary
38)	1,2-Dichloropropane	19.14	10.00	10.05	100%	70.0	130.0	pass	Primary
39)	1,4-Dioxane	19.31	12.00	11.08	92%	70.0	130.0	pass	Subset
40)	Bromodichloromethane	19.60	11.00	9.69	88%	70.0	130.0	pass	Subset
41)	cis-1,3-Dichloropropene	20.35	10.00	9.43	94%	70.0	130.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	20.55	11.00	8.76	80%	70.0	130.0	pass	Subset
43)	CHLOROBENZENE-d5	23.08	19.40	19.60	101%	70.0	130.0	pass	Internal
44)	Toluene	20.80	10.00	10.22	102%	70.0	130.0	pass	Primary
45)	trans-1,3-Dichloropropene	21.28	10.00	8.57	86%	70.0	130.0	pass	Primary
46)	1,1,2-Trichloroethane	21.60	10.00	10.50	105%	70.0	130.0	pass	Primary
47)	Tetrachloroethene	21.64	10.00	10.28	103%	70.0	130.0	pass	Primary
48)	2-Hexanone	21.89	11.00	7.92	72%	70.0	130.0	pass	Subset
49)	Chlorodibromomethane	22.21	11.00	9.54	87%	70.0	130.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	22.44	9.70	9.85	102%	70.0	130.0	pass	Primary

51)	Chlorobenzene	23.13	10.00	10.08	101%	70.0	130.0	pass	Primary
52)	Ethylbenzene	23.20	10.00	10.13	101%	70.0	130.0	pass	Primary
53)	m&p-Xylene	23.38	22.00	19.92	91%	70.0	130.0	pass	Primary
54)	o-Xylene	24.03	11.00	9.90	90%	70.0	130.0	pass	Primary
55)	Styrene	24.07	9.70	8.68	89%	70.0	130.0	pass	Primary
56)	Bromoform	24.48	12.00	9.99	83%	70.0	130.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	25.16	9.90	8.76	89%	70.0	130.0	pass	Primary
58)	4-Ethyltoluene	25.36	11.00	9.07	82%	70.0	130.0	pass	Subset
59)	1,3,5-Trimethylbenzene	25.45	9.60	9.44	98%	70.0	130.0	pass	Primary
60)	1,2,4-Trimethylbenzene	26.06	9.70	9.46	98%	70.0	130.0	pass	Primary
61)	1,3-Dichlorobenzene	26.62	9.50	9.38	99%	70.0	130.0	pass	Primary
62)	1,4-Dichlorobenzene	26.77	9.70	9.25	95%	70.0	130.0	pass	Primary
63)	Benzyl chloride	26.99	10.00	7.89	79%	70.0	130.0	pass	Subset
64)	1,2-Dichlorobenzene	27.39	9.50	9.53	100%	70.0	130.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.84	8.90	8.13	91%	70.0	130.0	pass	Primary
66)	Hexachlorobutadiene	29.95	9.10	8.95	98%	70.0	130.0	pass	Primary

C:\MSDChem\1\DATA\10255KAA\10255KC4.D

RT DUPLICATE REPORT

Instrument Name: HP5973K
Sample Name: S20K037-CAL4
Misc Info: 10ppbv 2045034
Date Acquired: 11/9/2020 22:06
QLast Update: Tue Nov 10 08:55:42 2020
Operator: LLH

#	Name	RT	CONC	Qion	
1)	BROMOCHLOROMETHANE	16.313	19.600	49	16.289
2)	Propene	5.010	8.500	41.1	
3)	Dichlorodifluoromethane	5.113	8.916	85	
4)	1,2-Dichlorotetrafluoroethane	5.497	8.827	85	
5)	Chloromethane	5.740	9.134	50	
6)	Vinyl chloride	6.081	9.829	62	
7)	1,3-Butadiene	6.184	9.678	54.1	
8)	Bromomethane	7.255	9.587	93.9	
9)	Chloroethane	7.620	9.484	64	
10)	Bromoethene	8.265	9.214	105.9	
11)	Trichlorofluoromethane	8.392	8.508	100.9	
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.388	9.795	150.9	
13)	1,1-Dichloroethene	10.522	9.818	61	
14)	Acetone	11.093	9.016	43.1	
15)	Carbon disulfide	11.209	9.465	75.9	
16)	2-Propanol	11.604	9.394	45.1	
17)	Allyl chloride	11.976	9.998	41.1	
18)	Dichloromethane	12.493	8.817	49	
19)	tert-Butyl methyl ether (MTBE)	13.028	10.050	73.1	
20)	trans-1,2-Dichloroethene	13.113	9.364	61	
21)	Hexane	13.600	9.298	57.1	
22)	1,1-Dichloroethane	14.397	9.073	63	
23)	Vinyl acetate	14.500	10.381	43.1	
24)	cis-1,2-Dichloroethene	15.784	9.554	61	
25)	2-Butanone (MEK)	15.863	9.334	72	
26)	Ethyl acetate	15.869	9.476	61	
27)	Tetrahydrofuran	16.289	8.488	42.1	
28)	Chloroform	16.447	9.551	82.9	
29)	Cyclohexane	16.623	9.952	56.1	
30)	1,1,1-Trichloroethane	16.703	9.731	96.9	
31)	Carbon tetrachloride	16.940	9.174	116.9	
32)	1,4-DIFLUOROBENZENE	18.223	19.600	114	17.682
33)	Benzene	17.439	9.756	78	17.317
34)	2,2,4-Trimethylpentane	17.317	9.901	57.1	
35)	1,2-Dichloroethane	17.658	9.204	62	
36)	Heptane	17.682	9.632	43.1	
37)	Trichloroethene	18.625	9.760	129.9	
38)	1,2-Dichloropropane	19.148	9.533	63	
39)	1,4-Dioxane	19.318	9.472	88	
40)	Bromodichloromethane	19.598	9.577	82.9	
41)	cis-1,3-Dichloropropene	20.347	9.931	75	
42)	4-Methyl-2-pentanone (MIBK)	20.553	8.916	43.1	

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43)	CHLOROBENZENE-d5	23.084	19.600	117	22.445
44)	Toluene	20.803	9.674	91	
45)	trans-1,3-Dichloropropene	21.290	8.659	75	
46)	1,1,2-Trichloroethane	21.600	9.830	96.9	
47)	Tetrachloroethene	21.642	9.423	165.8	
48)	2-Hexanone	21.892	8.386	43.1	
49)	Chlorodibromomethane	22.208	9.643	128.9	
50)	1,2-Dibromoethane (EDB)	22.445	9.716	106.9	
51)	Chlorobenzene	23.133	9.676	112	
52)	Ethylbenzene	23.200	9.658	91	
53)	m&p-Xylene	23.376	19.195	91	
54)	o-Xylene	24.027	9.461	91	
55)	Styrene	24.070	9.769	104	
56)	Bromoform	24.483	10.022	172.8	
57)	1,1,2,2-Tetrachloroethane	25.159	9.490	82.9	
58)	4-Ethyltoluene	25.359	9.111	105	
59)	1,3,5-Trimethylbenzene	25.451	9.497	105	
60)	1,2,4-Trimethylbenzene	26.059	9.415	105	
61)	1,3-Dichlorobenzene	26.625	8.886	145.9	
62)	1,4-Dichlorobenzene	26.771	8.908	145.9	
63)	Benzyl chloride	26.990	8.928	91	0.000
64)	1,2-Dichlorobenzene	27.385	8.995	145.9	0.000
65)	1,2,4-Trichlorobenzene	29.843	8.759	179.9	0.000
66)	Hexachlorobutadiene	29.953	9.244	224.8	0.000

C:\MSDChem\1\DATA\10255KAA\10255KC4.D

CHEMSTATION CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S20K037-SCV1
Misc Info: 10ppbv 2046024
Date Acquired: 11/10/2020 0:41
QLast Update: Tue Nov 10 08:55:42 20
Operator: LLH

#	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: S20K037-SCV1
Misc Info: 10ppbv 2046024
Date Acquired: 11/10/2020 0:41
QLast Update: Tue Nov 10 08:55:42 20
Operator: LLH

#	Name	L1	L2	L3	L4	L5	L6
1)	BROMOCHLOROMETHANE	214647	208175	209643	209437	208131	209514
2)	Propene	7545	14961	29884	55626	81180	106737
3)	Dichlorodifluoromethane	16475	36964	74884	139945	204269	270725
4)	1,2-Dichlorotetrafluoroethane	18175	40716	82376	155406	227520	301912
5)	Chloromethane	6865	15674	31437	58581	84788	112183
6)	Vinyl chloride	7735	17487	36069	66764	97776	128772
7)	1,3-Butadiene	6336	12926	26210	49033	72008	94088
8)	Bromomethane	5878	13380	27049	50892	75199	100128
9)	Chloroethane	4069	9181	18517	34901	51376	68514
10)	Bromoethene	6876	13609	28032	52366	78410	104526
11)	Trichlorofluoromethane	14966	33922	67689	127333	187312	249139
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	11047	24959	50344	94587	139976	188019
13)	1,1-Dichloroethene	10444	23646	47681	89713	132100	175767
14)	Acetone	10884	22164	44810	84859	123517	162615
15)	Carbon disulfide	21934	43590	88749	166161	245029	326235
16)	2-Propanol	10959	23650	48717	93166	139007	185369
17)	Allyl chloride	10414	21255	43313	81087	119317	157544
18)	Dichloromethane	10697	20287	38052	68510	98078	129516
19)	tert-Butyl methyl ether (MTBE)	22462	45129	92341	175148	258967	346488
20)	trans-1,2-Dichloroethene	10530	21517	44267	83137	121760	161802
21)	Hexane	14066	28715	58304	108746	160320	213559
22)	1,1-Dichloroethane	12391	27895	56092	104713	153731	204447
23)	Vinyl acetate	15712	37705	78594	149947	221941	294515
24)	cis-1,2-Dichloroethene	9403	20766	42209	79387	117871	158729
25)	2-Butanone (MEK)	4000	8346	17430	33113	49596	65976
26)	Ethyl acetate	2543	5364	10774	20689	29939	40601
27)	Tetrahydrofuran	8959	18655	38238	71432	105546	138312
28)	Chloroform	13270	29828	59864	112028	165071	219055
29)	Cyclohexane	14448	29414	58917	110995	162306	216152
30)	1,1,1-Trichloroethane	13072	29314	59552	111284	163803	217305
31)	Carbon tetrachloride	13161	30161	61581	115765	169463	225455
32)	1,4-DIFLUOROBENZENE	692453	667311	666050	661746	670308	676348
33)	Benzene	23178	51893	104456	195511	**285979**	380055
34)	2,2,4-Trimethylpentane	45072	91436	184377	346758	506295	673073
35)	1,2-Dichloroethane	7912	18135	36563	69059	100595	133102
36)	Heptane	15845	32604	65883	122776	179049	236250
37)	Trichloroethene	9989	21665	43598	81587	121390	161778
38)	1,2-Dichloropropane	8491	19007	38340	71896	105894	140634
39)	1,4-Dioxane	5568	10448	22080	41428	61309	81125
40)	Bromodichloromethane	15867	32520	66810	126864	187298	248588
41)	cis-1,3-Dichloropropene	12046	28488	59183	112888	167336	224207
42)	4-Methyl-2-pentanone (MIBK)	18488	36706	75931	144121	212181	280053

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43)	CHLOROBENZENE-d5	620206	601423	605785	608048	617866	628950
44)	Toluene	26791	60404	122839	232305	342446	456979
45)	trans-1,3-Dichloropropene	9083	22484	47594	90537	134691	180880
46)	1,1,2-Trichloroethane	8556	19389	39493	76149	113130	151141
47)	Tetrachloroethene	12730	28896	59459	113108	168978	227594
48)	2-Hexanone	15372	31667	67009	128327	188699	249772
49)	Chlorodibromomethane	15171	32817	69140	132367	198475	266723
50)	1,2-Dibromoethane (EDB)	11795	27496	56800	108055	160537	215355
51)	Chlorobenzene	20878	47780	96735	183760	272810	364315
52)	Ethylbenzene	34733	78842	162095	306442	451862	603964
53)	m&p-Xylene	51043	117463	242346	459896	677854	906595
54)	o-Xylene	26272	60094	122830	233514	345638	462977
55)	Styrene	18577	45590	96503	188510	281272	378130
56)	Bromoform	14060	33699	72590	141441	213642	289656
57)	1,1,2,2-Tetrachloroethane	18274	42895	89300	170682	253091	338359
58)	4-Ethyltoluene	43154	91045	190257	363099	540913	721685
59)	1,3,5-Trimethylbenzene	30665	70303	146000	277691	411723	550040
60)	1,2,4-Trimethylbenzene	29943	69378	144893	277315	411129	550818
61)	1,3-Dichlorobenzene	19171	44027	93045	178396	266569	359427
62)	1,4-Dichlorobenzene	17782	41655	88972	172264	257703	345821
63)	Benzyl chloride	18109	53458	118675	229888	344167	460297
64)	1,2-Dichlorobenzene	18981	43886	92711	177537	263407	353140
65)	1,2,4-Trichlorobenzene	12459	29396	68442	138520	211939	289302
66)	Hexachlorobutadiene	18296	41964	88702	173748	264052	361731

CHEMSTATION VS LIMS CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S20K037-SCV1
Misc Info: 10ppbv 2046024
Date Acquired: 11/10/2020 0:41
QLast Update: Tue Nov 10 08:55:42 20
Operator: LLH

#	Name	L1	L2	L3	L4	L5	L6
		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: S20K037-SCV1
Misc Info: 10ppbv 2046024
Date Acquired: 11/10/2020 0:41
QLast Update: Tue Nov 10 08:55:42 2
Operator: LLH

			L1	L2	L3	L4	L5	L6
#	Name	Amount	1	2	5	10	15	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

S20K037

Sequence Date: 11/09/2020

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	N / A	SEQUENCE #:		S20K037	11/09/20
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.	11/09/20 Tue Nov 10, 2020 08:55:42			
	Initial Calibration ID (LIMS number):	2011004 / S20K037			
	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 #:	S20K037	11/09/20
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:	LLH 11/10/20
	REVIEWED BY:	Estrellita Manuel (affiliate) Digitally signed by Estrellita Manuel (affiliate) Date: 2020.11.12 14:20:39 -08'00' SIGN HERE

COMMENTS

Injection Log

Directory: d:\msdchem\1\2020\DATA\110920K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	38	110920K01.D	1.	PRIME		9 Nov 2020 16:12
2	32	110920K02.D	1.	PRIME		9 Nov 2020 17:04
3	31	110920K03.D	1.	PRIME		9 Nov 2020 17:57
4	31	110920K04.D	1.	S20K037-TUN1	BFB 1901028	9 Nov 2020 18:48
5	31	110920K05.D	1.	S20K037-CAL1	1.0ppbv 2045034	9 Nov 2020 19:37
6	32	110920K06.D	1.	S20K037-CAL2	2.0ppbv 2046020	9 Nov 2020 20:26
7	32	110920K07.D	1.	S20K037-CAL3	5.0ppbv 2046021	9 Nov 2020 21:16
8	32	110920K08.D	1.	S20K037-CAL4	10ppbv 2045034	9 Nov 2020 22:06
9	32	110920K09.D	1.	S20K037-CAL5	15ppbv 2046022	9 Nov 2020 22:57
10	32	110920K10.D	1.	S20K037-CAL6	20ppbv 2046023	9 Nov 2020 23:49
11	38	110920K11.D	1.	S20K037-SCV1	10ppbv 2046024	10 Nov 2020 00:41
12	38	110920K12.D	1.	S20K037SCV1	10ppbv 2046024	10 Nov 2020 01:34
13	33	110920K13.D	1.	S20K037-IBL1	200ml BLANK	10 Nov 2020 02:26

GC/MS QA-QC Check Report

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Tune File : D:\msdchem\1\2020\DATA\110920K_FSAA\110920K04.D
Tune Time : 9 Nov 2020 6:48 pm

Daily Calibration File : D:\msdchem\1\2020\DATA\110920K_FSAA\110920K08.D

File	Sample	Surrogate Recovery %			Internal Standard Responses		
			209437	661746	608048		
110920K05.D	S20K037-CAL1	214647	692453	620206			
110920K06.D	S20K037-CAL2	208175	667311	601423			
110920K07.D	S20K037-CAL3	209643	666050	605785			
110920K08.D	S20K037-CAL4	209437	661746	608048			
110920K09.D	S20K037-CAL5	208131	670308	617866			
110920K10.D	S20K037-CAL6	209514	676348	628950			
110920K11.D	S20K037-SCV1	218018	698871	636412			
110920K12.D	S20K037SCV1	215708	688358	629053	NOTUSED		
110920K13.D	S20K037-IBL1	211254	685591	601844			

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

Created: Tue Nov 10 09:11:32 2020 HP5973K

Analysis Sequence

S20K037

Project:
Analysis:

Instrument: HP5973K **Calibration ID:** 2011004 Printed: 11/10/2020 9:20 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S20K037-TUN1	BFB Tune	1	11/9/20 18:48	1901028		LLH	110920K04.D	
S20K037-CAL1	CAL STD	2	11/9/20 19:37	2045034		LLH	110920K05.D	
S20K037-CAL2	CAL STD	3	11/9/20 20:26	2046020		LLH	110920K06.D	
S20K037-CAL3	CAL STD	4	11/9/20 21:16	2046021		LLH	110920K07.D	
S20K037-CAL4	CAL STD	5	11/9/20 22:06	2045035		LLH	110920K08.D	
S20K037-CAL5	CAL STD	6	11/9/20 22:57	2046022		LLH	110920K09.D	
S20K037-CAL6	CAL STD	7	11/9/20 23:49	2046023		LLH	110920K10.D	
S20K037-SCV1	SCV	8	11/10/20 0:41	2046024		LLH	110920K11.D	

Sequence Comments

Reagents

Reagent # **Description**

Table of Contents

Sequence Report

I	Name	Inlet	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
	PRIME	Three	T8	40	40	200	TO-15_A.CTD3	11/9/2020 4:12:30 PM	Completed
	PRIME	Three	T2	40	40	100	TO-15_A.CTD3	11/9/2020 5:04:11 PM	Completed
	PRIME	Three	T1	40	40	200	TO-15_A.CTD3	11/9/2020 5:57:39 PM	Completed
	BFB	Three	T1	40	40	50	TO-15_A.CTD3	11/9/2020 6:48:33 PM	Completed
	CAL1	Three	T1	40	0	20	TO-15_A.CTD3	11/9/2020 7:37:31 PM	Completed
	CAL2	Three	T2	40	0	20	TO-15_A.CTD3	11/9/2020 8:26:42 PM	Completed
	CAL3	Three	T2	40	0	50	TO-15_A.CTD3	11/9/2020 9:16:08 PM	Completed
	CAL4	Three	T2	40	0	100	TO-15_A.CTD3	11/9/2020 10:06:29 PM	Completed
	CAL5	Three	T2	40	0	150	TO-15_A.CTD3	11/9/2020 10:57:40 PM	Completed
	CAL6	Three	T2	40	0	200	TO-15_A.CTD3	11/9/2020 11:49:41 PM	Completed
	SCV1	Three	T8	40	0	200	TO-15_A.CTD3	11/10/2020 12:41:53 AM	Completed
	SCV1	Three	T8	40	0	200	TO-15_A.CTD3	11/10/2020 1:34:04 AM	Completed
	BLANK	Three	T3	40	0	200	TO-15_A.CTD3	11/10/2020 2:26:06 AM	Completed

SEQUENCE DATA

S20K037

S20K037-TUN1

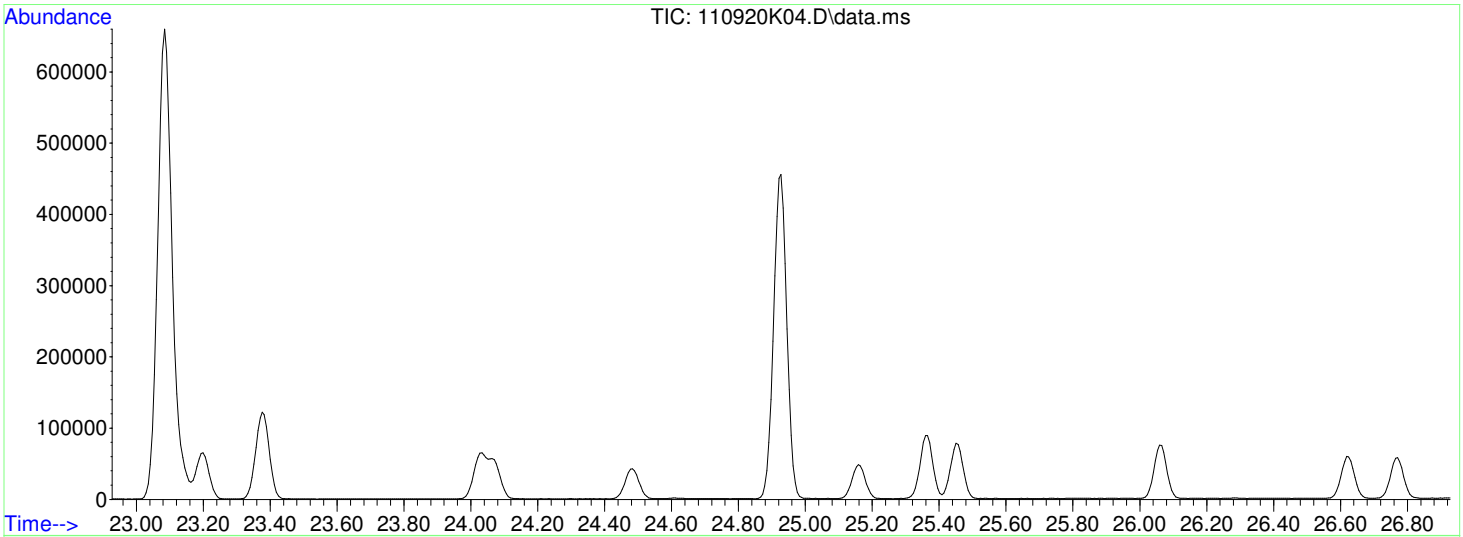
Table of Contents

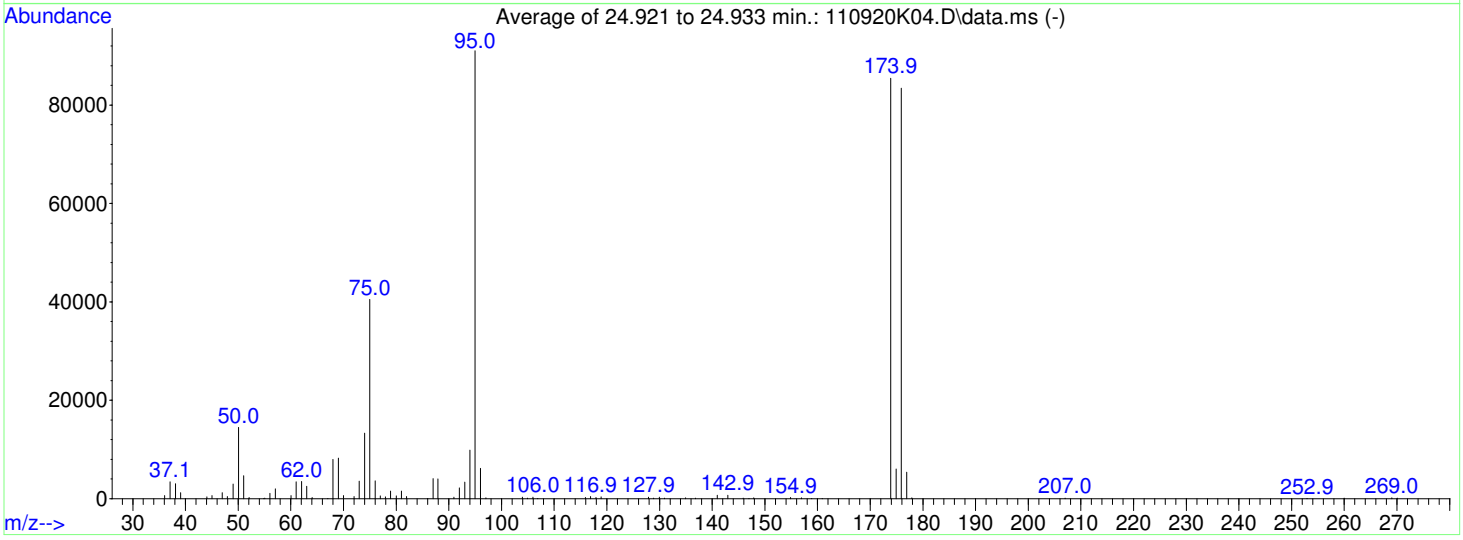
Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K04.D
InstName : HP5973K
Acq On : 9 Nov 2020 6:48 pm
Operator : LLH
Sample : S20K037-TUN1
Misc : BFB 1901028
ALS Vial : 31 Sample Multiplier: 1

REVIEWED
By LLH at 8:49 am, Nov 10, 2020

Integration File: lscint.p

Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Title : TO15
Last Update : Wed Aug 12 16:12:13 2020





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

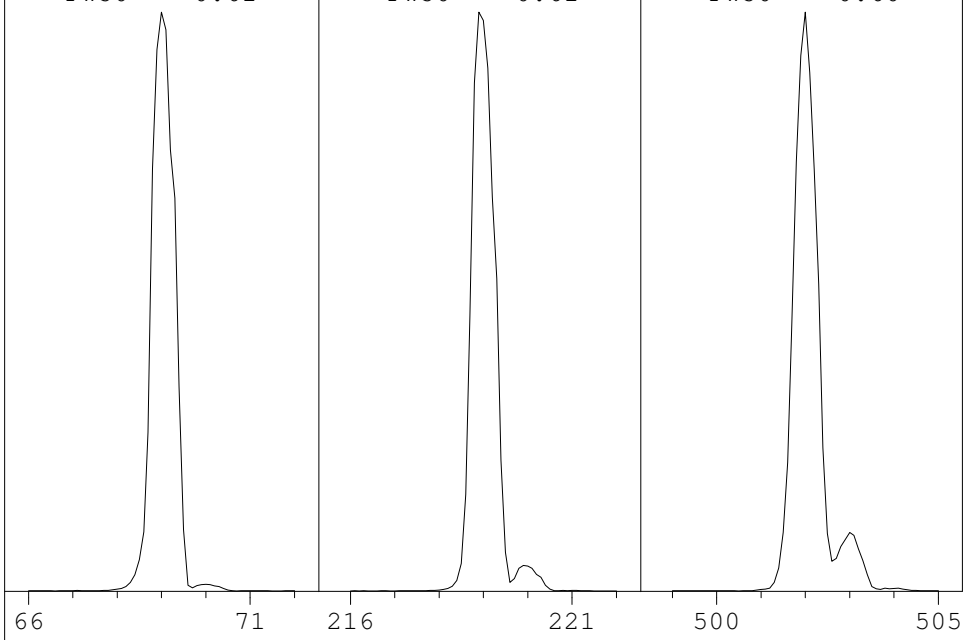
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.9	14503	PASS
75	95	30	66	44.4	40469	PASS
95	95	100	100	100.0	91061	PASS
96	95	5	9	6.7	6131	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.8	85429	PASS
175	174	4	9	7.1	6047	PASS
176	174	93	101	97.7	83445	PASS
177	176	5	9	6.4	5380	PASS

Autotune

Mon Nov 09 15:43:28 2020 Instrum

C:\MSDCHEM\1\5973N\atune.u US82321658

Mass	69.00	Mass	218.90	Mass	502.00
Ab	388111	Ab	312743	Ab	36265
Pw50	0.61	Pw50	0.61	Pw50	0.60

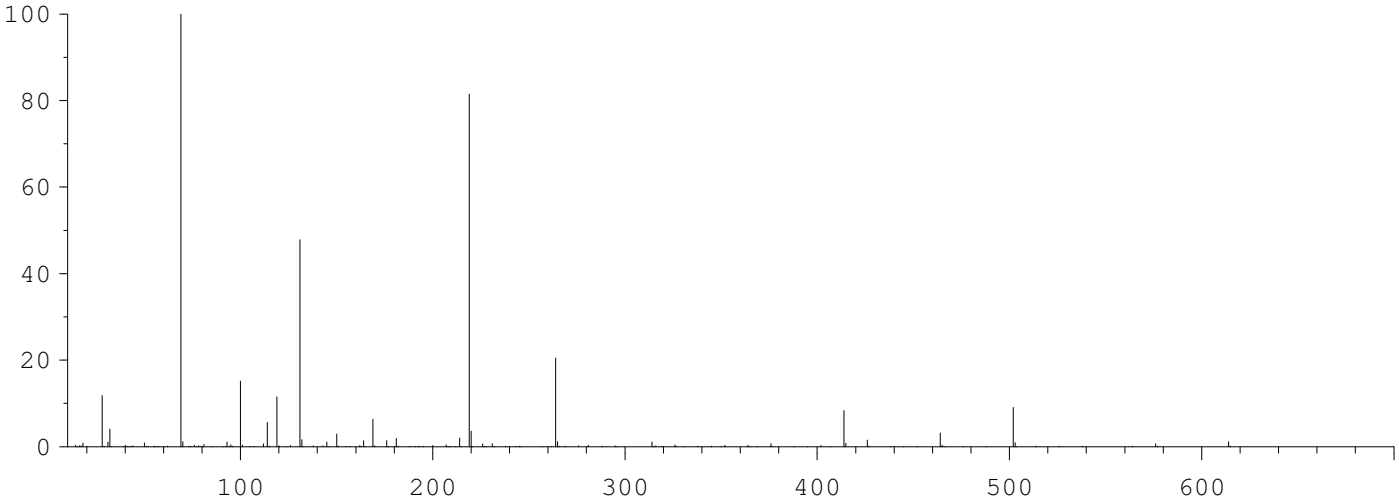


Ion Pol	Pos	MassGain	66
		MassOffs	-8
Emission	34.6	AmuGain	1991
EIEnrgy	69.9	AmuOffs	128
Filament	1	Wid219	-0.038
		DC Pol	Pos
Repeller	32.30		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1012
EntOffs	18.82		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
150 peaks Base: 69.00 Abundance: 351040



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	351040	100.00	70.00	4001	1.14
219.00	285952	81.46	220.00	12516	4.38
502.00	31816	9.06	503.00	3367	10.58

Air/Water Check: H20~0.86% N2~11.80% O2~4.06% CO2~0.21% N2/H2O~1365.33%

Column(1) Flow: 1.492 Column(2): 0 ml/min. Interface Temp: 230

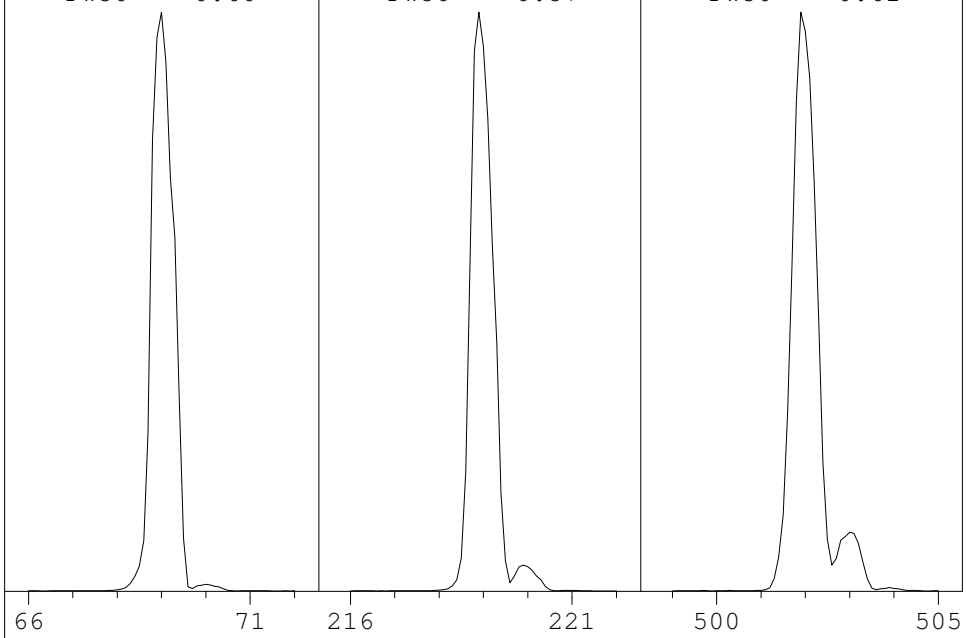
Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 56956
Repeller Maximum 35 volts using ion 219; Gain Factor 0.57

MassGain Values(Samples): 67(3) 67(2) 67(1) 67(0) 66(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	128.0	128.0	128.0	128.0	128.0	128.0	128.0
Entrance Lens Offset:	18.8	18.8	18.8	18.8	18.8	18.8	18.8

Mon Nov 09 15:47:00 2020 Instrum
C:\msdchem\1\5973N\bfb110920K.U 0582321658

Mass	69.00	Mass	218.90	Mass	501.90
Ab	556062	Ab	374744	Ab	41352
Pw50	0.60	Pw50	0.57	Pw50	0.61

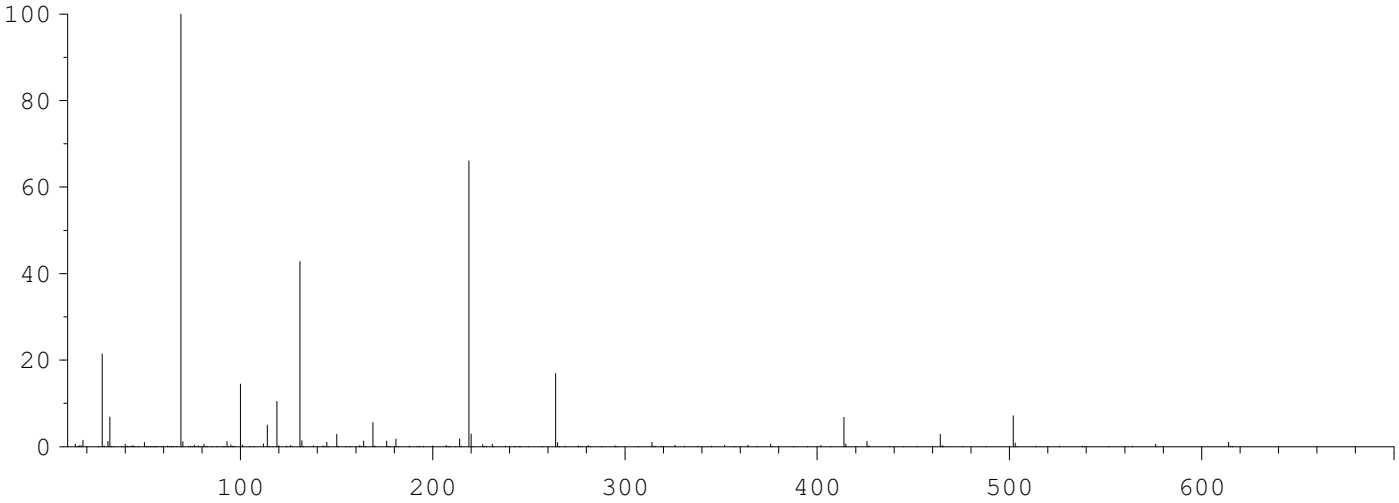


Ion Pol	Pos	MassGain	66
		MassOffs	-8
Emission	34.6	AmuGain	1991
EIEnrgy	69.9	AmuOffs	128
Filament	1	Wid219	-0.038
		DC Pol	Pos
Repeller	28.28		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1082
EntOffs	18.82		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
175 peaks Base: 69.00 Abundance: 501824



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	501824	100.00	70.00	5759	1.15
218.90	331456	66.05	220.00	14642	4.42
502.00	35936	7.16	503.00	4124	11.48

Air/Water Check: H20~1.42% N2~21.46% O2~6.84% CO2~0.25% N2/H2O~1509.09%

Column(1) Flow: 1.492 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 97953
Repeller Maximum 35 volts using ion 219; Gain Factor 0.98

MassGain Values(Samples): 67(3) 67(2) 67(1) 67(0) 66(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	128.0	128.0	128.0	128.0	128.0	128.0	128.0
Entrance Lens Offset:	18.8	18.8	18.8	18.8	18.8	18.8	18.8

S20K037-CAL1

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K05.D
InstName : HP5973K
Acq On : 9 Nov 2020 7:37 pm
Operator : LLH
Sample : S20K037-CAL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 10 08:51:00 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:50:40 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.319	49	214647	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	692453	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	620206	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	7545	1.28	ppbv		97
3) Dichlorodifluoromethane	5.107	85	16475	1.12	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.503	85	18175	1.11	ppbv		100
5) Chloromethane	5.740	50	6865	1.16	ppbv		98
6) Vinyl chloride	6.081	62	7735	1.27	ppbv		99
7) 1,3-Butadiene	6.184	54	6336	1.40	ppbv		79
8) Bromomethane	7.249	94	5878	1.22	ppbv		99
9) Chloroethane	7.620	64	4069	1.23	ppbv		97
10) Bromoethene	8.258	106	6876	1.37	ppbv		96
11) Trichlorofluoromethane	8.386	101	14966	1.06	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.400	151	11047	1.22	ppbv		99
13) 1,1-Dichloroethene	10.522	61	10444	1.28	ppbv		99
14) Acetone	11.099	43	10884	1.24	ppbv		99
15) Carbon disulfide	11.215	76	21934	1.38	ppbv		99
16) 2-Propanol	11.611	45	10959	1.27	ppbv		96
17) Allyl chloride	11.976	41	10414	1.48	ppbv		98
18) Dichloromethane	12.487	49	10697	1.49	ppbv		98
19) tert-Butyl methyl ethe...	13.034	73	22462	1.51	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	10530	1.30	ppbv		96
21) Hexane	13.600	57	14066	1.42	ppbv		99
22) 1,1-Dichloroethane	14.397	63	12391	1.18	ppbv		99
23) Vinyl acetate	14.506	43	15712	1.21	ppbv		98
24) cis-1,2-Dichloroethene	15.784	61	9403	1.28	ppbv	#	100
25) 2-Butanone (MEK)	15.863	72	4000	1.26	ppbv	#	94
26) Ethyl acetate	15.869	61	2543	1.30	ppbv	#	98
27) Tetrahydrofuran	16.301	42	8959	1.20	ppbv		99
28) Chloroform	16.447	83	13270	1.22	ppbv		98
29) Cyclohexane	16.617	56	14448	1.51	ppbv		99
30) 1,1,1-Trichloroethane	16.702	97	13072	1.24	ppbv		99
31) Carbon tetrachloride	16.940	117	13161	1.13	ppbv		100
33) Benzene	17.445	78	23178	1.22	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	45072	1.43	ppbv		99
35) 1,2-Dichloroethane	17.664	62	7912	1.04	ppbv		99
36) Heptane	17.682	43	15845	1.35	ppbv		98
37) Trichloroethene	18.631	130	9989	1.26	ppbv		99
38) 1,2-Dichloropropane	19.142	63	8491	1.20	ppbv		99
39) 1,4-Dioxane	19.324	88	5568	1.36	ppbv		98
40) Bromodichloromethane	19.604	83	15867	1.23	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	12046	1.14	ppbv		98
42) 4-Methyl-2-pentanone (...	20.559	43	18488	1.20	ppbv		99
44) Toluene	20.803	91	26791	1.23	ppbv		99
45) trans-1,3-Dichloropropene	21.289	75	9083	0.92	ppbv		99
46) 1,1,2-Trichloroethane	21.600	97	8556	1.18	ppbv		98
47) Tetrachloroethene	21.642	166	12730	1.11	ppbv		99
48) 2-Hexanone	21.892	43	15372	1.06	ppbv		98
49) Chlorodibromomethane	22.208	129	15171	1.17	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	11795	1.13	ppbv		100
51) Chlorobenzene	23.133	112	20878	1.17	ppbv	#	82
52) Ethylbenzene	23.200	91	34733	1.19	ppbv		99
53) m&p-Xylene	23.376	91	51043	2.32	ppbv		99
54) o-Xylene	24.027	91	26272	1.19	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K05.D
InstName : HP5973K
Acq On : 9 Nov 2020 7:37 pm
Operator : LLH
Sample : S20K037-CAL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

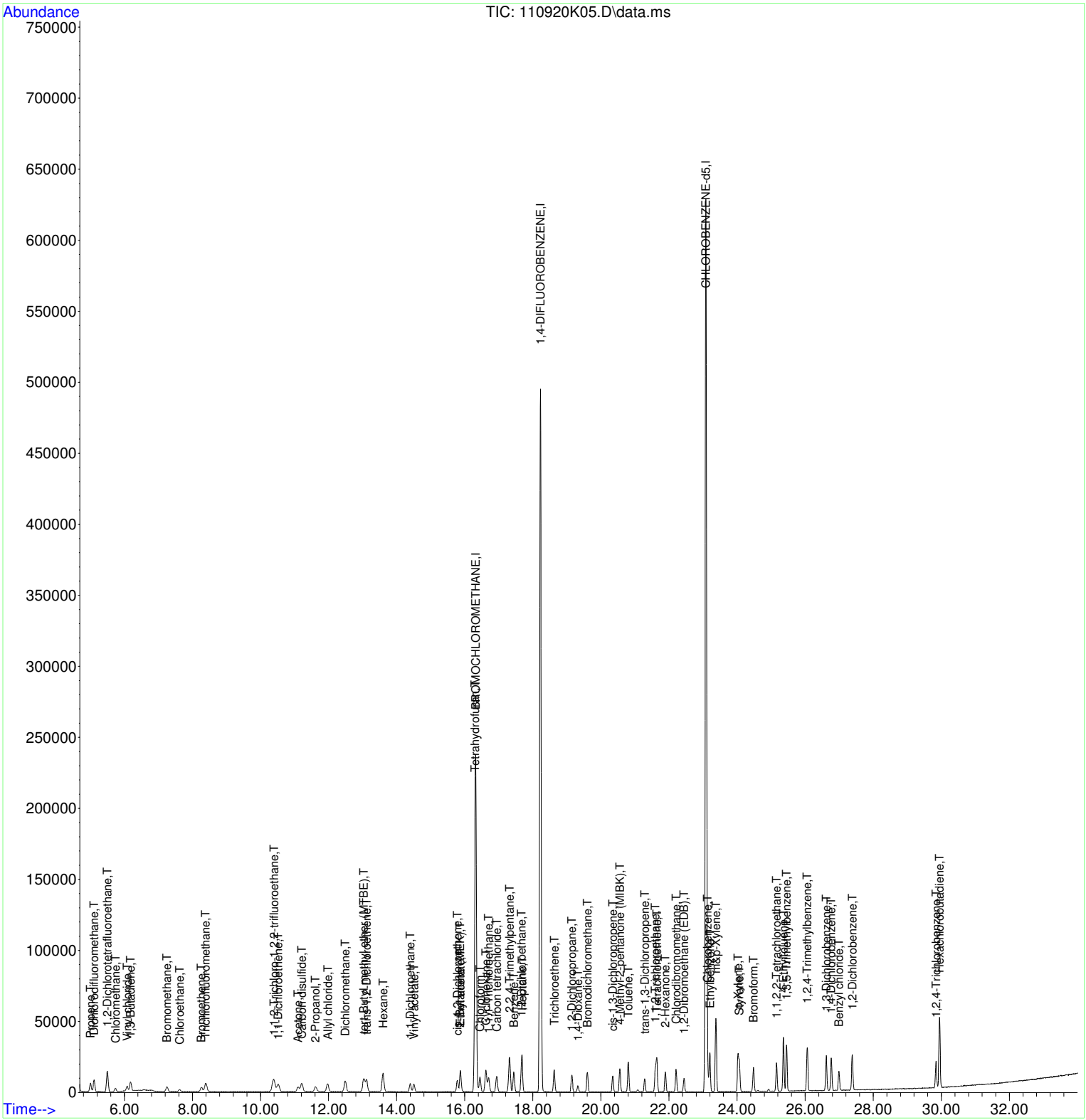
Quant Time: Nov 10 08:51:00 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:50:40 2020
Response via : Initial Calibration

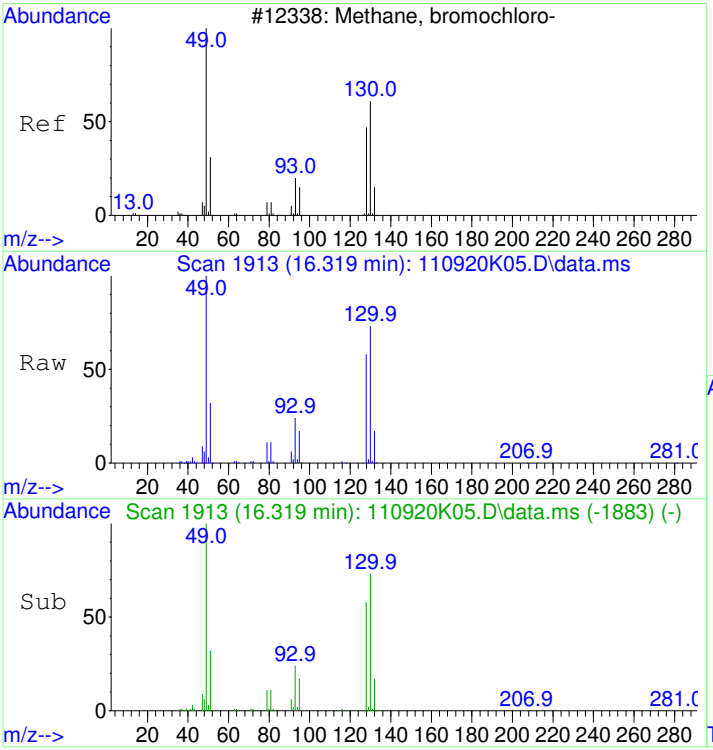
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	18577	1.03 ppbv	97
56) Bromoform	24.483	173	14060	1.03 ppbv	99
57) 1,1,2,2-Tetrachloroethane	25.159	83	18274	1.08 ppbv	99
58) 4-Ethyltoluene	25.359	105	43154	1.21 ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	30665	1.15 ppbv	98
60) 1,2,4-Trimethylbenzene	26.059	105	29943	1.13 ppbv	99
61) 1,3-Dichlorobenzene	26.619	146	19171	0.98 ppbv	99
62) 1,4-Dichlorobenzene	26.765	146	17782	0.93 ppbv	99
63) Benzyl chloride	26.990	91	18109	0.71 ppbv	98
64) 1,2-Dichlorobenzene	27.385	146	18981	1.00 ppbv	99
65) 1,2,4-Trichlorobenzene	29.849	180	12459	0.78 ppbv	99
66) Hexachlorobutadiene	29.946	225	18296	1.01 ppbv	99

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

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K05.D
InstName : HP5973K
Acq On : 9 Nov 2020 7:37 pm
Operator : LLH
Sample : S20K037-CAL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 10 08:51:00 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:50:40 2020
Response via : Initial Calibration

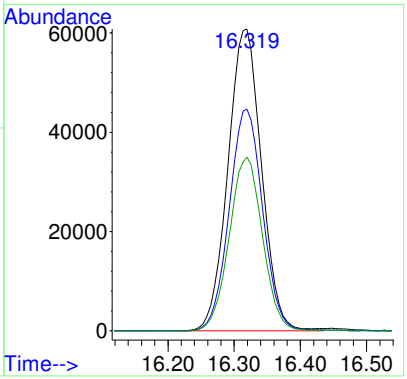


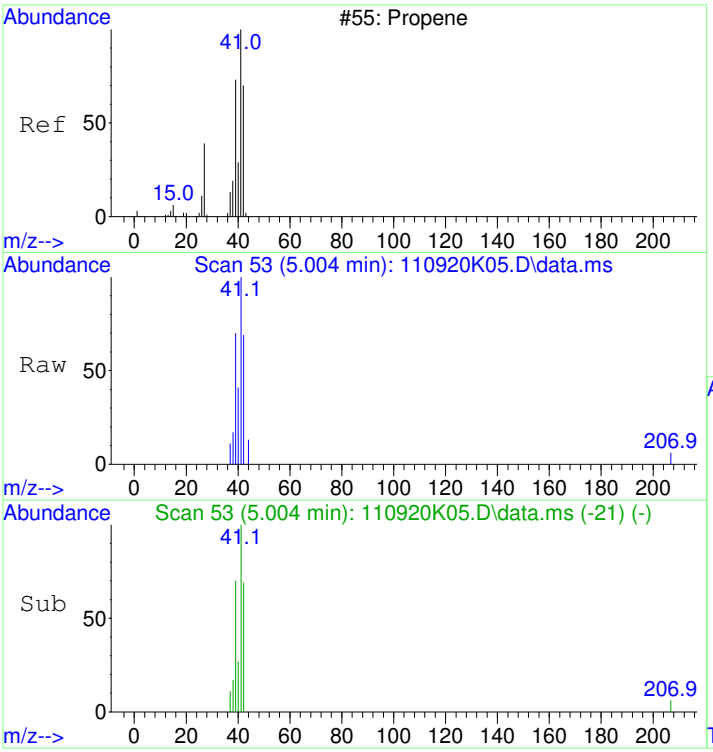


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 49 Resp: 214647

Ion	Ratio	Lower	Upper
49	100		
130	73.2	51.9	91.9
128	56.4	35.7	75.7

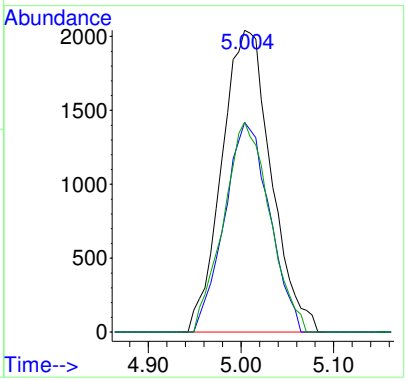


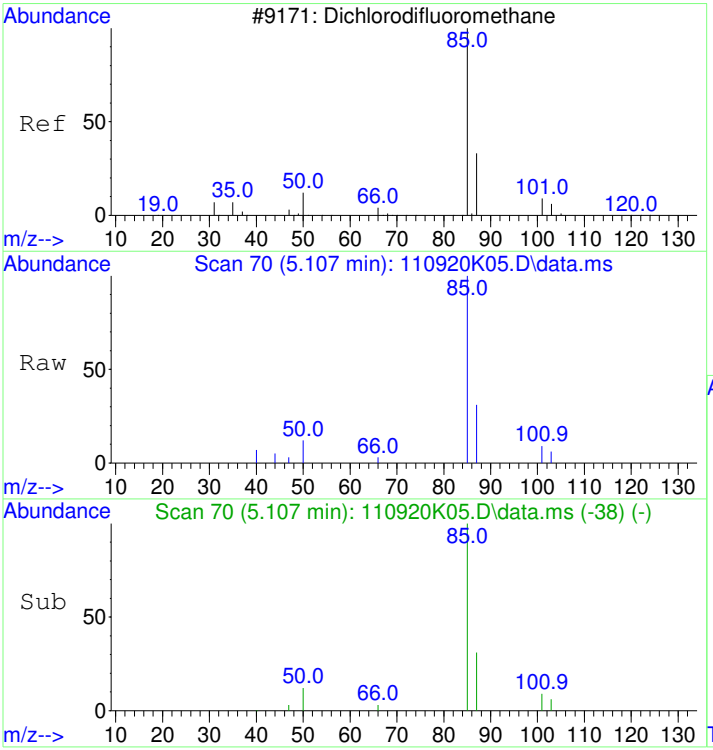


#2
Propene
Concen: 1.28 ppbv
RT: 5.004 min Scan# 53
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 41 Resp: 7545

Ion	Ratio	Lower	Upper
41	100		
42	63.6	47.3	87.3
39	65.3	46.1	86.1

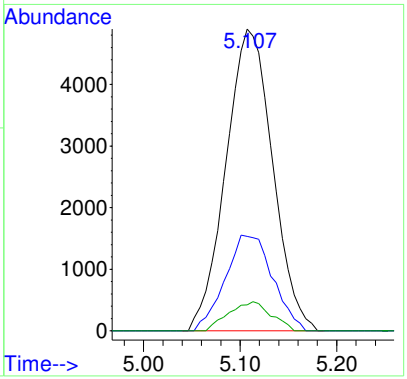


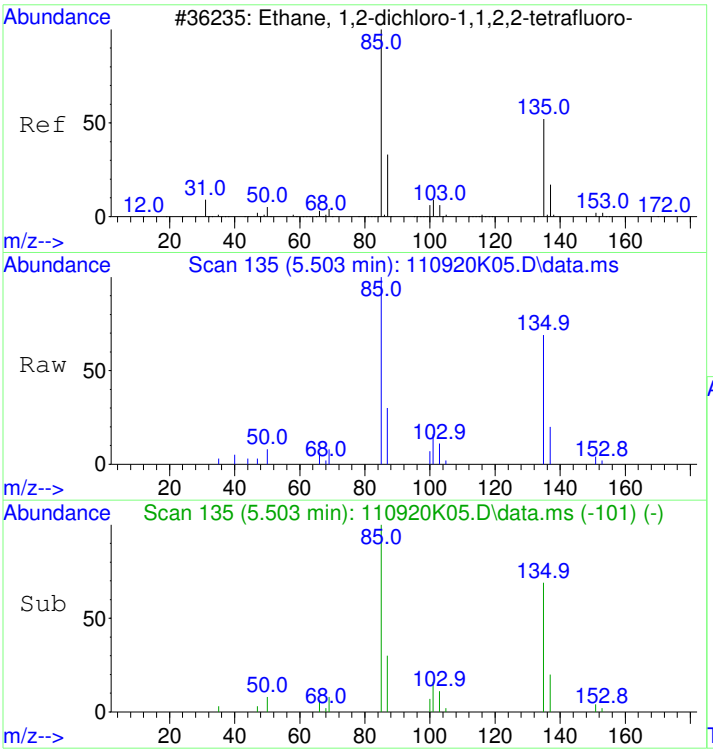


#3
Dichlorodifluoromethane
Concen: 1.12 ppbv
RT: 5.107 min Scan# 70
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 85 Resp: 16475

Ion	Ratio	Lower	Upper
85	100		
87	32.2	12.2	52.2
101	8.8	0.0	29.2

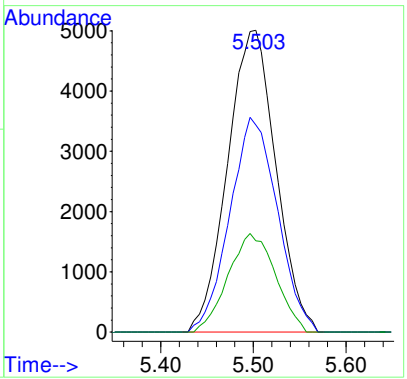


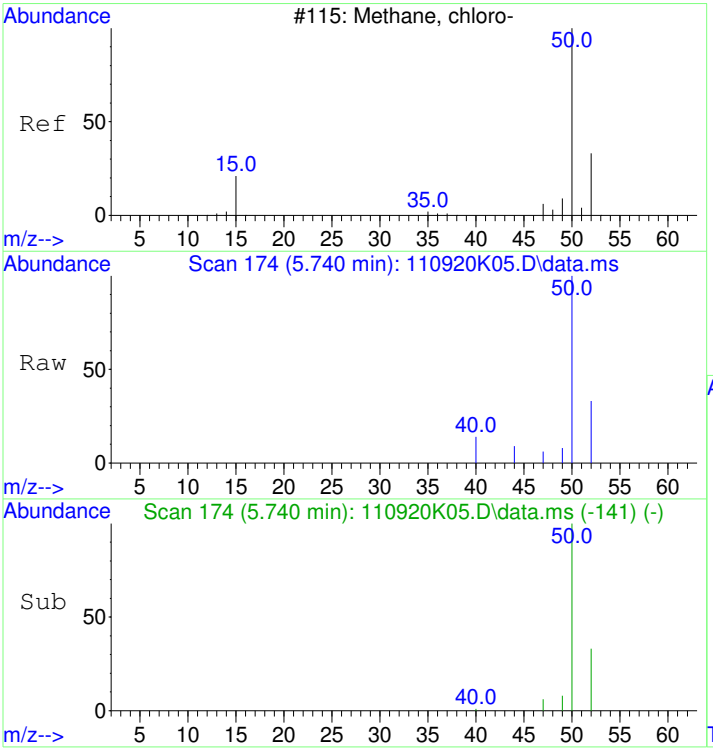


#4
1,2-Dichlorotetrafluoroethane
Concen: 1.11 ppbv
RT: 5.503 min Scan# 135
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 85 Resp: 18175

Ion	Ratio	Lower	Upper
85	100		
135	70.1	50.0	90.0
87	32.0	12.1	52.1

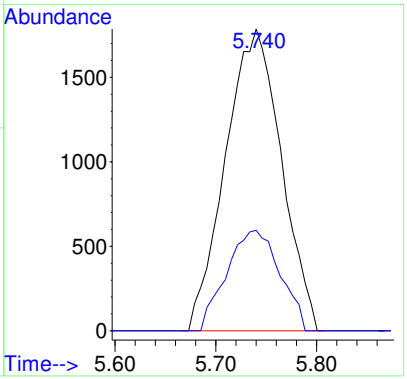


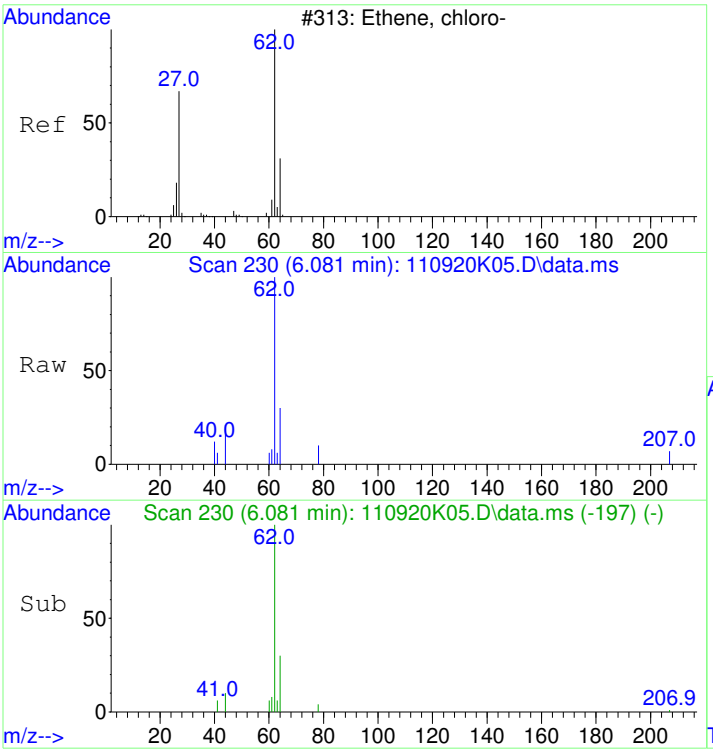


#5
Chloromethane
Concen: 1.16 ppbv
RT: 5.740 min Scan# 174
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 50 Resp: 6865

Ion	Ratio	Lower	Upper
50	100		
52	31.8	12.8	52.8

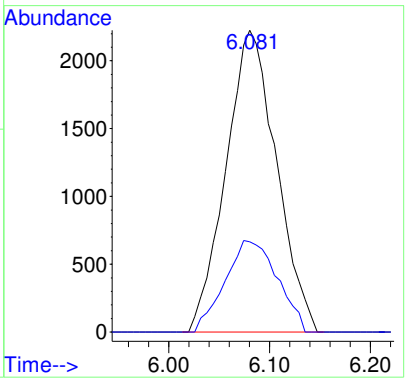


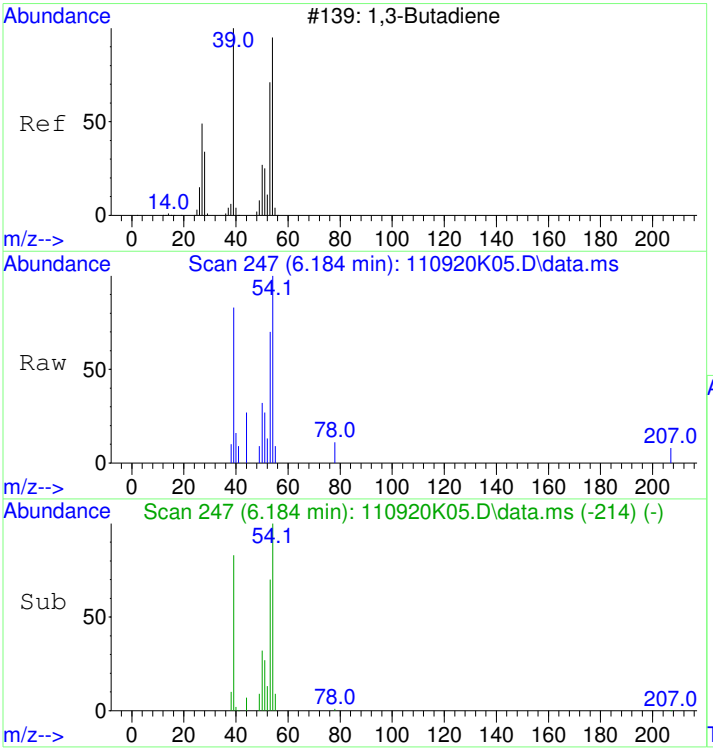


#6
Vinyl chloride
Concen: 1.27 ppbv
RT: 6.081 min Scan# 230
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 62 Resp: 7735

Ion	Ratio	Lower	Upper
62	100		
64	31.5	12.3	52.3

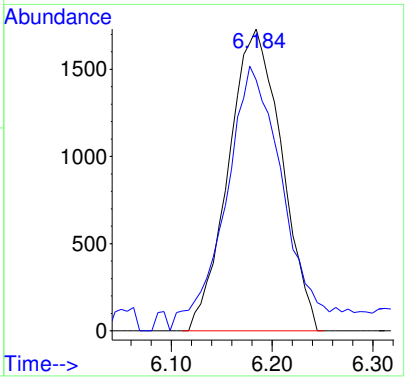


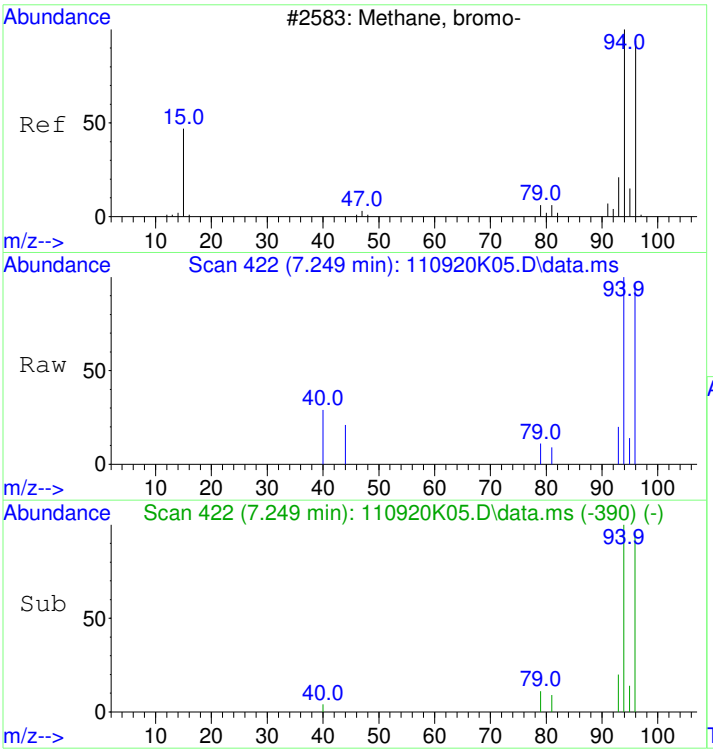


#7
1,3-Butadiene
Concen: 1.40 ppbv
RT: 6.184 min Scan# 247
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 54 Resp: 6336

Ion	Ratio	Lower	Upper
54	100		
39	101.3	62.1	102.1

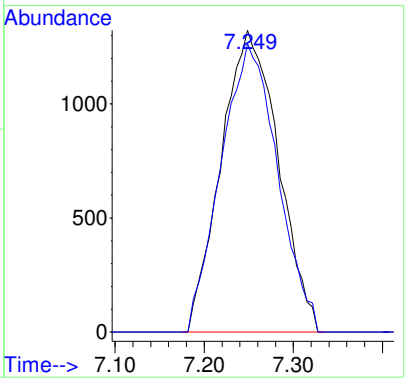


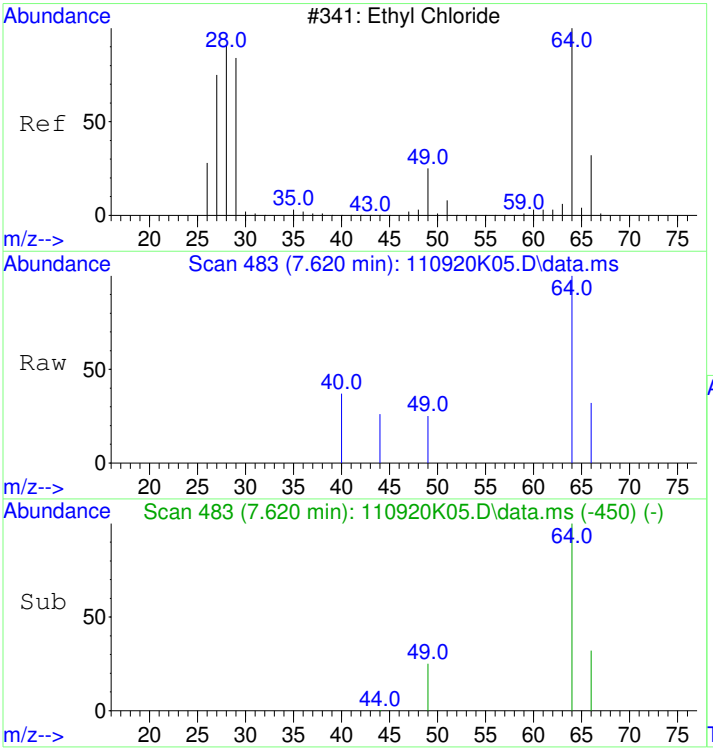


#8
Bromomethane
Concen: 1.22 ppbv
RT: 7.249 min Scan# 422
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 94 Resp: 5878

Ion	Ratio	Lower	Upper
94	100		
96	94.6	74.1	114.1

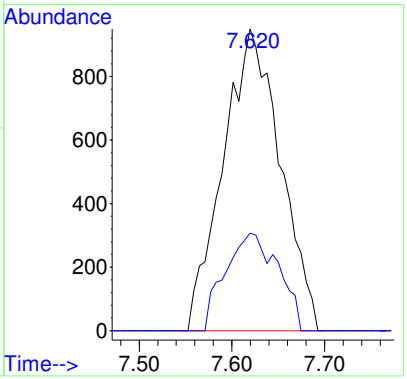


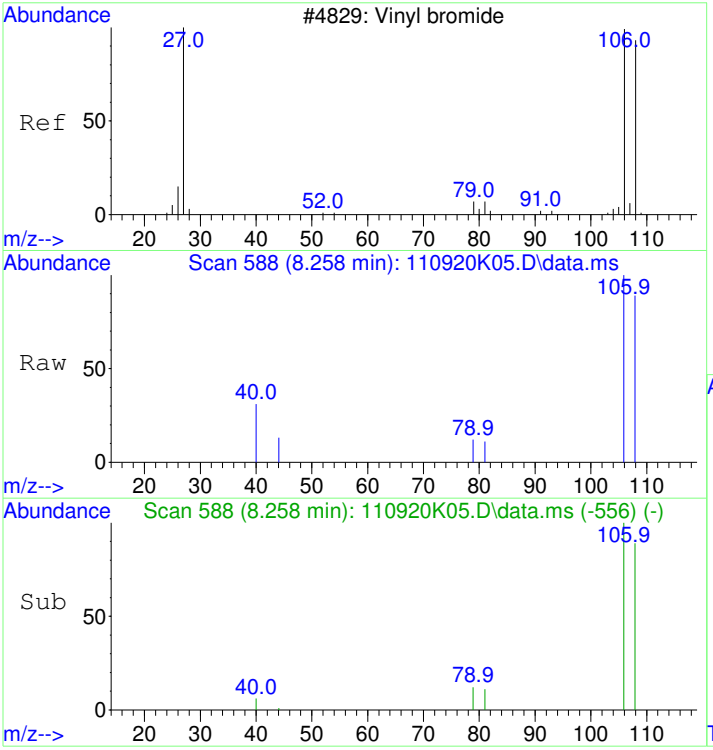


#9
Chloroethane
Concen: 1.23 ppbv
RT: 7.620 min Scan# 483
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 64 Resp: 4069

Ion	Ratio	Lower	Upper
64	100		
66	29.9	11.4	51.4

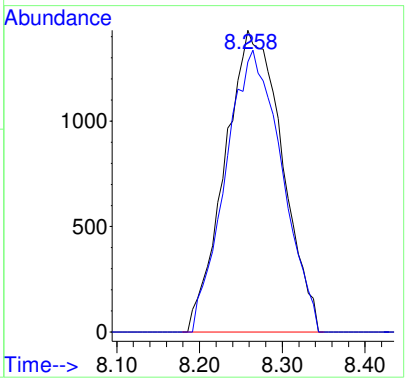


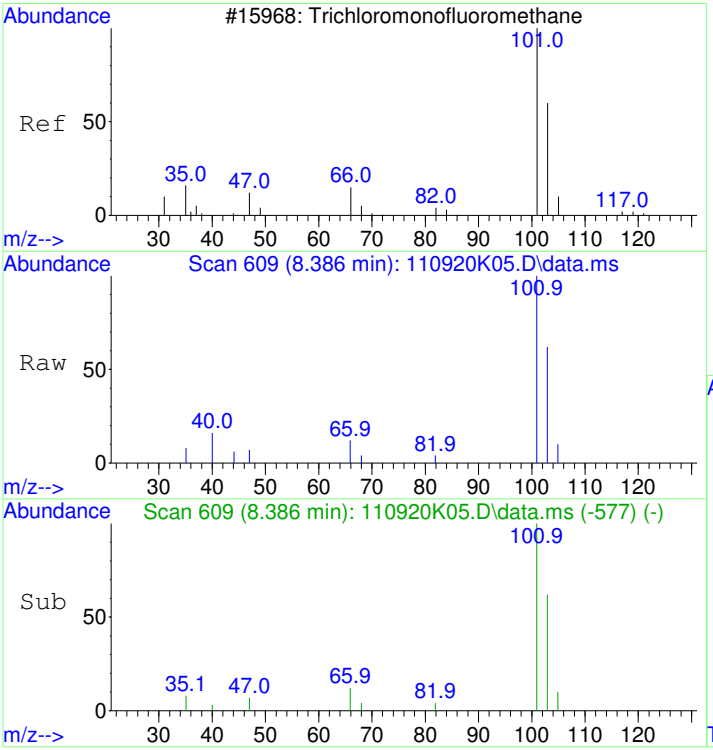


#10
Bromoethene
Concen: 1.37 ppbv
RT: 8.258 min Scan# 588
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:106 Resp: 6876

Ion	Ratio	Lower	Upper
106	100		
108	91.7	0.0	215.1

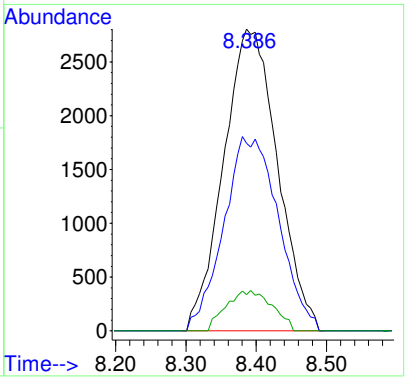


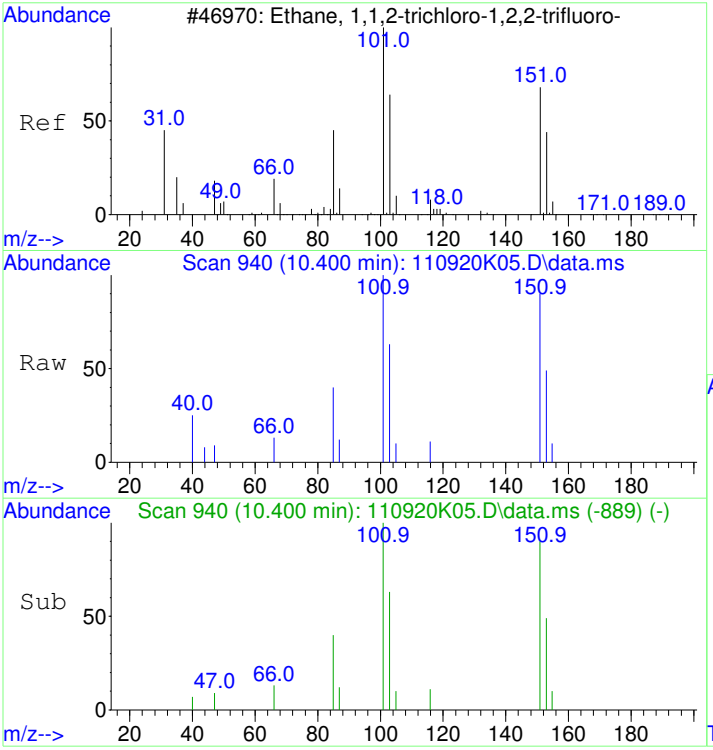


#11
Trichlorofluoromethane
Concen: 1.06 ppbv
RT: 8.386 min Scan# 609
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:101 Resp: 14966

Ion	Ratio	Lower	Upper
101	100		
103	65.1	44.9	84.9
66	11.4	0.0	31.9

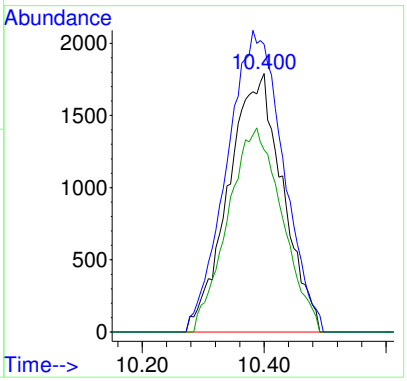


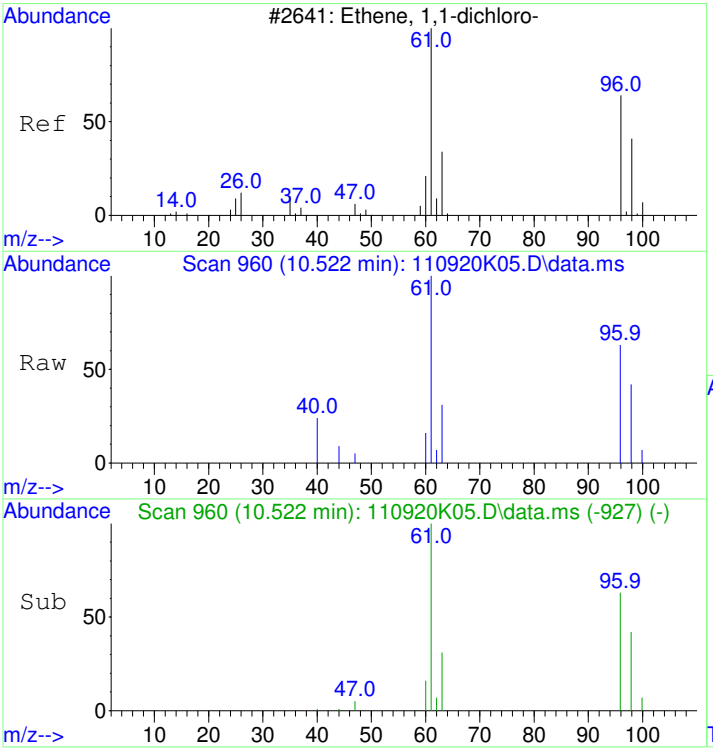


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.22 ppbv
RT: 10.400 min Scan# 940
Delta R.T. 0.012 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:151 Resp: 11047

Ion	Ratio	Lower	Upper
151	100		
101	121.6	101.9	141.9
103	79.2	58.4	98.4

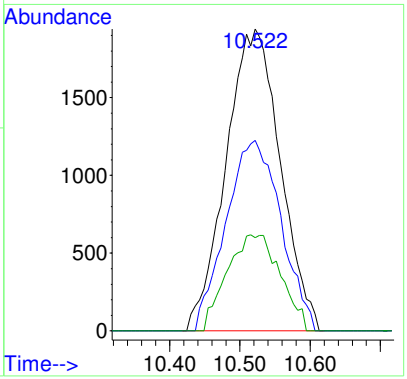


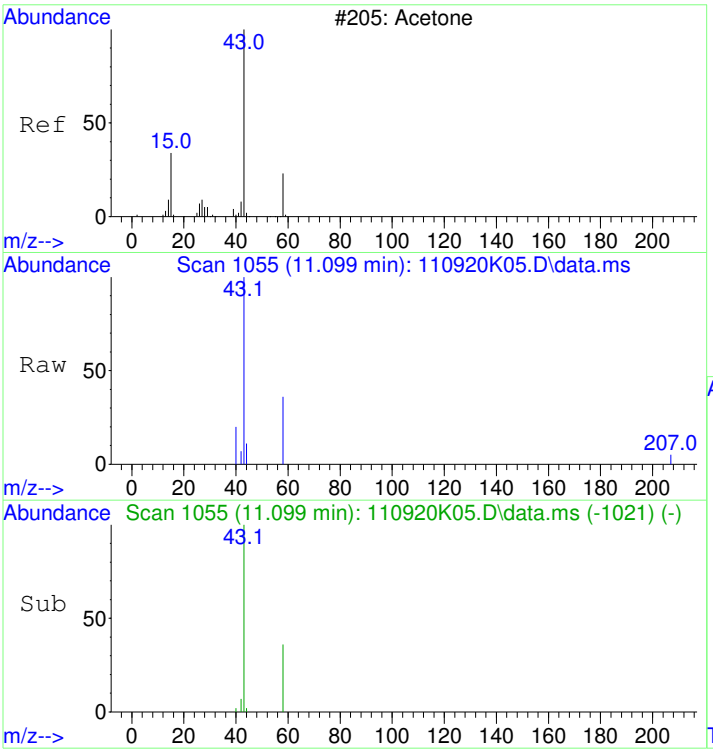


#13
1,1-Dichloroethene
Concen: 1.28 ppbv
RT: 10.522 min Scan# 960
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 61 Resp: 10444

Ion	Ratio	Lower	Upper
61	100		
96	63.7	43.5	83.5
63	31.1	12.1	52.1

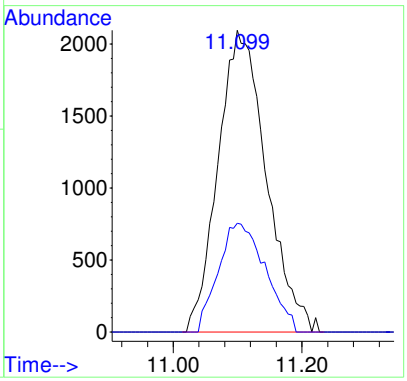


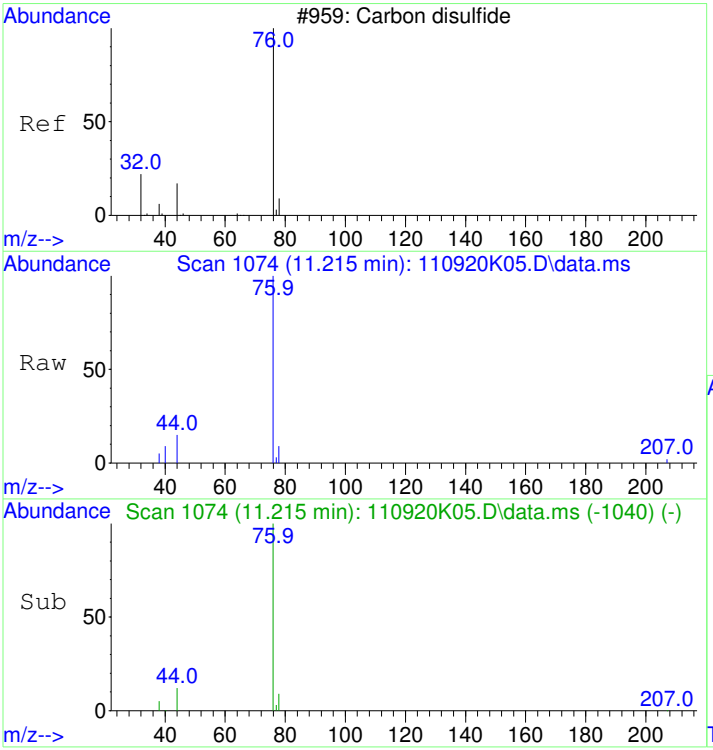


#14
Acetone
Concen: 1.24 ppbv
RT: 11.099 min Scan# 1055
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 43 Resp: 10884

Ion	Ratio	Lower	Upper
43	100		
58	35.2	15.9	55.9

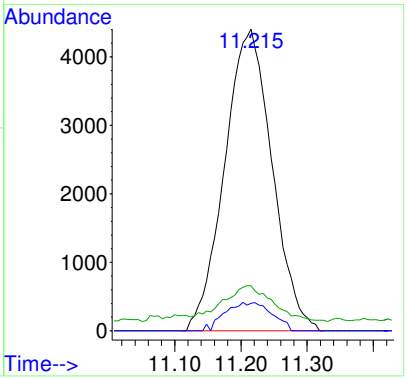


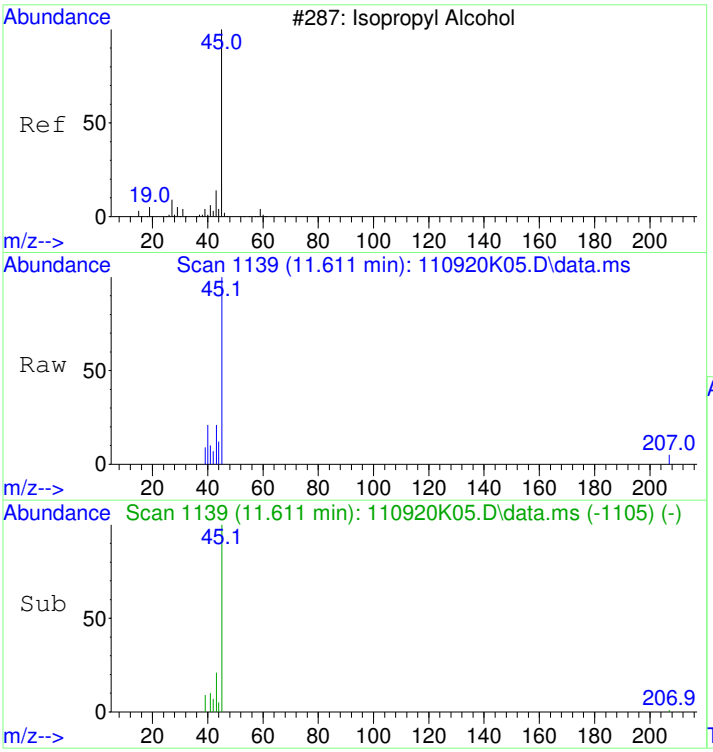


#15
Carbon disulfide
Concen: 1.38 ppbv
RT: 11.215 min Scan# 1074
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 76 Resp: 21934

Ion	Ratio	Lower	Upper
76	100		
78	9.3	0.0	29.0
44	10.7	0.0	30.1

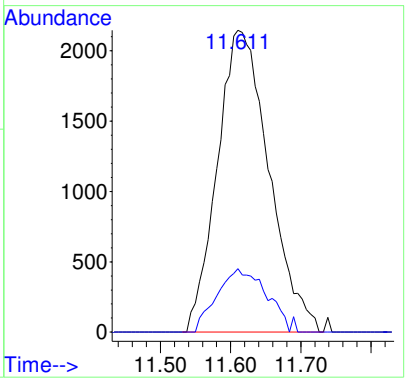


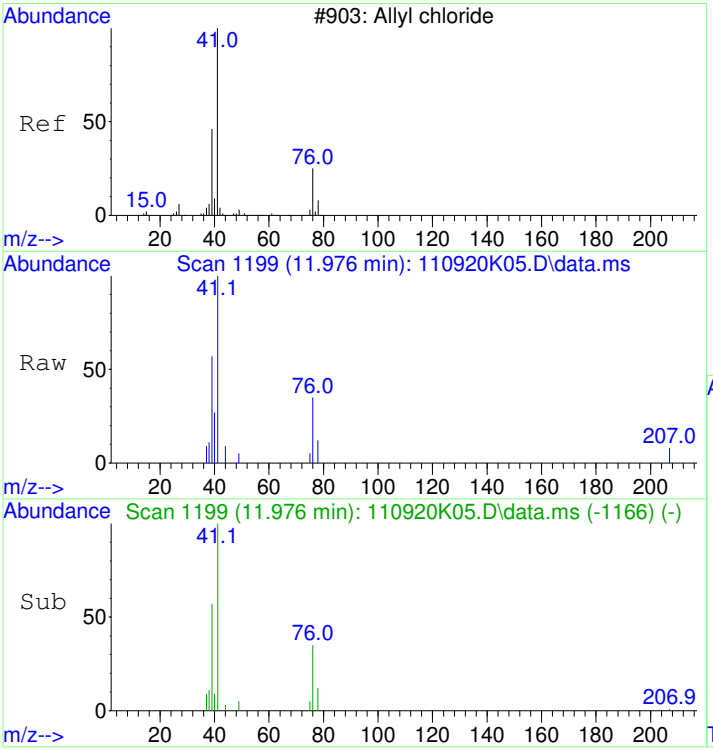


#16
2-Propanol
Concen: 1.27 ppbv
RT: 11.611 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 45 Resp: 10959

Ion	Ratio	Lower	Upper
45	100		
43	20.3	0.0	38.7

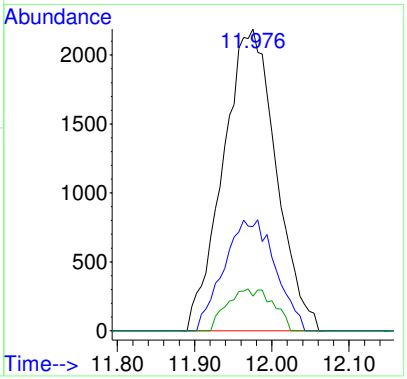


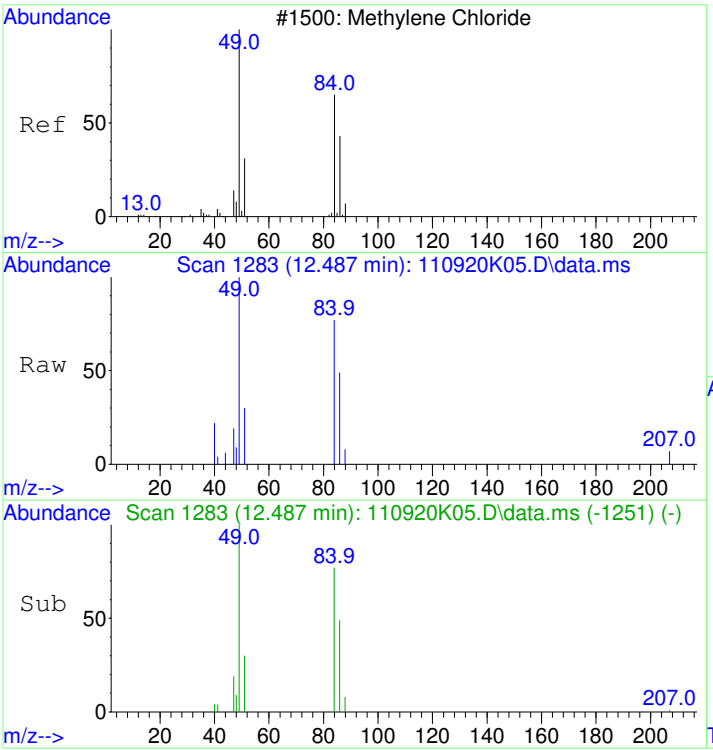


#17
Allyl chloride
Concen: 1.48 ppbv
RT: 11.976 min Scan# 1199
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 41 Resp: 10414

Ion	Ratio	Lower	Upper
41	100		
76	35.7	17.5	57.5
78	12.1	0.0	32.2

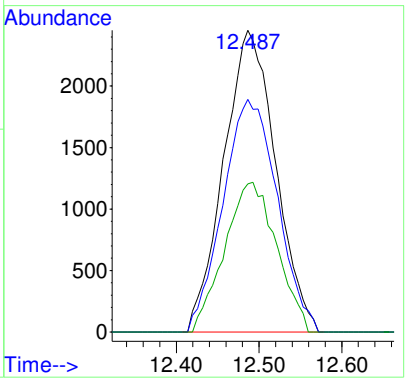


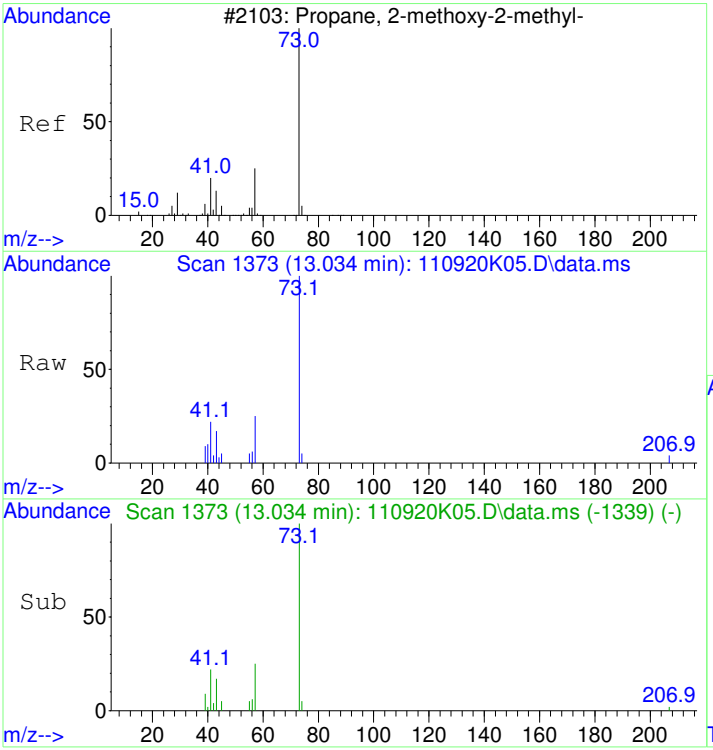


#18
Dichloromethane
Concen: 1.49 ppbv
RT: 12.487 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 49 Resp: 10697

Ion	Ratio	Lower	Upper
49	100		
84	80.7	57.4	97.4
86	49.6	29.7	69.7

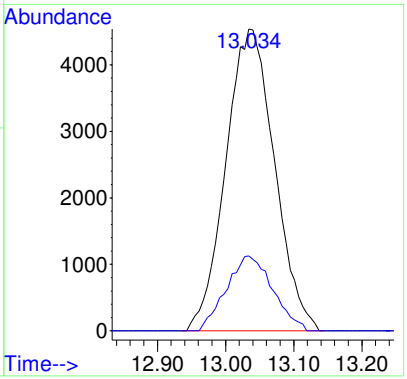


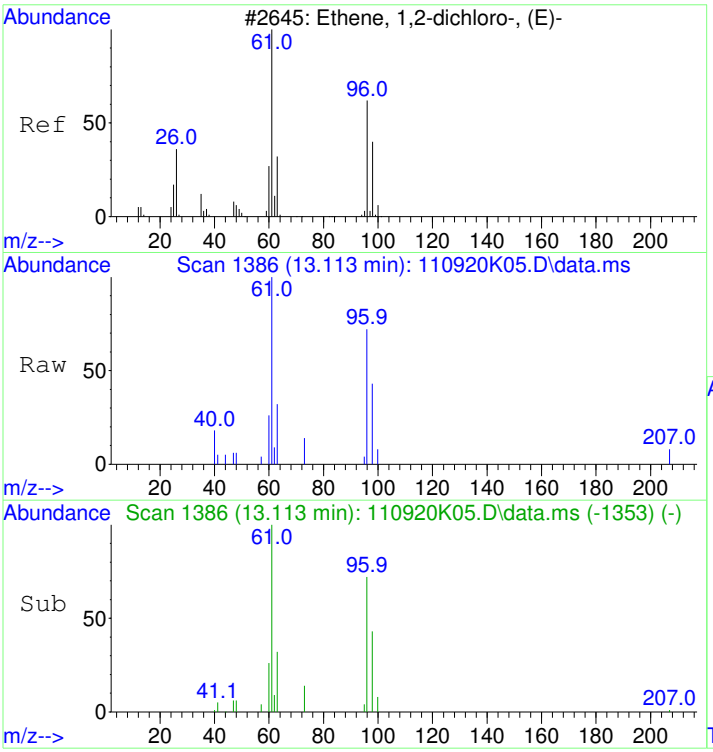


#19
tert-Butyl methyl ether (MTBE)
Concen: 1.51 ppbv
RT: 13.034 min Scan# 1373
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 73 Resp: 22462

Ion	Ratio	Lower	Upper
73	100		
57	23.6	3.6	43.6

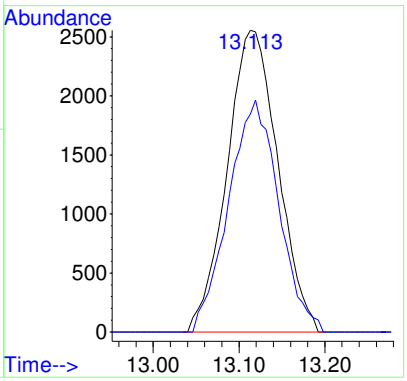


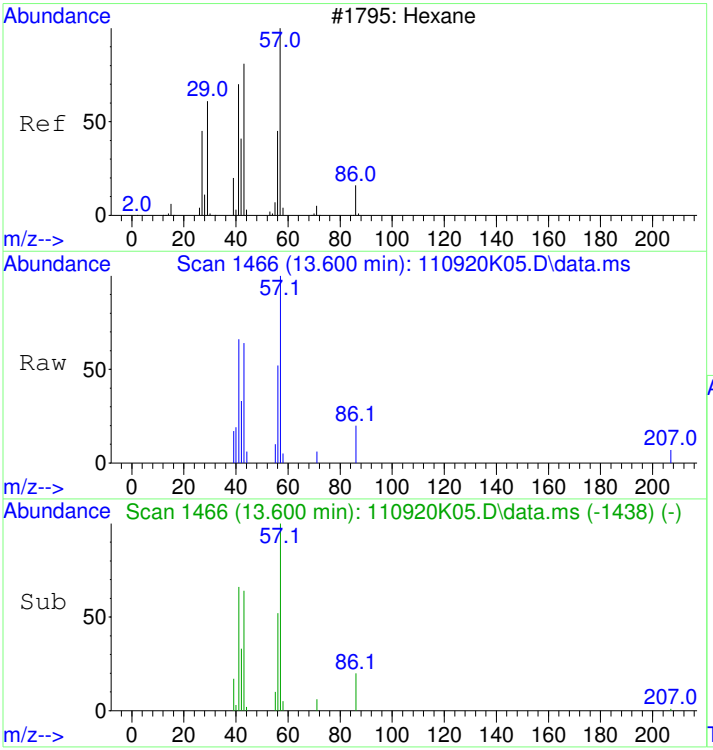


#20
trans-1,2-Dichloroethene
Concen: 1.30 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 61 Resp: 10530

Ion	Ratio	Lower	Upper
61	100		
96	75.8	52.8	92.8

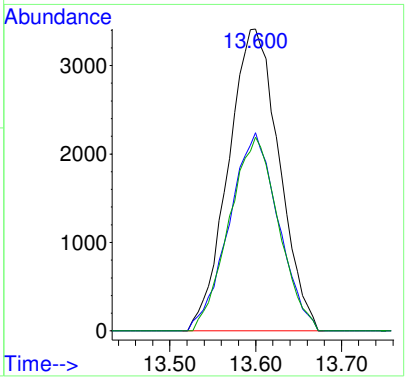


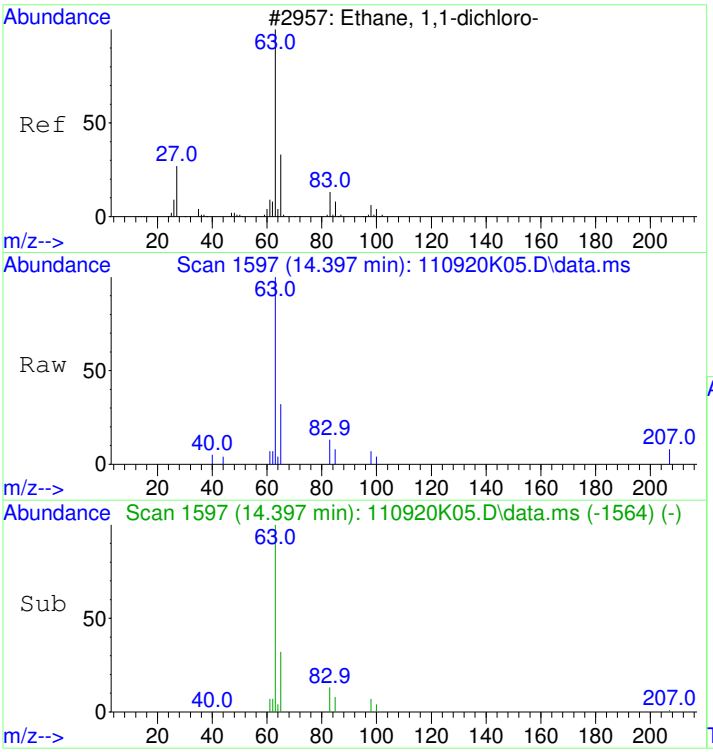


#21
Hexane
Concen: 1.42 ppbv
RT: 13.600 min Scan# 1466
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 57 Resp: 14066

Ion	Ratio	Lower	Upper
57	100		
41	63.6	42.6	82.6
43	62.2	42.4	82.4

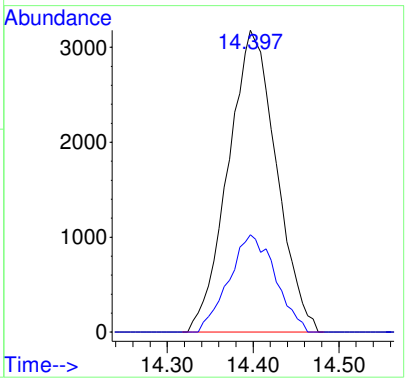


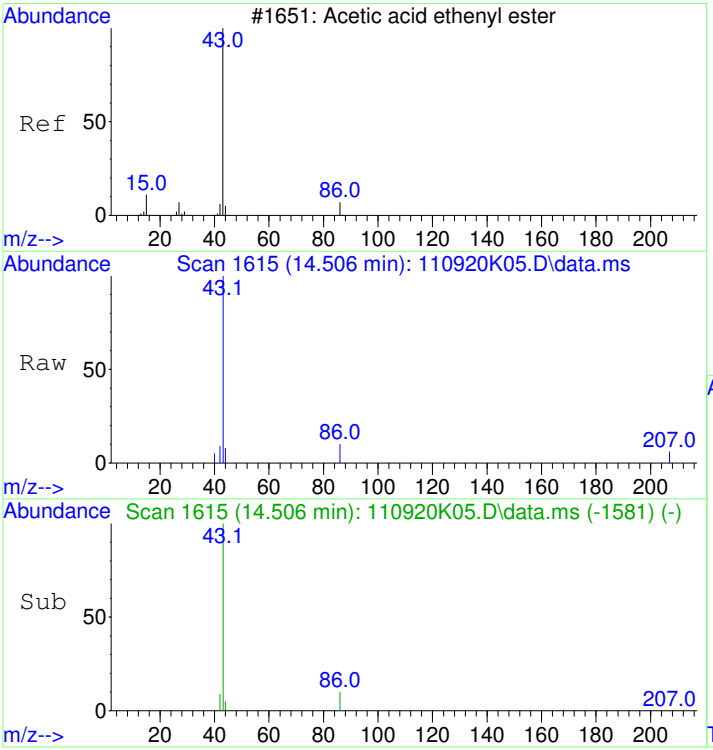


#22
1,1-Dichloroethane
Concen: 1.18 ppbv
RT: 14.397 min Scan# 1597
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 63 Resp: 12391

Ion	Ratio	Lower	Upper
63	100		
65	31.1	11.9	51.9

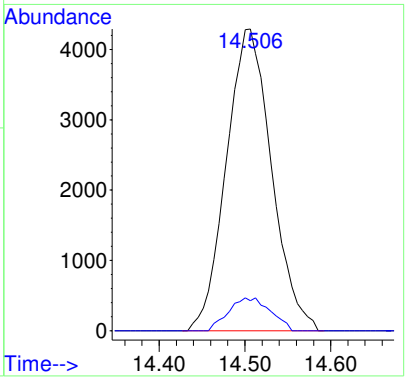


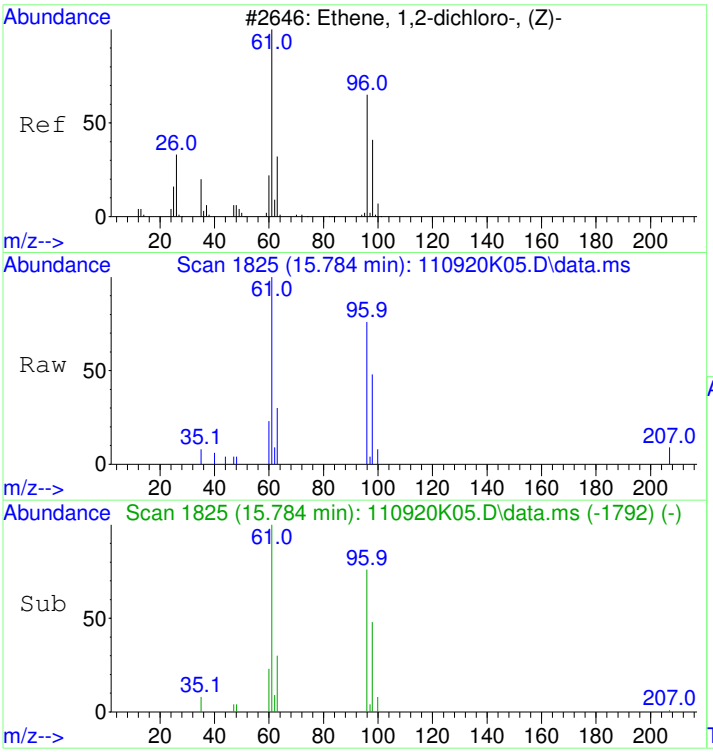


#23
Vinyl acetate
Concen: 1.21 ppbv
RT: 14.506 min Scan# 1615
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 43 Resp: 15712

Ion	Ratio	Lower	Upper
43	100		
86	10.1	0.0	30.7

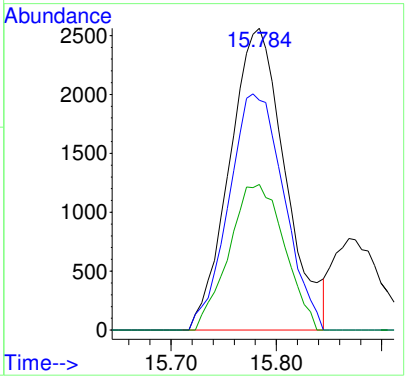


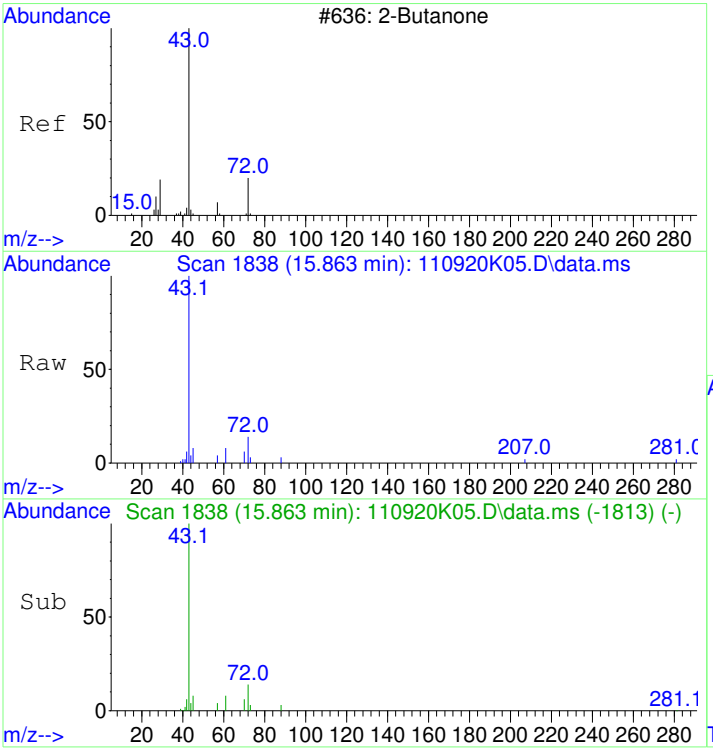


#24
cis-1,2-Dichloroethene
Concen: 1.28 ppbv
RT: 15.784 min Scan# 1825
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 61 Resp: 9403

Ion	Ratio	Lower	Upper
61	100		
96	77.9	57.6	97.6
98	0.0	0.0	20.0

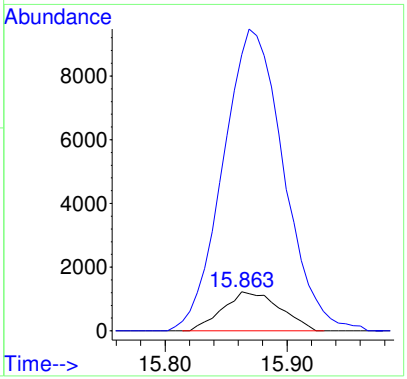


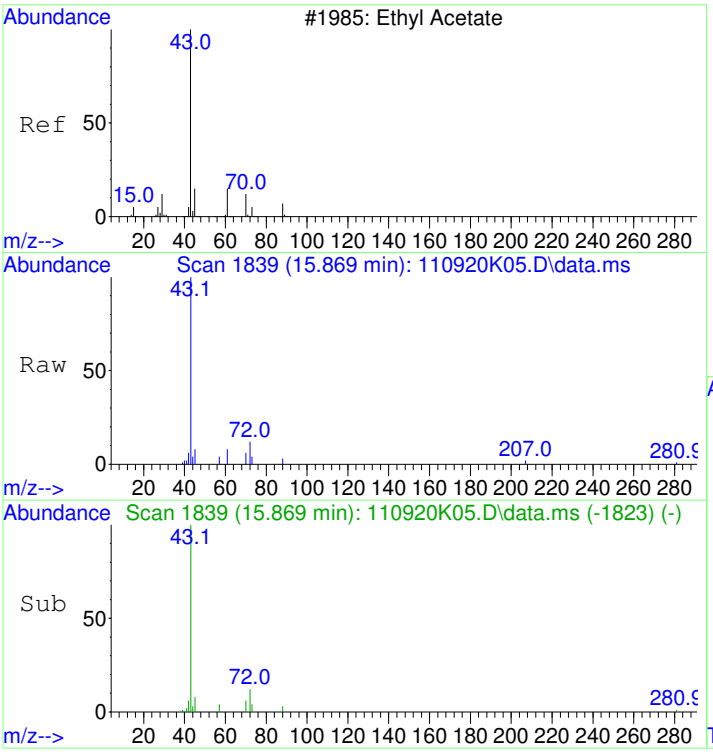


#25
2-Butanone (MEK)
Concen: 1.26 ppbv
RT: 15.863 min Scan# 1838
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 72 Resp: 4000

Ion	Ratio	Lower	Upper
72	100		
43	820.0	789.0	809.0#

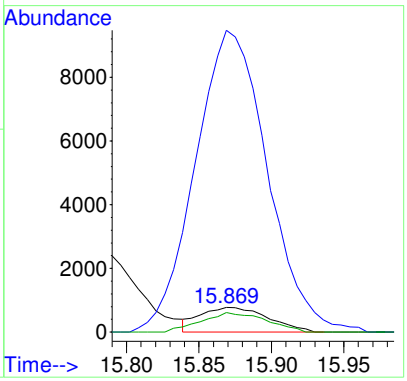


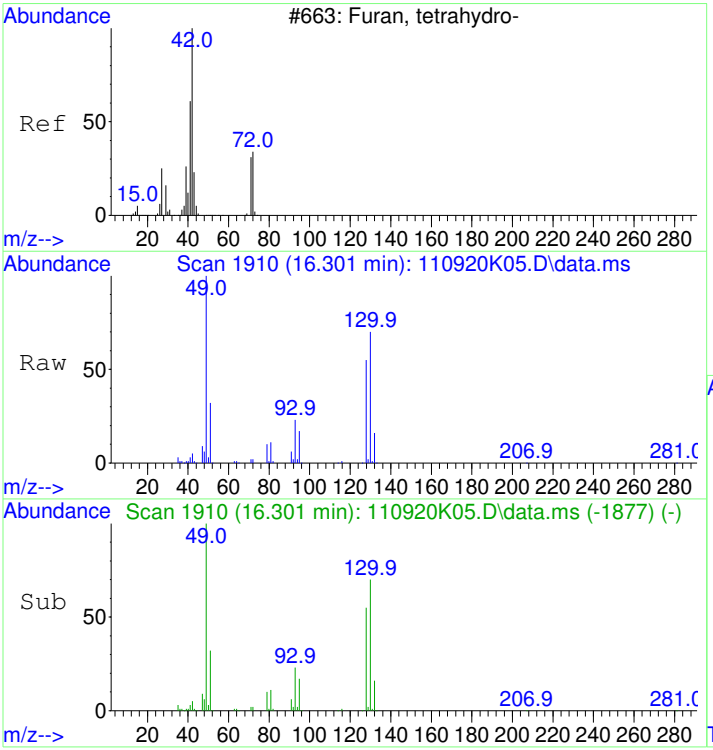


#26
Ethyl acetate
Concen: 1.30 ppbv
RT: 15.869 min Scan# 1839
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 61 Resp: 2543

Ion	Ratio	Lower	Upper
61	100		
43	1289.8	1267.1	1287.1#
70	74.9	65.7	85.7

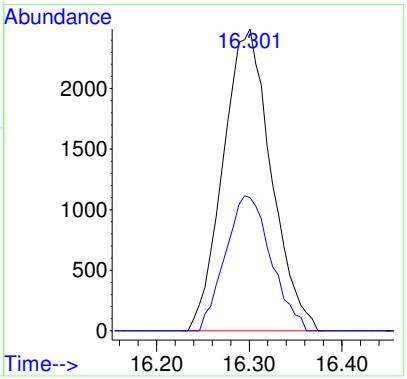


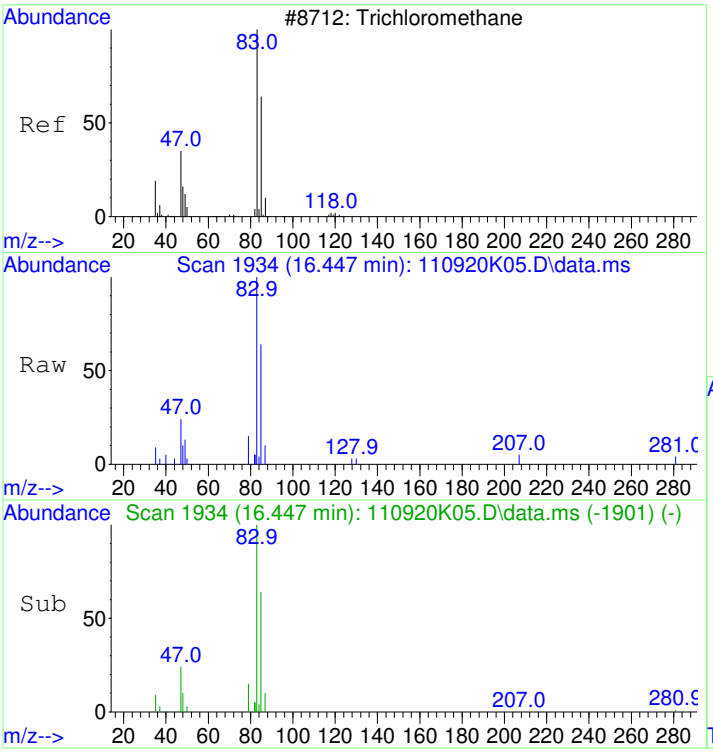


#27
Tetrahydrofuran
Concen: 1.20 ppbv
RT: 16.301 min Scan# 1910
Delta R.T. 0.012 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 42 Resp: 8959

Ion	Ratio	Lower	Upper
42	100		
72	42.5	23.2	63.2

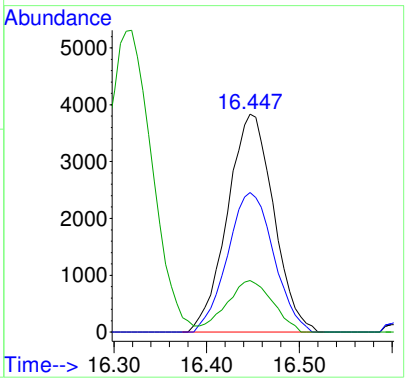


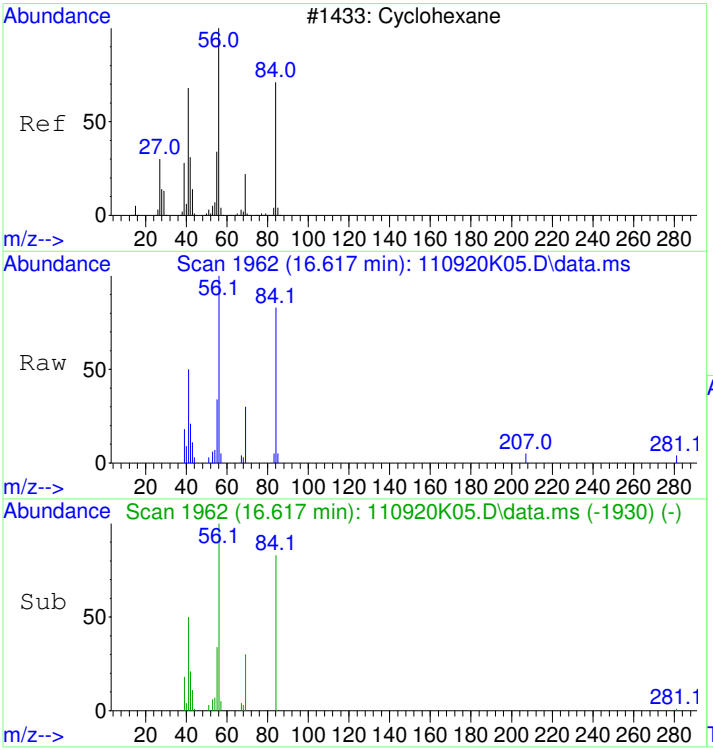


#28
Chloroform
Concen: 1.22 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 83 Resp: 13270

Ion	Ratio	Lower	Upper
83	100		
85	64.1	45.5	85.5
47	21.0	1.4	41.4

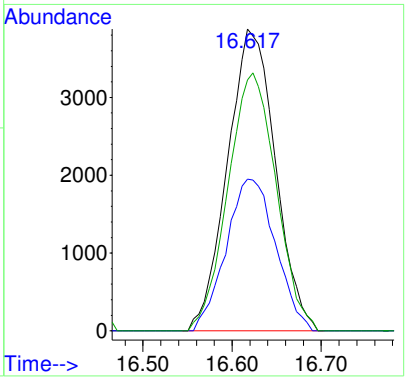


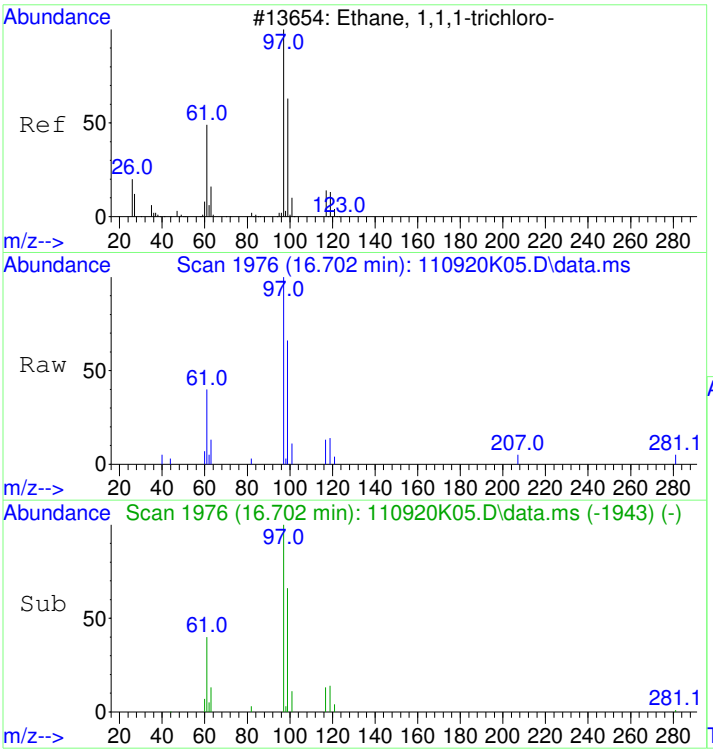


#29
Cyclohexane
Concen: 1.51 ppbv
RT: 16.617 min Scan# 1962
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 56 Resp: 14448

Ion	Ratio	Lower	Upper
56	100		
41	52.0	30.1	70.1
84	86.0	66.5	106.5

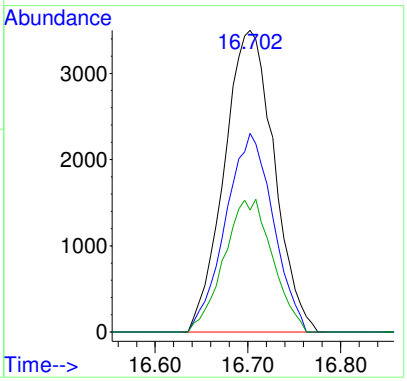


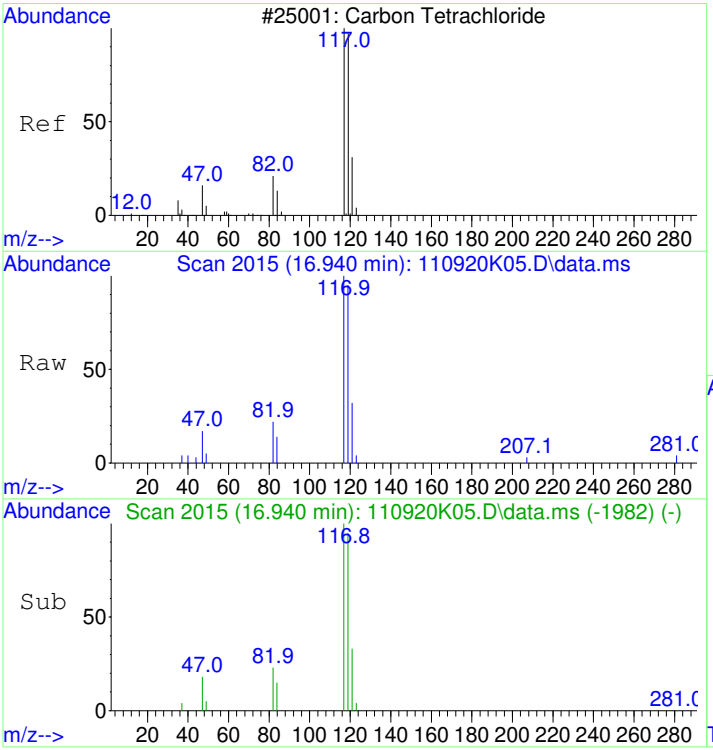


#30
1,1,1-Trichloroethane
Concen: 1.24 ppbv
RT: 16.702 min Scan# 1976
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 97 Resp: 13072

Ion	Ratio	Lower	Upper
97	100		
99	63.0	44.8	84.8
61	42.8	23.0	63.0

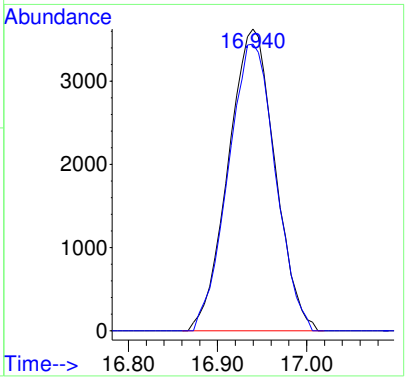


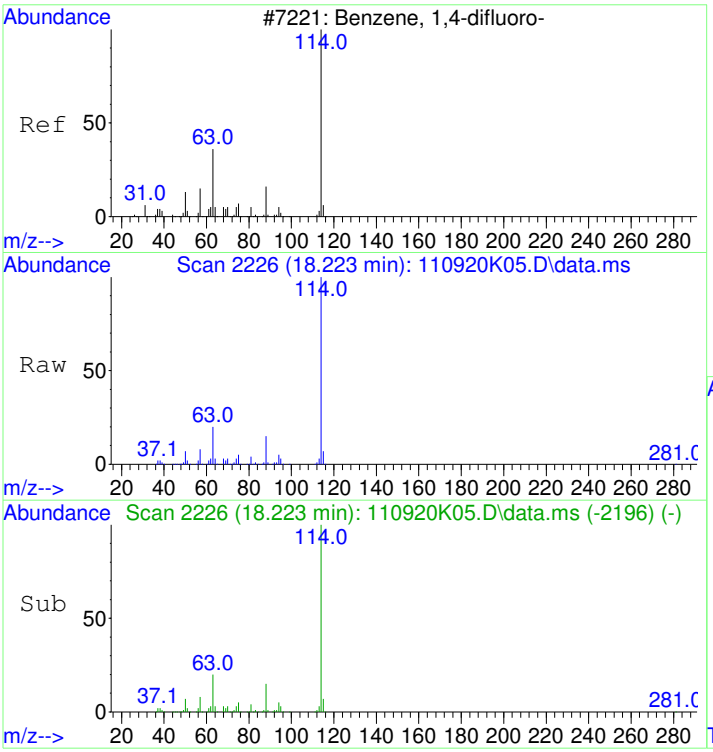


#31
Carbon tetrachloride
Concen: 1.13 ppbv
RT: 16.940 min Scan# 2015
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:117 Resp: 13161

Ion	Ratio	Lower	Upper
117	100		
119	96.1	75.9	115.9

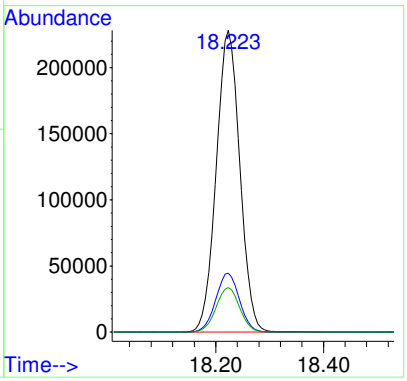


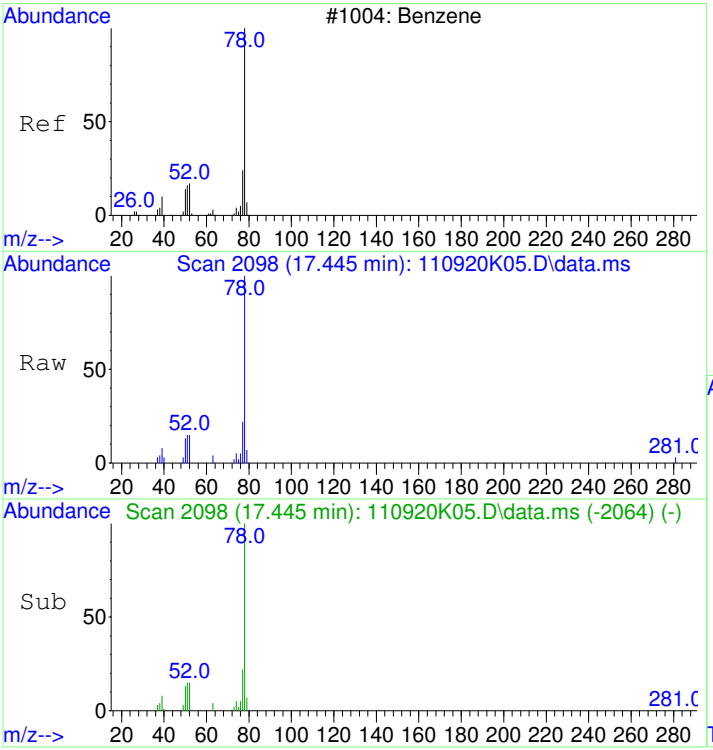


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:114 Resp: 692453

Ion	Ratio	Lower	Upper
114	100		
63	19.6	0.0	39.5
88	14.8	0.0	34.7

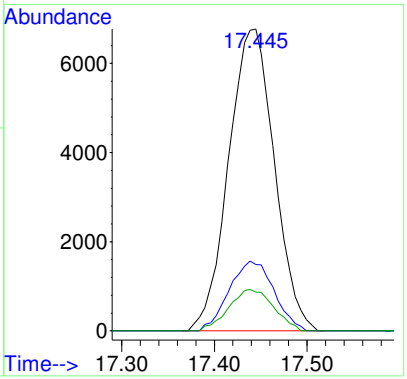


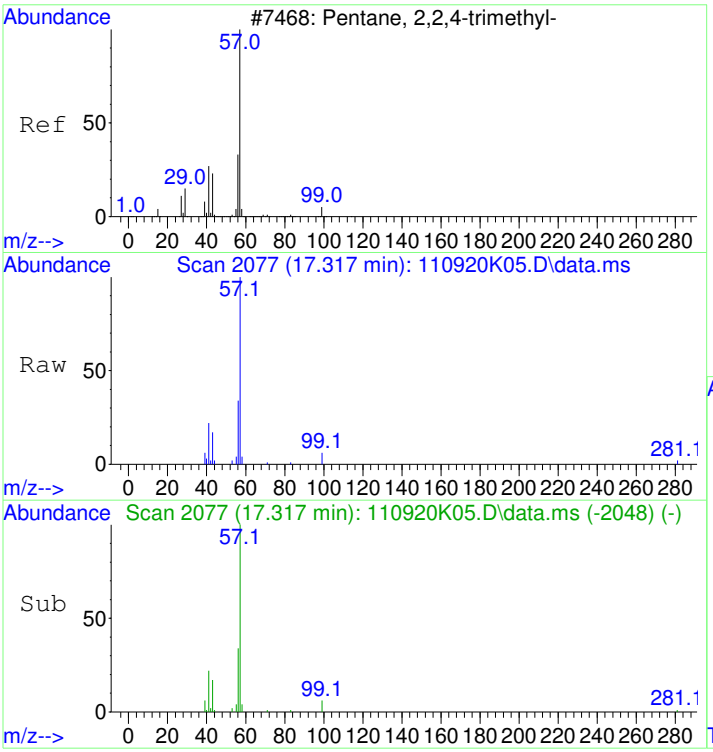


#33
Benzene
Concen: 1.22 ppbv
RT: 17.445 min Scan# 2098
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 78 Resp: 23178

Ion	Ratio	Lower	Upper
78	100		
77	22.7	2.6	42.6
50	13.4	0.0	33.4

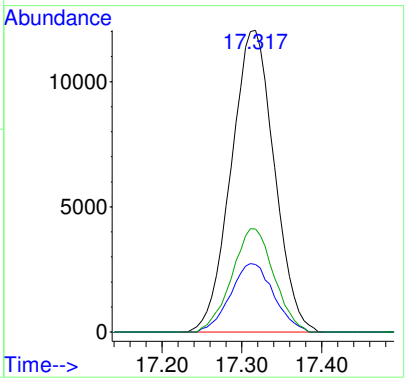


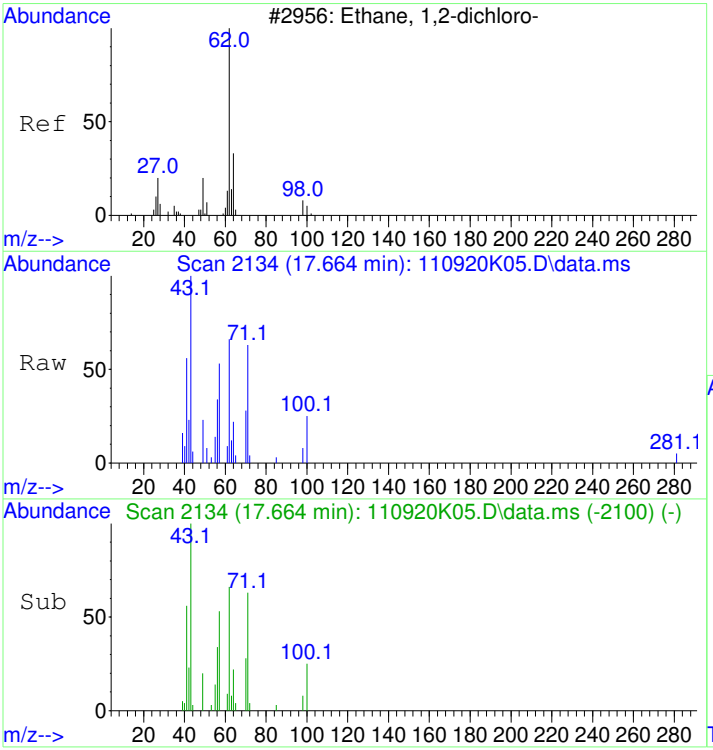


#34
2,2,4-Trimethylpentane
Concen: 1.43 ppbv
RT: 17.317 min Scan# 2077
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 57 Resp: 45072

Ion	Ratio	Lower	Upper
57	100		
41	22.8	2.1	42.1
56	33.6	13.5	53.5

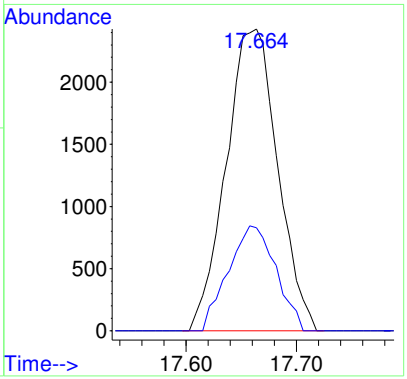


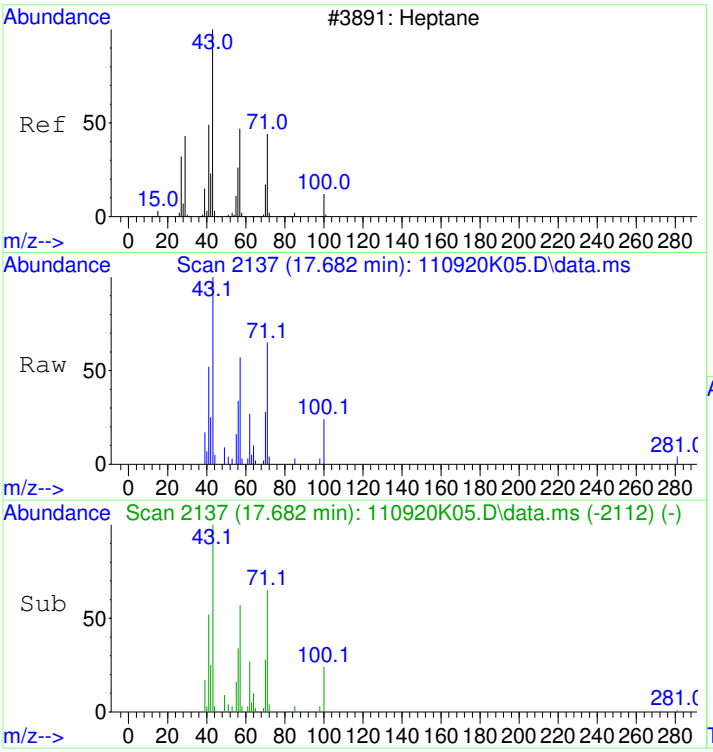


#35
1,2-Dichloroethane
Concen: 1.04 ppbv
RT: 17.664 min Scan# 2134
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 62 Resp: 7912

Ion	Ratio	Lower	Upper
62	100		
64	32.1	12.4	52.4

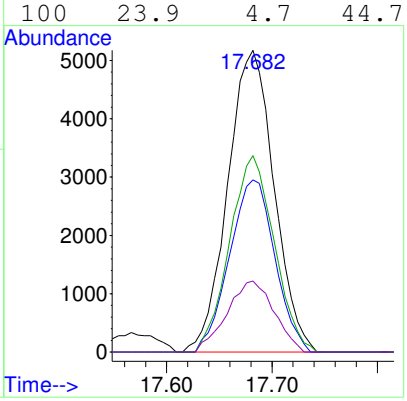


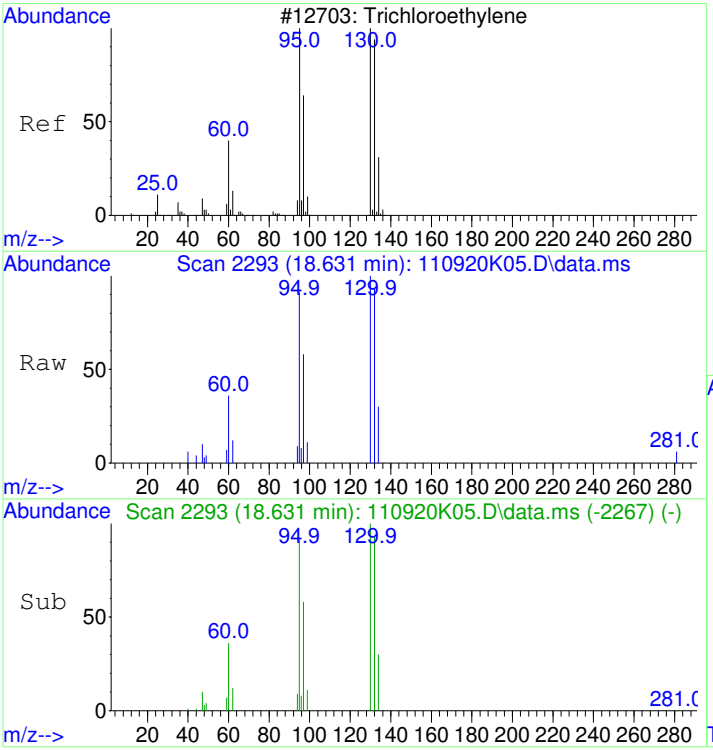


#36
Heptane
Concen: 1.35 ppbv
RT: 17.682 min Scan# 2137
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 43 Resp: 15845

Ion	Ratio	Lower	Upper
43	100		
57	55.9	36.9	76.9
71	62.5	43.9	83.9
100	23.9	4.7	44.7

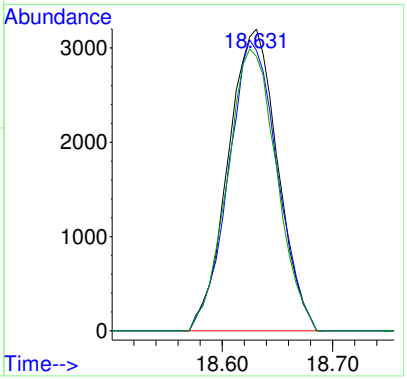


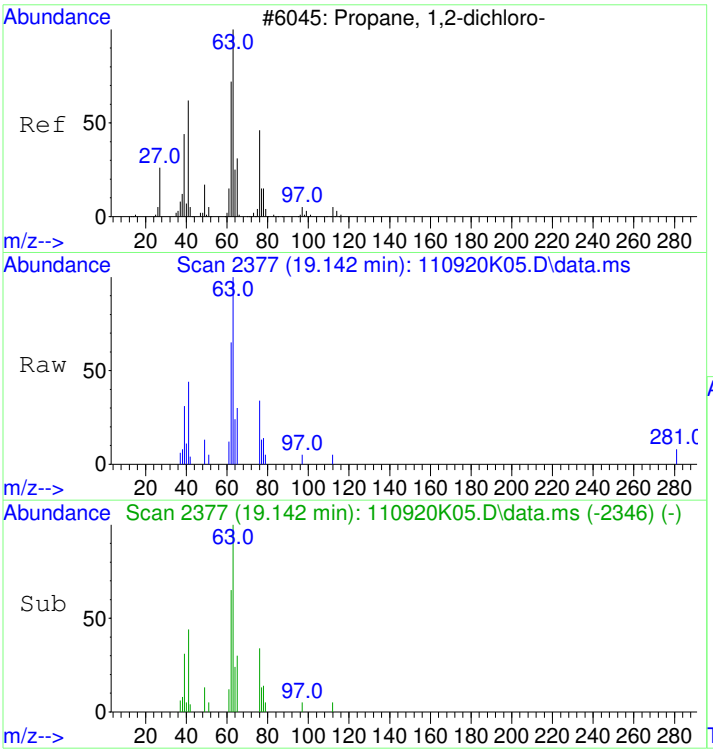


#37
Trichloroethene
Concen: 1.26 ppbv
RT: 18.631 min Scan# 2293
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:130 Resp: 9989

Ion	Ratio	Lower	Upper
130	100		
132	95.0	76.3	116.3
95	93.3	74.0	114.0

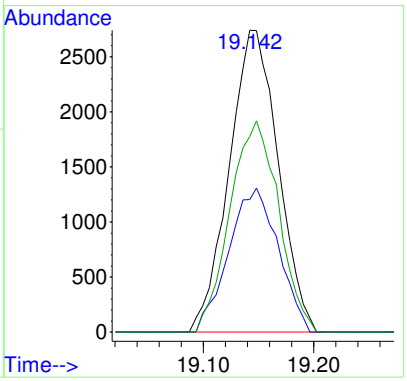


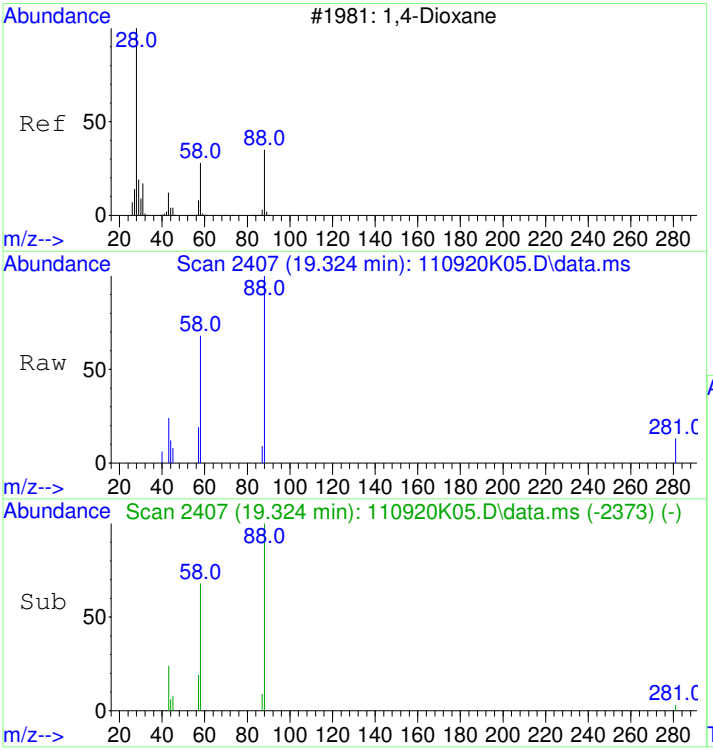


#38
1,2-Dichloropropane
Concen: 1.20 ppbv
RT: 19.142 min Scan# 2377
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 63 Resp: 8491

Ion	Ratio	Lower	Upper
63	100		
41	48.3	27.4	67.4
62	69.6	50.3	90.3

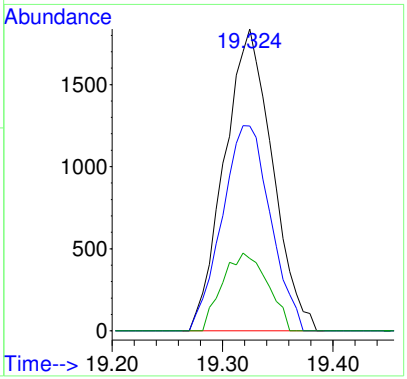


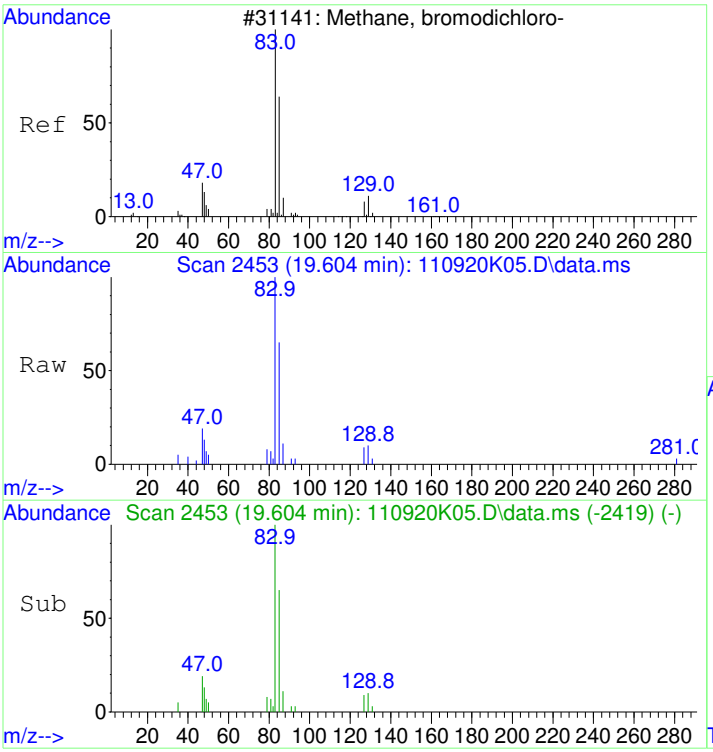


#39
1,4-Dioxane
Concen: 1.36 ppbv
RT: 19.324 min Scan# 2407
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 88 Resp: 5568

Ion	Ratio	Lower	Upper
88	100		
58	68.5	47.4	87.4
43	24.4	5.9	45.9

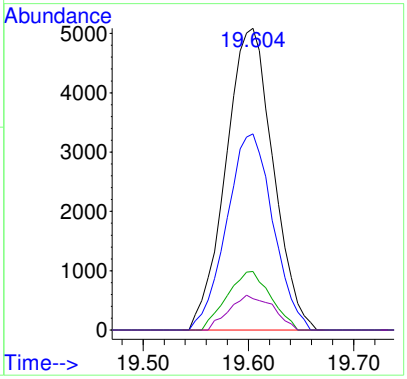


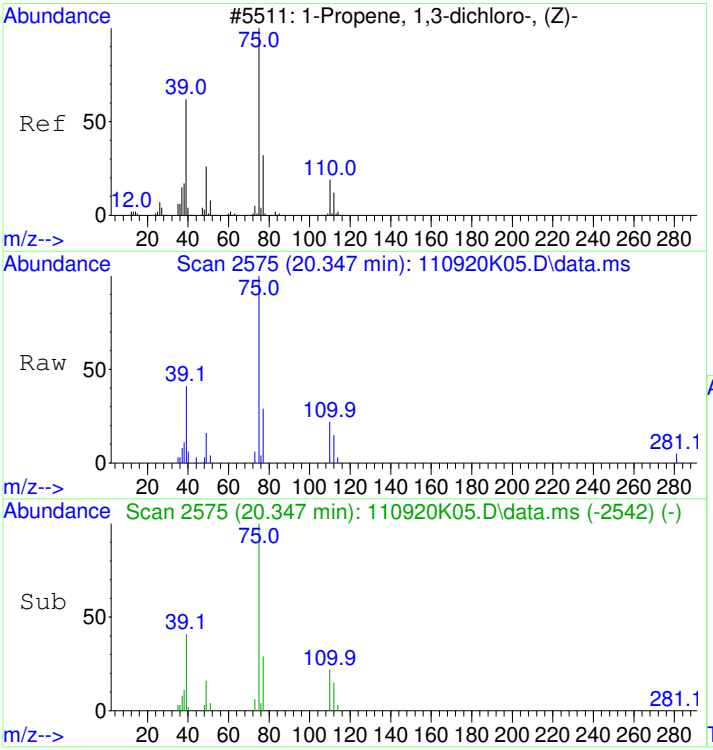


#40
Bromodichloromethane
Concen: 1.23 ppbv
RT: 19.604 min Scan# 2453
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 83 Resp: 15867

Ion	Ratio	Lower	Upper
83	100		
85	63.9	43.8	83.8
47	18.0	0.0	38.3
129	10.7	0.0	30.9

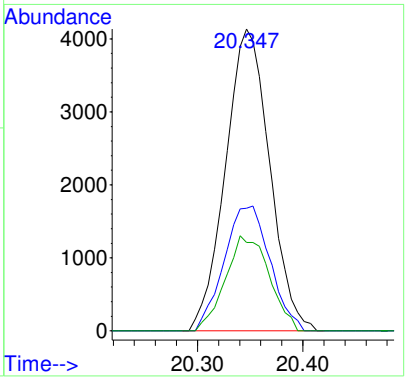


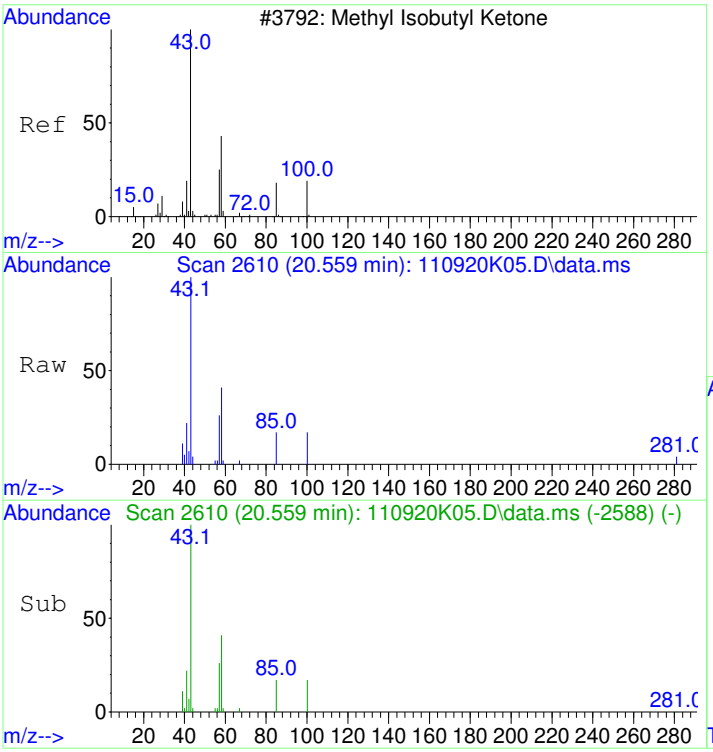


#41
cis-1,3-Dichloropropene
Concen: 1.14 ppbv
RT: 20.347 min Scan# 2575
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 75 Resp: 12046

Ion	Ratio	Lower	Upper
75	100		
39	43.0	21.7	61.7
77	31.2	11.7	51.7

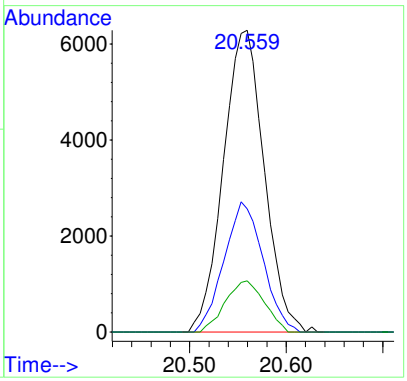


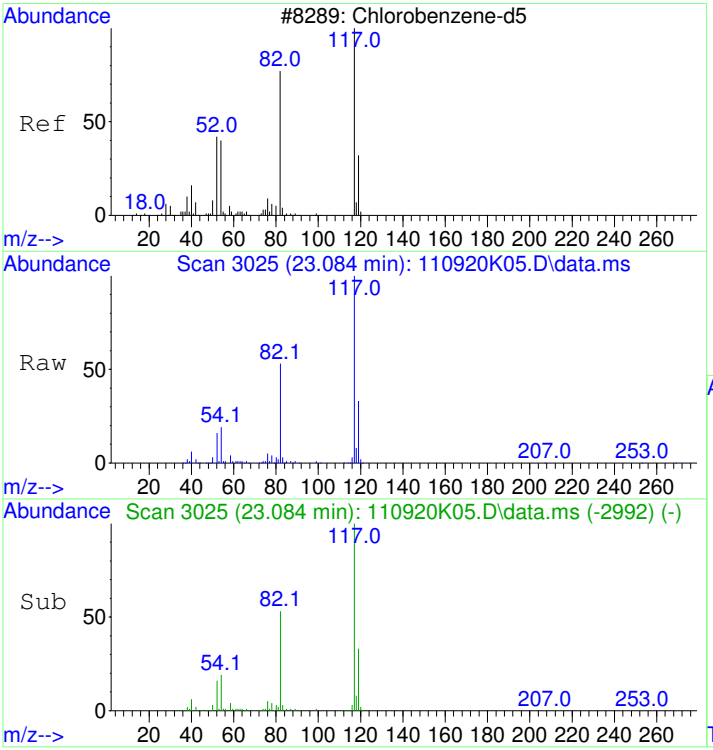


#42
4-Methyl-2-pentanone (MIBK)
Concen: 1.20 ppbv
RT: 20.559 min Scan# 2610
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 43 Resp: 18488

Ion	Ratio	Lower	Upper
43	100		
58	41.1	21.7	61.7
100	16.2	0.0	36.4

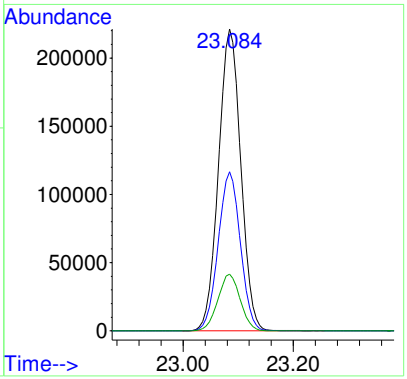


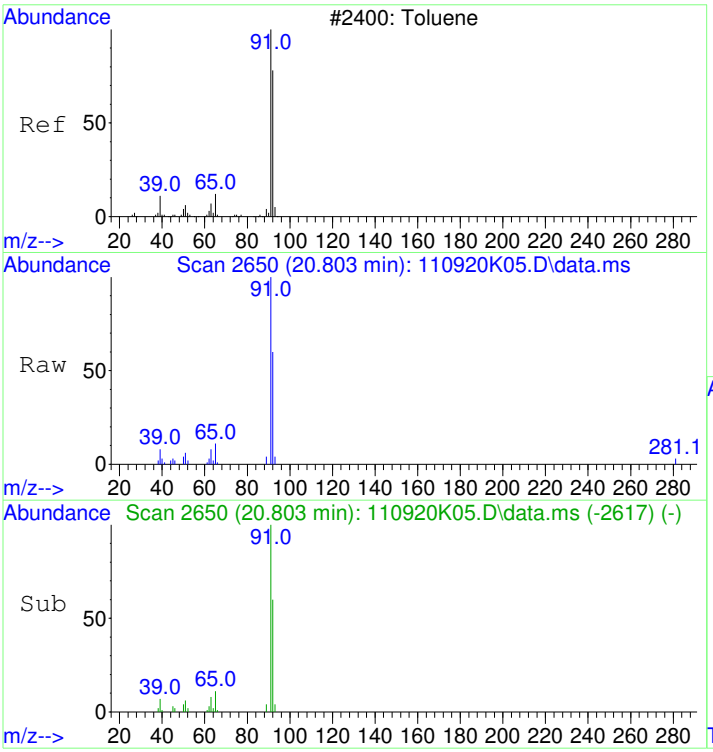


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:117 Resp: 620206

Ion	Ratio	Lower	Upper
117	100		
82	52.4	32.3	72.3
54	18.8	0.0	38.6

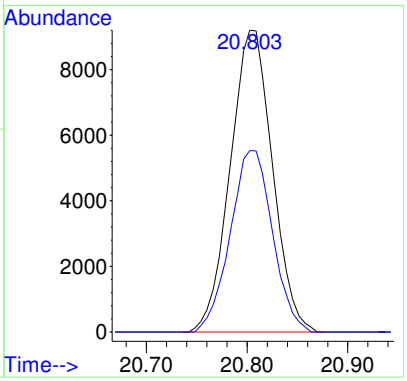


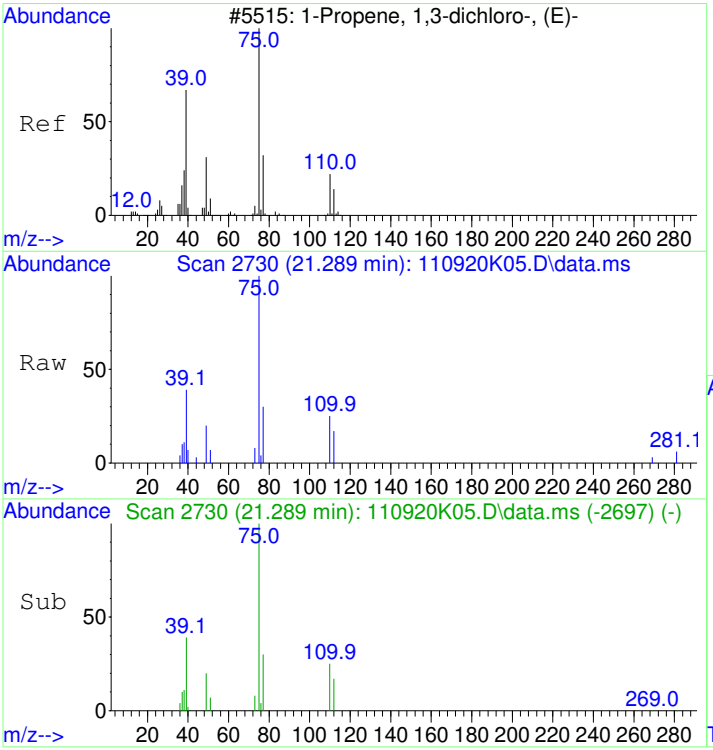


#44
Toluene
Concen: 1.23 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 91 Resp: 26791

Ion	Ratio	Lower	Upper
91	100		
92	60.2	40.8	80.8

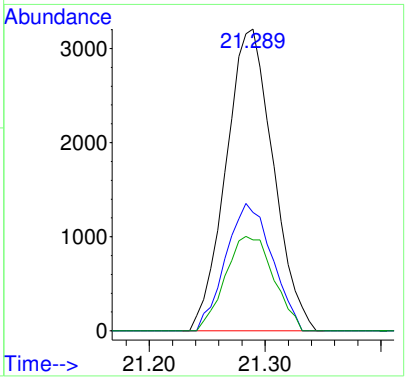


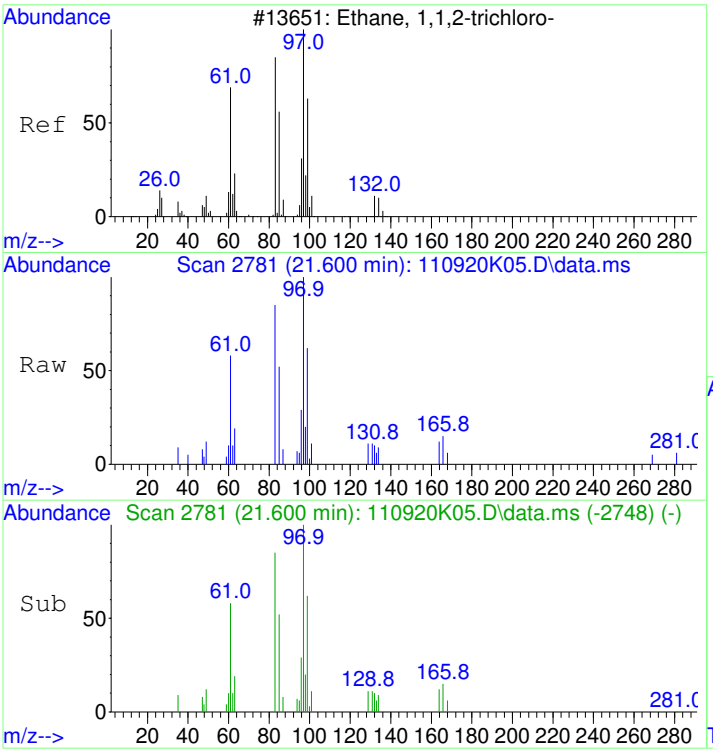


#45
trans-1,3-Dichloropropene
Concen: 0.92 ppbv
RT: 21.289 min Scan# 2730
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 75 Resp: 9083

Ion	Ratio	Lower	Upper
75	100		
39	41.5	22.0	62.0
77	32.0	11.4	51.4

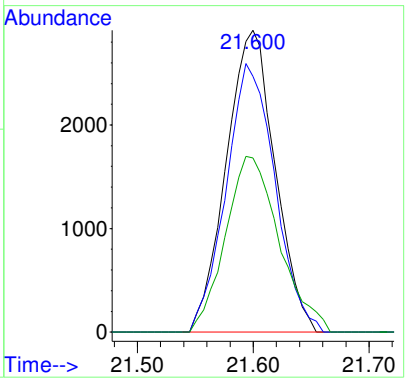


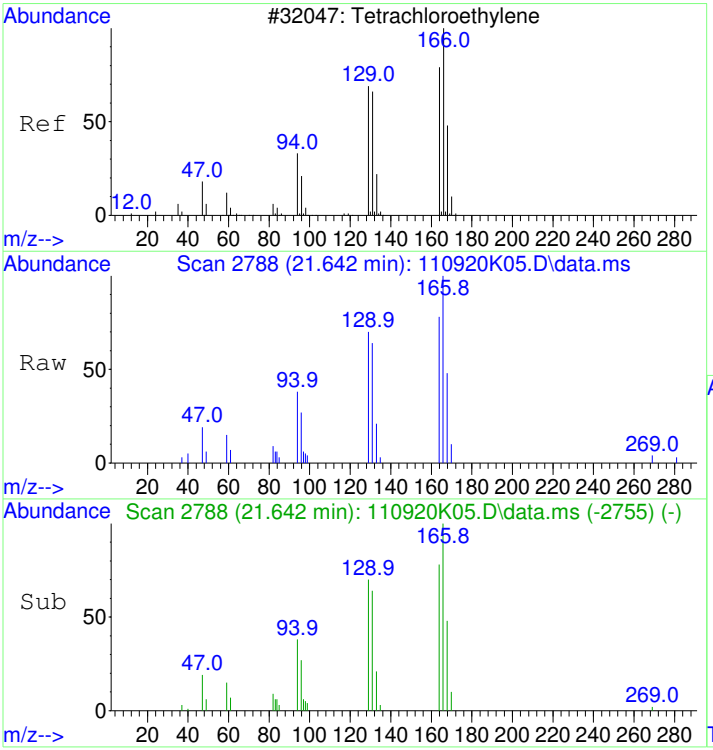


#46
1,1,2-Trichloroethane
Concen: 1.18 ppbv
RT: 21.600 min Scan# 2781
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 97 Resp: 8556

Ion	Ratio	Lower	Upper
97	100		
83	89.1	67.6	107.6
61	64.0	42.5	82.5

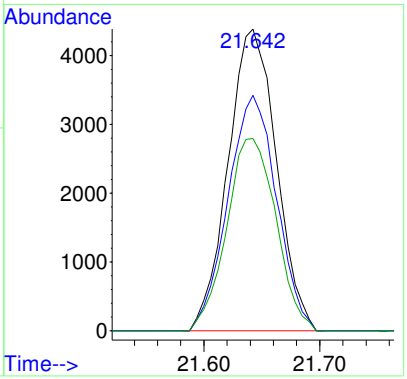


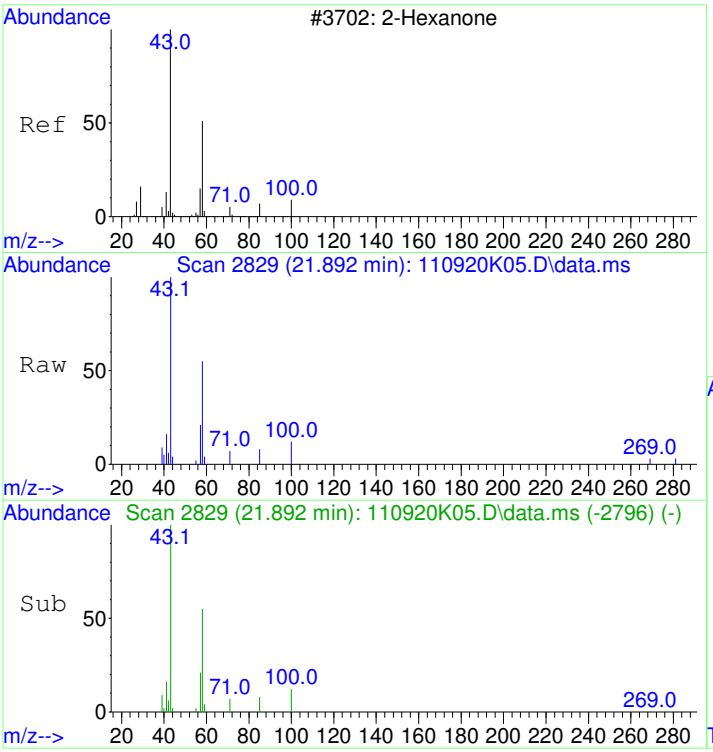


#47
Tetrachloroethene
Concen: 1.11 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:166 Resp: 12730

Ion	Ratio	Lower	Upper
166	100		
164	78.4	57.8	97.8
131	65.1	44.1	84.1

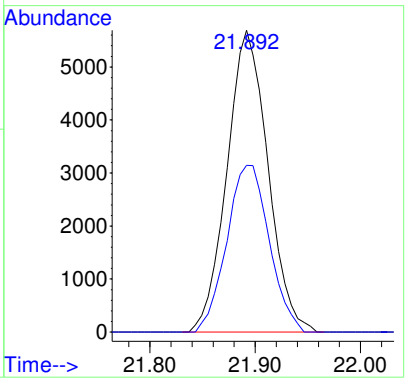


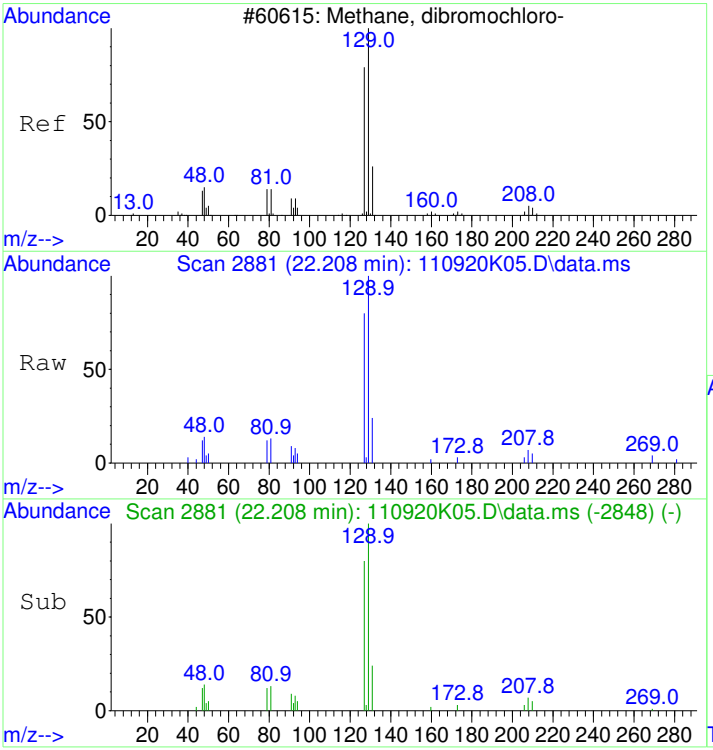


#48
2-Hexanone
Concen: 1.06 ppbv
RT: 21.892 min Scan# 2829
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 43 Resp: 15372

Ion	Ratio	Lower	Upper
43	100		
58	57.3	38.5	78.5

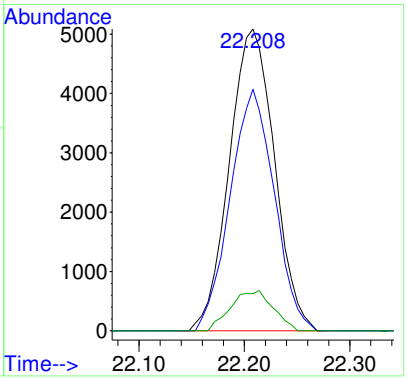


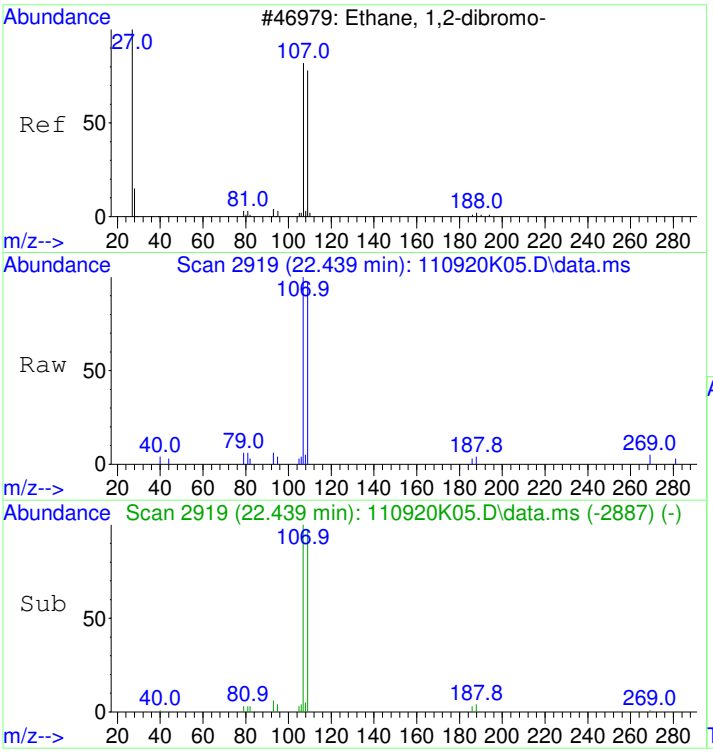


#49
Chlorodibromomethane
Concen: 1.17 ppbv
RT: 22.208 min Scan# 2881
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:129 Resp: 15171

Ion	Ratio	Lower	Upper
129	100		
127	78.0	57.7	97.7
79	12.5	0.0	32.5

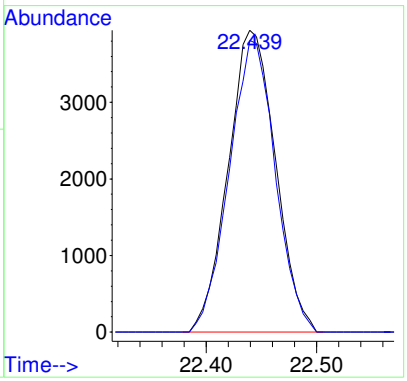


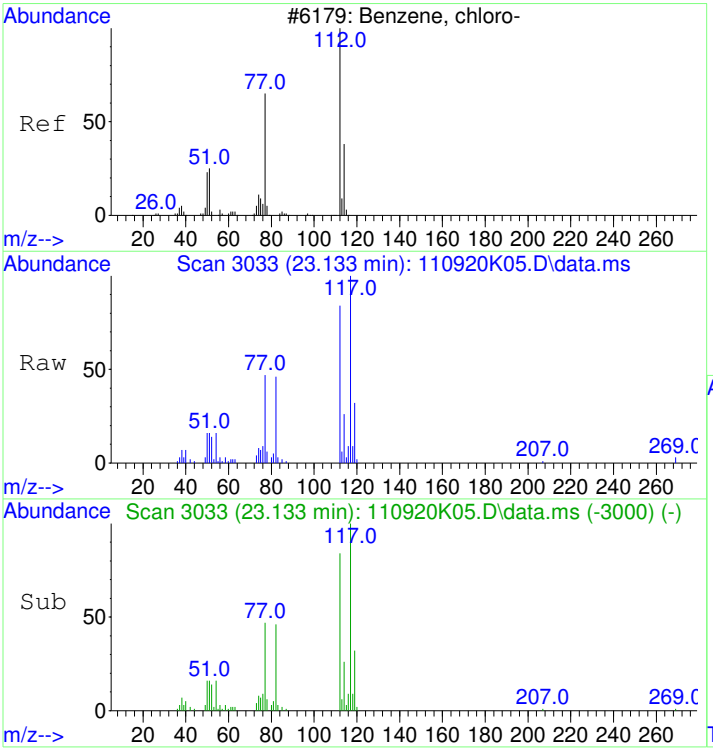


#50
1,2-Dibromoethane (EDB)
Concen: 1.13 ppbv
RT: 22.439 min Scan# 2919
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:107 Resp: 11795

Ion	Ratio	Lower	Upper
107	100		
109	94.1	74.5	114.5

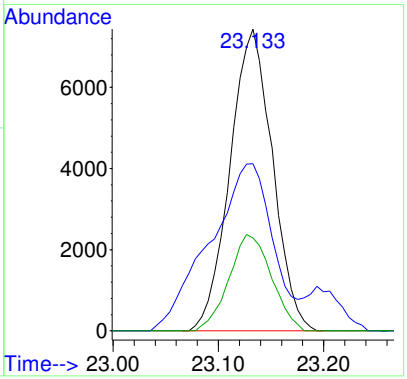


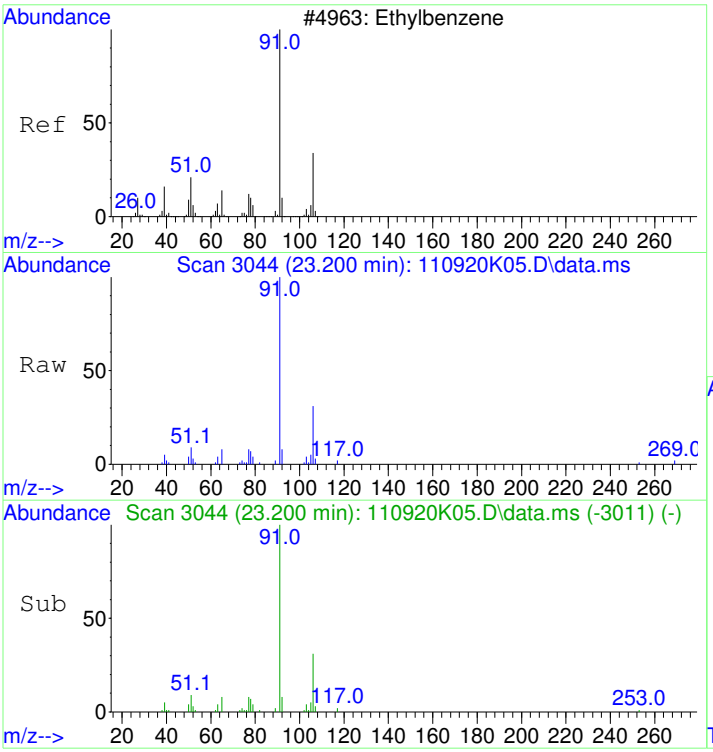


#51
Chlorobenzene
Concen: 1.17 ppbv
RT: 23.133 min Scan# 3033
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:112 Resp: 20878

Ion	Ratio	Lower	Upper
112	100		
77	93.9	52.2	92.2#
114	31.9	11.9	51.9

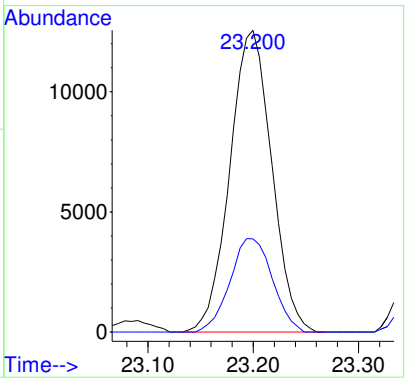


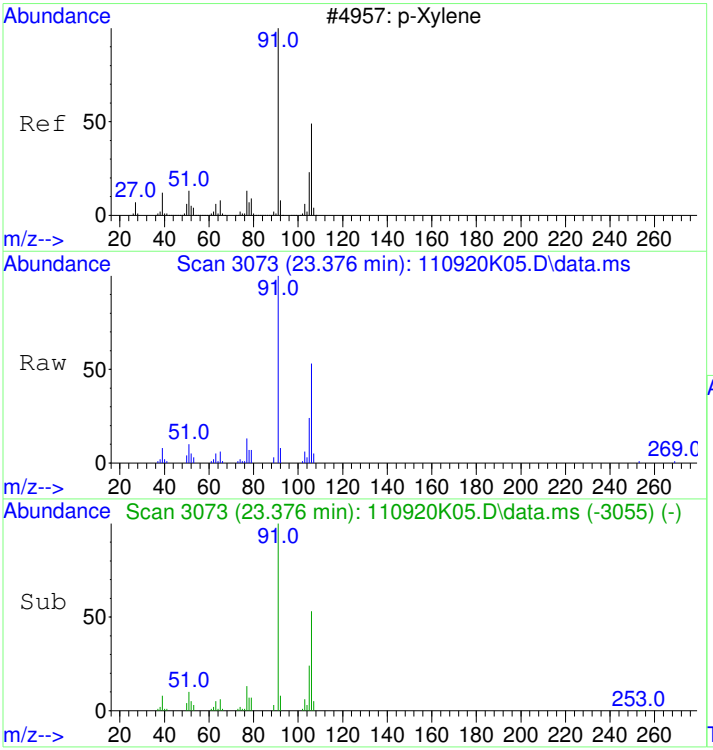


#52
Ethylbenzene
Concen: 1.19 ppbv
RT: 23.200 min Scan# 3044
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 91 Resp: 34733

Ion	Ratio	Lower	Upper
91	100		
106	31.4	11.8	51.8

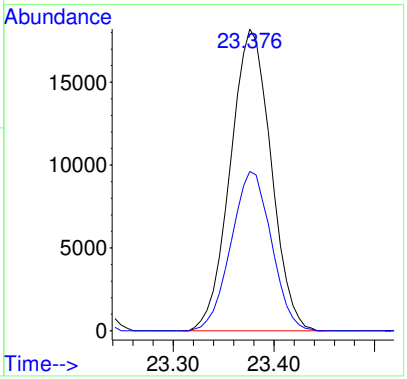


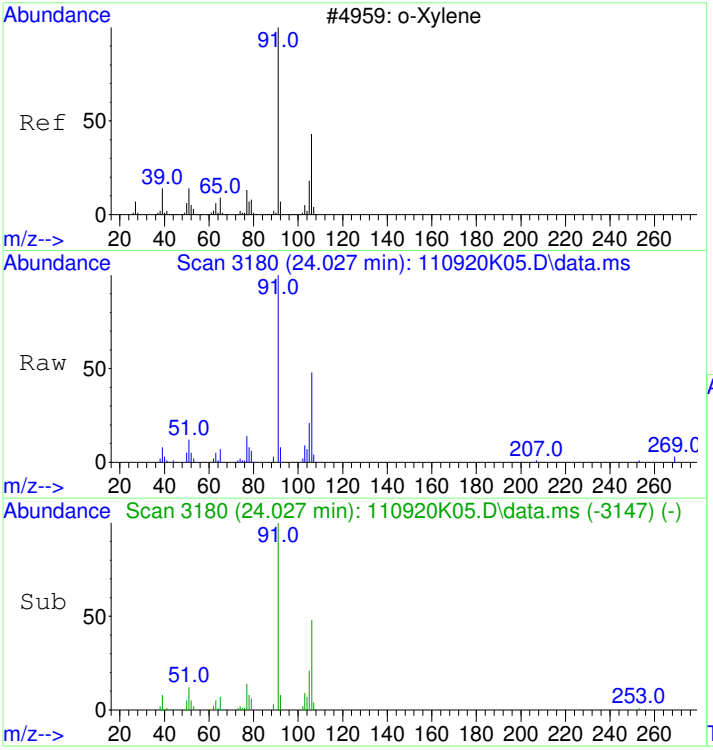


#53
m&p-Xylene
Concen: 2.32 ppbv
RT: 23.376 min Scan# 3073
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 91 Resp: 51043

