Table of Contents

Lab Report (PKG)	2
Batch Data (B17F038)	23
Batch Data (B17F043)	31
Raw Data (1706003)	35
Canister Certification (PKG)	405
Standards PDFs (PKG)	467

United States Environmental Protection Agency
Region 9 Laboratory

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

Date: **6/16/2017**

Subject: **Analytical Testing Results - Project R17S65**
SDG: 17158A

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 OU3 May 2017 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 Eugenia McNaughton 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**	**SDG:** 17158A
Project Number: R17S65	**75 Hawthorne Street**	**Reported:** 06/16/17 11:49
Project: MEW OU3 May 2017 Investigation	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
PH01-3ft	1706011-01	Air	06/06/17 12:15	06/07/17 14:45
SG145-6	1706011-02	Air	06/06/17 16:22	06/07/17 14:45
SG131-10	1706011-03	Air	06/06/17 19:15	06/07/17 14:45
F5-062-4ft	1706011-04	Air	06/06/17 18:35	06/07/17 14:45
F5-038-3ft	1706011-05	Air	06/06/17 18:50	06/07/17 14:45
F5-060-3ft	1706011-06	Air	06/06/17 18:00	06/07/17 14:45
F5-058-3ft	1706011-07	Air	06/06/17 19:00	06/07/17 14:45
F5-054-3ft	1706011-08	Air	06/06/17 17:40	06/07/17 14:45
F6-006-4ft	1706011-09	Air	06/06/17 18:11	06/07/17 14:45
F6-008-3ft	1706011-10	Air	06/06/17 18:25	06/07/17 14:45

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**	**SDG:** 17158A	
Project Number: R17S65	**75 Hawthorne Street**	**Reported:** 06/16/17 11:49	
Project: MEW OU3 May 2017 Investigation	**San Francisco CA, 94105**		

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1706011-01									**Air - Sampled: 06/06/17 12:15**
Sample ID: PH01-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	6	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		ND	U	9	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	9	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	9	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Benzene		ND	U	7	"	"	"	"	TO-15
Trichloroethene		ND	U	10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 1706011-02									**Air - Sampled: 06/06/17 16:22**
Sample ID: SG145-6									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	50	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		ND	U	80	"	"	"	"	TO-15
trans-1,2-Dichloroethene	RE2	6,900		1,700	"	B17F043	06/09/17	06/09/17	TO-15
cis-1,2-Dichloroethene	RE2	3,200		1,700	"	"	"	"	TO-15
Chloroform		80	C1, J	100	"	B17F038	06/07/17	06/08/17	TO-15
Benzene		40	C1, J	70	"	"	"	"	TO-15
Trichloroethene	RE1	180,000		9,600	"	"	06/08/17	06/09/17	TO-15
Tetrachloroethene		ND	U	100	"	"	06/07/17	06/08/17	TO-15
Lab ID: 1706011-03									**Air - Sampled: 06/06/17 19:15**
Sample ID: SG131-10									**Volatile Organic Compounds by TO-15**
Vinyl chloride	RE1	ND	U	5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene	RE1	ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene	RE1	100		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE2	200		200	"	B17F043	06/09/17	06/09/17	TO-15
Chloroform	RE1	ND	U	10	"	B17F038	06/07/17	06/08/17	TO-15
Benzene	RE1	5	C1, J	7	"	"	"	"	TO-15
Trichloroethene	RE2	2,900		200	"	B17F043	06/09/17	06/09/17	TO-15
Tetrachloroethene	RE1	ND	U	10	"	B17F038	06/07/17	06/08/17	TO-15
Lab ID: 1706011-04									**Air - Sampled: 06/06/17 18:35**
Sample ID: F5-062-4ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform	RE1	300		30	"	B17F043	06/09/17	06/09/17	TO-15
Benzene		ND	U	7	"	B17F038	06/07/17	06/08/17	TO-15
Trichloroethene		30		10	"	"	"	"	TO-15
Tetrachloroethene		20		10	"	"	"	"	TO-15

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**	**SDG:** 17158A
Project Number: R17S65	**75 Hawthorne Street**	**Reported:** 06/16/17 11:49
Project: MEW OU3 May 2017 Investigation	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1706011-05									**Air - Sampled: 06/06/17 18:50**
Sample ID: F5-038-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		5	C1, J	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		40		8	"	"	"	"	TO-15
Chloroform		100		10	"	"	"	"	TO-15
Benzene		ND	U	7	"	"	"	"	TO-15
Trichloroethene		200		10	"	"	"	"	TO-15
Tetrachloroethene		20		10	"	"	"	"	TO-15
Lab ID: 1706011-06									**Air - Sampled: 06/06/17 18:00**
Sample ID: F5-060-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	6	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		ND	U	9	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	9	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	9	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Benzene		ND	U	7	"	"	"	"	TO-15
Trichloroethene		200		10	"	"	"	"	TO-15
Tetrachloroethene		100		10	"	"	"	"	TO-15
Lab ID: 1706011-07									**Air - Sampled: 06/06/17 19:00**
Sample ID: F5-058-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Benzene		ND	U	7	"	"	"	"	TO-15
Trichloroethene		ND	U	10	"	"	"	"	TO-15
Tetrachloroethene		ND	U	10	"	"	"	"	TO-15
Lab ID: 1706011-08									**Air - Sampled: 06/06/17 17:40**
Sample ID: F5-054-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		ND	U	5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		ND	U	8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
cis-1,2-Dichloroethene		ND	U	8	"	"	"	"	TO-15
Chloroform		ND	U	10	"	"	"	"	TO-15
Benzene		ND	U	7	"	"	"	"	TO-15
Trichloroethene		ND	U	10	"	"	"	"	TO-15

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**	**SDG:** 17158A
Project Number: R17S65	**75 Hawthorne Street**	**Reported:** 06/16/17 11:49
Project: MEW OU3 May 2017 Investigation	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1706011-08									**Air - Sampled: 06/06/17 17:40**
Sample ID: F5-054-3ft									**Volatile Organic Compounds by TO-15**
Tetrachloroethene		ND	U	10	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
Lab ID: 1706011-09									**Air - Sampled: 06/06/17 18:11**
Sample ID: F6-006-4ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		8		5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		20		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		10		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE1	200		90	"	B17F043	06/09/17	06/09/17	TO-15
Chloroform	RE1	300		100	"	"	"	"	TO-15
Benzene		ND	U	7	"	B17F038	06/07/17	06/08/17	TO-15
Trichloroethene	RE1	800		100	"	B17F043	06/09/17	06/09/17	TO-15
Tetrachloroethene		100		10	"	B17F038	06/07/17	06/08/17	TO-15
Lab ID: 1706011-10									**Air - Sampled: 06/06/17 18:25**
Sample ID: F6-008-3ft									**Volatile Organic Compounds by TO-15**
Vinyl chloride		9		5	ug/m³ Air	B17F038	06/07/17	06/08/17	TO-15
1,1-Dichloroethene		20		8	"	"	"	"	TO-15
trans-1,2-Dichloroethene		20		8	"	"	"	"	TO-15
cis-1,2-Dichloroethene	RE1	200		90	"	B17F043	06/09/17	06/09/17	TO-15
Chloroform	RE1	500		100	"	"	"	"	TO-15
Benzene		ND	U	7	"	B17F038	06/07/17	06/08/17	TO-15
Trichloroethene	RE1	1,000		100	"	B17F043	06/09/17	06/09/17	TO-15
Tetrachloroethene		100		10	"	B17F038	06/07/17	06/08/17	TO-15

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 B17F038 - Air_Can_Pressure										
Blank (B17F038-BLK1)				Prepared & Analyzed: 06/08/17						
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
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 (B17F038-BS1)				Prepared & Analyzed: 06/08/17						
1,2-Dichlorotetrafluoroethane	63	7	ug/m³ Air	70.5		90	67-127			
Chloromethane	20	2	ug/m³ Air	22.7		89	70-123			
Vinyl chloride	25	3	ug/m³ Air	27.3		90	69-125			
Bromomethane	37	4	ug/m³ Air	41.5		90	66-125			
Chloroethane	25	3	ug/m³ Air	27.7		90	67-125			
Trichlorofluoromethane	50	6	ug/m³ Air	56.1		89	68-133			
1,1,2-Trichloro-1,2,2-trifluoroethane	64	8	ug/m³ Air	72.0		89	64-125			
1,1-Dichloroethene	37	4	ug/m³ Air	40.8		90	73-128			
Dichloromethane	28	3	ug/m³ Air	33.7		82	73-116			
trans-1,2-Dichloroethene	39	4	ug/m³ Air	43.6		89	80-123			
1,1-Dichloroethane	36	4	ug/m³ Air	40.0		90	72-125			
cis-1,2-Dichloroethene	38	4	ug/m³ Air	41.2		92	77-129			
Chloroform	47	5	ug/m³ Air	52.2		90	77-126			
1,1,1-Trichloroethane	51	5	ug/m³ Air	56.2		90	74-133			
Carbon tetrachloride	59	6	ug/m³ Air	65.4		90	71-141			
Benzene	31	3	ug/m³ Air	34.2		90	81-125			
1,2-Dichloroethane	37	4	ug/m³ Air	42.1		89	61-153			
Trichloroethene	53	5	ug/m³ Air	59.1		90	73-128			
1,2-Dichloropropane	45	5	ug/m³ Air	49.4		90	77-129			
cis-1,3-Dichloropropene	44	5	ug/m³ Air	47.2		94	80-136			
Toluene	37	4	ug/m³ Air	40.7		91	78-133			
trans-1,3-Dichloropropene	41	5	ug/m³ Air	44.0		94	79-146			
1,1,2-Trichloroethane	53	5	ug/m³ Air	59.4		90	74-134			
Tetrachloroethene	66	7	ug/m³ Air	73.2		90	73-130			
1,2-Dibromoethane (EDB)	77	8	ug/m³ Air	84.4		91	78-133			
Chlorobenzene	45	5	ug/m³ Air	50.6		89	81-126			
Ethylbenzene	43	4	ug/m³ Air	47.3		90	82-130			
m&p-Xylene	84	9	ug/m³ Air	93.7		90	82-131			
o-Xylene	42	4	ug/m³ Air	46.0		92	82-132			
Styrene	40	4	ug/m³ Air	43.8		91	65-141			
1,1,2,2-Tetrachloroethane	64	7	ug/m³ Air	72.0		90	73-127			

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 B17F038 - Air_Can_Pressure										
LCS (B17F038-BS1)				Prepared & Analyzed: 06/08/17						
1,3,5-Trimethylbenzene	47	5	ug/m³ Air	52.6		90	77-132			
1,2,4-Trimethylbenzene	47	5	ug/m³ Air	52.1		91	78-131			
1,3-Dichlorobenzene	57	6	ug/m³ Air	63.1		90	79-124			
1,4-Dichlorobenzene	57	6	ug/m³ Air	63.7		90	75-127			
1,2-Dichlorobenzene	55	6	ug/m³ Air	62.5		89	77-124			
1,2,4-Trichlorobenzene	60	7	ug/m³ Air	69.7		86	55-132			
Hexachlorobutadiene	92	10	ug/m³ Air	105		87	52-131			
Duplicate (B17F038-DUP1)		**Source: 1706011-02RE1**		Prepared: 06/08/17 Analyzed: 06/09/17						
Trichloroethene	180000	9600	ug/m³ Air		180000			0.2	20	
Batch B17F043 - Air_Can_Pressure										
Blank (B17F043-BLK1)				Prepared & Analyzed: 06/09/17						
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
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 (B17F043-BS1)				Prepared & Analyzed: 06/09/17						
1,2-Dichlorotetrafluoroethane	63	7	ug/m³ Air	70.5		89	67-127			
Chloromethane	19	2	ug/m³ Air	22.7		85	70-123			
Vinyl chloride	24	3	ug/m³ Air	27.3		89	69-125			
Bromomethane	37	4	ug/m³ Air	41.5		89	66-125			
Chloroethane	24	3	ug/m³ Air	27.7		88	67-125			
Trichlorofluoromethane	50	6	ug/m³ Air	56.1		89	68-133			
1,1,2-Trichloro-1,2,2-trifluoroethane	65	8	ug/m³ Air	72.0		90	64-125			
1,1-Dichloroethene	36	4	ug/m³ Air	40.8		89	73-128			
Dichloromethane	27	3	ug/m³ Air	33.7		80	73-116			
trans-1,2-Dichloroethene	39	4	ug/m³ Air	43.6		89	80-123			
1,1-Dichloroethane	35	4	ug/m³ Air	40.0		88	72-125			
cis-1,2-Dichloroethene	37	4	ug/m³ Air	41.2		89	77-129			
Chloroform	47	5	ug/m³ Air	52.2		89	77-126			
1,1,1-Trichloroethane	51	5	ug/m³ Air	56.2		91	74-133			
Carbon tetrachloride	60	6	ug/m³ Air	65.4		92	71-141			
Benzene	30	3	ug/m³ Air	34.2		89	81-125			
1,2-Dichloroethane	37	4	ug/m³ Air	42.1		88	61-153			
Trichloroethene	53	5	ug/m³ Air	59.1		90	73-128			
1,2-Dichloropropane	44	5	ug/m³ Air	49.4		90	77-129			
cis-1,3-Dichloropropene	44	5	ug/m³ Air	47.2		93	80-136			

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 B17F043 - Air_Can_Pressure										
LCS (B17F043-BS1)				Prepared & Analyzed: 06/09/17						
Toluene	37	4	ug/m³ Air	40.7		90	78-133			
trans-1,3-Dichloropropene	42	5	ug/m³ Air	44.0		94	79-146			
1,1,2-Trichloroethane	53	5	ug/m³ Air	59.4		90	74-134			
Tetrachloroethene	66	7	ug/m³ Air	73.2		90	73-130			
1,2-Dibromoethane (EDB)	76	8	ug/m³ Air	84.4		90	78-133			
Chlorobenzene	45	5	ug/m³ Air	50.6		89	81-126			
Ethylbenzene	42	4	ug/m³ Air	47.3		89	82-130			
m&p-Xylene	84	9	ug/m³ Air	93.7		90	82-131			
o-Xylene	42	4	ug/m³ Air	46.0		91	82-132			
Styrene	40	4	ug/m³ Air	43.8		91	65-141			
1,1,2,2-Tetrachloroethane	64	7	ug/m³ Air	72.0		89	73-127			
1,3,5-Trimethylbenzene	47	5	ug/m³ Air	52.6		89	77-132			
1,2,4-Trimethylbenzene	47	5	ug/m³ Air	52.1		91	78-131			
1,3-Dichlorobenzene	56	6	ug/m³ Air	63.1		89	79-124			
1,4-Dichlorobenzene	57	6	ug/m³ Air	63.7		90	75-127			
1,2-Dichlorobenzene	55	6	ug/m³ Air	62.5		88	77-124			
1,2,4-Trichlorobenzene	58	7	ug/m³ Air	69.7		84	55-132			
Hexachlorobutadiene	92	10	ug/m³ Air	105		87	52-131			
Batch S17F030 - B17F038										
Instrument Blank (S17F030-IBL1)				Prepared & Analyzed: 06/08/17						
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	3	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
Benzene	ND	3	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	6	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

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 S17F030 - B17F038										
Instrument Blank (S17F030-IBL1)				Prepared & Analyzed: 06/08/17						
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
Instrument Blank (S17F030-IBL2)				Prepared & Analyzed: 06/08/17						
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	3	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
Benzene	ND	3	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U
1,2-Dibromoethane (EDB)	ND	8	ppbv							U

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 S17F030 - B17F038										
Instrument Blank (S17F030-IBL2)				Prepared & Analyzed: 06/08/17						
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U
1,3,5-Trimethylbenzene	ND	5	ppbv							U
1,2,4-Trimethylbenzene	ND	5	ppbv							U
1,3-Dichlorobenzene	ND	6	ppbv							U
1,4-Dichlorobenzene	ND	6	ppbv							U
1,2-Dichlorobenzene	ND	6	ppbv							U
1,2,4-Trichlorobenzene	ND	7	ppbv							U
Hexachlorobutadiene	ND	10	ppbv							U
Instrument Blank (S17F030-IBL3)				Prepared & Analyzed: 06/08/17						
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	3	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
Benzene	ND	3	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U
1,2-Dibromoethane (EDB)	ND	8	ppbv							U
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 S17F030 - B17F038										
Instrument Blank (S17F030-IBL3)				Prepared & Analyzed: 06/08/17						
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U
1,3,5-Trimethylbenzene	ND	5	ppbv							U
1,2,4-Trimethylbenzene	ND	5	ppbv							U
1,3-Dichlorobenzene	ND	6	ppbv							U
1,4-Dichlorobenzene	ND	6	ppbv							U
1,2-Dichlorobenzene	ND	6	ppbv							U
1,2,4-Trichlorobenzene	ND	7	ppbv							U
Hexachlorobutadiene	ND	10	ppbv							U
Instrument Blank (S17F030-IBL4)				Prepared: 06/08/17 Analyzed: 06/09/17						
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	3	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
Benzene	ND	3	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U
1,2-Dibromoethane (EDB)	ND	8	ppbv							U
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U

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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 S17F030 - B17F038										
Instrument Blank (S17F030-IBL4)				Prepared: 06/08/17 Analyzed: 06/09/17						
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
Batch S17F039 - B17F043										
Instrument Blank (S17F039-IBL1)				Prepared & Analyzed: 06/09/17						
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	3	ppbv							U
trans-1,2-Dichloroethene	ND	4	ppbv							U
1,1-Dichloroethane	ND	4	ppbv							U
cis-1,2-Dichloroethene	ND	4	ppbv							U
Chloroform	ND	5	ppbv							U
1,1,1-Trichloroethane	ND	5	ppbv							U
Carbon tetrachloride	ND	6	ppbv							U
Benzene	ND	3	ppbv							U
1,2-Dichloroethane	ND	4	ppbv							U
Trichloroethene	ND	5	ppbv							U
1,2-Dichloropropane	ND	5	ppbv							U
cis-1,3-Dichloropropene	ND	5	ppbv							U
Toluene	ND	4	ppbv							U
trans-1,3-Dichloropropene	ND	5	ppbv							U
1,1,2-Trichloroethane	ND	5	ppbv							U
Tetrachloroethene	ND	7	ppbv							U
1,2-Dibromoethane (EDB)	ND	8	ppbv							U
Chlorobenzene	ND	5	ppbv							U
Ethylbenzene	ND	4	ppbv							U
m&p-Xylene	ND	9	ppbv							U
o-Xylene	ND	4	ppbv							U
Styrene	ND	4	ppbv							U
1,1,2,2-Tetrachloroethane	ND	7	ppbv							U
1,3,5-Trimethylbenzene	ND	5	ppbv							U
1,2,4-Trimethylbenzene	ND	5	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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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 S17F039 - B17F043										
Instrument Blank (S17F039-IBL1)				Prepared & Analyzed: 06/09/17						
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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 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**		**SDG:**	17158A
Project Number:	R17S65	**75 Hawthorne Street**		**Reported:**	06/16/17 11:49
Project:	MEW OU3 May 2017 Investigation	**San Francisco CA, 94105**			

WORK ORDER

Printed: 6/7/2017 3:26:53PM

1706011

EPA Region 9 Laboratory

Client: **California Site Cleanup Section 3**
Project: **MEW OU3 May 2017 Investigation**
Project Number: **R17S65**

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	Box	22	Yes	Yes	Yes	No	Yes	

Date Due:	07/08/17 17:00 (30 day TAT)	SDG:	17158A
Received By:	Jack Berges	Date Received:	06/07/17 14:45
Logged In By:	Junn Masongsong	Date Logged In:	06/07/17 15:12

Analysis	Hold Time Expires	Comments	
1706011-01 PH01-3ft [Air] Sampled 06/06/17 12:15 (GMT-08:00) Pacific Time (US &			**Can 631**
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim	
1706011-02 SG145-6 [Air] Sampled 06/06/17 16:22 (GMT-08:00) Pacific Time (US &			**Can 1099 TCE>100000 ug/m3**
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim	
1706011-03 SG131-10 [Air] Sampled 06/06/17 19:15 (GMT-08:00) Pacific Time (US &			**Can 1981 Previous TCE: 15,000 and 50 ug/m3**
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim	
1706011-04 F5-062-4ft [Air] Sampled 06/06/17 18:35 (GMT-08:00) Pacific Time (US &			**Can 652 TCE ~50 ug/m3**
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim	
1706011-05 F5-038-3ft [Air] Sampled 06/06/17 18:50 (GMT-08:00) Pacific Time (US &			**Can 1112 TCE ~500 ug/m3**
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim	
1706011-06 F5-060-3ft [Air] Sampled 06/06/17 18:00 (GMT-08:00) Pacific Time (US &			**Can 1992 TCE ~340 ug/m3**
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim	

WORK ORDER

Printed: 6/7/2017 3:26:53PM

1706011

EPA Region 9 Laboratory

Client: **California Site Cleanup Section 3** **Project Number:** **R17S65**
Project: **MEW OU3 May 2017 Investigation**

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1706011-07 F5-058-3ft [Air] Sampled 06/06/17 19:00 (GMT-08:00) Pacific Time		**Can 846 TCE ~300 ug/m3**
(US &		
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim
1706011-08 F5-054-3ft [Air] Sampled 06/06/17 17:40 (GMT-08:00) Pacific Time		**Can 1969 TCE ~50 ug/m3**
(US &		
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim
1706011-09 F6-006-4ft [Air] Sampled 06/06/17 18:11 (GMT-08:00) Pacific Time		**Can 1107 TCE ~1000 ug/m3**
(US &		
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim
1706011-10 F6-008-3ft [Air] Sampled 06/06/17 18:25 (GMT-08:00) Pacific Time		**Can 649 TCE ~800 ug/m3**
(US &		
VOCs, Soil Gas	07/06/17	8 analytes, 14 day prelim

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 MEW - 09M6 / R17S65	Project: MEW OU3 Sampling Investigation	EPA Project Manager contact: Alana Lee, 415-972-3141 Lee.Alana@epa.gov
EPA R9 Laboratory	Samplers: *(Signature)* Alana Lee	Analysis Requested: TO15 - MEW Analyte List, 14 day TAT

Lab ID	Field Sample ID (Location)	Canister ID	Comp	Grab	Sample Date	Sample Time	Initial Pressure	Final Pressure	TCE Screen (ug/m3)	COMMENTS
1	PH01-3ft	631		X	6/6/17	1215	-30	0	4	Pothole 1 - Moffett Gateway

Alana Lee 6/6/17

Relinquished by: *(Signature)* Date/Time	Received by: *(Signature)* Date/Time	
Alana Lee 6/7/17 1445		
Received for Laboratory by: *(Signature)* Date/Time	Temp	
[illegible] 6/7/17 14:45		

Table of Contents

U.S. Environmental Protection Agency	CHAIN OF CUSTODY RECORD	EPA REGION 9 75 Hawthorne Street San Francisco, California 94105
Project / Case Number MEW - 09M6 / R17S65	Project: MEW OU3 Sampling Investigation	EPA Project Manager contact: Alana Lee, 415-972-3141 Lee.Alana@epa.gov
EPA R9 Laboratory	Samplers: (Signature) Alana Lee	Analysis Requested: TO15 - MEW Analyte List, 14 day TAT Preliminary

Lab ID	Field Sample ID (Location)	Canister ID	Comp	Grab	Sample Date	Sample Time	Initial Pressure	Final Pressure	TCE Screen	COMMENTS
2	SG145-6	1099		X	6/6/17	1622	-30	0	7100000 ug/m3	HIGH TCE screen!
3	SG131-10	1981		X	6/6/17	1915	-30	0		TCE Previous: 15,000 and 50 ug/m3

Alana Lee 6/6/17

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Alana Lee	6/7/17 1445	[illegible]	6/7/17 14:45
Received for Laboratory by: (Signature)	Date/Time	Temp	

Table of Contents

U.S. Environmental Protection Agency	CHAIN OF CUSTODY RECORD	EPA REGION 9 75 Hawthorne Street San Francisco, California 94105
Project / Case Number MEW - 09M6 / R17S65	Project: MEW OU3 Sampling Investigation	EPA Project Manager contact: Alana Lee, 415-972-3141 Lee.Alana@epa.gov
EPA R9 Laboratory	Samplers: *(Signature)* Alana Lee	Analysis Requested: TO15 - MEW Analyte List, 14 day TAT

Lab ID	Field Sample ID (Location)	Canister ID	Comp	Grab	Sample Date	Sample Time	Initial Pressure	Final Pressure	~TCE Screen ug/m³	COMMENTS
4	F5-062-4ft	652		X	6/6/17	1835	-30	0	~50	
5	F5-038-3ft	1112		X	↓	1850	-30	0	~500	
6	F5-060-3ft	1992		X	↓	1800	-30	0	340	
7	F5-058-3ft	846		X	↓	1900	-30	0	300	
8	F5-054-3ft	1969		X	↓	1740	-30	0	50	
9	F6-006-4ft	~~1844~~ 1107		X	↓	1811	-30	0	1000	
10	F6-008-3ft	649		X	↓	1825	-30	0	800	

Alana Lee 6/6/17

Alana Lee 6/6/17

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Date/Time
Alana Lee	6/7/17 1445	[illegible]	6/7/17 14:45
Received for Laboratory by: *(Signature)*	Date/Time	Temp	

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

Project No: R17565 **Work Order No(s):** 1706011 **Date:** 6/7/17 **by** JDM

CUSTODY SEALS Intact ☒ Yes ☐ No ☐ N/A- None
Check if applies: ☒ External Seals ☐ Internal Seals ☐ Hand Delivered

TEMPERATURE 22 **°C Within Acceptable Range** ☐ Yes ☐ No ☒ Ambient OK
Check if applies:
☐ Provided Temp Blank ☐ Between 6°C to 10°C ☐ Still cooling (sampled today & iced)
☐ Previously Frozen ☐ Insufficient/Melted Ice ☐ Delivery Delay

SAMPLE CONTAINERS Intact ☒ Yes ☐ No
If not intact, was volume recoverable for analysis? ☐ Yes ☐ No ☒ N/A
Check if applies: ☐ Bottle/Jar/Vial broken ☐ Cap broken or loose ☐ Other _____

CHAIN OF CUSTODY Received ☒ Yes ☐ No
COC complete and consistent with labels ☒ Yes ☐ No ☐ N/A
Check if applies: ☐ Not relinquished ☐ Inconsistency resolved ☐ Follow-up needed (see comments)
TAT and analyses match scheduling ☒ Yes ☐ No ☐ N/A
Check if applies: ☐ Preliminary Results ☐ Rush Request ☐ 7-day TAT
Within hold times ☐ Expires today ☒ Yes ☐ No ☐ N/A
All shipping and sample containers accounted for ☒ Yes ☐ No ☐ N/A

PRESERVATION / FILTRATION ☒ N/A No chem. pres./filtra.
Check if applies: ☐ Sample Receiving to preserve
☐ Analyst to filter and/or preserve
Preserved and/or filtered samples correctly identified ☐ Yes ☐ No ☒ N/A
Preserved samples (non-VOA vials) measured at correct pH ☐ Yes ☐ No ☒ N/A
Preservation/measured pH_____

Sample Receiving Preservation and/or pH Adjustments*

Sample ID	Initial pH	Pres.	Date/time Pres. added	Adjusted pH	pH after 16-hrs (metals)	Date/time of pH recheck	Rechecked by

*(continue on back, if needed)

FOLLOW-UP / COMMENTS_____

BATCH

B17F038

TO15 DILUTION LOGBOOK

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
06/07/17	1618	1706011-01	PH01-3ft	631	14.36	400	400	31.22	24.30/14.64	2.17
LH	1622	-02	S6145-6	1099	14.55	400	400	30.82	—	2.12
	1627	-03	S6131-10	1981	14.82	400	400	30.56	—	2.06
	1636	-04	F5-062-4ft	652	14.83	400	400	30.71	—	2.07
	1639	-05	F5-038-3ft	1112	14.61	400	400	30.92	—	2.12
	1642	-06	F5-060-3ft	1942	14.08	400	400	30.57	—	2.17
	1644	-07	F5-058-3ft	846	14.88	400	400	30.73	—	2.07
	1647	-08	F5-054-3ft	1969	14.60	400	400	30.24	—	2.07
	1650	-09	F6-006-4ft	1107	14.80	400	400	30.67	—	2.07
	1653	-10	F6-008-3ft	649	14.62	400	400	30.72	—	2.10

LM 6/8/17

USEPA REGION 9 LABORATORY

TO15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: ___ Date: 6/8/17

PREPARATION BENCH SHEET

B17F038

EPA Region 9 Laboratory

Project: R17S62
Project: R17S65

Printed: 6/9/2017 11:04:30AM

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
1706010-02RE3 A	AMCO-PZ14 -0606-003	06/07/17 15:39	20	200				864	7.87	32.92	1	4.18	LLH	CAN DIL'N REDO from TEDLAR
1706010-02RE4 A	AMCO-PZ14 -0606-003	06/08/17 15:06	20	200				864	15.32	32.74	8.19	17.53	LLH	RE-REPRESS
1706011-01 A	PH01-3ft	06/07/17 16:18	200	200				631	14.36	31.22	1	2.17	LLH	8 analytes, 14 day prelim
1706011-02 A	SG145-6	06/07/17 16:22	20	200				1099	14.55	30.82	1	2.12	LLH	High TCE! 8 analytes, 14 day prelim
1706011-02RE1 A	SG145-6	06/08/17 15:16	20	200				629	-	30.87	2.12	178.20	LLH	2ND CAN DILN
1706011-03 A	SG131-10	06/07/17 16:27	20	200				1981	14.82	30.56	1	2.06	LLH	8 analytes, 14 day prelim
1706011-03RE1 A	SG131-10	06/07/17 16:27	200	200				1981	14.82	30.56	1	2.06	LLH	ORIG CAN
1706011-04 A	F5-062-4ft	06/07/17 16:36	200	200				652	14.83	30.71	1	2.07	LLH	8 analytes, 14 day prelim
1706011-05 A	F5-038-3ft	06/07/17 16:39	200	200				1112	14.61	30.92	1	2.12	LLH	8 analytes, 14 day prelim
1706011-06 A	F5-060-3ft	06/07/17 16:42	200	200				1992	14.08	30.57	1	2.17	LLH	8 analytes, 14 day prelim
1706011-07 A	F5-058-3ft	06/07/17 16:44	200	200				846	14.88	30.73	1	2.07	LLH	8 analytes, 14 day prelim
1706011-08 A	F5-054-3ft	06/07/17 16:47	200	200				1969	14.60	30.24	1	2.07	LLH	8 analytes, 14 day prelim
1706011-09 A	F6-006-4ft	06/07/17 16:50	200	200				11.07	14.80	30.67	1	2.07	LLH	8 analytes, 14 day prelim

PREPARATION BENCH SHEET

B17F038

EPA Region 9 Laboratory

Project: R17S62
Project: R17S65

Printed: 6/9/2017 11:04:30AM

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
1706011-10 A	F6-008-3ft	06/07/17 16:53	200	200				649	14.62	30.72	1	2.10	LLH	8 analytes, 14 day prelim
B17F038-BLK1	Blank	06/08/17 07:34	200	200									LLH	
B17F038-BS1	LCS	06/08/17 07:34	200	200	1723029		100000						LLH	
B17F038-DUP1	Duplicate	06/08/17 07:34	20	200		1706011-02 RE1		629	-	30.87	2.12	178.20	LLH	

Batch Comments

Reagents

Reagent #	Description

INTERIM DILUTION FACTOR CALCULATION FORM

06/07/17 LLH

SAMPLE #	CAN #	INITIAL PRESS	FINAL PRESS	INTERIM DF	ORIGINAL DF	FINAL DF
1706010-02RE4	**864**	15.77	30.96	1.96	4.18	
		15.32	32.74	2.14		**17.53**

FINAL DF = INTERIM DF x INTERIM DF x ORIGINAL DF

Table of Contents

2nd CAN DILUTION CALCULATION FORM

06/08/17 LLH

SAMPLE #	CAN #	VOL ADDED ml	CAN SIZE ml	FINAL PRESS	AMBIENT PRESS	ORIGINAL DF	2nd CAN DF
1706011-02RE1	629	10	400	30.87	14.69	2.12	**178.20**

2nd CAN DF = $\dfrac{\text{FINAL PRESSURE}}{\text{AMBIENT PRESSURE}}$ **X CAN VOL X ORIG DF**

VOL ADDED

Table of Contents

TO15 DILUTION LOGBOOK

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
6/6/17 EM	1727	1706009-01	AMCO-INF-0606-040	1580	10 mL	400	400	29.04	29.80/14.64	79.54
↓	1745	1706010-01	AMCO-PZ2-0606-003	7250	10mL	1L	1L	30.12	—	205.74 *
↓	1759	↓ -02 ☆	AMCO-PZ14-0606-003	7251	9.44	1L	1L	28.01	—	2.97
		* 2nd can dilution:								
		1706010-01 =	30.12 / 14.64 × 1000 × 1 / 10		= 205.74	em 6/8/17				
06/07/17	1039	1706010-02RE2	vent/repress	7251	15.25	1L	1L	30.08	29.83/14.65	1.97 ☆
WH	1241	↓ -02RE2	vent/re-repress	7251	15.00	1L	1L	32.04	—	2.14
	1104	1706010-01RE3	vent/repress	7250	15.22	1L	1L	30.03	—	1.97
	1539	1706010-02RE3	AMCO-PZ14-0606-003	864	7.87	400	400	32.92	29.80/14.64	4.18
			transfer from tedlar	em 6/8/17						
06/08/17	1211	1706010-02RE4	vent/repress	8164	15.77	400	400	30.96	29.91/14.69	1.96
WH	1506	↓ -02RE4	vent/re-repress	8164	15.32	400	400	32.74	—	2.14
			WH 06/08/17							
	☆	not used - redid can dilution - see 1706010-02RE3 - WH 06/07/17								

USEPA REGION 9 LABORATORY

TO15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: TL

Date: 6/8/17

Page 29 of 516 1706011 DATA_PKG (Rev0).PDF 06/16/17 11:57:12

Table of Contents

TO15 DILUTION LOGBOOK

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
06/07/17	1618	1706011-01	PH01-3ft	631	14.36	400	400	31.22	29.80/14.64	2.17
LH	1622	-02	SG145-6	1099	14.55	400	400	30.82	—	2.12
	1627	-03	SG131-10	1981	14.82	400	400	30.56	—	2.06
	1636	-04	F5-062-4ft	652	14.83	400	400	30.71	—	2.07
	1639	-05	F5-038-3ft	1112	14.61	400	400	30.92	—	2.12
	1642	-06	F5-060-3ft	1942	14.08	400	400	30.57	—	2.17
	1644	-07	F5-058-3ft	846	14.88	400	400	30.73	—	2.07
	1647	-08	F5-054-3ft	1969	14.60	400	400	30.24	—	2.07
	1650	-09	F6-006-4ft	1107	14.80	400	400	30.67	—	2.07
	1653	-10	F6-008-3ft	649	14.62	400	400	30.72	—	2.10