Ion	Ratio	Lower	Upper
91	100		
106	52.4	33.1	73.1

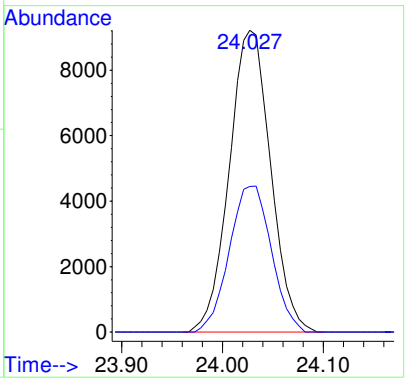


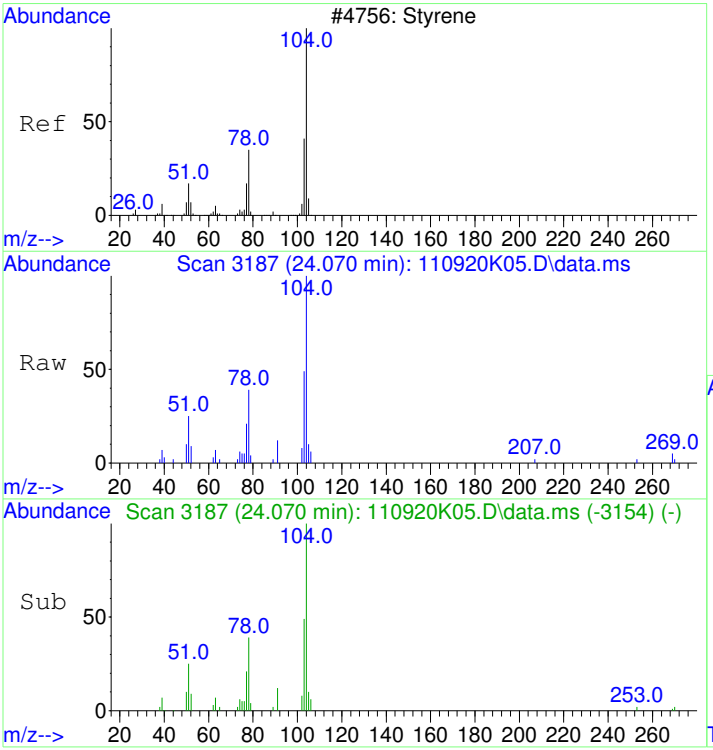


#54
o-Xylene
Concen: 1.19 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 91 Resp: 26272

Ion	Ratio	Lower	Upper
91	100		
106	49.2	29.9	69.9

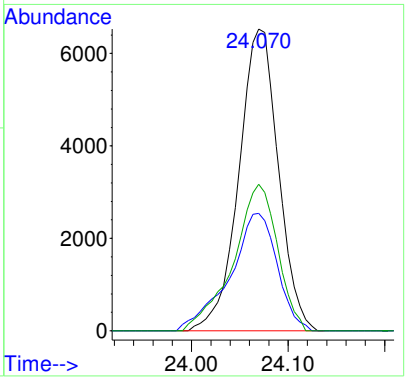


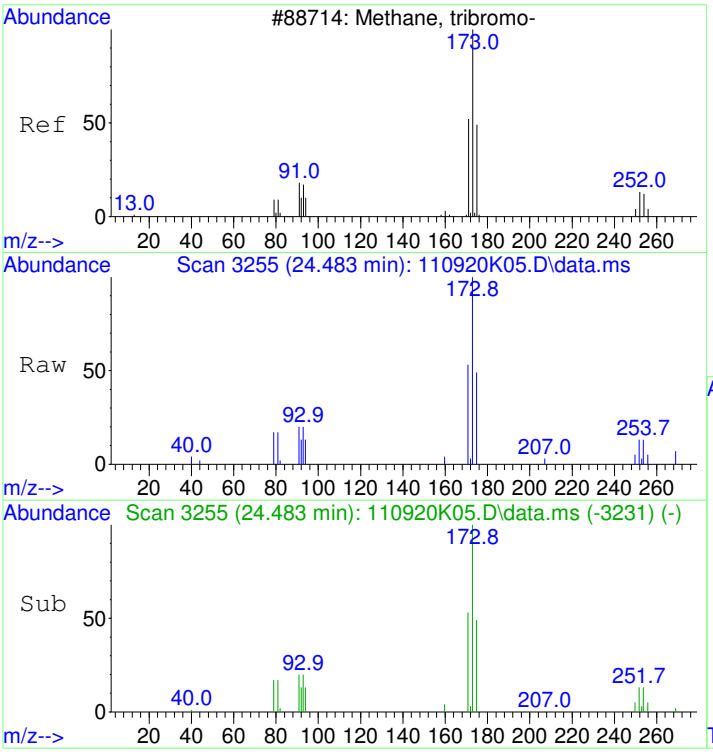


#55
Styrene
Concen: 1.03 ppbv
RT: 24.070 min Scan# 3187
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:104 Resp: 18577

Ion	Ratio	Lower	Upper
104	100		
78	46.6	24.1	64.1
103	54.3	32.7	72.7

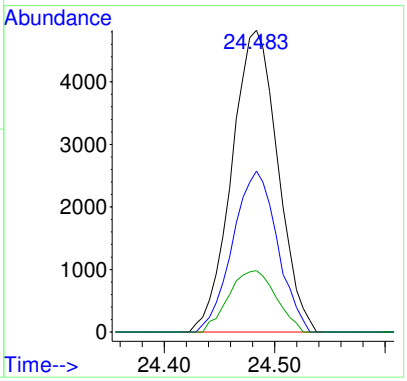


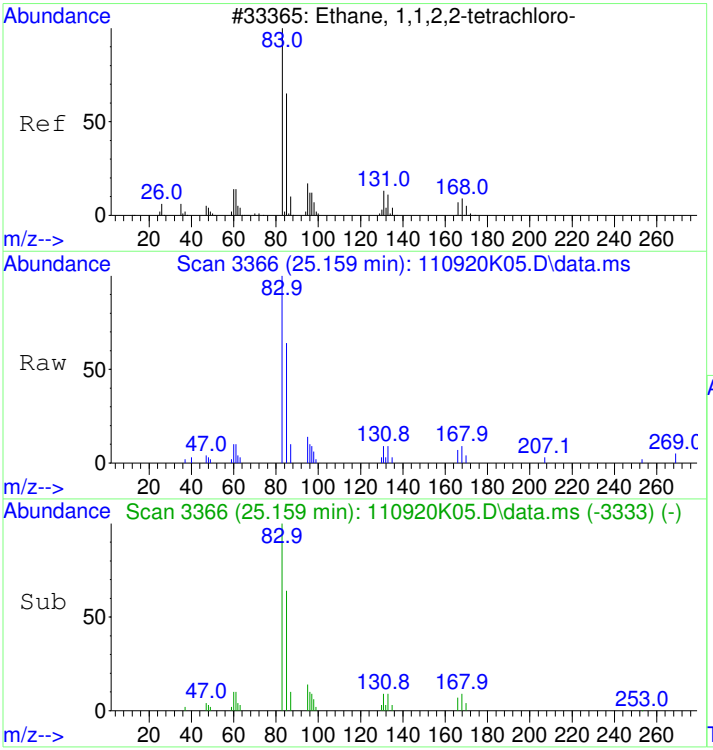


#56
Bromoform
Concen: 1.03 ppbv
RT: 24.483 min Scan# 3255
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:173 Resp: 14060

Ion	Ratio	Lower	Upper
173	100		
171	51.6	31.3	71.3
91	20.9	0.0	39.8

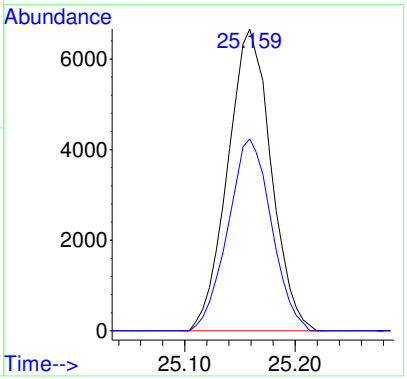


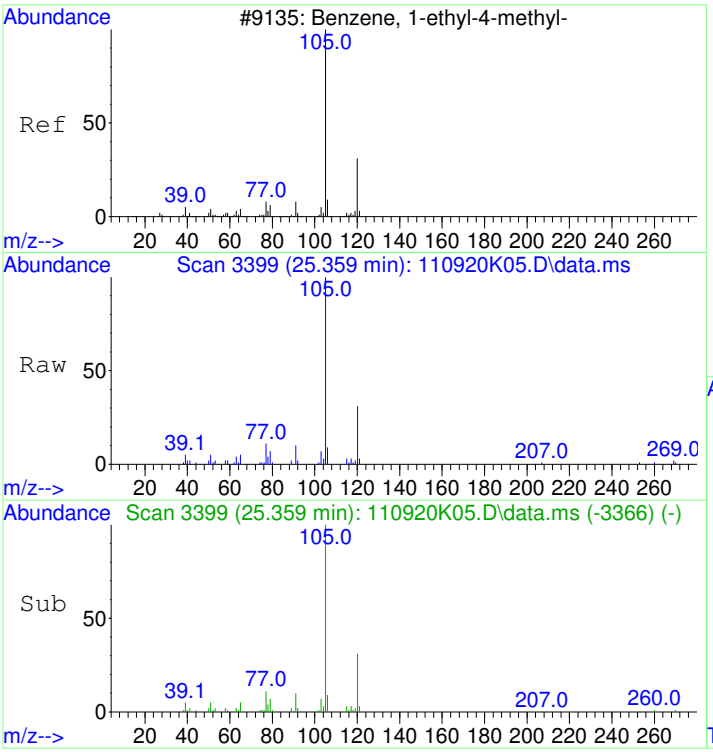


#57
1,1,2,2-Tetrachloroethane
Concen: 1.08 ppbv
RT: 25.159 min Scan# 3366
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 83 Resp: 18274

Ion	Ratio	Lower	Upper
83	100		
85	63.9	44.4	84.4

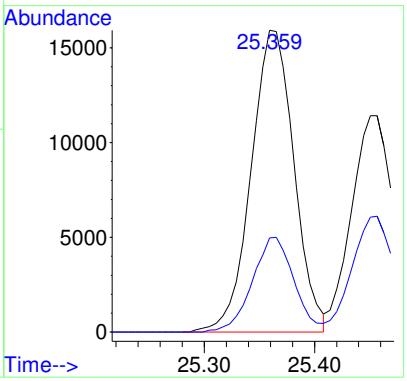


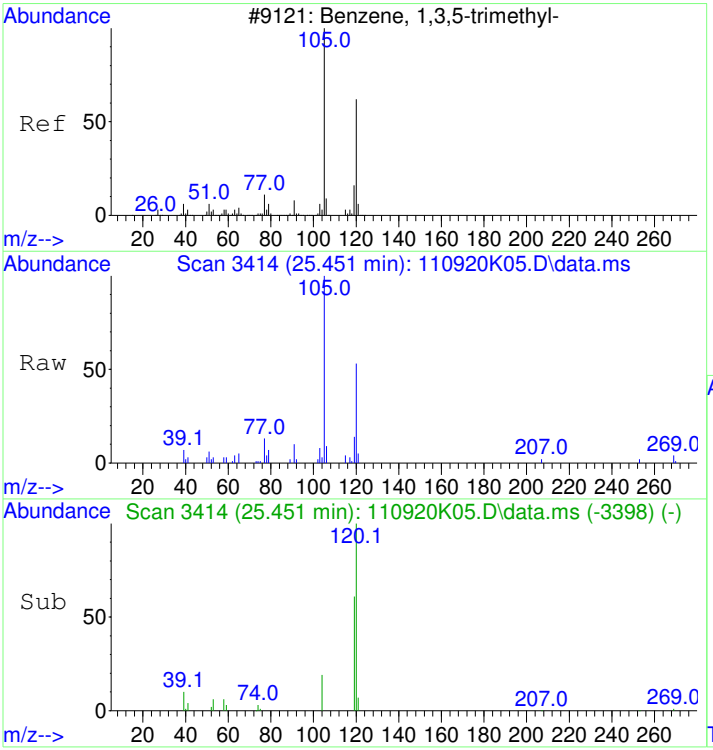


#58
4-Ethyltoluene
Concen: 1.21 ppbv
RT: 25.359 min Scan# 3399
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:105 Resp: 43154

Ion	Ratio	Lower	Upper
105	100		
120	30.5	10.8	50.8

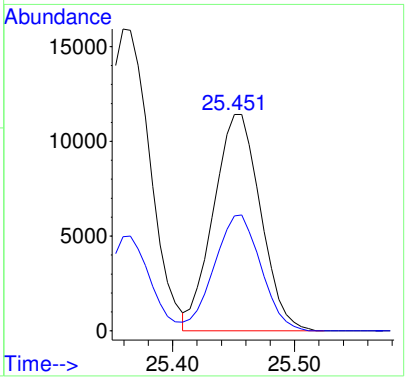


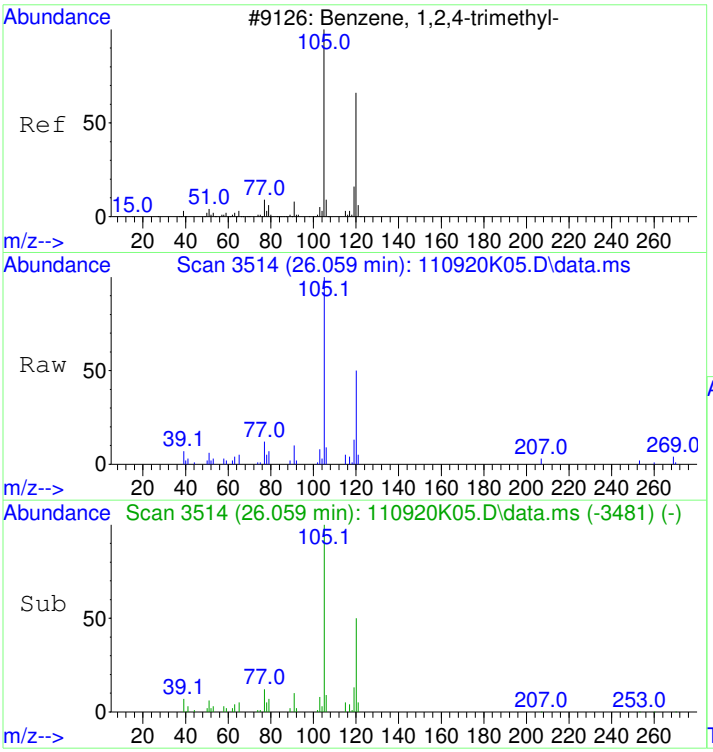


#59
1,3,5-Trimethylbenzene
Concen: 1.15 ppbv
RT: 25.451 min Scan# 3414
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:105 Resp: 30665

Ion	Ratio	Lower	Upper
105	100		
120	52.8	34.0	74.0

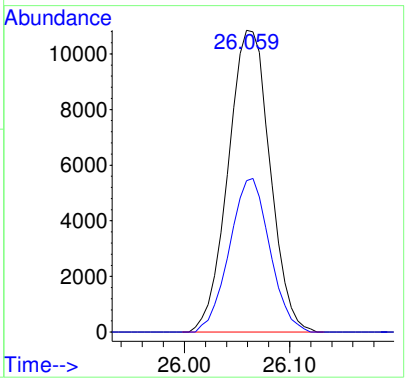


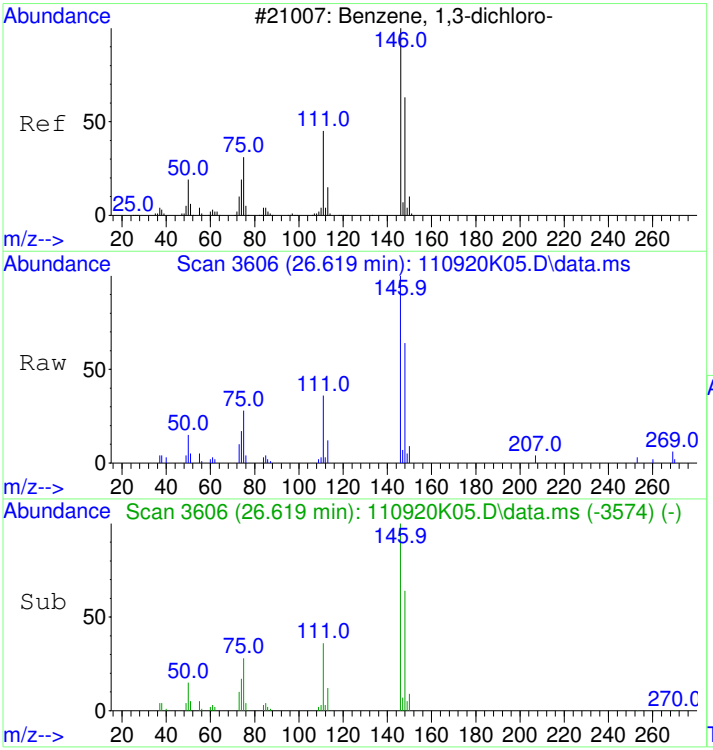


#60
1,2,4-Trimethylbenzene
Concen: 1.13 ppbv
RT: 26.059 min Scan# 3514
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:105 Resp: 29943

Ion	Ratio	Lower	Upper
105	100		
120	49.1	29.8	69.8

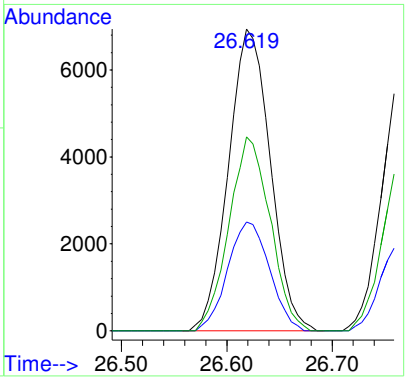


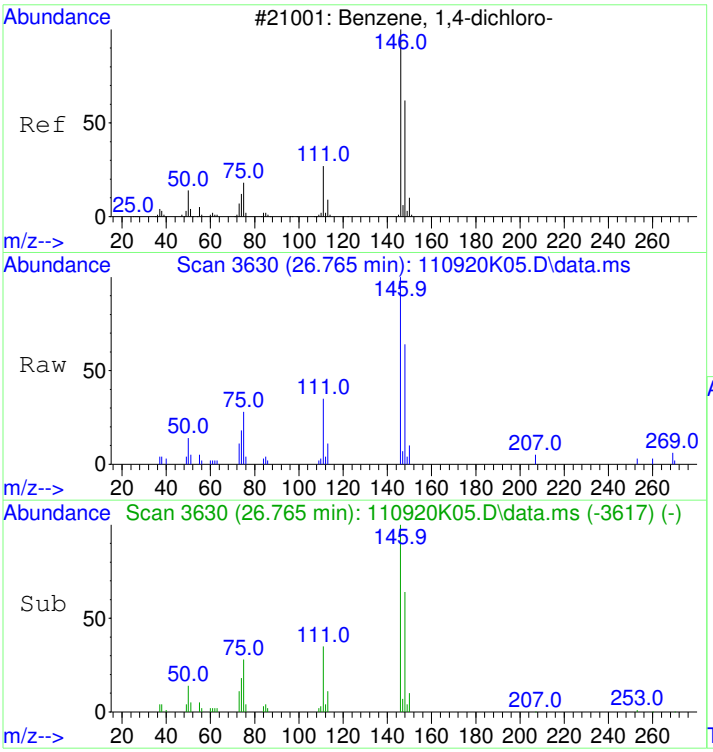


#61
1,3-Dichlorobenzene
Concen: 0.98 ppbv
RT: 26.619 min Scan# 3606
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:146 Resp: 19171

Ion	Ratio	Lower	Upper
146	100		
111	36.1	16.5	56.5
148	63.1	44.2	84.2

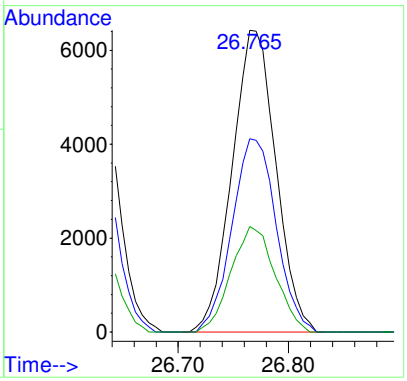


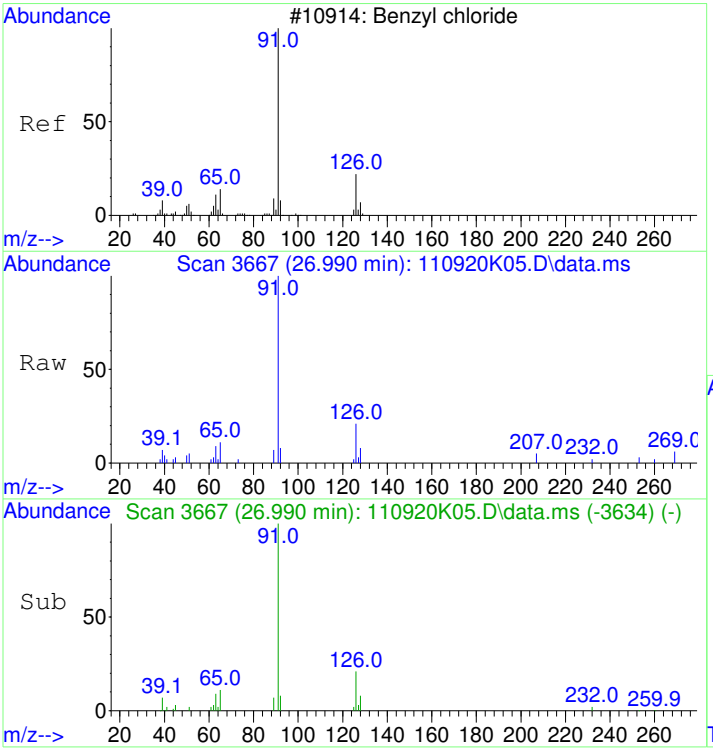


#62
1,4-Dichlorobenzene
Concen: 0.93 ppbv
RT: 26.765 min Scan# 3630
Delta R.T. -0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:146 Resp: 17782

Ion	Ratio	Lower	Upper
146	100		
148	64.6	43.7	83.7
111	35.1	14.6	54.6

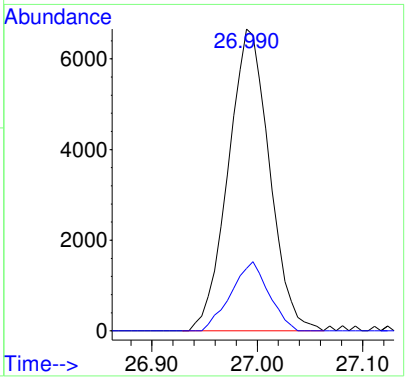


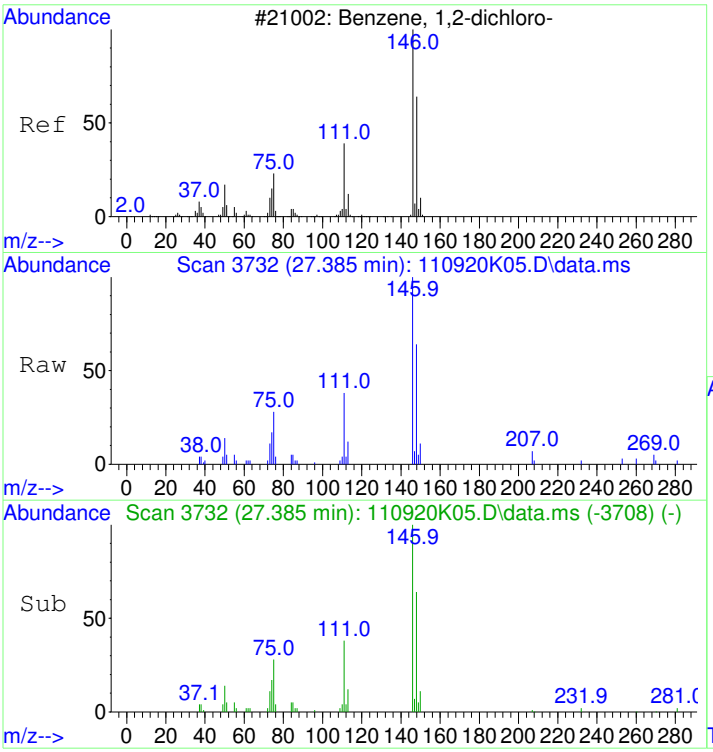


#63
Benzyl chloride
Concen: 0.71 ppbv
RT: 26.990 min Scan# 3667
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion: 91 Resp: 18109

Ion	Ratio	Lower	Upper
91	100		
126	21.0	1.8	41.8

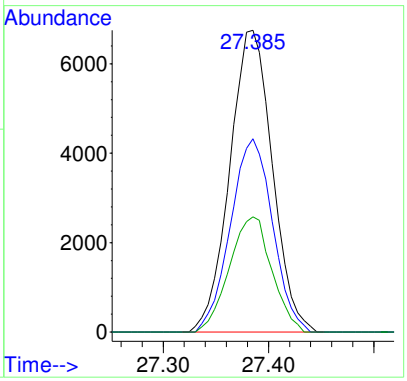


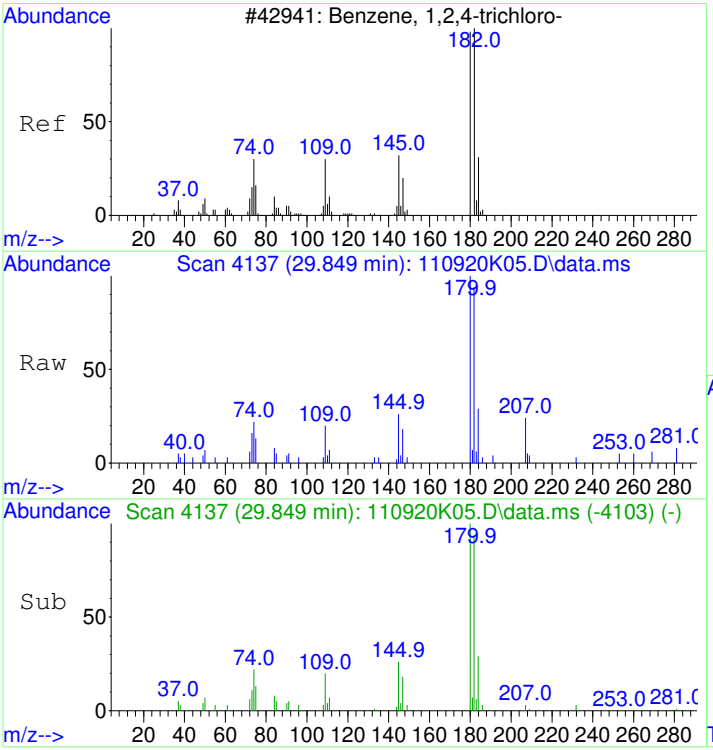


#64
1,2-Dichlorobenzene
Concen: 1.00 ppbv
RT: 27.385 min Scan# 3732
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:146 Resp: 18981

Ion	Ratio	Lower	Upper
146	100		
148	63.4	44.0	84.0
111	38.0	17.8	57.8

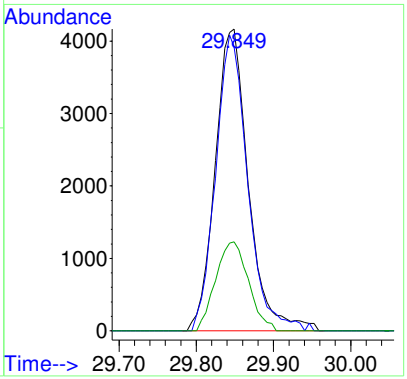


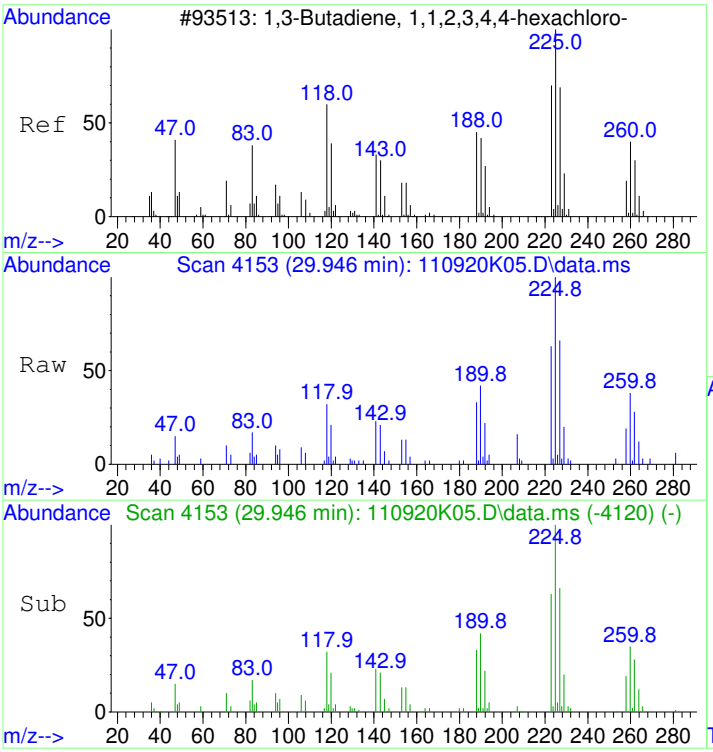


#65
1,2,4-Trichlorobenzene
Concen: 0.78 ppbv
RT: 29.849 min Scan# 4137
Delta R.T. 0.006 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:180 Resp: 12459

Ion	Ratio	Lower	Upper
180	100		
182	94.5	75.3	115.3
184	29.2	10.6	50.6

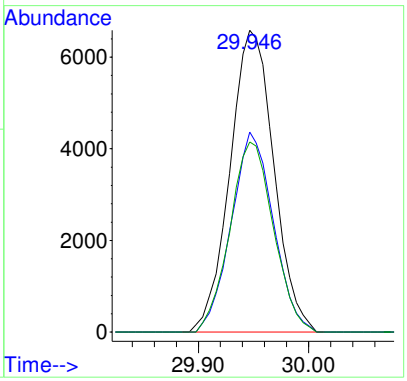




#66
Hexachlorobutadiene
Concen: 1.01 ppbv
RT: 29.946 min Scan# 4153
Delta R.T. -0.000 min
Lab File: 110920K05.D
Acq: 9 Nov 2020 7:37 pm

Tgt Ion:225 Resp: 18296

Ion	Ratio	Lower	Upper
225	100		
227	63.5	44.5	84.5
223	62.6	42.4	82.4



S20K037-CAL2

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K06.D
InstName : HP5973K
Acq On : 9 Nov 2020 8:26 pm
Operator : LLH
Sample : S20K037-CAL2
Misc : 2.0ppbv 2046020
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:51:58 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:51:50 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	208175	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	667311	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	601423	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	14961	2.47	ppbv		98
3) Dichlorodifluoromethane	5.107	85	36964	2.52	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.496	85	40716	2.50	ppbv		99
5) Chloromethane	5.740	50	15674	2.64	ppbv		100
6) Vinyl chloride	6.080	62	17487	2.83	ppbv		100
7) 1,3-Butadiene	6.184	54	12926	2.79	ppbv		94
8) Bromomethane	7.248	94	13380	2.76	ppbv		100
9) Chloroethane	7.626	64	9181	2.73	ppbv		97
10) Bromoethene	8.258	106	13609	2.64	ppbv		100
11) Trichlorofluoromethane	8.386	101	33922	2.42	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	24959	2.77	ppbv		100
13) 1,1-Dichloroethene	10.521	61	23646	2.84	ppbv		99
14) Acetone	11.099	43	22164	2.51	ppbv		99
15) Carbon disulfide	11.209	76	43590	2.69	ppbv		99
16) 2-Propanol	11.610	45	23650	2.66	ppbv		98
17) Allyl chloride	11.969	41	21255	2.90	ppbv		99
18) Dichloromethane	12.493	49	20287	2.80	ppbv		100
19) tert-Butyl methyl ethe...	13.034	73	45129	2.89	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	21517	2.62	ppbv		98
21) Hexane	13.600	57	28715	2.75	ppbv		99
22) 1,1-Dichloroethane	14.397	63	27895	2.63	ppbv		99
23) Vinyl acetate	14.500	43	37705	2.86	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	20766	2.76	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	8346	2.56	ppbv	#	93
26) Ethyl acetate	15.875	61	5364	2.69	ppbv		98
27) Tetrahydrofuran	16.295	42	18655	2.44	ppbv		99
28) Chloroform	16.447	83	29828	2.75	ppbv		98
29) Cyclohexane	16.623	56	29414	2.94	ppbv		99
30) 1,1,1-Trichloroethane	16.702	97	29314	2.76	ppbv		100
31) Carbon tetrachloride	16.940	117	30161	2.58	ppbv		100
33) Benzene	17.438	78	51893	2.74	ppbv		99
34) 2,2,4-Trimethylpentane	17.317	57	91436	2.81	ppbv		100
35) 1,2-Dichloroethane	17.664	62	18135	2.45	ppbv		100
36) Heptane	17.682	43	32604	2.72	ppbv		98
37) Trichloroethene	18.631	130	21665	2.72	ppbv		99
38) 1,2-Dichloropropane	19.148	63	19007	2.68	ppbv		99
39) 1,4-Dioxane	19.318	88	10448	2.52	ppbv		98
40) Bromodichloromethane	19.598	83	32520	2.54	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	28488	2.69	ppbv		99
42) 4-Methyl-2-pentanone (...	20.559	43	36706	2.35	ppbv		99
44) Toluene	20.803	91	60404	2.73	ppbv		99
45) trans-1,3-Dichloropropene	21.289	75	22484	2.30	ppbv		99
46) 1,1,2-Trichloroethane	21.594	97	19389	2.67	ppbv		98
47) Tetrachloroethene	21.642	166	28896	2.54	ppbv		100
48) 2-Hexanone	21.892	43	31667	2.17	ppbv		99
49) Chlorodibromomethane	22.208	129	32817	2.54	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	27496	2.65	ppbv		100
51) Chlorobenzene	23.133	112	47780	2.69	ppbv		94
52) Ethylbenzene	23.200	91	78842	2.69	ppbv		100
53) m&p-Xylene	23.376	91	117463	5.30	ppbv		99
54) o-Xylene	24.027	91	60094	2.66	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K06.D
InstName : HP5973K
Acq On : 9 Nov 2020 8:26 pm
Operator : LLH
Sample : S20K037-CAL2
Misc : 2.0ppbv 2046020
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:51:58 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:51:50 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55)	Styrene	24.070	104	45590	2.53 ppbv	98
56)	Bromoform	24.483	173	33699	2.53 ppbv	99
57)	1,1,2,2-Tetrachloroethane	25.159	83	42895	2.55 ppbv	100
58)	4-Ethyltoluene	25.359	105	91045	2.48 ppbv	100
59)	1,3,5-Trimethylbenzene	25.457	105	70303	2.61 ppbv	99
60)	1,2,4-Trimethylbenzene	26.059	105	69378	2.56 ppbv	99
61)	1,3-Dichlorobenzene	26.625	146	44027	2.28 ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	41655	2.21 ppbv	99
63)	Benzyl chloride	26.990	91	53458	2.18 ppbv	98
64)	1,2-Dichlorobenzene	27.385	146	43886	2.33 ppbv	100
65)	1,2,4-Trichlorobenzene	29.843	180	29396	1.87 ppbv	100
66)	Hexachlorobutadiene	29.946	225	41964	2.33 ppbv	100

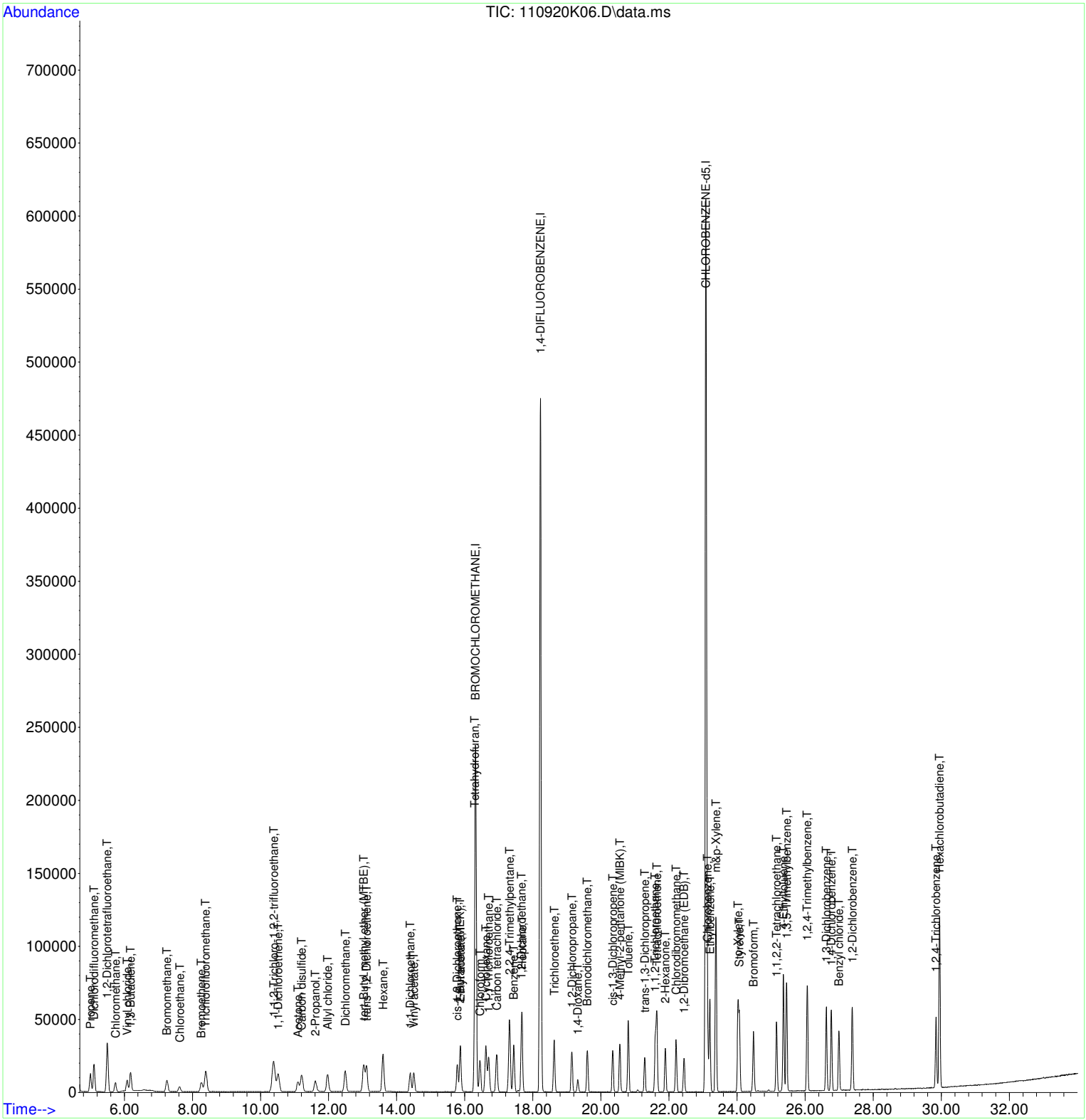
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K06.D
InstName : HP5973K
Acq On : 9 Nov 2020 8:26 pm
Operator : LLH
Sample : S20K037-CAL2
Misc : 2.0ppbv 2046020
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:51:58 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:51:50 2020
Response via : Initial Calibration



S20K037-CAL3

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K07.D
InstName : HP5973K
Acq On : 9 Nov 2020 9:16 pm
Operator : LLH
Sample : S20K037-CAL3
Misc : 5.0ppbv 2046021
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:52:45 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:52:39 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	209643	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	666050	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	605785	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.010	41	29884	4.63	ppbv		99
3) Dichlorodifluoromethane	5.113	85	74884	4.83	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.496	85	82376	4.75	ppbv		100
5) Chloromethane	5.734	50	31437	4.97	ppbv		99
6) Vinyl chloride	6.080	62	36069	5.44	ppbv		100
7) 1,3-Butadiene	6.184	54	26210	5.28	ppbv		96
8) Bromomethane	7.242	94	27049	5.21	ppbv		100
9) Chloroethane	7.620	64	18517	5.14	ppbv		100
10) Bromoethene	8.264	106	28032	5.06	ppbv		98
11) Trichlorofluoromethane	8.392	101	67689	4.57	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	50344	5.28	ppbv		100
13) 1,1-Dichloroethene	10.521	61	47681	5.33	ppbv		100
14) Acetone	11.093	43	44810	4.80	ppbv		100
15) Carbon disulfide	11.209	76	88749	5.15	ppbv		97
16) 2-Propanol	11.604	45	48717	5.04	ppbv		99
17) Allyl chloride	11.969	41	43313	5.45	ppbv		100
18) Dichloromethane	12.493	49	38052	4.96	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	92341	5.44	ppbv		100
20) trans-1,2-Dichloroethene	13.119	61	44267	5.07	ppbv		100
21) Hexane	13.600	57	58304	5.13	ppbv		100
22) 1,1-Dichloroethane	14.403	63	56092	4.95	ppbv		99
23) Vinyl acetate	14.500	43	78594	5.52	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	42209	5.20	ppbv	#	99
25) 2-Butanone (MEK)	15.869	72	17430	5.01	ppbv		98
26) Ethyl acetate	15.875	61	10774	5.03	ppbv	#	95
27) Tetrahydrofuran	16.289	42	38238	4.63	ppbv		99
28) Chloroform	16.447	83	59864	5.18	ppbv		99
29) Cyclohexane	16.617	56	58917	5.41	ppbv		99
30) 1,1,1-Trichloroethane	16.702	97	59552	5.28	ppbv		99
31) Carbon tetrachloride	16.934	117	61581	4.96	ppbv		99
33) Benzene	17.439	78	104456	5.24	ppbv		100
34) 2,2,4-Trimethylpentane	17.311	57	184377	5.32	ppbv		100
35) 1,2-Dichloroethane	17.664	62	36563	4.80	ppbv		100
36) Heptane	17.682	43	65883	5.18	ppbv		98
37) Trichloroethene	18.631	130	43598	5.23	ppbv		99
38) 1,2-Dichloropropane	19.148	63	38340	5.12	ppbv		99
39) 1,4-Dioxane	19.318	88	22080	5.07	ppbv		100
40) Bromodichloromethane	19.598	83	66810	5.03	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	59183	5.26	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	75931	4.67	ppbv		100
44) Toluene	20.803	91	122839	5.21	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	47594	4.60	ppbv		99
46) 1,1,2-Trichloroethane	21.600	97	39493	5.15	ppbv		98
47) Tetrachloroethene	21.642	166	59459	4.99	ppbv		100
48) 2-Hexanone	21.892	43	67009	4.37	ppbv		100
49) Chlorodibromomethane	22.208	129	69140	5.10	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.445	107	56800	5.18	ppbv		100
51) Chlorobenzene	23.133	112	96735	5.16	ppbv		98
52) Ethylbenzene	23.200	91	162095	5.20	ppbv		100
53) m&p-Xylene	23.376	91	242346	10.29	ppbv		99
54) o-Xylene	24.027	91	122830	5.07	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K07.D
InstName : HP5973K
Acq On : 9 Nov 2020 9:16 pm
Operator : LLH
Sample : S20K037-CAL3
Misc : 5.0ppbv 2046021
ALS Vial : 32 Sample Multiplier: 1

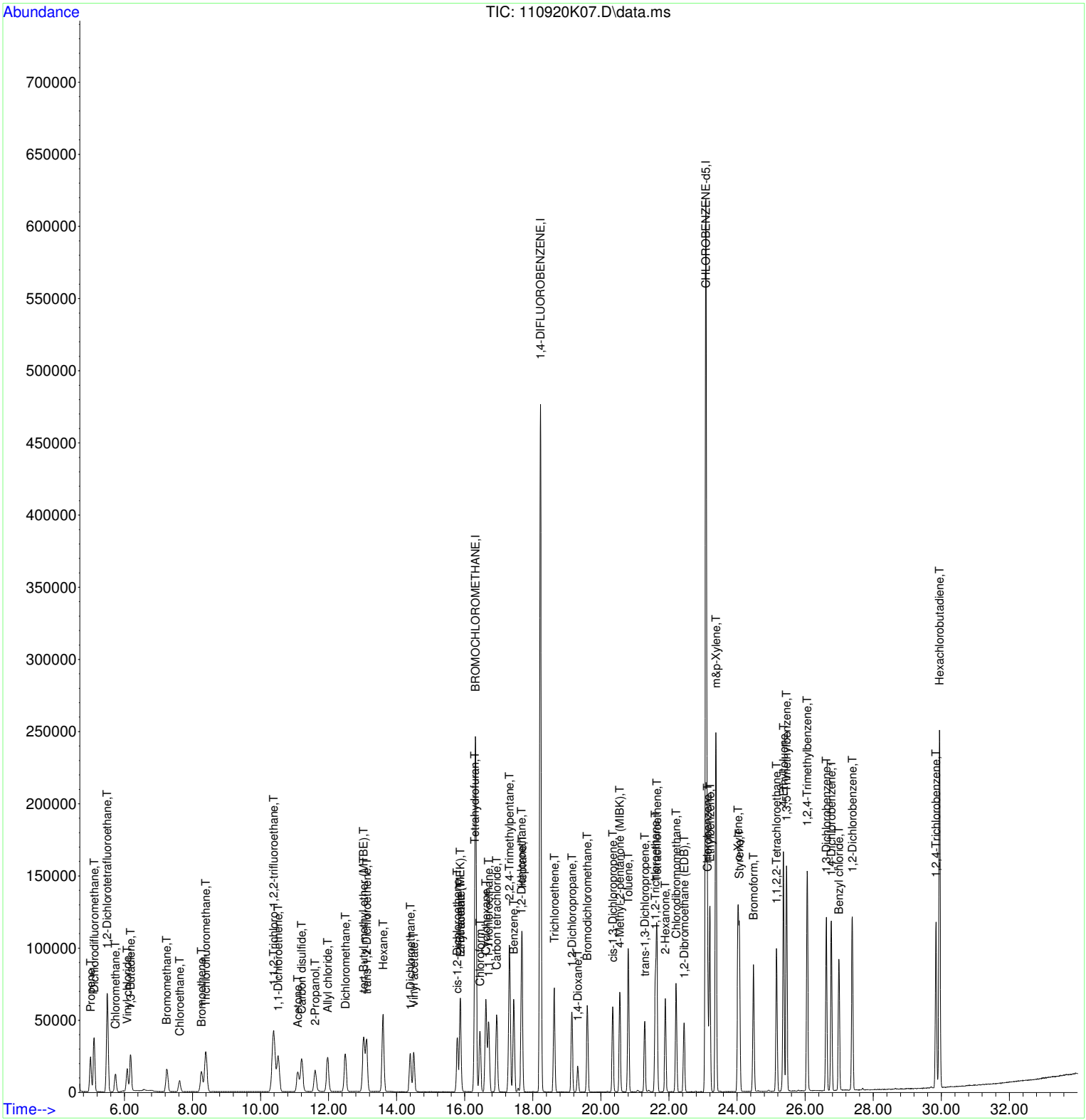
Quant Time: Nov 10 08:52:45 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:52:39 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55)	Styrene	24.070	104	96503	5.06 ppbv	99
56)	Bromoform	24.483	173	72590	5.18 ppbv	100
57)	1,1,2,2-Tetrachloroethane	25.159	83	89300	5.03 ppbv	100
58)	4-Ethyltoluene	25.365	105	190257	4.85 ppbv	100
59)	1,3,5-Trimethylbenzene	25.451	105	146000	5.08 ppbv	100
60)	1,2,4-Trimethylbenzene	26.059	105	144893	5.00 ppbv	100
61)	1,3-Dichlorobenzene	26.625	146	93045	4.62 ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	88972	4.56 ppbv	99
63)	Benzyl chloride	26.990	91	118675	4.61 ppbv	99
64)	1,2-Dichlorobenzene	27.385	146	92711	4.71 ppbv	100
65)	1,2,4-Trichlorobenzene	29.843	180	68442	4.27 ppbv	100
66)	Hexachlorobutadiene	29.946	225	88702	4.72 ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K07.D
InstName : HP5973K
Acq On : 9 Nov 2020 9:16 pm
Operator : LLH
Sample : S20K037-CAL3
Misc : 5.0ppbv 2046021
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:52:45 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:52:39 2020
Response via : Initial Calibration



S20K037-CAL4

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
InstName : HP5973K
Acq On : 9 Nov 2020 10:06 pm
Operator : LLH
Sample : S20K037-CAL4
Misc : 10ppbv 2045034
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:53:35 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:53:27 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	209437	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	661746	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	608048	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.010	41	55626	8.50	ppbv		100
3) Dichlorodifluoromethane	5.113	85	139945	8.92	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.497	85	155406	8.83	ppbv		100
5) Chloromethane	5.740	50	58581	9.13	ppbv		100
6) Vinyl chloride	6.081	62	66764	9.83	ppbv		100
7) 1,3-Butadiene	6.184	54	49033	9.68	ppbv		100
8) Bromomethane	7.255	94	50892	9.59	ppbv		100
9) Chloroethane	7.620	64	34901	9.48	ppbv		100
10) Bromoethene	8.265	106	52366	9.21	ppbv		100
11) Trichlorofluoromethane	8.392	101	127333	8.51	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	94587	9.79	ppbv		100
13) 1,1-Dichloroethene	10.522	61	89713	9.82	ppbv		100
14) Acetone	11.093	43	84859	9.02	ppbv		100
15) Carbon disulfide	11.209	76	166161	9.46	ppbv		100
16) 2-Propanol	11.604	45	93166	9.39	ppbv		100
17) Allyl chloride	11.976	41	81087	10.00	ppbv		100
18) Dichloromethane	12.493	49	68510	8.82	ppbv		100
19) tert-Butyl methyl ethe...	13.028	73	175148	10.05	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	83137	9.36	ppbv		100
21) Hexane	13.600	57	108746	9.30	ppbv		100
22) 1,1-Dichloroethane	14.397	63	104713	9.07	ppbv		100
23) Vinyl acetate	14.500	43	149947	10.38	ppbv		100
24) cis-1,2-Dichloroethene	15.784	61	79387	9.55	ppbv	#	100
25) 2-Butanone (MEK)	15.863	72	33113	9.33	ppbv		100
26) Ethyl acetate	15.869	61	20689	9.48	ppbv		100
27) Tetrahydrofuran	16.289	42	71432	8.49	ppbv		100
28) Chloroform	16.447	83	112028	9.55	ppbv		100
29) Cyclohexane	16.623	56	110995	9.95	ppbv		100
30) 1,1,1-Trichloroethane	16.703	97	111284	9.73	ppbv		100
31) Carbon tetrachloride	16.940	117	115765	9.17	ppbv		100
33) Benzene	17.439	78	195511	9.76	ppbv		100
34) 2,2,4-Trimethylpentane	17.317	57	346758	9.90	ppbv		100
35) 1,2-Dichloroethane	17.658	62	69059	9.20	ppbv		100
36) Heptane	17.682	43	122776	9.63	ppbv		100
37) Trichloroethene	18.625	130	81587	9.76	ppbv		100
38) 1,2-Dichloropropane	19.148	63	71896	9.53	ppbv		100
39) 1,4-Dioxane	19.318	88	41428	9.47	ppbv		100
40) Bromodichloromethane	19.598	83	126864	9.58	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	112888	9.93	ppbv		100
42) 4-Methyl-2-pentanone (...	20.553	43	144121	8.92	ppbv		100
44) Toluene	20.803	91	232305	9.67	ppbv		100
45) trans-1,3-Dichloropropene	21.290	75	90537	8.66	ppbv		100
46) 1,1,2-Trichloroethane	21.600	97	76149	9.83	ppbv		100
47) Tetrachloroethene	21.642	166	113108	9.42	ppbv		100
48) 2-Hexanone	21.892	43	128327	8.39	ppbv		100
49) Chlorodibromomethane	22.208	129	132367	9.64	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.445	107	108055	9.72	ppbv		100
51) Chlorobenzene	23.133	112	183760	9.68	ppbv		100
52) Ethylbenzene	23.200	91	306442	9.66	ppbv		100
53) m&p-Xylene	23.376	91	459896	19.20	ppbv		100
54) o-Xylene	24.027	91	233514	9.46	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
InstName : HP5973K
Acq On : 9 Nov 2020 10:06 pm
Operator : LLH
Sample : S20K037-CAL4
Misc : 10ppbv 2045034
ALS Vial : 32 Sample Multiplier: 1

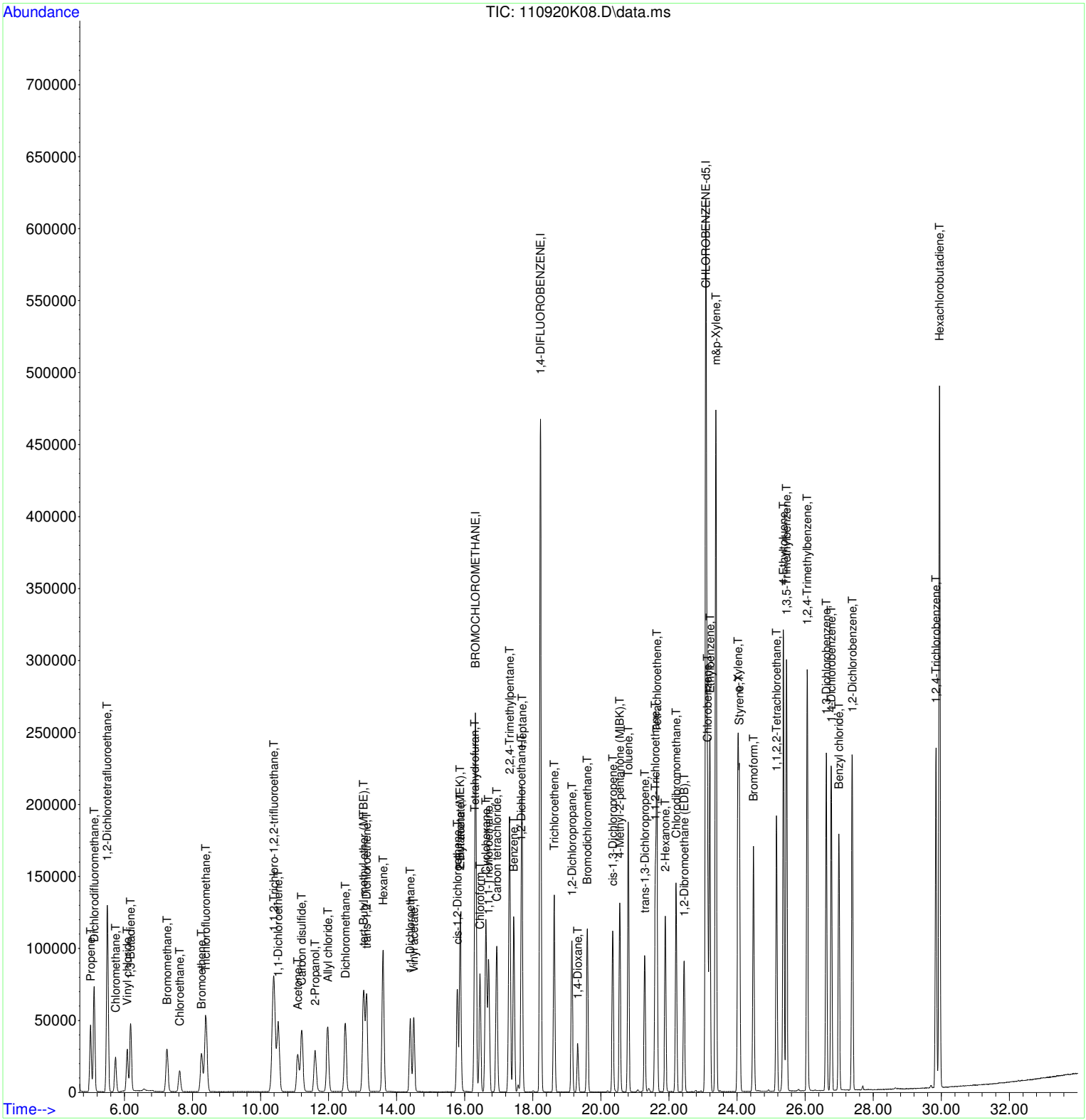
Quant Time: Nov 10 08:53:35 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:53:27 2020
Response via : Initial Calibration

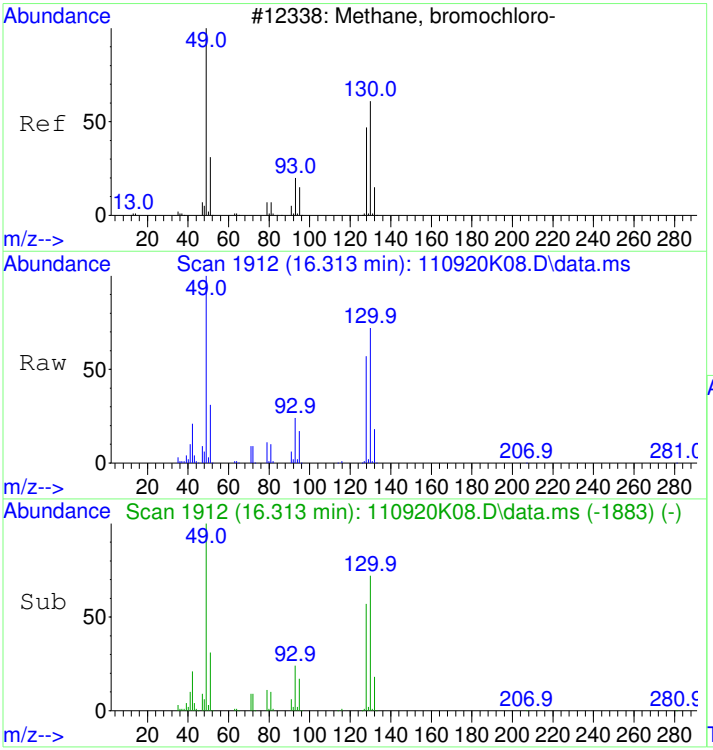
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	24.070	104	188510	9.77	ppbv	100
56)	Bromoform	24.483	173	141441	10.02	ppbv	100
57)	1,1,2,2-Tetrachloroethane	25.159	83	170682	9.49	ppbv	100
58)	4-Ethyltoluene	25.359	105	363099	9.11	ppbv	100
59)	1,3,5-Trimethylbenzene	25.451	105	277691	9.50	ppbv	100
60)	1,2,4-Trimethylbenzene	26.059	105	277315	9.42	ppbv	100
61)	1,3-Dichlorobenzene	26.625	146	178396	8.89	ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	172264	8.91	ppbv	100
63)	Benzyl chloride	26.990	91	229888	8.93	ppbv	100
64)	1,2-Dichlorobenzene	27.385	146	177537	8.99	ppbv	100
65)	1,2,4-Trichlorobenzene	29.843	180	138520	8.76	ppbv	100
66)	Hexachlorobutadiene	29.946	225	173748	9.24	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
InstName : HP5973K
Acq On : 9 Nov 2020 10:06 pm
Operator : LLH
Sample : S20K037-CAL4
Misc : 10ppbv 2045034
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:53:35 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:53:27 2020
Response via : Initial Calibration

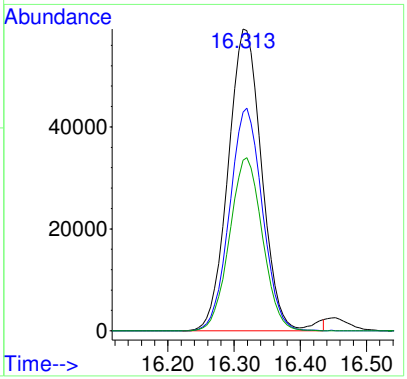


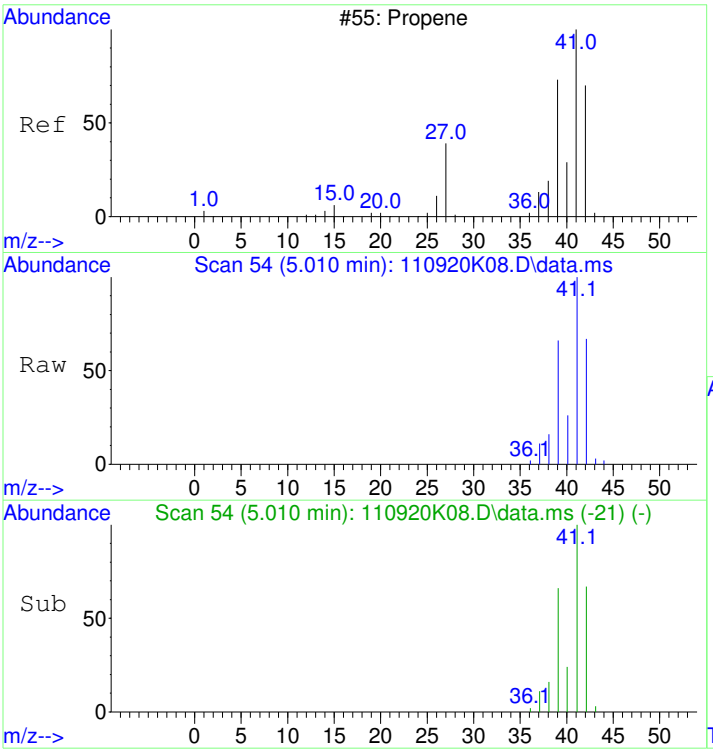


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 49 Resp: 209437

Ion	Ratio	Lower	Upper
49	100		
130	71.9	51.9	91.9
128	55.7	35.7	75.7

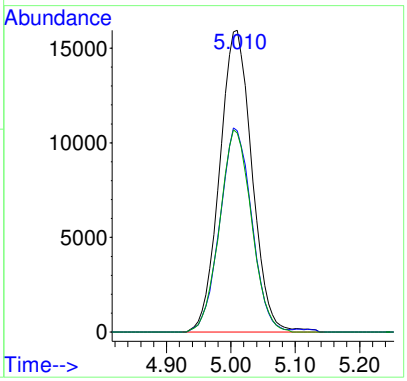


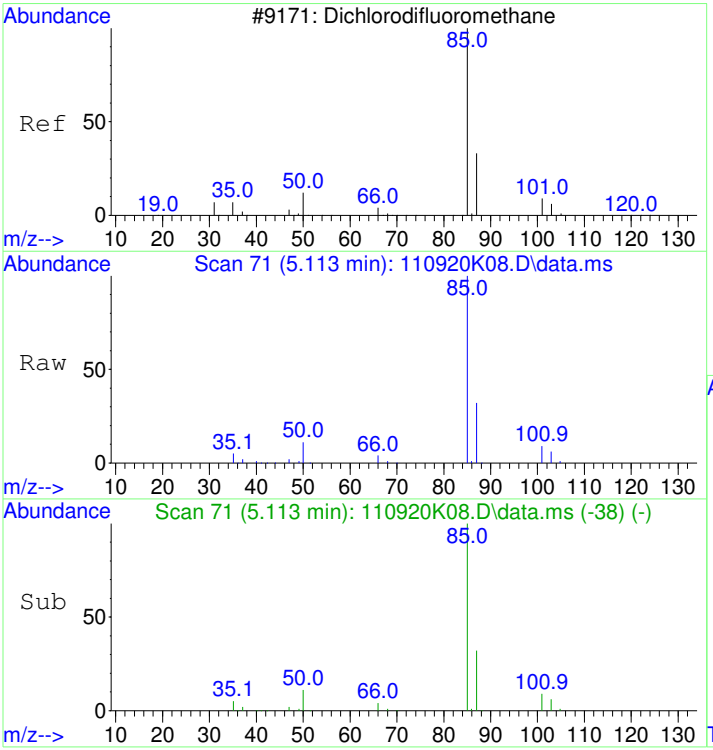


#2
Propene
Concen: 8.50 ppbv
RT: 5.010 min Scan# 54
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 41 Resp: 55626

Ion	Ratio	Lower	Upper
41	100		
42	67.3	47.3	87.3
39	66.1	46.1	86.1

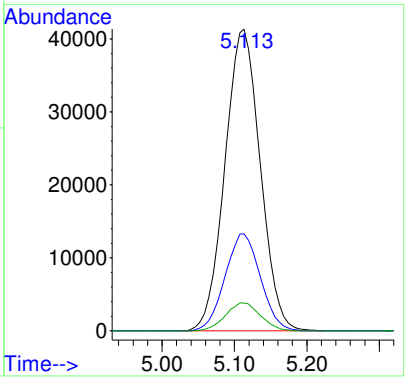


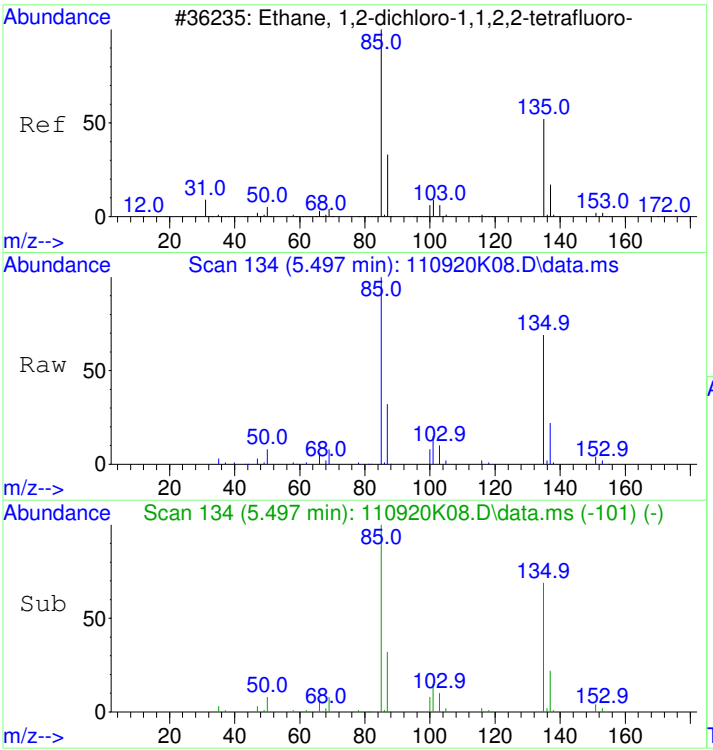


#3
Dichlorodifluoromethane
Concen: 8.92 ppbv
RT: 5.113 min Scan# 71
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 85 Resp: 139945

Ion	Ratio	Lower	Upper
85	100		
87	32.2	12.2	52.2
101	9.2	0.0	29.2

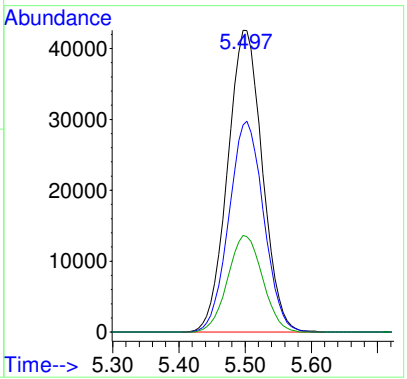


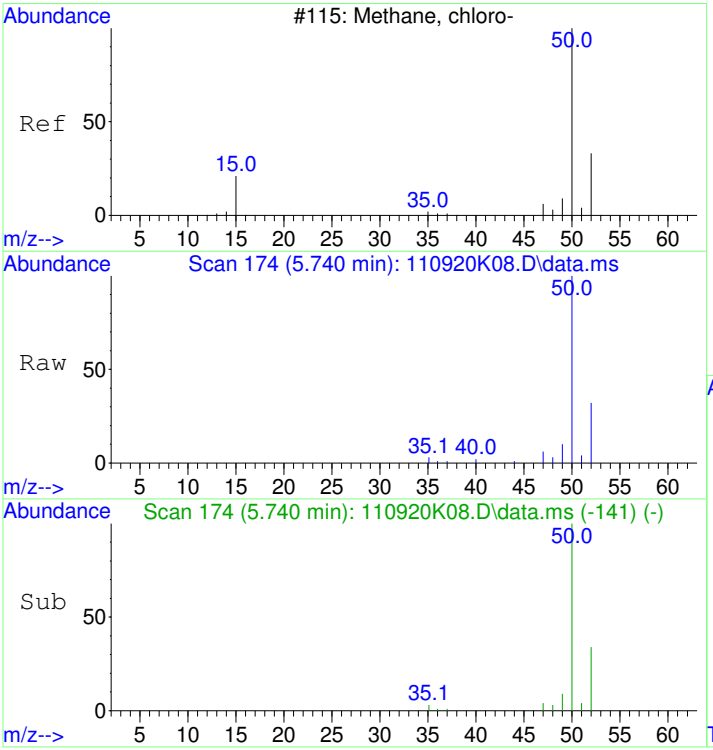


#4
1,2-Dichlorotetrafluoroethane
Concen: 8.83 ppbv
RT: 5.497 min Scan# 134
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 85 Resp: 155406

Ion	Ratio	Lower	Upper
85	100		
135	70.0	50.0	90.0
87	32.1	12.1	52.1

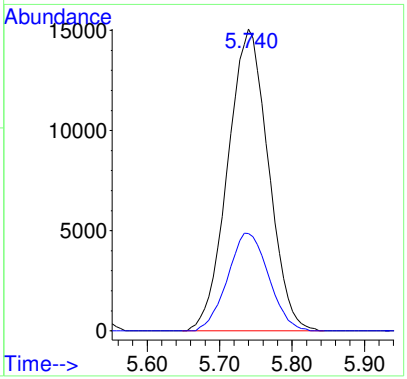


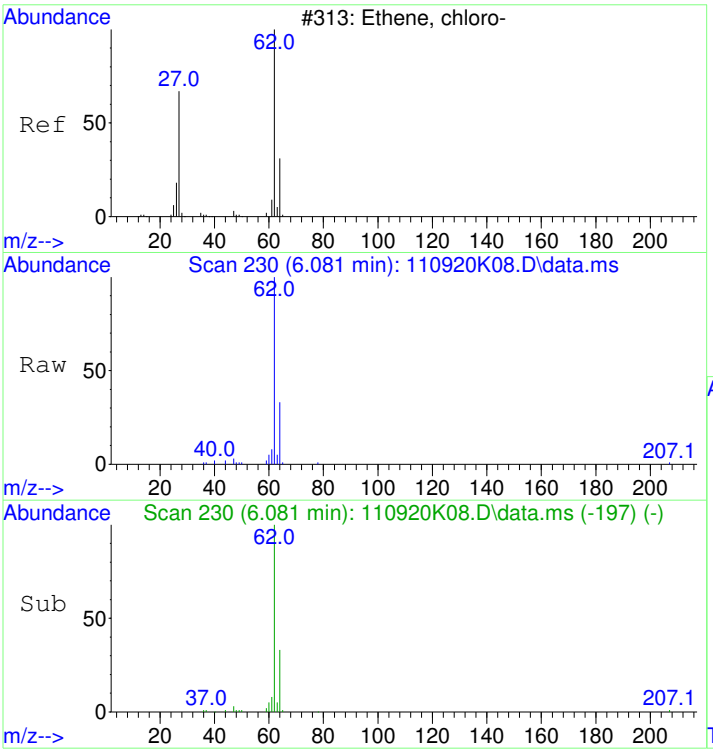


#5
Chloromethane
Concen: 9.13 ppbv
RT: 5.740 min Scan# 174
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 50 Resp: 58581

Ion	Ratio	Lower	Upper
50	100		
52	32.8	12.8	52.8

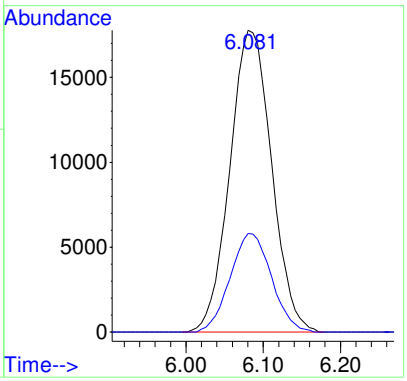


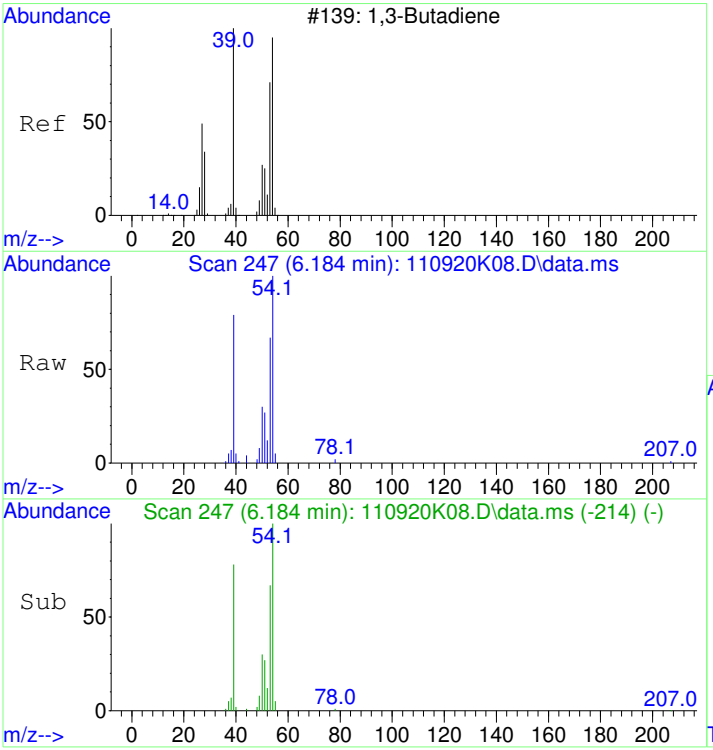


#6
Vinyl chloride
Concen: 9.83 ppbv
RT: 6.081 min Scan# 230
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 62 Resp: 66764

Ion	Ratio	Lower	Upper
62	100		
64	32.3	12.3	52.3

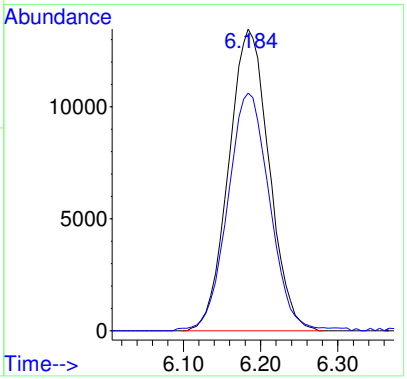


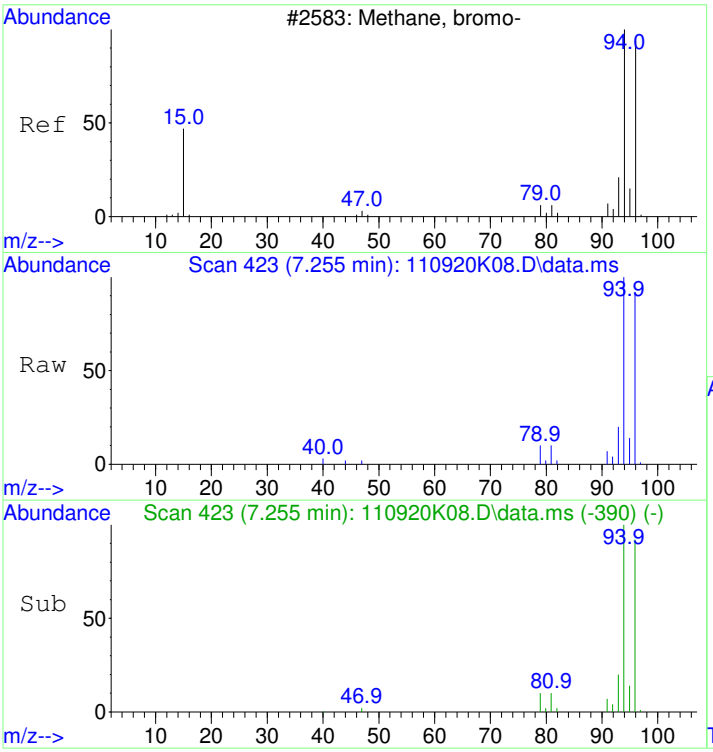


#7
1,3-Butadiene
Concen: 9.68 ppbv
RT: 6.184 min Scan# 247
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 54 Resp: 49033

Ion	Ratio	Lower	Upper
54	100		
39	82.1	62.1	102.1

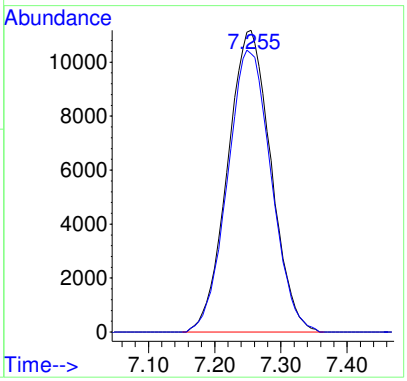


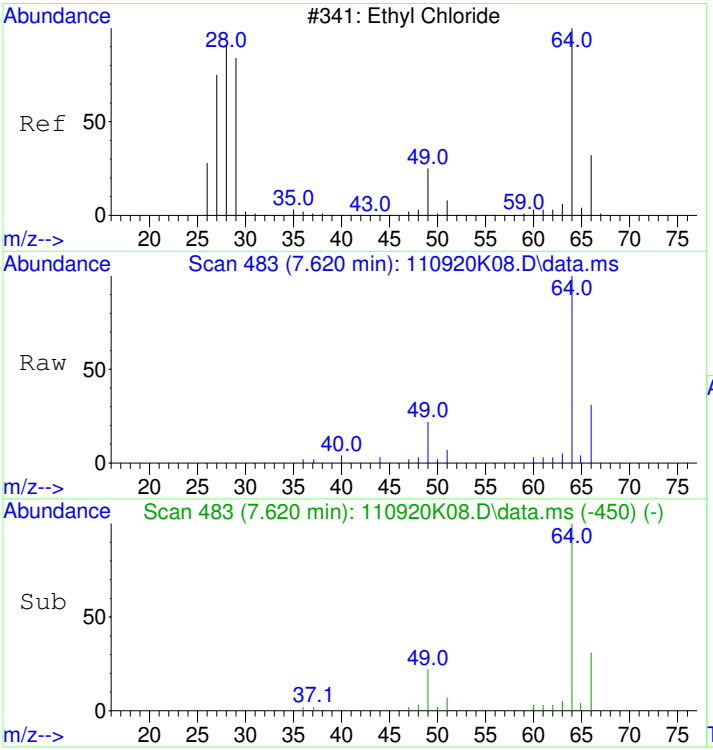


#8
Bromomethane
Concen: 9.59 ppbv
RT: 7.255 min Scan# 423
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 94 Resp: 50892

Ion	Ratio	Lower	Upper
94	100		
96	94.1	74.1	114.1

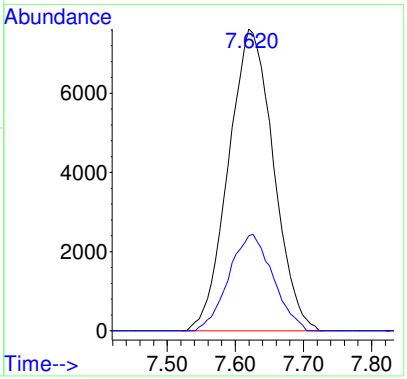


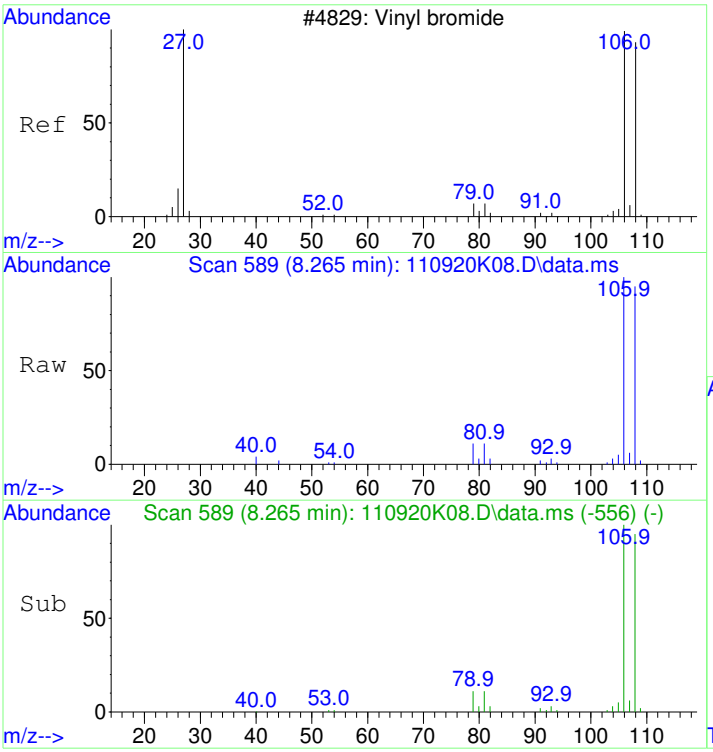


#9
Chloroethane
Concen: 9.48 ppbv
RT: 7.620 min Scan# 483
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 64 Resp: 34901

Ion	Ratio	Lower	Upper
64	100		
66	31.4	11.4	51.4

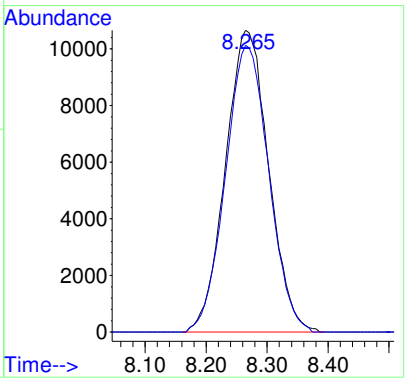


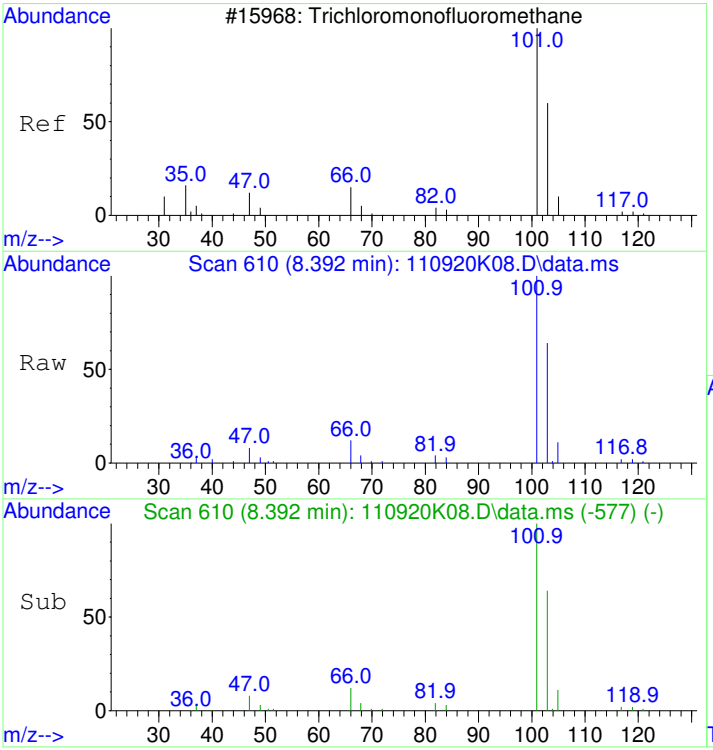


#10
Bromoethene
Concen: 9.21 ppbv
RT: 8.265 min Scan# 589
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:106 Resp: 52366

Ion	Ratio	Lower	Upper
106	100		
108	95.1	0.0	215.1

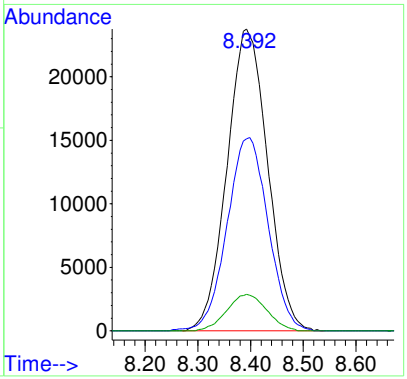


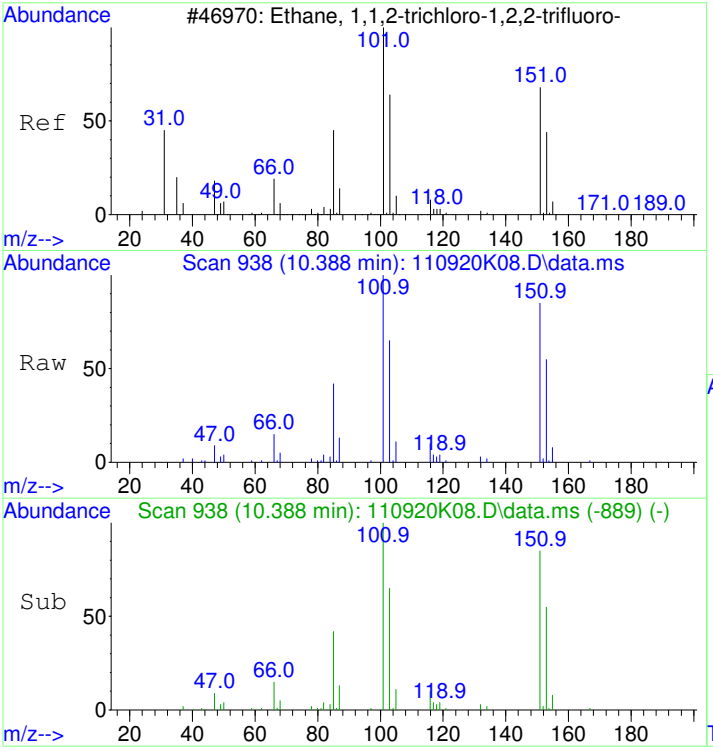


#11
Trichlorofluoromethane
Concen: 8.51 ppbv
RT: 8.392 min Scan# 610
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:101 Resp: 127333

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9
66	11.9	0.0	31.9

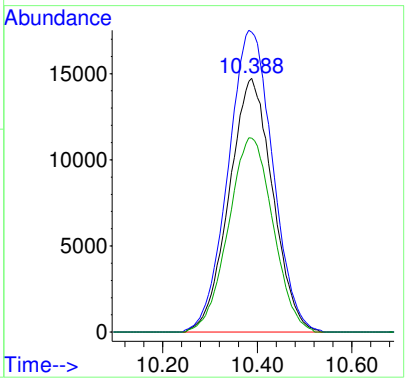


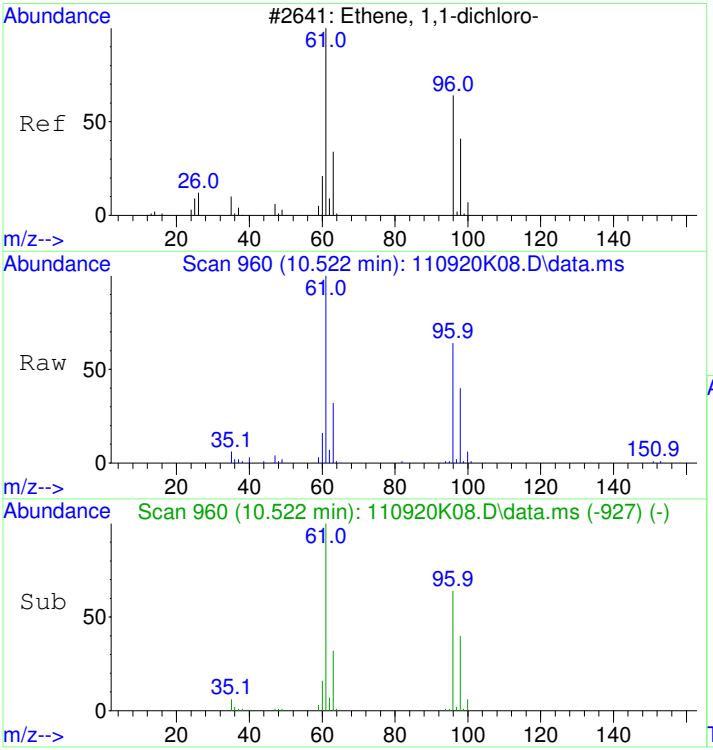


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 9.79 ppbv
RT: 10.388 min Scan# 938
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:151 Resp: 94587

Ion	Ratio	Lower	Upper
151	100		
101	121.9	101.9	141.9
103	78.4	58.4	98.4

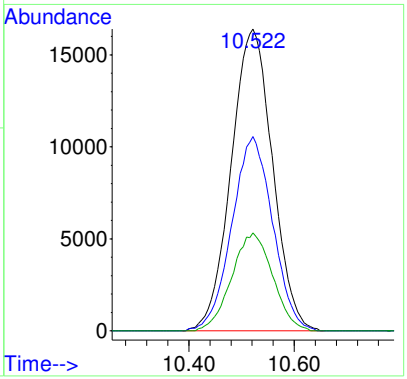


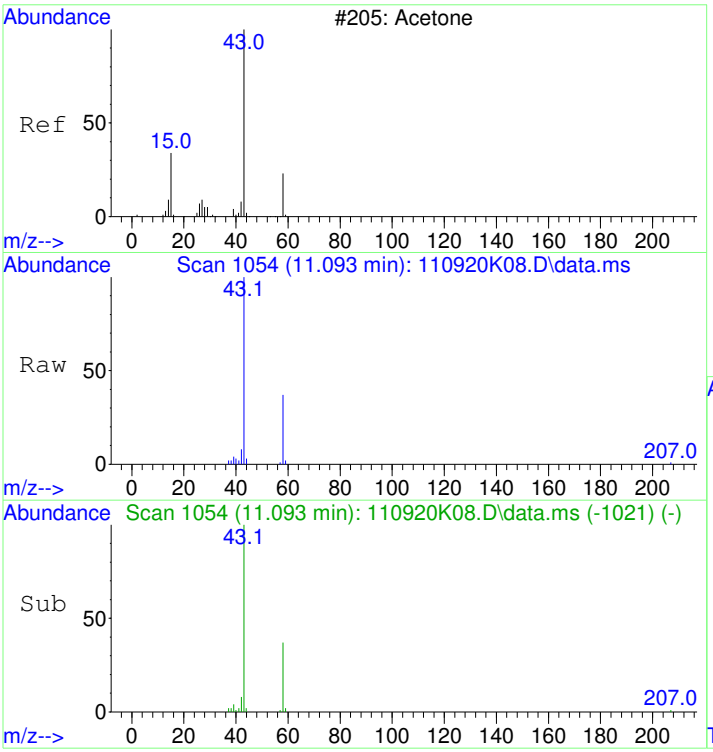


#13
1,1-Dichloroethene
Concen: 9.82 ppbv
RT: 10.522 min Scan# 960
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 61 Resp: 89713

Ion	Ratio	Lower	Upper
61	100		
96	63.5	43.5	83.5
63	32.1	12.1	52.1

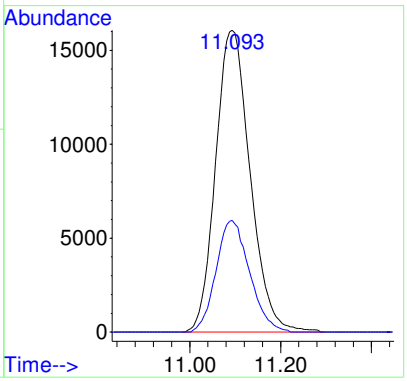


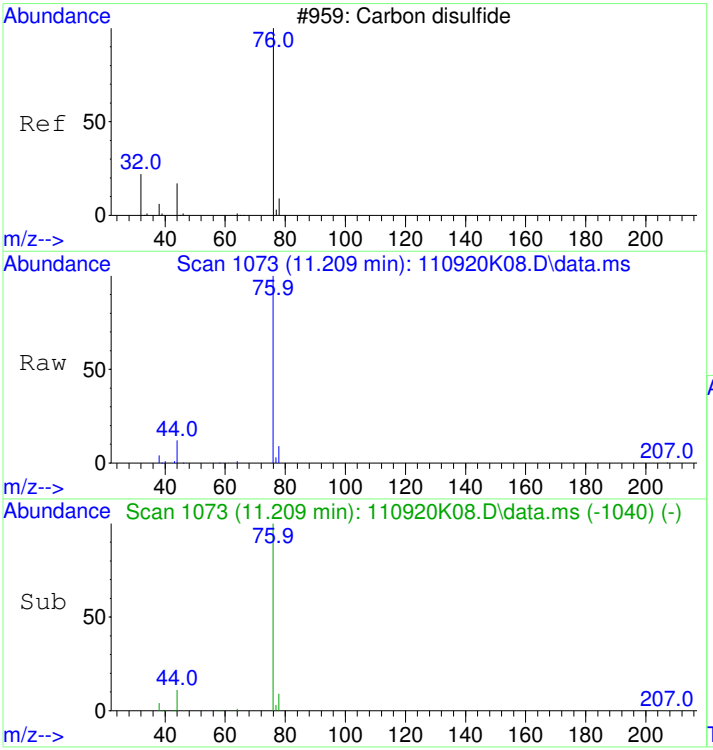


#14
Acetone
Concen: 9.02 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 43 Resp: 84859

Ion	Ratio	Lower	Upper
43	100		
58	35.9	15.9	55.9

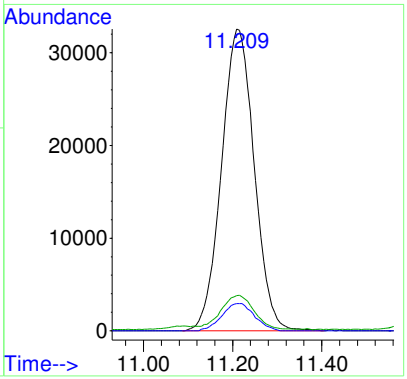


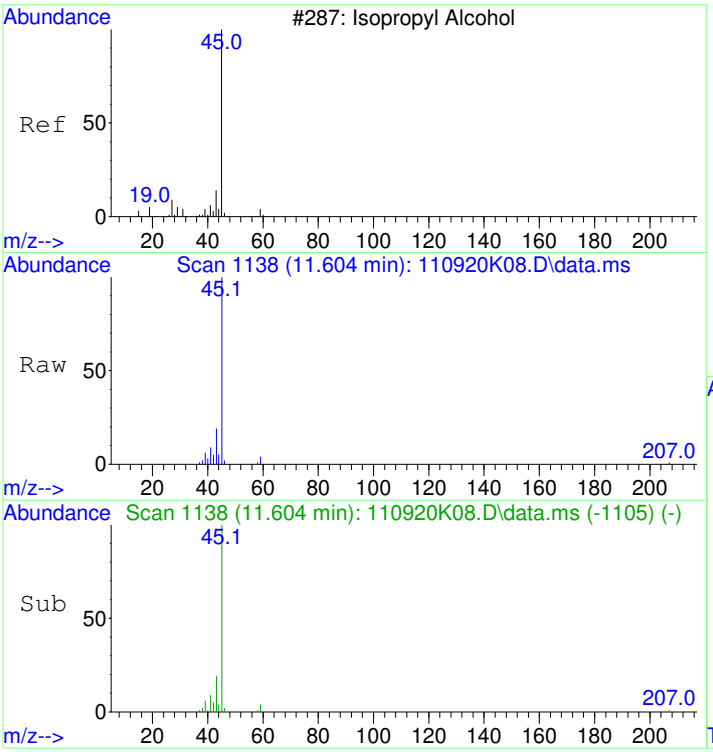


#15
Carbon disulfide
Concen: 9.46 ppbv
RT: 11.209 min Scan# 1073
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 76 Resp: 166161

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.0
44	10.1	0.0	30.1

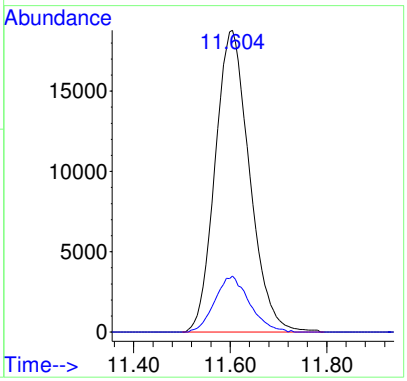


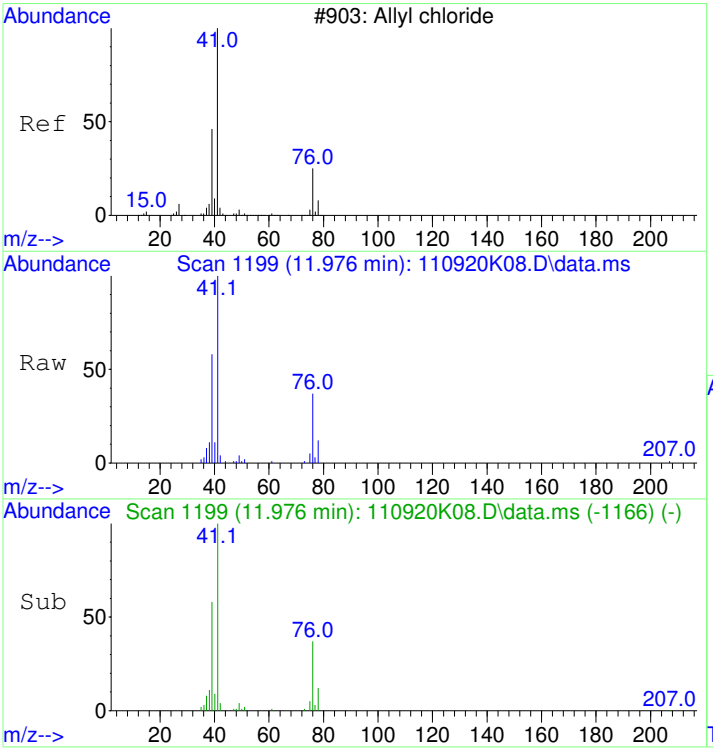


#16
2-Propanol
Concen: 9.39 ppbv
RT: 11.604 min Scan# 1138
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 45 Resp: 93166

Ion	Ratio	Lower	Upper
45	100		
43	18.7	0.0	38.7

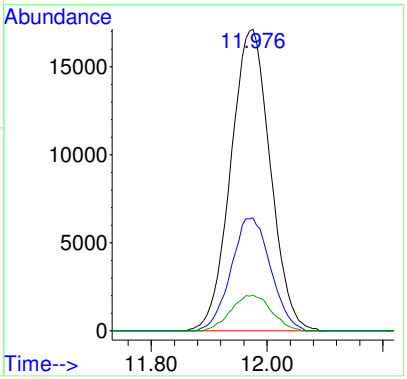


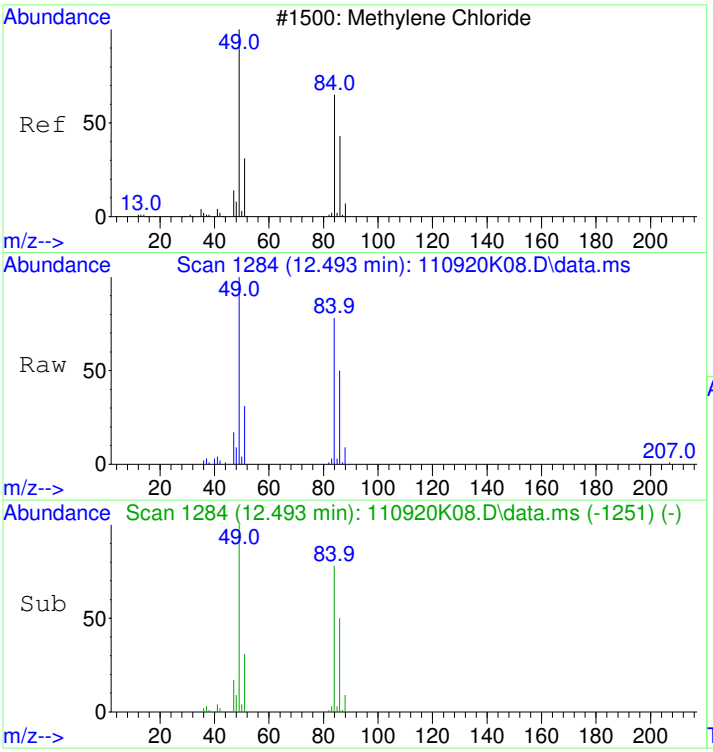


#17
Allyl chloride
Concen: 10.00 ppbv
RT: 11.976 min Scan# 1199
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 41 Resp: 81087

Ion	Ratio	Lower	Upper
41	100		
76	37.5	17.5	57.5
78	12.2	0.0	32.2

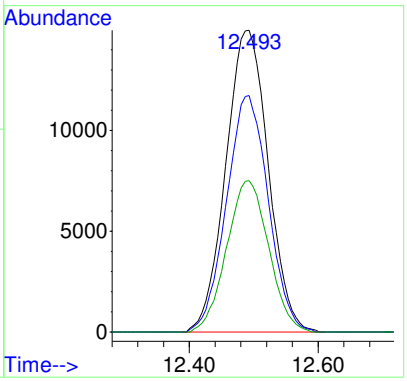


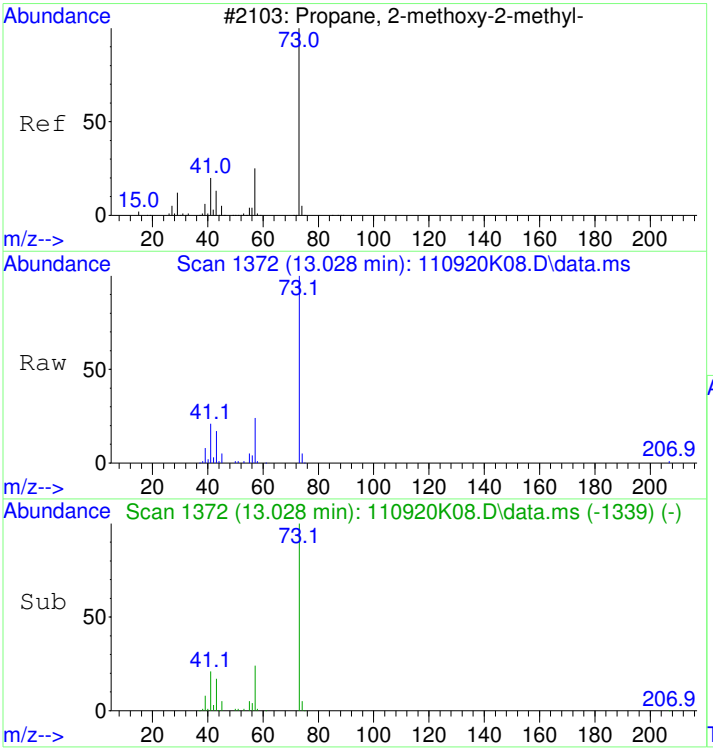


#18
Dichloromethane
Concen: 8.82 ppbv
RT: 12.493 min Scan# 1284
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 49 Resp: 68510

Ion	Ratio	Lower	Upper
49	100		
84	77.4	57.4	97.4
86	49.7	29.7	69.7

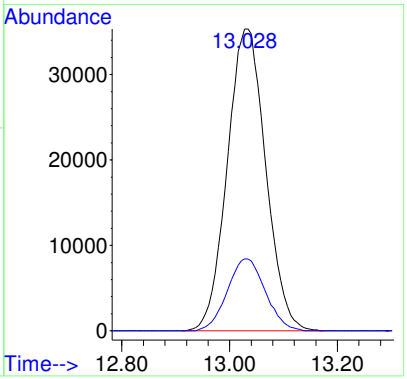


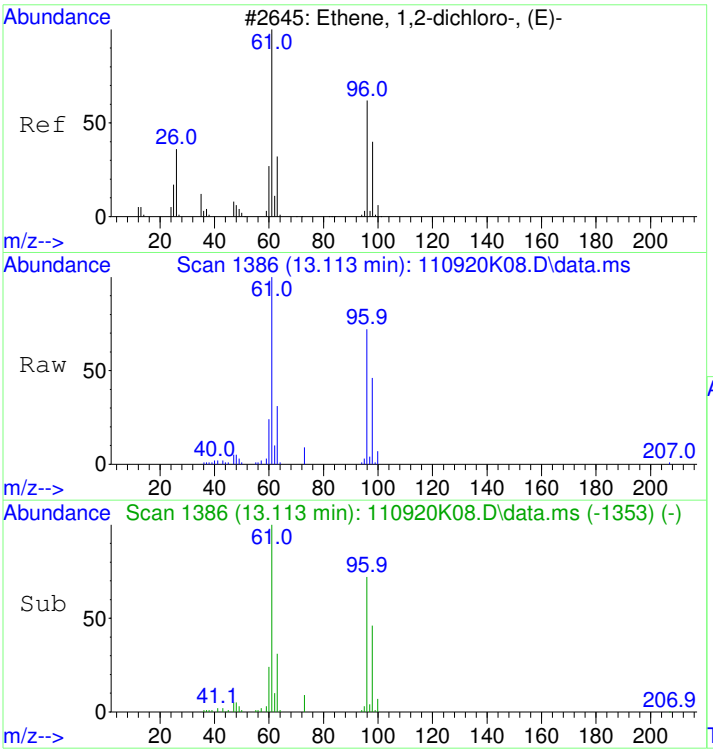


#19
tert-Butyl methyl ether (MTBE)
Concen: 10.05 ppbv
RT: 13.028 min Scan# 1372
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 73 Resp: 175148

Ion	Ratio	Lower	Upper
73	100		
57	23.6	3.6	43.6

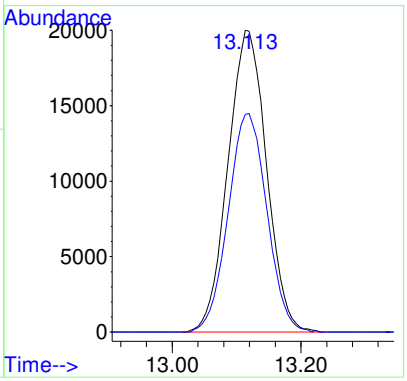


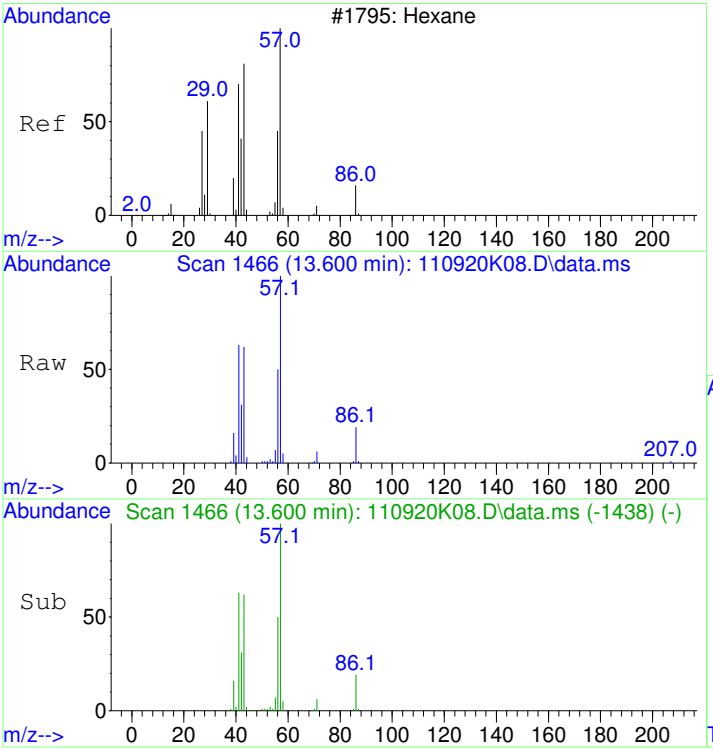


#20
trans-1,2-Dichloroethene
Concen: 9.36 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 61 Resp: 83137

Ion	Ratio	Lower	Upper
61	100		
96	72.8	52.8	92.8

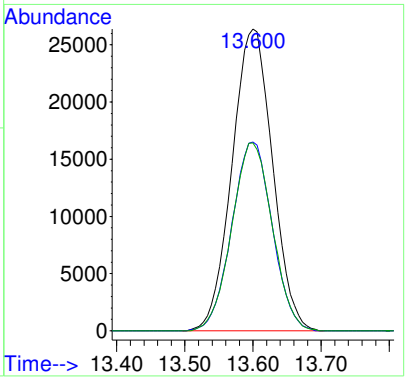


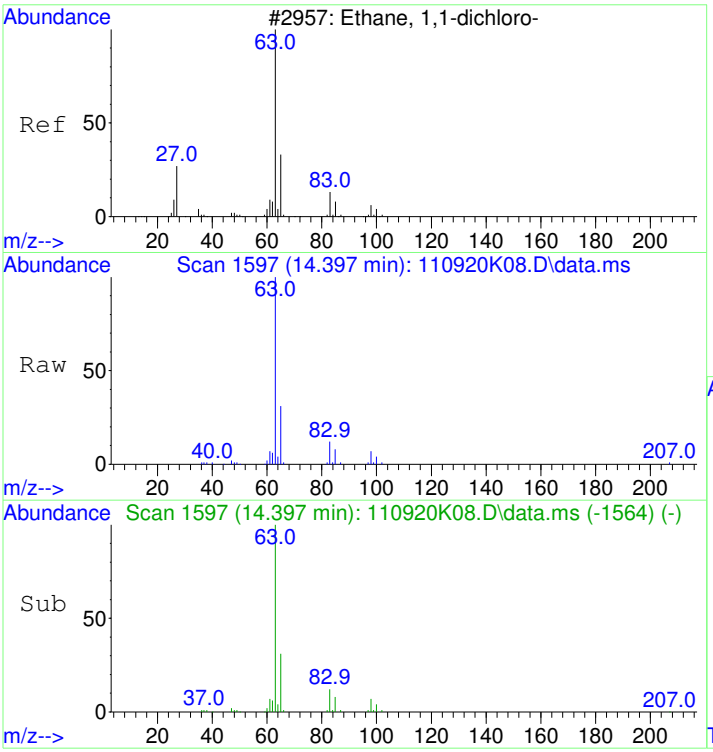


#21
Hexane
Concen: 9.30 ppbv
RT: 13.600 min Scan# 1466
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 57 Resp: 108746

Ion	Ratio	Lower	Upper
57	100		
41	62.6	42.6	82.6
43	62.4	42.4	82.4

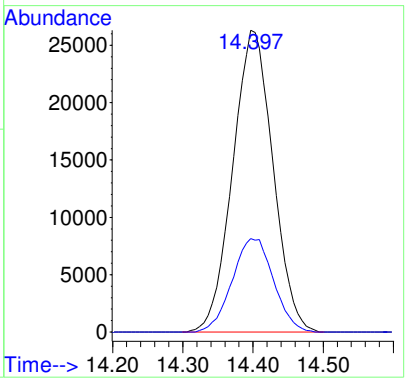


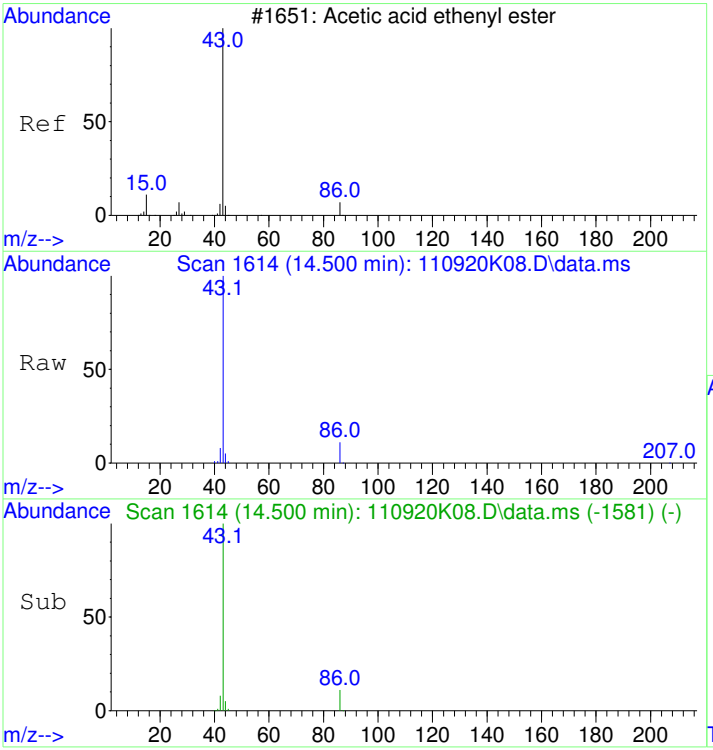


#22
1,1-Dichloroethane
Concen: 9.07 ppbv
RT: 14.397 min Scan# 1597
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 63 Resp: 104713

Ion	Ratio	Lower	Upper
63	100		
65	31.9	11.9	51.9

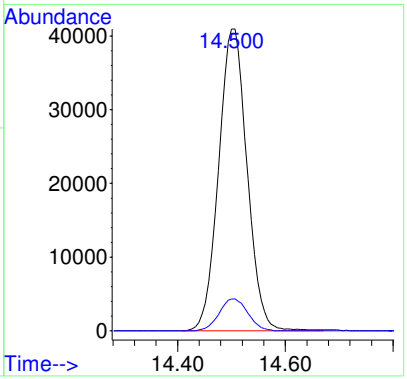


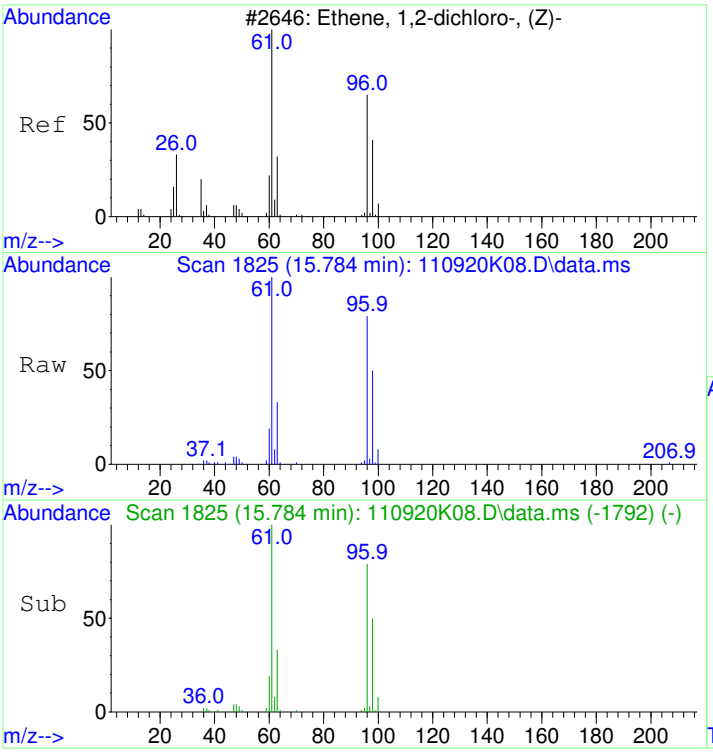


#23
Vinyl acetate
Concen: 10.38 ppbv
RT: 14.500 min Scan# 1614
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 43 Resp: 149947

Ion	Ratio	Lower	Upper
43	100		
86	10.7	0.0	30.7

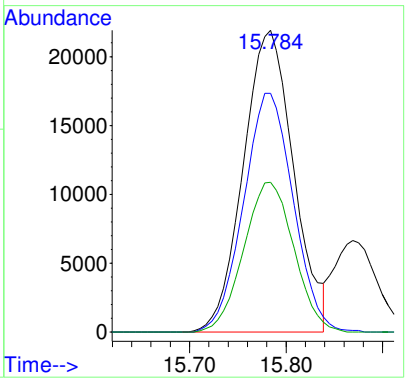


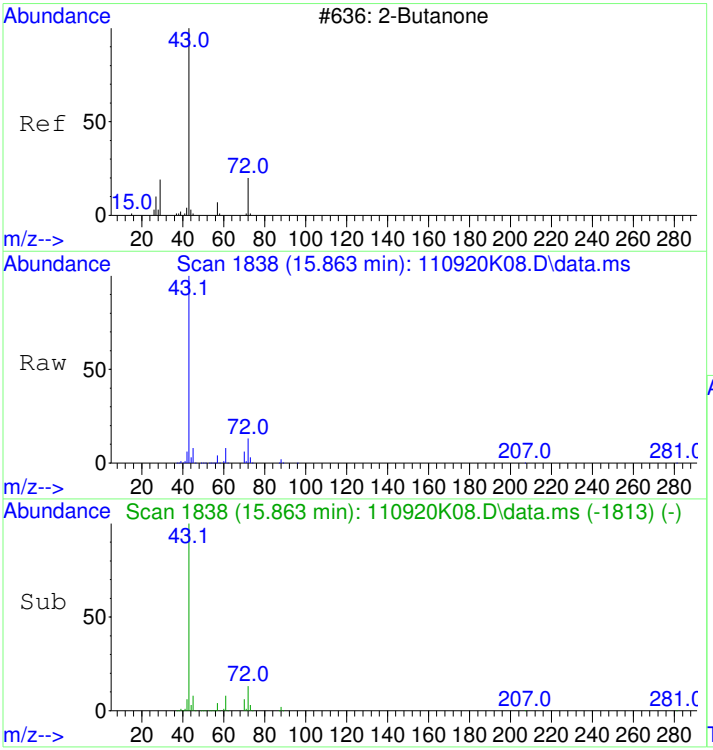


#24
cis-1,2-Dichloroethene
Concen: 9.55 ppbv
RT: 15.784 min Scan# 1825
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 61 Resp: 79387

Ion	Ratio	Lower	Upper
61	100		
96	77.6	57.6	97.6
98	0.0	0.0	20.0

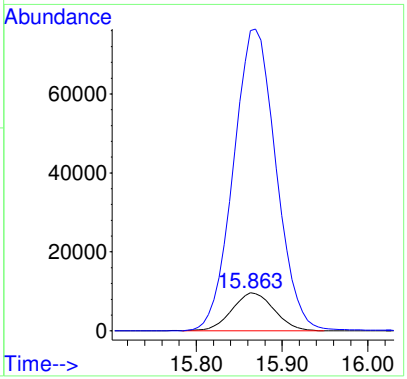


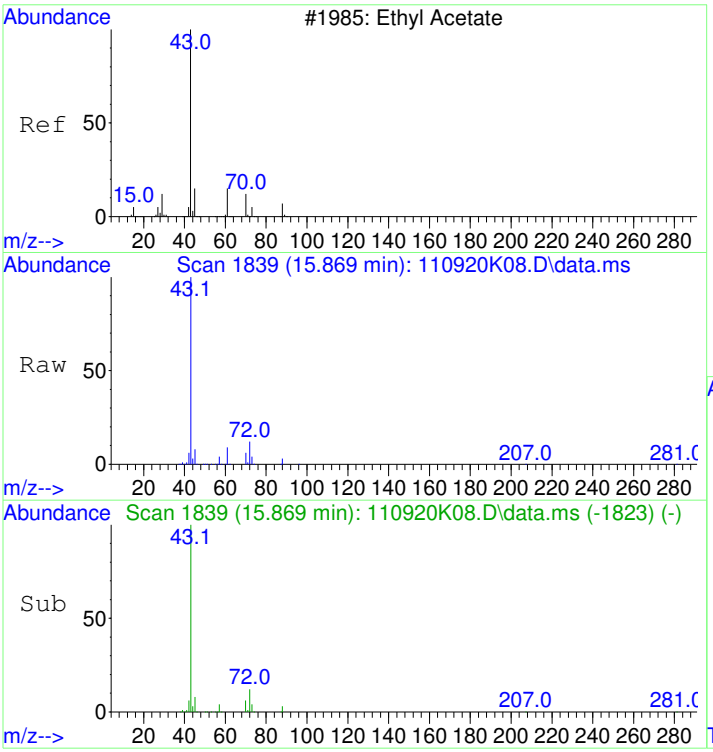


#25
2-Butanone (MEK)
Concen: 9.33 ppbv
RT: 15.863 min Scan# 1838
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 72 Resp: 33113

Ion	Ratio	Lower	Upper
72	100		
43	799.0	789.0	809.0

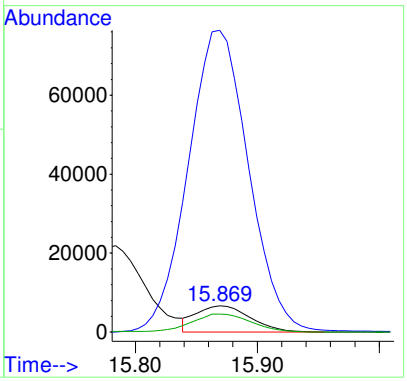


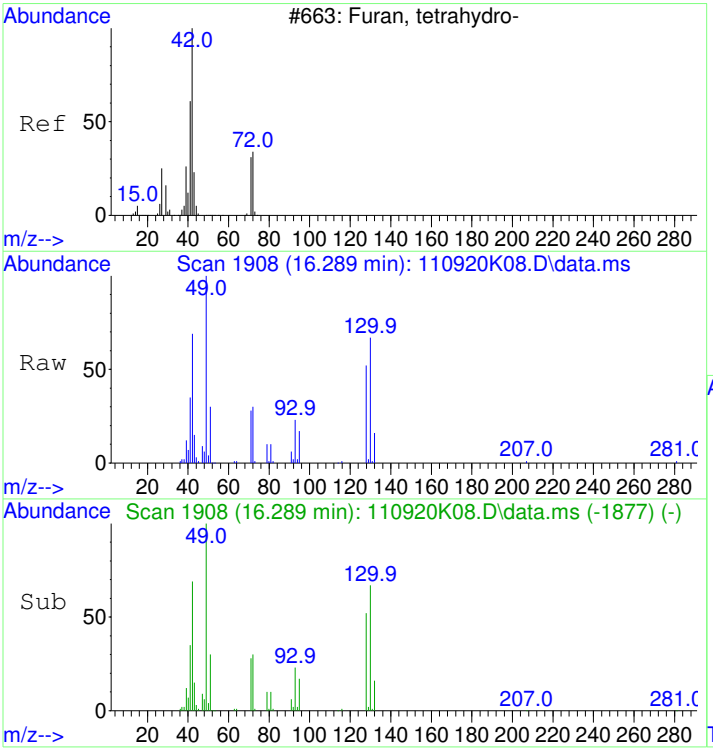


#26
Ethyl acetate
Concen: 9.48 ppbv
RT: 15.869 min Scan# 1839
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 61 Resp: 20689

Ion	Ratio	Lower	Upper
61	100		
43	1277.1	1267.1	1287.1
70	75.7	65.7	85.7

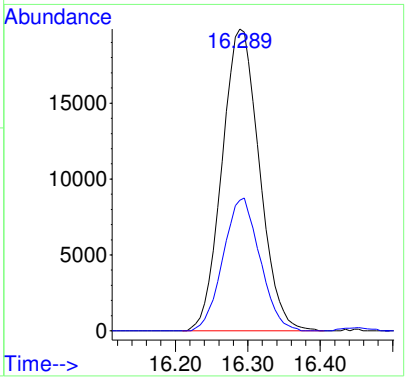


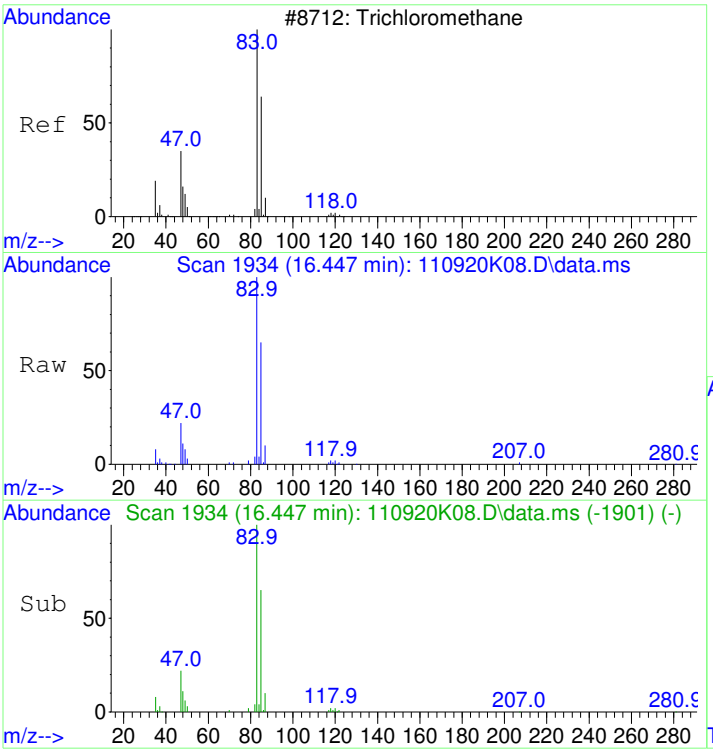


#27
Tetrahydrofuran
Concen: 8.49 ppbv
RT: 16.289 min Scan# 1908
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 42 Resp: 71432

Ion	Ratio	Lower	Upper
42	100		
72	43.2	23.2	63.2

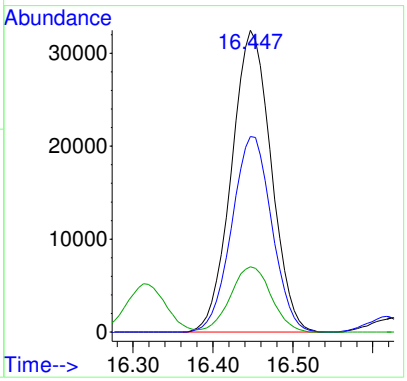


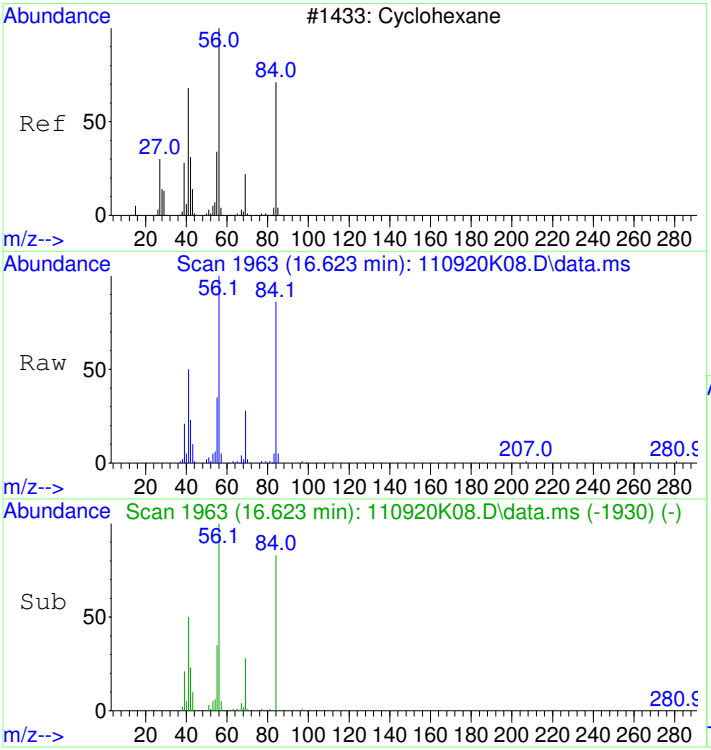


#28
Chloroform
Concen: 9.55 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 83 Resp: 112028

Ion	Ratio	Lower	Upper
83	100		
85	65.5	45.5	85.5
47	21.4	1.4	41.4

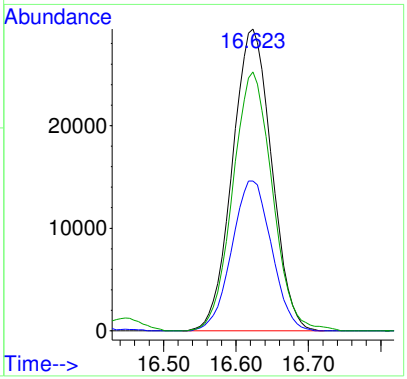


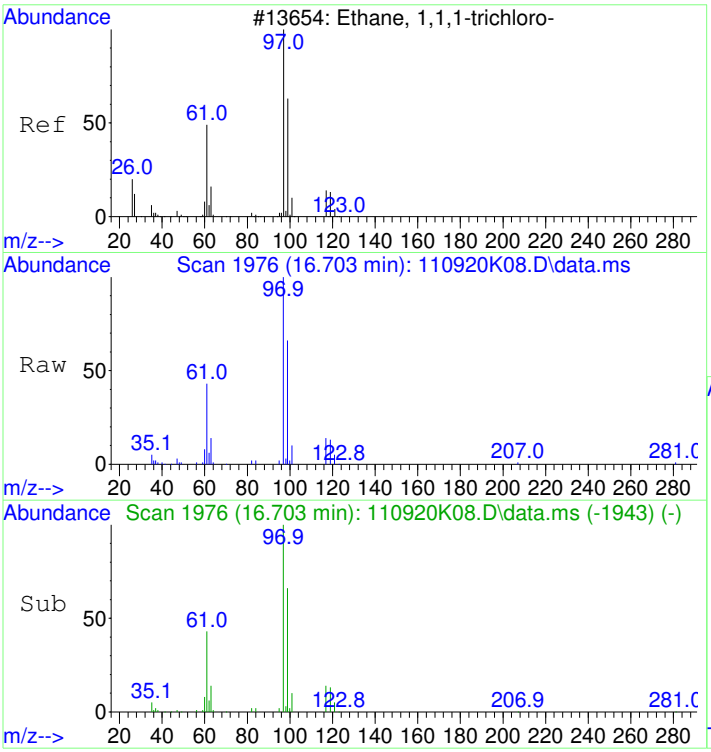


#29
Cyclohexane
Concen: 9.95 ppbv
RT: 16.623 min Scan# 1963
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 56 Resp: 110995

Ion	Ratio	Lower	Upper
56	100		
41	50.1	30.1	70.1
84	86.5	66.5	106.5

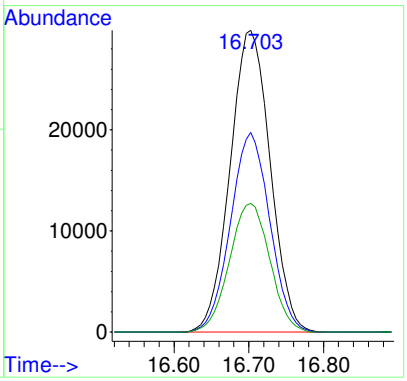


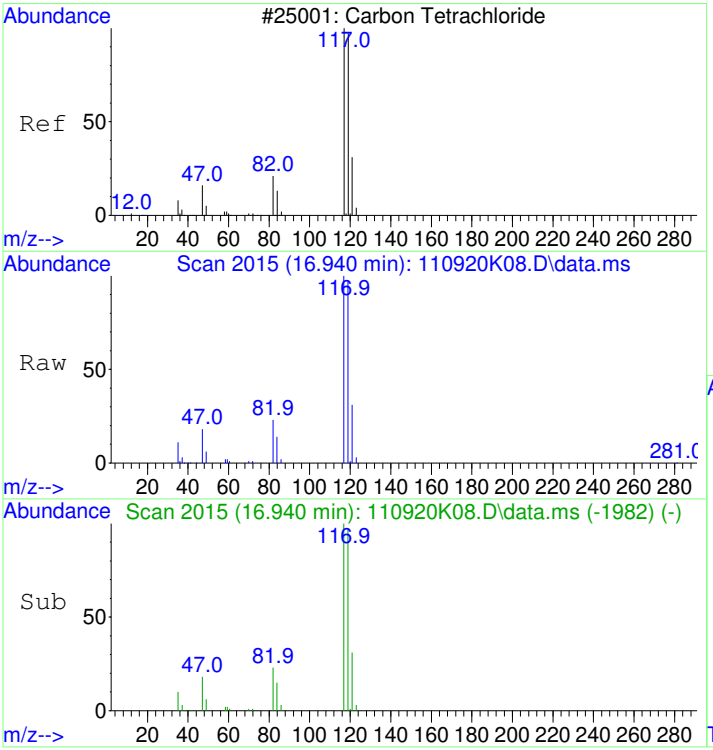


#30
1,1,1-Trichloroethane
Concen: 9.73 ppbv
RT: 16.703 min Scan# 1976
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 97 Resp: 111284

Ion	Ratio	Lower	Upper
97	100		
99	64.8	44.8	84.8
61	43.0	23.0	63.0

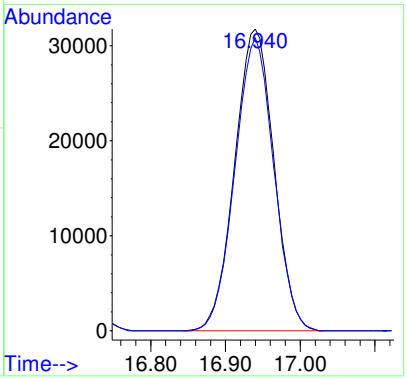


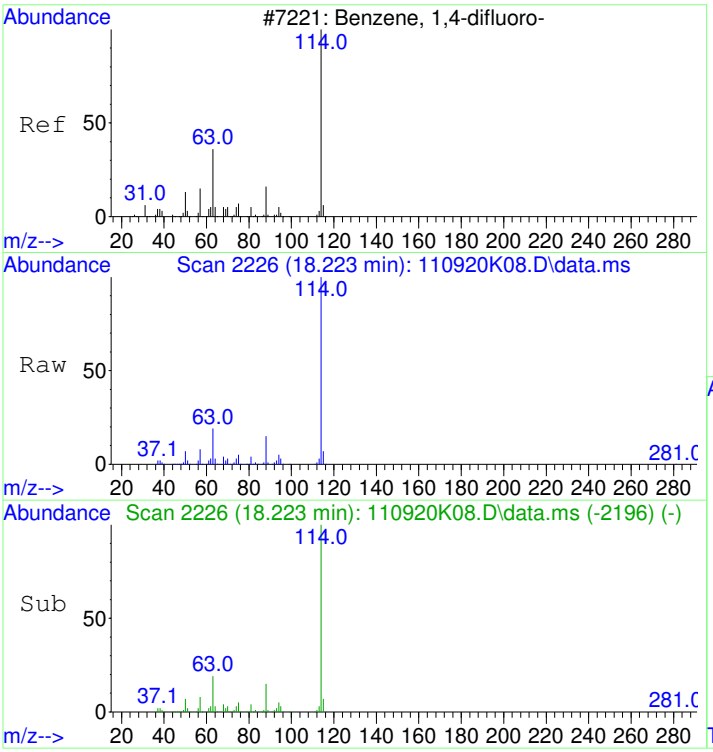


#31
Carbon tetrachloride
Concen: 9.17 ppbv
RT: 16.940 min Scan# 2015
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:117 Resp: 115765

Ion	Ratio	Lower	Upper
117	100		
119	95.9	75.9	115.9

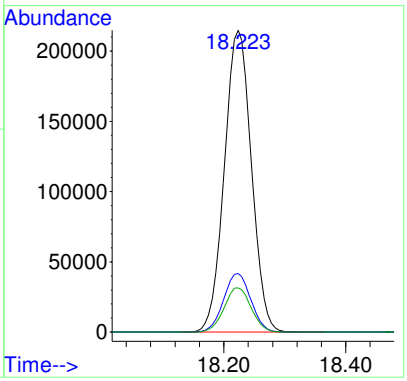


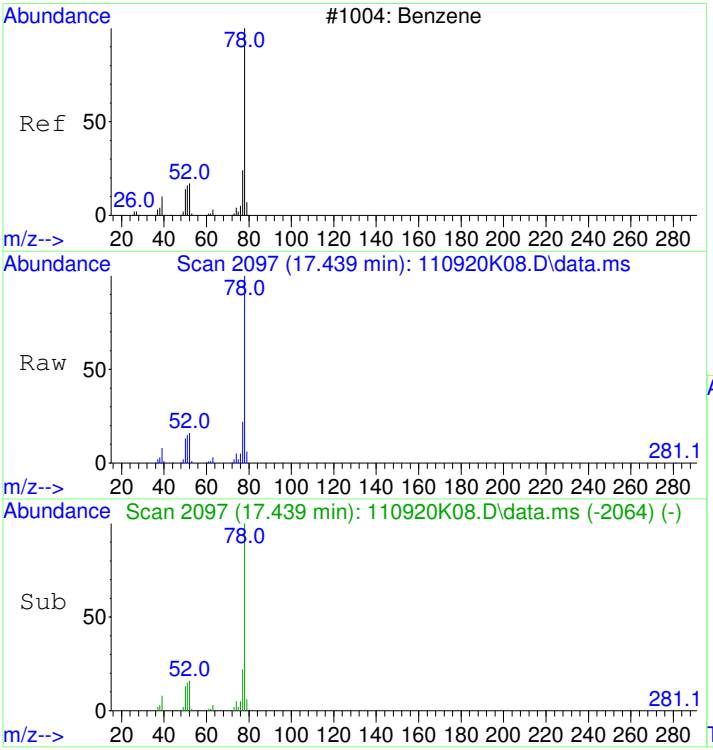


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:114 Resp: 661746

Ion	Ratio	Lower	Upper
114	100		
63	19.5	0.0	39.5
88	14.7	0.0	34.7

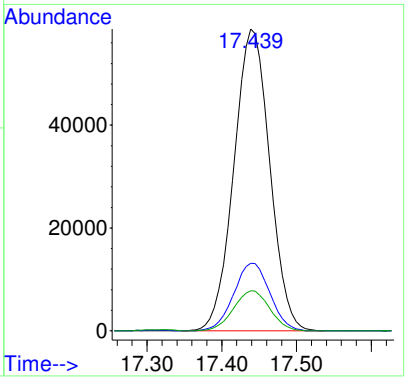


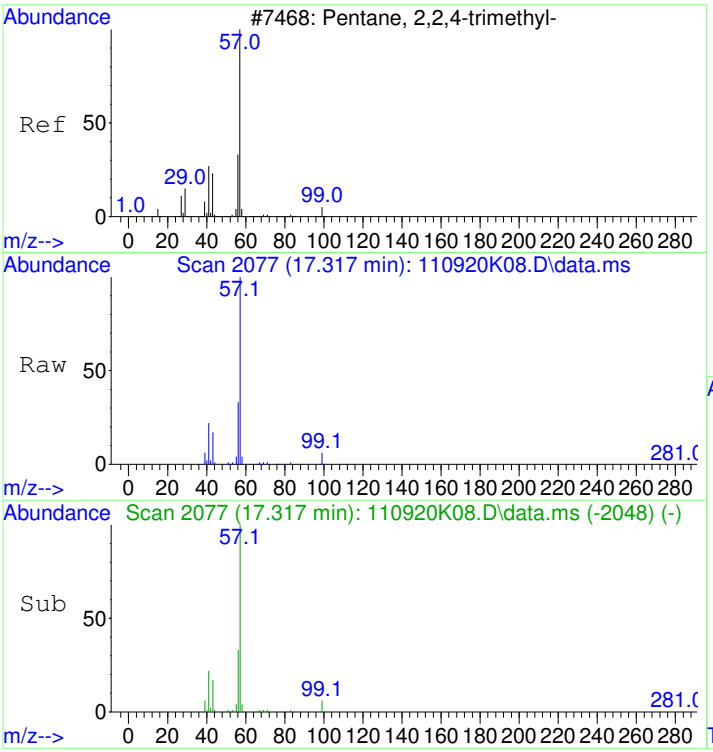


#33
Benzene
Concen: 9.76 ppbv
RT: 17.439 min Scan# 2097
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 78 Resp: 195511

Ion	Ratio	Lower	Upper
78	100		
77	22.6	2.6	42.6
50	13.4	0.0	33.4

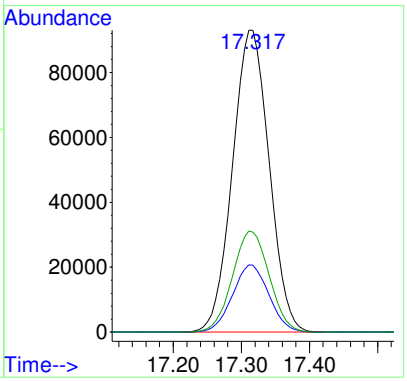


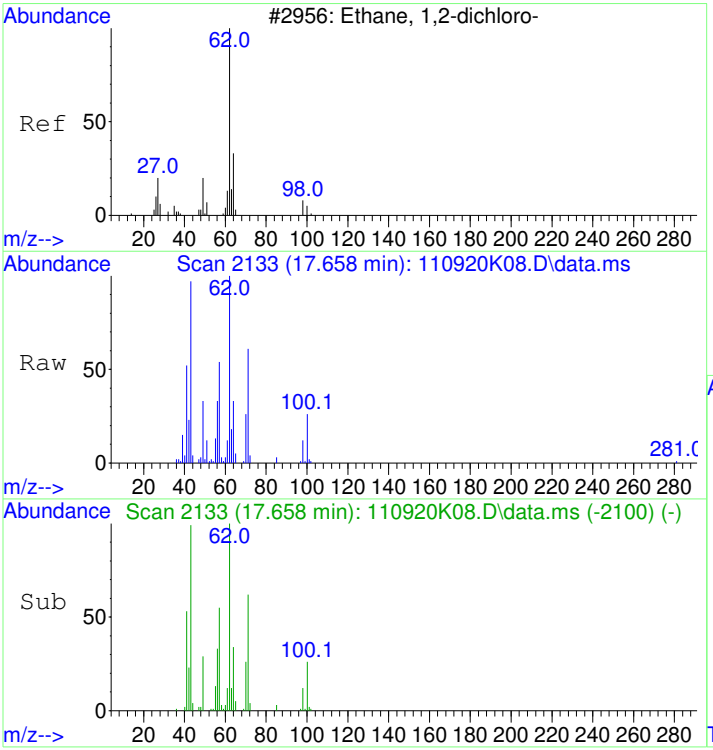


#34
2,2,4-Trimethylpentane
Concen: 9.90 ppbv
RT: 17.317 min Scan# 2077
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 57 Resp: 346758

Ion	Ratio	Lower	Upper
57	100		
41	22.1	2.1	42.1
56	33.5	13.5	53.5

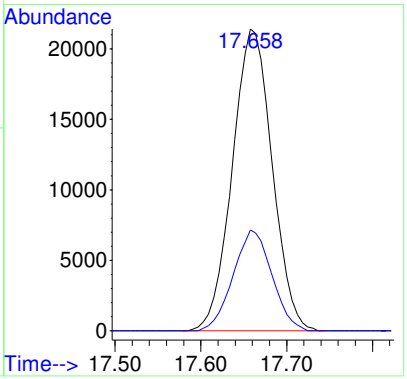


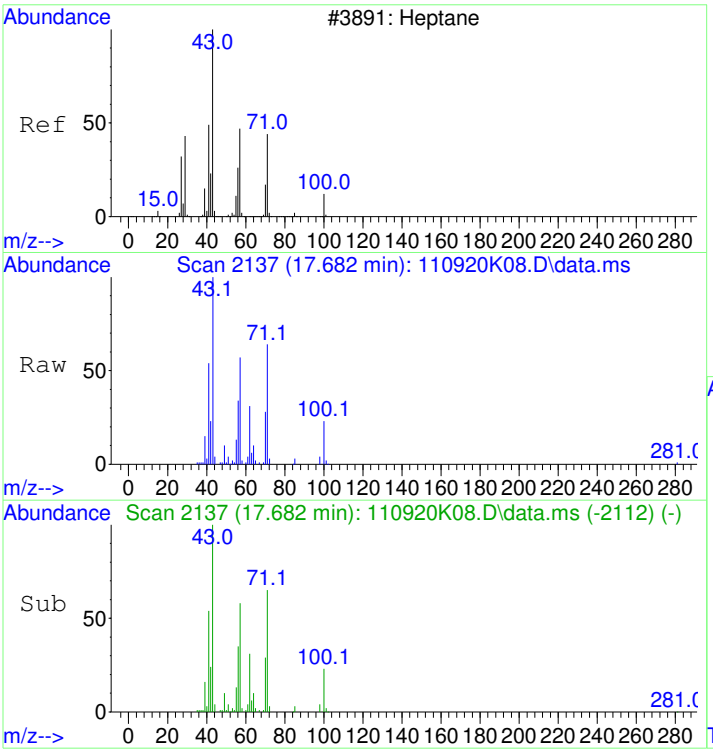


#35
1,2-Dichloroethane
Concen: 9.20 ppbv
RT: 17.658 min Scan# 2133
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 62 Resp: 69059

Ion	Ratio	Lower	Upper
62	100		
64	32.4	12.4	52.4

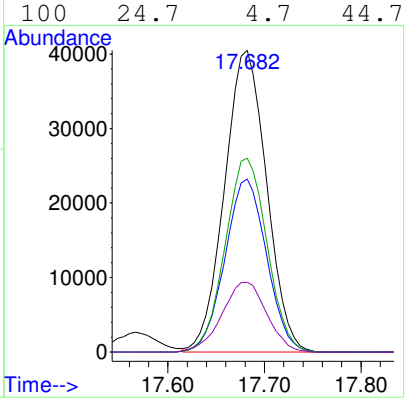


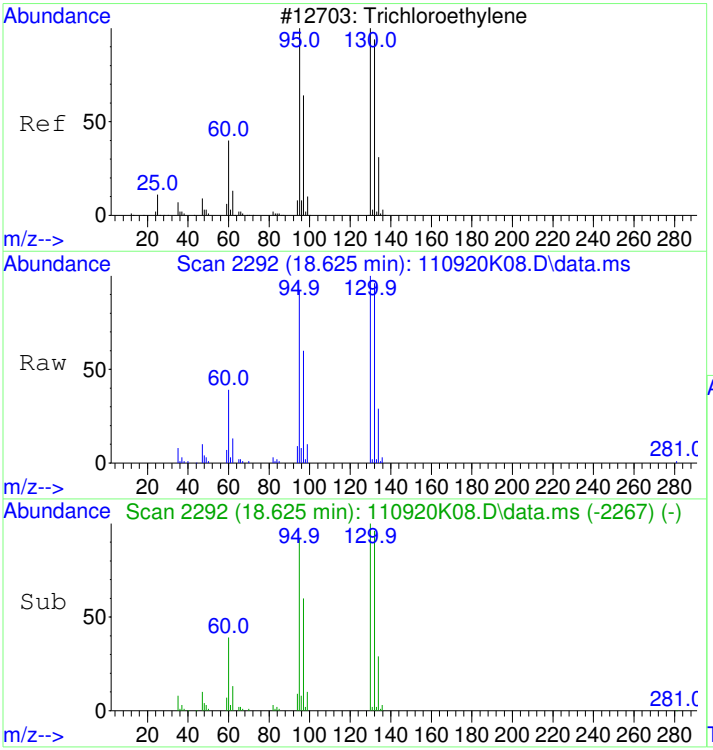


#36
Heptane
Concen: 9.63 ppbv
RT: 17.682 min Scan# 2137
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 43 Resp: 122776

Ion	Ratio	Lower	Upper
43	100		
57	56.9	36.9	76.9
71	63.9	43.9	83.9
100	24.7	4.7	44.7

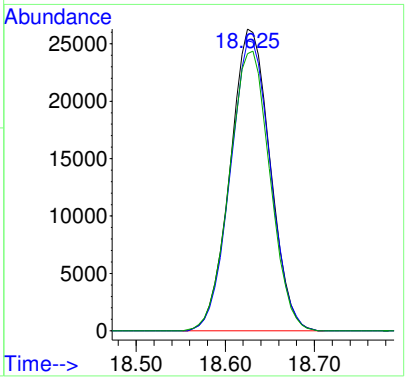


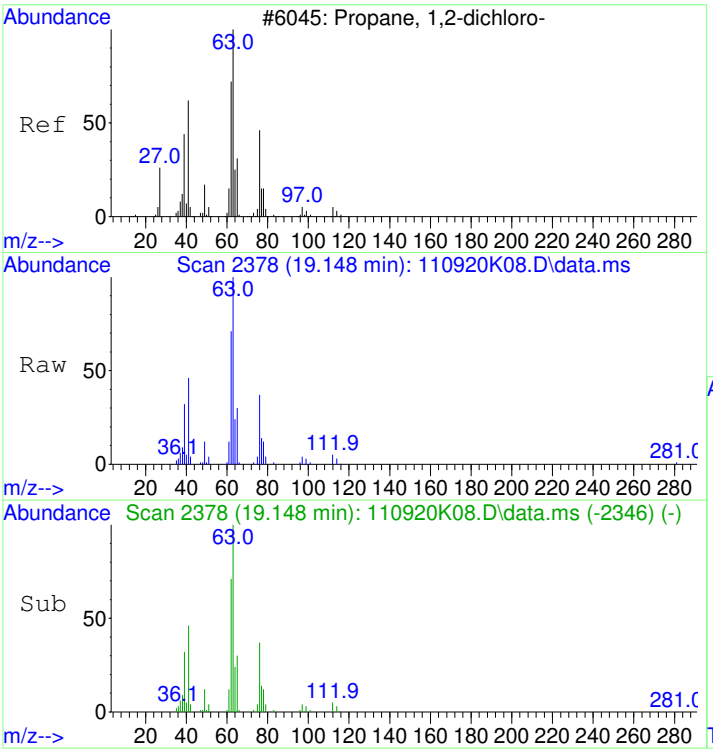


#37
Trichloroethene
Concen: 9.76 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:130 Resp: 81587

Ion	Ratio	Lower	Upper
130	100		
132	96.3	76.3	116.3
95	94.0	74.0	114.0

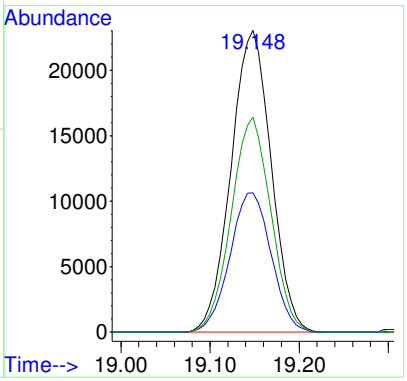


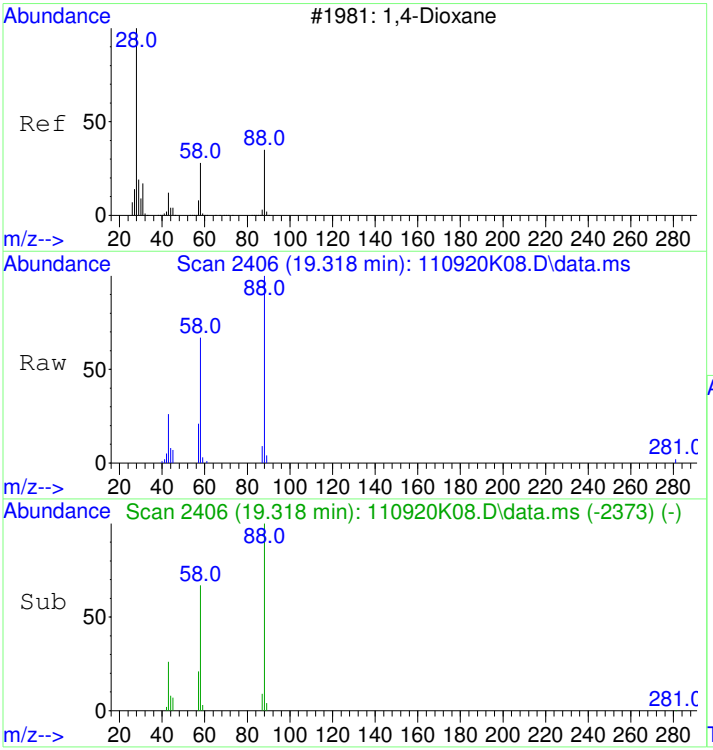


#38
1,2-Dichloropropane
Concen: 9.53 ppbv
RT: 19.148 min Scan# 2378
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 63 Resp: 71896

Ion	Ratio	Lower	Upper
63	100		
41	47.4	27.4	67.4
62	70.3	50.3	90.3

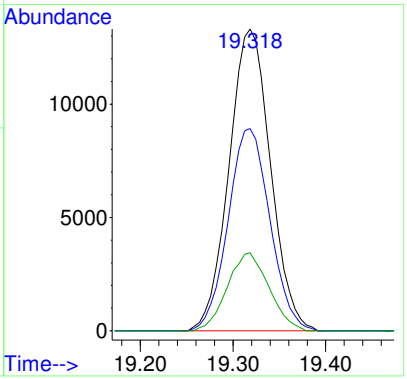


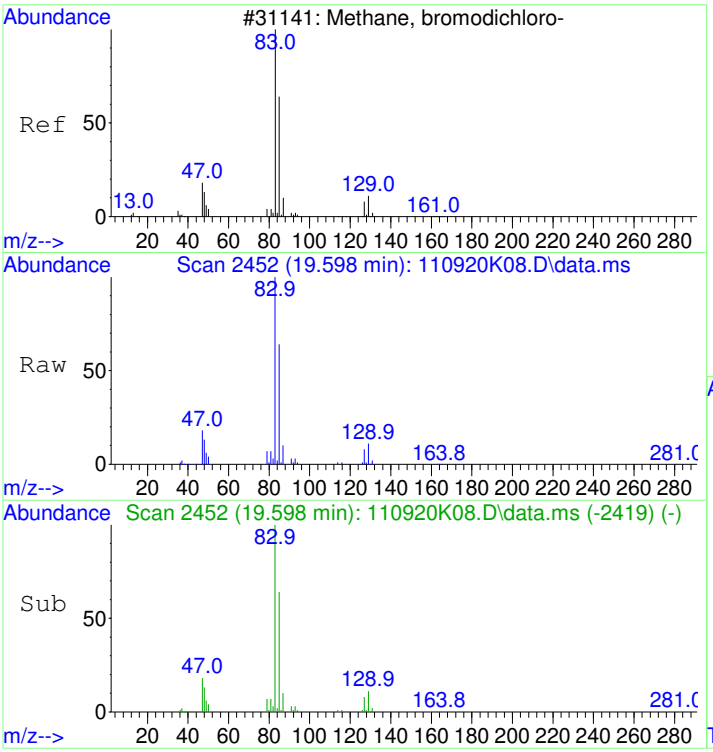


#39
1,4-Dioxane
Concen: 9.47 ppbv
RT: 19.318 min Scan# 2406
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 88 Resp: 41428

Ion	Ratio	Lower	Upper
88	100		
58	67.4	47.4	87.4
43	25.9	5.9	45.9

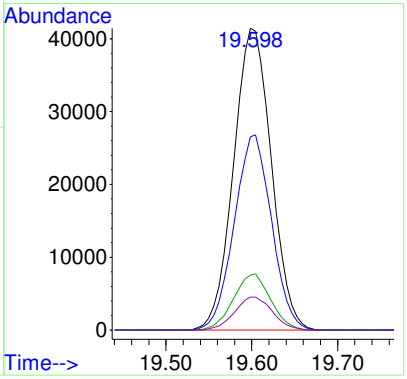


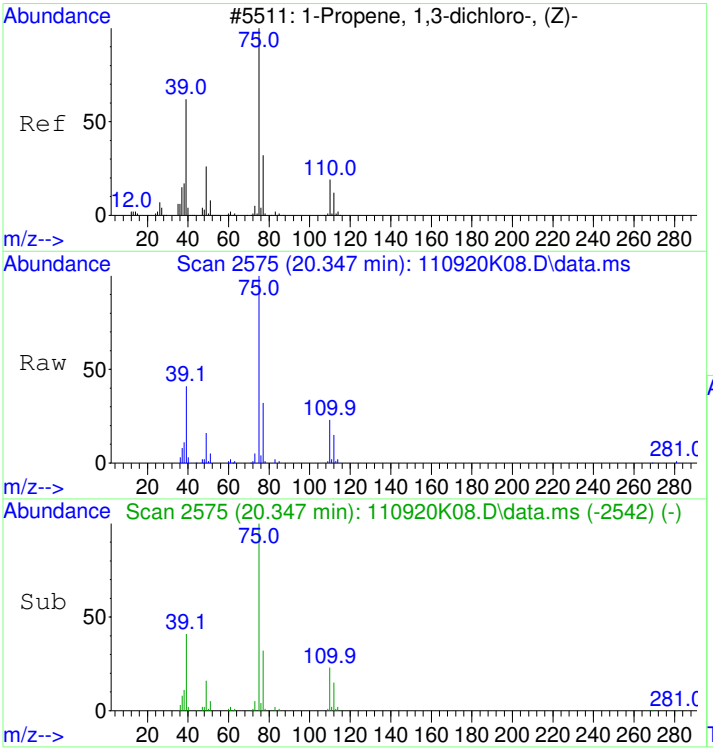


#40
Bromodichloromethane
Concen: 9.58 ppbv
RT: 19.598 min Scan# 2452
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 83 Resp: 126864

Ion	Ratio	Lower	Upper
83	100		
85	63.8	43.8	83.8
47	18.3	0.0	38.3
129	10.9	0.0	30.9

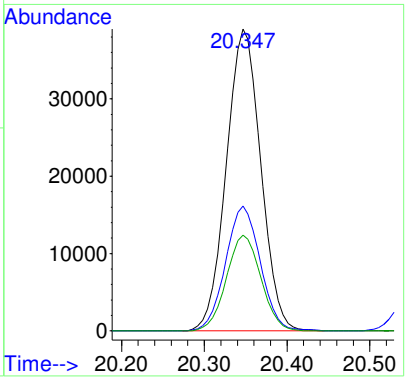


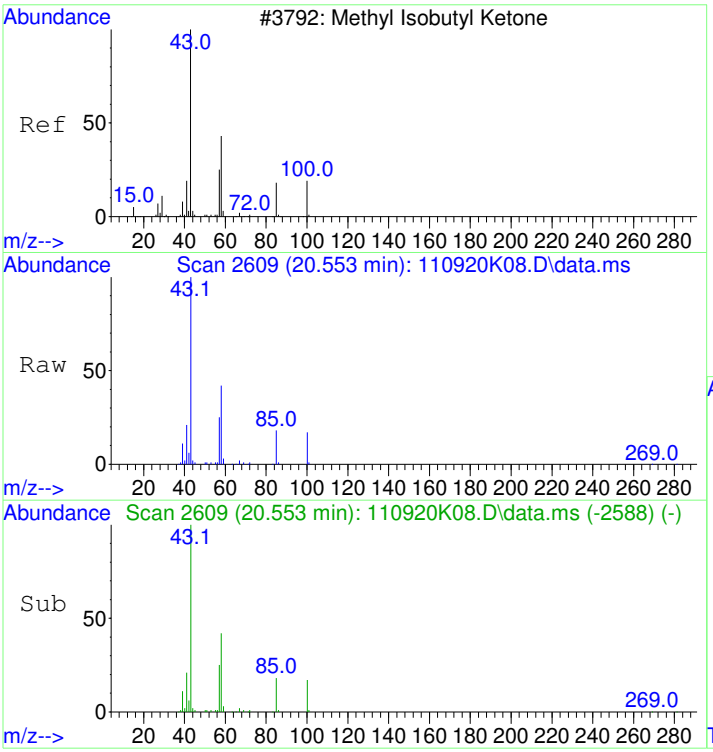


#41
cis-1,3-Dichloropropene
Concen: 9.93 ppbv
RT: 20.347 min Scan# 2575
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 75 Resp: 112888

Ion	Ratio	Lower	Upper
75	100		
39	41.7	21.7	61.7
77	31.7	11.7	51.7

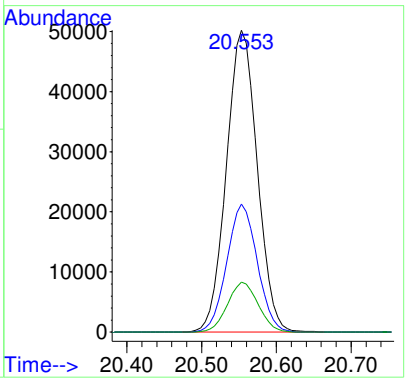


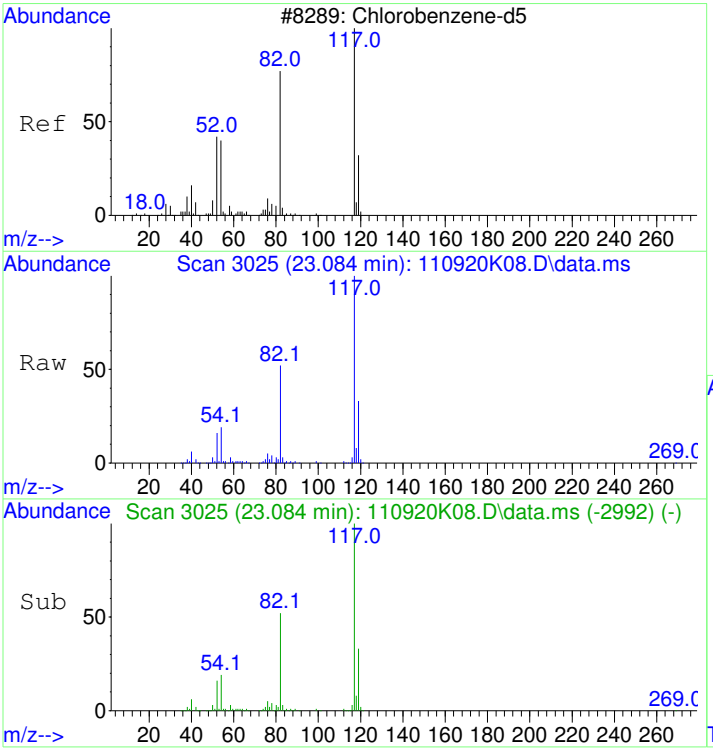


#42
4-Methyl-2-pentanone (MIBK)
Concen: 8.92 ppbv
RT: 20.553 min Scan# 2609
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 43 Resp: 144121

Ion	Ratio	Lower	Upper
43	100		
58	41.7	21.7	61.7
100	16.4	0.0	36.4

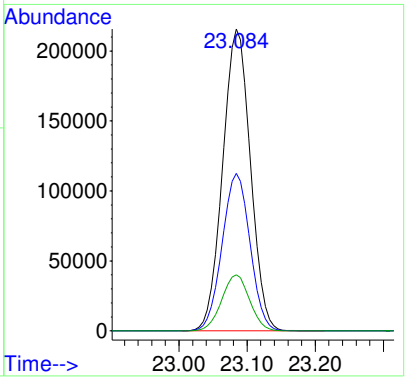


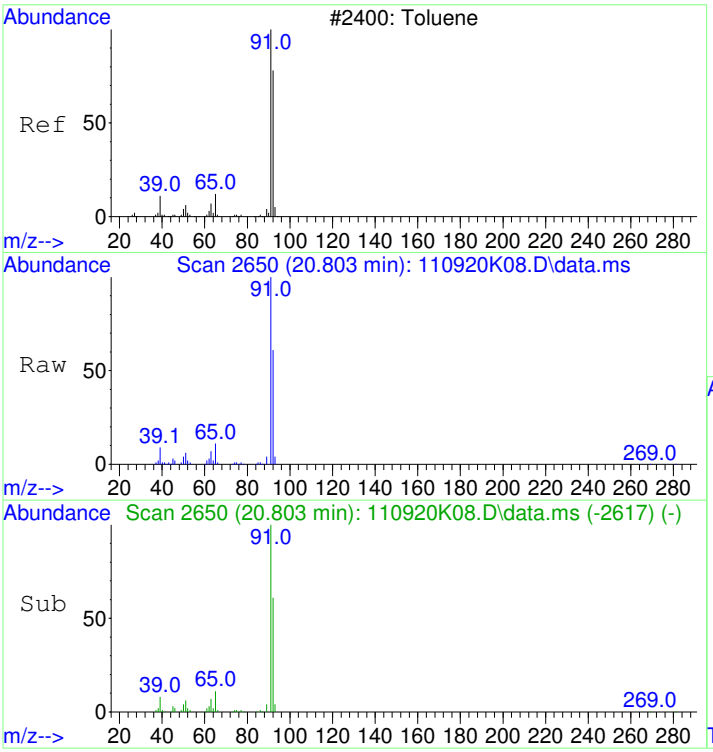


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:117 Resp: 608048

Ion	Ratio	Lower	Upper
117	100		
82	52.3	32.3	72.3
54	18.6	0.0	38.6

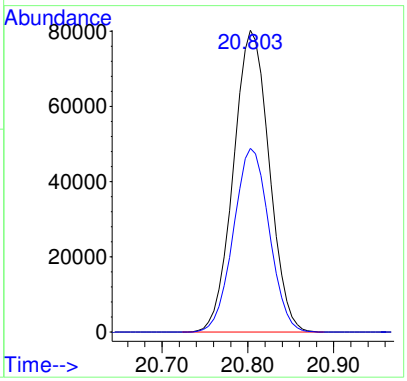


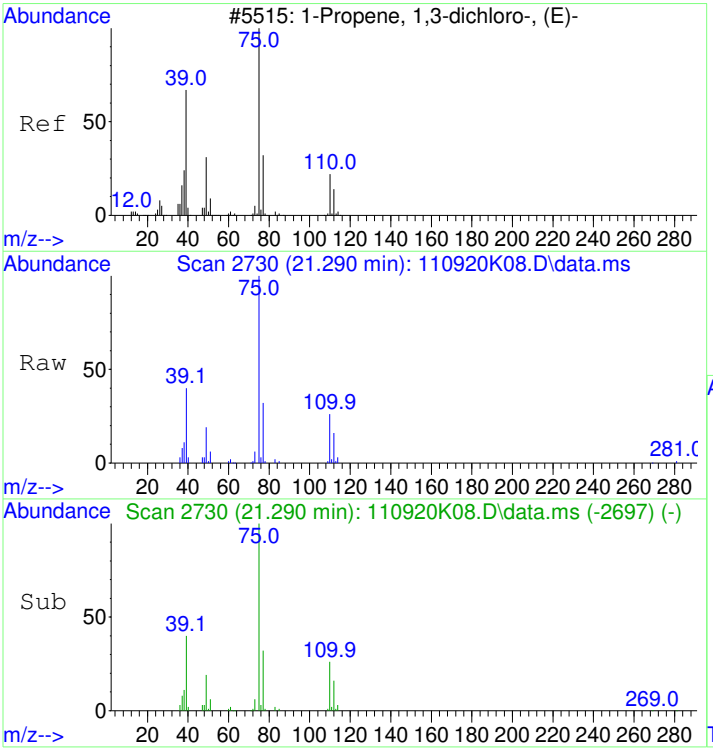


#44
Toluene
Concen: 9.67 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 91 Resp: 232305

Ion	Ratio	Lower	Upper
91	100		
92	60.8	40.8	80.8

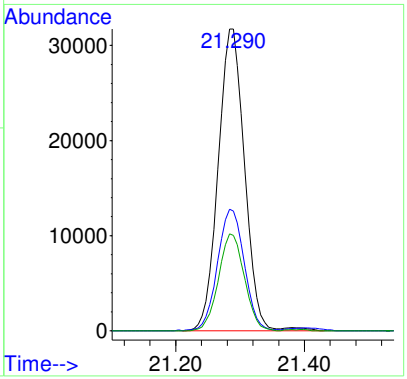


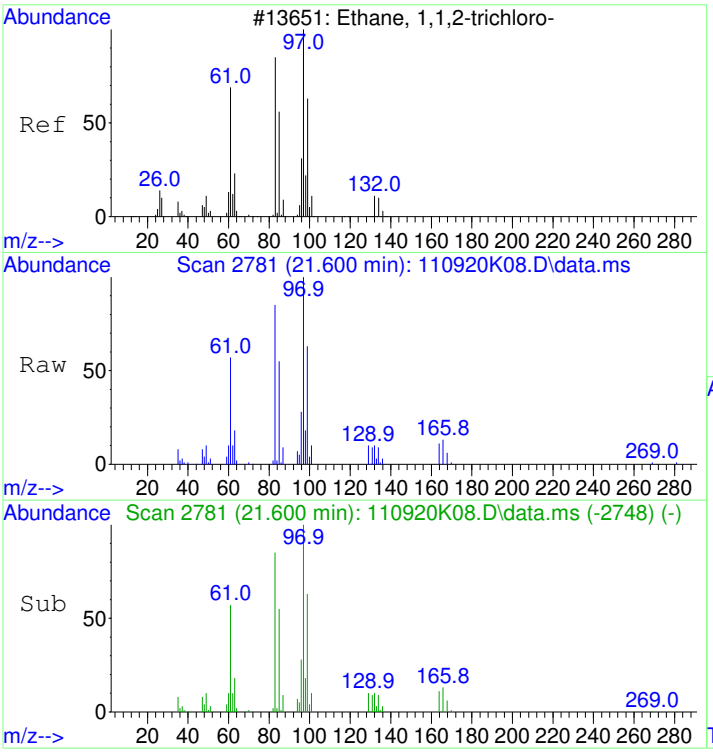


#45
trans-1,3-Dichloropropene
Concen: 8.66 ppbv
RT: 21.290 min Scan# 2730
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 75 Resp: 90537

Ion	Ratio	Lower	Upper
75	100		
39	42.0	22.0	62.0
77	31.4	11.4	51.4

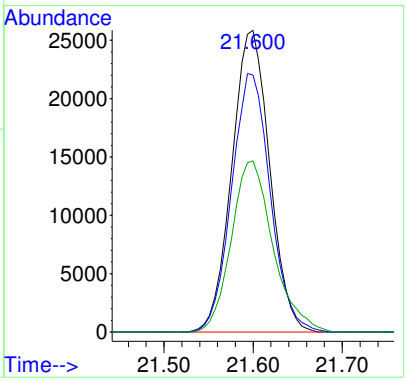


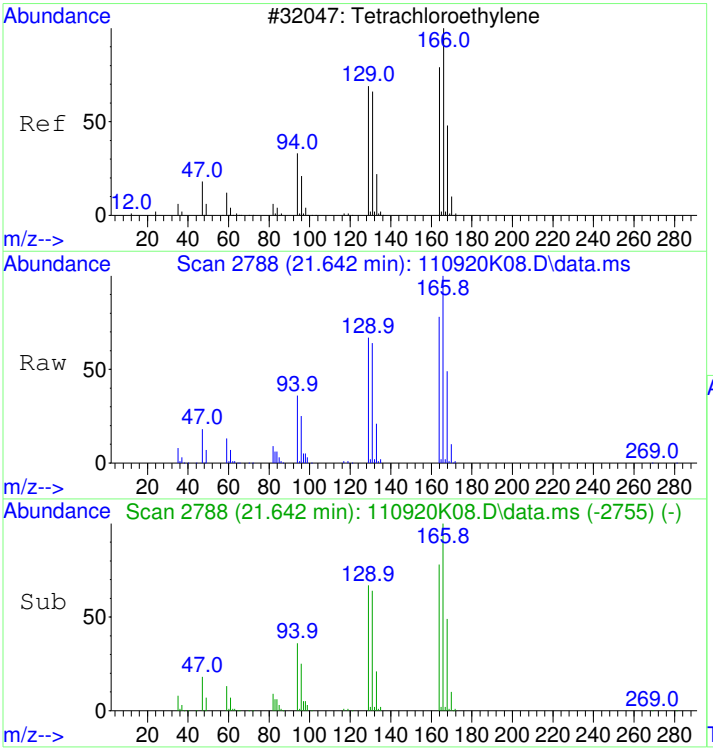


#46
1,1,2-Trichloroethane
Concen: 9.83 ppbv
RT: 21.600 min Scan# 2781
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 97 Resp: 76149

Ion	Ratio	Lower	Upper
97	100		
83	87.6	67.6	107.6
61	62.5	42.5	82.5

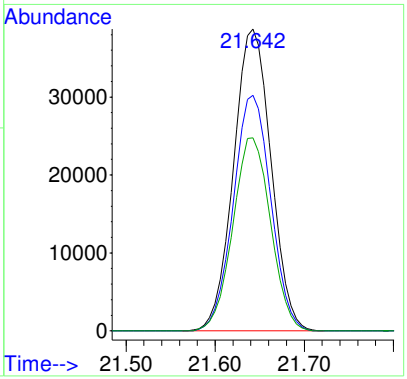


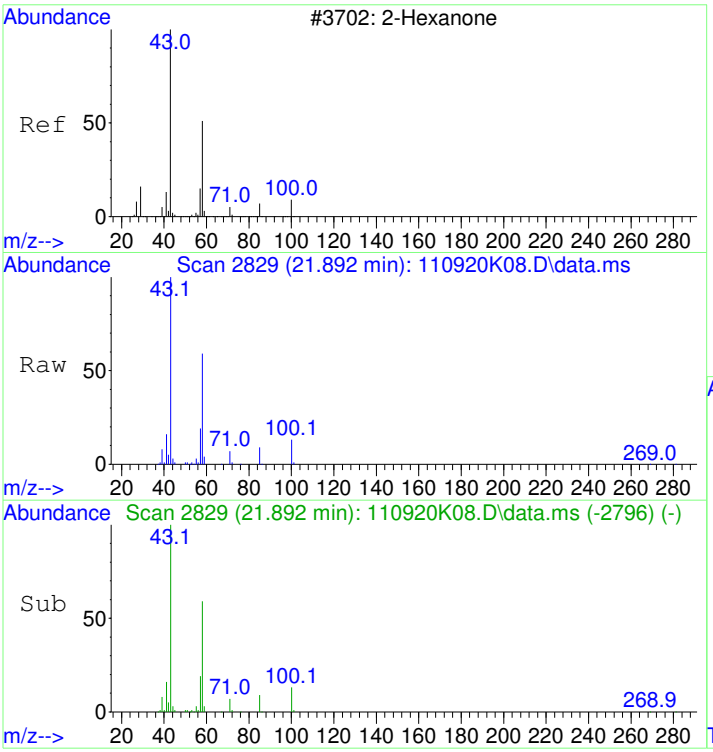


#47
Tetrachloroethene
Concen: 9.42 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:166 Resp: 113108

Ion	Ratio	Lower	Upper
166	100		
164	77.8	57.8	97.8
131	64.1	44.1	84.1

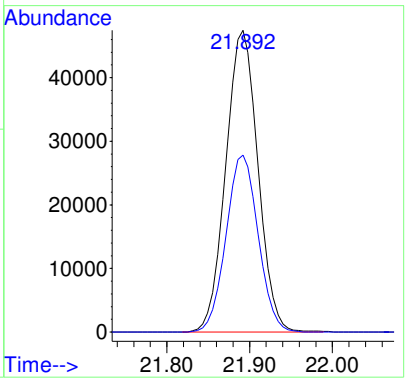


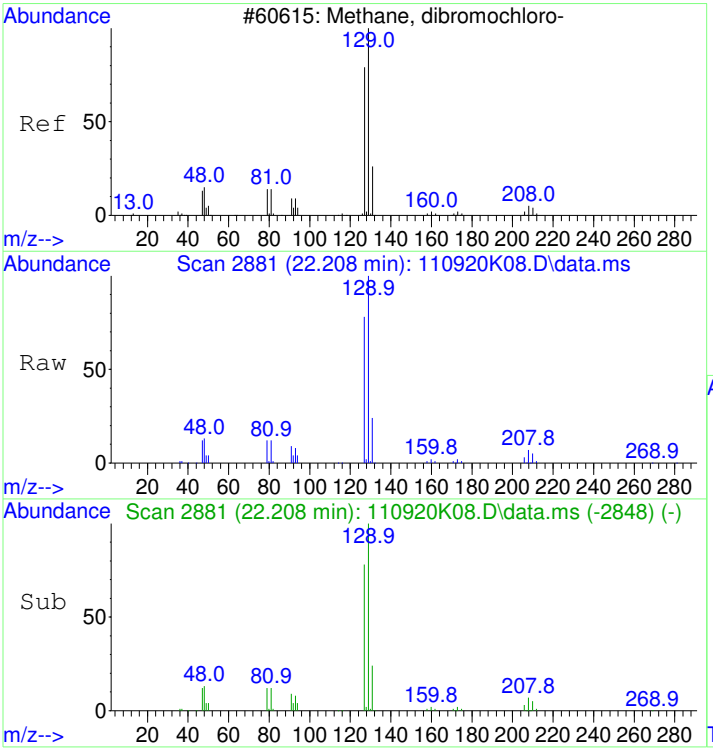


#48
2-Hexanone
Concen: 8.39 ppbv
RT: 21.892 min Scan# 2829
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 43 Resp: 128327

Ion	Ratio	Lower	Upper
43	100		
58	58.5	38.5	78.5

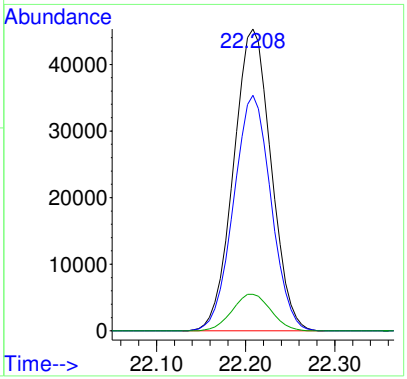


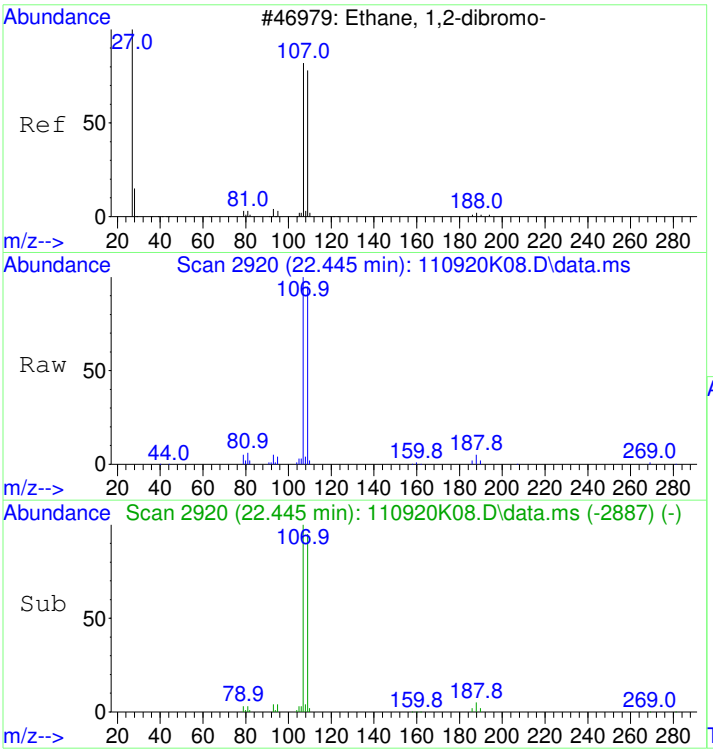


#49
Chlorodibromomethane
Concen: 9.64 ppbv
RT: 22.208 min Scan# 2881
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:129 Resp: 132367

Ion	Ratio	Lower	Upper
129	100		
127	77.7	57.7	97.7
79	12.5	0.0	32.5

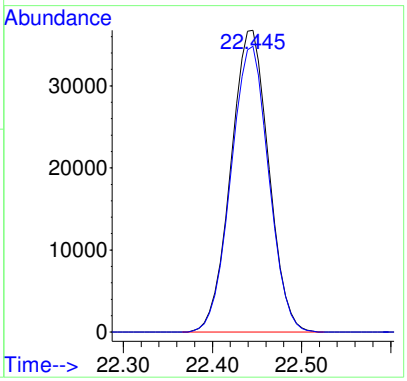


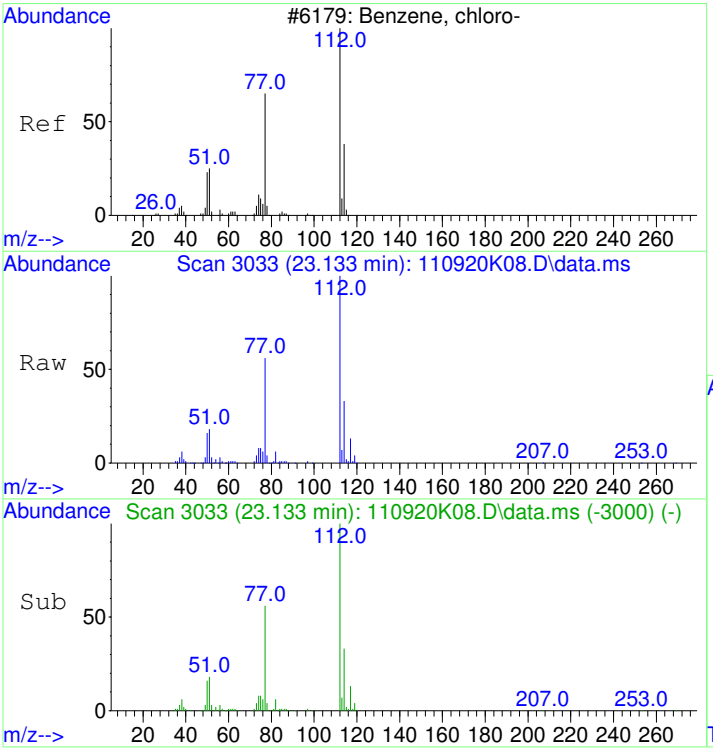


#50
1,2-Dibromoethane (EDB)
Concen: 9.72 ppbv
RT: 22.445 min Scan# 2920
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:107 Resp: 108055

Ion	Ratio	Lower	Upper
107	100		
109	94.5	74.5	114.5

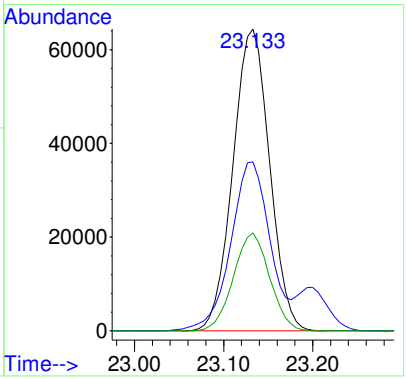


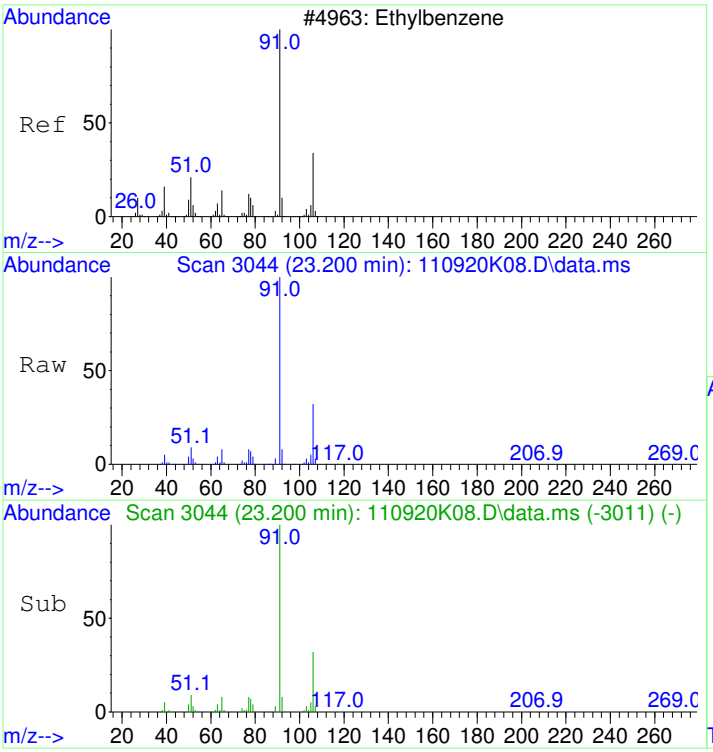


#51
Chlorobenzene
Concen: 9.68 ppbv
RT: 23.133 min Scan# 3033
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:112 Resp: 183760

Ion	Ratio	Lower	Upper
112	100		
77	72.2	52.2	92.2
114	31.9	11.9	51.9

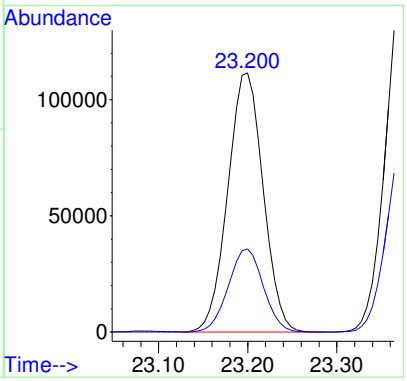


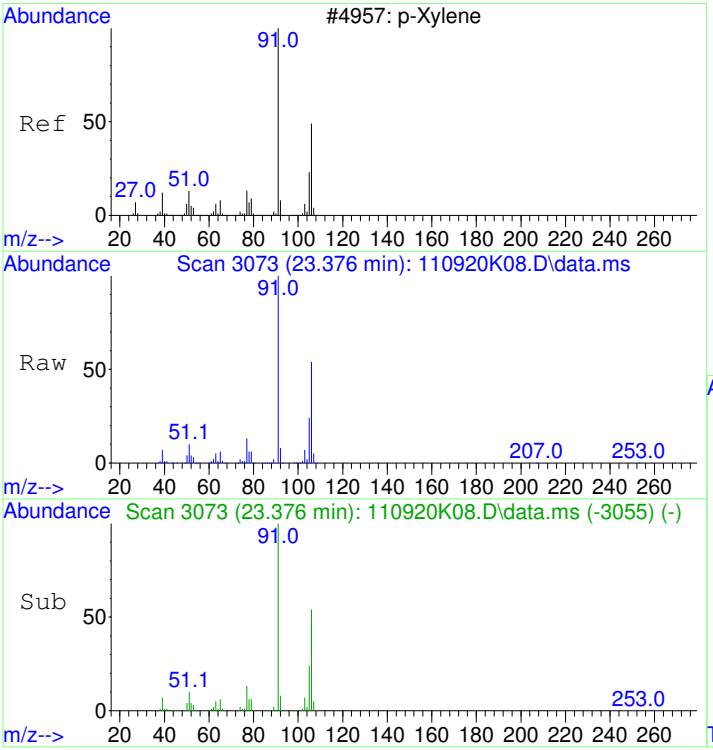


#52
Ethylbenzene
Concen: 9.66 ppbv
RT: 23.200 min Scan# 3044
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 91 Resp: 306442

Ion	Ratio	Lower	Upper
91	100		
106	31.8	11.8	51.8

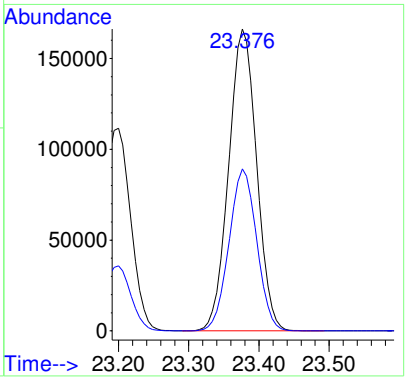


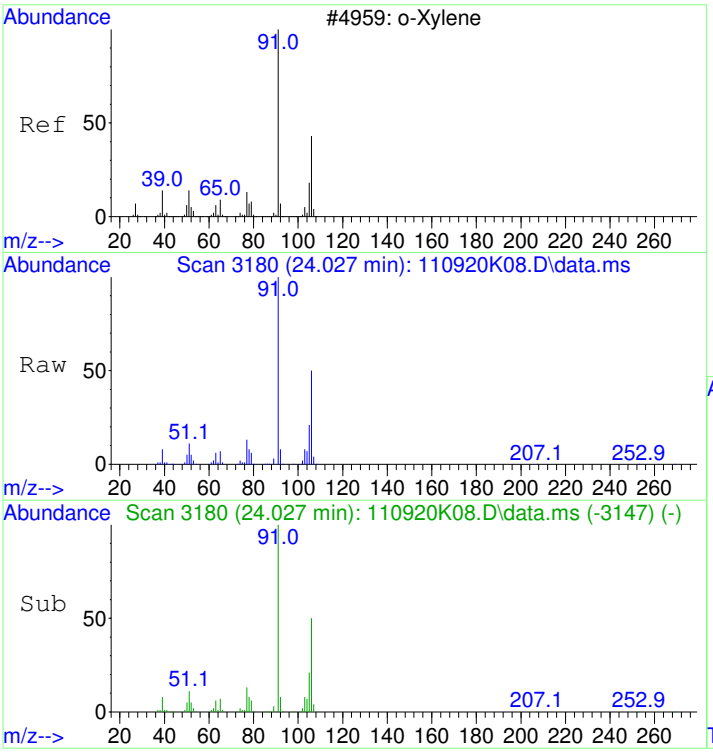


#53
m&p-Xylene
Concen: 19.20 ppbv
RT: 23.376 min Scan# 3073
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 91 Resp: 459896

Ion	Ratio	Lower	Upper
91	100		
106	53.1	33.1	73.1

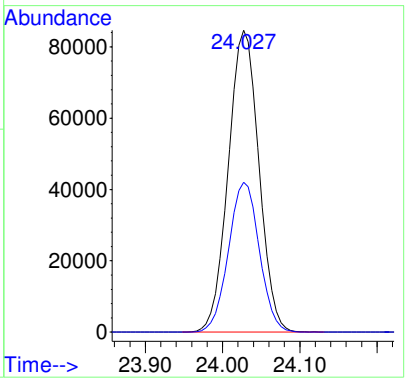


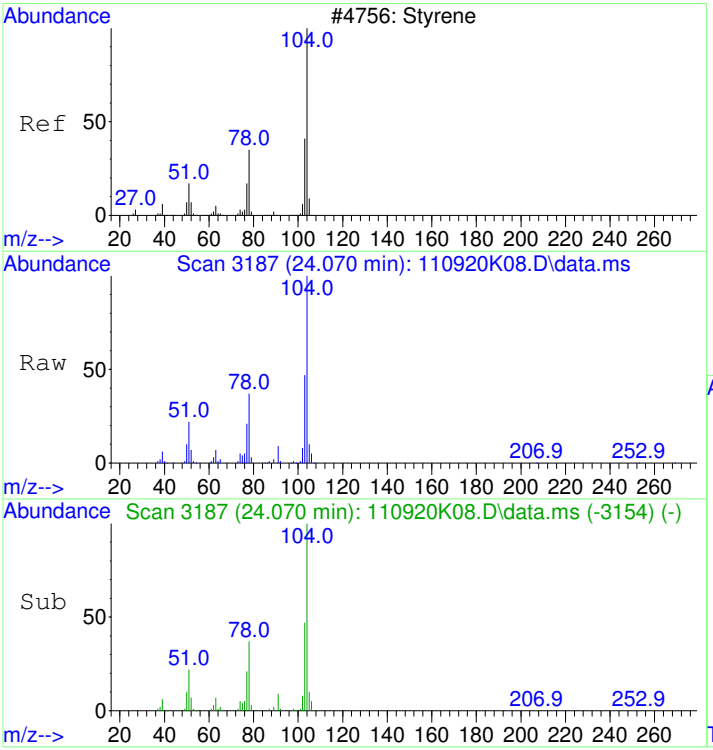


#54
o-Xylene
Concen: 9.46 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 91 Resp: 233514

Ion	Ratio	Lower	Upper
91	100		
106	49.9	29.9	69.9

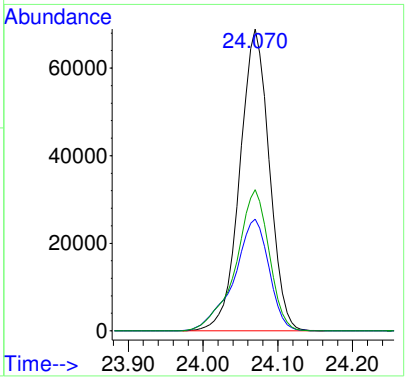


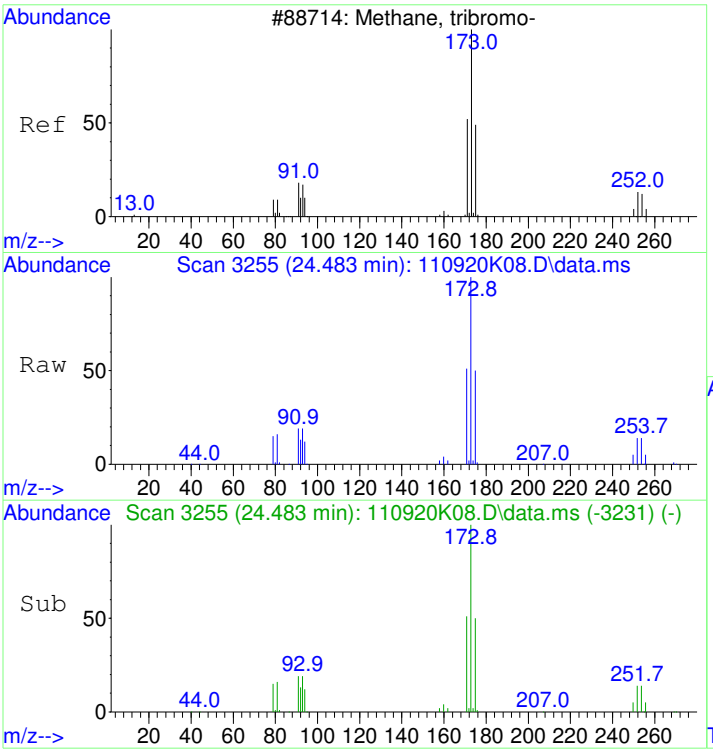


#55
Styrene
Concen: 9.77 ppbv
RT: 24.070 min Scan# 3187
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:104 Resp: 188510

Ion	Ratio	Lower	Upper
104	100		
78	44.1	24.1	64.1
103	52.7	32.7	72.7

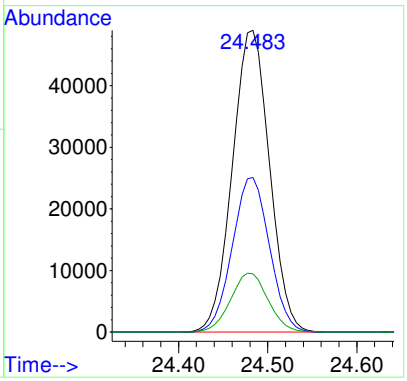


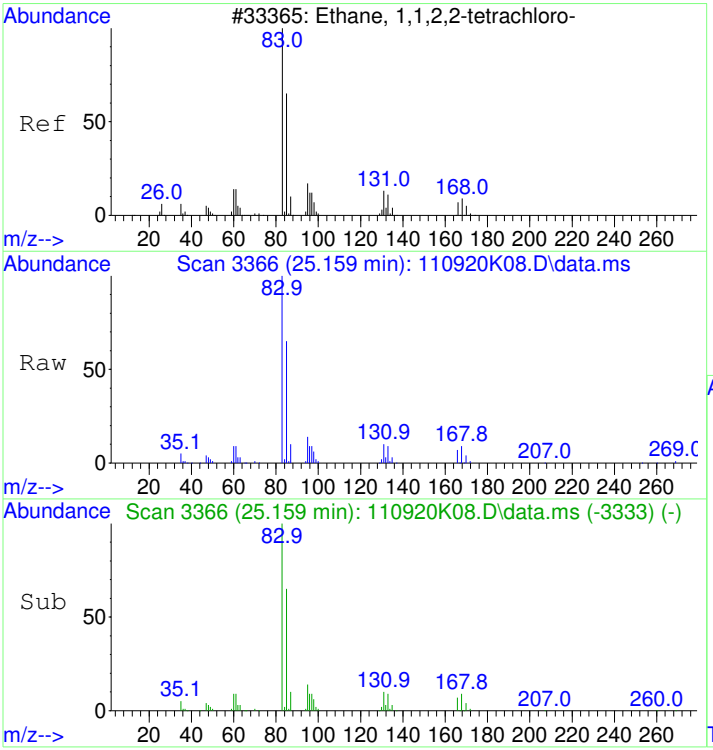


#56
Bromoform
Concen: 10.02 ppbv
RT: 24.483 min Scan# 3255
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:173 Resp: 141441

Ion	Ratio	Lower	Upper
173	100		
171	51.3	31.3	71.3
91	19.8	0.0	39.8

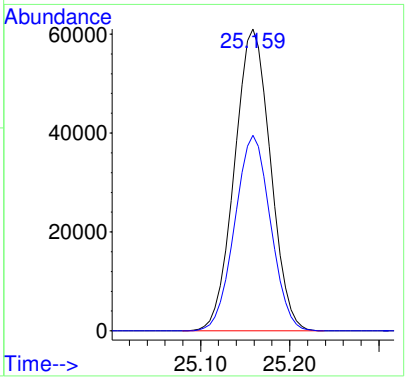


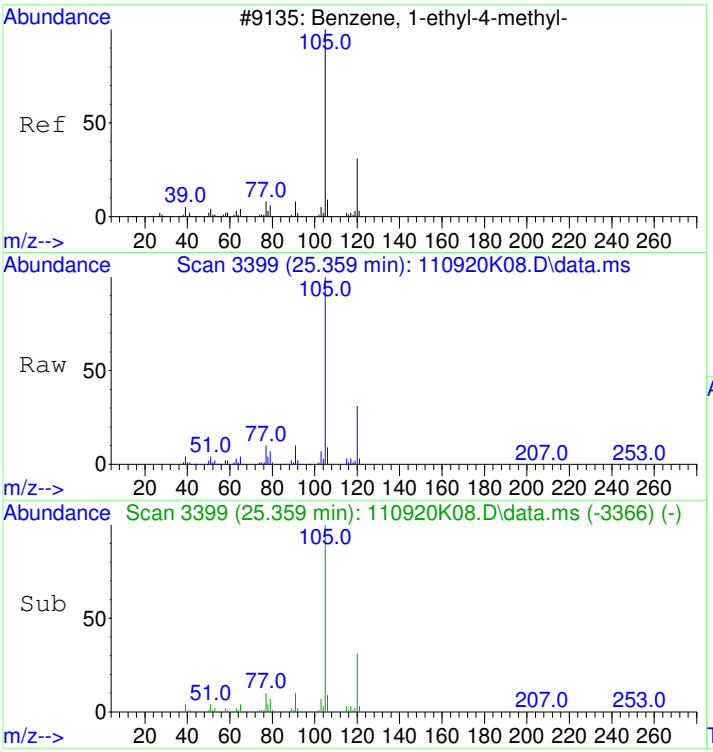


#57
1,1,2,2-Tetrachloroethane
Concen: 9.49 ppbv
RT: 25.159 min Scan# 3366
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 83 Resp: 170682

Ion	Ratio	Lower	Upper
83	100		
85	64.4	44.4	84.4

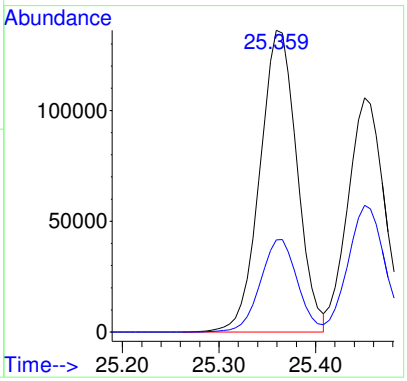


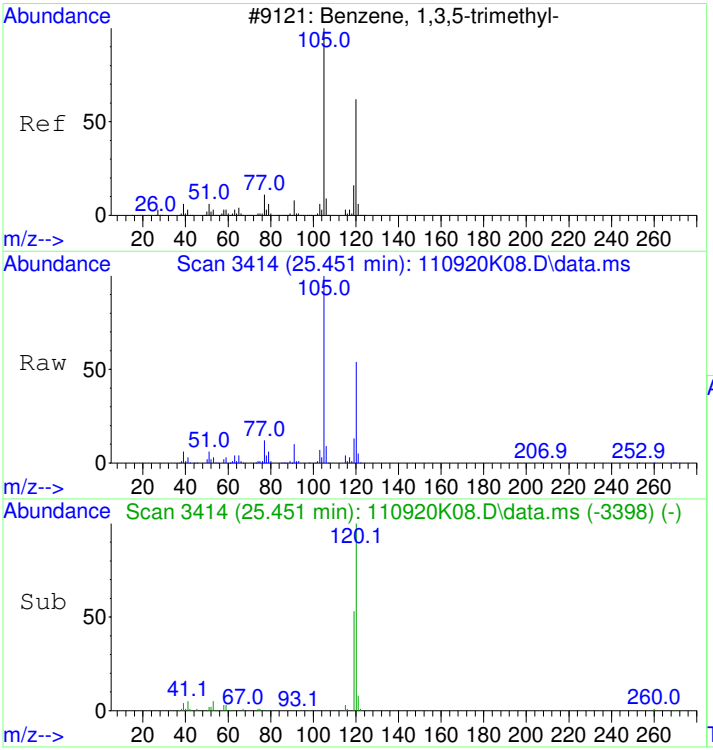


#58
4-Ethyltoluene
Concen: 9.11 ppbv
RT: 25.359 min Scan# 3399
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:105 Resp: 363099

Ion	Ratio	Lower	Upper
105	100		
120	30.8	10.8	50.8

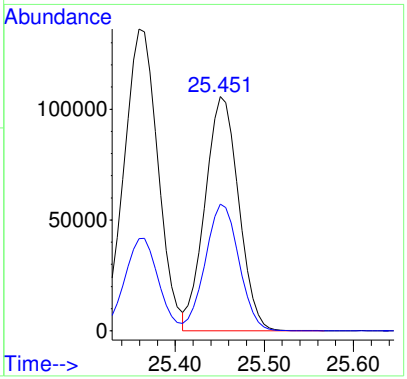


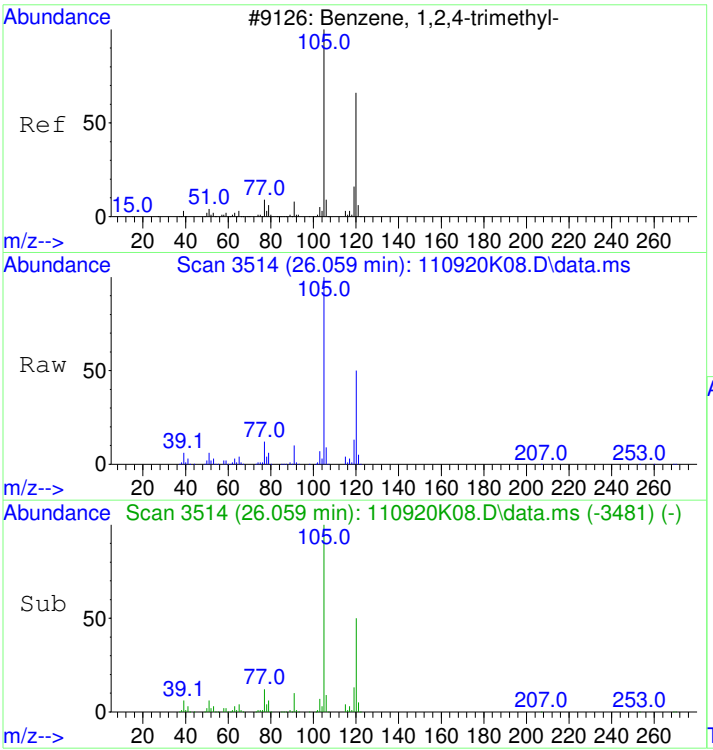


#59
1,3,5-Trimethylbenzene
Concen: 9.50 ppbv
RT: 25.451 min Scan# 3414
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:105 Resp: 277691

Ion	Ratio	Lower	Upper
105	100		
120	54.0	34.0	74.0

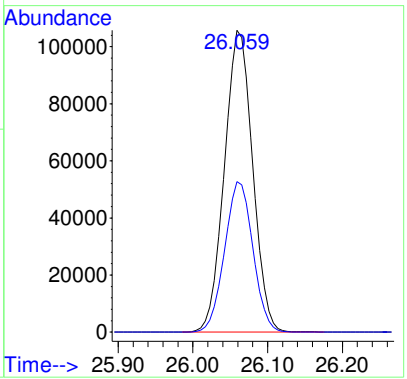


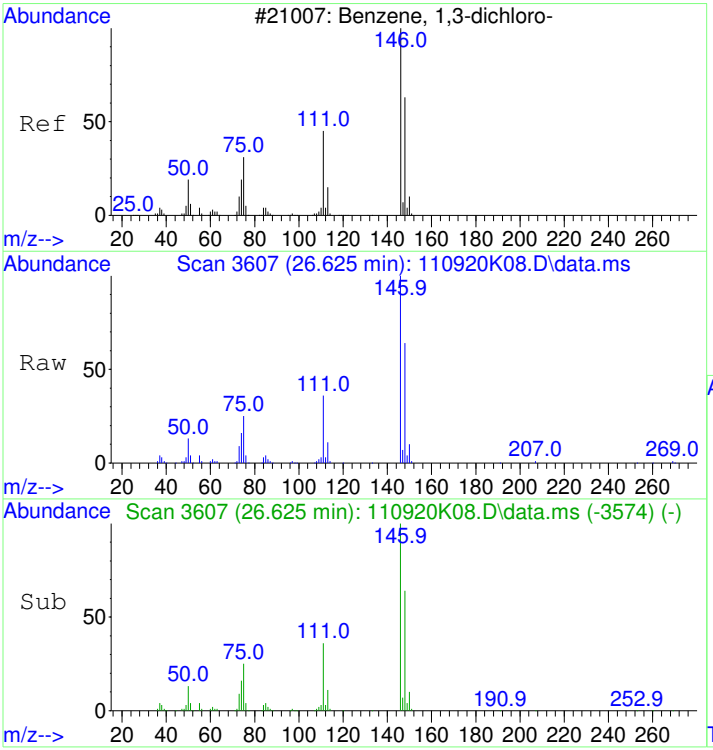


#60
1,2,4-Trimethylbenzene
Concen: 9.42 ppbv
RT: 26.059 min Scan# 3514
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:105 Resp: 277315

Ion	Ratio	Lower	Upper
105	100		
120	49.8	29.8	69.8

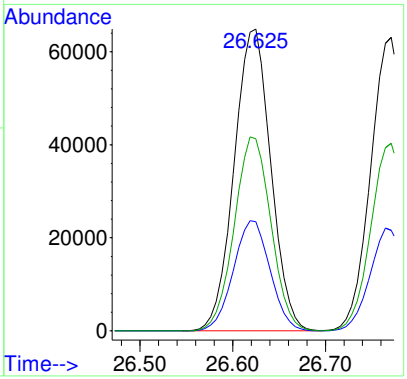


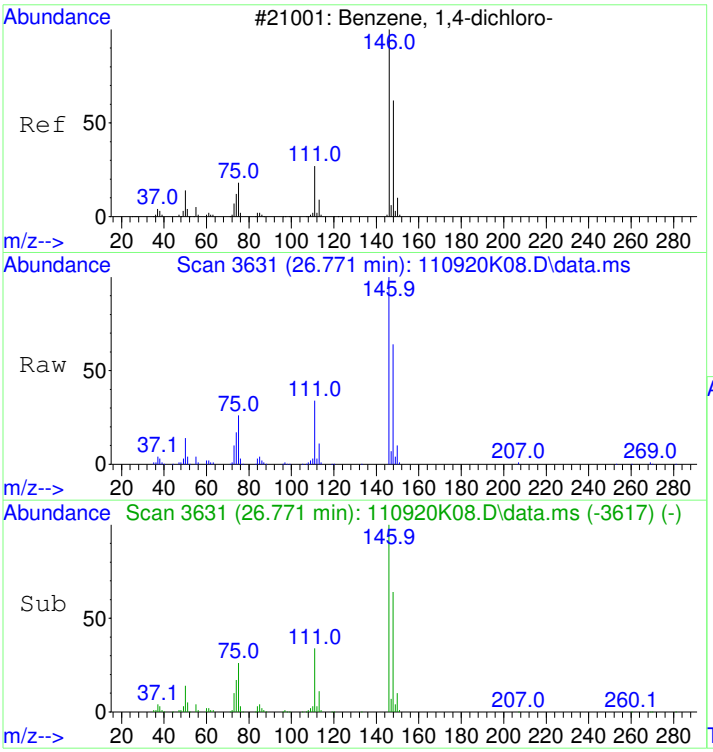


#61
1,3-Dichlorobenzene
Concen: 8.89 ppbv
RT: 26.625 min Scan# 3607
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:146 Resp: 178396

Ion	Ratio	Lower	Upper
146	100		
111	36.5	16.5	56.5
148	64.2	44.2	84.2

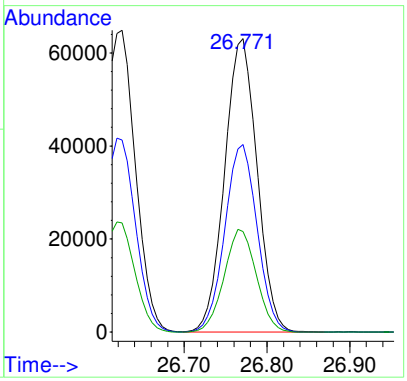


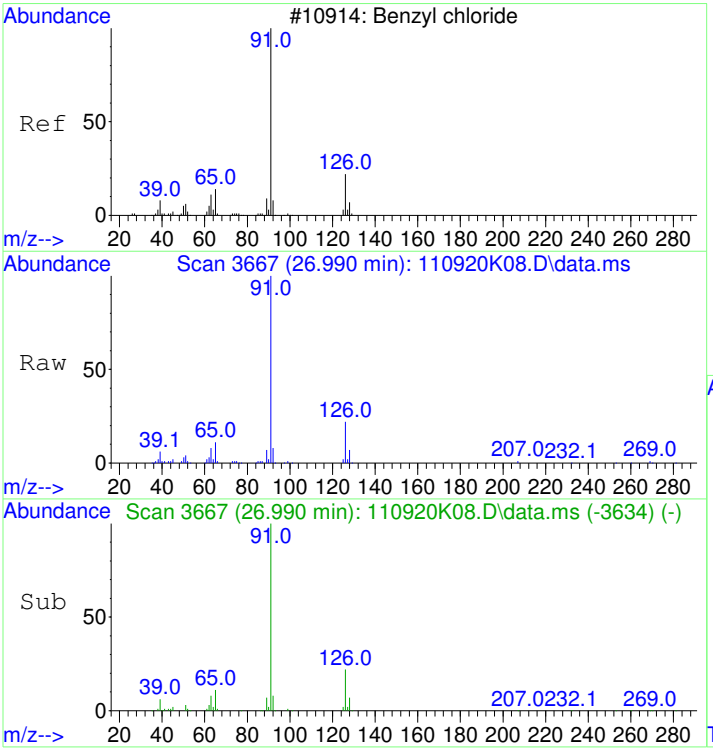


#62
1,4-Dichlorobenzene
Concen: 8.91 ppbv
RT: 26.771 min Scan# 3631
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:146 Resp: 172264

Ion	Ratio	Lower	Upper
146	100		
148	63.7	43.7	83.7
111	34.6	14.6	54.6

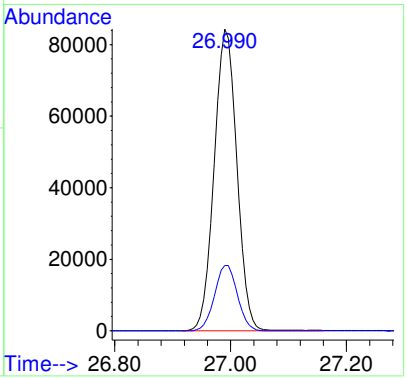


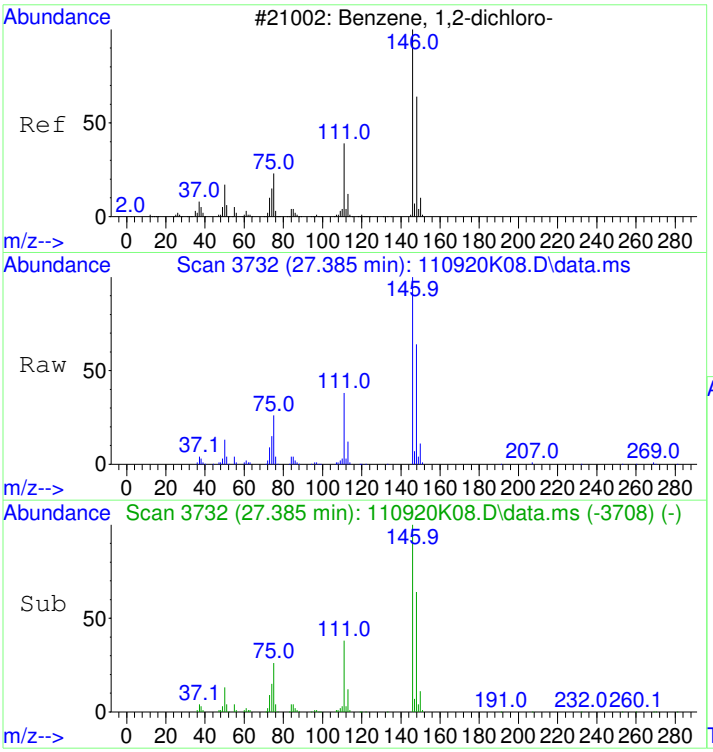


#63
Benzyl chloride
Concen: 8.93 ppbv
RT: 26.990 min Scan# 3667
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion: 91 Resp: 229888

Ion	Ratio	Lower	Upper
91	100		
126	21.8	1.8	41.8

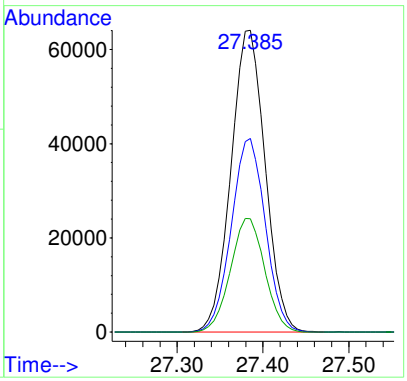


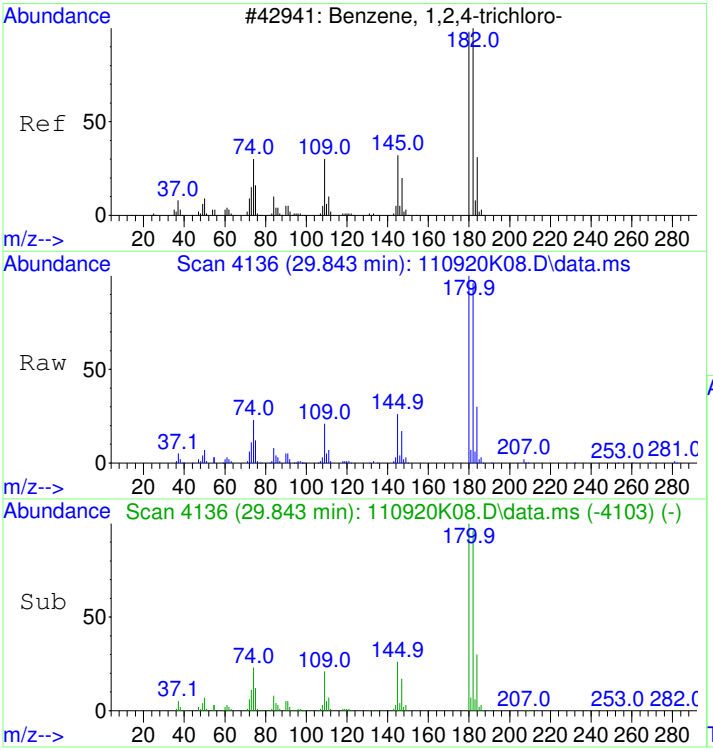


#64
1,2-Dichlorobenzene
Concen: 8.99 ppbv
RT: 27.385 min Scan# 3732
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:146 Resp: 177537

Ion	Ratio	Lower	Upper
146	100		
148	64.0	44.0	84.0
111	37.8	17.8	57.8

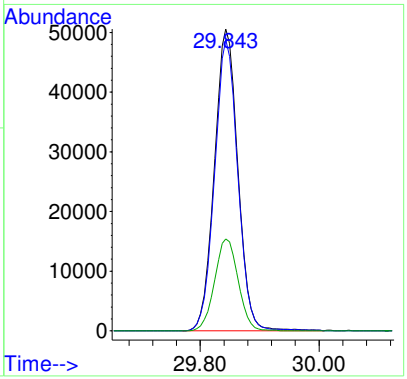


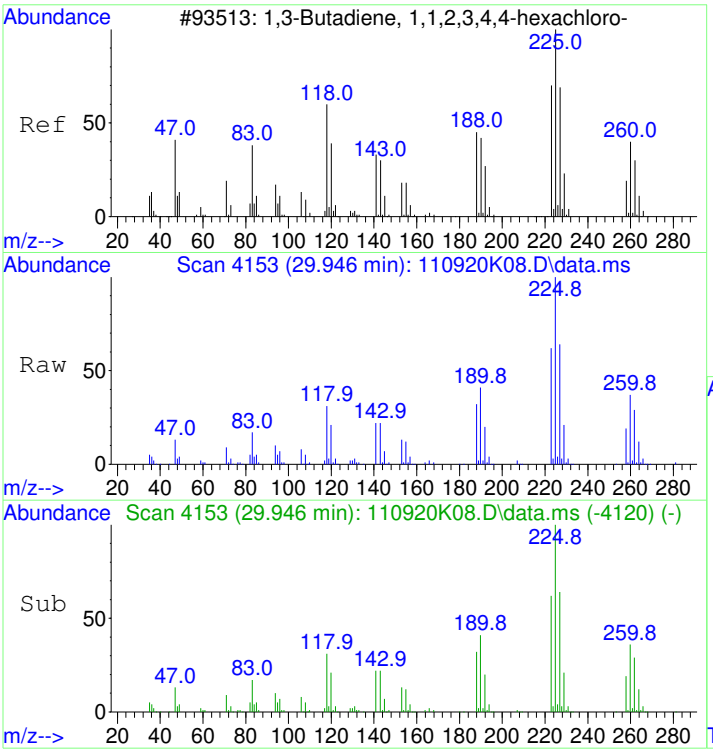


#65
1,2,4-Trichlorobenzene
Concen: 8.76 ppbv
RT: 29.843 min Scan# 4136
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:180 Resp: 138520

Ion	Ratio	Lower	Upper
180	100		
182	95.3	75.3	115.3
184	30.6	10.6	50.6

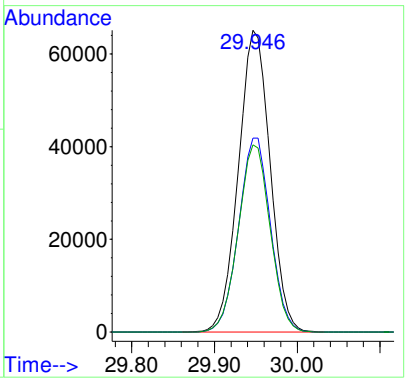




#66
Hexachlorobutadiene
Concen: 9.24 ppbv
RT: 29.946 min Scan# 4153
Delta R.T. 0.000 min
Lab File: 110920K08.D
Acq: 9 Nov 2020 10:06 pm

Tgt Ion:225 Resp: 173748

Ion	Ratio	Lower	Upper
225	100		
227	64.5	44.5	84.5
223	62.4	42.4	82.4



LSC Area Percent Report

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
Acq On : 9 Nov 2020 10:06 pm
Operator : LLH
Sample : S20K037-CAL4
Misc : 10ppbv 2045034
ALS Vial : 32 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\110920K_TO15AA.M
Title : TO15

Signal : TIC: 110920K08.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.004	43	53	61	rBB	41085	124954	6.71%	0.484%
2	5.113	61	71	82	rBB	68106	206492	11.08%	0.799%
3	5.503	117	135	157	rBB2	129669	474541	25.47%	1.837%
4	5.740	157	174	195	rBB2	24208	92117	4.94%	0.357%
5	6.087	220	231	239	rBB	23695	76178	4.09%	0.295%
6	6.184	239	247	259	rBB	40982	132834	7.13%	0.514%
7	7.255	405	423	445	rBB	29575	134844	7.24%	0.522%
8	7.620	467	483	506	rBB	14544	64200	3.45%	0.249%
9	8.265	576	589	599	rBB	19013	74390	3.99%	0.288%
10	10.388	911	938	1010	rBB3	80498	779880	41.86%	3.019%
11	11.093	1042	1054	1063	rBB	16752	67698	3.63%	0.262%
12	11.209	1065	1073	1088	rBB	30636	122855	6.59%	0.476%
13	11.604	1121	1138	1168	rBB	28707	142088	7.63%	0.550%
14	11.976	1180	1199	1265	rBB	44912	211631	11.36%	0.819%
15	12.493	1265	1284	1325	rBB	47465	215513	11.57%	0.834%
16	13.034	1353	1373	1447	rBB2	70334	615329	33.02%	2.382%
17	13.600	1447	1466	1527	rBB	98241	408053	21.90%	1.580%
18	14.397	1586	1597	1607	rBB	43565	151361	8.12%	0.586%
19	15.784	1815	1825	1831	rBB	50692	152775	8.20%	0.591%
20	15.869	1831	1839	1850	rBB	104672	306535	16.45%	1.187%
21	16.313	1896	1912	1925	rBB2	259658	965330	51.81%	3.737%
22	16.447	1925	1934	1948	rBB	78128	248440	13.33%	0.962%
23	16.623	1949	1963	1991	rBB2	119677	785555	42.16%	3.041%
24	16.940	1999	2015	2030	rBB	101249	361165	19.38%	1.398%
25	17.311	2062	2076	2087	rBB	185669	664262	35.65%	2.571%
26	17.439	2087	2097	2109	rBB	116527	367162	19.71%	1.421%
27	17.676	2123	2136	2150	rBB2	211758	691897	37.13%	2.678%
28	18.223	2211	2226	2250	rBB	467500	1437837	77.17%	5.566%
29	18.625	2279	2292	2307	rBB2	136848	423635	22.74%	1.640%
30	19.148	2365	2378	2391	rBB	104985	325056	17.45%	1.258%
31	19.318	2391	2406	2420	rBB	33653	104782	5.62%	0.406%
32	19.604	2437	2453	2465	rBB	113478	345838	18.56%	1.339%
33	20.347	2561	2575	2597	rBB	111869	325193	17.45%	1.259%
34	20.553	2598	2609	2635	rBB	131290	374569	20.10%	1.450%
35	20.803	2635	2650	2677	rBB	187602	543199	29.15%	2.103%
36	21.283	2710	2729	2741	rBB	94553	264403	14.19%	1.023%
37	21.636	2767	2787	2815	rBB2	221974	1007866	54.09%	3.901%
38	21.892	2815	2829	2869	rBB	122164	331951	17.82%	1.285%
39	22.208	2869	2881	2903	rBB	145315	424835	22.80%	1.644%
40	22.445	2907	2920	2937	rBB	90950	267535	14.36%	1.036%

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
Acq On : 9 Nov 2020 10:06 pm
Operator : LLH
Sample : S20K037-CAL4
Misc : 10ppbv 2045034
ALS Vial : 32 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\110920K_TO15AA.M
Title : TO15

41	23.084	3015	3025	3037	rBB2	576987	1863264	100.00%	7.212%
42	23.200	3039	3044	3051	rBB	184114	383889	20.60%	1.486%
43	23.376	3059	3073	3089	rBB	473489	1303018	69.93%	5.044%
44	24.033	3167	3181	3239	rBB2	249312	1200608	64.44%	4.647%
45	24.483	3239	3255	3321	rBB	170473	501209	26.90%	1.940%
46	25.159	3351	3366	3383	rBB	191506	530300	28.46%	2.053%
47	25.359	3388	3399	3407	rBB	307391	770937	41.38%	2.984%
48	25.451	3407	3414	3424	rBB	286616	715083	38.38%	2.768%
49	26.059	3503	3514	3593	rBB	292531	774414	41.56%	2.998%
50	26.619	3593	3606	3619	rBB	234378	639405	34.32%	2.475%
51	26.765	3619	3630	3642	rBB	225346	617687	33.15%	2.391%
52	26.990	3655	3667	3713	rBB	177960	485902	26.08%	1.881%
53	27.379	3717	3731	3777	rBB	232993	645714	34.65%	2.499%
54	29.843	4126	4136	4145	rBB	228027	588106	31.56%	2.276%

Sum of corrected areas: 25834314

Table of Contents

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Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
Acq On    :  9 Nov 2020  10:06 pm
Operator  : LLH
Sample    : S20K037-CAL4
Misc      : 10ppbv 2045034
ALS Vial  : 32   Sample Multiplier: 1

Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title  : TO15

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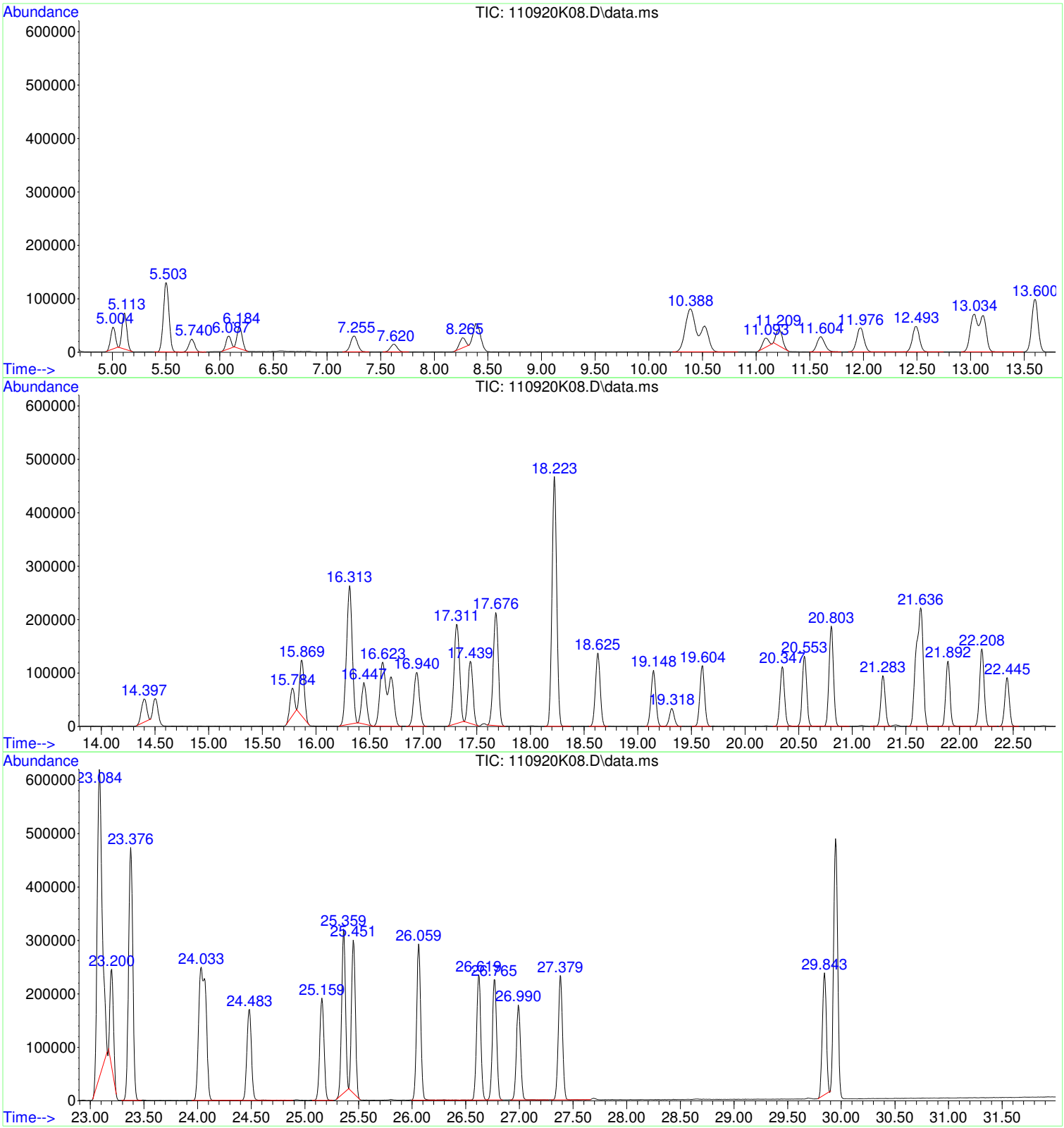


Library Search Compound Report

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K08.D
Acq On : 9 Nov 2020 10:06 pm
Operator : LLH
Sample : S20K037-CAL4
Misc : 10ppbv 2045034
ALS Vial : 32 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15

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

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
  Data File : 110920K08.D
  Acq On    :  9 Nov 2020  10:06 pm
  Operator  : LLH
  Sample    : S20K037-CAL4
  Misc      : 10ppbv 2045034
  ALS Vial  : 32   Sample Multiplier: 1

  Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
  Quant Title  : TO15

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

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

S20K037-CAL5

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K09.D
InstName : HP5973K
Acq On : 9 Nov 2020 10:57 pm
Operator : LLH
Sample : S20K037-CAL5
Misc : 15ppbv 2046022
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:54:02 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:53:53 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	208131	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	670308	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	617866	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	81180	12.48	ppbv		100
3) Dichlorodifluoromethane	5.107	85	204269	13.10	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.496	85	227520	13.00	ppbv		100
5) Chloromethane	5.734	50	84788	13.30	ppbv		99
6) Vinyl chloride	6.080	62	97776	14.48	ppbv		100
7) 1,3-Butadiene	6.178	54	72008	14.30	ppbv		99
8) Bromomethane	7.242	94	75199	14.26	ppbv		100
9) Chloroethane	7.620	64	51376	14.05	ppbv		99
10) Bromoethene	8.264	106	78410	13.88	ppbv		99
11) Trichlorofluoromethane	8.386	101	187312	12.59	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	139976	14.59	ppbv		99
13) 1,1-Dichloroethene	10.509	61	132100	14.55	ppbv		100
14) Acetone	11.087	43	123517	13.21	ppbv		99
15) Carbon disulfide	11.209	76	245029	14.04	ppbv		100
16) 2-Propanol	11.592	45	139007	14.10	ppbv		99
17) Allyl chloride	11.969	41	119317	14.80	ppbv		100
18) Dichloromethane	12.486	49	98078	12.70	ppbv		99
19) tert-Butyl methyl ethe...	13.022	73	258967	14.95	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	121760	13.80	ppbv		100
21) Hexane	13.594	57	160320	13.79	ppbv		99
22) 1,1-Dichloroethane	14.397	63	153731	13.40	ppbv		100
23) Vinyl acetate	14.500	43	221941	15.46	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	117871	14.27	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	49596	14.07	ppbv	#	95
26) Ethyl acetate	15.869	61	29939	13.80	ppbv		98
27) Tetrahydrofuran	16.289	42	105546	12.62	ppbv		100
28) Chloroform	16.447	83	165071	14.16	ppbv		99
29) Cyclohexane	16.623	56	162306	14.64	ppbv		99
30) 1,1,1-Trichloroethane	16.696	97	163803	14.41	ppbv		99
31) Carbon tetrachloride	16.934	117	169463	13.51	ppbv		100
33) Benzene	17.438	78	285979	14.09	ppbv		100
34) 2,2,4-Trimethylpentane	17.311	57	506295	14.27	ppbv		100
35) 1,2-Dichloroethane	17.657	62	100595	13.24	ppbv		100
36) Heptane	17.682	43	179049	13.87	ppbv		100
37) Trichloroethene	18.625	130	121390	14.34	ppbv		99
38) 1,2-Dichloropropane	19.148	63	105894	13.86	ppbv		99
39) 1,4-Dioxane	19.318	88	61309	13.84	ppbv		100
40) Bromodichloromethane	19.598	83	187298	13.96	ppbv		100
41) cis-1,3-Dichloropropene	20.346	75	167336	14.53	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	212181	12.96	ppbv		99
44) Toluene	20.803	91	342446	14.03	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	134691	12.68	ppbv		99
46) 1,1,2-Trichloroethane	21.600	97	113130	14.37	ppbv		100
47) Tetrachloroethene	21.642	166	168978	13.85	ppbv		100
48) 2-Hexanone	21.892	43	188699	12.13	ppbv		99
49) Chlorodibromomethane	22.208	129	198475	14.23	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	160537	14.21	ppbv		100
51) Chlorobenzene	23.133	112	272810	14.14	ppbv		99
52) Ethylbenzene	23.200	91	451862	14.01	ppbv		100
53) m&p-Xylene	23.376	91	677854	27.84	ppbv		99
54) o-Xylene	24.027	91	345638	13.78	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K09.D
InstName : HP5973K
Acq On : 9 Nov 2020 10:57 pm
Operator : LLH
Sample : S20K037-CAL5
Misc : 15ppbv 2046022
ALS Vial : 32 Sample Multiplier: 1

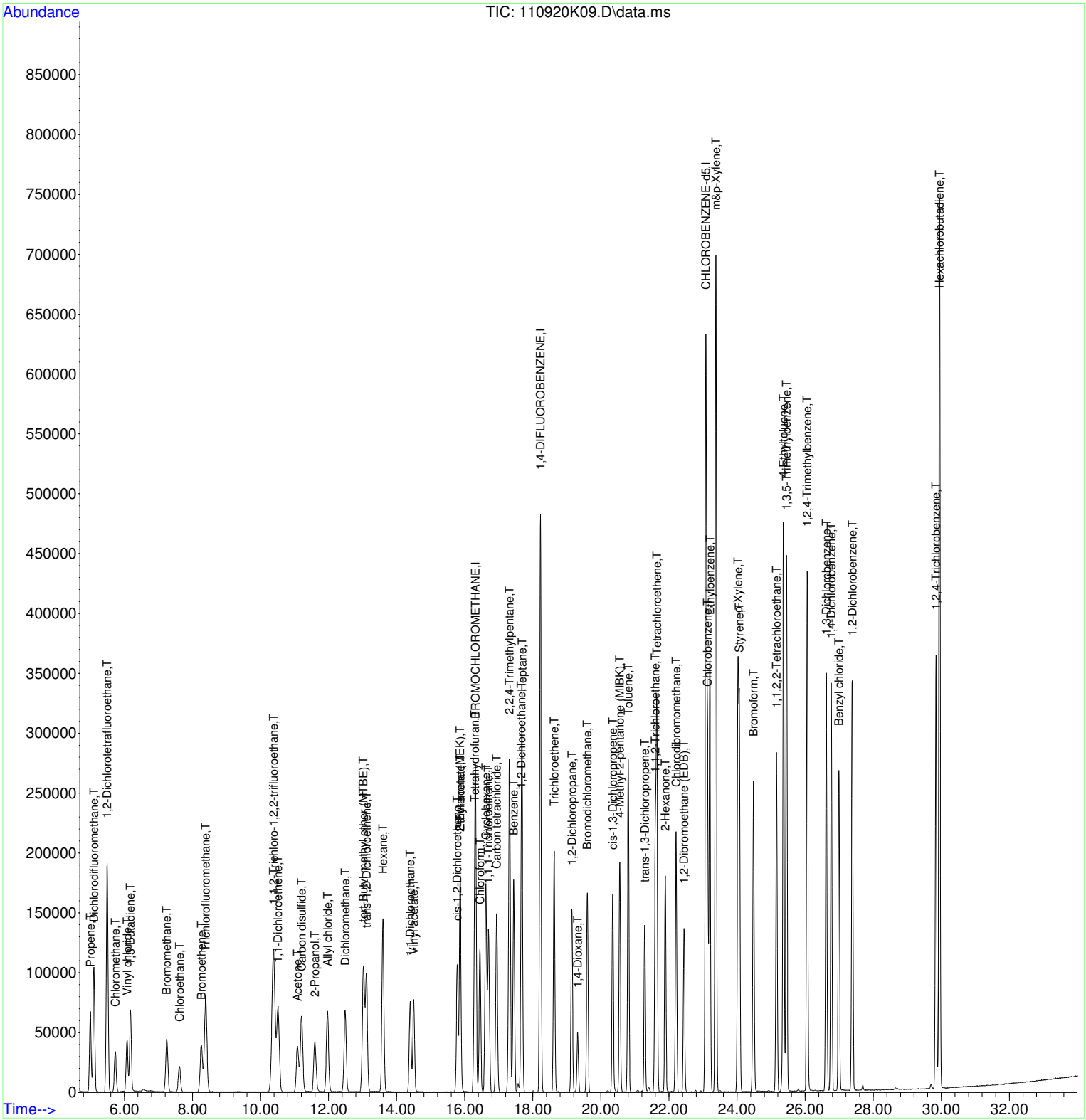
Quant Time: Nov 10 08:54:02 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:53:53 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	281272	14.34 ppbv	100
56) Bromoform	24.483	173	213642	14.90 ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	253091	13.85 ppbv	100
58) 4-Ethyltoluene	25.359	105	540913	13.36 ppbv	100
59) 1,3,5-Trimethylbenzene	25.451	105	411723	13.86 ppbv	100
60) 1,2,4-Trimethylbenzene	26.059	105	411129	13.74 ppbv	99
61) 1,3-Dichlorobenzene	26.625	146	266569	13.07 ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	257703	13.11 ppbv	100
63) Benzyl chloride	26.990	91	344167	13.15 ppbv	100
64) 1,2-Dichlorobenzene	27.385	146	263407	13.13 ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	211939	13.19 ppbv	100
66) Hexachlorobutadiene	29.946	225	264052	13.83 ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K09.D
InstName : HP5973K
Acq On : 9 Nov 2020 10:57 pm
Operator : LLH
Sample : S20K037-CAL5
Misc : 15ppbv 2046022
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:54:02 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:53:53 2020
Response via : Initial Calibration



S20K037-CAL6

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K10.D
InstName : HP5973K
Acq On : 9 Nov 2020 11:49 pm
Operator : LLH
Sample : S20K037-CAL6
Misc : 20ppbv 2046023
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:54:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:54:52 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.319	49	209514	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	676348	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	628950	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.010	41	106737	16.30	ppbv		100
3) Dichlorodifluoromethane	5.113	85	270725	17.31	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.503	85	301912	17.15	ppbv		99
5) Chloromethane	5.740	50	112183	17.46	ppbv		99
6) Vinyl chloride	6.087	62	128772	18.64	ppbv		100
7) 1,3-Butadiene	6.184	54	94088	18.32	ppbv		98
8) Bromomethane	7.255	94	100128	18.64	ppbv		100
9) Chloroethane	7.620	64	68514	18.41	ppbv		100
10) Bromoethene	8.265	106	104526	18.18	ppbv		99
11) Trichlorofluoromethane	8.392	101	249139	16.64	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	188019	19.45	ppbv		99
13) 1,1-Dichloroethene	10.522	61	175767	19.17	ppbv		100
14) Acetone	11.087	43	162615	17.29	ppbv		99
15) Carbon disulfide	11.209	76	326235	18.45	ppbv		99
16) 2-Propanol	11.598	45	185369	18.53	ppbv		98
17) Allyl chloride	11.969	41	157544	19.30	ppbv		98
18) Dichloromethane	12.487	49	129516	16.63	ppbv		98
19) tert-Butyl methyl ethe...	13.028	73	346488	19.69	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	161802	18.14	ppbv		99
21) Hexane	13.600	57	213559	18.05	ppbv		98
22) 1,1-Dichloroethane	14.403	63	204447	17.60	ppbv		100
23) Vinyl acetate	14.500	43	294515	20.41	ppbv		99
24) cis-1,2-Dichloroethene	15.784	61	158729	18.97	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	65976	18.41	ppbv	#	94
26) Ethyl acetate	15.869	61	40601	18.40	ppbv	#	95
27) Tetrahydrofuran	16.289	42	138312	16.32	ppbv		99
28) Chloroform	16.447	83	219055	18.62	ppbv		99
29) Cyclohexane	16.623	56	216152	19.18	ppbv		99
30) 1,1,1-Trichloroethane	16.702	97	217305	18.98	ppbv		99
31) Carbon tetrachloride	16.940	117	225455	17.85	ppbv		100
33) Benzene	17.439	78	380055	18.51	ppbv		99
34) 2,2,4-Trimethylpentane	17.317	57	673073	18.76	ppbv		100
35) 1,2-Dichloroethane	17.658	62	133102	17.67	ppbv		100
36) Heptane	17.682	43	236250	18.19	ppbv		99
37) Trichloroethene	18.631	130	161778	19.02	ppbv		99
38) 1,2-Dichloropropane	19.148	63	140634	18.24	ppbv		99
39) 1,4-Dioxane	19.318	88	81125	18.27	ppbv		99
40) Bromodichloromethane	19.598	83	248588	18.54	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	224207	19.31	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	280053	17.14	ppbv		99
44) Toluene	20.803	91	456979	18.33	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	180880	16.90	ppbv		99
46) 1,1,2-Trichloroethane	21.600	97	151141	18.90	ppbv		99
47) Tetrachloroethene	21.642	166	227594	18.52	ppbv		100
48) 2-Hexanone	21.892	43	249772	16.03	ppbv		98
49) Chlorodibromomethane	22.208	129	266723	18.88	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	215355	18.79	ppbv		100
51) Chlorobenzene	23.133	112	364315	18.56	ppbv		98
52) Ethylbenzene	23.200	91	603964	18.38	ppbv		99
53) m&p-Xylene	23.376	91	906595	36.59	ppbv		99
54) o-Xylene	24.027	91	462977	18.13	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K10.D
InstName : HP5973K
Acq On : 9 Nov 2020 11:49 pm
Operator : LLH
Sample : S20K037-CAL6
Misc : 20ppbv 2046023
ALS Vial : 32 Sample Multiplier: 1

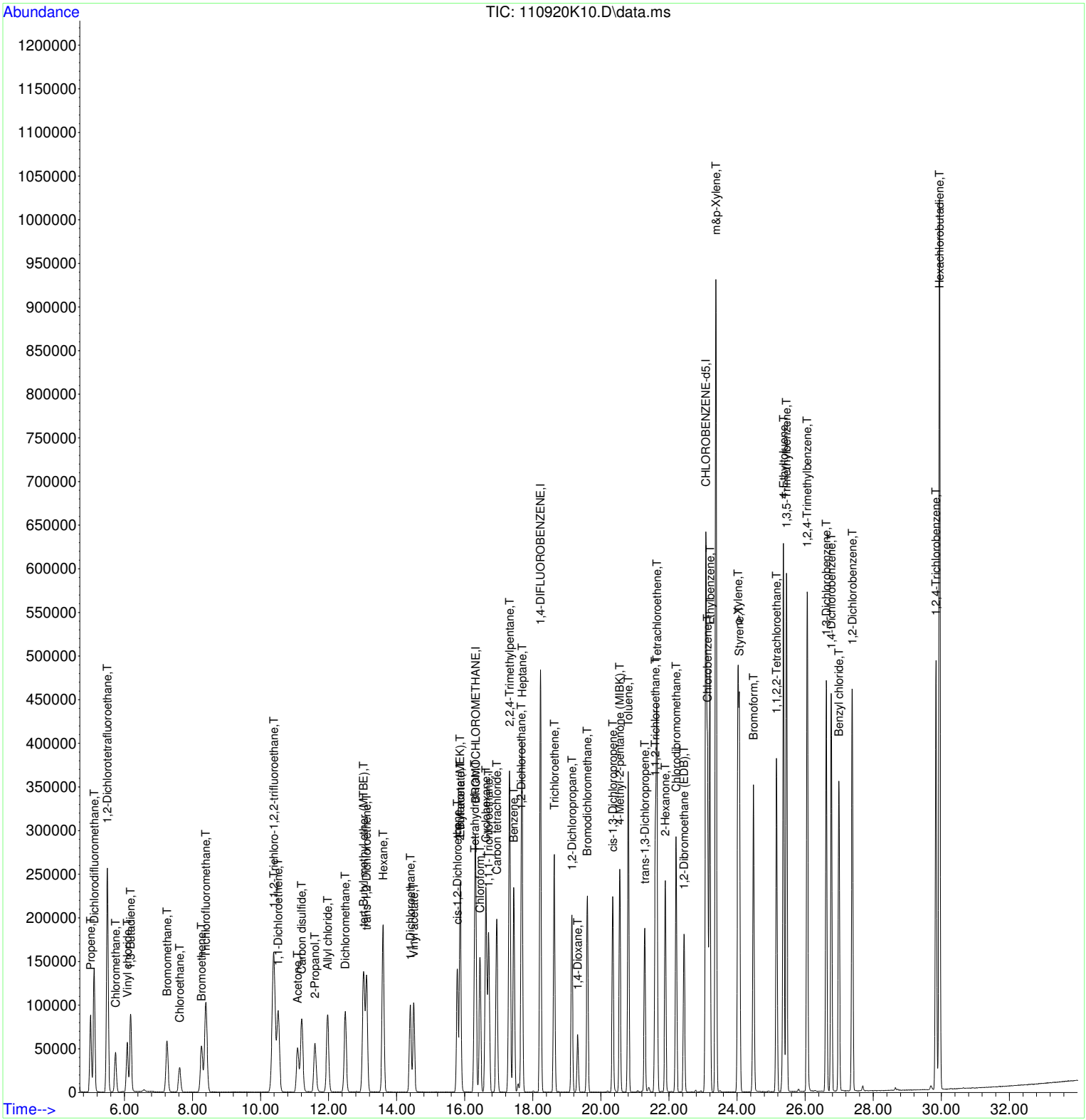
Quant Time: Nov 10 08:54:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:54:52 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Styrene	24.070	104	378130	18.99	ppbv	99
56) Bromoform	24.483	173	289656	20.05	ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	338359	18.29	ppbv	100
58) 4-Ethyltoluene	25.365	105	721685	17.60	ppbv	100
59) 1,3,5-Trimethylbenzene	25.451	105	550040	18.21	ppbv	100
60) 1,2,4-Trimethylbenzene	26.059	105	550818	18.16	ppbv	99
61) 1,3-Dichlorobenzene	26.619	146	359427	17.72	ppbv	100
62) 1,4-Dichlorobenzene	26.771	146	345821	17.78	ppbv	99
63) Benzyl chloride	26.990	91	460297	17.71	ppbv	99
64) 1,2-Dichlorobenzene	27.385	146	353140	17.63	ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	289302	18.59	ppbv	99
66) Hexachlorobutadiene	29.946	225	361731	19.17	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K10.D
InstName : HP5973K
Acq On : 9 Nov 2020 11:49 pm
Operator : LLH
Sample : S20K037-CAL6
Misc : 20ppbv 2046023
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 10 08:54:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:54:52 2020
Response via : Initial Calibration



S20K037-SCV1

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K11.D
InstName : HP5973K
Acq On : 10 Nov 2020 12:41 am
Operator : LLH
Sample : S20K037-SCV1
Misc : 10ppbv 2046024
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Nov 10 08:57:33 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	218018	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	698871	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	636412	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	59370	8.74	ppbv		99
3) Dichlorodifluoromethane	5.107	85	153128	9.52	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.497	85	161831	8.90	ppbv		95
5) Chloromethane	5.734	50	64872	9.74	ppbv		100
6) Vinyl chloride	6.081	62	72881	10.01	ppbv		100
7) 1,3-Butadiene	6.184	54	53467	9.90	ppbv		98
8) Bromomethane	7.249	94	55145	9.82	ppbv		100
9) Chloroethane	7.620	64	39894	10.25	ppbv		99
10) Bromoethene	8.258	106	59997	10.01	ppbv		99
11) Trichlorofluoromethane	8.392	101	143156	9.25	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	107217	10.73	ppbv		99
13) 1,1-Dichloroethene	10.515	61	98315	10.32	ppbv		99
14) Acetone	11.087	43	97951	10.05	ppbv		98
15) Carbon disulfide	11.209	76	197035	10.70	ppbv		99
16) 2-Propanol	11.598	45	91240	8.73	ppbv		100
17) Allyl chloride	11.969	41	87016	10.22	ppbv		98
18) Dichloromethane	12.487	49	75690	9.33	ppbv		98
19) tert-Butyl methyl ethe...	13.028	73	189745	10.34	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	86018	9.28	ppbv		98
21) Hexane	13.594	57	118044	9.53	ppbv		99
22) 1,1-Dichloroethane	14.397	63	119823	9.90	ppbv		100
23) Vinyl acetate	14.500	43	118697	7.95	ppbv		100
24) cis-1,2-Dichloroethene	15.778	61	94012	10.77	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	37608	10.07	ppbv	#	90
26) Ethyl acetate	15.869	61	22233	9.63	ppbv		99
27) Tetrahydrofuran	16.289	42	71249	8.06	ppbv		99
28) Chloroform	16.441	83	124065	10.17	ppbv		99
29) Cyclohexane	16.623	56	118364	10.03	ppbv		99
30) 1,1,1-Trichloroethane	16.696	97	109504	9.24	ppbv		99
31) Carbon tetrachloride	16.940	117	124823	9.56	ppbv		99
33) Benzene	17.439	78	218994	10.30	ppbv		100
34) 2,2,4-Trimethylpentane	17.311	57	371175	9.99	ppbv		100
35) 1,2-Dichloroethane	17.664	62	75692	9.90	ppbv		100
36) Heptane	17.676	43	131193	9.78	ppbv		99
37) Trichloroethene	18.625	130	101037	11.59	ppbv		100
38) 1,2-Dichloropropane	19.142	63	80090	10.05	ppbv		99
39) 1,4-Dioxane	19.312	88	50204	11.08	ppbv		99
40) Bromodichloromethane	19.598	83	132812	9.69	ppbv		100
41) cis-1,3-Dichloropropene	20.347	75	112766	9.43	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	146298	8.76	ppbv		99
44) Toluene	20.803	91	258438	10.22	ppbv		100
45) trans-1,3-Dichloropropene	21.283	75	91793	8.57	ppbv		98
46) 1,1,2-Trichloroethane	21.600	97	84575	10.50	ppbv		100
47) Tetrachloroethene	21.642	166	126110	10.28	ppbv		100
48) 2-Hexanone	21.886	43	122931	7.92	ppbv		98
49) Chlorodibromomethane	22.208	129	135251	9.54	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	113334	9.85	ppbv		99
51) Chlorobenzene	23.133	112	199458	10.08	ppbv		100
52) Ethylbenzene	23.200	91	336261	10.13	ppbv		100
53) m&p-Xylene	23.376	91	497985	19.92	ppbv		99
54) o-Xylene	24.027	91	255090	9.90	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K11.D
InstName : HP5973K
Acq On : 10 Nov 2020 12:41 am
Operator : LLH
Sample : S20K037-SCV1
Misc : 10ppbv 2046024
ALS Vial : 38 Sample Multiplier: 1

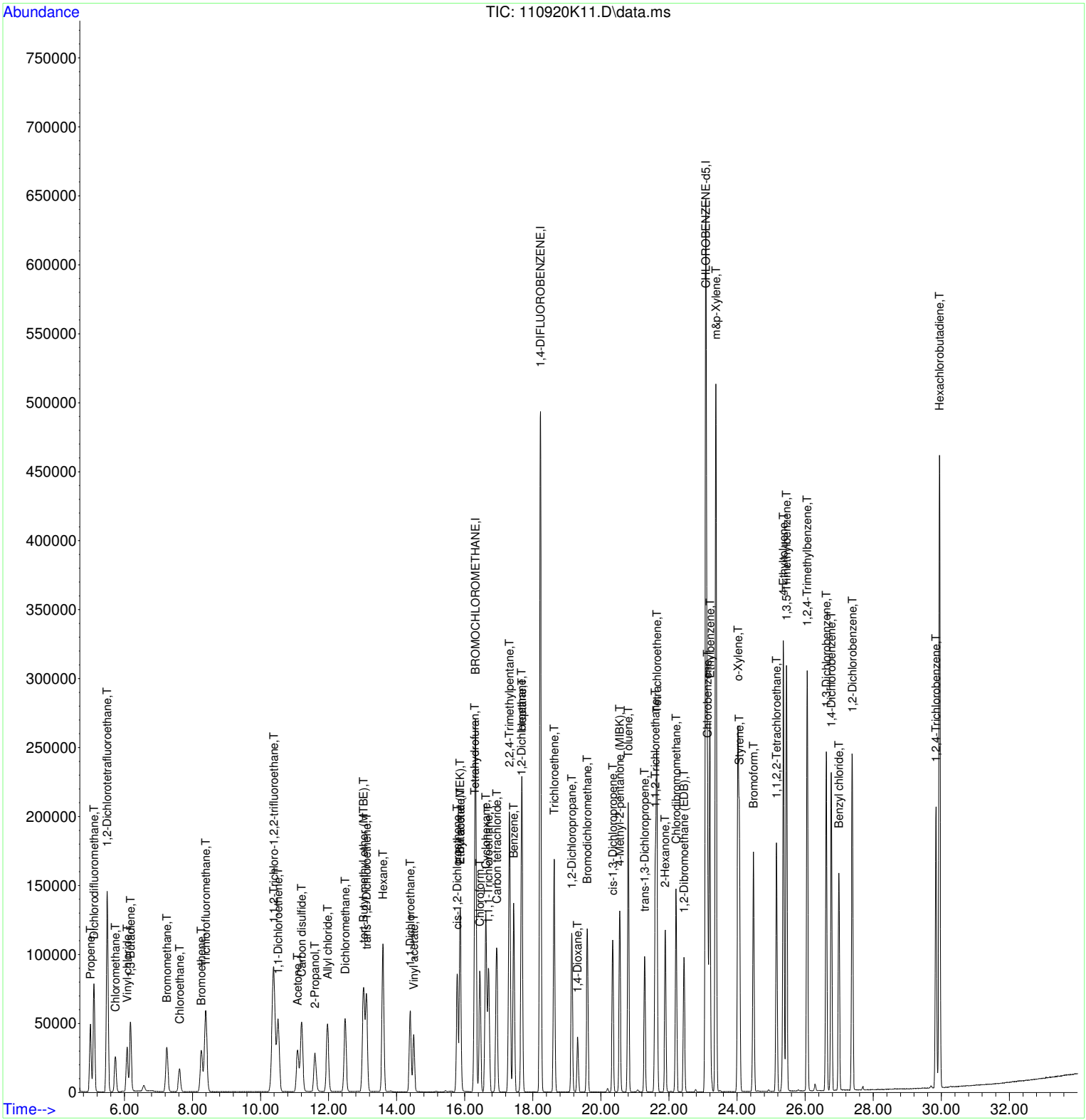
Quant Time: Nov 10 08:57:33 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	24.070	104	174136	8.68	ppbv	98
56)	Bromoform	24.483	173	143911	9.99	ppbv	100
57)	1,1,2,2-Tetrachloroethane	25.159	83	162801	8.76	ppbv	100
58)	4-Ethyltoluene	25.359	105	372839	9.07	ppbv	99
59)	1,3,5-Trimethylbenzene	25.451	105	287470	9.44	ppbv	100
60)	1,2,4-Trimethylbenzene	26.059	105	288614	9.46	ppbv	100
61)	1,3-Dichlorobenzene	26.619	146	187628	9.38	ppbv	100
62)	1,4-Dichlorobenzene	26.771	146	176529	9.25	ppbv	100
63)	Benzyl chloride	26.990	91	201889	7.89	ppbv	100
64)	1,2-Dichlorobenzene	27.385	146	189229	9.53	ppbv	100
65)	1,2,4-Trichlorobenzene	29.843	180	120674	8.13	ppbv	100
66)	Hexachlorobutadiene	29.946	225	165347	8.95	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\110920K_FSAA\
Data File : 110920K11.D
InstName : HP5973K
Acq On : 10 Nov 2020 12:41 am
Operator : LLH
Sample : S20K037-SCV1
Misc : 10ppbv 2046024
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Nov 10 08:57:33 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



SEQUENCE

S20K070

Sequence Date: 11/17/2020

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B20K064	SEQUENCE #:	S20K070 11/17/20
BATCH #:	MEW R21S04/20322D	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.	11/09/20 Tue Nov 10, 2020 08:55:42			
	Initial Calibration ID (LIMS number):	2011004 / S20K037			
	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	Benzyl Chloride
	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?	☑			
	Other method-specific QCs within QC criteria? Specify if applicable.	☑			

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B20K064	SEQUENCE #:	S20K070	11/17/20
BATCH #:	MEW R21S04/20322D	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?	☑			
	Do any samples need to be re-digested or re-extracted?	☐	Y	Y	>LR
	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:	EM 11/18/20
	REVIEWED BY:	Rajabi, Ziyad Digitally signed by Rajabi, Ziyad Date: 2020.11.25 15:39:41 -08'00' SIGN HERE

COMMENTS

Injection Log

Directory: d:\msdchem\1\2020\DATA\111720K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	31	111720K01.D	1.	S20K070-TUN1	BFB 1901028	17 Nov 2020 10:18
2	32	111720K02.D	1.	S20K070-CCV1@B20K064-BS1	10ppbv 2045034@2045036	17 Nov 2020 11:08
3	31	111720K03.D	1.	S20K070-CRL1	1.0ppbv 2045034	17 Nov 2020 11:57
4	33	111720K04.D	1.	B20K064-BLK1	200ml BLANK	17 Nov 2020 12:49
5	21	111720K05.D	1.9	2011024-01	200ml FG-037-3ft-G	17 Nov 2020 14:24
6	21	111720K06.D	1.9	B20K064-DUP1	200ml FG-037-3ft-G	17 Nov 2020 15:17
7	22	111720K07.D	1.9	2011024-02	200ml FG-033-3ft-G	17 Nov 2020 16:09
8	23	111720K08.D	1.9	2011024-03	200ml FG-031-3ft-G	17 Nov 2020 17:02
9	24	111720K09.D	1.96	2011024-04	200ml FG-029-3ft-G	17 Nov 2020 17:54
10	25	111720K10.D	1.93	2011024-07	200ml FG-055-3ft-G	17 Nov 2020 18:47
11	26	111720K11.D	1.92	2011024-08	200ml FG-021-3ft-G	17 Nov 2020 19:39
12	33	111720K12.D	1.	S20K070-IBL1	200ml IB	17 Nov 2020 20:32
13	11	111720K13.D	1.92	2011024-05RE1	20ml FG-010-3ft-G	17 Nov 2020 21:21
14	12	111720K14.D	1.92	2011024-06RE1	20ml FG-006-3ft-G	17 Nov 2020 22:11
15	11	111720K15.D	1.92	2011024-05	200ml FG-010-3ft-G	17 Nov 2020 23:03
16	12	111720K16.D	1.92	2011024-06	200ml FG-006-3ft-G	17 Nov 2020 23:56
17	33	111720K17.D	1.	S20K070-IBL2	200ml IB	18 Nov 2020 00:48
18	22	111720K18.D	1.9	2011024-02RE1	40ml FG-033-3ft-G	18 Nov 2020 01:37
19	23	111720K19.D	1.9	2011024-03RE1	40ml FG-031-3ft-G	18 Nov 2020 02:27
20	24	111720K20.D	1.96	2011024-04RE1	40ml FG-029-3ft-G	18 Nov 2020 03:17
21	25	111720K21.D	1.93	2011024-07RE1	40ml FG-055-3ft-G	18 Nov 2020 04:07
22	26	111720K22.D	1.92	2011024-08RE1	40ml FG-021-3ft-G	18 Nov 2020 04:56
23	27	111720K23.D	1.9	2011024-01RE1	50ml FG-037-3ft-G	18 Nov 2020 05:46
24	33	111720K24.D	1.	S20K070-IBL3	200ml IB	18 Nov 2020 06:38

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2020\DATA\111720K_FSAA\111720K01.D
Tune Time : 17 Nov 2020 10:18 am

Daily Calibration File : D:\msdchem\1\2020\DATA\111720K_FSAA\111720K02.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		157954	487444	456167
111720K02.D	S20K070-CCV1	157954	487444	456167
111720K03.D	S20K070-CRL1	157730	496700	447617
111720K04.D	B20K064-BLK1	157799	499544	444846
111720K05.D	2011024-01	160297	498194	453310
111720K06.D	B20K064-DUP1	159232	494473	450233
111720K07.D	2011024-02	161727	498293	447103
111720K08.D	2011024-03	160684	495857	446918
111720K09.D	2011024-04	165011	502734	456867
111720K10.D	2011024-07	160214	500211	445738
111720K11.D	2011024-08	157406	489991	441560
111720K12.D	S20K070-IBL1	157128	491361	434259
111720K13.D	2011024-05RE1	156226	482599	431852
111720K14.D	2011024-06RE1	156169	480117	430506
111720K15.D	2011024-05	151981	464989	423719
111720K16.D	2011024-06	157461	480962	432704
111720K17.D	S20K070-IBL2	157635	488545	433665
111720K18.D	2011024-02RE1	158097	485500	435227
111720K19.D	2011024-03RE1	152000	465234	417314
111720K20.D	2011024-04RE1	151214	464657	418459
111720K21.D	2011024-07RE1	147308	454720	406188
111720K22.D	2011024-08RE1	149649	456892	412584
111720K23.D	2011024-01RE1	148342	452621	407758

```
-----------------------------------------------------------------------------
111720K24.D
         S20K070-IBL3           148412     459115     408922
-----------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Wed Nov 18 09:35:46 2020  HP5973K
```

Sequence Report

Name	Inlet	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
BFB	Three	T1	40	40	50	TO-15_A.CTD3	11/17/2020 10:18:14 AM	Completed
CCV	Three	T2	40	0	100	TO-15_A.CTD3	11/17/2020 11:08:48 AM	Completed
CRL	Three	T1	40	0	20	TO-15_A.CTD3	11/17/2020 11:57:46 AM	Completed
BLANK	Three	T3	40	0	200	TO-15_A.CTD3	11/17/2020 12:49:55 PM	Completed
2011024-01	Two	T1	40	0	200	TO-15_A.CTD3	11/17/2020 2:24:46 PM	Completed
2011024-01DUP	Two	T1	40	0	200	TO-15_A.CTD3	11/17/2020 3:17:18 PM	Completed
2011024-02	Two	T2	40	0	200	TO-15_A.CTD3	11/17/2020 4:09:47 PM	Completed
2011024-03	Two	T3	40	0	200	TO-15_A.CTD3	11/17/2020 5:02:22 PM	Completed
2011024-04	Two	T4	40	0	200	TO-15_A.CTD3	11/17/2020 5:54:45 PM	Completed
2011024-07	Two	T5	40	0	200	TO-15_A.CTD3	11/17/2020 6:47:20 PM	Completed
2011024-08	Two	T6	40	0	200	TO-15_A.CTD3	11/17/2020 7:39:52 PM	Completed
IB	Three	T3	40	0	200	TO-15_A.CTD3	11/17/2020 8:32:05 PM	Completed
2011024-05RE1	One	T1	40	0	20	TO-15_A.CTD3	11/17/2020 9:21:47 PM	Completed
2011024-06RE1	One	T2	40	0	20	TO-15_A.CTD3	11/17/2020 10:11:14 PM	Completed
2011024-05	One	T1	40	0	200	TO-15_A.CTD3	11/17/2020 11:03:40 PM	Completed
2011024-06	One	T2	40	0	200	TO-15_A.CTD3	11/17/2020 11:56:09 PM	Completed
IB	Three	T3	40	0	200	TO-15_A.CTD3	11/18/2020 12:48:17 AM	Completed
2011024-02RE1	Two	T2	40	0	40	TO-15_A.CTD3	11/18/2020 1:37:58 AM	Completed
2011024-03RE1	Two	T3	40	0	40	TO-15_A.CTD3	11/18/2020 2:27:49 AM	Completed
2011024-04RE1	Two	T4	40	0	40	TO-15_A.CTD3	11/18/2020 3:17:26 AM	Completed
2011024-07RE1	Two	T5	40	0	40	TO-15_A.CTD3	11/18/2020 4:07:12 AM	Completed
2011024-08RE1	Two	T6	40	0	40	TO-15_A.CTD3	11/18/2020 4:56:53 AM	Completed
2011024-01RE1	Two	T7	40	0	50	TO-15_A.CTD3	11/18/2020 5:46:39 AM	Completed
IB	Three	T3	40	0	200	TO-15_A.CTD3	11/18/2020 6:38:52 AM	Completed

Analysis Sequence

S20K070

Project: R21S04
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 2011004 Printed: 11/18/2020 2:42 pm

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S20K070-TUN1	BFB Tune	1	11/17/20 10:18	1901028		EM	111720K01.D	
S20K070-CCV1	CCV - TO15	2	11/17/20 11:08	2045035		EM	111720K02.D	
B20K064-BS1	LCS	3	11/17/20 11:08			EM	111720K02.D	
S20K070-CRL1	QLS - TO15	4	11/17/20 11:57	2045034		EM	111720K03.D	
B20K064-BLK1	Blank	5	11/17/20 12:49		2006148	EM	111720K04.D	
2011024-01 A	F6-037-3ft-G	6	11/17/20 14:24		2006148	EM	111720K05.D	
B20K064-DUP1	Duplicate	7	11/17/20 15:17		2006148	EM	111720K06.D	
2011024-02 A	F6-033-3ft-G	8	11/17/20 16:09		2006148	EM	111720K07.D	
2011024-03 A	F6-031-3ft-G	9	11/17/20 17:02		2006148	EM	111720K08.D	
2011024-04 A	F6-029-3ft-G	10	11/17/20 17:54		2006148	EM	111720K09.D	
2011024-07 A	F6-055-3ft-G	11	11/17/20 18:47		2006148	EM	111720K10.D	
2011024-08 A	F6-021-3ft-G	12	11/17/20 19:39		2006148	EM	111720K11.D	
S20K070-IBL1	Instrument Blank	13	11/17/20 20:32		2006148	EM	111720K12.D	
2011024-05RE1 A	F6-010-3ft-G	14	11/17/20 21:21		2006148	EM	111720K13.D	
2011024-06RE1 A	F6-006-3ft-G	15	11/17/20 22:11		2006148	EM	111720K14.D	
2011024-05 A	F6-010-3ft-G	16	11/17/20 23:03		2006148	EM	111720K15.D	
2011024-06 A	F6-006-3ft-G	17	11/17/20 23:56		2006148	EM	111720K16.D	
S20K070-IBL2	Instrument Blank	18	11/18/20 0:48		2006148	EM	111720K17.D	
2011024-02RE1 A	F6-033-3ft-G	19	11/18/20 1:37		2006148	EM	111720K18.D	
2011024-03RE1 A	F6-031-3ft-G	20	11/18/20 2:27		2006148	EM	111720K19.D	
2011024-04RE1 A	F6-029-3ft-G	21	11/18/20 3:17		2006148	EM	111720K20.D	
2011024-07RE1 A	F6-055-3ft-G	22	11/18/20 4:07		2006148	EM	111720K21.D	

Analysis Sequence

S20K070

(Continued)

Project: R21S04
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 2011004 Printed: 11/18/2020 2:42 pm

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
2011024-08RE1 A	F6-021-3ft-G	23	11/18/20 4:56		2006148	EM	111720K22.D	
2011024-01RE1 A	F6-037-3ft-G	24	11/18/20 5:46		2006148	EM	111720K23.D	
S20K070-IBL3	Instrument Blank	25	11/18/20 6:38		2006148	EM	111720K24.D	

Sequence Comments

Reagents

Reagent #	Description

SEQUENCE DATA

S20K070

S20K070-TUN1

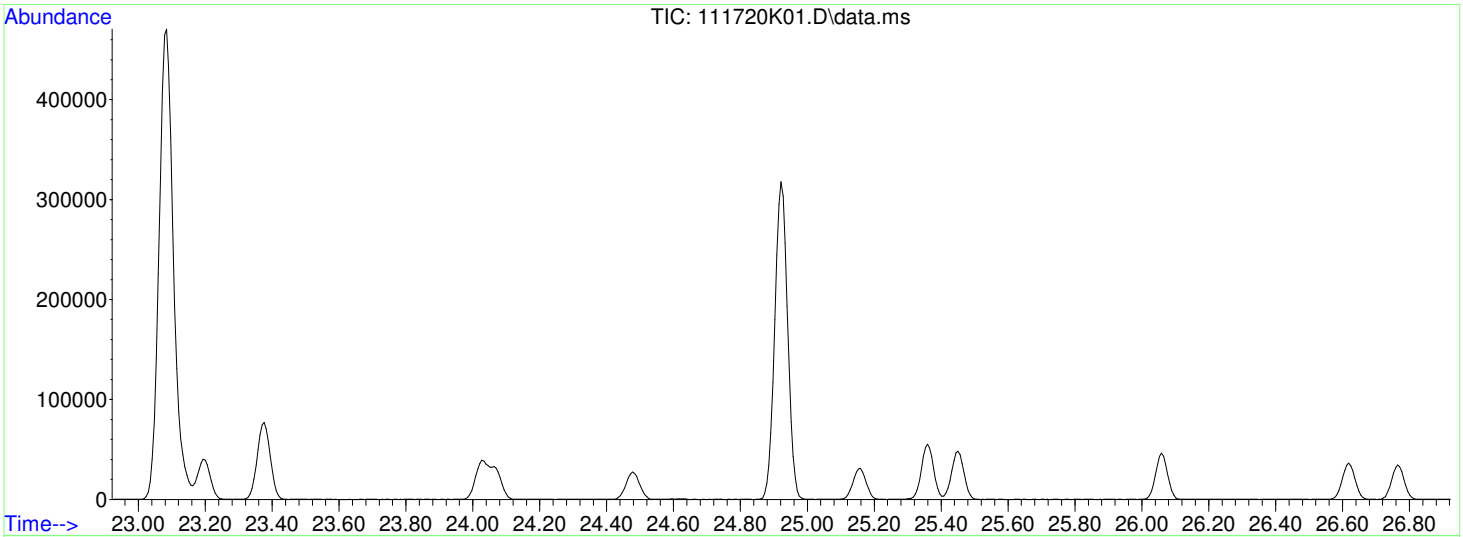
Table of Contents

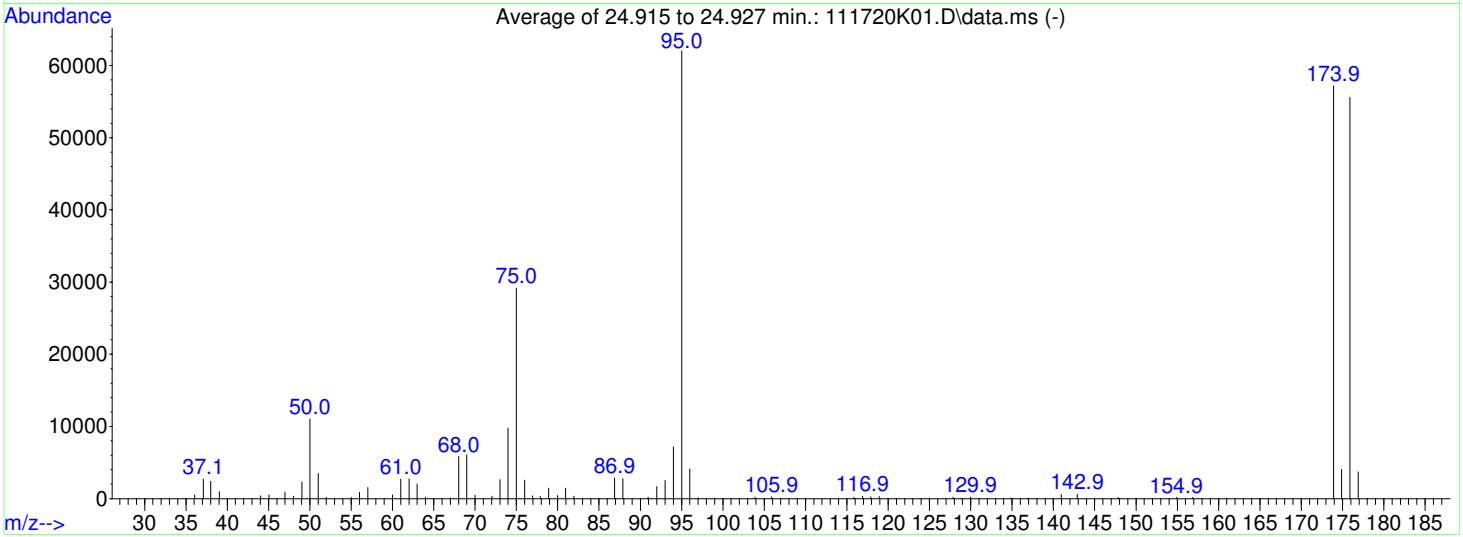
Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K01.D
InstName : HP5973K
Acq On : 17 Nov 2020 10:18 am
Operator : EM
Sample : S20K070-TUN1
Misc : BFB 1901028
ALS Vial : 31 Sample Multiplier: 1

REVIEWED
By EM at 12:19 pm, Nov 17, 2020

Integration File: lscint.p

Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Title : TO15
Last Update : Tue Nov 10 08:55:42 2020



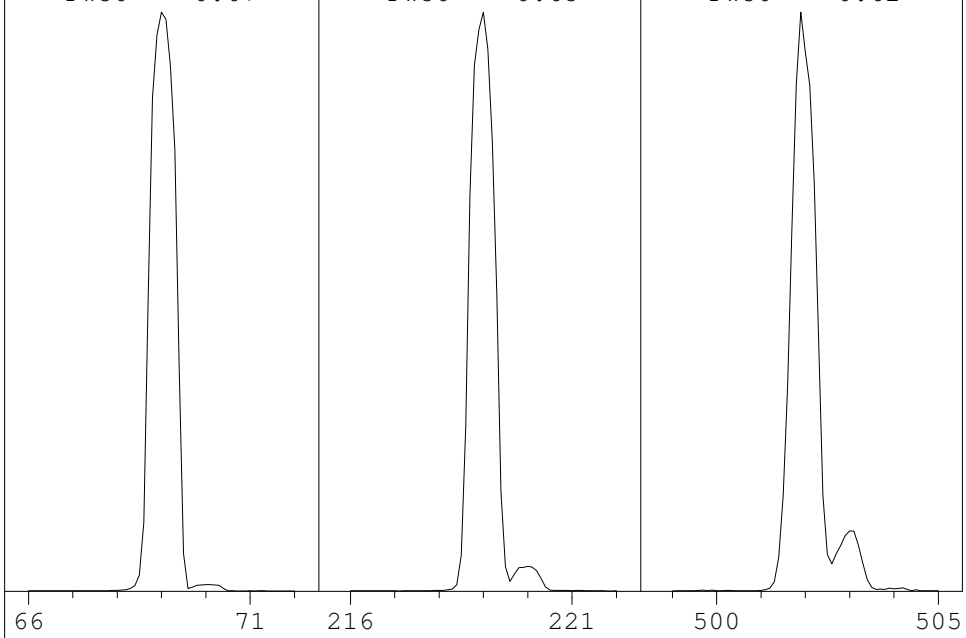


AutoFind: Scans 3326, 3327, 3328; Background Corrected with Scan 3312

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.7	11011	PASS
75	95	30	66	47.0	29163	PASS
95	95	100	100	100.0	62077	PASS
96	95	5	9	6.6	4115	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	92.1	57160	PASS
175	174	4	9	7.1	4081	PASS
176	174	93	101	97.2	55573	PASS
177	176	5	9	6.7	3708	PASS

Tue Nov 17 09:48:11 2020 Instrum
C:\msdchem\1\5973N\bfb111720K.U 0582321658

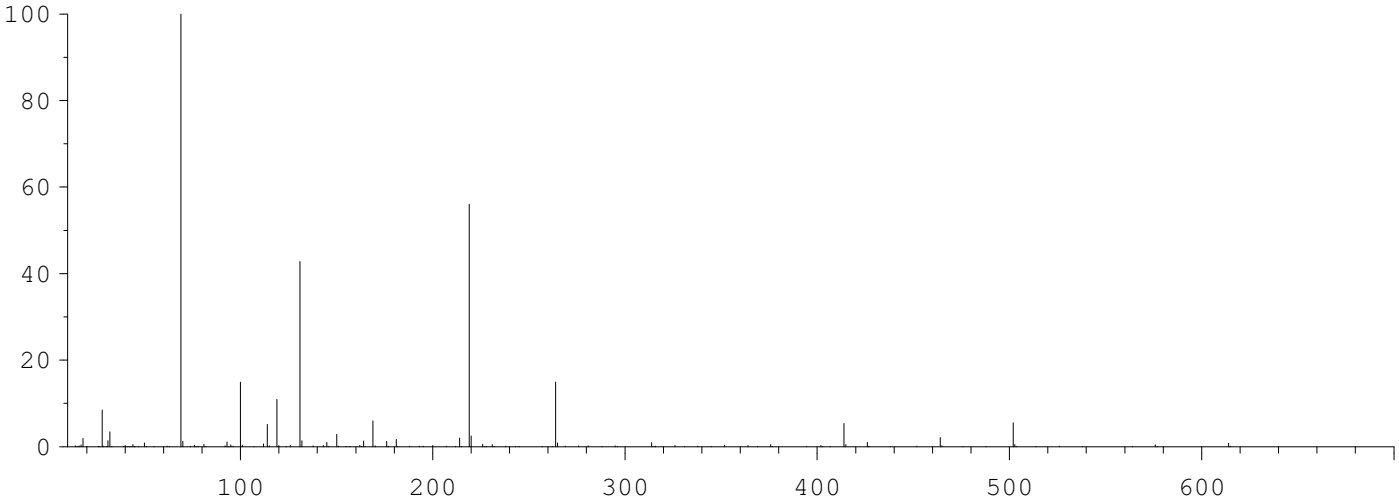
Mass	69.00	Mass	219.00	Mass	501.90
Ab	396741	Ab	225054	Ab	22475
Pw50	0.67	Pw50	0.65	Pw50	0.62



Ion Pol	Pos	MassGain	66
		MassOffs	-8
Emission	34.6	AmuGain	1991
EIEnrgy	69.9	AmuOffs	128
Filament	1	Wid219	-0.038
		DC Pol	Pos
Repeller	28.28		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1082
EntOffs	18.82		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:
MS Source 230 Turbo Speed100
MS Quad 150

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
136 peaks Base: 69.00 Abundance: 368704



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	368704	100.00	70.00	4449	1.21
219.00	206464	56.00	220.00	9338	4.52
502.00	20328	5.51	502.90	1699	8.36

Air/Water Check: H20~1.86% N2~8.47% O2~3.47% CO2~0.51% N2/H2O~455.26%

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 99351
Repeller Maximum 35 volts using ion 219; Gain Factor 0.99

MassGain Values(Samples): 67(3) 67(2) 67(1) 67(0) 66(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	128.0	128.0	128.0	128.0	128.0	128.0	128.0
Entrance Lens Offset:	18.8	18.8	18.8	18.8	18.8	18.8	18.8

S20K070-CCV1

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

REVIEWED
By EM at 12:18 pm, Nov 18, 2020

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	75	0.00
2	T	Propene	0.611	0.493	19.3	68	0.00
3	T	Dichlorodifluoromethane	1.446	1.233	14.7	70	0.00
4	T	1,2-Dichlorotetrafluoroetha	1.634	1.365	16.5	68	0.00
5	T	Chloromethane	0.599	0.487	18.7	66	0.00
6	T	Vinyl chloride	0.655	0.615	6.1	77	0.00
7	T	1,3-Butadiene	0.485	0.469	3.3	80	0.00
8	T	Bromomethane	0.505	0.420	16.8	68	0.00
9	T	Chloroethane	0.350	0.285	18.6	67	0.00
10	T	Bromoethene	0.539	0.426	21.0	66	0.00
11	T	Trichlorofluoromethane	1.391	1.208	13.2	71	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	0.899	0.764	15.0	70	0.00
13	T	1,1-Dichloroethene	0.857	0.686	20.0	65	0.00
14	T	Acetone	0.876	0.716	18.3	67	-0.01
15	T	Carbon disulfide	1.656	1.358	18.0	68	0.00
16	T	2-Propanol	0.939	0.732	22.0	63	0.00
17	T	Allyl chloride	0.765	0.600	21.6	65	0.00
18	T	Dichloromethane	0.729	0.571	21.7	69	0.00
19	T	tert-Butyl methyl ether (MT	1.650	1.286	22.1	64	0.00
20	T	trans-1,2-Dichloroethene	0.834	0.677	18.8	67	0.00
21	T	Hexane	1.114	0.868	22.1	65	0.00
22	T	1,1-Dichloroethane	1.088	0.895	17.7	68	0.00
23	T	Vinyl acetate	1.341	1.101	17.9	65	0.00
24	T	cis-1,2-Dichloroethene	0.785	0.628	20.0	66	0.00
25	T	2-Butanone (MEK)	0.336	0.278	17.3	68	0.00
26	T	Ethyl acetate	0.208	0.168	19.2	66	0.00
27	T	Tetrahydrofuran	0.795	0.655	17.6	68	0.00
28	T	Chloroform	1.097	0.947	13.7	71	0.00
29	T	Cyclohexane	1.061	0.840	20.8	66	0.00
30	T	1,1,1-Trichloroethane	1.065	0.936	12.1	72	0.00
31	T	Carbon tetrachloride	1.174	1.035	11.8	71	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	74	0.00
33	T	Benzene	0.596	0.517	13.3	68	0.00
34	T	2,2,4-Trimethylpentane	1.043	0.861	17.4	66	0.00
35	T	1,2-Dichloroethane	0.214	0.193	9.8	70	0.00
36	T	Heptane	0.376	0.319	15.2	68	0.00
37	T	Trichloroethene	0.245	0.209	14.7	68	0.00
38	T	1,2-Dichloropropane	0.224	0.193	13.8	68	0.00
39	T	1,4-Dioxane	0.127	0.103	18.9	65	0.00
40	T	Bromodichloromethane	0.384	0.341	11.2	70	0.00
41	T	cis-1,3-Dichloropropene	0.335	0.286	14.6	65	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.469	0.405	13.6	69	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	75	0.00
44	T	Toluene	0.778	0.663	14.8	68	0.00
45	T	trans-1,3-Dichloropropene	0.330	0.280	15.2	66	0.00
46	T	1,1,2-Trichloroethane	0.248	0.217	12.5	70	0.00
47	T	Tetrachloroethene	0.378	0.329	13.0	70	0.00
48	T	2-Hexanone	0.478	0.408	14.6	68	0.00
49	T	Chlorodibromomethane	0.436	0.386	11.5	71	0.00
50	T	1,2-Dibromoethane (EDB)	0.354	0.305	13.8	68	0.00
51	T	Chlorobenzene	0.609	0.523	14.1	69	0.00

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	1.022	0.893	12.6	70	0.00
53 T	m&p-Xylene	0.770	0.683	11.3	71	0.00
54 T	o-Xylene	0.794	0.692	12.8	70	0.00
55 T	Styrene	0.618	0.549	11.2	68	0.00
56 T	Bromoform	0.444	0.406	8.6	71	0.00
57 T	1,1,2,2-Tetrachloroethane	0.572	0.512	10.5	71	0.00
58 T	4-Ethyltoluene	1.266	1.104	12.8	70	0.00
59 T	1,3,5-Trimethylbenzene	0.938	0.838	10.7	71	0.00
60 T	1,2,4-Trimethylbenzene	0.939	0.839	10.6	70	0.00
61 T	1,3-Dichlorobenzene	0.616	0.543	11.9	69	0.00
62 T	1,4-Dichlorobenzene	0.588	0.515	12.4	68	0.00
63 T	Benzyl chloride	0.788	0.715	9.3	67	0.00
64 T	1,2-Dichlorobenzene	0.611	0.550	10.0	71	0.00
65 T	1,2,4-Trichlorobenzene	0.457	0.399	12.7	65	0.00
66 T	Hexachlorobutadiene	0.569	0.525	7.7	72	0.00

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

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	157954	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	487444	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	456167	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	37781	7.68	ppbv		99
3) Dichlorodifluoromethane	5.107	85	97343	8.35	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.497	85	105582	8.02	ppbv		100
5) Chloromethane	5.734	50	38877	8.05	ppbv		99
6) Vinyl chloride	6.081	62	51076	9.68	ppbv		99
7) 1,3-Butadiene	6.178	54	39267	10.04	ppbv		99
8) Bromomethane	7.249	94	34529	8.49	ppbv		100
9) Chloroethane	7.620	64	23234	8.24	ppbv		100
10) Bromoethene	8.259	106	34671	7.99	ppbv		100
11) Trichlorofluoromethane	8.392	101	90540	8.08	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	65853	9.09	ppbv		99
13) 1,1-Dichloroethene	10.522	61	58643	8.49	ppbv		100
14) Acetone	11.081	43	57101	8.09	ppbv		99
15) Carbon disulfide	11.209	76	113807	8.53	ppbv		99
16) 2-Propanol	11.598	45	58968	7.79	ppbv		95
17) Allyl chloride	11.970	41	52712	8.54	ppbv		100
18) Dichloromethane	12.487	49	47392	8.07	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	112964	8.50	ppbv		100
20) trans-1,2-Dichloroethene	13.119	61	55672	8.29	ppbv		99
21) Hexane	13.600	57	70615	7.87	ppbv		98
22) 1,1-Dichloroethane	14.397	63	70696	8.07	ppbv		99
23) Vinyl acetate	14.500	43	97600	9.03	ppbv		99
24) cis-1,2-Dichloroethene	15.778	61	52163	8.25	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	22431	8.29	ppbv	#	96
26) Ethyl acetate	15.869	61	13651	8.16	ppbv	#	89
27) Tetrahydrofuran	16.289	42	48540	7.57	ppbv		99
28) Chloroform	16.447	83	79333	8.97	ppbv		99
29) Cyclohexane	16.623	56	73070	8.55	ppbv		98
30) 1,1,1-Trichloroethane	16.696	97	79985	9.32	ppbv		100
31) Carbon tetrachloride	16.934	117	82581	8.73	ppbv		99
33) Benzene	17.439	78	133783	9.02	ppbv		99
34) 2,2,4-Trimethylpentane	17.311	57	229218	8.84	ppbv		98
35) 1,2-Dichloroethane	17.658	62	48539	9.11	ppbv		99
36) Heptane	17.682	43	83224	8.90	ppbv		99
37) Trichloroethene	18.625	130	55669	9.15	ppbv		99
38) 1,2-Dichloropropane	19.142	63	48859	8.79	ppbv		98
39) 1,4-Dioxane	19.318	88	26766	8.47	ppbv		99
40) Bromodichloromethane	19.598	83	88983	9.31	ppbv		99
41) cis-1,3-Dichloropropene	20.347	75	73906	8.86	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	98794	8.48	ppbv		99
44) Toluene	20.803	91	158962	8.77	ppbv		99
45) trans-1,3-Dichloropropene	21.283	75	59910	7.81	ppbv		100
46) 1,1,2-Trichloroethane	21.594	97	52983	9.18	ppbv		98
47) Tetrachloroethene	21.642	166	78779	8.96	ppbv		100
48) 2-Hexanone	21.892	43	87378	7.86	ppbv		99
49) Chlorodibromomethane	22.208	129	93360	9.19	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	73846	8.95	ppbv		99
51) Chlorobenzene	23.127	112	126699	8.94	ppbv		99
52) Ethylbenzene	23.194	91	213991	9.00	ppbv		99
53) m&p-Xylene	23.376	91	324274	18.10	ppbv		100
54) o-Xylene	24.027	91	162586	8.80	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

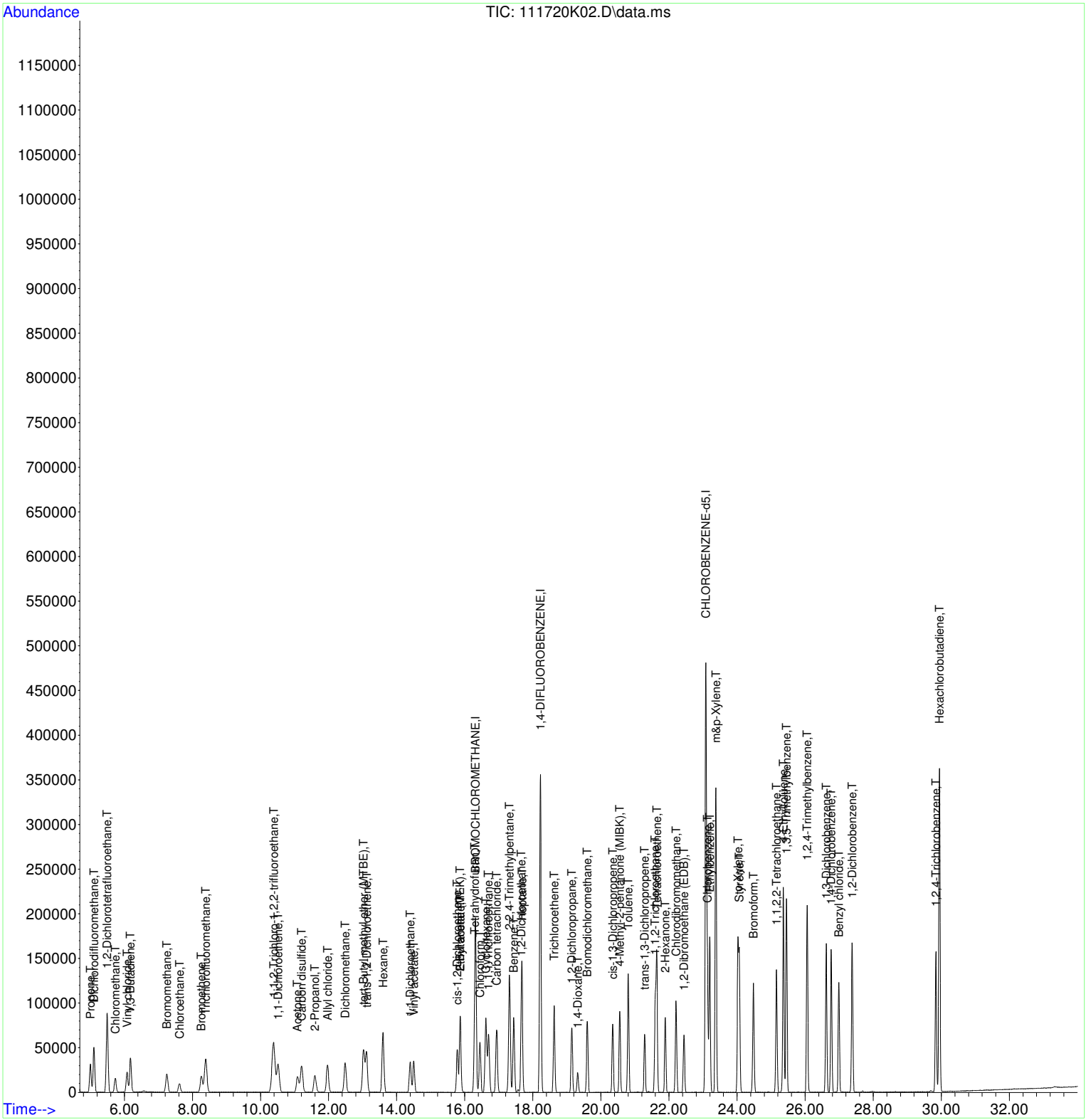
Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Styrene	24.064	104	129057	8.97	ppbv	99
56) Bromoform	24.483	173	100232	9.71	ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	120430	9.04	ppbv	100
58) 4-Ethyltoluene	25.359	105	254466	8.64	ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	196981	9.03	ppbv	99
60) 1,2,4-Trimethylbenzene	26.059	105	195301	8.93	ppbv	98
61) 1,3-Dichlorobenzene	26.619	146	123864	8.63	ppbv	100
62) 1,4-Dichlorobenzene	26.765	146	117352	8.58	ppbv	99
63) Benzyl chloride	26.990	91	154714	8.44	ppbv	99
64) 1,2-Dichlorobenzene	27.379	146	125340	8.81	ppbv	99
65) 1,2,4-Trichlorobenzene	29.843	180	90116	8.47	ppbv	99
66) Hexachlorobutadiene	29.946	225	125865	9.50	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



REVIEWED
By EM at 2:48 pm, Nov 17, 2020

LCS REPORT

Instrument Name: HP5973K
Sample Name: S20K070-CCV1@B20K064-BS1
Misc Info: 10ppbv 2045034@2045036
Date Acquired: 11/17/2020 11:08
QLast Update: Tue Nov 10 08:55:42 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
2)	Propene	5.00	9.50	7.68	81%	72.0	114.0	pass
3)	Dichlorodifluoromethane	5.11	9.80	8.35	85%	73.0	120.0	pass
4)	1,2-Dichlorotetrafluoroethane	5.50	9.60	8.02	84%	74.0	116.0	pass
5)	Chloromethane	5.73	9.90	8.05	81%	73.0	113.0	pass
6)	Vinyl chloride	6.08	10.30	9.68	94%	68.0	119.0	pass
7)	1,3-Butadiene	6.18	10.40	10.04	97%	68.0	120.0	pass
8)	Bromomethane	7.25	10.20	8.49	83%	71.0	122.0	pass
9)	Chloroethane	7.62	10.10	8.24	82%	73.0	116.0	pass
10)	Bromoethene	8.26	10.10	7.99	79%	64.0	123.0	pass
11)	Trichlorofluoromethane	8.39	9.30	8.08	87%	74.0	120.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.39	10.70	9.09	85%	63.0	126.0	pass
13)	1,1-Dichloroethene	10.52	10.60	8.49	80%	69.0	119.0	pass
14)	Acetone	11.08	9.90	8.09	82%	79.0	114.0	pass
15)	Carbon disulfide	11.21	10.40	8.53	82%	75.0	120.0	pass
16)	2-Propanol	11.60	10.00	7.79	78%	66.0	119.0	pass
17)	Allyl chloride	11.97	10.90	8.54	78%	72.0	116.0	pass
18)	Dichloromethane	12.49	10.30	8.07	78%	76.0	110.0	pass
19)	tert-Butyl methyl ether (MTBE)	13.03	10.90	8.50	78%	61.0	124.0	pass
20)	trans-1,2-Dichloroethene	13.12	10.20	8.29	81%	78.0	113.0	pass
21)	Hexane	13.60	10.10	7.87	78%	76.0	116.0	pass
22)	1,1-Dichloroethane	14.40	9.80	8.07	82%	76.0	113.0	pass
23)	Vinyl acetate	14.50	11.00	9.03	82%	71.0	117.0	pass
24)	cis-1,2-Dichloroethene	15.78	10.30	8.25	80%	74.0	116.0	pass
25)	2-Butanone (MEK)	15.86	10.00	8.29	83%	73.0	124.0	pass
26)	Ethyl acetate	15.87	10.10	8.16	81%	71.0	122.0	pass
27)	Tetrahydrofuran	16.29	9.20	7.57	82%	79.0	119.0	pass
28)	Chloroform	16.45	10.40	8.97	86%	77.0	115.0	pass
29)	Cyclohexane	16.62	10.80	8.55	79%	76.0	114.0	pass
30)	1,1,1-Trichloroethane	16.70	10.60	9.32	88%	77.0	117.0	pass
31)	Carbon tetrachloride	16.93	9.90	8.73	88%	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	9.02	87%	81.0	115.0	pass
34)	2,2,4-Trimethylpentane	17.31	10.70	8.84	83%	77.0	120.0	pass
35)	1,2-Dichloroethane	17.66	10.10	9.11	90%	74.0	128.0	pass
36)	Heptane	17.68	10.50	8.90	85%	73.0	128.0	pass
37)	Trichloroethene	18.62	10.70	9.15	86%	82.0	113.0	pass
38)	1,2-Dichloropropane	19.14	10.20	8.79	86%	78.0	119.0	pass
39)	1,4-Dioxane	19.32	10.50	8.47	81%	73.0	120.0	pass
40)	Bromodichloromethane	19.60	10.50	9.31	89%	79.0	124.0	pass
41)	cis-1,3-Dichloropropene	20.35	10.40	8.86	85%	82.0	117.0	pass
42)	4-Methyl-2-pentanone (MIBK)	20.55	9.80	8.48	86%	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	8.77	85%	80.0	120.0	pass
45)	trans-1,3-Dichloropropene	21.28	9.20	7.81	85%	81.0	122.0	pass
46)	1,1,2-Trichloroethane	21.59	10.50	9.18	87%	81.0	121.0	pass
47)	Tetrachloroethene	21.64	10.30	8.96	87%	69.0	122.0	pass

48)	2-Hexanone	21.89	9.20	7.86	85%	61.0	140.0	pass
49)	Chlorodibromomethane	22.21	10.40	9.19	88%	82.0	128.0	pass
50)	1,2-Dibromoethane (EDB)	22.44	10.40	8.95	86%	80.0	121.0	pass
51)	Chlorobenzene	23.13	10.40	8.94	86%	80.0	122.0	pass
52)	Ethylbenzene	23.19	10.30	9.00	87%	80.0	125.0	pass
53)	m&p-Xylene	23.38	20.40	18.10	89%	80.0	128.0	pass
54)	o-Xylene	24.03	10.10	8.80	87%	79.0	130.0	pass
55)	Styrene	24.06	10.10	8.97	89%	76.0	133.0	pass
56)	Bromoform	24.48	10.60	9.71	92%	82.0	136.0	pass
57)	1,1,2,2-Tetrachloroethane	25.16	10.10	9.04	90%	78.0	132.0	pass
58)	4-Ethyltoluene	25.36	9.90	8.64	87%	77.0	133.0	pass
59)	1,3,5-Trimethylbenzene	25.45	10.10	9.03	89%	78.0	133.0	pass
60)	1,2,4-Trimethylbenzene	26.06	10.00	8.93	89%	78.0	133.0	pass
61)	1,3-Dichlorobenzene	26.62	9.80	8.63	88%	76.0	133.0	pass
62)	1,4-Dichlorobenzene	26.76	9.80	8.58	88%	75.0	134.0	pass
63)	Benzyl chloride	26.99	9.30	8.44	91%	73.0	144.0	pass
64)	1,2-Dichlorobenzene	27.38	9.80	8.81	90%	77.0	134.0	pass
65)	1,2,4-Trichlorobenzene	29.84	9.70	8.47	87%	70.0	133.0	pass
66)	Hexachlorobutadiene	29.95	10.30	9.50	92%	74.0	130.0	pass

B20K064-BS1

REVIEWED
By EM at 2:48 pm, Nov 17, 2020

LCS REPORT

Instrument Name: HP5973K
Sample Name: S20K070-CCV1@B20K064-BS1
Misc Info: 10ppbv 2045034@2045036
Date Acquired: 11/17/2020 11:08
QLast Update: Tue Nov 10 08:55:42 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
2)	Propene	5.00	9.50	7.68	81%	72.0	114.0	pass
3)	Dichlorodifluoromethane	5.11	9.80	8.35	85%	73.0	120.0	pass
4)	1,2-Dichlorotetrafluoroethane	5.50	9.60	8.02	84%	74.0	116.0	pass
5)	Chloromethane	5.73	9.90	8.05	81%	73.0	113.0	pass
6)	Vinyl chloride	6.08	10.30	9.68	94%	68.0	119.0	pass
7)	1,3-Butadiene	6.18	10.40	10.04	97%	68.0	120.0	pass
8)	Bromomethane	7.25	10.20	8.49	83%	71.0	122.0	pass
9)	Chloroethane	7.62	10.10	8.24	82%	73.0	116.0	pass
10)	Bromoethene	8.26	10.10	7.99	79%	64.0	123.0	pass
11)	Trichlorofluoromethane	8.39	9.30	8.08	87%	74.0	120.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.39	10.70	9.09	85%	63.0	126.0	pass
13)	1,1-Dichloroethene	10.52	10.60	8.49	80%	69.0	119.0	pass
14)	Acetone	11.08	9.90	8.09	82%	79.0	114.0	pass
15)	Carbon disulfide	11.21	10.40	8.53	82%	75.0	120.0	pass
16)	2-Propanol	11.60	10.00	7.79	78%	66.0	119.0	pass
17)	Allyl chloride	11.97	10.90	8.54	78%	72.0	116.0	pass
18)	Dichloromethane	12.49	10.30	8.07	78%	76.0	110.0	pass
19)	tert-Butyl methyl ether (MTBE)	13.03	10.90	8.50	78%	61.0	124.0	pass
20)	trans-1,2-Dichloroethene	13.12	10.20	8.29	81%	78.0	113.0	pass
21)	Hexane	13.60	10.10	7.87	78%	76.0	116.0	pass
22)	1,1-Dichloroethane	14.40	9.80	8.07	82%	76.0	113.0	pass
23)	Vinyl acetate	14.50	11.00	9.03	82%	71.0	117.0	pass
24)	cis-1,2-Dichloroethene	15.78	10.30	8.25	80%	74.0	116.0	pass
25)	2-Butanone (MEK)	15.86	10.00	8.29	83%	73.0	124.0	pass
26)	Ethyl acetate	15.87	10.10	8.16	81%	71.0	122.0	pass
27)	Tetrahydrofuran	16.29	9.20	7.57	82%	79.0	119.0	pass
28)	Chloroform	16.45	10.40	8.97	86%	77.0	115.0	pass
29)	Cyclohexane	16.62	10.80	8.55	79%	76.0	114.0	pass
30)	1,1,1-Trichloroethane	16.70	10.60	9.32	88%	77.0	117.0	pass
31)	Carbon tetrachloride	16.93	9.90	8.73	88%	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	9.02	87%	81.0	115.0	pass
34)	2,2,4-Trimethylpentane	17.31	10.70	8.84	83%	77.0	120.0	pass
35)	1,2-Dichloroethane	17.66	10.10	9.11	90%	74.0	128.0	pass
36)	Heptane	17.68	10.50	8.90	85%	73.0	128.0	pass
37)	Trichloroethene	18.62	10.70	9.15	86%	82.0	113.0	pass
38)	1,2-Dichloropropane	19.14	10.20	8.79	86%	78.0	119.0	pass
39)	1,4-Dioxane	19.32	10.50	8.47	81%	73.0	120.0	pass
40)	Bromodichloromethane	19.60	10.50	9.31	89%	79.0	124.0	pass
41)	cis-1,3-Dichloropropene	20.35	10.40	8.86	85%	82.0	117.0	pass
42)	4-Methyl-2-pentanone (MIBK)	20.55	9.80	8.48	86%	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	8.77	85%	80.0	120.0	pass
45)	trans-1,3-Dichloropropene	21.28	9.20	7.81	85%	81.0	122.0	pass
46)	1,1,2-Trichloroethane	21.59	10.50	9.18	87%	81.0	121.0	pass
47)	Tetrachloroethene	21.64	10.30	8.96	87%	69.0	122.0	pass

48)	2-Hexanone	21.89	9.20	7.86	85%	61.0	140.0	pass
49)	Chlorodibromomethane	22.21	10.40	9.19	88%	82.0	128.0	pass
50)	1,2-Dibromoethane (EDB)	22.44	10.40	8.95	86%	80.0	121.0	pass
51)	Chlorobenzene	23.13	10.40	8.94	86%	80.0	122.0	pass
52)	Ethylbenzene	23.19	10.30	9.00	87%	80.0	125.0	pass
53)	m&p-Xylene	23.38	20.40	18.10	89%	80.0	128.0	pass
54)	o-Xylene	24.03	10.10	8.80	87%	79.0	130.0	pass
55)	Styrene	24.06	10.10	8.97	89%	76.0	133.0	pass
56)	Bromoform	24.48	10.60	9.71	92%	82.0	136.0	pass
57)	1,1,2,2-Tetrachloroethane	25.16	10.10	9.04	90%	78.0	132.0	pass
58)	4-Ethyltoluene	25.36	9.90	8.64	87%	77.0	133.0	pass
59)	1,3,5-Trimethylbenzene	25.45	10.10	9.03	89%	78.0	133.0	pass
60)	1,2,4-Trimethylbenzene	26.06	10.00	8.93	89%	78.0	133.0	pass
61)	1,3-Dichlorobenzene	26.62	9.80	8.63	88%	76.0	133.0	pass
62)	1,4-Dichlorobenzene	26.76	9.80	8.58	88%	75.0	134.0	pass
63)	Benzyl chloride	26.99	9.30	8.44	91%	73.0	144.0	pass
64)	1,2-Dichlorobenzene	27.38	9.80	8.81	90%	77.0	134.0	pass
65)	1,2,4-Trichlorobenzene	29.84	9.70	8.47	87%	70.0	133.0	pass
66)	Hexachlorobutadiene	29.95	10.30	9.50	92%	74.0	130.0	pass

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	157954	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	487444	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	456167	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	5.004	41	37781	7.68	ppbv		99
3) Dichlorodifluoromethane	5.107	85	97343	8.35	ppbv		100
4) 1,2-Dichlorotetrafluor...	5.497	85	105582	8.02	ppbv		100
5) Chloromethane	5.734	50	38877	8.05	ppbv		99
6) Vinyl chloride	6.081	62	51076	9.68	ppbv		99
7) 1,3-Butadiene	6.178	54	39267	10.04	ppbv		99
8) Bromomethane	7.249	94	34529	8.49	ppbv		100
9) Chloroethane	7.620	64	23234	8.24	ppbv		100
10) Bromoethene	8.259	106	34671	7.99	ppbv		100
11) Trichlorofluoromethane	8.392	101	90540	8.08	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	65853	9.09	ppbv		99
13) 1,1-Dichloroethene	10.522	61	58643	8.49	ppbv		100
14) Acetone	11.081	43	57101	8.09	ppbv		99
15) Carbon disulfide	11.209	76	113807	8.53	ppbv		99
16) 2-Propanol	11.598	45	58968	7.79	ppbv		95
17) Allyl chloride	11.970	41	52712	8.54	ppbv		100
18) Dichloromethane	12.487	49	47392	8.07	ppbv		99
19) tert-Butyl methyl ethe...	13.028	73	112964	8.50	ppbv		100
20) trans-1,2-Dichloroethene	13.119	61	55672	8.29	ppbv		99
21) Hexane	13.600	57	70615	7.87	ppbv		98
22) 1,1-Dichloroethane	14.397	63	70696	8.07	ppbv		99
23) Vinyl acetate	14.500	43	97600	9.03	ppbv		99
24) cis-1,2-Dichloroethene	15.778	61	52163	8.25	ppbv	#	99
25) 2-Butanone (MEK)	15.863	72	22431	8.29	ppbv	#	96
26) Ethyl acetate	15.869	61	13651	8.16	ppbv	#	89
27) Tetrahydrofuran	16.289	42	48540	7.57	ppbv		99
28) Chloroform	16.447	83	79333	8.97	ppbv		99
29) Cyclohexane	16.623	56	73070	8.55	ppbv		98
30) 1,1,1-Trichloroethane	16.696	97	79985	9.32	ppbv		100
31) Carbon tetrachloride	16.934	117	82581	8.73	ppbv		99
33) Benzene	17.439	78	133783	9.02	ppbv		99
34) 2,2,4-Trimethylpentane	17.311	57	229218	8.84	ppbv		98
35) 1,2-Dichloroethane	17.658	62	48539	9.11	ppbv		99
36) Heptane	17.682	43	83224	8.90	ppbv		99
37) Trichloroethene	18.625	130	55669	9.15	ppbv		99
38) 1,2-Dichloropropane	19.142	63	48859	8.79	ppbv		98
39) 1,4-Dioxane	19.318	88	26766	8.47	ppbv		99
40) Bromodichloromethane	19.598	83	88983	9.31	ppbv		99
41) cis-1,3-Dichloropropene	20.347	75	73906	8.86	ppbv		99
42) 4-Methyl-2-pentanone (...	20.553	43	98794	8.48	ppbv		99
44) Toluene	20.803	91	158962	8.77	ppbv		99
45) trans-1,3-Dichloropropene	21.283	75	59910	7.81	ppbv		100
46) 1,1,2-Trichloroethane	21.594	97	52983	9.18	ppbv		98
47) Tetrachloroethene	21.642	166	78779	8.96	ppbv		100
48) 2-Hexanone	21.892	43	87378	7.86	ppbv		99
49) Chlorodibromomethane	22.208	129	93360	9.19	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	73846	8.95	ppbv		99
51) Chlorobenzene	23.127	112	126699	8.94	ppbv		99
52) Ethylbenzene	23.194	91	213991	9.00	ppbv		99
53) m&p-Xylene	23.376	91	324274	18.10	ppbv		100
54) o-Xylene	24.027	91	162586	8.80	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

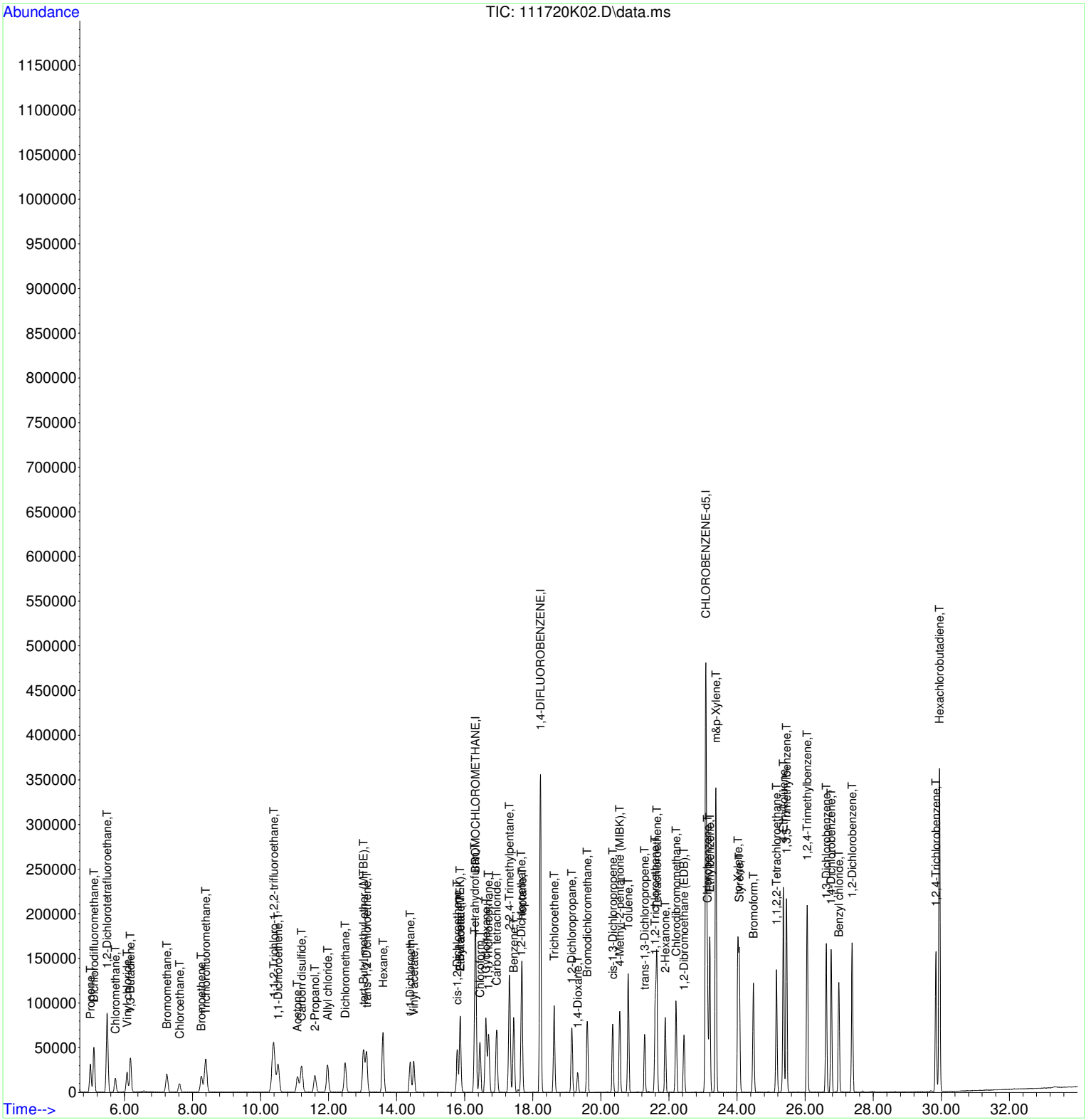
Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.064	104	129057	8.97 ppbv	99
56) Bromoform	24.483	173	100232	9.71 ppbv	100
57) 1,1,2,2-Tetrachloroethane	25.159	83	120430	9.04 ppbv	100
58) 4-Ethyltoluene	25.359	105	254466	8.64 ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	196981	9.03 ppbv	99
60) 1,2,4-Trimethylbenzene	26.059	105	195301	8.93 ppbv	98
61) 1,3-Dichlorobenzene	26.619	146	123864	8.63 ppbv	100
62) 1,4-Dichlorobenzene	26.765	146	117352	8.58 ppbv	99
63) Benzyl chloride	26.990	91	154714	8.44 ppbv	99
64) 1,2-Dichlorobenzene	27.379	146	125340	8.81 ppbv	99
65) 1,2,4-Trichlorobenzene	29.843	180	90116	8.47 ppbv	99
66) Hexachlorobutadiene	29.946	225	125865	9.50 ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	75	0.00
2	T	Propene	0.611	0.493	19.3	68	0.00
3	T	Dichlorodifluoromethane	1.446	1.233	14.7	70	0.00
4	T	1,2-Dichlorotetrafluoroetha	1.634	1.365	16.5	68	0.00
5	T	Chloromethane	0.599	0.487	18.7	66	0.00
6	T	Vinyl chloride	0.655	0.615	6.1	77	0.00
7	T	1,3-Butadiene	0.485	0.469	3.3	80	0.00
8	T	Bromomethane	0.505	0.420	16.8	68	0.00
9	T	Chloroethane	0.350	0.285	18.6	67	0.00
10	T	Bromoethene	0.539	0.426	21.0	66	0.00
11	T	Trichlorofluoromethane	1.391	1.208	13.2	71	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	0.899	0.764	15.0	70	0.00
13	T	1,1-Dichloroethene	0.857	0.686	20.0	65	0.00
14	T	Acetone	0.876	0.716	18.3	67	-0.01
15	T	Carbon disulfide	1.656	1.358	18.0	68	0.00
16	T	2-Propanol	0.939	0.732	22.0	63	0.00
17	T	Allyl chloride	0.765	0.600	21.6	65	0.00
18	T	Dichloromethane	0.729	0.571	21.7	69	0.00
19	T	tert-Butyl methyl ether (MT	1.650	1.286	22.1	64	0.00
20	T	trans-1,2-Dichloroethene	0.834	0.677	18.8	67	0.00
21	T	Hexane	1.114	0.868	22.1	65	0.00
22	T	1,1-Dichloroethane	1.088	0.895	17.7	68	0.00
23	T	Vinyl acetate	1.341	1.101	17.9	65	0.00
24	T	cis-1,2-Dichloroethene	0.785	0.628	20.0	66	0.00
25	T	2-Butanone (MEK)	0.336	0.278	17.3	68	0.00
26	T	Ethyl acetate	0.208	0.168	19.2	66	0.00
27	T	Tetrahydrofuran	0.795	0.655	17.6	68	0.00
28	T	Chloroform	1.097	0.947	13.7	71	0.00
29	T	Cyclohexane	1.061	0.840	20.8	66	0.00
30	T	1,1,1-Trichloroethane	1.065	0.936	12.1	72	0.00
31	T	Carbon tetrachloride	1.174	1.035	11.8	71	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	74	0.00
33	T	Benzene	0.596	0.517	13.3	68	0.00
34	T	2,2,4-Trimethylpentane	1.043	0.861	17.4	66	0.00
35	T	1,2-Dichloroethane	0.214	0.193	9.8	70	0.00
36	T	Heptane	0.376	0.319	15.2	68	0.00
37	T	Trichloroethene	0.245	0.209	14.7	68	0.00
38	T	1,2-Dichloropropane	0.224	0.193	13.8	68	0.00
39	T	1,4-Dioxane	0.127	0.103	18.9	65	0.00
40	T	Bromodichloromethane	0.384	0.341	11.2	70	0.00
41	T	cis-1,3-Dichloropropene	0.335	0.286	14.6	65	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.469	0.405	13.6	69	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	75	0.00
44	T	Toluene	0.778	0.663	14.8	68	0.00
45	T	trans-1,3-Dichloropropene	0.330	0.280	15.2	66	0.00
46	T	1,1,2-Trichloroethane	0.248	0.217	12.5	70	0.00
47	T	Tetrachloroethene	0.378	0.329	13.0	70	0.00
48	T	2-Hexanone	0.478	0.408	14.6	68	0.00
49	T	Chlorodibromomethane	0.436	0.386	11.5	71	0.00
50	T	1,2-Dibromoethane (EDB)	0.354	0.305	13.8	68	0.00
51	T	Chlorobenzene	0.609	0.523	14.1	69	0.00

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K02.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:08 am
Operator : EM
Sample : S20K070-CCV1@B20K064-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 17 12:20:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	1.022	0.893	12.6	70	0.00
53 T	m&p-Xylene	0.770	0.683	11.3	71	0.00
54 T	o-Xylene	0.794	0.692	12.8	70	0.00
55 T	Styrene	0.618	0.549	11.2	68	0.00
56 T	Bromoform	0.444	0.406	8.6	71	0.00
57 T	1,1,2,2-Tetrachloroethane	0.572	0.512	10.5	71	0.00
58 T	4-Ethyltoluene	1.266	1.104	12.8	70	0.00
59 T	1,3,5-Trimethylbenzene	0.938	0.838	10.7	71	0.00
60 T	1,2,4-Trimethylbenzene	0.939	0.839	10.6	70	0.00
61 T	1,3-Dichlorobenzene	0.616	0.543	11.9	69	0.00
62 T	1,4-Dichlorobenzene	0.588	0.515	12.4	68	0.00
63 T	Benzyl chloride	0.788	0.715	9.3	67	0.00
64 T	1,2-Dichlorobenzene	0.611	0.550	10.0	71	0.00
65 T	1,2,4-Trichlorobenzene	0.457	0.399	12.7	65	0.00
66 T	Hexachlorobutadiene	0.569	0.525	7.7	72	0.00

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

S20K070-CRL1

REVIEWED
By EM at 2:48 pm, Nov 17, 2020

QLS REPORT

Instrument Name: HP5973K
Sample Name: S20K070-CRL1
Misc Info: 1.0ppbv 2045034
Date Acquired: 11/17/2020 11:57
QLast Update: Tue Nov 10 08:55:42 2020
Operator: EM

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	TYPE
1)	BROMOCHLOROMETHANE	16.31	#N/A	19.60	#N/A	60.0	140.0	#N/A	Internal
2)	Propene	5.00	0.95	0.99	104%	60.0	140.0	pass	Subset
3)	Dichlorodifluoromethane	5.11	0.98	0.99	101%	60.0	140.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	5.50	0.96	0.96	100%	60.0	140.0	pass	Primary
5)	Chloromethane	5.74	0.99	0.98	99%	60.0	140.0	pass	Primary
6)	Vinyl chloride	6.08	1.03	1.15	112%	60.0	140.0	pass	Primary
7)	1,3-Butadiene	6.19	1.04	1.28	123%	60.0	140.0	pass	Subset
8)	Bromomethane	7.24	1.02	0.92	90%	60.0	140.0	pass	Primary
9)	Chloroethane	7.62	1.01	0.89	88%	60.0	140.0	pass	Primary
10)	Bromoethene	8.26	1.01	0.93	92%	60.0	140.0	pass	Subset
11)	Trichlorofluoromethane	8.39	0.93	0.90	97%	60.0	140.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.38	1.07	1.00	93%	60.0	140.0	pass	Primary
13)	1,1-Dichloroethene	10.52	1.06	0.85	80%	60.0	140.0	pass	Primary
14)	Acetone	11.11	0.99	0.95	96%	60.0	140.0	pass	Subset
15)	Carbon disulfide	11.20	1.04	1.04	100%	60.0	140.0	pass	Subset
16)	2-Propanol	11.62	1.00	0.75	75%	60.0	140.0	pass	Subset
17)	Allyl chloride	11.98	1.09	0.91	83%	60.0	140.0	pass	Subset
18)	Dichloromethane	12.49	1.03	1.21	118%	60.0	140.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	13.03	1.09	0.89	82%	60.0	140.0	pass	Subset
20)	trans-1,2-Dichloroethene	13.11	1.02	0.97	95%	60.0	140.0	pass	Subset
21)	Hexane	13.59	1.01	0.82	81%	60.0	140.0	pass	Subset
22)	1,1-Dichloroethane	14.40	0.98	0.87	89%	60.0	140.0	pass	Primary
23)	Vinyl acetate	14.51	1.10	0.72	66%	60.0	140.0	pass	Subset
24)	cis-1,2-Dichloroethene	15.78	1.03	0.83	80%	60.0	140.0	pass	Primary
25)	2-Butanone (MEK)	15.87	1.00	0.85	85%	60.0	140.0	pass	Subset
26)	Ethyl acetate	15.87	1.01	0.95	94%	60.0	140.0	pass	Subset
27)	Tetrahydrofuran	16.31	0.92	0.81	88%	60.0	140.0	pass	Subset
28)	Chloroform	16.44	1.04	0.97	93%	60.0	140.0	pass	Primary
29)	Cyclohexane	16.62	1.08	0.95	88%	60.0	140.0	pass	Subset
30)	1,1,1-Trichloroethane	16.70	1.06	1.00	94%	60.0	140.0	pass	Primary
31)	Carbon tetrachloride	16.93	0.99	0.93	94%	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	0.97	93%	60.0	140.0	pass	Primary
34)	2,2,4-Trimethylpentane	17.31	1.07	0.92	86%	60.0	140.0	pass	Subset
35)	1,2-Dichloroethane	17.66	1.01	0.96	95%	60.0	140.0	pass	Primary
36)	Heptane	17.68	1.05	0.92	88%	60.0	140.0	pass	Subset
37)	Trichloroethene	18.63	1.07	0.97	91%	60.0	140.0	pass	Primary
38)	1,2-Dichloropropane	19.15	1.02	0.90	88%	60.0	140.0	pass	Primary
39)	1,4-Dioxane	19.32	1.05	0.90	86%	60.0	140.0	pass	Subset
40)	Bromodichloromethane	19.60	1.05	1.05	100%	60.0	140.0	pass	Subset
41)	cis-1,3-Dichloropropene	20.35	1.04	0.77	74%	60.0	140.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	20.55	0.98	0.89	91%	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	0.87	85%	60.0	140.0	pass	Primary
45)	trans-1,3-Dichloropropene	21.29	0.92	0.67	72%	60.0	140.0	pass	Primary
46)	1,1,2-Trichloroethane	21.60	1.05	0.96	91%	60.0	140.0	pass	Primary
47)	Tetrachloroethene	21.64	1.03	0.93	90%	60.0	140.0	pass	Primary
48)	2-Hexanone	21.90	0.92	0.77	83%	60.0	140.0	pass	Subset
49)	Chlorodibromomethane	22.21	1.04	0.97	93%	60.0	140.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	22.44	1.04	0.89	85%	60.0	140.0	pass	Primary

51)	Chlorobenzene	23.13	1.04	0.94	90%	60.0	140.0	pass	Primary	
52)	Ethylbenzene	23.20	1.03	0.90	87%	60.0	140.0	pass	Primary	
53)	m&p-Xylene	23.38	2.04	1.74	85%	60.0	140.0	pass	Primary	
54)	o-Xylene	24.03	1.01	0.80	79%	60.0	140.0	pass	Primary	
55)	Styrene	24.07	1.01	0.73	72%	60.0	140.0	pass	Primary	
56)	Bromoform	24.48	1.06	0.88	83%	60.0	140.0	pass	Subset	
57)	1,1,2,2-Tetrachloroethane	25.15	1.01	0.88	87%	60.0	140.0	pass	Primary	
58)	4-Ethyltoluene	25.36	0.99	0.83	84%	60.0	140.0	pass	Subset	
59)	1,3,5-Trimethylbenzene	25.45	1.01	0.84	84%	60.0	140.0	pass	Primary	
60)	1,2,4-Trimethylbenzene	26.06	1.00	0.78	78%	60.0	140.0	pass	Primary	
61)	1,3-Dichlorobenzene	26.62	0.98	0.82	83%	60.0	140.0	pass	Primary	
62)	1,4-Dichlorobenzene	26.76	0.98	0.78	80%	60.0	140.0	pass	Primary	
63)	Benzyl chloride	26.99	0.93	0.55	60%	60.0	140.0	FAIL	Subset	OK
64)	1,2-Dichlorobenzene	27.38	0.98	0.85	87%	60.0	140.0	pass	Primary	
65)	1,2,4-Trichlorobenzene	29.84	0.97	0.65	67%	60.0	140.0	pass	Primary	
66)	Hexachlorobutadiene	29.95	1.03	0.92	90%	60.0	140.0	pass	Primary	

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K03.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:57 am
Operator : EM
Sample : S20K070-CRL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 17 14:00:02 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	157730	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	496700	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	447617	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	4879	0.99	ppbv		97
3) Dichlorodifluoromethane	5.107	85	11494	0.99	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.496	85	12623	0.96	ppbv		97
5) Chloromethane	5.740	50	4718	0.98	ppbv		99
6) Vinyl chloride	6.080	62	6051	1.15	ppbv		97
7) 1,3-Butadiene	6.190	54	4988	1.28	ppbv		91
8) Bromomethane	7.242	94	3724	0.92	ppbv		100
9) Chloroethane	7.620	64	2501	0.89	ppbv		90
10) Bromoethene	8.258	106	4023	0.93	ppbv		98
11) Trichlorofluoromethane	8.392	101	10123	0.90	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	7210	1.00	ppbv		99
13) 1,1-Dichloroethene	10.515	61	5832	0.85	ppbv		99
14) Acetone	11.106	43	6714	0.95	ppbv		93
15) Carbon disulfide	11.203	76	13857	1.04	ppbv		81
16) 2-Propanol	11.617	45	5685	0.75	ppbv		87
17) Allyl chloride	11.975	41	5596	0.91	ppbv		96
18) Dichloromethane	12.493	49	7122	1.21	ppbv		99
19) tert-Butyl methyl ethe...	13.034	73	11851	0.89	ppbv		96
20) trans-1,2-Dichloroethene	13.113	61	6521	0.97	ppbv		99
21) Hexane	13.594	57	7345	0.82	ppbv		93
22) 1,1-Dichloroethane	14.403	63	7636	0.87	ppbv		98
23) Vinyl acetate	14.506	43	7783	0.72	ppbv		93
24) cis-1,2-Dichloroethene	15.778	61	5231	0.83	ppbv	#	99
25) 2-Butanone (MEK)	15.869	72	2309	0.85	ppbv	#	87
26) Ethyl acetate	15.869	61	1587	0.95	ppbv	#	92
27) Tetrahydrofuran	16.307	42	5159	0.81	ppbv		96
28) Chloroform	16.441	83	8581	0.97	ppbv		98
29) Cyclohexane	16.623	56	8092	0.95	ppbv		97
30) 1,1,1-Trichloroethane	16.696	97	8543	1.00	ppbv		99
31) Carbon tetrachloride	16.934	117	8747	0.93	ppbv		98
33) Benzene	17.445	78	14634	0.97	ppbv		99
34) 2,2,4-Trimethylpentane	17.311	57	24232	0.92	ppbv		96
35) 1,2-Dichloroethane	17.658	62	5226	0.96	ppbv		96
36) Heptane	17.682	43	8768	0.92	ppbv		96
37) Trichloroethene	18.631	130	6008	0.97	ppbv		99
38) 1,2-Dichloropropane	19.148	63	5074	0.90	ppbv		97
39) 1,4-Dioxane	19.324	88	2898	0.90	ppbv		97
40) Bromodichloromethane	19.604	83	10256	1.05	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	6522	0.77	ppbv		97
42) 4-Methyl-2-pentanone (...	20.553	43	10621	0.89	ppbv		95
44) Toluene	20.803	91	15508	0.87	ppbv		100
45) trans-1,3-Dichloropropene	21.289	75	5016	0.67	ppbv		98
46) 1,1,2-Trichloroethane	21.600	97	5426	0.96	ppbv		98
47) Tetrachloroethene	21.642	166	7990	0.93	ppbv		100
48) 2-Hexanone	21.898	43	8367	0.77	ppbv		94
49) Chlorodibromomethane	22.208	129	9658	0.97	ppbv		100
50) 1,2-Dibromoethane (EDB)	22.439	107	7193	0.89	ppbv		98
51) Chlorobenzene	23.127	112	13056	0.94	ppbv	#	76
52) Ethylbenzene	23.200	91	20962	0.90	ppbv		99
53) m&p-Xylene	23.376	91	30633	1.74	ppbv		98
54) o-Xylene	24.027	91	14526	0.80	ppbv		98

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K03.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:57 am
Operator : EM
Sample : S20K070-CRL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

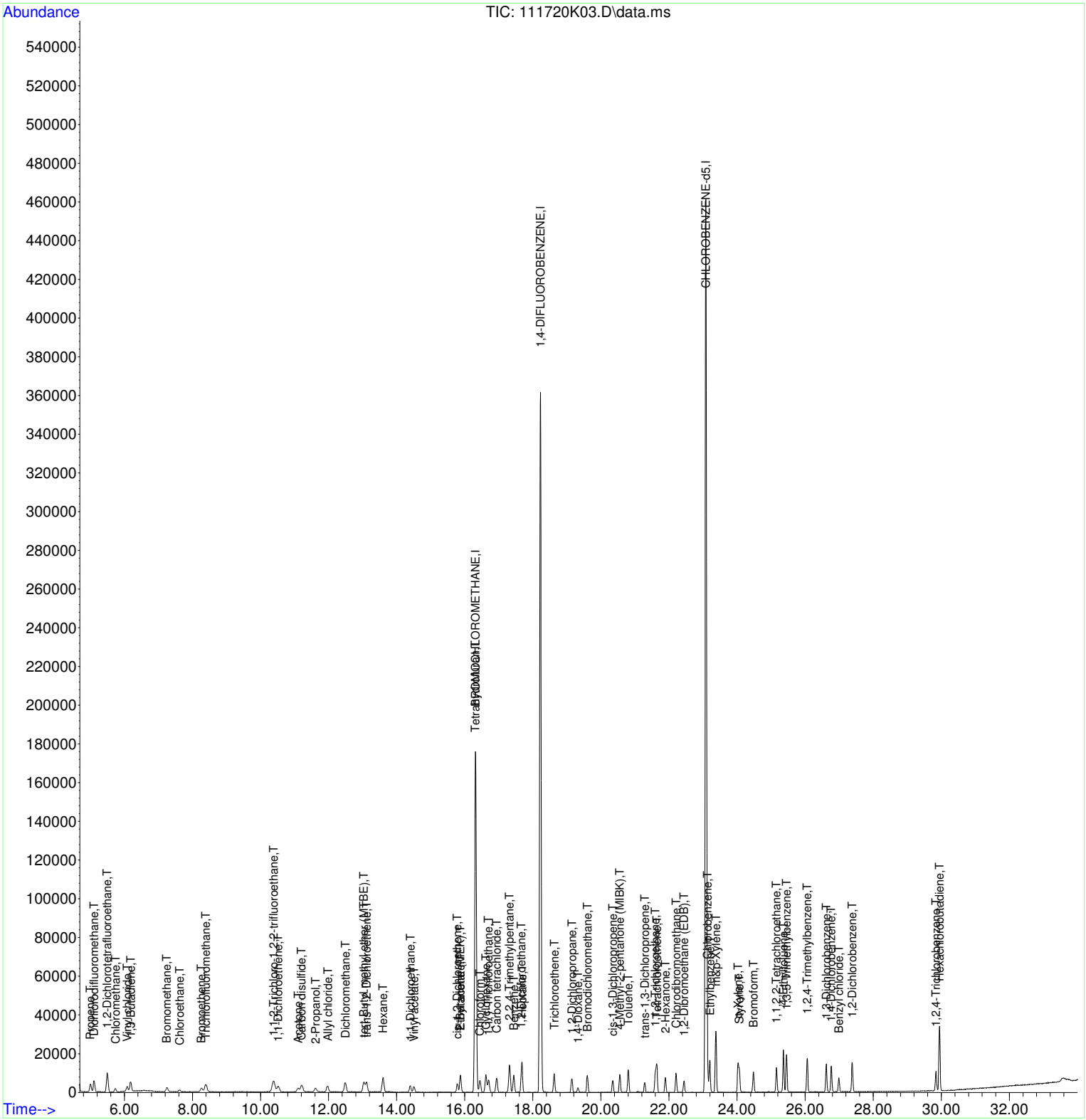
Quant Time: Nov 17 14:00:02 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	10336	0.73 ppbv	95
56) Bromoform	24.483	173	8955	0.88 ppbv	99
57) 1,1,2,2-Tetrachloroethane	25.153	83	11448	0.88 ppbv	100
58) 4-Ethyltoluene	25.359	105	24035	0.83 ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	18063	0.84 ppbv	98
60) 1,2,4-Trimethylbenzene	26.059	105	16675	0.78 ppbv	99
61) 1,3-Dichlorobenzene	26.619	146	11505	0.82 ppbv	99
62) 1,4-Dichlorobenzene	26.765	146	10492	0.78 ppbv	99
63) Benzyl chloride	26.990	91	9968	0.55 ppbv	96
64) 1,2-Dichlorobenzene	27.379	146	11864	0.85 ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	6809	0.65 ppbv	98
66) Hexachlorobutadiene	29.946	225	12011	0.92 ppbv	99

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

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K03.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:57 am
Operator : EM
Sample : S20K070-CRL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 17 14:00:02 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



B20K064-BLK1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K04.D
InstName : HP5973K
Acq On : 17 Nov 2020 12:49 pm
Operator : EM
Sample : B20K064-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 17 14:01:15 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	157799	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	499544	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	444846	19.60 ppbv	0.00

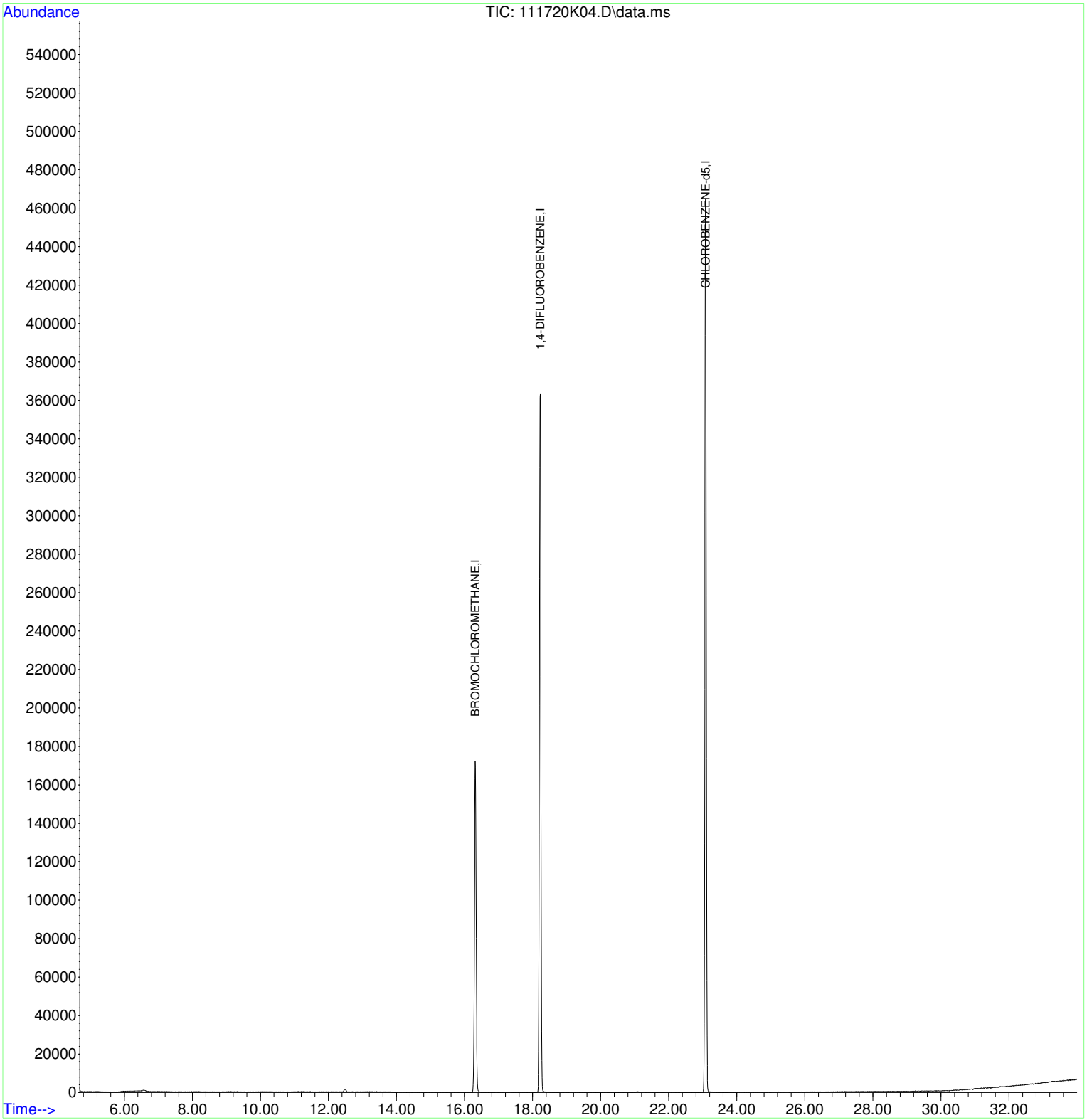
Target Compounds Qvalue

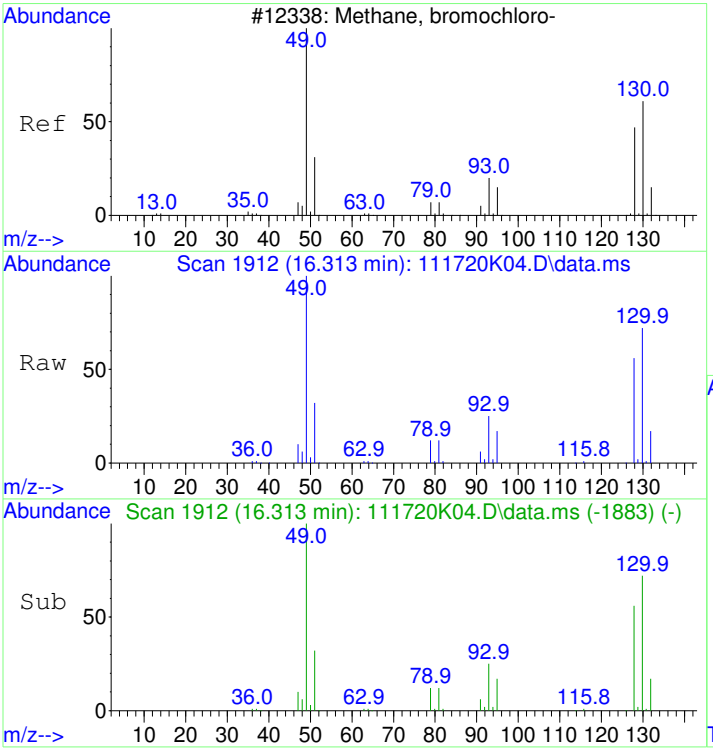
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 2:49 pm, Nov 17, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K04.D
InstName : HP5973K
Acq On : 17 Nov 2020 12:49 pm
Operator : EM
Sample : B20K064-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 17 14:01:15 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

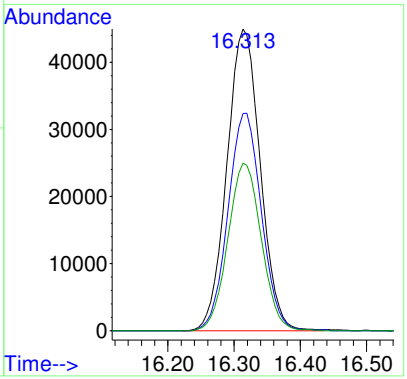


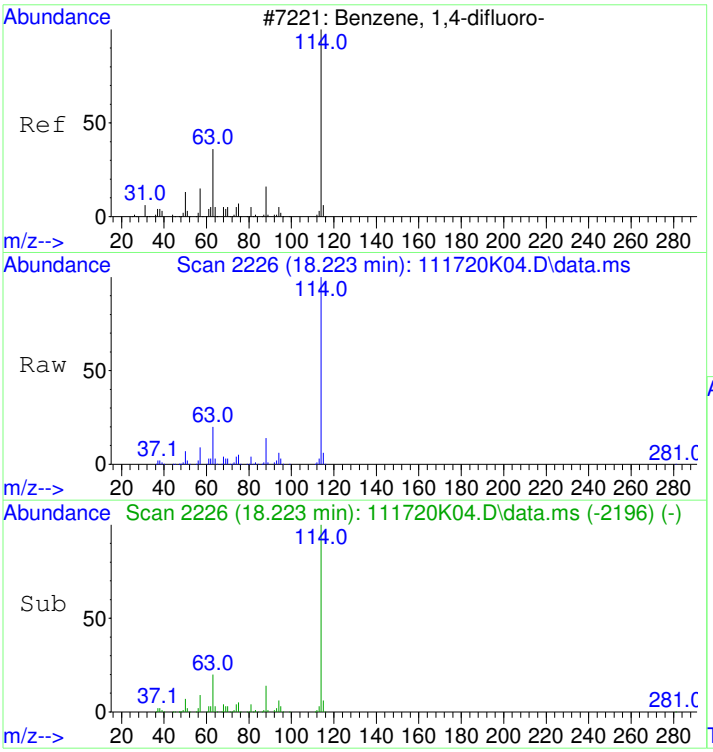


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K04.D
Acq: 17 Nov 2020 12:49 pm

Tgt Ion: 49 Resp: 157799

Ion	Ratio	Lower	Upper
49	100		
130	72.1	51.9	91.9
128	55.0	35.7	75.7

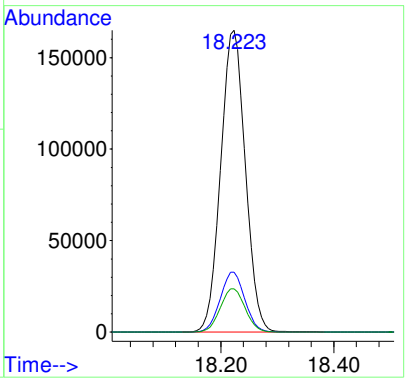


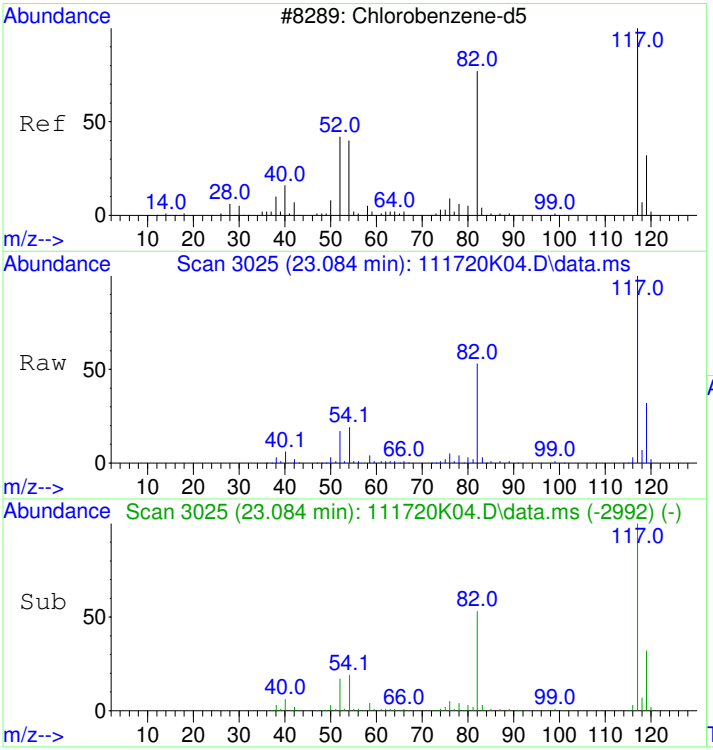


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 111720K04.D
Acq: 17 Nov 2020 12:49 pm

Tgt Ion:114 Resp: 499544

Ion	Ratio	Lower	Upper
114	100		
63	19.8	0.0	39.5
88	14.5	0.0	34.7

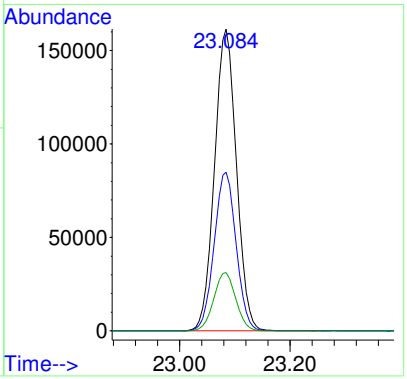




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K04.D
Acq: 17 Nov 2020 12:49 pm

Tgt Ion:117 Resp: 444846

Ion	Ratio	Lower	Upper
117	100		
82	52.7	32.3	72.3
54	19.4	0.0	38.6



2011024-01

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K05.D
InstName : HP5973K
Acq On : 17 Nov 2020 2:24 pm
Operator : EM
Sample : 2011024-01
Misc : 200ml FG-037-3ft-G
ALS Vial : 21 Sample Multiplier: 1.9

Quant Time: Nov 17 15:34:50 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

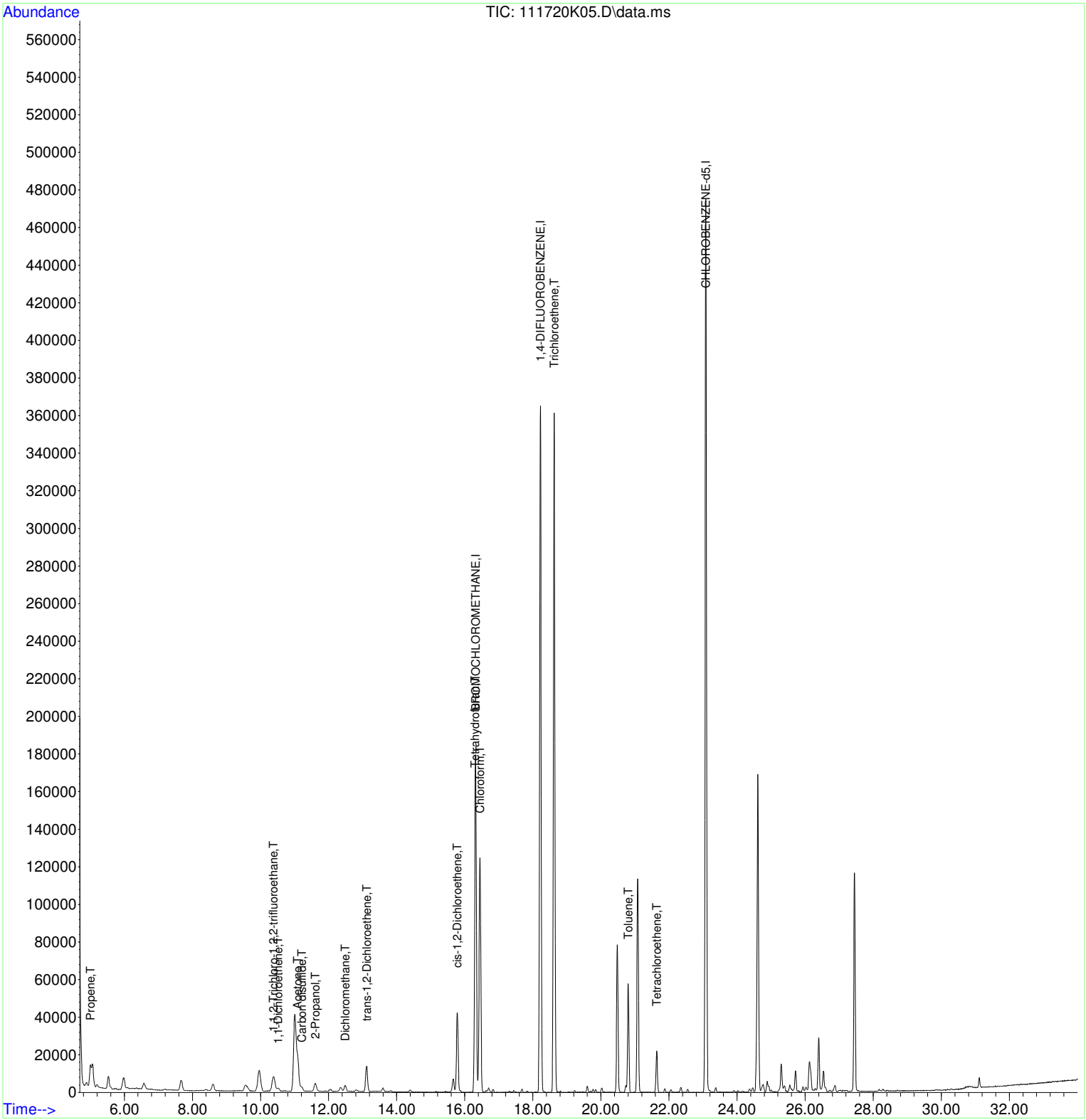
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)		
Internal Standards								
1) BROMOCHLOROMETHANE	16.319	49	160297	19.60	ppbv	0.00		
32) 1,4-DIFLUOROBENZENE	18.223	114	498194	19.60	ppbv	0.00		
43) CHLOROBENZENE-d5	23.084	117	453310	19.60	ppbv	0.00		
Target Compounds							Qvalue	
2) Propene	5.004	41	9330	1.87	ppbv	#	79	
12) 1,1,2-Trichloro-1,2,2-...	10.376	151	9825	1.34	ppbv		98	
13) 1,1-Dichloroethene	10.522	61	3303	0.47	ppbv	#	43	
14) Acetone	11.087	43	56514	7.89	ppbv		94	
15) Carbon disulfide	11.215	76	8252	0.61	ppbv	#	83	
16) 2-Propanol	11.610	45	13384	1.74	ppbv		88	
18) Dichloromethane	12.486	49	4654	0.78	ppbv		97	
20) trans-1,2-Dichloroethene	13.119	61	17251	2.53	ppbv		99	
24) cis-1,2-Dichloroethene	15.778	61	45442	7.08	ppbv	#	98	
27) Tetrahydrofuran	16.301	42	7999	1.23	ppbv		97	
28) Chloroform	16.447	83	173635	19.36	ppbv		99	
37) Trichloroethene	18.625	130	204555	32.90	ppbv		99	OC
44) Toluene	20.803	91	69829	3.88	ppbv		99	
47) Tetrachloroethene	21.636	166	12034	1.38	ppbv		99	