LM 6/8/17

USEPA REGION 9 LABORATORY

TO15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: TM

Date: 6/8/17

BATCH

B17F043

PREPARATION BENCH SHEET

B17F043

EPA Region 9 Laboratory

Project: R17S65

Printed: 6/12/2017 9:26:19AM

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
1706011-02RE2 A	SG145-6	06/09/17 10:07	100	200				629	20.50	25.10	178.20	217.40	LLH	2ND CAN REPRESS
1706011-03RE2 A	SG131-10	06/09/17 09:55	20	200				1981	15.10	30.53	2.06	4.16	LLH	REPRESS
1706011-04RE1 A	F5-062-4ft	06/09/17 09:58	100	200				652	18.95	29.01	2.07	3.17	LLH	REPRESS
1706011-09RE1 A	F6-006-4ft	06/09/17 10:01	30	200				1107	18.43	29.16	2.07	3.31	LLH	REPRESS
1706011-10RE1 A	F6-008-3ft	06/09/17 10:04	30	200				649	18.25	29.16	2.10	3.36	LLH	REPRESS
B17F043-BLK1	Blank	06/09/17 10:20	200	200									LLH	
B17F043-BS1	LCS	06/09/17 10:20	200	200	1723029		100000						LLH	

Batch Comments

Reagents

Reagent #	Description

Table of Contents

PREPARATION BENCH SHEET

B17F043

EPA Region 9 Laboratory

Project: R17S65

Printed: 6/12/2017 9:26:19AM

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

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

TO15 DILUTION LOGBOOK

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
06/08/17	1516	1706011-02RE1	2nd can 10ml of can #1099	629	—	400	400	30.87	29.91/14.69	178.20 *
UH		* 30.87 / 14.69 × 400 / 10 × 2.12 = 178.20 DF						UH 6/12/17		
06/09/17	0955	1706011-03RE2	Vent/ repress	1981	15.10	400	400	30.53	29.85/14.66	2.02
UH	0958	-04RE1	repress	1652	18.95	400	400	29.01	—	1.53
	1001	-09RE1	repress	1107	18.43	400	400	29.26	—	1.59
	1004	-10RE1	repress	649	18.25	400	400	29.16	—	1.60
	1007	-02RE1	2nd can repress	629	20.50	400	400	25.10	—	1.22

UH 6/12/17

USEPA REGION 9 LABORATORY

O15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: [illegible]

Date: 6/12/17

Calibration

1706003

Table of Contents

Method Path : D:\msdchem\1\2017\METHOD\
Method File : 060517K_TO15AA.M
Title : TO15
Last Update : Tue Jun 06 11:26:11 2017
Response Via : Initial Calibration

Calibration Files
1 =060517K03.D 2 =060517K04.D 5 =060517K05.D 10 =060517K06.D 15 =060517K07.D
20 =060517K08.D

		Compound	1	2	5	10	15	20	Avg	%RSD
1)	I	BROMOCHLOROMETHANE	----------ISTD----------							
2)	T	Propene	0.543	0.602	0.453	0.452	0.457	0.454	0.493	12.97
3)	T	Dichlorodifluo...	2.555	2.872	2.136	2.047	2.028	1.992	2.272	15.84
4)	T	1,2-Dichlorote...	2.551	2.921	2.159	2.104	2.111	2.081	2.321	14.77
5)	T	Chloromethane	0.728	0.781	0.577	0.555	0.557	0.557	0.626	16.16
6)	T	Vinyl chloride	0.725	0.831	0.618	0.595	0.602	0.595	0.661	14.68
7)	T	1,3-Butadiene	0.534	0.579	0.424	0.415	0.420	0.415	0.465	15.66
8)	T	Bromomethane	0.764	0.867	0.641	0.608	0.611	0.607	0.683	15.89
9)	T	Chloroethane	0.462	0.498	0.372	0.361	0.360	0.358	0.402	15.38
10)	T	Bromoethene	0.767	0.859	0.634	0.632	0.628	0.630	0.692	14.25
11)	T	Trichlorofluor...	2.451	2.874	2.080	1.976	1.958	1.915	2.209	17.20
12)	T	1,1,2-Trichlor...	1.521	1.752	1.280	1.234	1.231	1.207	1.371	16.01
13)	T	1,1-Dichloroet...	1.122	1.315	0.978	0.959	0.963	0.956	1.049	13.84
14)	T	Acetone	1.104	1.213	0.892	0.865	0.861	0.855	0.965	16.01
15)	T	Carbon disulfide	2.479	2.721	1.981	1.928	1.917	1.890	2.153	16.55
16)	T	2-Propanol	0.716	0.858	0.670	0.689	0.718	0.730	0.730	9.07
17)	T	Allyl chloride	0.735	0.840	0.633	0.635	0.643	0.644	0.688	12.19
18)	T	Dichloromethane	1.145	1.076	0.733	0.674	0.663	0.655	0.824	27.22
19)	T	tert-Butyl met...	2.005	2.340	1.794	1.804	1.834	1.840	1.936	10.95
20)	T	trans-1,2-Dich...	1.115	1.229	0.920	0.884	0.882	0.869	0.983	15.42
21)	T	Hexane	1.118	1.322	1.009	0.988	0.995	0.992	1.071	12.37
22)	T	1,1-Dichloroet...	1.496	1.699	1.243	1.211	1.204	1.195	1.341	15.60
23)	T	Vinyl acetate	1.000	1.284	1.041	1.073	1.109	1.129	1.106	8.93
24)	T	cis-1,2-Dichlo...	0.949	1.154	0.866	0.847	0.856	0.848	0.920	13.12
25)	T	2-Butanone (MEK)	0.367	0.458	0.342	0.333	0.335	0.334	0.362	13.55
26)	T	Ethyl acetate	0.219	0.266	0.200	0.198	0.197	0.197	0.213	12.87
27)	T	Tetrahydrofuran	0.719	0.836	0.625	0.608	0.616	0.617	0.670	13.60
28)	T	Chloroform	1.796	2.080	1.520	1.475	1.459	1.443	1.629	15.79
29)	T	Cyclohexane	1.135	1.331	1.006	0.991	0.996	0.983	1.074	12.88
30)	T	1,1,1-Trichlor...	1.900	2.190	1.634	1.592	1.583	1.564	1.744	14.43
31)	T	Carbon tetrach...	1.917	2.209	1.664	1.608	1.603	1.579	1.763	14.26
32)	I	1,4-DIFLUOROBENZENE	----------ISTD----------							
33)	T	Benzene	0.630	0.737	0.547	0.527	0.526	0.521	0.581	14.89
34)	T	2,2,4-Trimethy...	0.861	1.019	0.770	0.757	0.758	0.753	0.820	12.90
35)	T	1,2-Dichloroet...	0.297	0.342	0.252	0.243	0.242	0.236	0.269	15.71
36)	T	Heptane	0.299	0.341	0.253	0.244	0.244	0.241	0.270	15.11
37)	T	Trichloroethene	0.278	0.330	0.246	0.243	0.242	0.241	0.263	13.58
38)	T	1,2-Dichloropr...	0.209	0.243	0.180	0.176	0.176	0.175	0.193	14.44
39)	T	1,4-Dioxane	0.117	0.168	0.126	0.124	0.126	0.125	0.131	14.16
40)	T	Bromodichlorom...	0.495	0.565	0.414	0.403	0.403	0.398	0.446	15.38
41)	T	cis-1,3-Dichlo...	0.296	0.372	0.290	0.292	0.294	0.296	0.307	10.47
42)	T	4-Methyl-2-pen...	0.345	0.447	0.337	0.335	0.336	0.334	0.356	12.63
43)	I	CHLOROBENZENE-d5	----------ISTD----------							
44)	T	Toluene	0.891	1.074	0.799	0.779	0.780	0.768	0.848	14.04
45)	T	trans-1,3-Dich...	0.334	0.415	0.324	0.329	0.336	0.335	0.346	9.92
46)	T	1,1,2-Trichlor...	0.318	0.372	0.274	0.267	0.267	0.264	0.294	14.74
47)	T	Tetrachloroethene	0.487	0.573	0.420	0.410	0.412	0.407	0.452	14.75
48)	T	2-Hexanone	0.352	0.495	0.381	0.377	0.379	0.376	0.393	12.93
49)	T	Chlorodibromom...	0.572	0.676	0.500	0.490	0.491	0.485	0.536	14.16
50)	T	1,2-Dibromoeth...	0.443	0.530	0.393	0.387	0.391	0.387	0.422	13.58
51)	T	Chlorobenzene	0.775	0.916	0.666	0.642	0.646	0.636	0.713	15.69
52)	T	Ethylbenzene	1.260	1.509	1.110	1.076	1.072	1.059	1.181	14.99
53)	T	m&p-Xylene	0.951	1.156	0.844	0.830	0.824	0.813	0.903	14.78
54)	T	o-Xylene	0.920	1.144	0.862	0.846	0.849	0.840	0.910	12.97
55)	T	Styrene	0.772	0.969	0.720	0.707	0.712	0.705	0.764	13.53
56)	T	Bromoform	0.524	0.661	0.501	0.502	0.511	0.505	0.534	11.77
57)	T	1,1,2,2-Tetrac...	0.732	0.840	0.624	0.606	0.608	0.600	0.668	14.65
58)	T	4-Ethyltoluene	1.353	1.750	1.304	1.284	1.287	1.269	1.375	13.54
59)	T	1,3,5-Trimethy...	1.223	1.448	1.074	1.043	1.044	1.022	1.142	14.57

Table of Contents

Method Path : D:\msdchem\1\2017\METHOD\
Method File : 060517K_TO15AA.M
Title : TO15

60)	T	1,2,4-Trimethy...	1.170	1.444	1.072	1.063	1.064	1.050	1.144	13.40
61)	T	1,3-Dichlorobe...	0.874	1.035	0.770	0.763	0.766	0.759	0.828	13.37
62)	T	1,4-Dichlorobe...	0.835	1.027	0.763	0.759	0.763	0.756	0.817	13.12
63)	T	Benzyl chloride	0.408	0.759	0.636	0.692	0.731	0.741	0.661	19.89
64)	T	1,2-Dichlorobe...	0.897	1.041	0.759	0.746	0.749	0.741	0.822	14.93
65)	T	1,2,4-Trichlor...	0.968	1.071	0.776	0.765	0.766	0.766	0.852	15.73
66)	T	Hexachlorobuta...	0.891	0.988	0.717	0.692	0.691	0.675	0.776	16.94

(#) = Out of Range

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

RT DUPLICATE REPORT

Instrument Name: HP5973K
Sample Name: S17F006-CAL4
Misc Info: 10ppbv 1723026
Date Acquired: 6/5/2017 18:29
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

#	Name	RT	CONC	Qion	
1)	BROMOCHLOROMETHANE	15.313	20.000	49.1	15.301
2)	Propene	4.223	9.994	41.1	
3)	Dichlorodifluoromethane	4.308	9.432	85	
4)	1,2-Dichlorotetrafluoroethane	4.649	9.130	85	
5)	Chloromethane	4.856	9.519	50.1	
6)	Vinyl chloride	5.154	9.649	62.1	
7)	1,3-Butadiene	5.239	9.275	54.1	
8)	Bromomethane	6.163	9.490	94	
9)	Chloroethane	6.498	9.205	64	
10)	Bromoethene	7.046	9.757	106	
11)	Trichlorofluoromethane	7.155	8.926	101	
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.901	8.421	150.9	
13)	1,1-Dichloroethene	9.029	9.491	61	
14)	Acetone	9.680	9.662	43.1	
15)	Carbon disulfide	9.716	9.274	76	
16)	2-Propanol	10.288	10.781	45.1	
17)	Allyl chloride	10.629	10.190	41.1	
18)	Dichloromethane	11.213	7.190	49.1	
19)	tert-Butyl methyl ether (MTBE)	11.827	10.229	73.1	
20)	trans-1,2-Dichloroethene	11.888	9.729	61	
21)	Hexane	12.417	9.854	57.1	
22)	1,1-Dichloroethane	13.287	8.861	63.1	
23)	Vinyl acetate	13.446	11.385	43.1	
24)	cis-1,2-Dichloroethene	14.753	9.812	61	
25)	2-Butanone (MEK)	14.893	10.280	72.1	
26)	Ethyl acetate	14.906	10.352	61.1	
27)	Tetrahydrofuran	15.301	9.617	42.1	
28)	Chloroform	15.465	9.650	83	
29)	Cyclohexane	15.599	9.973	56.1	
30)	1,1,1-Trichloroethane	15.709	9.393	97	
31)	Carbon tetrachloride	15.940	9.489	116.9	
32)	1,4-DIFLUOROBENZENE	17.309	18.800	114	16.749
33)	Benzene	16.475	9.739	78.1	16.347
34)	2,2,4-Trimethylpentane	16.347	9.924	57.1	
35)	1,2-Dichloroethane	16.718	9.360	62.1	
36)	Heptane	16.749	9.614	43.1	
37)	Trichloroethene	17.704	10.263	129.9	
38)	1,2-Dichloropropane	18.239	9.794	63	
39)	1,4-Dioxane	18.440	10.925	88.1	
40)	Bromodichloromethane	18.714	9.338	83	
41)	cis-1,3-Dichloropropene	19.480	10.331	75	
42)	4-Methyl-2-pentanone (MIBK)	19.724	10.451	43.1	

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

43)	CHLOROBENZENE-d5	22.236	20.000	117.1	21.585
44)	Toluene	19.937	10.079	91.1	
45)	trans-1,3-Dichloropropene	20.448	9.623	75	
46)	1,1,2-Trichloroethane	20.758	9.956	97	
47)	Tetrachloroethene	20.770	9.877	165.9	
48)	2-Hexanone	21.080	10.852	43.1	
49)	Chlorodibromomethane	21.354	9.870	128.9	
50)	1,2-Dibromoethane (EDB)	21.585	10.263	107	
51)	Chlorobenzene	22.285	9.966	112	
52)	Ethylbenzene	22.364	10.041	91.1	
53)	m&p-Xylene	22.547	20.139	91.1	
54)	o-Xylene	23.197	10.154	91.1	
55)	Styrene	23.246	9.845	104.1	
56)	Bromoform	23.642	10.466	172.9	
57)	1,1,2,2-Tetrachloroethane	24.353	9.510	83	
58)	4-Ethyltoluene	24.554	10.129	105.1	
59)	1,3,5-Trimethylbenzene	24.645	9.851	105.1	
60)	1,2,4-Trimethylbenzene	25.254	10.093	105.1	
61)	1,3-Dichlorobenzene	25.795	9.787	146	
62)	1,4-Dichlorobenzene	25.947	10.089	146	
63)	Benzyl chloride	26.185	13.840	91.1	0.000
64)	1,2-Dichlorobenzene	26.556	9.440	146	0.000
65)	1,2,4-Trichlorobenzene	29.026	8.300	180	0.000
66)	Hexachlorobutadiene	29.135	8.655	224.9	0.000
)	0	0.000	0.000	0	0.000

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

CHEMSTATION CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S17F006-SCV1
Misc Info: 10ppbv 1722109
Date Acquired: 6/5/2017 21:00
QLast Update: Tue Jun 06 11:26:11 20
Operator: LLH

#	Name	L1	L2	L3	L4	L5	L6
1)	BROMOCHLOROMETHANE	20.00	20.00	20.00	20.00	20.00	20.00
2)	Propene	1.10	2.20	5.50	11.00	16.50	22.00
3)	Dichlorodifluoromethane	1.06	2.12	5.30	10.60	15.90	21.20
4)	1,2-Dichlorotetrafluoroethane	1.01	2.02	5.05	10.10	15.15	20.20
5)	Chloromethane	1.10	2.20	5.50	11.00	16.50	22.00
6)	Vinyl chloride	1.07	2.14	5.35	10.70	16.05	21.40
7)	1,3-Butadiene	1.06	2.12	5.30	10.60	15.90	21.20
8)	Bromomethane	1.07	2.14	5.35	10.70	16.05	21.40
9)	Chloroethane	1.05	2.10	5.25	10.50	15.75	21.00
10)	Bromoethene	1.08	2.16	5.40	10.80	16.20	21.60
11)	Trichlorofluoromethane	1.00	2.00	5.00	10.00	15.00	20.00
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	0.94	1.88	4.70	9.40	14.10	18.80
13)	1,1-Dichloroethene	1.03	2.06	5.15	10.30	15.45	20.60
14)	Acetone	1.10	2.20	5.50	11.00	16.50	22.00
15)	Carbon disulfide	1.06	2.12	5.30	10.60	15.90	21.20
16)	2-Propanol	1.10	2.20	5.50	11.00	16.50	22.00
17)	Allyl chloride	1.10	2.20	5.50	11.00	16.50	22.00
18)	Dichloromethane	0.97	1.94	4.85	9.70	14.55	19.40
19)	tert-Butyl methyl ether (MTBE)	1.08	2.16	5.40	10.80	16.20	21.60
20)	trans-1,2-Dichloroethene	1.10	2.20	5.50	11.00	16.50	22.00
21)	Hexane	1.05	2.10	5.25	10.50	15.75	21.00
22)	1,1-Dichloroethane	0.99	1.98	4.95	9.90	14.85	19.80
23)	Vinyl acetate	1.10	2.20	5.50	11.00	16.50	22.00
24)	cis-1,2-Dichloroethene	1.04	2.08	5.20	10.40	15.60	20.80
25)	2-Butanone (MEK)	1.08	2.16	5.40	10.80	16.20	21.60
26)	Ethyl acetate	1.09	2.18	5.45	10.90	16.35	21.80
27)	Tetrahydrofuran	1.05	2.10	5.25	10.50	15.75	21.00
28)	Chloroform	1.07	2.14	5.35	10.70	16.05	21.40
29)	Cyclohexane	1.07	2.14	5.35	10.70	16.05	21.40
30)	1,1,1-Trichloroethane	1.03	2.06	5.15	10.30	15.45	20.60
31)	Carbon tetrachloride	1.04	2.08	5.20	10.40	15.60	20.80
32)	1,4-DIFLUOROBENZENE	18.80	18.80	18.80	18.80	18.80	18.80
33)	Benzene	1.07	2.14	5.35	10.70	16.05	21.40
34)	2,2,4-Trimethylpentane	1.06	2.12	5.30	10.60	15.90	21.20
35)	1,2-Dichloroethane	1.04	2.08	5.20	10.40	15.60	20.80
36)	Heptane	1.07	2.14	5.35	10.70	16.05	21.40
37)	Trichloroethene	1.10	2.20	5.50	11.00	16.50	22.00
38)	1,2-Dichloropropane	1.07	2.14	5.35	10.70	16.05	21.40
39)	1,4-Dioxane	1.06	2.12	5.30	10.60	15.90	21.20
40)	Bromodichloromethane	1.04	2.08	5.20	10.40	15.60	20.80
41)	cis-1,3-Dichloropropene	1.04	2.08	5.20	10.40	15.60	20.80
42)	4-Methyl-2-pentanone (MIBK)	1.06	2.12	5.30	10.60	15.90	21.20

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

43)	CHLOROBENZENE-d5	20.00	20.00	20.00	20.00	20.00	20.00
44)	Toluene	1.08	2.16	5.40	10.80	16.20	21.60
45)	trans-1,3-Dichloropropene	0.97	1.94	4.85	9.70	14.55	19.40
46)	1,1,2-Trichloroethane	1.09	2.18	5.45	10.90	16.35	21.80
47)	Tetrachloroethene	1.08	2.16	5.40	10.80	16.20	21.60
48)	2-Hexanone	1.05	2.10	5.25	10.50	15.75	21.00
49)	Chlorodibromomethane	1.07	2.14	5.35	10.70	16.05	21.40
50)	1,2-Dibromoethane (EDB)	1.10	2.20	5.50	11.00	16.50	22.00
51)	Chlorobenzene	1.10	2.20	5.50	11.00	16.50	22.00
52)	Ethylbenzene	1.09	2.18	5.45	10.90	16.35	21.80
53)	m&p-Xylene	2.16	4.32	10.80	21.60	32.40	43.20
54)	o-Xylene	1.06	2.12	5.30	10.60	15.90	21.20
55)	Styrene	1.03	2.06	5.15	10.30	15.45	20.60
56)	Bromoform	1.07	2.14	5.35	10.70	16.05	21.40
57)	1,1,2,2-Tetrachloroethane	1.05	2.10	5.25	10.50	15.75	21.00
58)	4-Ethyltoluene	1.04	2.08	5.20	10.40	15.60	20.80
59)	1,3,5-Trimethylbenzene	1.07	2.14	5.35	10.70	16.05	21.40
60)	1,2,4-Trimethylbenzene	1.06	2.12	5.30	10.60	15.90	21.20
61)	1,3-Dichlorobenzene	1.05	2.10	5.25	10.50	15.75	21.00
62)	1,4-Dichlorobenzene	1.06	2.12	5.30	10.60	15.90	21.20
63)	Benzyl chloride	1.10	2.20	5.50	11.00	16.50	22.00
64)	1,2-Dichlorobenzene	1.04	2.08	5.20	10.40	15.60	20.80
65)	1,2,4-Trichlorobenzene	0.94	1.88	4.70	9.40	14.10	18.80
66)	Hexachlorobutadiene	0.99	1.98	4.95	9.90	14.85	19.80
)	0	0.00	0.00	0.00	0.00	0.00	0.00

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

CALIBRATION AREA REPORT

Instrument Name: HP5973K
Sample Name: S17F006-SCV1
Misc Info: 10ppbv 1722109
Date Acquired: 6/5/2017 21:00
QLast Update: Tue Jun 06 11:26:11 201
Operator: LLH

#	Name	L1	L2	L3	L4	L5	L6
1)	BROMOCHLOROMETHANE	272984	276814	275180	280259	285172	293775
2)	Propene	8148	18328	34298	69635	107448	146641
3)	Dichlorodifluoromethane	36959	84285	155736	304126	459783	620177
4)	1,2-Dichlorotetrafluoroethane	35169	81666	150027	297771	455923	617528
5)	Chloromethane	10925	23769	43648	85544	131115	180091
6)	Vinyl chloride	10585	24610	45455	89232	137671	186980
7)	1,3-Butadiene	7726	16989	30918	61690	95114	129312
8)	Bromomethane	11152	25689	47161	91227	139728	190705
9)	Chloroethane	6624	14476	26907	53074	80869	110471
10)	Bromoethene	11307	25693	47114	95636	145089	199811
11)	Trichlorofluoromethane	33461	79556	143090	276897	418684	562508
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	19511	45575	82805	162520	247442	333350
13)	1,1-Dichloroethene	15780	37502	69289	138404	212238	289370
14)	Acetone	16576	36948	67532	133267	202492	276267
15)	Carbon disulfide	35863	79844	144484	286320	434585	588468
16)	2-Propanol	10750	26113	50688	106176	168877	235914
17)	Allyl chloride	11042	25579	47908	97819	151316	208064
18)	Dichloromethane	15155	28900	48923	91612	137651	186555
19)	tert-Butyl methyl ether (MTBE)	29556	69942	133287	272983	423637	583798
20)	trans-1,2-Dichloroethene	16743	37420	69590	136281	207484	280884
21)	Hexane	16017	38422	72899	145389	223473	306148
22)	1,1-Dichloroethane	20211	46570	84672	168064	254892	347471
23)	Vinyl acetate	15018	39097	78770	165370	260800	364856
24)	cis-1,2-Dichloroethene	13473	33211	61975	123506	190408	259041
25)	2-Butanone (MEK)	5409	13694	25378	50432	77471	105933
26)	Ethyl acetate	3252	8021	15004	30189	45864	63099
27)	Tetrahydrofuran	10308	24288	45161	89408	138269	190289
28)	Chloroform	26223	61616	111907	221119	333869	453517
29)	Cyclohexane	16580	39415	74021	148551	227900	309089
30)	1,1,1-Trichloroethane	26713	62440	115756	229844	348741	473273
31)	Carbon tetrachloride	27211	63598	119072	234374	356504	482429
32)	1,4-DIFLUOROBENZENE	1055850	1064919	1056449	1080054	1099961	1133808
33)	Benzene	37887	89319	164482	323654	**494403**	672034
34)	2,2,4-Trimethylpentane	51234	122349	229344	461250	705243	962622
35)	1,2-Dichloroethane	17373	40334	73726	145405	220803	296362
36)	Heptane	17984	41294	76033	150058	229364	310492
37)	Trichloroethene	17147	41160	75900	153353	233641	319562
38)	1,2-Dichloropropane	12560	29511	54006	108411	164887	225584
39)	1,4-Dioxane	6965	20200	37421	75753	117178	159231
40)	Bromodichloromethane	28887	66622	121007	240706	368206	499723
41)	cis-1,3-Dichloropropene	17273	43827	84856	174348	268427	370799
42)	4-Methyl-2-pentanone (MIBK)	20533	53674	100225	204201	312494	427093

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

43)	CHLOROBENZENE-d5	937918	955570	959107	984303	1006859	1044396
44)	Toluene	45123	110787	206849	414267	635756	866188
45)	trans-1,3-Dichloropropene	15213	38475	75432	157147	246252	339323
46)	1,1,2-Trichloroethane	16238	38716	71580	143254	219678	300529
47)	Tetrachloroethene	24660	59116	108824	218056	335673	459556
48)	2-Hexanone	17356	49655	95880	194780	300598	411936
49)	Chlorodibromomethane	28716	69072	128332	257986	396938	542404
50)	1,2-Dibromoethane (EDB)	22850	55745	103597	209696	324957	444365
51)	Chlorobenzene	39961	96255	175619	347306	536258	731094
52)	Ethylbenzene	64418	157172	290020	577267	882074	1206112
53)	m&p-Xylene	96318	238552	437320	882786	1344071	1835159
54)	o-Xylene	45755	115853	219124	441442	679766	930066
55)	Styrene	37299	95352	177821	358339	553456	758488
56)	Bromoform	26312	67605	128630	264351	412553	564168
57)	1,1,2,2-Tetrachloroethane	36026	84326	157107	312918	481898	657596
58)	4-Ethyltoluene	65980	173891	325295	657295	1010502	1378722
59)	1,3,5-Trimethylbenzene	61384	148032	275649	549502	843262	1141760
60)	1,2,4-Trimethylbenzene	58152	146234	272400	554639	851892	1162723
61)	1,3-Dichlorobenzene	43056	103878	193818	394416	607310	832768
62)	1,4-Dichlorobenzene	41527	104055	194039	395724	610613	836872
63)	Benzyl chloride	21052	79728	167649	374763	607345	851617
64)	1,2-Dichlorobenzene	43760	103441	189341	381672	588129	804392
65)	1,2,4-Trichlorobenzene	42659	96224	174802	353887	543429	752095
66)	Hexachlorobutadiene	41370	93487	170174	337153	516330	697902
)	0	0	0	0	0	0	0

CHEMSTATION VS LIMS CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S17F006-SCV1
Misc Info: 10ppbv 1722109
Date Acquired: 6/5/2017 21:00
QLast Update: Tue Jun 06 11:26:11 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: S17F006-SCV1
Misc Info: 10ppbv 1722109
Date Acquired: 6/5/2017 21:00
QLast Update: Tue Jun 06 11:26:11 2(
Operator: LLH

#	Name	Amount	L1 1	L2 2	L3 5	L4 10	L5 15	L6 20
1)	BROMOCHLOROMETHANE	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2)	Propene	0.022	1.10	2.20	5.50	11.00	16.50	22.00
3)	Dichlorodifluoromethane	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
4)	1,2-Dichlorotetrafluoroethane	0.0202	1.01	2.02	5.05	10.10	15.15	20.20
5)	Chloromethane	0.022	1.10	2.20	5.50	11.00	16.50	22.00
6)	Vinyl chloride	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
7)	1,3-Butadiene	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
8)	Bromomethane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
9)	Chloroethane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
10)	Bromoethene	0.0216	1.08	2.16	5.40	10.80	16.20	21.60
11)	Trichlorofluoromethane	0.02	1.00	2.00	5.00	10.00	15.00	20.00
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	0.0188	0.94	1.88	4.70	9.40	14.10	18.80
13)	1,1-Dichloroethene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
14)	Acetone	0.022	1.10	2.20	5.50	11.00	16.50	22.00
15)	Carbon disulfide	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
16)	2-Propanol	0.022	1.10	2.20	5.50	11.00	16.50	22.00
17)	Allyl chloride	0.022	1.10	2.20	5.50	11.00	16.50	22.00
18)	Dichloromethane	0.0194	0.97	1.94	4.85	9.70	14.55	19.40
19)	tert-Butyl methyl ether (MTBE)	0.0216	1.08	2.16	5.40	10.80	16.20	21.60
20)	trans-1,2-Dichloroethene	0.022	1.10	2.20	5.50	11.00	16.50	22.00
21)	Hexane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
22)	1,1-Dichloroethane	0.0198	0.99	1.98	4.95	9.90	14.85	19.80
23)	Vinyl acetate	0.022	1.10	2.20	5.50	11.00	16.50	22.00
24)	cis-1,2-Dichloroethene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
25)	2-Butanone (MEK)	0.0216	1.08	2.16	5.40	10.80	16.20	21.60
26)	Ethyl acetate	0.0218	1.09	2.18	5.45	10.90	16.35	21.80
27)	Tetrahydrofuran	0.021	1.05	2.10	5.25	10.50	15.75	21.00
28)	Chloroform	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
29)	Cyclohexane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
30)	1,1,1-Trichloroethane	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
31)	Carbon tetrachloride	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
32)	1,4-DIFLUOROBENZENE	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
33)	Benzene	0.0214	1.07	2.14	5.35	**10.70**	16.05	21.40
34)	2,2,4-Trimethylpentane	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
35)	1,2-Dichloroethane	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
36)	Heptane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
37)	Trichloroethene	0.022	1.10	2.20	5.50	11.00	16.50	22.00
38)	1,2-Dichloropropane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
39)	1,4-Dioxane	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
40)	Bromodichloromethane	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
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)	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
43)	CHLOROBENZENE-d5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
44)	Toluene	0.0216	1.08	2.16	5.40	10.80	16.20	21.60
45)	trans-1,3-Dichloropropene	0.0194	0.97	1.94	4.85	9.70	14.55	19.40
46)	1,1,2-Trichloroethane	0.0218	1.09	2.18	5.45	10.90	16.35	21.80
47)	Tetrachloroethene	0.0216	1.08	2.16	5.40	10.80	16.20	21.60
48)	2-Hexanone	0.021	1.05	2.10	5.25	10.50	15.75	21.00
49)	Chlorodibromomethane	0.0214	1.07	2.14	5.35	10.70	16.05	21.40

50)	1,2-Dibromoethane (EDB)	0.022	1.10	2.20	5.50	11.00	16.50	22.00
51)	Chlorobenzene	0.022	1.10	2.20	5.50	11.00	16.50	22.00
52)	Ethylbenzene	0.0218	1.09	2.18	5.45	10.90	16.35	21.80
53)	m&p-Xylene	0.0432	2.16	4.32	10.80	21.60	32.40	43.20
54)	o-Xylene	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
55)	Styrene	0.0206	1.03	2.06	5.15	10.30	15.45	20.60
56)	Bromoform	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
57)	1,1,2,2-Tetrachloroethane	0.021	1.05	2.10	5.25	10.50	15.75	21.00
58)	4-Ethyltoluene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
59)	1,3,5-Trimethylbenzene	0.0214	1.07	2.14	5.35	10.70	16.05	21.40
60)	1,2,4-Trimethylbenzene	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
61)	1,3-Dichlorobenzene	0.021	1.05	2.10	5.25	10.50	15.75	21.00
62)	1,4-Dichlorobenzene	0.0212	1.06	2.12	5.30	10.60	15.90	21.20
63)	Benzyl chloride	0.022	1.10	2.20	5.50	11.00	16.50	22.00
64)	1,2-Dichlorobenzene	0.0208	1.04	2.08	5.20	10.40	15.60	20.80
65)	1,2,4-Trichlorobenzene	0.0188	0.94	1.88	4.70	9.40	14.10	18.80
66)	Hexachlorobutadiene	0.0198	0.99	1.98	4.95	9.90	14.85	19.80

SEQUENCE

S17F006

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	N / A	SEQUENCE #:		S17F006	06/05/17
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.	06/05/2017 Tue Jun 06 11:26:11 2017			ICAL = OK SCV = Vinyl Acetate
	Initial Calibration ID (LIMS number):	1706003			
	ICAL within QC criteria?		Y	Y	OK
	SCV within QC criteria?		Y	Y	Vinyl Acetate = 40%
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 #:	S17F006	06/05/17
BATCH #:	INITIAL CALIBRATION	ANALYSIS:	TO15	HP5973K

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

APPROVALS	ANALYST INITIALS & DATE:	EM 06/06/17
	REVIEWED BY:	Ziyad Rajabi (affiliate) Digitally signed by Ziyad Rajabi (affiliate) Date: 2017.06.07 12:06:18 -07'00' SIGN HERE

COMMENTS

*** Dichloromethane contamination slightly above 1/2 MDL, see Discrepancy Report D15-011. LLH 05/16/17

Injection Log

Directory: d:\msdchem\1\2017\DATA\060517K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	32	060517K01.D	1.	PRIME		5 Jun 2017 14:25
2	31	060517K02.D	1.	S17F006-TUN1	BFB 1538040	5 Jun 2017 15:15
3	31	060517K03.D	1.	S17F006-CAL1	1.0ppbv 1723023	5 Jun 2017 16:03
4	32	060517K04.D	1.	S17F006-CAL2	2.0ppbv 1723024	5 Jun 2017 16:51
5	32	060517K05.D	1.	S17F006-CAL3	5.0ppbv 1723025	5 Jun 2017 17:39
6	32	060517K06.D	1.	S17F006-CAL4	10ppbv 1723026	5 Jun 2017 18:29
7	32	060517K07.D	1.	S17F006-CAL5	15ppbv 1723027	5 Jun 2017 19:18
8	32	060517K08.D	1.	S17F006-CAL6	20ppbv 1723028	5 Jun 2017 20:09
9	38	060517K09.D	1.	S17F006-SCV1	10ppbv 1722109	5 Jun 2017 21:00
10	38	060517K10.D	1.	S17F006-SCV1	10ppbv 1722109	5 Jun 2017 21:51
11	33	060517K11.D	1.	S17F006-IBL1	200ml BLANK	5 Jun 2017 22:42

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2017\DATA\060517K_FSAA\060517K02.D
Tune Time : 5 Jun 2017 3:15 pm

Daily Calibration File : D:\msdchem\1\2017\DATA\060517K_FSAA\060517K06.D

File	Sample	Surrogate Recovery %		Internal Standard Responses	
		280259	1080050	984303	
060517K03.D	S17F006-CAL1	272984	1055850	937918	
060517K04.D	S17F006-CAL2	276814	1064919	955570	
060517K05.D	S17F006-CAL3	275180	1056449	959107	
060517K06.D	S17F006-CAL4	280259	1080054	984303	
060517K07.D	S17F006-CAL5	285172	1099961	1006859	
060517K08.D	S17F006-CAL6	293775	1133808	1044396	
060517K09.D	S17F006-SCV1	296228	1142021	1035759	
060517K10.D	S17F006-SCV1	299005	1155396	1049785	NOT USED
060517K11.D	S17F006-IBL1	297614	1151795	1015100	

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

Created: Tue Jun 06 13:34:09 2017 HP5973K

Sequence

6/6/2017 11:34

Name	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
PRIME	T2	40	40	100	TO-15_A.CTD3	6/5/2017 2:25:13 PM	Completed
BFB	T1	40	40	50	TO-15_A.CTD3	6/5/2017 3:15:25 PM	Completed
CAL1	T1	40	0	20	TO-15_A.CTD3	6/5/2017 4:03:15 PM	Completed
CAL2	T2	40	0	20	TO-15_A.CTD3	6/5/2017 4:51:23 PM	Completed
CAL3	T2	40	0	50	TO-15_A.CTD3	6/5/2017 5:39:52 PM	Completed
CAL4	T2	40	0	100	TO-15_A.CTD3	6/5/2017 6:29:06 PM	Completed
CAL5	T2	40	0	150	TO-15_A.CTD3	6/5/2017 7:18:56 PM	Completed
CAL6	T2	40	0	200	TO-15_A.CTD3	6/5/2017 8:09:39 PM	Completed
SCV1	T8	40	0	200	TO-15_A.CTD3	6/5/2017 9:00:46 PM	Completed
SCV1	T8	40	0	200	TO-15_A.CTD3	6/5/2017 9:51:52 PM	Completed
BLANK	T3	40	0	200	TO-15_A.CTD3	6/5/2017 10:42:58 PM	Completed