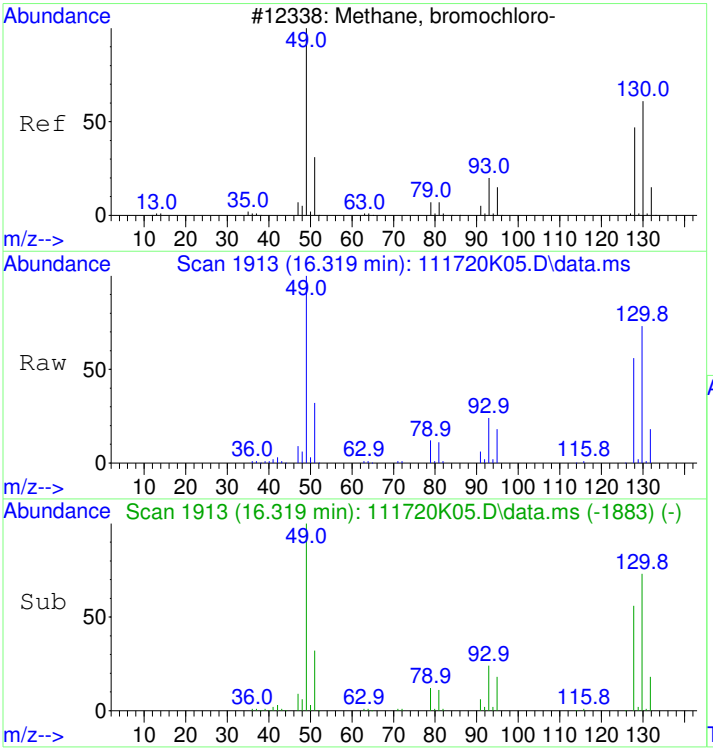
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 3:43 pm, Nov 17, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K05.D
InstName : HP5973K
Acq On : 17 Nov 2020 2:24 pm
Operator : EM
Sample : 2011024-01
Misc : 200ml FG-037-3ft-G
ALS Vial : 21 Sample Multiplier: 1.9

Quant Time: Nov 17 15:34:50 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

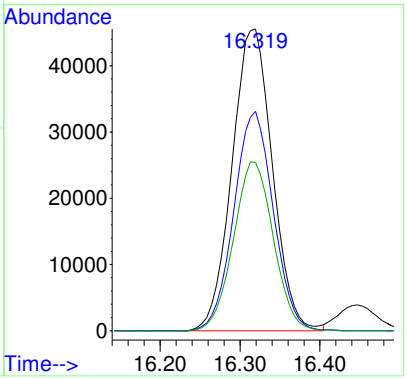


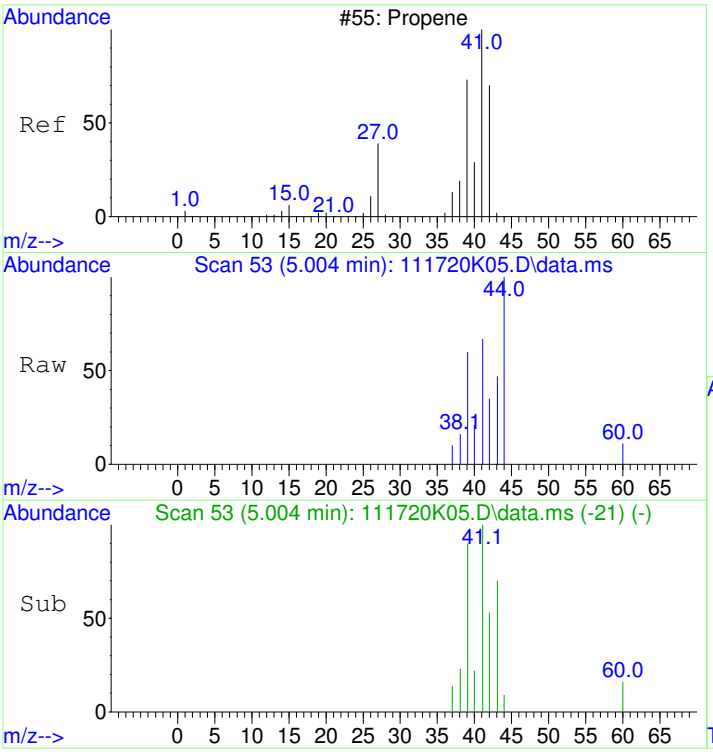


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 49 Resp: 160297

Ion	Ratio	Lower	Upper
49	100		
130	71.0	51.9	91.9
128	54.9	35.7	75.7

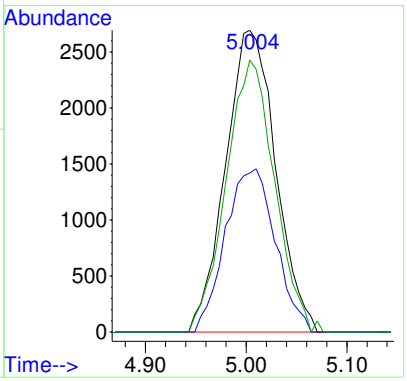


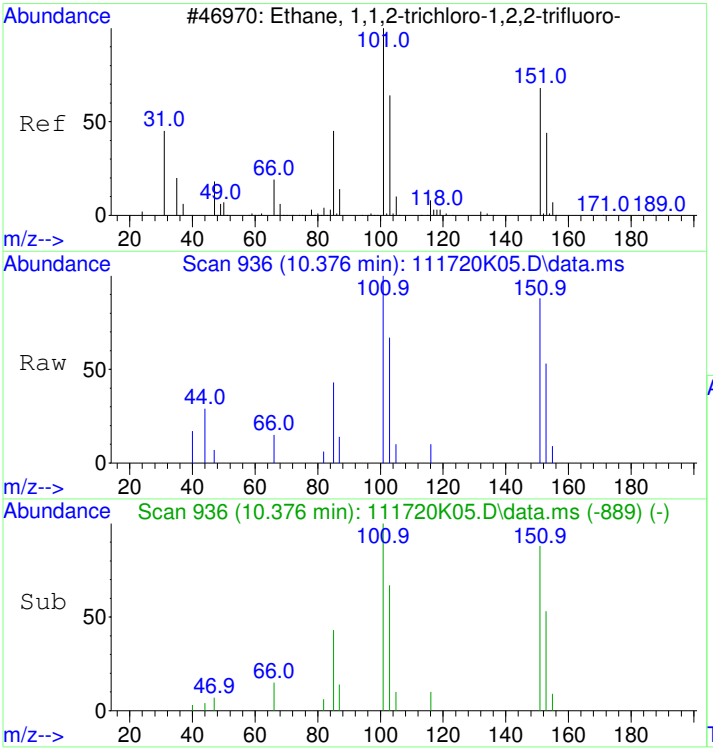


#2
Propene
Concen: 1.87 ppbv
RT: 5.004 min Scan# 53
Delta R.T. -0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 41 Resp: 9330

Ion	Ratio	Lower	Upper
41	100		
42	54.1	47.3	87.3
39	87.1	46.1	86.1#

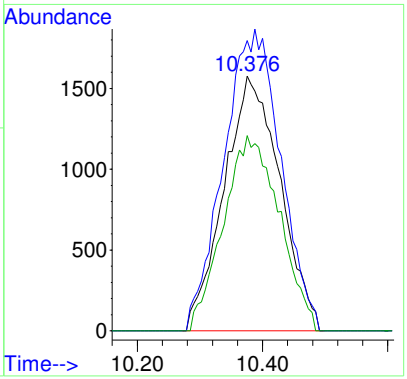


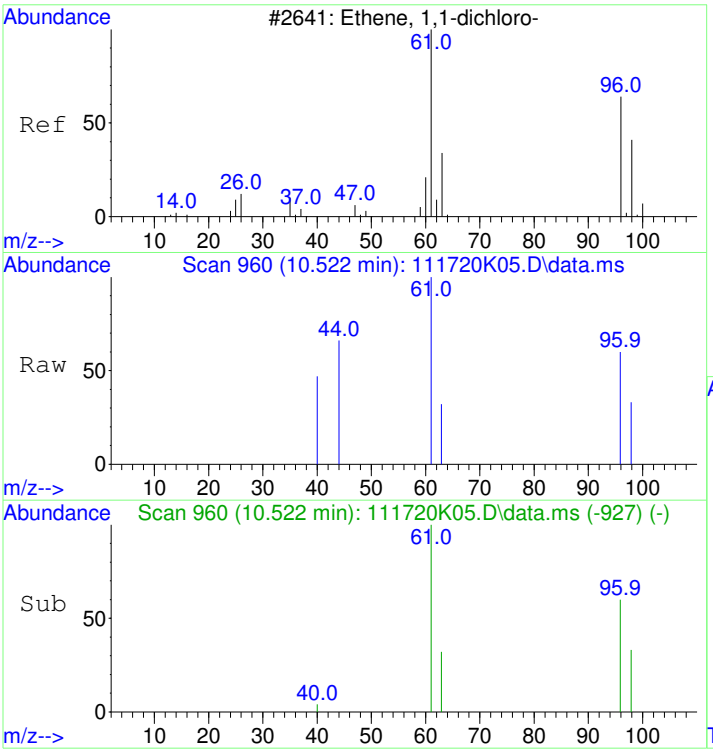


#12
1,1,2-Trichloro-1,2,2-trifluoroetnane
Concen: 1.34 ppbv
RT: 10.376 min Scan# 936
Delta R.T. -0.012 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion:151 Resp: 9825

Ion	Ratio	Lower	Upper
151	100		
101	120.5	101.9	141.9
103	76.3	58.4	98.4

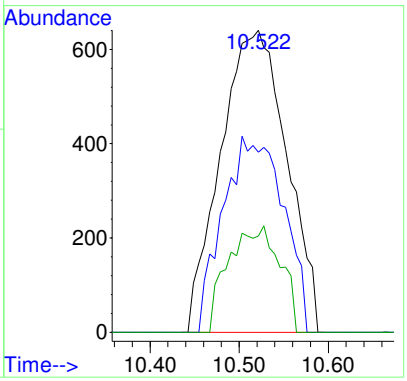


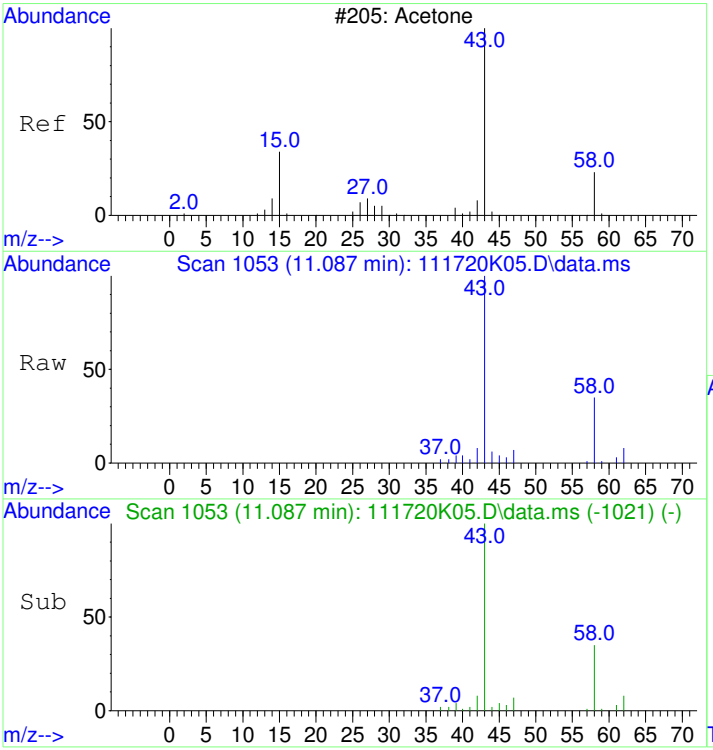


#13
1,1-Dichloroethene
Concen: 0.47 ppbv
RT: 10.522 min Scan# 960
Delta R.T. -0.000 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 61 Resp: 3303

Ion	Ratio	Lower	Upper
61	100		
96	0.0	43.5	83.5#
63	27.4	12.1	52.1

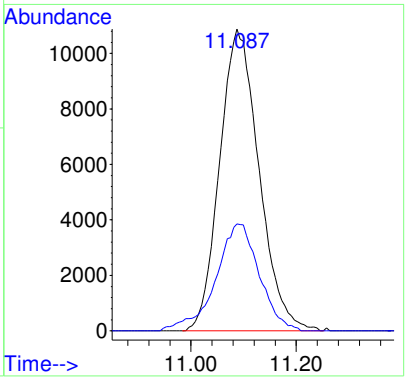


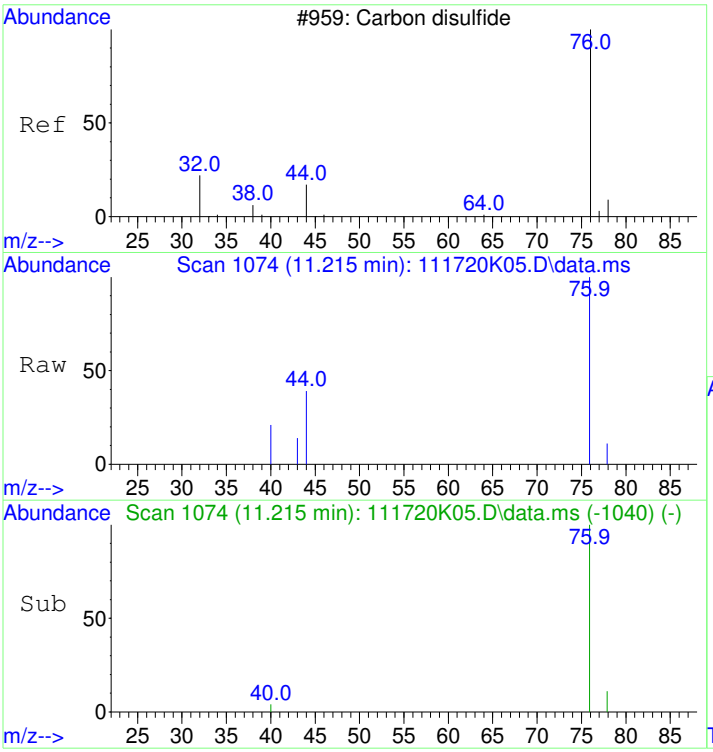


#14
Acetone
Concen: 7.89 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. -0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 43 Resp: 56514

Ion	Ratio	Lower	Upper
43	100		
58	39.2	15.9	55.9

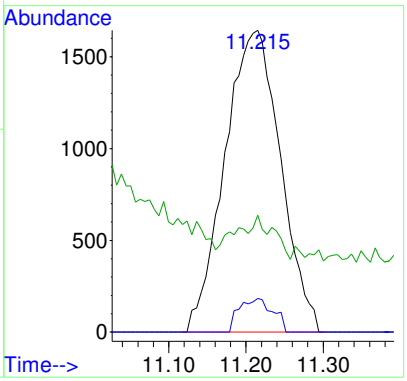


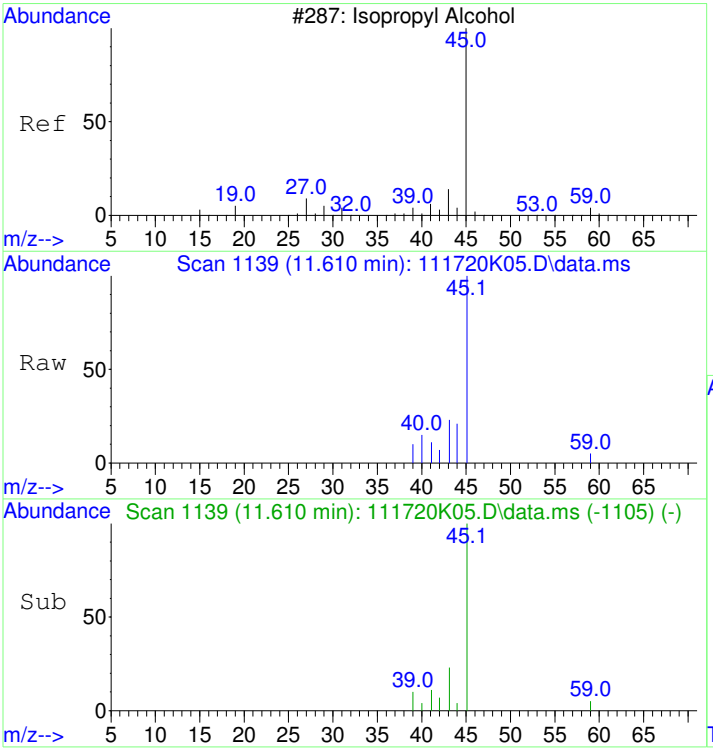


#15
Carbon disulfide
Concen: 0.61 ppbv
RT: 11.215 min Scan# 1074
Delta R.T. 0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 76 Resp: 8252

Ion	Ratio	Lower	Upper
76	100		
78	6.7	0.0	29.0
44	0.0	0.0	30.1

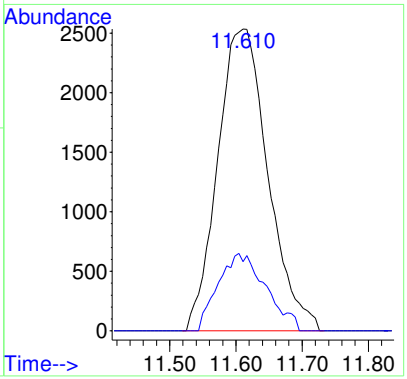


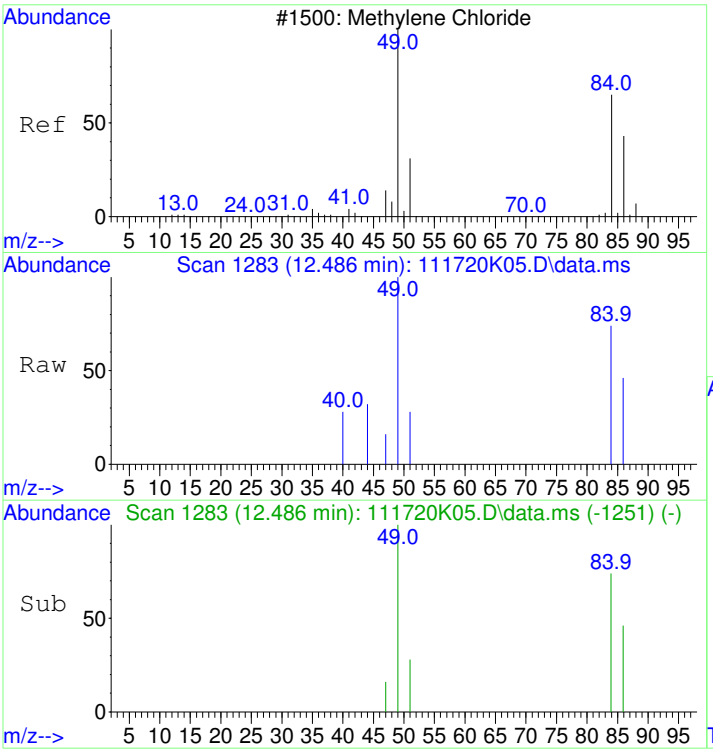


#16
2-Propanol
Concen: 1.74 ppbv
RT: 11.610 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 45 Resp: 13384

Ion	Ratio	Lower	Upper
45	100		
43	24.3	0.0	38.7

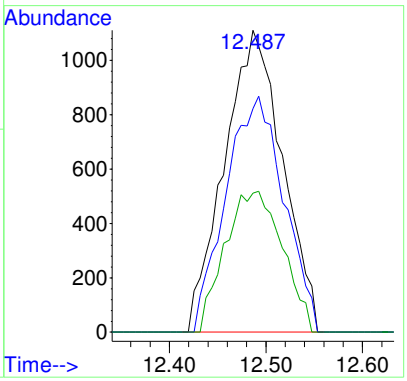


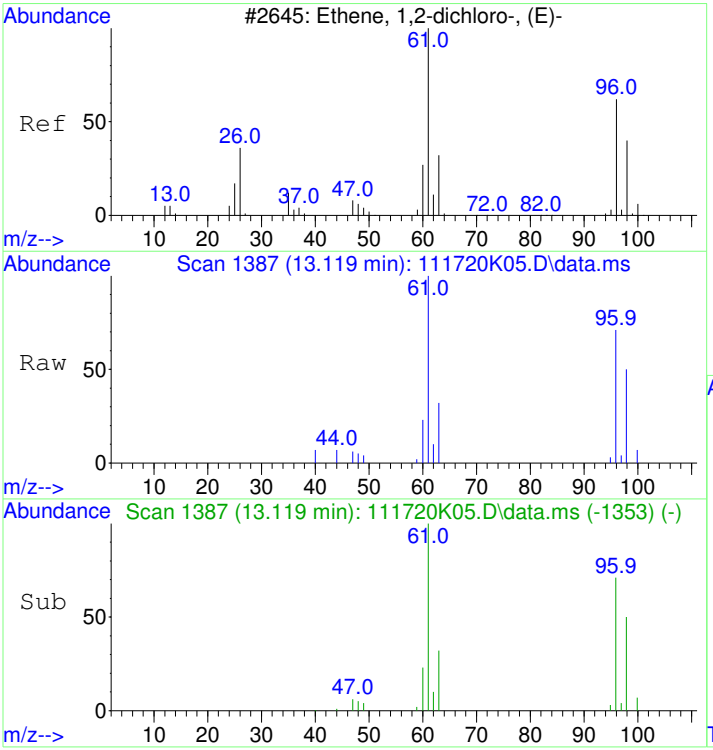


#18
Dichloromethane
Concen: 0.78 ppbv
RT: 12.486 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 49 Resp: 4654

Ion	Ratio	Lower	Upper
49	100		
84	78.1	57.4	97.4
86	46.0	29.7	69.7

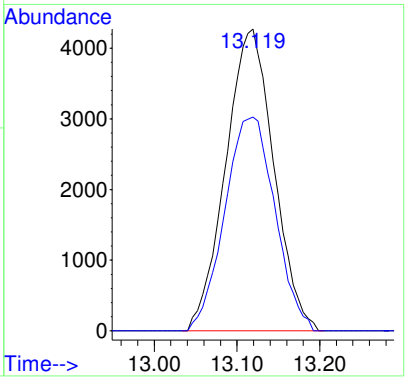


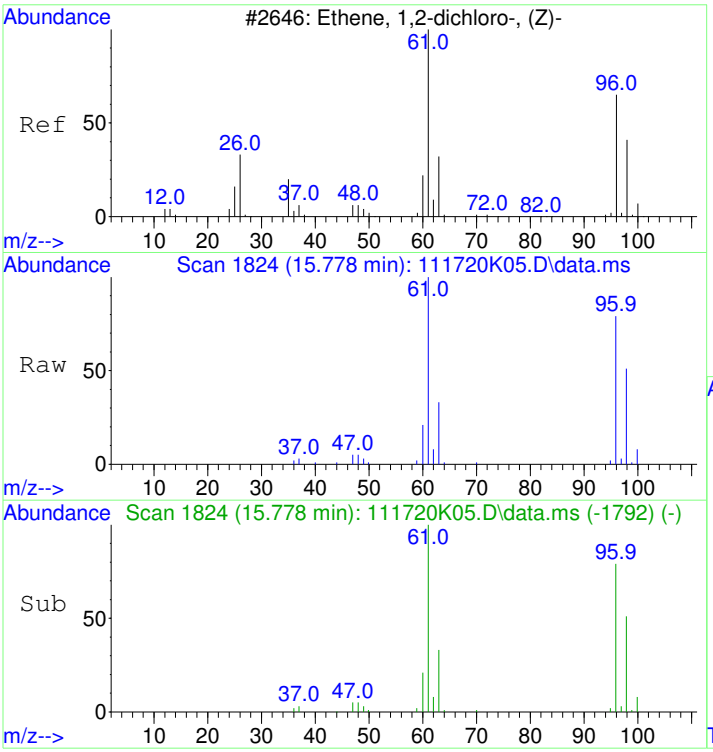


#20
trans-1,2-Dichloroethene
Concen: 2.53 ppbv
RT: 13.119 min Scan# 1387
Delta R.T. 0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 61 Resp: 17251

Ion	Ratio	Lower	Upper
61	100		
96	73.9	52.8	92.8

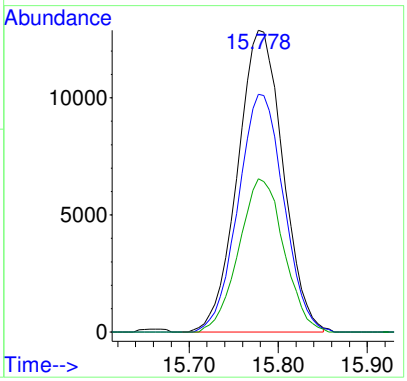


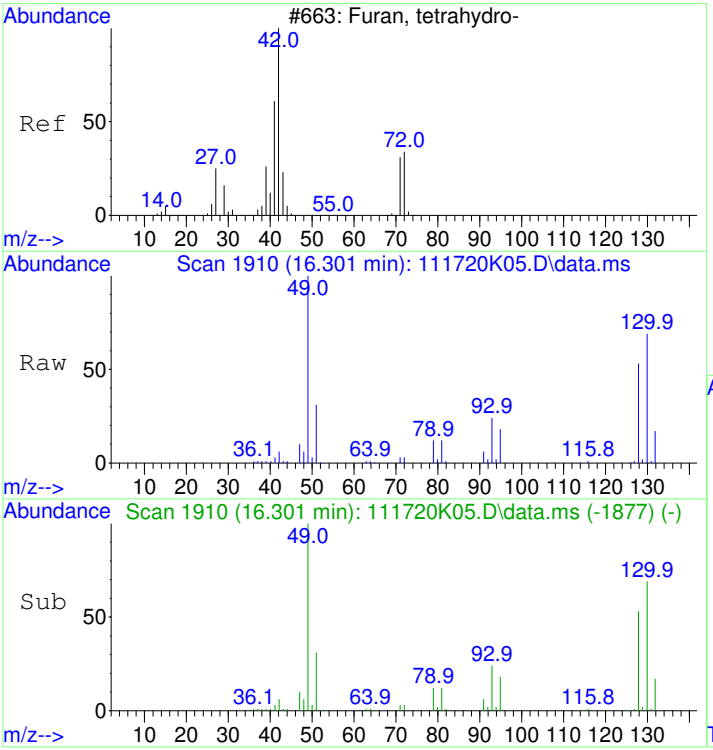


#24
cis-1,2-Dichloroethene
Concen: 7.08 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 61 Resp: 45442

Ion	Ratio	Lower	Upper
61	100		
96	79.2	57.6	97.6
98	0.0	0.0	20.0

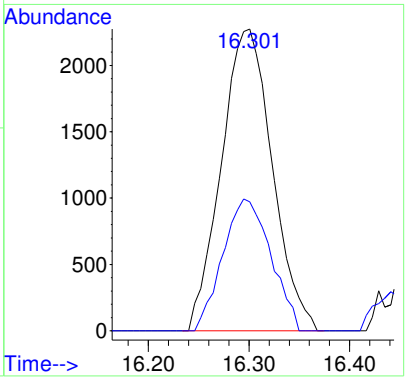


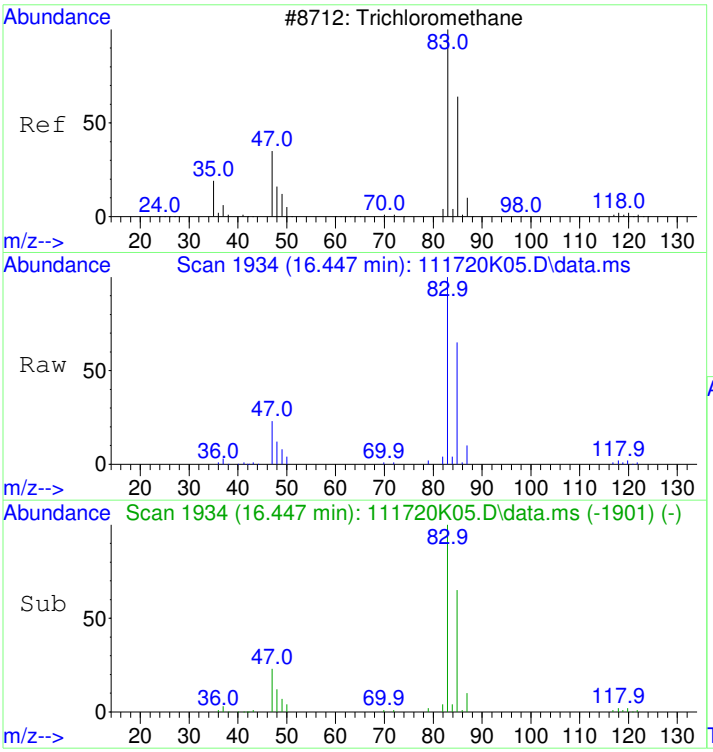


#27
Tetrahydrofuran
Concen: 1.23 ppbv
RT: 16.301 min Scan# 1910
Delta R.T. 0.012 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 42 Resp: 7999

Ion	Ratio	Lower	Upper
42	100		
72	41.1	23.2	63.2

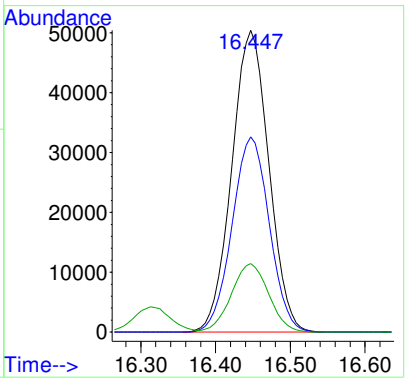


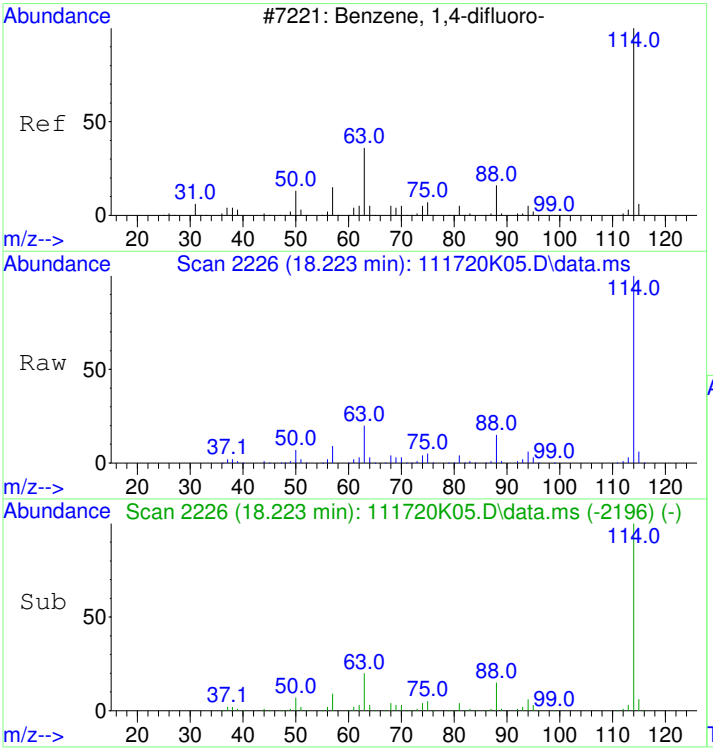


#28
Chloroform
Concen: 19.36 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 83 Resp: 173635

Ion	Ratio	Lower	Upper
83	100		
85	64.9	45.5	85.5
47	22.1	1.4	41.4

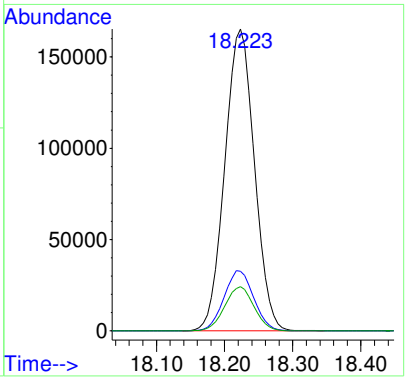


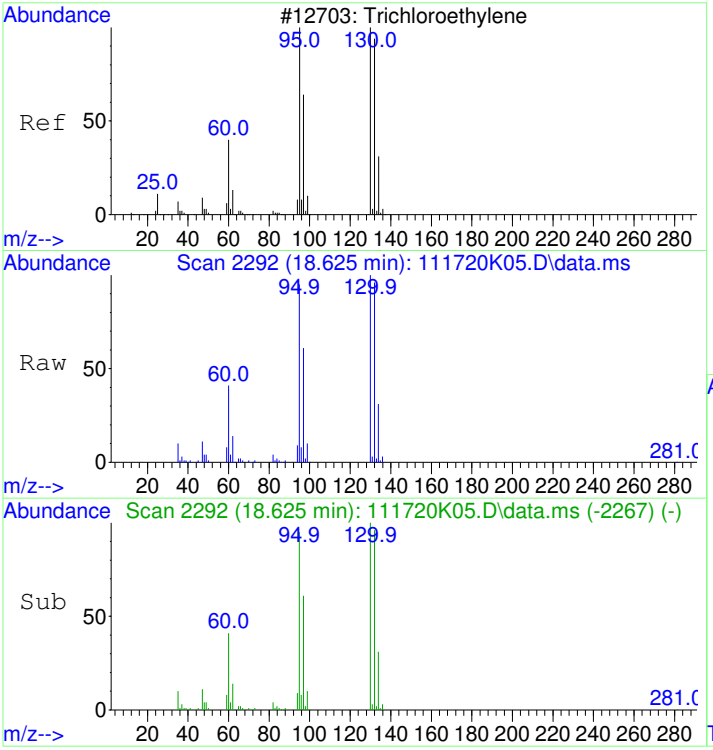


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion:114 Resp: 498194

Ion	Ratio	Lower	Upper
114	100		
63	19.9	0.0	39.5
88	14.5	0.0	34.7

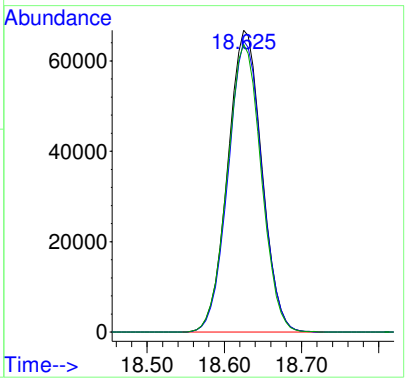


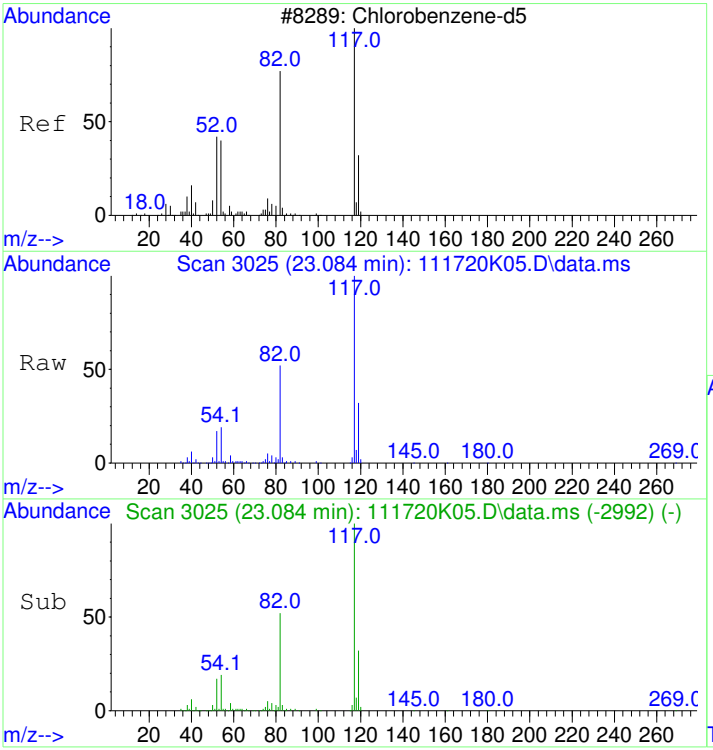


#37
Trichloroethene
Concen: 32.90 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion:130 Resp: 204555

Ion	Ratio	Lower	Upper
130	100		
132	95.8	76.3	116.3
95	94.9	74.0	114.0

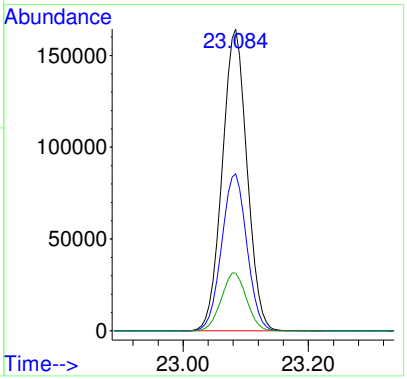


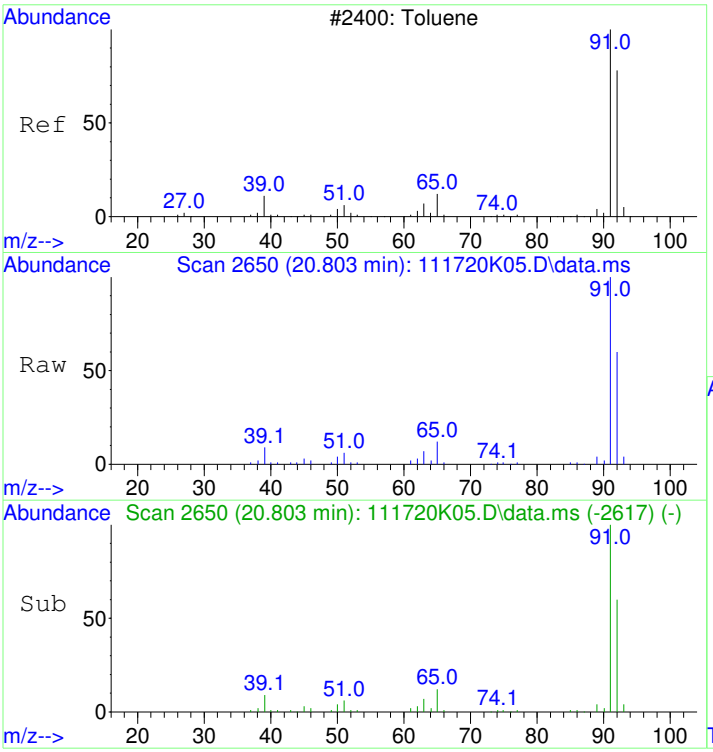


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion:117 Resp: 453310

Ion	Ratio	Lower	Upper
117	100		
82	52.9	32.3	72.3
54	19.5	0.0	38.6

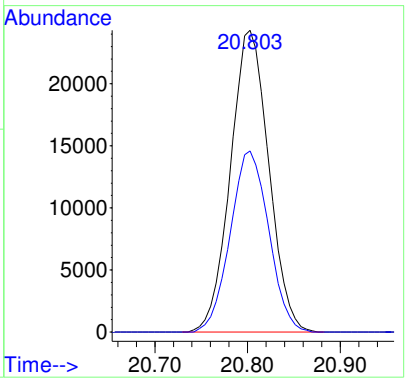


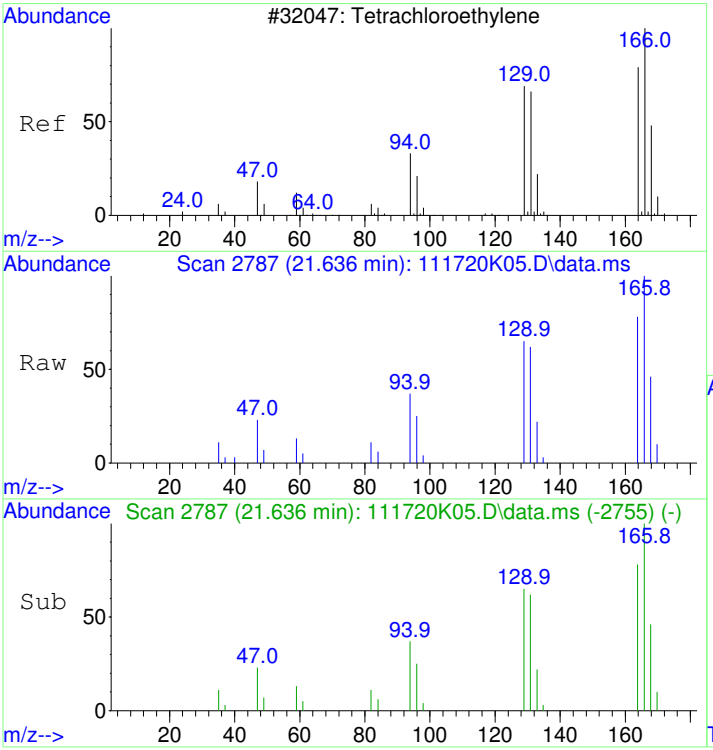


#44
Toluene
Concen: 3.88 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion: 91 Resp: 69829

Ion	Ratio	Lower	Upper
91	100		
92	60.2	40.8	80.8

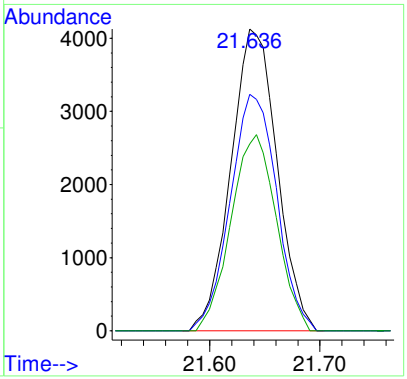




#47
Tetrachloroethene
Concen: 1.38 ppbv
RT: 21.636 min Scan# 2787
Delta R.T. -0.006 min
Lab File: 111720K05.D
Acq: 17 Nov 2020 2:24 pm

Tgt Ion:166 Resp: 12034

Ion	Ratio	Lower	Upper
166	100		
164	79.1	57.8	97.8
131	64.0	44.1	84.1



B20K064-DUP1

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K06.D
InstName : HP5973K
Acq On : 17 Nov 2020 3:17 pm
Operator : EM
Sample : B20K064-DUP1
Misc : 200ml FG-037-3ft-G
ALS Vial : 21 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:03 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
Internal Standards								
1) BROMOCHLOROMETHANE	16.313	49	159232	19.60	ppbv		0.00	
32) 1,4-DIFLUOROBENZENE	18.223	114	494473	19.60	ppbv		0.00	
43) CHLOROBENZENE-d5	23.084	117	450233	19.60	ppbv		0.00	
Target Compounds							Qvalue	
2) Propene	5.010	41	8836	1.78	ppbv	#	79	
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	9850	1.35	ppbv		99	
13) 1,1-Dichloroethene	10.521	61	3211	0.46	ppbv		94	
14) Acetone	11.087	43	56313	7.91	ppbv		94	
15) Carbon disulfide	11.209	76	8167	0.61	ppbv	#	82	
16) 2-Propanol	11.610	45	13447	1.76	ppbv		90	
18) Dichloromethane	12.480	49	4590	0.77	ppbv		99	
20) trans-1,2-Dichloroethene	13.113	61	16997	2.51	ppbv		97	
24) cis-1,2-Dichloroethene	15.778	61	45633	7.16	ppbv	#	98	
27) Tetrahydrofuran	16.301	42	8164	1.26	ppbv		97	
28) Chloroform	16.447	83	174865	19.62	ppbv		98	
37) Trichloroethene	18.625	130	205242	33.26	ppbv		99	OC
44) Toluene	20.803	91	70356	3.93	ppbv		99	
47) Tetrachloroethene	21.642	166	12214	1.41	ppbv		99	

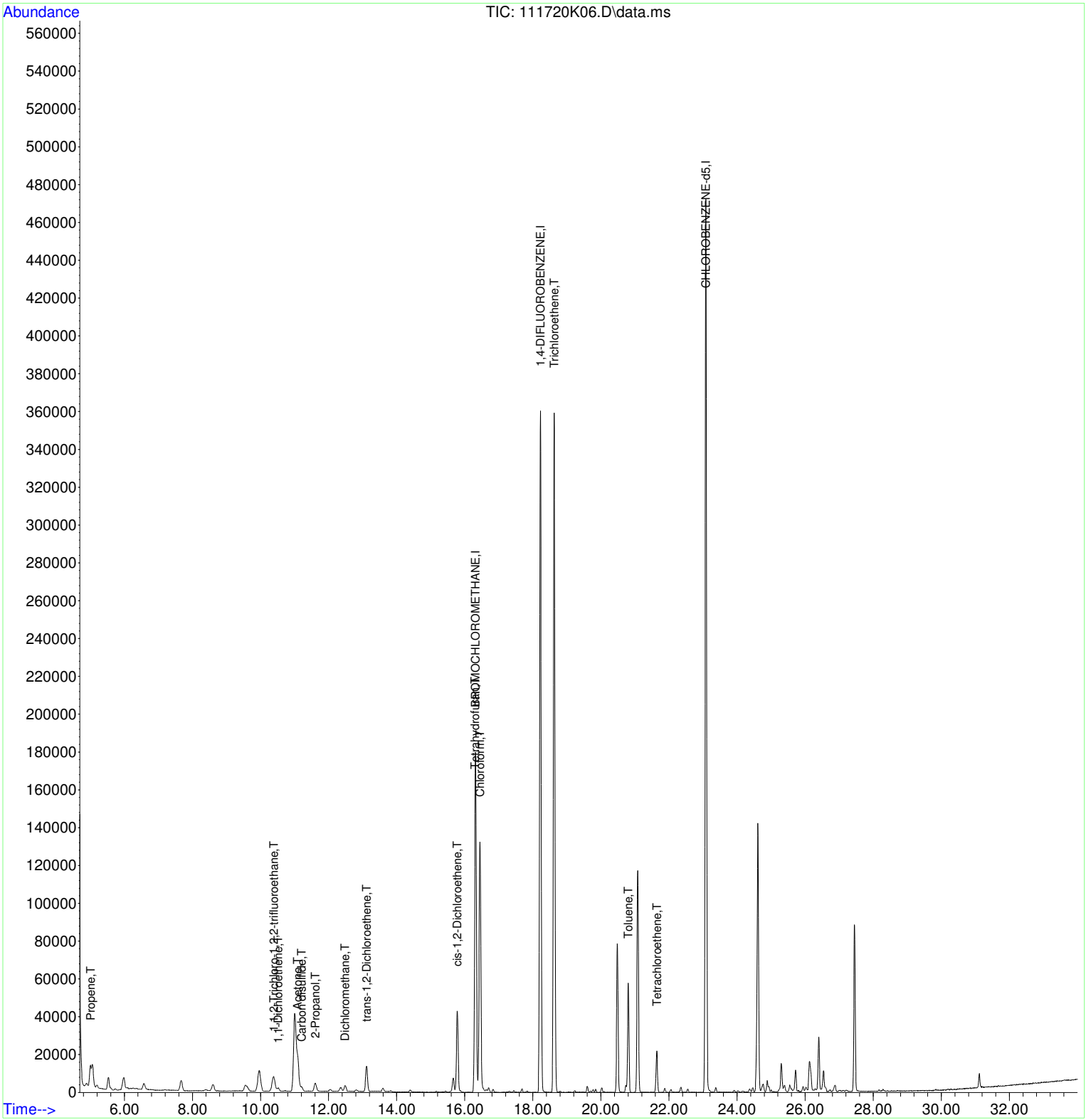
(#) = qualifier out of range (m) = manual integration (+) = signals summed

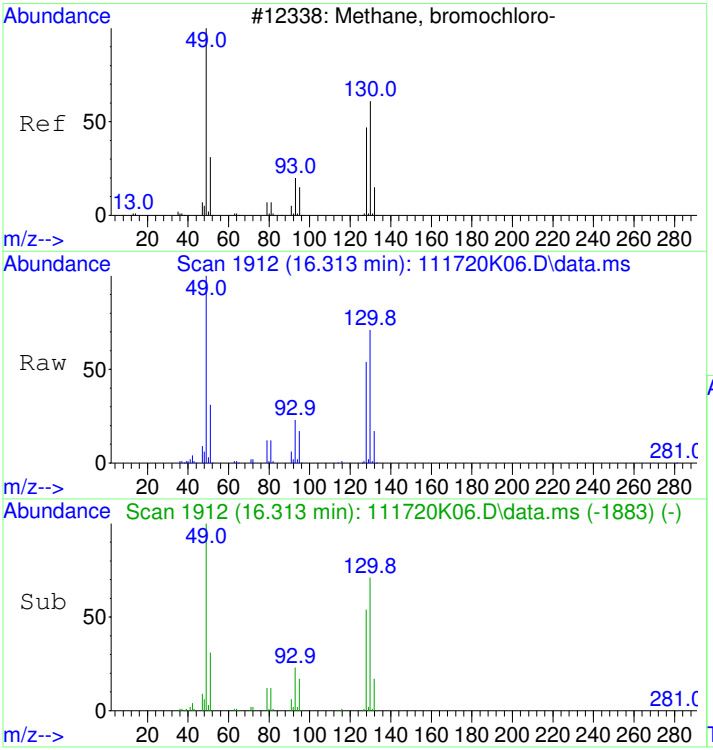
REVIEWED
By EM at 9:06 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K06.D
InstName : HP5973K
Acq On : 17 Nov 2020 3:17 pm
Operator : EM
Sample : B20K064-DUP1
Misc : 200ml FG-037-3ft-G
ALS Vial : 21 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:03 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

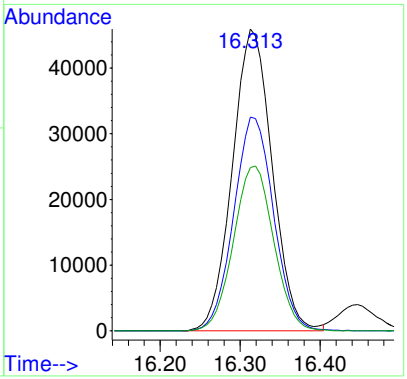


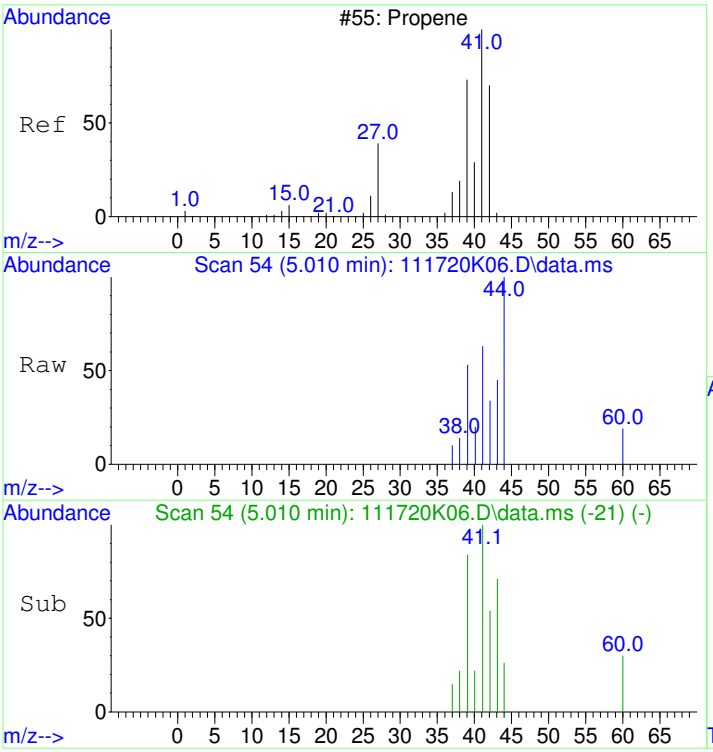


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 49 Resp: 159232

Ion	Ratio	Lower	Upper
49	100		
130	71.1	51.9	91.9
128	55.1	35.7	75.7

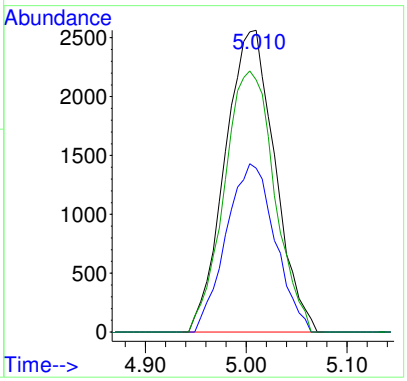


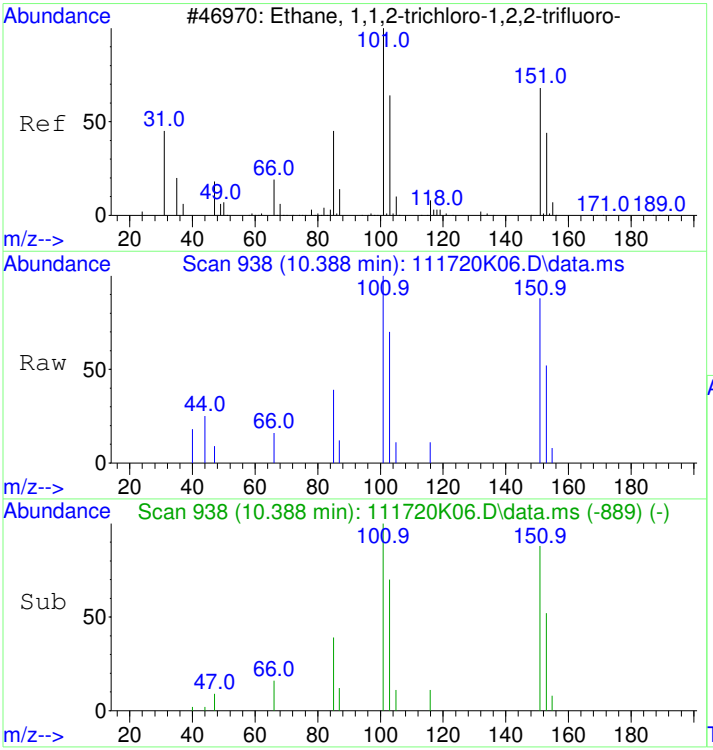


#2
Propene
Concen: 1.78 ppbv
RT: 5.010 min Scan# 54
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 41 Resp: 8836

Ion	Ratio	Lower	Upper
41	100		
42	54.7	47.3	87.3
39	87.1	46.1	86.1#

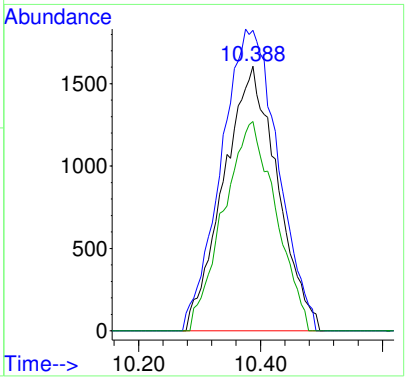


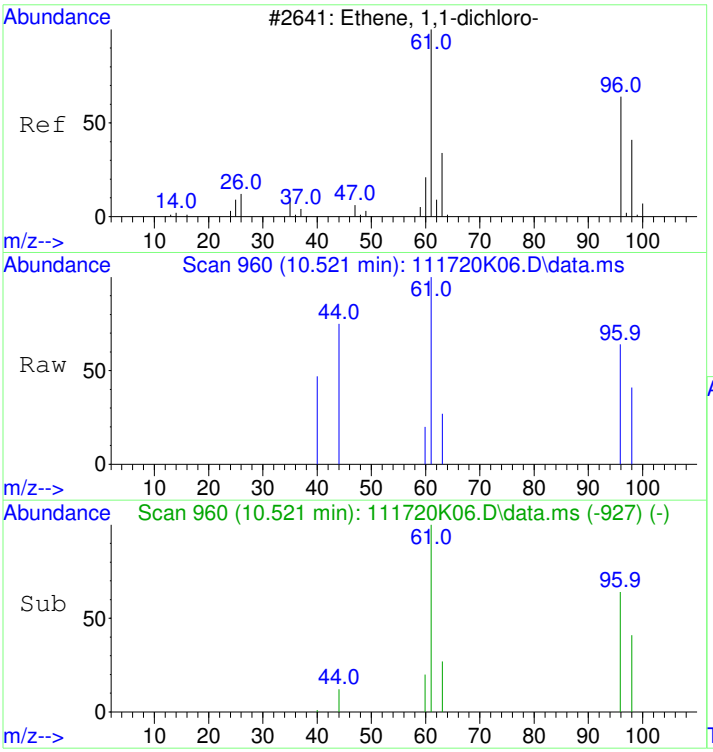


#12
1,1,2-Trichloro-1,2,2-trifluoroetnane
Concen: 1.35 ppbv
RT: 10.388 min Scan# 938
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion:151 Resp: 9850

Ion	Ratio	Lower	Upper
151	100		
101	120.5	101.9	141.9
103	76.8	58.4	98.4

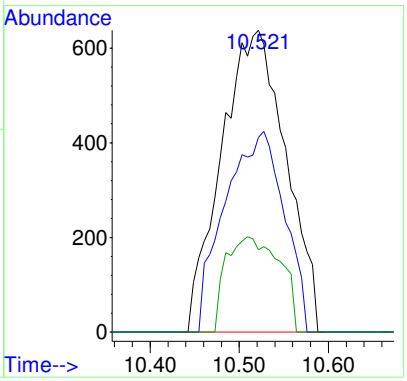


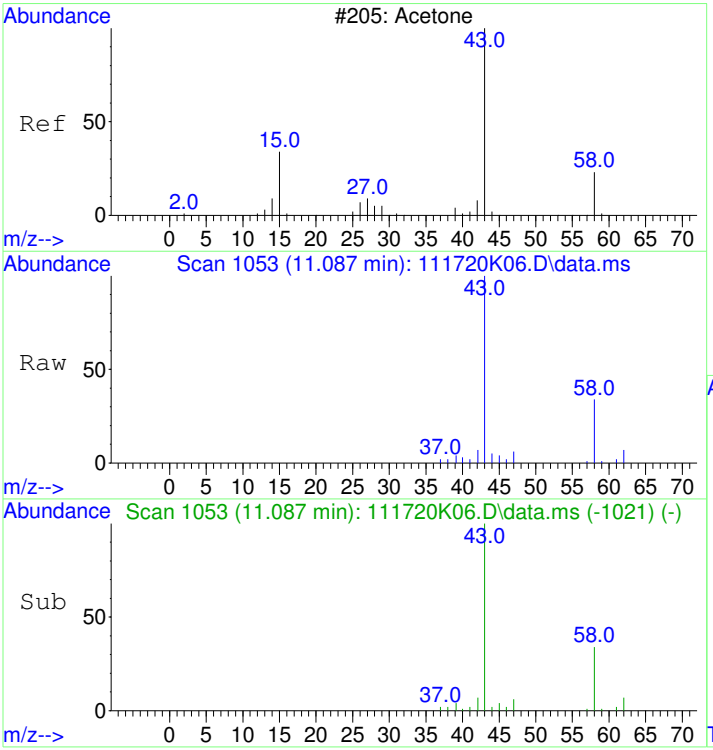


#13
1,1-Dichloroethene
Concen: 0.46 ppbv
RT: 10.521 min Scan# 960
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 61 Resp: 3211

Ion	Ratio	Lower	Upper
61	100		
96	61.1	43.5	83.5
63	26.3	12.1	52.1

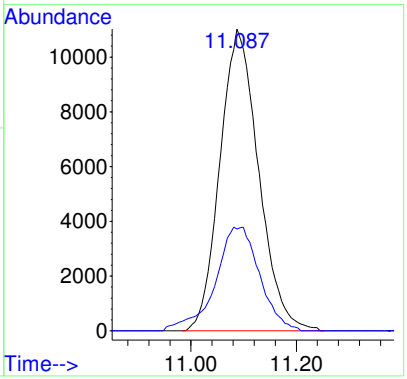


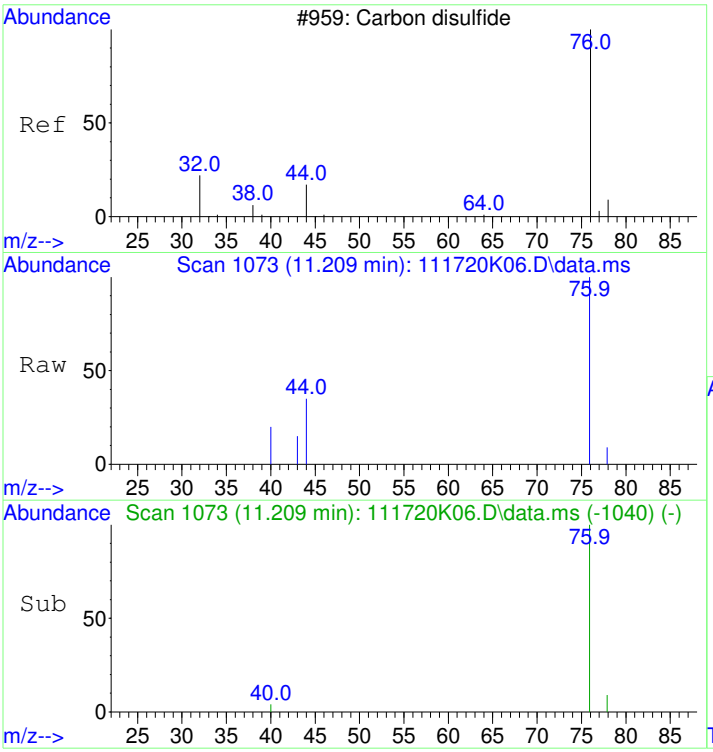


#14
Acetone
Concen: 7.91 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. -0.006 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 43 Resp: 56313

Ion	Ratio	Lower	Upper
43	100		
58	39.3	15.9	55.9

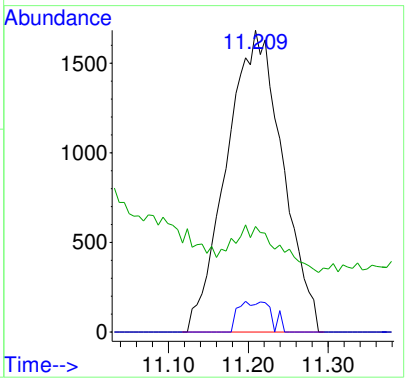


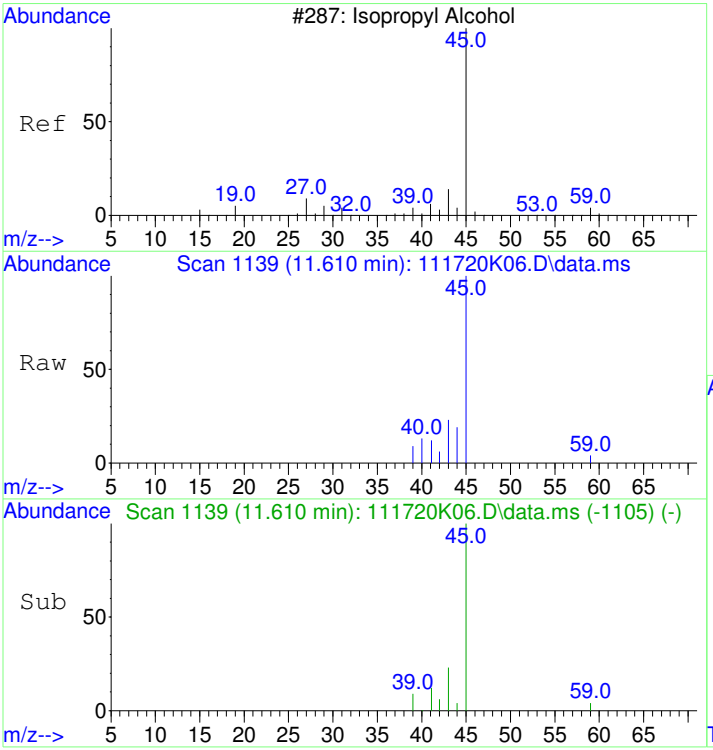


#15
Carbon disulfide
Concen: 0.61 ppbv
RT: 11.209 min Scan# 1073
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 76 Resp: 8167

Ion	Ratio	Lower	Upper
76	100		
78	6.0	0.0	29.0
44	0.0	0.0	30.1

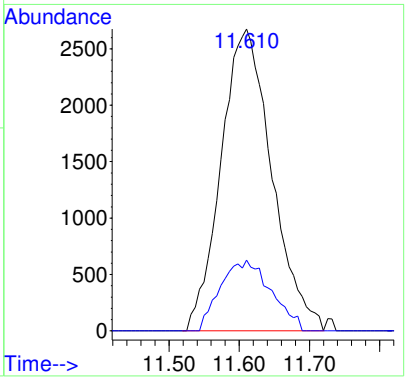


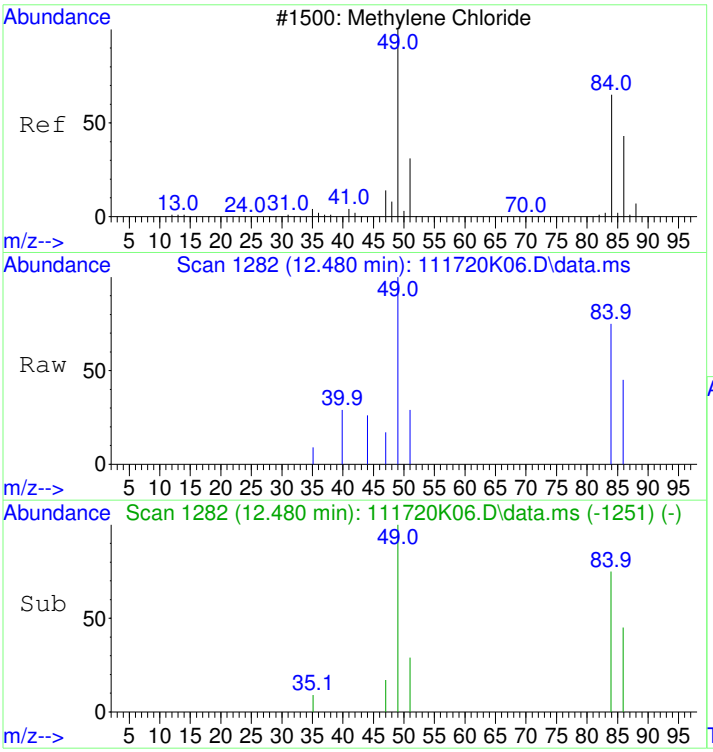


#16
2-Propanol
Concen: 1.76 ppbv
RT: 11.610 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 45 Resp: 13447

Ion	Ratio	Lower	Upper
45	100		
43	23.3	0.0	38.7

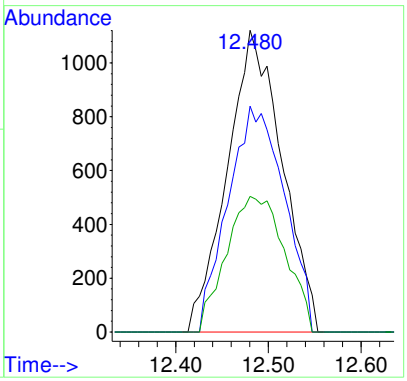


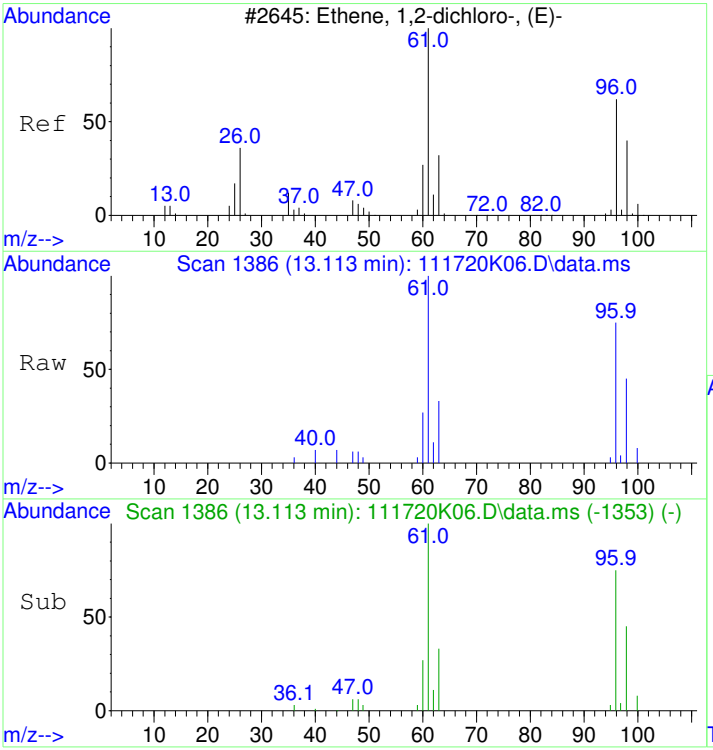


#18
Dichloromethane
Concen: 0.77 ppbv
RT: 12.480 min Scan# 1282
Delta R.T. -0.012 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 49 Resp: 4590

Ion	Ratio	Lower	Upper
49	100		
84	77.1	57.4	97.4
86	48.1	29.7	69.7

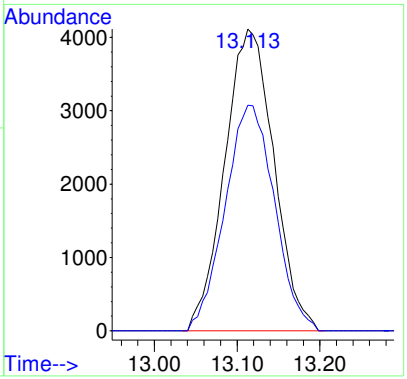


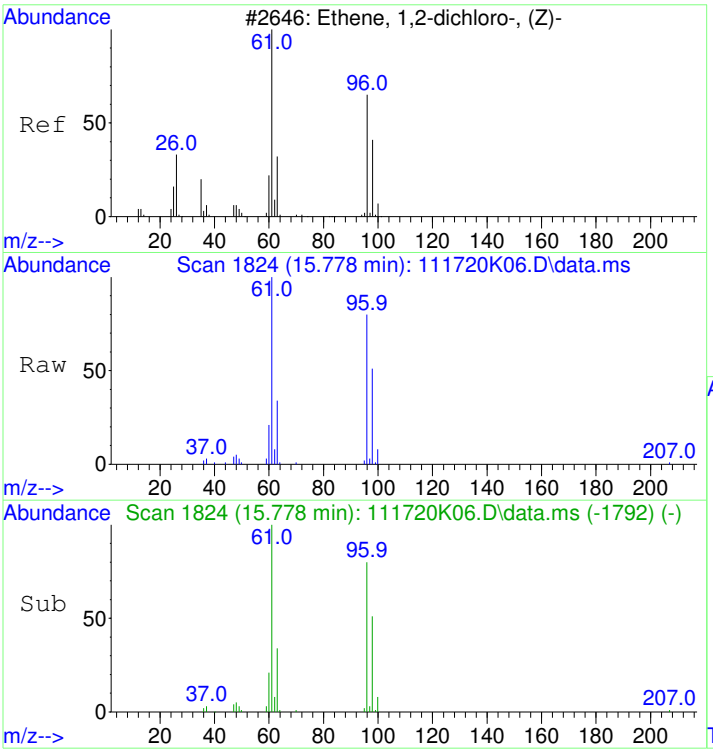


#20
trans-1,2-Dichloroethene
Concen: 2.51 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 61 Resp: 16997

Ion	Ratio	Lower	Upper
61	100		
96	75.1	52.8	92.8

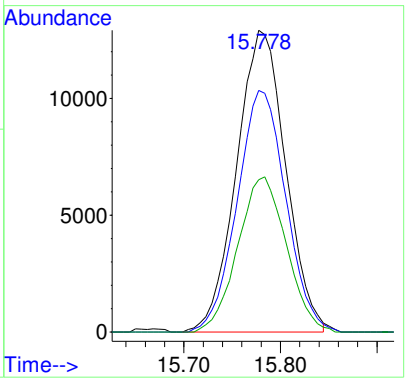


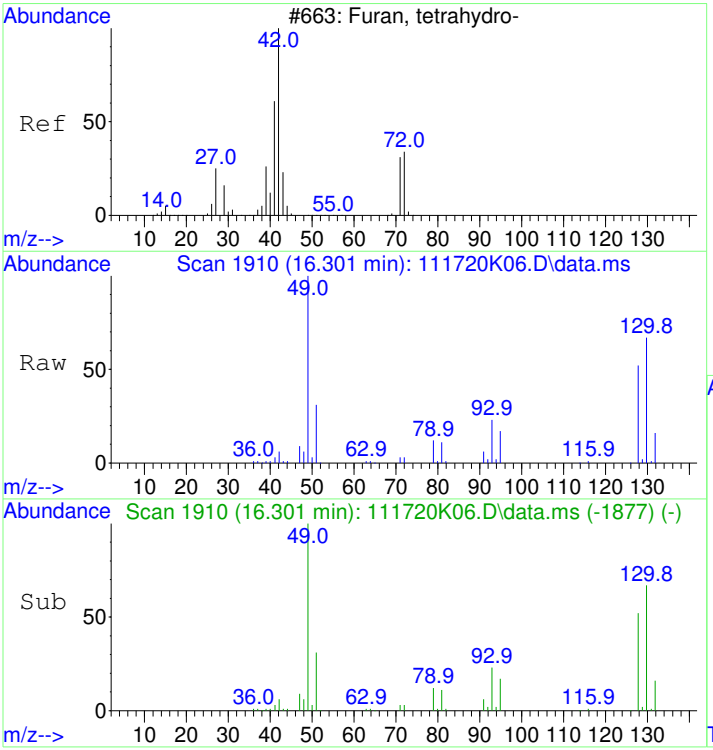


#24
cis-1,2-Dichloroethene
Concen: 7.16 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 61 Resp: 45633

Ion	Ratio	Lower	Upper
61	100		
96	79.3	57.6	97.6
98	0.0	0.0	20.0

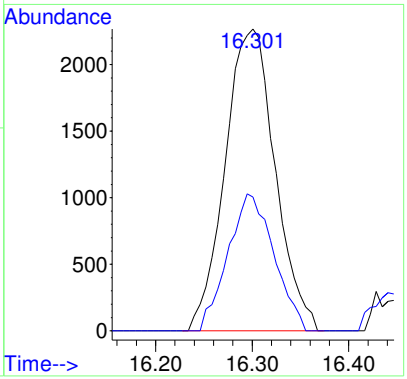


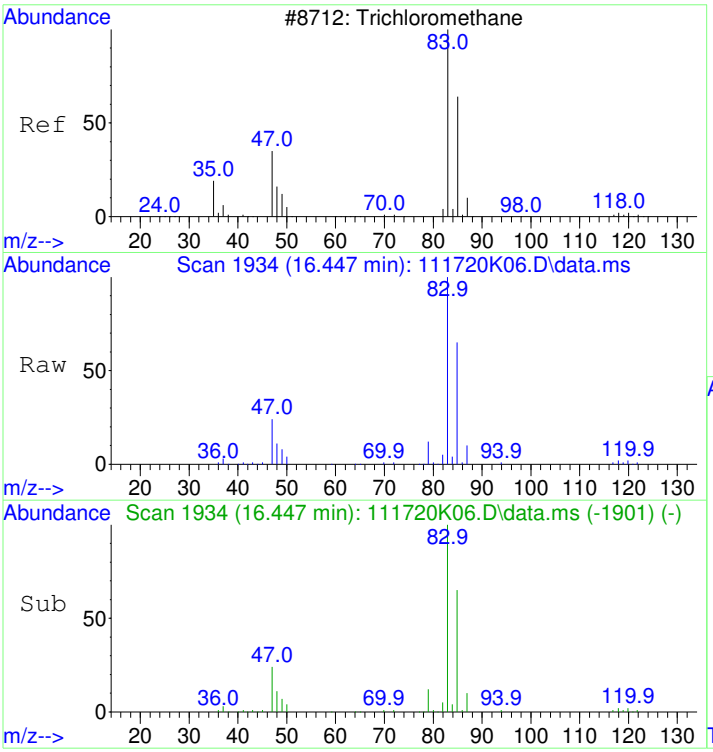


#27
Tetrahydrofuran
Concen: 1.26 ppbv
RT: 16.301 min Scan# 1910
Delta R.T. 0.012 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 42 Resp: 8164

Ion	Ratio	Lower	Upper
42	100		
72	41.5	23.2	63.2

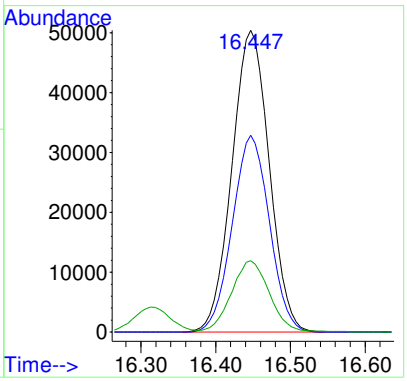


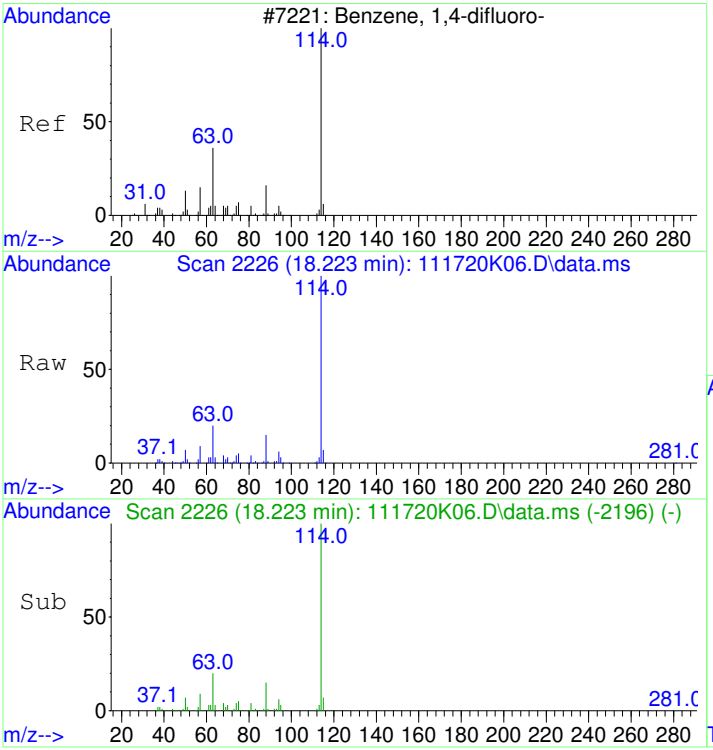


#28
Chloroform
Concen: 19.62 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 83 Resp: 174865

Ion	Ratio	Lower	Upper
83	100		
85	64.7	45.5	85.5
47	23.1	1.4	41.4

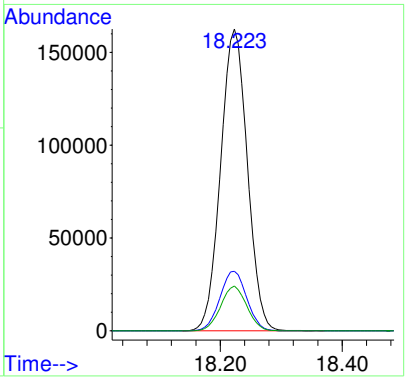


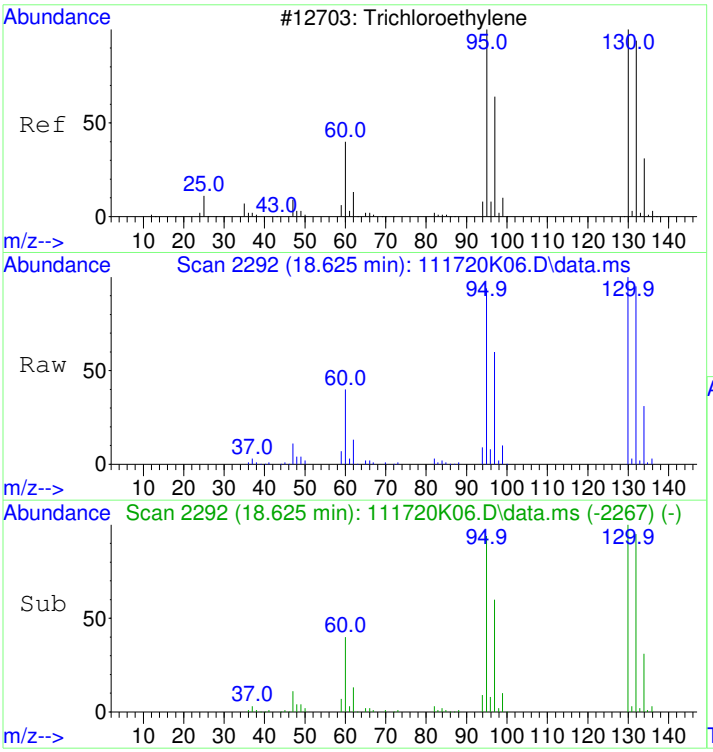


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion:114 Resp: 494473

Ion	Ratio	Lower	Upper
114	100		
63	19.8	0.0	39.5
88	14.5	0.0	34.7

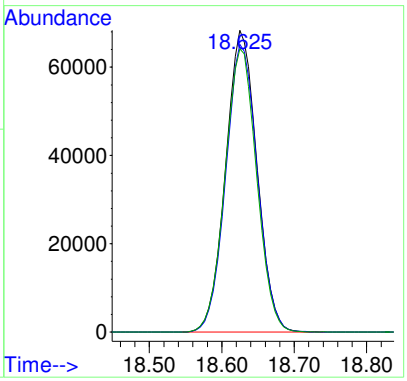


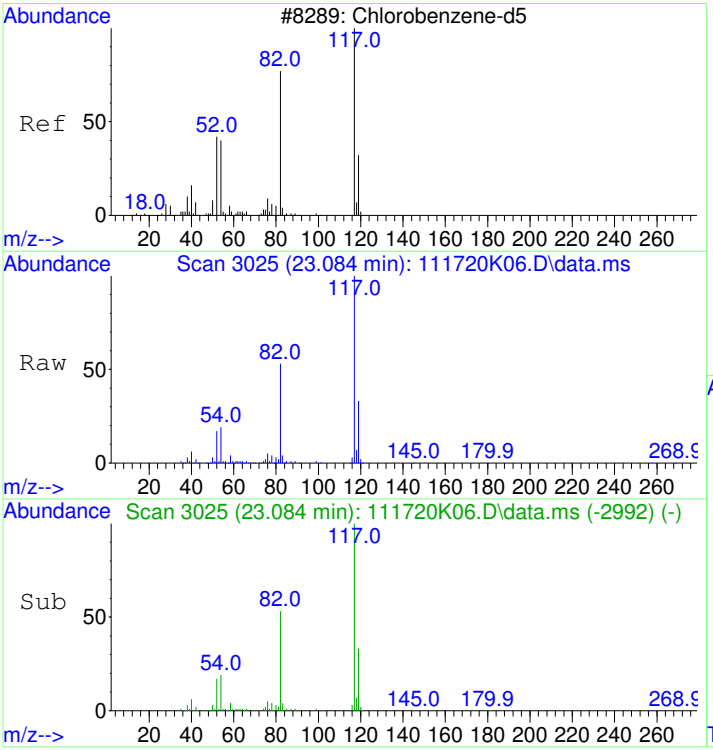


#37
Trichloroethene
Concen: 33.26 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion:130 Resp: 205242

Ion	Ratio	Lower	Upper
130	100		
132	96.1	76.3	116.3
95	94.8	74.0	114.0

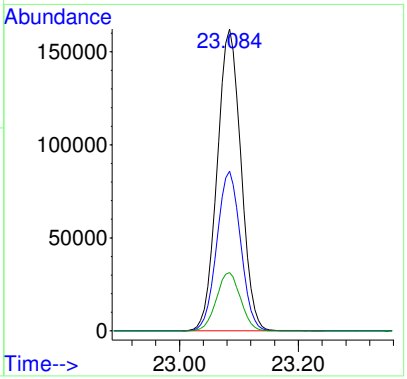


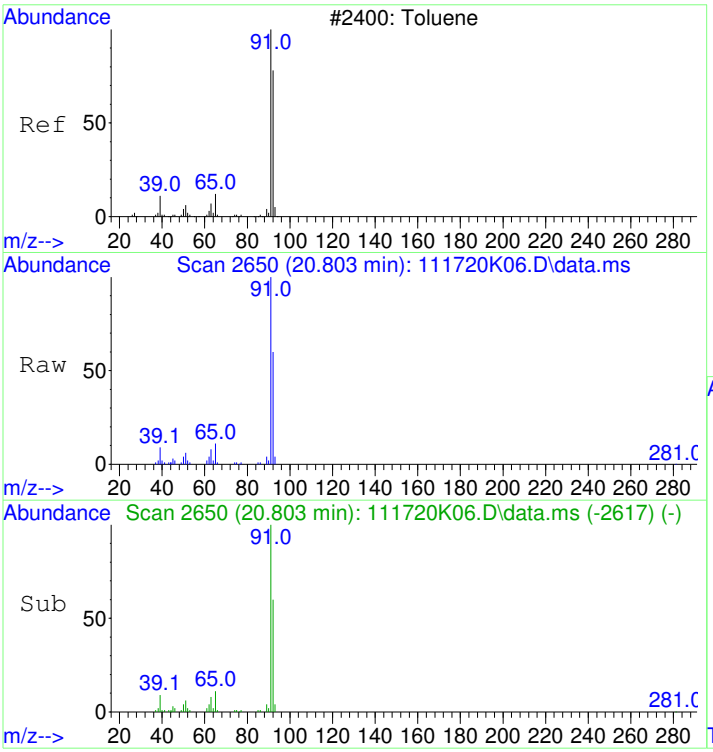


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion:117 Resp: 450233

Ion	Ratio	Lower	Upper
117	100		
82	52.9	32.3	72.3
54	19.5	0.0	38.6

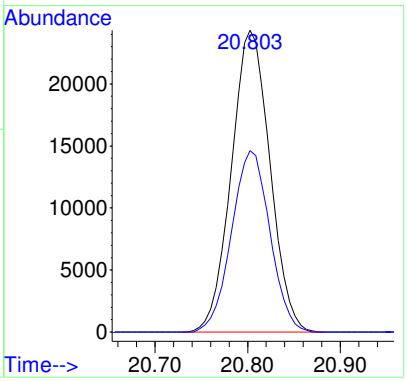


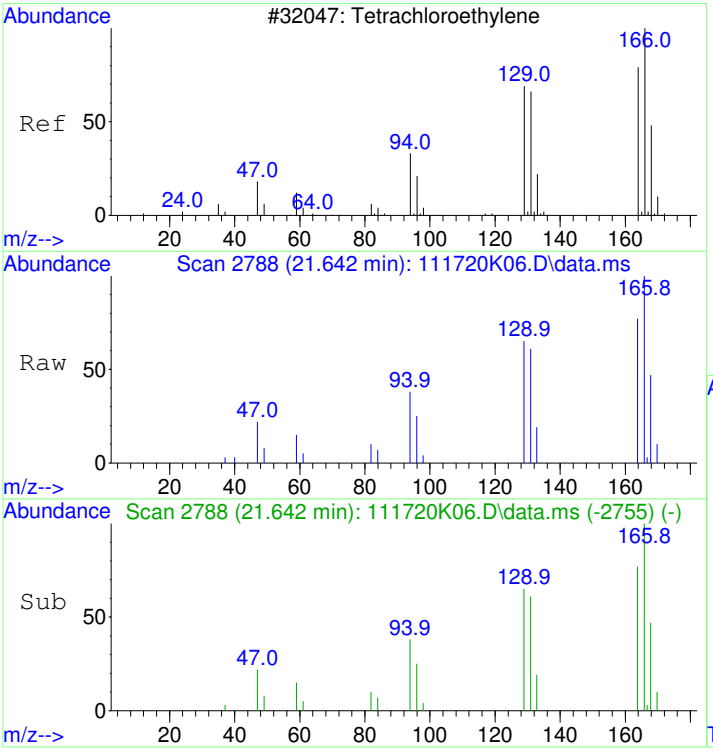


#44
Toluene
Concen: 3.93 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion: 91 Resp: 70356

Ion	Ratio	Lower	Upper
91	100		
92	59.7	40.8	80.8

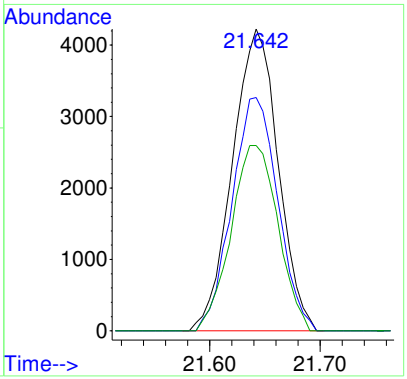




#47
Tetrachloroethene
Concen: 1.41 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K06.D
Acq: 17 Nov 2020 3:17 pm

Tgt Ion:166 Resp: 12214

Ion	Ratio	Lower	Upper
166	100		
164	77.6	57.8	97.8
131	63.0	44.1	84.1



2011024-02

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K07.D
InstName : HP5973K
Acq On : 17 Nov 2020 4:09 pm
Operator : EM
Sample : 2011024-02
Misc : 200ml FG-033-3ft-G
ALS Vial : 22 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:08 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

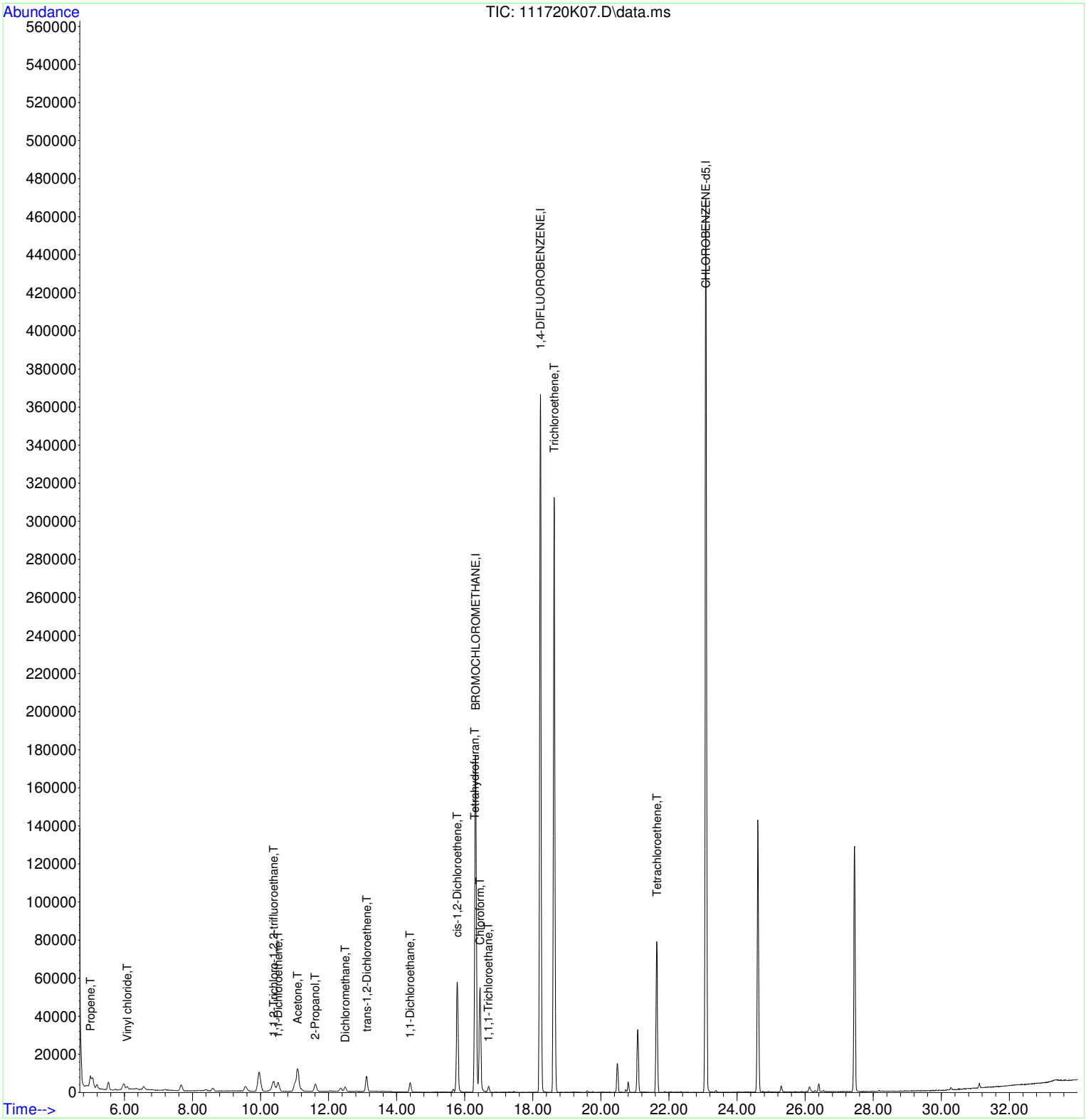
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) BROMOCHLOROMETHANE	16.319	49	161727	19.60	ppbv	0.00	
32) 1,4-DIFLUOROBENZENE	18.223	114	498293	19.60	ppbv	0.00	
43) CHLOROBENZENE-d5	23.084	117	447103	19.60	ppbv	0.00	
Target Compounds						Qvalue	
2) Propene	5.004	41	4169	0.83	ppbv	# 74	
6) Vinyl chloride	6.081	62	3286	0.61	ppbv	98	
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	6480	0.87	ppbv	99	
13) 1,1-Dichloroethene	10.522	61	8956	1.27	ppbv	99	
14) Acetone	11.087	43	39227	5.42	ppbv	100	
16) 2-Propanol	11.604	45	12085	1.56	ppbv	87	
18) Dichloromethane	12.487	49	3522	0.59	ppbv	97	
20) trans-1,2-Dichloroethene	13.119	61	10373	1.51	ppbv	100	
22) 1,1-Dichloroethane	14.391	63	10831	1.21	ppbv	98	
24) cis-1,2-Dichloroethene	15.778	61	61497	9.50	ppbv	# 98	
27) Tetrahydrofuran	16.295	42	6505	0.99	ppbv	98	
28) Chloroform	16.447	83	68989	7.62	ppbv	98	
30) 1,1,1-Trichloroethane	16.696	97	4512	0.51	ppbv	97	
37) Trichloroethene	18.625	130	180231	28.99	ppbv	99	OC
47) Tetrachloroethene	21.642	166	42797	4.97	ppbv	99	

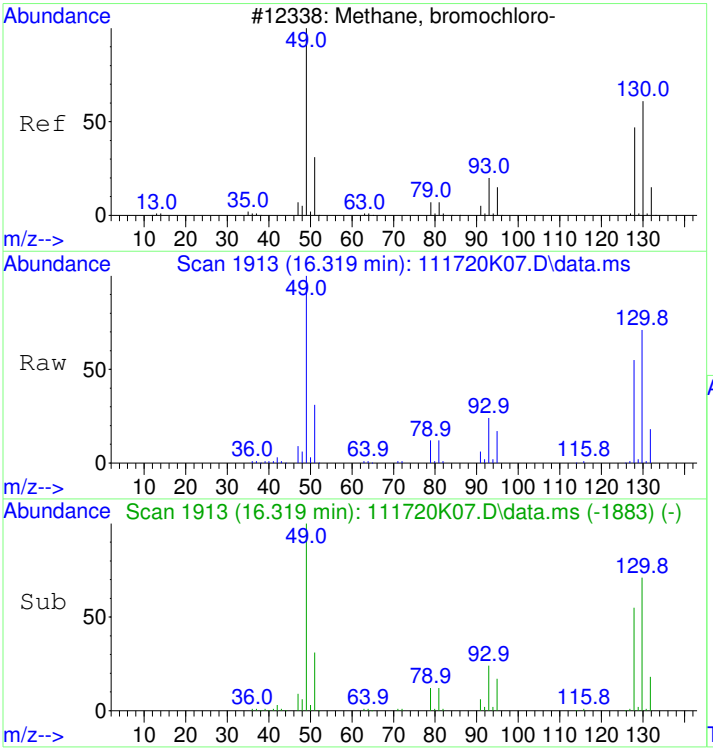
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 9:07 am, Nov 18, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K07.D
InstName : HP5973K
Acq On : 17 Nov 2020 4:09 pm
Operator : EM
Sample : 2011024-02
Misc : 200ml FG-033-3ft-G
ALS Vial : 22 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:08 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

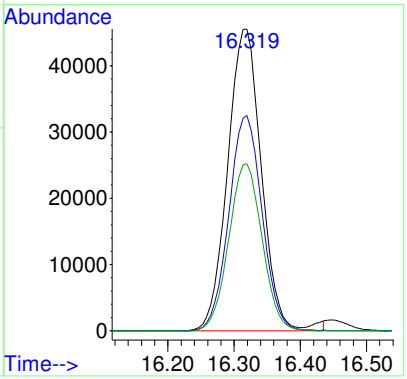


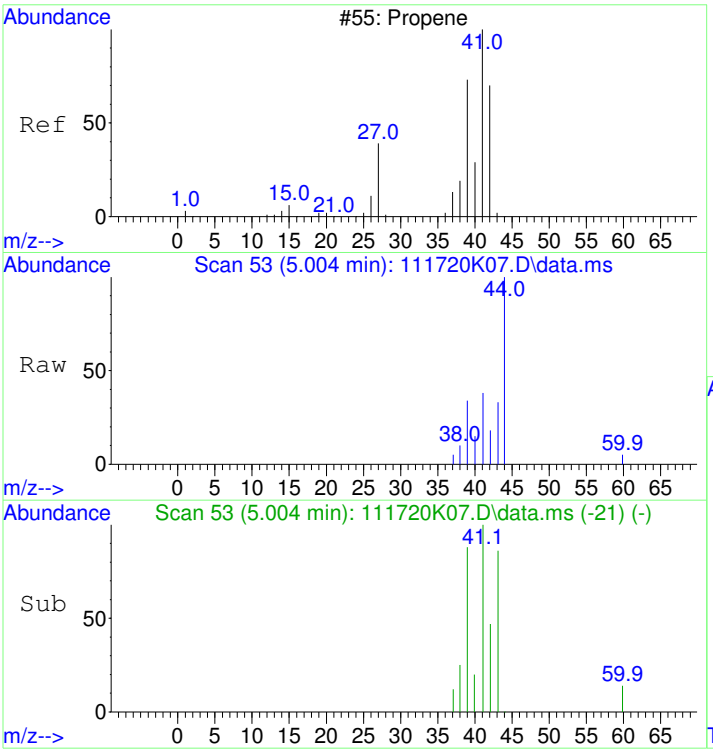


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 49 Resp: 161727

Ion	Ratio	Lower	Upper
49	100		
130	70.1	51.9	91.9
128	54.2	35.7	75.7

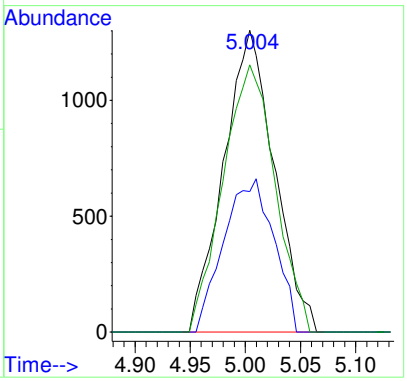


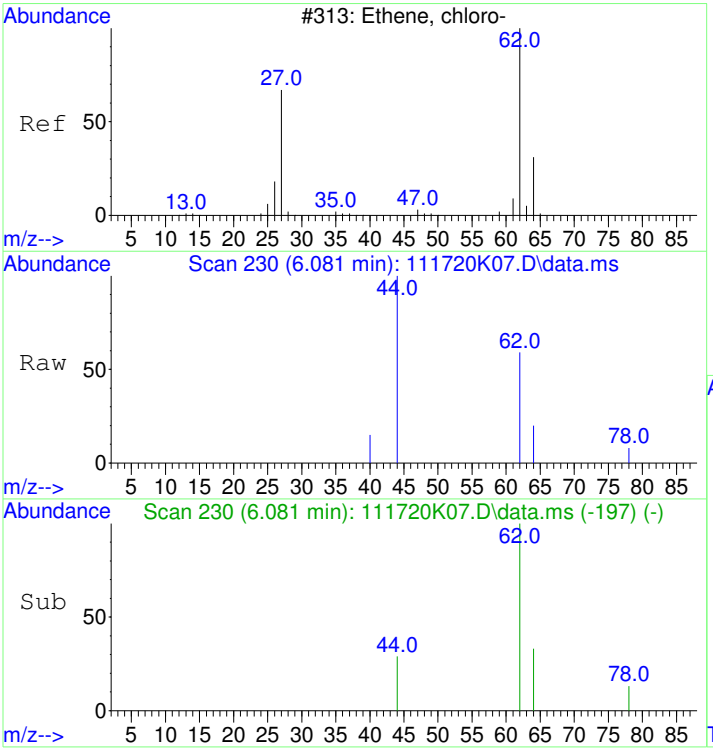


#2
Propene
Concen: 0.83 ppbv
RT: 5.004 min Scan# 53
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 41 Resp: 4169

Ion	Ratio	Lower	Upper
41	100		
42	50.3	47.3	87.3
39	90.9	46.1	86.1#

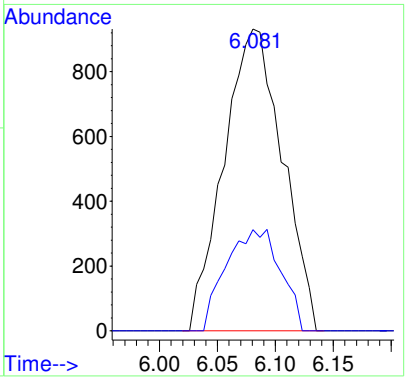


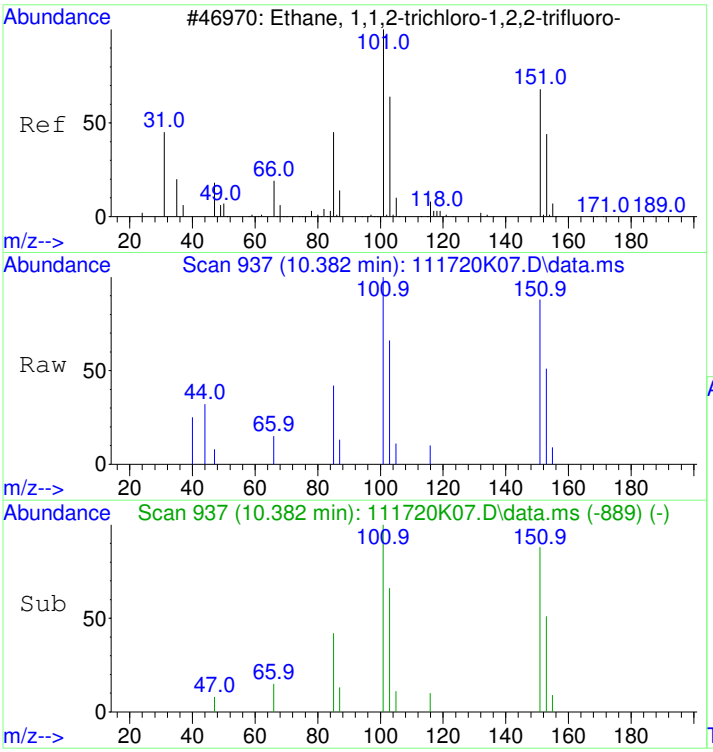


#6
Vinyl chloride
Concen: 0.61 ppbv
RT: 6.081 min Scan# 230
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 62 Resp: 3286

Ion	Ratio	Lower	Upper
62	100		
64	31.2	12.3	52.3

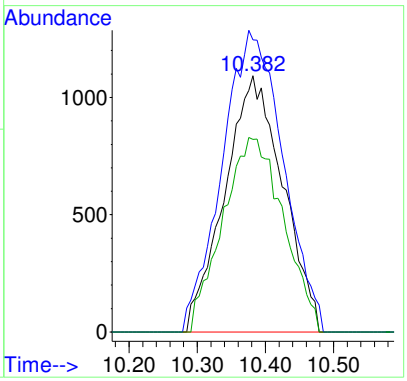


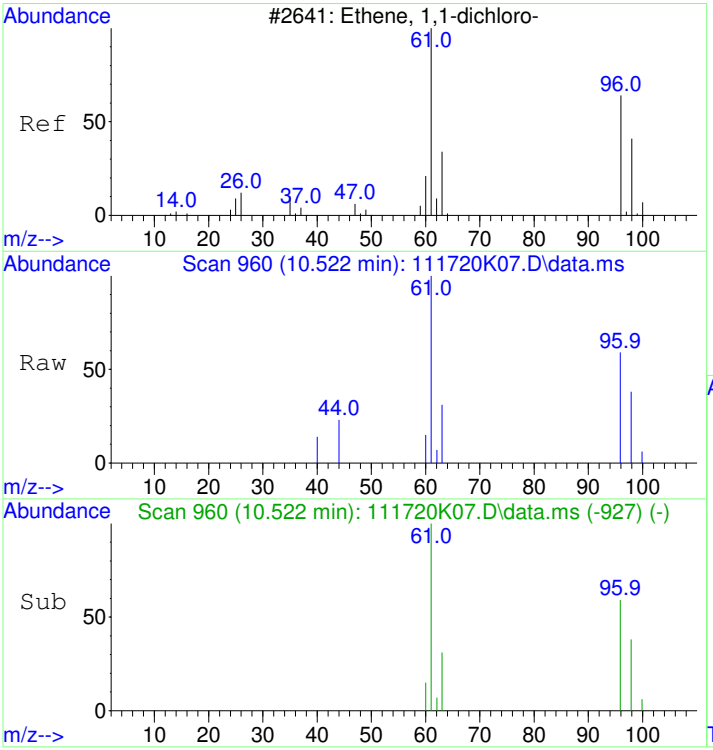


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 0.87 ppbv
RT: 10.382 min Scan# 937
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion:151 Resp: 6480

Ion	Ratio	Lower	Upper
151	100		
101	123.4	101.9	141.9
103	79.0	58.4	98.4

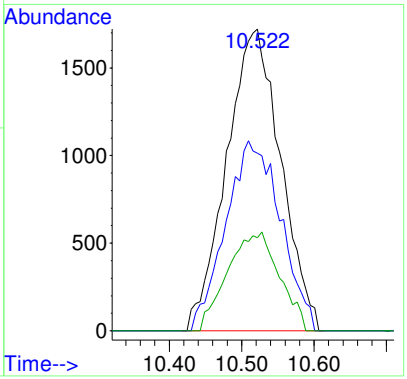


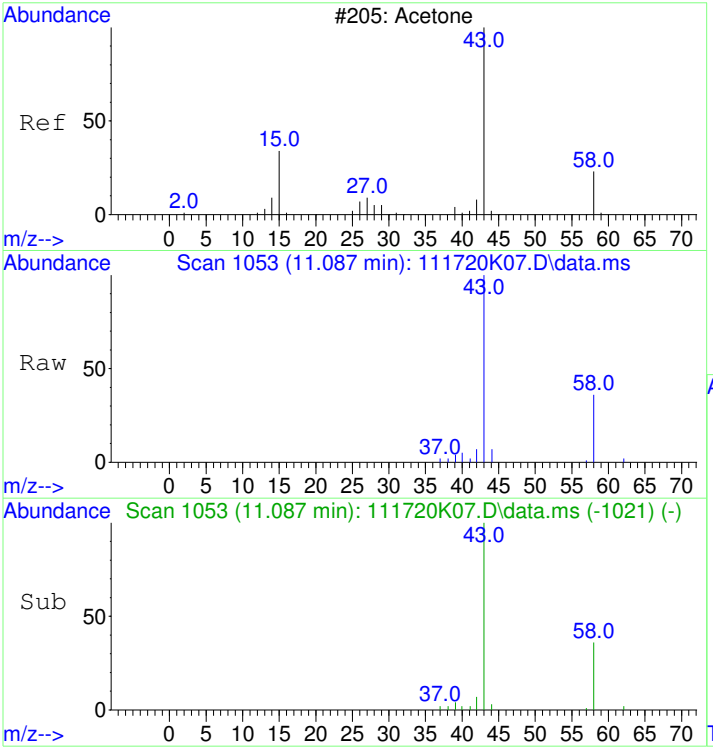


#13
1,1-Dichloroethene
Concen: 1.27 ppbv
RT: 10.522 min Scan# 960
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 61 Resp: 8956

Ion	Ratio	Lower	Upper
61	100		
96	63.6	43.5	83.5
63	31.2	12.1	52.1

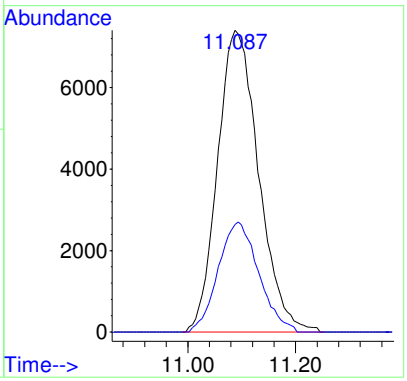


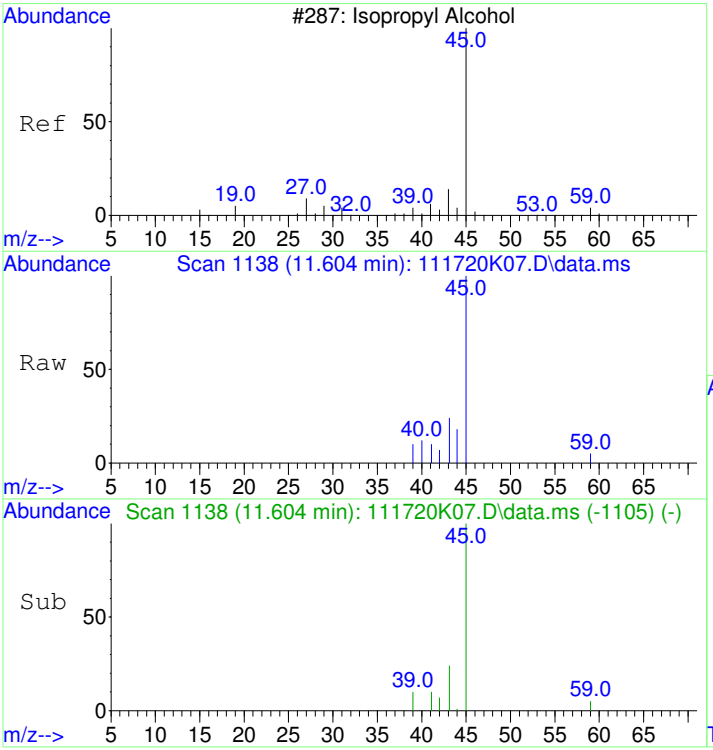


#14
Acetone
Concen: 5.42 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 43 Resp: 39227

Ion	Ratio	Lower	Upper
43	100		
58	35.9	15.9	55.9

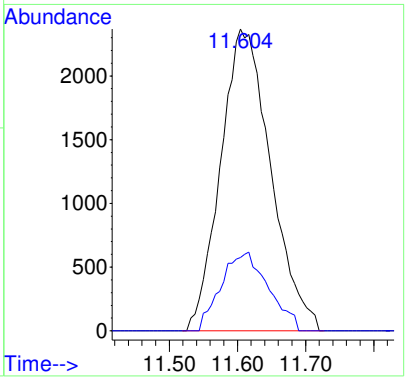


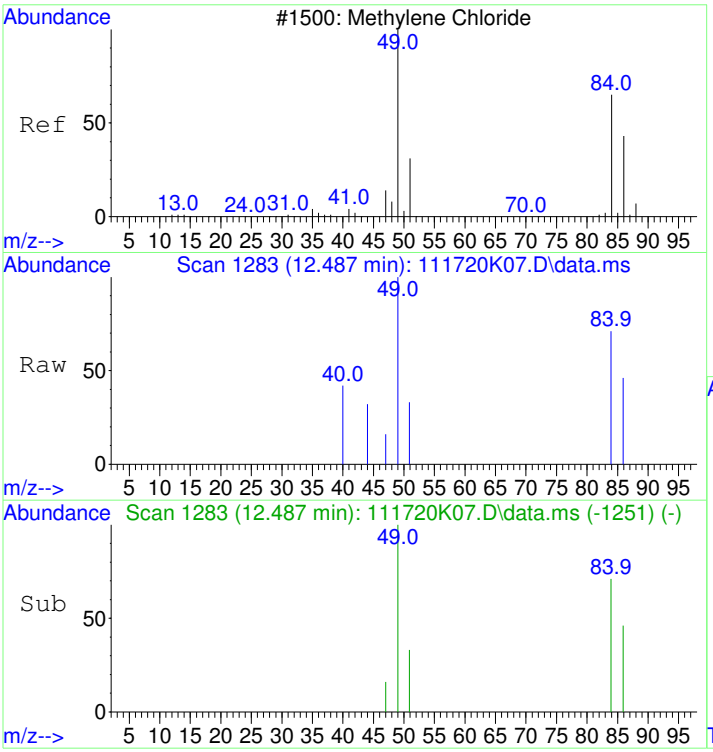


#16
2-Propanol
Concen: 1.56 ppbv
RT: 11.604 min Scan# 1138
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 45 Resp: 12085

Ion	Ratio	Lower	Upper
45	100		
43	24.5	0.0	38.7

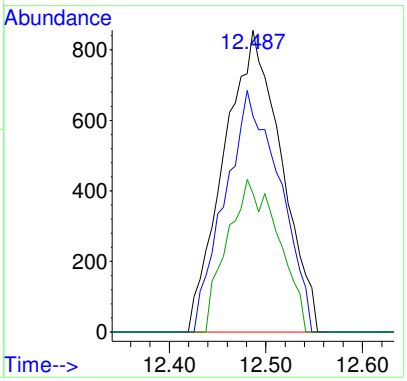


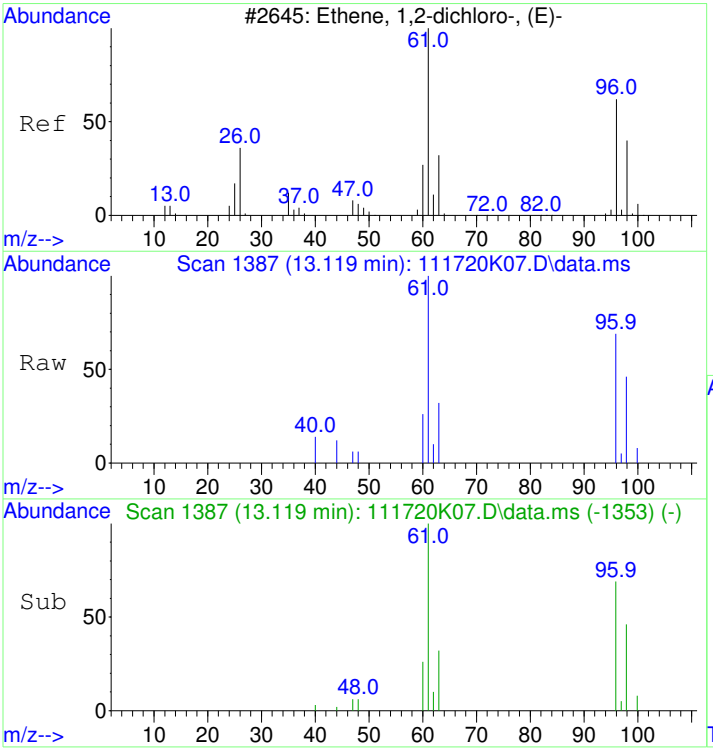


#18
Dichloromethane
Concen: 0.59 ppbv
RT: 12.487 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 49 Resp: 3522

Ion	Ratio	Lower	Upper
49	100		
84	76.7	57.4	97.4
86	45.2	29.7	69.7

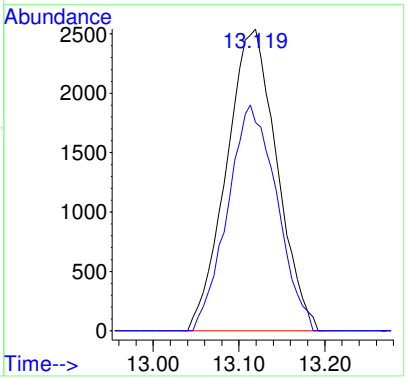


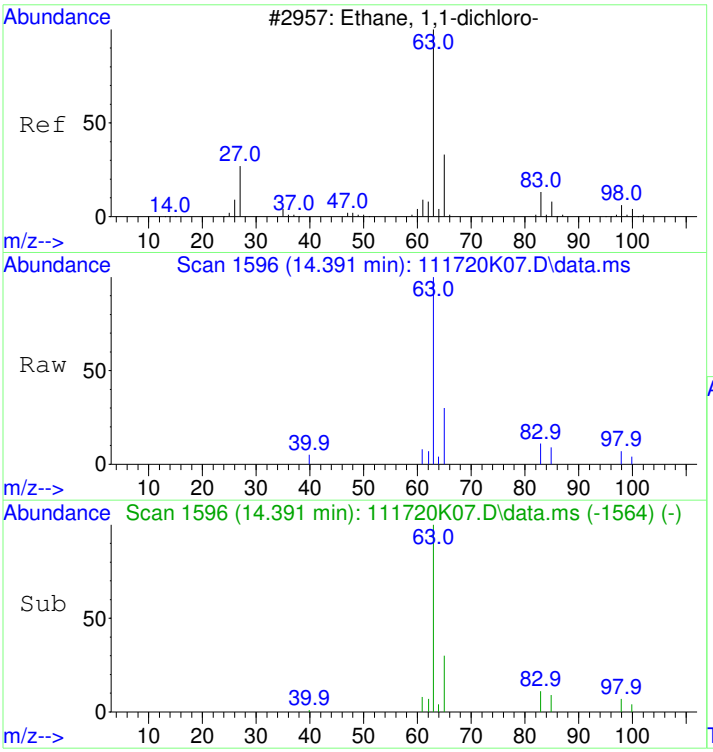


#20
trans-1,2-Dichloroethene
Concen: 1.51 ppbv
RT: 13.119 min Scan# 1387
Delta R.T. 0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 61 Resp: 10373

Ion	Ratio	Lower	Upper
61	100		
96	73.0	52.8	92.8

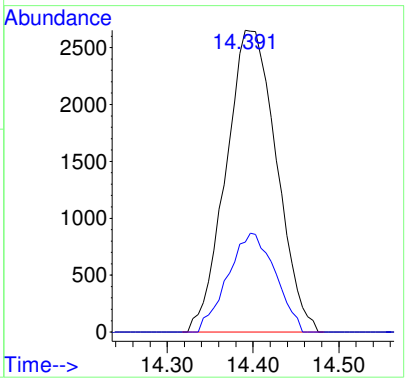


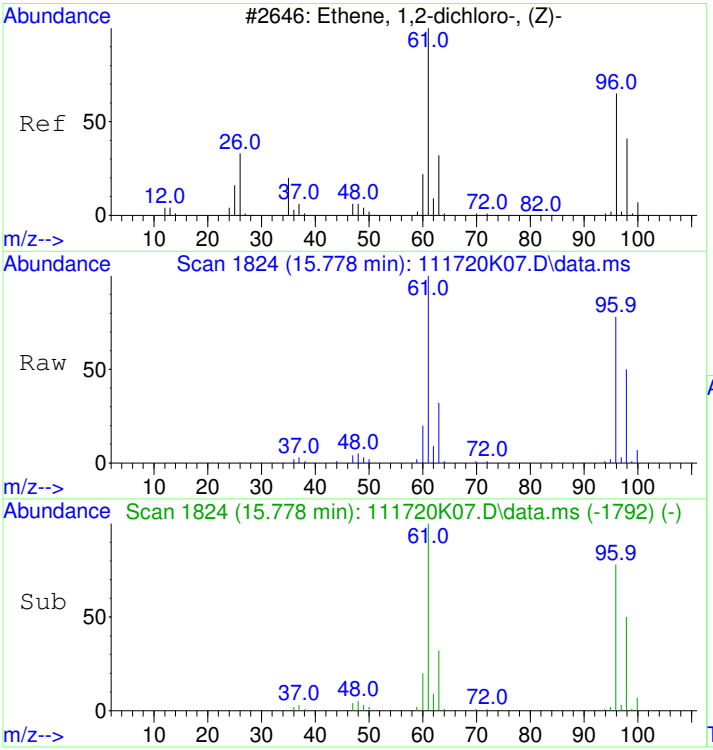


#22
1,1-Dichloroethane
Concen: 1.21 ppbv
RT: 14.391 min Scan# 1596
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 63 Resp: 10831

Ion	Ratio	Lower	Upper
63	100		
65	30.8	11.9	51.9

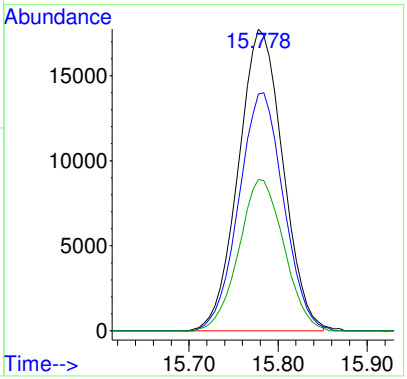


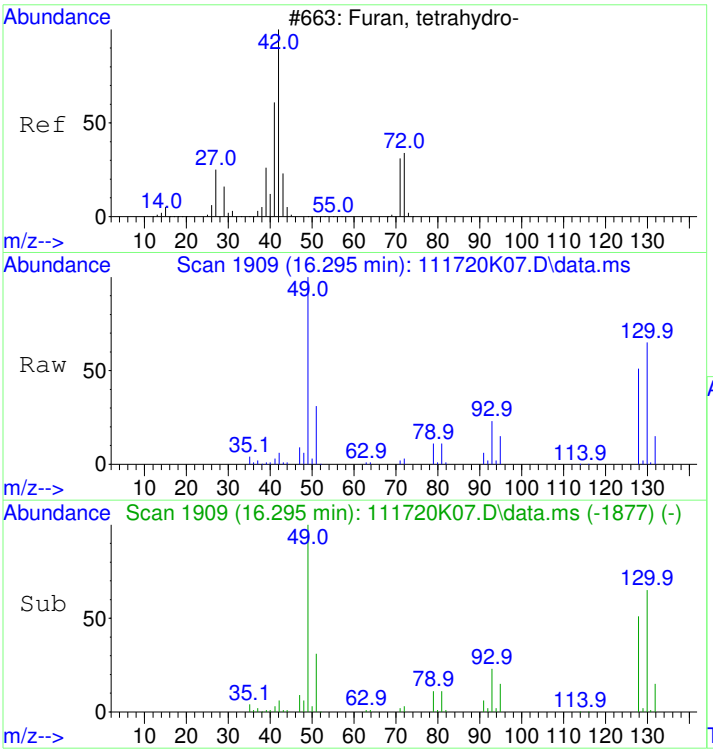


#24
cis-1,2-Dichloroethene
Concen: 9.50 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 61 Resp: 61497

Ion	Ratio	Lower	Upper
61	100		
96	79.2	57.6	97.6
98	0.0	0.0	20.0

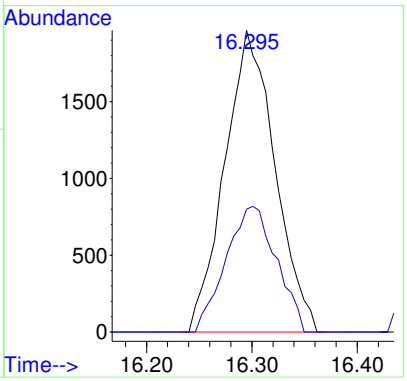


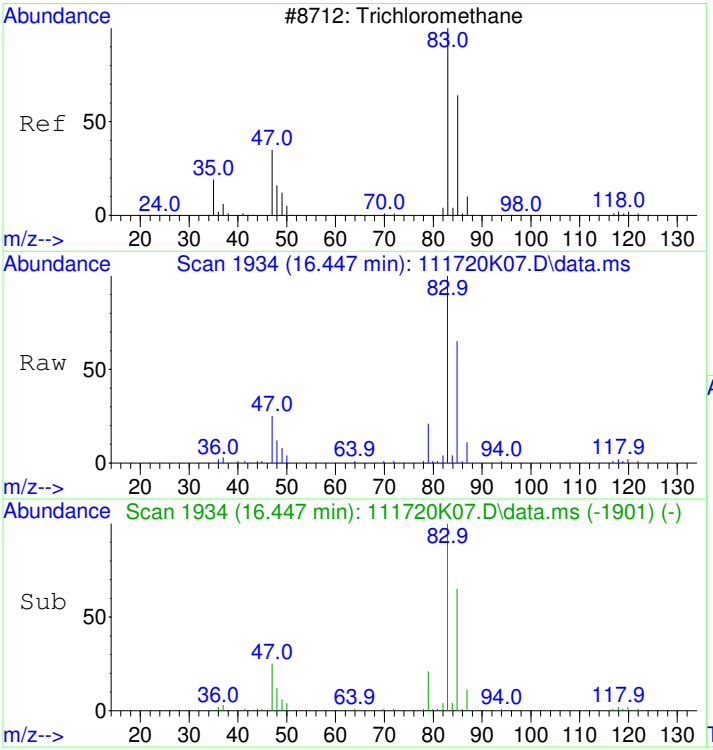


#27
Tetrahydrofuran
Concen: 0.99 ppbv
RT: 16.295 min Scan# 1909
Delta R.T. 0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 42 Resp: 6505

Ion	Ratio	Lower	Upper
42	100		
72	41.9	23.2	63.2

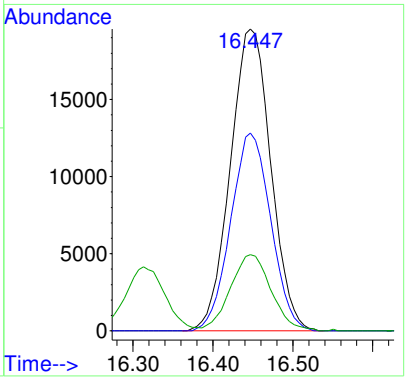


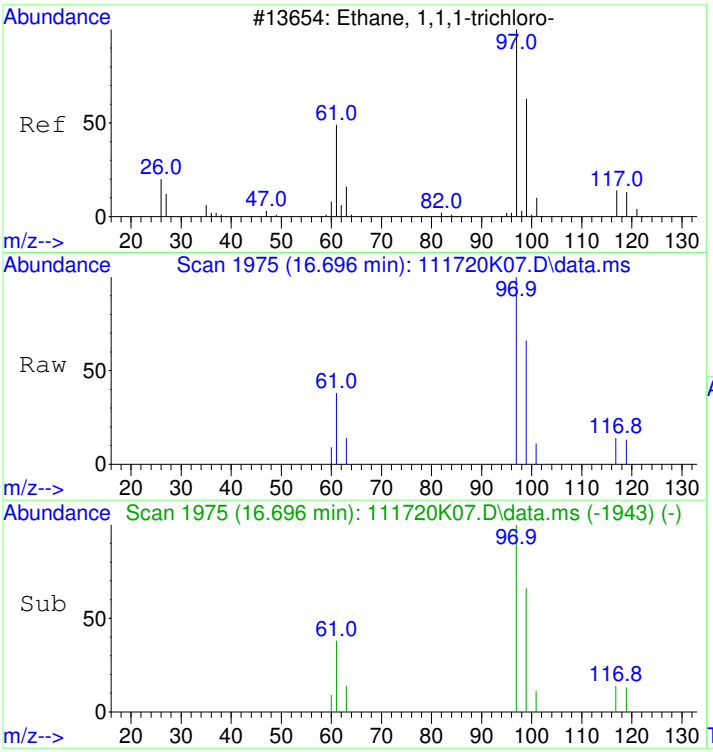


#28
Chloroform
Concen: 7.62 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 83 Resp: 68989

Ion	Ratio	Lower	Upper
83	100		
85	64.8	45.5	85.5
47	24.1	1.4	41.4

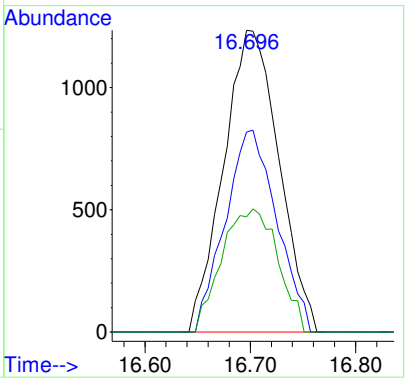


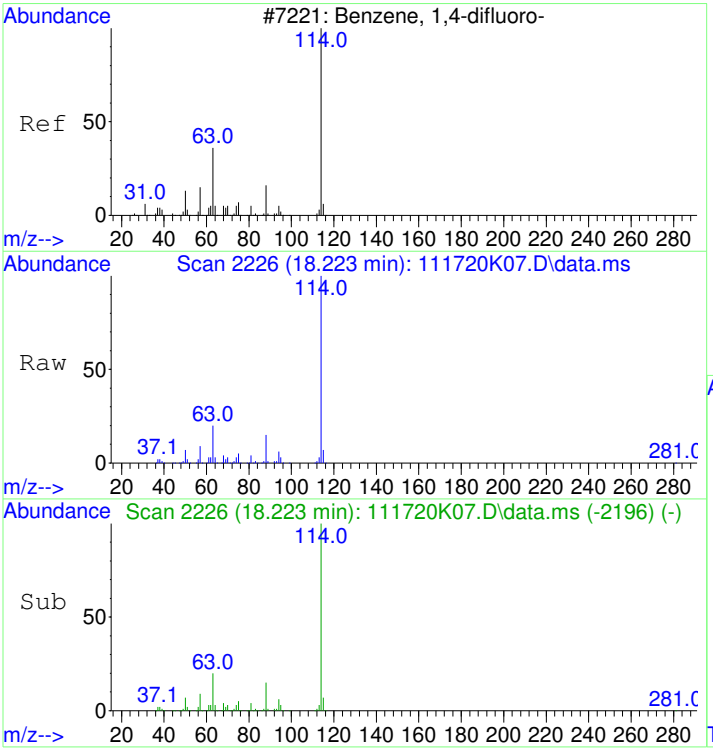


#30
1,1,1-Trichloroethane
Concen: 0.51 ppbv
RT: 16.696 min Scan# 1975
Delta R.T. -0.006 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion: 97 Resp: 4512

Ion	Ratio	Lower	Upper
97	100		
99	62.3	44.8	84.8
61	41.3	23.0	63.0

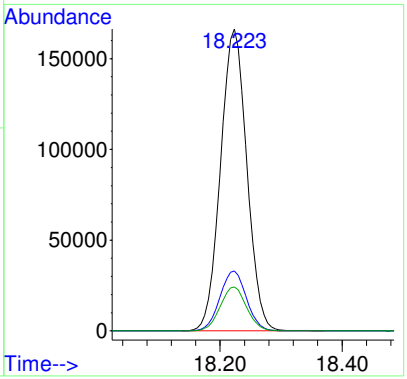


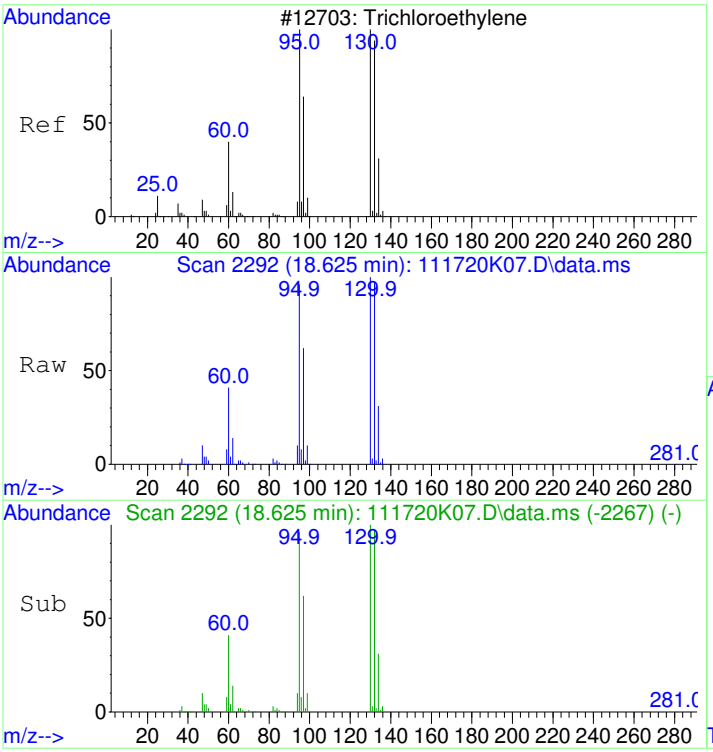


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion:114 Resp: 498293

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.5	0.0	34.7

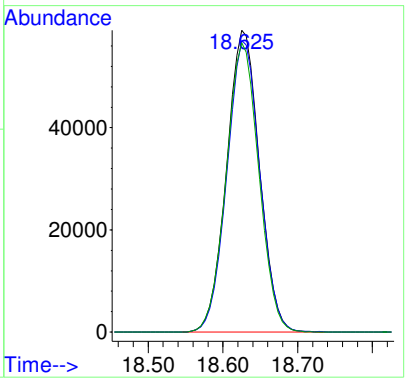




#37
Trichloroethene
Concen: 28.99 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion:130 Resp: 180231

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.3	116.3
95	95.1	74.0	114.0



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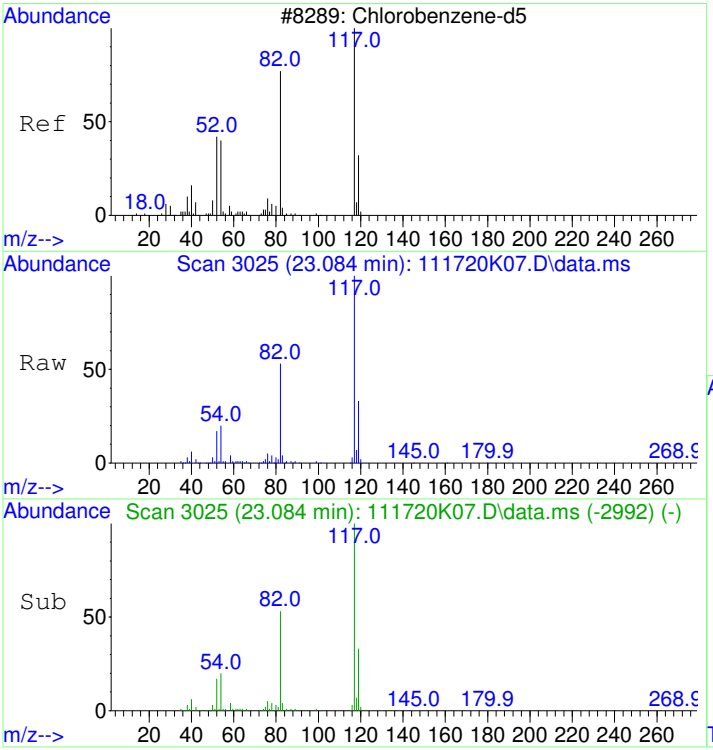
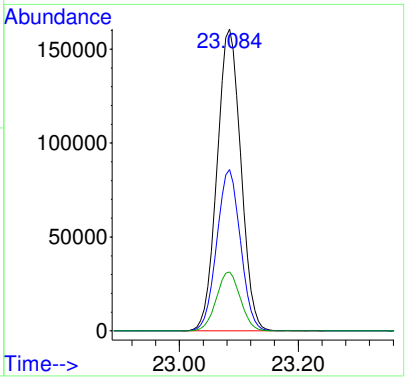
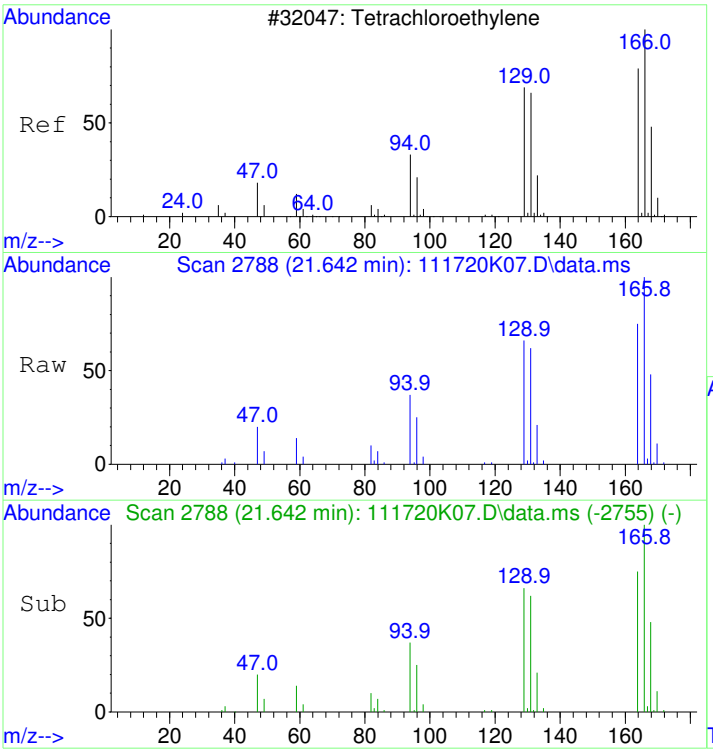


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion:117 Resp: 447103

Ion	Ratio	Lower	Upper
117	100		
82	53.1	32.3	72.3
54	19.6	0.0	38.6

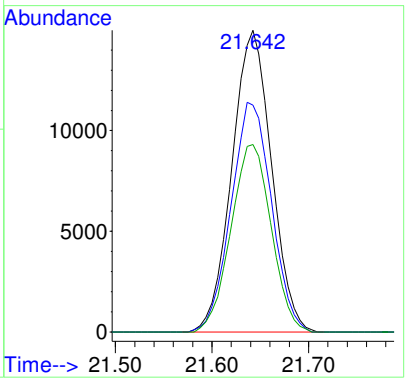




#47
Tetrachloroethene
Concen: 4.97 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. 0.000 min
Lab File: 111720K07.D
Acq: 17 Nov 2020 4:09 pm

Tgt Ion:166 Resp: 42797

Ion	Ratio	Lower	Upper
166	100		
164	77.6	57.8	97.8
131	63.1	44.1	84.1



2011024-03

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K08.D
InstName : HP5973K
Acq On : 17 Nov 2020 5:02 pm
Operator : EM
Sample : 2011024-03
Misc : 200ml FG-031-3ft-G
ALS Vial : 23 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:13 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

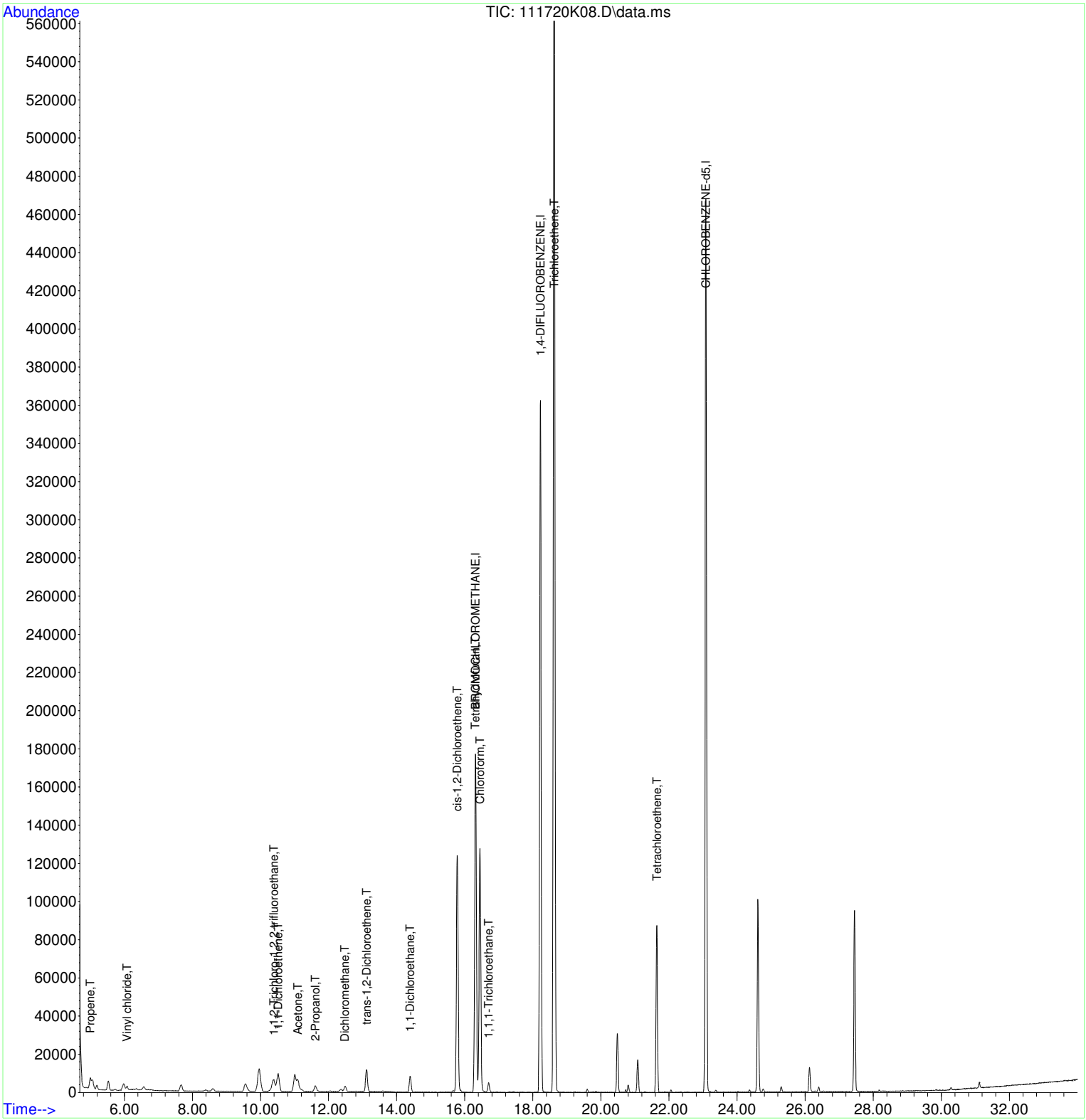
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)		
Internal Standards								
1) BROMOCHLOROMETHANE	16.313	49	160684	19.60	ppbv	0.00		
32) 1,4-DIFLUOROBENZENE	18.223	114	495857	19.60	ppbv	0.00		
43) CHLOROBENZENE-d5	23.084	117	446918	19.60	ppbv	0.00		
Target Compounds						Qvalue		
2) Propene	4.998	41	3983	0.80	ppbv	# 75		
6) Vinyl chloride	6.074	62	4837	0.90	ppbv	98		
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	7873	1.07	ppbv	100		
13) 1,1-Dichloroethene	10.515	61	18185	2.59	ppbv	99		
14) Acetone	11.093	43	20320	2.83	ppbv	98		
16) 2-Propanol	11.610	45	9197	1.19	ppbv	87		
18) Dichloromethane	12.474	49	4389	0.73	ppbv	99		
20) trans-1,2-Dichloroethene	13.113	61	14777	2.16	ppbv	99		
22) 1,1-Dichloroethane	14.391	63	17754	1.99	ppbv	100		
24) cis-1,2-Dichloroethene	15.778	61	132645	20.61	ppbv	# 98	OC	
27) Tetrahydrofuran	16.307	42	5031	0.77	ppbv	98		
28) Chloroform	16.447	83	172409	19.17	ppbv	99		
30) 1,1,1-Trichloroethane	16.702	97	6612	0.76	ppbv	99		
37) Trichloroethene	18.625	130	433531	70.07	ppbv	99	OC	
47) Tetrachloroethene	21.642	166	46619	5.41	ppbv	99		

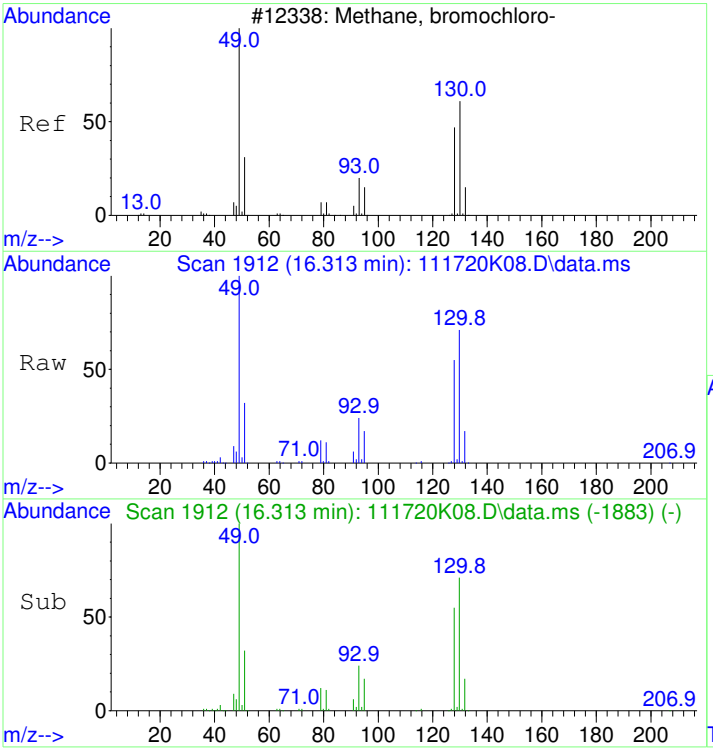
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 9:09 am, Nov 18, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K08.D
InstName : HP5973K
Acq On : 17 Nov 2020 5:02 pm
Operator : EM
Sample : 2011024-03
Misc : 200ml FG-031-3ft-G
ALS Vial : 23 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:13 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

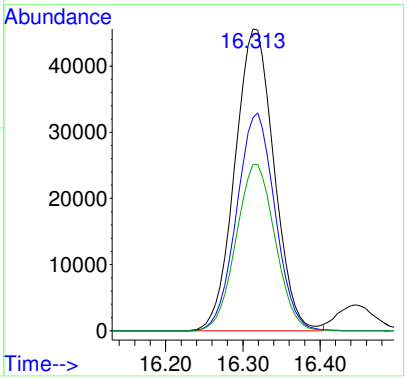


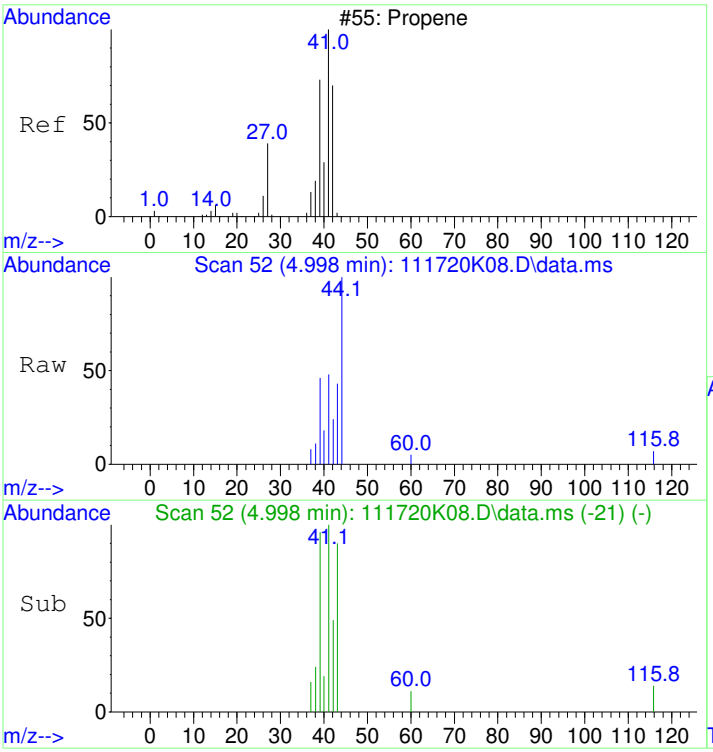


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 49 Resp: 160684

Ion	Ratio	Lower	Upper
49	100		
130	70.9	51.9	91.9
128	55.0	35.7	75.7

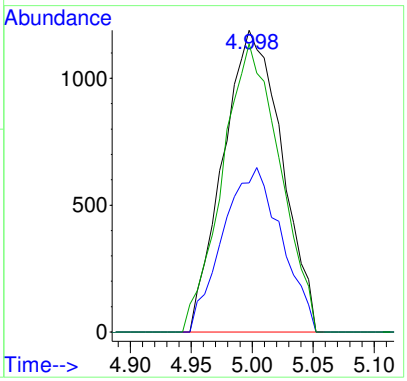


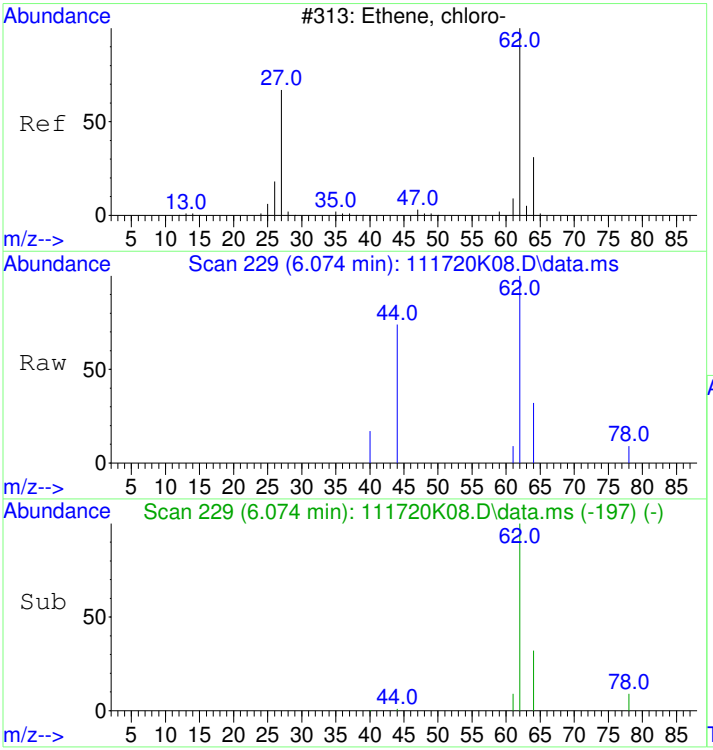


#2
Propene
Concen: 0.80 ppbv
RT: 4.998 min Scan# 52
Delta R.T. -0.012 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 41 Resp: 3983

Ion	Ratio	Lower	Upper
41	100		
42	54.4	47.3	87.3
39	93.4	46.1	86.1#

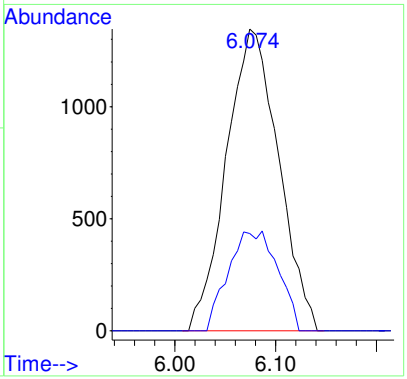


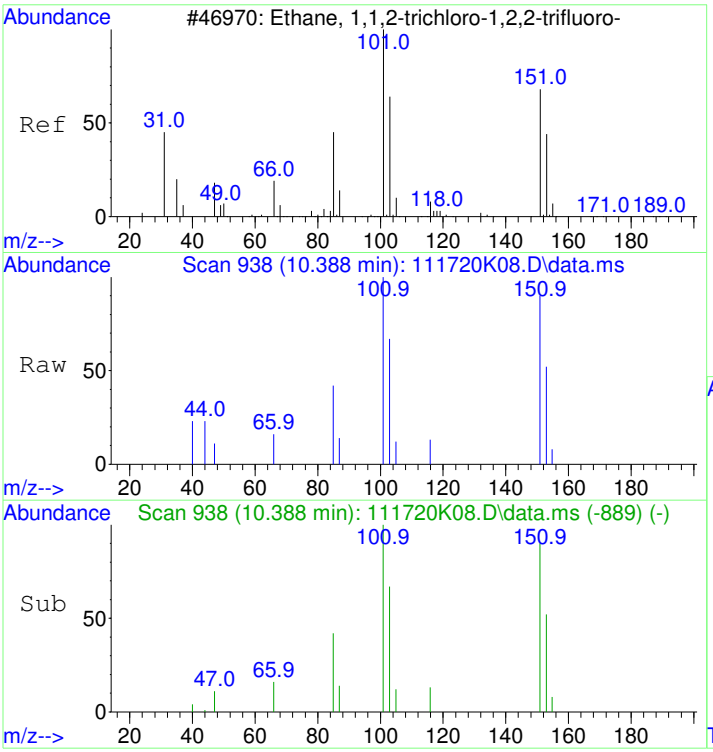


#6
Vinyl chloride
Concen: 0.90 ppbv
RT: 6.074 min Scan# 229
Delta R.T. -0.006 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 62 Resp: 4837

Ion	Ratio	Lower	Upper
62	100		
64	31.3	12.3	52.3

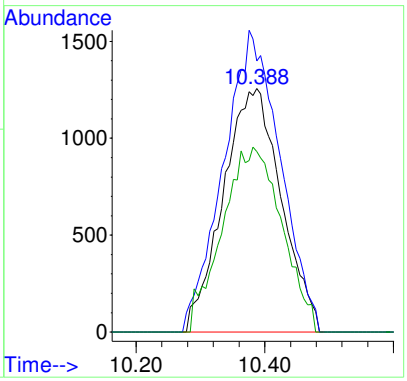


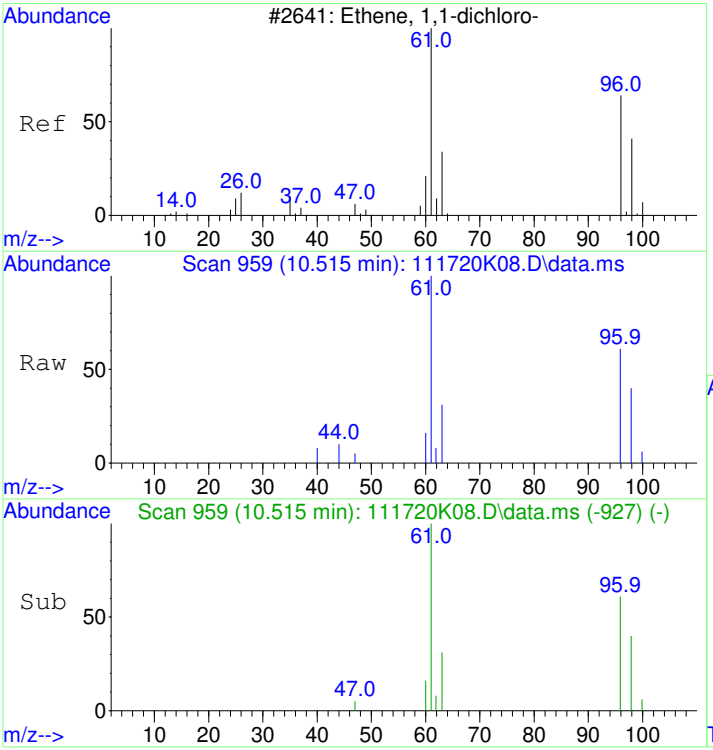


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.07 ppbv
RT: 10.388 min Scan# 938
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion:151 Resp: 7873

Ion	Ratio	Lower	Upper
151	100		
101	121.6	101.9	141.9
103	77.9	58.4	98.4

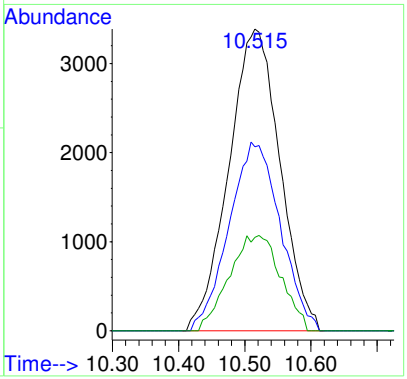


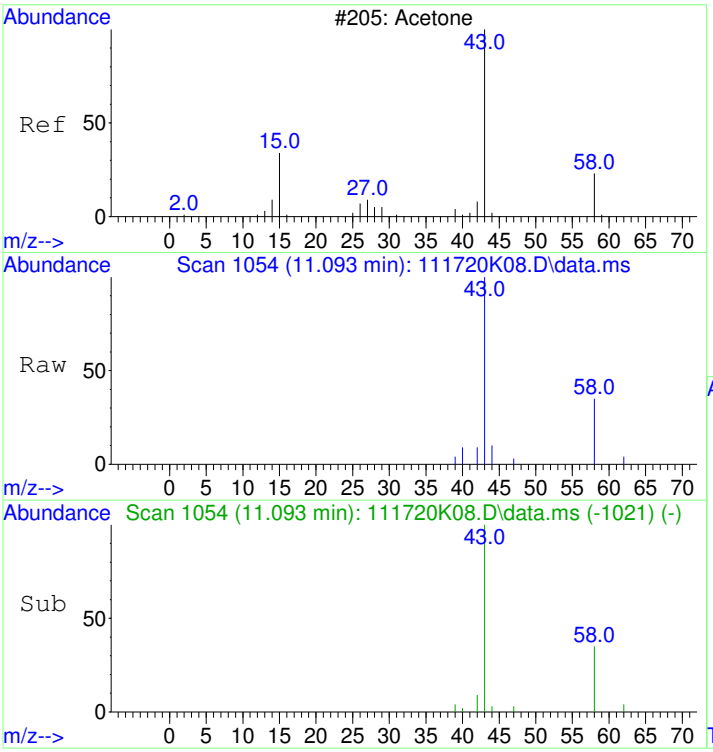


#13
1,1-Dichloroethene
Concen: 2.59 ppbv
RT: 10.515 min Scan# 959
Delta R.T. -0.006 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 61 Resp: 18185

Ion	Ratio	Lower	Upper
61	100		
96	62.7	43.5	83.5
63	31.8	12.1	52.1

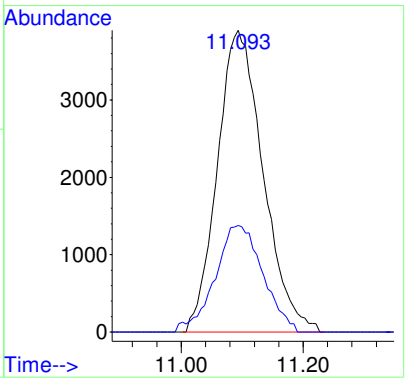


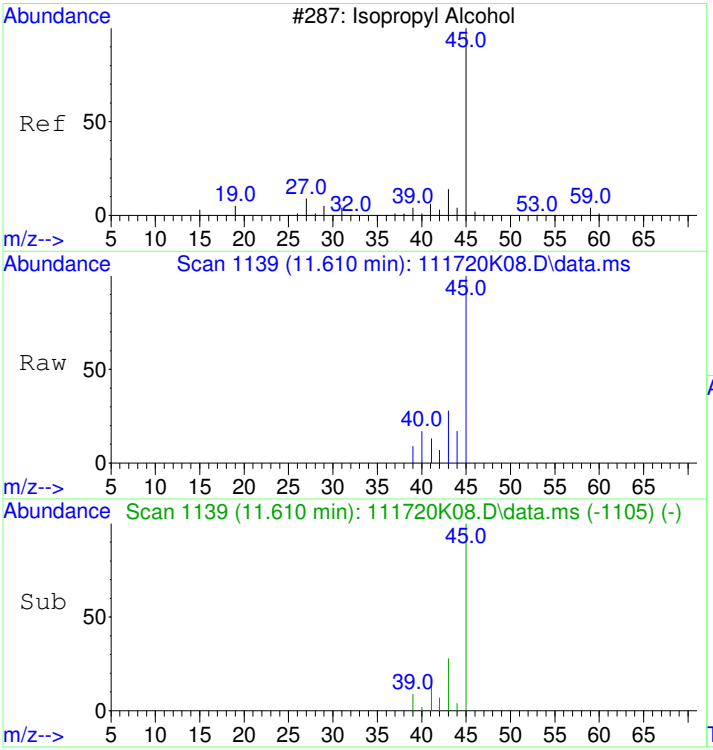


#14
Acetone
Concen: 2.83 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 43 Resp: 20320

Ion	Ratio	Lower	Upper
43	100		
58	36.8	15.9	55.9

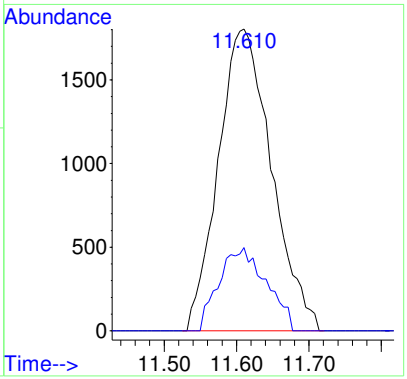


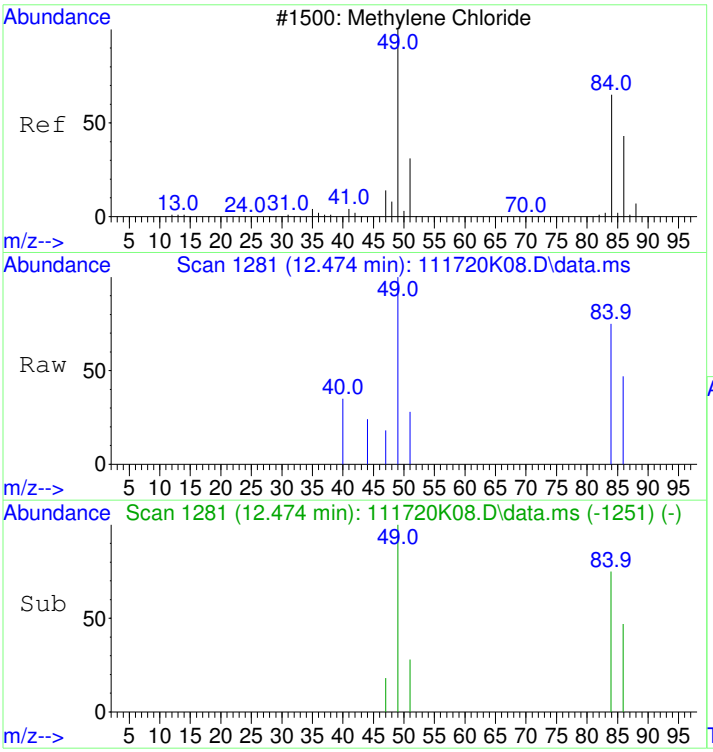


#16
2-Propanol
Concen: 1.19 ppbv
RT: 11.610 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 45 Resp: 9197

Ion	Ratio	Lower	Upper
45	100		
43	24.5	0.0	38.7

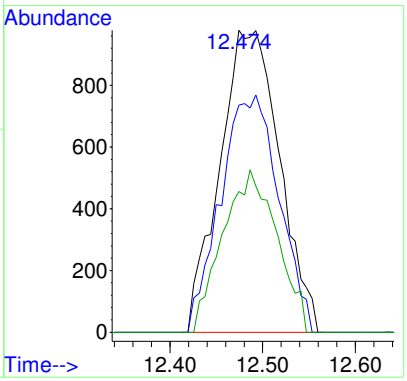


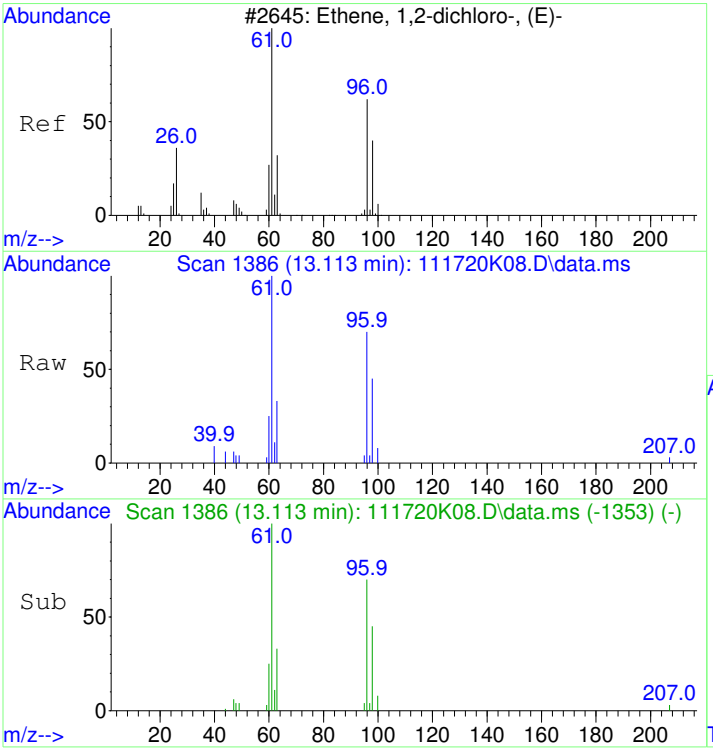


#18
Dichloromethane
Concen: 0.73 ppbv
RT: 12.474 min Scan# 1281
Delta R.T. -0.018 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 49 Resp: 4389

Ion	Ratio	Lower	Upper
49	100		
84	76.8	57.4	97.4
86	48.6	29.7	69.7

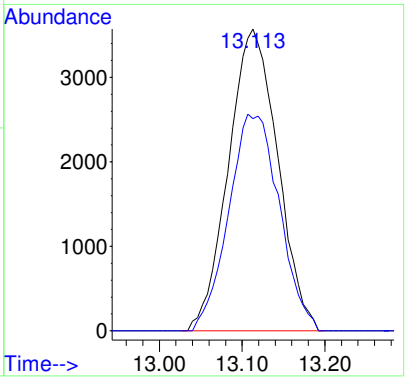


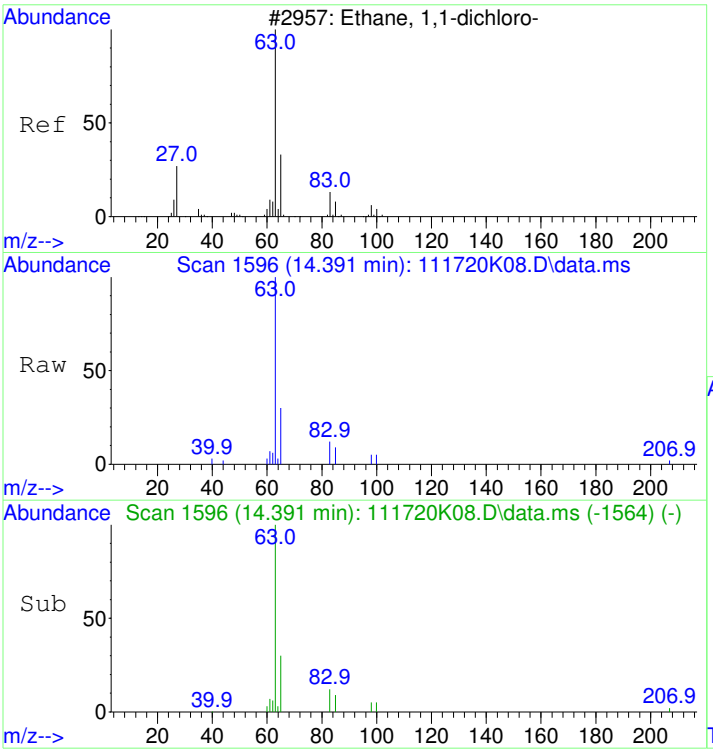


#20
trans-1,2-Dichloroethene
Concen: 2.16 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 61 Resp: 14777

Ion	Ratio	Lower	Upper
61	100		
96	73.9	52.8	92.8

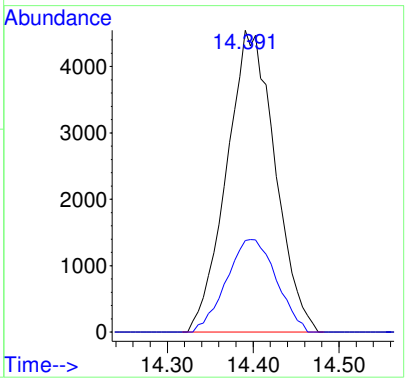


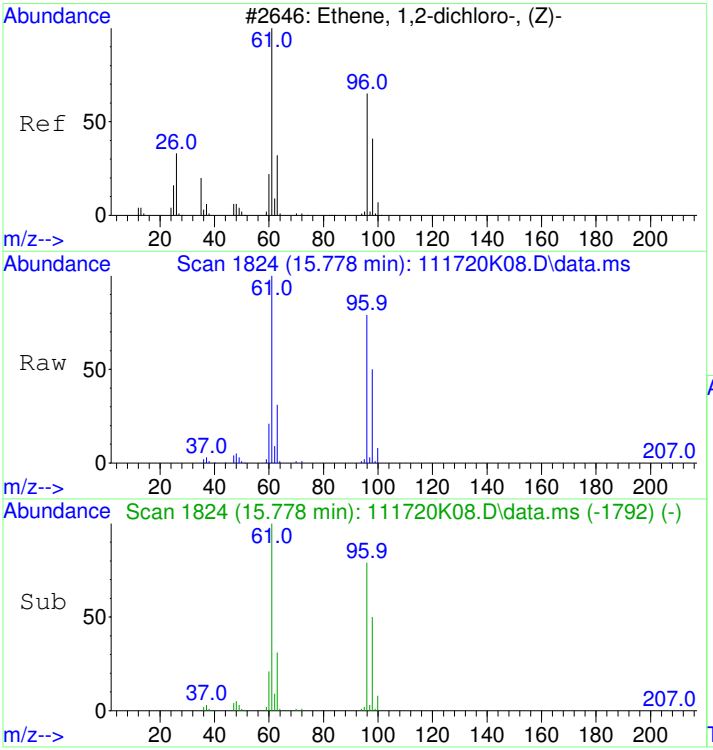


#22
1,1-Dichloroethane
Concen: 1.99 ppbv
RT: 14.391 min Scan# 1596
Delta R.T. -0.006 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 63 Resp: 17754

Ion	Ratio	Lower	Upper
63	100		
65	31.7	11.9	51.9

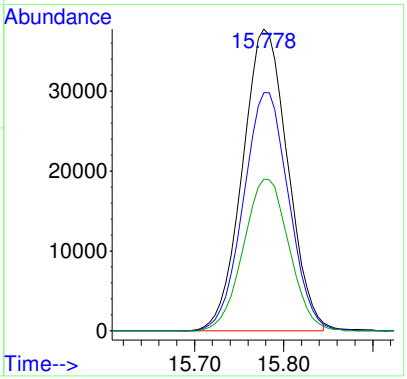




#24
cis-1,2-Dichloroethene
Concen: 20.61 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 61 Resp: 132645

Ion	Ratio	Lower	Upper
61	100		
96	79.1	57.6	97.6
98	0.0	0.0	20.0



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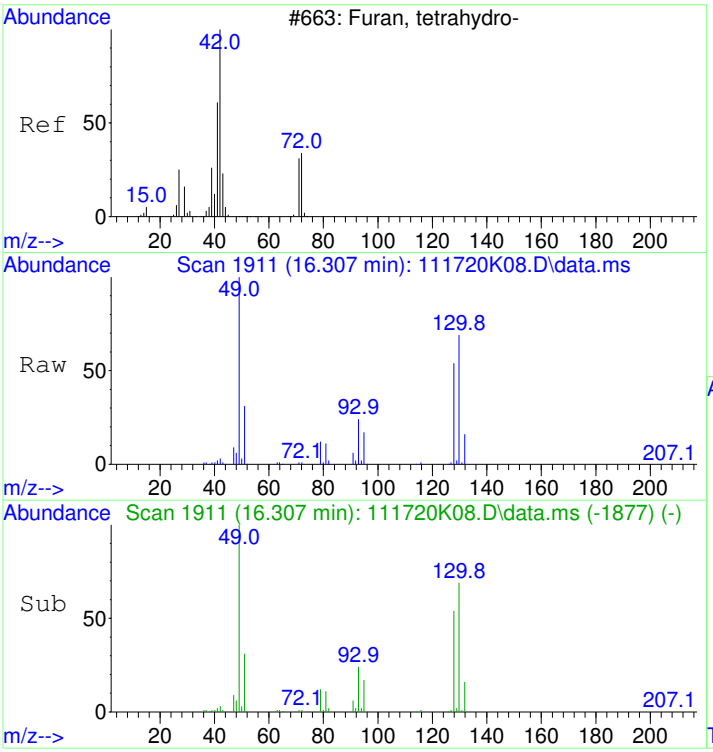
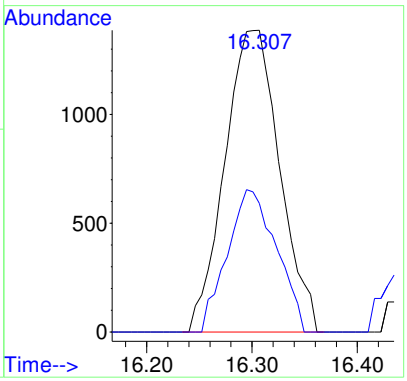
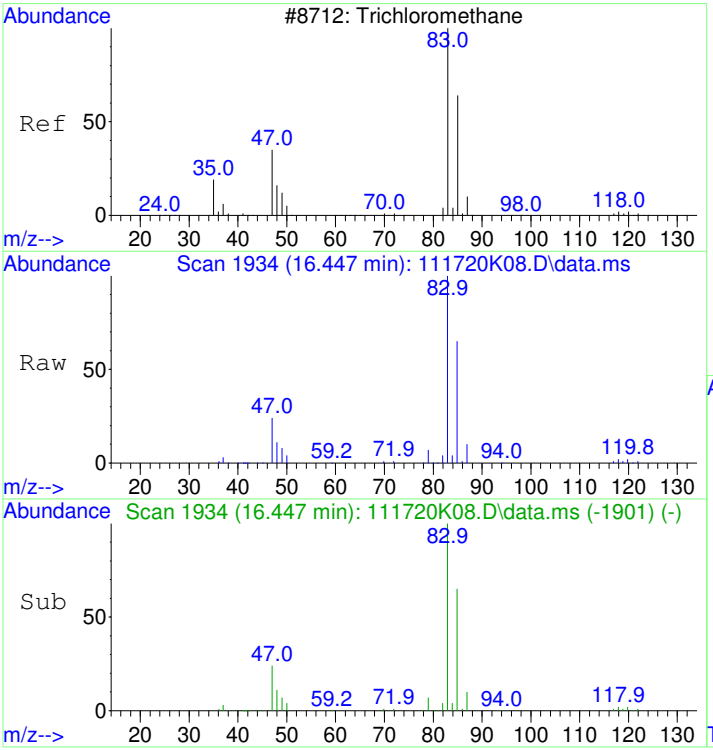


#27
Tetrahydrofuran
Concen: 0.77 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.018 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 42 Resp: 5031