Analysis Sequence

S17F006

Project:
Analysis:

Instrument: HP5973K **Calibration ID:** 1706003 Printed: 06/07/2017 10:07 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S17F006-TUN1	MS Tune	1	6/5/17 15:15	1538040		LLH	060517K02.D	
S17F006-CAL1	TO15	2	6/5/17 16:03	1723023		LLH	060517K03.D	
S17F006-CAL2	TO15	3	6/5/17 16:51	1723024		LLH	060517K04.D	
S17F006-CAL3	TO15	4	6/5/17 17:39	1723025		LLH	060517K05.D	
S17F006-CAL4	TO15	5	6/5/17 18:29	1723026		LLH	060517K06.D	
S17F006-CAL5	TO15	6	6/5/17 19:18	1723027		LLH	060517K07.D	
S17F006-CAL6	TO15	7	6/5/17 20:09	1723028		LLH	060517K08.D	
S17F006-SCV1	TO15 SCV	8	6/5/17 21:00	1722109		LLH	060517K09.D	
S17F006-IBL1	Instrument Blank	9	6/5/17 22:42		1707044	LLH	060517K11.D	

Sequence Comments

Reagents

Reagent # **Description**

Table of Contents

SEQUENCE DATA

S17F006

S17F006-TUN1

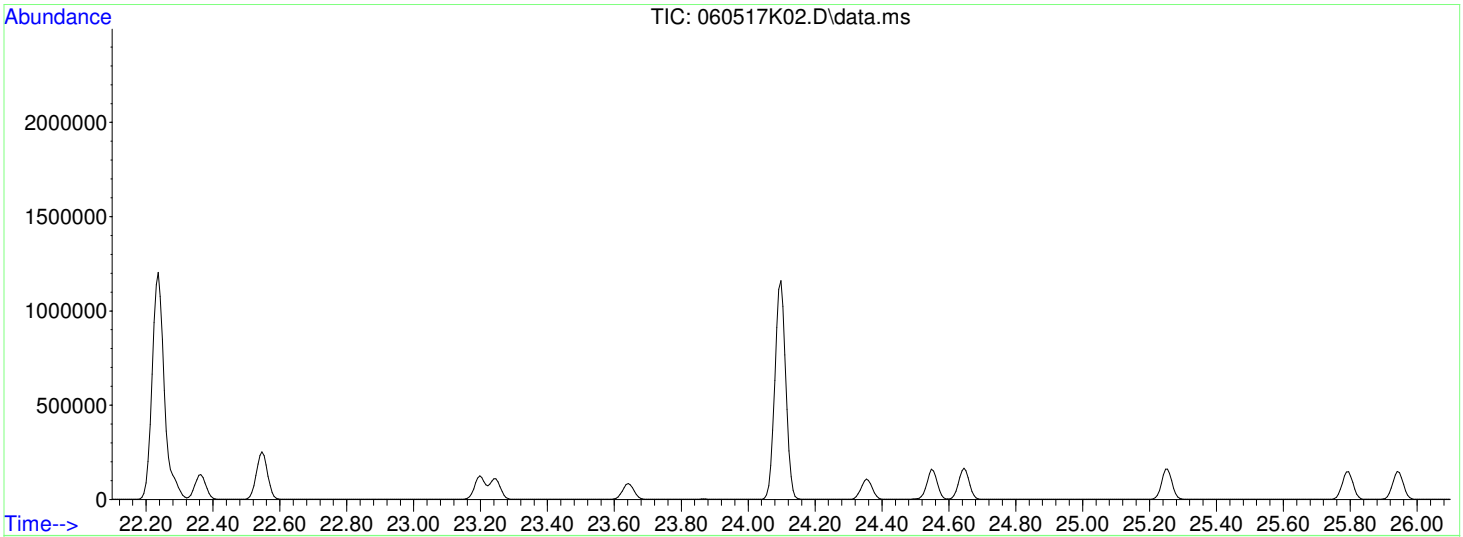
Table of Contents

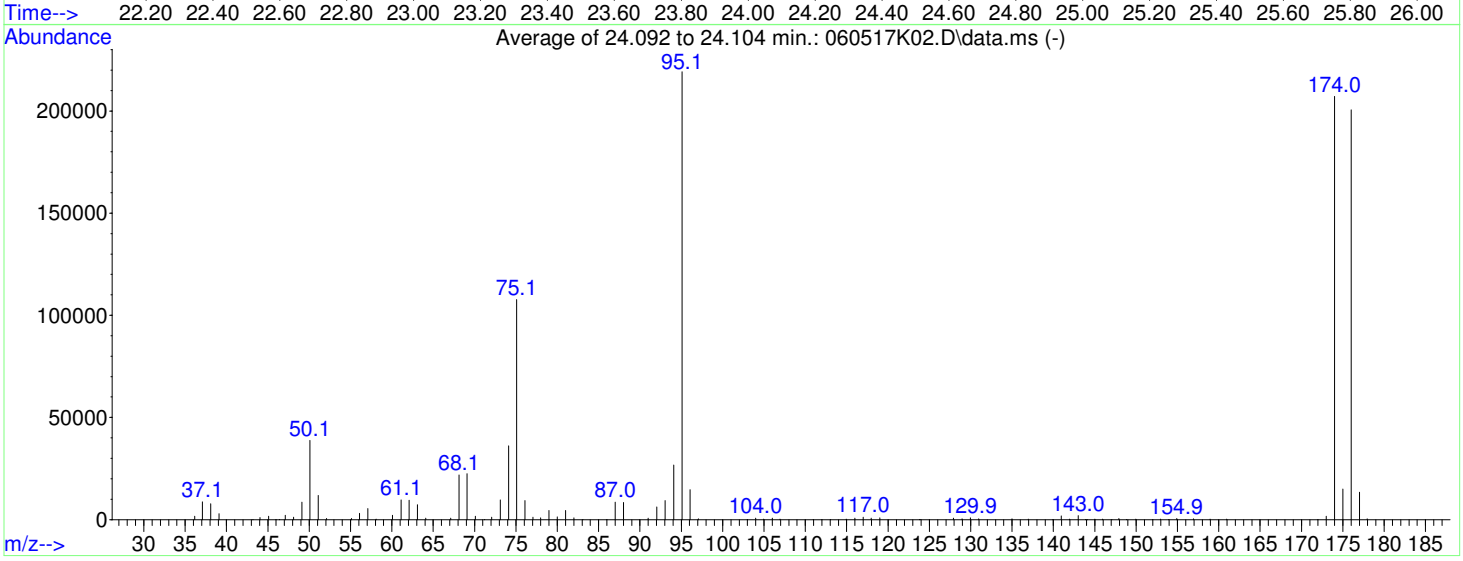
Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K02.D
InstName : HP5973K
Acq On : 5 Jun 2017 3:15 pm
Operator : LLH
Sample : S17F006-TUN1
Misc : BFB 1538040
ALS Vial : 31 Sample Multiplier: 1

REVIEWED
By LLH at 3:51 pm, Jun 05, 2017

Integration File: lscint.p

Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Title : TO15
Last Update : Mon Jun 05 15:22:04 2017





AutoFind: Scans 3355, 3356, 3357; Background Corrected with Scan 3343

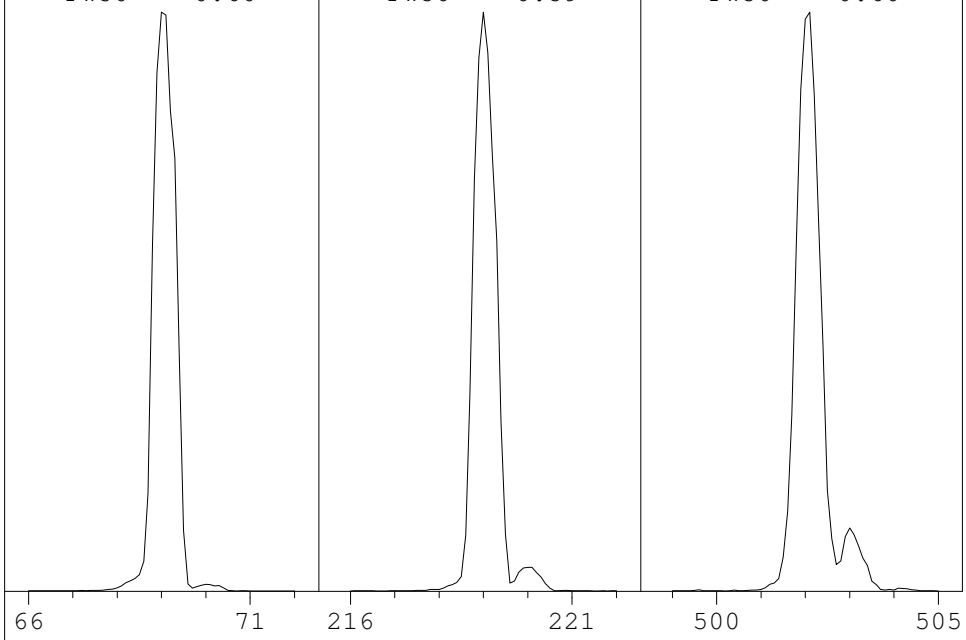
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.7	38728	PASS
75	95	30	66	49.1	107707	PASS
95	95	100	100	100.0	219285	PASS
96	95	5	9	6.7	14630	PASS
173	174	0.00	2	0.8	1650	PASS
174	95	50	120	94.5	207168	PASS
175	174	4	9	7.2	14972	PASS
176	174	93	101	96.8	200597	PASS
177	176	5	9	6.7	13418	PASS

Autotune

Mon Jun 05 10:24:29 2017 Instrum

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

Mass	69.00	Mass	219.00	Mass	502.10
Ab	487941	Ab	381062	Ab	42323
Pw50	0.60	Pw50	0.59	Pw50	0.60

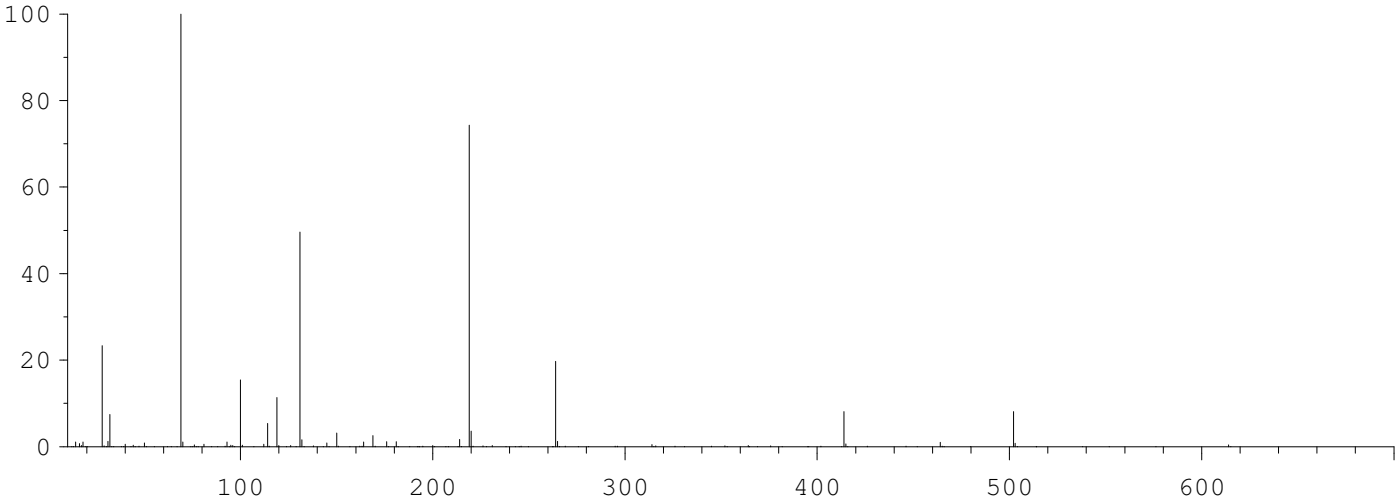


Ion Pol	Pos	MassGain	72
		MassOffs	-8
Emission	34.6	AmuGain	1985
EIEnrgy	69.9	AmuOffs	131
Filament	1	Wid219	-0.024
		DC Pol	Pos
Repeller	34.81		
IonFcus	90.2	HEDEnab	On
EntLens	14.5	EMVolts	1141
EntOffs	20.08		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
144 peaks Base: 69.10 Abundance: 446080



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.10	446080	100.00	70.10	4812	1.08
219.00	331584	74.33	220.00	15901	4.80
502.10	36112	8.10	503.10	3604	9.98

Air/Water Check: H20~1.09% N2~23.38% O2~7.43% CO2~0.35% N2/H2O~2154.71%

Column(1) Flow: 1.496 Column(2): 0 ml/min. Interface Temp: 230

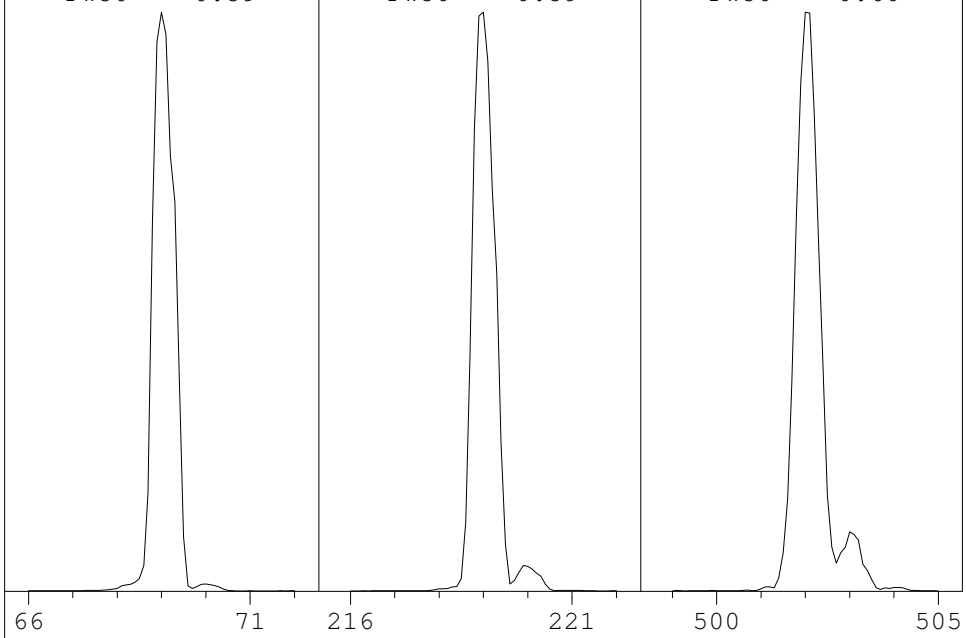
Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 268586
Repeller Maximum 35 volts using ion 219; Gain Factor 2.69

MassGain Values(Samples): 76(3) 72(2) 71(1) 71(0) 72(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Entrance Lens Offset:	20.1	20.1	20.1	20.1	20.1	20.1	20.1

Mon Jun 05 10:26:41 2017 Instrum
C:\msdchem\1\5973N\BFB060517.u US03960556

Mass	69.00	Mass	219.00	Mass	502.00
Ab	404107	Ab	271305	Ab	31140
Pw50	0.59	Pw50	0.59	Pw50	0.60

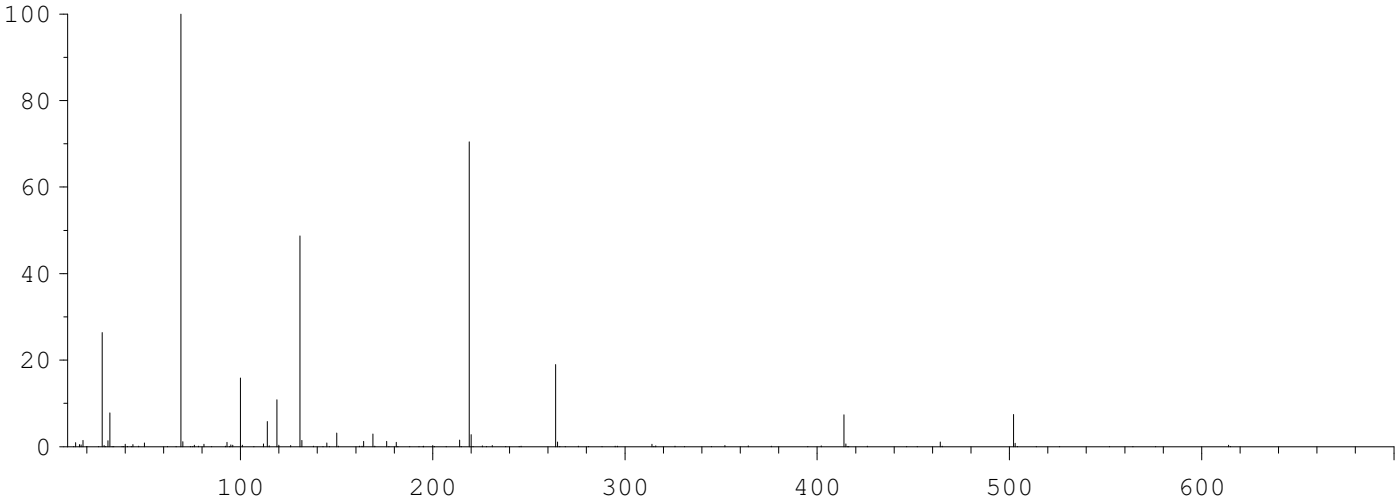


Ion Pol	Pos	MassGain	72
		MassOffs	-8
Emission	34.6	AmuGain	1985
EIEnrgy	69.9	AmuOffs	131
Filament	1	Wid219	-0.024
		DC Pol	Pos
Repeller	32.13		
IonFcus	90.2	HEDEnab	On
EntLens	14.5	EMVolts	1129
EntOffs	20.08		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
120 peaks Base: 69.00 Abundance: 354880



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	354880	100.00	70.00	4138	1.17
219.00	249984	70.44	220.00	9925	3.97
502.10	26488	7.46	503.00	2803	10.58

Air/Water Check: H20~1.48% N2~26.36% O2~7.80% CO2~0.46% N2/H2O~1779.38%

Column(1) Flow: 1.496 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 245266
Repeller Maximum 35 volts using ion 219; Gain Factor 2.45

MassGain Values(Samples): 76(3) 72(2) 71(1) 71(0) 72(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Entrance Lens Offset:	20.1	20.1	20.1	20.1	20.1	20.1	20.1

S17F006-CAL1

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K03.D
InstName : HP5973K
Acq On : 5 Jun 2017 4:03 pm
Operator : LLH
Sample : S17F006-CAL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 06 11:24:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:23:52 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	272984	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1055850	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	937918	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	8148	1.20	ppbv		97
3) Dichlorodifluoromethane	4.308	85	36959	1.18	ppbv		99
4) 1,2-Dichlorotetrafluor...	4.649	85	35169	1.11	ppbv		99
5) Chloromethane	4.862	50	10925	1.25	ppbv		99
6) Vinyl chloride	5.154	62	10585	1.18	ppbv		99
7) 1,3-Butadiene	5.239	54	7726	1.19	ppbv		97
8) Bromomethane	6.170	94	11152	1.19	ppbv		98
9) Chloroethane	6.492	64	6624	1.18	ppbv		100
10) Bromoethene	7.052	106	11307	1.18	ppbv		99
11) Trichlorofluoromethane	7.155	101	33461	1.11	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.913	151	19511	1.04	ppbv		99
13) 1,1-Dichloroethene	9.029	61	15780	1.11	ppbv		99
14) Acetone	9.716	43	16576	1.23	ppbv		100
15) Carbon disulfide	9.728	76	35863	1.19	ppbv		96
16) 2-Propanol	10.319	45	10750	1.12	ppbv		95
17) Allyl chloride	10.629	41	11042	1.18	ppbv		97
18) Dichloromethane	11.207	49	15155	1.22	ppbv		97
19) tert-Butyl methyl ethe...	11.852	73	29556	1.14	ppbv		100
20) trans-1,2-Dichloroethene	11.888	61	16743	1.23	ppbv		95
21) Hexane	12.417	57	16017	1.11	ppbv		95
22) 1,1-Dichloroethane	13.293	63	20211	1.09	ppbv		99
23) Vinyl acetate	13.446	43	15018	1.06	ppbv		99
24) cis-1,2-Dichloroethene	14.760	61	13473	1.10	ppbv		98
25) 2-Butanone (MEK)	14.900	72	5409	1.13	ppbv	#	94
26) Ethyl acetate	14.918	61	3252	1.14	ppbv	#	95
27) Tetrahydrofuran	15.319	42	10308	1.14	ppbv		95
28) Chloroform	15.465	83	26223	1.17	ppbv		99
29) Cyclohexane	15.599	56	16580	1.14	ppbv		98
30) 1,1,1-Trichloroethane	15.703	97	26713	1.12	ppbv		98
31) Carbon tetrachloride	15.934	117	27211	1.13	ppbv		99
33) Benzene	16.475	78	37887	1.17	ppbv		99
34) 2,2,4-Trimethylpentane	16.347	57	51234	1.13	ppbv		97
35) 1,2-Dichloroethane	16.718	62	17373	1.14	ppbv		99
36) Heptane	16.743	43	17984	1.18	ppbv		95
37) Trichloroethene	17.698	130	17147	1.17	ppbv		98
38) 1,2-Dichloropropane	18.239	63	12560	1.16	ppbv		98
39) 1,4-Dioxane	18.458	88	6965	1.03	ppbv		92
40) Bromodichloromethane	18.714	83	28887	1.15	ppbv		99
41) cis-1,3-Dichloropropene	19.480	75	17273	1.05	ppbv		99
42) 4-Methyl-2-pentanone (...	19.730	43	20533	1.07	ppbv		99
44) Toluene	19.937	91	45123	1.15	ppbv		100
45) trans-1,3-Dichloropropene	20.448	75	15213	0.98	ppbv		99
46) 1,1,2-Trichloroethane	20.758	97	16238	1.18	ppbv		98
47) Tetrachloroethene	20.770	166	24660	1.17	ppbv		99
48) 2-Hexanone	21.087	43	17356	1.01	ppbv		99
49) Chlorodibromomethane	21.360	129	28716	1.15	ppbv		100
50) 1,2-Dibromoethane (EDB)	21.585	107	22850	1.17	ppbv		99
51) Chlorobenzene	22.279	112	39961	1.20	ppbv		83
52) Ethylbenzene	22.364	91	64418	1.18	ppbv		99
53) m&p-Xylene	22.547	91	96318	2.31	ppbv		100
54) o-Xylene	23.198	91	45755	1.10	ppbv		100

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K03.D
InstName : HP5973K
Acq On : 5 Jun 2017 4:03 pm
Operator : LLH
Sample : S17F006-CAL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

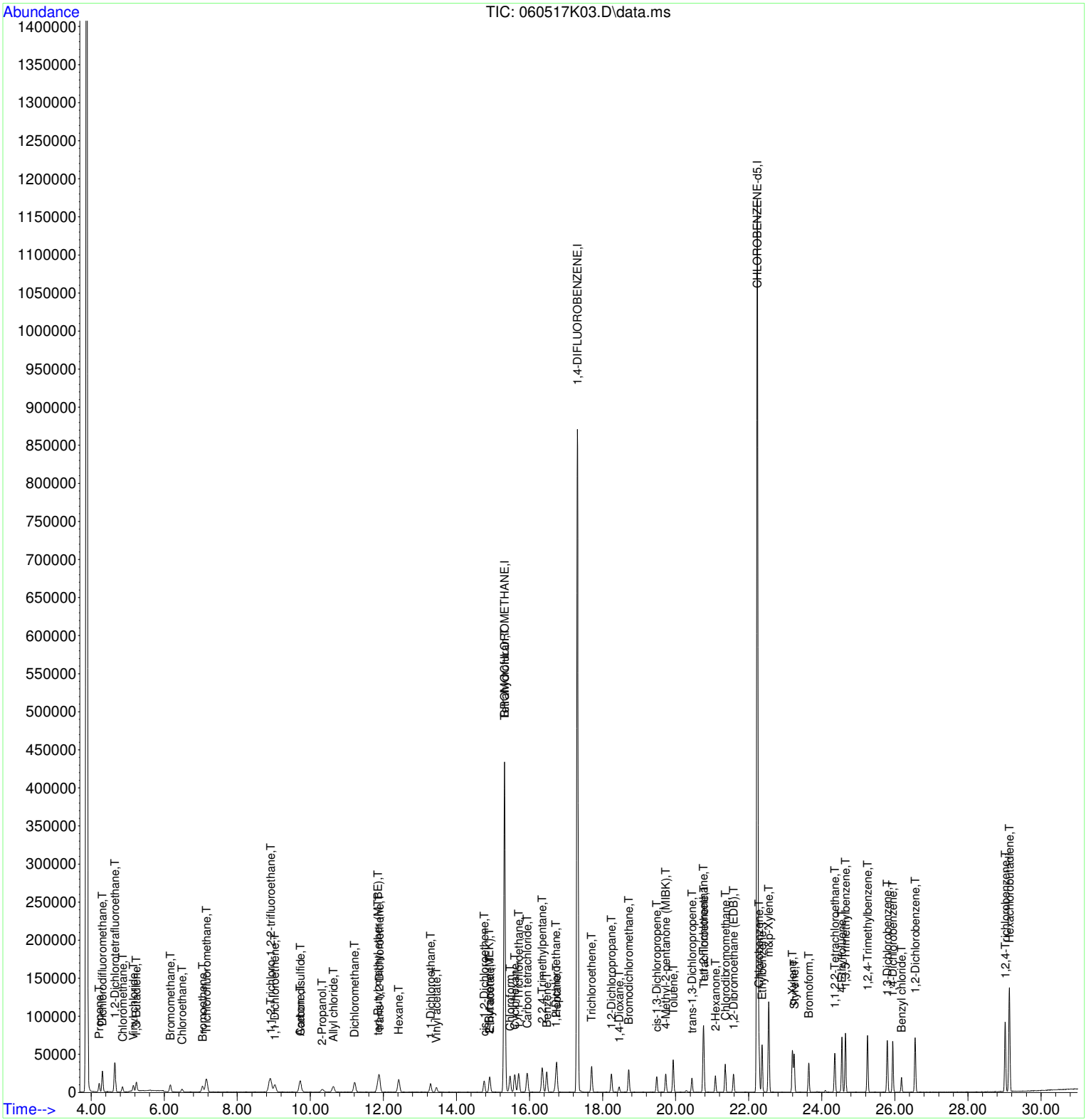
Quant Time: Jun 06 11:24:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:23:52 2017
Response via : Initial Calibration

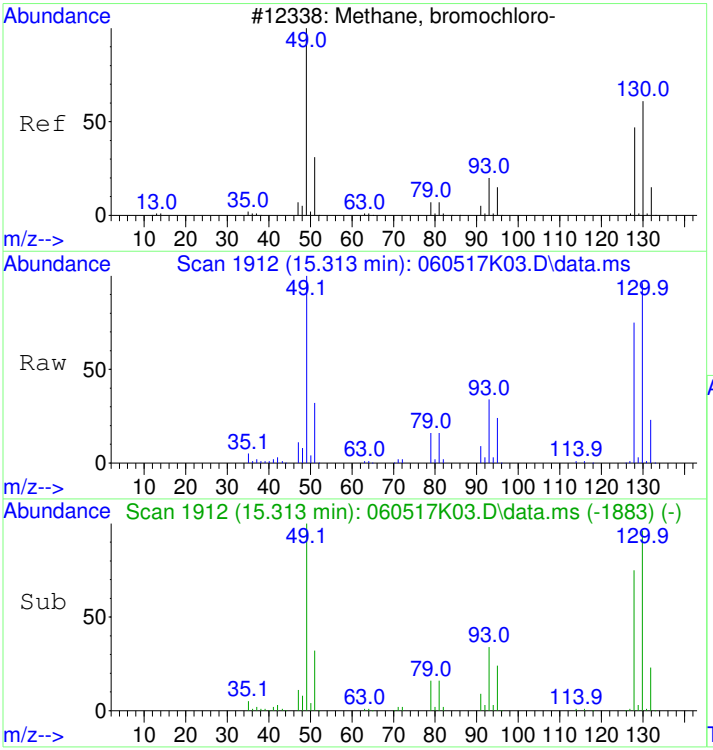
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	37299	1.08 ppbv	100
56) Bromoform	23.642	173	26312	1.09 ppbv	99
57) 1,1,2,2-Tetrachloroethane	24.353	83	36026	1.15 ppbv	99
58) 4-Ethyltoluene	24.548	105	65980	1.07 ppbv	99
59) 1,3,5-Trimethylbenzene	24.645	105	61384	1.15 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	58152	1.11 ppbv	99
61) 1,3-Dichlorobenzene	25.795	146	43056	1.12 ppbv	100
62) 1,4-Dichlorobenzene	25.947	146	41527	1.11 ppbv	99
63) Benzyl chloride	26.178	91	21052	0.82 ppbv	97
64) 1,2-Dichlorobenzene	26.556	146	43760	1.14 ppbv	100
65) 1,2,4-Trichlorobenzene	29.026	180	42659	1.05 ppbv	99
66) Hexachlorobutadiene	29.135	225	41370	1.11 ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K03.D
InstName : HP5973K
Acq On : 5 Jun 2017 4:03 pm
Operator : LLH
Sample : S17F006-CAL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 06 11:24:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:23:52 2017
Response via : Initial Calibration

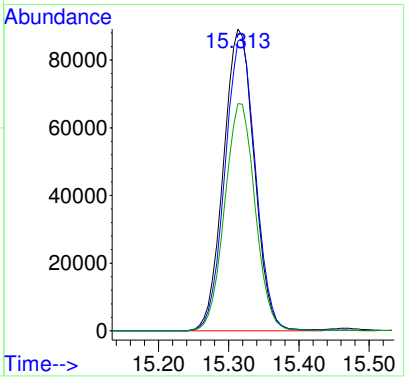


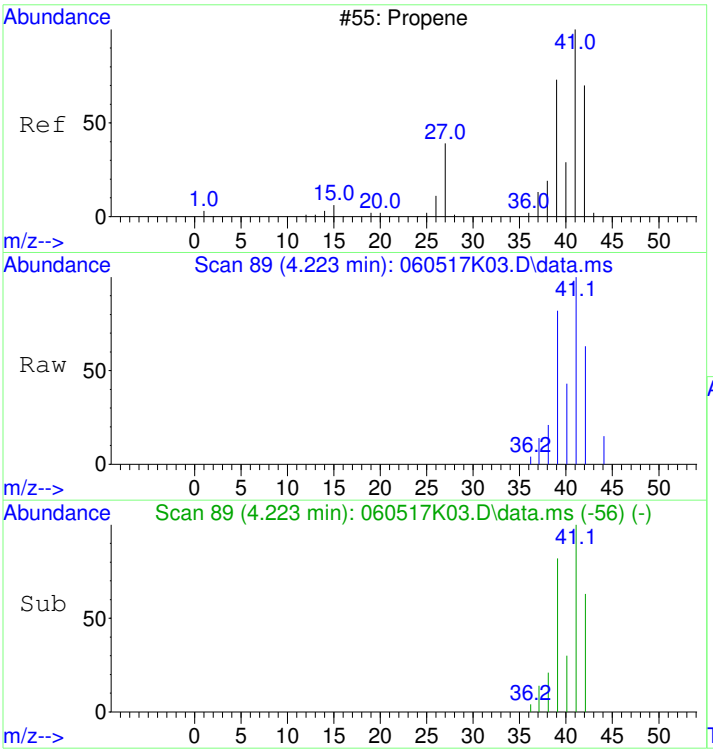


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 49 Resp: 272984

Ion	Ratio	Lower	Upper
49	100		
130	95.7	75.6	115.6
128	74.4	54.4	94.4

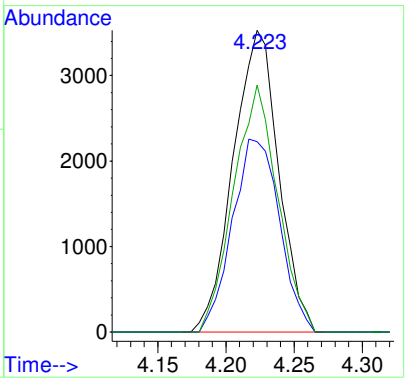


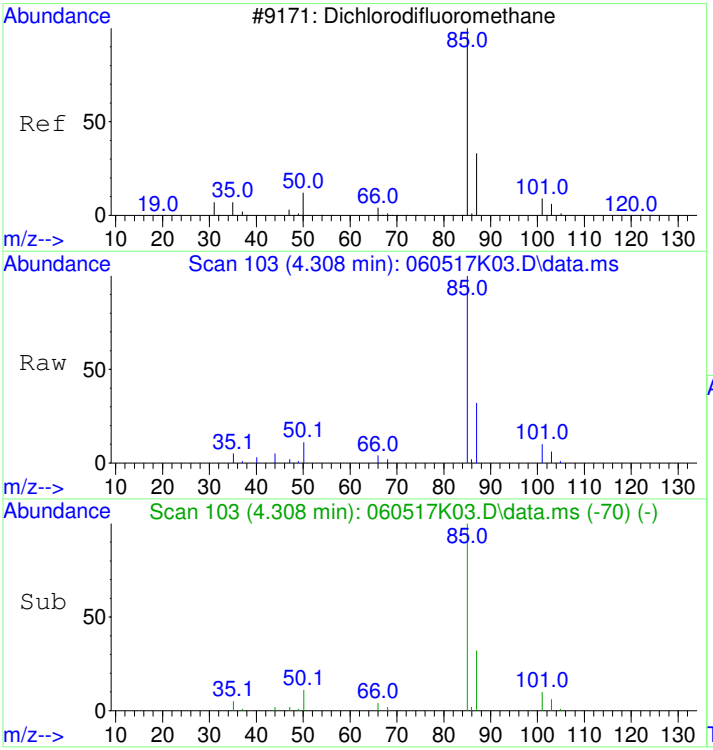


#2
Propene
Concen: 1.20 ppbv
RT: 4.223 min Scan# 89
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 41 Resp: 8148

Ion	Ratio	Lower	Upper
41	100		
42	66.4	46.4	86.4
39	79.7	55.4	95.4

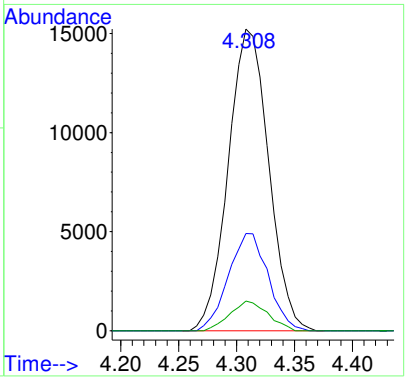


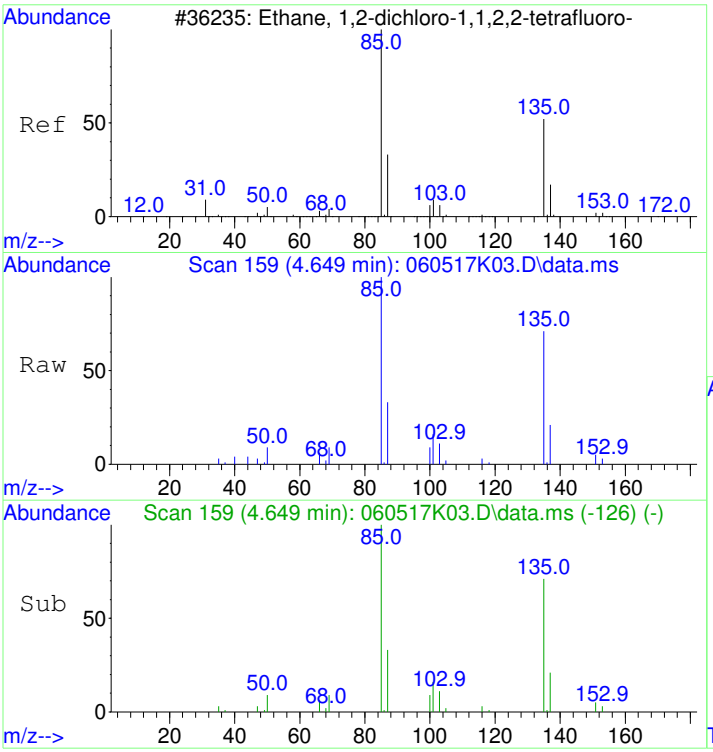


#3
Dichlorodifluoromethane
Concen: 1.18 ppbv
RT: 4.308 min Scan# 103
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 85 Resp: 36959

Ion	Ratio	Lower	Upper
85	100		
87	31.7	12.4	52.4
101	9.3	0.0	29.5

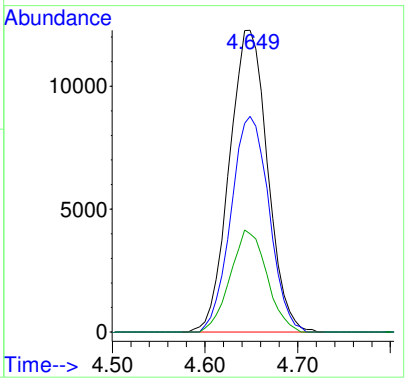


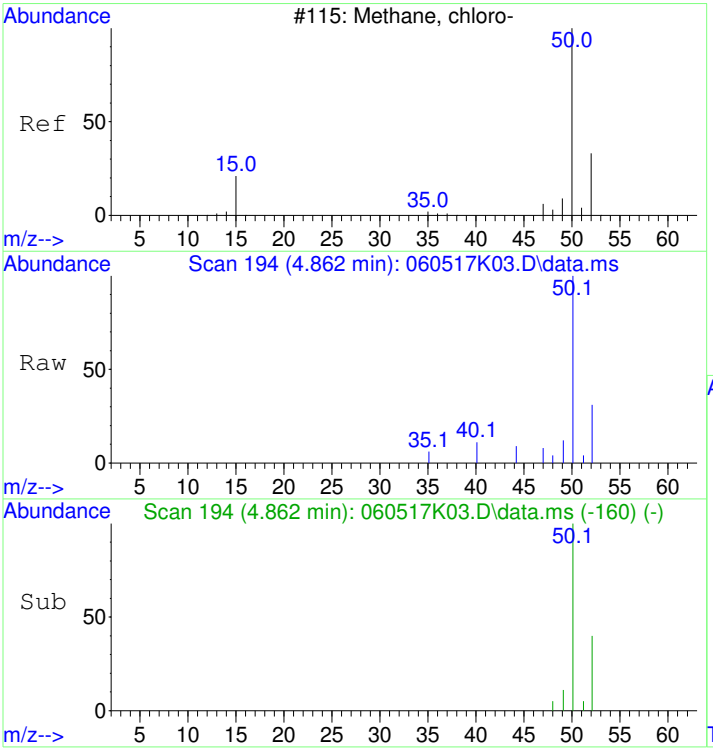


#4
1,2-Dichlorotetrafluoroethane
Concen: 1.11 ppbv
RT: 4.649 min Scan# 159
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 85 Resp: 35169

Ion	Ratio	Lower	Upper
85	100		
135	71.2	52.1	92.1
87	32.3	12.2	52.2

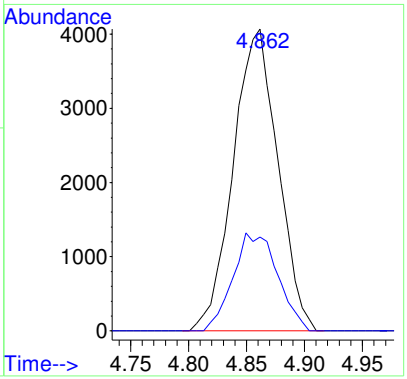


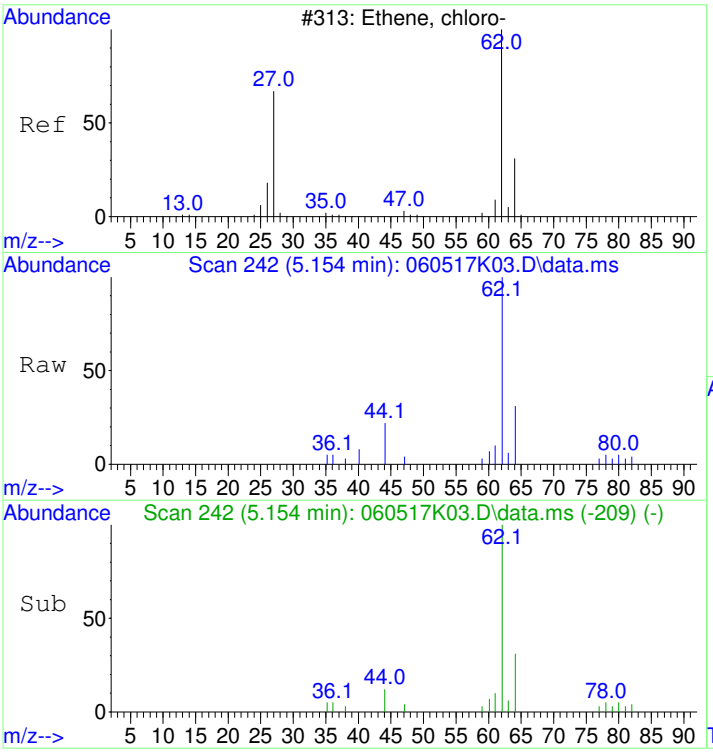


#5
Chloromethane
Concen: 1.25 ppbv
RT: 4.862 min Scan# 194
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 50 Resp: 10925

Ion	Ratio	Lower	Upper
50	100		
52	32.3	12.0	52.0

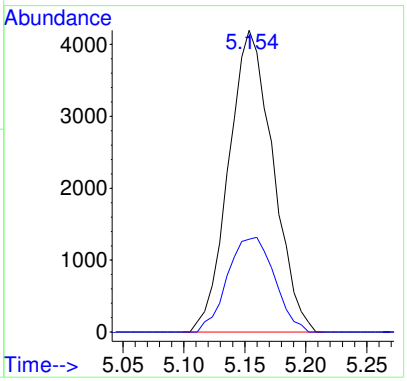


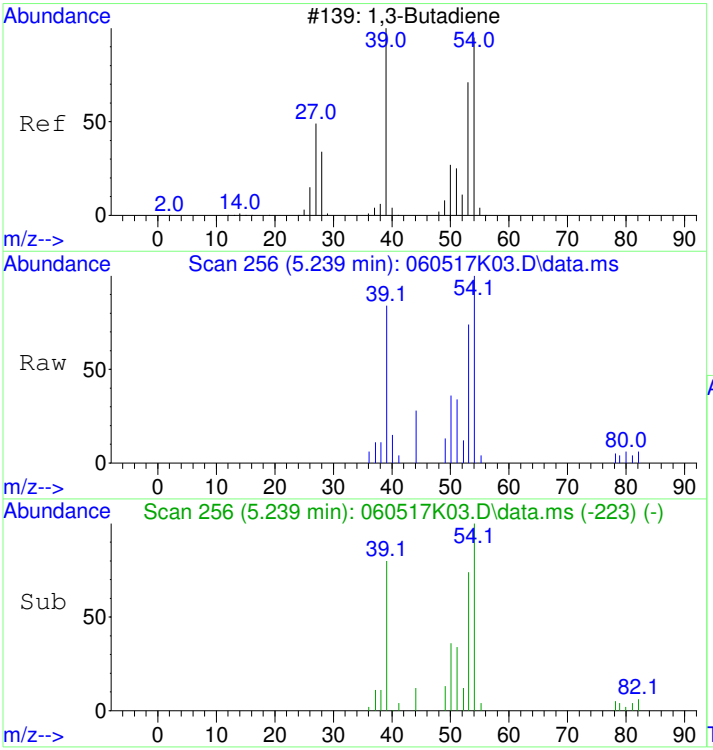


#6
Vinyl chloride
Concen: 1.18 ppbv
RT: 5.154 min Scan# 242
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 62 Resp: 10585

Ion	Ratio	Lower	Upper
62	100		
64	33.3	12.5	52.5

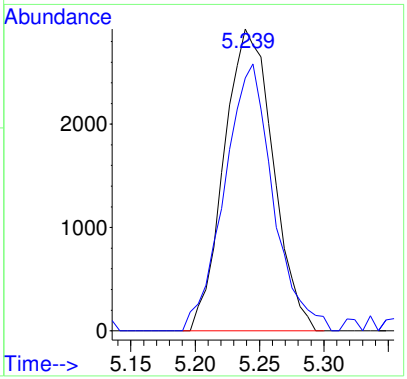


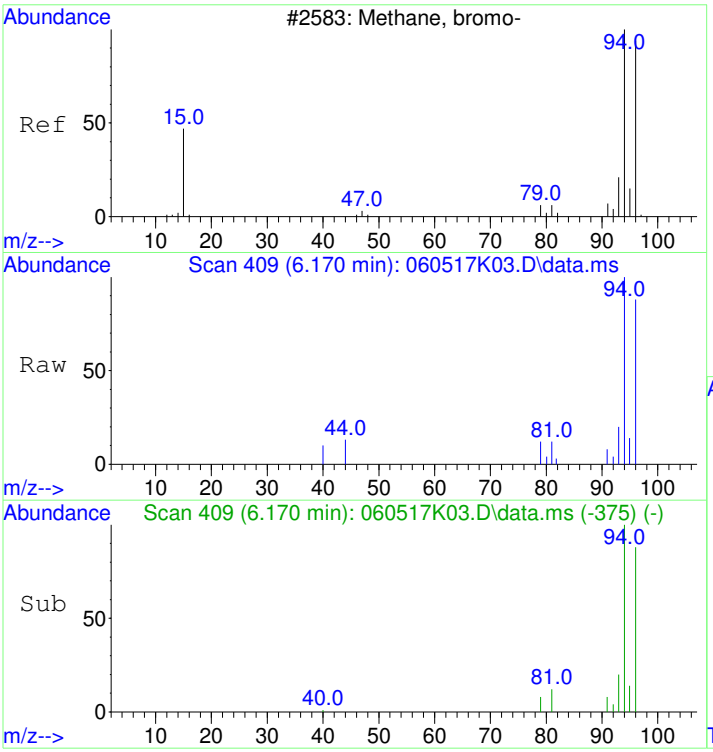


#7
1,3-Butadiene
Concen: 1.19 ppbv
RT: 5.239 min Scan# 256
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 54 Resp: 7726

Ion	Ratio	Lower	Upper
54	100		
39	87.8	64.7	104.7

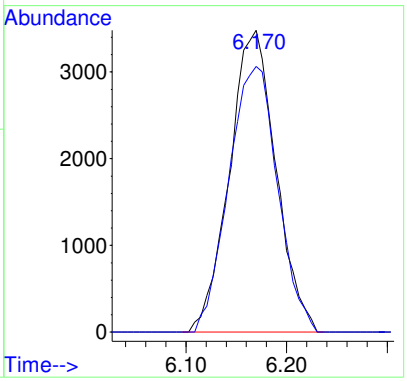


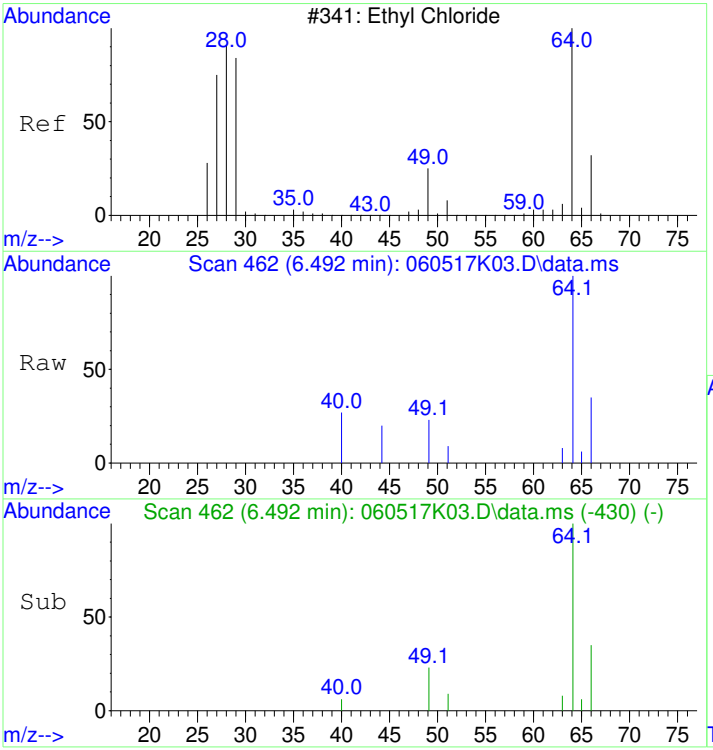


#8
Bromomethane
Concen: 1.19 ppbv
RT: 6.170 min Scan# 409
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 94 Resp: 11152

Ion	Ratio	Lower	Upper
94	100		
96	92.7	74.7	114.7

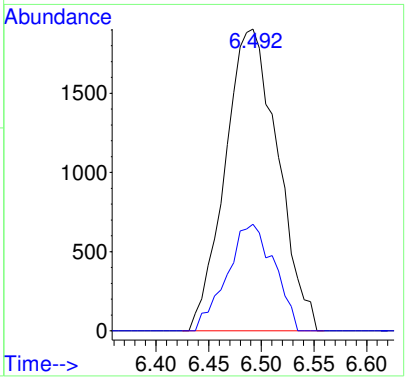


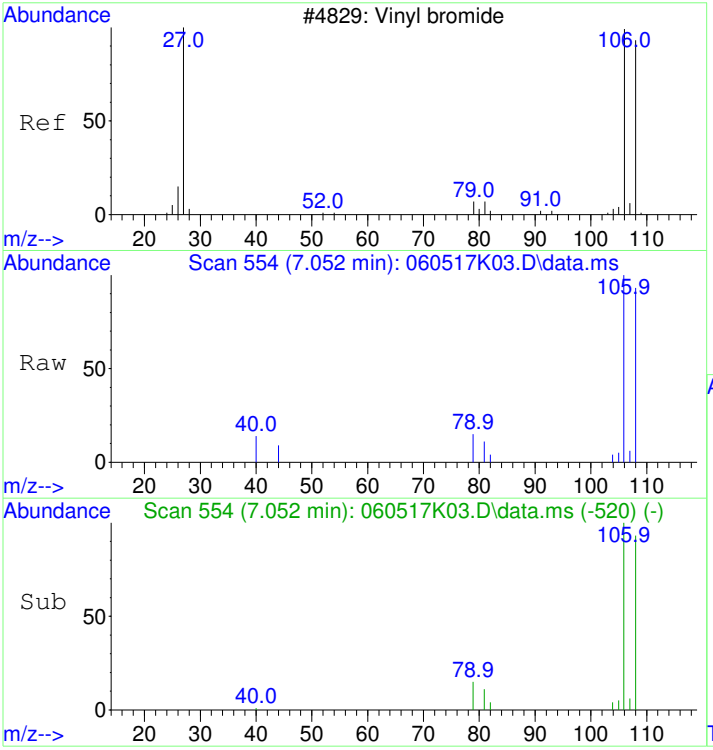


#9
Chloroethane
Concen: 1.18 ppbv
RT: 6.492 min Scan# 462
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 64 Resp: 6624

Ion	Ratio	Lower	Upper
64	100		
66	31.7	11.8	51.8

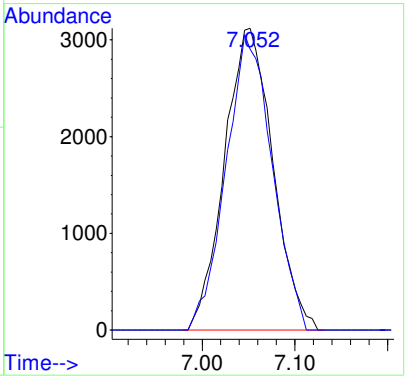


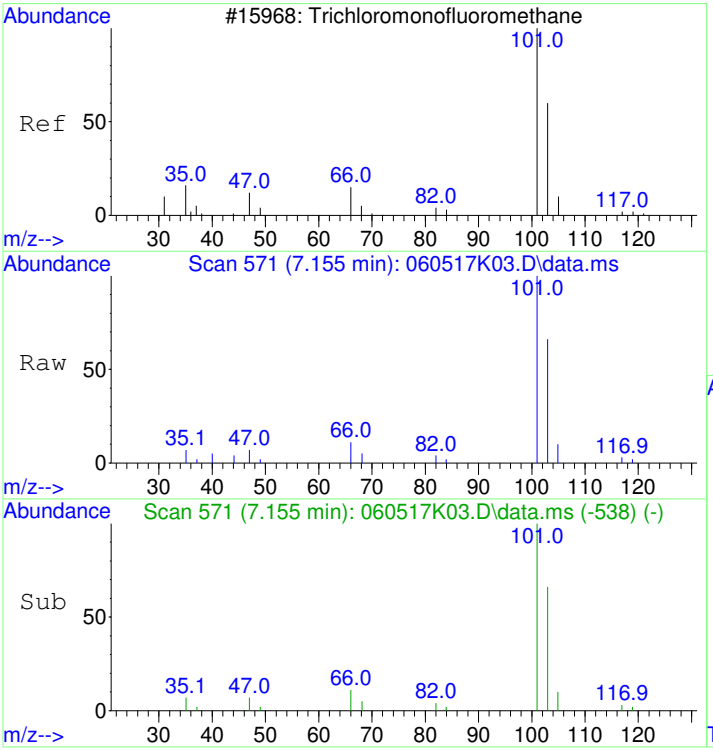


#10
Bromoethene
Concen: 1.18 ppbv
RT: 7.052 min Scan# 554
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:106 Resp: 11307

Ion	Ratio	Lower	Upper
106	100		
108	93.4	0.0	212.6

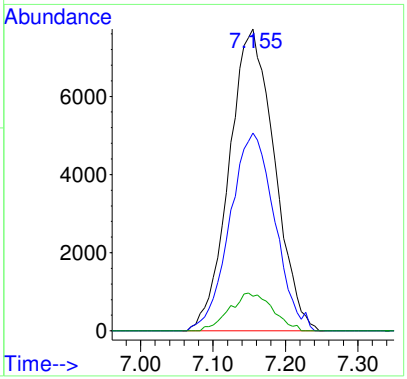


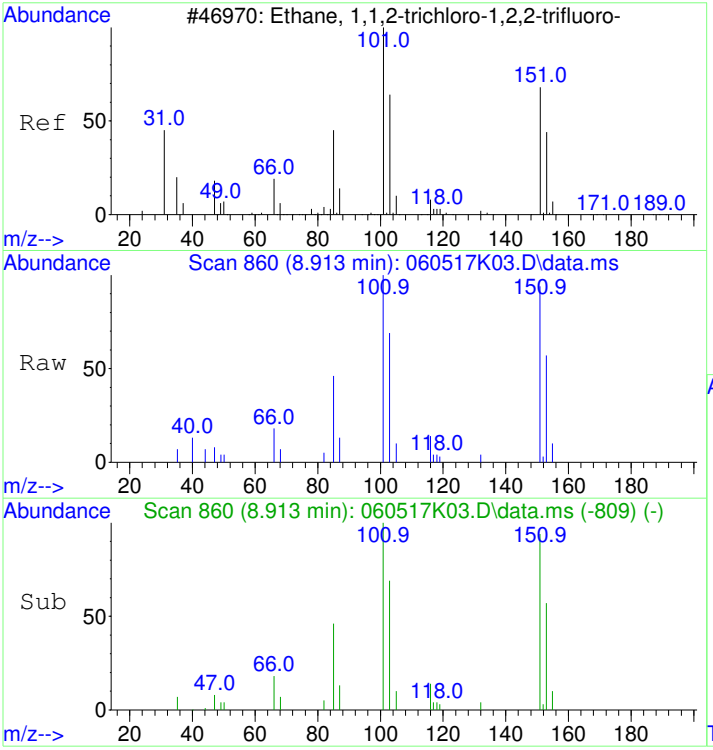


#11
Trichlorofluoromethane
Concen: 1.11 ppbv
RT: 7.155 min Scan# 571
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:101 Resp: 33461

Ion	Ratio	Lower	Upper
101	100		
103	65.1	45.1	85.1
66	12.0	0.0	31.9

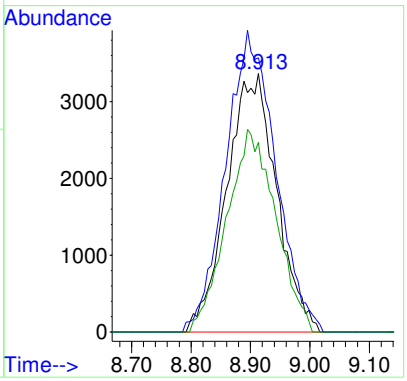


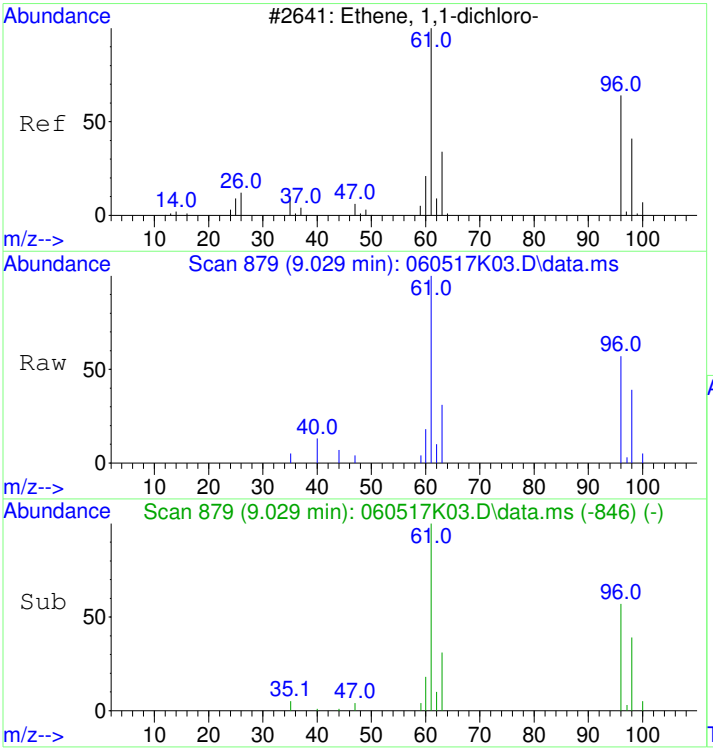


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.04 ppbv
RT: 8.913 min Scan# 860
Delta R.T. 0.012 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:151 Resp: 19511

Ion	Ratio	Lower	Upper
151	100		
101	117.4	97.8	137.8
103	77.4	55.7	95.7

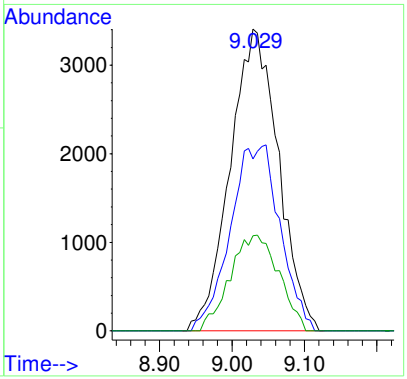


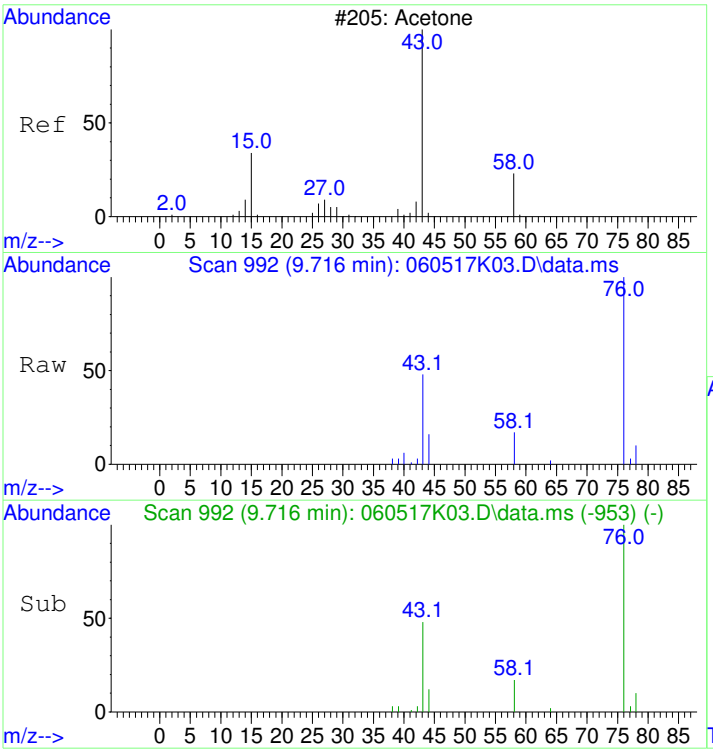


#13
1,1-Dichloroethene
Concen: 1.11 ppbv
RT: 9.029 min Scan# 879
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 61 Resp: 15780

Ion	Ratio	Lower	Upper
61	100		
96	63.4	43.8	83.8
63	32.1	12.4	52.4

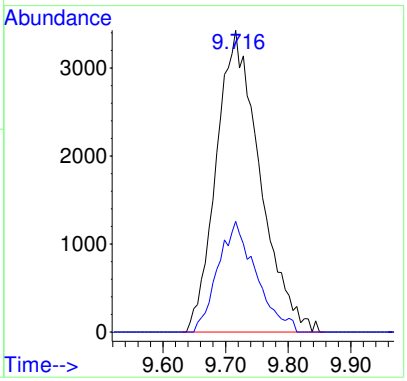


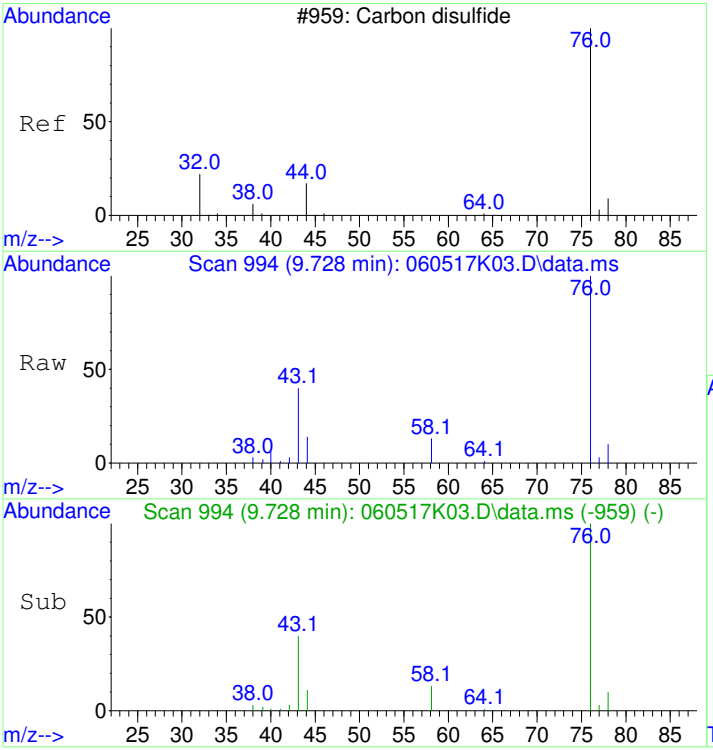


#14
Acetone
Concen: 1.23 ppbv
RT: 9.716 min Scan# 992
Delta R.T. 0.037 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 43 Resp: 16576

Ion	Ratio	Lower	Upper
43	100		
58	32.1	12.0	52.0

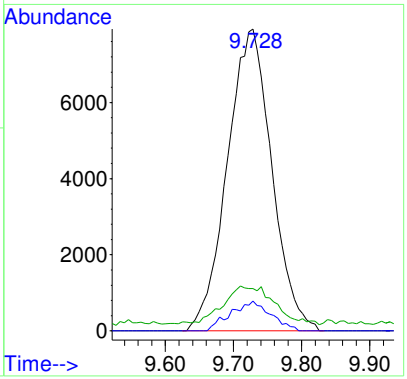


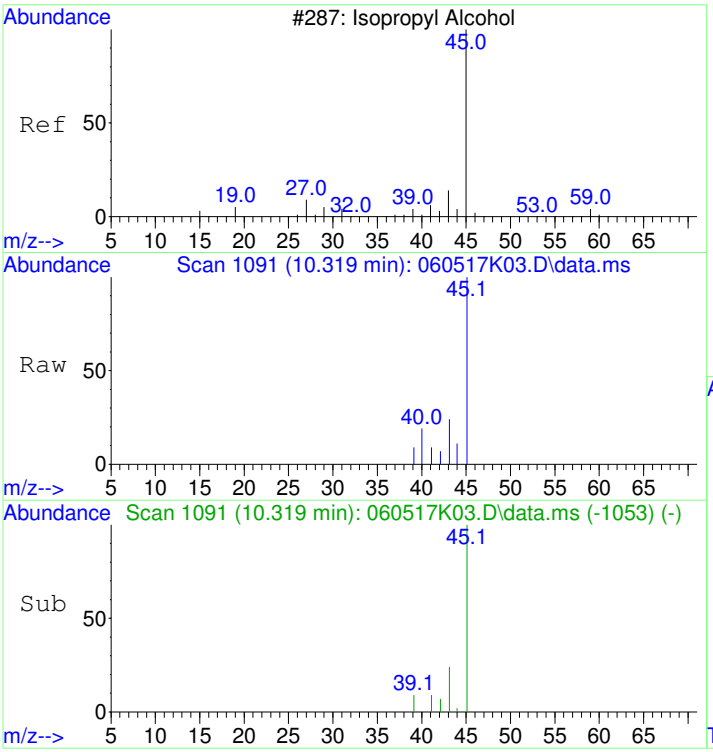


#15
Carbon disulfide
Concen: 1.19 ppbv
RT: 9.728 min Scan# 994
Delta R.T. 0.012 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 76 Resp: 35863

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	29.0
44	14.7	0.0	32.4

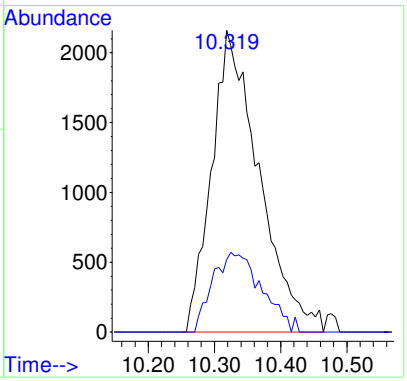


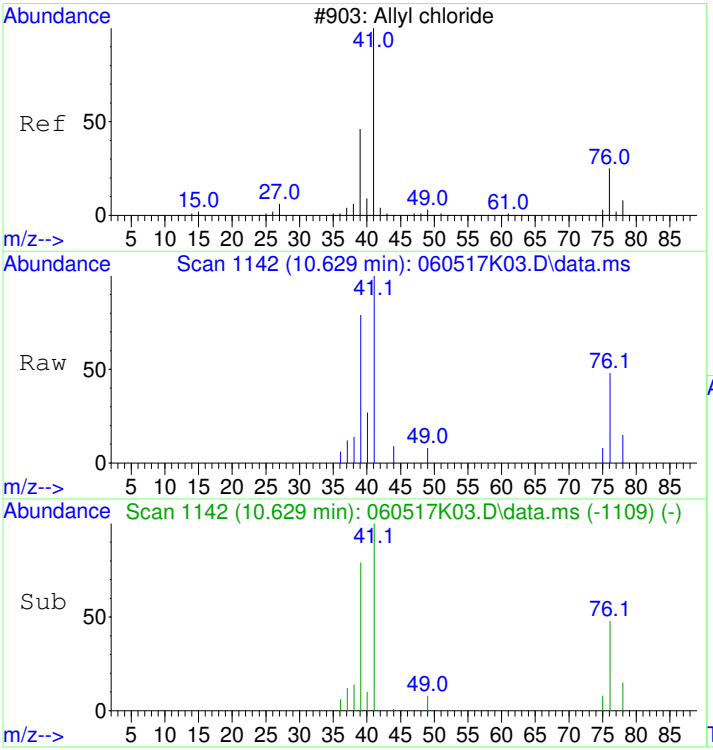


#16
2-Propanol
Concen: 1.12 ppbv
RT: 10.319 min Scan# 1091
Delta R.T. 0.030 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 45 Resp: 10750

Ion	Ratio	Lower	Upper
45	100		
43	27.4	4.7	44.7

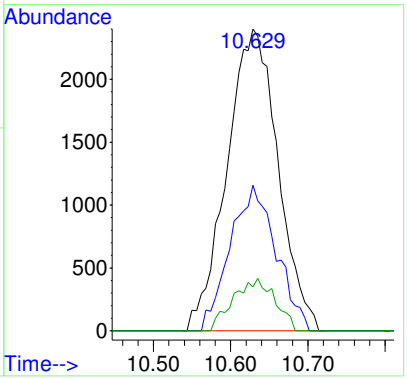


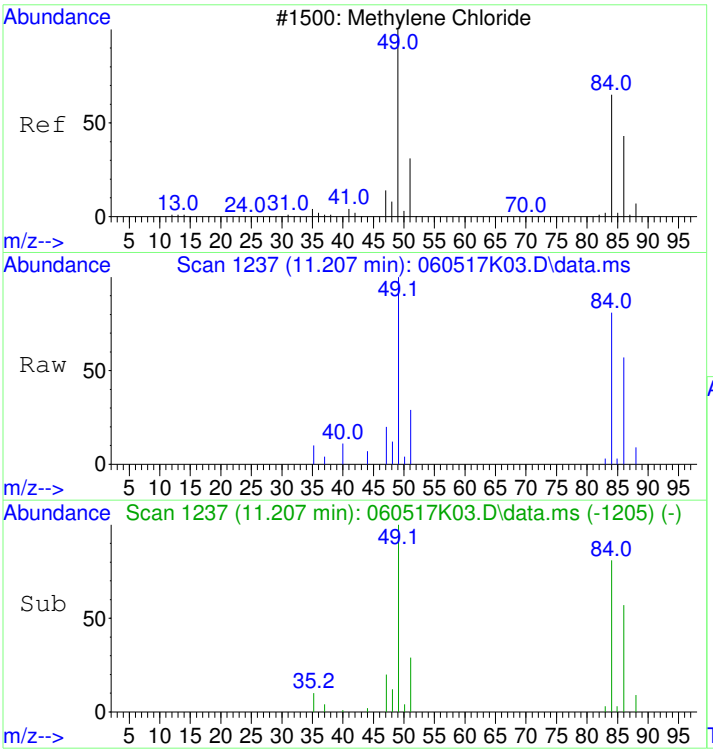


#17
Allyl chloride
Concen: 1.18 ppbv
RT: 10.629 min Scan# 1142
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 41 Resp: 11042