Ion	Ratio	Lower	Upper
42	100		
72	42.1	23.2	63.2

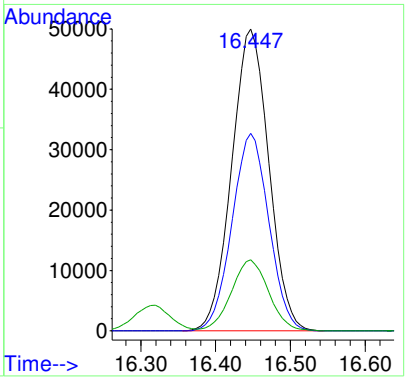


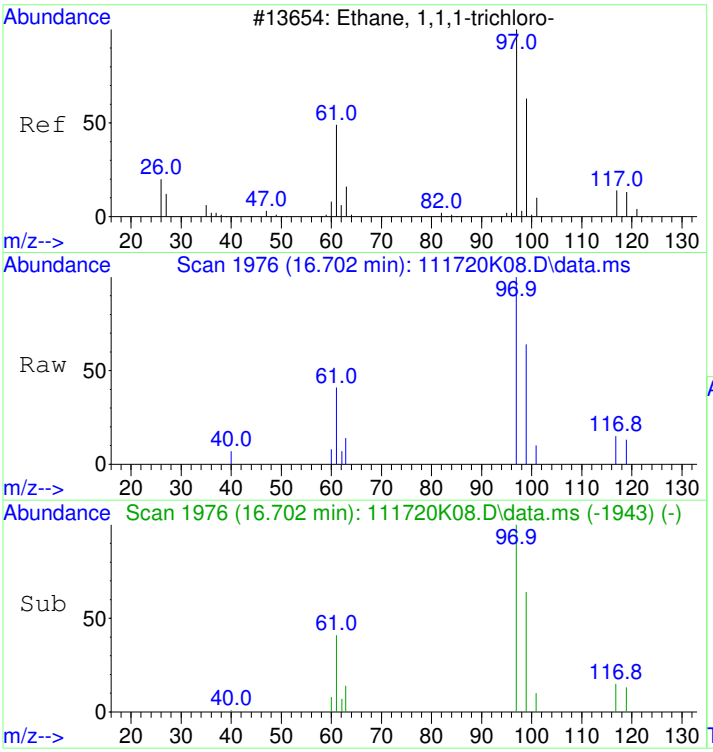


#28
Chloroform
Concen: 19.17 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 83 Resp: 172409

Ion	Ratio	Lower	Upper
83	100		
85	64.9	45.5	85.5
47	22.7	1.4	41.4

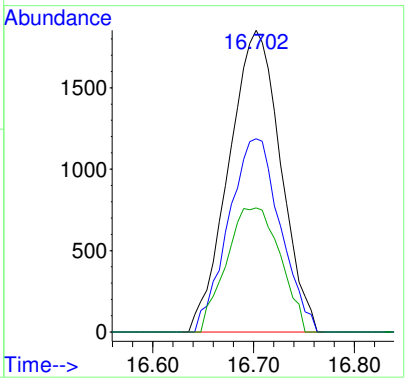


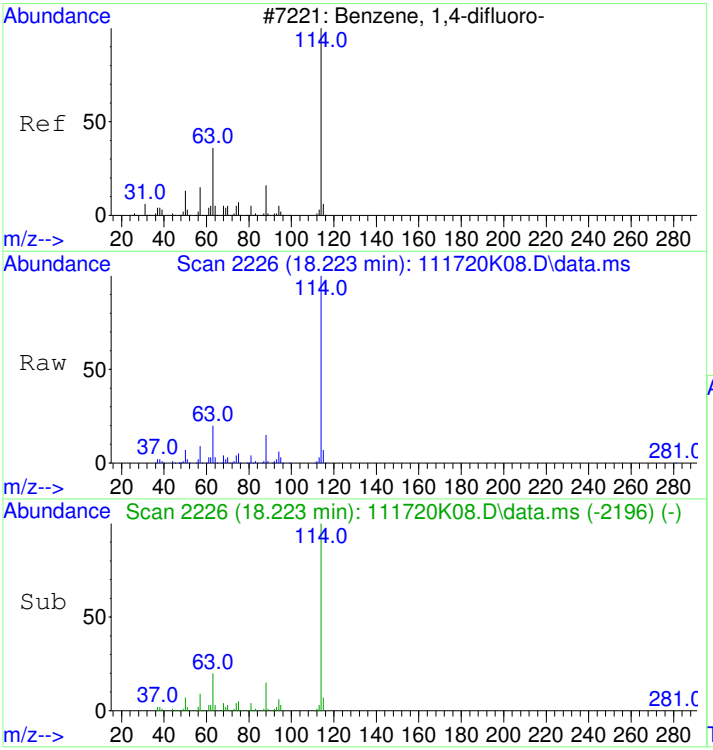


#30
1,1,1-Trichloroethane
Concen: 0.76 ppbv
RT: 16.702 min Scan# 1976
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion: 97 Resp: 6612

Ion	Ratio	Lower	Upper
97	100		
99	64.2	44.8	84.8
61	42.7	23.0	63.0

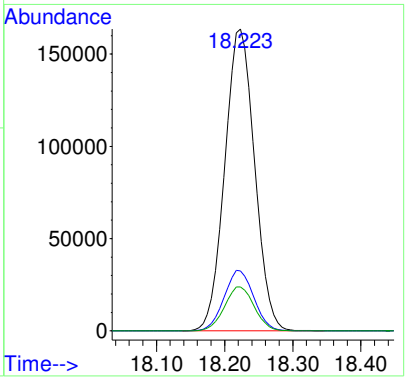


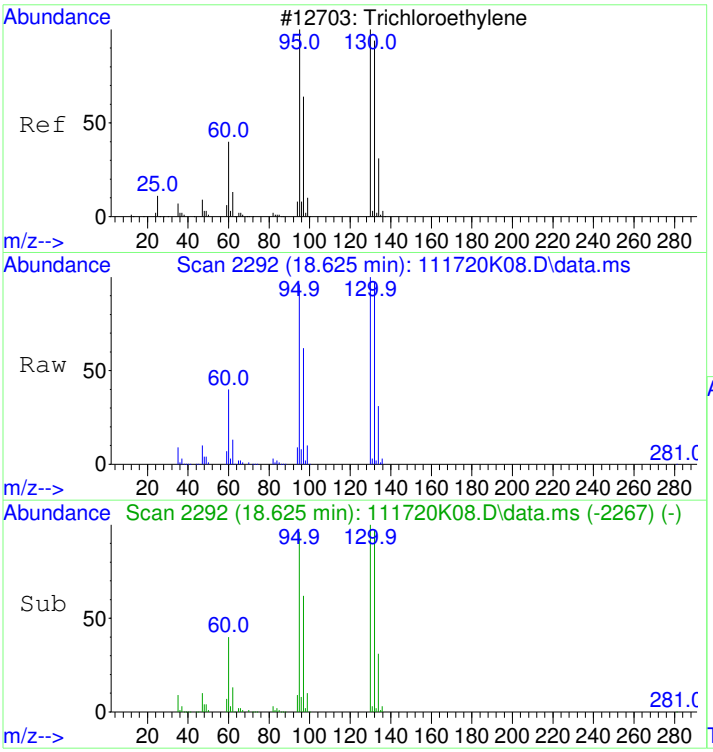


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion:114 Resp: 495857

Ion	Ratio	Lower	Upper
114	100		
63	19.9	0.0	39.5
88	14.5	0.0	34.7

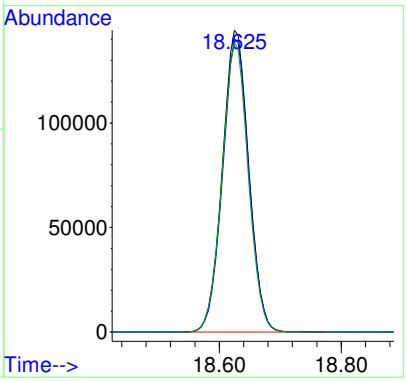




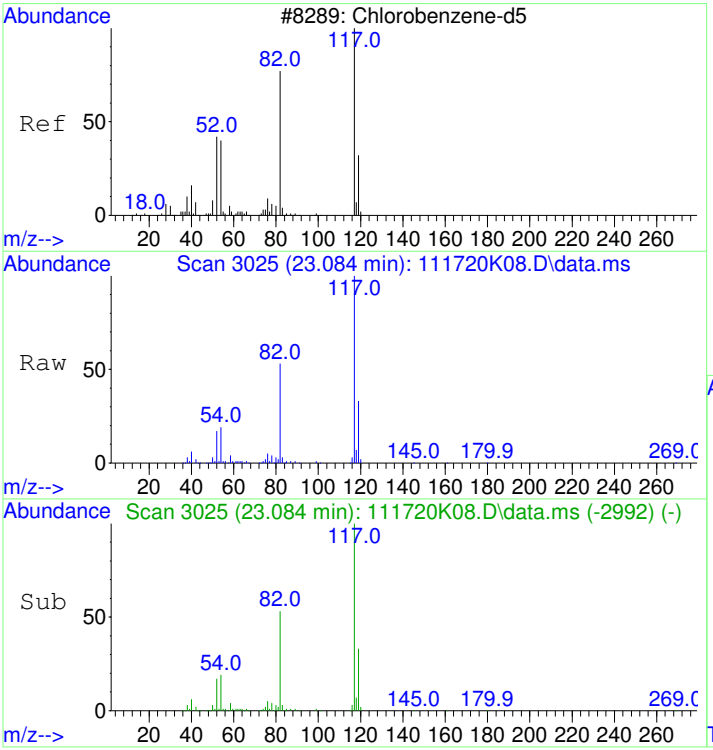
#37
Trichloroethene
Concen: 70.07 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion:130 Resp: 433531

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.3	116.3
95	95.0	74.0	114.0



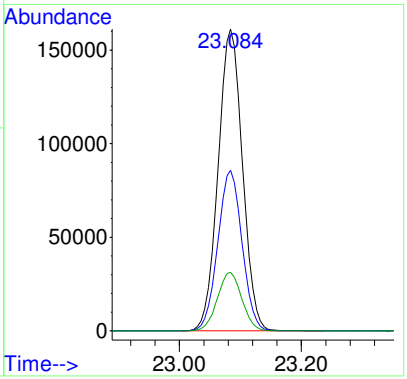
OC

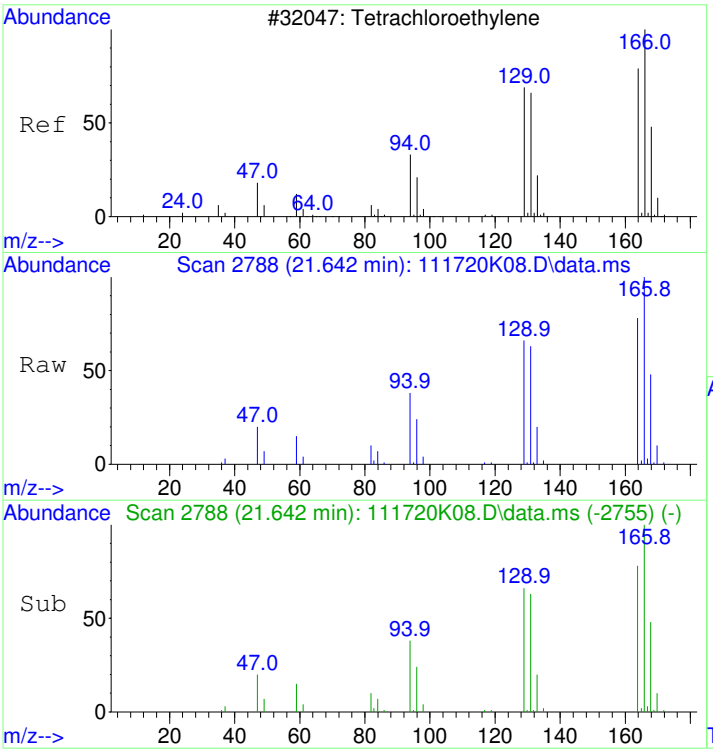


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion:117 Resp: 446918

Ion	Ratio	Lower	Upper
117	100		
82	52.9	32.3	72.3
54	19.5	0.0	38.6

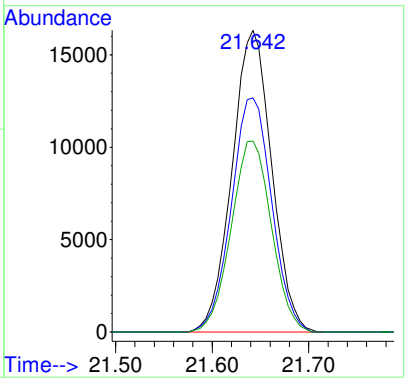




#47
Tetrachloroethene
Concen: 5.41 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K08.D
Acq: 17 Nov 2020 5:02 pm

Tgt Ion:166 Resp: 46619

Ion	Ratio	Lower	Upper
166	100		
164	79.0	57.8	97.8
131	64.2	44.1	84.1



2011024-04

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K09.D
InstName : HP5973K
Acq On : 17 Nov 2020 5:54 pm
Operator : EM
Sample : 2011024-04
Misc : 200ml FG-029-3ft-G
ALS Vial : 24 Sample Multiplier: 1.96

Quant Time: Nov 18 09:04:18 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Qvalue	Dev(Min)	
Internal Standards								
1) BROMOCHLOROMETHANE	16.319	49	165011	19.60	ppbv		0.00	
32) 1,4-DIFLUOROBENZENE	18.223	114	502734	19.60	ppbv		0.00	
43) CHLOROBENZENE-d5	23.084	117	456867	19.60	ppbv		0.00	
Target Compounds						Qvalue		
2) Propene	4.998	41	3987	0.78	ppbv	#	74	
6) Vinyl chloride	6.087	62	10761	1.95	ppbv		97	
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	10671	1.41	ppbv		99	
13) 1,1-Dichloroethene	10.522	61	28915	4.01	ppbv		99	
14) Acetone	11.087	43	87995	11.93	ppbv		99	
16) 2-Propanol	11.598	45	37972	4.80	ppbv		94	
18) Dichloromethane	12.487	49	3930	0.64	ppbv		97	
20) trans-1,2-Dichloroethene	13.119	61	23481	3.35	ppbv		98	
22) 1,1-Dichloroethane	14.403	63	28409	3.10	ppbv		100	
24) cis-1,2-Dichloroethene	15.778	61	302661	45.80	ppbv	#	98	OC
25) 2-Butanone (MEK)	15.790	72	1541	~~0.55~~	~~ppbv~~	#	1	
28) Chloroform	16.447	83	83152	9.00	ppbv		98	
30) 1,1,1-Trichloroethane	16.702	97	11072	1.23	ppbv		99	
37) Trichloroethene	18.625	130	1030161	164.21	ppbv		100	OC
44) Toluene	20.803	91	20280	1.12	ppbv		100	
47) Tetrachloroethene	21.642	166	58937	6.69	ppbv		99	
52) Ethylbenzene	23.194	91	48396	2.03	ppbv		99	
53) m&p-Xylene	23.376	91	148275	8.26	ppbv		99	
54) o-Xylene	24.027	91	83516	4.51	ppbv		99	

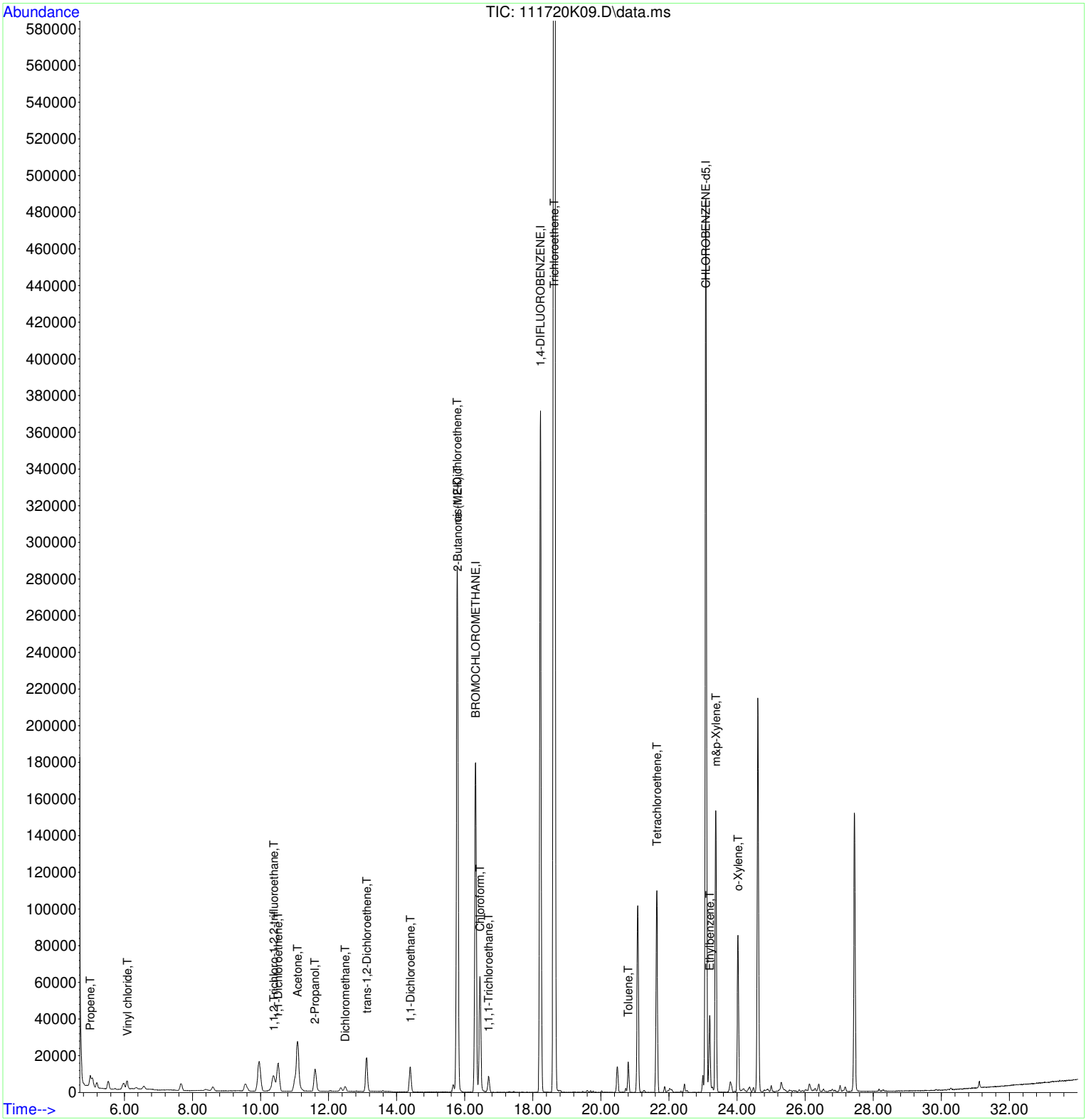
(#) = qualifier out of range (m) = manual integration (+) = signals summed

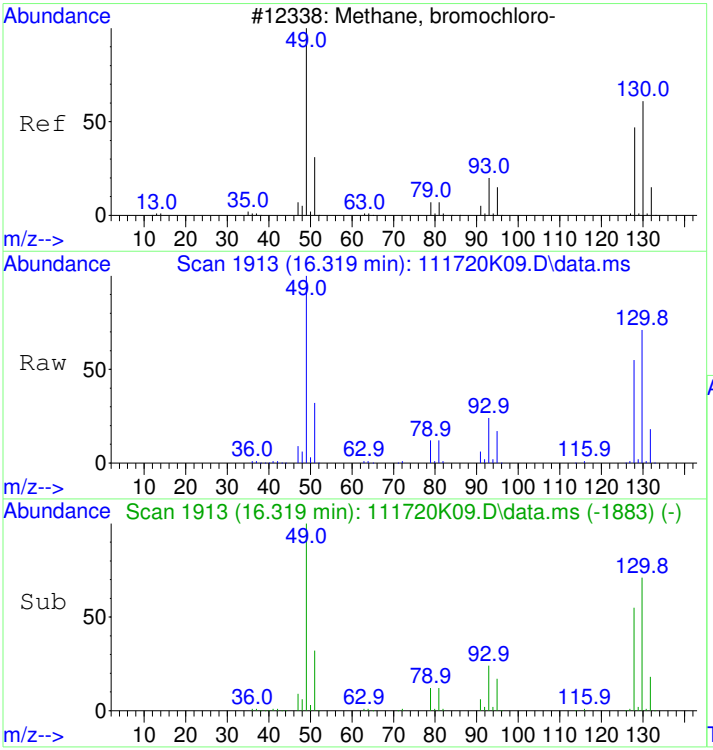
AFTER Q DELETE

REVIEWED
By EM at 9:09 am, Nov 18, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K09.D
InstName : HP5973K
Acq On : 17 Nov 2020 5:54 pm
Operator : EM
Sample : 2011024-04
Misc : 200ml FG-029-3ft-G
ALS Vial : 24 Sample Multiplier: 1.96

Quant Time: Nov 18 09:04:18 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

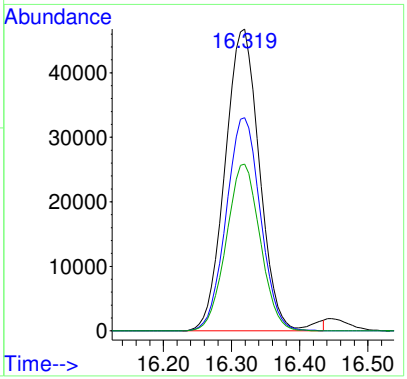


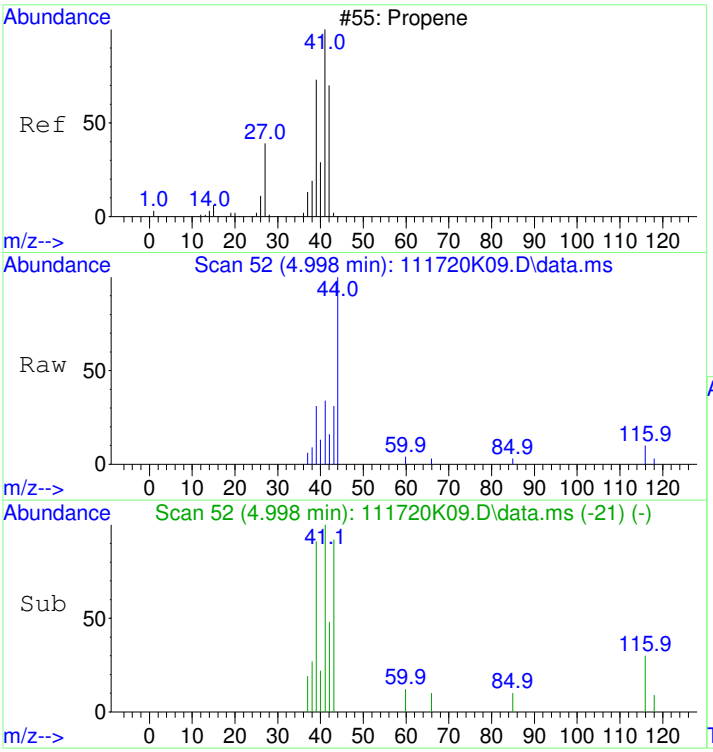


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 49 Resp: 165011

Ion	Ratio	Lower	Upper
49	100		
130	69.7	51.9	91.9
128	54.0	35.7	75.7

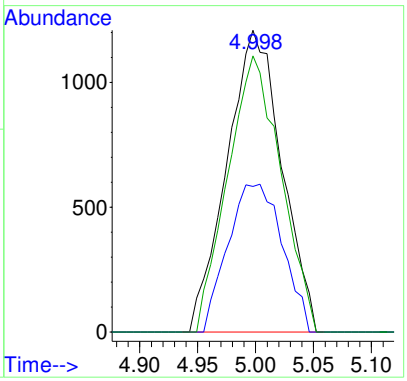


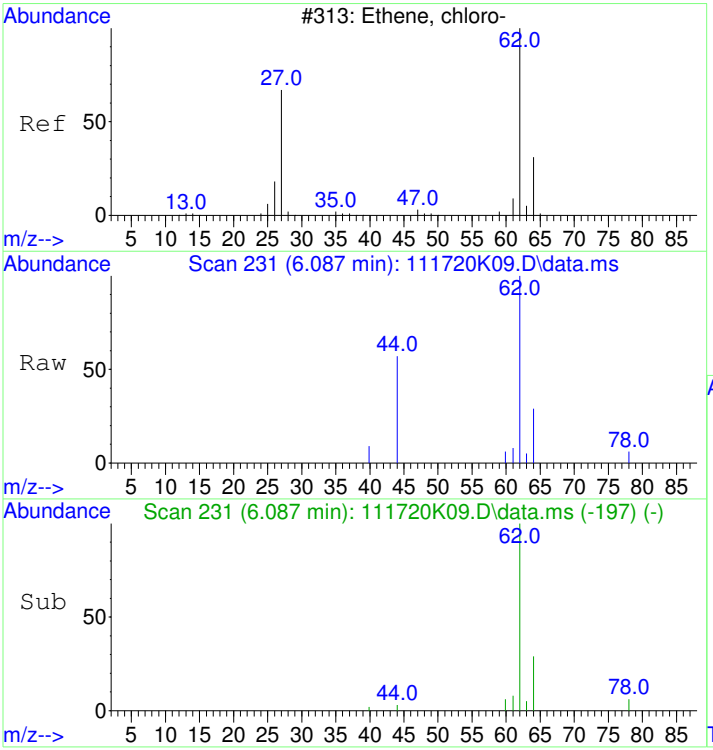


#2
Propene
Concen: 0.78 ppbv
RT: 4.998 min Scan# 52
Delta R.T. -0.012 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 41 Resp: 3987

Ion	Ratio	Lower	Upper
41	100		
42	48.6	47.3	87.3
39	88.4	46.1	86.1#

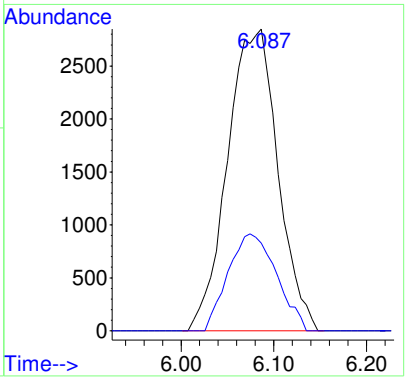


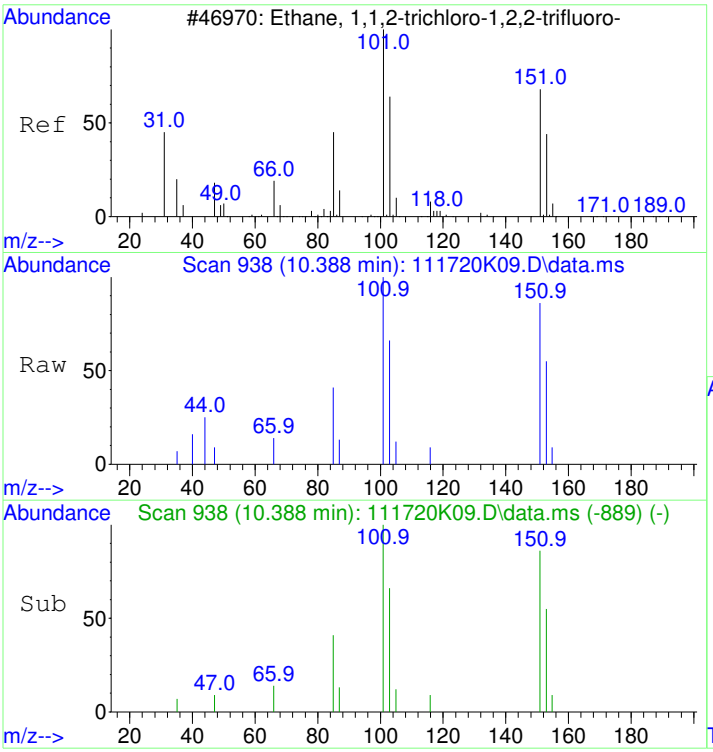


#6
Vinyl chloride
Concen: 1.95 ppbv
RT: 6.087 min Scan# 231
Delta R.T. 0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 62 Resp: 10761

Ion	Ratio	Lower	Upper
62	100		
64	30.8	12.3	52.3

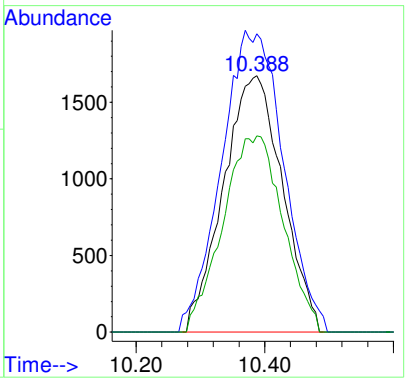


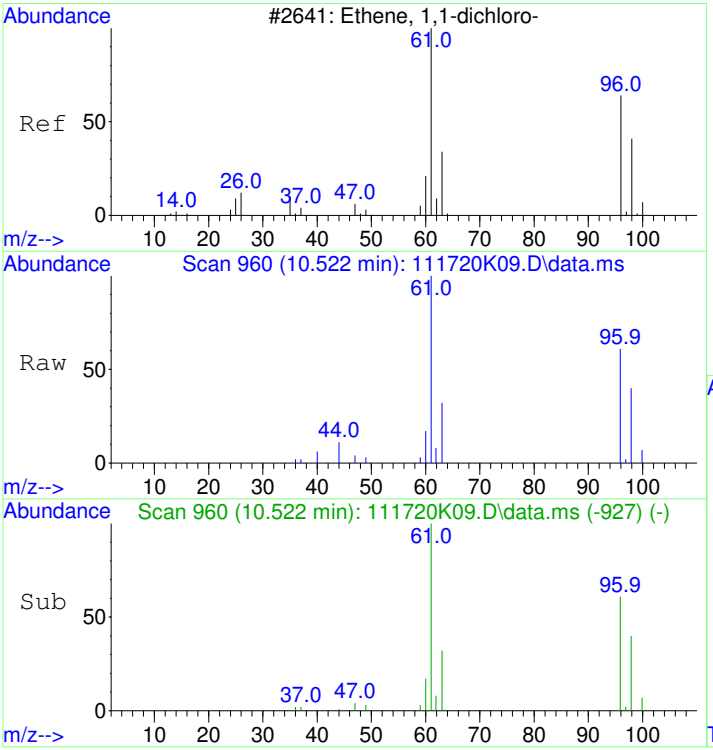


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.41 ppbv
RT: 10.388 min Scan# 938
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion:151 Resp: 10671

Ion	Ratio	Lower	Upper
151	100		
101	123.4	101.9	141.9
103	78.0	58.4	98.4

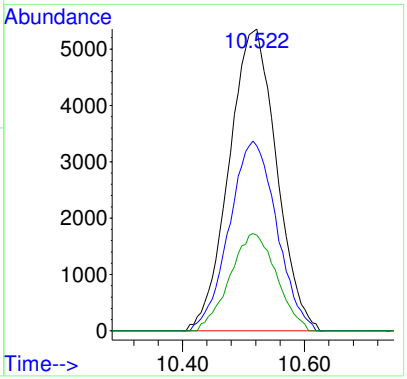


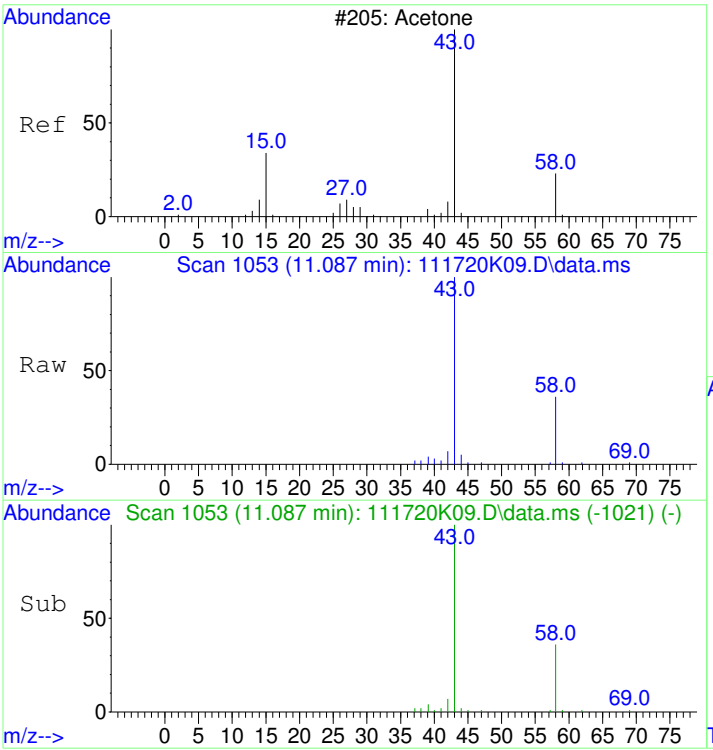


#13
1,1-Dichloroethene
Concen: 4.01 ppbv
RT: 10.522 min Scan# 960
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 61 Resp: 28915

Ion	Ratio	Lower	Upper
61	100		
96	62.8	43.5	83.5
63	31.7	12.1	52.1

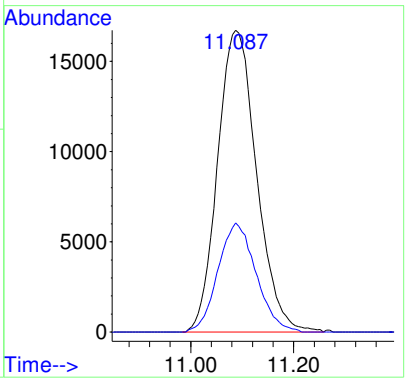


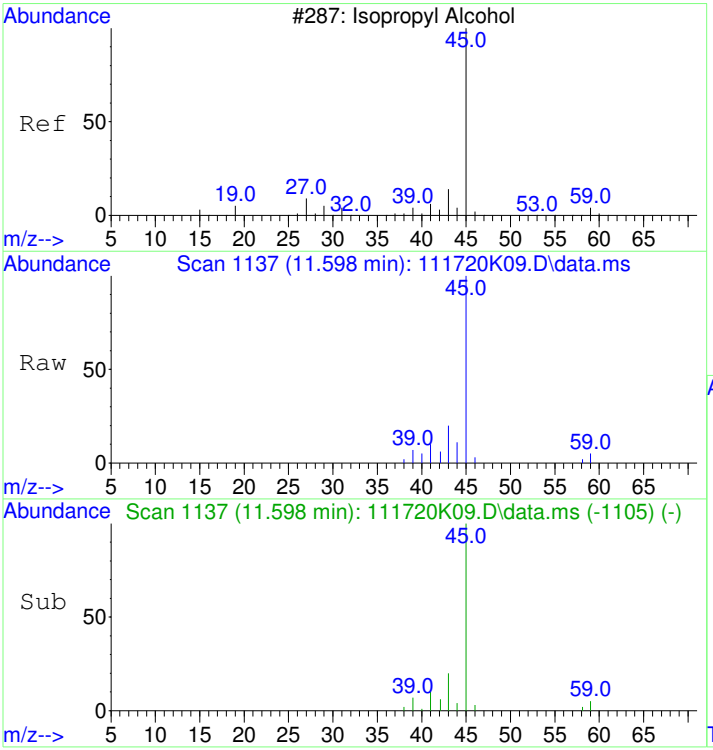


#14
Acetone
Concen: 11.93 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. -0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 43 Resp: 87995

Ion	Ratio	Lower	Upper
43	100		
58	35.3	15.9	55.9

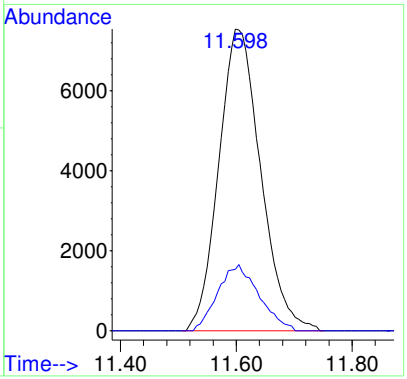


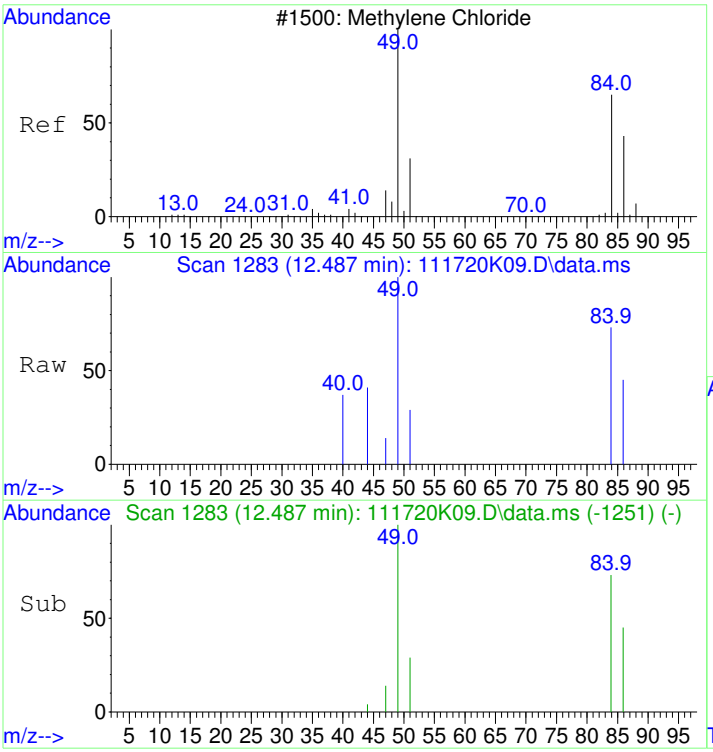


#16
2-Propanol
Concen: 4.80 ppbv
RT: 11.598 min Scan# 1137
Delta R.T. -0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 45 Resp: 37972

Ion	Ratio	Lower	Upper
45	100		
43	21.5	0.0	38.7

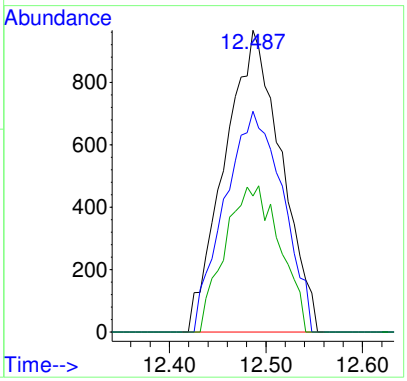


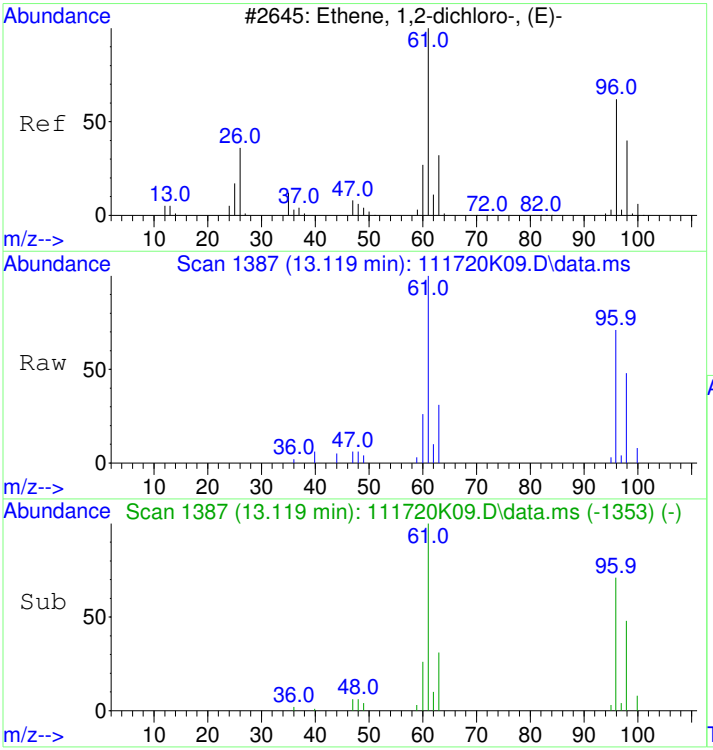


#18
Dichloromethane
Concen: 0.64 ppbv
RT: 12.487 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 49 Resp: 3930

Ion	Ratio	Lower	Upper
49	100		
84	75.3	57.4	97.4
86	47.1	29.7	69.7

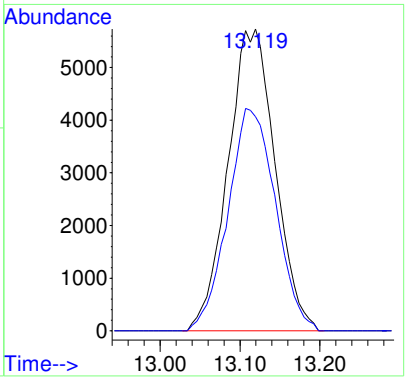


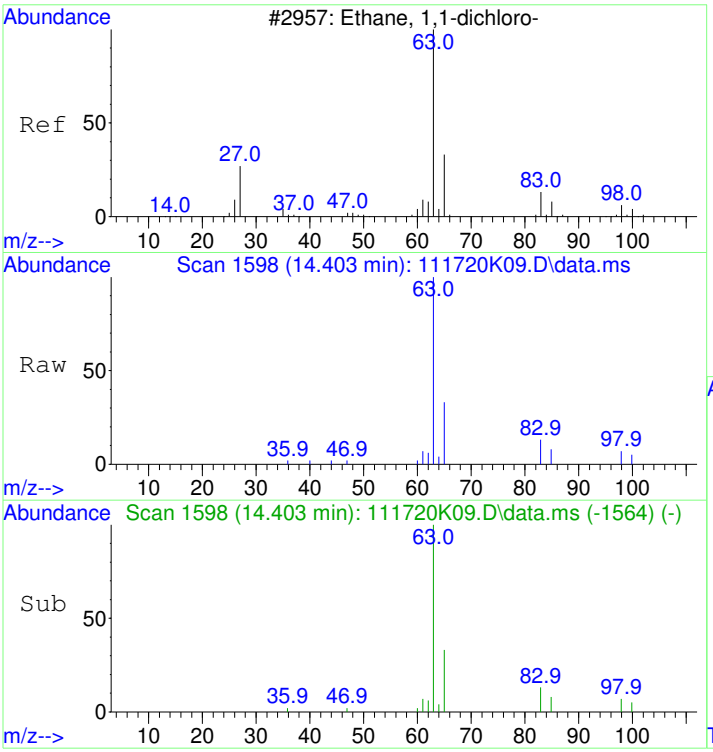


#20
trans-1,2-Dichloroethene
Concen: 3.35 ppbv
RT: 13.119 min Scan# 1387
Delta R.T. 0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 61 Resp: 23481

Ion	Ratio	Lower	Upper
61	100		
96	74.4	52.8	92.8

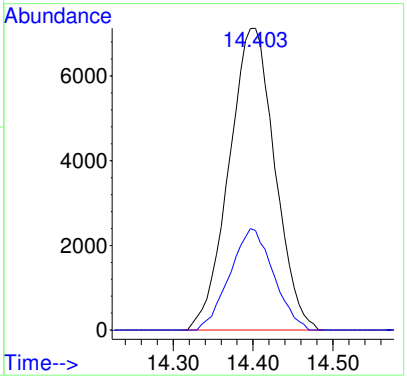


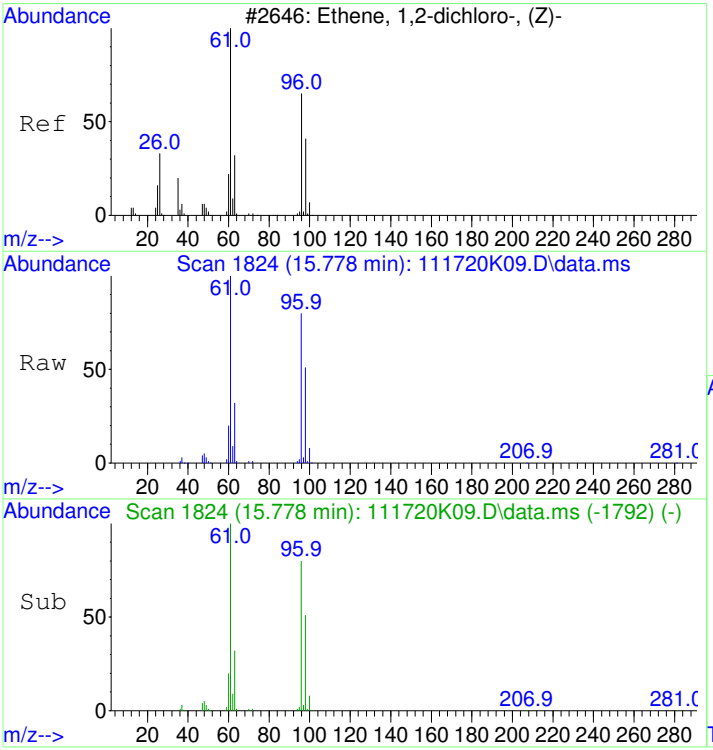


#22
1,1-Dichloroethane
Concen: 3.10 ppbv
RT: 14.403 min Scan# 1598
Delta R.T. 0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 63 Resp: 28409

Ion	Ratio	Lower	Upper
63	100		
65	32.0	11.9	51.9

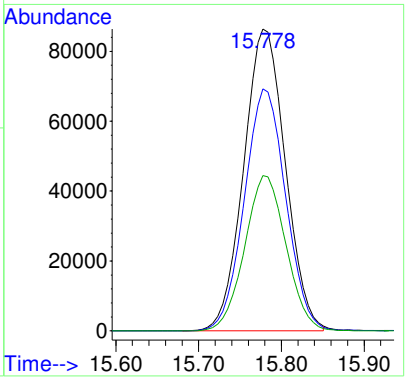




#24
cis-1,2-Dichloroethene
Concen: 45.80 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 61 Resp: 302661

Ion	Ratio	Lower	Upper
61	100		
96	79.6	57.6	97.6
98	0.0	0.0	20.0



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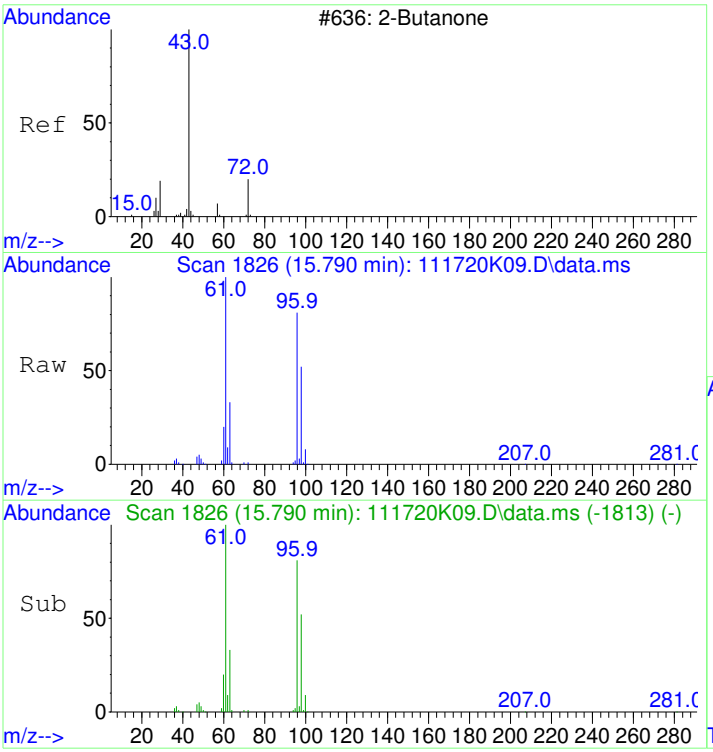
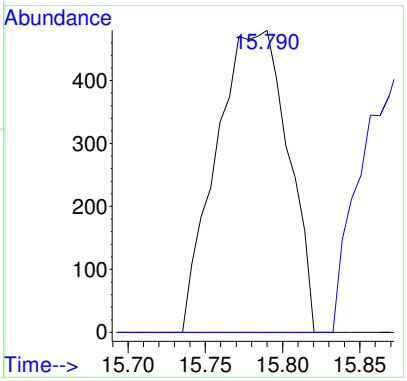


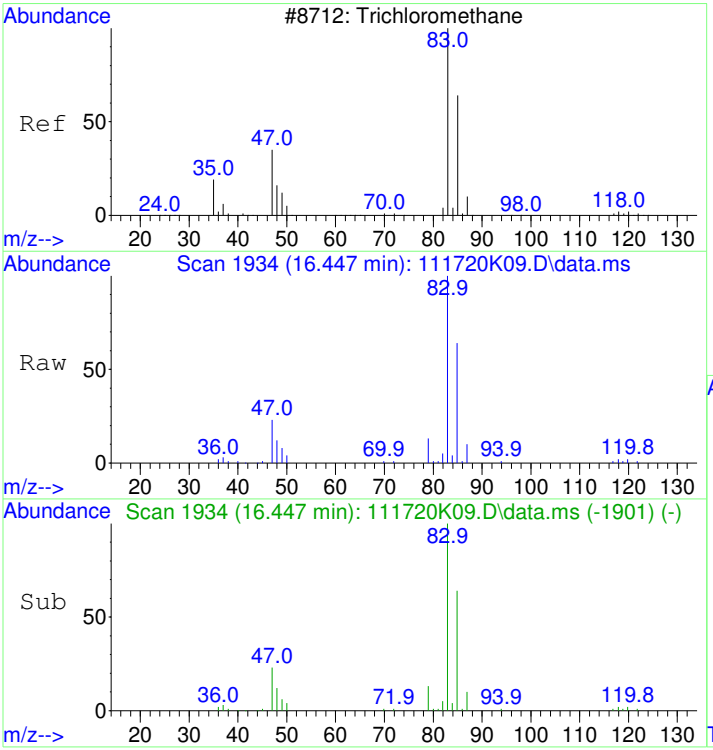
#25
2-Butanone (MEK)
Concen: 0.55 ppbv
RT: 15.790 min Scan# 1826
Delta R.T. -0.073 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 72 Resp: 1541

Ion	Ratio	Lower	Upper
72	100		
43	0.0	789.0	809.0#



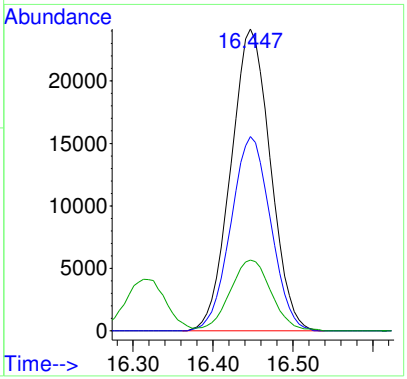
rt/spectra off

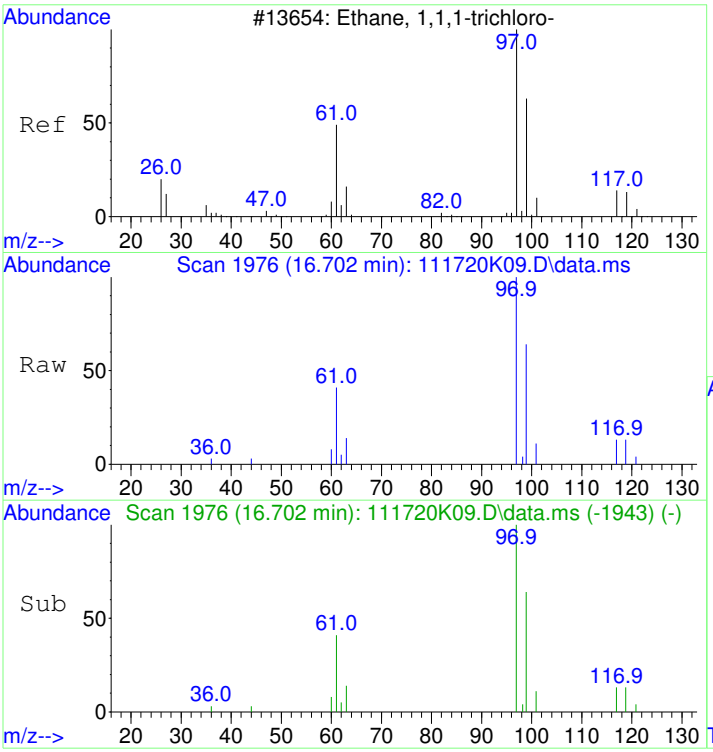


#28
Chloroform
Concen: 9.00 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 83 Resp: 83152

Ion	Ratio	Lower	Upper
83	100		
85	64.8	45.5	85.5
47	23.3	1.4	41.4

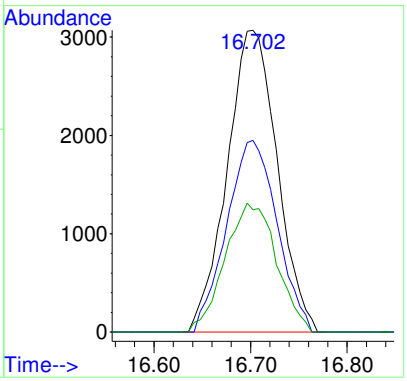


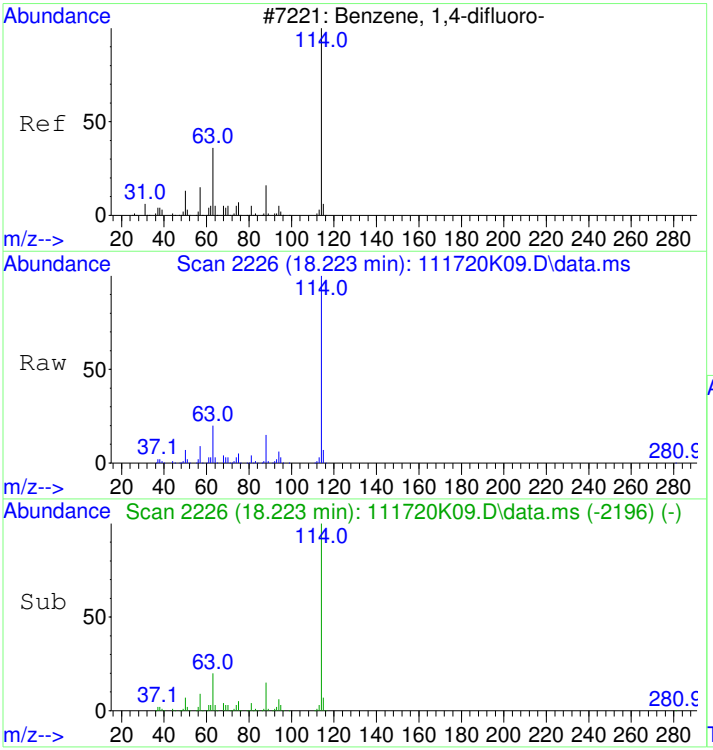


#30
1,1,1-Trichloroethane
Concen: 1.23 ppbv
RT: 16.702 min Scan# 1976
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 97 Resp: 11072

Ion	Ratio	Lower	Upper
97	100		
99	63.8	44.8	84.8
61	43.8	23.0	63.0

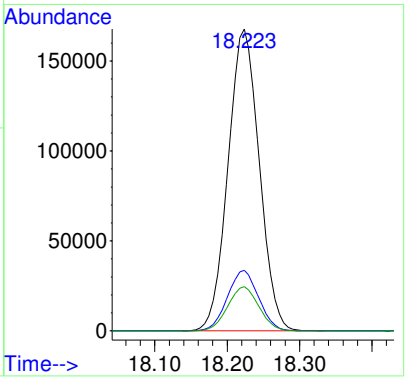


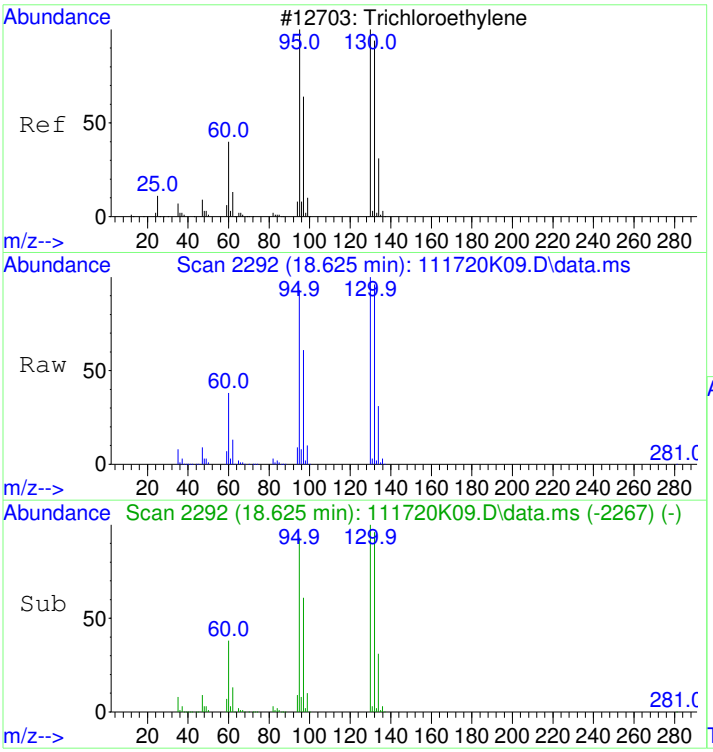


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion:114 Resp: 502734

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.6	0.0	34.7

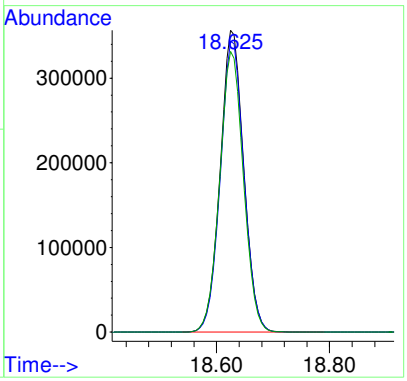




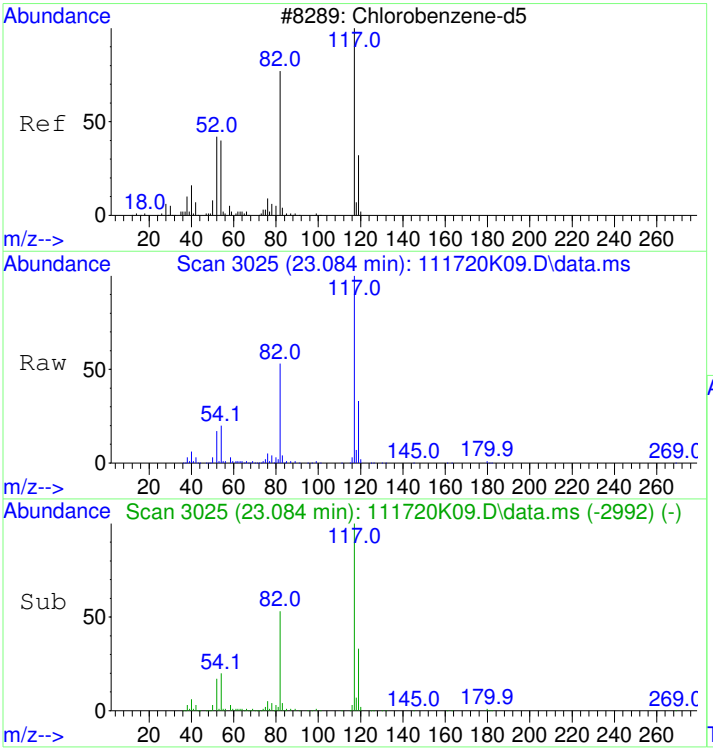
#37
Trichloroethene
Concen: 164.21 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion:130 Resp: 1030161

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.3	116.3
95	93.9	74.0	114.0



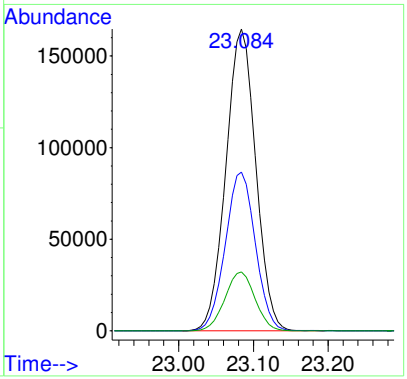
OC

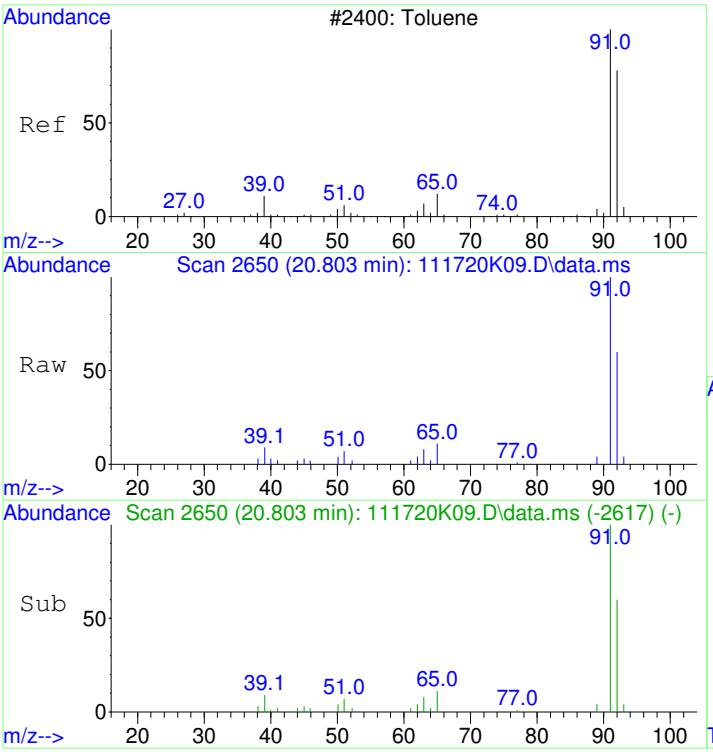


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion:117 Resp: 456867

Ion	Ratio	Lower	Upper
117	100		
82	53.0	32.3	72.3
54	19.7	0.0	38.6

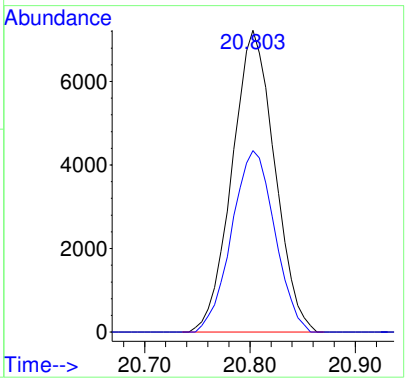


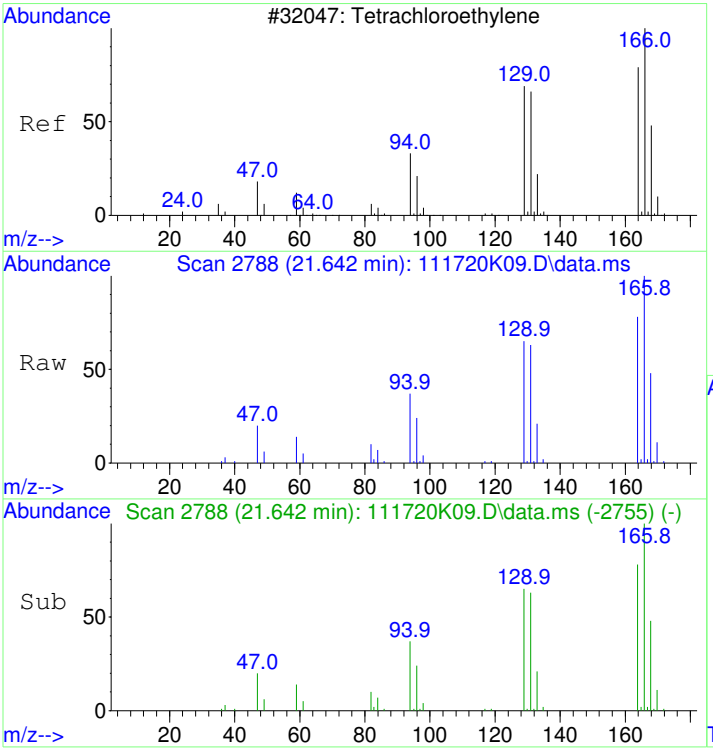


#44
Toluene
Concen: 1.12 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 91 Resp: 20280

Ion	Ratio	Lower	Upper
91	100		
92	60.8	40.8	80.8

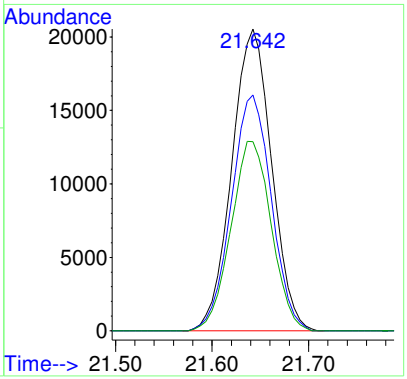


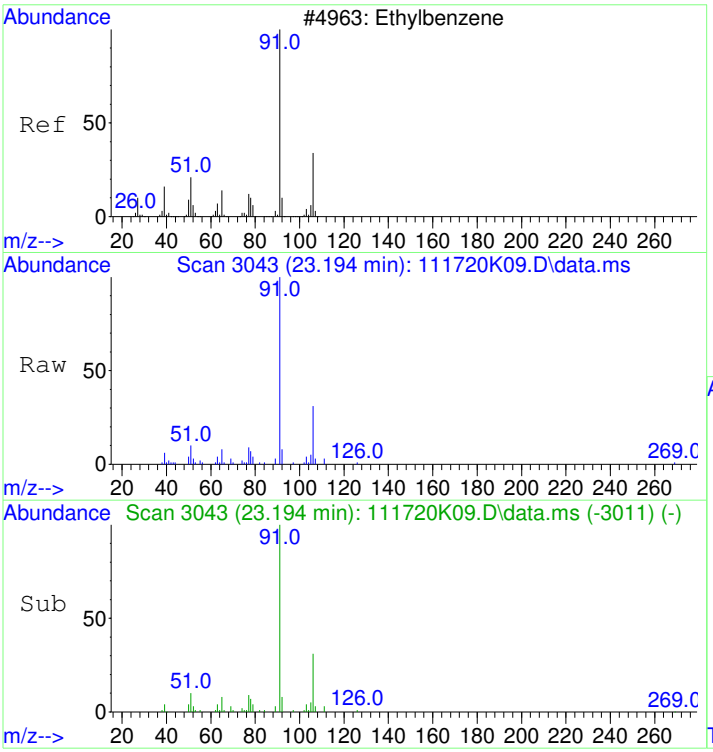


#47
Tetrachloroethene
Concen: 6.69 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion:166 Resp: 58937

Ion	Ratio	Lower	Upper
166	100		
164	78.4	57.8	97.8
131	63.4	44.1	84.1

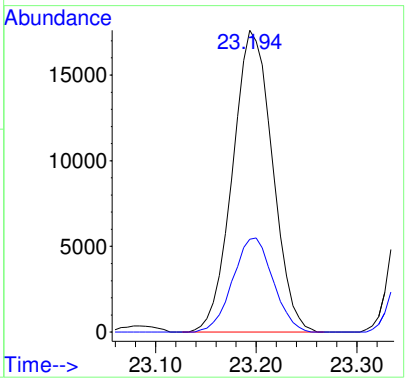


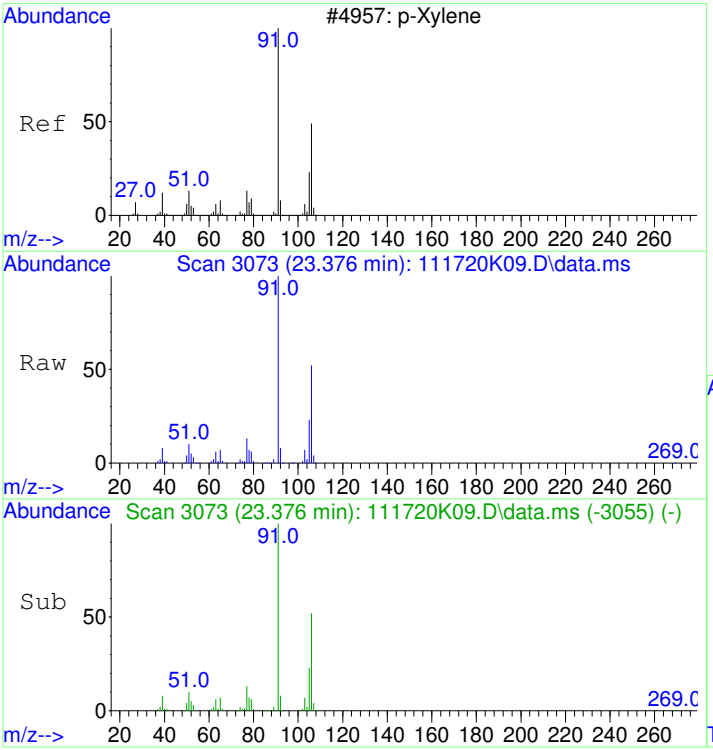


#52
Ethylbenzene
Concen: 2.03 ppbv
RT: 23.194 min Scan# 3043
Delta R.T. -0.006 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 91 Resp: 48396

Ion	Ratio	Lower	Upper
91	100		
106	31.4	11.8	51.8

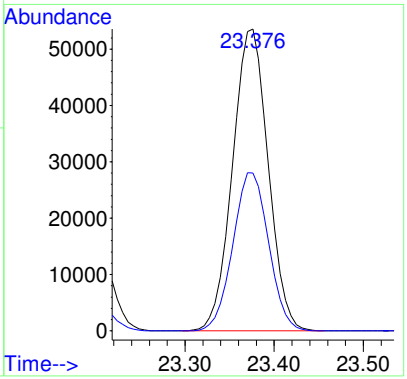


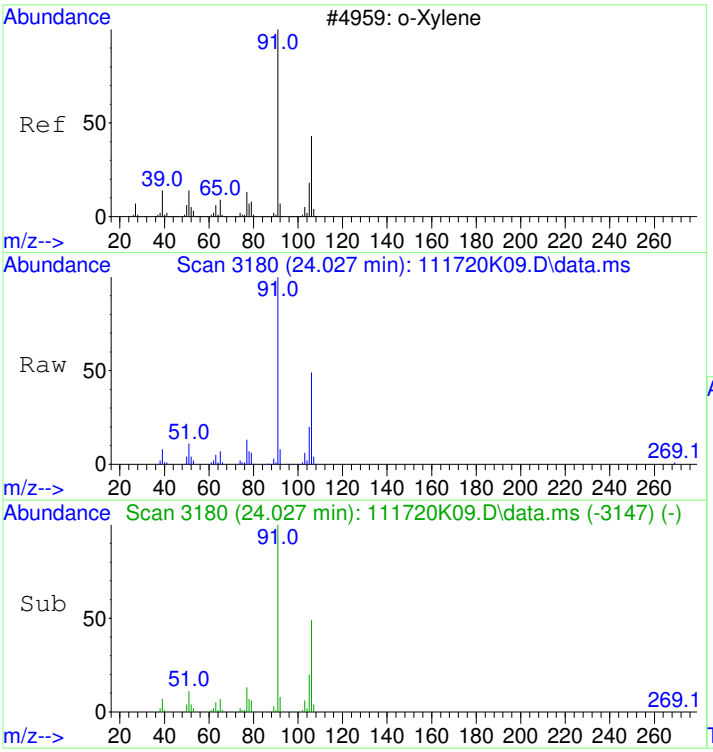


#53
m&p-Xylene
Concen: 8.26 ppbv
RT: 23.376 min Scan# 3073
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 91 Resp: 148275

Ion	Ratio	Lower	Upper
91	100		
106	52.5	33.1	73.1

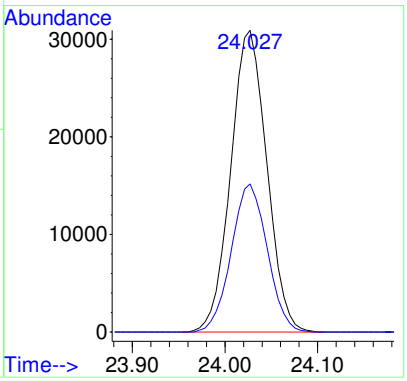




#54
o-Xylene
Concen: 4.51 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. -0.000 min
Lab File: 111720K09.D
Acq: 17 Nov 2020 5:54 pm

Tgt Ion: 91 Resp: 83516

Ion	Ratio	Lower	Upper
91	100		
106	49.0	29.9	69.9



2011024-07

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K10.D
InstName : HP5973K
Acq On : 17 Nov 2020 6:47 pm
Operator : EM
Sample : 2011024-07
Misc : 200ml FG-055-3ft-G
ALS Vial : 25 Sample Multiplier: 1.93

REPORT

Quant Time: Nov 18 09:04:23 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

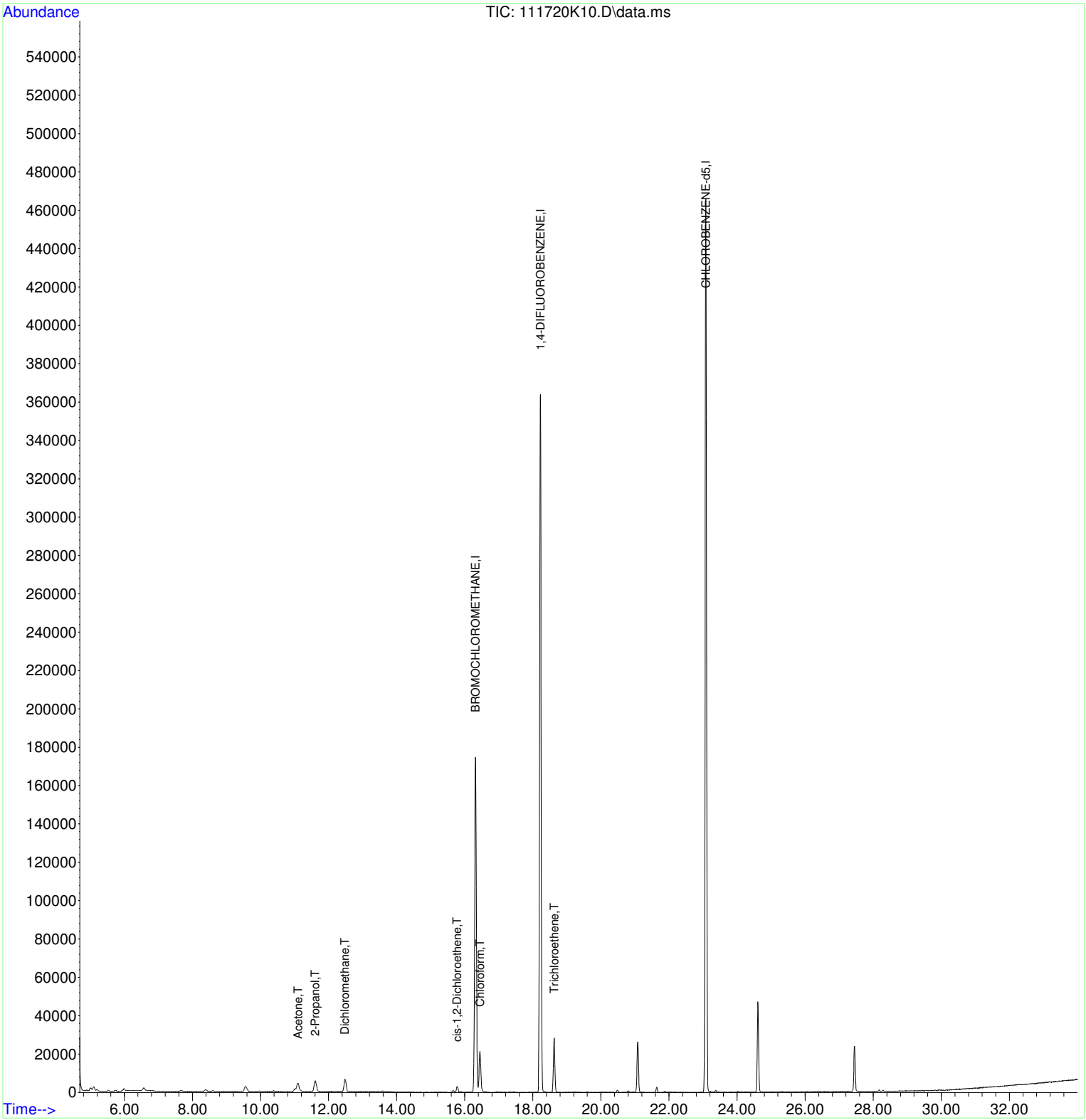
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	160214	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	500211	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	445738	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.099	43	14997	2.09	ppbv		100
16) 2-Propanol	11.604	45	18002	2.34	ppbv		89
18) Dichloromethane	12.474	49	9974	1.67	ppbv		99
24) cis-1,2-Dichloroethene	15.772	61	3679	0.57	ppbv	#	95
28) Chloroform	16.447	83	24481	2.73	ppbv		97
37) Trichloroethene	18.625	130	16869	2.70	ppbv		100

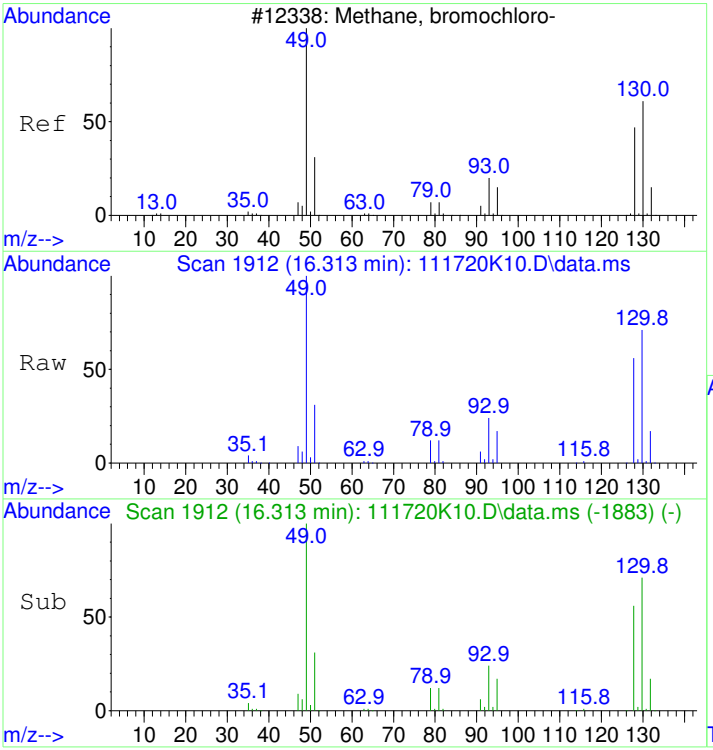
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 9:11 am, Nov 18, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K10.D
InstName : HP5973K
Acq On : 17 Nov 2020 6:47 pm
Operator : EM
Sample : 2011024-07
Misc : 200ml FG-055-3ft-G
ALS Vial : 25 Sample Multiplier: 1.93

Quant Time: Nov 18 09:04:23 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

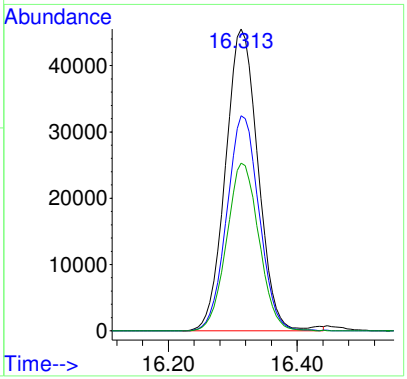


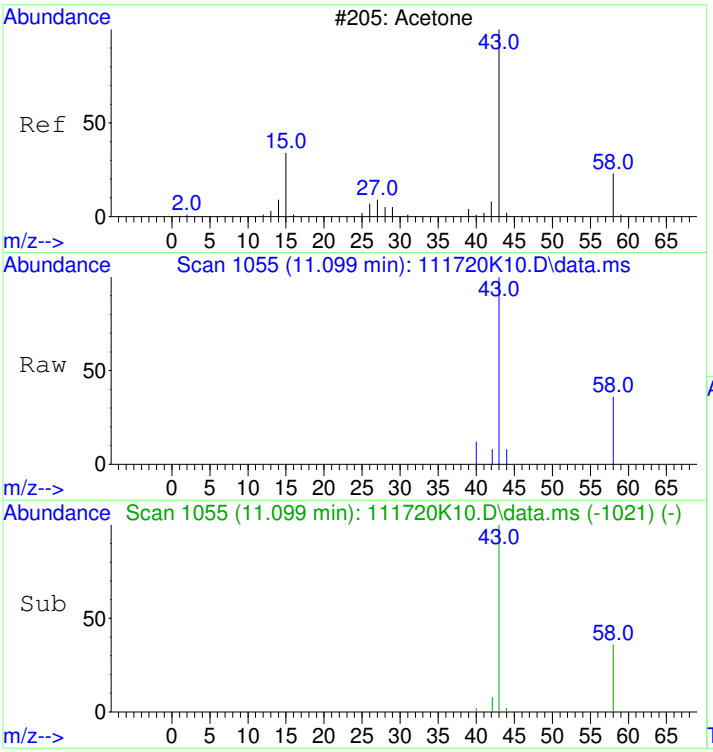


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion: 49 Resp: 160214

Ion	Ratio	Lower	Upper
49	100		
130	70.7	51.9	91.9
128	54.6	35.7	75.7

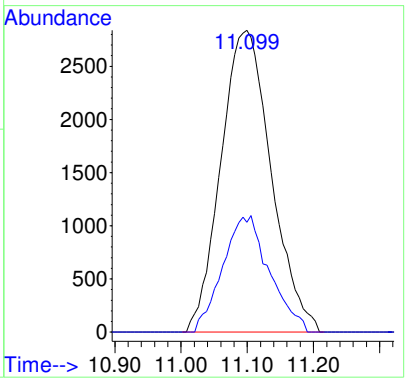


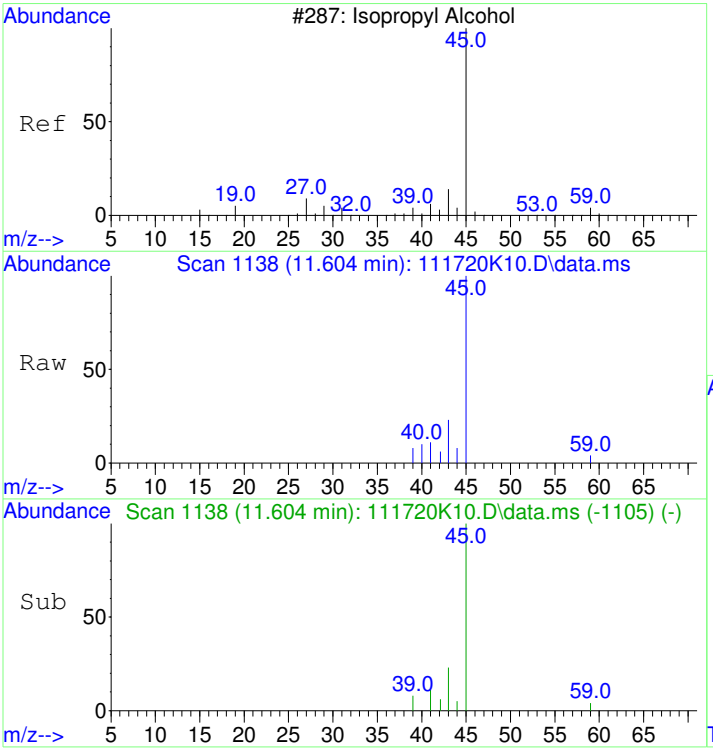


#14
Acetone
Concen: 2.09 ppbv
RT: 11.099 min Scan# 1055
Delta R.T. 0.006 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion: 43 Resp: 14997

Ion	Ratio	Lower	Upper
43	100		
58	35.7	15.9	55.9

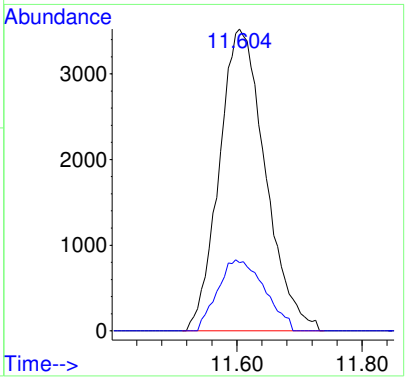


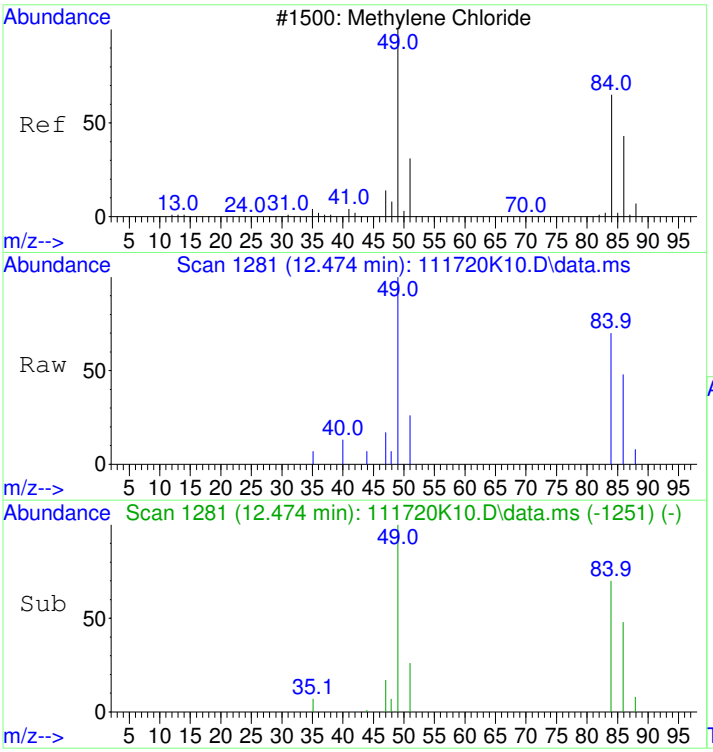


#16
2-Propanol
Concen: 2.34 ppbv
RT: 11.604 min Scan# 1138
Delta R.T. -0.000 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion: 45 Resp: 18002

Ion	Ratio	Lower	Upper
45	100		
43	23.8	0.0	38.7

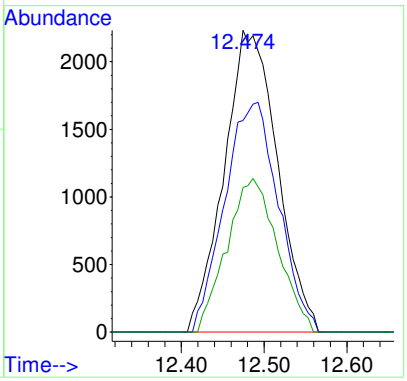


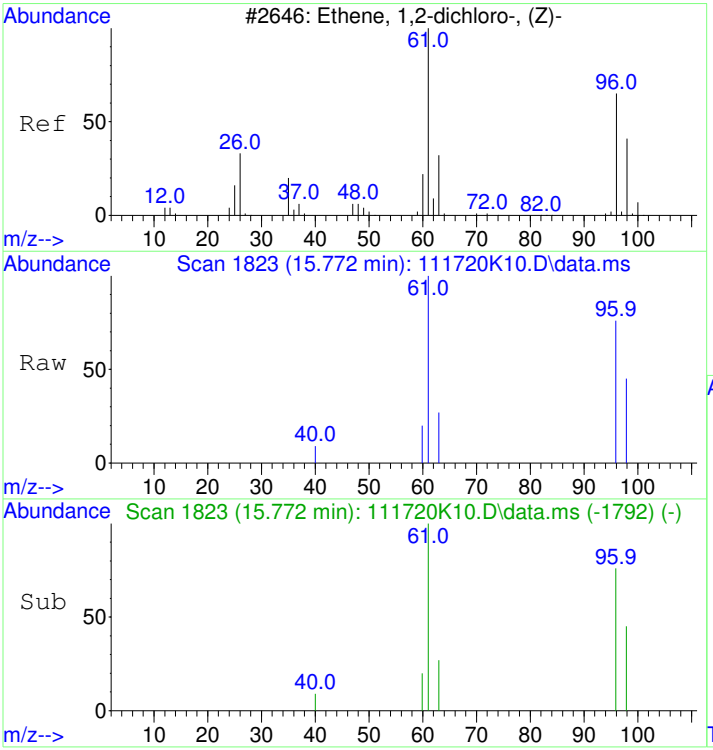


#18
Dichloromethane
Concen: 1.67 ppbv
RT: 12.474 min Scan# 1281
Delta R.T. -0.018 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion: 49 Resp: 9974

Ion	Ratio	Lower	Upper
49	100		
84	77.1	57.4	97.4
86	48.5	29.7	69.7

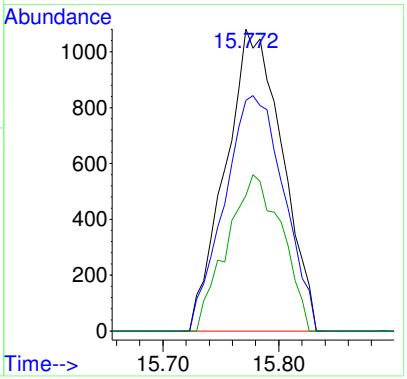


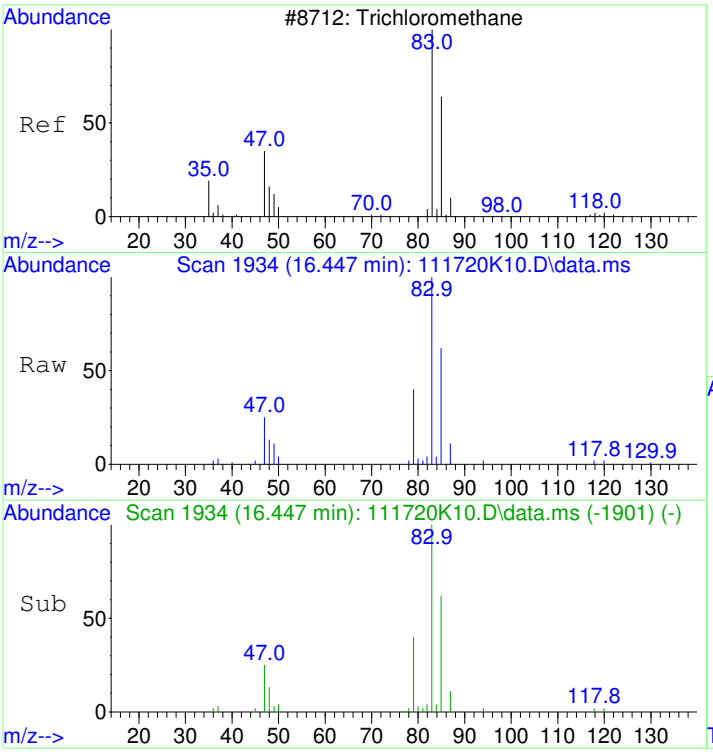


#24
cis-1,2-Dichloroethene
Concen: 0.57 ppbv
RT: 15.772 min Scan# 1823
Delta R.T. -0.012 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion: 61 Resp: 3679

Ion	Ratio	Lower	Upper
61	100		
96	81.8	57.6	97.6
98	0.0	0.0	20.0

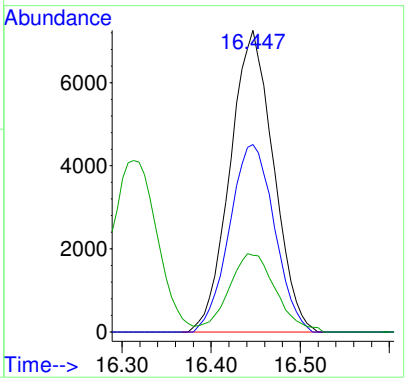


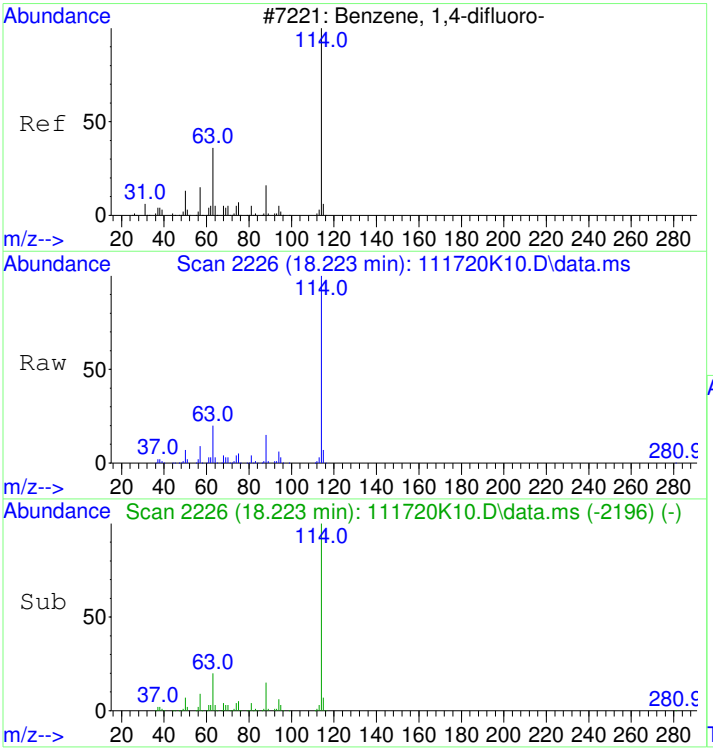


#28
Chloroform
Concen: 2.73 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion: 83 Resp: 24481

Ion	Ratio	Lower	Upper
83	100		
85	64.5	45.5	85.5
47	25.8	1.4	41.4

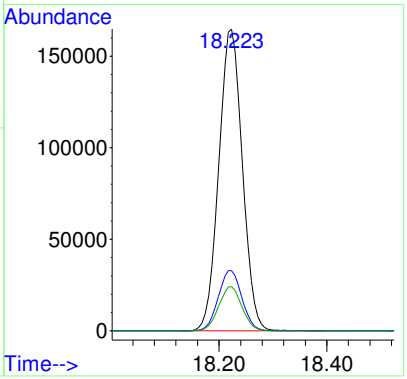


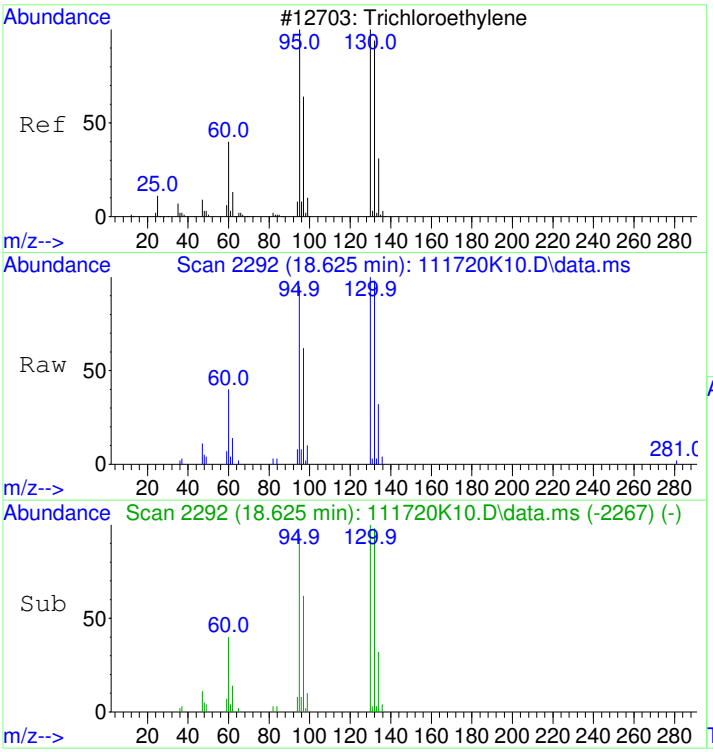


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion:114 Resp: 500211

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.4	0.0	34.7

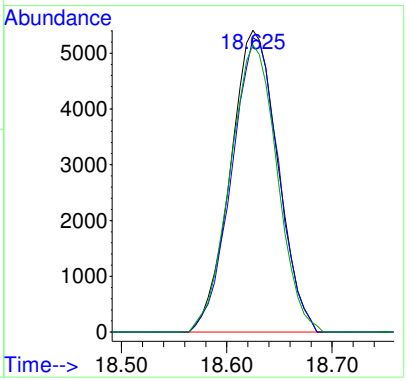


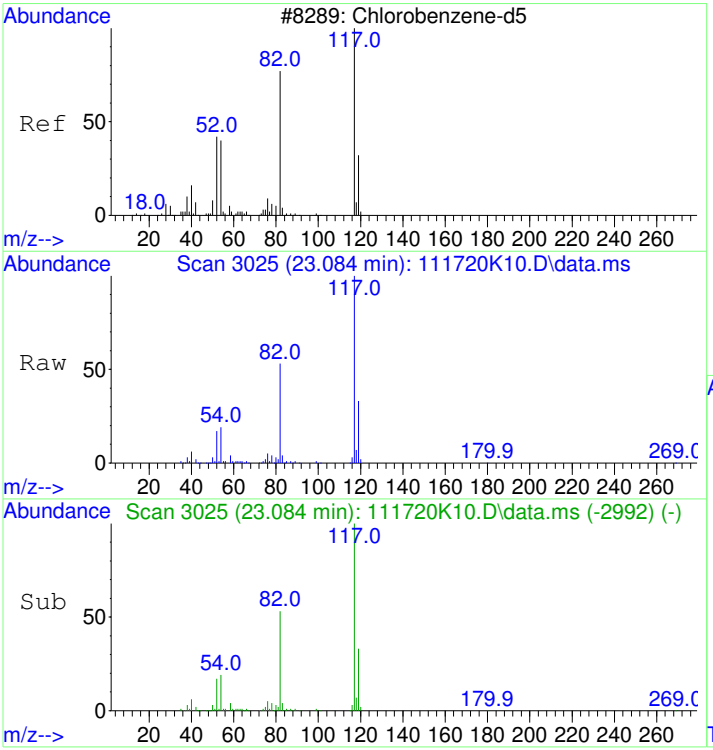


#37
Trichloroethene
Concen: 2.70 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion:130 Resp: 16869

Ion	Ratio	Lower	Upper
130	100		
132	96.2	76.3	116.3
95	94.8	74.0	114.0

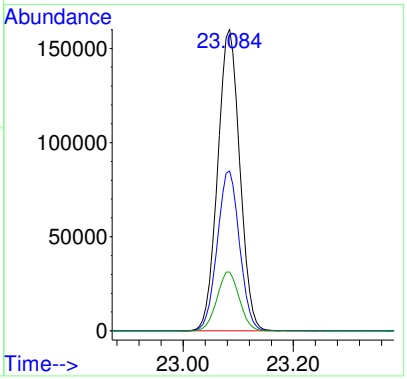




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K10.D
Acq: 17 Nov 2020 6:47 pm

Tgt Ion:117 Resp: 445738

Ion	Ratio	Lower	Upper
117	100		
82	53.3	32.3	72.3
54	19.7	0.0	38.6



2011024-08

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K11.D
InstName : HP5973K
Acq On : 17 Nov 2020 7:39 pm
Operator : EM
Sample : 2011024-08
Misc : 200ml FG-021-3ft-G
ALS Vial : 26 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:27 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.313	49	157406	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	489991	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	441560	19.60	ppbv	0.00
Target Compounds						Qvalue
2) Propene	5.004	41	3643	0.74	ppbv #	74
5) Chloromethane	5.722	50	2167	0.45	ppbv	82
14) Acetone	11.093	43	16089	2.29	ppbv	94
18) Dichloromethane	12.493	49	8859	1.51	ppbv	99
28) Chloroform	16.447	83	123542	14.02	ppbv	98
37) Trichloroethene	18.625	130	5998	0.98	ppbv	98
44) Toluene	20.803	91	126155	7.19	ppbv	99

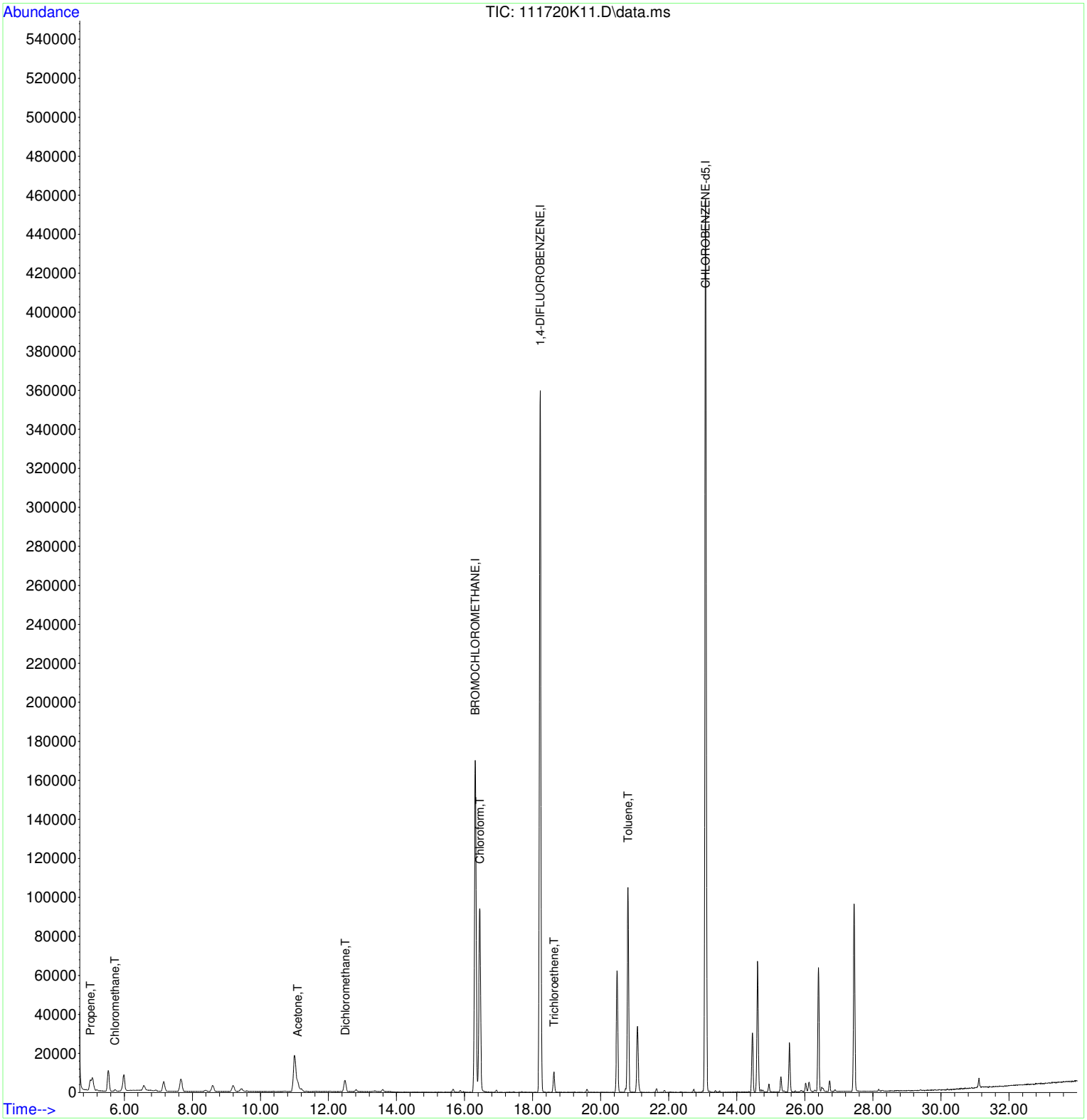
(#) = qualifier out of range (m) = manual integration (+) = signals summed

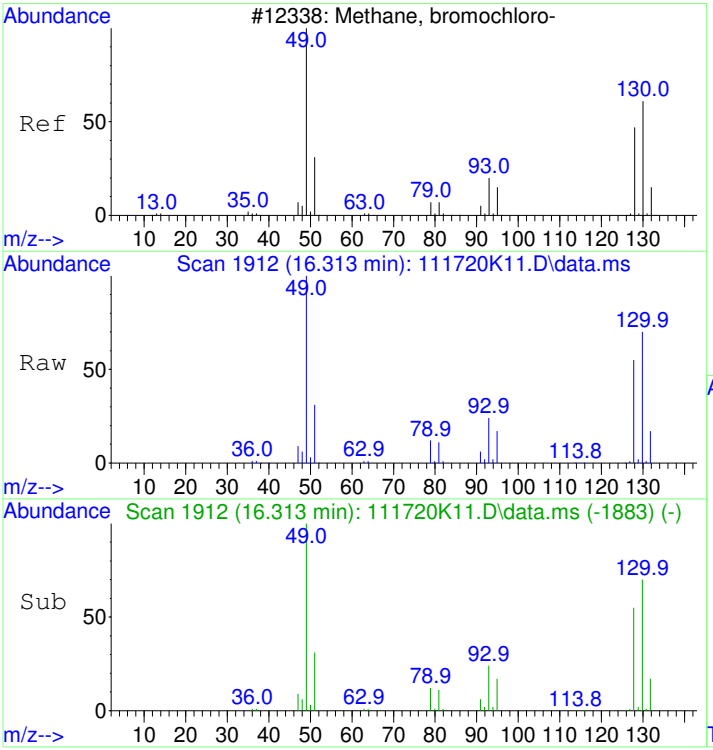
REVIEWED
By EM at 9:12 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K11.D
InstName : HP5973K
Acq On : 17 Nov 2020 7:39 pm
Operator : EM
Sample : 2011024-08
Misc : 200ml FG-021-3ft-G
ALS Vial : 26 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:27 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

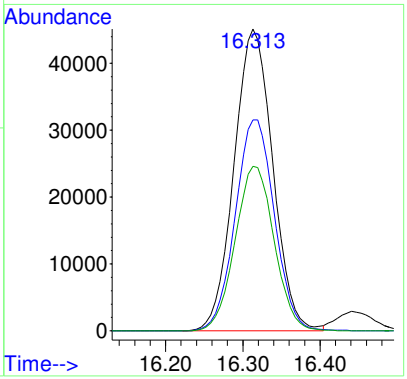


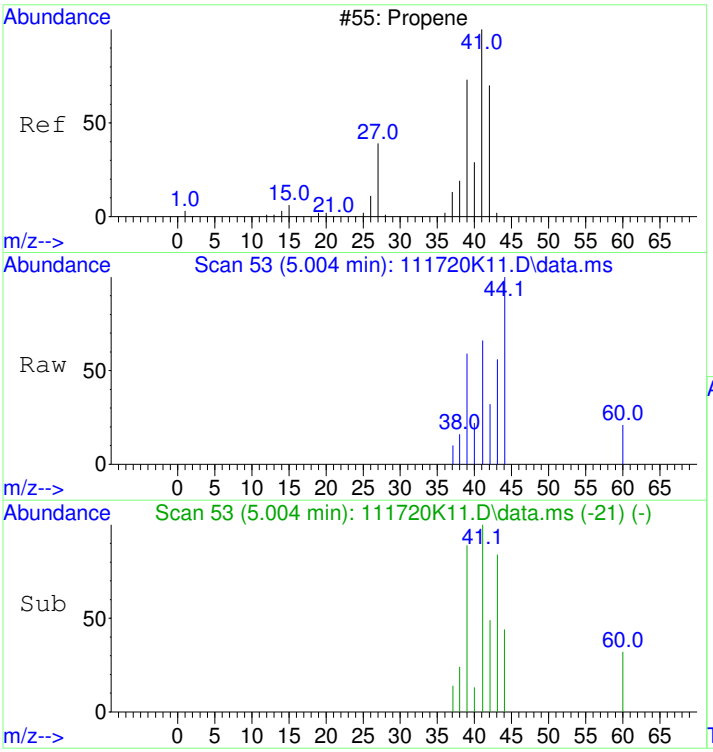


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 49 Resp: 157406

Ion	Ratio	Lower	Upper
49	100		
130	70.7	51.9	91.9
128	54.5	35.7	75.7

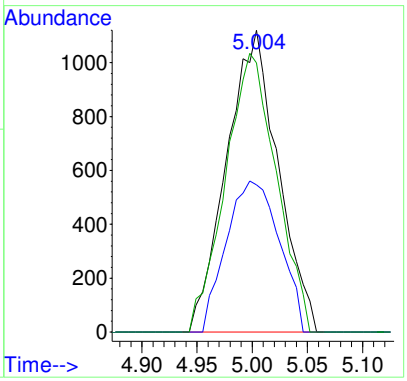


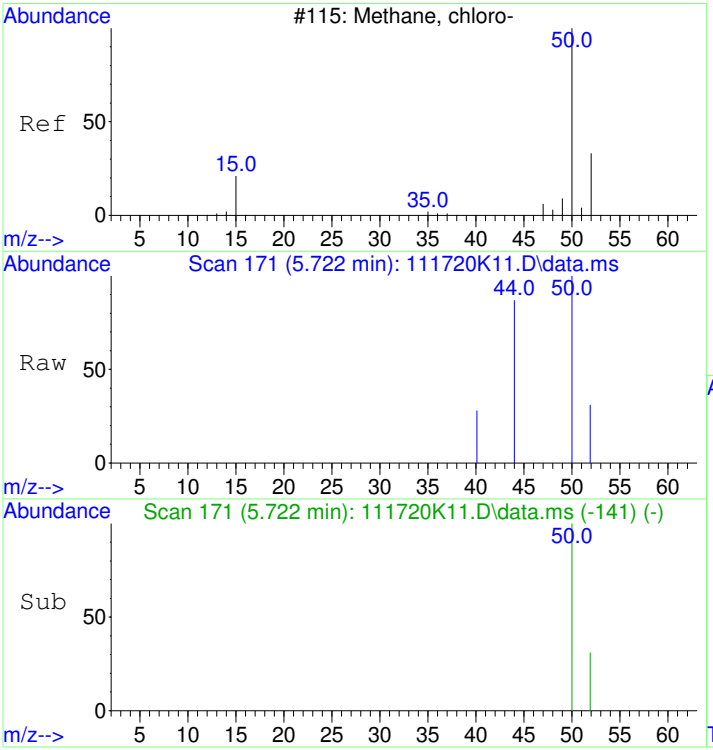


#2
Propene
Concen: 0.74 ppbv
RT: 5.004 min Scan# 53
Delta R.T. -0.006 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 41 Resp: 3643

Ion	Ratio	Lower	Upper
41	100		
42	51.7	47.3	87.3
39	91.5	46.1	86.1#

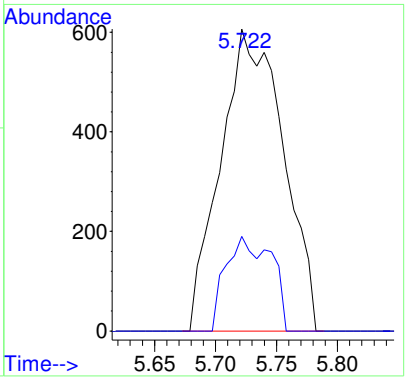


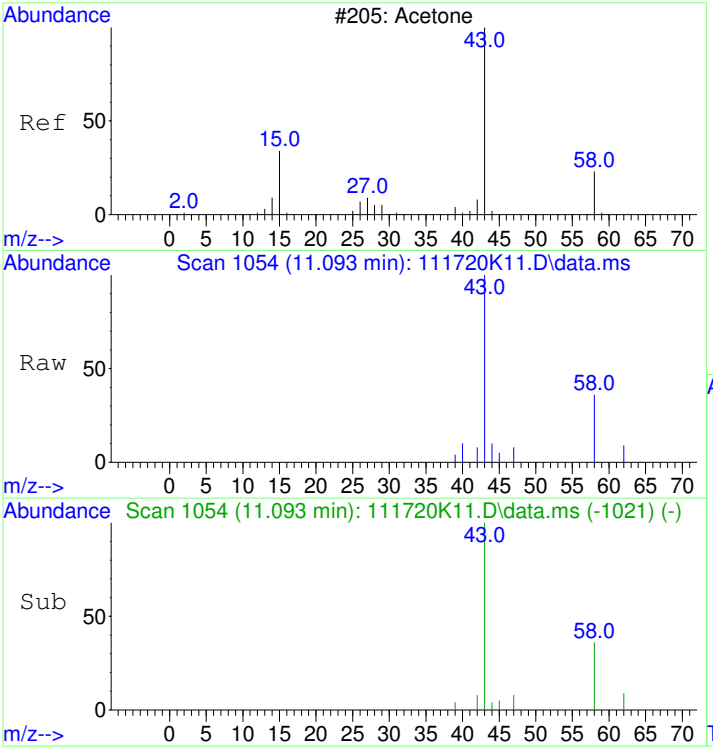


#5
Chloromethane
Concen: 0.45 ppbv
RT: 5.722 min Scan# 171
Delta R.T. -0.018 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 50 Resp: 2167

Ion	Ratio	Lower	Upper
50	100		
52	22.7	12.8	52.8

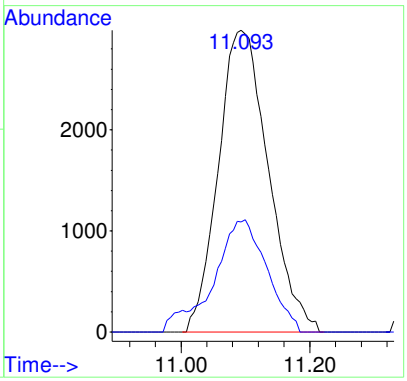


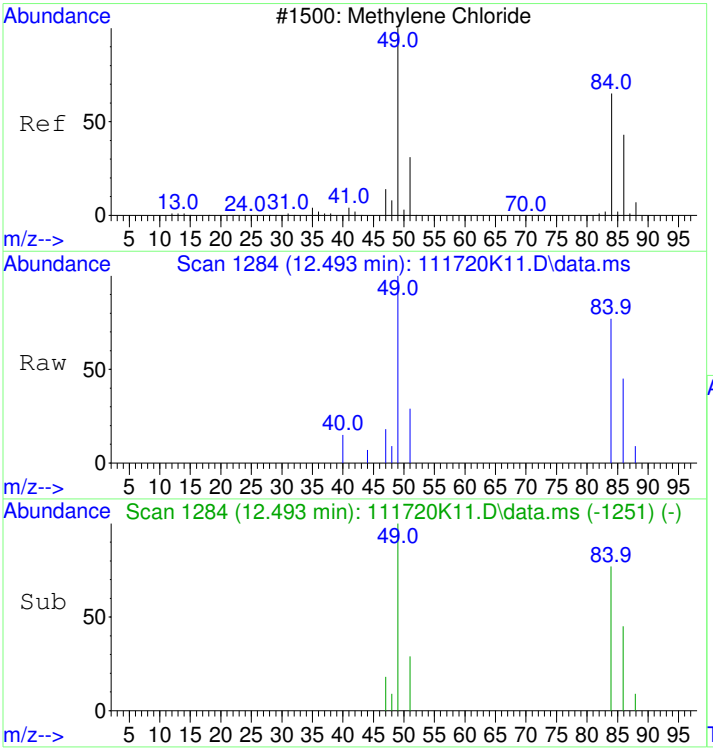


#14
Acetone
Concen: 2.29 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 43 Resp: 16089

Ion	Ratio	Lower	Upper
43	100		
58	39.5	15.9	55.9

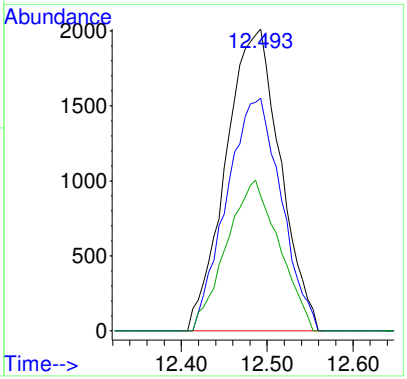


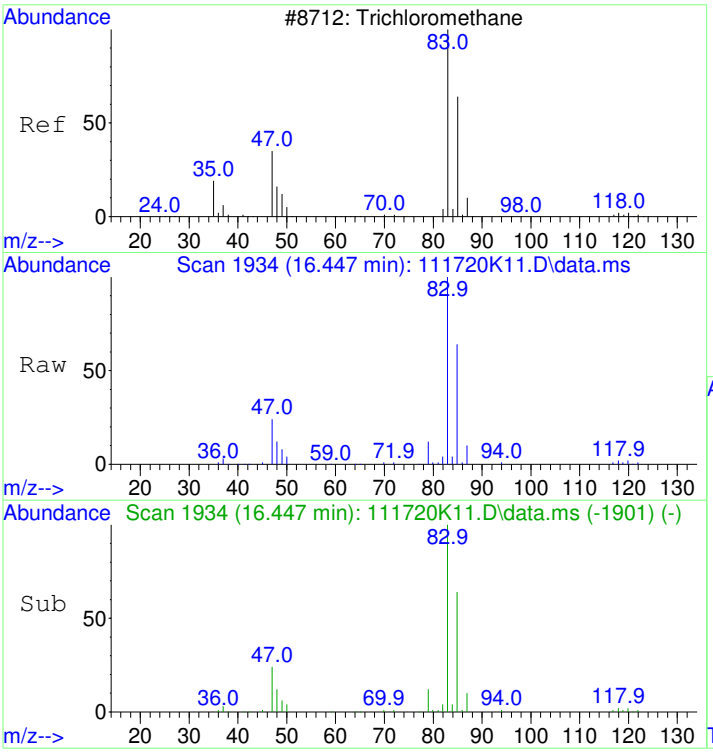


#18
Dichloromethane
Concen: 1.51 ppbv
RT: 12.493 min Scan# 1284
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 49 Resp: 8859

Ion	Ratio	Lower	Upper
49	100		
84	77.4	57.4	97.4
86	48.4	29.7	69.7

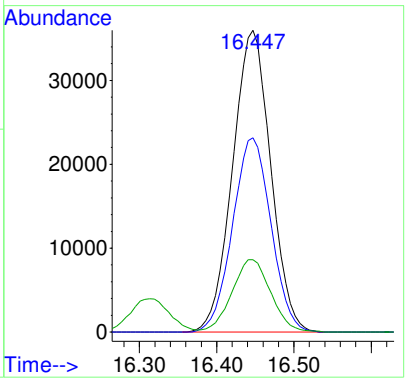


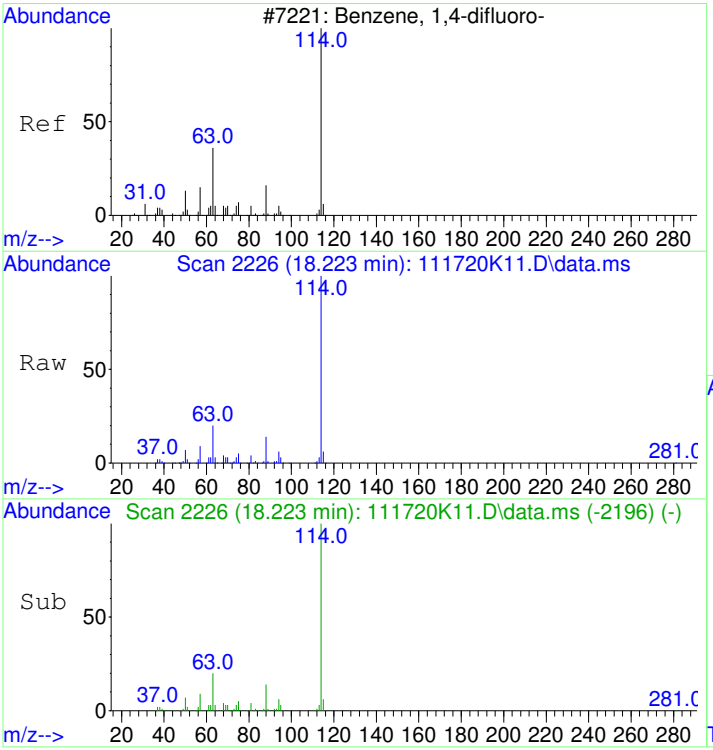


#28
Chloroform
Concen: 14.02 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 83 Resp: 123542

Ion	Ratio	Lower	Upper
83	100		
85	64.9	45.5	85.5
47	23.4	1.4	41.4

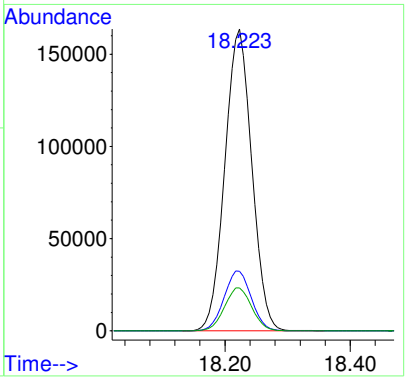


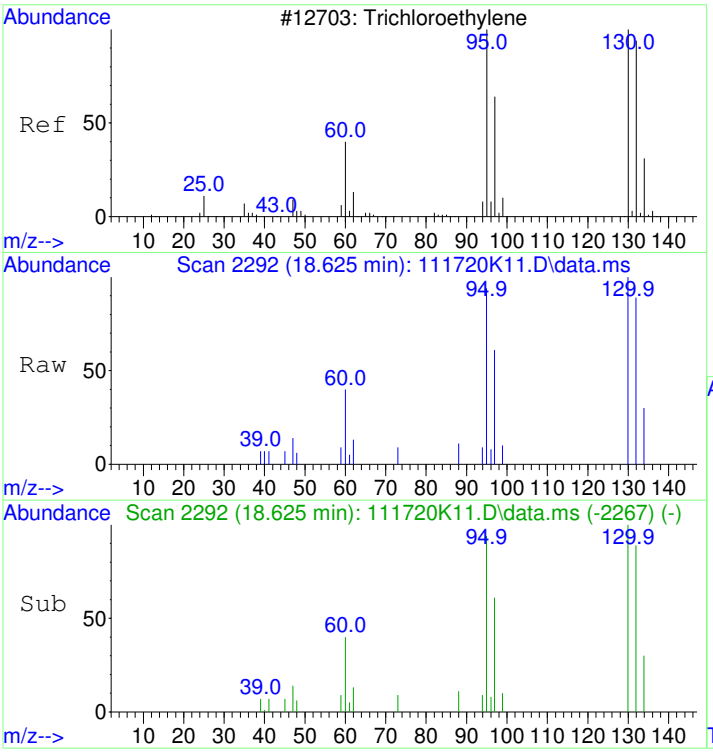


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion:114 Resp: 489991

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.4	0.0	34.7

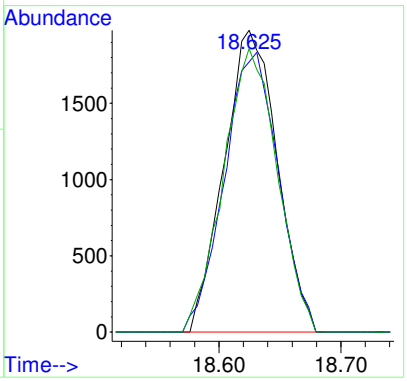


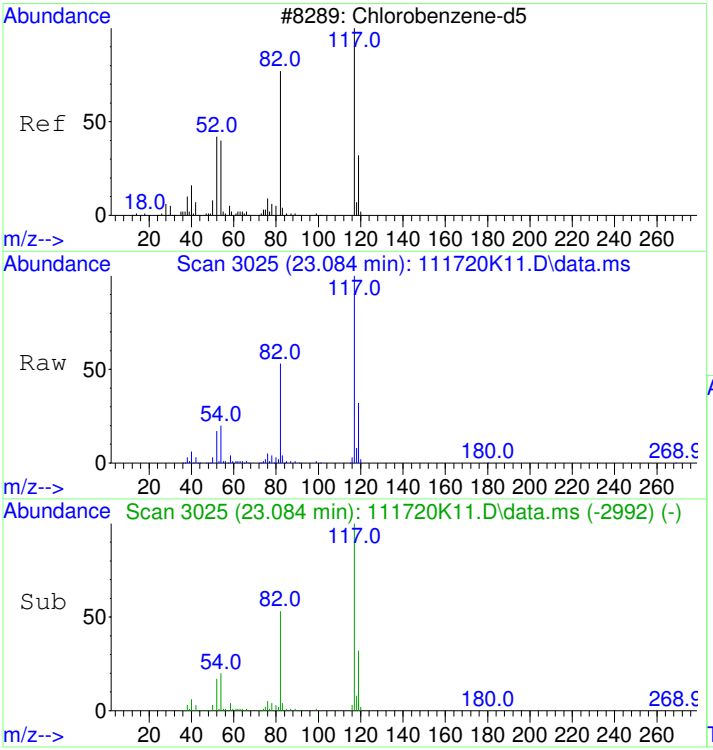


#37
Trichloroethene
Concen: 0.98 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion:130 Resp: 5998

Ion	Ratio	Lower	Upper
130	100		
132	94.4	76.3	116.3
95	95.2	74.0	114.0

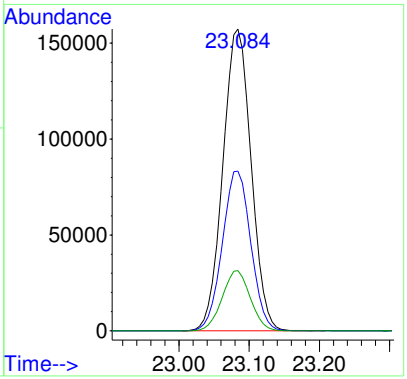


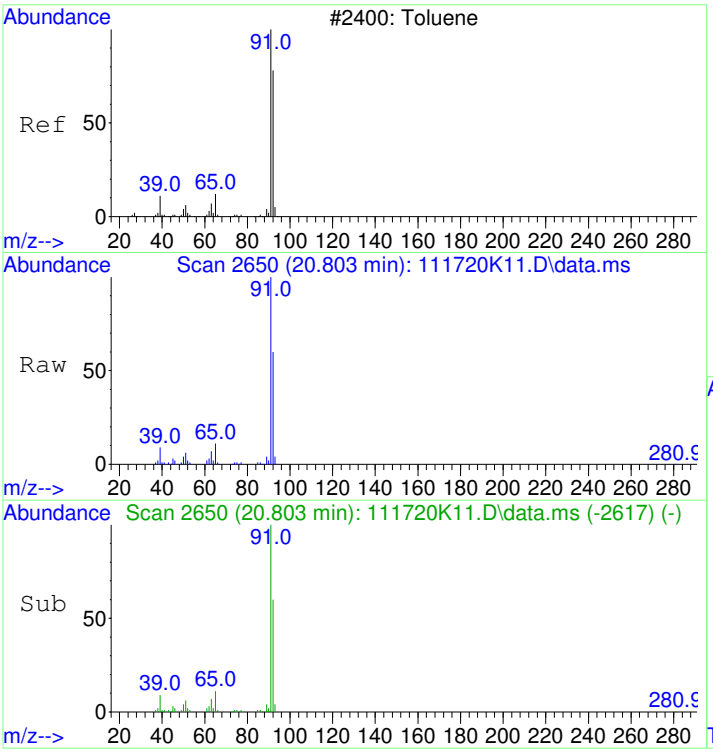


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion:117 Resp: 441560

Ion	Ratio	Lower	Upper
117	100		
82	53.2	32.3	72.3
54	19.9	0.0	38.6

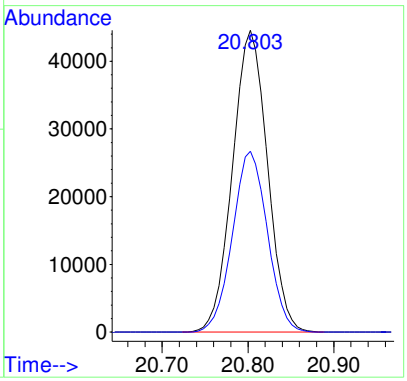




#44
Toluene
Concen: 7.19 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 111720K11.D
Acq: 17 Nov 2020 7:39 pm

Tgt Ion: 91 Resp: 126155

Ion	Ratio	Lower	Upper
91	100		
92	59.8	40.8	80.8



S20K070-IBL1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K12.D
InstName : HP5973K
Acq On : 17 Nov 2020 8:32 pm
Operator : EM
Sample : S20K070-IBL1
Misc : 200ml IB
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 09:04:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	157128	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	491361	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	434259	19.60 ppbv	0.00

Target Compounds Qvalue

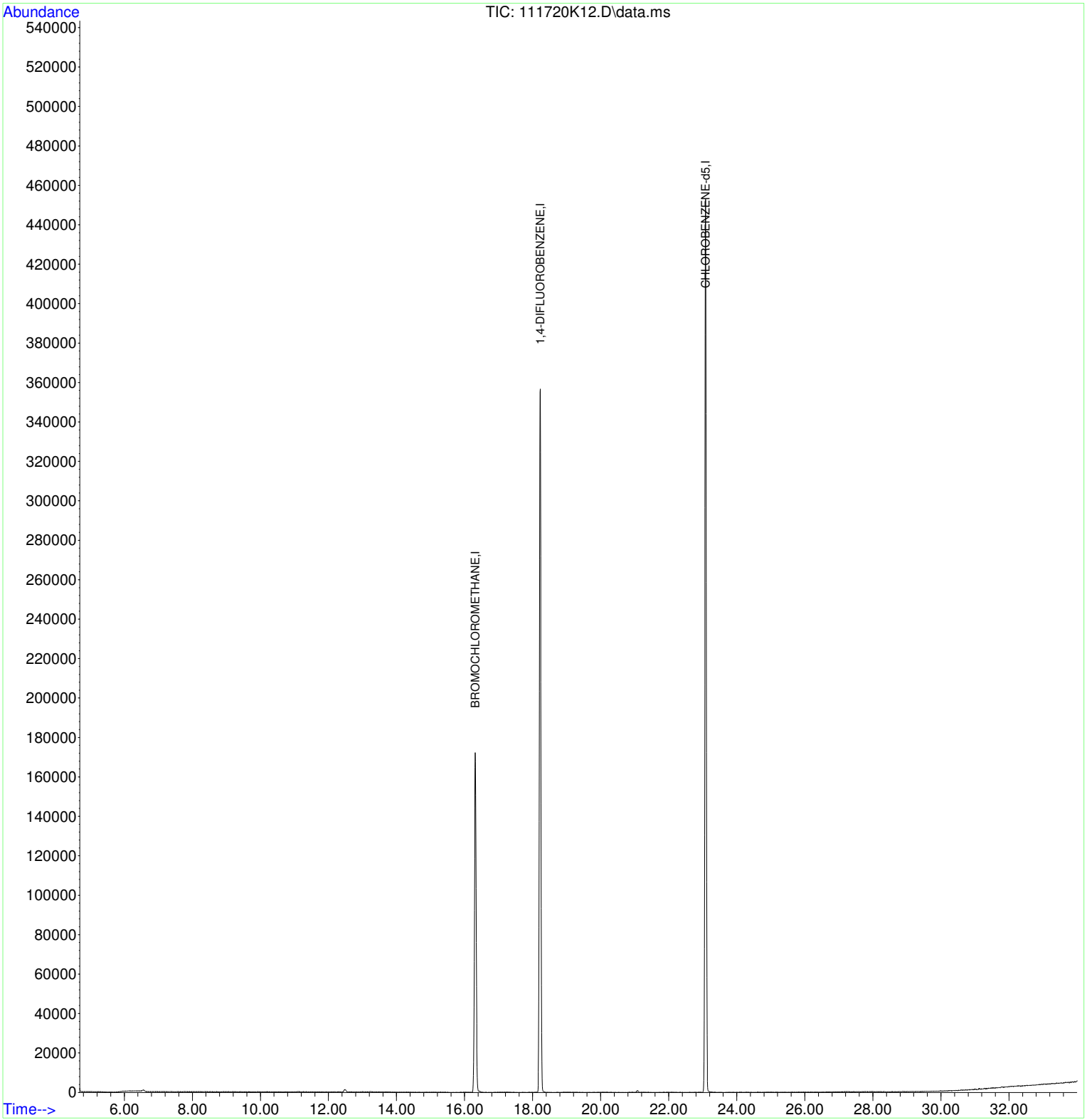
(#) = qualifier out of range (m) = manual integration (+) = signals summed

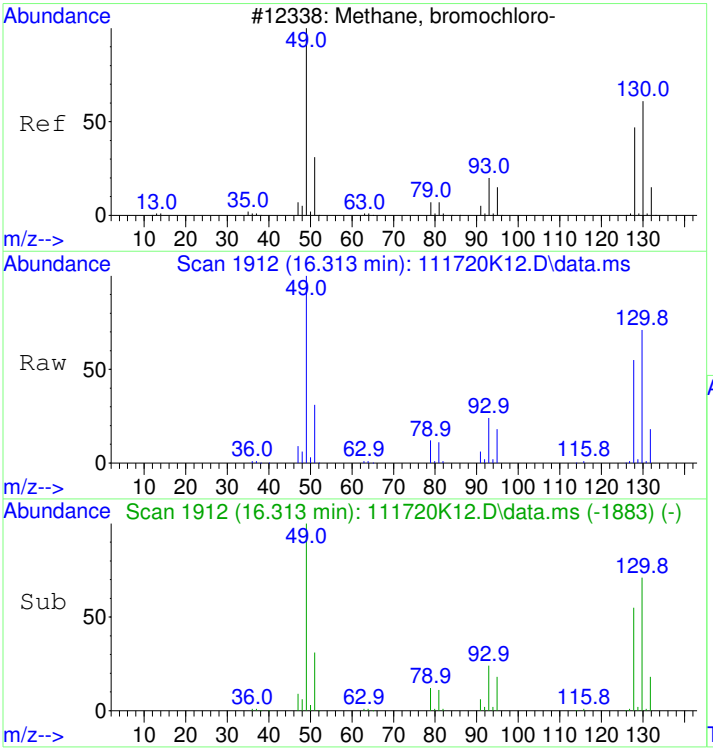
REVIEWED
By EM at 9:12 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K12.D
InstName : HP5973K
Acq On : 17 Nov 2020 8:32 pm
Operator : EM
Sample : S20K070-IBL1
Misc : 200ml IB
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 09:04:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

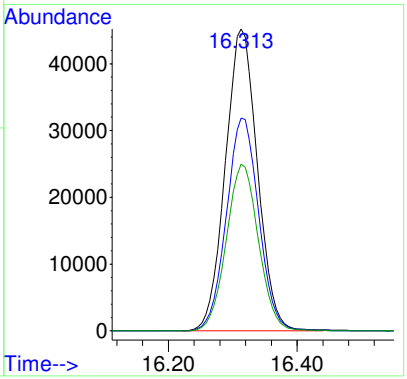


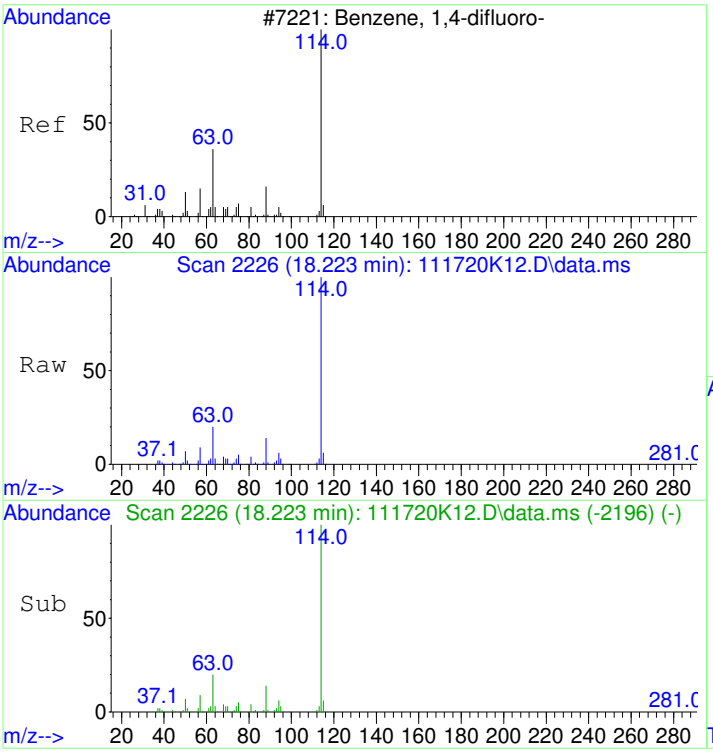


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K12.D
Acq: 17 Nov 2020 8:32 pm

Tgt Ion: 49 Resp: 157128

Ion	Ratio	Lower	Upper
49	100		
130	70.8	51.9	91.9
128	54.7	35.7	75.7

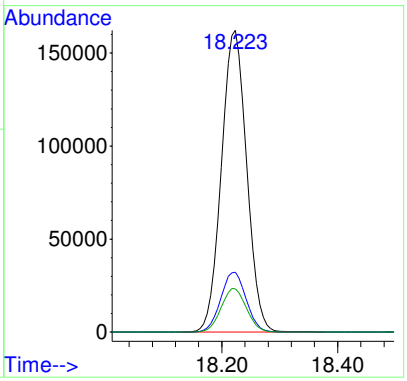


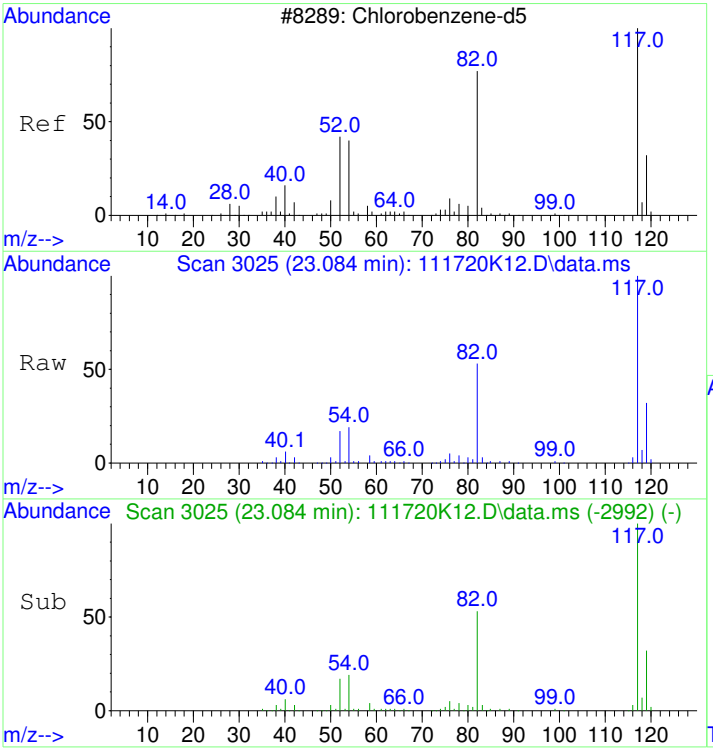


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K12.D
Acq: 17 Nov 2020 8:32 pm

Tgt Ion:114 Resp: 491361

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.4	0.0	34.7

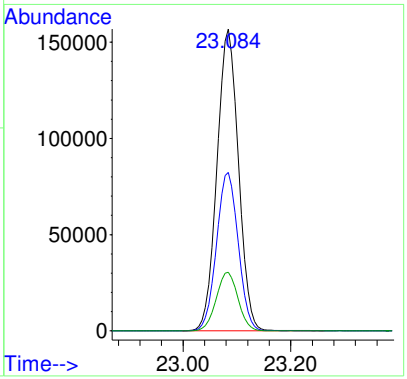




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K12.D
Acq: 17 Nov 2020 8:32 pm

Tgt Ion:117 Resp: 434259

Ion	Ratio	Lower	Upper
117	100		
82	53.0	32.3	72.3
54	19.6	0.0	38.6



2011024-05RE1

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K13.D
InstName : HP5973K
Acq On : 17 Nov 2020 9:21 pm
Operator : EM
Sample : 2011024-05RE1
Misc : 20ml FG-010-3ft-G
ALS Vial : 11 Sample Multiplier: 1.92

report cis12DCE, CHCL3, and TCE

Quant Time: Nov 18 09:04:34 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	156226	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	482599	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	431852	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.099	43	4597	0.66	ppbv		94
24) cis-1,2-Dichloroethene	15.778	61	33092	5.29	ppbv	#	97
28) Chloroform	16.441	83	29945	3.43	ppbv		97
37) Trichloroethene	18.625	130	93651	15.55	ppbv		99
47) Tetrachloroethene	21.642	166	4806	0.58	ppbv		99

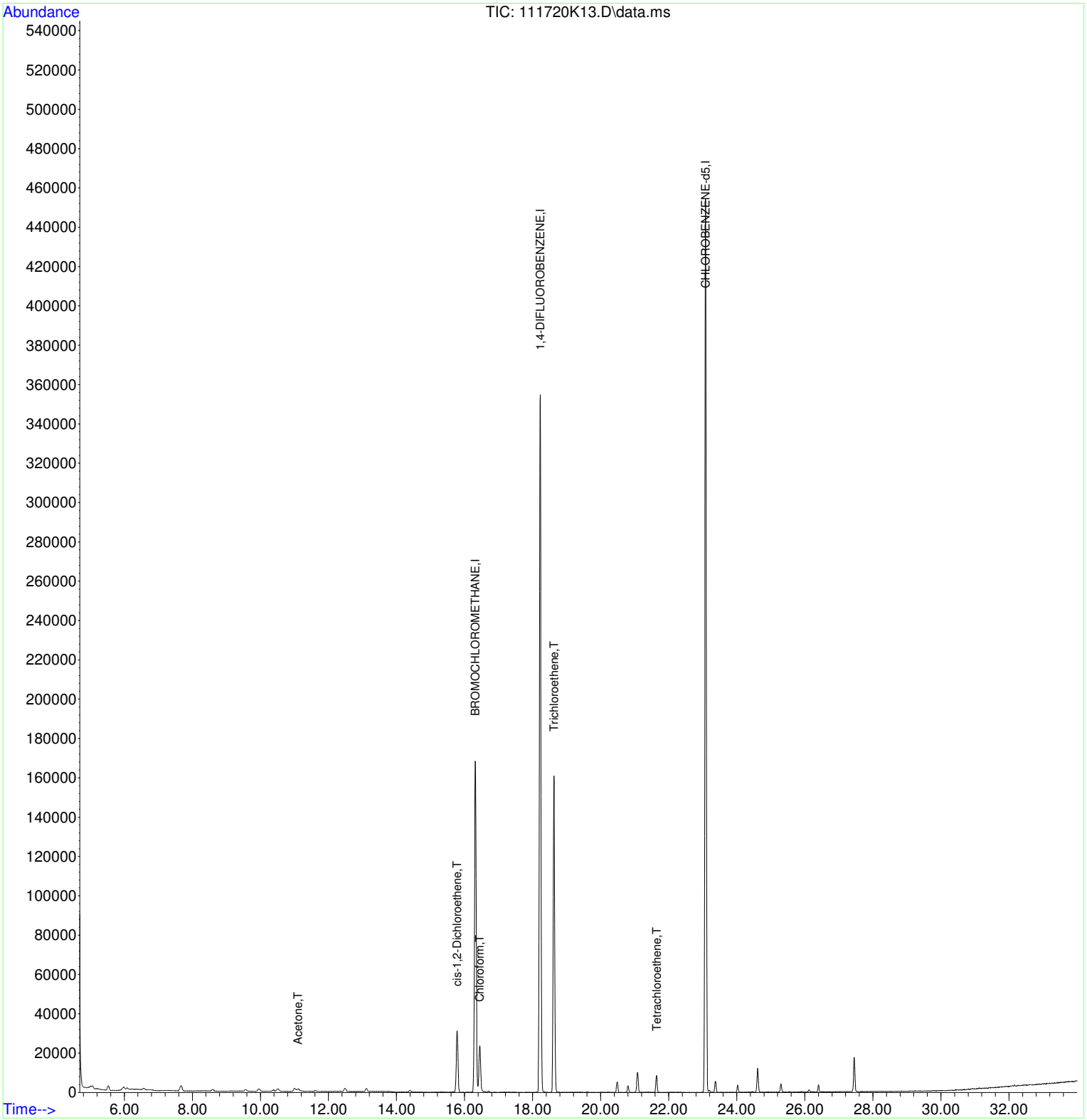
(#) = qualifier out of range (m) = manual integration (+) = signals summed

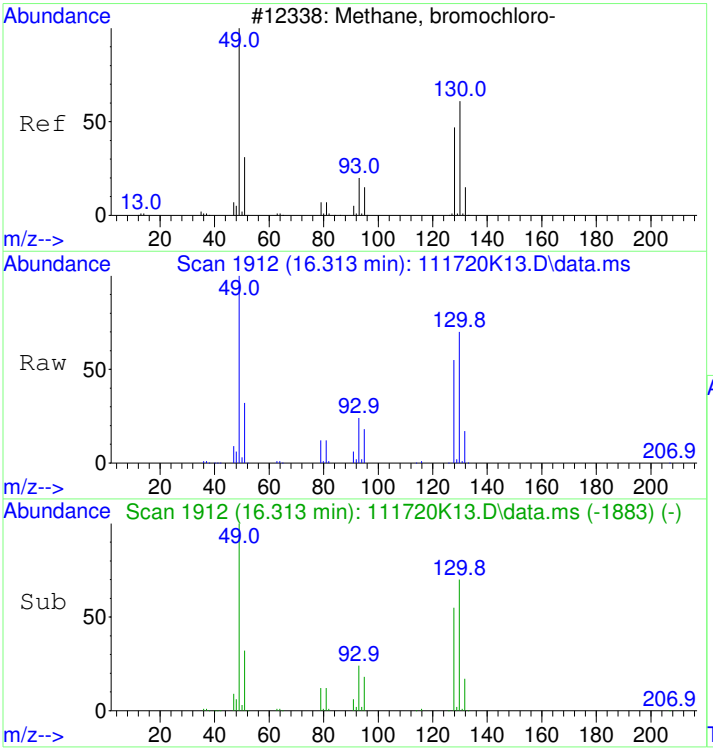
REVIEWED
By EM at 9:15 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K13.D
InstName : HP5973K
Acq On : 17 Nov 2020 9:21 pm
Operator : EM
Sample : 2011024-05RE1
Misc : 20ml FG-010-3ft-G
ALS Vial : 11 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:34 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

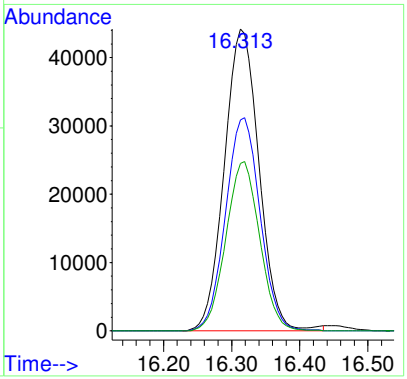


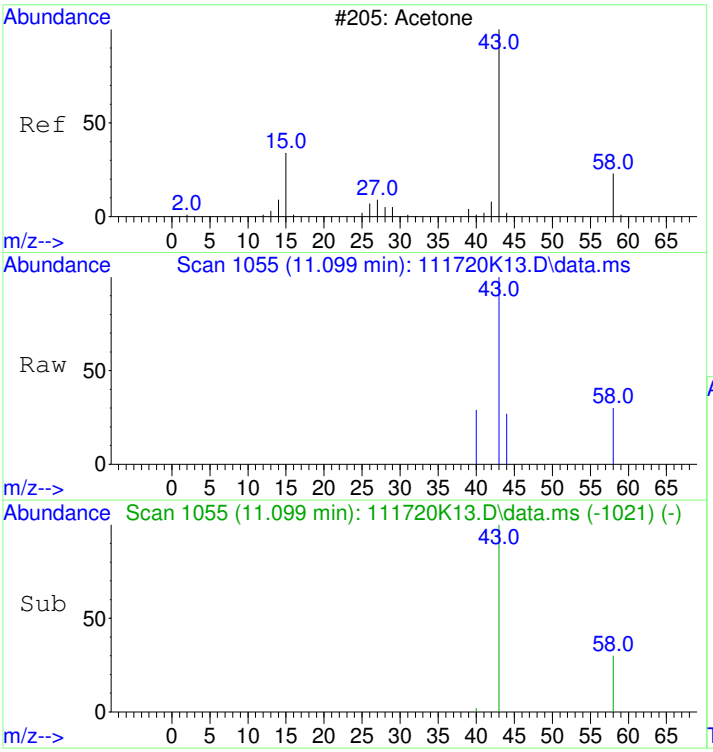


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion: 49 Resp: 156226

Ion	Ratio	Lower	Upper
49	100		
130	70.2	51.9	91.9
128	54.2	35.7	75.7

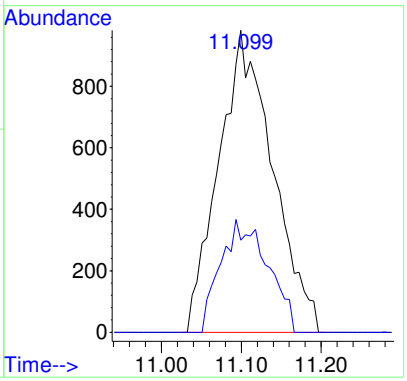


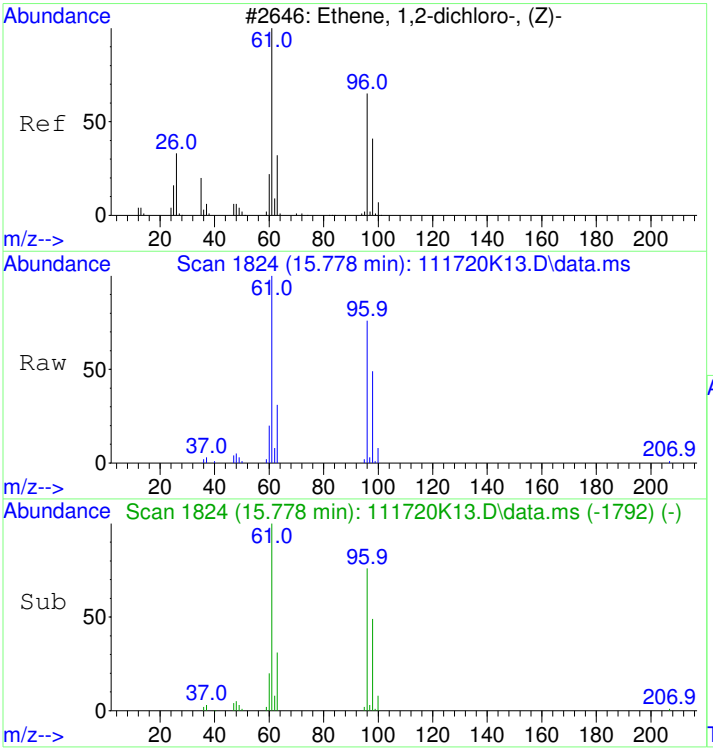


#14
Acetone
Concen: 0.66 ppbv
RT: 11.099 min Scan# 1055
Delta R.T. 0.006 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion: 43 Resp: 4597

Ion	Ratio	Lower	Upper
43	100		
58	32.4	15.9	55.9

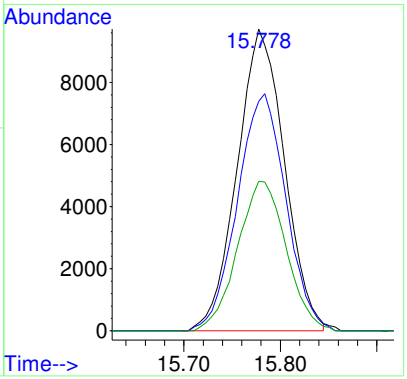


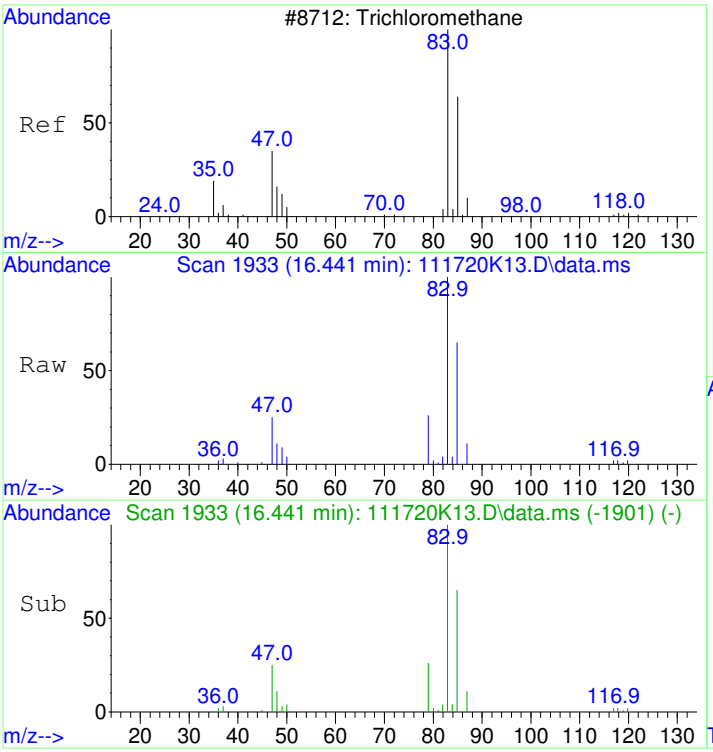


#24
cis-1,2-Dichloroethene
Concen: 5.29 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion: 61 Resp: 33092

Ion	Ratio	Lower	Upper
61	100		
96	80.4	57.6	97.6
98	0.0	0.0	20.0

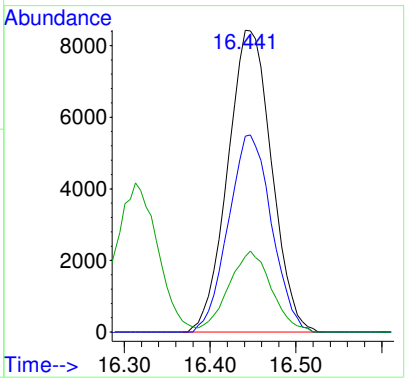


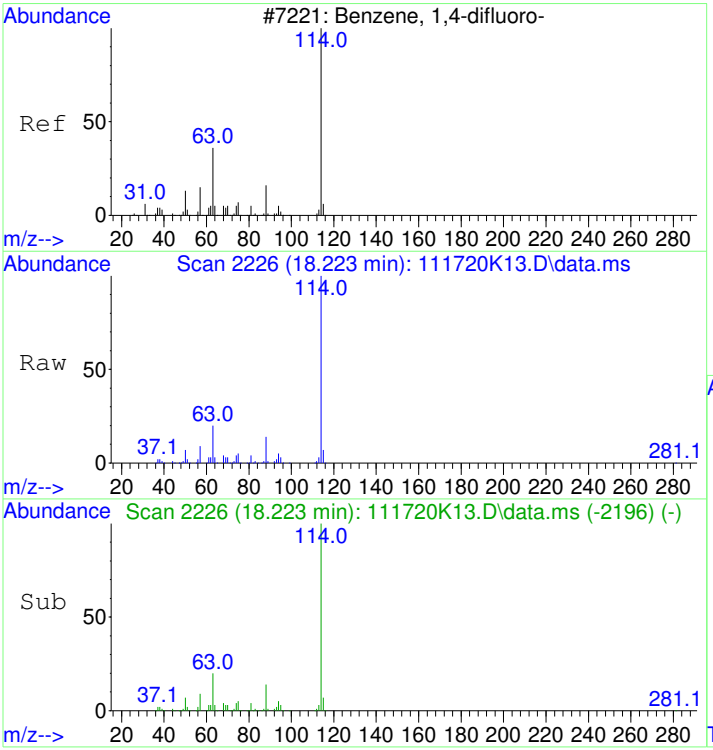


#28
Chloroform
Concen: 3.43 ppbv
RT: 16.441 min Scan# 1933
Delta R.T. -0.006 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion: 83 Resp: 29945

Ion	Ratio	Lower	Upper
83	100		
85	64.4	45.5	85.5
47	24.3	1.4	41.4

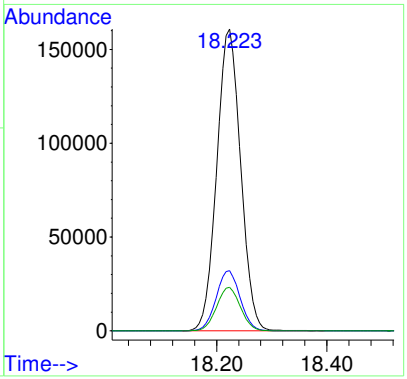


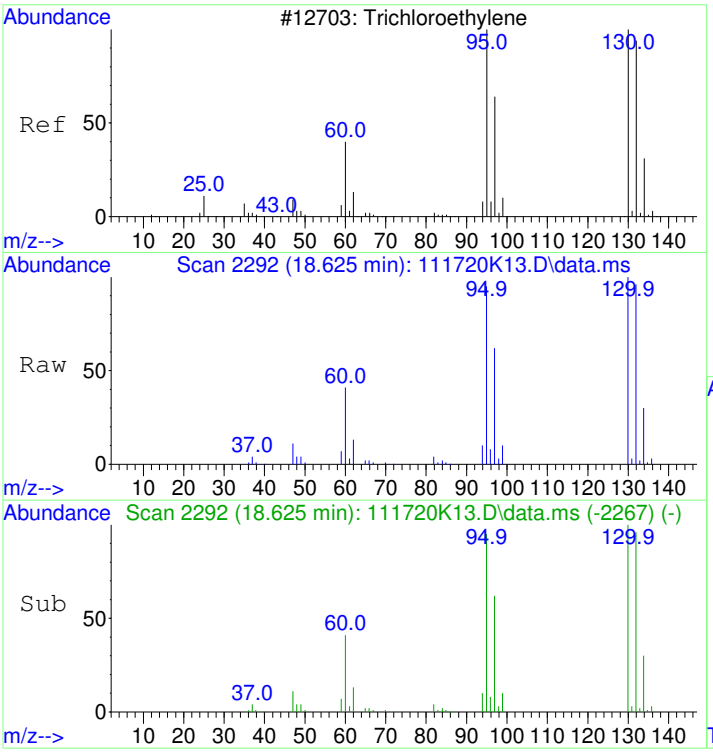


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion:114 Resp: 482599

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.4	0.0	34.7

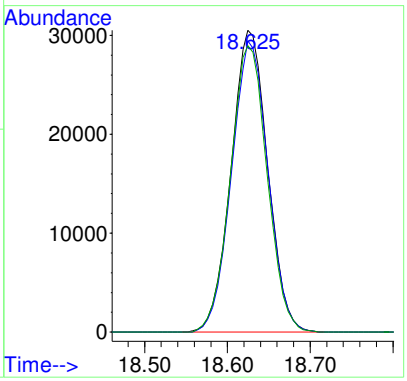


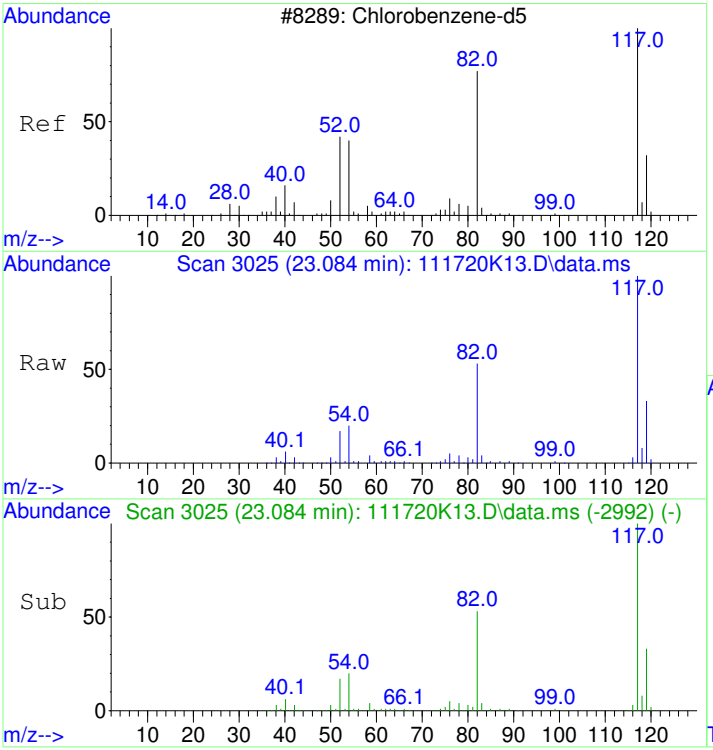


#37
Trichloroethene
Concen: 15.55 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion:130 Resp: 93651

Ion	Ratio	Lower	Upper
130	100		
132	95.9	76.3	116.3
95	95.2	74.0	114.0

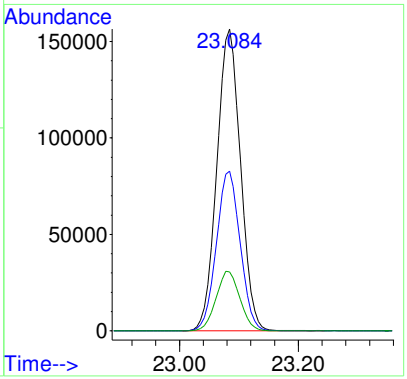


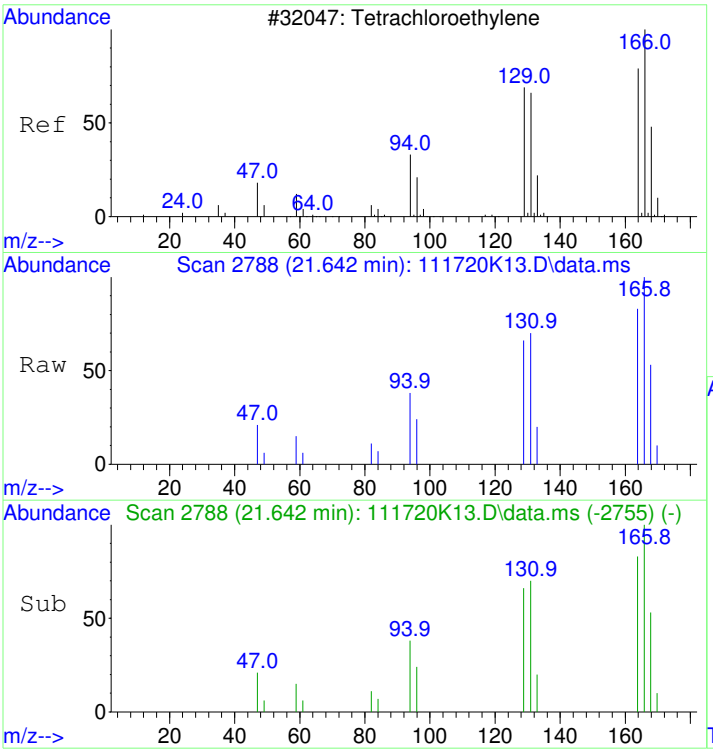


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion:117 Resp: 431852

Ion	Ratio	Lower	Upper
117	100		
82	53.0	32.3	72.3
54	19.8	0.0	38.6

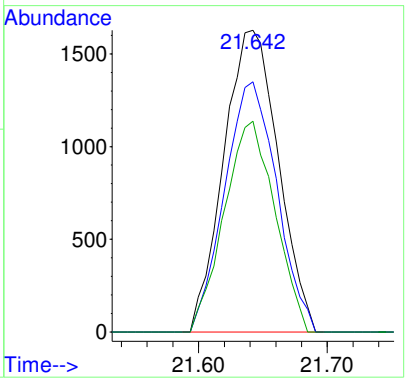




#47
Tetrachloroethene
Concen: 0.58 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K13.D
Acq: 17 Nov 2020 9:21 pm

Tgt Ion:166 Resp: 4806

Ion	Ratio	Lower	Upper
166	100		
164	79.3	57.8	97.8
131	64.8	44.1	84.1



2011024-06RE1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K14.D
InstName : HP5973K
Acq On : 17 Nov 2020 10:11 pm
Operator : EM
Sample : 2011024-06RE1
Misc : 20ml FG-006-3ft-G
ALS Vial : 12 Sample Multiplier: 1.92

report cis12DCE, CHCL3, and TCE

Quant Time: Nov 18 09:04:38 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	156169	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	480117	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	430506	19.60	ppbv		0.00
Target Compounds							Qvalue
6) Vinyl chloride	6.081	62	2520	0.48	ppbv		92
13) 1,1-Dichloroethene	10.515	61	3097	0.45	ppbv		94
24) cis-1,2-Dichloroethene	15.778	61	43212	6.91	ppbv	#	98
28) Chloroform	16.447	83	25871	2.96	ppbv		99
37) Trichloroethene	18.625	130	123486	20.61	ppbv		99
47) Tetrachloroethene	21.642	166	4862	0.59	ppbv		100

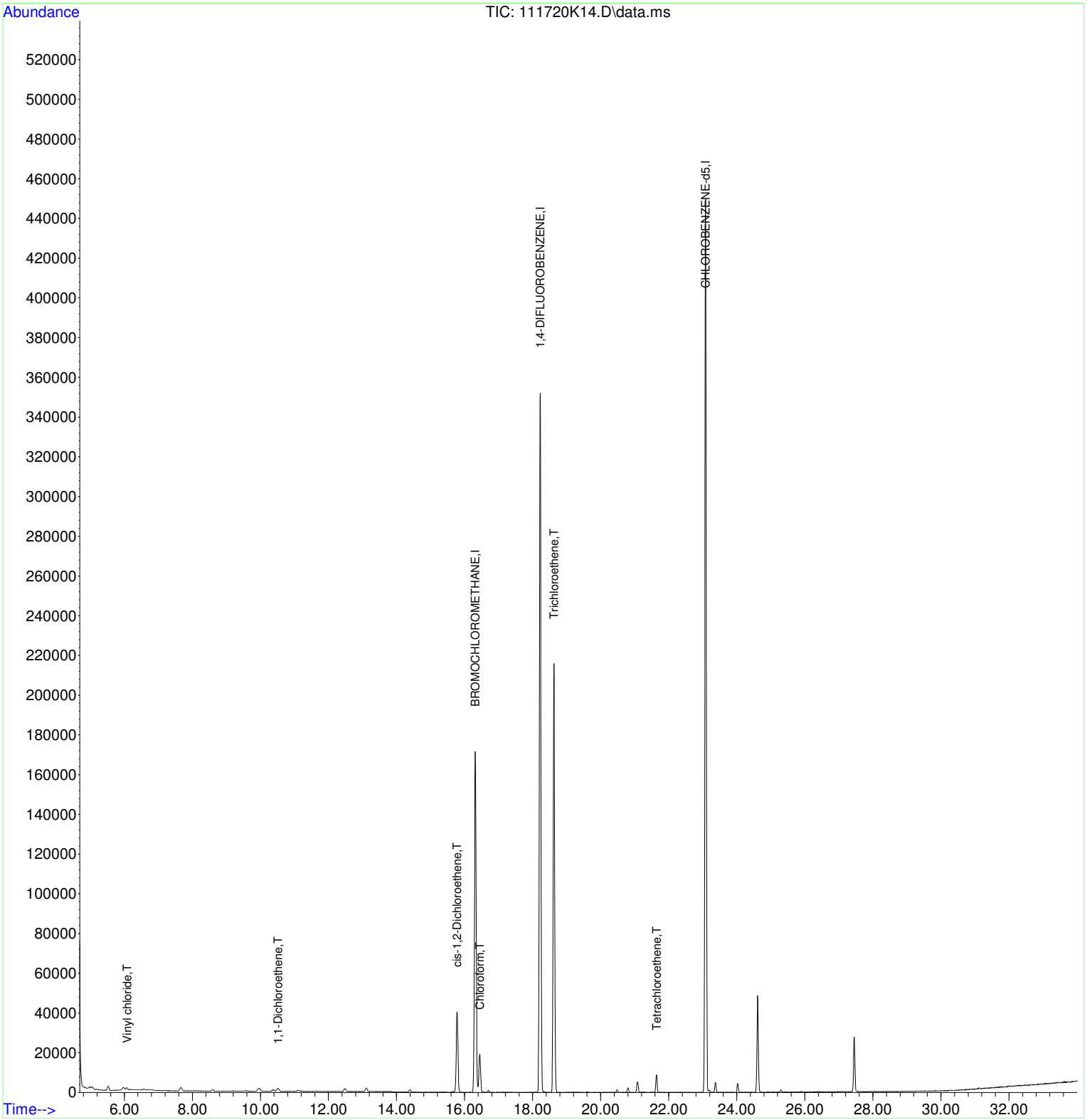
(#) = qualifier out of range (m) = manual integration (+) = signals summed

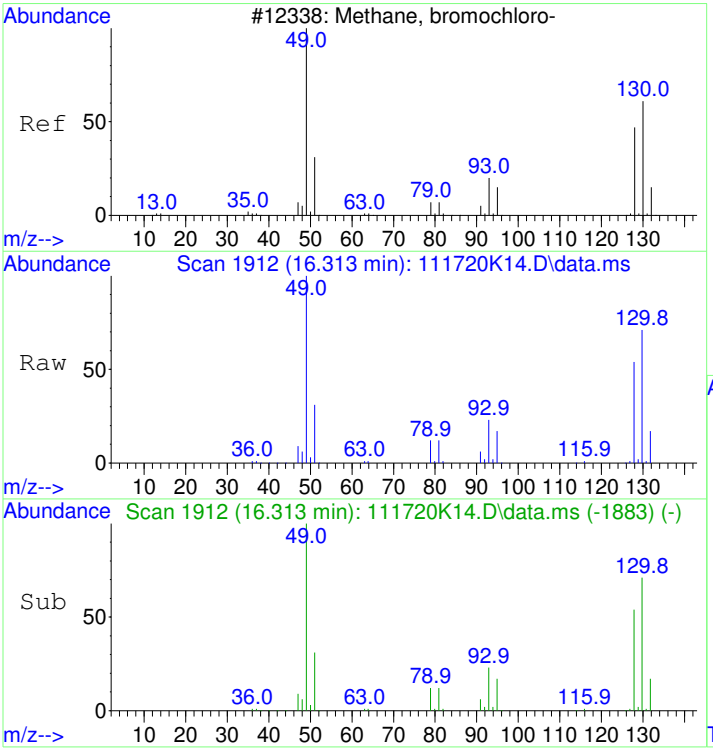
REVIEWED
By EM at 9:14 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K14.D
InstName : HP5973K
Acq On : 17 Nov 2020 10:11 pm
Operator : EM
Sample : 2011024-06RE1
Misc : 20ml FG-006-3ft-G
ALS Vial : 12 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:38 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

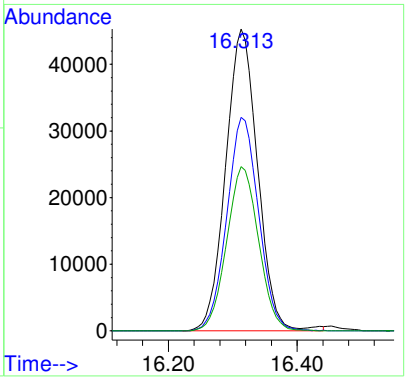


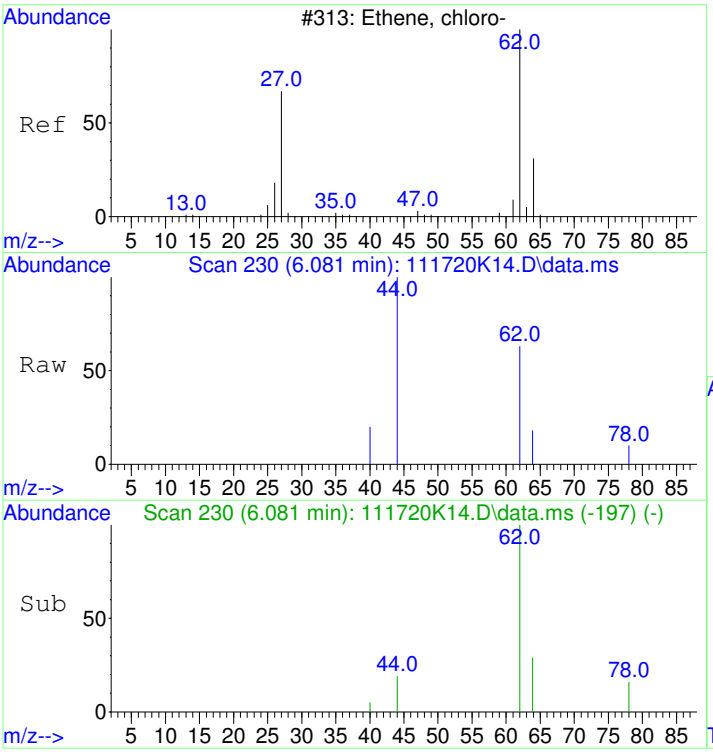


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion: 49 Resp: 156169

Ion	Ratio	Lower	Upper
49	100		
130	70.3	51.9	91.9
128	53.9	35.7	75.7

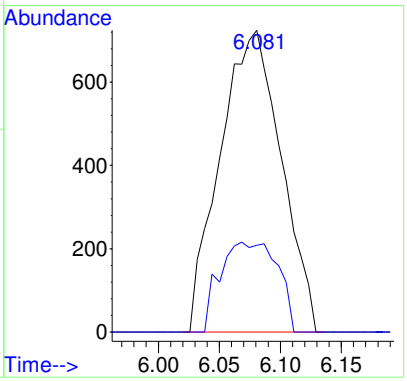


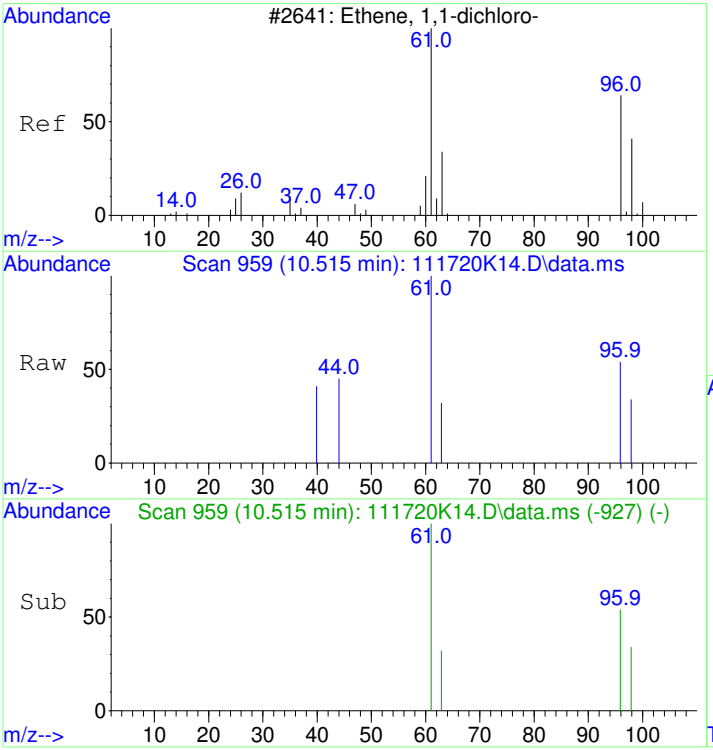


#6
Vinyl chloride
Concen: 0.48 ppbv
RT: 6.081 min Scan# 230
Delta R.T. -0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion: 62 Resp: 2520