Ion	Ratio	Lower	Upper
41	100		
76	43.4	25.6	65.6
78	14.1	0.0	35.0

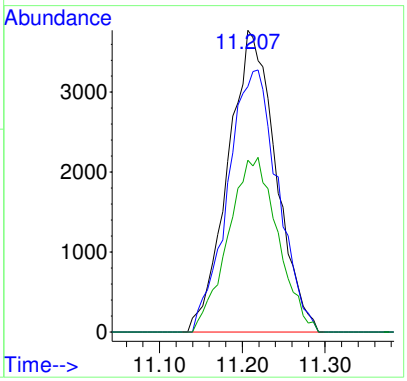


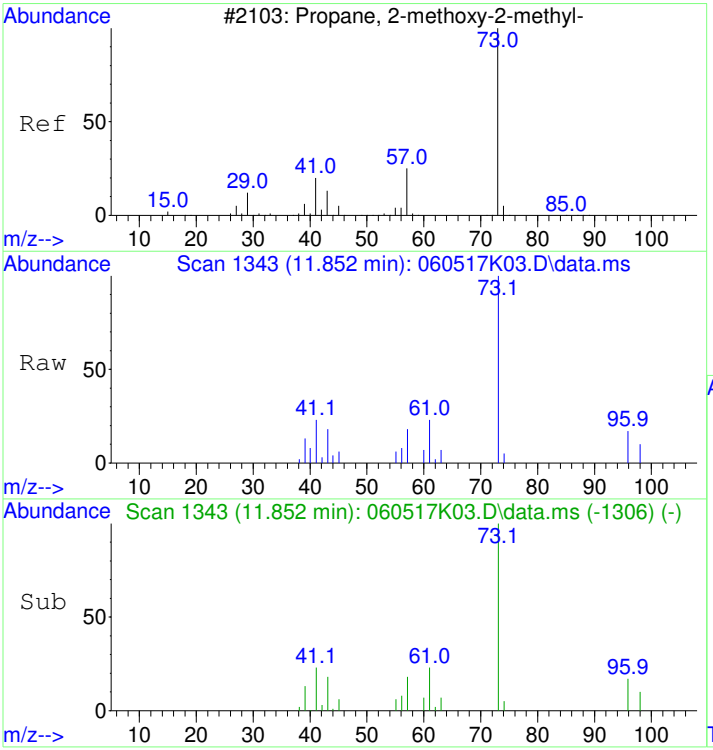


#18
Dichloromethane
Concen: 1.22 ppbv
RT: 11.207 min Scan# 1237
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 49 Resp: 15155

Ion	Ratio	Lower	Upper
49	100		
84	91.0	74.2	114.2
86	59.9	41.1	81.1

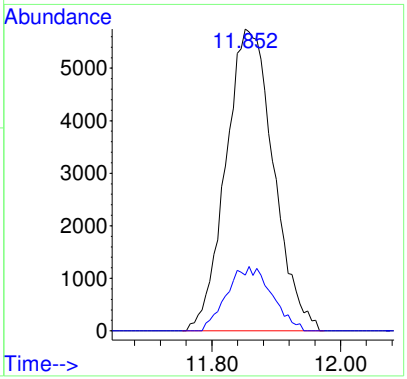


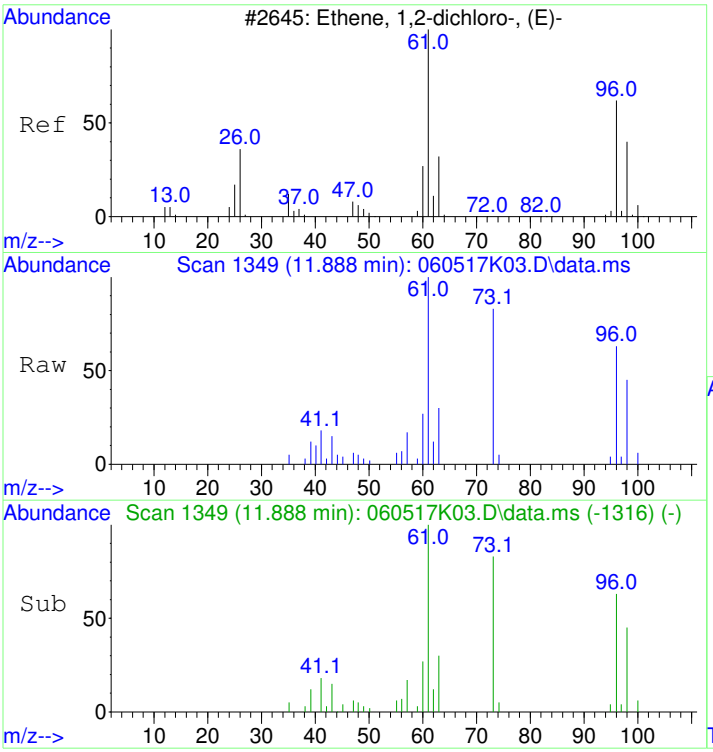


#19
tert-Butyl methyl ether (MTBE)
Concen: 1.14 ppbv
RT: 11.852 min Scan# 1343
Delta R.T. 0.024 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 73 Resp: 29556

Ion	Ratio	Lower	Upper
73	100		
57	20.0	0.0	39.8

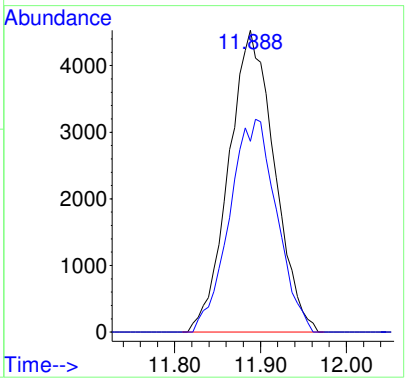


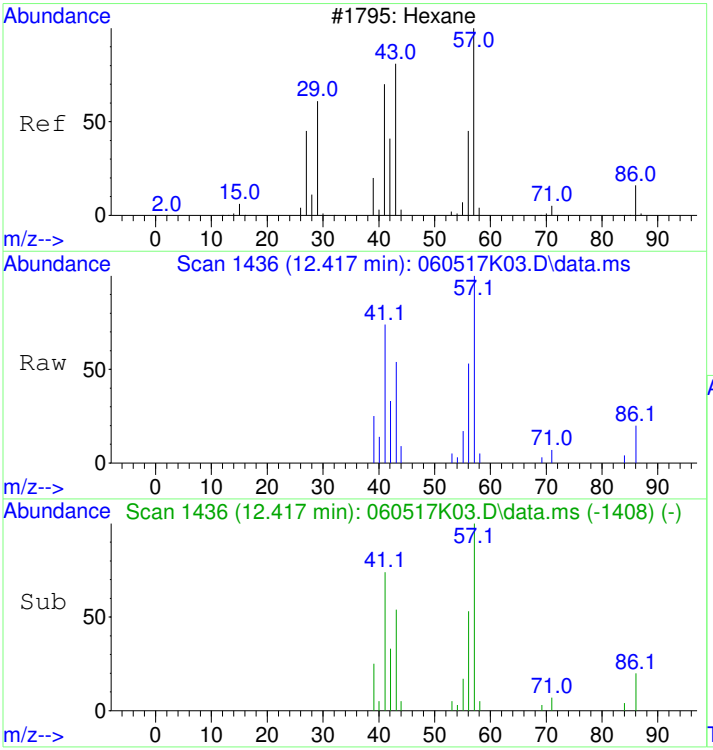


#20
trans-1,2-Dichloroethene
Concen: 1.23 ppbv
RT: 11.888 min Scan# 1349
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 61 Resp: 16743

Ion	Ratio	Lower	Upper
61	100		
96	72.7	56.8	96.8

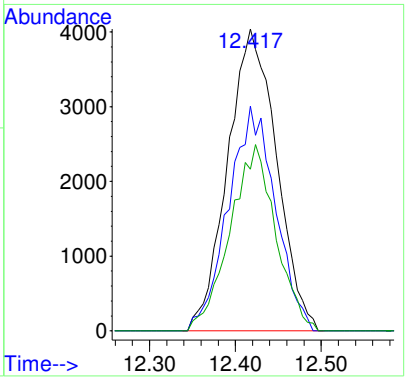


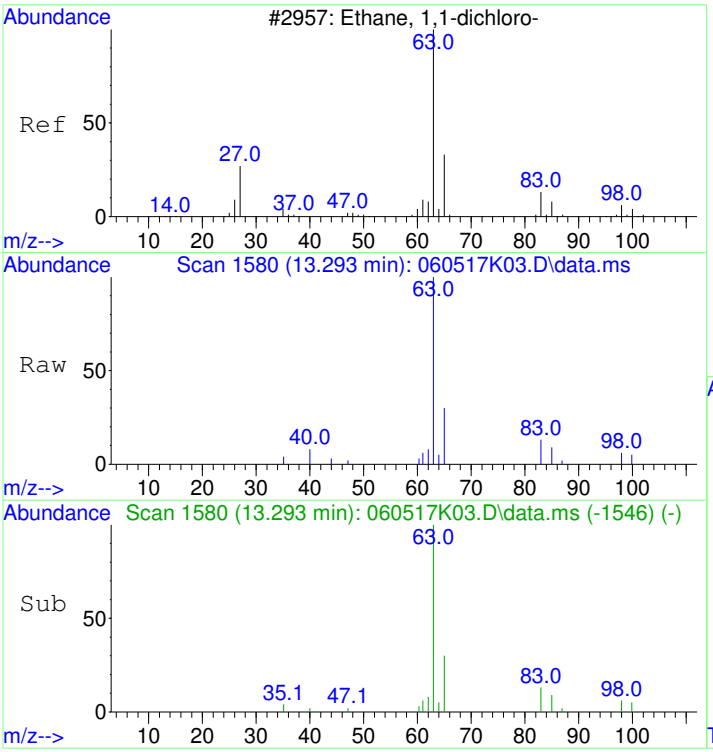


#21
Hexane
Concen: 1.11 ppbv
RT: 12.417 min Scan# 1436
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 57 Resp: 16017

Ion	Ratio	Lower	Upper
57	100		
41	71.4	45.2	85.2
43	57.4	36.6	76.6

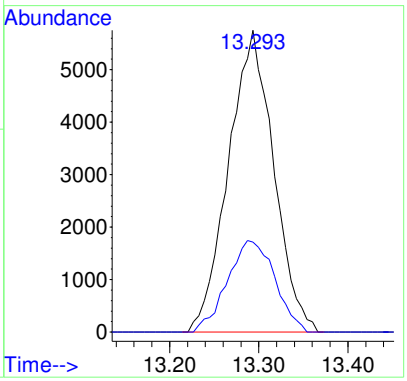


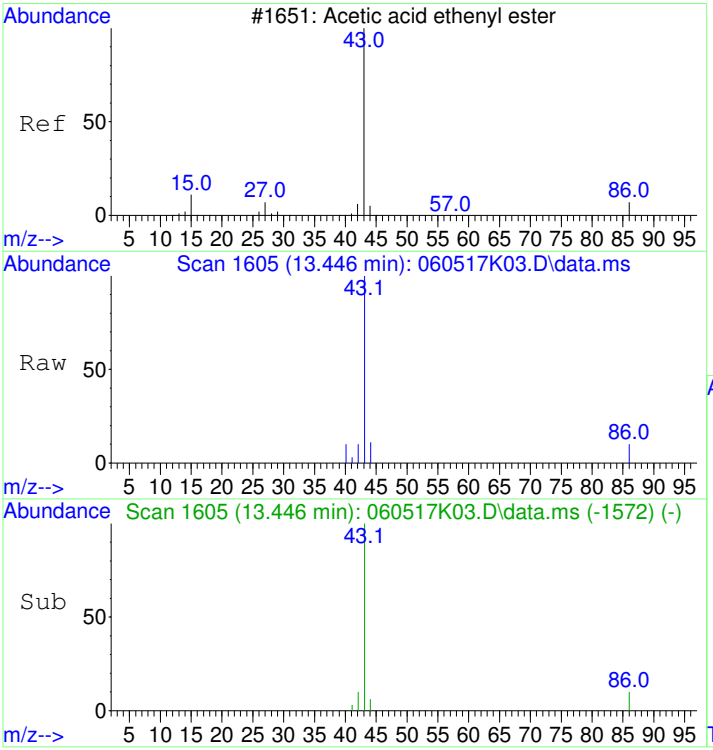


#22
1,1-Dichloroethane
Concen: 1.09 ppbv
RT: 13.293 min Scan# 1580
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 63 Resp: 20211

Ion	Ratio	Lower	Upper
63	100		
65	31.8	12.5	52.5

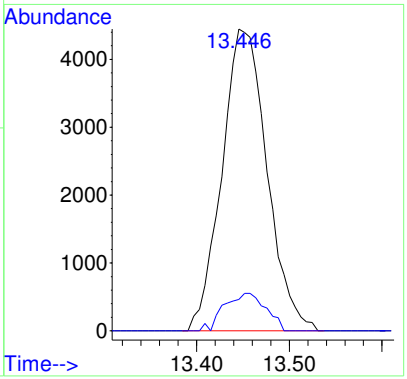


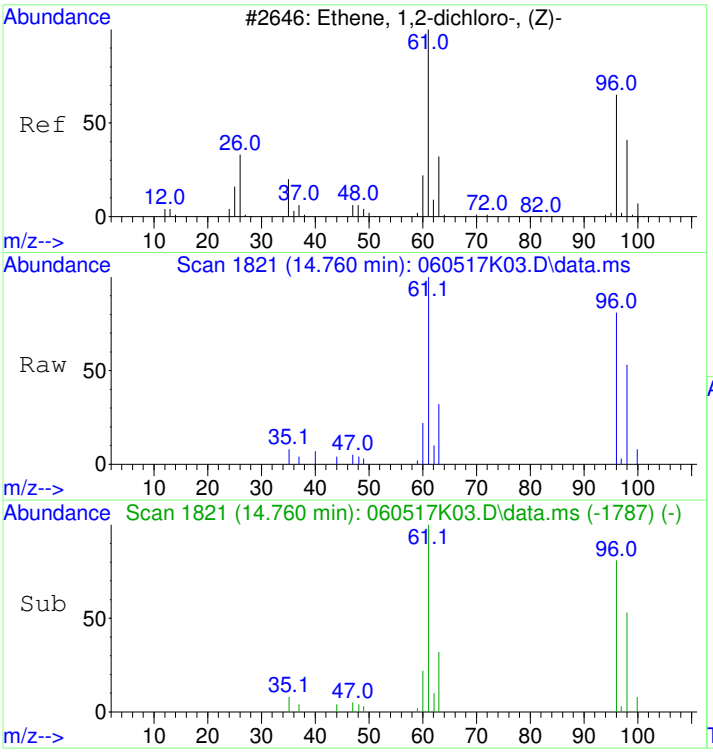


#23
Vinyl acetate
Concen: 1.06 ppbv
RT: 13.446 min Scan# 1605
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 43 Resp: 15018

Ion	Ratio	Lower	Upper
43	100		
86	11.5	0.0	31.8

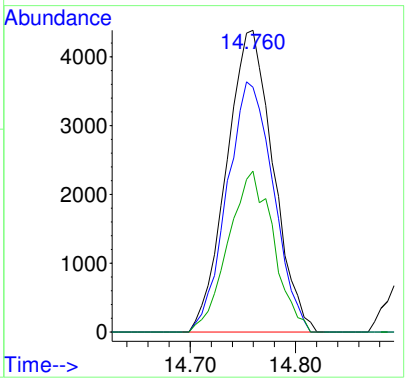


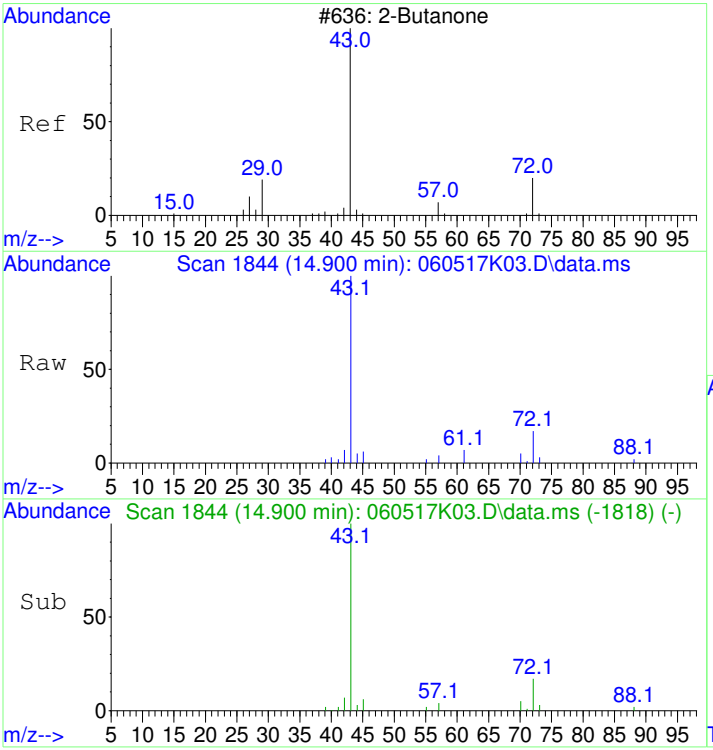


#24
cis-1,2-Dichloroethene
Concen: 1.10 ppbv
RT: 14.760 min Scan# 1821
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 61 Resp: 13473

Ion	Ratio	Lower	Upper
61	100		
96	82.6	64.3	104.3
98	51.8	33.1	73.1

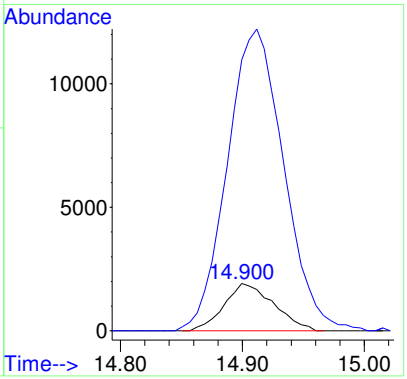


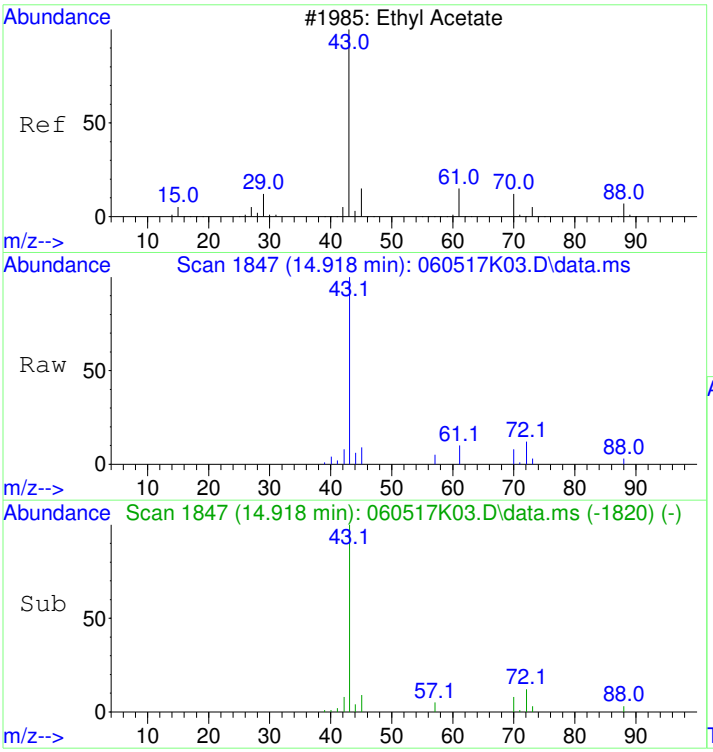


#25
2-Butanone (MEK)
Concen: 1.13 ppbv
RT: 14.900 min Scan# 1844
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 72 Resp: 5409

Ion	Ratio	Lower	Upper
72	100		
43	727.9	697.6	717.6#

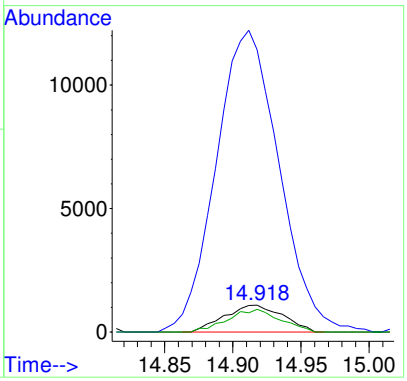


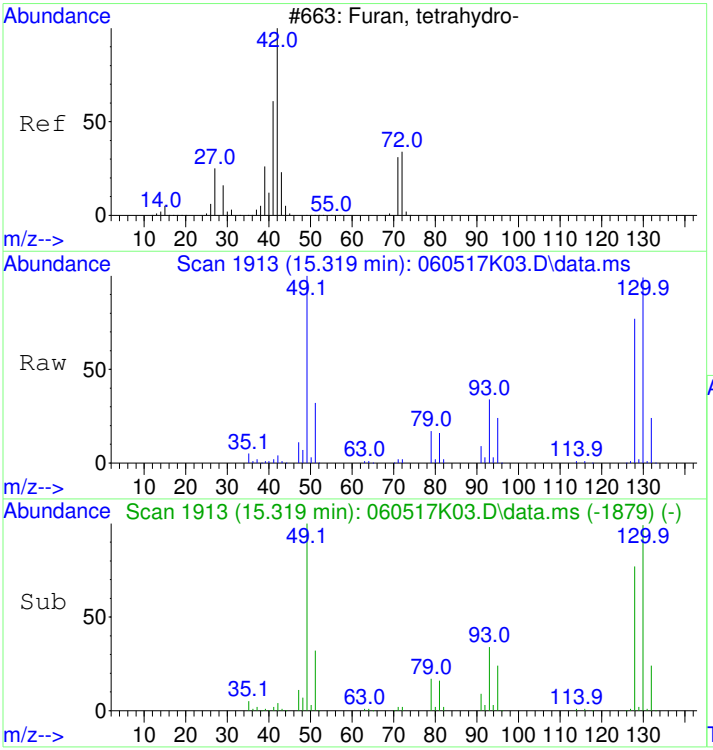


#26
Ethyl acetate
Concen: 1.14 ppbv
RT: 14.918 min Scan# 1847
Delta R.T. 0.012 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 61 Resp: 3252

Ion	Ratio	Lower	Upper
61	100		
43	1210.6	1172.3	1192.3#
70	76.1	63.8	83.8

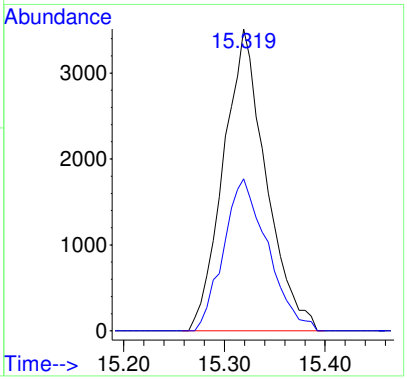


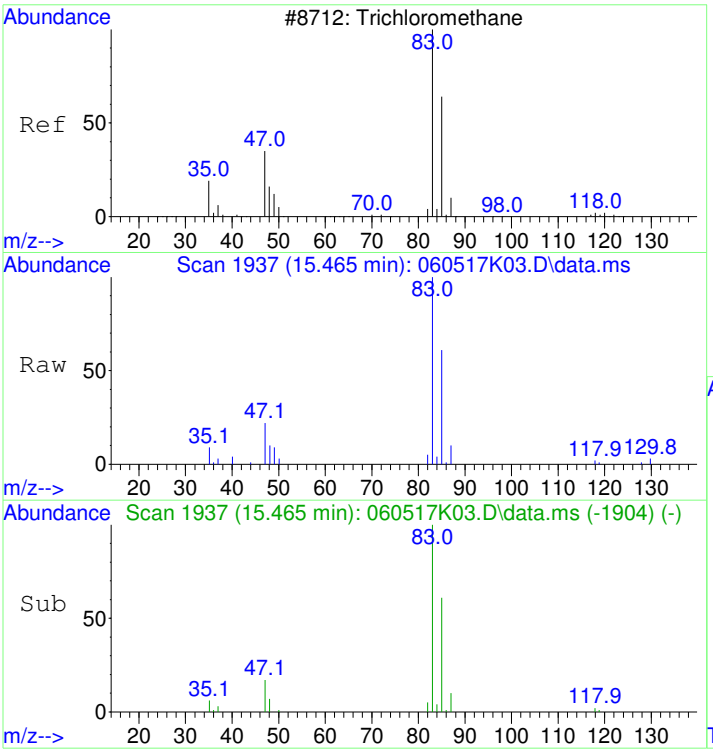


#27
Tetrahydrofuran
Concen: 1.14 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.018 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 42 Resp: 10308

Ion	Ratio	Lower	Upper
42	100		
72	52.3	35.6	75.6

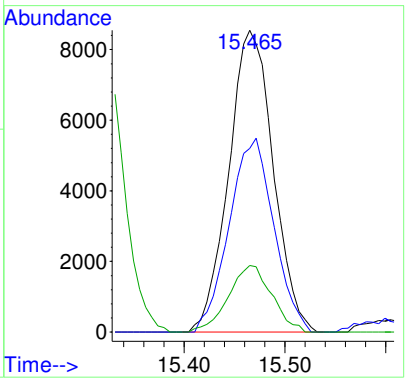


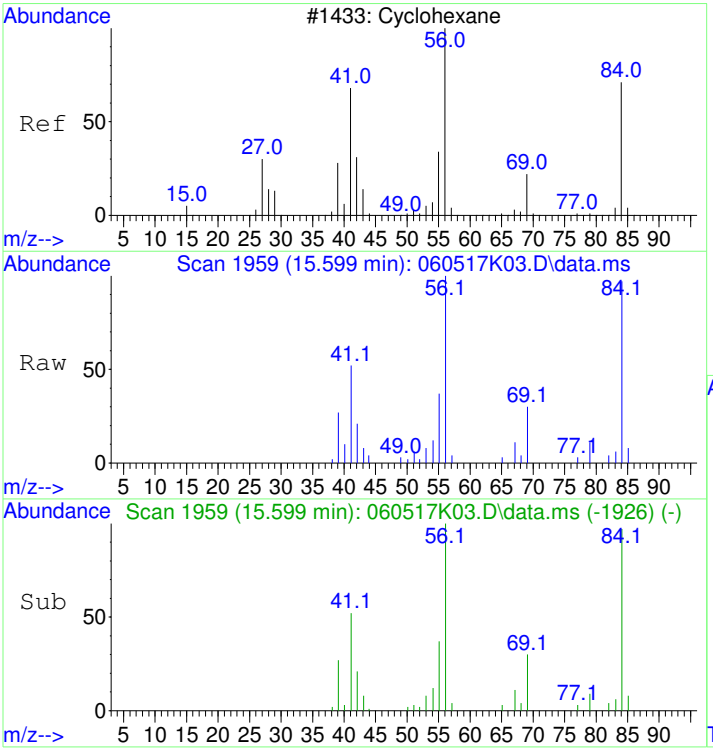


#28
Chloroform
Concen: 1.17 ppbv
RT: 15.465 min Scan# 1937
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 83 Resp: 26223

Ion	Ratio	Lower	Upper
83	100		
85	64.4	45.0	85.0
47	21.5	0.8	40.8

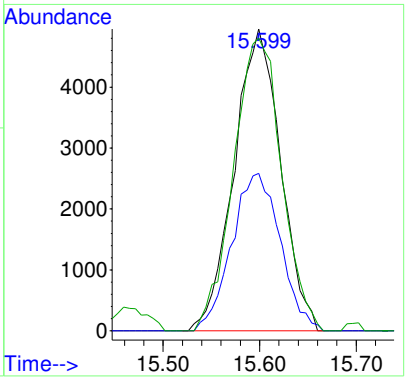


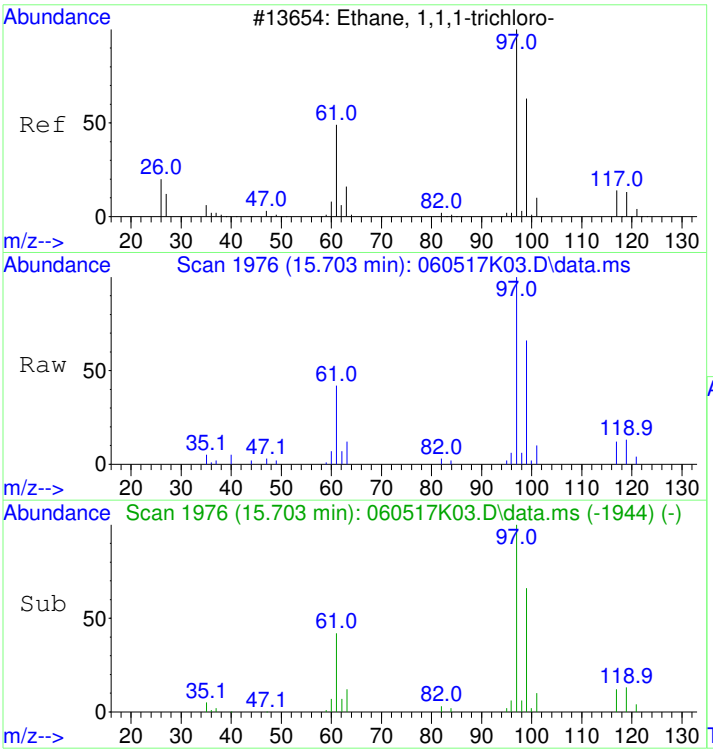


#29
Cyclohexane
Concen: 1.14 ppbv
RT: 15.599 min Scan# 1959
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 56 Resp: 16580

Ion	Ratio	Lower	Upper
56	100		
41	54.4	30.8	70.8
84	100.5	80.0	120.0

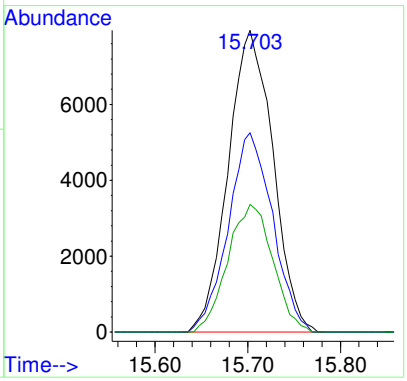


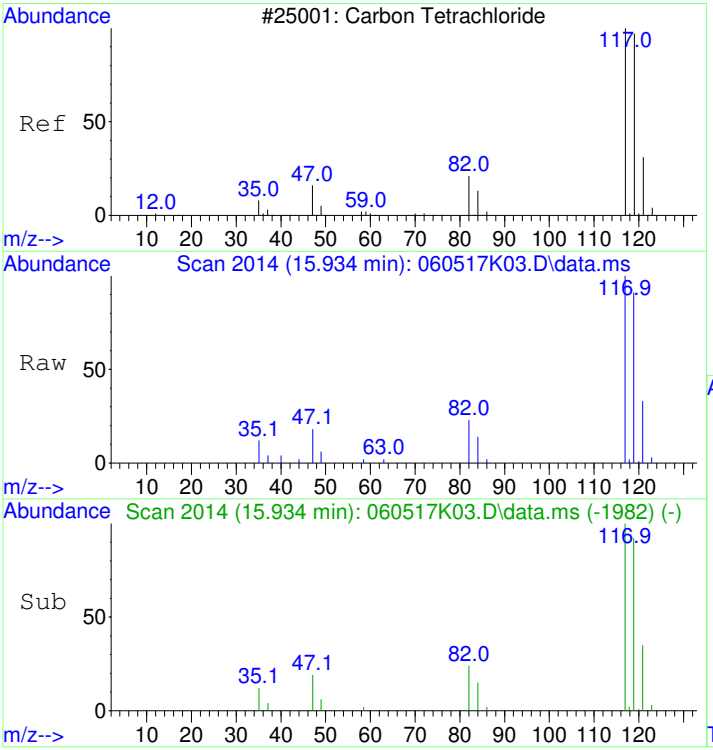


#30
1,1,1-Trichloroethane
Concen: 1.12 ppbv
RT: 15.703 min Scan# 1976
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 97 Resp: 26713

Ion	Ratio	Lower	Upper
97	100		
99	65.4	44.3	84.3
61	42.5	21.1	61.1

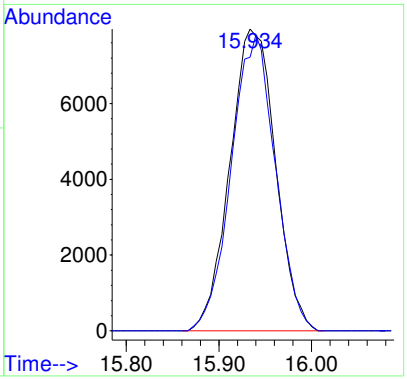


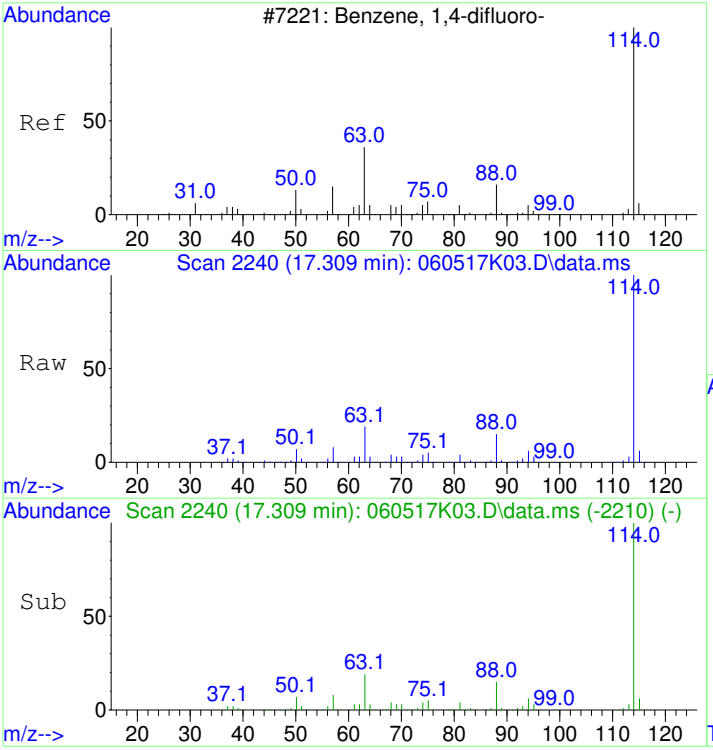


#31
Carbon tetrachloride
Concen: 1.13 ppbv
RT: 15.934 min Scan# 2014
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:117 Resp: 27211

Ion	Ratio	Lower	Upper
117	100		
119	94.7	76.1	116.1

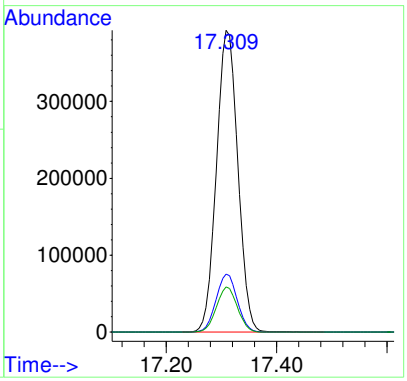


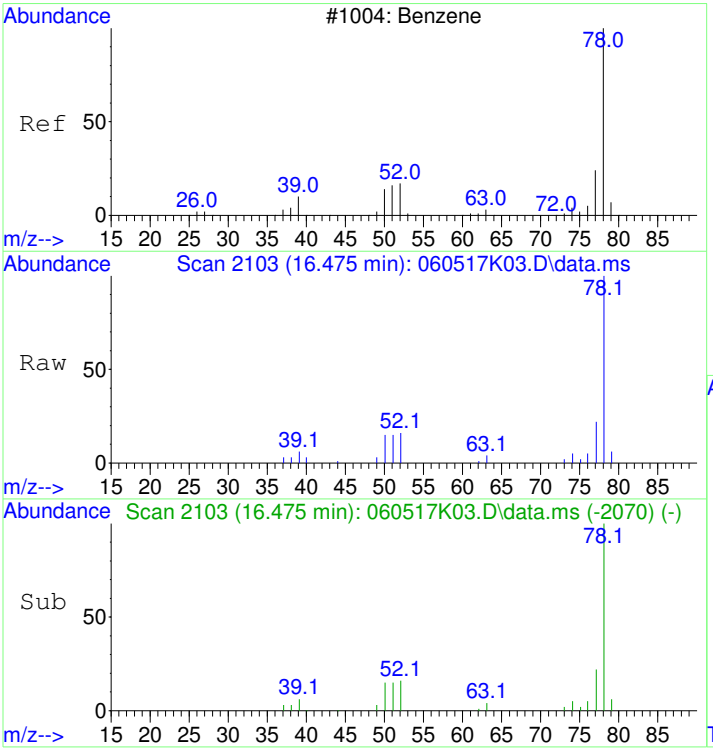


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.309 min Scan# 2240
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:114 Resp: 1055850

Ion	Ratio	Lower	Upper
114	100		
63	19.1	0.0	39.1
88	14.6	0.0	34.7

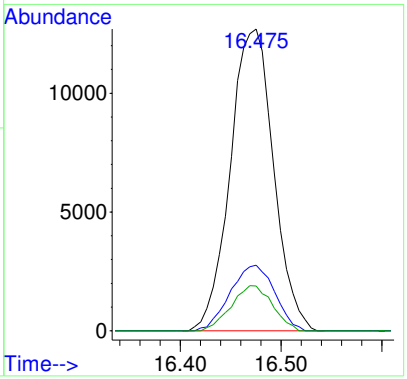


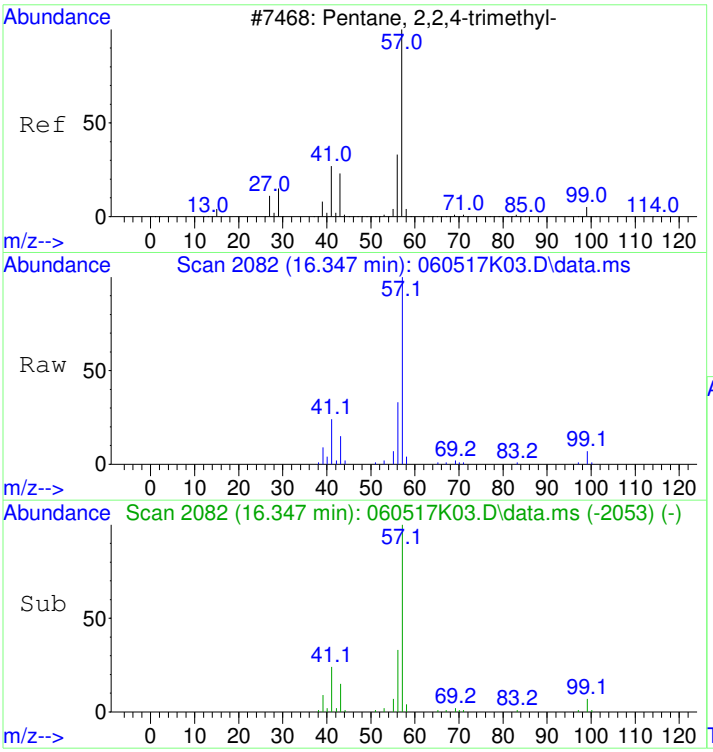


#33
Benzene
Concen: 1.17 ppbv
RT: 16.475 min Scan# 2103
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 78 Resp: 37887

Ion	Ratio	Lower	Upper
78	100		
77	22.4	2.9	42.9
50	14.2	0.0	34.4

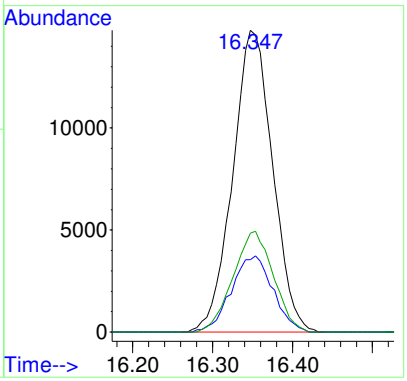


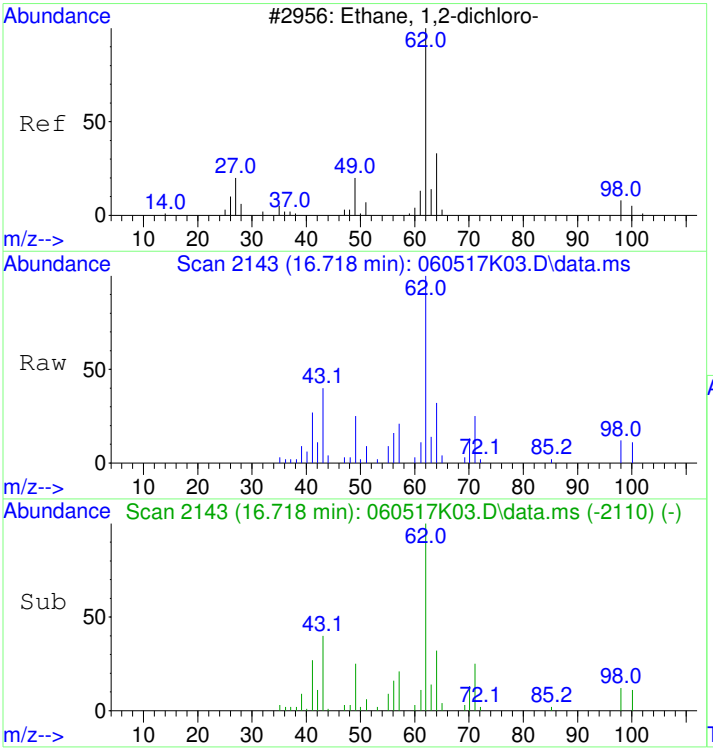


#34
2,2,4-Trimethylpentane
Concen: 1.13 ppbv
RT: 16.347 min Scan# 2082
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 57 Resp: 51234

Ion	Ratio	Lower	Upper
57	100		
41	26.3	4.6	44.6
56	33.7	12.4	52.4

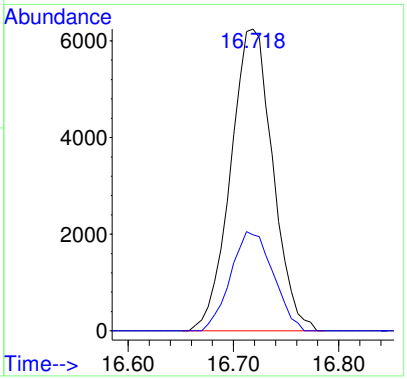


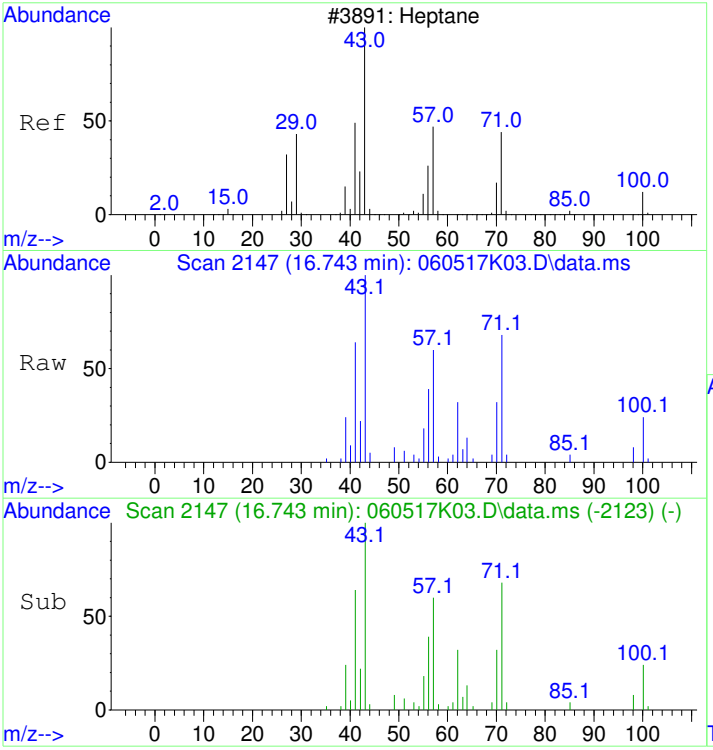


#35
1,2-Dichloroethane
Concen: 1.14 ppbv
RT: 16.718 min Scan# 2143
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 62 Resp: 17373

Ion	Ratio	Lower	Upper
62	100		
64	33.1	12.4	52.4

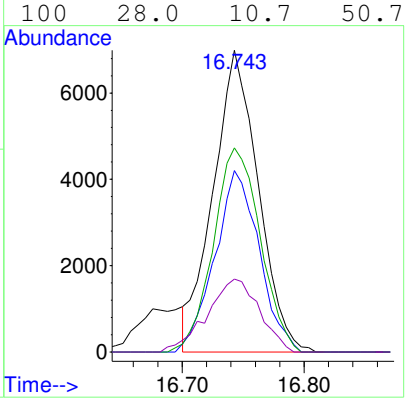


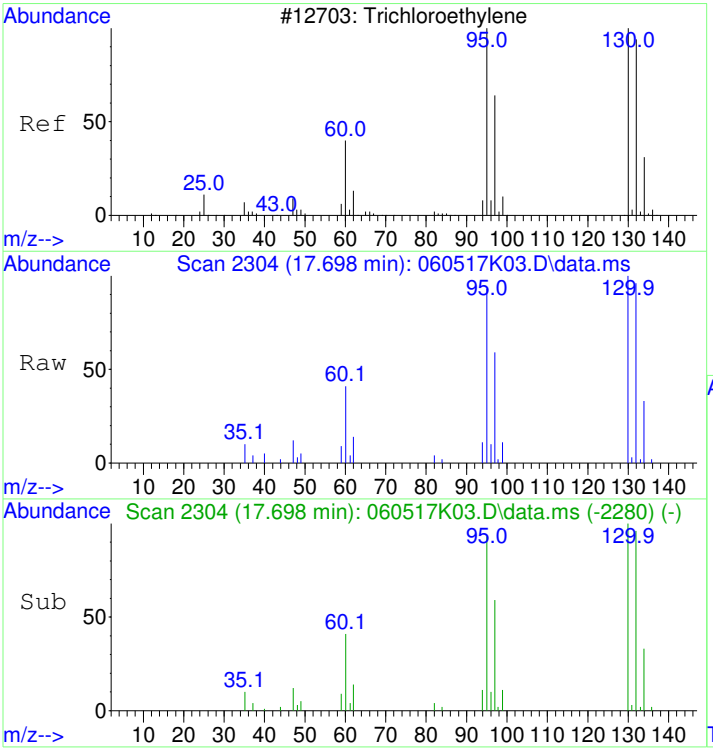


#36
Heptane
Concen: 1.18 ppbv
RT: 16.743 min Scan# 2147
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 43 Resp: 17984

Ion	Ratio	Lower	Upper
43	100		
57	59.2	43.1	83.1
71	70.3	55.3	95.3
100	28.0	10.7	50.7

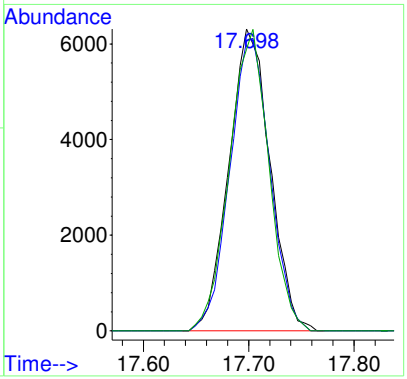


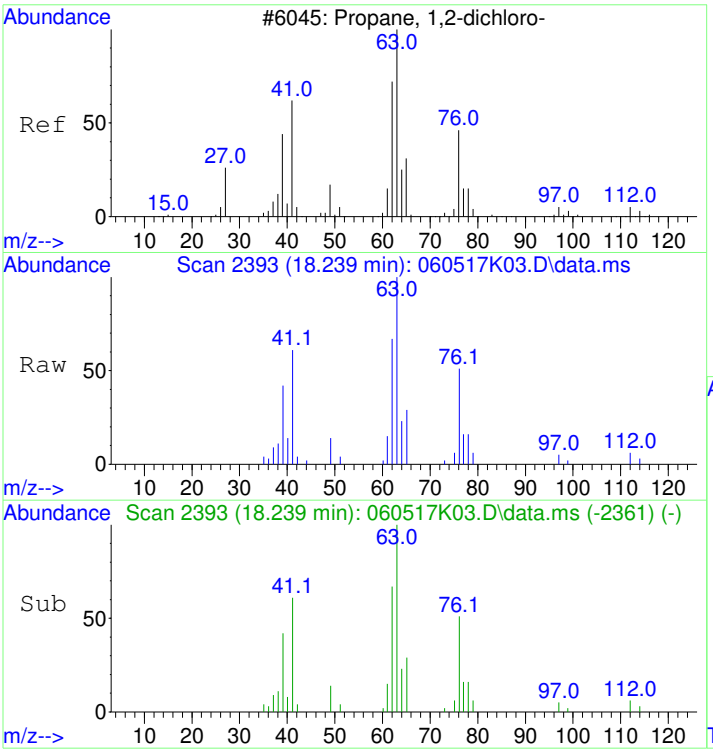


#37
Trichloroethene
Concen: 1.17 ppbv
RT: 17.698 min Scan# 2304
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:130 Resp: 17147

Ion	Ratio	Lower	Upper
130	100		
132	94.8	75.8	115.8
95	95.7	73.6	113.6

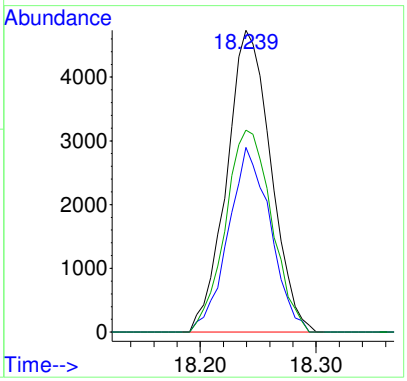


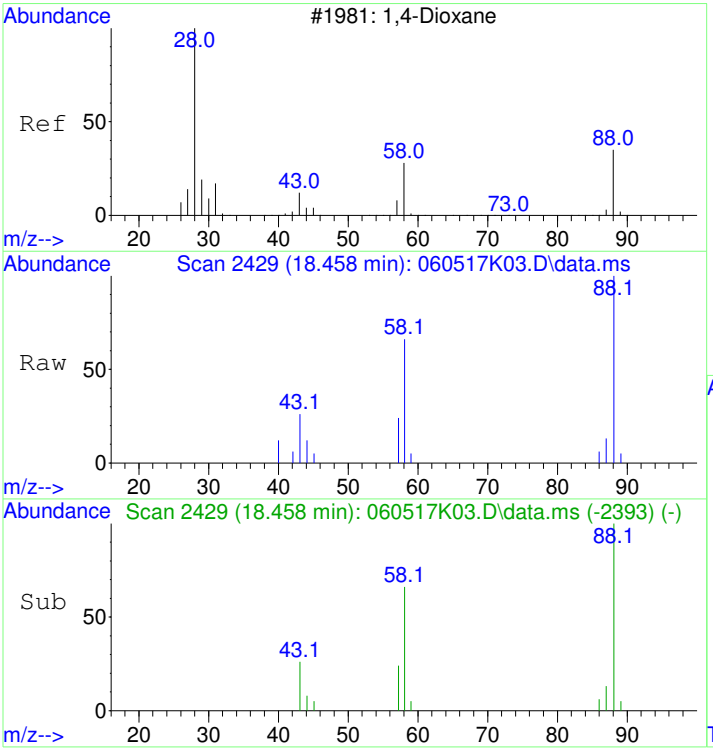


#38
1,2-Dichloropropane
Concen: 1.16 ppbv
RT: 18.239 min Scan# 2393
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 63 Resp: 12560

Ion	Ratio	Lower	Upper
63	100		
41	58.4	35.1	75.1
62	70.0	50.1	90.1

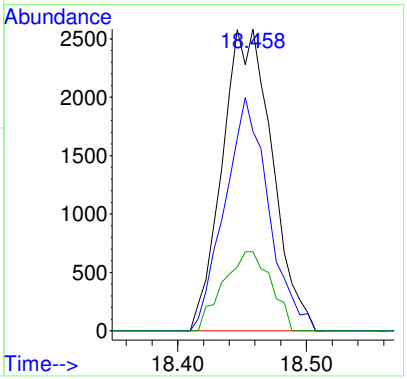


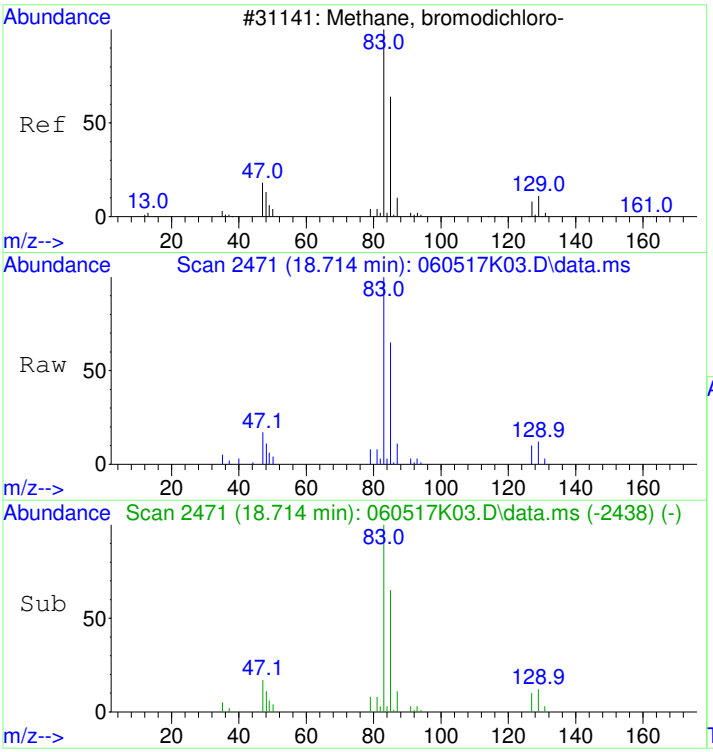


#39
1,4-Dioxane
Concen: 1.03 ppbv
RT: 18.458 min Scan# 2429
Delta R.T. 0.018 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 88 Resp: 6965

Ion	Ratio	Lower	Upper
88	100		
58	68.0	40.1	80.1
43	25.1	4.2	44.2

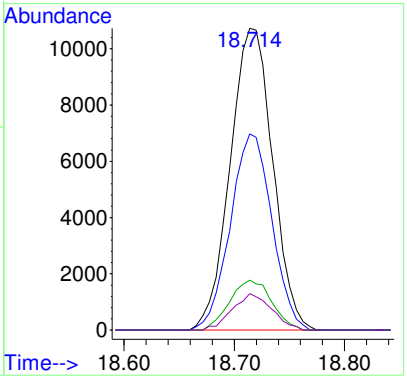


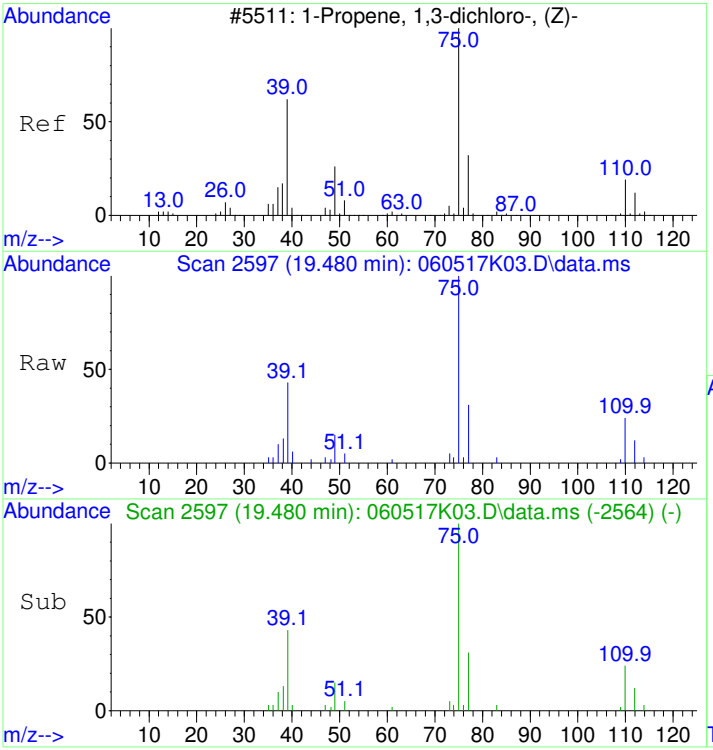


#40
Bromodichloromethane
Concen: 1.15 ppbv
RT: 18.714 min Scan# 2471
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 83 Resp: 28887

Ion	Ratio	Lower	Upper
83	100		
85	63.4	43.9	83.9
47	16.3	0.0	36.3
129	11.2	0.0	31.5

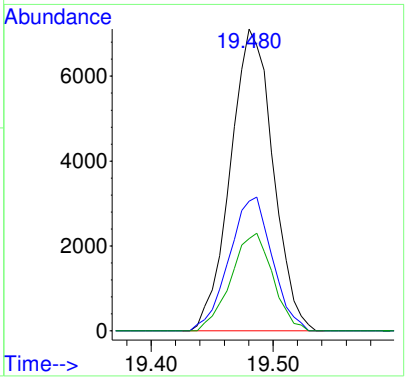


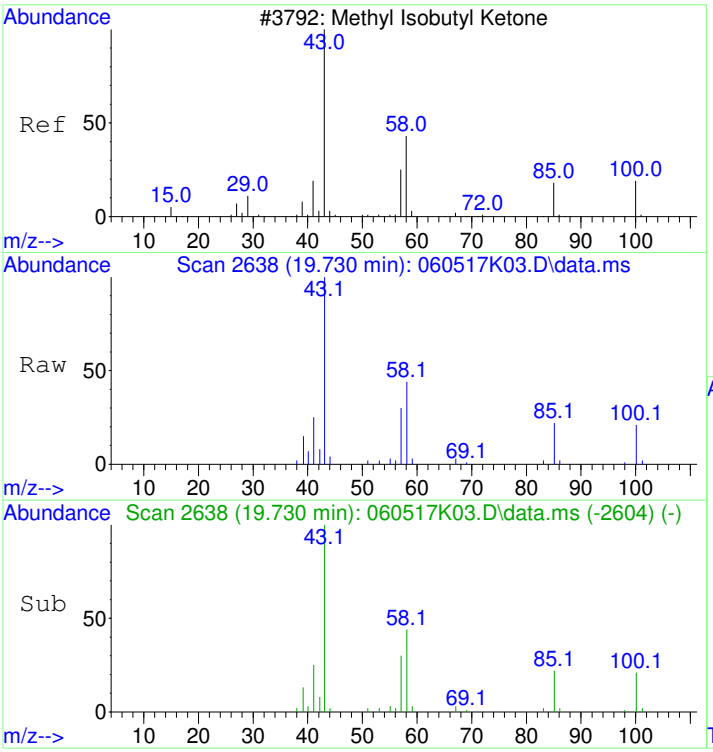


#41
cis-1,3-Dichloropropene
Concen: 1.05 ppbv
RT: 19.480 min Scan# 2597
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 75 Resp: 17273

Ion	Ratio	Lower	Upper
75	100		
39	44.7	23.1	63.1
77	31.7	11.7	51.7

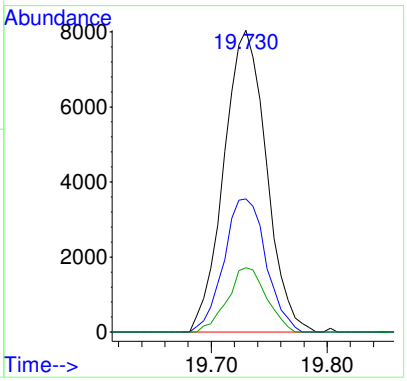


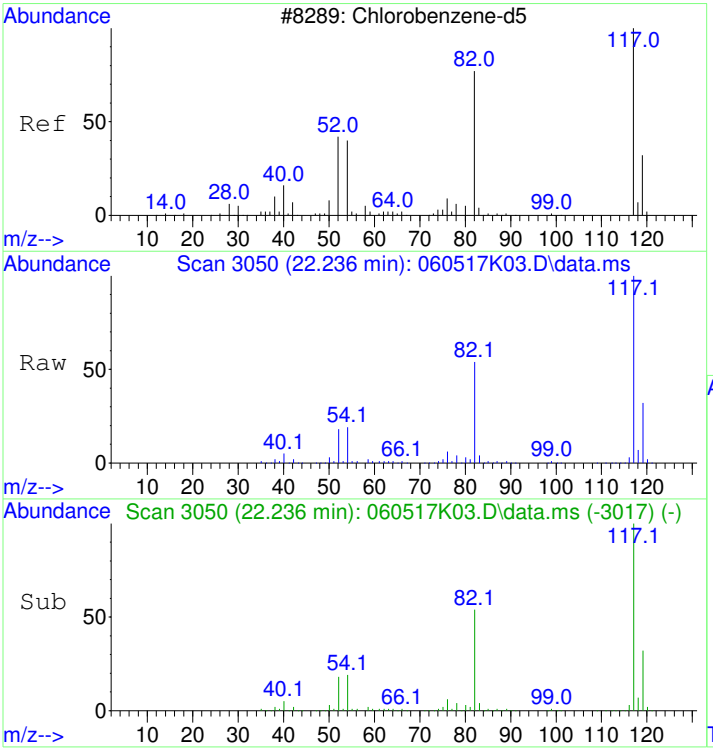


#42
4-Methyl-2-pentanone (MIBK)
Concen: 1.07 ppbv
RT: 19.730 min Scan# 2638
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 43 Resp: 20533

Ion	Ratio	Lower	Upper
43	100		
58	43.7	24.2	64.2
100	19.5	0.0	39.4

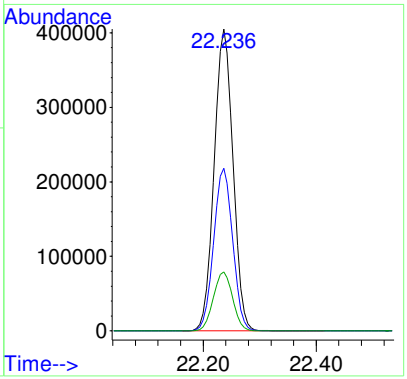


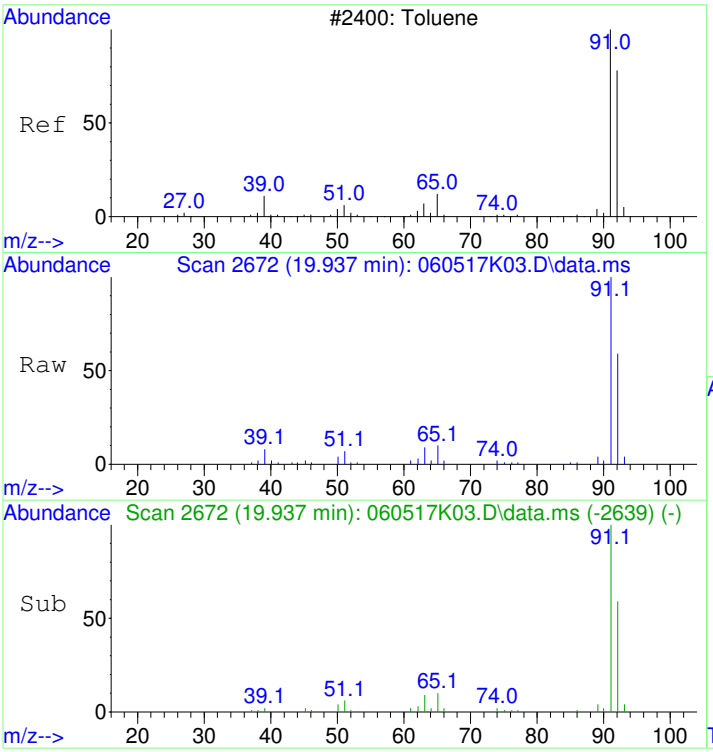


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:117 Resp: 937918

Ion	Ratio	Lower	Upper
117	100		
82	54.3	33.7	73.7
54	19.9	0.0	39.6

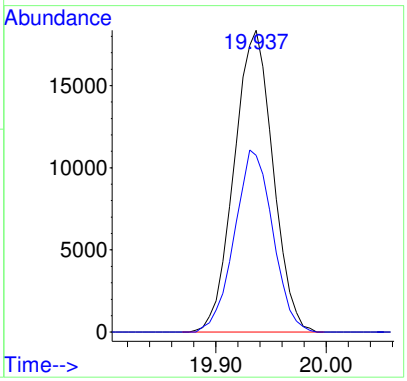


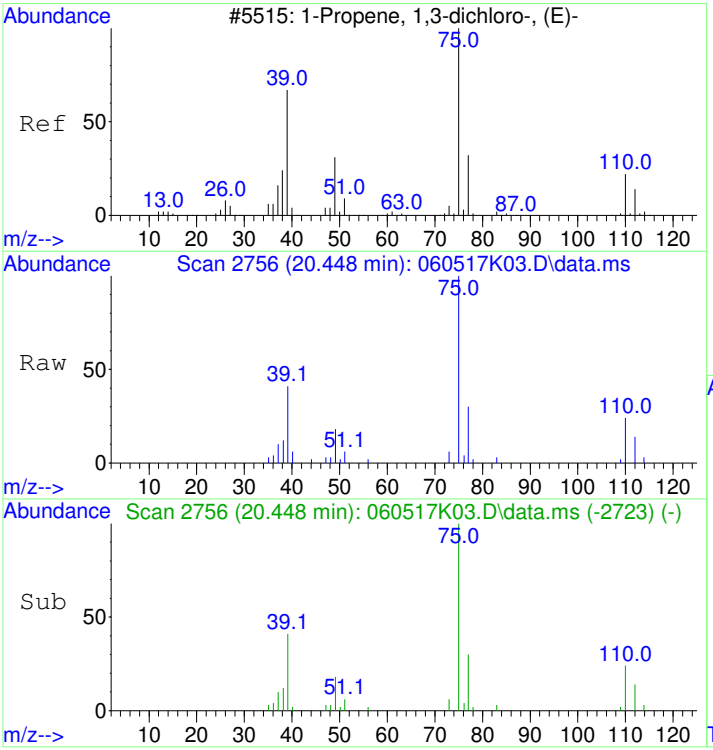


#44
Toluene
Concen: 1.15 ppbv
RT: 19.937 min Scan# 2672
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 91 Resp: 45123

Ion	Ratio	Lower	Upper
91	100		
92	59.5	39.8	79.8

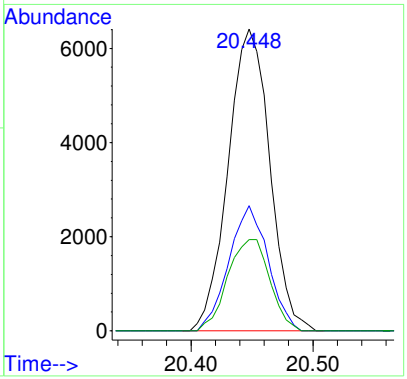


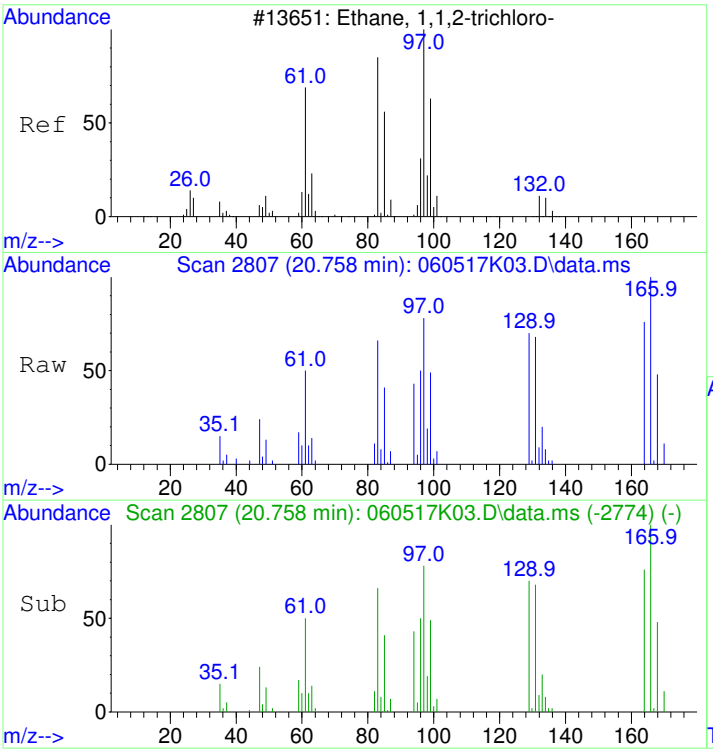


#45
trans-1,3-Dichloropropene
Concen: 0.98 ppbv
RT: 20.448 min Scan# 2756
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 75 Resp: 15213

Ion	Ratio	Lower	Upper
75	100		
39	39.0	19.8	59.8
77	30.5	11.5	51.5

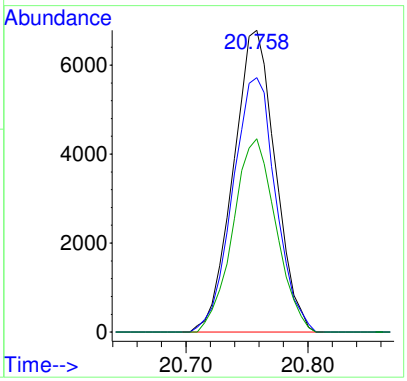


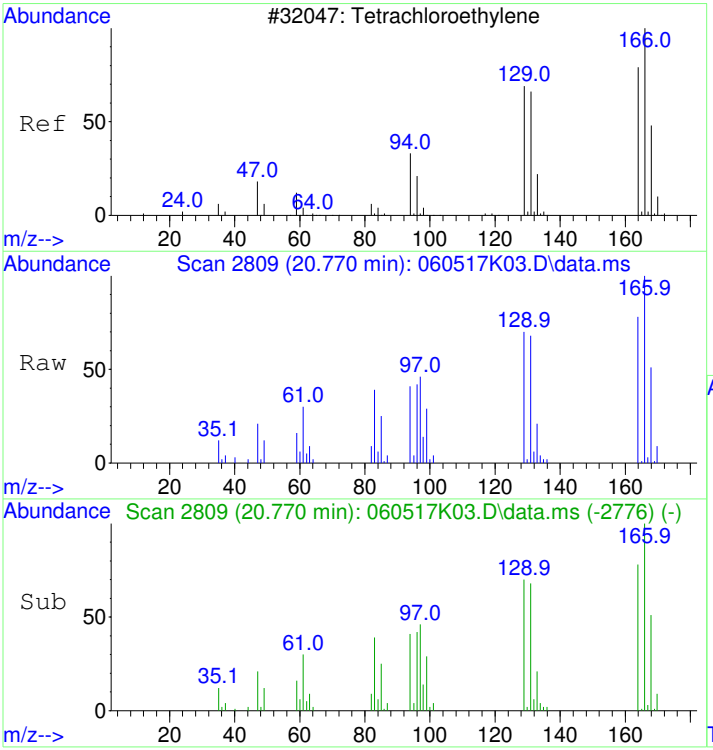


#46
1,1,2-Trichloroethane
Concen: 1.18 ppbv
RT: 20.758 min Scan# 2807
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 97 Resp: 16238