Ion	Ratio	Lower	Upper
62	100		
64	28.1	12.3	52.3

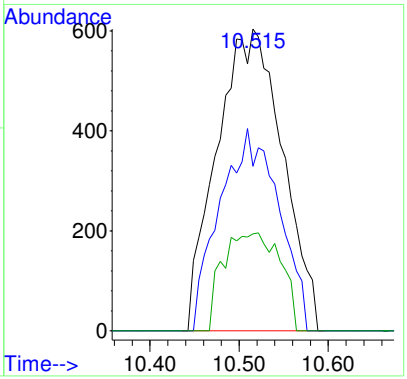


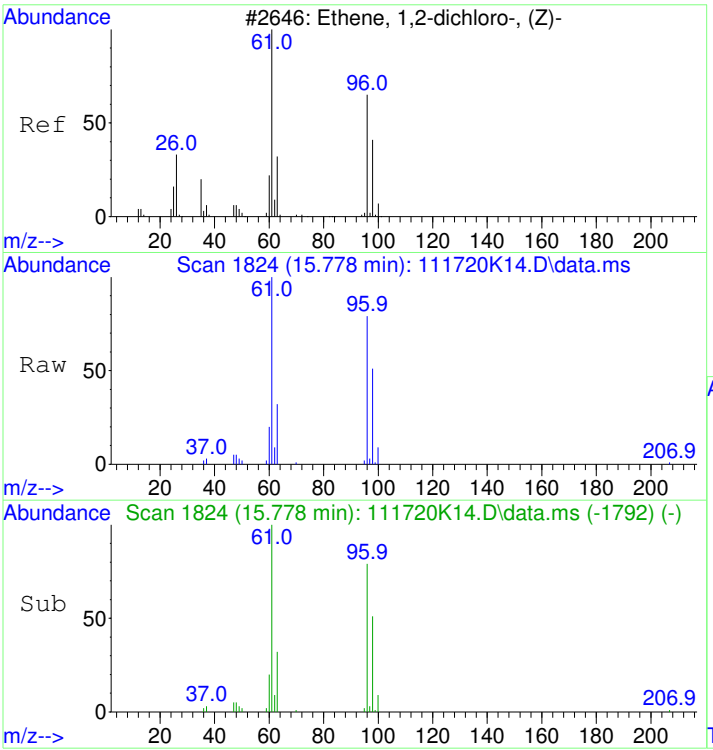


#13
1,1-Dichloroethene
Concen: 0.45 ppbv
RT: 10.515 min Scan# 959
Delta R.T. -0.006 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion: 61 Resp: 3097

Ion	Ratio	Lower	Upper
61	100		
96	59.6	43.5	83.5
63	28.1	12.1	52.1

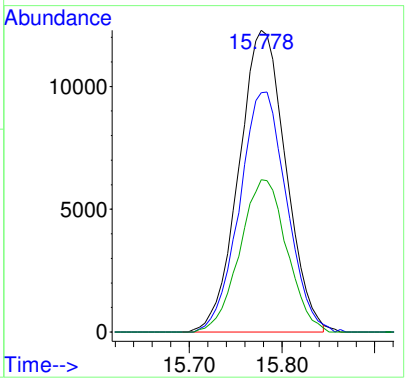


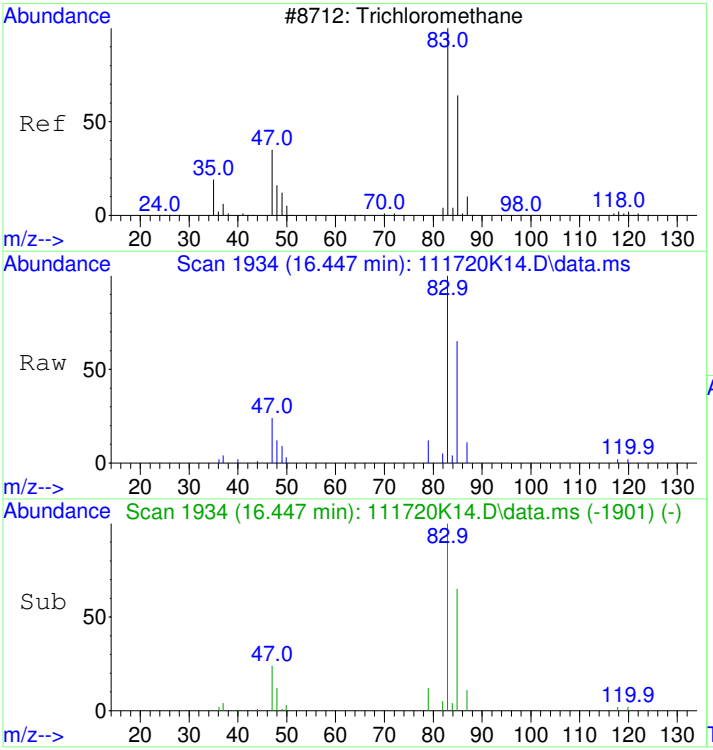


#24
cis-1,2-Dichloroethene
Concen: 6.91 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion: 61 Resp: 43212

Ion	Ratio	Lower	Upper
61	100		
96	79.7	57.6	97.6
98	0.0	0.0	20.0

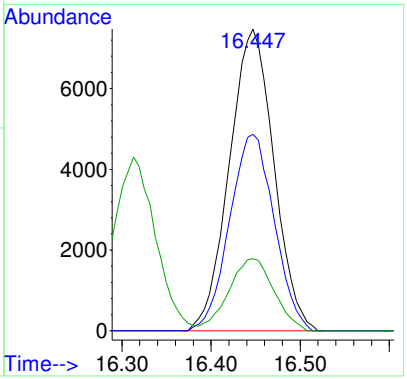


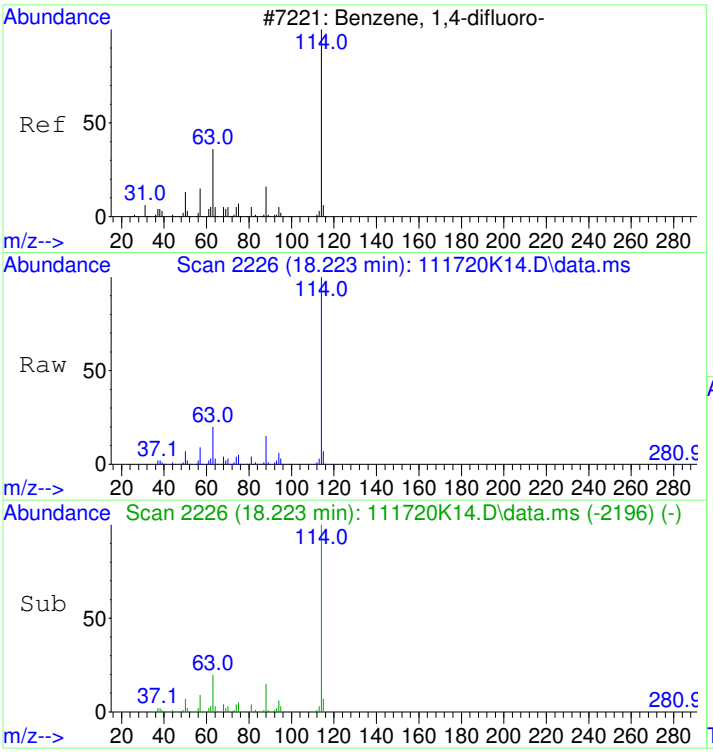


#28
Chloroform
Concen: 2.96 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion: 83 Resp: 25871

Ion	Ratio	Lower	Upper
83	100		
85	65.4	45.5	85.5
47	22.5	1.4	41.4

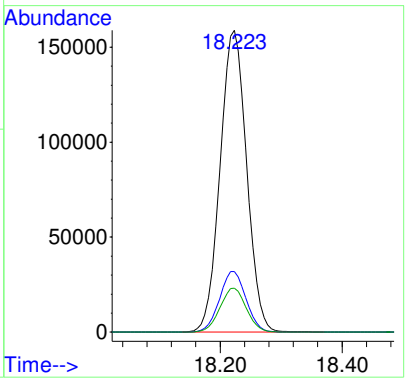


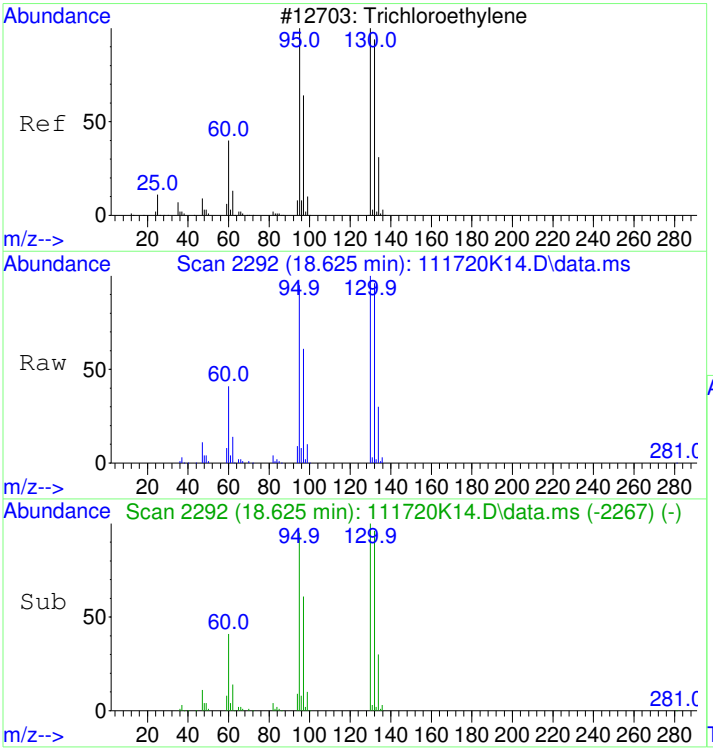


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion:114 Resp: 480117

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.4	0.0	34.7

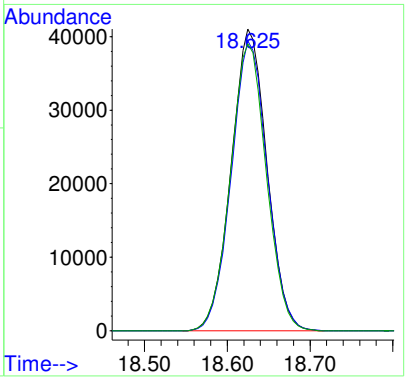


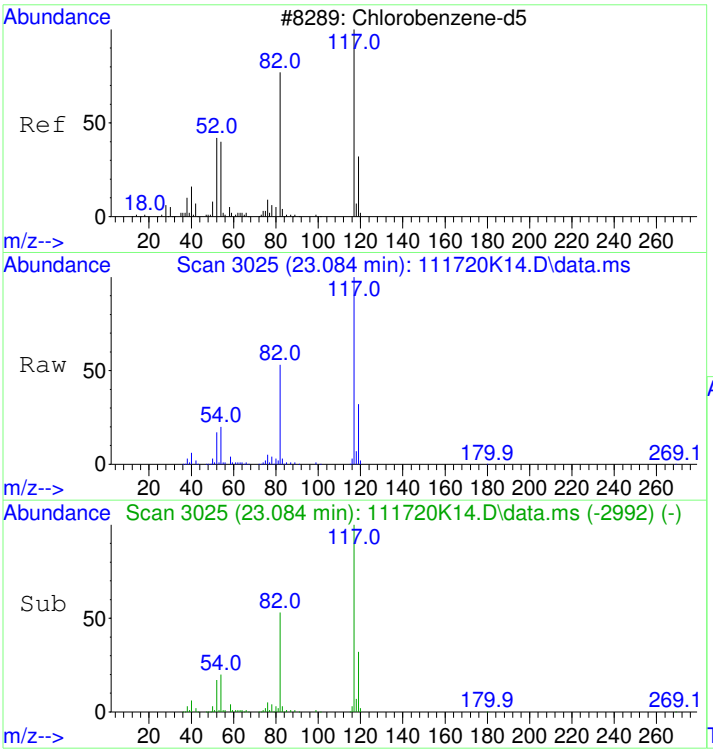


#37
Trichloroethene
Concen: 20.61 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion:130 Resp: 123486

Ion	Ratio	Lower	Upper
130	100		
132	96.3	76.3	116.3
95	95.5	74.0	114.0

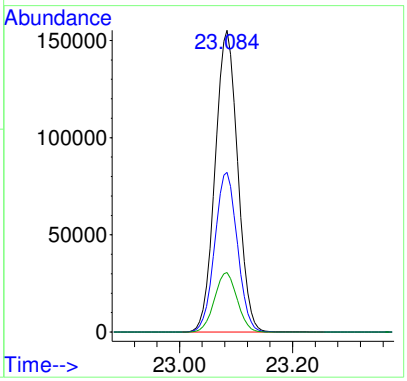


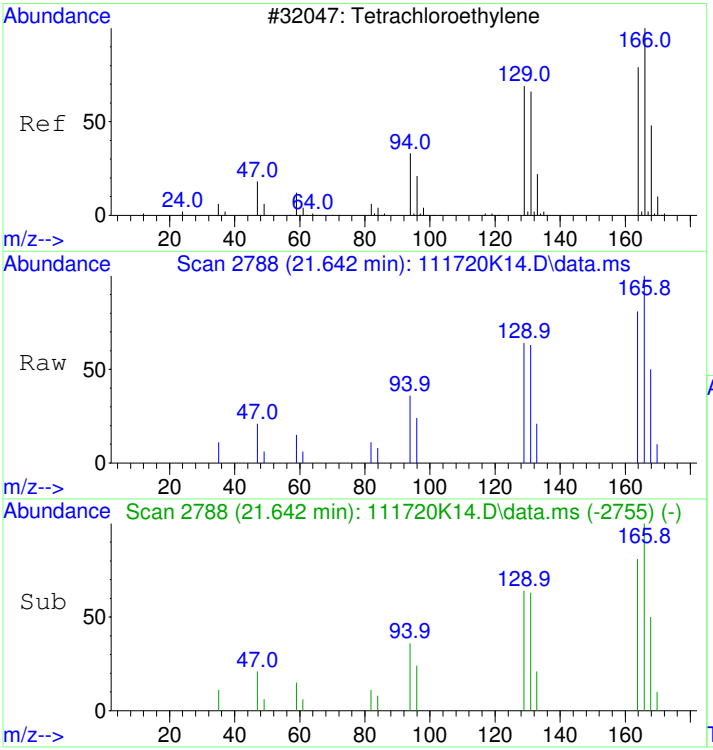


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion:117 Resp: 430506

Ion	Ratio	Lower	Upper
117	100		
82	53.0	32.3	72.3
54	19.8	0.0	38.6

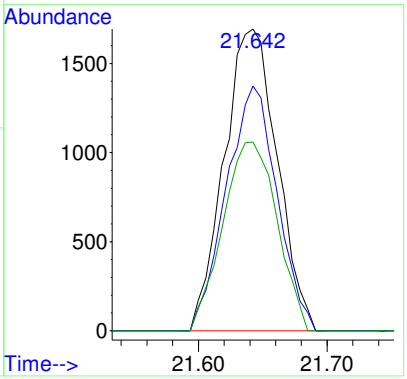




#47
Tetrachloroethene
Concen: 0.59 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K14.D
Acq: 17 Nov 2020 10:11 pm

Tgt Ion:166 Resp: 4862

Ion	Ratio	Lower	Upper
166	100		
164	77.5	57.8	97.8
131	63.6	44.1	84.1



2011024-05

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K15.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:03 pm
Operator : EM
Sample : 2011024-05
Misc : 200ml FG-010-3ft-G
ALS Vial : 11 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:42 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
Internal Standards								
1) BROMOCHLOROMETHANE	16.313	49	151981	19.60	ppbv		0.00	
32) 1,4-DIFLUOROBENZENE	18.223	114	464989	19.60	ppbv		0.00	
43) CHLOROBENZENE-d5	23.084	117	423719	19.60	ppbv		0.00	
Target Compounds						Qvalue		
2) Propene	4.998	41	7239	1.53	ppbv	#	75	
6) Vinyl chloride	6.081	62	13973	2.75	ppbv		99	
12) 1,1,2-Trichloro-1,2,2-...	10.369	151	8137	1.17	ppbv		98	
13) 1,1-Dichloroethene	10.515	61	22243	3.35	ppbv		99	
14) Acetone	11.093	43	37879	5.57	ppbv		99	
15) Carbon disulfide	11.203	76	8843	0.69	ppbv		93	
16) 2-Propanol	11.611	45	14002	1.92	ppbv		89	
18) Dichloromethane	12.487	49	5629	1.00	ppbv		98	
20) trans-1,2-Dichloroethene	13.107	61	18599	2.88	ppbv		99	
22) 1,1-Dichloroethane	14.391	63	22970	2.72	ppbv		100	
24) cis-1,2-Dichloroethene	15.778	61	292883	48.12	ppbv	#	98	OC
27) Tetrahydrofuran	16.295	42	4714	0.76	ppbv		94	
28) Chloroform	16.447	83	246078	28.93	ppbv		99	OC
30) 1,1,1-Trichloroethane	16.696	97	10105	1.22	ppbv		100	
37) Trichloroethene	18.625	130	900967	155.28	ppbv		100	OC
40) Bromodichloromethane	19.604	83	4493	0.49	ppbv		98	
44) Toluene	20.803	91	44702	2.66	ppbv		99	
47) Tetrachloroethene	21.642	166	41336	5.06	ppbv		99	
52) Ethylbenzene	23.200	91	12987	0.59	ppbv		99	
53) m&p-Xylene	23.370	91	57966	3.48	ppbv		99	
54) o-Xylene	24.027	91	42566	2.48	ppbv		98	

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

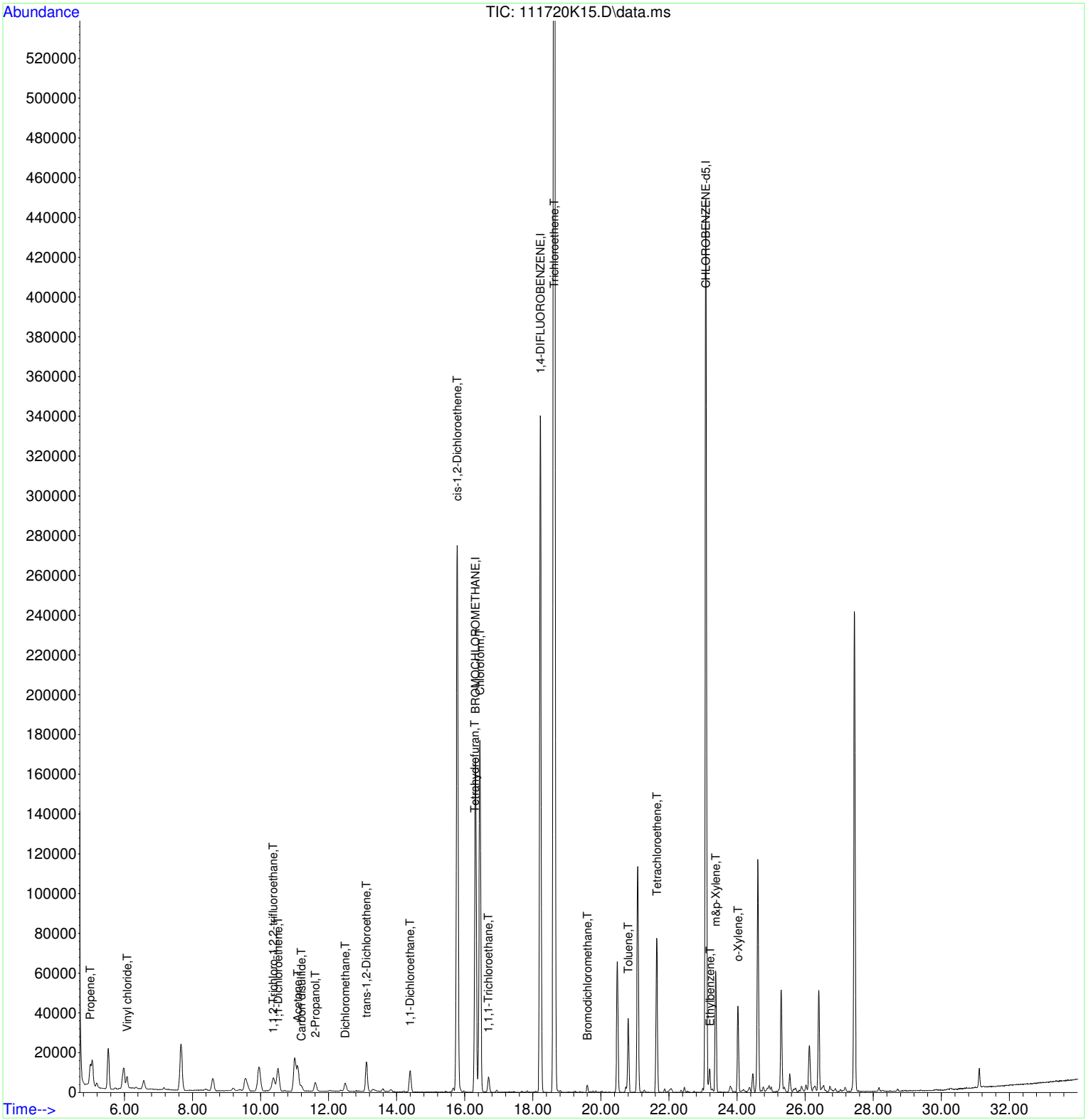
REVIEWED
By EM at 9:18 am, Nov 18, 2020

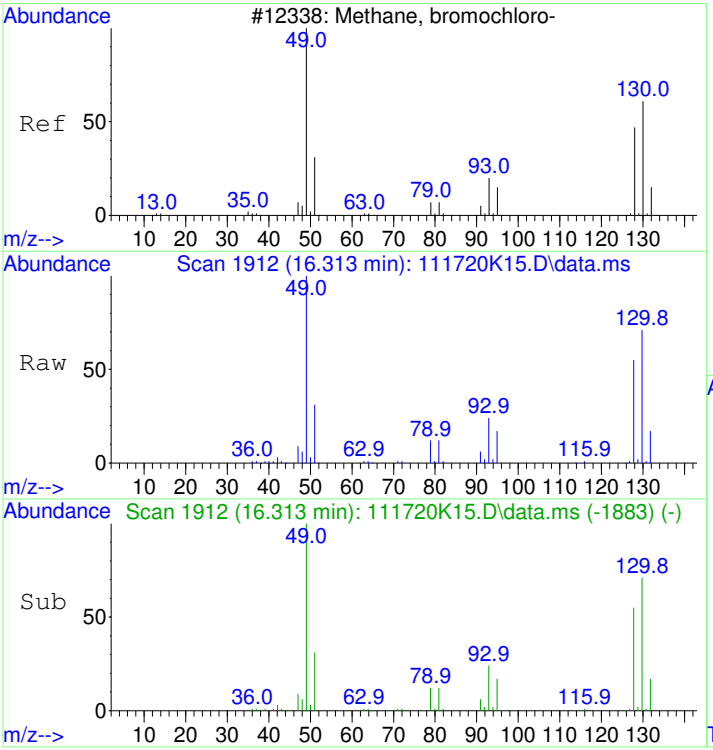
Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K15.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:03 pm
Operator : EM
Sample : 2011024-05
Misc : 200ml FG-010-3ft-G
ALS Vial : 11 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:42 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

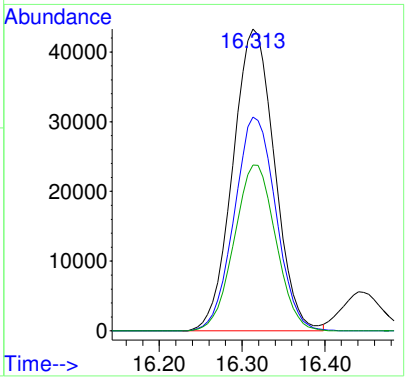


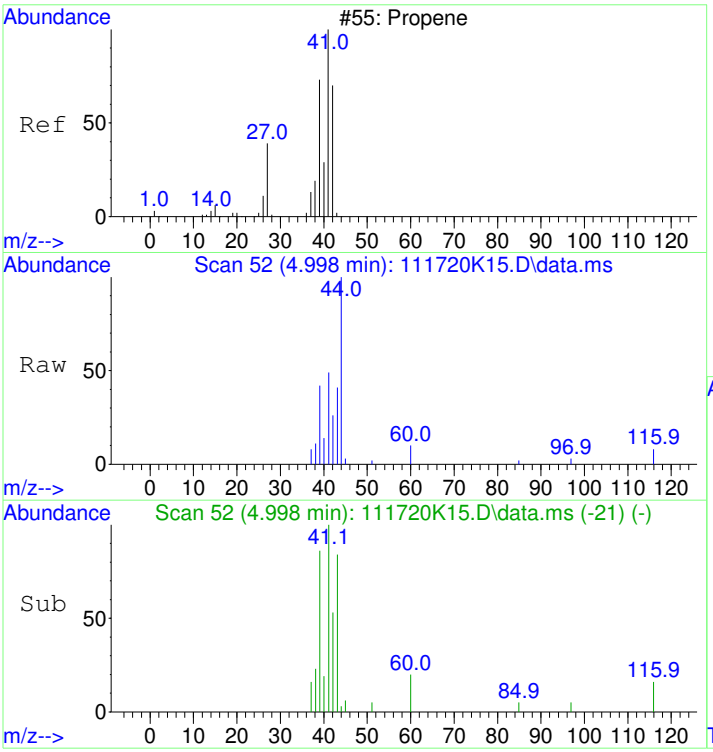


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 49 Resp: 151981

Ion	Ratio	Lower	Upper
49	100		
130	70.6	51.9	91.9
128	54.7	35.7	75.7

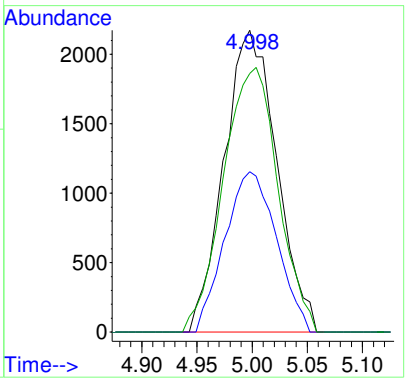


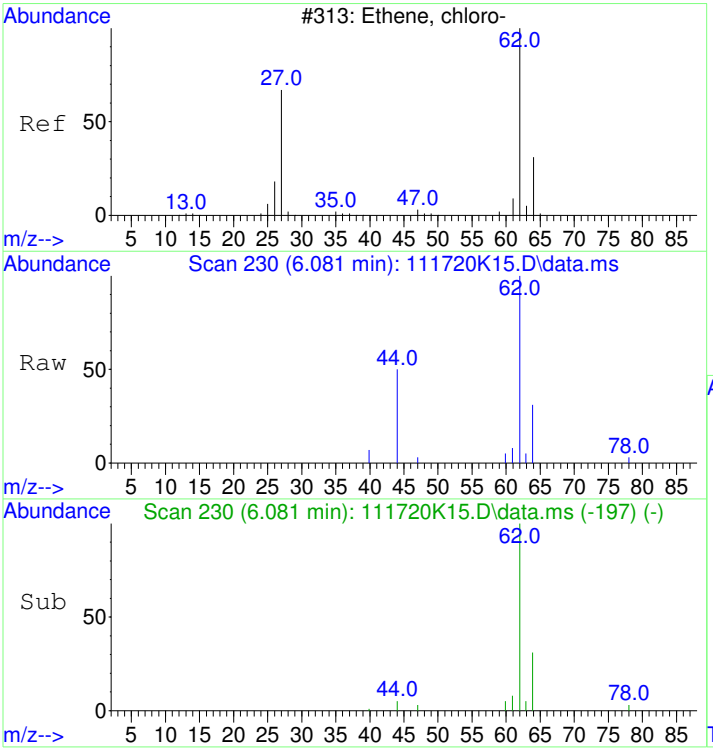


#2
Propene
Concen: 1.53 ppbv
RT: 4.998 min Scan# 52
Delta R.T. -0.012 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 41 Resp: 7239

Ion	Ratio	Lower	Upper
41	100		
42	52.1	47.3	87.3
39	90.9	46.1	86.1#

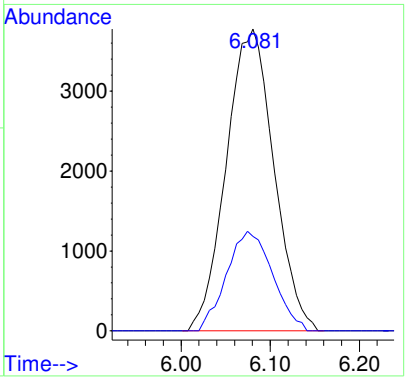


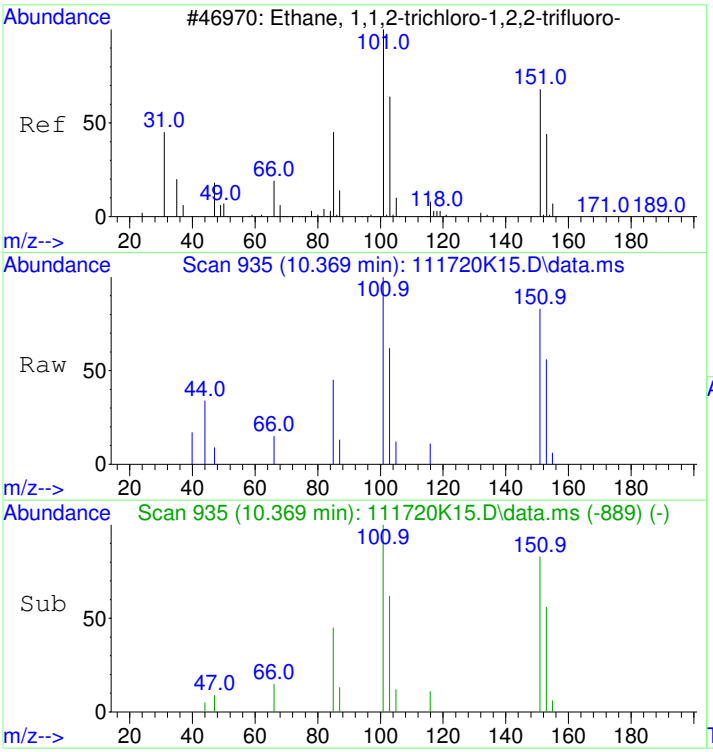


#6
Vinyl chloride
Concen: 2.75 ppbv
RT: 6.081 min Scan# 230
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 62 Resp: 13973

Ion	Ratio	Lower	Upper
62	100		
64	31.9	12.3	52.3

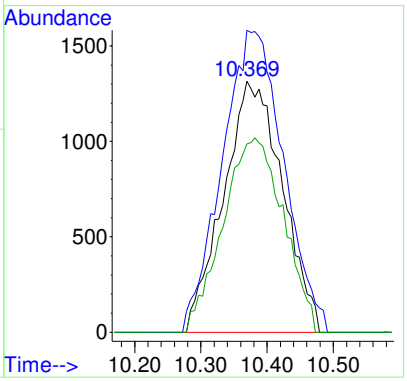


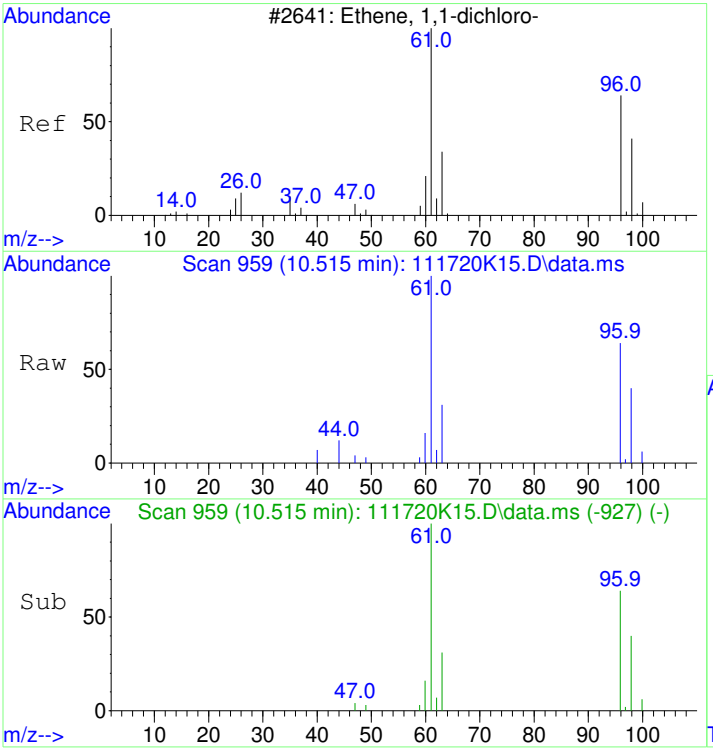


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.17 ppbv
RT: 10.369 min Scan# 935
Delta R.T. -0.018 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion:151 Resp: 8137

Ion	Ratio	Lower	Upper
151	100		
101	125.5	101.9	141.9
103	79.1	58.4	98.4

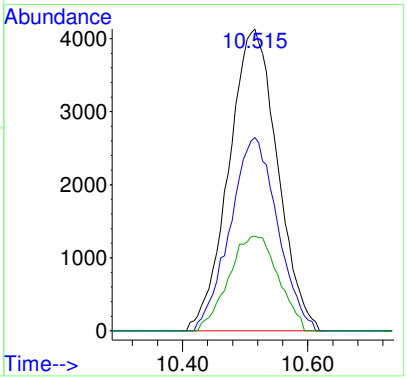


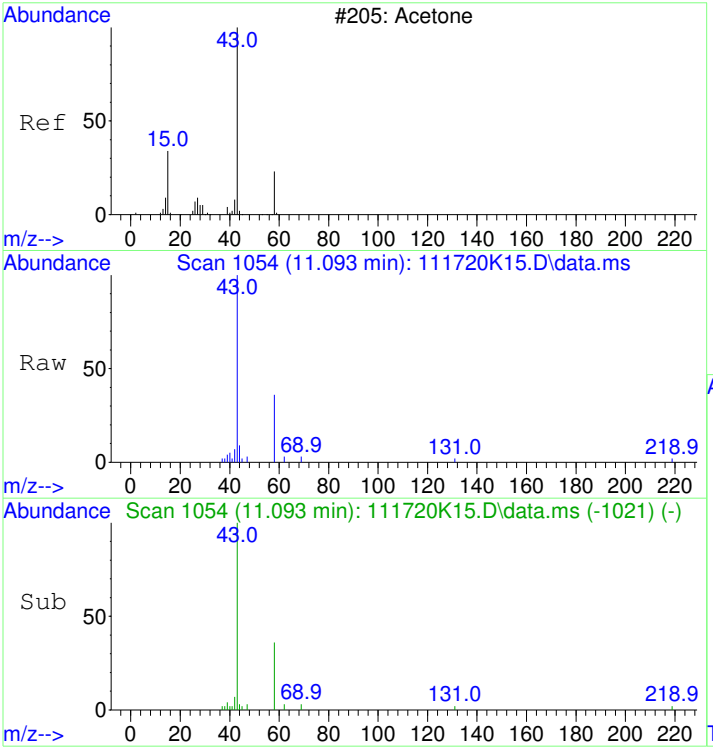


#13
1,1-Dichloroethene
Concen: 3.35 ppbv
RT: 10.515 min Scan# 959
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 61 Resp: 22243

Ion	Ratio	Lower	Upper
61	100		
96	62.6	43.5	83.5
63	32.0	12.1	52.1

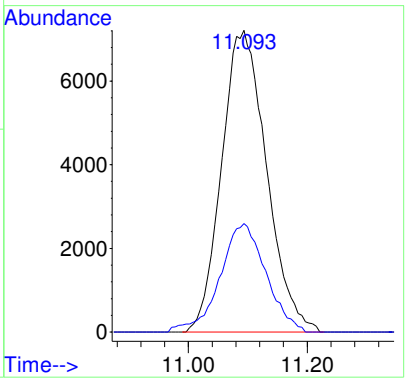


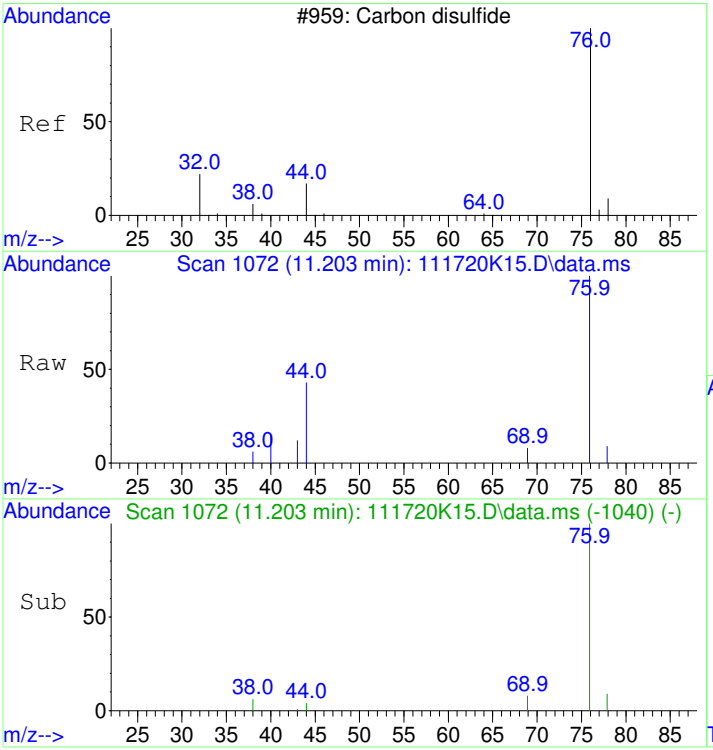


#14
Acetone
Concen: 5.57 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 43 Resp: 37879

Ion	Ratio	Lower	Upper
43	100		
58	36.7	15.9	55.9

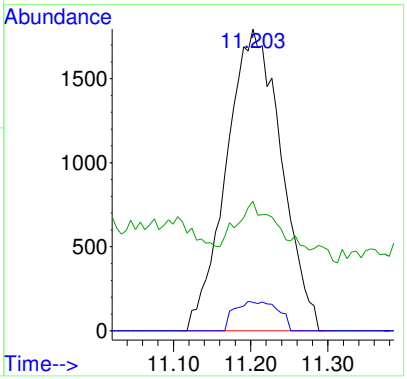


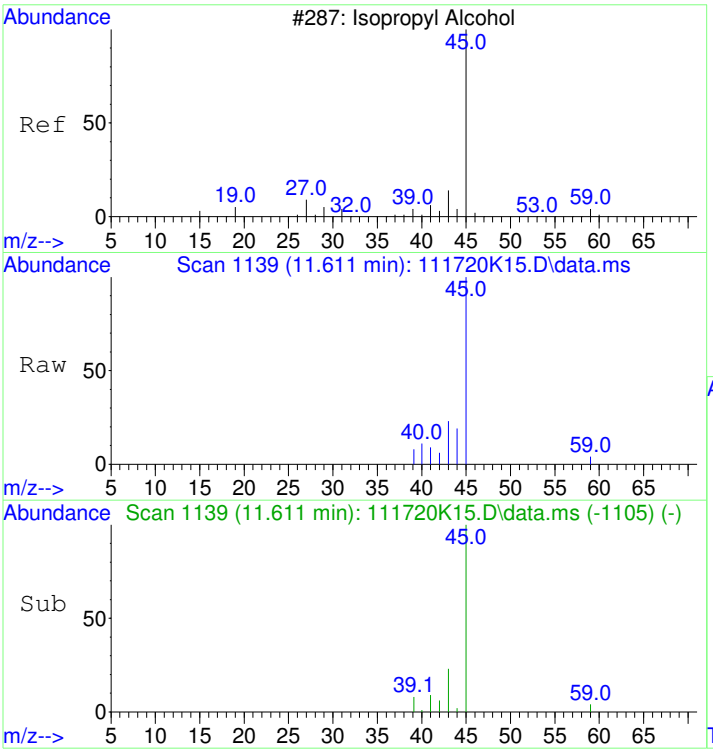


#15
Carbon disulfide
Concen: 0.69 ppbv
RT: 11.203 min Scan# 1072
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 76 Resp: 8843

Ion	Ratio	Lower	Upper
76	100		
78	7.7	0.0	29.0
44	13.6	0.0	30.1

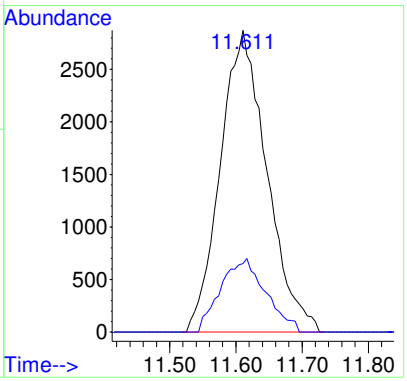


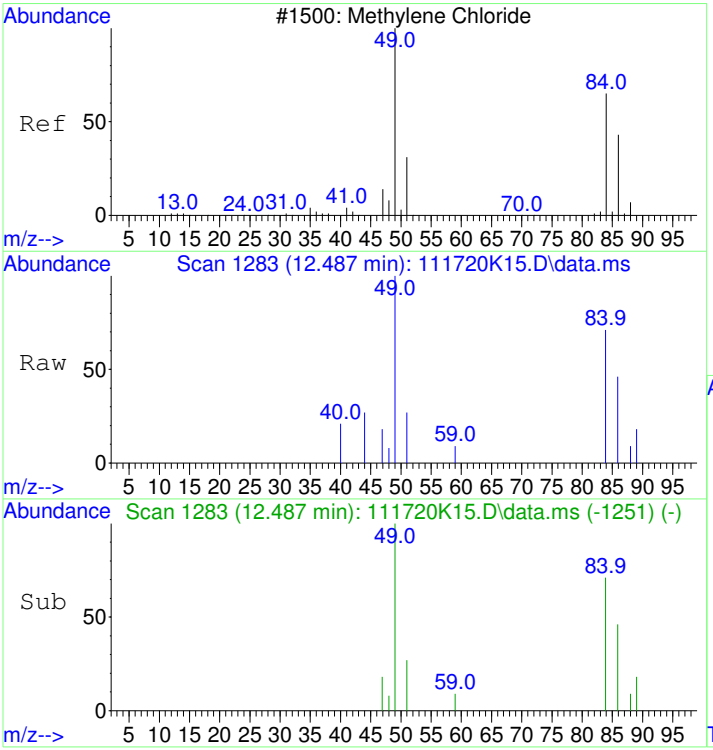


#16
2-Propanol
Concen: 1.92 ppbv
RT: 11.611 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 45 Resp: 14002

Ion	Ratio	Lower	Upper
45	100		
43	23.5	0.0	38.7

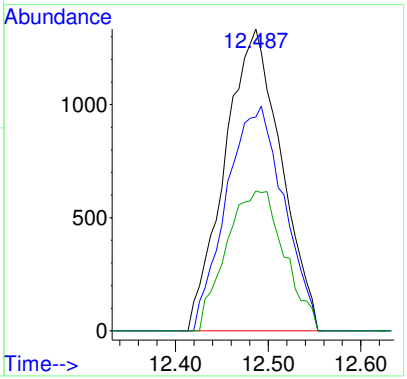


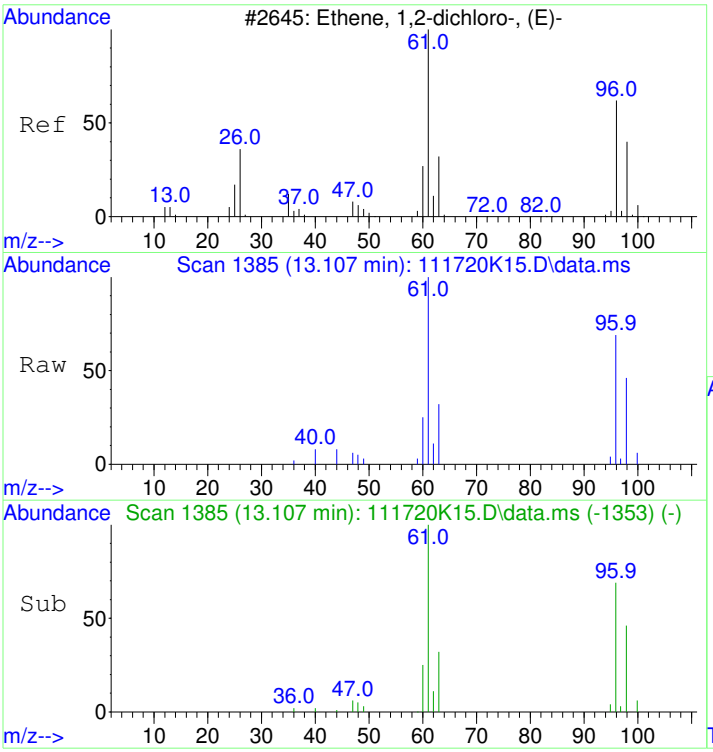


#18
Dichloromethane
Concen: 1.00 ppbv
RT: 12.487 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 49 Resp: 5629

Ion	Ratio	Lower	Upper
49	100		
84	76.1	57.4	97.4
86	47.8	29.7	69.7

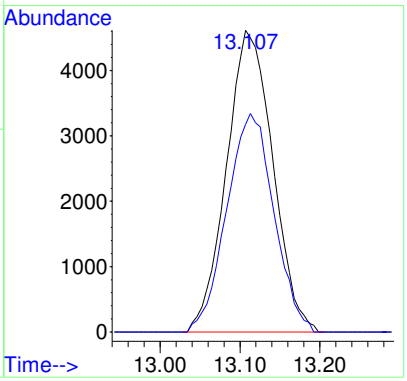


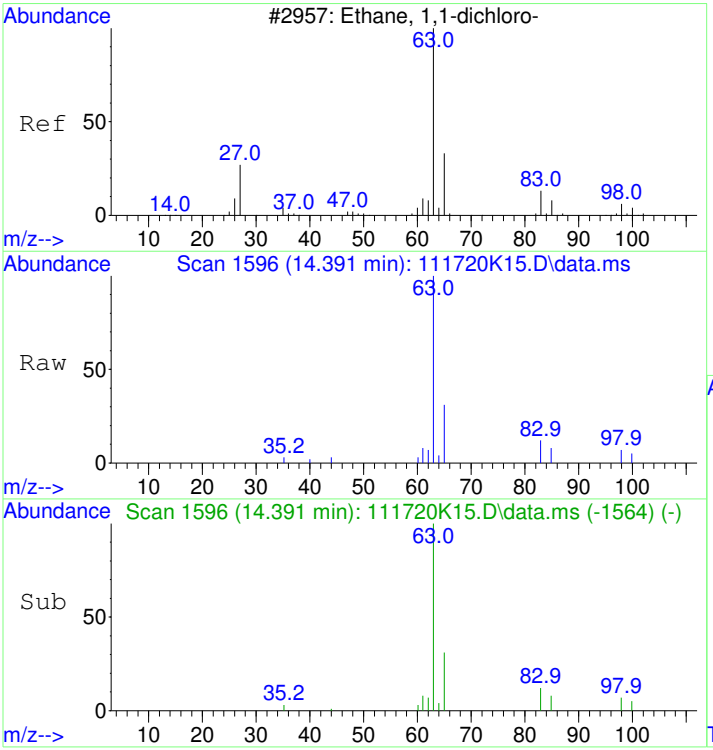


#20
trans-1,2-Dichloroethene
Concen: 2.88 ppbv
RT: 13.107 min Scan# 1385
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 61 Resp: 18599

Ion	Ratio	Lower	Upper
61	100		
96	73.6	52.8	92.8

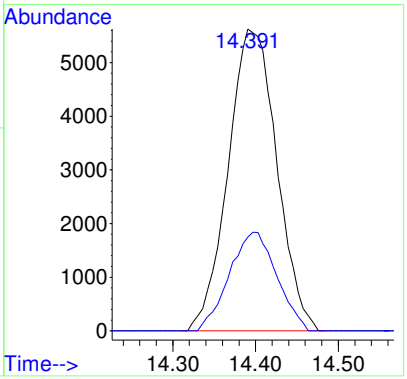


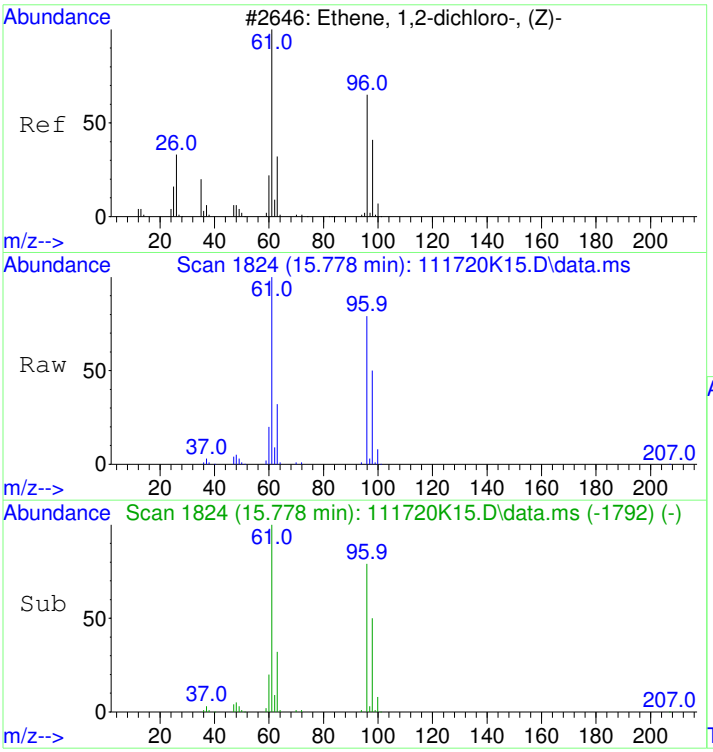


#22
1,1-Dichloroethane
Concen: 2.72 ppbv
RT: 14.391 min Scan# 1596
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 63 Resp: 22970

Ion	Ratio	Lower	Upper
63	100		
65	31.8	11.9	51.9

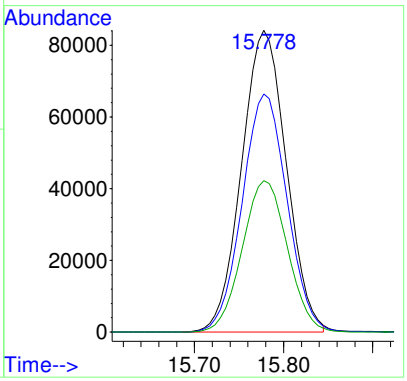




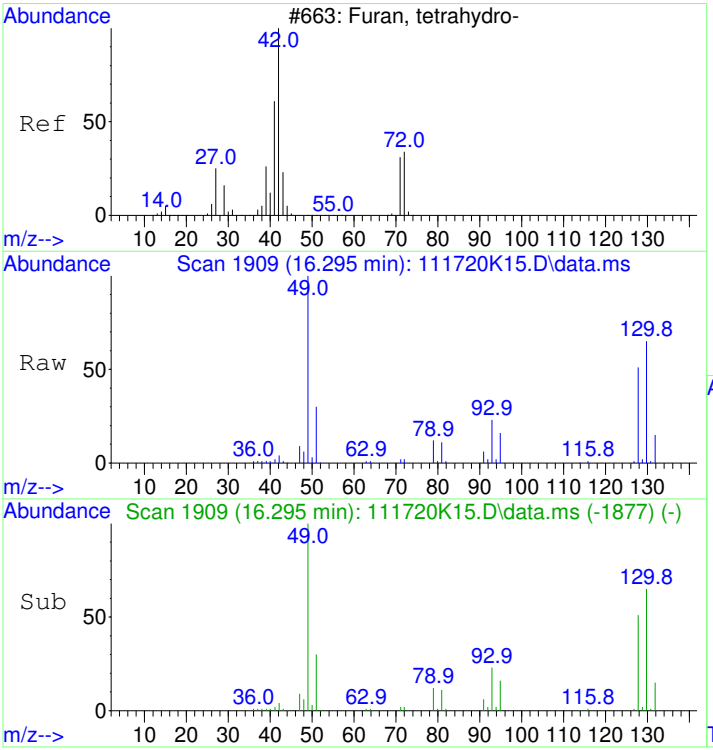
#24
cis-1,2-Dichloroethene
Concen: 48.12 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 61 Resp: 292883

Ion	Ratio	Lower	Upper
61	100		
96	79.0	57.6	97.6
98	0.0	0.0	20.0



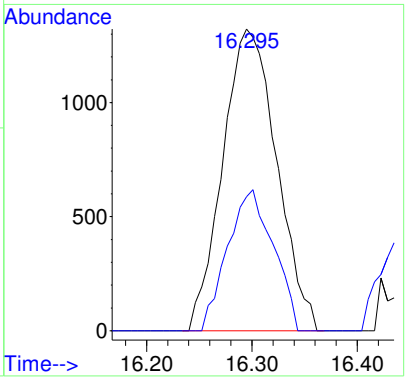
OC

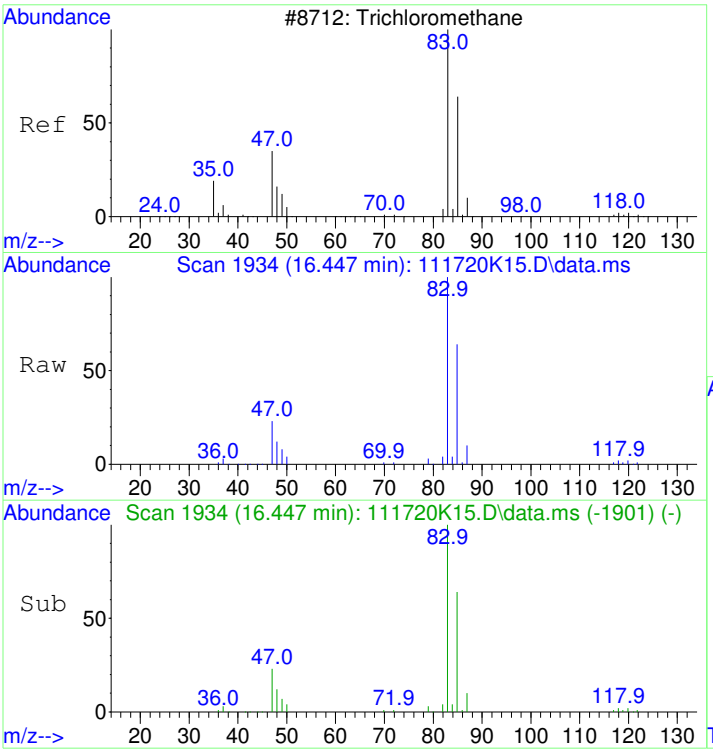


#27
Tetrahydrofuran
Concen: 0.76 ppbv
RT: 16.295 min Scan# 1909
Delta R.T. 0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 42 Resp: 4714

Ion	Ratio	Lower	Upper
42	100		
72	39.6	23.2	63.2

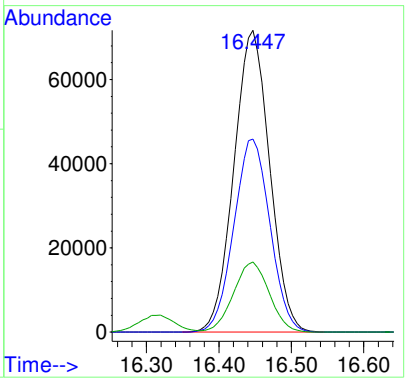




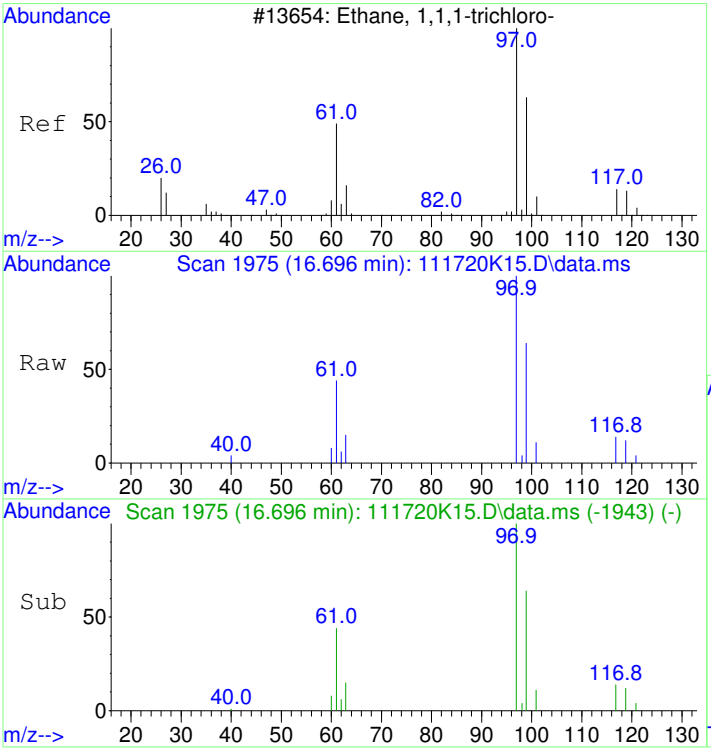
#28
Chloroform
Concen: 28.93 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 83 Resp: 246078

Ion	Ratio	Lower	Upper
83	100		
85	64.6	45.5	85.5
47	22.5	1.4	41.4



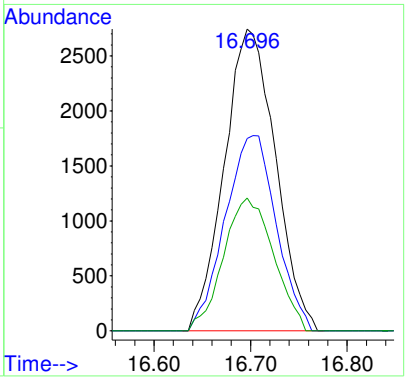
OC

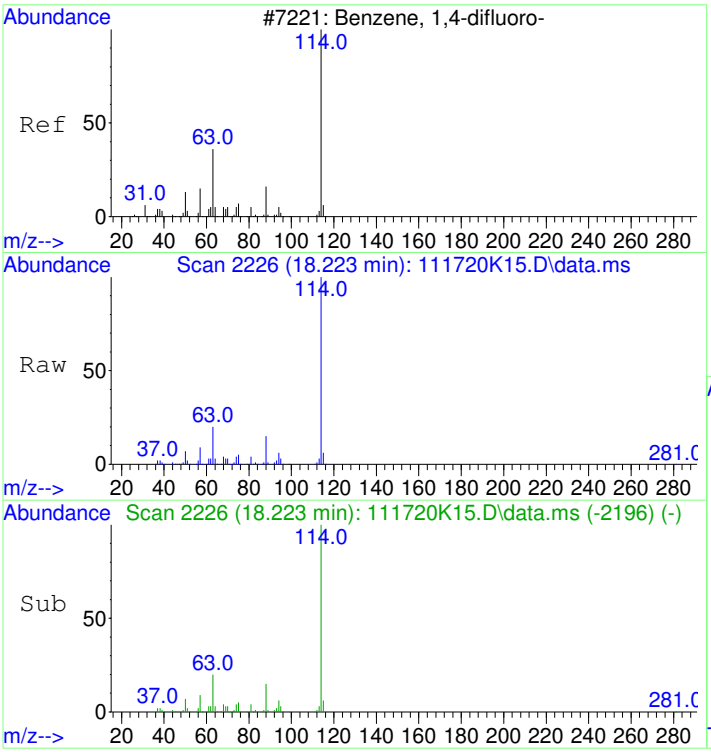


#30
1,1,1-Trichloroethane
Concen: 1.22 ppbv
RT: 16.696 min Scan# 1975
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 97 Resp: 10105

Ion	Ratio	Lower	Upper
97	100		
99	64.7	44.8	84.8
61	43.1	23.0	63.0

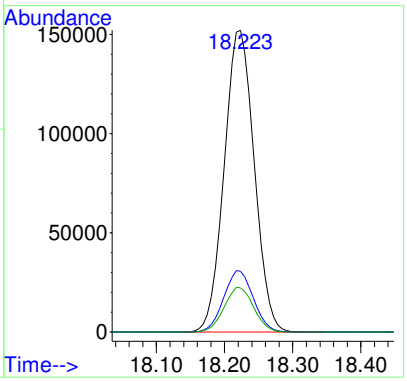


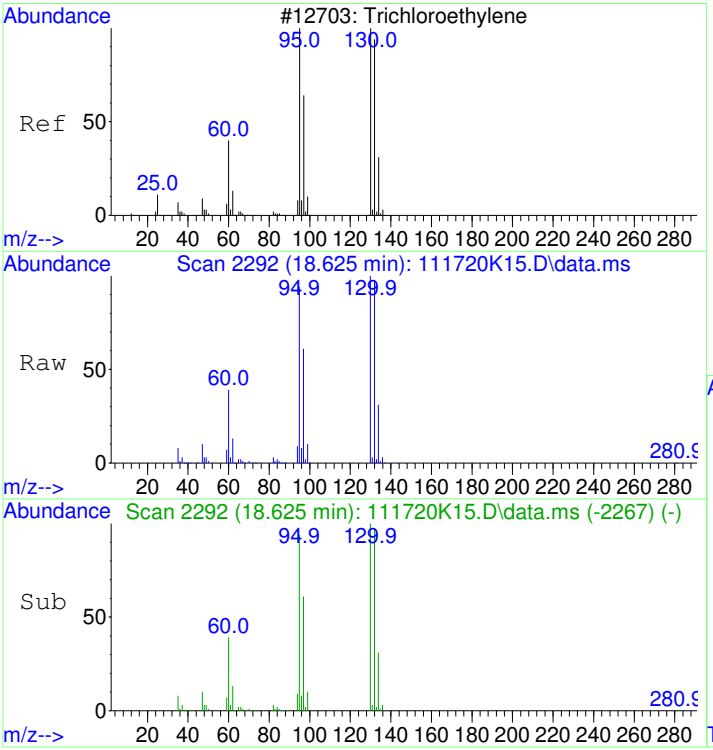


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion:114 Resp: 464989

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.6	0.0	34.7

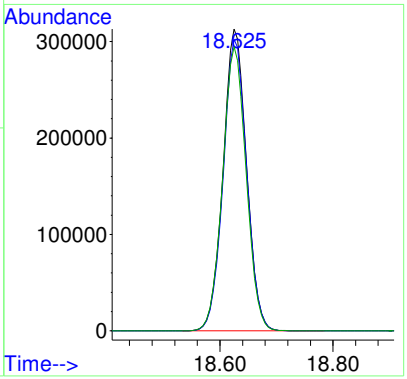




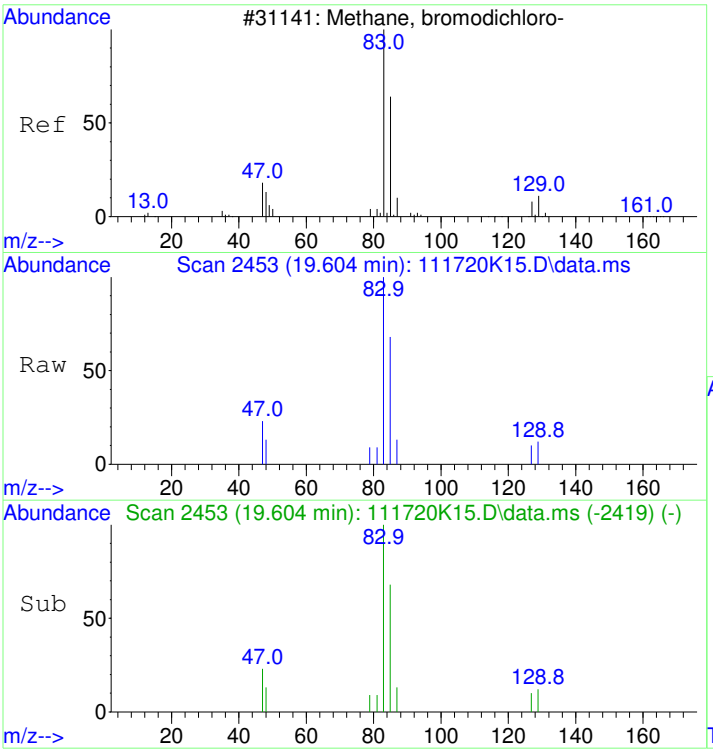
#37
Trichloroethene
Concen: 155.28 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion:130 Resp: 900967

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.3	116.3
95	94.6	74.0	114.0



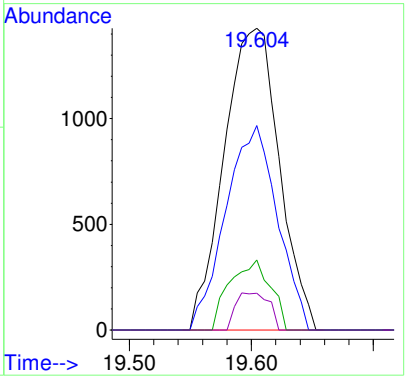
OC

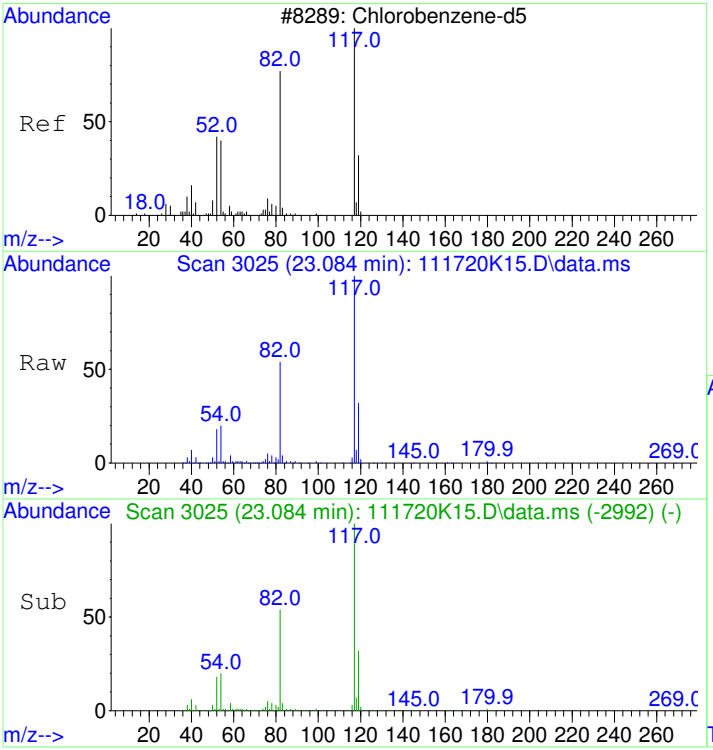


#40
Bromodichloromethane
Concen: 0.49 ppbv
RT: 19.604 min Scan# 2453
Delta R.T. 0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 83 Resp: 4493

Ion	Ratio	Lower	Upper
83	100		
85	63.3	43.8	83.8
47	17.1	0.0	38.3
129	7.4	0.0	30.9

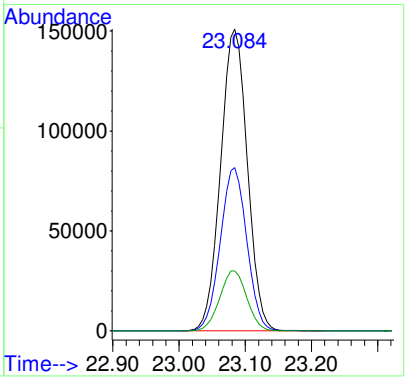


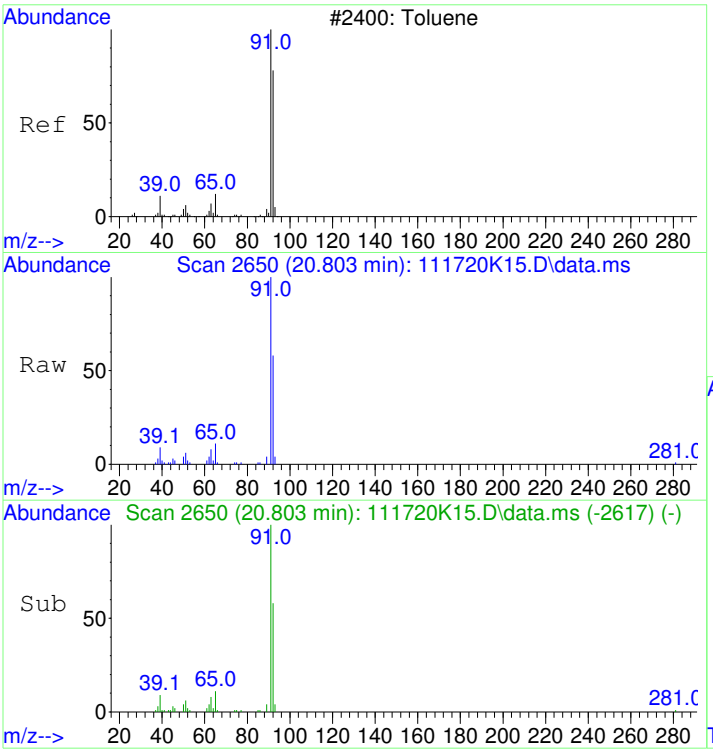


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion:117 Resp: 423719

Ion	Ratio	Lower	Upper
117	100		
82	53.6	32.3	72.3
54	20.1	0.0	38.6

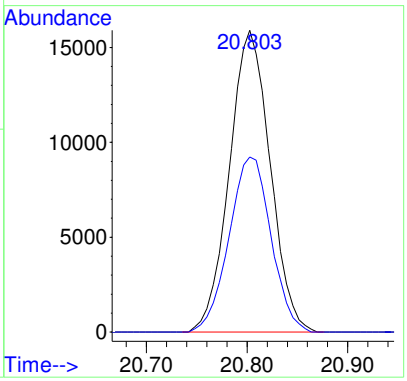


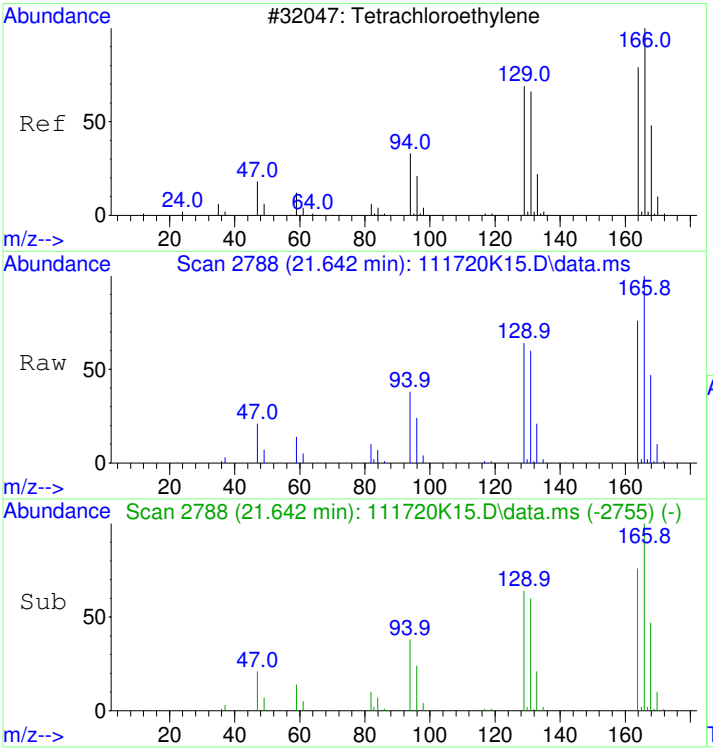


#44
Toluene
Concen: 2.66 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 91 Resp: 44702

Ion	Ratio	Lower	Upper
91	100		
92	59.7	40.8	80.8

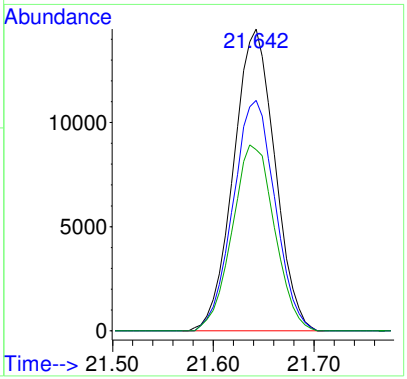


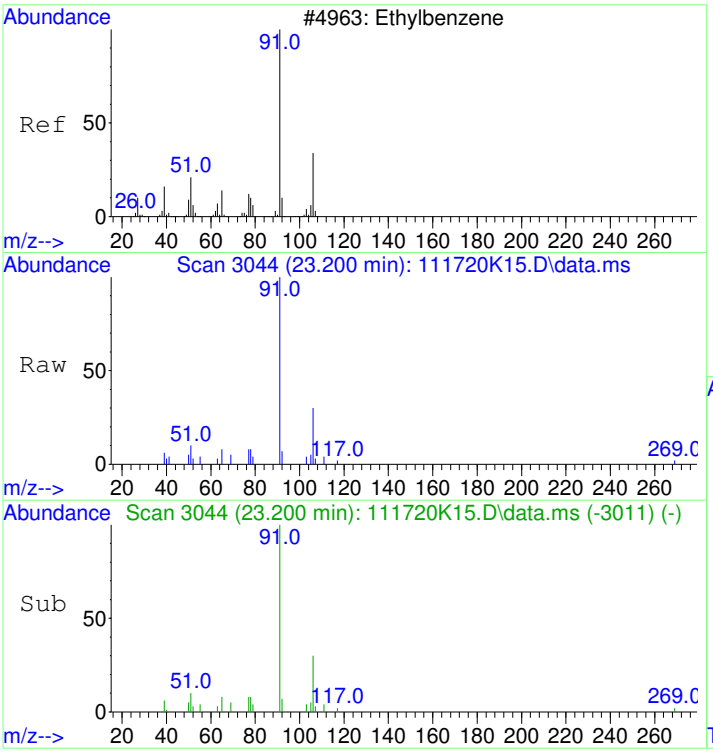


#47
Tetrachloroethene
Concen: 5.06 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion:166 Resp: 41336

Ion	Ratio	Lower	Upper
166	100		
164	77.7	57.8	97.8
131	63.0	44.1	84.1

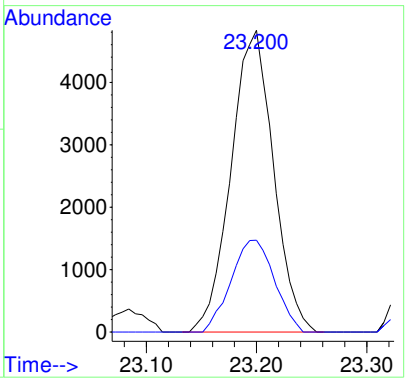


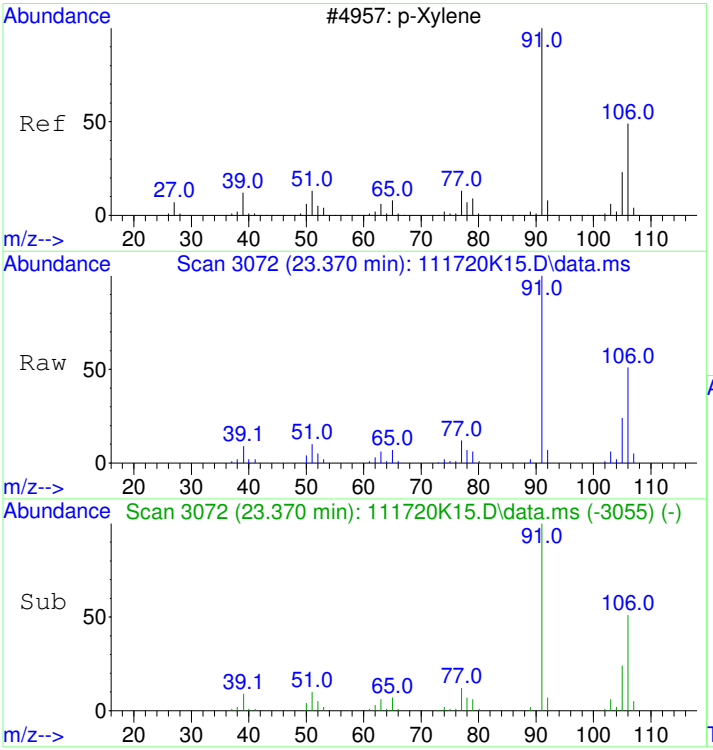


#52
Ethylbenzene
Concen: 0.59 ppbv
RT: 23.200 min Scan# 3044
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 91 Resp: 12987

Ion	Ratio	Lower	Upper
91	100		
106	31.1	11.8	51.8

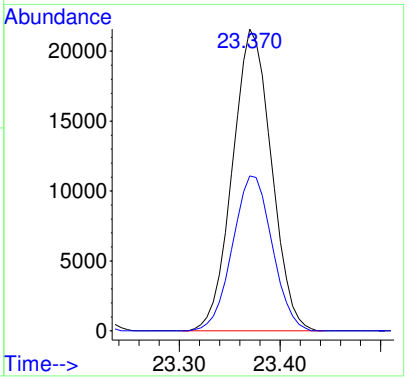


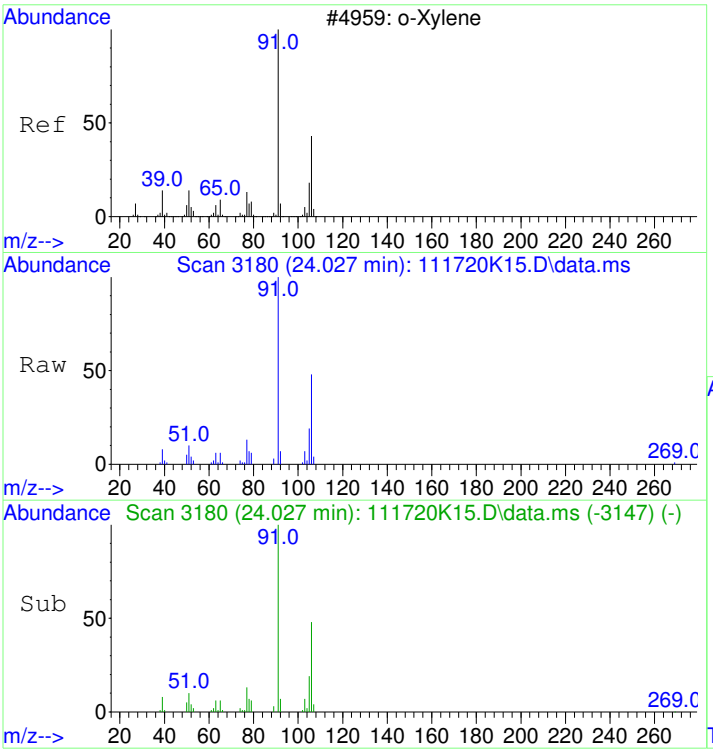


#53
m&p-Xylene
Concen: 3.48 ppbv
RT: 23.370 min Scan# 3072
Delta R.T. -0.006 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 91 Resp: 57966

Ion	Ratio	Lower	Upper
91	100		
106	52.3	33.1	73.1

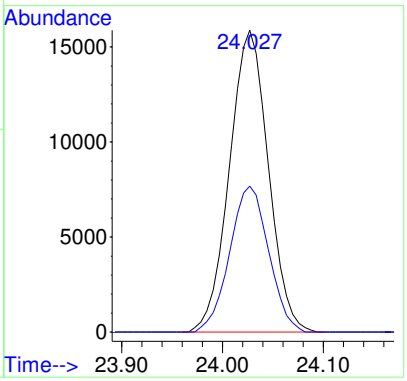




#54
o-Xylene
Concen: 2.48 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. -0.000 min
Lab File: 111720K15.D
Acq: 17 Nov 2020 11:03 pm

Tgt Ion: 91 Resp: 42566

Ion	Ratio	Lower	Upper
91	100		
106	48.4	29.9	69.9



2011024-06

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K16.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:56 pm
Operator : EM
Sample : 2011024-06
Misc : 200ml FG-006-3ft-G
ALS Vial : 12 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:48 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

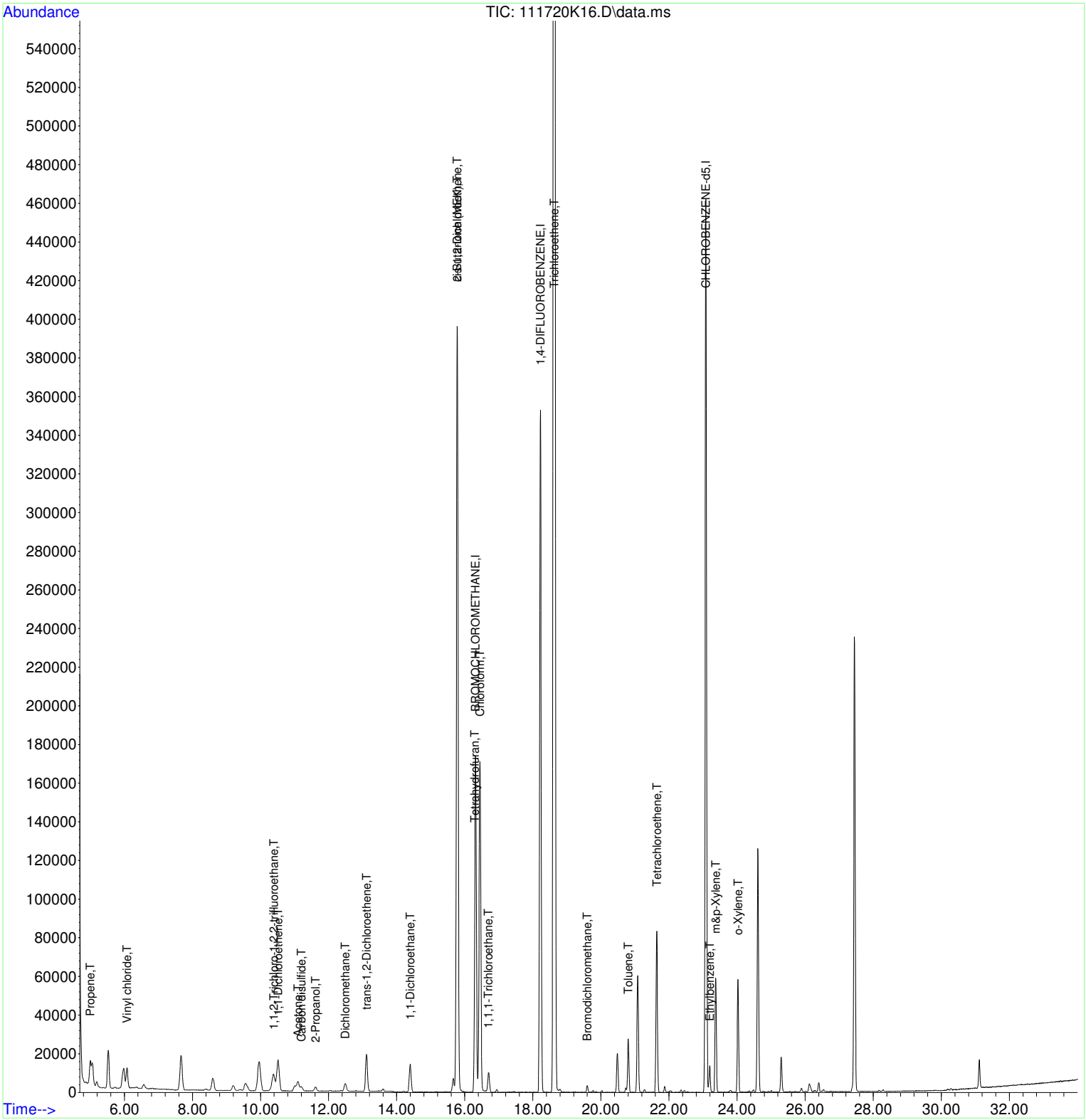
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)		
Internal Standards								
1) BROMOCHLOROMETHANE	16.313	49	157461	19.60	ppbv	0.00		
32) 1,4-DIFLUOROBENZENE	18.223	114	480962	19.60	ppbv	0.00		
43) CHLOROBENZENE-d5	23.084	117	432704	19.60	ppbv	0.00		
Target Compounds						Qvalue		
2) Propene	4.998	41	7626	1.55	ppbv	# 76		
6) Vinyl chloride	6.074	62	24233	4.61	ppbv	99		
12) 1,1,2-Trichloro-1,2,2-...	10.388	151	10722	1.49	ppbv	99		
13) 1,1-Dichloroethene	10.515	61	30087	4.37	ppbv	99		
14) Acetone	11.099	43	15095	2.14	ppbv	97		
15) Carbon disulfide	11.203	76	8036	0.60	ppbv	94		
16) 2-Propanol	11.616	45	6517	0.86	ppbv	85		
18) Dichloromethane	12.486	49	5741	0.98	ppbv	99		
20) trans-1,2-Dichloroethene	13.113	61	24020	3.59	ppbv	99		
22) 1,1-Dichloroethane	14.397	63	30137	3.45	ppbv	100		
24) cis-1,2-Dichloroethene	15.778	61	420645	66.71	ppbv	# 98	OC	
25) 2-Butanone (MEK)	15.778	72	2313	~~0.86~~	~~ppbv~~	# 1		AFTER Q DELETE
27) Tetrahydrofuran	16.295	42	3809	0.60	ppbv	91		
28) Chloroform	16.447	83	235494	26.72	ppbv	99	OC	
30) 1,1,1-Trichloroethane	16.696	97	13149	1.54	ppbv	99		
37) Trichloroethene	18.625	130	1354610	225.71	ppbv	99	OC	
40) Bromodichloromethane	19.598	83	4311	0.46	ppbv	96		
44) Toluene	20.803	91	33088	1.93	ppbv	99		
47) Tetrachloroethene	21.642	166	44754	5.37	ppbv	99		
52) Ethylbenzene	23.194	91	16522	0.73	ppbv	98		
53) m&p-Xylene	23.370	91	55980	3.29	ppbv	98		
54) o-Xylene	24.027	91	56132	3.20	ppbv	98		

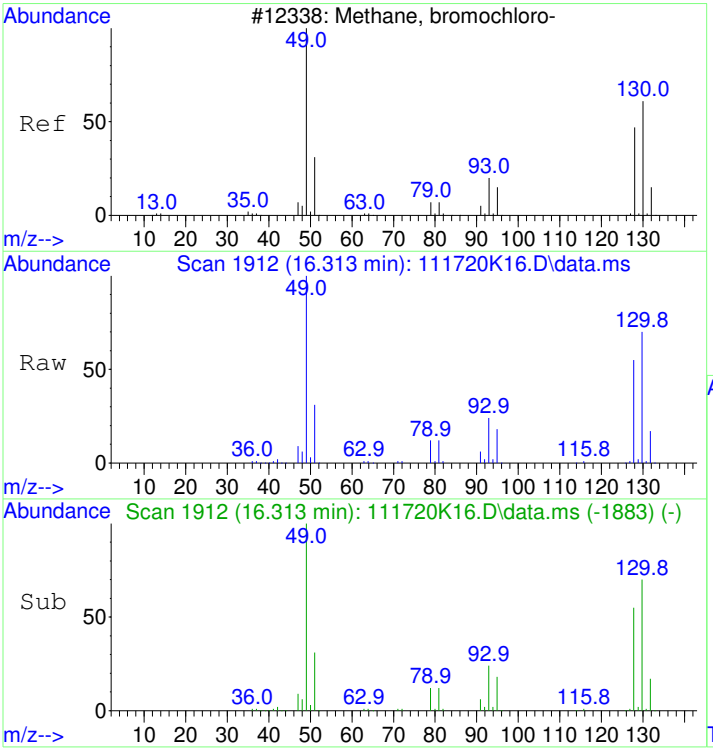
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 9:18 am, Nov 18, 2020

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K16.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:56 pm
Operator : EM
Sample : 2011024-06
Misc : 200ml FG-006-3ft-G
ALS Vial : 12 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:48 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

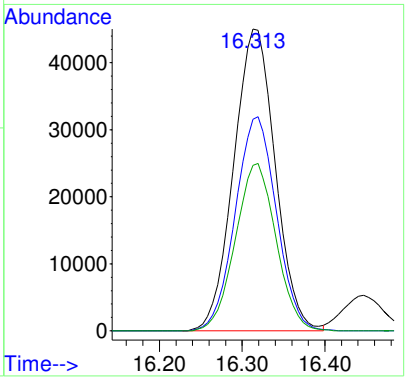


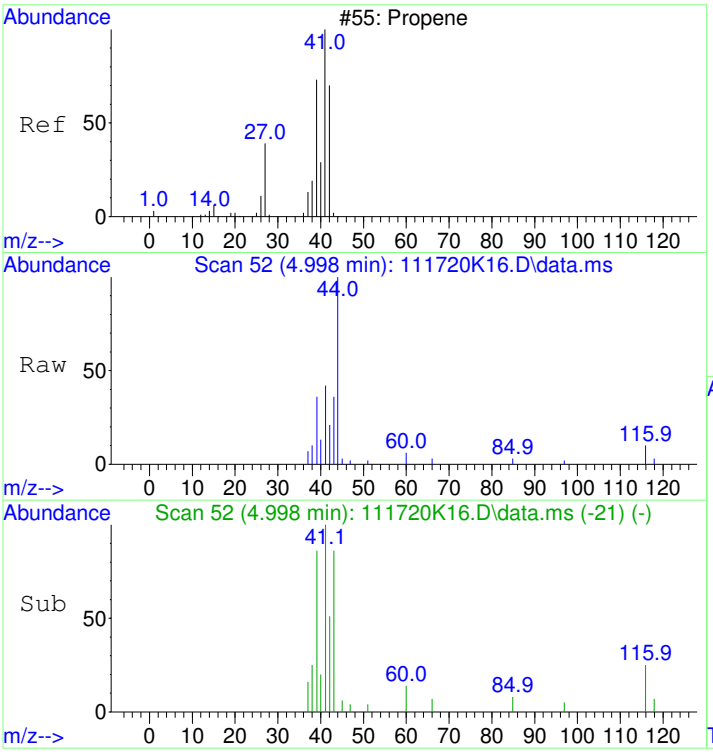


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 49 Resp: 157461

Ion	Ratio	Lower	Upper
49	100		
130	70.2	51.9	91.9
128	54.2	35.7	75.7

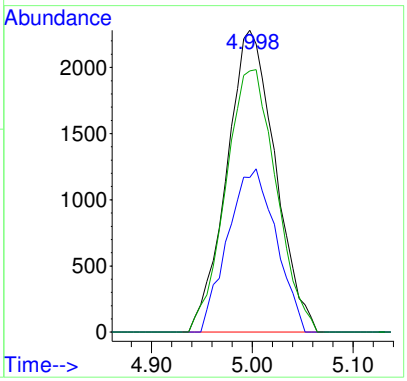


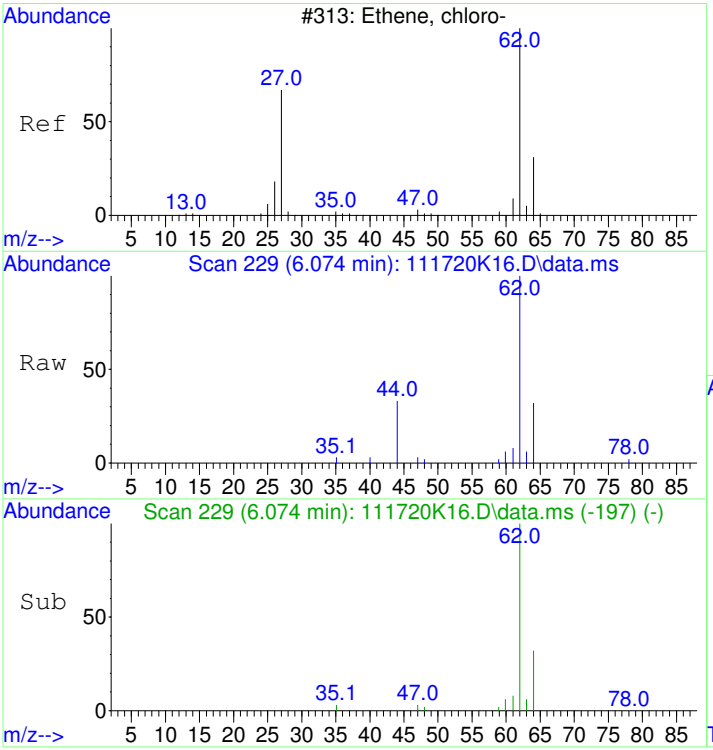


#2
Propene
Concen: 1.55 ppbv
RT: 4.998 min Scan# 52
Delta R.T. -0.012 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 41 Resp: 7626

Ion	Ratio	Lower	Upper
41	100		
42	53.7	47.3	87.3
39	90.4	46.1	86.1#

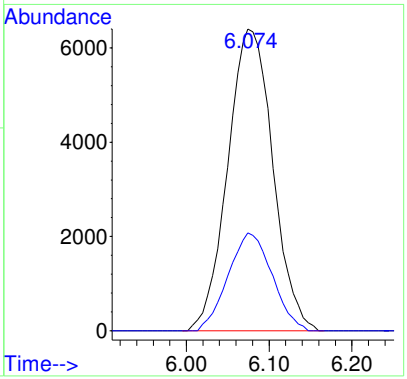


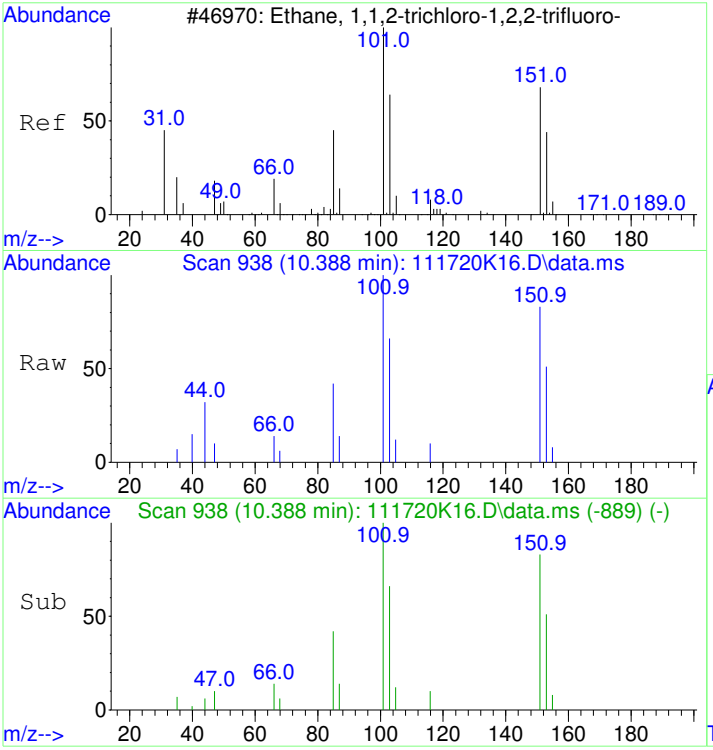


#6
Vinyl chloride
Concen: 4.61 ppbv
RT: 6.074 min Scan# 229
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 62 Resp: 24233

Ion	Ratio	Lower	Upper
62	100		
64	31.6	12.3	52.3

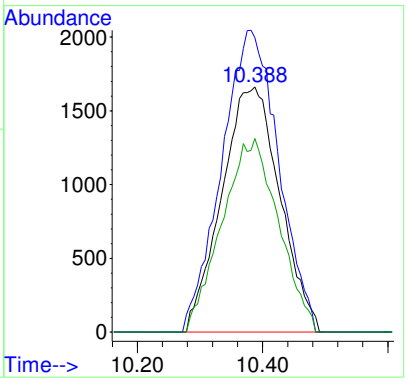


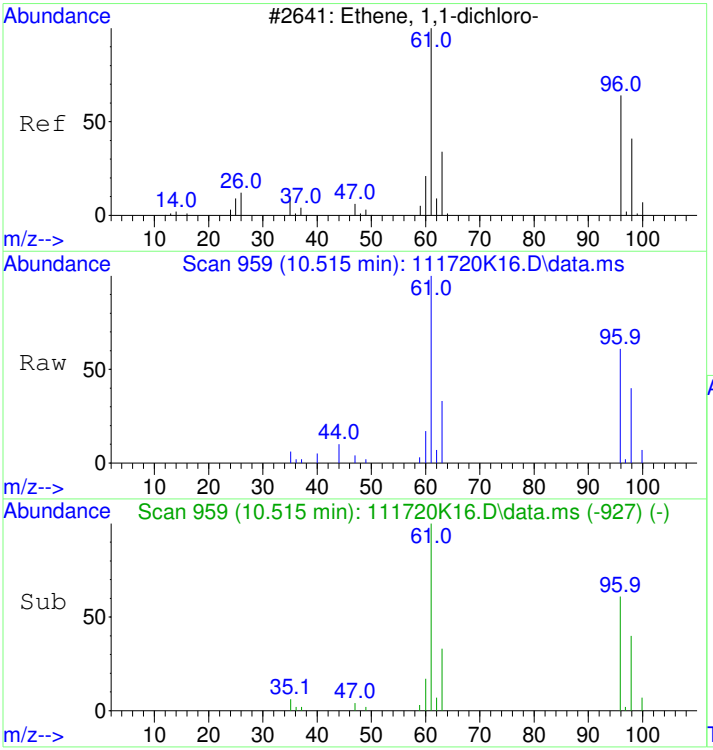


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.49 ppbv
RT: 10.388 min Scan# 938
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion:151 Resp: 10722

Ion	Ratio	Lower	Upper
151	100		
101	120.9	101.9	141.9
103	76.6	58.4	98.4

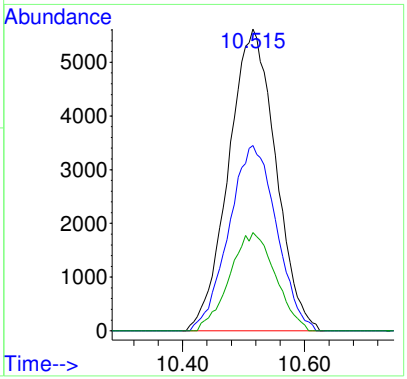


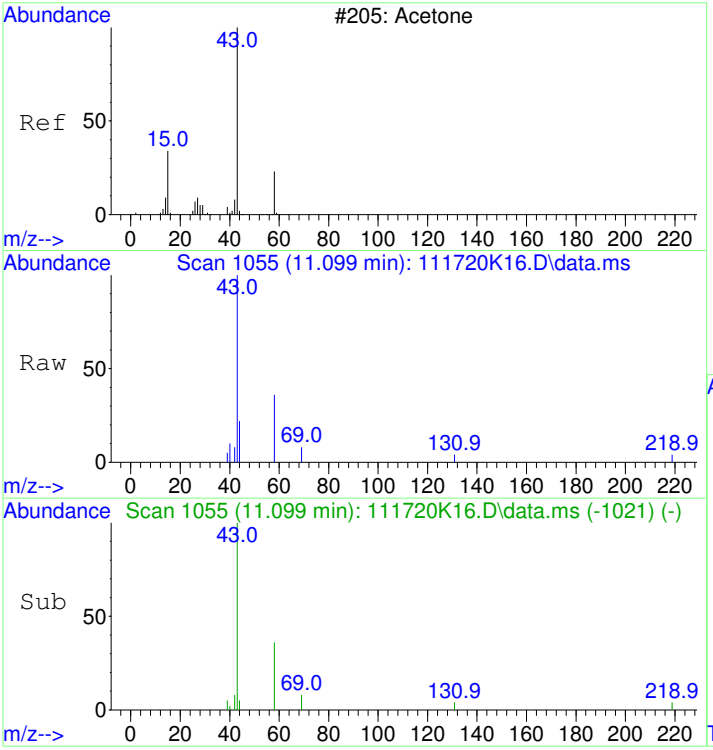


#13
1,1-Dichloroethene
Concen: 4.37 ppbv
RT: 10.515 min Scan# 959
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 61 Resp: 30087

Ion	Ratio	Lower	Upper
61	100		
96	62.2	43.5	83.5
63	31.7	12.1	52.1

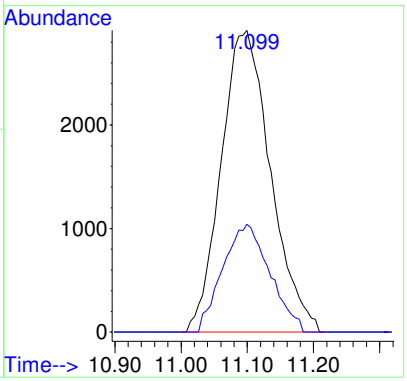


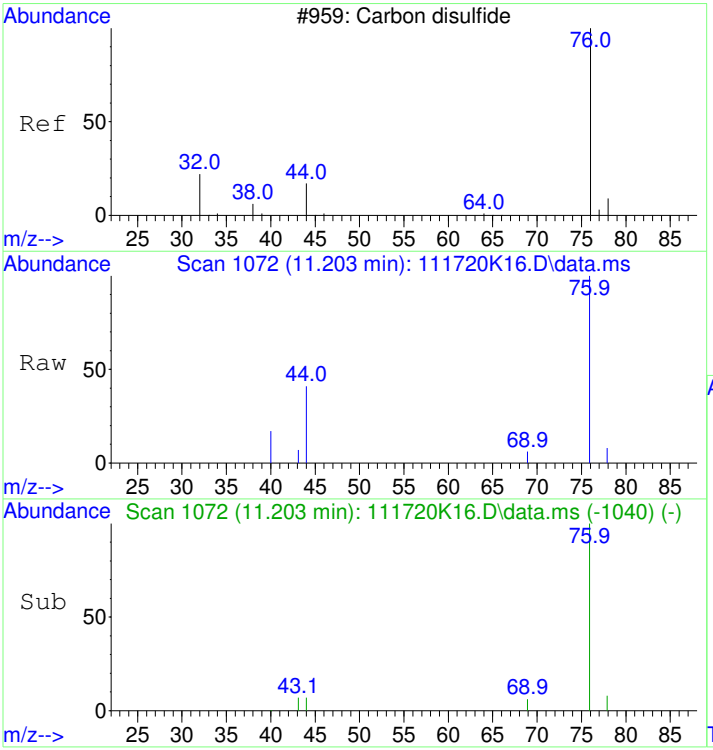


#14
Acetone
Concen: 2.14 ppbv
RT: 11.099 min Scan# 1055
Delta R.T. 0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 43 Resp: 15095

Ion	Ratio	Lower	Upper
43	100		
58	34.0	15.9	55.9

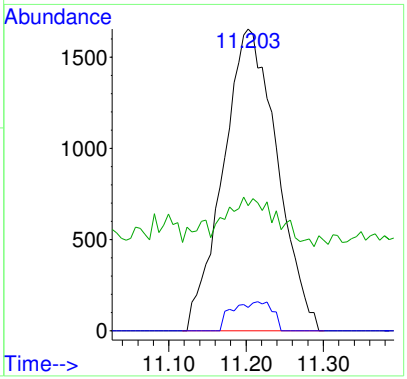


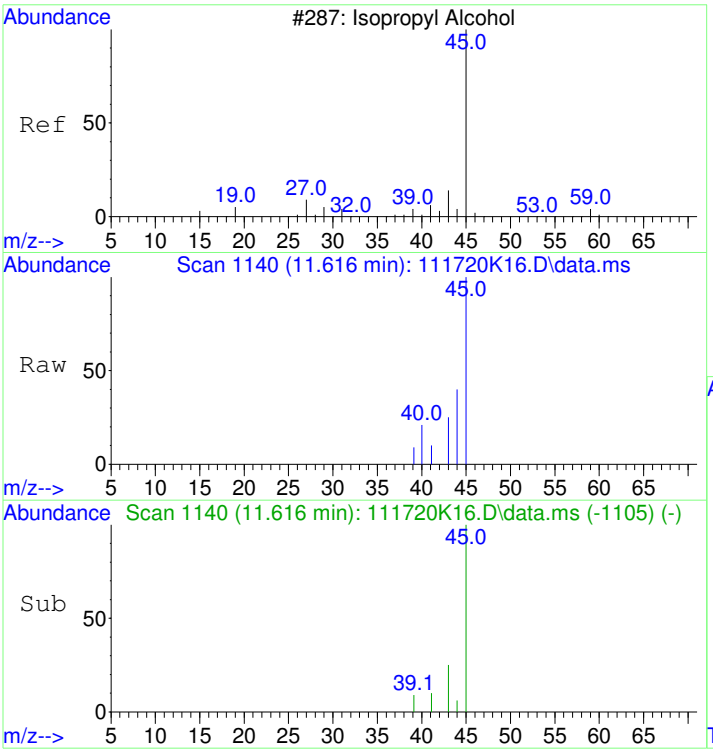


#15
Carbon disulfide
Concen: 0.60 ppbv
RT: 11.203 min Scan# 1072
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 76 Resp: 8036

Ion	Ratio	Lower	Upper
76	100		
78	7.1	0.0	29.0
44	12.7	0.0	30.1

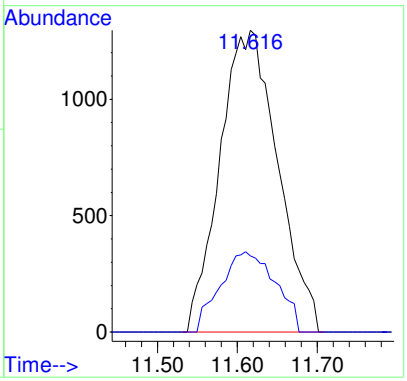


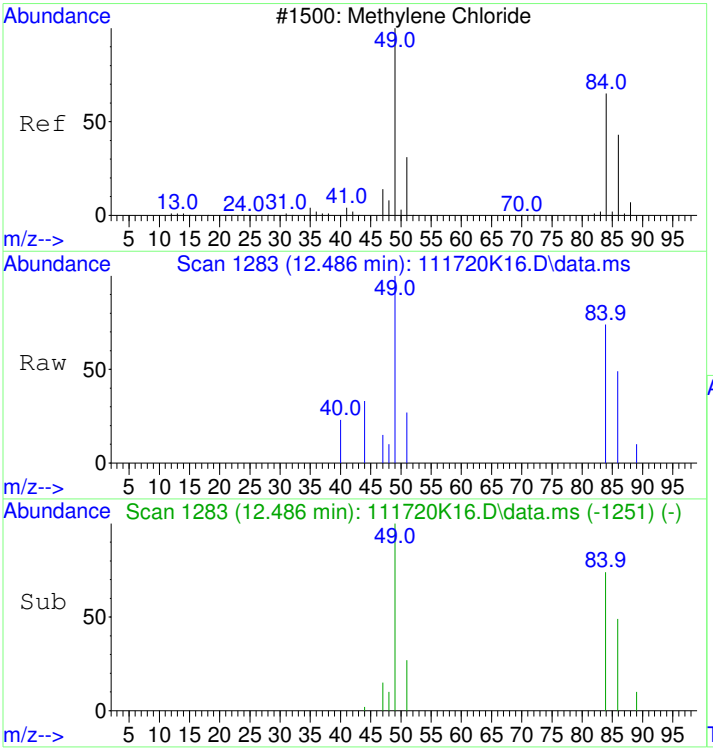


#16
2-Propanol
Concen: 0.86 ppbv
RT: 11.616 min Scan# 1140
Delta R.T. 0.012 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 45 Resp: 6517

Ion	Ratio	Lower	Upper
45	100		
43	25.4	0.0	38.7

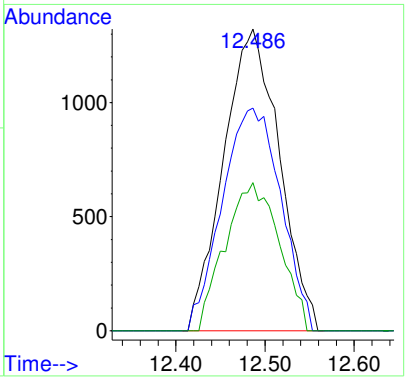


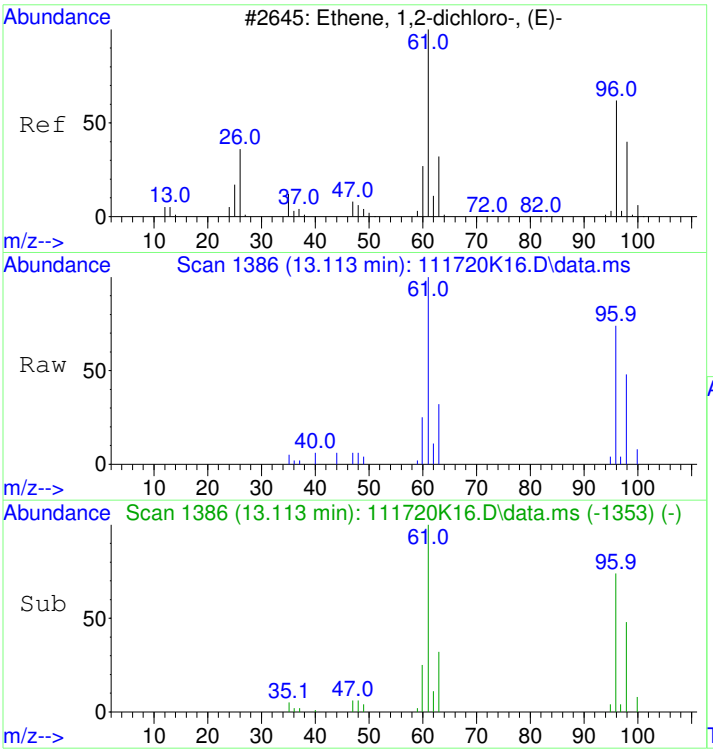


#18
Dichloromethane
Concen: 0.98 ppbv
RT: 12.486 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 49 Resp: 5741

Ion	Ratio	Lower	Upper
49	100		
84	77.6	57.4	97.4
86	47.7	29.7	69.7

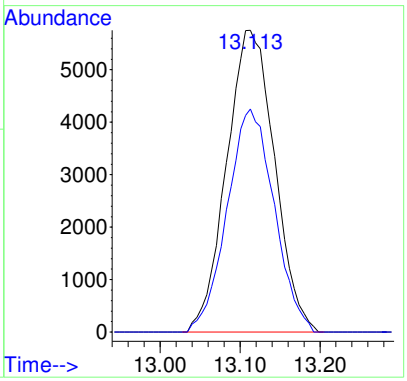


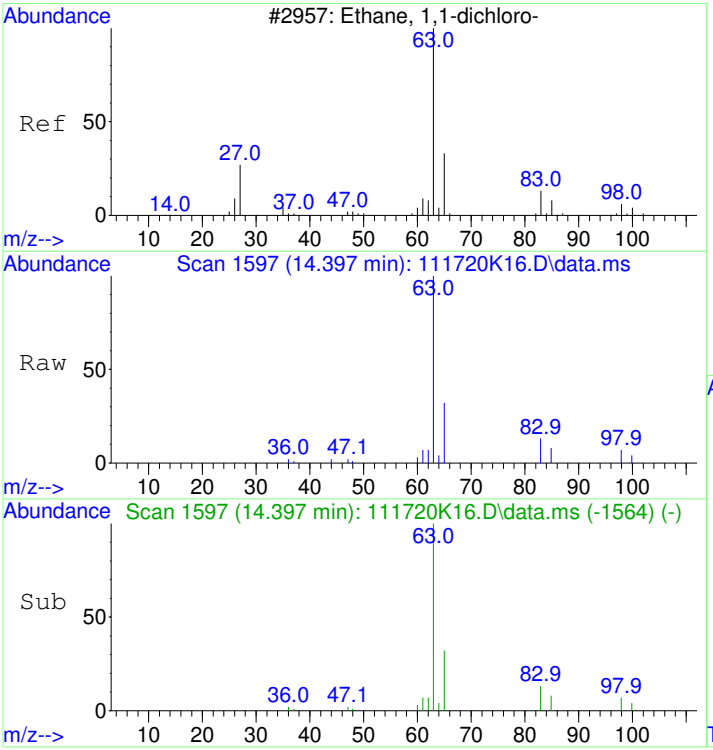


#20
trans-1,2-Dichloroethene
Concen: 3.59 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 61 Resp: 24020

Ion	Ratio	Lower	Upper
61	100		
96	72.3	52.8	92.8

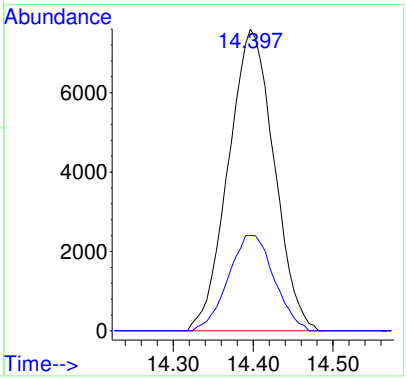


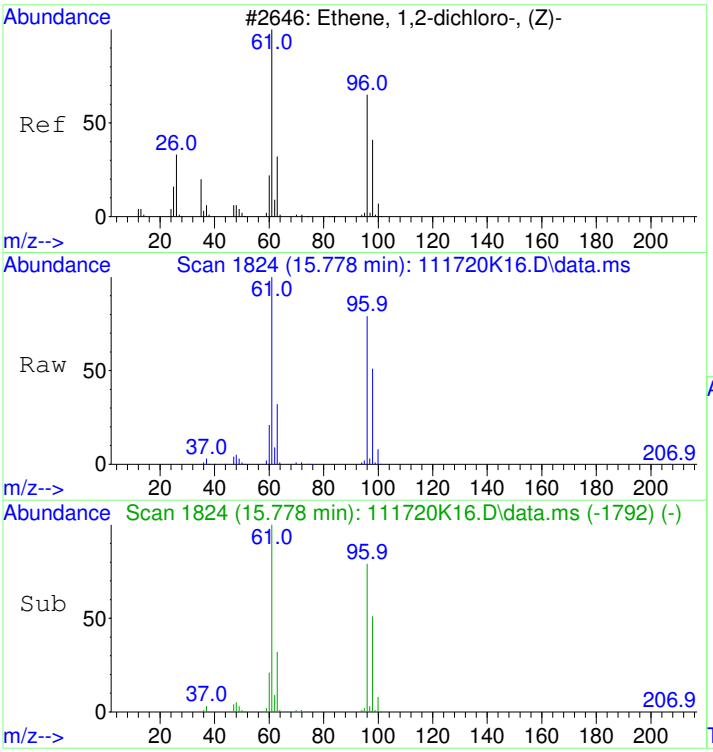


#22
1,1-Dichloroethane
Concen: 3.45 ppbv
RT: 14.397 min Scan# 1597
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 63 Resp: 30137

Ion	Ratio	Lower	Upper
63	100		
65	31.8	11.9	51.9

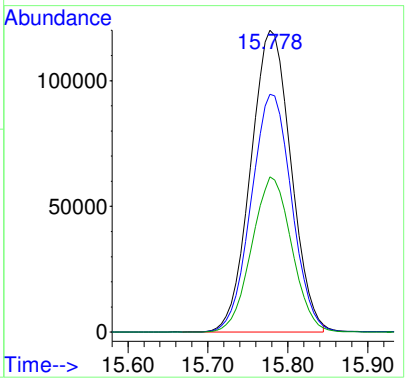




#24
cis-1,2-Dichloroethene
Concen: 66.71 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 61 Resp: 420645

Ion	Ratio	Lower	Upper
61	100		
96	79.0	57.6	97.6
98	0.0	0.0	20.0



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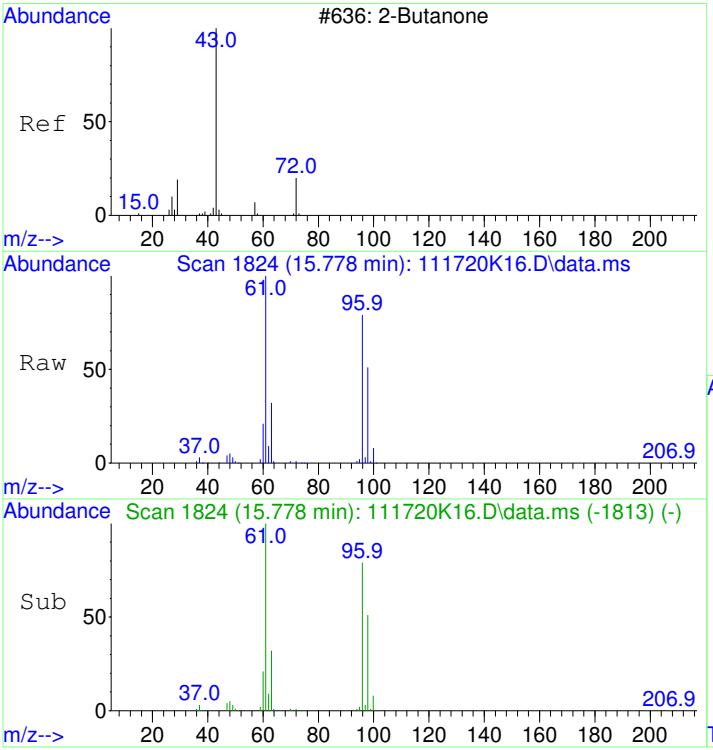
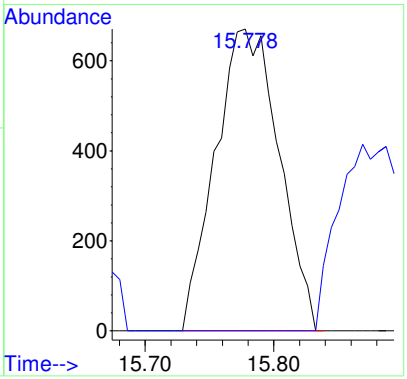


#25
2-Butanone (MEK)
Concen: 0.86 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.085 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 72 Resp: 2313

Ion	Ratio	Lower	Upper
72	100		
43	0.0	789.0	809.0#



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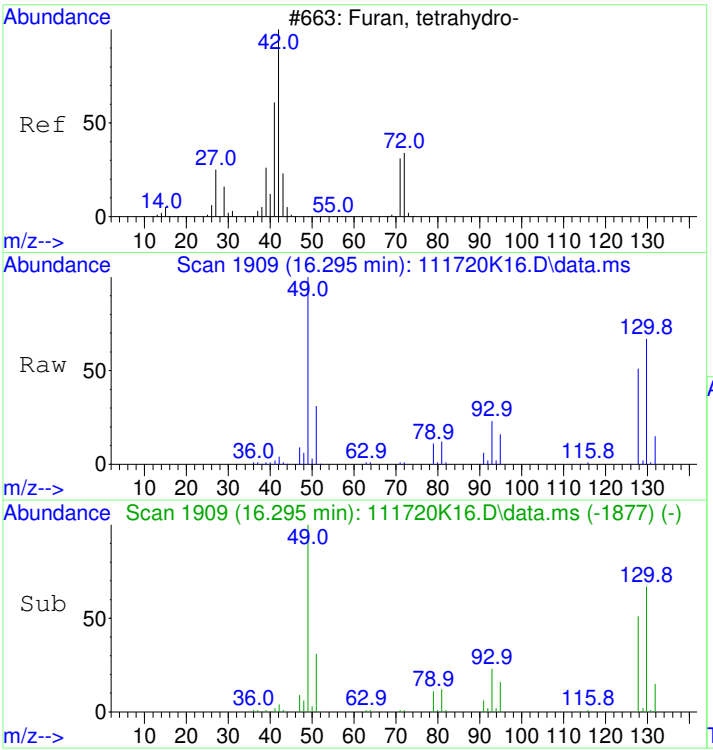
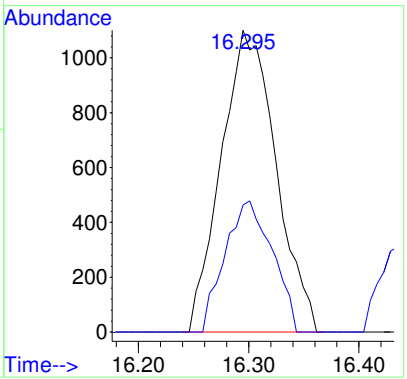
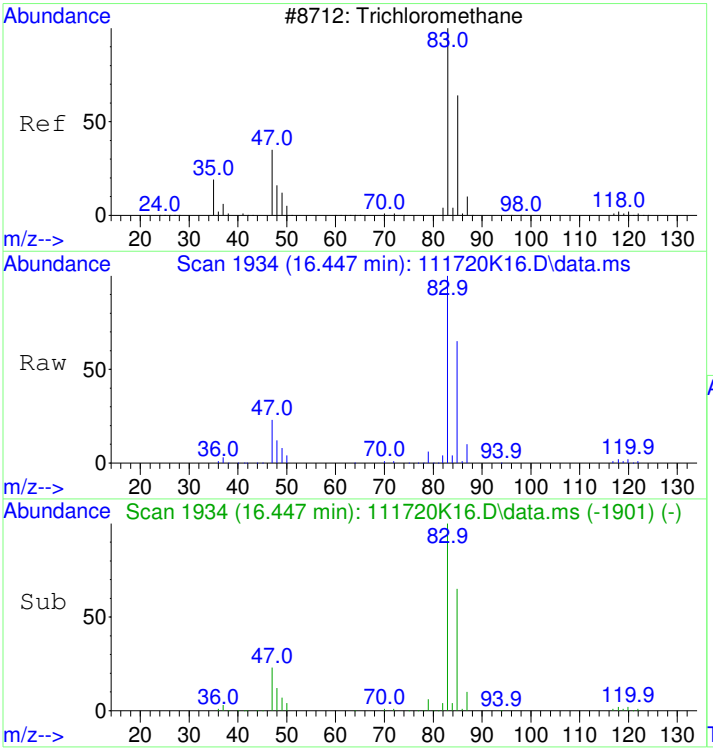


#27
Tetrahydrofuran
Concen: 0.60 ppbv
RT: 16.295 min Scan# 1909
Delta R.T. 0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 42 Resp: 3809

Ion	Ratio	Lower	Upper
42	100		
72	37.7	23.2	63.2

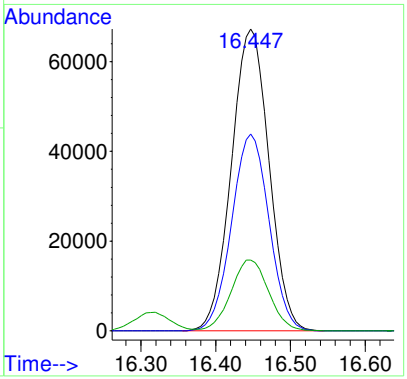




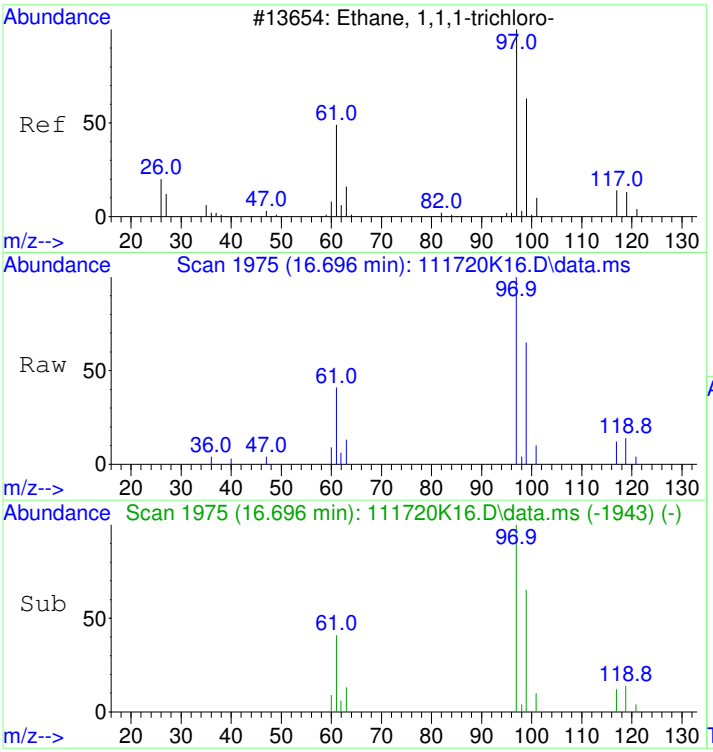
#28
Chloroform
Concen: 26.72 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 83 Resp: 235494

Ion	Ratio	Lower	Upper
83	100		
85	64.8	45.5	85.5
47	22.8	1.4	41.4



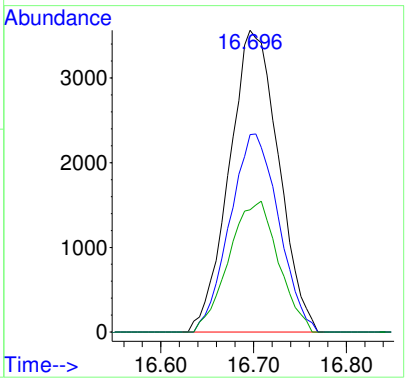
OC

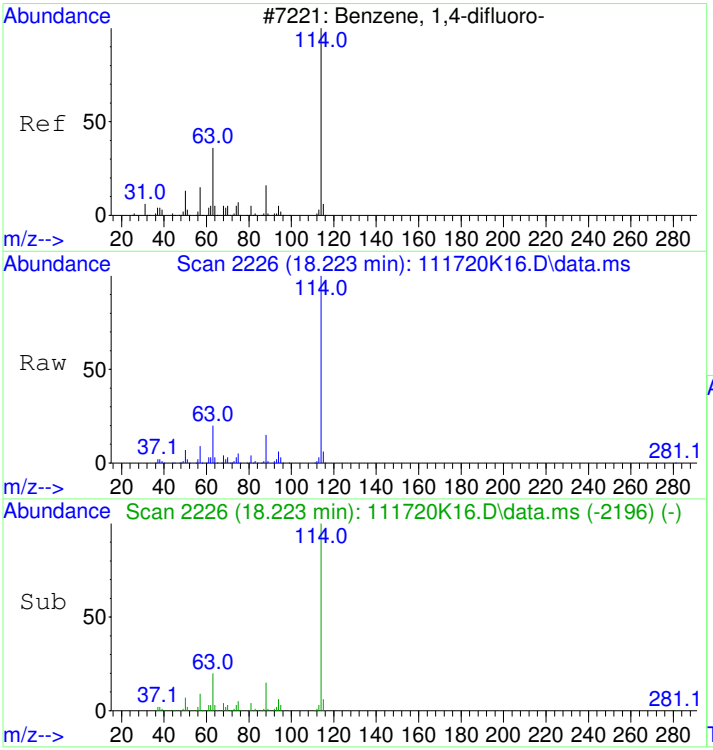


#30
1,1,1-Trichloroethane
Concen: 1.54 ppbv
RT: 16.696 min Scan# 1975
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 97 Resp: 13149

Ion	Ratio	Lower	Upper
97	100		
99	65.0	44.8	84.8
61	43.6	23.0	63.0

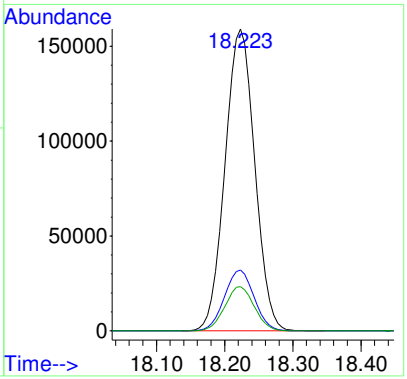


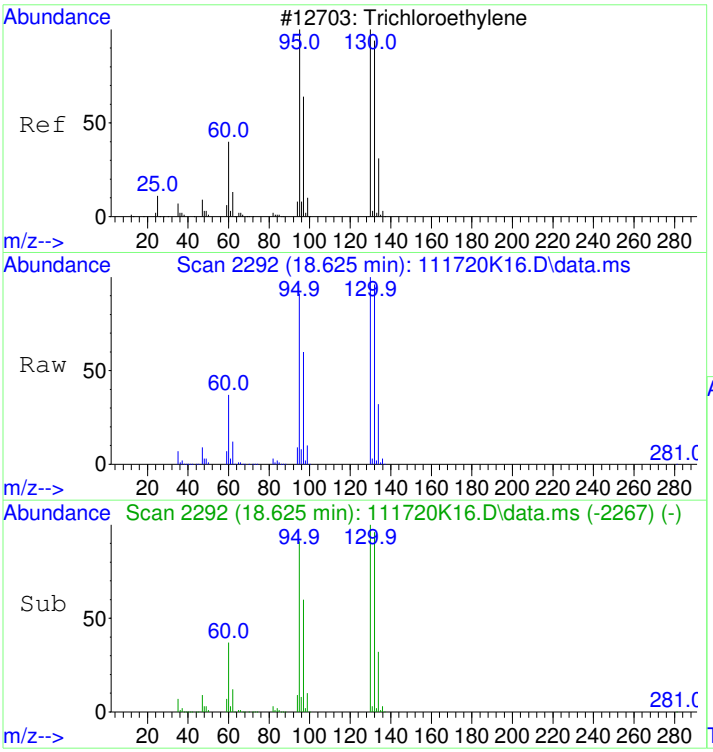


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion:114 Resp: 480962

Ion	Ratio	Lower	Upper
114	100		
63	20.1	0.0	39.5
88	14.5	0.0	34.7

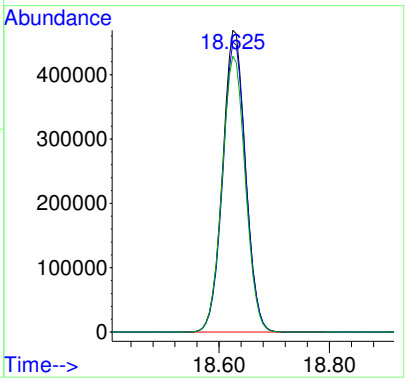




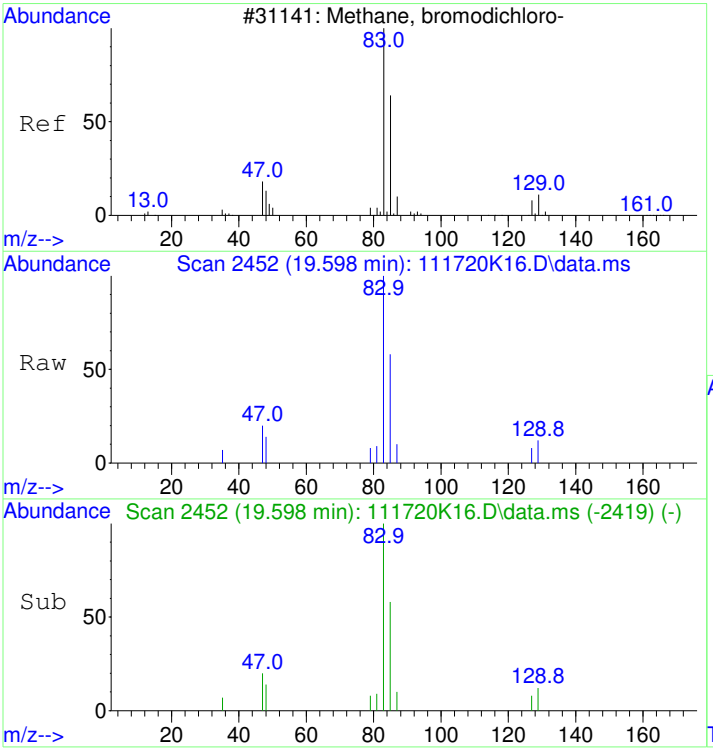
#37
Trichloroethene
Concen: 225.71 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion:130 Resp: 1354610

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.3	116.3
95	92.9	74.0	114.0



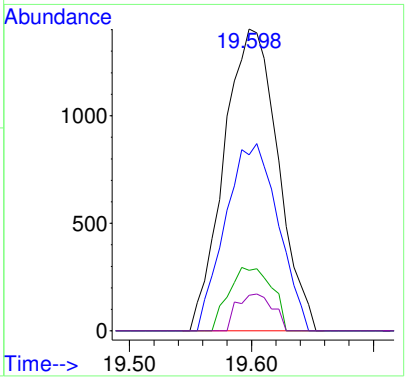
OC

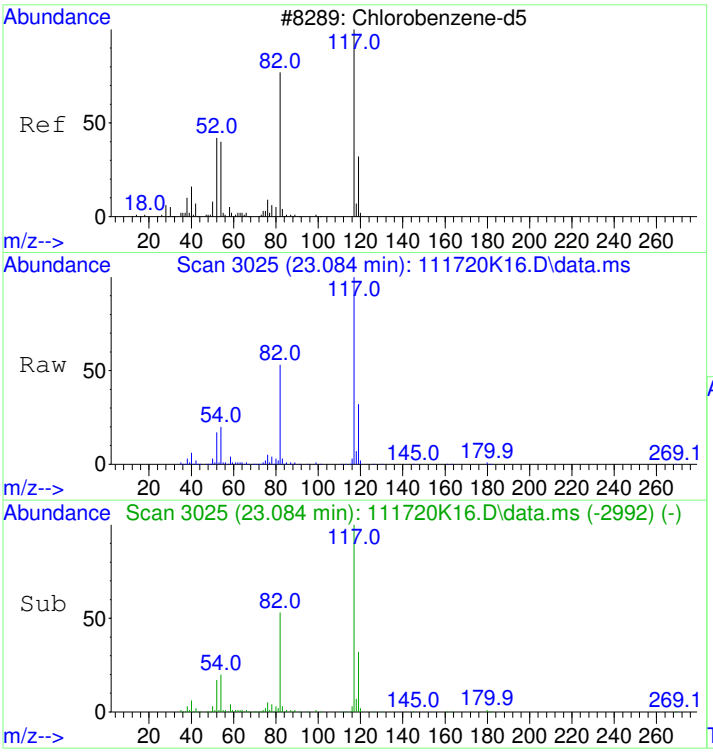


#40
Bromodichloromethane
Concen: 0.46 ppbv
RT: 19.598 min Scan# 2452
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 83 Resp: 4311

Ion	Ratio	Lower	Upper
83	100		
85	60.6	43.8	83.8
47	16.8	0.0	38.3
129	8.1	0.0	30.9

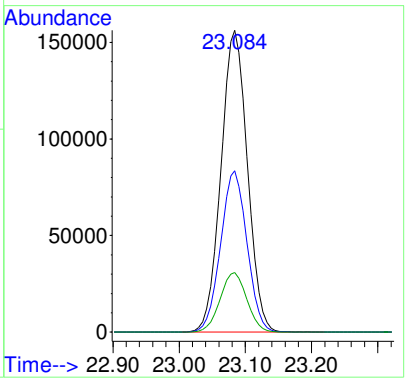


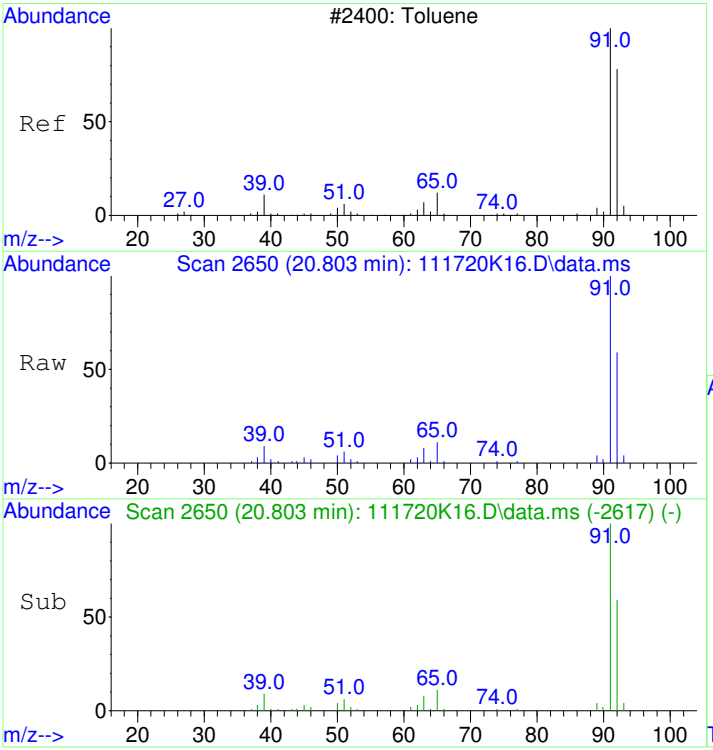


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion:117 Resp: 432704

Ion	Ratio	Lower	Upper
117	100		
82	53.2	32.3	72.3
54	19.9	0.0	38.6

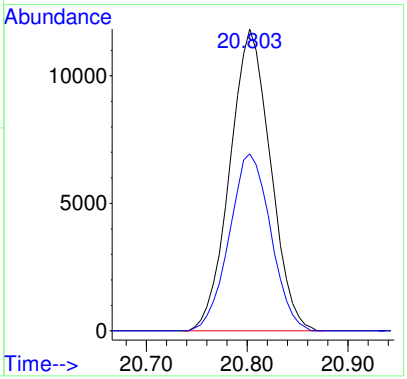


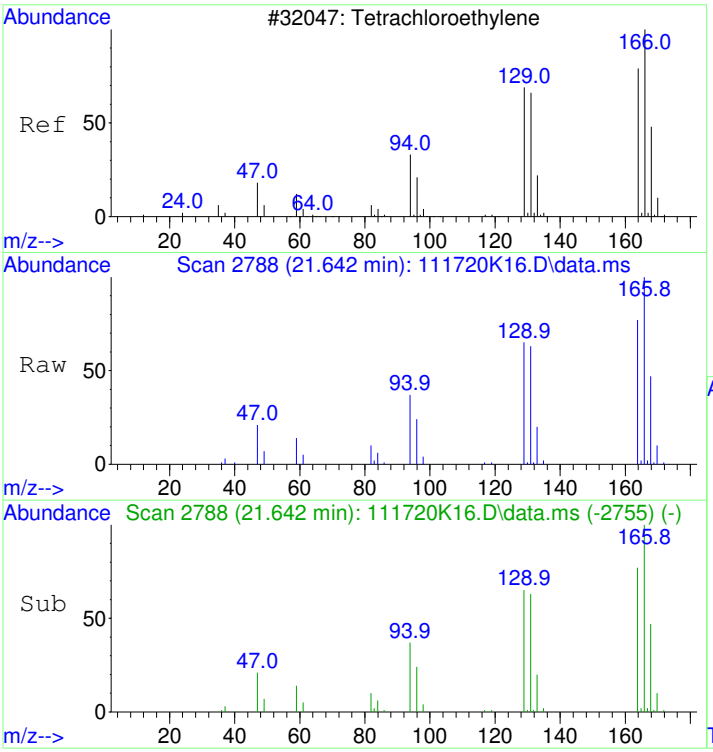


#44
Toluene
Concen: 1.93 ppbv
RT: 20.803 min Scan# 2650
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 91 Resp: 33088

Ion	Ratio	Lower	Upper
91	100		
92	60.0	40.8	80.8

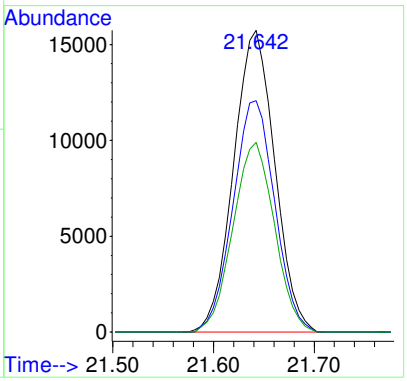


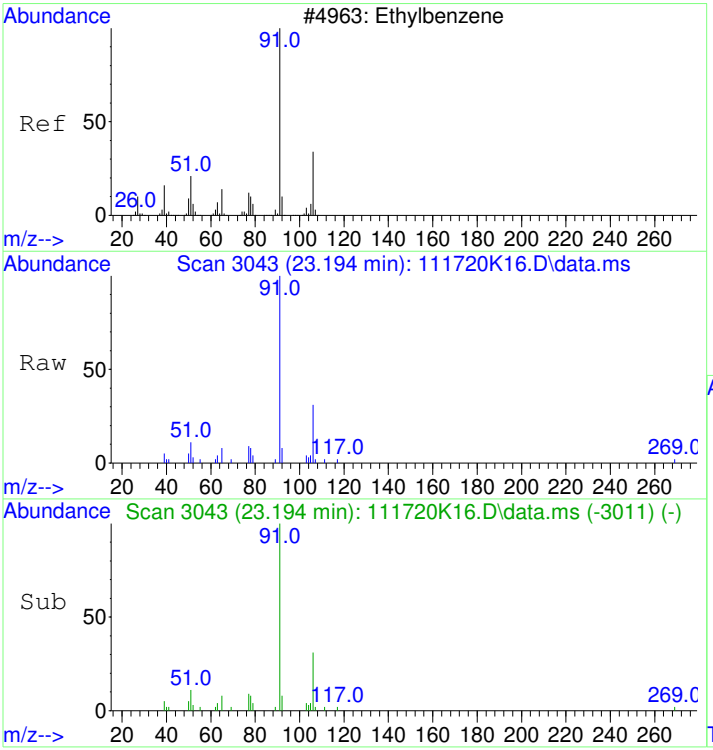


#47
Tetrachloroethene
Concen: 5.37 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion:166 Resp: 44754

Ion	Ratio	Lower	Upper
166	100		
164	77.7	57.8	97.8
131	63.2	44.1	84.1

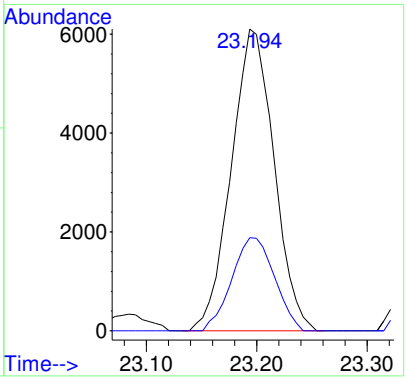


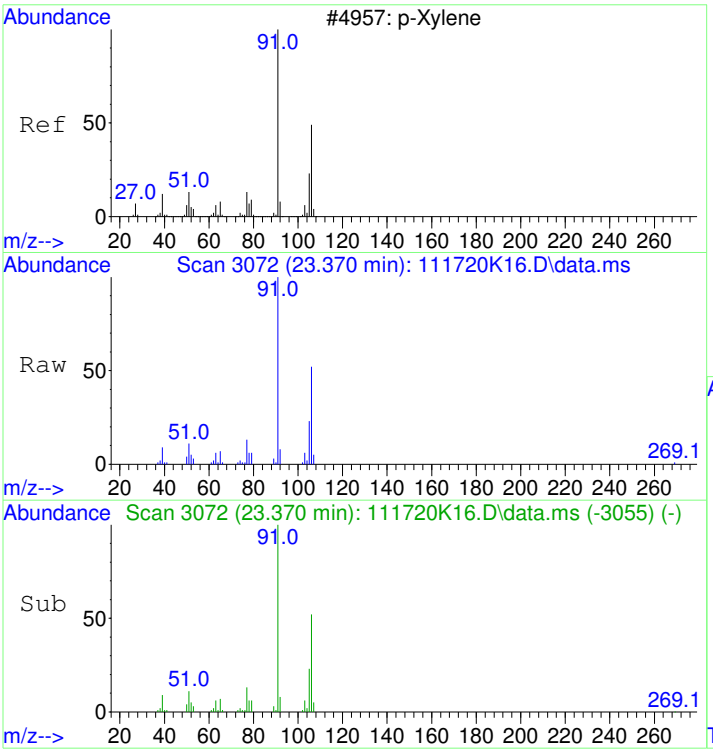


#52
Ethylbenzene
Concen: 0.73 ppbv
RT: 23.194 min Scan# 3043
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 91 Resp: 16522

Ion	Ratio	Lower	Upper
91	100		
106	30.8	11.8	51.8

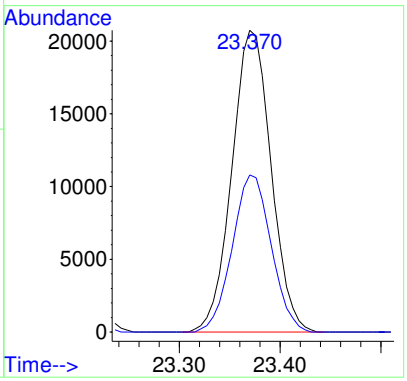


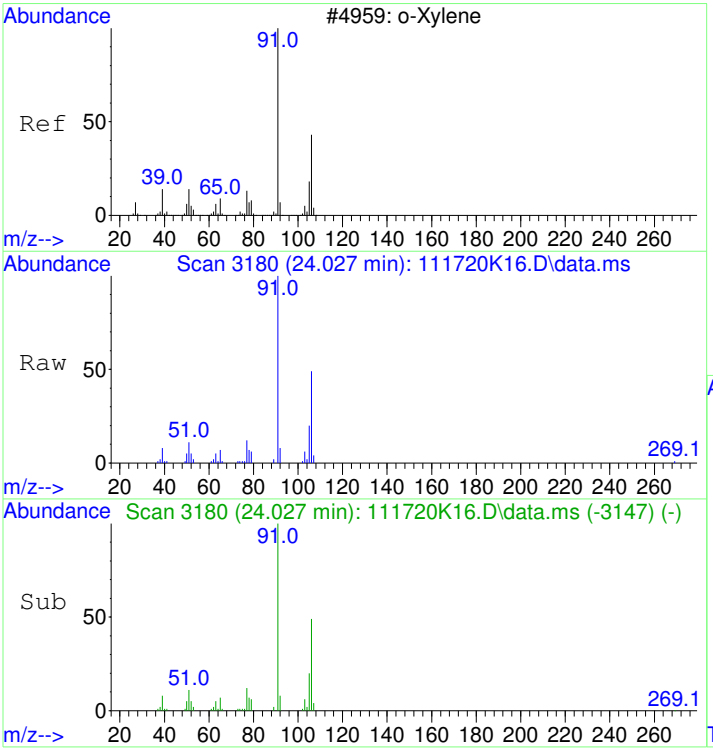


#53
m&p-Xylene
Concen: 3.29 ppbv
RT: 23.370 min Scan# 3072
Delta R.T. -0.006 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

Tgt Ion: 91 Resp: 55980

Ion	Ratio	Lower	Upper
91	100		
106	51.7	33.1	73.1

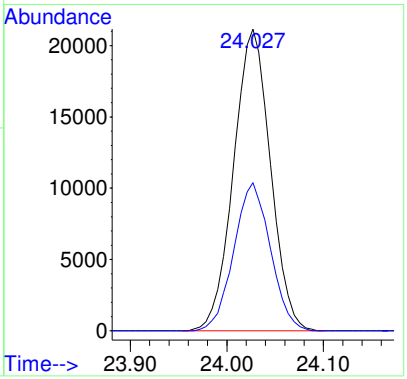




#54
o-Xylene
Concen: 3.20 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. -0.000 min
Lab File: 111720K16.D
Acq: 17 Nov 2020 11:56 pm

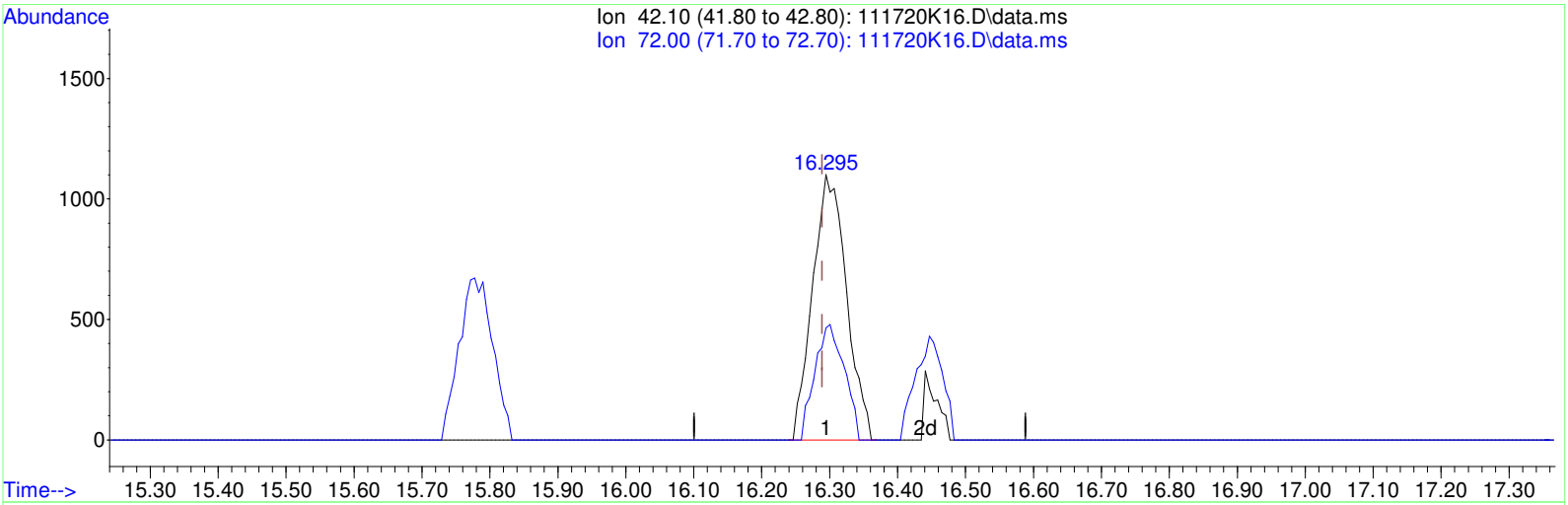
Tgt Ion: 91 Resp: 56132

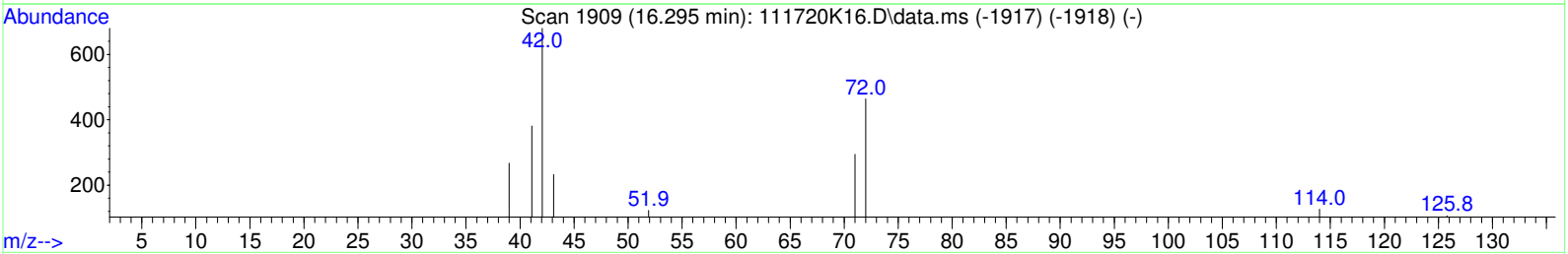
Ion	Ratio	Lower	Upper
91	100		
106	48.7	29.9	69.9

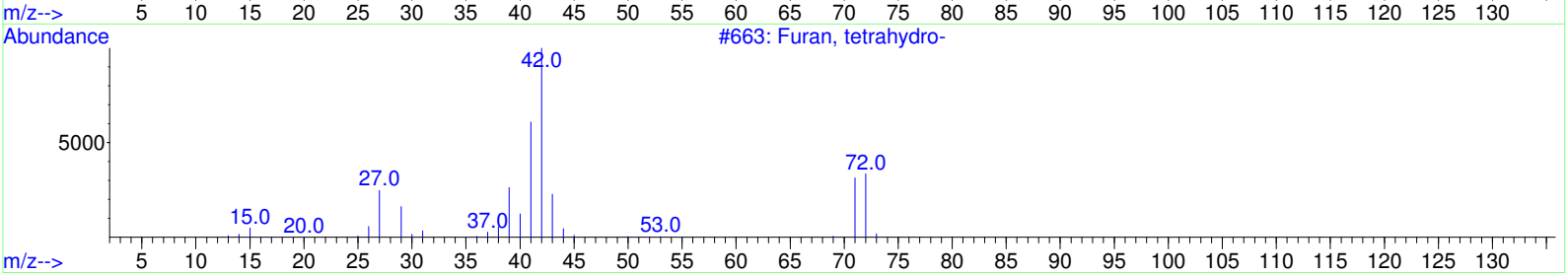


Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K16.D
InstName : HP5973K
Acq On : 17 Nov 2020 11:56 pm
Operator : EM
Sample : 2011024-06
Misc : 200ml FG-006-3ft-G
ALS Vial : 12 Sample Multiplier: 1.92

Quant Time: Nov 18 09:04:48 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration







TIC: 111720K16.D\data.ms

(27) Tetrahydrofuran (T)

16.295min (+ 0.006) 0.60 ppbv

response 3809

Ion	Exp%	Act%
42.10	100.00	100.00
72.00	43.20	37.70
0.00	0.00	0.00
0.00	0.00	0.00

S20K070-IBL2

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K17.D
InstName : HP5973K
Acq On : 18 Nov 2020 12:48 am
Operator : EM
Sample : S20K070-IBL2
Misc : 200ml IB
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 09:04:54 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	157635	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	488545	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	433665	19.60 ppbv	0.00

Target Compounds Qvalue

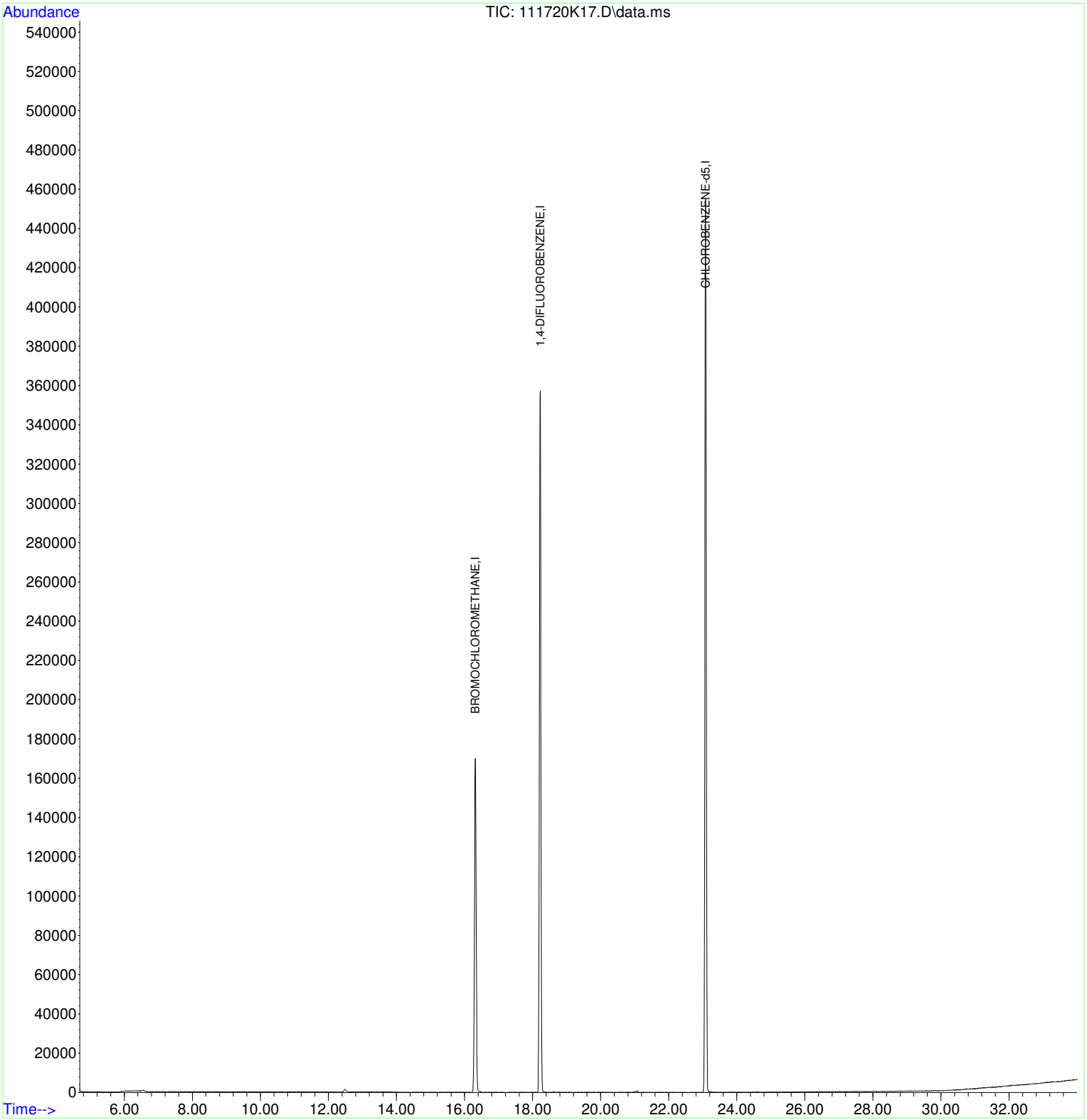
(#) = qualifier out of range (m) = manual integration (+) = signals summed

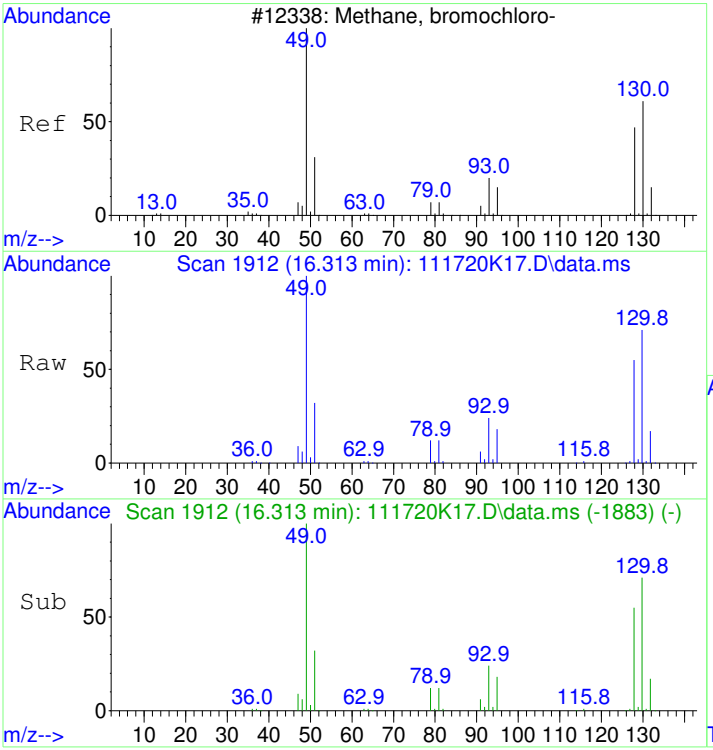
REVIEWED
By EM at 9:21 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K17.D
InstName : HP5973K
Acq On : 18 Nov 2020 12:48 am
Operator : EM
Sample : S20K070-IBL2
Misc : 200ml IB
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 09:04:54 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

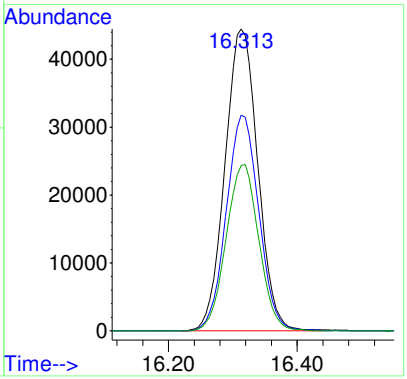


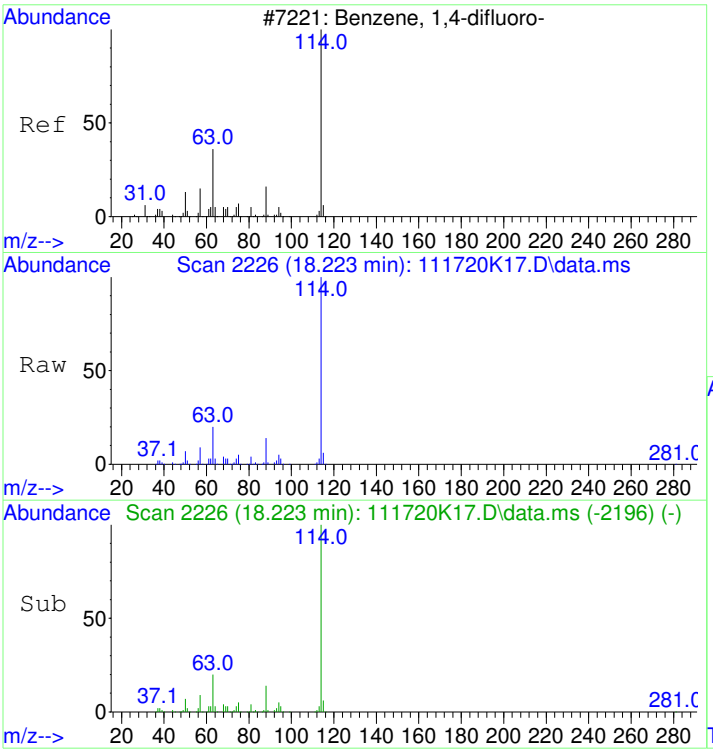


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K17.D
Acq: 18 Nov 2020 12:48 am

Tgt Ion: 49 Resp: 157635

Ion	Ratio	Lower	Upper
49	100		
130	70.8	51.9	91.9
128	54.4	35.7	75.7

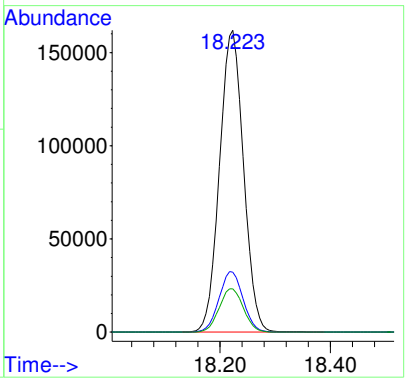


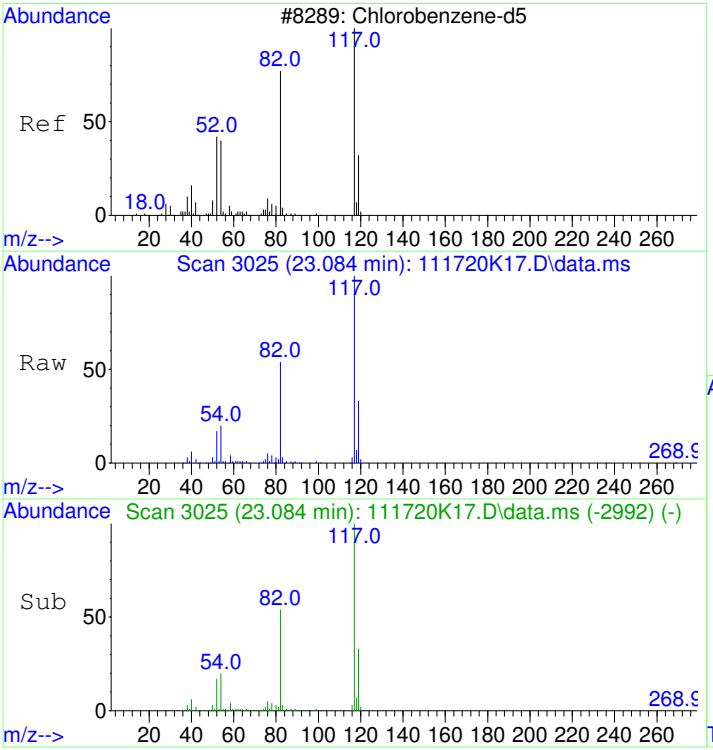


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K17.D
Acq: 18 Nov 2020 12:48 am

Tgt Ion:114 Resp: 488545

Ion	Ratio	Lower	Upper
114	100		
63	20.0	0.0	39.5
88	14.5	0.0	34.7

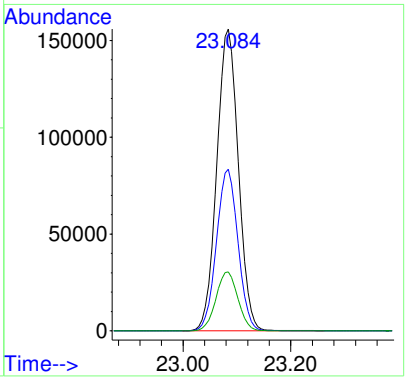




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K17.D
Acq: 18 Nov 2020 12:48 am

Tgt Ion:117 Resp: 433665

Ion	Ratio	Lower	Upper
117	100		
82	53.3	32.3	72.3
54	19.8	0.0	38.6



2011024-02RE1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K18.D
InstName : HP5973K
Acq On : 18 Nov 2020 1:37 am
Operator : EM
Sample : 2011024-02RE1
Misc : 40ml FG-033-3ft-G
ALS Vial : 22 Sample Multiplier: 1.9

report TCE

Quant Time: Nov 18 09:04:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	158097	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	485500	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	435227	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.099	43	7699	1.09	ppbv		97
24) cis-1,2-Dichloroethene	15.778	61	11552	1.82	ppbv	#	98
28) Chloroform	16.447	83	13712	1.55	ppbv		96
37) Trichloroethene	18.631	130	33843	5.59	ppbv		99
47) Tetrachloroethene	21.642	166	8062	0.96	ppbv		100

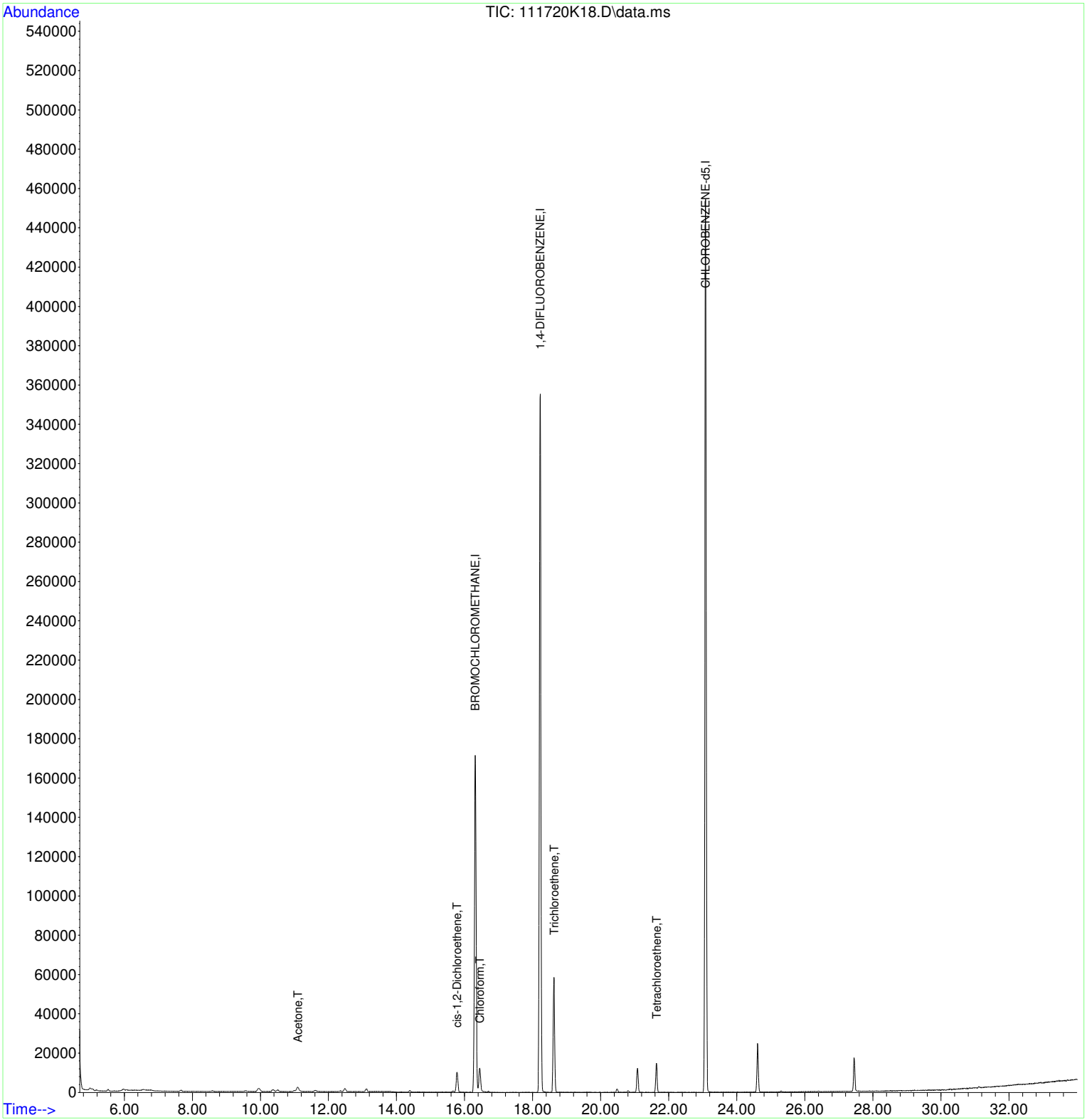
(#) = qualifier out of range (m) = manual integration (+) = signals summed

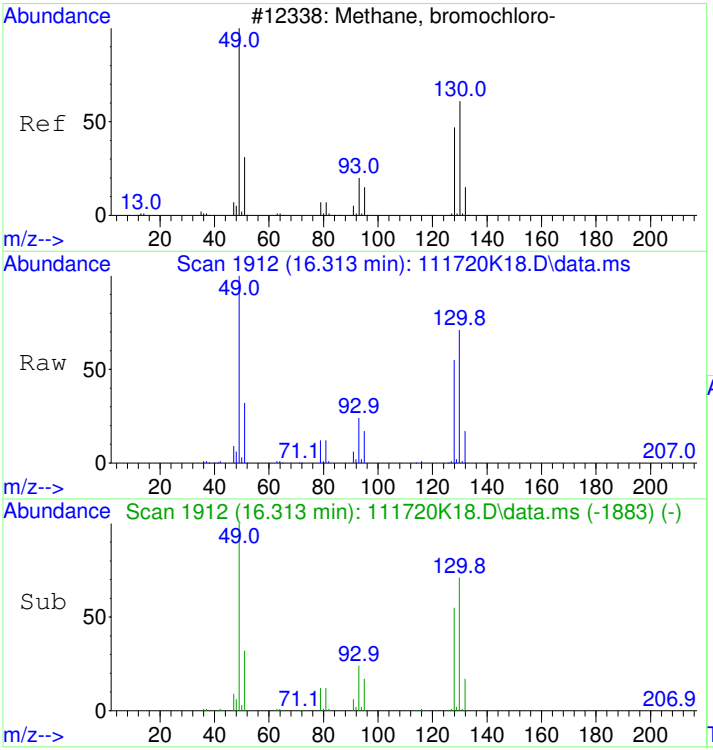
REVIEWED
By EM at 9:22 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K18.D
InstName : HP5973K
Acq On : 18 Nov 2020 1:37 am
Operator : EM
Sample : 2011024-02RE1
Misc : 40ml FG-033-3ft-G
ALS Vial : 22 Sample Multiplier: 1.9

Quant Time: Nov 18 09:04:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

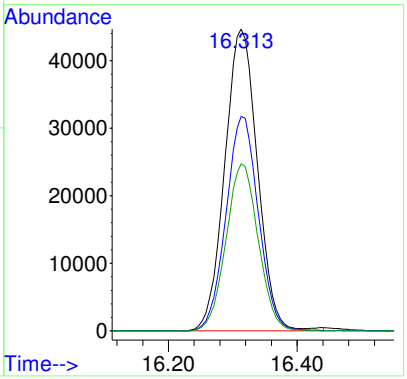


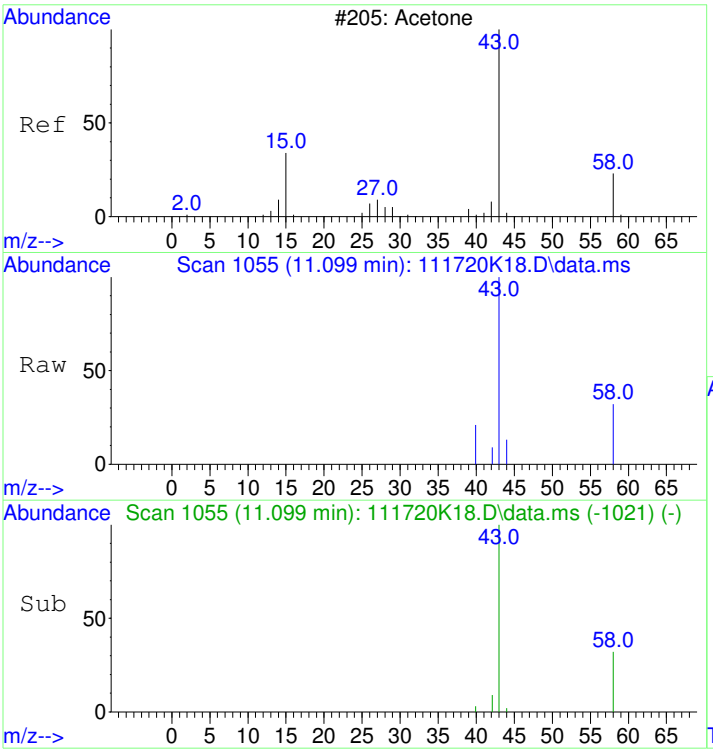


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion: 49 Resp: 158097

Ion	Ratio	Lower	Upper
49	100		
130	70.1	51.9	91.9
128	54.0	35.7	75.7

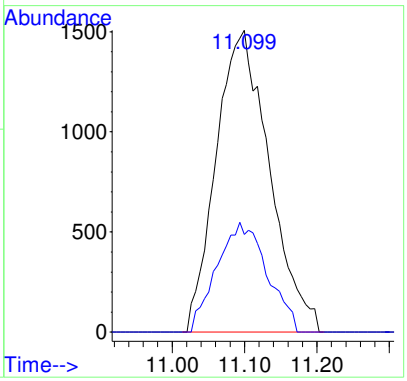


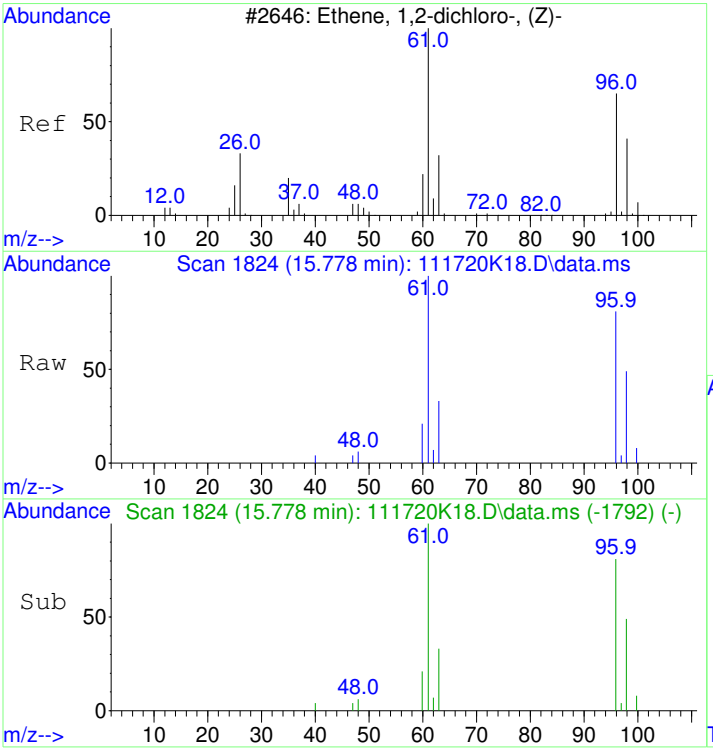


#14
Acetone
Concen: 1.09 ppbv
RT: 11.099 min Scan# 1055
Delta R.T. 0.006 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion: 43 Resp: 7699