Ion	Ratio	Lower	Upper
97	100		
83	86.4	63.8	103.8
61	65.2	45.1	85.1

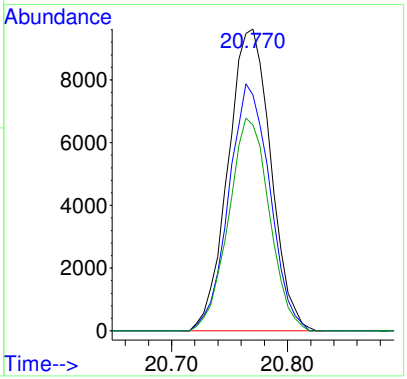


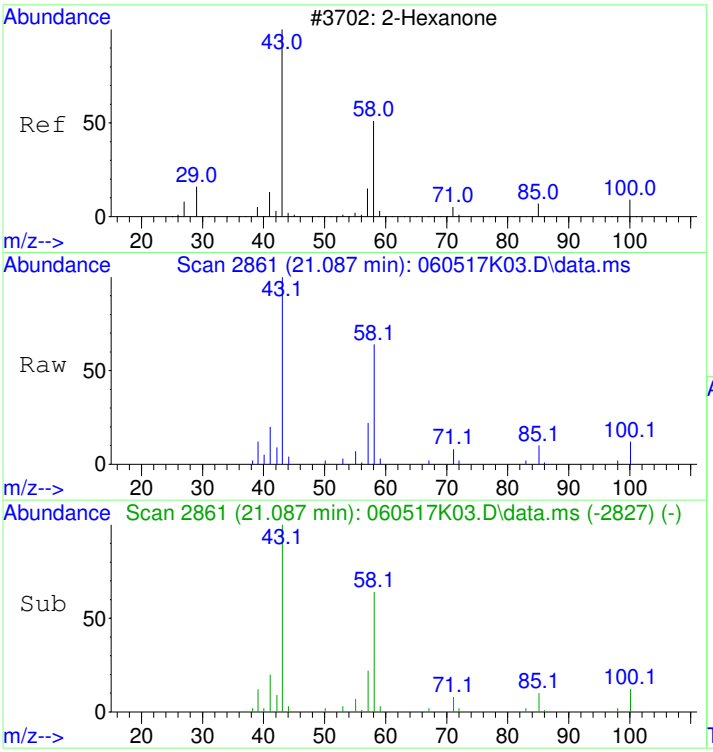


#47
Tetrachloroethene
Concen: 1.17 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:166 Resp: 24660

Ion	Ratio	Lower	Upper
166	100		
164	78.5	57.9	97.9
131	67.1	46.1	86.1

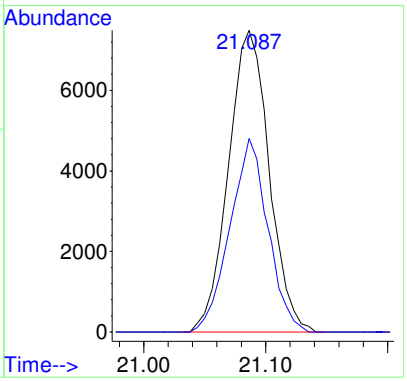


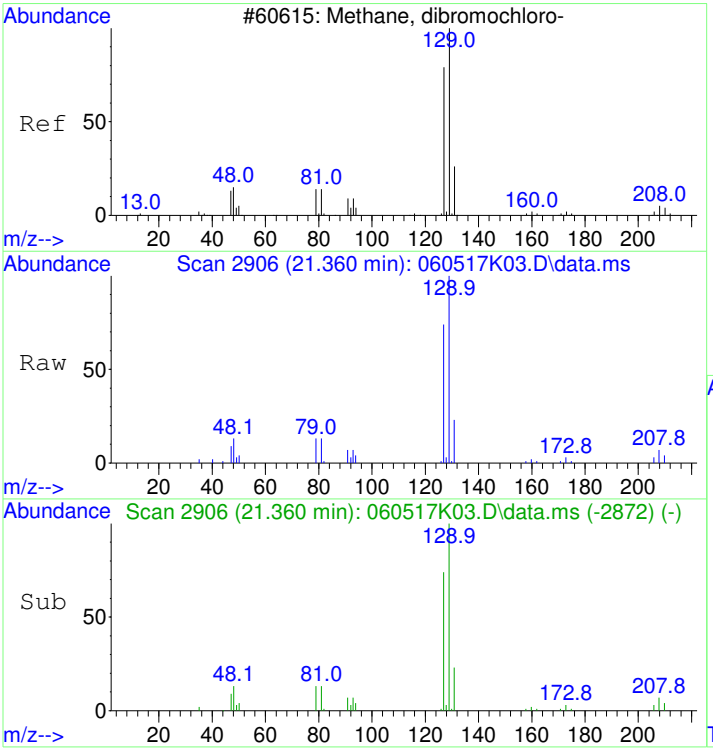


#48
2-Hexanone
Concen: 1.01 ppbv
RT: 21.087 min Scan# 2861
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 43 Resp: 17356

Ion	Ratio	Lower	Upper
43	100		
58	59.9	40.8	80.8

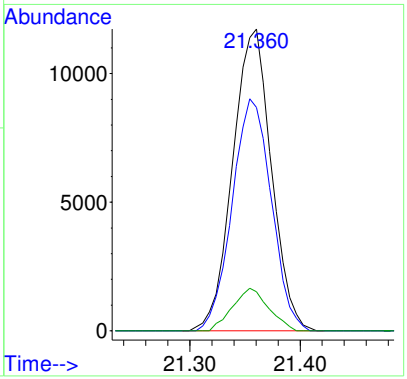


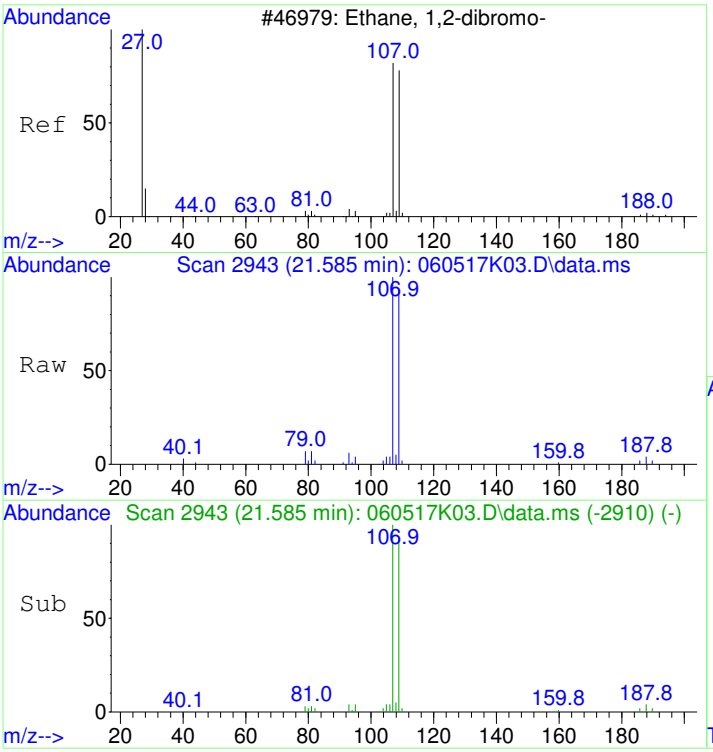


#49
Chlorodibromomethane
Concen: 1.15 ppbv
RT: 21.360 min Scan# 2906
Delta R.T. 0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:129 Resp: 28716

Ion	Ratio	Lower	Upper
129	100		
127	77.7	57.7	97.7
79	13.1	0.0	33.0

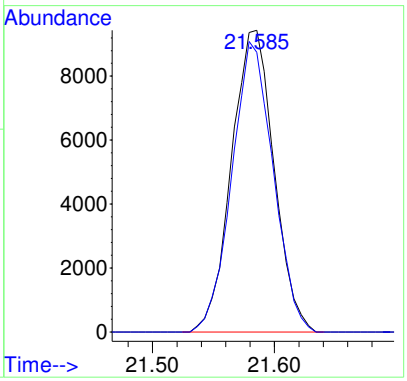


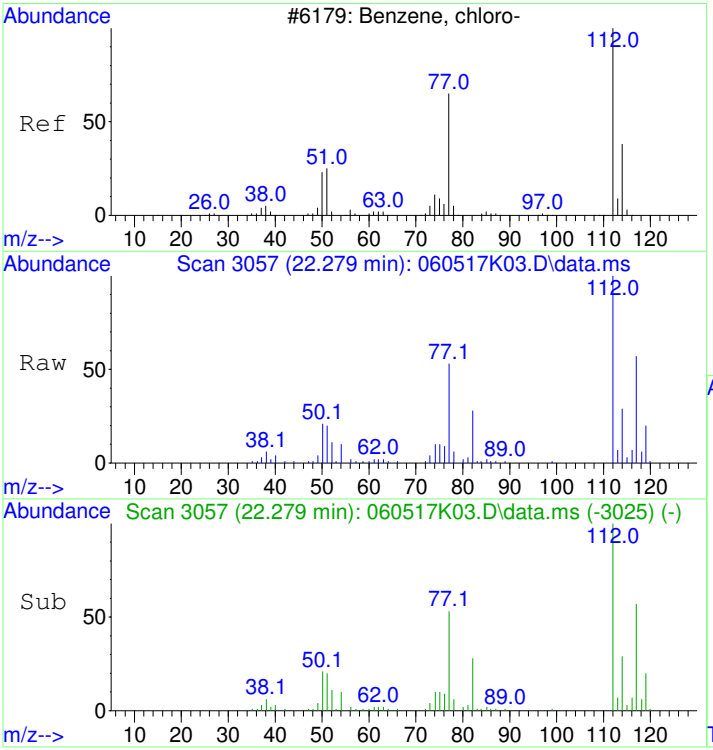


#50
1,2-Dibromoethane (EDB)
Concen: 1.17 ppbv
RT: 21.585 min Scan# 2943
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:107 Resp: 22850

Ion	Ratio	Lower	Upper
107	100		
109	93.4	74.3	114.3

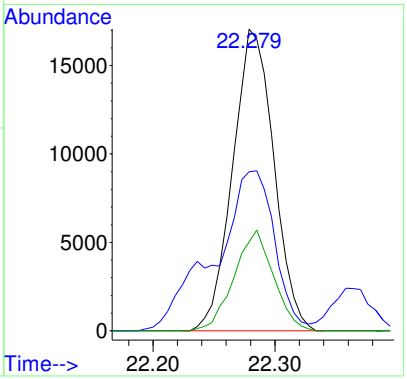


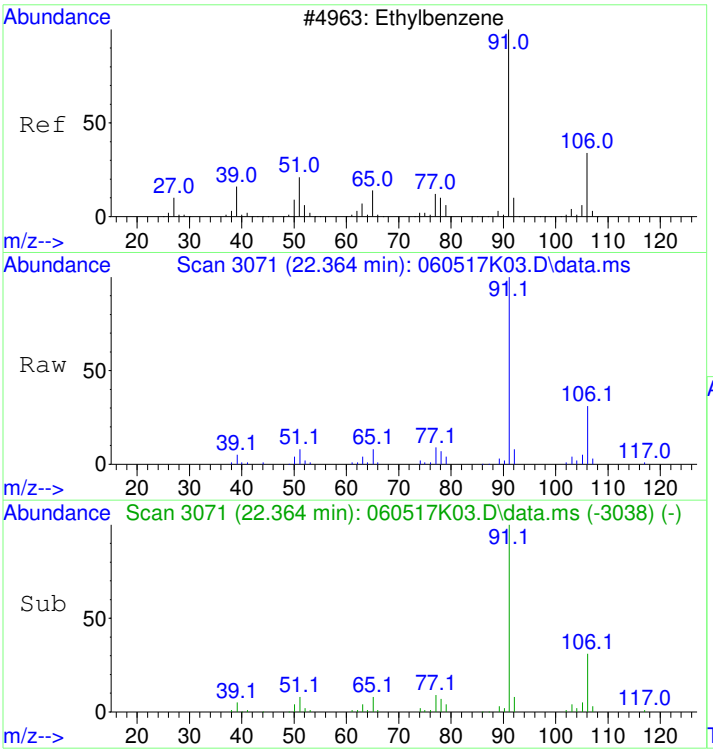


#51
Chlorobenzene
Concen: 1.20 ppbv
RT: 22.279 min Scan# 3057
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:112 Resp: 39961

Ion	Ratio	Lower	Upper
112	100		
77	77.6	38.1	78.1
114	31.9	12.6	52.6

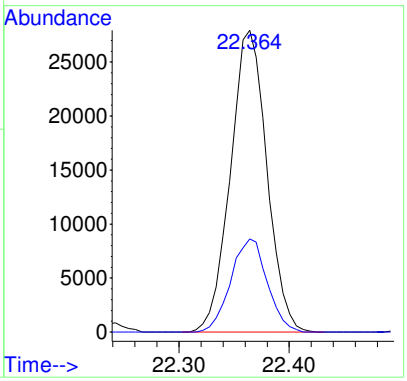


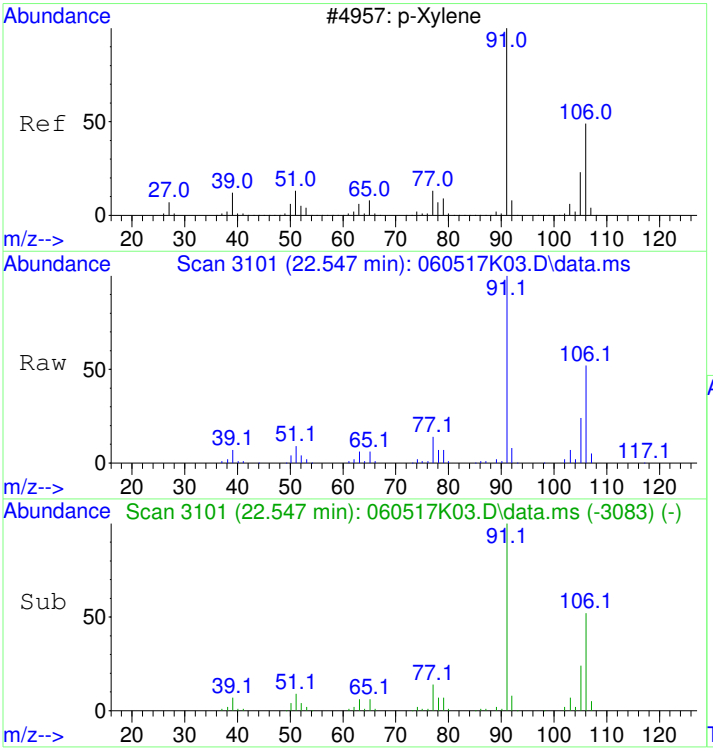


#52
Ethylbenzene
Concen: 1.18 ppbv
RT: 22.364 min Scan# 3071
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 91 Resp: 64418

Ion	Ratio	Lower	Upper
91	100		
106	30.9	11.5	51.5

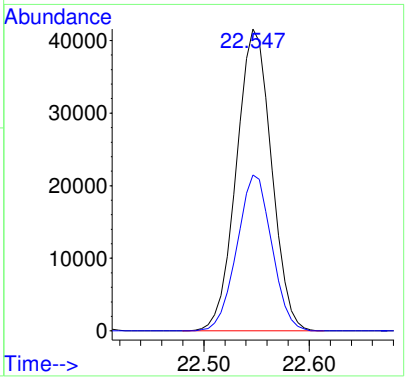


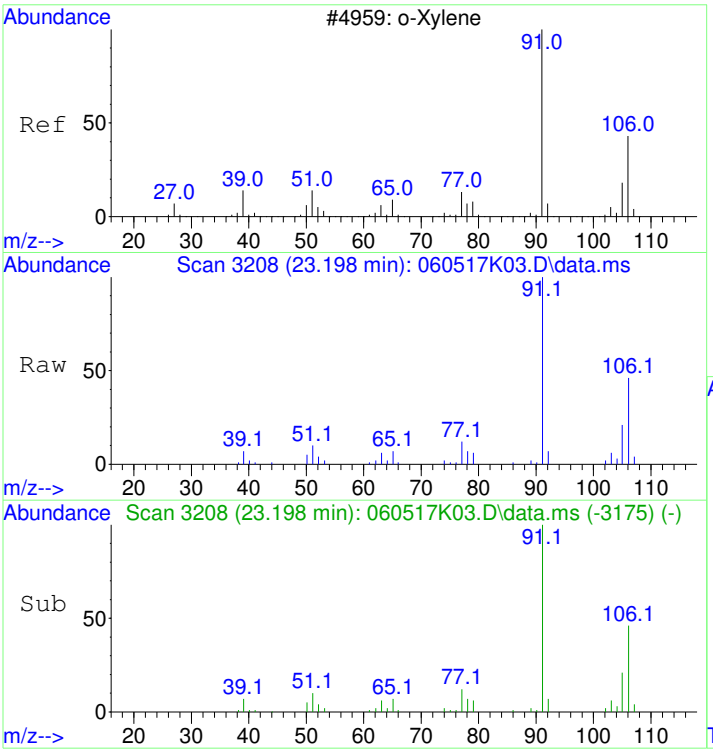


#53
m&p-Xylene
Concen: 2.31 ppbv
RT: 22.547 min Scan# 3101
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 91 Resp: 96318

Ion	Ratio	Lower	Upper
91	100		
106	51.2	31.1	71.1

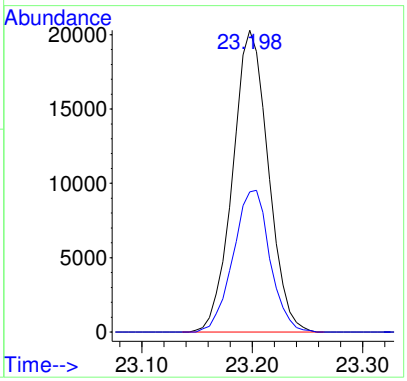


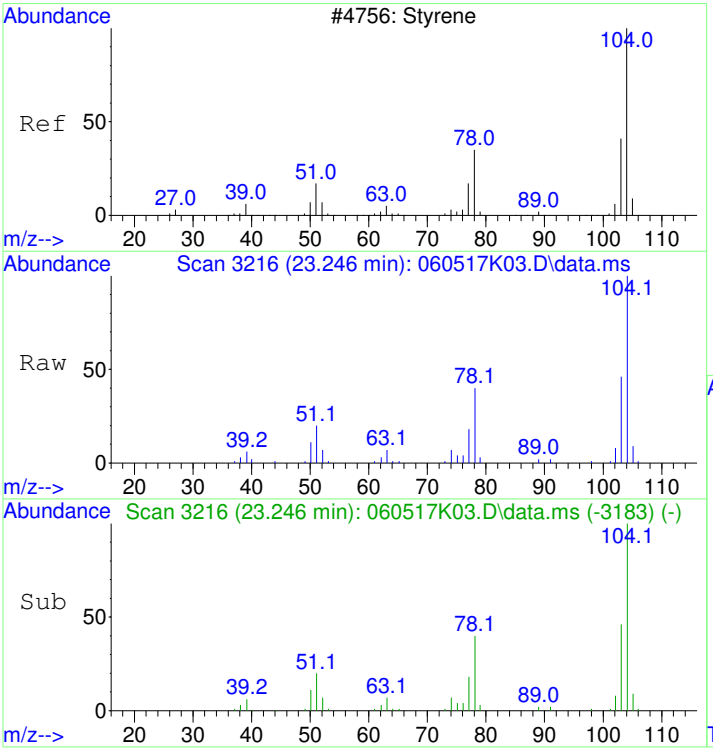


#54
o-Xylene
Concen: 1.10 ppbv
RT: 23.198 min Scan# 3208
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 91 Resp: 45755

Ion	Ratio	Lower	Upper
91	100		
106	48.5	28.6	68.6

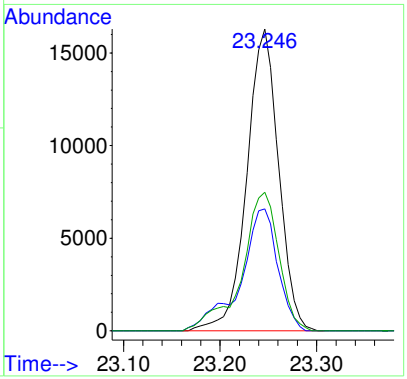


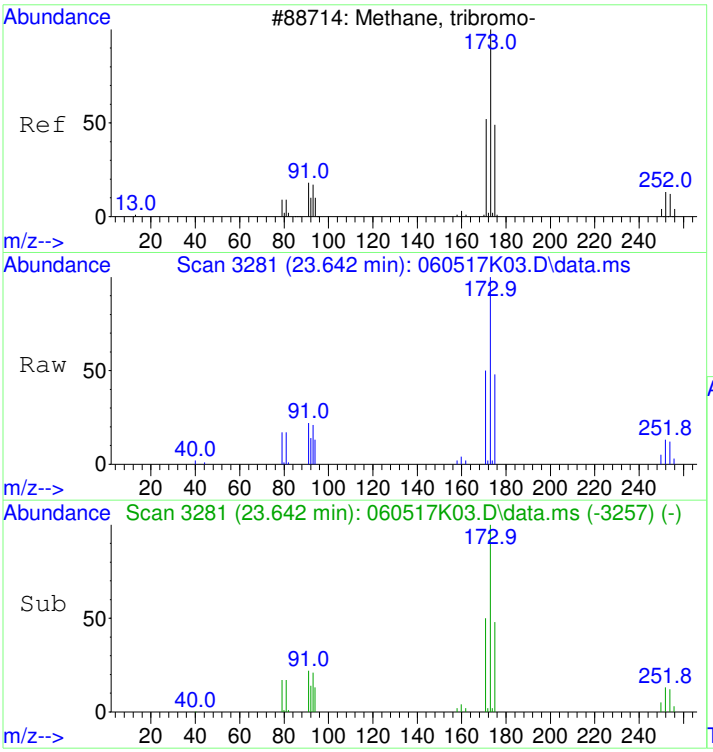


#55
Styrene
Concen: 1.08 ppbv
RT: 23.246 min Scan# 3216
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:104 Resp: 37299

Ion	Ratio	Lower	Upper
104	100		
78	47.3	27.1	67.1
103	53.2	33.1	73.1

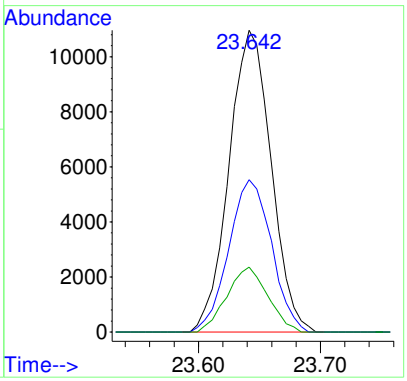


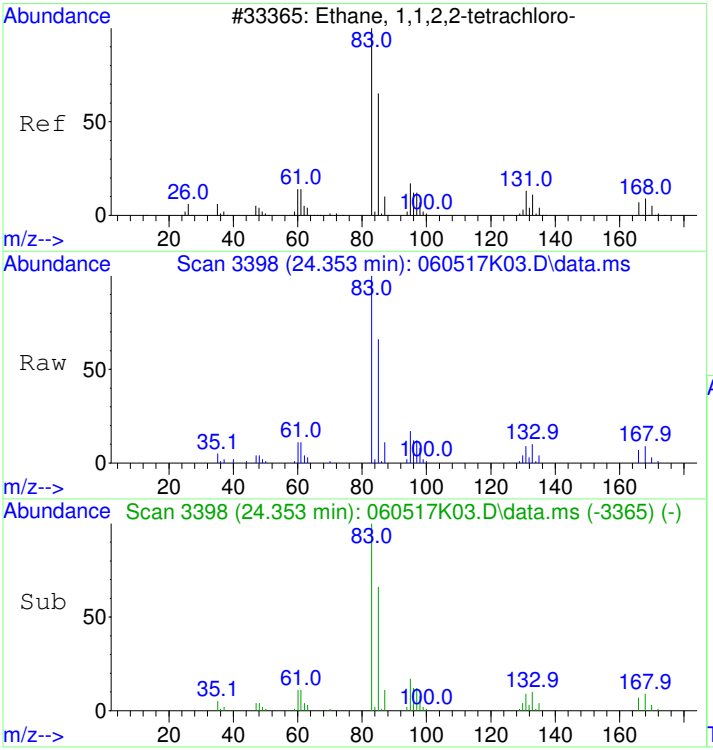


#56
Bromoform
Concen: 1.09 ppbv
RT: 23.642 min Scan# 3281
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:173 Resp: 26312

Ion	Ratio	Lower	Upper
173	100		
171	51.2	31.5	71.5
91	20.9	0.4	40.4

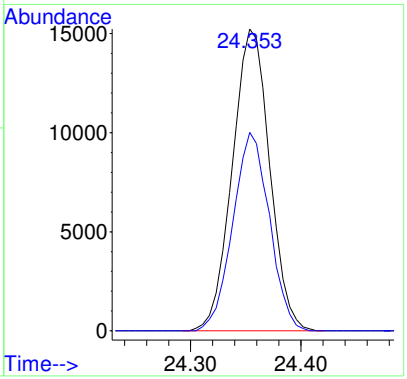


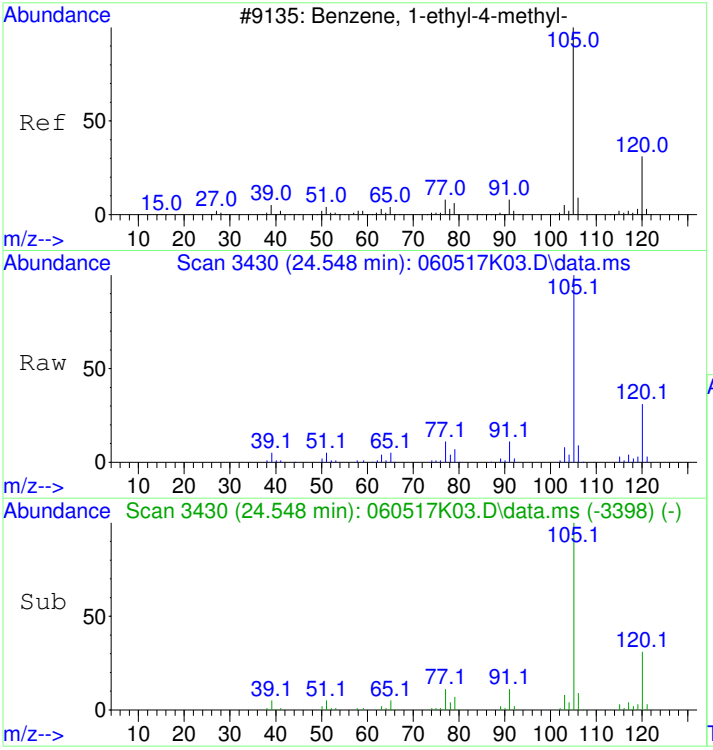


#57
1,1,2,2-Tetrachloroethane
Concen: 1.15 ppbv
RT: 24.353 min Scan# 3398
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 83 Resp: 36026

Ion	Ratio	Lower	Upper
83	100		
85	64.4	43.7	83.7

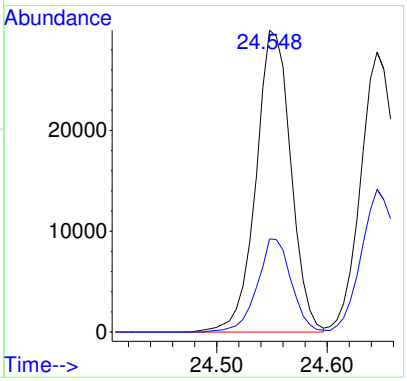


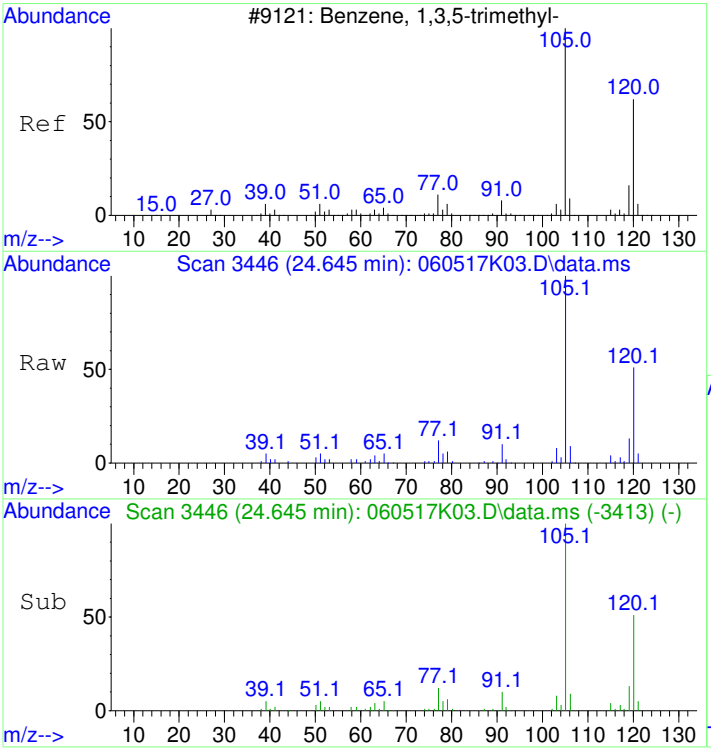


#58
4-Ethyltoluene
Concen: 1.07 ppbv
RT: 24.548 min Scan# 3430
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:105 Resp: 65980

Ion	Ratio	Lower	Upper
105	100		
120	30.2	9.6	49.6

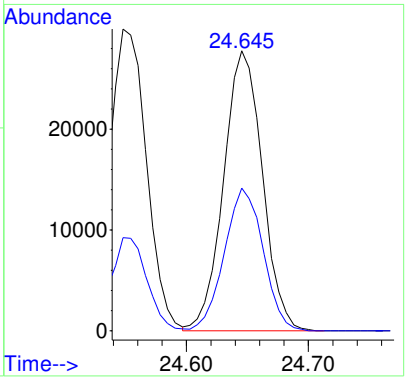


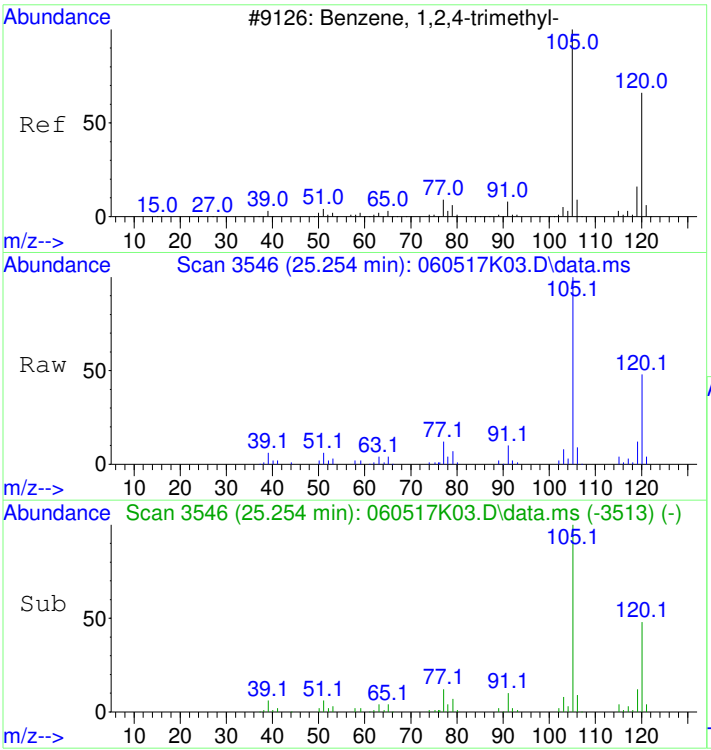


#59
1,3,5-Trimethylbenzene
Concen: 1.15 ppbv
RT: 24.645 min Scan# 3446
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:105 Resp: 61384

Ion	Ratio	Lower	Upper
105	100		
120	50.9	31.1	71.1

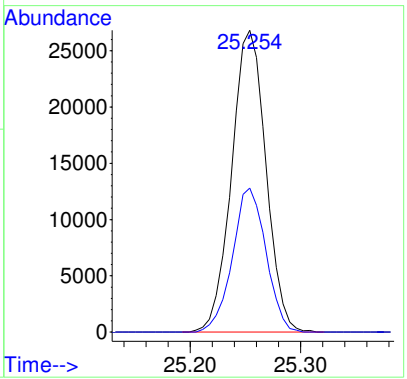


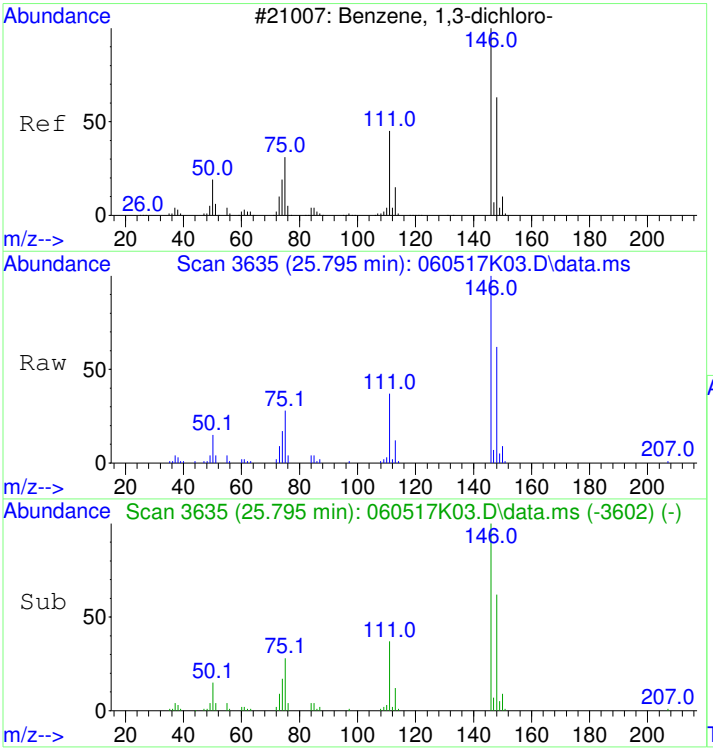


#60
1,2,4-Trimethylbenzene
Concen: 1.11 ppbv
RT: 25.254 min Scan# 3546
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:105 Resp: 58152