Ion	Ratio	Lower	Upper
43	100		
58	34.2	15.9	55.9

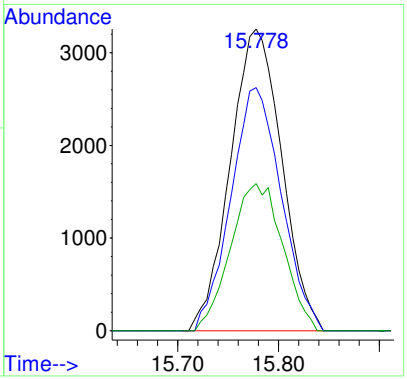


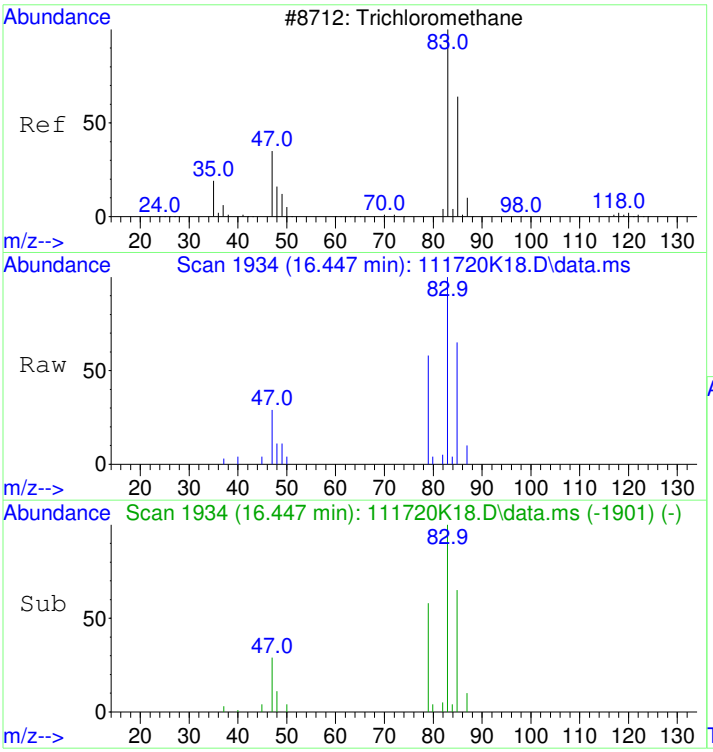


#24
cis-1,2-Dichloroethene
Concen: 1.82 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion: 61 Resp: 11552

Ion	Ratio	Lower	Upper
61	100		
96	79.1	57.6	97.6
98	0.0	0.0	20.0

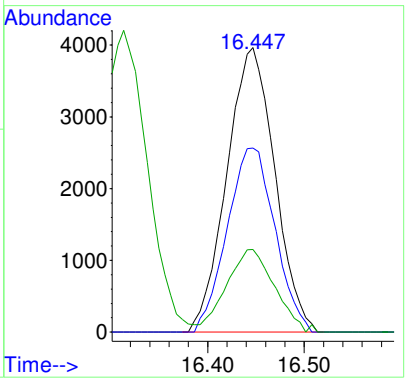


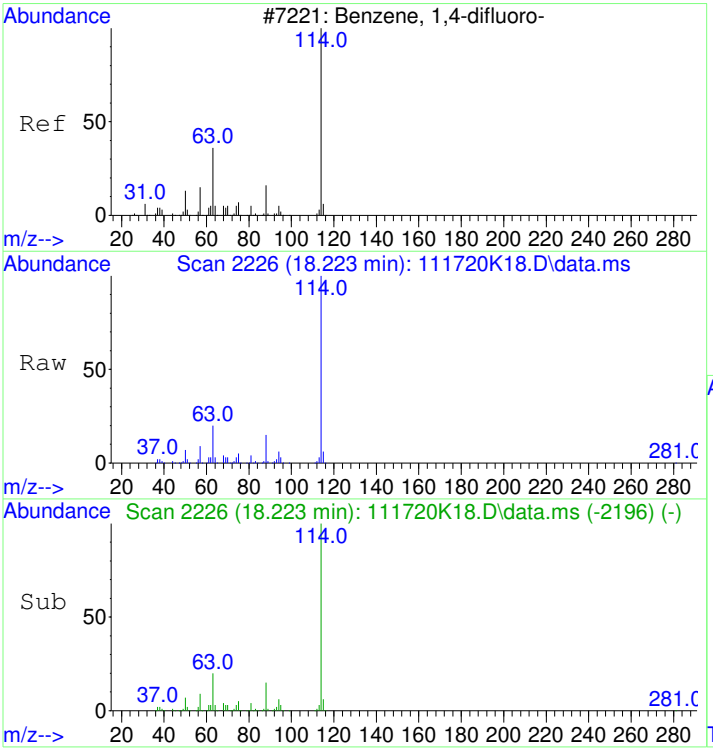


#28
Chloroform
Concen: 1.55 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion: 83 Resp: 13712

Ion	Ratio	Lower	Upper
83	100		
85	64.4	45.5	85.5
47	26.2	1.4	41.4

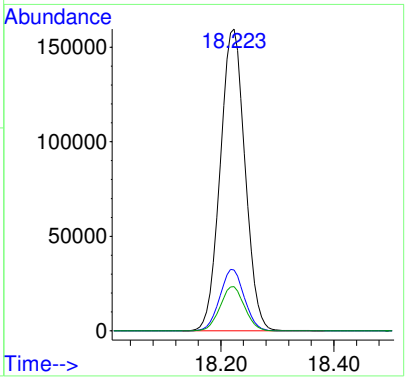


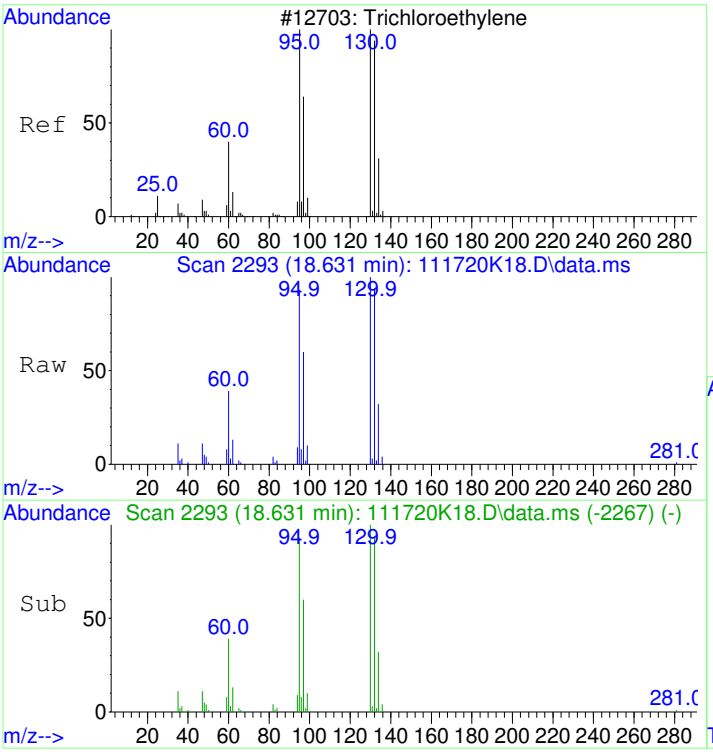


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion:114 Resp: 485500

Ion	Ratio	Lower	Upper
114	100		
63	20.1	0.0	39.5
88	14.4	0.0	34.7

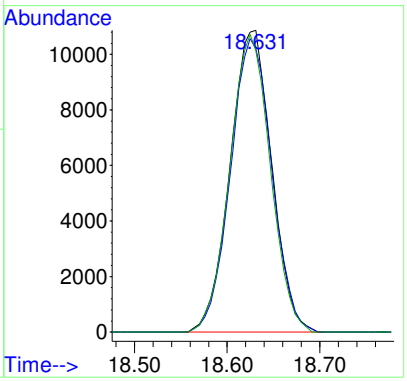


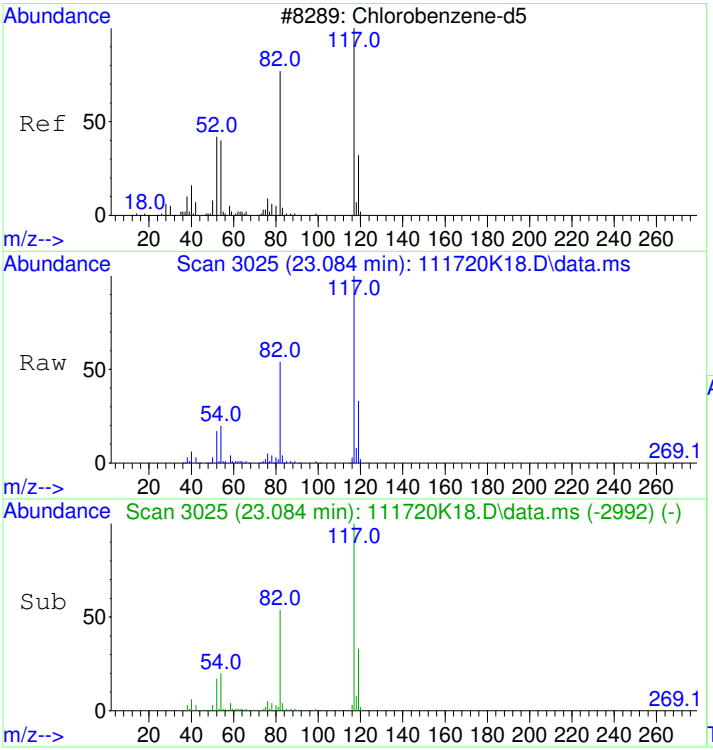


#37
Trichloroethene
Concen: 5.59 ppbv
RT: 18.631 min Scan# 2293
Delta R.T. 0.006 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion:130 Resp: 33843

Ion	Ratio	Lower	Upper
130	100		
132	96.9	76.3	116.3
95	96.3	74.0	114.0

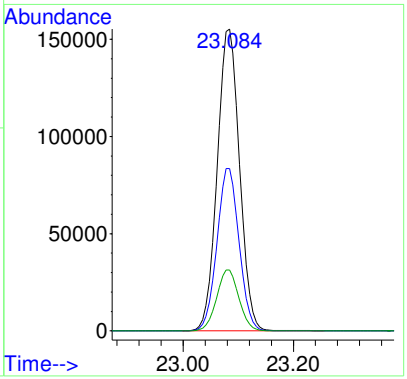


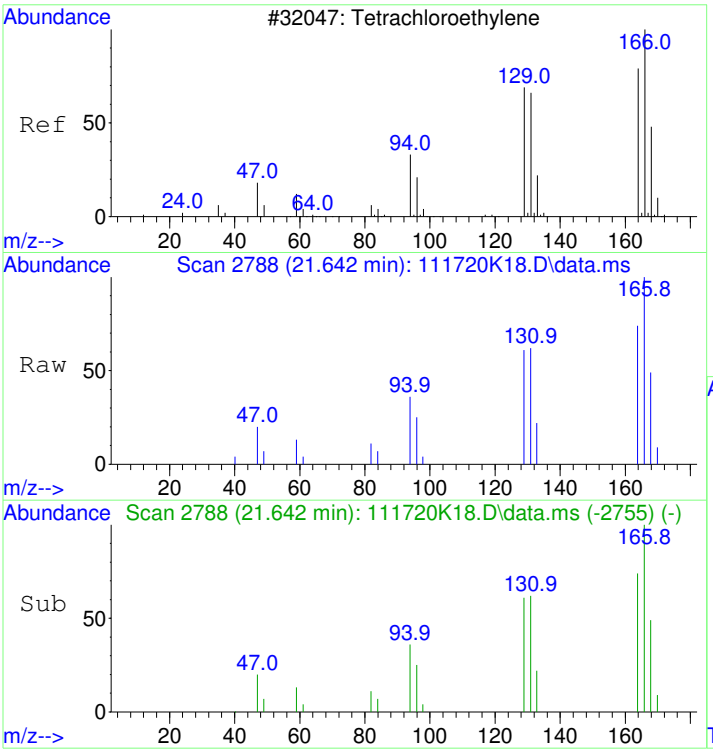


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion:117 Resp: 435227

Ion	Ratio	Lower	Upper
117	100		
82	53.3	32.3	72.3
54	20.0	0.0	38.6

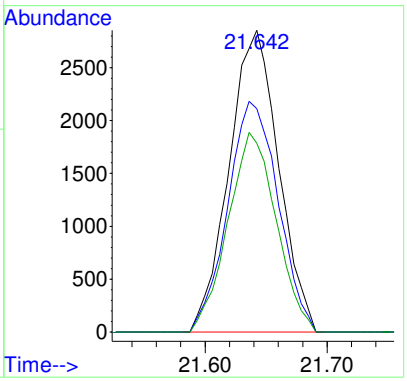




#47
Tetrachloroethene
Concen: 0.96 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K18.D
Acq: 18 Nov 2020 1:37 am

Tgt Ion:166 Resp: 8062

Ion	Ratio	Lower	Upper
166	100		
164	77.7	57.8	97.8
131	64.2	44.1	84.1



2011024-03RE1

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K19.D
InstName : HP5973K
Acq On : 18 Nov 2020 2:27 am
Operator : EM
Sample : 2011024-03RE1
Misc : 40ml FG-031-3ft-G
ALS Vial : 23 Sample Multiplier: 1.9

report cis12DCE and TCE

Quant Time: Nov 18 09:05:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	152000	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	465234	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	417314	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.105	43	3524	0.52	ppbv		89
18) Dichloromethane	12.486	49	2816	0.50	ppbv		97
24) cis-1,2-Dichloroethene	15.778	61	17967	2.95	ppbv	#	98
28) Chloroform	16.447	83	24476	2.88	ppbv		98
37) Trichloroethene	18.625	130	57693	9.94	ppbv		99
47) Tetrachloroethene	21.642	166	6546	0.81	ppbv		99

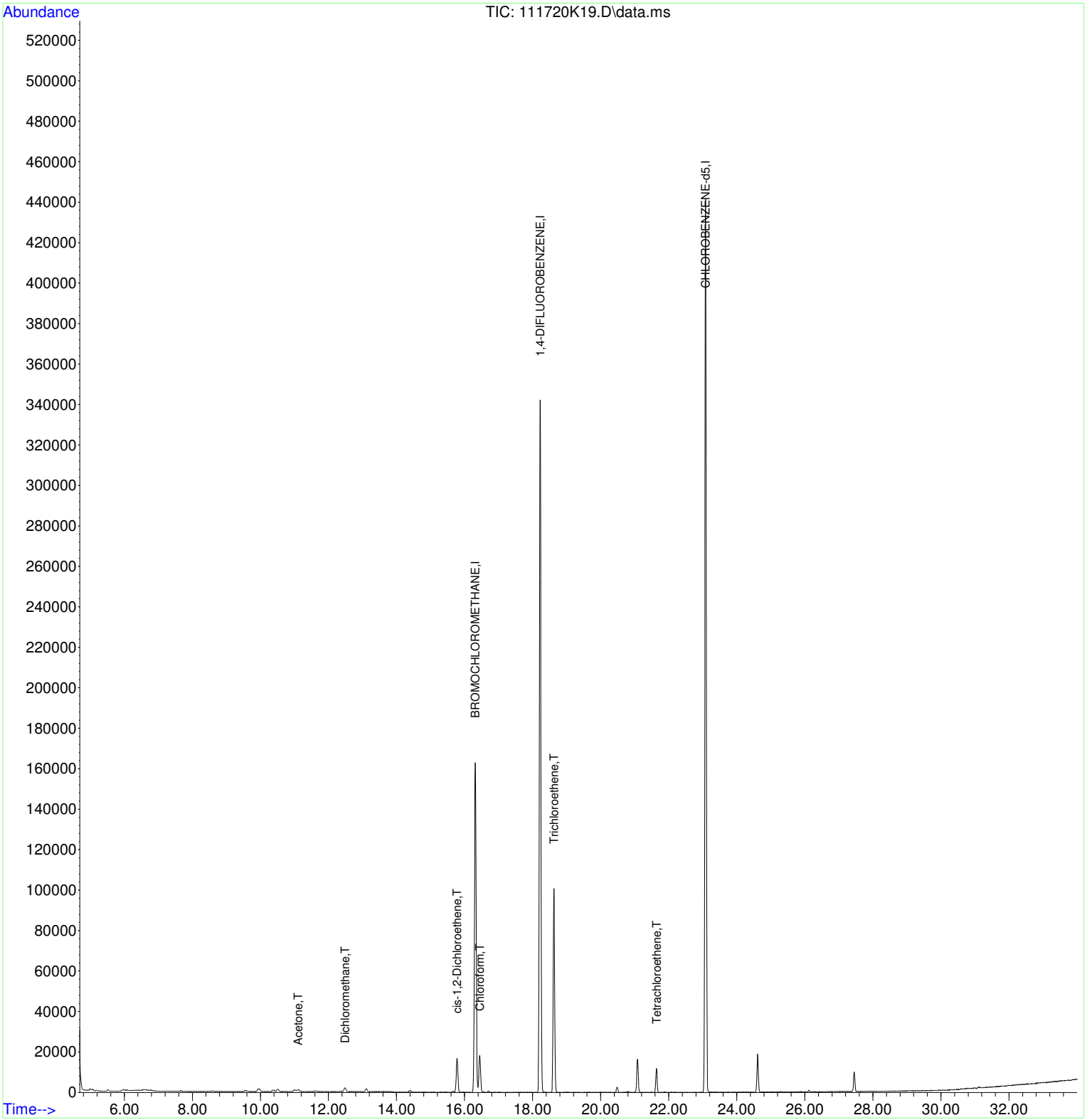
(#) = qualifier out of range (m) = manual integration (+) = signals summed

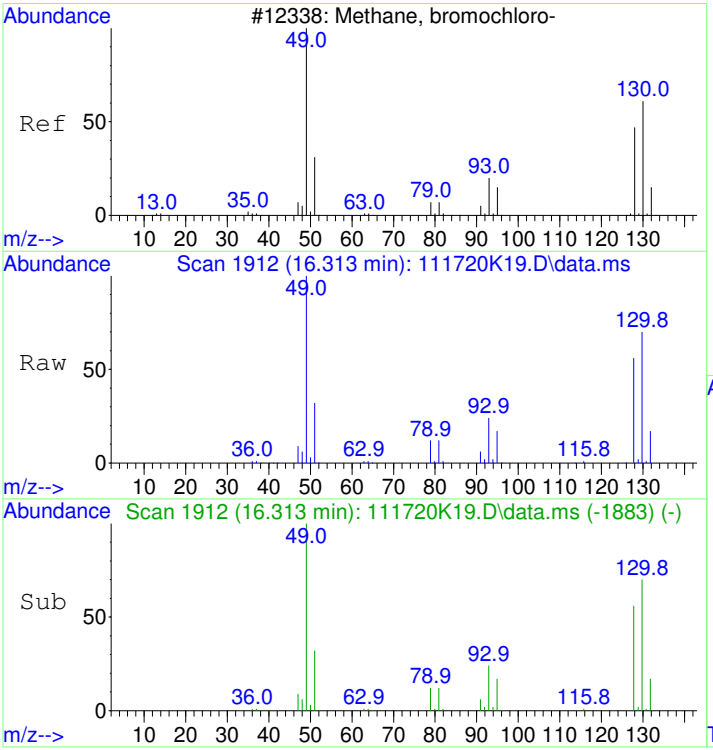
REVIEWED
By EM at 9:24 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K19.D
InstName : HP5973K
Acq On : 18 Nov 2020 2:27 am
Operator : EM
Sample : 2011024-03RE1
Misc : 40ml FG-031-3ft-G
ALS Vial : 23 Sample Multiplier: 1.9

Quant Time: Nov 18 09:05:01 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

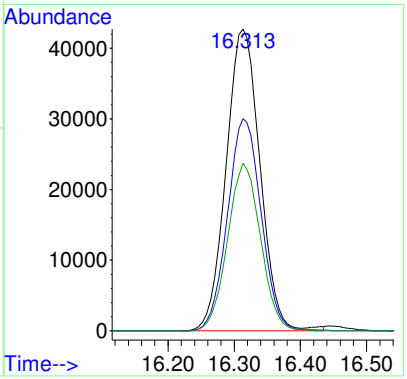


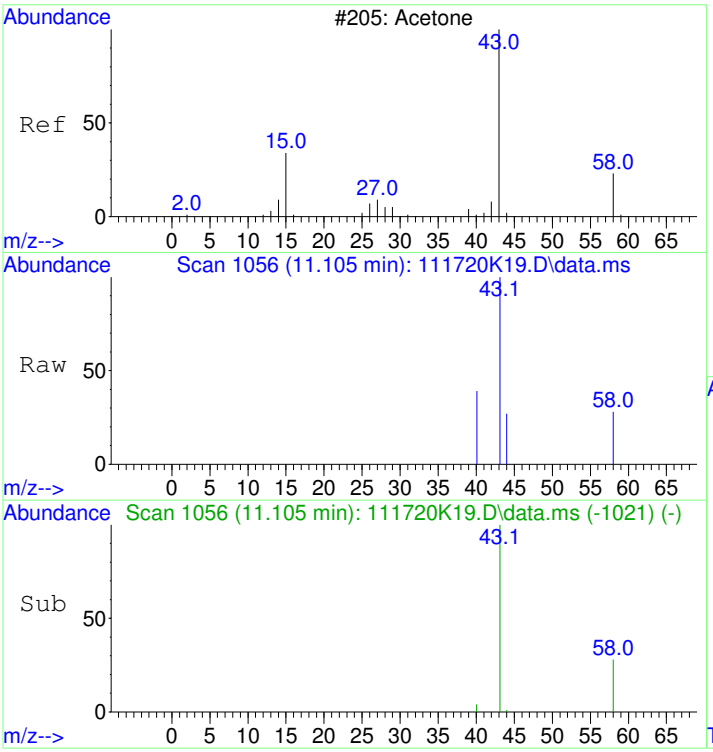


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion: 49 Resp: 152000

Ion	Ratio	Lower	Upper
49	100		
130	69.7	51.9	91.9
128	53.6	35.7	75.7

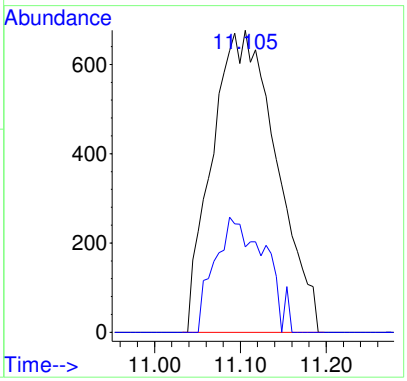


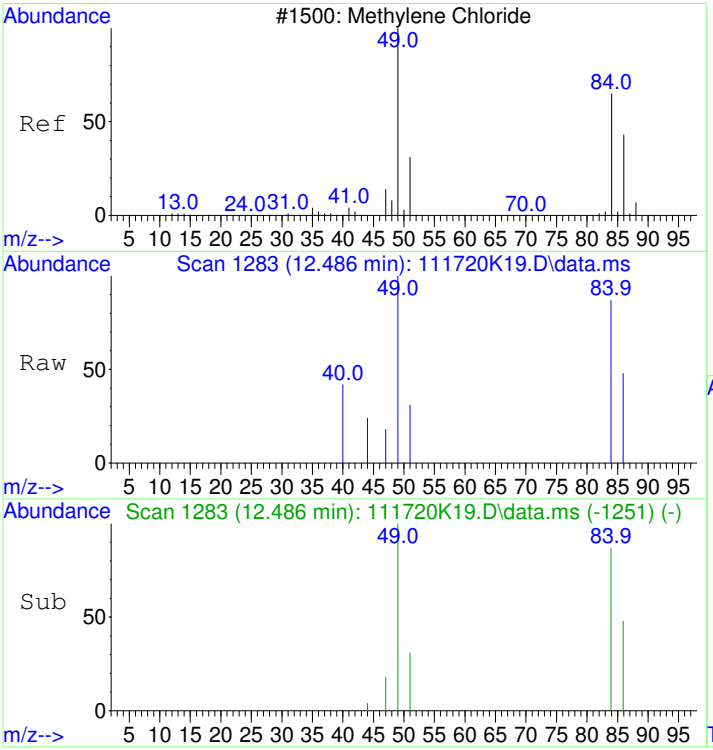


#14
Acetone
Concen: 0.52 ppbv
RT: 11.105 min Scan# 1056
Delta R.T. 0.012 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion: 43 Resp: 3524

Ion	Ratio	Lower	Upper
43	100		
58	29.7	15.9	55.9

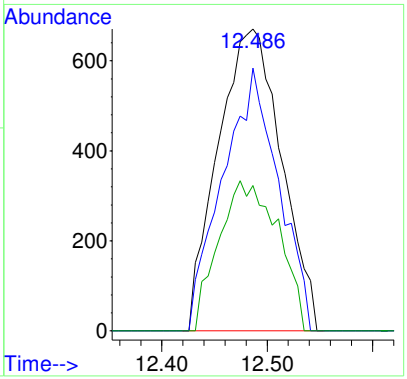


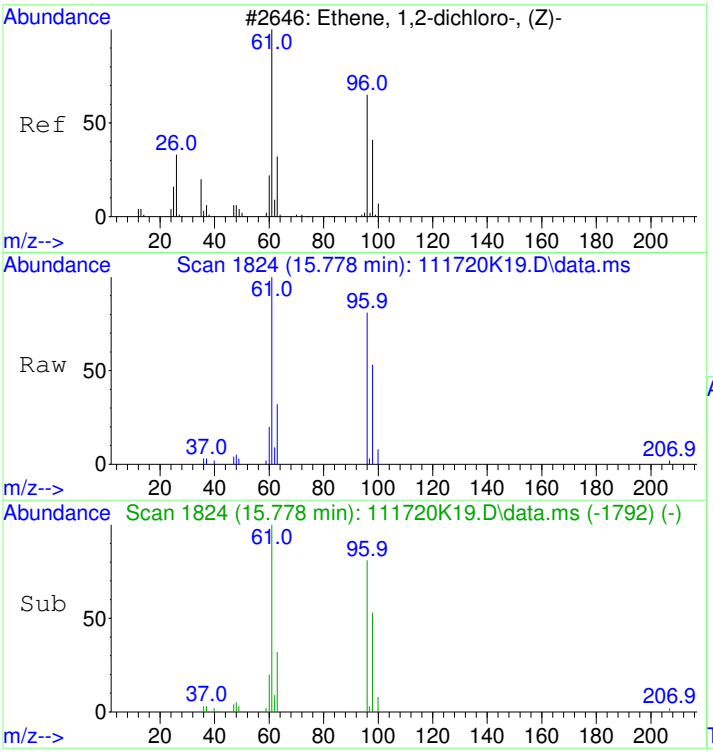


#18
Dichloromethane
Concen: 0.50 ppbv
RT: 12.486 min Scan# 1283
Delta R.T. -0.006 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion: 49 Resp: 2816

Ion	Ratio	Lower	Upper
49	100		
84	76.3	57.4	97.4
86	46.3	29.7	69.7

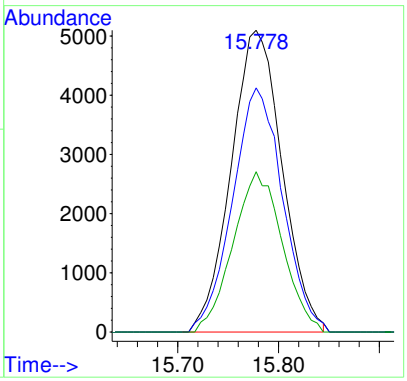


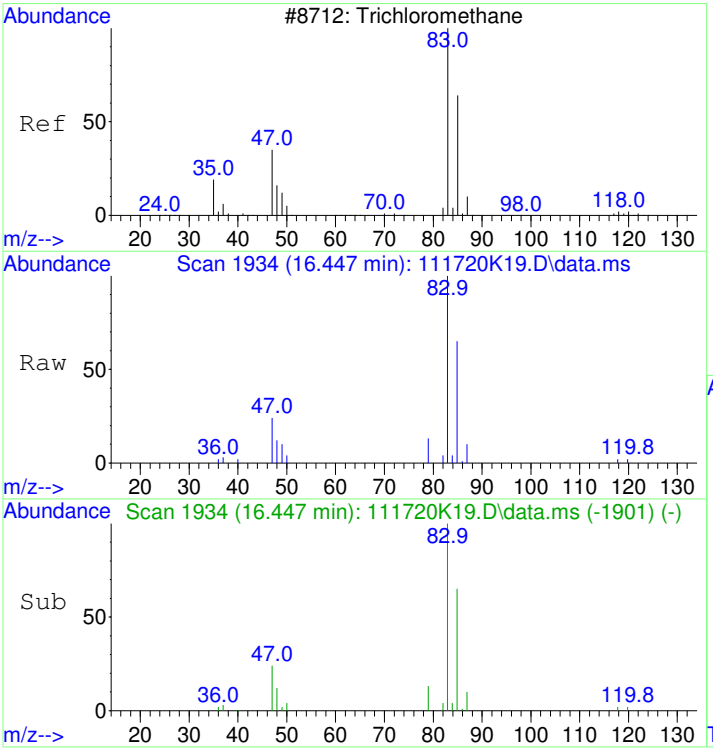


#24
cis-1,2-Dichloroethene
Concen: 2.95 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion: 61 Resp: 17967

Ion	Ratio	Lower	Upper
61	100		
96	79.5	57.6	97.6
98	0.0	0.0	20.0

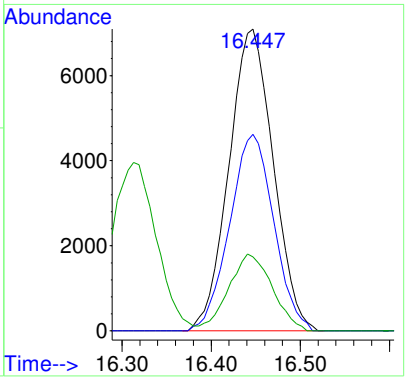


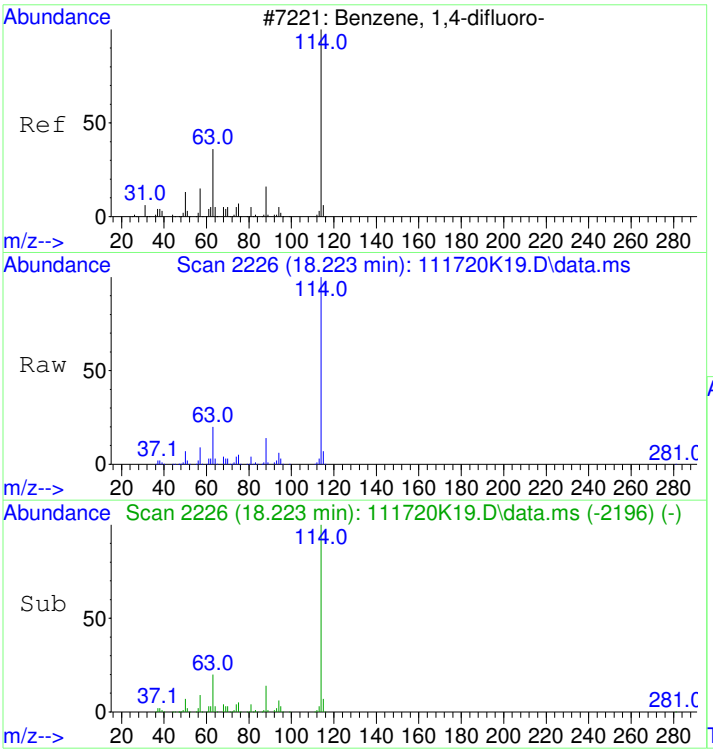


#28
Chloroform
Concen: 2.88 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion: 83 Resp: 24476

Ion	Ratio	Lower	Upper
83	100		
85	64.8	45.5	85.5
47	23.2	1.4	41.4

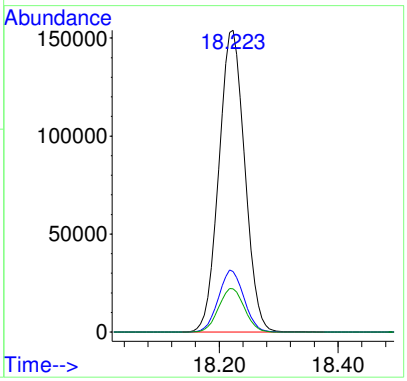


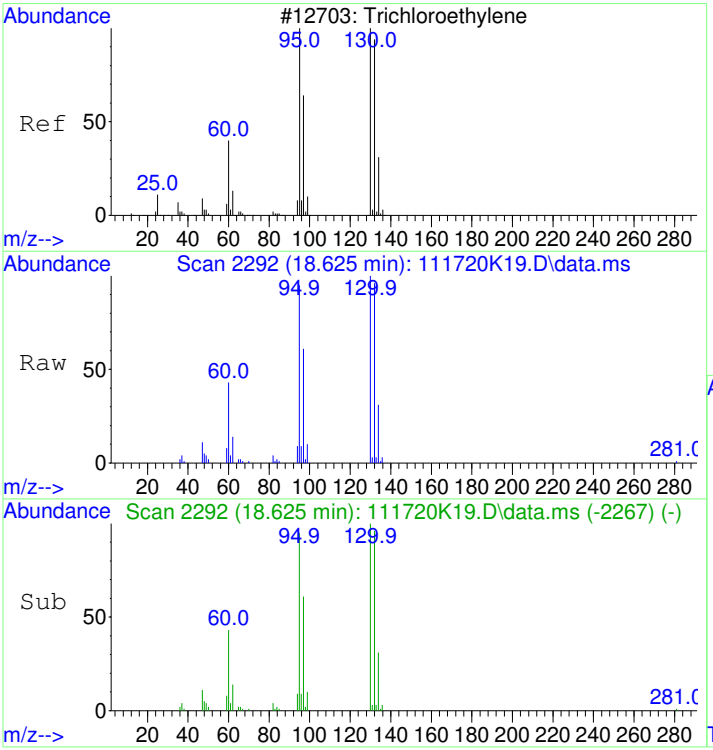


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion:114 Resp: 465234

Ion	Ratio	Lower	Upper
114	100		
63	20.2	0.0	39.5
88	14.4	0.0	34.7

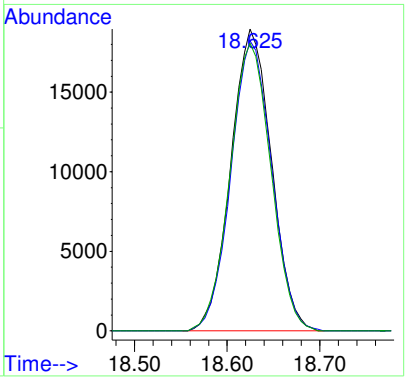


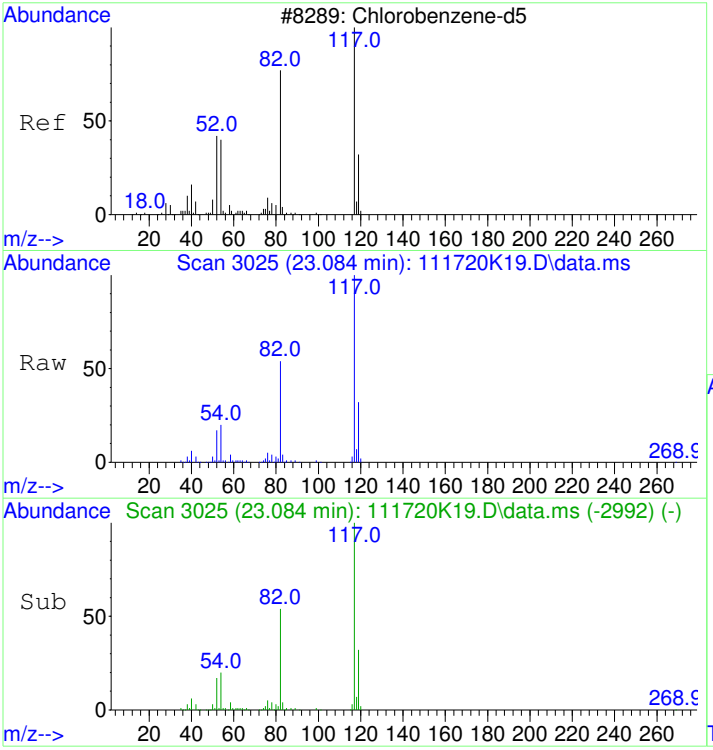


#37
Trichloroethene
Concen: 9.94 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion:130 Resp: 57693

Ion	Ratio	Lower	Upper
130	100		
132	96.2	76.3	116.3
95	95.8	74.0	114.0

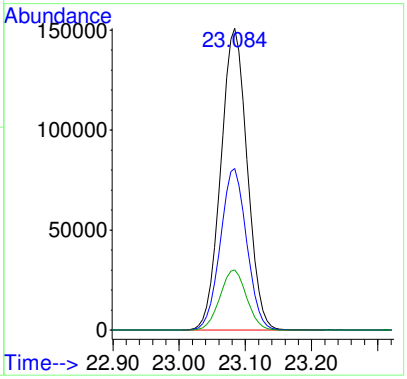


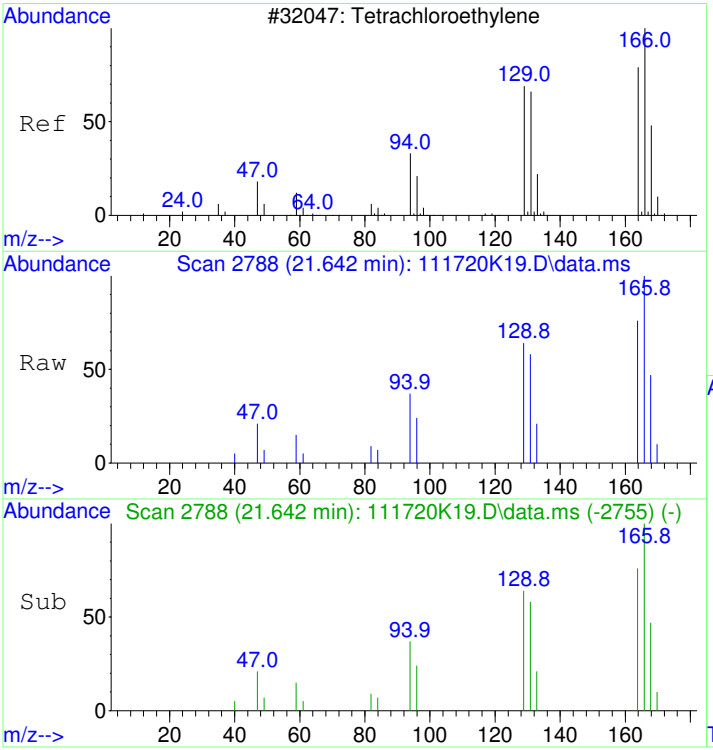


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion:117 Resp: 417314

Ion	Ratio	Lower	Upper
117	100		
82	53.4	32.3	72.3
54	20.1	0.0	38.6

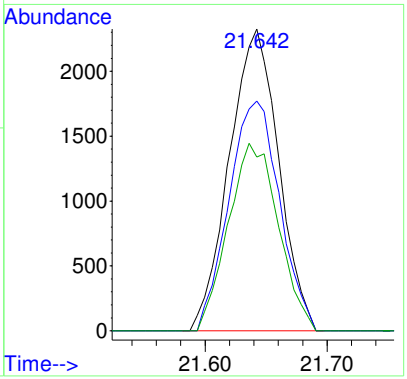




#47
Tetrachloroethene
Concen: 0.81 ppbv
RT: 21.642 min Scan# 2788
Delta R.T. -0.000 min
Lab File: 111720K19.D
Acq: 18 Nov 2020 2:27 am

Tgt Ion:166 Resp: 6546

Ion	Ratio	Lower	Upper
166	100		
164	78.3	57.8	97.8
131	62.9	44.1	84.1



2011024-04RE1

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K20.D
InstName : HP5973K
Acq On : 18 Nov 2020 3:17 am
Operator : EM
Sample : 2011024-04RE1
Misc : 40ml FG-029-3ft-G
ALS Vial : 24 Sample Multiplier: 1.96

report cis12DCE and see -RE2 for TCE

Quant Time: Nov 18 09:05:05 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	151214	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	464657	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	418459	19.60	ppbv		0.00
Target Compounds							Qvalue
13) 1,1-Dichloroethene	10.509	61	5094	0.77	ppbv		98
14) Acetone	11.093	43	16827	2.49	ppbv		97
16) 2-Propanol	11.610	45	6250	0.86	ppbv		83
20) trans-1,2-Dichloroethene	13.113	61	4195	0.65	ppbv		95
22) 1,1-Dichloroethane	14.397	63	5497	0.66	ppbv		94
24) cis-1,2-Dichloroethene	15.778	61	54554	9.01	ppbv	#	98
28) Chloroform	16.447	83	15783	1.87	ppbv		99
37) Trichloroethene	18.625	130	168299	29.03	ppbv		99
47) Tetrachloroethene	21.648	166	11036	1.37	ppbv		99
53) m&p-Xylene	23.376	91	25490	1.55	ppbv		98
54) o-Xylene	24.027	91	13779	0.81	ppbv		99

OC

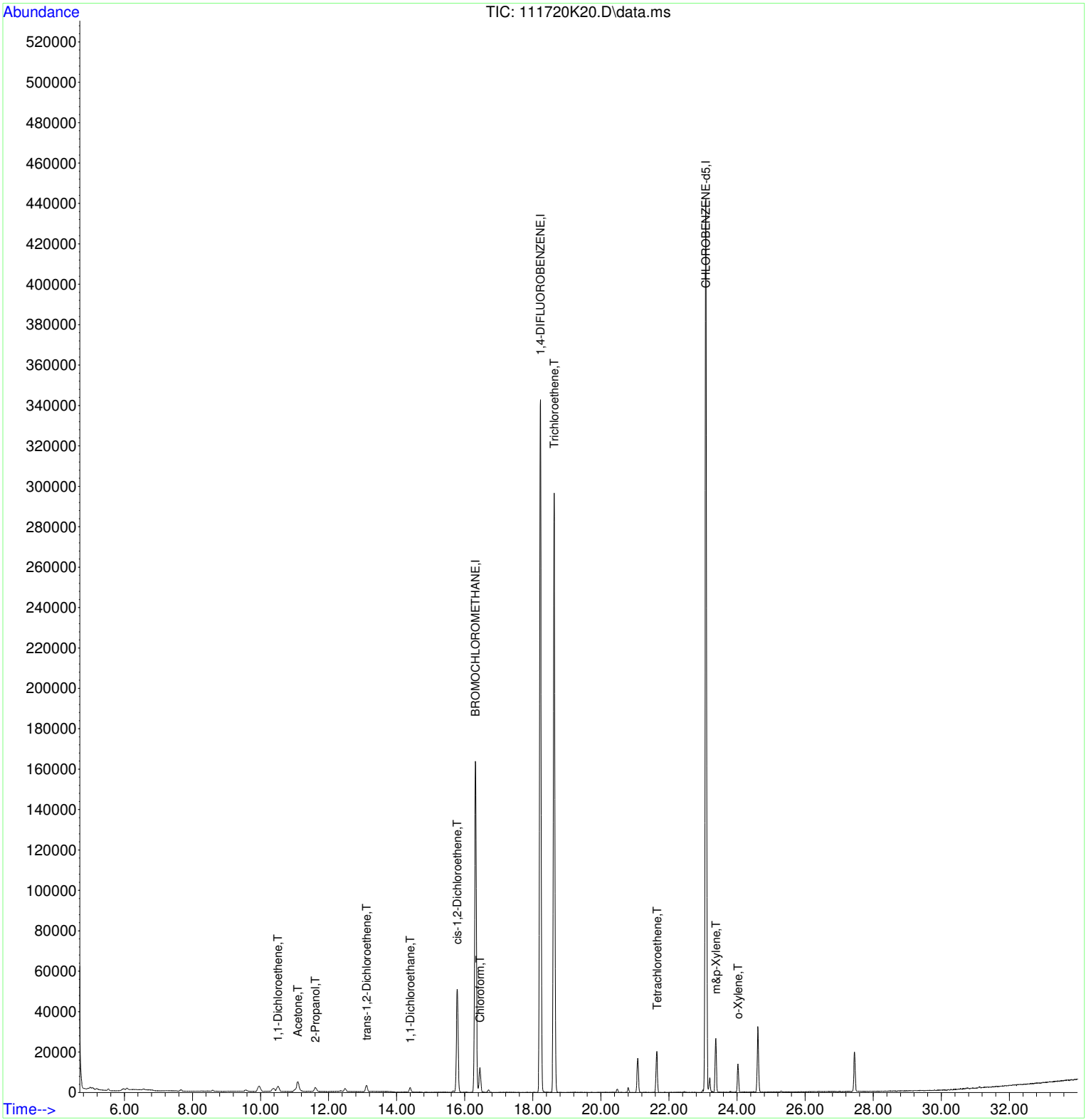
(#) = qualifier out of range (m) = manual integration (+) = signals summed

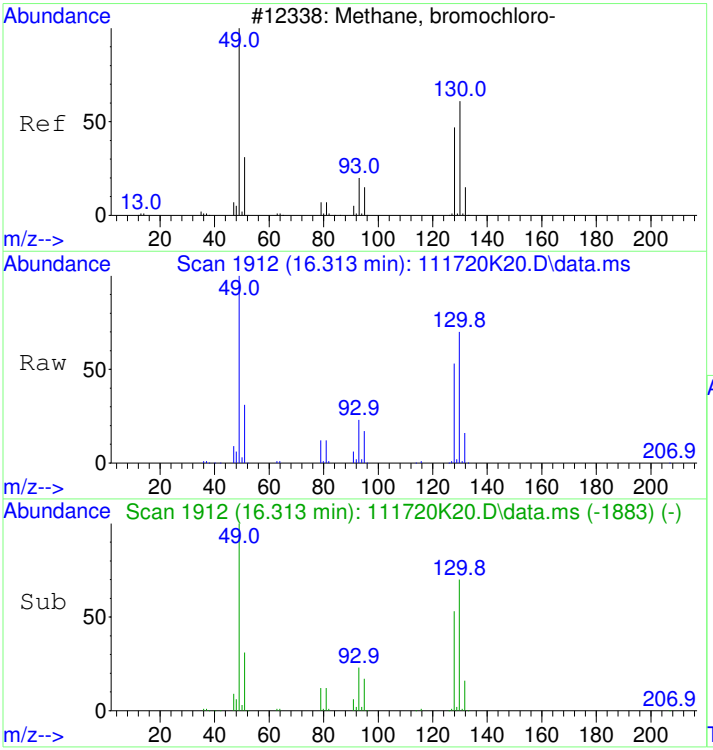
REVIEWED
By EM at 9:28 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K20.D
InstName : HP5973K
Acq On : 18 Nov 2020 3:17 am
Operator : EM
Sample : 2011024-04RE1
Misc : 40ml FG-029-3ft-G
ALS Vial : 24 Sample Multiplier: 1.96

Quant Time: Nov 18 09:05:05 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

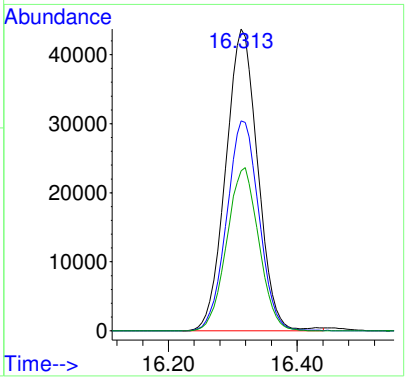


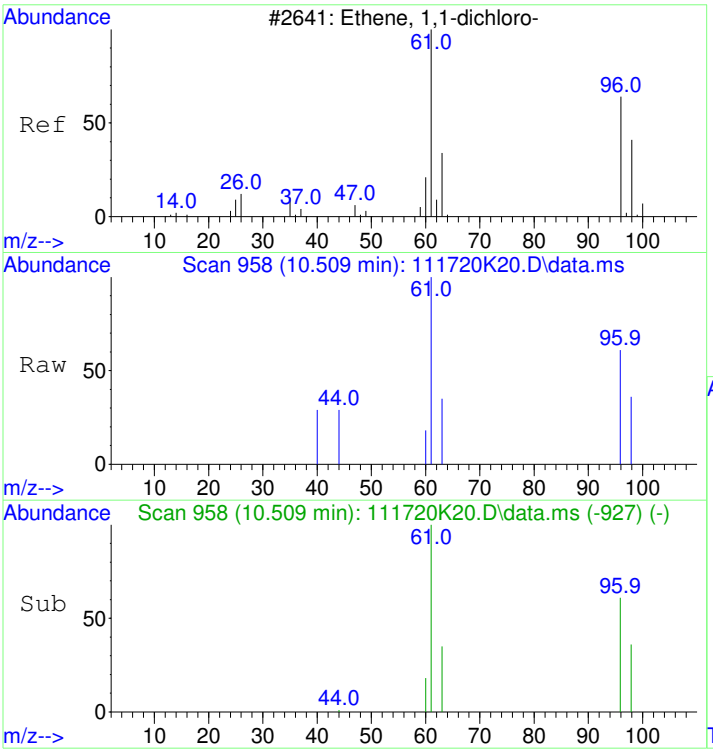


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 49 Resp: 151214

Ion	Ratio	Lower	Upper
49	100		
130	70.1	51.9	91.9
128	54.0	35.7	75.7

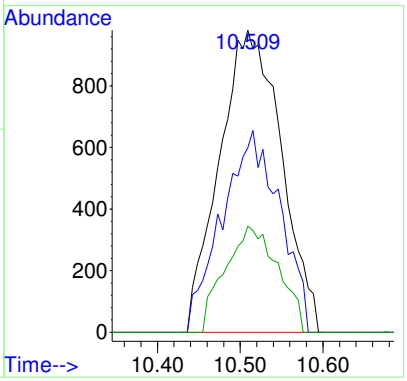


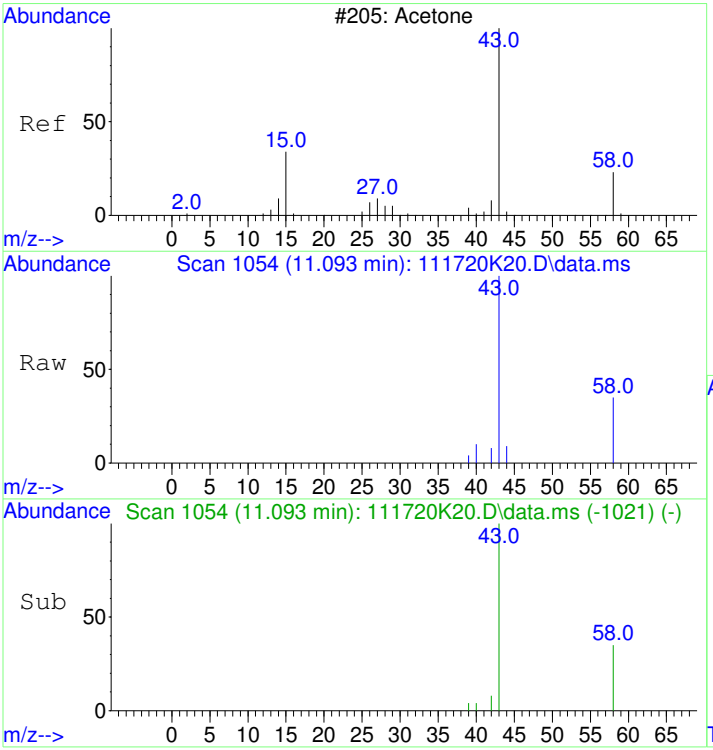


#13
1,1-Dichloroethene
Concen: 0.77 ppbv
RT: 10.509 min Scan# 958
Delta R.T. -0.012 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 61 Resp: 5094

Ion	Ratio	Lower	Upper
61	100		
96	62.3	43.5	83.5
63	30.1	12.1	52.1

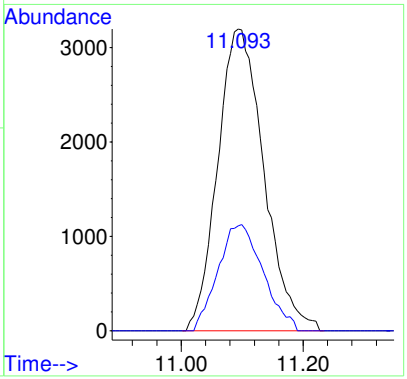


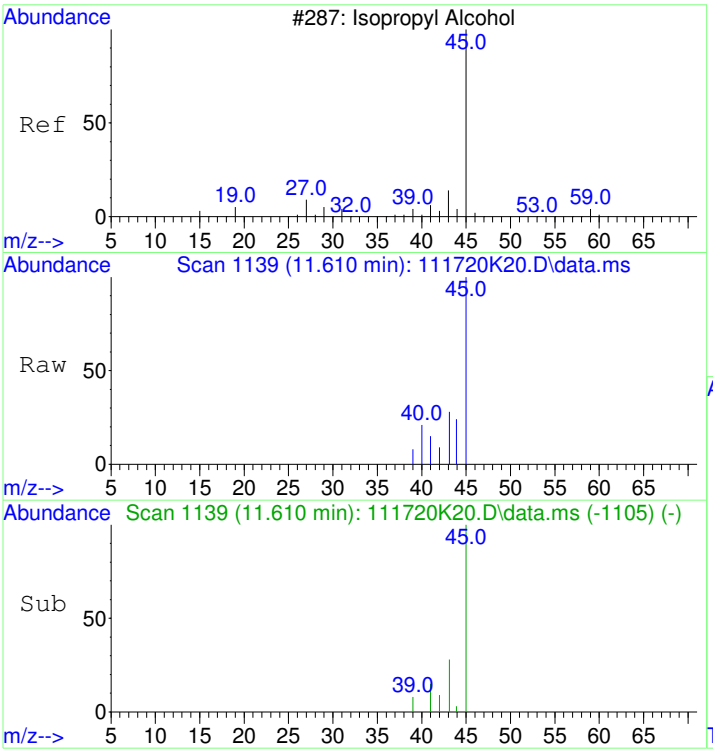


#14
Acetone
Concen: 2.49 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 43 Resp: 16827

Ion	Ratio	Lower	Upper
43	100		
58	34.3	15.9	55.9

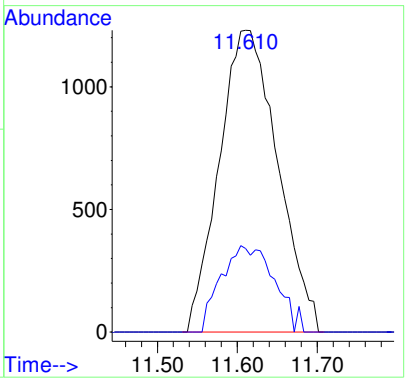


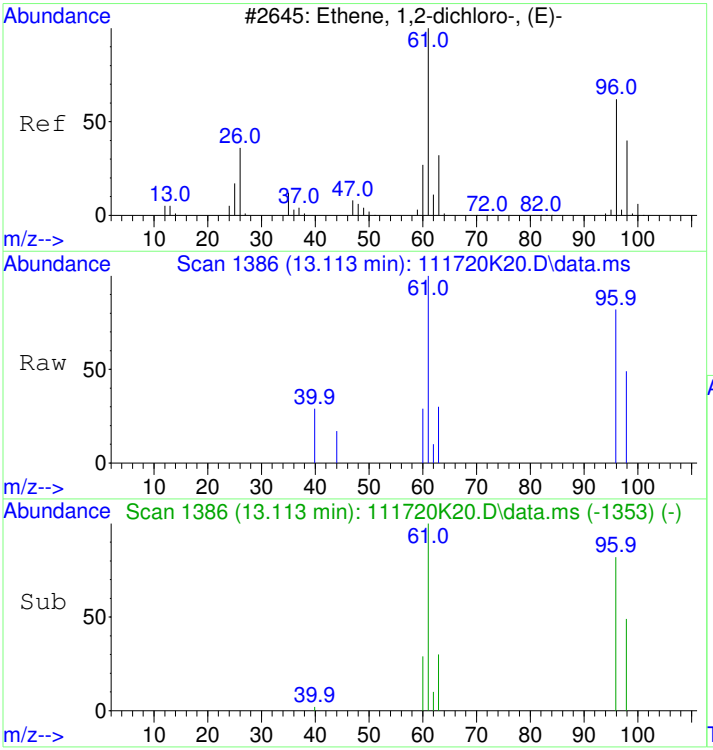


#16
2-Propanol
Concen: 0.86 ppbv
RT: 11.610 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 45 Resp: 6250

Ion	Ratio	Lower	Upper
45	100		
43	26.3	0.0	38.7

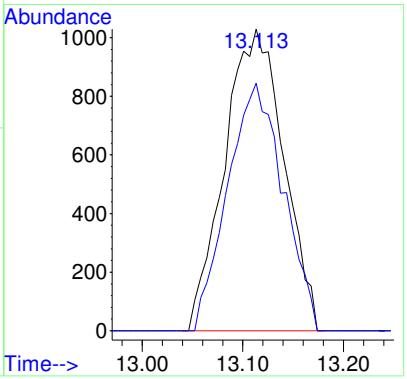


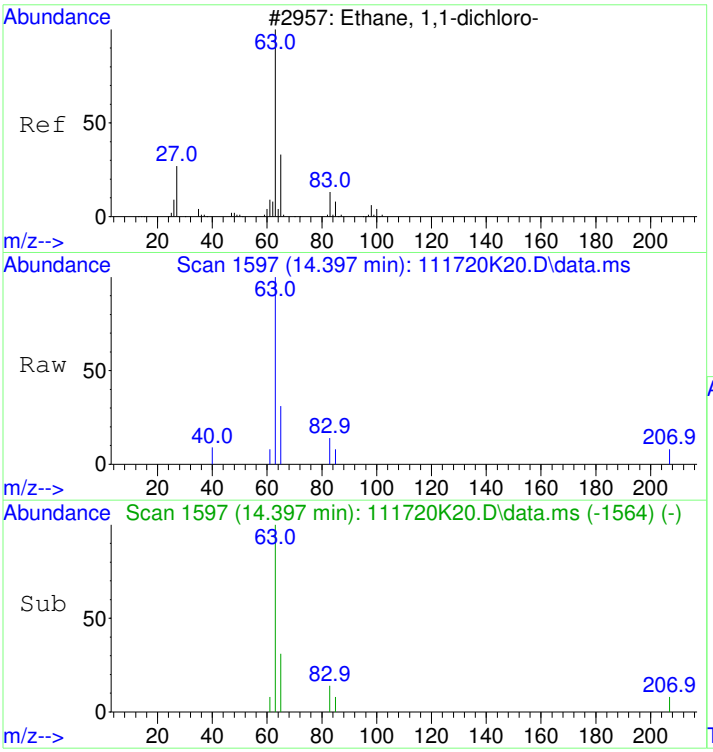


#20
trans-1,2-Dichloroethene
Concen: 0.65 ppbv
RT: 13.113 min Scan# 1386
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 61 Resp: 4195

Ion	Ratio	Lower	Upper
61	100		
96	77.2	52.8	92.8

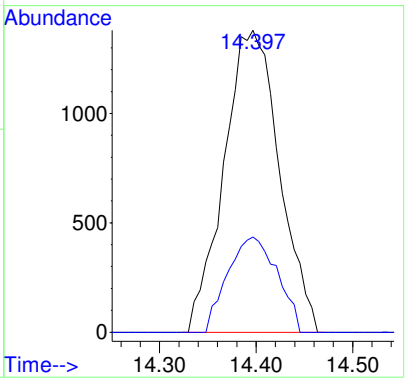


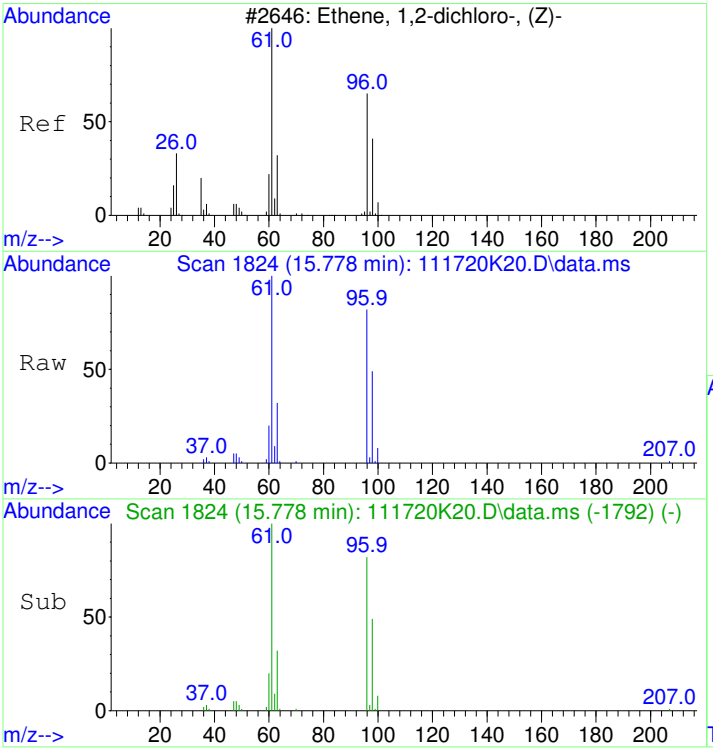


#22
1,1-Dichloroethane
Concen: 0.66 ppbv
RT: 14.397 min Scan# 1597
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 63 Resp: 5497

Ion	Ratio	Lower	Upper
63	100		
65	28.3	11.9	51.9

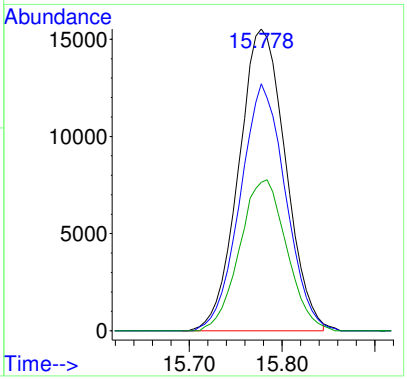


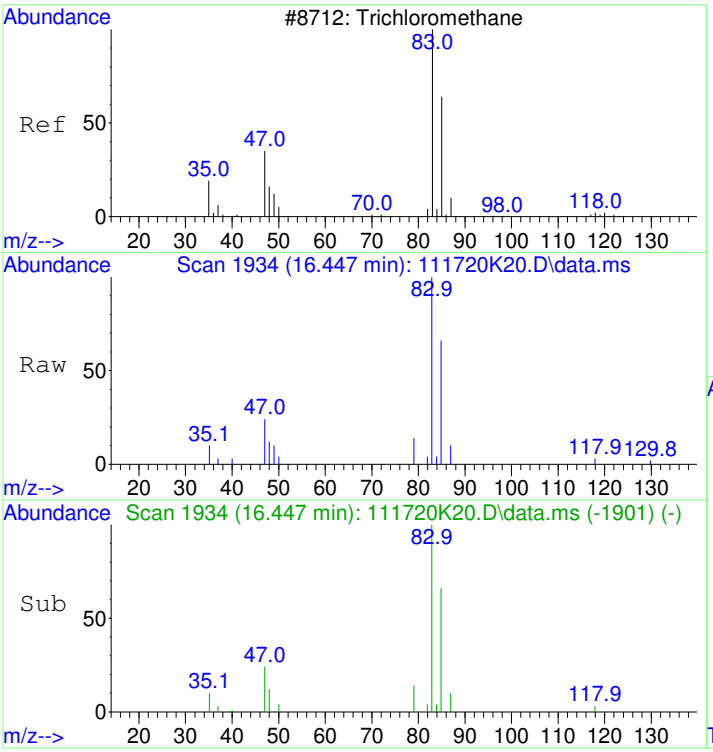


#24
cis-1,2-Dichloroethene
Concen: 9.01 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 61 Resp: 54554

Ion	Ratio	Lower	Upper
61	100		
96	79.2	57.6	97.6
98	0.0	0.0	20.0

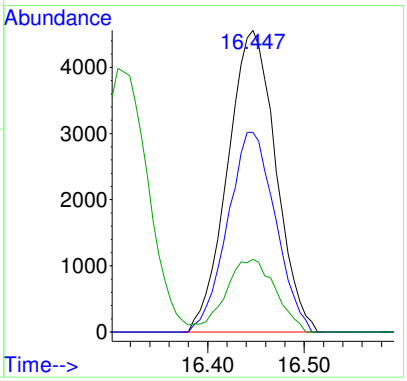


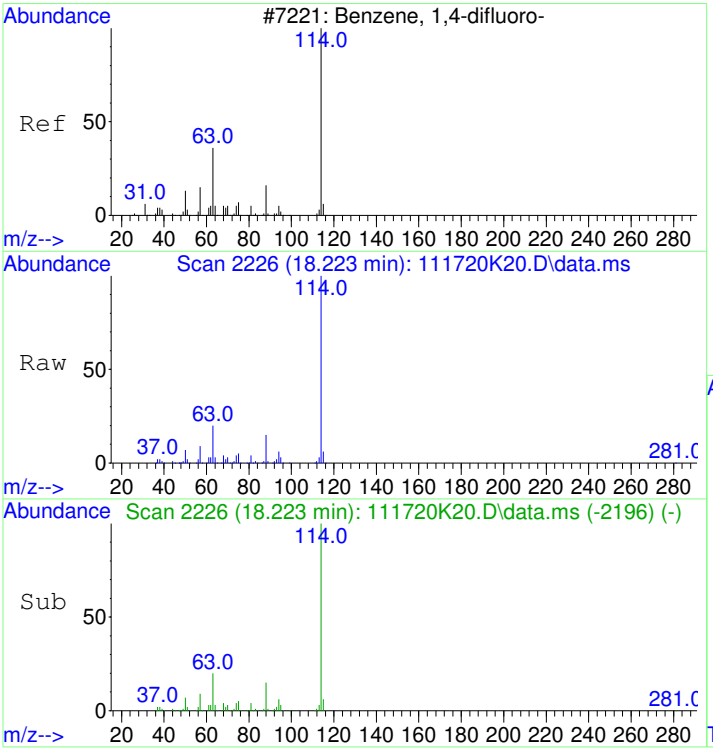


#28
Chloroform
Concen: 1.87 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 83 Resp: 15783

Ion	Ratio	Lower	Upper
83	100		
85	65.7	45.5	85.5
47	22.7	1.4	41.4

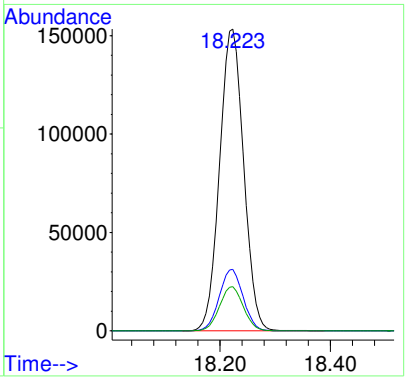


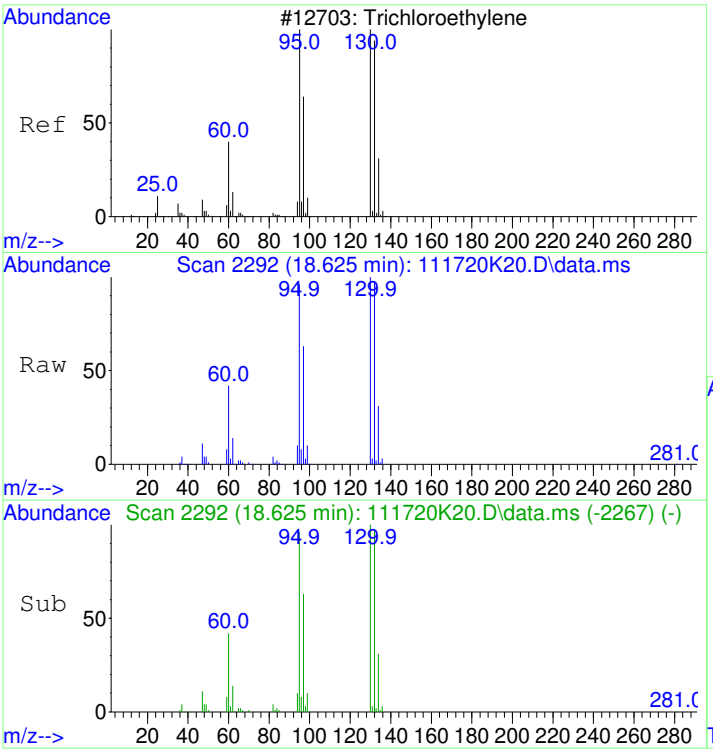


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion:114 Resp: 464657

Ion	Ratio	Lower	Upper
114	100		
63	20.1	0.0	39.5
88	14.4	0.0	34.7

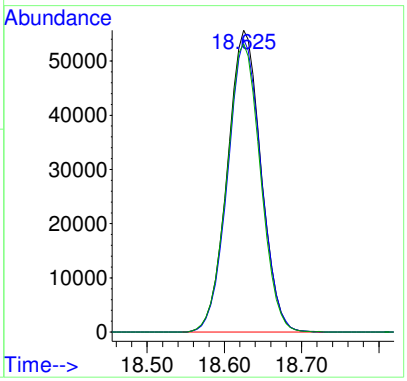




#37
Trichloroethene
Concen: 29.03 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion:130 Resp: 168299

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.3	116.3
95	95.4	74.0	114.0



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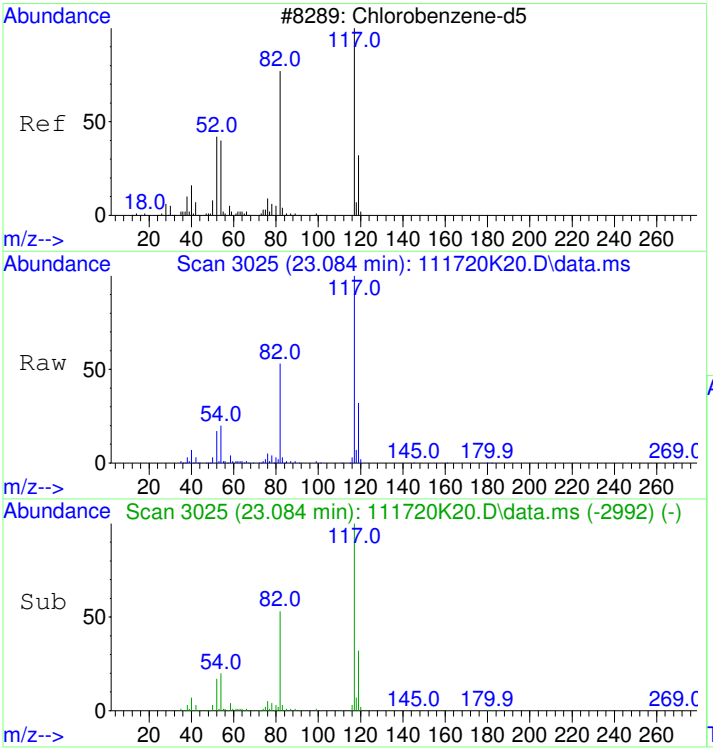
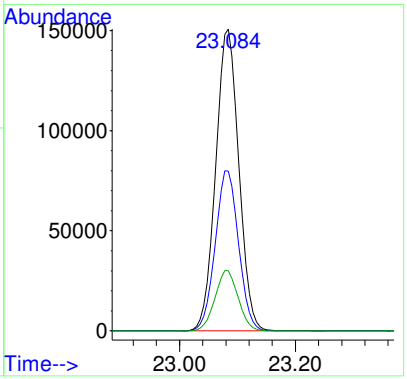
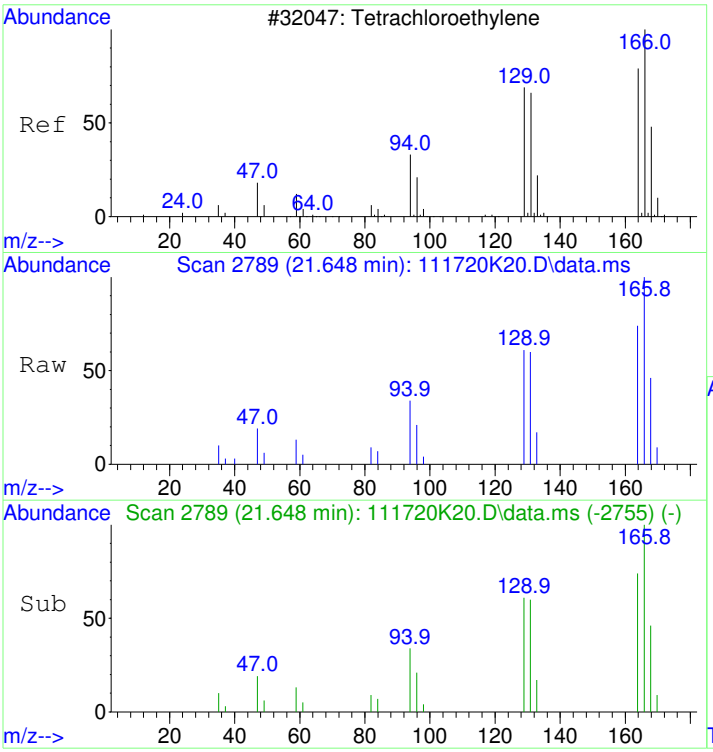


#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion:117 Resp: 418459

Ion	Ratio	Lower	Upper
117	100		
82	53.3	32.3	72.3
54	20.0	0.0	38.6

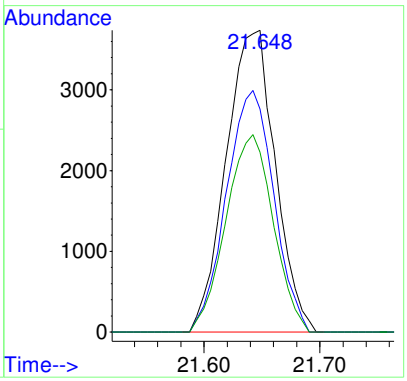


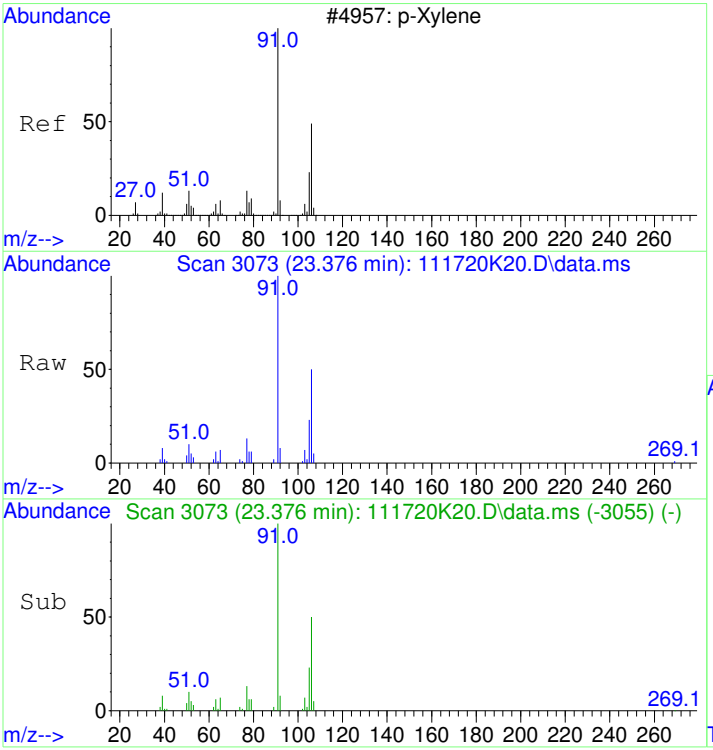


#47
Tetrachloroethene
Concen: 1.37 ppbv
RT: 21.648 min Scan# 2789
Delta R.T. 0.006 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion:166 Resp: 11036

Ion	Ratio	Lower	Upper
166	100		
164	77.3	57.8	97.8
131	63.0	44.1	84.1

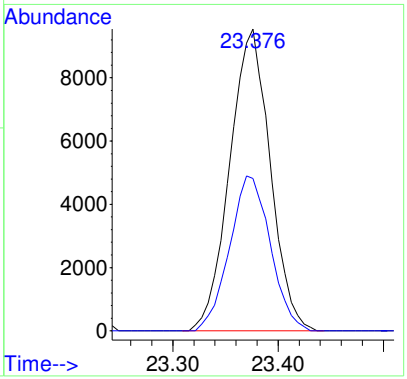


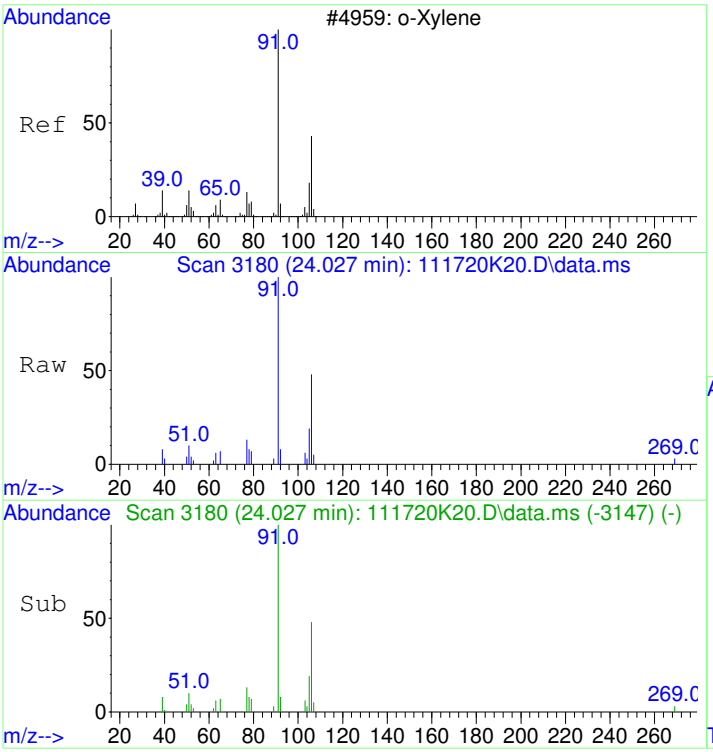


#53
m&p-Xylene
Concen: 1.55 ppbv
RT: 23.376 min Scan# 3073
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 91 Resp: 25490

Ion	Ratio	Lower	Upper
91	100		
106	51.7	33.1	73.1

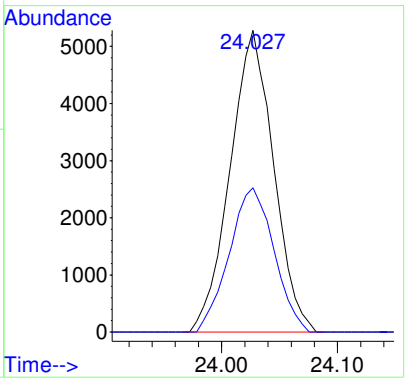




#54
o-Xylene
Concen: 0.81 ppbv
RT: 24.027 min Scan# 3180
Delta R.T. -0.000 min
Lab File: 111720K20.D
Acq: 18 Nov 2020 3:17 am

Tgt Ion: 91 Resp: 13779

Ion	Ratio	Lower	Upper
91	100		
106	49.1	29.9	69.9



2011024-01RE1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K23.D
InstName : HP5973K
Acq On : 18 Nov 2020 5:46 am
Operator : EM
Sample : 2011024-01RE1
Misc : 50ml FG-037-3ft-G
ALS Vial : 27 Sample Multiplier: 1.9

report TCE

Quant Time: Nov 18 09:05:17 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	148342	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.217	114	452621	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	407758	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.105	43	5496	0.83	ppbv		95
24) cis-1,2-Dichloroethene	15.778	61	3838	0.65	ppbv	#	98
28) Chloroform	16.447	83	16628	2.00	ppbv		99
37) Trichloroethene	18.625	130	18011	3.19	ppbv		99

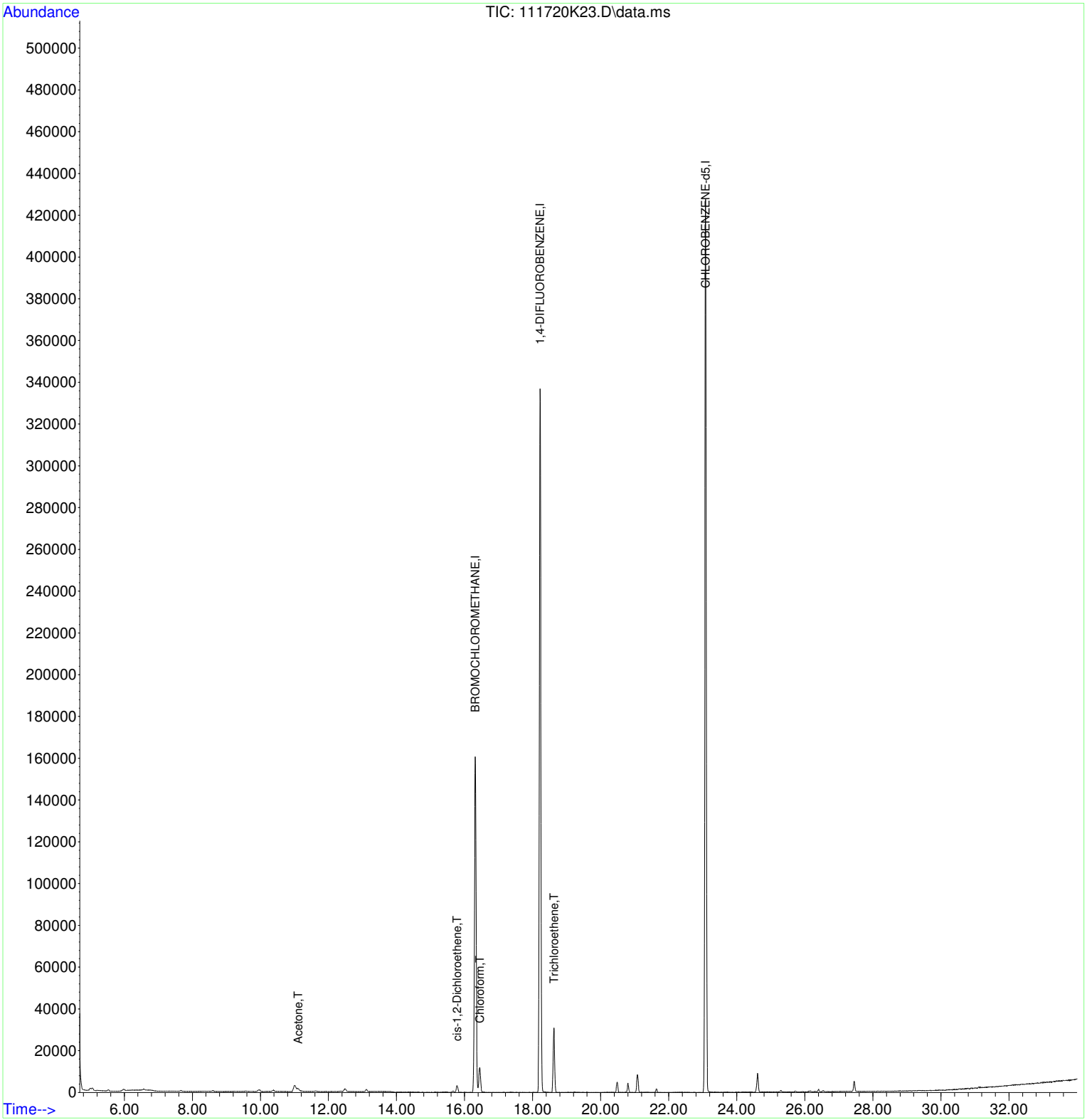
(#) = qualifier out of range (m) = manual integration (+) = signals summed

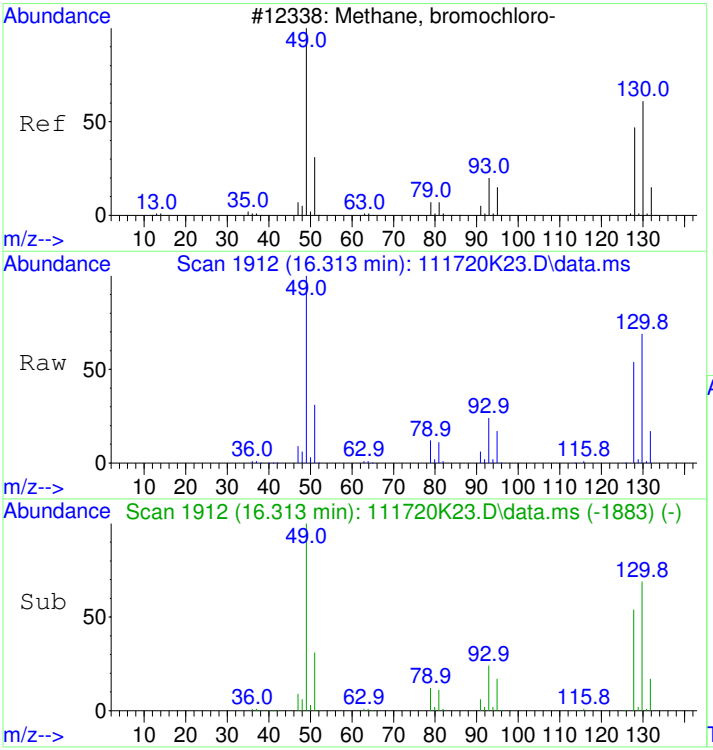
REVIEWED
By EM at 9:31 am, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K23.D
InstName : HP5973K
Acq On : 18 Nov 2020 5:46 am
Operator : EM
Sample : 2011024-01RE1
Misc : 50ml FG-037-3ft-G
ALS Vial : 27 Sample Multiplier: 1.9

Quant Time: Nov 18 09:05:17 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

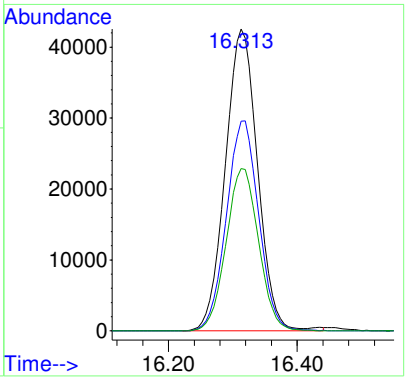


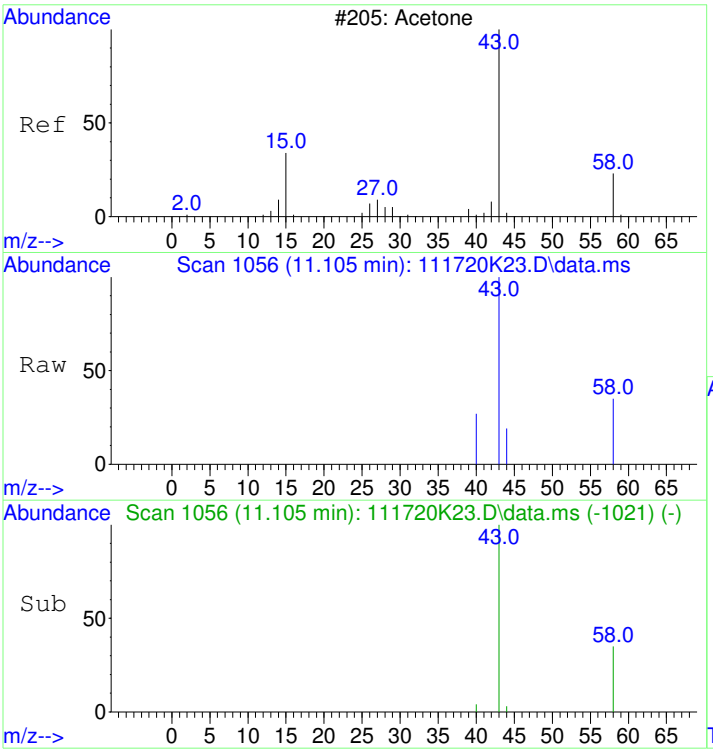


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion: 49 Resp: 148342

Ion	Ratio	Lower	Upper
49	100		
130	69.5	51.9	91.9
128	53.6	35.7	75.7

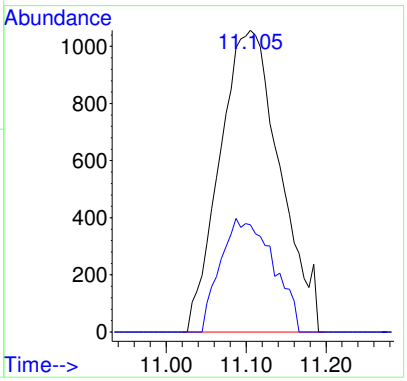


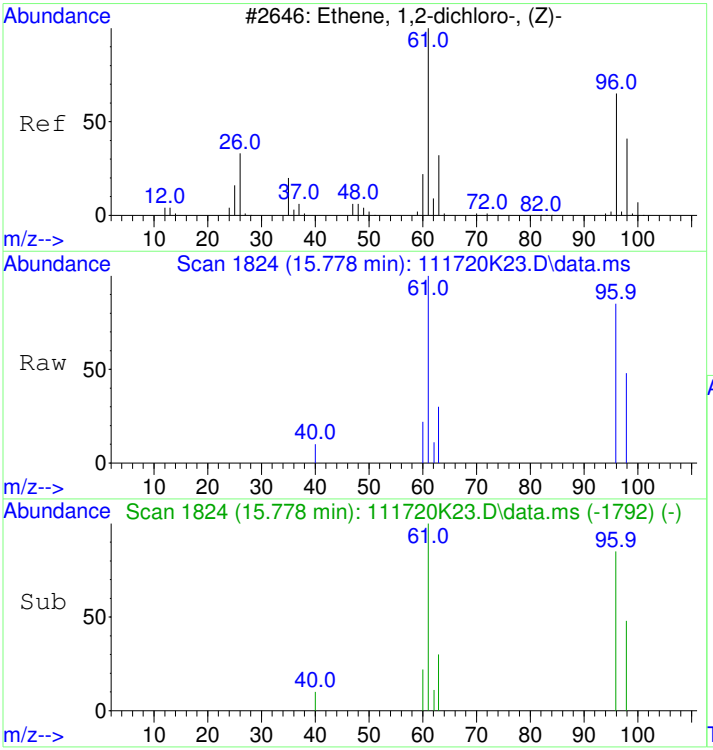


#14
Acetone
Concen: 0.83 ppbv
RT: 11.105 min Scan# 1056
Delta R.T. 0.012 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion: 43 Resp: 5496

Ion	Ratio	Lower	Upper
43	100		
58	33.0	15.9	55.9

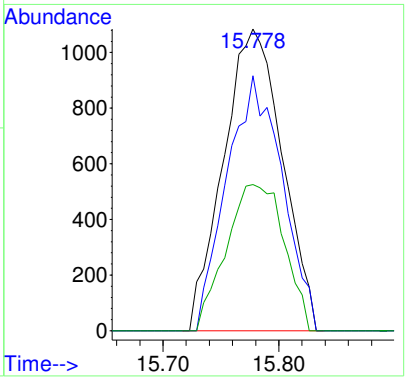


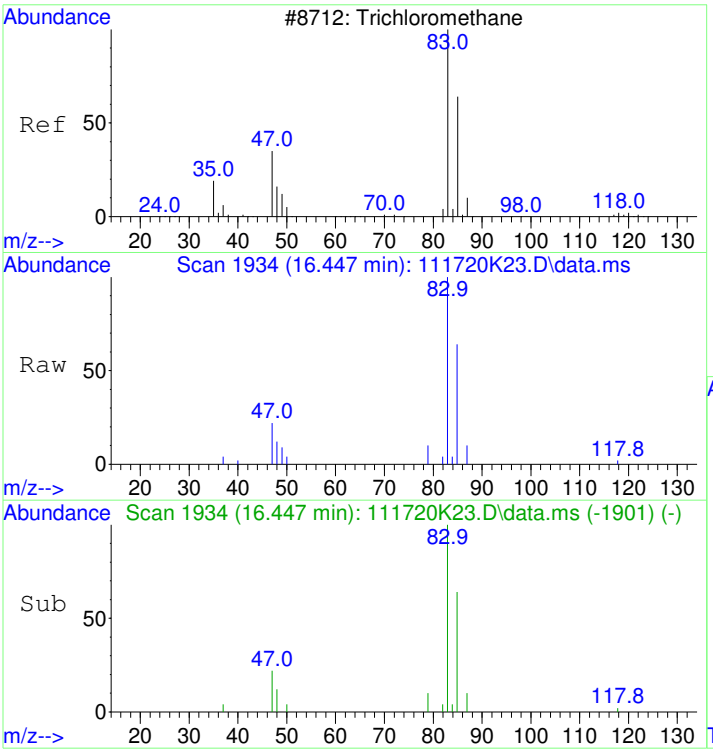


#24
cis-1,2-Dichloroethene
Concen: 0.65 ppbv
RT: 15.778 min Scan# 1824
Delta R.T. -0.006 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion: 61 Resp: 3838

Ion	Ratio	Lower	Upper
61	100		
96	79.2	57.6	97.6
98	0.0	0.0	20.0

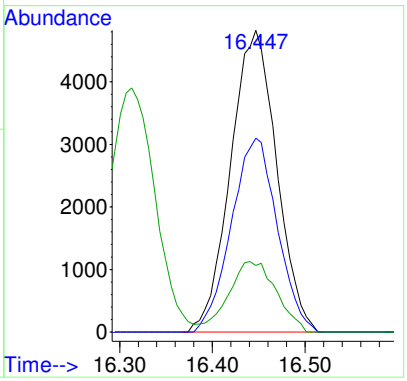


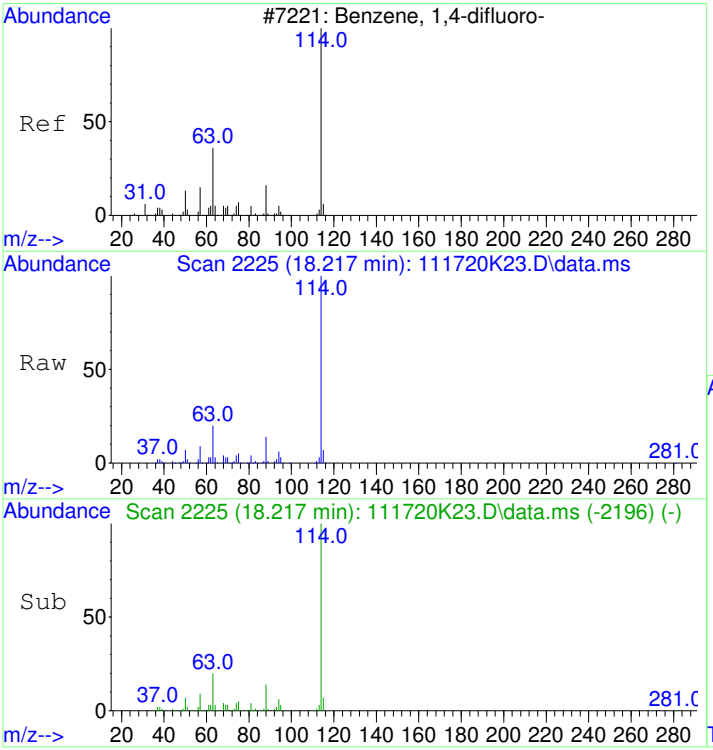


#28
Chloroform
Concen: 2.00 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion: 83 Resp: 16628

Ion	Ratio	Lower	Upper
83	100		
85	64.2	45.5	85.5
47	21.7	1.4	41.4

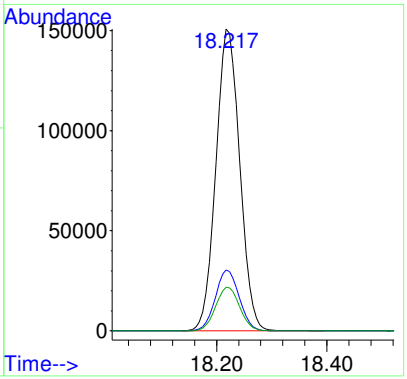


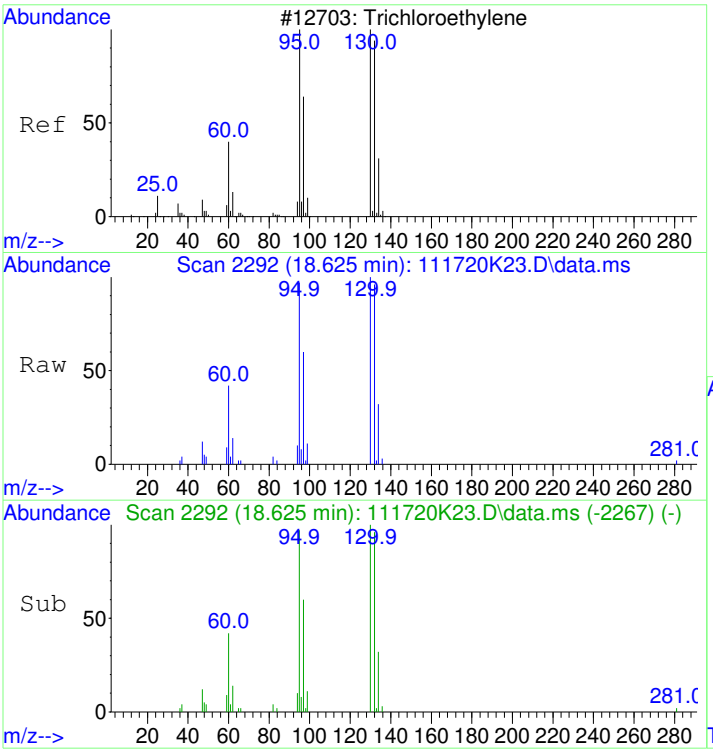


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.006 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion:114 Resp: 452621

Ion	Ratio	Lower	Upper
114	100		
63	20.1	0.0	39.5
88	14.5	0.0	34.7

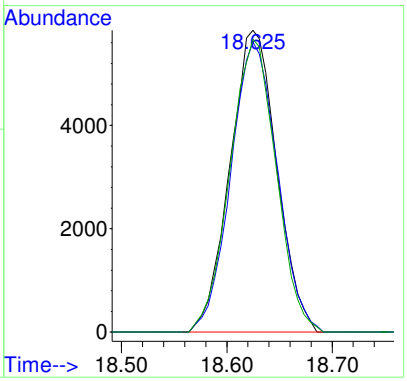


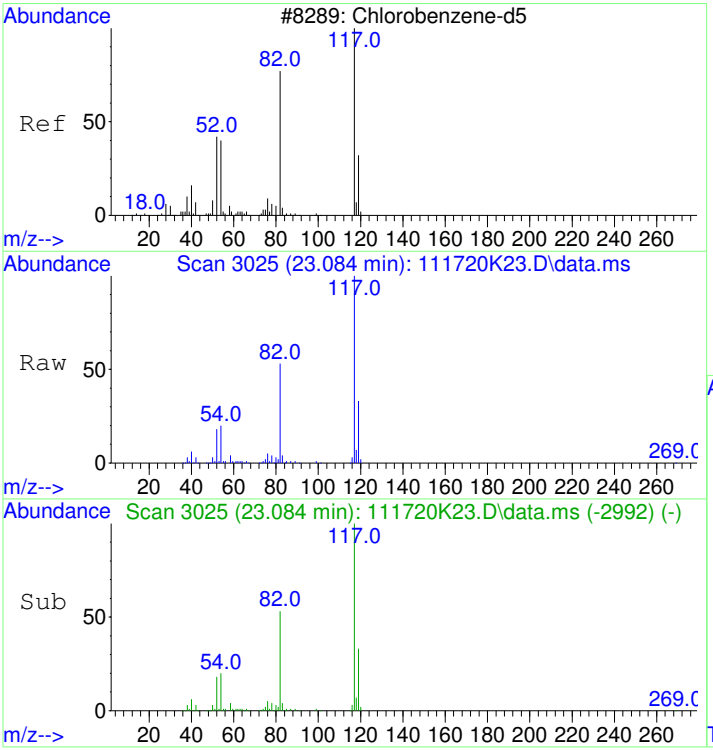


#37
Trichloroethene
Concen: 3.19 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion:130 Resp: 18011

Ion	Ratio	Lower	Upper
130	100		
132	95.5	76.3	116.3
95	95.6	74.0	114.0

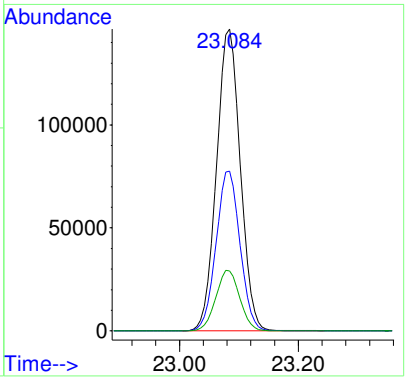




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K23.D
Acq: 18 Nov 2020 5:46 am

Tgt Ion:117 Resp: 407758

Ion	Ratio	Lower	Upper
117	100		
82	53.1	32.3	72.3
54	20.1	0.0	38.6



S20K070-IBL3

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K24.D
InstName : HP5973K
Acq On : 18 Nov 2020 6:38 am
Operator : EM
Sample : S20K070-IBL3
Misc : 200ml IB
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 09:05:21 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	148412	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.217	114	459115	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	408922	19.60 ppbv	0.00

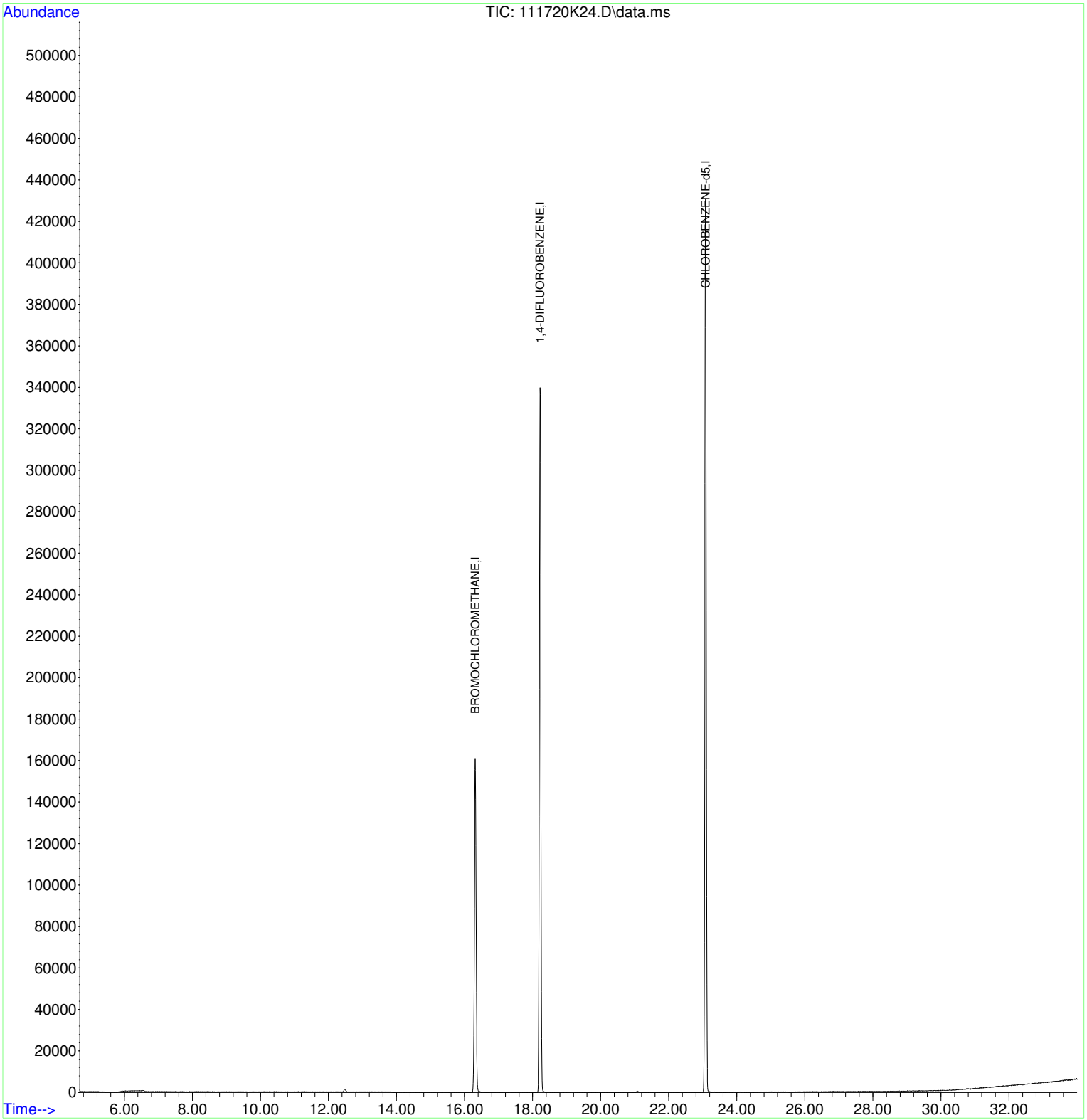
Target Compounds Qvalue

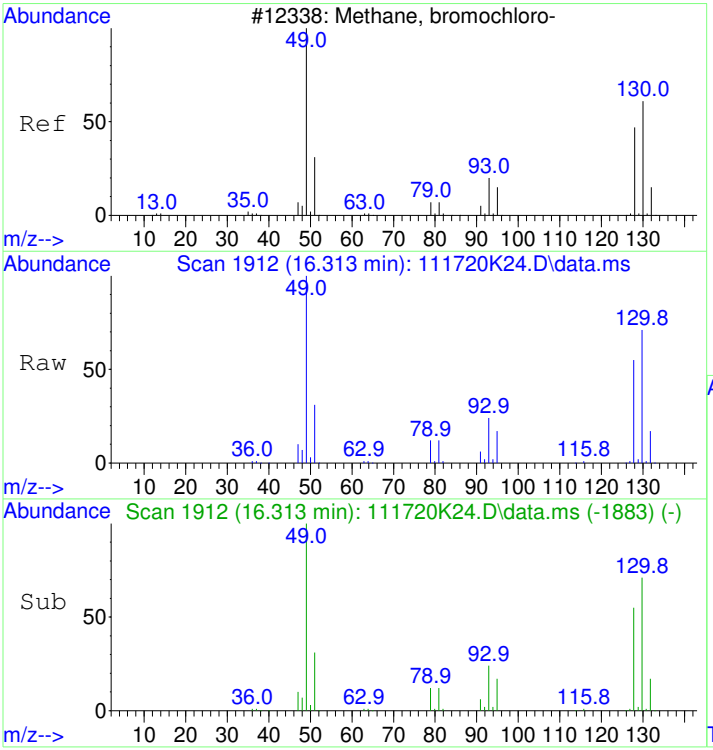
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111720K24.D
InstName : HP5973K
Acq On : 18 Nov 2020 6:38 am
Operator : EM
Sample : S20K070-IBL3
Misc : 200ml IB
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 09:05:21 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

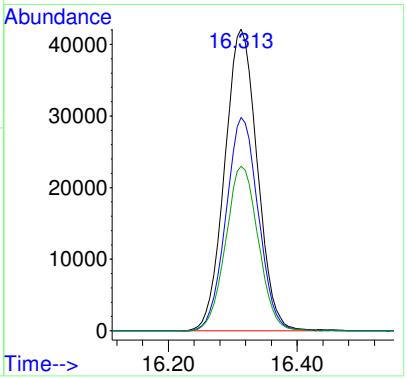


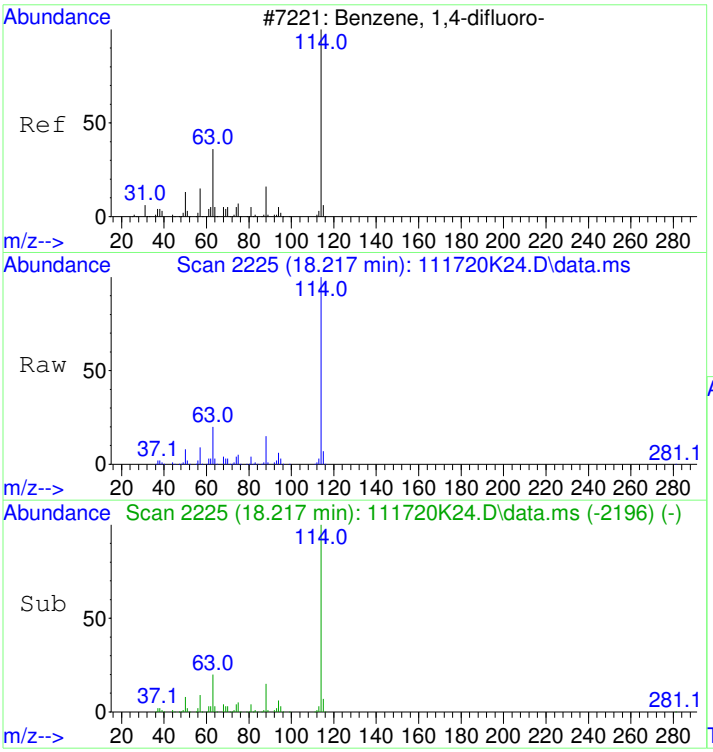


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111720K24.D
Acq: 18 Nov 2020 6:38 am

Tgt Ion: 49 Resp: 148412

Ion	Ratio	Lower	Upper
49	100		
130	70.1	51.9	91.9
128	54.1	35.7	75.7

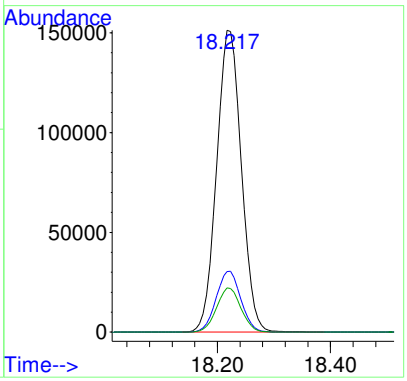


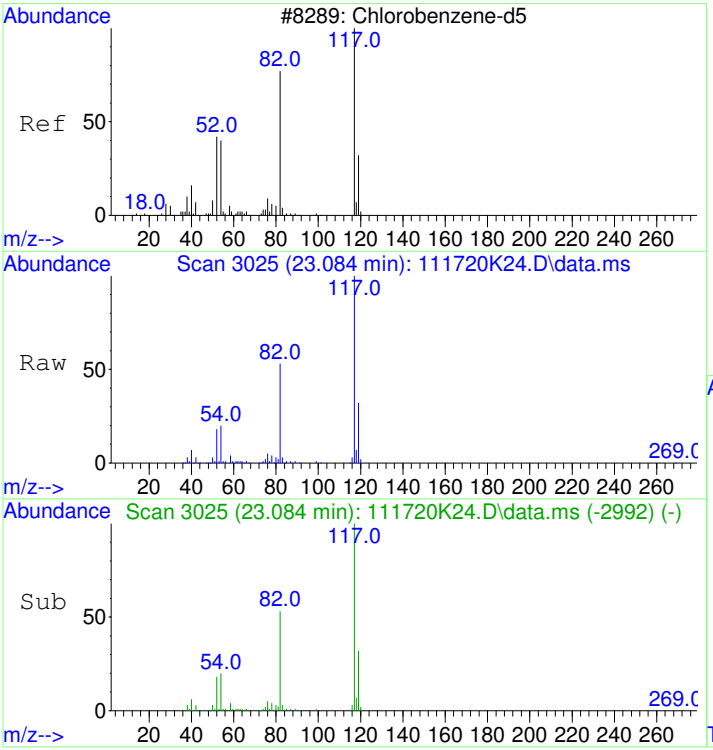


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.006 min
Lab File: 111720K24.D
Acq: 18 Nov 2020 6:38 am

Tgt Ion:114 Resp: 459115

Ion	Ratio	Lower	Upper
114	100		
63	20.1	0.0	39.5
88	14.4	0.0	34.7

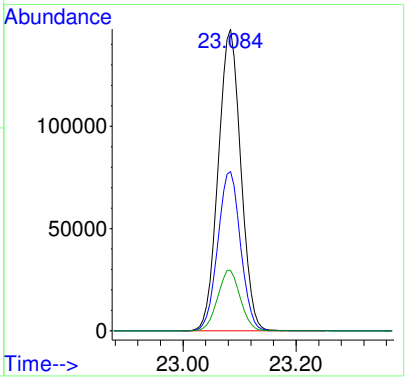




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111720K24.D
Acq: 18 Nov 2020 6:38 am

Tgt Ion:117 Resp: 408922

Ion	Ratio	Lower	Upper
117	100		
82	53.2	32.3	72.3
54	20.1	0.0	38.6



SEQUENCE

S20K076

Sequence Date: 11/18/2020

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B20K073	SEQUENCE #:	S20K076 11/18/20
BATCH #:	MEW ; +CAN CERTIFICATION	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.	11/09/20 Tue Nov 10, 2020 08:55:42			
	Initial Calibration ID (LIMS number):	2011004 / S20K037			
	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	
	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?	☑			
	Other method-specific QCs within QC criteria? Specify if applicable.	☑			

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B20K073	SEQUENCE #:	S20K076	11/18/20
BATCH #:	MEW ; +CAN CERTIFICATION	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?	✔			
	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:	EM 11/19/20
	REVIEWED BY:	Rajabi, Ziyad Digitally signed by Rajabi, Ziyad Date: 2020.11.25 15:47:41 -08'00' SIGN HERE

COMMENTS

Injection Log

Directory: d:\MSDCHEM\1\2020\DATA\111820K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	31	111820K01.D	1.	S20K076-TUN1	BFB 1901028	18 Nov 2020 07:29
2	32	111820K02.D	1.	S20K076-CCV1@B20K073-BS1	10ppbv 2045034@2045036	18 Nov 2020 08:20
3	31	111820K03.D	1.	S20K076-CRL1	1.0ppbv 2045034	18 Nov 2020 09:09
4	33	111820K04.D	1.	B20K073-BLK1	200ml BLANK	18 Nov 2020 10:01
5	13	111820K05.D	1.	CAN 1991	200ml BLANK	18 Nov 2020 11:09
6	14	111820K06.D	1.	CAN 2002	200ml BLANK	18 Nov 2020 11:59
7	15	111820K07.D	4.02	2011024-04RE2	20ml FG-029-3ft-G	18 Nov 2020 12:48
8	11	111820K08.D	1.	S20K076-IBL1	200ml CAN #599 RECERTIFICATION	18 Nov 2020 13:41
9	12	111820K09.D	1.	CAN #627	200ml RECERTIFICATION	18 Nov 2020 14:33
10	13	111820K10.D	1.	CAN #630	200ml RECERTIFICATION	18 Nov 2020 15:25
11	14	111820K11.D	1.	CAN #649	200ml RECERTIFICATION	18 Nov 2020 16:18
12	15	111820K12.D	1.	CAN #854	200ml RECERTIFICATION	18 Nov 2020 17:10
13	16	111820K13.D	1.	CAN #856	200ml RECERTIFICATION	18 Nov 2020 18:02
14	17	111820K14.D	1.	CAN #860	200ml RECERTIFICATION	18 Nov 2020 18:55
15	18	111820K15.D	1.	CAN #899	200ml RECERTIFICATION	18 Nov 2020 19:48
16	19	111820K16.D	1.	CAN #1087	200ml RECERTIFICATION	18 Nov 2020 20:40
17	10	111820K17.D	1.	CAN #1090	200ml RECERTIFICATION	18 Nov 2020 21:32
18	11	111820K18.D	1.	CAN #1107	200ml RECERTIFICATION	18 Nov 2020 22:25
19	12	111820K19.D	1.	CAN #1109	200ml RECERTIFICATION	18 Nov 2020 23:17
20	21	111820K20.D	1.	CAN #1115	200ml RECERTIFICATION	19 Nov 2020 00:10
21	22	111820K21.D	1.	CAN #1581	200ml RECERTIFICATION	19 Nov 2020 01:02
22	23	111820K22.D	1.	CAN #1965	200ml RECERTIFICATION	19 Nov 2020 01:55
23	24	111820K23.D	1.	CAN #1969	200ml RECERTIFICATION	19 Nov 2020 02:47
24	25	111820K24.D	1.	CAN #1981	200ml RECERTIFICATION	19 Nov 2020 03:40
25	26	111820K25.D	1.	CAN #1984	200ml RECERTIFICATION	19 Nov 2020 04:33
26	27	111820K26.D	1.	CAN #1991	200ml RECERTIFICATION	19 Nov 2020 05:25
27	28	111820K27.D	1.	CAN #2002	200ml RECERTIFICATION	19 Nov 2020 06:18

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2020\DATA\111820K_FSAA\111820K01.D
Tune Time : 18 Nov 2020 7:29 am

Daily Calibration File : D:\msdchem\1\2020\DATA\111820K_FSAA\111820K02.D

File	Sample	Surrogate Recovery %			Internal Standard Responses		
			156639	473041	442951		
111820K02.D	S20K076-CCV1		156639	473041	442951		
111820K03.D	S20K076-CRL1		160226	487562	439878		
111820K04.D	B20K073-BLK1		157292	485486	428910		
111820K05.D	CAN 1991		155280	476898	427116		
111820K06.D	CAN 2002		162990	491583	439582		
111820K07.D	2011024-04RE2		152988	466541	417550		
111820K08.D	S20K076-IBL1		152278	462879	415697	CAN 599	RECLEAN
111820K09.D	CAN #627		151409	456752	412048		
111820K10.D	CAN #630		149013	451071	405198		
111820K11.D	CAN #649		146034	439845	396632		
111820K12.D	CAN #854		145425	437210	394638		
111820K13.D	CAN #856		142590	430624	389106	RECLEAN	
111820K14.D	CAN #860		144241	432702	390392		
111820K15.D	CAN #899		140961	424725	381582		
111820K16.D	CAN #1087		139898	417670	378393	RECLEAN	
111820K17.D	CAN #1090		143697	426300	385888	RECLEAN	
111820K18.D	CAN #1107		137486	410800	367019		
111820K19.D	CAN #1109		135832	407400	366678		
111820K20.D	CAN #1115		133499	397321	357452		
111820K21.D	CAN #1581		134212	400210	358556		
111820K22.D	CAN #1965		134279	399600	358906		
111820K23.D	CAN #1969		132867	396079	356209		

111820K24.D

CAN #1981	132308	393711	353288	RECLEAN

111820K25.D

CAN #1984	133656	397462	355290	RECLEAN

111820K26.D

CAN #1991	131385	388995	349058

111820K27.D

CAN #2002	130983	387038	349785	RECLEAN

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

Created: Thu Nov 19 09:02:41 2020 HP5973K

Sequence Report

Name	Inlet	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
BFB	Three	T1	40	40	50	TO-15_A.CTD3	11/18/2020 7:29:41 AM	Completed
CCV	Three	T2	40	0	100	TO-15_A.CTD3	11/18/2020 8:20:06 AM	Completed
CRL	Three	T1	40	0	20	TO-15_A.CTD3	11/18/2020 9:09:07 AM	Completed
BLANK	Three	T3	40	0	200	TO-15_A.CTD3	11/18/2020 10:01:29 AM	Completed
CAN 1991	One	T3	40	0	200	TO-15_A.CTD3	11/18/2020 11:09:27 AM	Completed
CAN 2002	One	T4	40	0	200	TO-15_A.CTD3	11/18/2020 11:59:03 AM	Completed
2011024-04RE2	One	T5	40	0	20	TO-15_A.CTD3	11/18/2020 12:48:45 PM	Completed
CAN #599	One	T1	40	0	200	TO-15_A.CTD3	11/18/2020 1:41:05 PM	Completed
CAN #627	One	T2	40	0	200	TO-15_A.CTD3	11/18/2020 2:33:22 PM	Completed
CAN #630	One	T3	40	0	200	TO-15_A.CTD3	11/18/2020 3:25:40 PM	Completed
CAN #649	One	T4	40	0	200	TO-15_A.CTD3	11/18/2020 4:18:02 PM	Completed
CAN #854	One	T5	40	0	200	TO-15_A.CTD3	11/18/2020 5:10:26 PM	Completed
CAN #856	One	T6	40	0	200	TO-15_A.CTD3	11/18/2020 6:02:51 PM	Completed
CAN #860	One	T7	40	0	200	TO-15_A.CTD3	11/18/2020 6:55:44 PM	Completed
CAN #899	One	T8	40	0	200	TO-15_A.CTD3	11/18/2020 7:48:22 PM	Completed
CAN #1087	One	T9	40	0	200	TO-15_A.CTD3	11/18/2020 8:40:41 PM	Completed
CAN #1090	One	T10	40	0	200	TO-15_A.CTD3	11/18/2020 9:32:54 PM	Completed
CAN #1107	One	T11	40	0	200	TO-15_A.CTD3	11/18/2020 10:25:13 PM	Completed
CAN #1109	One	T12	40	0	200	TO-15_A.CTD3	11/18/2020 11:17:38 PM	Completed
CAN #1115	Two	T1	40	0	200	TO-15_A.CTD3	11/19/2020 12:10:08 AM	Completed
CAN #1581	Two	T2	40	0	200	TO-15_A.CTD3	11/19/2020 1:02:33 AM	Completed
CAN #1965	Two	T3	40	0	200	TO-15_A.CTD3	11/19/2020 1:55:24 AM	Completed
CAN #1969	Two	T4	40	0	200	TO-15_A.CTD3	11/19/2020 2:47:47 AM	Completed
CAN #1981	Two	T5	40	0	200	TO-15_A.CTD3	11/19/2020 3:40:28 AM	Completed
CAN #1984	Two	T6	40	0	200	TO-15_A.CTD3	11/19/2020 4:33:13 AM	Completed
CAN #1991	Two	T7	40	0	200	TO-15_A.CTD3	11/19/2020 5:25:41 AM	Completed
CAN #2002	Two	T8	40	0	200	TO-15_A.CTD3	11/19/2020 6:18:21 AM	Completed

Analysis Sequence

S20K076

Project: R21S04
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 2011004 Printed: 11/19/2020 3:04 pm

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S20K076-TUN1	BFB Tune	1	11/18/20 7:29	1901028		EM	111820K01.D	
S20K076-CCV1	CCV - TO15	2	11/18/20 8:20	2045035		EM	111820K02.D	
B20K073-BS1	LCS	3	11/18/20 8:20			EM	111820K02.D	
S20K076-CRL1	QLS - TO15	4	11/18/20 9:09	2045034		EM	111820K03.D	
B20K073-BLK1	Blank	5	11/18/20 10:01		2006148	EM	111820K04.D	
2011024-04RE2 A	F6-029-3ft-G	6	11/18/20 12:48		2006148	EM	111820K07.D	
S20K076-IBL1	Instrument Blank	7	11/18/20 13:41		2006148	EM	111820K08.D	

Sequence Comments

Reagents

Reagent #	Description

SEQUENCE DATA

S20K076

S20K076-TUN1

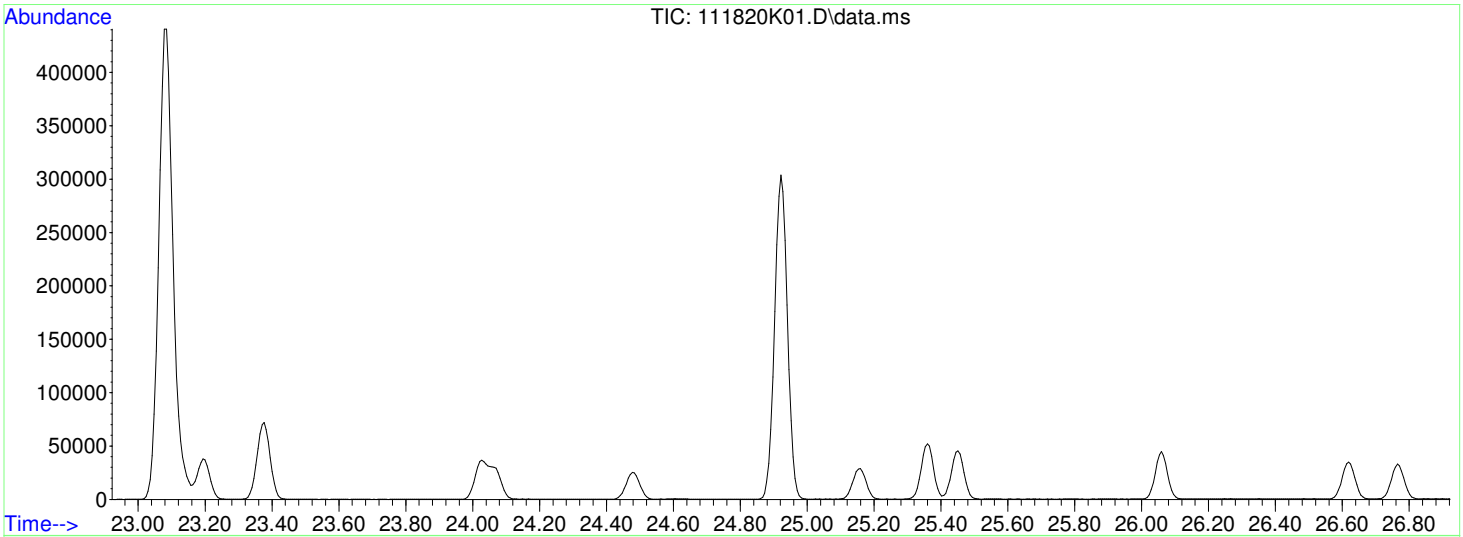
Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111720K_FSAA\
Data File : 111820K01.D
InstName : HP5973K
Acq On : 18 Nov 2020 7:29 am
Operator : EM
Sample : S20K076-TUN1
Misc : BFB 1901028
ALS Vial : 31 Sample Multiplier: 1

REVIEWED
By EM at 12:42 pm, Nov 18, 2020

Integration File: lscint.p

Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Title : TO15
Last Update : Tue Nov 10 08:55:42 2020

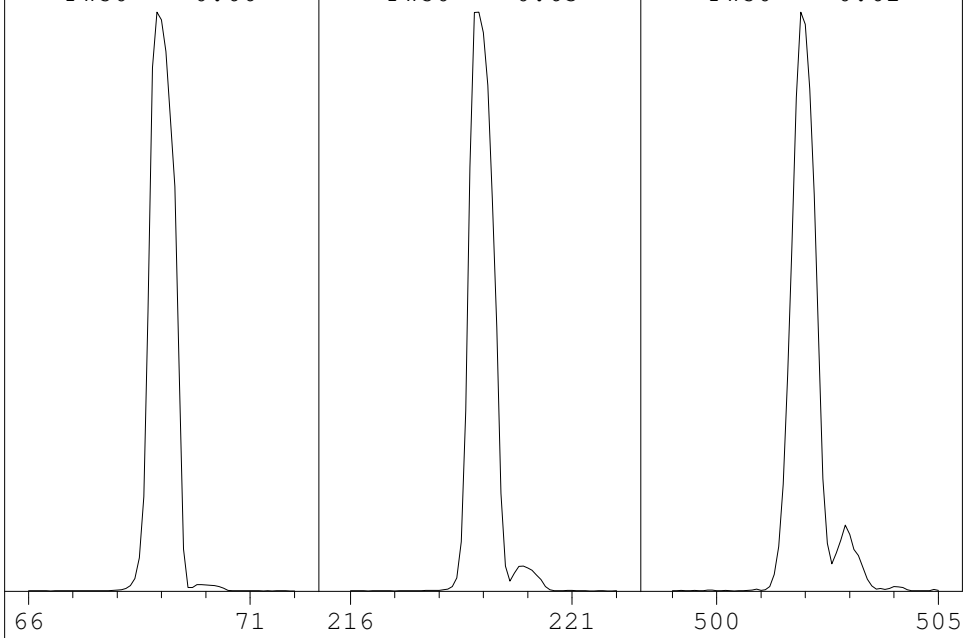


AutoFind: Scans 3326, 3327, 3328; Background Corrected with Scan 3312

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.8	10971	PASS
75	95	30	66	48.8	28496	PASS
95	95	100	100	100.0	58443	PASS
96	95	5	9	6.7	3931	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	91.7	53573	PASS
175	174	4	9	7.2	3859	PASS
176	174	93	101	97.3	52120	PASS
177	176	5	9	6.7	3489	PASS

Wed Nov 18 10:50:50 2020 Instrum
C:\msdchem\1\5973N\bfb111820K.U 0582321658

Mass	68.90	Mass	218.90	Mass	501.90
Ab	337496	Ab	186803	Ab	20073
Pw50	0.66	Pw50	0.63	Pw50	0.61

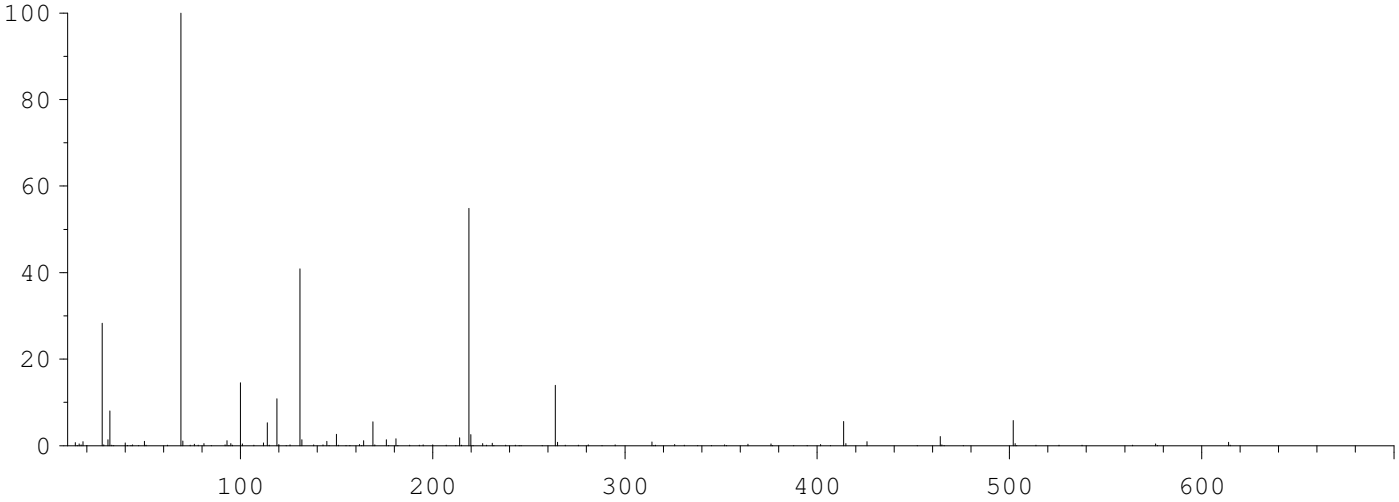


Ion Pol	Pos	MassGain	66
		MassOffs	-8
Emission	34.6	AmuGain	1991
EIEnrgy	69.9	AmuOffs	128
Filament	1	Wid219	-0.038
		DC Pol	Pos
Repeller	28.28		
IonFcus	90.2	HEDEnab	On
EntLens	19.0	EMVolts	1082
EntOffs	18.82		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
123 peaks Base: 69.00 Abundance: 313024



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	313024	100.00	70.00	3418	1.09
218.90	171648	54.84	219.90	8089	4.71
502.00	18184	5.81	503.00	1603	8.82

Air/Water Check: H20~0.91% N2~28.32% O2~8.03% CO2~0.21% N2/H2O~3113.20%

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 101934
Repeller Maximum 35 volts using ion 219; Gain Factor 1.02

MassGain Values(Samples): 67(3) 67(2) 67(1) 67(0) 66(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	128.0	128.0	128.0	128.0	128.0	128.0	128.0
Entrance Lens Offset:	18.8	18.8	18.8	18.8	18.8	18.8	18.8

S20K076-CCV1

Evaluate Continuing Calibration Report

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

REVIEWED
By EM at 2:33 pm, Nov 18, 2020

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	75	0.00
2	T	Propene	0.611	0.519	15.1	71	-0.01
3	T	Dichlorodifluoromethane	1.446	1.259	12.9	70	-0.01
4	T	1,2-Dichlorotetrafluoroetha	1.634	1.384	15.3	68	0.00
5	T	Chloromethane	0.599	0.505	15.7	68	-0.01
6	T	Vinyl chloride	0.655	0.638	2.6	79	0.00
7	T	1,3-Butadiene	0.485	0.492	-1.4	83	-0.01
8	T	Bromomethane	0.505	0.408	19.2	65	-0.01
9	T	Chloroethane	0.350	0.278	20.6	64	0.00
10	T	Bromoethene	0.539	0.416	22.8	64	0.00
11	T	Trichlorofluoromethane	1.391	1.199	13.8	70	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	0.899	0.739	17.8	67	0.00
13	T	1,1-Dichloroethene	0.857	0.683	20.3	64	-0.01
14	T	Acetone	0.876	0.734	16.2	68	-0.01
15	T	Carbon disulfide	1.656	1.325	20.0	66	-0.01
16	T	2-Propanol	0.939	0.739	21.3	63	-0.01
17	T	Allyl chloride	0.765	0.600	21.6	64	-0.01
18	T	Dichloromethane	0.729	0.569	21.9	68	0.00
19	T	tert-Butyl methyl ether (MT	1.650	1.286	22.1	64	0.00
20	T	trans-1,2-Dichloroethene	0.834	0.667	20.0	65	0.00
21	T	Hexane	1.114	0.860	22.8	64	0.00
22	T	1,1-Dichloroethane	1.088	0.877	19.4	66	0.00
23	T	Vinyl acetate	1.341	1.126	16.0	66	0.00
24	T	cis-1,2-Dichloroethene	0.785	0.628	20.0	65	0.00
25	T	2-Butanone (MEK)	0.336	0.273	18.8	66	0.00
26	T	Ethyl acetate	0.208	0.171	17.8	67	0.00
27	T	Tetrahydrofuran	0.795	0.653	17.9	67	0.00
28	T	Chloroform	1.097	0.925	15.7	69	0.00
29	T	Cyclohexane	1.061	0.826	22.1	64	0.00
30	T	1,1,1-Trichloroethane	1.065	0.922	13.4	70	0.00
31	T	Carbon tetrachloride	1.174	1.020	13.1	70	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	71	0.00
33	T	Benzene	0.596	0.518	13.1	67	0.00
34	T	2,2,4-Trimethylpentane	1.043	0.863	17.3	64	0.00
35	T	1,2-Dichloroethane	0.214	0.198	7.5	70	0.00
36	T	Heptane	0.376	0.328	12.8	68	0.00
37	T	Trichloroethene	0.245	0.207	15.5	65	0.00
38	T	1,2-Dichloropropane	0.224	0.191	14.7	66	0.00
39	T	1,4-Dioxane	0.127	0.102	19.7	62	0.00
40	T	Bromodichloromethane	0.384	0.342	10.9	68	0.00
41	T	cis-1,3-Dichloropropene	0.335	0.285	14.9	63	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.469	0.420	10.4	69	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	73	0.00
44	T	Toluene	0.778	0.662	14.9	66	0.00
45	T	trans-1,3-Dichloropropene	0.330	0.280	15.2	64	0.00
46	T	1,1,2-Trichloroethane	0.248	0.215	13.3	67	0.00
47	T	Tetrachloroethene	0.378	0.327	13.5	67	0.00
48	T	2-Hexanone	0.478	0.421	11.9	68	0.00
49	T	Chlorodibromomethane	0.436	0.383	12.2	68	0.00
50	T	1,2-Dibromoethane (EDB)	0.354	0.301	15.0	66	0.00
51	T	Chlorobenzene	0.609	0.515	15.4	66	0.00

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	1.022	0.888	13.1	67	0.00
53 T	m&p-Xylene	0.770	0.683	11.3	68	0.00
54 T	o-Xylene	0.794	0.692	12.8	68	0.00
55 T	Styrene	0.618	0.546	11.7	66	0.00
56 T	Bromoform	0.444	0.404	9.0	68	0.00
57 T	1,1,2,2-Tetrachloroethane	0.572	0.514	10.1	69	0.00
58 T	4-Ethyltoluene	1.266	1.100	13.1	68	0.00
59 T	1,3,5-Trimethylbenzene	0.938	0.839	10.6	69	0.00
60 T	1,2,4-Trimethylbenzene	0.939	0.840	10.5	68	0.00
61 T	1,3-Dichlorobenzene	0.616	0.533	13.5	66	0.00
62 T	1,4-Dichlorobenzene	0.588	0.507	13.8	65	0.00
63 T	Benzyl chloride	0.788	0.714	9.4	65	0.00
64 T	1,2-Dichlorobenzene	0.611	0.539	11.8	67	0.00
65 T	1,2,4-Trichlorobenzene	0.457	0.393	14.0	62	0.00
66 T	Hexachlorobutadiene	0.569	0.526	7.6	70	0.00

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

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	156639	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	473041	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	442951	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	39402	8.07	ppbv		98
3) Dichlorodifluoromethane	5.101	85	98642	8.54	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.490	85	106210	8.13	ppbv		99
5) Chloromethane	5.728	50	39982	8.35	ppbv		100
6) Vinyl chloride	6.074	62	52555	10.05	ppbv		99
7) 1,3-Butadiene	6.172	54	40898	10.55	ppbv		97
8) Bromomethane	7.242	94	33287	8.25	ppbv		100
9) Chloroethane	7.614	64	22434	8.03	ppbv		100
10) Bromoethene	8.258	106	33588	7.80	ppbv		99
11) Trichlorofluoromethane	8.386	101	89121	8.02	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	63169	8.80	ppbv		100
13) 1,1-Dichloroethene	10.509	61	57830	8.45	ppbv		99
14) Acetone	11.081	43	58068	8.29	ppbv		97
15) Carbon disulfide	11.197	76	110099	8.32	ppbv		99
16) 2-Propanol	11.592	45	59084	7.87	ppbv		95
17) Allyl chloride	11.963	41	52251	8.54	ppbv		99
18) Dichloromethane	12.487	49	46805	8.03	ppbv		98
19) tert-Butyl methyl ethe...	13.022	73	112050	8.50	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	54366	8.16	ppbv		100
21) Hexane	13.594	57	69388	7.80	ppbv		96
22) 1,1-Dichloroethane	14.391	63	68699	7.90	ppbv		100
23) Vinyl acetate	14.494	43	99017	9.24	ppbv		98
24) cis-1,2-Dichloroethene	15.778	61	51714	8.24	ppbv	#	98
25) 2-Butanone (MEK)	15.869	72	21782	8.12	ppbv	#	89
26) Ethyl acetate	15.863	61	13821	8.33	ppbv	#	92
27) Tetrahydrofuran	16.289	42	47985	7.55	ppbv		98
28) Chloroform	16.447	83	76843	8.77	ppbv		99
29) Cyclohexane	16.617	56	71252	8.40	ppbv		98
30) 1,1,1-Trichloroethane	16.702	97	78133	9.18	ppbv		100
31) Carbon tetrachloride	16.934	117	80671	8.60	ppbv		100
33) Benzene	17.439	78	130073	9.04	ppbv		99
34) 2,2,4-Trimethylpentane	17.311	57	222776	8.85	ppbv		98
35) 1,2-Dichloroethane	17.658	62	48372	9.35	ppbv		100
36) Heptane	17.682	43	83164	9.16	ppbv		96
37) Trichloroethene	18.625	130	53383	9.04	ppbv		99
38) 1,2-Dichloropropane	19.142	63	47106	8.73	ppbv		97
39) 1,4-Dioxane	19.318	88	25775	8.40	ppbv		98
40) Bromodichloromethane	19.598	83	86775	9.36	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	71656	8.85	ppbv		97
42) 4-Methyl-2-pentanone (...	20.553	43	99253	8.78	ppbv		97
44) Toluene	20.803	91	154065	8.76	ppbv		99
45) trans-1,3-Dichloropropene	21.283	75	58241	7.82	ppbv		98
46) 1,1,2-Trichloroethane	21.594	97	51105	9.12	ppbv		98
47) Tetrachloroethene	21.642	166	76097	8.91	ppbv		100
48) 2-Hexanone	21.892	43	87492	8.10	ppbv		97
49) Chlorodibromomethane	22.202	129	90111	9.14	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	70816	8.84	ppbv		100
51) Chlorobenzene	23.127	112	121113	8.80	ppbv		97
52) Ethylbenzene	23.194	91	206749	8.95	ppbv		100
53) m&p-Xylene	23.376	91	314867	18.10	ppbv		100
54) o-Xylene	24.027	91	158015	8.81	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

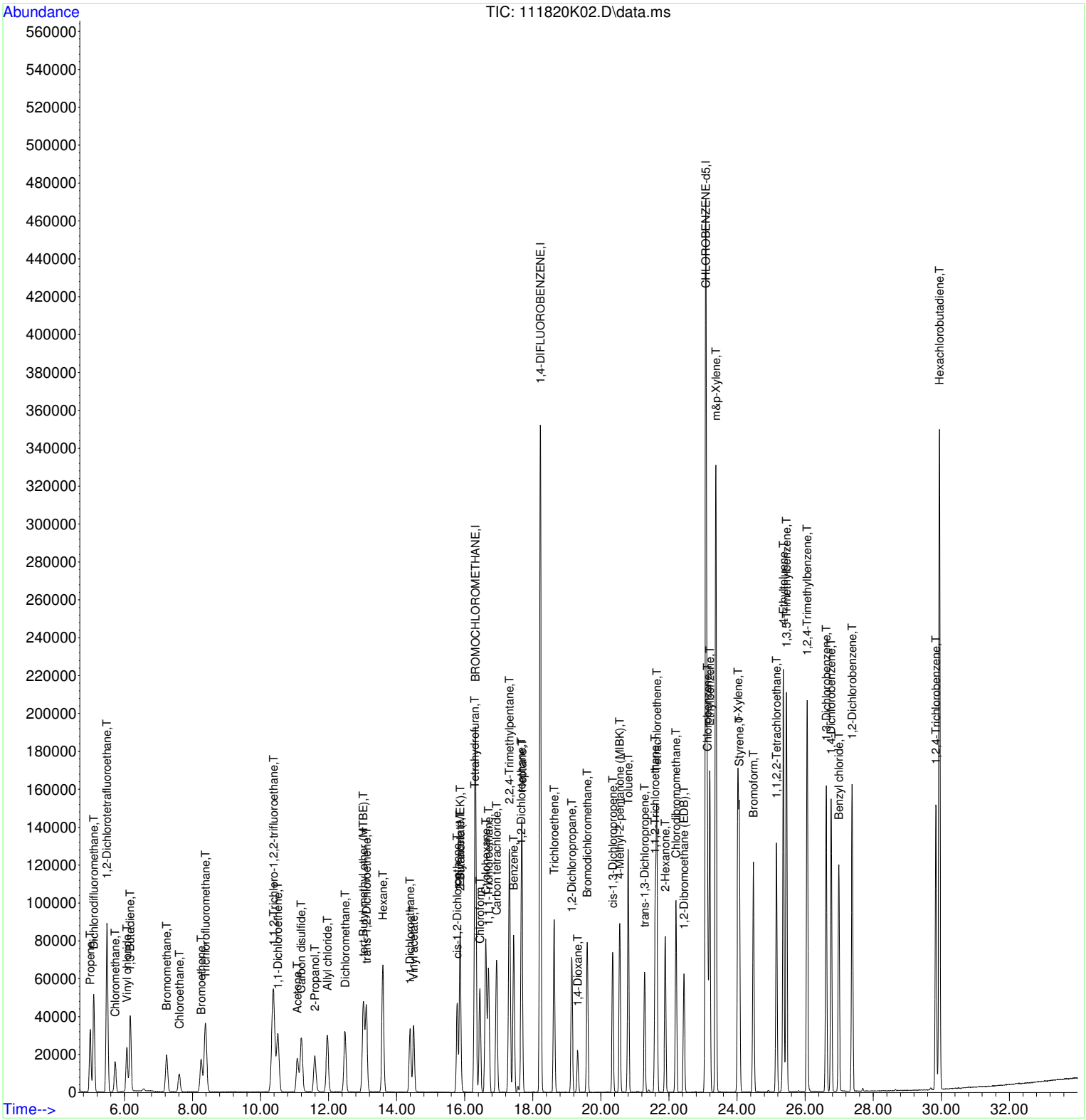
Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Styrene	24.070	104	124740	8.93	ppbv	99
56) Bromoform	24.477	173	96834	9.66	ppbv	99
57) 1,1,2,2-Tetrachloroethane	25.159	83	117295	9.07	ppbv	99
58) 4-Ethyltoluene	25.359	105	246134	8.61	ppbv	98
59) 1,3,5-Trimethylbenzene	25.451	105	191513	9.04	ppbv	99
60) 1,2,4-Trimethylbenzene	26.059	105	189757	8.94	ppbv	98
61) 1,3-Dichlorobenzene	26.619	146	118121	8.48	ppbv	100
62) 1,4-Dichlorobenzene	26.765	146	112322	8.46	ppbv	99
63) Benzyl chloride	26.990	91	150045	8.42	ppbv	98
64) 1,2-Dichlorobenzene	27.379	146	119330	8.64	ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	86068	8.33	ppbv	100
66) Hexachlorobutadiene	29.946	225	122352	9.51	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



LCS REPORT

Instrument Name: HP5973K
Sample Name: S20K076-CCV1@B20K073-BS1
Misc Info: 10ppbv 2045034@2045036
Date Acquired: 11/18/2020 8:20
QLast Update: Tue Nov 10 08:55:42 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
2)	Propene	5.00	9.50	8.07	85%	72.0	114.0	pass
3)	Dichlorodifluoromethane	5.10	9.80	8.54	87%	73.0	120.0	pass
4)	1,2-Dichlorotetrafluoroethane	5.49	9.60	8.13	85%	74.0	116.0	pass
5)	Chloromethane	5.73	9.90	8.35	84%	73.0	113.0	pass
6)	Vinyl chloride	6.07	10.30	10.05	98%	68.0	119.0	pass
7)	1,3-Butadiene	6.17	10.40	10.55	101%	68.0	120.0	pass
8)	Bromomethane	7.24	10.20	8.25	81%	71.0	122.0	pass
9)	Chloroethane	7.61	10.10	8.03	79%	73.0	116.0	pass
10)	Bromoethene	8.26	10.10	7.80	77%	64.0	123.0	pass
11)	Trichlorofluoromethane	8.39	9.30	8.02	86%	74.0	120.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.38	10.70	8.80	82%	63.0	126.0	pass
13)	1,1-Dichloroethene	10.51	10.60	8.45	80%	69.0	119.0	pass
14)	Acetone	11.08	9.90	8.29	84%	79.0	114.0	pass
15)	Carbon disulfide	11.20	10.40	8.32	80%	75.0	120.0	pass
16)	2-Propanol	11.59	10.00	7.87	79%	66.0	119.0	pass
17)	Allyl chloride	11.96	10.90	8.54	78%	72.0	116.0	pass
18)	Dichloromethane	12.49	10.30	8.03	78%	76.0	110.0	pass
19)	tert-Butyl methyl ether (MTBE)	13.02	10.90	8.50	78%	61.0	124.0	pass
20)	trans-1,2-Dichloroethene	13.11	10.20	8.16	80%	78.0	113.0	pass
21)	Hexane	13.59	10.10	7.80	77%	76.0	116.0	pass
22)	1,1-Dichloroethane	14.39	9.80	7.90	81%	76.0	113.0	pass
23)	Vinyl acetate	14.49	11.00	9.24	84%	71.0	117.0	pass
24)	cis-1,2-Dichloroethene	15.78	10.30	8.24	80%	74.0	116.0	pass
25)	2-Butanone (MEK)	15.87	10.00	8.12	81%	73.0	124.0	pass
26)	Ethyl acetate	15.86	10.10	8.33	83%	71.0	122.0	pass
27)	Tetrahydrofuran	16.29	9.20	7.55	82%	79.0	119.0	pass
28)	Chloroform	16.45	10.40	8.77	84%	77.0	115.0	pass
29)	Cyclohexane	16.62	10.80	8.40	78%	76.0	114.0	pass
30)	1,1,1-Trichloroethane	16.70	10.60	9.18	87%	77.0	117.0	pass
31)	Carbon tetrachloride	16.93	9.90	8.60	87%	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	9.04	87%	81.0	115.0	pass
34)	2,2,4-Trimethylpentane	17.31	10.70	8.85	83%	77.0	120.0	pass
35)	1,2-Dichloroethane	17.66	10.10	9.35	93%	74.0	128.0	pass
36)	Heptane	17.68	10.50	9.16	87%	73.0	128.0	pass
37)	Trichloroethene	18.62	10.70	9.04	85%	82.0	113.0	pass
38)	1,2-Dichloropropane	19.14	10.20	8.73	86%	78.0	119.0	pass
39)	1,4-Dioxane	19.32	10.50	8.40	80%	73.0	120.0	pass
40)	Bromodichloromethane	19.60	10.50	9.36	89%	79.0	124.0	pass
41)	cis-1,3-Dichloropropene	20.35	10.40	8.85	85%	82.0	117.0	pass
42)	4-Methyl-2-pentanone (MIBK)	20.55	9.80	8.78	90%	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	8.76	85%	80.0	120.0	pass
45)	trans-1,3-Dichloropropene	21.28	9.20	7.82	85%	81.0	122.0	pass
46)	1,1,2-Trichloroethane	21.59	10.50	9.12	87%	81.0	121.0	pass
47)	Tetrachloroethene	21.64	10.30	8.91	87%	69.0	122.0	pass

48)	2-Hexanone	21.89	9.20	8.10	88%	61.0	140.0	pass
49)	Chlorodibromomethane	22.20	10.40	9.14	88%	82.0	128.0	pass
50)	1,2-Dibromoethane (EDB)	22.44	10.40	8.84	85%	80.0	121.0	pass
51)	Chlorobenzene	23.13	10.40	8.80	85%	80.0	122.0	pass
52)	Ethylbenzene	23.19	10.30	8.95	87%	80.0	125.0	pass
53)	m&p-Xylene	23.38	20.40	18.10	89%	80.0	128.0	pass
54)	o-Xylene	24.03	10.10	8.81	87%	79.0	130.0	pass
55)	Styrene	24.07	10.10	8.93	88%	76.0	133.0	pass
56)	Bromoform	24.48	10.60	9.66	91%	82.0	136.0	pass
57)	1,1,2,2-Tetrachloroethane	25.16	10.10	9.07	90%	78.0	132.0	pass
58)	4-Ethyltoluene	25.36	9.90	8.61	87%	77.0	133.0	pass
59)	1,3,5-Trimethylbenzene	25.45	10.10	9.04	89%	78.0	133.0	pass
60)	1,2,4-Trimethylbenzene	26.06	10.00	8.94	89%	78.0	133.0	pass
61)	1,3-Dichlorobenzene	26.62	9.80	8.48	87%	76.0	133.0	pass
62)	1,4-Dichlorobenzene	26.76	9.80	8.46	86%	75.0	134.0	pass
63)	Benzyl chloride	26.99	9.30	8.42	91%	73.0	144.0	pass
64)	1,2-Dichlorobenzene	27.38	9.80	8.64	88%	77.0	134.0	pass
65)	1,2,4-Trichlorobenzene	29.84	9.70	8.33	86%	70.0	133.0	pass
66)	Hexachlorobutadiene	29.95	10.30	9.51	92%	74.0	130.0	pass

B20K073-BS1

REVIEWED
By EM at 2:33 pm, Nov 18, 2020

LCS REPORT

Instrument Name: HP5973K
Sample Name: S20K076-CCV1@B20K073-BS1
Misc Info: 10ppbv 2045034@2045036
Date Acquired: 11/18/2020 8:20
QLast Update: Tue Nov 10 08:55:42 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
2)	Propene	5.00	9.50	8.07	85%	72.0	114.0	pass
3)	Dichlorodifluoromethane	5.10	9.80	8.54	87%	73.0	120.0	pass
4)	1,2-Dichlorotetrafluoroethane	5.49	9.60	8.13	85%	74.0	116.0	pass
5)	Chloromethane	5.73	9.90	8.35	84%	73.0	113.0	pass
6)	Vinyl chloride	6.07	10.30	10.05	98%	68.0	119.0	pass
7)	1,3-Butadiene	6.17	10.40	10.55	101%	68.0	120.0	pass
8)	Bromomethane	7.24	10.20	8.25	81%	71.0	122.0	pass
9)	Chloroethane	7.61	10.10	8.03	79%	73.0	116.0	pass
10)	Bromoethene	8.26	10.10	7.80	77%	64.0	123.0	pass
11)	Trichlorofluoromethane	8.39	9.30	8.02	86%	74.0	120.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.38	10.70	8.80	82%	63.0	126.0	pass
13)	1,1-Dichloroethene	10.51	10.60	8.45	80%	69.0	119.0	pass
14)	Acetone	11.08	9.90	8.29	84%	79.0	114.0	pass
15)	Carbon disulfide	11.20	10.40	8.32	80%	75.0	120.0	pass
16)	2-Propanol	11.59	10.00	7.87	79%	66.0	119.0	pass
17)	Allyl chloride	11.96	10.90	8.54	78%	72.0	116.0	pass
18)	Dichloromethane	12.49	10.30	8.03	78%	76.0	110.0	pass
19)	tert-Butyl methyl ether (MTBE)	13.02	10.90	8.50	78%	61.0	124.0	pass
20)	trans-1,2-Dichloroethene	13.11	10.20	8.16	80%	78.0	113.0	pass
21)	Hexane	13.59	10.10	7.80	77%	76.0	116.0	pass
22)	1,1-Dichloroethane	14.39	9.80	7.90	81%	76.0	113.0	pass
23)	Vinyl acetate	14.49	11.00	9.24	84%	71.0	117.0	pass
24)	cis-1,2-Dichloroethene	15.78	10.30	8.24	80%	74.0	116.0	pass
25)	2-Butanone (MEK)	15.87	10.00	8.12	81%	73.0	124.0	pass
26)	Ethyl acetate	15.86	10.10	8.33	83%	71.0	122.0	pass
27)	Tetrahydrofuran	16.29	9.20	7.55	82%	79.0	119.0	pass
28)	Chloroform	16.45	10.40	8.77	84%	77.0	115.0	pass
29)	Cyclohexane	16.62	10.80	8.40	78%	76.0	114.0	pass
30)	1,1,1-Trichloroethane	16.70	10.60	9.18	87%	77.0	117.0	pass
31)	Carbon tetrachloride	16.93	9.90	8.60	87%	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	9.04	87%	81.0	115.0	pass
34)	2,2,4-Trimethylpentane	17.31	10.70	8.85	83%	77.0	120.0	pass
35)	1,2-Dichloroethane	17.66	10.10	9.35	93%	74.0	128.0	pass
36)	Heptane	17.68	10.50	9.16	87%	73.0	128.0	pass
37)	Trichloroethene	18.62	10.70	9.04	85%	82.0	113.0	pass
38)	1,2-Dichloropropane	19.14	10.20	8.73	86%	78.0	119.0	pass
39)	1,4-Dioxane	19.32	10.50	8.40	80%	73.0	120.0	pass
40)	Bromodichloromethane	19.60	10.50	9.36	89%	79.0	124.0	pass
41)	cis-1,3-Dichloropropene	20.35	10.40	8.85	85%	82.0	117.0	pass
42)	4-Methyl-2-pentanone (MIBK)	20.55	9.80	8.78	90%	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	8.76	85%	80.0	120.0	pass
45)	trans-1,3-Dichloropropene	21.28	9.20	7.82	85%	81.0	122.0	pass
46)	1,1,2-Trichloroethane	21.59	10.50	9.12	87%	81.0	121.0	pass
47)	Tetrachloroethene	21.64	10.30	8.91	87%	69.0	122.0	pass

48)	2-Hexanone	21.89	9.20	8.10	88%	61.0	140.0	pass
49)	Chlorodibromomethane	22.20	10.40	9.14	88%	82.0	128.0	pass
50)	1,2-Dibromoethane (EDB)	22.44	10.40	8.84	85%	80.0	121.0	pass
51)	Chlorobenzene	23.13	10.40	8.80	85%	80.0	122.0	pass
52)	Ethylbenzene	23.19	10.30	8.95	87%	80.0	125.0	pass
53)	m&p-Xylene	23.38	20.40	18.10	89%	80.0	128.0	pass
54)	o-Xylene	24.03	10.10	8.81	87%	79.0	130.0	pass
55)	Styrene	24.07	10.10	8.93	88%	76.0	133.0	pass
56)	Bromoform	24.48	10.60	9.66	91%	82.0	136.0	pass
57)	1,1,2,2-Tetrachloroethane	25.16	10.10	9.07	90%	78.0	132.0	pass
58)	4-Ethyltoluene	25.36	9.90	8.61	87%	77.0	133.0	pass
59)	1,3,5-Trimethylbenzene	25.45	10.10	9.04	89%	78.0	133.0	pass
60)	1,2,4-Trimethylbenzene	26.06	10.00	8.94	89%	78.0	133.0	pass
61)	1,3-Dichlorobenzene	26.62	9.80	8.48	87%	76.0	133.0	pass
62)	1,4-Dichlorobenzene	26.76	9.80	8.46	86%	75.0	134.0	pass
63)	Benzyl chloride	26.99	9.30	8.42	91%	73.0	144.0	pass
64)	1,2-Dichlorobenzene	27.38	9.80	8.64	88%	77.0	134.0	pass
65)	1,2,4-Trichlorobenzene	29.84	9.70	8.33	86%	70.0	133.0	pass
66)	Hexachlorobutadiene	29.95	10.30	9.51	92%	74.0	130.0	pass

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	156639	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	473041	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	442951	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	39402	8.07	ppbv		98
3) Dichlorodifluoromethane	5.101	85	98642	8.54	ppbv		99
4) 1,2-Dichlorotetrafluor...	5.490	85	106210	8.13	ppbv		99
5) Chloromethane	5.728	50	39982	8.35	ppbv		100
6) Vinyl chloride	6.074	62	52555	10.05	ppbv		99
7) 1,3-Butadiene	6.172	54	40898	10.55	ppbv		97
8) Bromomethane	7.242	94	33287	8.25	ppbv		100
9) Chloroethane	7.614	64	22434	8.03	ppbv		100
10) Bromoethene	8.258	106	33588	7.80	ppbv		99
11) Trichlorofluoromethane	8.386	101	89121	8.02	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.382	151	63169	8.80	ppbv		100
13) 1,1-Dichloroethene	10.509	61	57830	8.45	ppbv		99
14) Acetone	11.081	43	58068	8.29	ppbv		97
15) Carbon disulfide	11.197	76	110099	8.32	ppbv		99
16) 2-Propanol	11.592	45	59084	7.87	ppbv		95
17) Allyl chloride	11.963	41	52251	8.54	ppbv		99
18) Dichloromethane	12.487	49	46805	8.03	ppbv		98
19) tert-Butyl methyl ethe...	13.022	73	112050	8.50	ppbv		100
20) trans-1,2-Dichloroethene	13.113	61	54366	8.16	ppbv		100
21) Hexane	13.594	57	69388	7.80	ppbv		96
22) 1,1-Dichloroethane	14.391	63	68699	7.90	ppbv		100
23) Vinyl acetate	14.494	43	99017	9.24	ppbv		98
24) cis-1,2-Dichloroethene	15.778	61	51714	8.24	ppbv	#	98
25) 2-Butanone (MEK)	15.869	72	21782	8.12	ppbv	#	89
26) Ethyl acetate	15.863	61	13821	8.33	ppbv	#	92
27) Tetrahydrofuran	16.289	42	47985	7.55	ppbv		98
28) Chloroform	16.447	83	76843	8.77	ppbv		99
29) Cyclohexane	16.617	56	71252	8.40	ppbv		98
30) 1,1,1-Trichloroethane	16.702	97	78133	9.18	ppbv		100
31) Carbon tetrachloride	16.934	117	80671	8.60	ppbv		100
33) Benzene	17.439	78	130073	9.04	ppbv		99
34) 2,2,4-Trimethylpentane	17.311	57	222776	8.85	ppbv		98
35) 1,2-Dichloroethane	17.658	62	48372	9.35	ppbv		100
36) Heptane	17.682	43	83164	9.16	ppbv		96
37) Trichloroethene	18.625	130	53383	9.04	ppbv		99
38) 1,2-Dichloropropane	19.142	63	47106	8.73	ppbv		97
39) 1,4-Dioxane	19.318	88	25775	8.40	ppbv		98
40) Bromodichloromethane	19.598	83	86775	9.36	ppbv		99
41) cis-1,3-Dichloropropene	20.346	75	71656	8.85	ppbv		97
42) 4-Methyl-2-pentanone (...	20.553	43	99253	8.78	ppbv		97
44) Toluene	20.803	91	154065	8.76	ppbv		99
45) trans-1,3-Dichloropropene	21.283	75	58241	7.82	ppbv		98
46) 1,1,2-Trichloroethane	21.594	97	51105	9.12	ppbv		98
47) Tetrachloroethene	21.642	166	76097	8.91	ppbv		100
48) 2-Hexanone	21.892	43	87492	8.10	ppbv		97
49) Chlorodibromomethane	22.202	129	90111	9.14	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	70816	8.84	ppbv		100
51) Chlorobenzene	23.127	112	121113	8.80	ppbv		97
52) Ethylbenzene	23.194	91	206749	8.95	ppbv		100
53) m&p-Xylene	23.376	91	314867	18.10	ppbv		100
54) o-Xylene	24.027	91	158015	8.81	ppbv		99

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

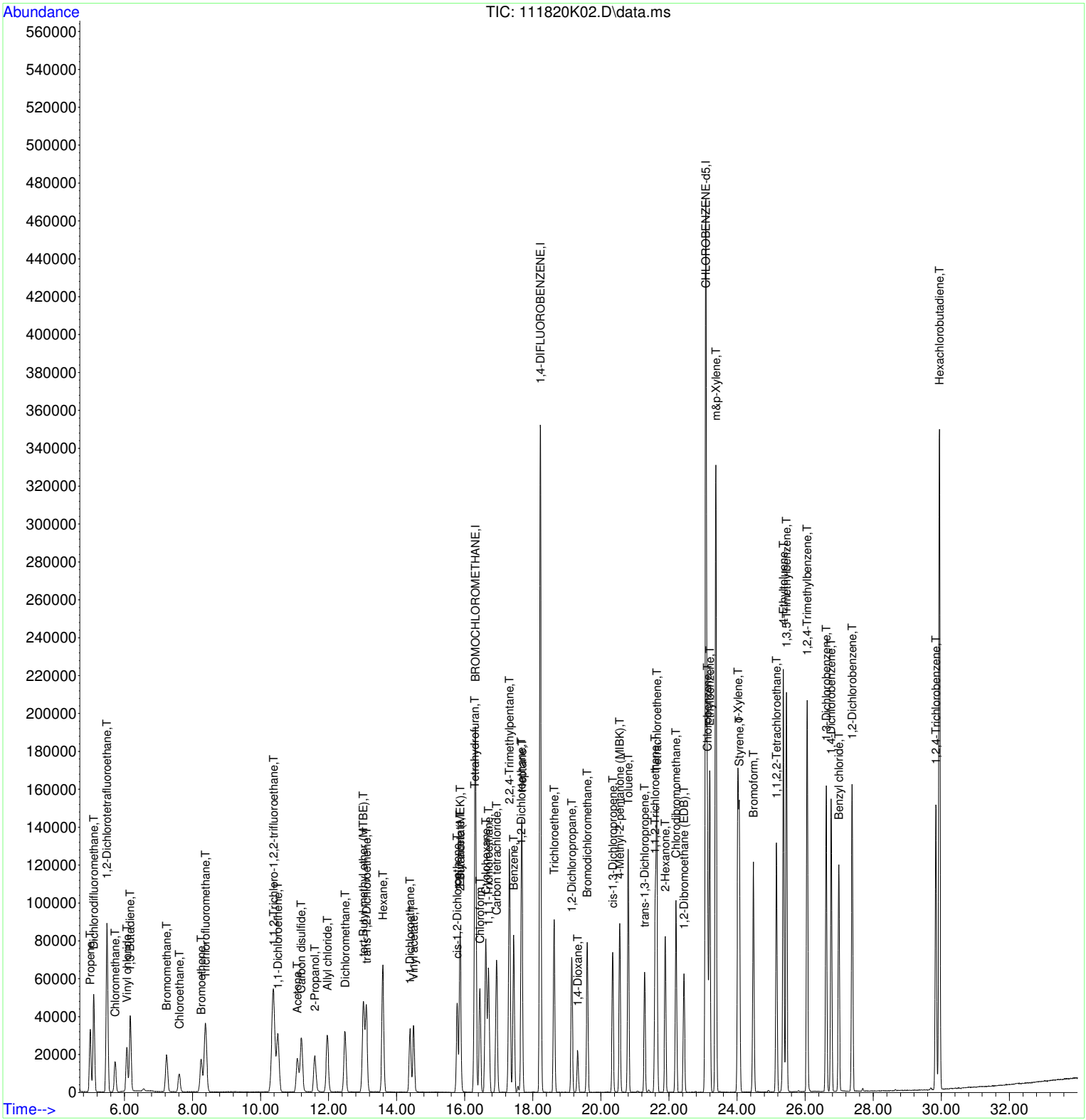
Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Styrene	24.070	104	124740	8.93	ppbv	99
56) Bromoform	24.477	173	96834	9.66	ppbv	99
57) 1,1,2,2-Tetrachloroethane	25.159	83	117295	9.07	ppbv	99
58) 4-Ethyltoluene	25.359	105	246134	8.61	ppbv	98
59) 1,3,5-Trimethylbenzene	25.451	105	191513	9.04	ppbv	99
60) 1,2,4-Trimethylbenzene	26.059	105	189757	8.94	ppbv	98
61) 1,3-Dichlorobenzene	26.619	146	118121	8.48	ppbv	100
62) 1,4-Dichlorobenzene	26.765	146	112322	8.46	ppbv	99
63) Benzyl chloride	26.990	91	150045	8.42	ppbv	98
64) 1,2-Dichlorobenzene	27.379	146	119330	8.64	ppbv	100
65) 1,2,4-Trichlorobenzene	29.843	180	86068	8.33	ppbv	100
66) Hexachlorobutadiene	29.946	225	122352	9.51	ppbv	100

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

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	75	0.00
2	T	Propene	0.611	0.519	15.1	71	-0.01
3	T	Dichlorodifluoromethane	1.446	1.259	12.9	70	-0.01
4	T	1,2-Dichlorotetrafluoroetha	1.634	1.384	15.3	68	0.00
5	T	Chloromethane	0.599	0.505	15.7	68	-0.01
6	T	Vinyl chloride	0.655	0.638	2.6	79	0.00
7	T	1,3-Butadiene	0.485	0.492	-1.4	83	-0.01
8	T	Bromomethane	0.505	0.408	19.2	65	-0.01
9	T	Chloroethane	0.350	0.278	20.6	64	0.00
10	T	Bromoethene	0.539	0.416	22.8	64	0.00
11	T	Trichlorofluoromethane	1.391	1.199	13.8	70	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	0.899	0.739	17.8	67	0.00
13	T	1,1-Dichloroethene	0.857	0.683	20.3	64	-0.01
14	T	Acetone	0.876	0.734	16.2	68	-0.01
15	T	Carbon disulfide	1.656	1.325	20.0	66	-0.01
16	T	2-Propanol	0.939	0.739	21.3	63	-0.01
17	T	Allyl chloride	0.765	0.600	21.6	64	-0.01
18	T	Dichloromethane	0.729	0.569	21.9	68	0.00
19	T	tert-Butyl methyl ether (MT	1.650	1.286	22.1	64	0.00
20	T	trans-1,2-Dichloroethene	0.834	0.667	20.0	65	0.00
21	T	Hexane	1.114	0.860	22.8	64	0.00
22	T	1,1-Dichloroethane	1.088	0.877	19.4	66	0.00
23	T	Vinyl acetate	1.341	1.126	16.0	66	0.00
24	T	cis-1,2-Dichloroethene	0.785	0.628	20.0	65	0.00
25	T	2-Butanone (MEK)	0.336	0.273	18.8	66	0.00
26	T	Ethyl acetate	0.208	0.171	17.8	67	0.00
27	T	Tetrahydrofuran	0.795	0.653	17.9	67	0.00
28	T	Chloroform	1.097	0.925	15.7	69	0.00
29	T	Cyclohexane	1.061	0.826	22.1	64	0.00
30	T	1,1,1-Trichloroethane	1.065	0.922	13.4	70	0.00
31	T	Carbon tetrachloride	1.174	1.020	13.1	70	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	71	0.00
33	T	Benzene	0.596	0.518	13.1	67	0.00
34	T	2,2,4-Trimethylpentane	1.043	0.863	17.3	64	0.00
35	T	1,2-Dichloroethane	0.214	0.198	7.5	70	0.00
36	T	Heptane	0.376	0.328	12.8	68	0.00
37	T	Trichloroethene	0.245	0.207	15.5	65	0.00
38	T	1,2-Dichloropropane	0.224	0.191	14.7	66	0.00
39	T	1,4-Dioxane	0.127	0.102	19.7	62	0.00
40	T	Bromodichloromethane	0.384	0.342	10.9	68	0.00
41	T	cis-1,3-Dichloropropene	0.335	0.285	14.9	63	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.469	0.420	10.4	69	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	73	0.00
44	T	Toluene	0.778	0.662	14.9	66	0.00
45	T	trans-1,3-Dichloropropene	0.330	0.280	15.2	64	0.00
46	T	1,1,2-Trichloroethane	0.248	0.215	13.3	67	0.00
47	T	Tetrachloroethene	0.378	0.327	13.5	67	0.00
48	T	2-Hexanone	0.478	0.421	11.9	68	0.00
49	T	Chlorodibromomethane	0.436	0.383	12.2	68	0.00
50	T	1,2-Dibromoethane (EDB)	0.354	0.301	15.0	66	0.00
51	T	Chlorobenzene	0.609	0.515	15.4	66	0.00

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K02.D
InstName : HP5973K
Acq On : 18 Nov 2020 8:20 am
Operator : EM
Sample : S20K076-CCV1@B20K073-BS1
Misc : 10ppbv 2045034@2045036
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 18 12:46:06 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 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	1.022	0.888	13.1	67	0.00
53 T	m&p-Xylene	0.770	0.683	11.3	68	0.00
54 T	o-Xylene	0.794	0.692	12.8	68	0.00
55 T	Styrene	0.618	0.546	11.7	66	0.00
56 T	Bromoform	0.444	0.404	9.0	68	0.00
57 T	1,1,2,2-Tetrachloroethane	0.572	0.514	10.1	69	0.00
58 T	4-Ethyltoluene	1.266	1.100	13.1	68	0.00
59 T	1,3,5-Trimethylbenzene	0.938	0.839	10.6	69	0.00
60 T	1,2,4-Trimethylbenzene	0.939	0.840	10.5	68	0.00
61 T	1,3-Dichlorobenzene	0.616	0.533	13.5	66	0.00
62 T	1,4-Dichlorobenzene	0.588	0.507	13.8	65	0.00
63 T	Benzyl chloride	0.788	0.714	9.4	65	0.00
64 T	1,2-Dichlorobenzene	0.611	0.539	11.8	67	0.00
65 T	1,2,4-Trichlorobenzene	0.457	0.393	14.0	62	0.00
66 T	Hexachlorobutadiene	0.569	0.526	7.6	70	0.00

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

S20K076-CRL1

REVIEWED
By EM at 2:29 pm, Nov 18, 2020

QLS REPORT

Instrument Name: HP5973K
Sample Name: S20K076-CRL1
Misc Info: 1.0ppbv 2045034
Date Acquired: 11/18/2020 9:09
QLast Update: Tue Nov 10 08:55:42 2020
Operator: EM

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	TYPE
1)	BROMOCHLOROMETHANE	16.31	#N/A	19.60	#N/A	60.0	140.0	#N/A	Internal
2)	Propene	5.00	0.95	1.00	105%	60.0	140.0	pass	Subset
3)	Dichlorodifluoromethane	5.10	0.98	0.97	99%	60.0	140.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	5.49	0.96	0.91	94%	60.0	140.0	pass	Primary
5)	Chloromethane	5.73	0.99	0.98	99%	60.0	140.0	pass	Primary
6)	Vinyl chloride	6.07	1.03	1.14	111%	60.0	140.0	pass	Primary
7)	1,3-Butadiene	6.18	1.04	1.28	123%	60.0	140.0	pass	Subset
8)	Bromomethane	7.24	1.02	0.89	87%	60.0	140.0	pass	Primary
9)	Chloroethane	7.61	1.01	0.87	86%	60.0	140.0	pass	Primary
10)	Bromoethene	8.26	1.01	0.89	88%	60.0	140.0	pass	Subset
11)	Trichlorofluoromethane	8.38	0.93	0.88	95%	60.0	140.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	10.37	1.07	0.97	90%	60.0	140.0	pass	Primary
13)	1,1-Dichloroethene	10.51	1.06	0.87	82%	60.0	140.0	pass	Primary
14)	Acetone	11.10	0.99	0.93	94%	60.0	140.0	pass	Subset
15)	Carbon disulfide	11.20	1.04	0.99	96%	60.0	140.0	pass	Subset
16)	2-Propanol	11.60	1.00	0.77	77%	60.0	140.0	pass	Subset
17)	Allyl chloride	11.98	1.09	0.92	84%	60.0	140.0	pass	Subset
18)	Dichloromethane	12.48	1.03	1.18	114%	60.0	140.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	13.03	1.09	0.89	82%	60.0	140.0	pass	Subset
20)	trans-1,2-Dichloroethene	13.11	1.02	0.94	93%	60.0	140.0	pass	Subset
21)	Hexane	13.59	1.01	0.82	81%	60.0	140.0	pass	Subset
22)	1,1-Dichloroethane	14.40	0.98	0.84	86%	60.0	140.0	pass	Primary
23)	Vinyl acetate	14.50	1.10	0.75	68%	60.0	140.0	pass	Subset
24)	cis-1,2-Dichloroethene	15.77	1.03	0.80	78%	60.0	140.0	pass	Primary
25)	2-Butanone (MEK)	15.88	1.00	0.81	81%	60.0	140.0	pass	Subset
26)	Ethyl acetate	15.87	1.01	0.83	82%	60.0	140.0	pass	Subset
27)	Tetrahydrofuran	16.29	0.92	0.82	89%	60.0	140.0	pass	Subset
28)	Chloroform	16.45	1.04	0.94	90%	60.0	140.0	pass	Primary
29)	Cyclohexane	16.62	1.08	0.91	85%	60.0	140.0	pass	Subset
30)	1,1,1-Trichloroethane	16.70	1.06	0.96	91%	60.0	140.0	pass	Primary
31)	Carbon tetrachloride	16.93	0.99	0.89	90%	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	0.96	92%	60.0	140.0	pass	Primary
34)	2,2,4-Trimethylpentane	17.31	1.07	0.93	87%	60.0	140.0	pass	Subset
35)	1,2-Dichloroethane	17.66	1.01	0.97	96%	60.0	140.0	pass	Primary
36)	Heptane	17.68	1.05	0.95	91%	60.0	140.0	pass	Subset
37)	Trichloroethene	18.63	1.07	0.95	89%	60.0	140.0	pass	Primary
38)	1,2-Dichloropropane	19.15	1.02	0.89	88%	60.0	140.0	pass	Primary
39)	1,4-Dioxane	19.32	1.05	0.93	89%	60.0	140.0	pass	Subset
40)	Bromodichloromethane	19.60	1.05	1.03	99%	60.0	140.0	pass	Subset
41)	cis-1,3-Dichloropropene	20.35	1.04	0.80	76%	60.0	140.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	20.56	0.98	0.93	95%	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	0.88	86%	60.0	140.0	pass	Primary
45)	trans-1,3-Dichloropropene	21.29	0.92	0.67	73%	60.0	140.0	pass	Primary
46)	1,1,2-Trichloroethane	21.59	1.05	0.93	89%	60.0	140.0	pass	Primary
47)	Tetrachloroethene	21.64	1.03	0.92	90%	60.0	140.0	pass	Primary
48)	2-Hexanone	21.89	0.92	0.80	87%	60.0	140.0	pass	Subset
49)	Chlorodibromomethane	22.20	1.04	0.96	93%	60.0	140.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	22.44	1.04	0.86	83%	60.0	140.0	pass	Primary

51)	Chlorobenzene	23.13	1.04	0.93	90%	60.0	140.0	pass	Primary
52)	Ethylbenzene	23.19	1.03	0.89	87%	60.0	140.0	pass	Primary
53)	m&p-Xylene	23.38	2.04	1.73	85%	60.0	140.0	pass	Primary
54)	o-Xylene	24.03	1.01	0.82	81%	60.0	140.0	pass	Primary
55)	Styrene	24.07	1.01	0.75	74%	60.0	140.0	pass	Primary
56)	Bromoform	24.48	1.06	0.87	82%	60.0	140.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	25.16	1.01	0.88	87%	60.0	140.0	pass	Primary
58)	4-Ethyltoluene	25.36	0.99	0.83	84%	60.0	140.0	pass	Subset
59)	1,3,5-Trimethylbenzene	25.45	1.01	0.85	84%	60.0	140.0	pass	Primary
60)	1,2,4-Trimethylbenzene	26.06	1.00	0.80	80%	60.0	140.0	pass	Primary
61)	1,3-Dichlorobenzene	26.62	0.98	0.82	83%	60.0	140.0	pass	Primary
62)	1,4-Dichlorobenzene	26.76	0.98	0.80	81%	60.0	140.0	pass	Primary
63)	Benzyl chloride	26.99	0.93	0.56	60%	60.0	140.0	pass	Subset
64)	1,2-Dichlorobenzene	27.38	0.98	0.84	86%	60.0	140.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.84	0.97	0.67	70%	60.0	140.0	pass	Primary
66)	Hexachlorobutadiene	29.95	1.03	0.91	88%	60.0	140.0	pass	Primary

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K03.D
InstName : HP5973K
Acq On : 18 Nov 2020 9:09 am
Operator : EM
Sample : S20K076-CRL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 18 12:46:53 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	160226	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.217	114	487562	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	439878	19.60	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.998	41	4972	1.00	ppbv		97
3) Dichlorodifluoromethane	5.101	85	11475	0.97	ppbv		98
4) 1,2-Dichlorotetrafluor...	5.490	85	12093	0.91	ppbv		98
5) Chloromethane	5.728	50	4804	0.98	ppbv		95
6) Vinyl chloride	6.074	62	6120	1.14	ppbv		100
7) 1,3-Butadiene	6.178	54	5078	1.28	ppbv		90
8) Bromomethane	7.242	94	3672	0.89	ppbv		100
9) Chloroethane	7.607	64	2476	0.87	ppbv		88
10) Bromoethene	8.258	106	3932	0.89	ppbv		99
11) Trichlorofluoromethane	8.380	101	10028	0.88	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	10.369	151	7112	0.97	ppbv		98
13) 1,1-Dichloroethene	10.509	61	6065	0.87	ppbv		96
14) Acetone	11.099	43	6641	0.93	ppbv		97
15) Carbon disulfide	11.203	76	13466	0.99	ppbv		90
16) 2-Propanol	11.604	45	5887	0.77	ppbv		84
17) Allyl chloride	11.975	41	5738	0.92	ppbv		92
18) Dichloromethane	12.480	49	7014	1.18	ppbv		97
19) tert-Butyl methyl ethe...	13.028	73	11984	0.89	ppbv		98
20) trans-1,2-Dichloroethene	13.107	61	6438	0.94	ppbv		98
21) Hexane	13.594	57	7479	0.82	ppbv		94
22) 1,1-Dichloroethane	14.403	63	7503	0.84	ppbv		97
23) Vinyl acetate	14.500	43	8222	0.75	ppbv		93
24) cis-1,2-Dichloroethene	15.772	61	5154	0.80	ppbv	#	98
25) 2-Butanone (MEK)	15.875	72	2229	0.81	ppbv	#	72
26) Ethyl acetate	15.869	61	1401	0.83	ppbv	#	71
27) Tetrahydrofuran	16.295	42	5300	0.82	ppbv		96
28) Chloroform	16.447	83	8387	0.94	ppbv		97
29) Cyclohexane	16.623	56	7917	0.91	ppbv		96
30) 1,1,1-Trichloroethane	16.702	97	8371	0.96	ppbv		99
31) Carbon tetrachloride	16.934	117	8573	0.89	ppbv		100
33) Benzene	17.439	78	14252	0.96	ppbv		99
34) 2,2,4-Trimethylpentane	17.311	57	24063	0.93	ppbv		96
35) 1,2-Dichloroethane	17.658	62	5169	0.97	ppbv		97
36) Heptane	17.676	43	8894	0.95	ppbv		96
37) Trichloroethene	18.631	130	5807	0.95	ppbv		98
38) 1,2-Dichloropropane	19.148	63	4966	0.89	ppbv		96
39) 1,4-Dioxane	19.324	88	2948	0.93	ppbv		99
40) Bromodichloromethane	19.598	83	9888	1.03	ppbv		98
41) cis-1,3-Dichloropropene	20.346	75	6638	0.80	ppbv		97
42) 4-Methyl-2-pentanone (...	20.559	43	10846	0.93	ppbv		95
44) Toluene	20.803	91	15417	0.88	ppbv		98
45) trans-1,3-Dichloropropene	21.289	75	4980	0.67	ppbv		97
46) 1,1,2-Trichloroethane	21.594	97	5195	0.93	ppbv		97
47) Tetrachloroethene	21.642	166	7833	0.92	ppbv		100
48) 2-Hexanone	21.892	43	8539	0.80	ppbv		96
49) Chlorodibromomethane	22.202	129	9432	0.96	ppbv		99
50) 1,2-Dibromoethane (EDB)	22.439	107	6871	0.86	ppbv		99
51) Chlorobenzene	23.133	112	12760	0.93	ppbv	#	75
52) Ethylbenzene	23.194	91	20524	0.89	ppbv		99
53) m&p-Xylene	23.376	91	29895	1.73	ppbv		99
54) o-Xylene	24.027	91	14572	0.82	ppbv		100

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K03.D
InstName : HP5973K
Acq On : 18 Nov 2020 9:09 am
Operator : EM
Sample : S20K076-CRL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 18 12:46:53 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	24.070	104	10359	0.75 ppbv	98
56) Bromoform	24.483	173	8641	0.87 ppbv	99
57) 1,1,2,2-Tetrachloroethane	25.159	83	11299	0.88 ppbv	100
58) 4-Ethyltoluene	25.359	105	23682	0.83 ppbv	99
59) 1,3,5-Trimethylbenzene	25.451	105	17916	0.85 ppbv	99
60) 1,2,4-Trimethylbenzene	26.059	105	16931	0.80 ppbv	97
61) 1,3-Dichlorobenzene	26.619	146	11294	0.82 ppbv	99
62) 1,4-Dichlorobenzene	26.765	146	10499	0.80 ppbv	98
63) Benzyl chloride	26.990	91	9913	0.56 ppbv	97
64) 1,2-Dichlorobenzene	27.379	146	11526	0.84 ppbv	99
65) 1,2,4-Trichlorobenzene	29.843	180	6918	0.67 ppbv	96
66) Hexachlorobutadiene	29.946	225	11625	0.91 ppbv	100

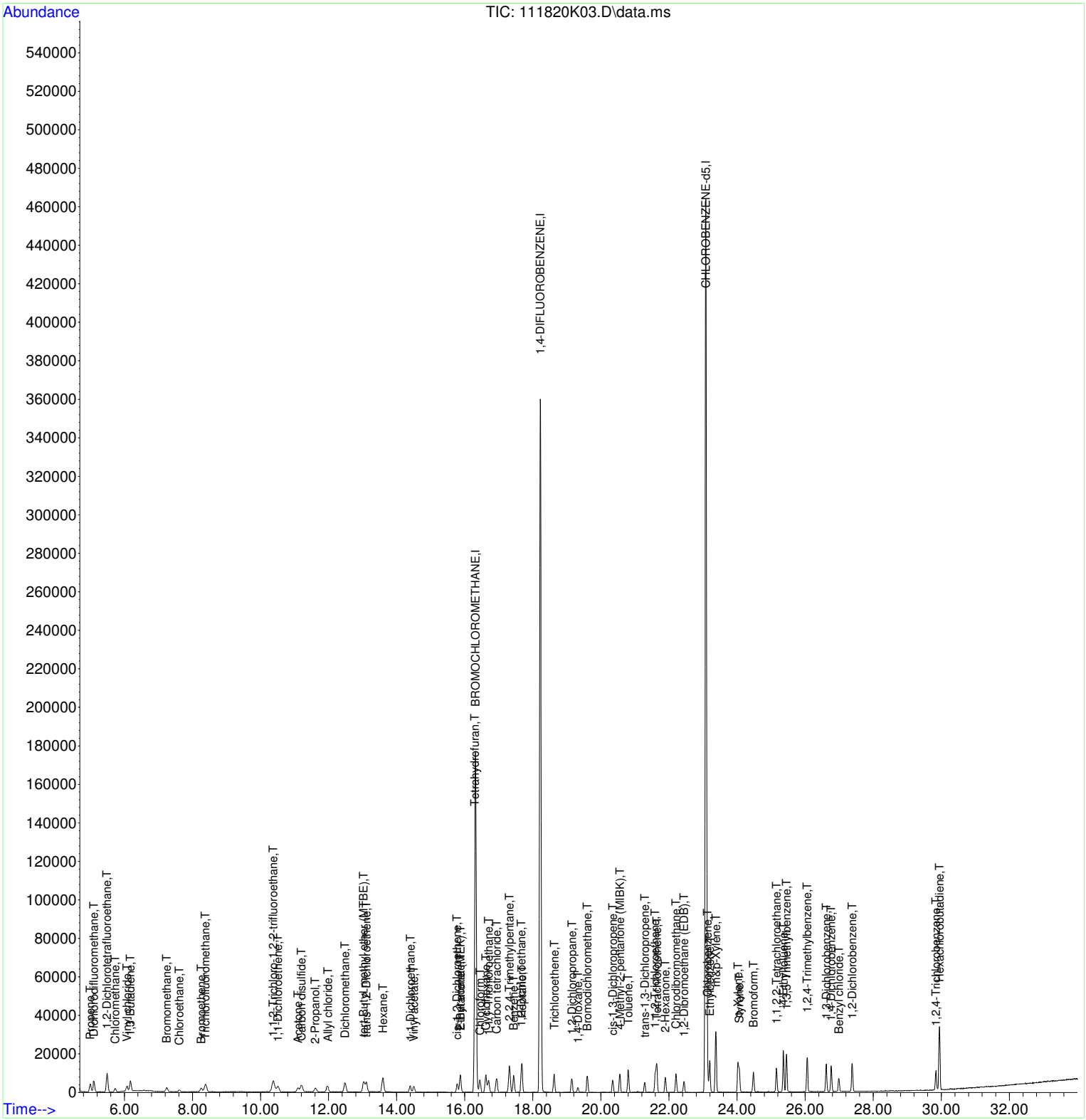
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K03.D
InstName : HP5973K
Acq On : 18 Nov 2020 9:09 am
Operator : EM
Sample : S20K076-CRL1
Misc : 1.0ppbv 2045034
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 18 12:46:53 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration



B20K073-BLK1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K04.D
InstName : HP5973K
Acq On : 18 Nov 2020 10:01 am
Operator : EM
Sample : B20K073-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 12:47:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	16.313	49	157292	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	485486	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	428910	19.60 ppbv	0.00

Target Compounds Qvalue

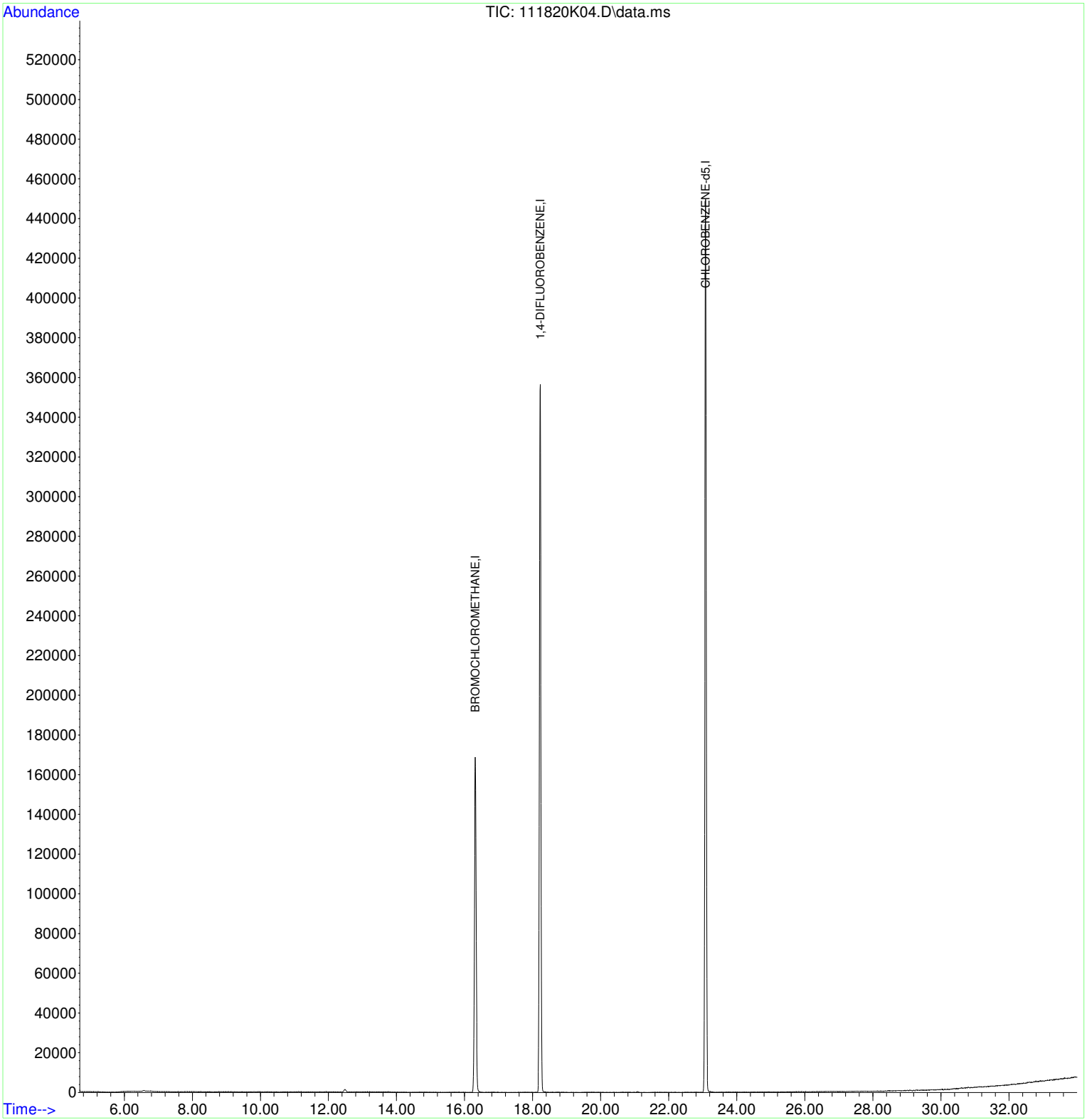
(#) = qualifier out of range (m) = manual integration (+) = signals summed

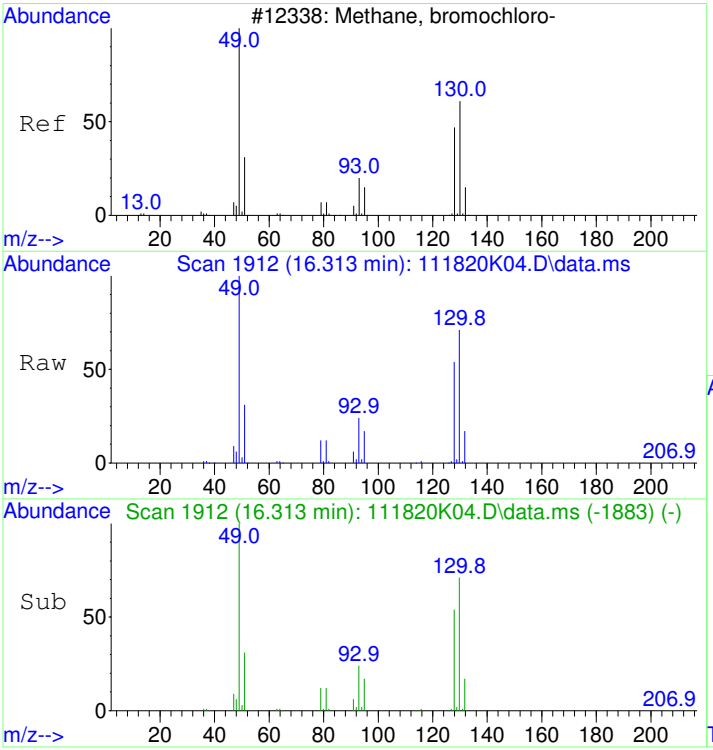
REVIEWED
By EM at 2:29 pm, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K04.D
InstName : HP5973K
Acq On : 18 Nov 2020 10:01 am
Operator : EM
Sample : B20K073-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 18 12:47:31 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

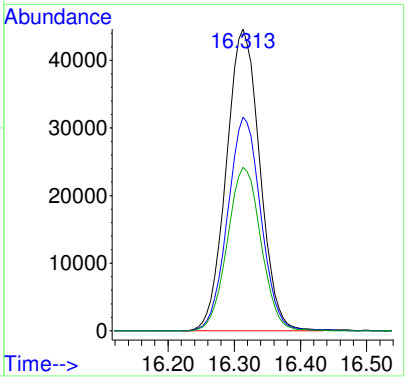


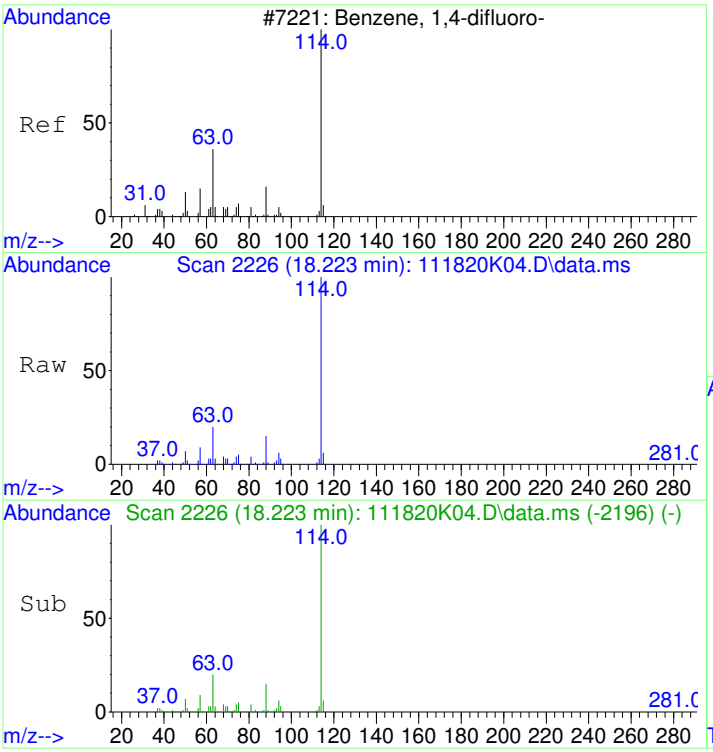


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 111820K04.D
Acq: 18 Nov 2020 10:01 am

Tgt Ion: 49 Resp: 157292

Ion	Ratio	Lower	Upper
49	100		
130	70.1	51.9	91.9
128	53.8	35.7	75.7

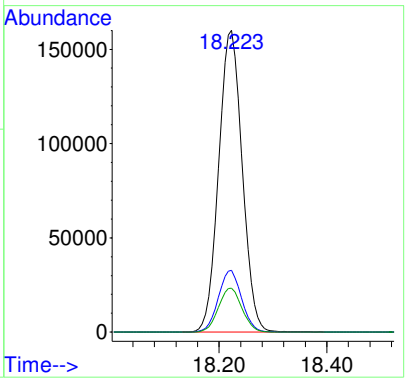


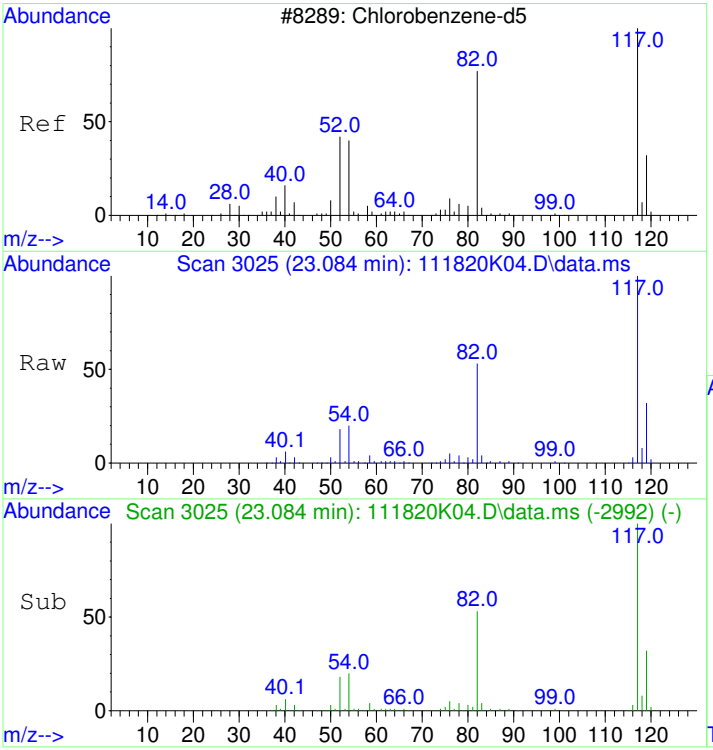


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 111820K04.D
Acq: 18 Nov 2020 10:01 am

Tgt Ion:114 Resp: 485486

Ion	Ratio	Lower	Upper
114	100		
63	20.2	0.0	39.5
88	14.5	0.0	34.7

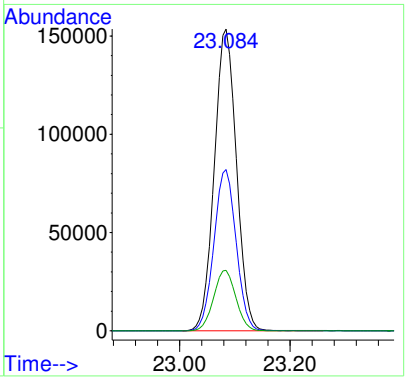




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111820K04.D
Acq: 18 Nov 2020 10:01 am

Tgt Ion:117 Resp: 428910

Ion	Ratio	Lower	Upper
117	100		
82	53.4	32.3	72.3
54	20.1	0.0	38.6



2011024-04RE2

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K07.D
InstName : HP5973K
Acq On : 18 Nov 2020 12:48 pm
Operator : EM
Sample : 2011024-04RE2
Misc : 20ml FG-029-3ft-G
ALS Vial : 15 Sample Multiplier: 4.02

report TCE

Quant Time: Nov 18 14:27:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	16.313	49	152988	19.60	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	466541	19.60	ppbv		0.00
43) CHLOROBENZENE-d5	23.084	117	417550	19.60	ppbv		0.00
Target Compounds							Qvalue
14) Acetone	11.105	43	4773	0.70	ppbv		89
24) cis-1,2-Dichloroethene	15.784	61	14760	2.41	ppbv	#	99
28) Chloroform	16.447	83	4425	0.52	ppbv		97
37) Trichloroethene	18.631	130	45692	7.85	ppbv		99

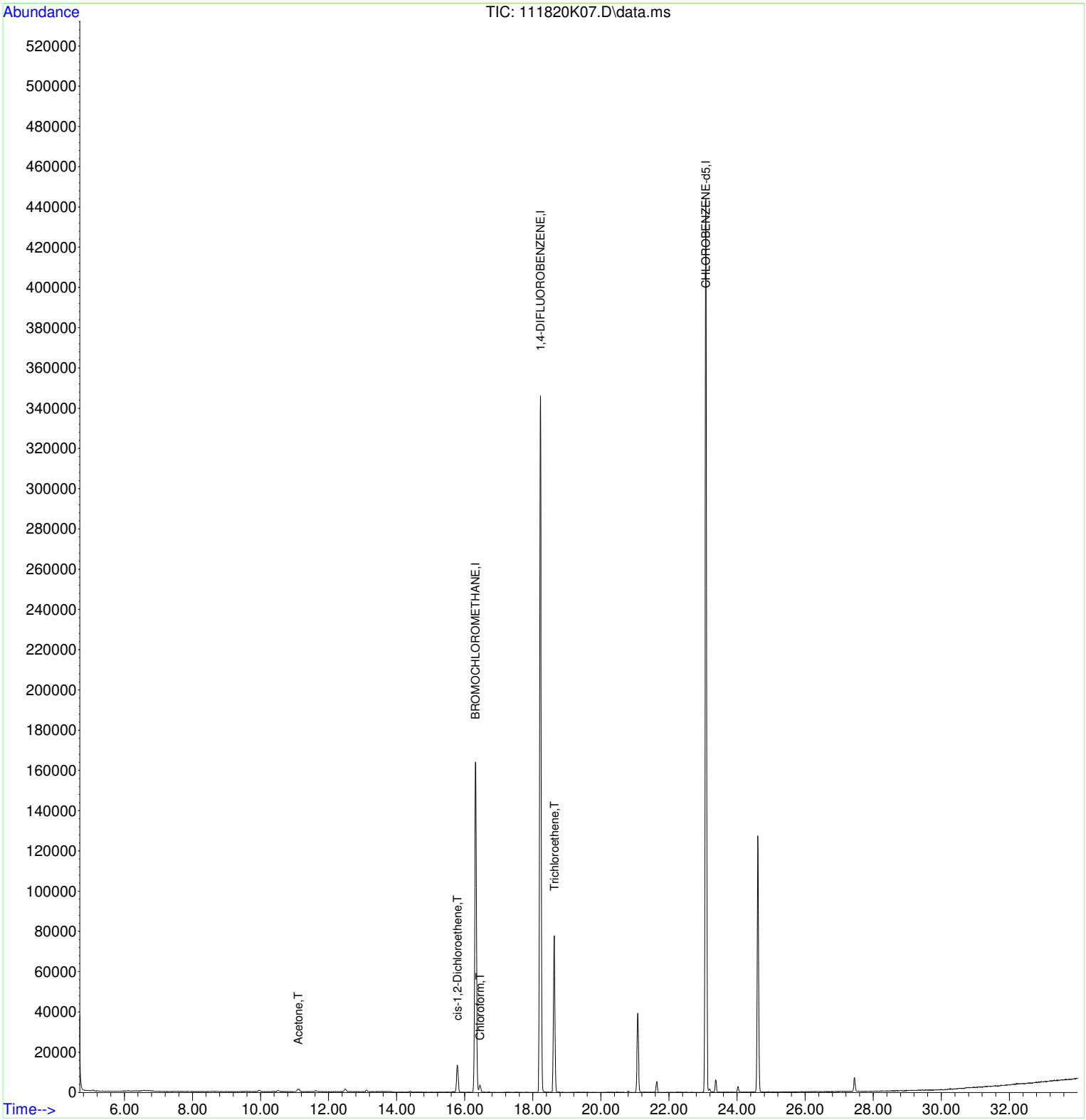
(#) = qualifier out of range (m) = manual integration (+) = signals summed

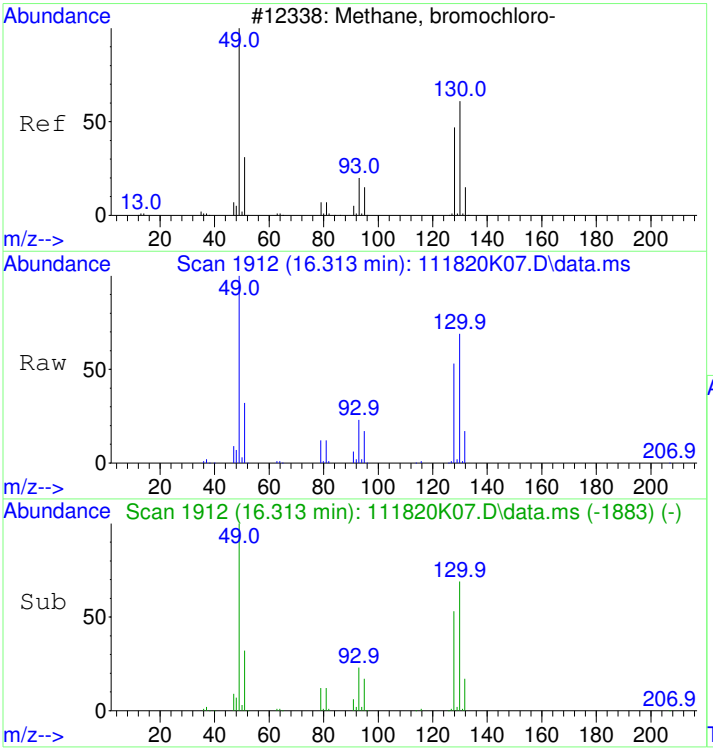
REVIEWED
By EM at 2:28 pm, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K07.D
InstName : HP5973K
Acq On : 18 Nov 2020 12:48 pm
Operator : EM
Sample : 2011024-04RE2
Misc : 20ml FG-029-3ft-G
ALS Vial : 15 Sample Multiplier: 4.02

Quant Time: Nov 18 14:27:57 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

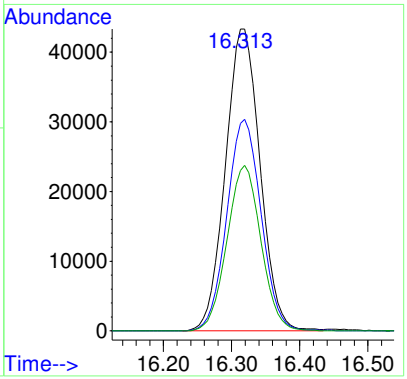


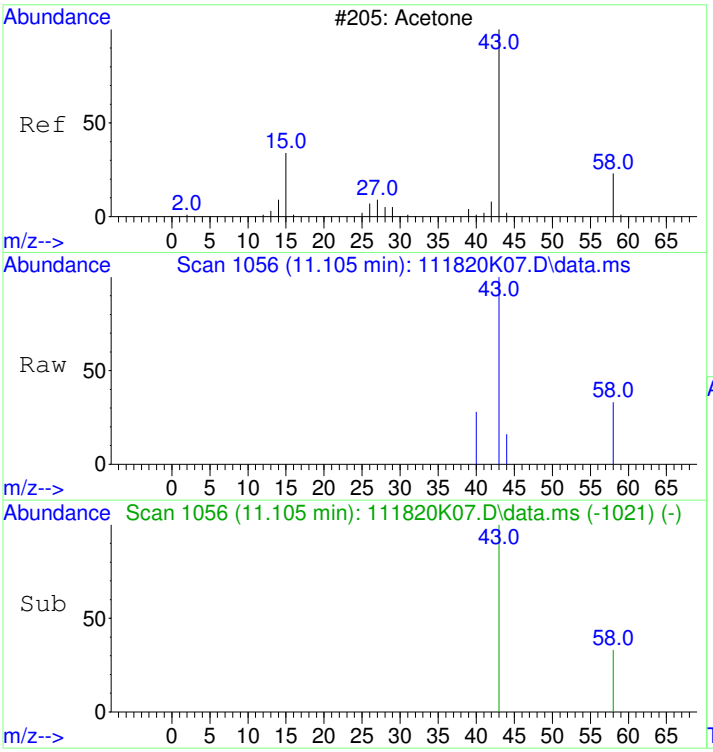


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion: 49 Resp: 152988

Ion	Ratio	Lower	Upper
49	100		
130	69.3	51.9	91.9
128	53.1	35.7	75.7

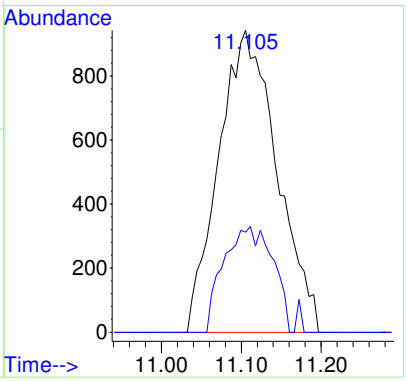


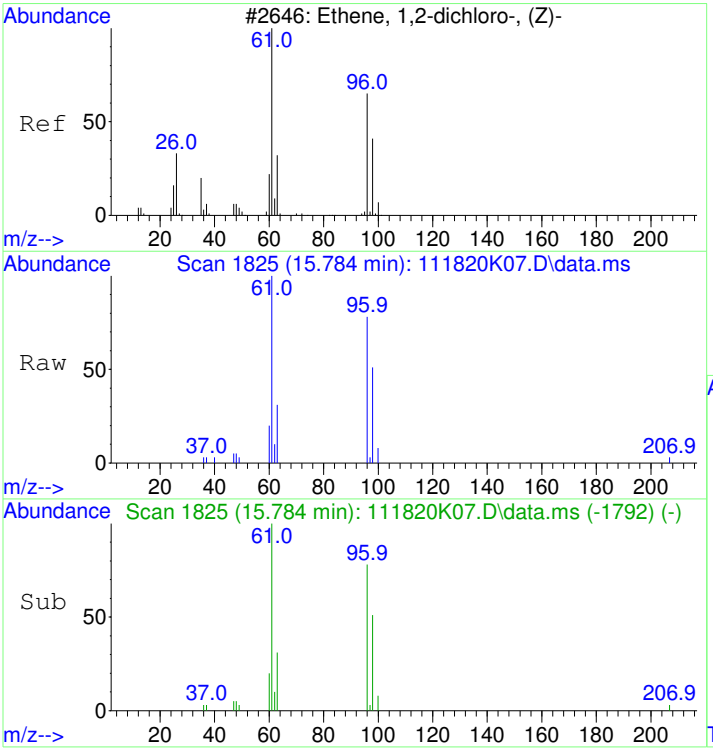


#14
Acetone
Concen: 0.70 ppbv
RT: 11.105 min Scan# 1056
Delta R.T. 0.012 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion: 43 Resp: 4773

Ion	Ratio	Lower	Upper
43	100		
58	29.5	15.9	55.9

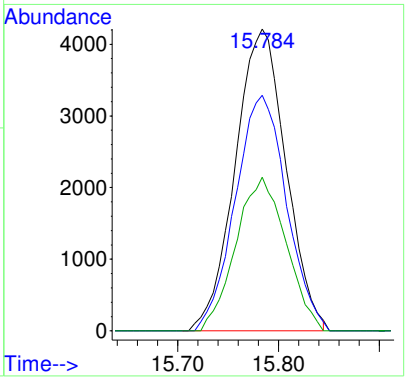


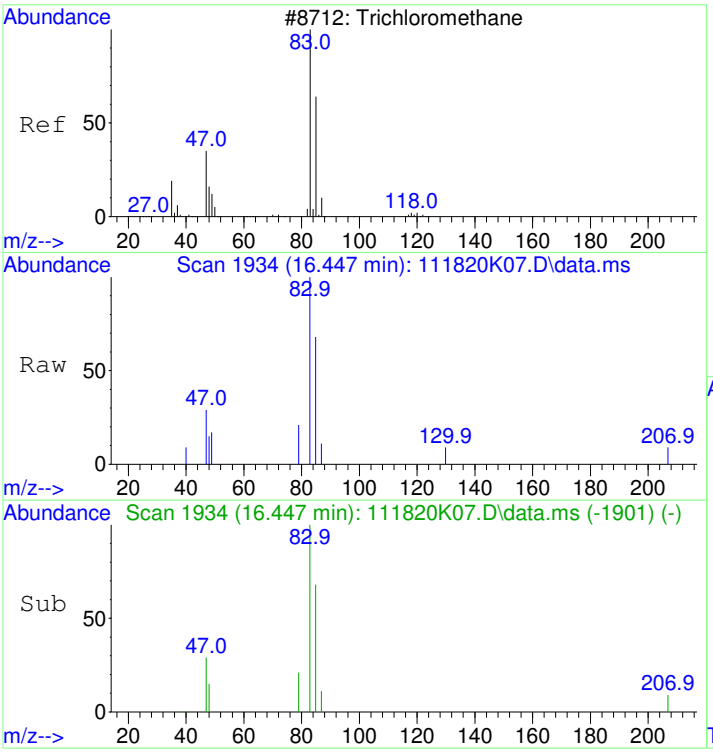


#24
cis-1,2-Dichloroethene
Concen: 2.41 ppbv
RT: 15.784 min Scan# 1825
Delta R.T. -0.000 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion: 61 Resp: 14760

Ion	Ratio	Lower	Upper
61	100		
96	78.8	57.6	97.6
98	0.0	0.0	20.0

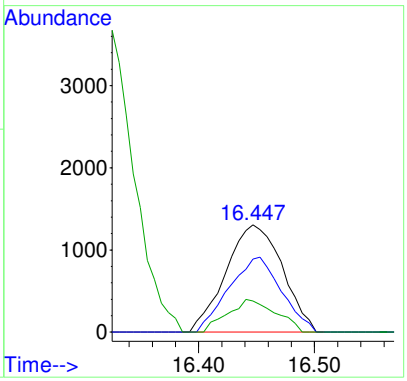


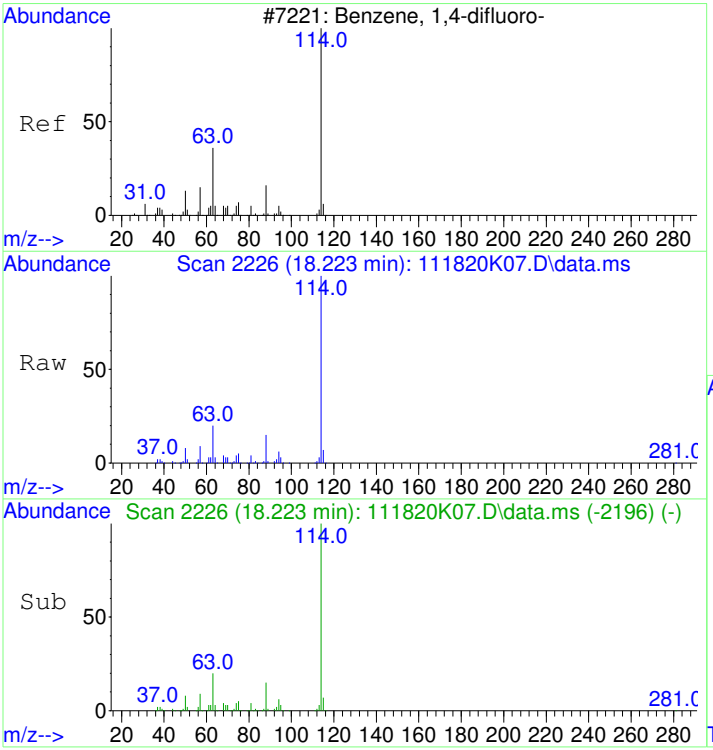


#28
Chloroform
Concen: 0.52 ppbv
RT: 16.447 min Scan# 1934
Delta R.T. -0.000 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion: 83 Resp: 4425

Ion	Ratio	Lower	Upper
83	100		
85	64.7	45.5	85.5
47	26.0	1.4	41.4

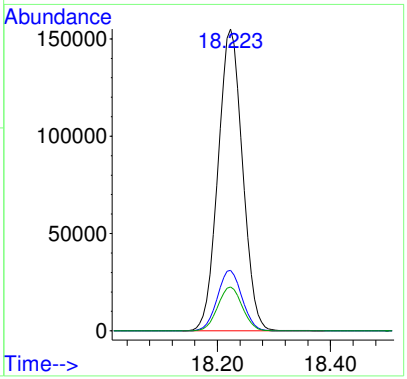


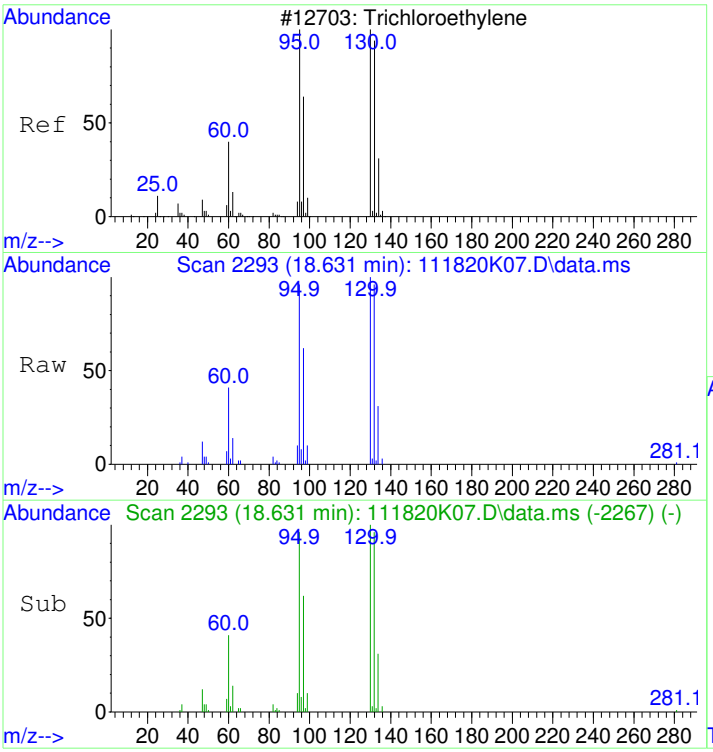


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. 0.000 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion:114 Resp: 466541

Ion	Ratio	Lower	Upper
114	100		
63	20.1	0.0	39.5
88	14.5	0.0	34.7

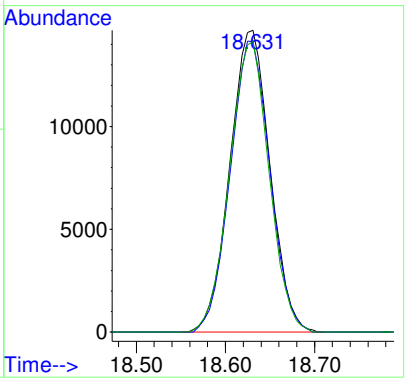


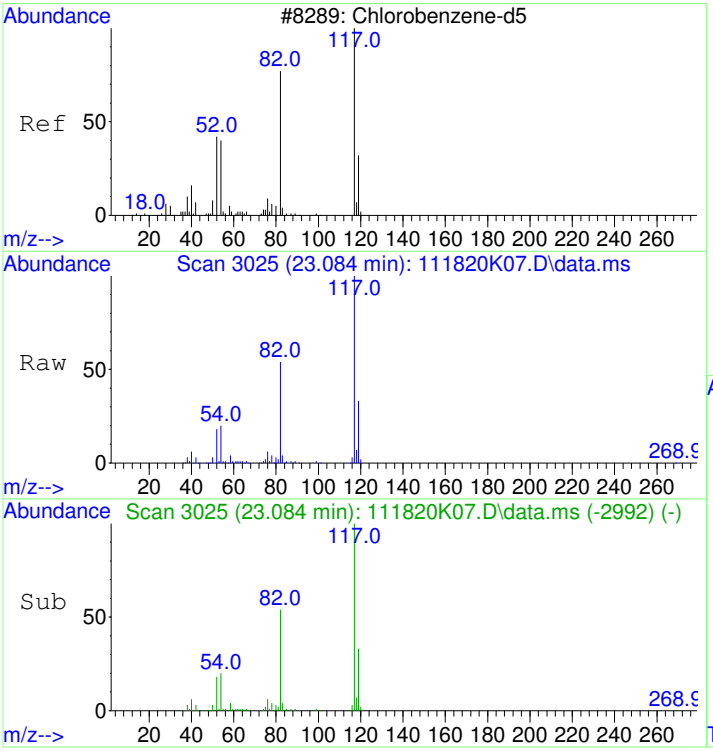


#37
Trichloroethene
Concen: 7.85 ppbv
RT: 18.631 min Scan# 2293
Delta R.T. 0.006 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion:130 Resp: 45692

Ion	Ratio	Lower	Upper
130	100		
132	95.4	76.3	116.3
95	95.0	74.0	114.0

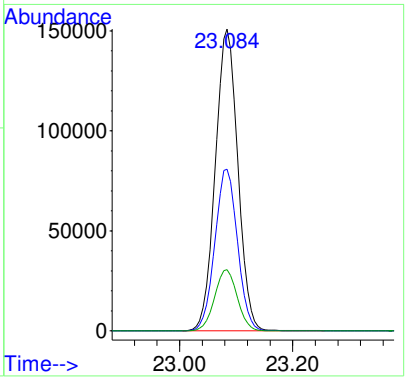




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 111820K07.D
Acq: 18 Nov 2020 12:48 pm

Tgt Ion:117 Resp: 417550

Ion	Ratio	Lower	Upper
117	100		
82	53.7	32.3	72.3
54	20.4	0.0	38.6



S20K076-IBL1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K08.D
InstName : HP5973K
Acq On : 18 Nov 2020 1:41 pm
Operator : EM
Sample : S20K076-IBL1
Misc : 200ml CAN #599 RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 18 14:28:43 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	16.313	49	152278	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.217	114	462879	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	415697	19.60	ppbv	0.00
Target Compounds						Qvalue
37) Trichloroethene	18.625	130	2916	0.50	ppbv	99

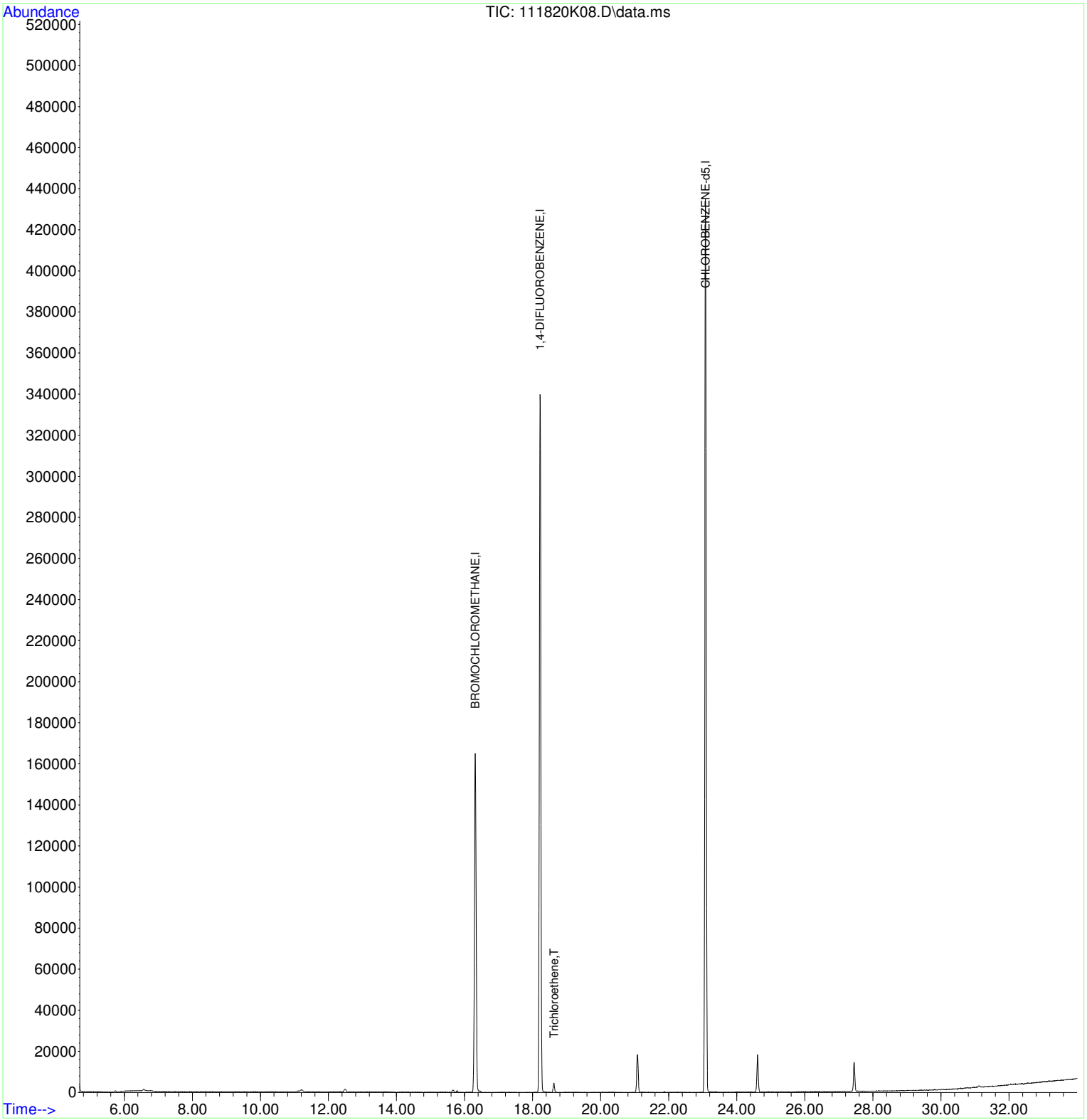
(#) = qualifier out of range (m) = manual integration (+) = signals summed

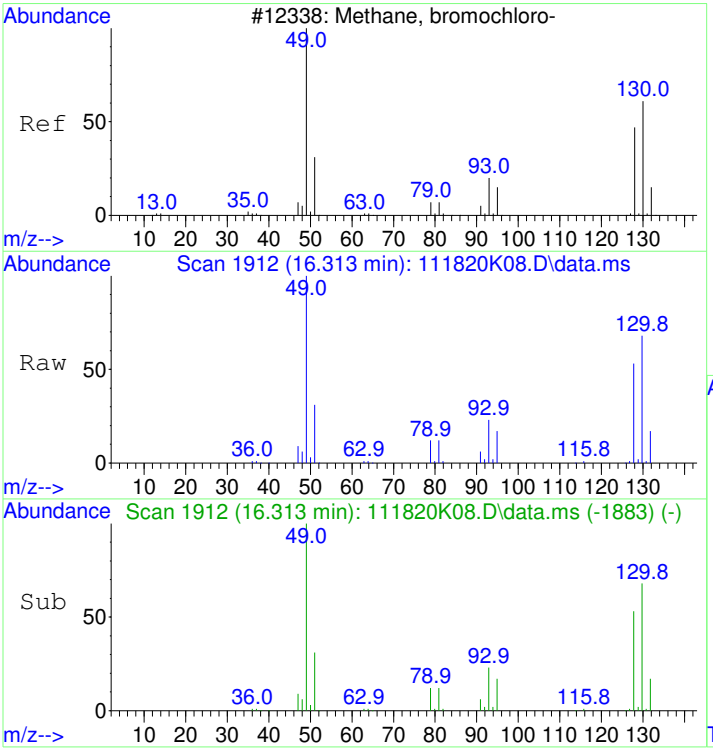
REVIEWED
By EM at 2:29 pm, Nov 18, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\111820K_FSAA\
Data File : 111820K08.D
InstName : HP5973K
Acq On : 18 Nov 2020 1:41 pm
Operator : EM
Sample : S20K076-IBL1
Misc : 200ml CAN #599 RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 18 14:28:43 2020
Quant Method : D:\msdchem\1\2020\METHOD\110920K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Nov 10 08:55:42 2020
Response via : Initial Calibration

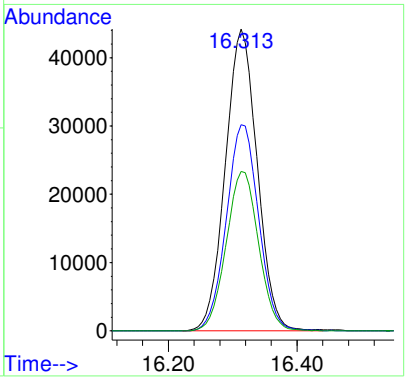


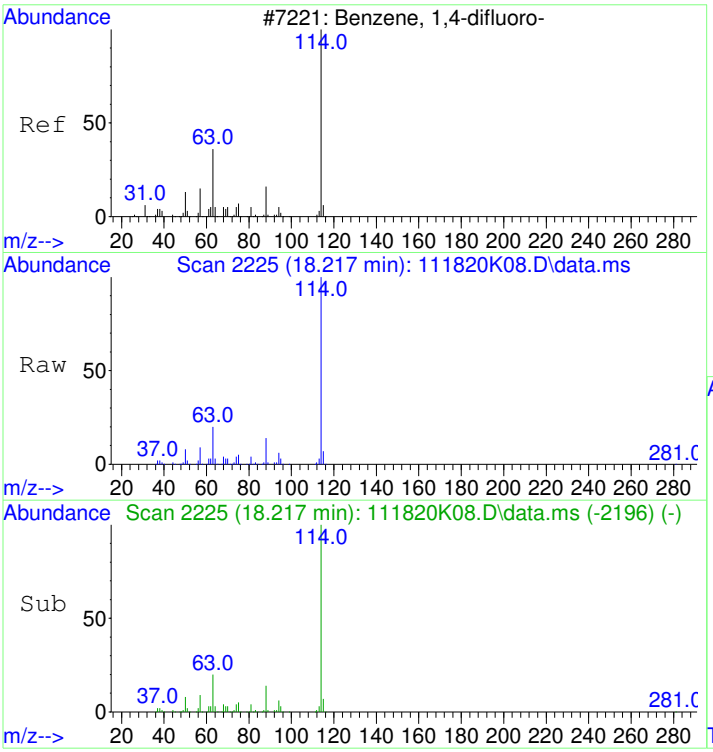


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 111820K08.D
Acq: 18 Nov 2020 1:41 pm

Tgt Ion: 49 Resp: 152278

Ion	Ratio	Lower	Upper
49	100		
130	69.2	51.9	91.9
128	53.2	35.7	75.7

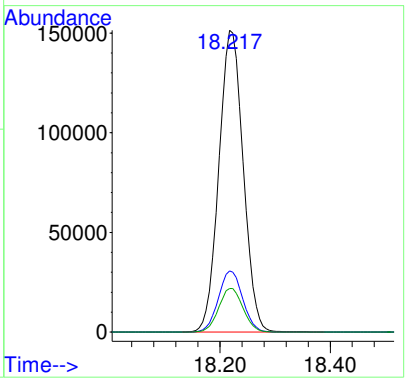


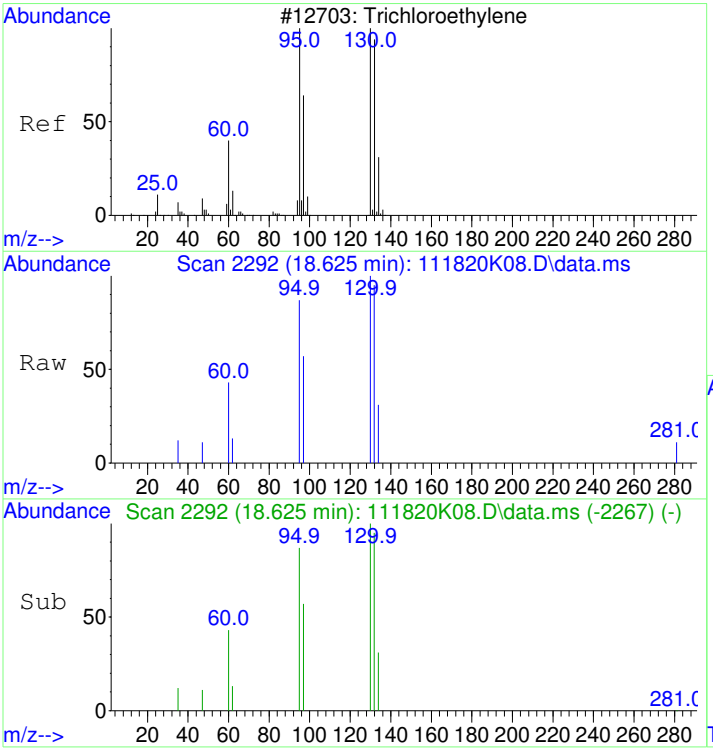


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.006 min
Lab File: 111820K08.D
Acq: 18 Nov 2020 1:41 pm

Tgt Ion:114 Resp: 462879

Ion	Ratio	Lower	Upper
114	100		
63	20.2	0.0	39.5
88	14.5	0.0	34.7

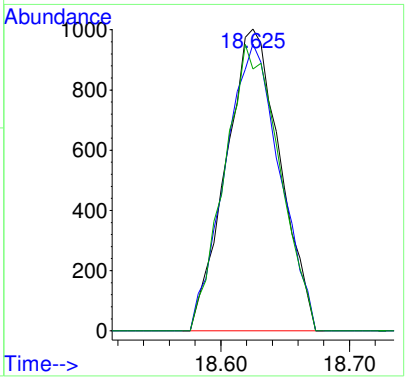


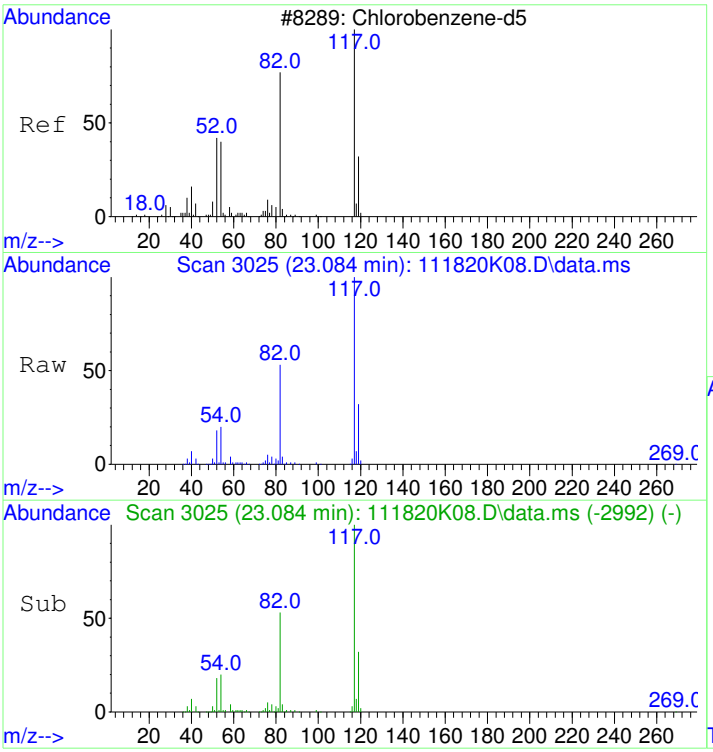


#37
Trichloroethene
Concen: 0.50 ppbv
RT: 18.625 min Scan# 2292
Delta R.T. -0.000 min
Lab File: 111820K08.D
Acq: 18 Nov 2020 1:41 pm

Tgt Ion:130 Resp: 2916

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.3	116.3
95	96.5	74.0	114.0

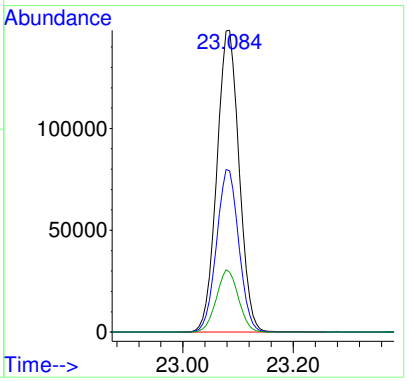




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. 0.000 min
Lab File: 111820K08.D
Acq: 18 Nov 2020 1:41 pm

Tgt Ion:117 Resp: 415697

Ion	Ratio	Lower	Upper
117	100		
82	53.7	32.3	72.3
54	20.3	0.0	38.6



Cannister Certifications

2011024-01

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K08.D
InstName : HP5973K
Acq On : 3 Jun 2020 8:29 pm
Operator : EM
Sample : CAN #1093
Misc : 200ml RECERTIFICATION
ALS Vial : 14 Sample Multiplier: 1

CLEAN

Quant Time: Jun 04 09:24:56 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	282945	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	860407	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	764851	19.60 ppbv	0.00

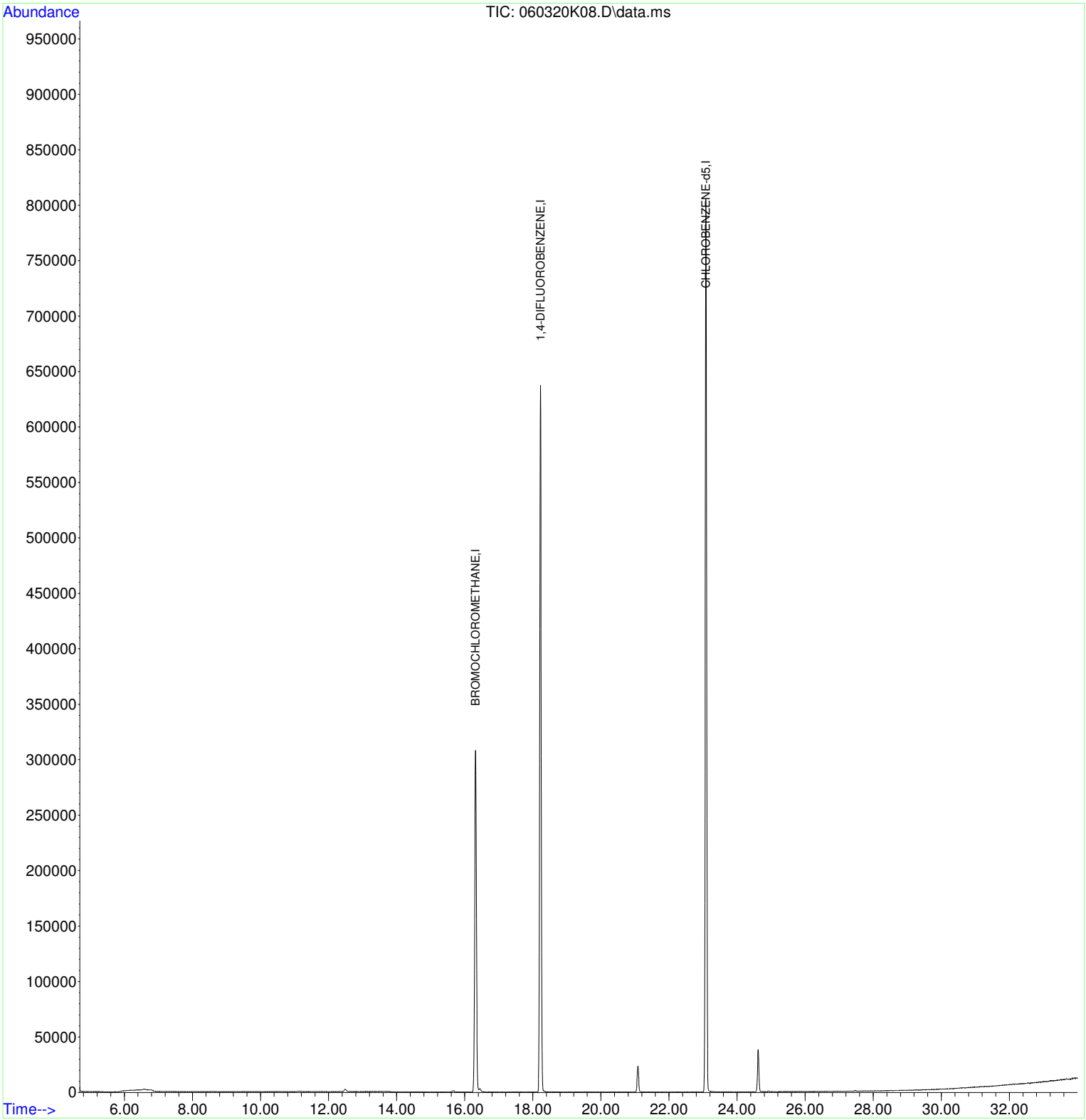
Target Compounds	Qvalue

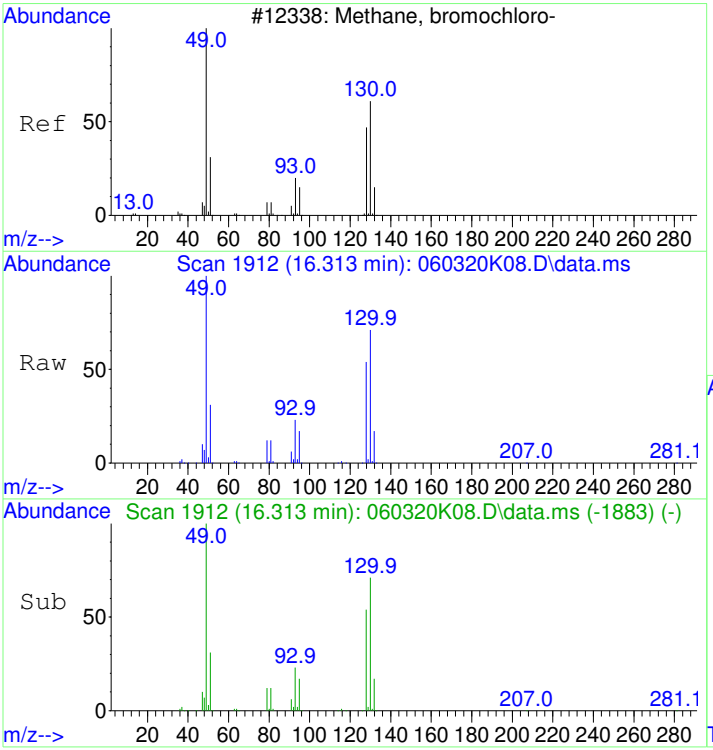
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 9:29 am, Jun 04, 2020

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K08.D
InstName : HP5973K
Acq On : 3 Jun 2020 8:29 pm
Operator : EM
Sample : CAN #1093
Misc : 200ml RECERTIFICATION
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 04 09:24:56 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

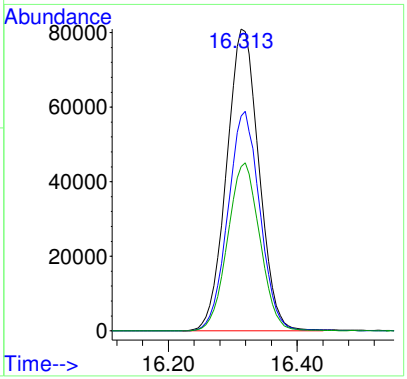


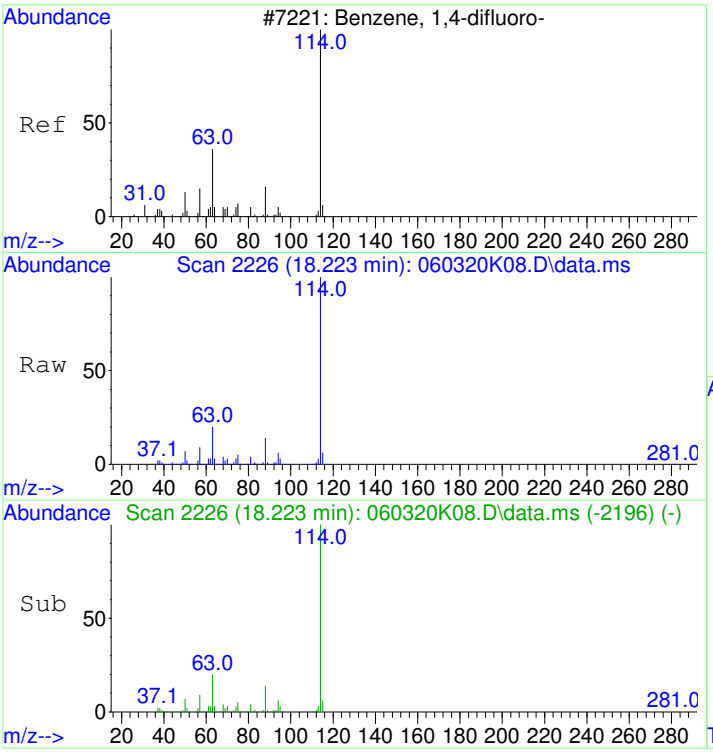


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060320K08.D
Acq: 3 Jun 2020 8:29 pm

Tgt Ion: 49 Resp: 282945

Ion	Ratio	Lower	Upper
49	100		
130	71.8	51.1	91.1
128	54.9	35.0	75.0

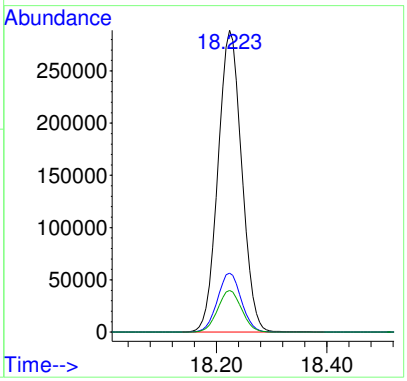


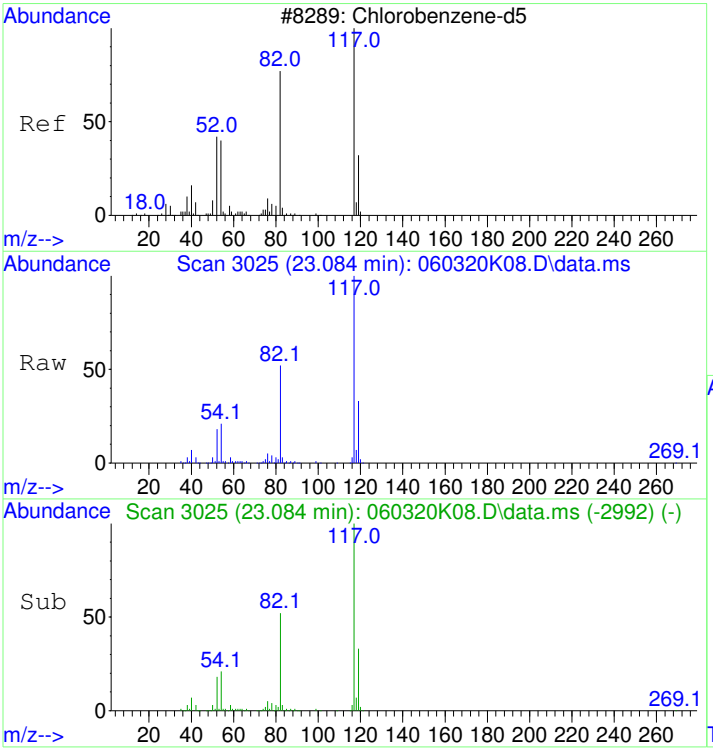


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 060320K08.D
Acq: 3 Jun 2020 8:29 pm

Tgt Ion:114 Resp: 860407

Ion	Ratio	Lower	Upper
114	100		
63	19.7	0.0	39.6
88	13.9	0.0	34.5

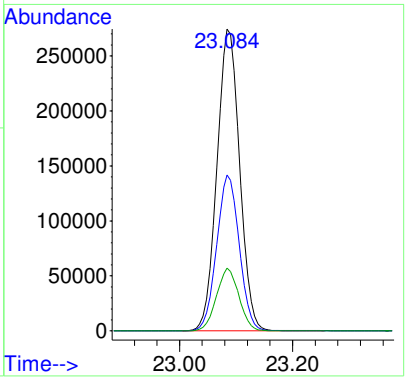




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 060320K08.D
Acq: 3 Jun 2020 8:29 pm

Tgt Ion:117 Resp: 764851

Ion	Ratio	Lower	Upper
117	100		
82	51.3	32.5	72.5
54	20.5	0.0	39.6



2011024-02

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K22.D
InstName : HP5973K
Acq On : 4 Jun 2020 8:49 am
Operator : EM
Sample : CAN #1983
Misc : 200ml RECERTIFICATION
ALS Vial : 26 Sample Multiplier: 1

CLEAN

Quant Time: Jun 04 09:25:38 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	297961	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	896789	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	797365	19.60 ppbv	0.00

Target Compounds Qvalue

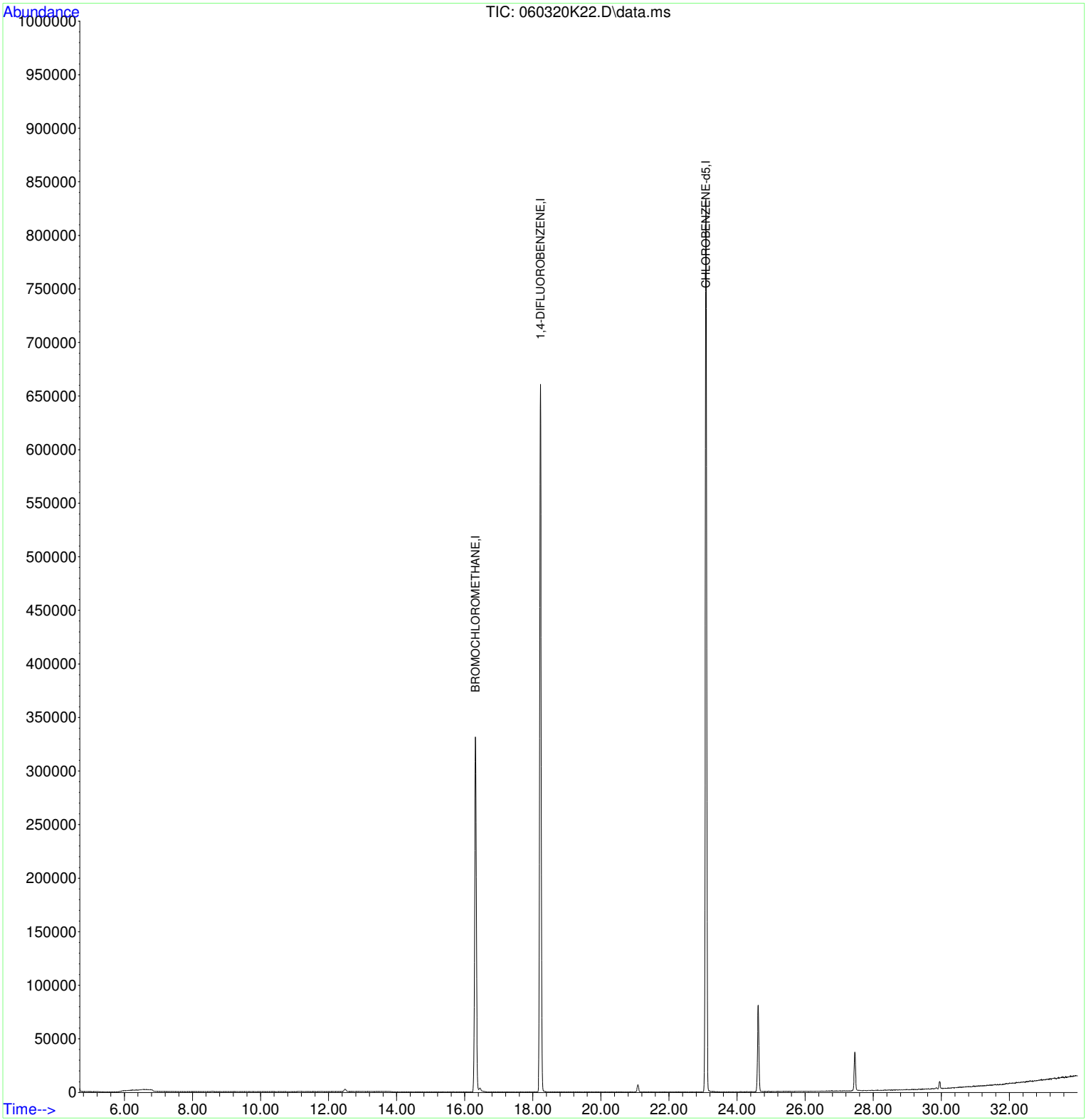
(#) = qualifier out of range (m) = manual integration (+) = signals summed

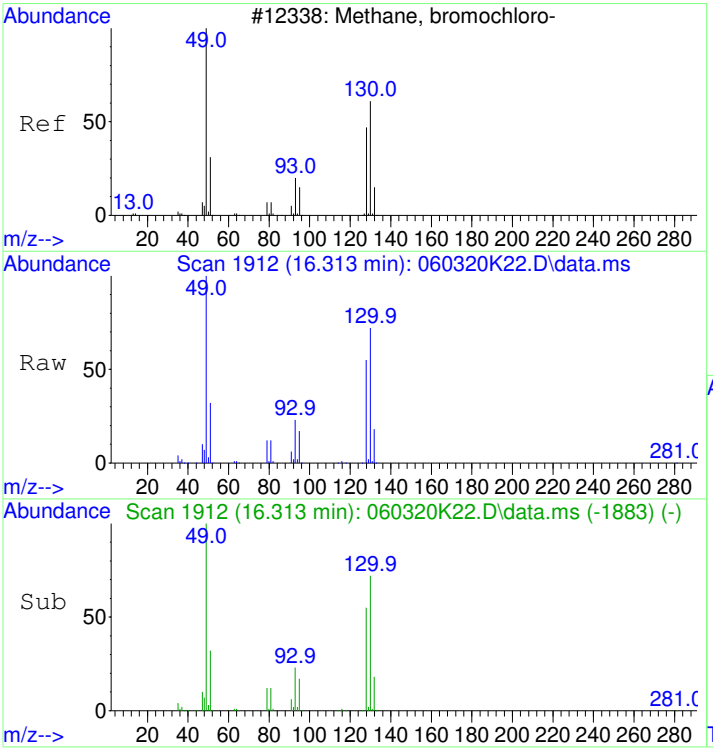
REVIEWED
By EM at 10:51 am, Jun 04, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K22.D
InstName : HP5973K
Acq On : 4 Jun 2020 8:49 am
Operator : EM
Sample : CAN #1983
Misc : 200ml RECERTIFICATION
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jun 04 09:25:38 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

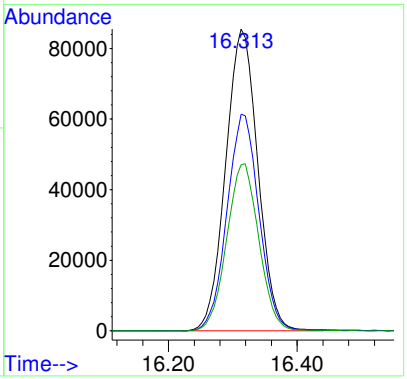


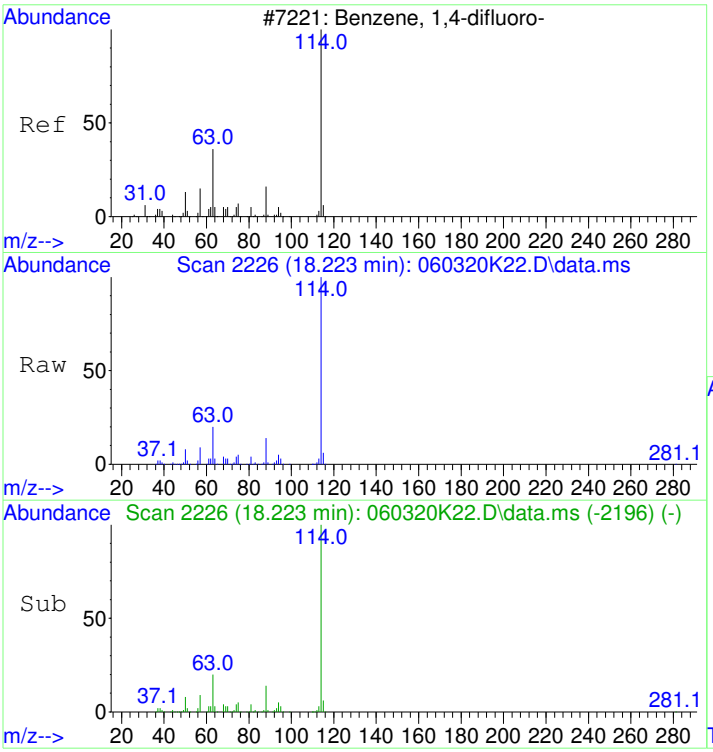


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 060320K22.D
Acq: 4 Jun 2020 8:49 am

Tgt Ion: 49 Resp: 297961

Ion	Ratio	Lower	Upper
49	100		
130	71.3	51.1	91.1
128	54.7	35.0	75.0

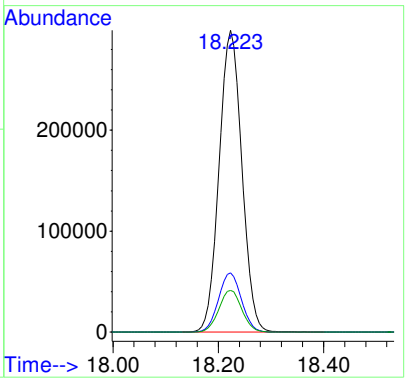


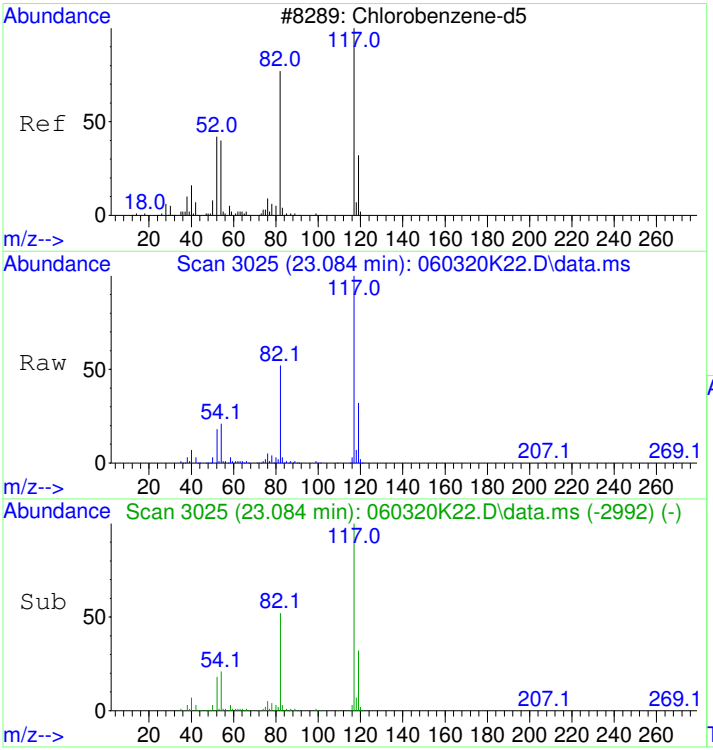


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 060320K22.D
Acq: 4 Jun 2020 8:49 am

Tgt Ion:114 Resp: 896789

Ion	Ratio	Lower	Upper
114	100		
63	19.8	0.0	39.6
88	14.0	0.0	34.5

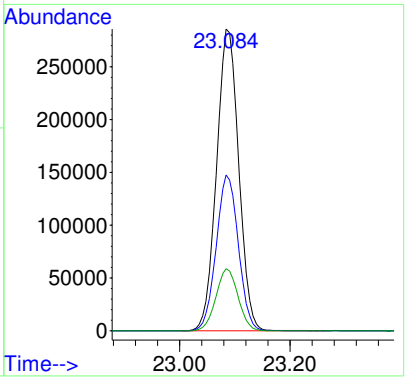




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 060320K22.D
Acq: 4 Jun 2020 8:49 am

Tgt Ion:117 Resp: 797365

Ion	Ratio	Lower	Upper
117	100		
82	51.5	32.5	72.5
54	20.5	0.0	39.6



2011024-03

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\052820K_FSAA\
Data File : 052820K24.D
InstName : HP5973K
Acq On : 29 May 2020 6:27 am
Operator : EM
Sample : CAN #1998
Misc : 200ml RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

CLEAN

Quant Time: Jun 03 09:06:18 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	288014	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	866273	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	775059	19.60 ppbv	0.00

Target Compounds Qvalue

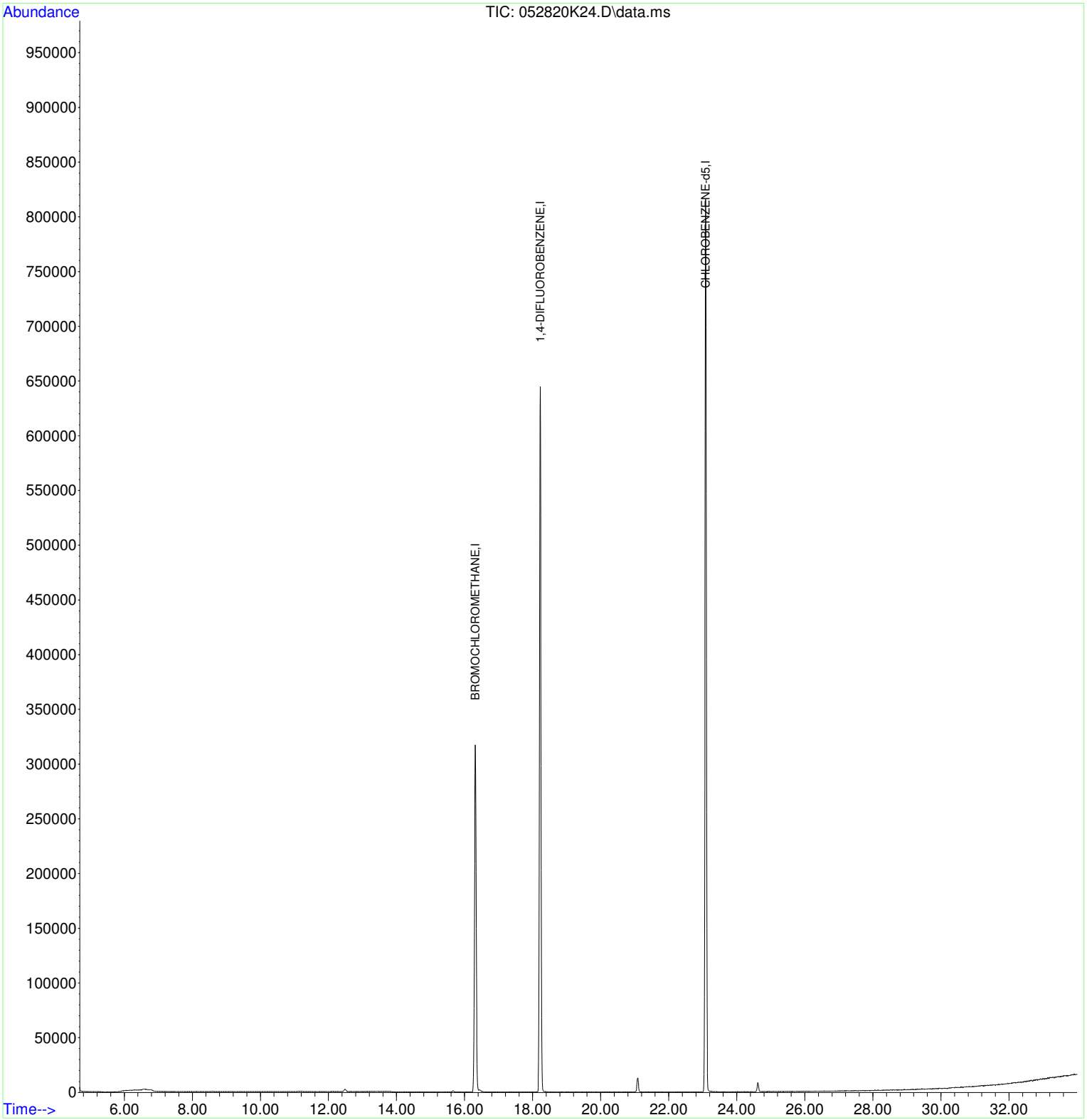
(#) = qualifier out of range (m) = manual integration (+) = signals summed

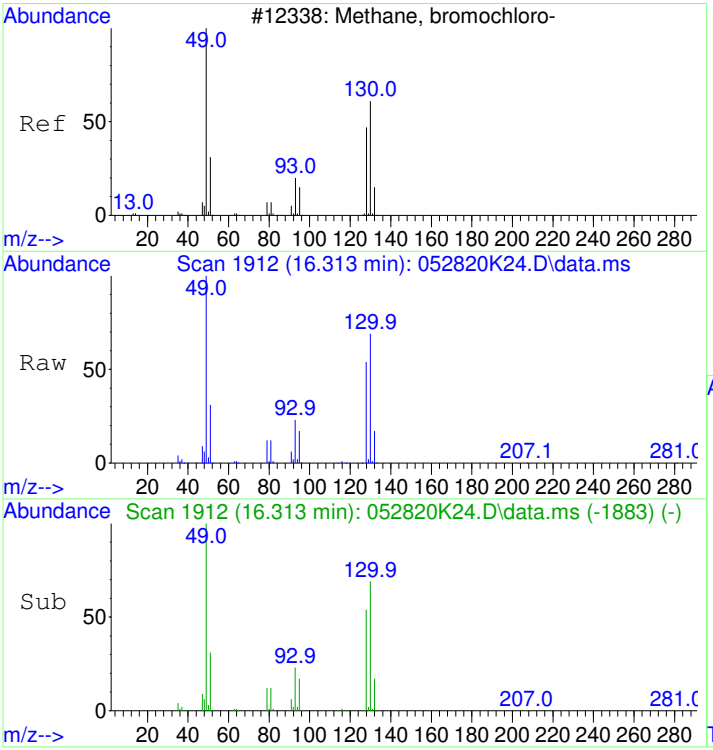
REVIEWED
By EM at 9:12 am, Jun 03, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\052820K_FSAA\
Data File : 052820K24.D
InstName : HP5973K
Acq On : 29 May 2020 6:27 am
Operator : EM
Sample : CAN #1998
Misc : 200ml RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 03 09:06:18 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

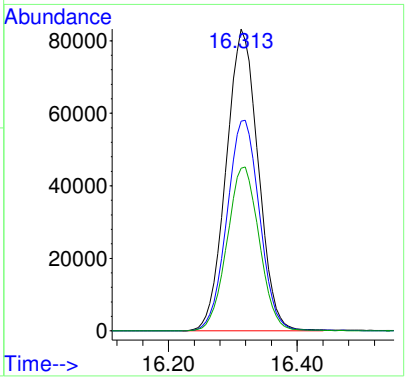


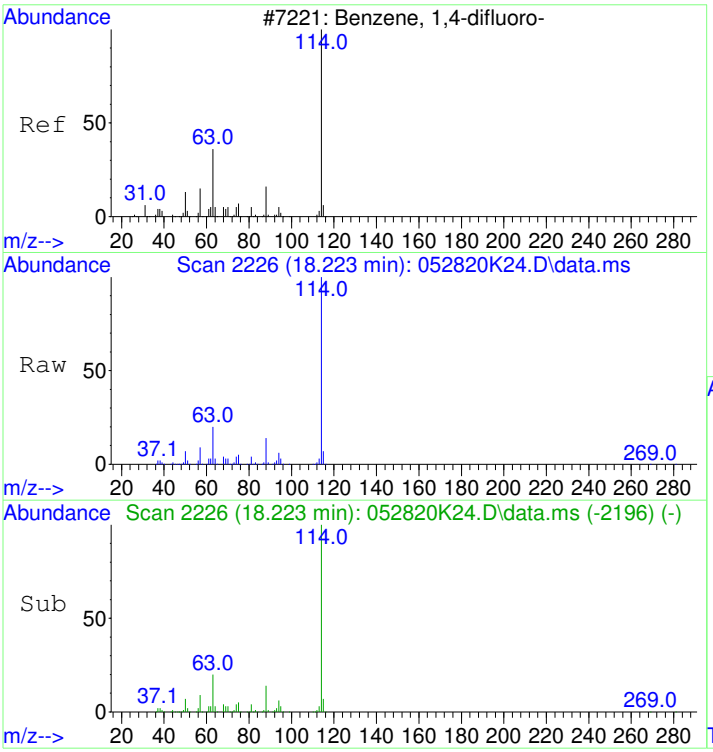


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 052820K24.D
Acq: 29 May 2020 6:27 am

Tgt Ion: 49 Resp: 288014

Ion	Ratio	Lower	Upper
49	100		
130	70.9	51.1	91.1
128	54.3	35.0	75.0

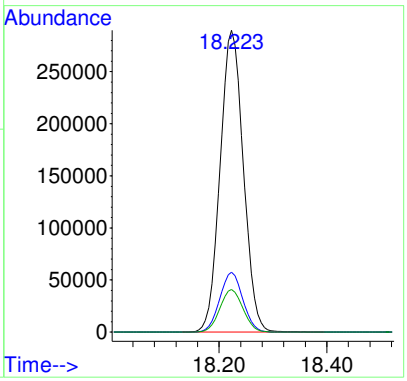


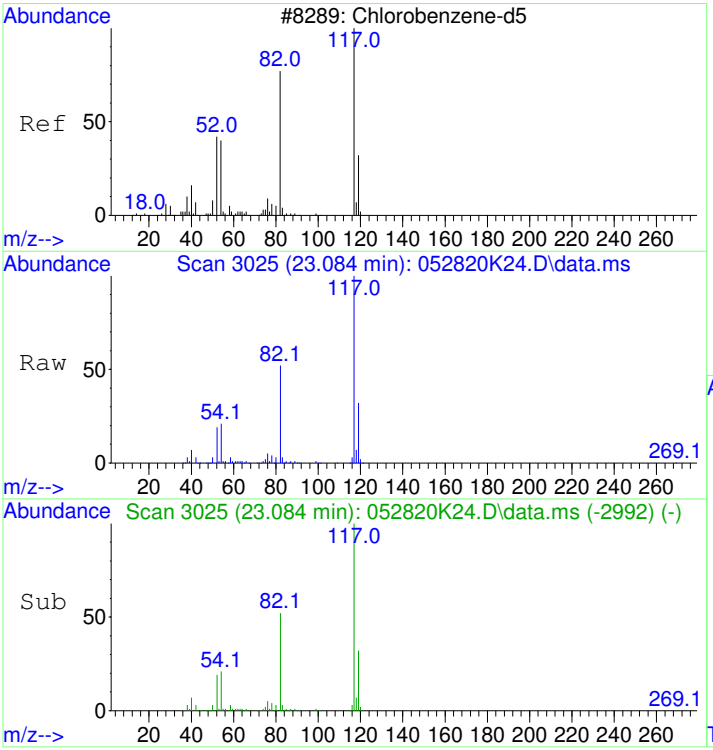


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 052820K24.D
Acq: 29 May 2020 6:27 am

Tgt Ion:114 Resp: 866273

Ion	Ratio	Lower	Upper
114	100		
63	19.7	0.0	39.6
88	14.0	0.0	34.5

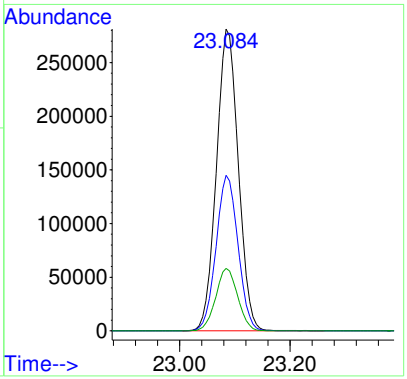




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 052820K24.D
Acq: 29 May 2020 6:27 am

Tgt Ion:117 Resp: 775059

Ion	Ratio	Lower	Upper
117	100		
82	51.5	32.5	72.5
54	20.7	0.0	39.6



2011024-04

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\052820K_FSAA\
Data File : 052820K23.D
InstName : HP5973K
Acq On : 29 May 2020 5:33 am
Operator : EM
Sample : CAN #1994
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: Jun 03 09:06:15 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	283477	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	853687	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.090	117	763723	19.60	ppbv	0.00

Target Compounds Qvalue

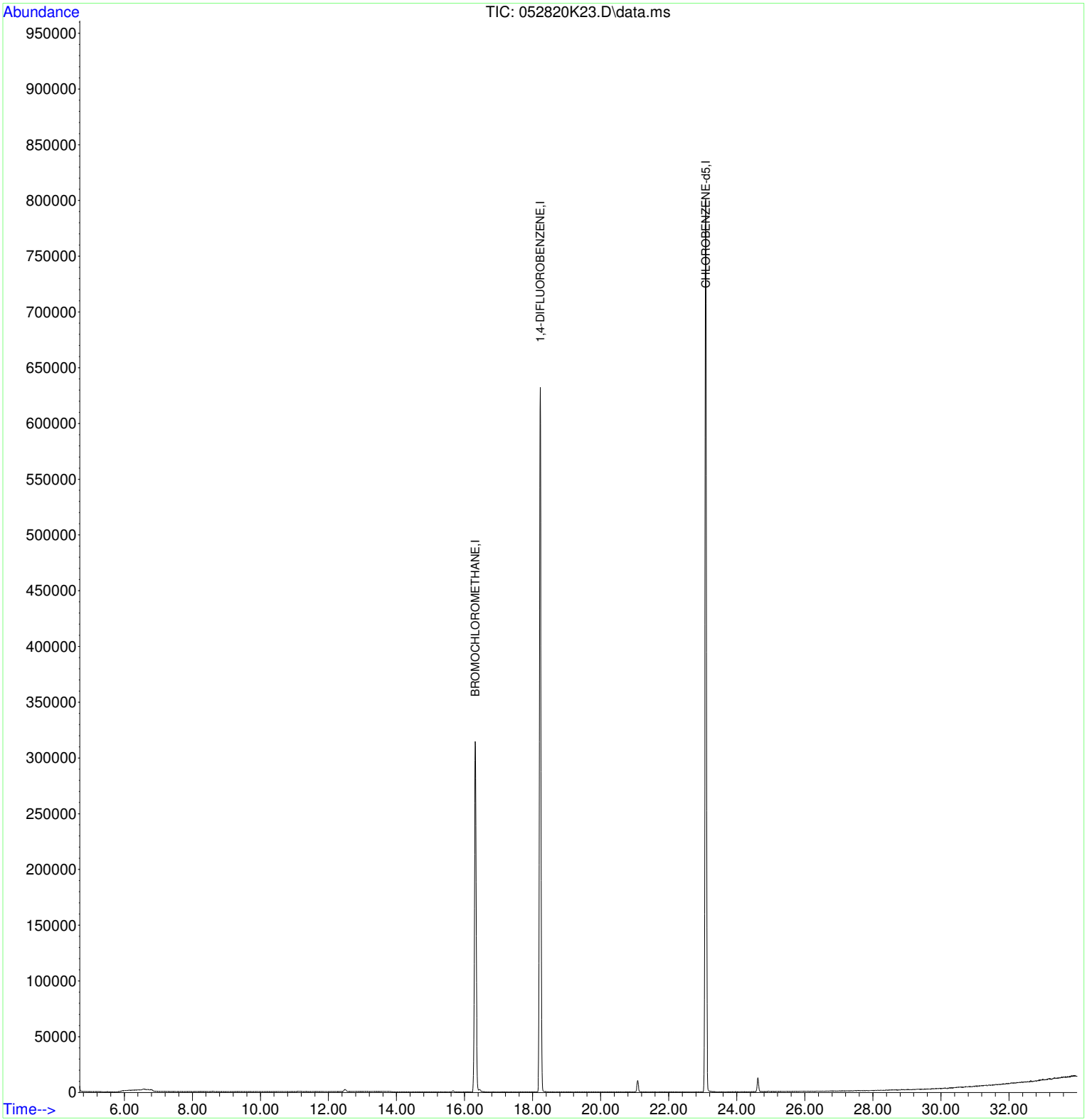
(#) = qualifier out of range (m) = manual integration (+) = signals summed

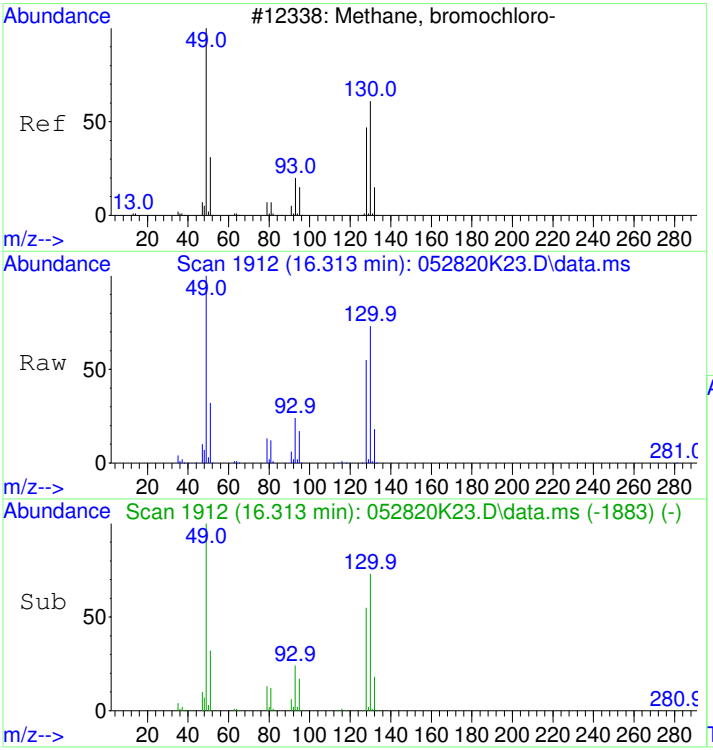
REVIEWED
By EM at 9:12 am, Jun 03, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\052820K_FSAA\
Data File : 052820K23.D
InstName : HP5973K
Acq On : 29 May 2020 5:33 am
Operator : EM
Sample : CAN #1994
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 03 09:06:15 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

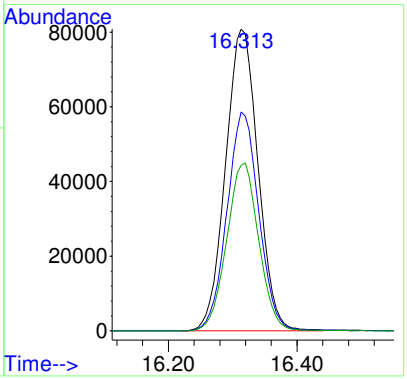


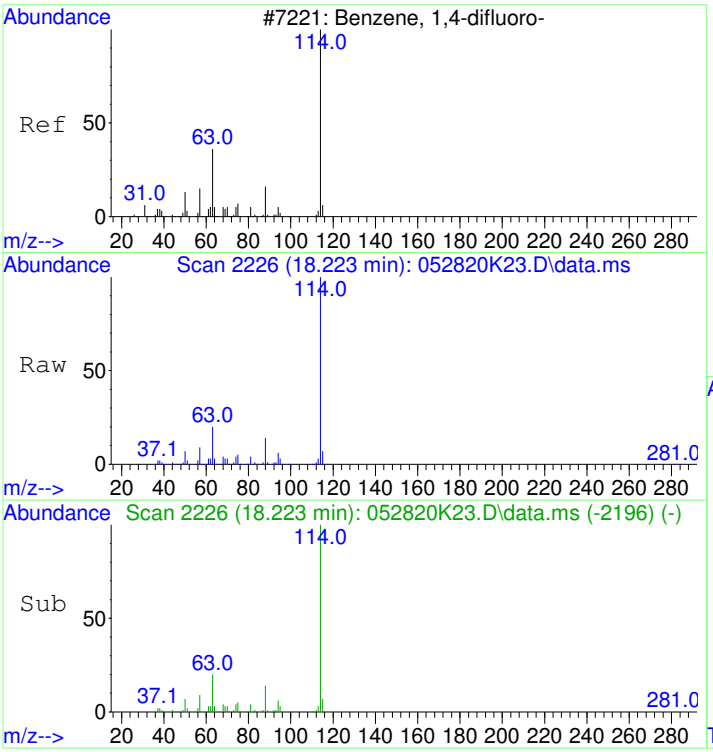


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 052820K23.D
Acq: 29 May 2020 5:33 am

Tgt Ion: 49 Resp: 283477

Ion	Ratio	Lower	Upper
49	100		
130	71.0	51.1	91.1
128	54.2	35.0	75.0

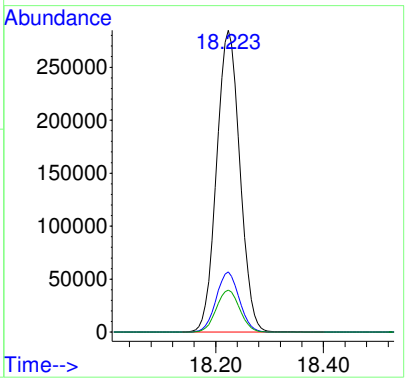


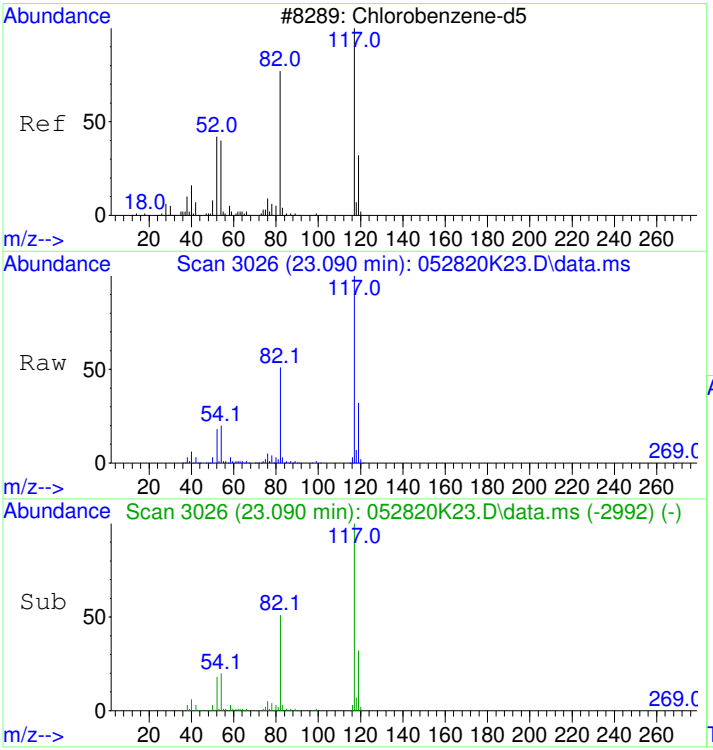


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 052820K23.D
Acq: 29 May 2020 5:33 am

Tgt Ion:114 Resp: 853687

Ion	Ratio	Lower	Upper
114	100		
63	19.8	0.0	39.6
88	14.0	0.0	34.5

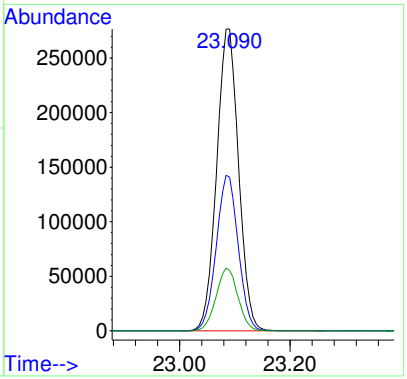




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.090 min Scan# 3026
Delta R.T. 0.006 min
Lab File: 052820K23.D
Acq: 29 May 2020 5:33 am

Tgt Ion:117 Resp: 763723

Ion	Ratio	Lower	Upper
117	100		
82	51.6	32.5	72.5
54	20.7	0.0	39.6



2011024-05

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K07.D
InstName : HP5973K
Acq On : 3 Jun 2020 7:37 pm
Operator : EM
Sample : CAN #1059
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

CLEAN

Quant Time: Jun 04 09:24:53 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	284292	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	863321	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	769810	19.60 ppbv	0.00

Target Compounds Qvalue

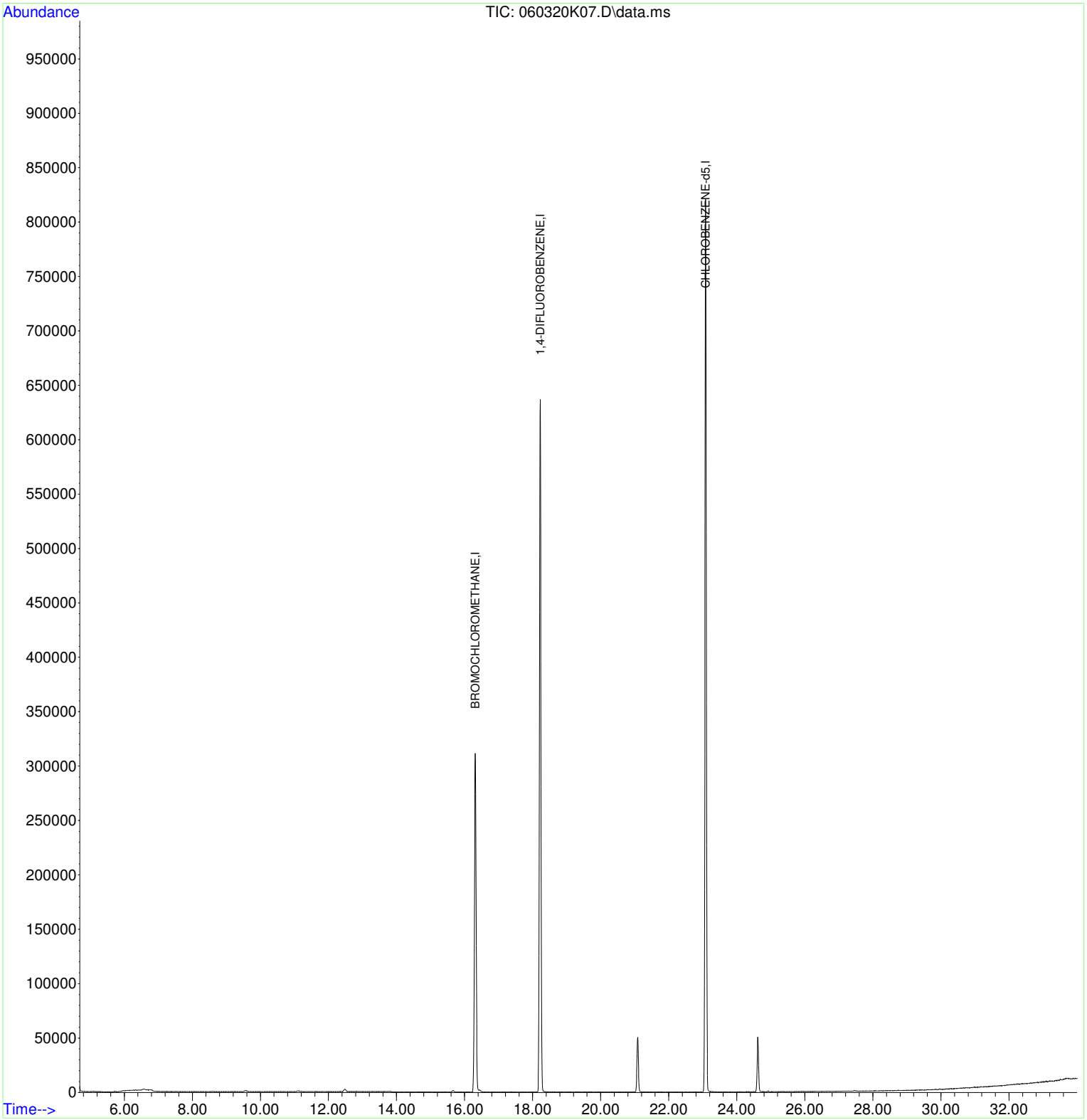
(#) = qualifier out of range (m) = manual integration (+) = signals summed

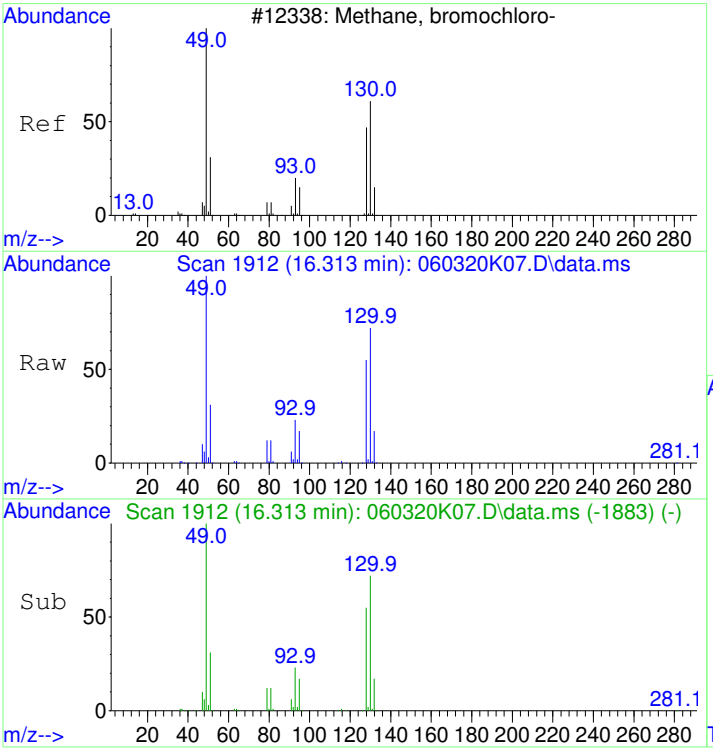
REVIEWED
By EM at 9:29 am, Jun 04, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K07.D
InstName : HP5973K
Acq On : 3 Jun 2020 7:37 pm
Operator : EM
Sample : CAN #1059
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 04 09:24:53 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

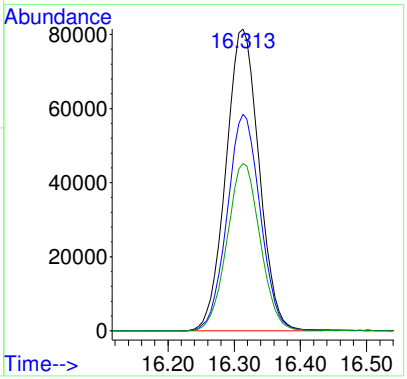


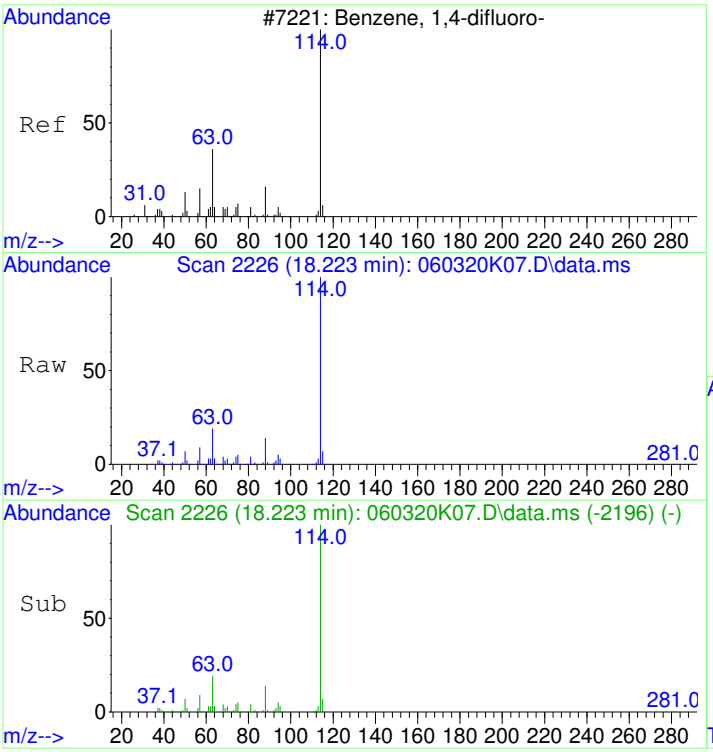


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060320K07.D
Acq: 3 Jun 2020 7:37 pm

Tgt Ion: 49 Resp: 284292

Ion	Ratio	Lower	Upper
49	100		
130	71.6	51.1	91.1
128	54.9	35.0	75.0

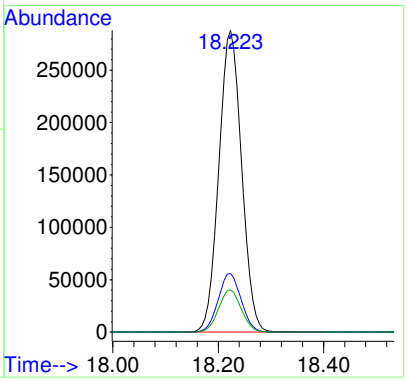


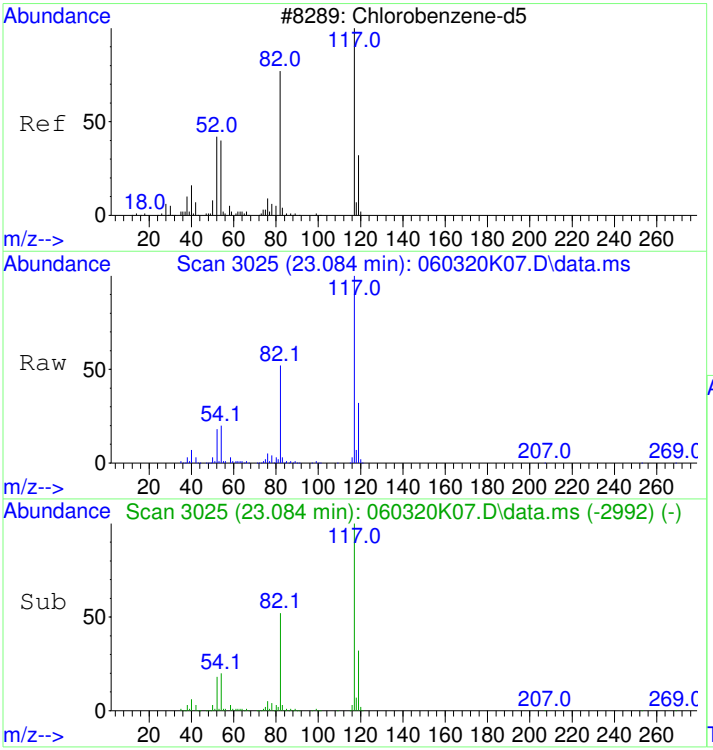


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 060320K07.D
Acq: 3 Jun 2020 7:37 pm

Tgt Ion:114 Resp: 863321

Ion	Ratio	Lower	Upper
114	100		
63	19.6	0.0	39.6
88	14.0	0.0	34.5

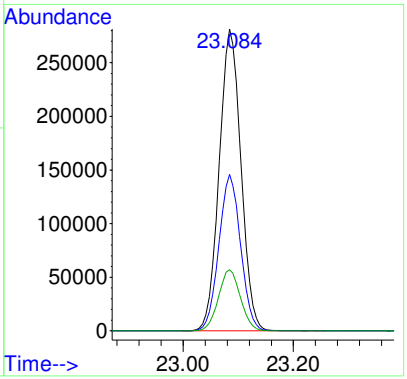




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 060320K07.D
Acq: 3 Jun 2020 7:37 pm

Tgt Ion:117 Resp: 769810

Ion	Ratio	Lower	Upper
117	100		
82	51.6	32.5	72.5
54	20.4	0.0	39.6



2011024-06

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\060420K_FSAA\
Data File : 060420K07.D
InstName : HP5973K
Acq On : 4 Jun 2020 6:13 pm
Operator : EM
Sample : CAN #635
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

CLEAN

Quant Time: Jun 05 09:19:18 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	327585	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	987279	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	871605	19.60 ppbv	0.00

Target Compounds Qvalue

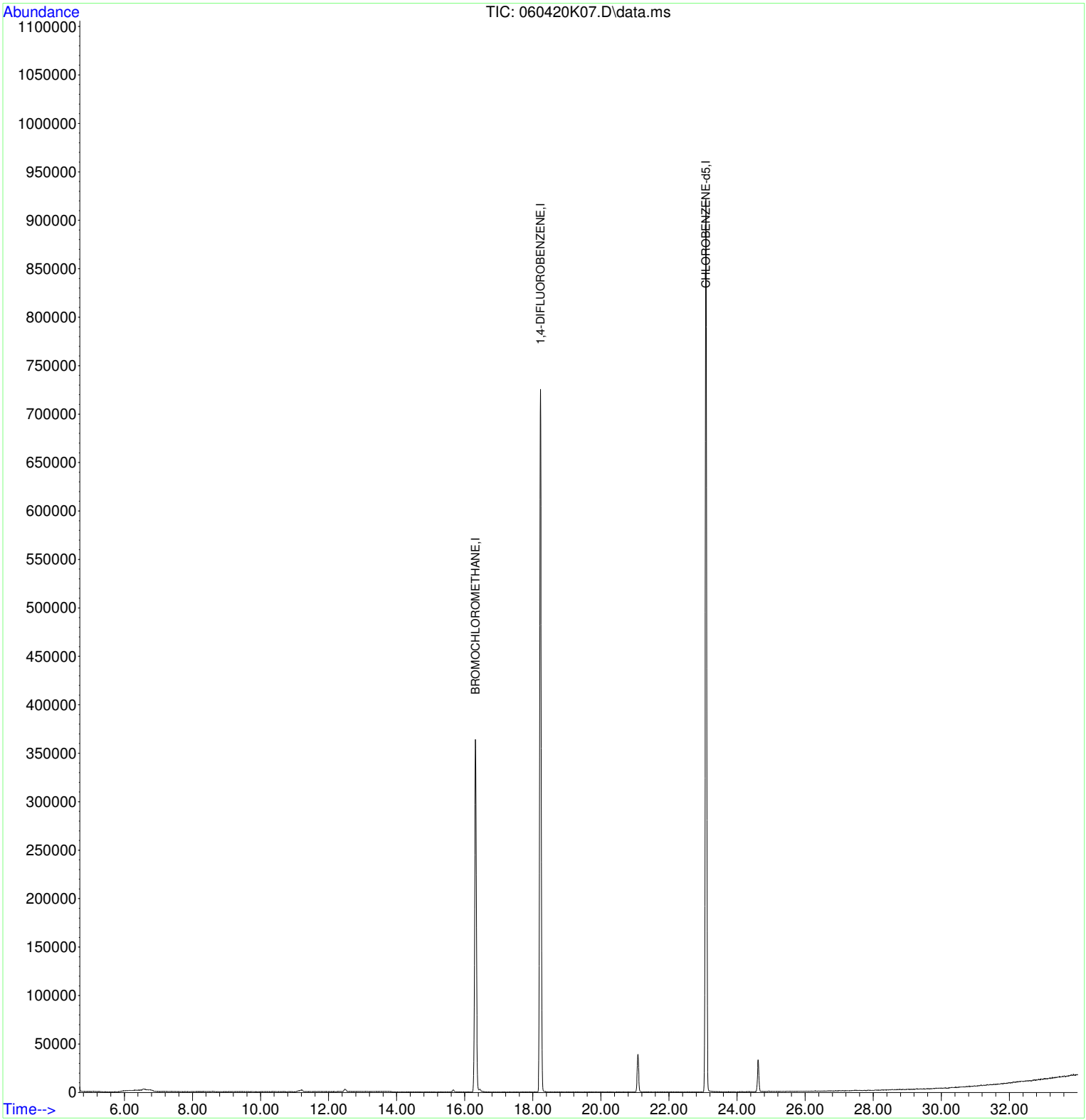
(#) = qualifier out of range (m) = manual integration (+) = signals summed

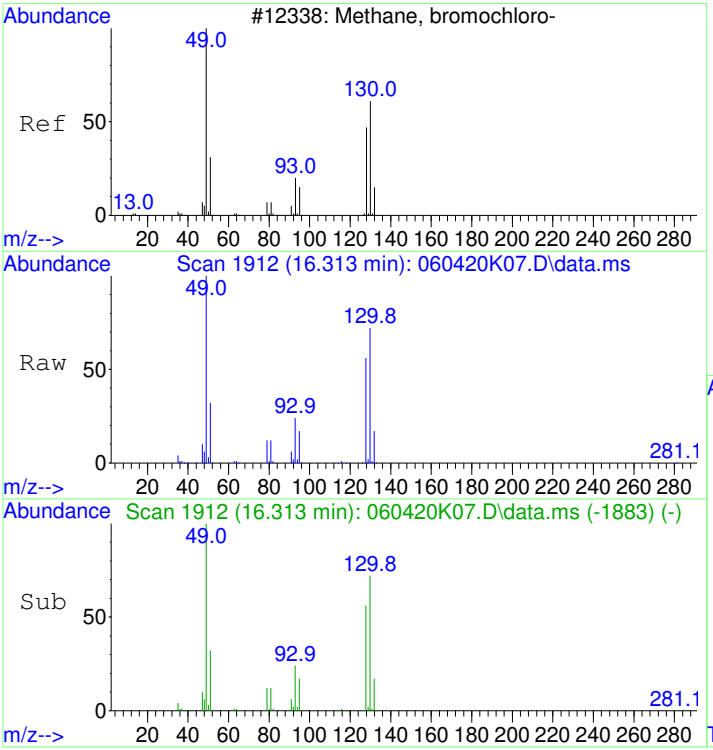
REVIEWED
By EM at 3:21 pm, Jun 05, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\060420K_FSAA\
Data File : 060420K07.D
InstName : HP5973K
Acq On : 4 Jun 2020 6:13 pm
Operator : EM
Sample : CAN #635
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 05 09:19:18 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

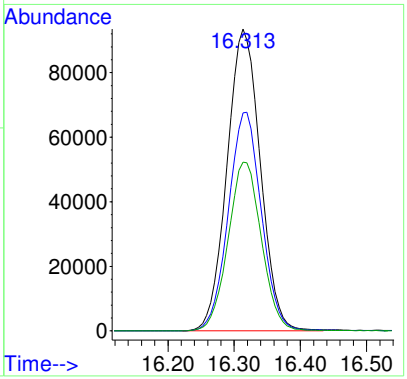


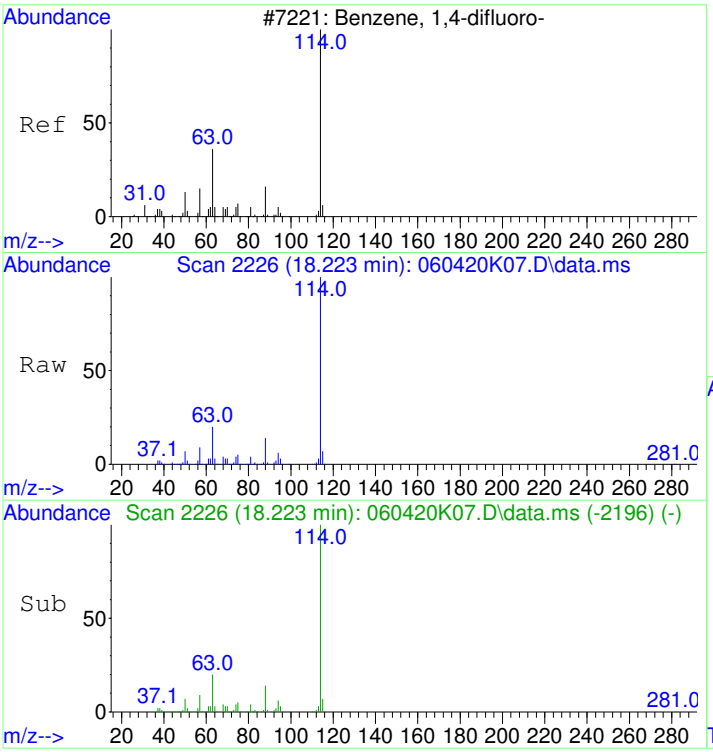


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060420K07.D
Acq: 4 Jun 2020 6:13 pm

Tgt Ion: 49 Resp: 327585

Ion	Ratio	Lower	Upper
49	100		
130	71.8	51.1	91.1
128	55.4	35.0	75.0

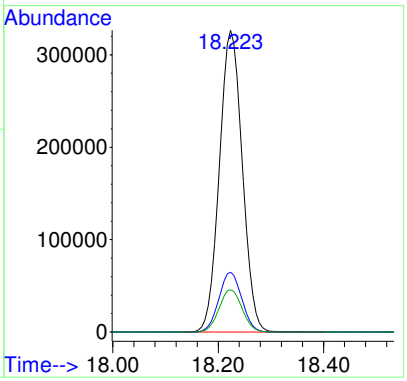


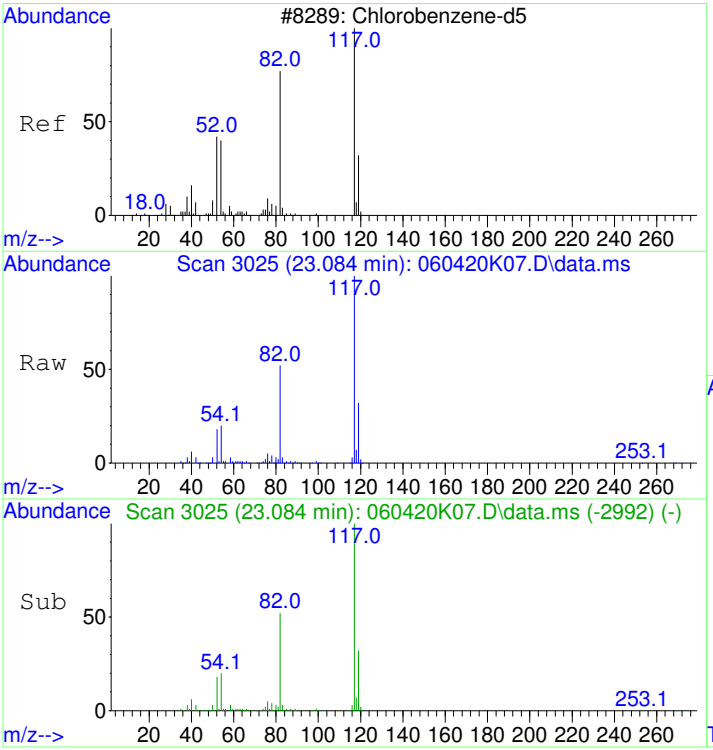


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 060420K07.D
Acq: 4 Jun 2020 6:13 pm

Tgt Ion:114 Resp: 987279

Ion	Ratio	Lower	Upper
114	100		
63	19.9	0.0	39.6
88	14.2	0.0	34.5

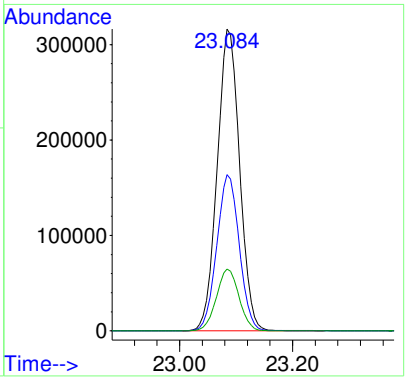




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 060420K07.D
Acq: 4 Jun 2020 6:13 pm

Tgt Ion:117 Resp: 871605

Ion	Ratio	Lower	Upper
117	100		
82	51.8	32.5	72.5
54	20.5	0.0	39.6



2011024-07

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K06.D
InstName : HP5973K
Acq On : 3 Jun 2020 6:43 pm
Operator : EM
Sample : CAN #891
Misc : 200ml RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

CLEAN

Quant Time: Jun 04 09:24:50 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	290222	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	887497	19.60 ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	783508	19.60 ppbv	0.00

Target Compounds Qvalue

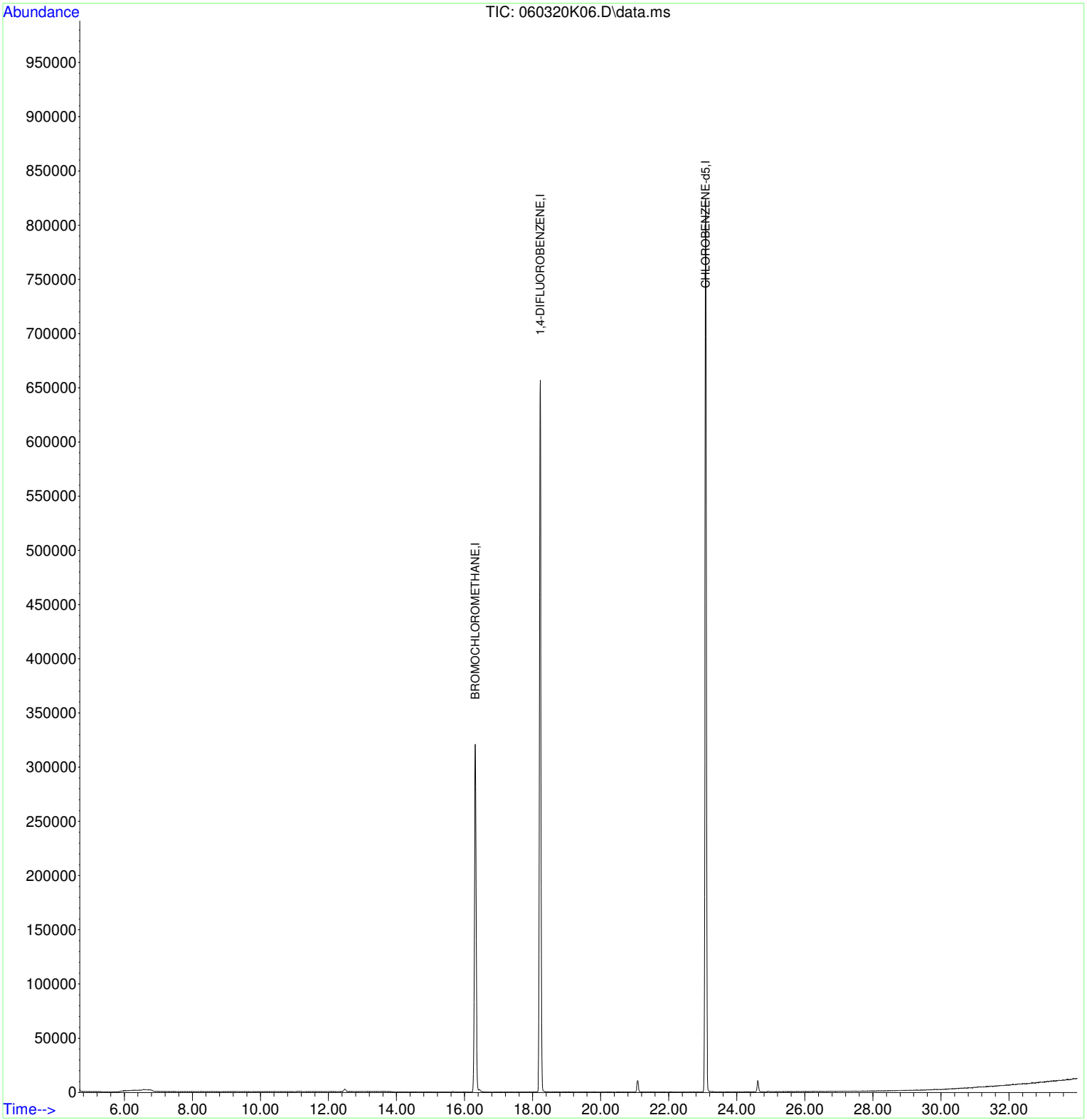
(#) = qualifier out of range (m) = manual integration (+) = signals summed

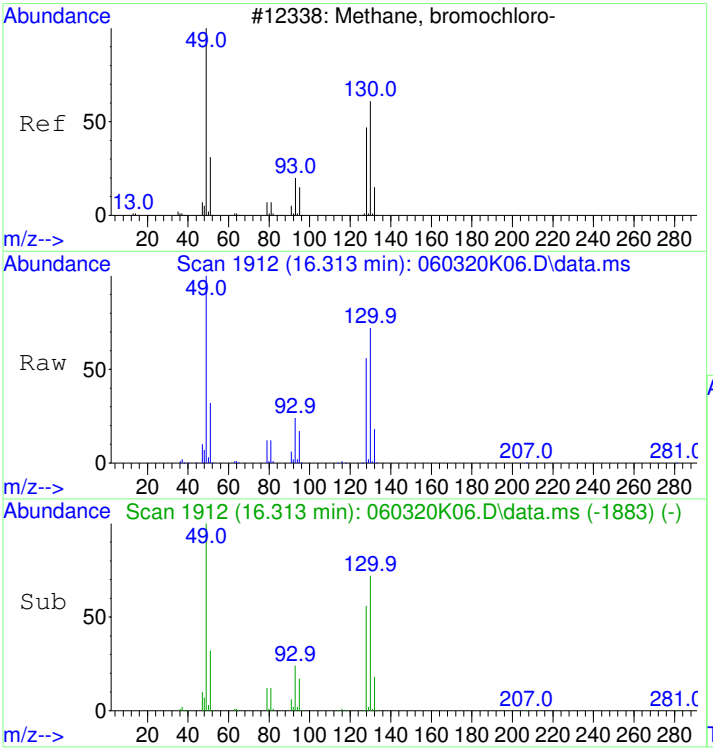
REVIEWED
By EM at 9:29 am, Jun 04, 2020

Table of Contents

Data Path : D:\msdchem\1\2020\DATA\060320K_FSAA\
Data File : 060320K06.D
InstName : HP5973K
Acq On : 3 Jun 2020 6:43 pm
Operator : EM
Sample : CAN #891
Misc : 200ml RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 09:24:50 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

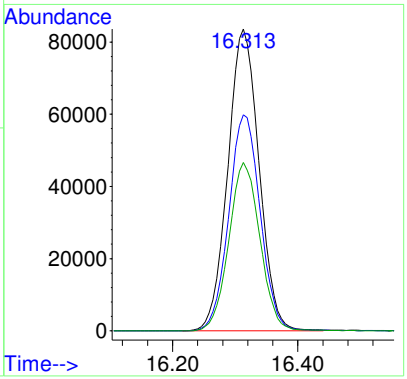


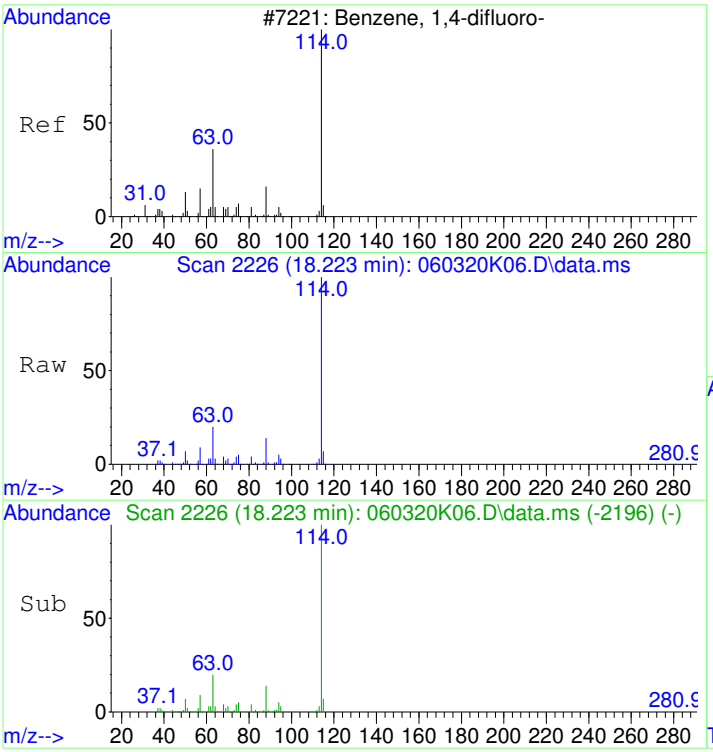


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060320K06.D
Acq: 3 Jun 2020 6:43 pm

Tgt Ion: 49 Resp: 290222

Ion	Ratio	Lower	Upper
49	100		
130	71.8	51.1	91.1
128	54.8	35.0	75.0

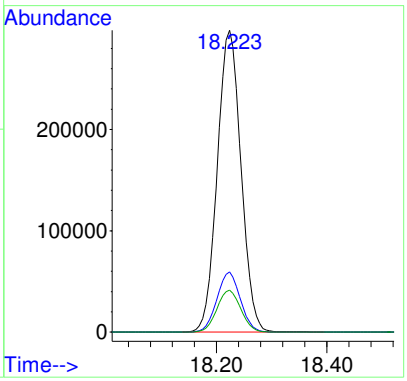


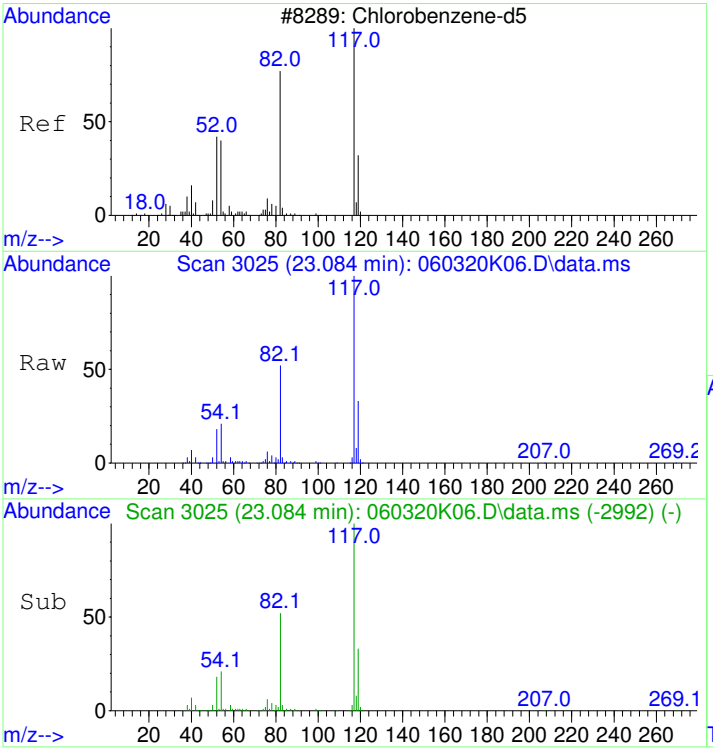


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 060320K06.D
Acq: 3 Jun 2020 6:43 pm

Tgt Ion:114 Resp: 887497

Ion	Ratio	Lower	Upper
114	100		
63	19.6	0.0	39.6
88	14.0	0.0	34.5

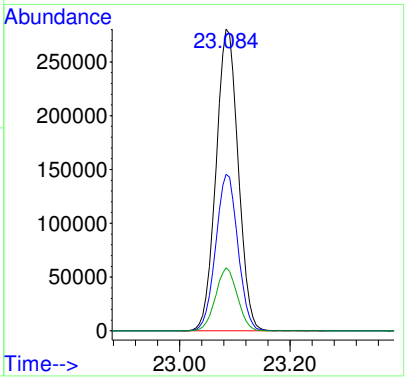




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 060320K06.D
Acq: 3 Jun 2020 6:43 pm

Tgt Ion:117 Resp: 783508

Ion	Ratio	Lower	Upper
117	100		
82	51.7	32.5	72.5
54	20.5	0.0	39.6



2011024-08

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2020\DATA\052820K_FSAA\
Data File : 052820K18.D
InstName : HP5973K
Acq On : 29 May 2020 1:08 am
Operator : EM
Sample : CAN #1979
Misc : 200ml RECERTIFICATION
ALS Vial : 22 Sample Multiplier: 1

CLEAN

Quant Time: Jun 03 09:06:00 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	282673	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	18.223	114	853814	19.60	ppbv	0.00
43) CHLOROBENZENE-d5	23.084	117	765911	19.60	ppbv	0.00

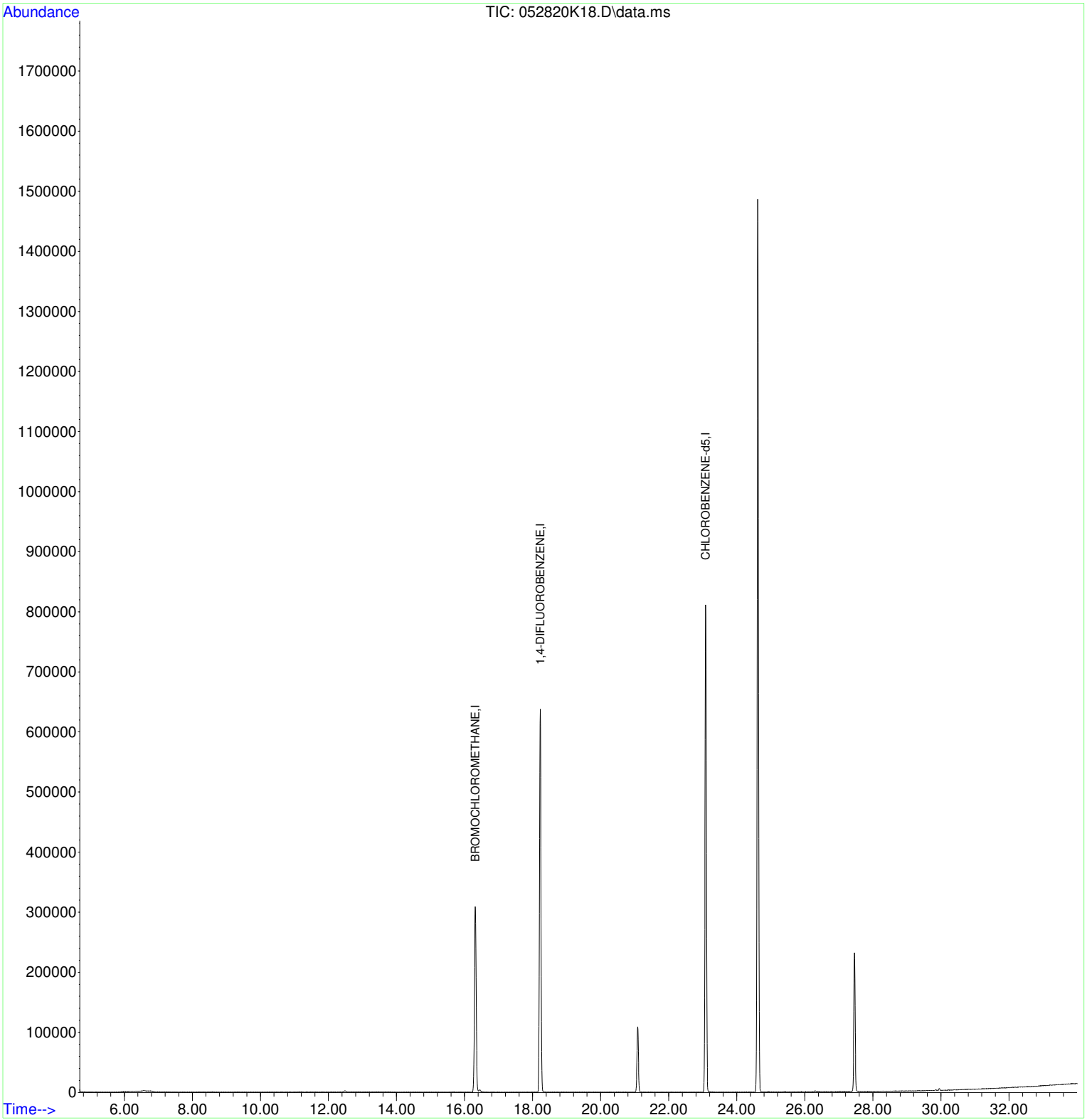
Target Compounds Qvalue

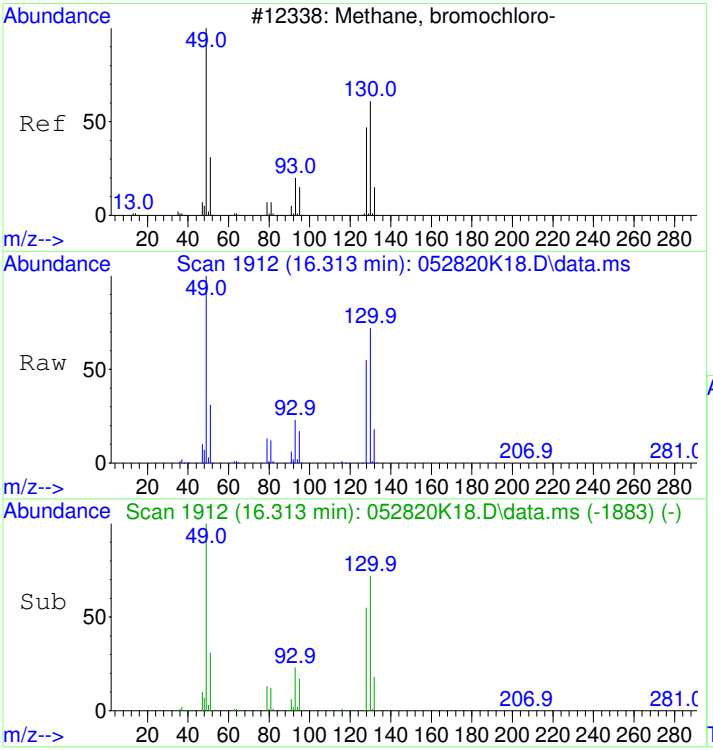
(#) = qualifier out of range (m) = manual integration (+) = signals summed

REVIEWED
By EM at 9:11 am, Jun 03, 2020

Data Path : D:\msdchem\1\2020\DATA\052820K_FSAA\
Data File : 052820K18.D
InstName : HP5973K
Acq On : 29 May 2020 1:08 am
Operator : EM
Sample : CAN #1979
Misc : 200ml RECERTIFICATION
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jun 03 09:06:00 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

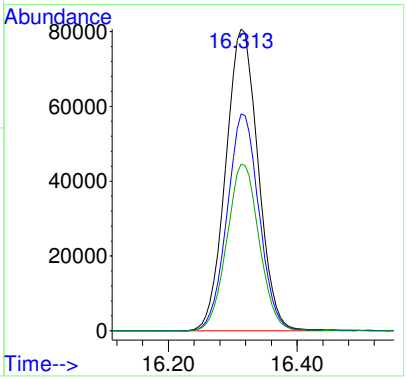


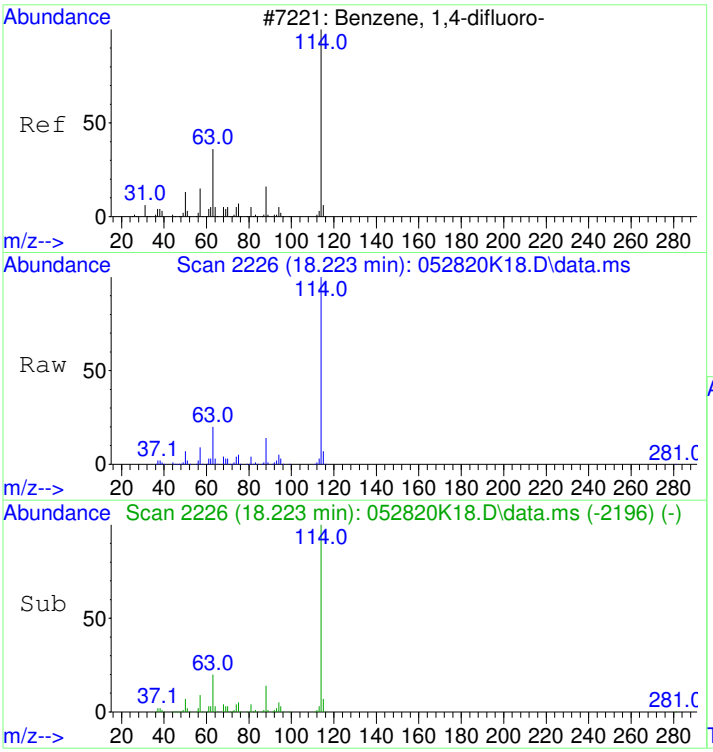


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 052820K18.D
Acq: 29 May 2020 1:08 am

Tgt Ion: 49 Resp: 282673

Ion	Ratio	Lower	Upper
49	100		
130	70.9	51.1	91.1
128	54.6	35.0	75.0

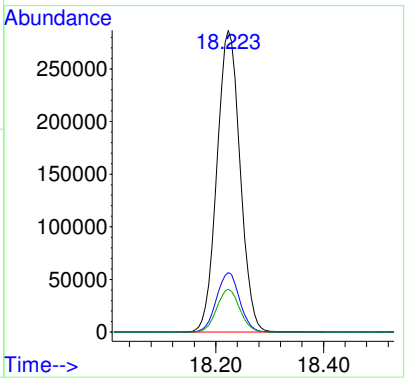


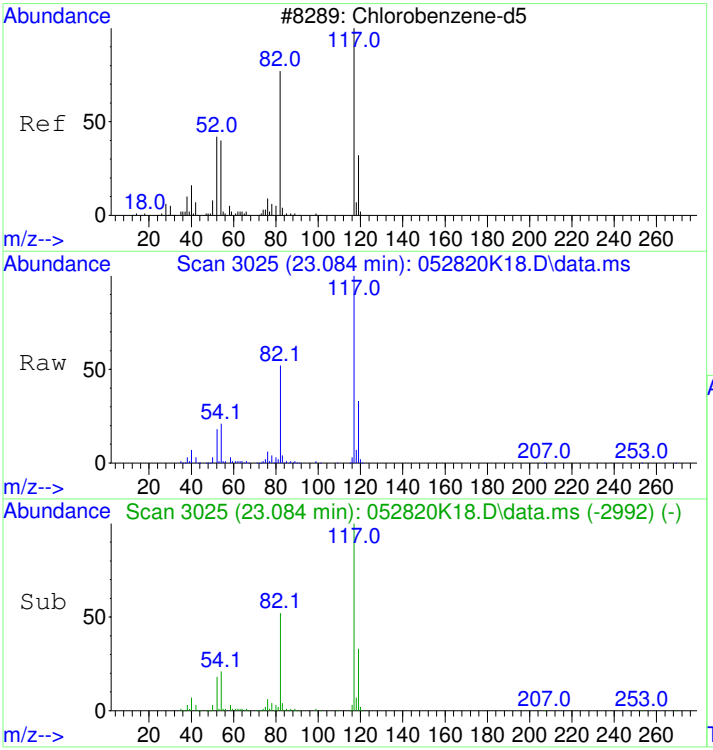


#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.223 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 052820K18.D
Acq: 29 May 2020 1:08 am

Tgt Ion:114 Resp: 853814

Ion	Ratio	Lower	Upper
114	100		
63	19.7	0.0	39.6
88	14.1	0.0	34.5

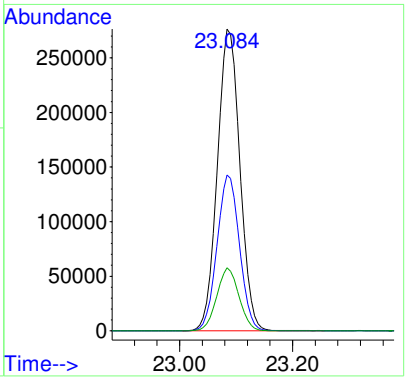




#43
CHLOROBENZENE-d5
Concen: 19.60 ppbv
RT: 23.084 min Scan# 3025
Delta R.T. -0.000 min
Lab File: 052820K18.D
Acq: 29 May 2020 1:08 am

Tgt Ion:117 Resp: 765911

Ion	Ratio	Lower	Upper
117	100		
82	51.4	32.5	72.5
54	20.5	0.0	39.6



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

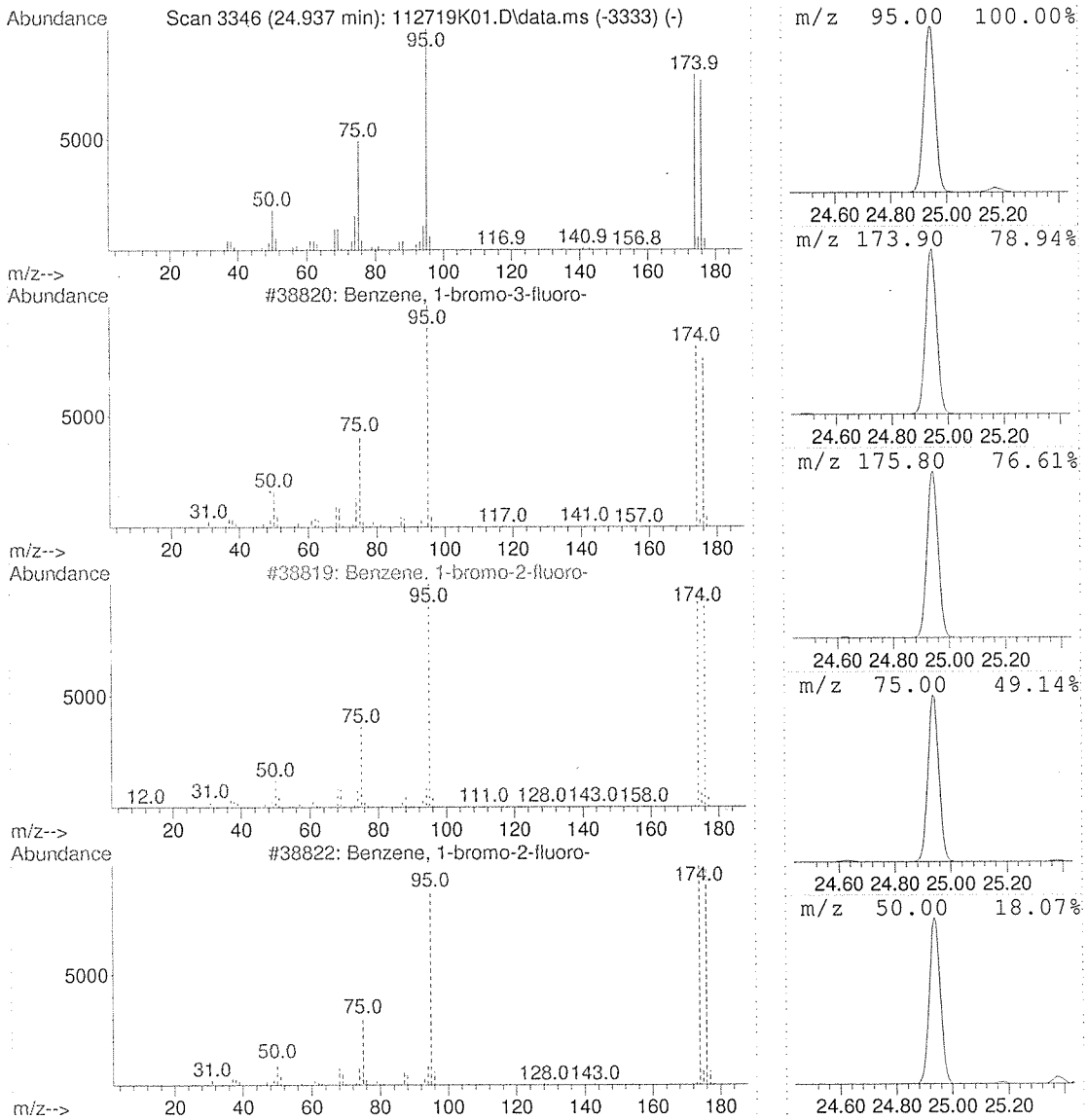
TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p

****

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

1926008

Description:	TO-14A Internal Standard Mix, Stock	**Expires:**	06/06/21
Standard Type:	Other Solution	**Prepared:**	06/06/19
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	110000	**Department:**	Air
Vials:	1	**Last Edit:**	06/24/19 13:14 by LLH
Vendor:	Scott/Air Liquide	**Lot Numb**	160-401499950-1

Restek Part # 26353, Cylinder #: ST0000197656 AU011072
Orig exp date: 06/06/21

Analyte	CAS Number	Concentration (ppm)
Chlorobenzene-d5	3114-55-4	0.097
Bromochloromethane	74-97-5	0.098
1,4-Difluorobenzene	540-36-3	0.099

Airgas
an Air Liquide company

Bta 1926009

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:	160-401499950-1
Cylinder Number:	ST0000197656	Cylinder Volume:	3.9 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	Jun 06, 2019	Valve Outlet:	180
Lot Number:	160-401499950-1		

Expiration Date: Jun 06, 2021 AU011072 Lot 02/24/19

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	99.000 PPB	+/- 10%
BROMOCHLOROMETHANE	100.000 PPB	98.000 PPB	+/- 10%
CHLOROBENZENE-D5	100.000 PPB	97.000 PPB	+/- 10%
NITROGEN	Balance		

Permanent Notes: RESTEK P/N 26353

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

2019011

Description:	TO-14A 39 Component Mix Standard	**Expires:**	04/06/22
Standard Type:	Analyte Spike	**Prepared:**	03/30/20
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	05/07/20 10:08 by LLH
Vendor:	Scott/Air Liquide	**Lot Numb**	160-401771915-1

Supelco: 41900-U Cylinder # ST0000248984 AU011836
Part No. X40NI99CA98C000 Scott/Air Liquide Exp date: 04/06/22

Analyte	CAS Number	Concentration (ppm)
1,2-Dibromoethane (EDB)	106-93-4	0.097
1,1,1-Trichloroethane	71-55-6	0.091
Benzene	71-43-2	0.1
1,4-Dichlorobenzene	106-46-7	0.097
1,3-Dichlorobenzene	541-73-1	0.095
1,3,5-Trimethylbenzene	108-67-8	0.096
1,2-Dichlorotetrafluoroethane	76-14-2	0.11
1,2-Dichloropropane	78-87-5	0.1
Carbon tetrachloride	56-23-5	0.1
1,2-Dichlorobenzene	95-50-1	0.095
Chlorobenzene	108-90-7	0.1
1,2,4-Trimethylbenzene	95-63-6	0.097
1,2,4-Trichlorobenzene	120-82-1	0.089
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	0.1
Ethylbenzene	100-41-4	0.1
Trichlorofluoromethane	75-69-4	0.1
Trichloroethene	79-01-6	0.1
trans-1,3-Dichloropropene	10061-02-6	0.1
Toluene	108-88-3	0.1
Tetrachloroethene	127-18-4	0.1
Styrene	100-42-5	0.097
o-Xylene	95-47-6	0.11
Bromomethane	74-83-9	0.11
Hexachlorobutadiene	87-68-3	0.091
Vinyl chloride	75-01-4	0.11

Analytical Standard Record

EPA Region 9 Laboratory

2019011

Dichloromethane	75-09-2	0.11
Dichlorodifluoromethane	75-71-8	0.1
cis-1,3-Dichloropropene	10061-01-5	0.1
cis-1,2-Dichloroethene	156-59-2	0.11
Chloromethane	74-87-3	0.099
Chloroform	67-66-3	0.1
Chloroethane	75-00-3	0.099
m&p-Xylene	179601-23-1	0.22

Airgas
an Air Liquide company

SCV Primary 2011011

Airgas Specialty G
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

AU011836

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

UA 05/07/20

Part Number:	X40NI99CA98C000	Reference Number:	160-401771915-1
Cylinder Number:	ST0000248984	Cylinder Volume:	98.0 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	Apr 06, 2020	Valve Outlet:	180
Lot Number:	160-401771915-1		

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	91.000 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	100.000 PPB	97.000 PPB	+/- 10%
1,2 DICHLORO PROPANE	100.000 PPB	100.000 PPB	+/- 10%
1,2 DICHLOROBENZENE	100.000 PPB	95.000 PPB	+/- 10%
1,2 DICHLOROETHANE	100.000 PPB	100.000 PPB	+/- 10%
1,2,4 TRICHLOROBENZENE	100.000 PPB	89.000 PPB	+/- 10%
1,2,4 TRIMETHYLBENZENE	100.000 PPB	97.000 PPB	+/- 10%
1,3 DICHLORO BENZENE	100.000 PPB	95.000 PPB	+/- 10%
1,3,5 TRIMETHYL BENZENE	100.000 PPB	96.000 PPB	+/- 10%
1,4 DICHLOROBENZENE	100.000 PPB	97.000 PPB	+/- 10%
BENZENE	100.000 PPB	100.000 PPB	+/- 10%
BROMOMETHANE	100.000 PPB	110.000 PPB	+/- 10%
CARBON TETRACHLORIDE	100.000 PPB	100.000 PPB	+/- 10%
CHLOROBENZENE	100.000 PPB	100.000 PPB	+/- 10%
CHLOROFORM	100.000 PPB	100.000 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	100.000 PPB	+/- 10%
ETHYL CHLORIDE	100.000 PPB	99.000 PPB	+/- 10%
HEXACHLORO 1,3 BUTADIENE	100.000 PPB	91.000 PPB	+/- 10%
M XYLENE	100.000 PPB	110.000 PPB	+/- 10%
METHYL CHLORIDE	100.000 PPB	99.000 PPB	+/- 10%
METHYLENE CHLORIDE	100.000 PPB	110.000 PPB	+/- 10%
O XYLENE	100.000 PPB	110.000 PPB	+/- 10%
P XYLENE	100.000 PPB	110.000 PPB	+/- 10%
PERCHLOROETHYLENE	100.000 PPB	100.000 PPB	+/- 10%
R11 TRICHLOROFLUOROMETHANE	100.000 PPB	100.000 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	100.000 PPB	+/- 10%

Approved for Release

Airgas
an Air Liquide company

2019011

Airgas Specialty G
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

STYRENE	100.000 PPB	97.000 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	100.000 PPB	+/- 10%
VINYL CHLORIDE	100.000 PPB	110.000 PPB	+/- 10%
NITROGEN	Balance		

Permanent Notes: SIGMA-ALDRICH P/N 41900-U

Notes:
Cylinder number: ST0000248984
Expiration Date: 06-April-2022

PO number: P487959
Date of manufacture: 30-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
Airgas.com

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

224 TMBenzene

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

THE LINDE GROUP

SHIPPED TO: GSS Warehouse
13890 Redskin Dr.
Herndon, VA 20171-3208

SCAN SUBSET CAL 2028010

PAGE: 1 of 2

ANALYSIS REPORT

A401/843

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

THE LINDE GROUP

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

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

Analytical Standard Record

EPA Region 9 Laboratory

2042009

Description:	TO-15 SCV (VIRTUAL)	**Expires:**	11/11/20
Standard Type:	Other Solution	**Prepared:**	10/12/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	2000	**Department:**	Air
Vials:	1	**Last Edit:**	10/12/20 10:42 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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	0.0091
1,2-Dibromoethane (EDB)	106-93-4	0.0097
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	0.0097
1,2,4-Trimethylbenzene	95-63-6	0.0097
1,3-Dichlorobenzene	541-73-1	0.0095
1,2-Dichlorobenzene	95-50-1	0.0095
1,2-Dichloroethane	107-06-2	0.01
1,2-Dichloropropane	78-87-5	0.01
1,2-Dichlorotetrafluoroethane	76-14-2	0.011
1,3,5-Trimethylbenzene	108-67-8	0.0096
Carbon disulfide	75-15-0	0.012

Analytical Standard Record
EPA Region 9 Laboratory
2042009

1,2,4-Trichlorobenzene	120-82-1	0.0089
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	0.011
Propene	115-07-1	0.011
Styrene	100-42-5	0.0097
Hexachlorobutadiene	87-68-3	0.0091
Tetrachloroethene	127-18-4	0.01
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	0.01
Trichlorofluoromethane	75-69-4	0.01
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	0.011
Carbon tetrachloride	56-23-5	0.01
Chlorobenzene	108-90-7	0.01
Chlorodibromomethane	124-48-1	0.011
Chloroethane	75-00-3	0.0099
Hexane	110-54-3	0.011
Chloromethane	74-87-3	0.0099
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	0.01
Dichloromethane	75-09-2	0.011
Ethyl acetate	141-78-6	0.011
Ethylbenzene	100-41-4	0.01
Chloroform	67-66-3	0.01

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2026038	TO-15 25 Compound Subset Stand	05/27/20	** Vendor **	05/27/22	06/23/20 14:23 by EM	200
2019011	TO-14A 39 Component Mix Stand	03/30/20	** Vendor **	04/06/22	05/07/20 10:08 by LLH	200

Analytical Standard Record

EPA Region 9 Laboratory

2042010

Description:	TO-15N SCV 10 ppbv (VIRTUAL)	**Expires:**	11/11/20
Standard Type:	Other Solution	**Prepared:**	10/12/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	10/12/20 10:43 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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	0.0095
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	0.0091
4-Ethyltoluene	622-96-8	0.011
1,2-Dichlorobenzene	95-50-1	0.0095
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	0.0089
1,4-Difluorobenzene	540-36-3	0.0198
1,2-Dibromoethane (EDB)	106-93-4	0.0097
1,4-Dichlorobenzene	106-46-7	0.0097
1,2-Dichloroethane	107-06-2	0.01
1,2-Dichloropropane	78-87-5	0.01
1,2-Dichlorotetrafluoroethane	76-14-2	0.011
1,3,5-Trimethylbenzene	108-67-8	0.0096

Analytical Standard Record

EPA Region 9 Laboratory

2042010

1,3-Butadiene	106-99-0	0.0096
Bromomethane	74-83-9	0.011
1,2,4-Trimethylbenzene	95-63-6	0.0097
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	0.011
Propene	115-07-1	0.011
Styrene	100-42-5	0.0097
Bromoethene	593-60-2	0.011
Tetrachloroethene	127-18-4	0.01
Ethylbenzene	100-41-4	0.01
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	0.01
Trichlorofluoromethane	75-69-4	0.01
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	0.01
Chlorobenzene	108-90-7	0.01
Chlorobenzene-d5	3114-55-4	0.0194
Chlorodibromomethane	124-48-1	0.011
Chloroethane	75-00-3	0.0099
Hexachlorobutadiene	87-68-3	0.0091
Chloromethane	74-87-3	0.0099
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	0.01
Dichloromethane	75-09-2	0.011
Ethyl acetate	141-78-6	0.011
Vinyl chloride	75-01-4	0.011
Chloroform	67-66-3	0.01

Analytical Standard Record

EPA Region 9 Laboratory

2042010

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1926008	TO-14A Internal Standard Mix, Stc	06/06/19	** Vendor **	06/06/21	06/24/19 13:14 by LLH	40
2042009	TO-15 SCV (VIRTUAL)	10/12/20	Liza Hernandez	11/11/20	10/12/20 10:42 by LLH	200

Analytical Standard Record

EPA Region 9 Laboratory

2045021

Description:	TO-15 LOW Std 10 ppbv (VIRTUAL	**Expires:**	12/02/20
Standard Type:	Analyte Spike	**Prepared:**	11/03/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	11/03/20 08:57 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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

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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 Stand	02/24/20	** Vendor **	02/24/21	08/10/20 11:54 by EM	25
2028010	TO-15 25 Compound Subset Stand	05/05/20	** Vendor **	05/05/21	08/10/20 11:55 by EM	25

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2045022

Description:	TO-15 CAL Std 20 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Analyte Spike	**Prepared:**	11/03/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	2500	**Department:**	Air
Vials:	1	**Last Edit:**	11/03/20 08:59 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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

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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 Stand	05/05/20	** Vendor **	05/05/21	08/10/20 11:55 by EM	50
2011030	TO-14A 39 Component Mix Stand	02/24/20	** Vendor **	02/24/21	08/10/20 11:54 by EM	50

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2045034

Description:	TO-15 CRL1 1.0 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Other Solution	**Prepared:**	11/03/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/03/20 11:04 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

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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

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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
2045021	TO-15 LOW Std 10 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	20

Analytical Standard Record

EPA Region 9 Laboratory

2045035

Description:	TO-15 CCV1 10 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Other Solution	**Prepared:**	11/03/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/03/20 11:04 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

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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

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2045035

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
2045022	TO-15 CAL Std 20 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	100

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2045036

Description:	TO-15 BS1 10 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Analyte Spike	**Prepared:**	11/03/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/03/20 11:05 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

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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

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2045036

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
2045022	TO-15 CAL Std 20 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	200

Analytical Standard Record

EPA Region 9 Laboratory

2046020

Description:	TO-15 CAL2 2.0 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Other Solution	**Prepared:**	11/09/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/09/20 13:05 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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

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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

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2046020

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
2045022	TO-15 CAL Std 20 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	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

2046021

Description:	TO-15 CAL3 5.0 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Other Solution	**Prepared:**	11/09/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/09/20 13:06 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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

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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

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2046021

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
2045022	TO-15 CAL Std 20 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	50

Analytical Standard Record

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2046022

Description:	TO-15 CAL5 15 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Other Solution	**Prepared:**	11/09/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/09/20 13:07 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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

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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

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2046022

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
2045022	TO-15 CAL Std 20 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	150

Analytical Standard Record

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2046023

Description:	TO-15 CAL6 20 ppbv (VIRTUAL)	**Expires:**	12/02/20
Standard Type:	Other Solution	**Prepared:**	11/09/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/09/20 13:08 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

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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

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2046023

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
2045022	TO-15 CAL Std 20 ppbv (VIRTUA	11/03/20	Liza Hernandez	12/02/20	11/03/20 10:57 by LLH	200

Analytical Standard Record

EPA Region 9 Laboratory

2046024

Description:	TO-15 SCV 10 ppbv (VIRTUAL)	**Expires:**	11/11/20
Standard Type:	Other Solution	**Prepared:**	11/09/20
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	11/09/20 13:10 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

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	0.0095
Allyl chloride	107-05-1	0.012
Benzene	71-43-2	0.01
Benzyl chloride	100-44-7	0.01
Bromochloromethane	74-97-5	0.0392
Bromodichloromethane	75-27-4	0.011
1,1,1-Trichloroethane	71-55-6	0.0091
4-Ethyltoluene	622-96-8	0.011
1,2-Dichlorobenzene	95-50-1	0.0095
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	0.0089
1,4-Difluorobenzene	540-36-3	0.0394
1,2-Dibromoethane (EDB)	106-93-4	0.0097
1,4-Dichlorobenzene	106-46-7	0.0097
1,2-Dichloroethane	107-06-2	0.01
1,2-Dichloropropane	78-87-5	0.01
1,2-Dichlorotetrafluoroethane	76-14-2	0.011
1,3,5-Trimethylbenzene	108-67-8	0.0096

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1,3-Butadiene	106-99-0	0.0096
Bromomethane	74-83-9	0.011
1,2,4-Trimethylbenzene	95-63-6	0.0097
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	0.011
Propene	115-07-1	0.011
Styrene	100-42-5	0.0097
Bromoethene	593-60-2	0.011
Tetrachloroethene	127-18-4	0.01
Ethylbenzene	100-41-4	0.01
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	0.01
Trichlorofluoromethane	75-69-4	0.01
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	0.01
Chlorobenzene	108-90-7	0.01
Chlorobenzene-d5	3114-55-4	0.039
Chlorodibromomethane	124-48-1	0.011
Chloroethane	75-00-3	0.0099
Hexachlorobutadiene	87-68-3	0.0091
Chloromethane	74-87-3	0.0099
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	0.01
Dichloromethane	75-09-2	0.011
Ethyl acetate	141-78-6	0.011
Vinyl chloride	75-01-4	0.011
Chloroform	67-66-3	0.01

Analytical Standard Record

EPA Region 9 Laboratory

2046024

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
2042010	TO-15N SCV 10 ppbv (VIRTUAL)	10/12/20	Liza Hernandez	11/11/20	10/12/20 10:43 by LLH	200