Ion	Ratio	Lower	Upper
105	100		
120	46.6	27.1	67.1

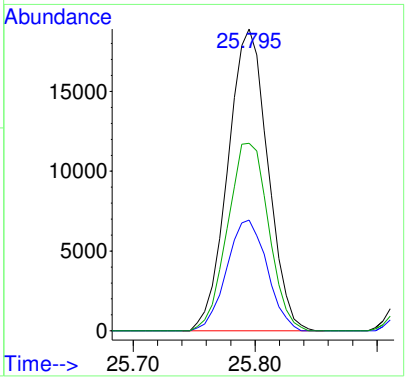


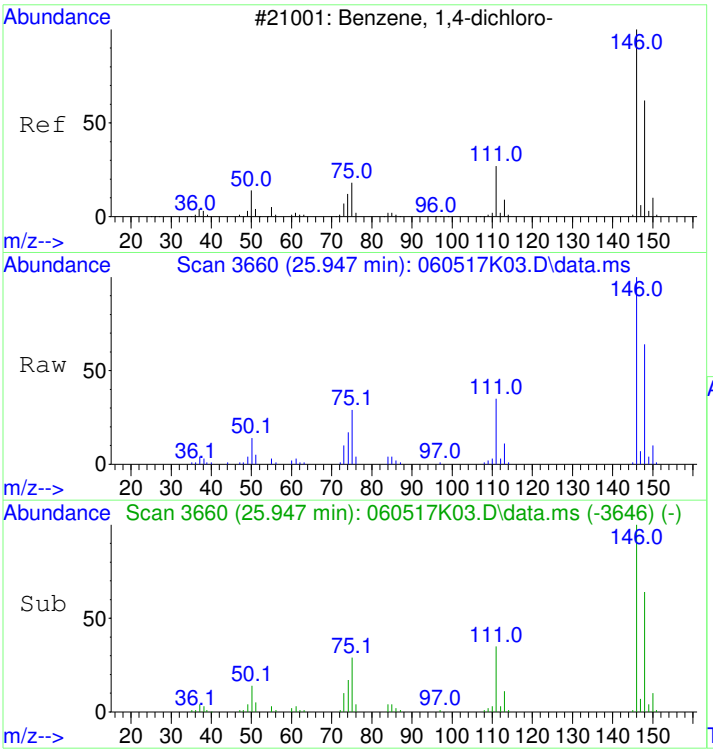


#61
1,3-Dichlorobenzene
Concen: 1.12 ppbv
RT: 25.795 min Scan# 3635
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:146 Resp: 43056

Ion	Ratio	Lower	Upper
146	100		
111	37.1	17.0	57.0
148	63.9	43.5	83.5

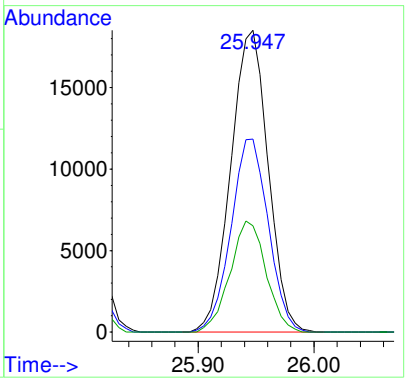


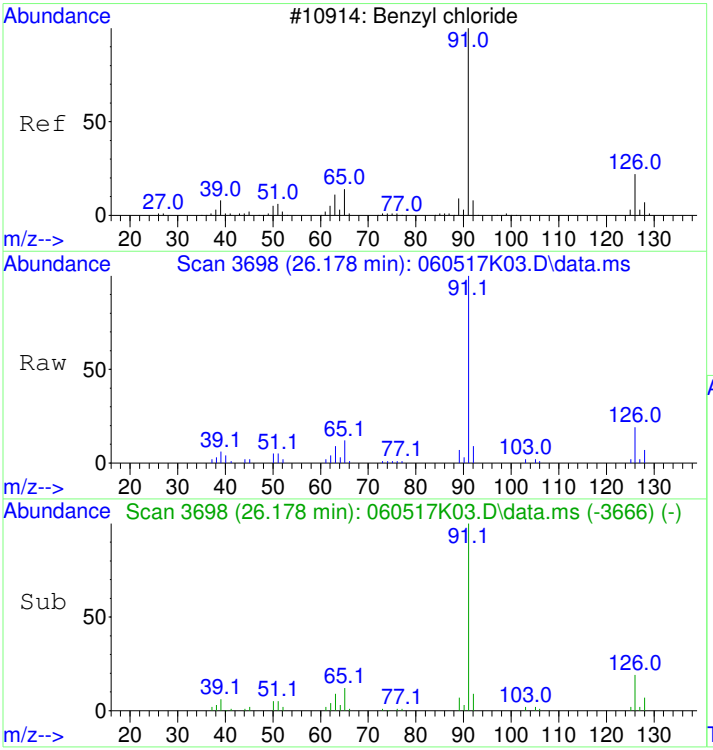


#62
1,4-Dichlorobenzene
Concen: 1.11 ppbv
RT: 25.947 min Scan# 3660
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:146 Resp: 41527

Ion	Ratio	Lower	Upper
146	100		
148	63.9	43.5	83.5
111	35.5	15.9	55.9

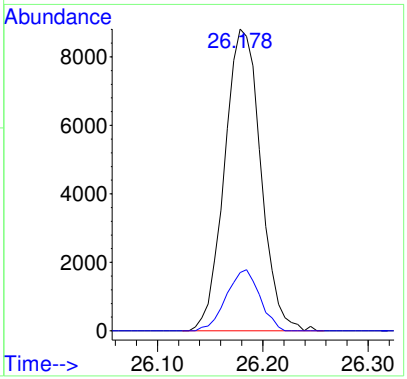


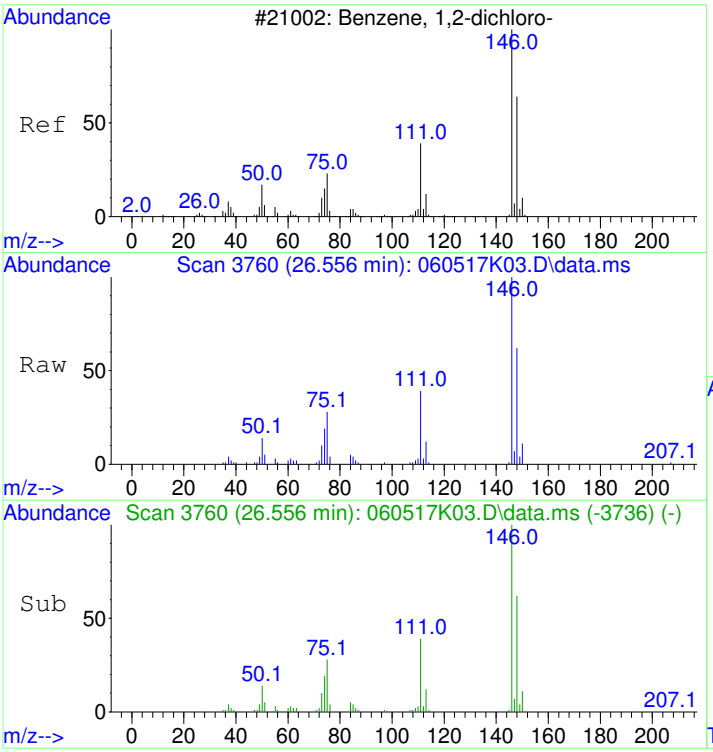


#63
Benzyl chloride
Concen: 0.82 ppbv
RT: 26.178 min Scan# 3698
Delta R.T. -0.006 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion: 91 Resp: 21052

Ion	Ratio	Lower	Upper
91	100		
126	18.7	0.0	39.9

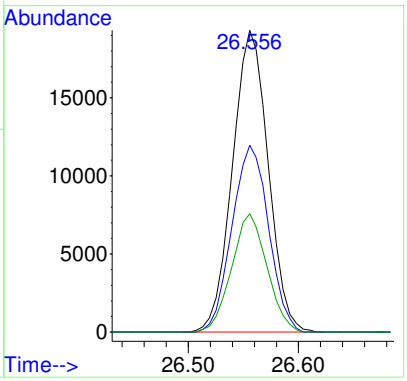


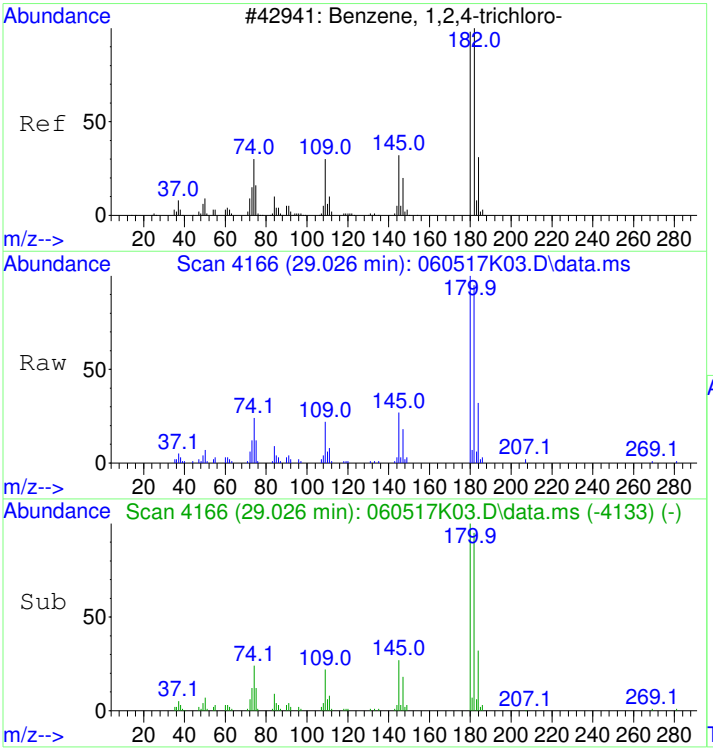


#64
1,2-Dichlorobenzene
Concen: 1.14 ppbv
RT: 26.556 min Scan# 3760
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:146 Resp: 43760

Ion	Ratio	Lower	Upper
146	100		
148	63.4	43.5	83.5
111	38.8	18.8	58.8

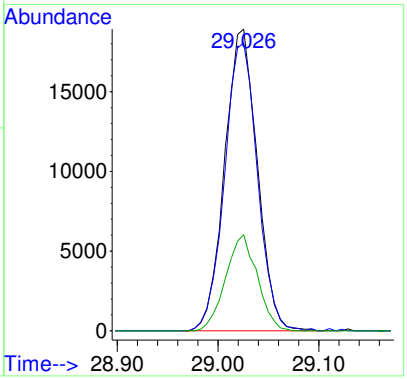


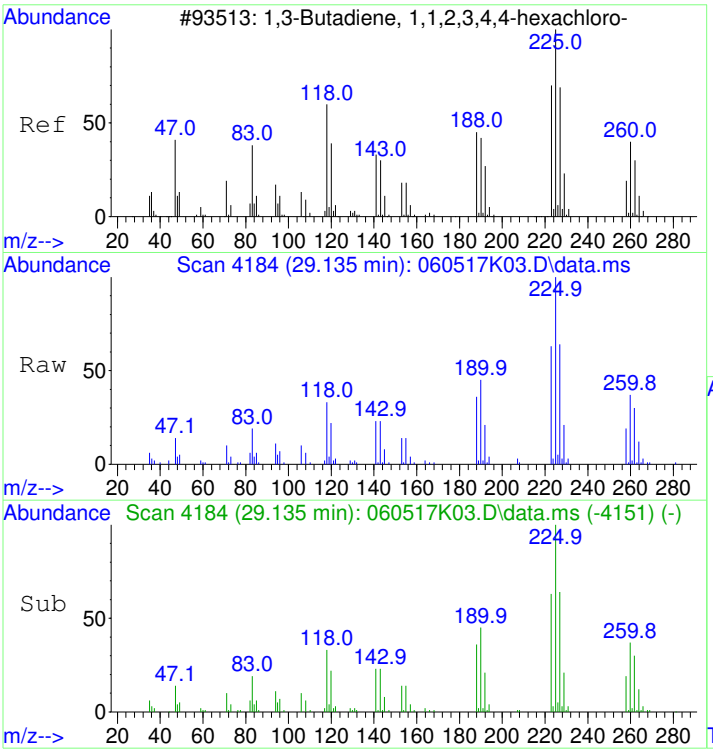


#65
1,2,4-Trichlorobenzene
Concen: 1.05 ppbv
RT: 29.026 min Scan# 4166
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:180 Resp: 42659

Ion	Ratio	Lower	Upper
180	100		
182	96.1	75.4	115.4
184	30.8	10.2	50.2

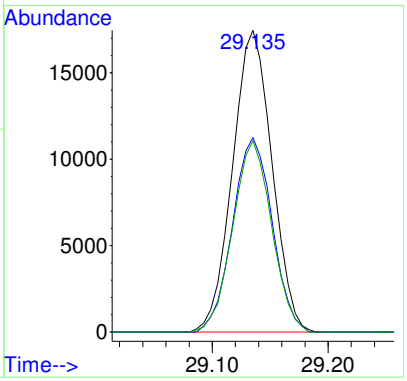




#66
Hexachlorobutadiene
Concen: 1.11 ppbv
RT: 29.135 min Scan# 4184
Delta R.T. 0.000 min
Lab File: 060517K03.D
Acq: 5 Jun 2017 4:03 pm

Tgt Ion:225 Resp: 41370

Ion	Ratio	Lower	Upper
225	100		
227	64.7	44.5	84.5
223	62.4	42.6	82.6



S17F006-CAL2

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K04.D
InstName : HP5973K
Acq On : 5 Jun 2017 4:51 pm
Operator : LLH
Sample : S17F006-CAL2
Misc : 2.0ppbv 1723024
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:24:50 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:24:27 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	276814	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1064919	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	955570	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	18328	2.66	ppbv		98
3) Dichlorodifluoromethane	4.308	85	84285	2.65	ppbv		100
4) 1,2-Dichlorotetrafluor...	4.649	85	81666	2.54	ppbv		100
5) Chloromethane	4.849	50	23769	2.68	ppbv		99
6) Vinyl chloride	5.153	62	24610	2.69	ppbv		99
7) 1,3-Butadiene	5.245	54	16989	2.59	ppbv		94
8) Bromomethane	6.163	94	25689	2.71	ppbv		98
9) Chloroethane	6.492	64	14476	2.54	ppbv		97
10) Bromoethene	7.052	106	25693	2.65	ppbv		99
11) Trichlorofluoromethane	7.155	101	79556	2.60	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	8.895	151	45575	2.39	ppbv		99
13) 1,1-Dichloroethene	9.035	61	37502	2.60	ppbv		99
14) Acetone	9.698	43	36948	2.71	ppbv		98
15) Carbon disulfide	9.722	76	79844	2.62	ppbv		98
16) 2-Propanol	10.325	45	26113	2.69	ppbv		95
17) Allyl chloride	10.623	41	25579	2.70	ppbv		99
18) Dichloromethane	11.207	49	28900	2.30	ppbv		98
19) tert-Butyl methyl ethe...	11.852	73	69942	2.65	ppbv		99
20) trans-1,2-Dichloroethene	11.888	61	37420	2.70	ppbv		99
21) Hexane	12.417	57	38422	2.64	ppbv		98
22) 1,1-Dichloroethane	13.287	63	46570	2.49	ppbv		99
23) Vinyl acetate	13.451	43	39097	2.73	ppbv		100
24) cis-1,2-Dichloroethene	14.759	61	33211	2.67	ppbv		98
25) 2-Butanone (MEK)	14.899	72	13694	2.83	ppbv		98
26) Ethyl acetate	14.912	61	8021	2.78	ppbv	#	97
27) Tetrahydrofuran	15.313	42	24288	2.64	ppbv		97
28) Chloroform	15.465	83	61616	2.72	ppbv		99
29) Cyclohexane	15.599	56	39415	2.68	ppbv		98
30) 1,1,1-Trichloroethane	15.702	97	62440	2.58	ppbv		98
31) Carbon tetrachloride	15.940	117	63598	2.61	ppbv		100
33) Benzene	16.469	78	89319	2.73	ppbv		100
34) 2,2,4-Trimethylpentane	16.347	57	122349	2.67	ppbv		98
35) 1,2-Dichloroethane	16.718	62	40334	2.63	ppbv		100
36) Heptane	16.743	43	41294	2.68	ppbv		99
37) Trichloroethene	17.704	130	41160	2.79	ppbv		98
38) 1,2-Dichloropropane	18.245	63	29511	2.70	ppbv		98
39) 1,4-Dioxane	18.446	88	20200	2.95	ppbv		98
40) Bromodichloromethane	18.714	83	66622	2.62	ppbv		100
41) cis-1,3-Dichloropropene	19.480	75	43827	2.63	ppbv		100
42) 4-Methyl-2-pentanone (...	19.724	43	53674	2.79	ppbv		99
44) Toluene	19.937	91	110787	2.78	ppbv		98
45) trans-1,3-Dichloropropene	20.448	75	38475	2.43	ppbv		99
46) 1,1,2-Trichloroethane	20.758	97	38716	2.77	ppbv		99
47) Tetrachloroethene	20.770	166	59116	2.76	ppbv		100
48) 2-Hexanone	21.086	43	49655	2.85	ppbv		99
49) Chlorodibromomethane	21.354	129	69072	2.72	ppbv		99
50) 1,2-Dibromoethane (EDB)	21.585	107	55745	2.81	ppbv		100
51) Chlorobenzene	22.285	112	96255	2.85	ppbv		95
52) Ethylbenzene	22.364	91	157172	2.82	ppbv		99
53) m&p-Xylene	22.546	91	238552	5.61	ppbv		100
54) o-Xylene	23.197	91	115853	2.75	ppbv		99

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K04.D
InstName : HP5973K
Acq On : 5 Jun 2017 4:51 pm
Operator : LLH
Sample : S17F006-CAL2
Misc : 2.0ppbv 1723024
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:24:50 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:24:27 2017
Response via : Initial Calibration

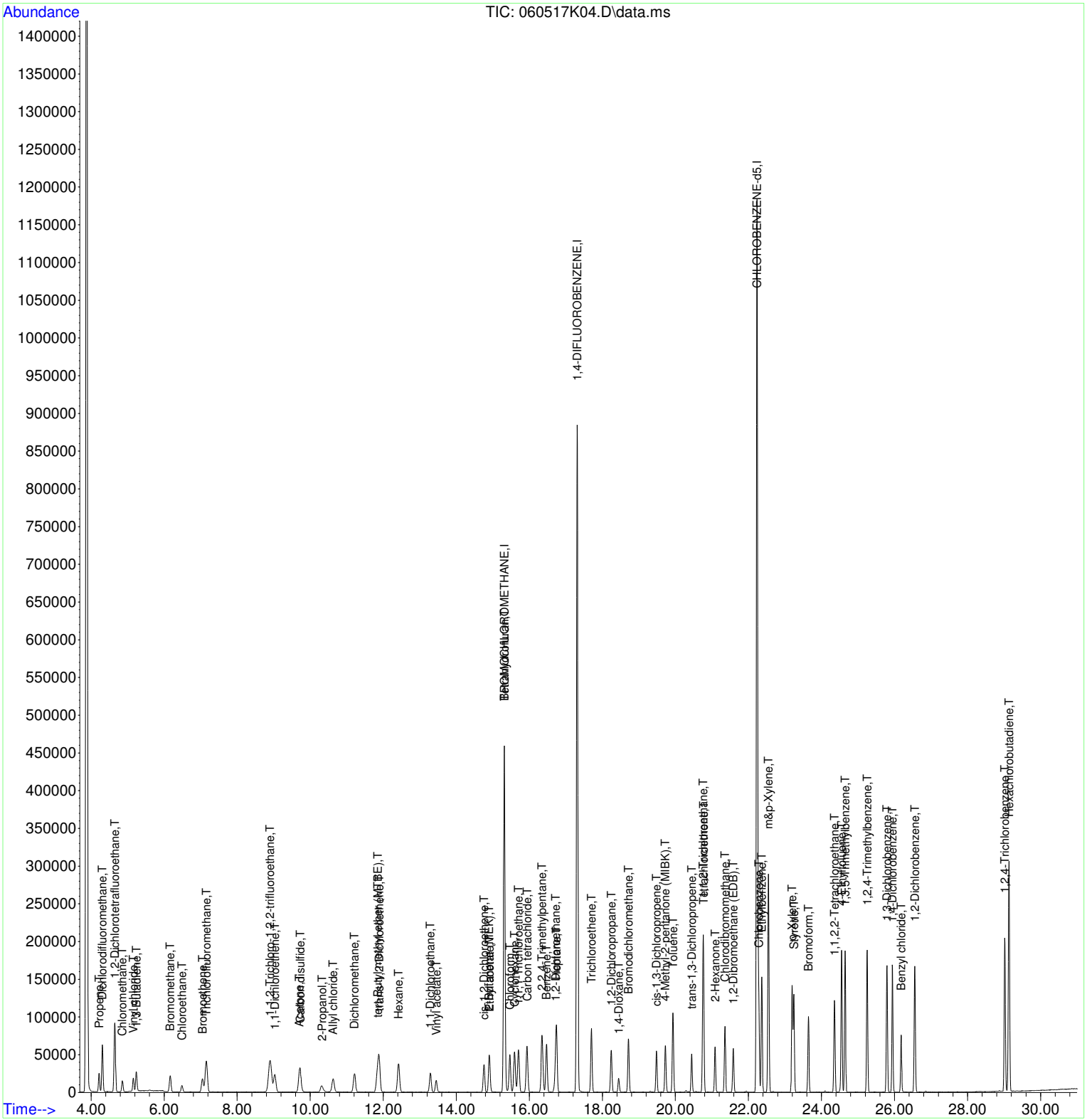
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	23.246	104	95352	2.70	ppbv	99
56)	Bromoform	23.641	173	67605	2.76	ppbv	100
57)	1,1,2,2-Tetrachloroethane	24.353	83	84326	2.64	ppbv	99
58)	4-Ethyltoluene	24.554	105	173891	2.76	ppbv	99
59)	1,3,5-Trimethylbenzene	24.645	105	148032	2.73	ppbv	99
60)	1,2,4-Trimethylbenzene	25.254	105	146234	2.74	ppbv	100
61)	1,3-Dichlorobenzene	25.795	146	103878	2.66	ppbv	99
62)	1,4-Dichlorobenzene	25.947	146	104055	2.73	ppbv	99
63)	Benzyl chloride	26.178	91	79728	3.03	ppbv	98
64)	1,2-Dichlorobenzene	26.556	146	103441	2.64	ppbv	99
65)	1,2,4-Trichlorobenzene	29.019	180	96224	2.32	ppbv	100
66)	Hexachlorobutadiene	29.135	225	93487	2.47	ppbv	99

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

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K04.D
InstName : HP5973K
Acq On : 5 Jun 2017 4:51 pm
Operator : LLH
Sample : S17F006-CAL2
Misc : 2.0ppbv 1723024
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:24:50 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:24:27 2017
Response via : Initial Calibration



S17F006-CAL3

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K05.D
InstName : HP5973K
Acq On : 5 Jun 2017 5:39 pm
Operator : LLH
Sample : S17F006-CAL3
Misc : 5.0ppbv 1723025
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:25:11 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:01 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	275180	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1056449	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	959107	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	34298	4.68	ppbv		99
3) Dichlorodifluoromethane	4.314	85	155736	4.54	ppbv		100
4) 1,2-Dichlorotetrafluor...	4.649	85	150027	4.32	ppbv		100
5) Chloromethane	4.861	50	43648	4.61	ppbv		98
6) Vinyl chloride	5.160	62	45455	4.61	ppbv		99
7) 1,3-Butadiene	5.245	54	30918	4.41	ppbv		95
8) Bromomethane	6.169	94	47161	4.59	ppbv		99
9) Chloroethane	6.492	64	26907	4.44	ppbv		100
10) Bromoethene	7.052	106	47114	4.55	ppbv		97
11) Trichlorofluoromethane	7.155	101	143090	4.27	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.907	151	82805	4.01	ppbv		100
13) 1,1-Dichloroethene	9.029	61	69289	4.45	ppbv		100
14) Acetone	9.698	43	67532	4.63	ppbv		99
15) Carbon disulfide	9.728	76	144484	4.42	ppbv		99
16) 2-Propanol	10.306	45	50688	4.89	ppbv		96
17) Allyl chloride	10.629	41	47908	4.73	ppbv		99
18) Dichloromethane	11.213	49	48923	3.68	ppbv		99
19) tert-Butyl methyl ethe...	11.839	73	133287	4.73	ppbv		99
20) trans-1,2-Dichloroethene	11.888	61	69590	4.70	ppbv		99
21) Hexane	12.423	57	72899	4.64	ppbv		99
22) 1,1-Dichloroethane	13.293	63	84672	4.19	ppbv		100
23) Vinyl acetate	13.451	43	78770	5.12	ppbv		100
24) cis-1,2-Dichloroethene	14.759	61	61975	4.58	ppbv		98
25) 2-Butanone (MEK)	14.899	72	25378	4.78	ppbv	#	97
26) Ethyl acetate	14.905	61	15004	4.80	ppbv		99
27) Tetrahydrofuran	15.307	42	45161	4.55	ppbv		98
28) Chloroform	15.465	83	111907	4.56	ppbv		100
29) Cyclohexane	15.593	56	74021	4.67	ppbv		99
30) 1,1,1-Trichloroethane	15.708	97	115756	4.44	ppbv		99
31) Carbon tetrachloride	15.940	117	119072	4.53	ppbv		99
33) Benzene	16.475	78	164482	4.64	ppbv		100
34) 2,2,4-Trimethylpentane	16.353	57	229344	4.64	ppbv		100
35) 1,2-Dichloroethane	16.718	62	73726	4.46	ppbv		100
36) Heptane	16.743	43	76033	4.59	ppbv		99
37) Trichloroethene	17.704	130	75900	4.76	ppbv		99
38) 1,2-Dichloropropane	18.245	63	54006	4.59	ppbv		99
39) 1,4-Dioxane	18.446	88	37421	4.88	ppbv		97
40) Bromodichloromethane	18.714	83	121007	4.42	ppbv		99
41) cis-1,3-Dichloropropene	19.480	75	84856	4.72	ppbv		100
42) 4-Methyl-2-pentanone (...	19.724	43	100225	4.75	ppbv		100
44) Toluene	19.937	91	206849	4.72	ppbv		100
45) trans-1,3-Dichloropropene	20.448	75	75432	4.37	ppbv		99
46) 1,1,2-Trichloroethane	20.758	97	71580	4.68	ppbv		99
47) Tetrachloroethene	20.770	166	108824	4.63	ppbv		100
48) 2-Hexanone	21.086	43	95880	4.90	ppbv		100
49) Chlorodibromomethane	21.354	129	128332	4.62	ppbv		100
50) 1,2-Dibromoethane (EDB)	21.585	107	103597	4.76	ppbv		99
51) Chlorobenzene	22.285	112	175619	4.71	ppbv		97
52) Ethylbenzene	22.364	91	290020	4.72	ppbv		99
53) m&p-Xylene	22.546	91	437320	9.31	ppbv		99
54) o-Xylene	23.197	91	219124	4.71	ppbv		99

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K05.D
InstName : HP5973K
Acq On : 5 Jun 2017 5:39 pm
Operator : LLH
Sample : S17F006-CAL3
Misc : 5.0ppbv 1723025
ALS Vial : 32 Sample Multiplier: 1

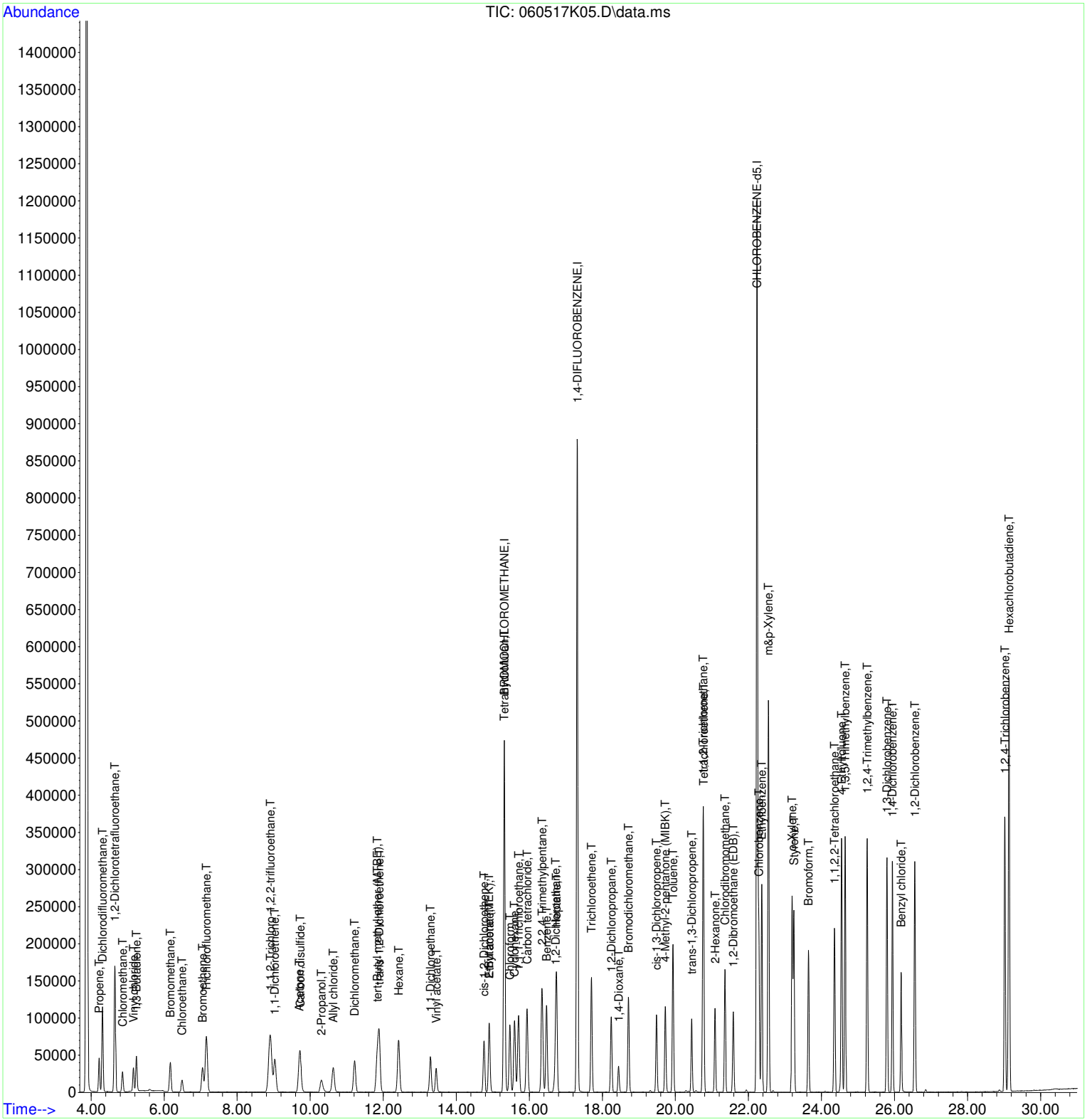
Quant Time: Jun 06 11:25:11 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:01 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	177821	4.54 ppbv	100
56) Bromoform	23.641	173	128630	4.77 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	157107	4.51 ppbv	100
58) 4-Ethyltoluene	24.554	105	325295	4.64 ppbv	99
59) 1,3,5-Trimethylbenzene	24.645	105	275649	4.64 ppbv	99
60) 1,2,4-Trimethylbenzene	25.254	105	272400	4.63 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	193818	4.54 ppbv	99
62) 1,4-Dichlorobenzene	25.947	146	194039	4.63 ppbv	100
63) Benzyl chloride	26.178	91	167649	5.64 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	189341	4.41 ppbv	100
65) 1,2,4-Trichlorobenzene	29.025	180	174802	3.90 ppbv	99
66) Hexachlorobutadiene	29.135	225	170174	4.14 ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K05.D
InstName : HP5973K
Acq On : 5 Jun 2017 5:39 pm
Operator : LLH
Sample : S17F006-CAL3
Misc : 5.0ppbv 1723025
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:25:11 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:01 2017
Response via : Initial Calibration



S17F006-CAL4

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
InstName : HP5973K
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:23:26 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:23:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	280259	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1080054	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	984303	20.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	4.223	41	69635	9.99	ppbv	100
3) Dichlorodifluoromethane	4.308	85	304126	9.43	ppbv	100
4) 1,2-Dichlorotetrafluor...	4.649	85	297771	9.13	ppbv	100
5) Chloromethane	4.856	50	85544	9.52	ppbv	100
6) Vinyl chloride	5.154	62	89232	9.65	ppbv	100
7) 1,3-Butadiene	5.239	54	61690	9.27	ppbv	100
8) Bromomethane	6.163	94	91227	9.49	ppbv	100
9) Chloroethane	6.498	64	53074	9.21	ppbv	100
10) Bromoethene	7.046	106	95636	9.76	ppbv	100
11) Trichlorofluoromethane	7.155	101	276897	8.93	ppbv	100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	162520	8.42	ppbv	100
13) 1,1-Dichloroethene	9.029	61	138404	9.49	ppbv	100
14) Acetone	9.680	43	133267	9.66	ppbv	100
15) Carbon disulfide	9.716	76	286320	9.27	ppbv	100
16) 2-Propanol	10.288	45	106176	10.78	ppbv	100
17) Allyl chloride	10.629	41	97819	10.19	ppbv	100
18) Dichloromethane	11.213	49	91612	7.19	ppbv	100
19) tert-Butyl methyl ethe...	11.827	73	272983	10.23	ppbv	100
20) trans-1,2-Dichloroethene	11.888	61	136281	9.73	ppbv	100
21) Hexane	12.417	57	145389	9.85	ppbv	100
22) 1,1-Dichloroethane	13.287	63	168064	8.86	ppbv	100
23) Vinyl acetate	13.446	43	165370	11.39	ppbv	100
24) cis-1,2-Dichloroethene	14.753	61	123506	9.81	ppbv	100
25) 2-Butanone (MEK)	14.893	72	50432	10.28	ppbv	100
26) Ethyl acetate	14.906	61	30189	10.35	ppbv	100
27) Tetrahydrofuran	15.301	42	89408	9.62	ppbv	100
28) Chloroform	15.465	83	221119	9.65	ppbv	100
29) Cyclohexane	15.599	56	148551	9.97	ppbv	100
30) 1,1,1-Trichloroethane	15.709	97	229844	9.39	ppbv	100
31) Carbon tetrachloride	15.940	117	234374	9.49	ppbv	100
33) Benzene	16.475	78	323654	9.74	ppbv	100
34) 2,2,4-Trimethylpentane	16.347	57	461250	9.92	ppbv	100
35) 1,2-Dichloroethane	16.718	62	145405	9.36	ppbv	100
36) Heptane	16.749	43	150058	9.61	ppbv	100
37) Trichloroethene	17.704	130	153353	10.26	ppbv	100
38) 1,2-Dichloropropane	18.239	63	108411	9.79	ppbv	100
39) 1,4-Dioxane	18.440	88	75753	10.93	ppbv	100
40) Bromodichloromethane	18.714	83	240706	9.34	ppbv	100
41) cis-1,3-Dichloropropene	19.480	75	174348	10.33	ppbv	100
42) 4-Methyl-2-pentanone (...	19.724	43	204201	10.45	ppbv	100
44) Toluene	19.937	91	414267	10.08	ppbv	100
45) trans-1,3-Dichloropropene	20.448	75	157147	9.62	ppbv	100
46) 1,1,2-Trichloroethane	20.758	97	143254	9.96	ppbv	100
47) Tetrachloroethene	20.770	166	218056	9.88	ppbv	100
48) 2-Hexanone	21.080	43	194780	10.85	ppbv	100
49) Chlorodibromomethane	21.354	129	257986	9.87	ppbv	100
50) 1,2-Dibromoethane (EDB)	21.585	107	209696	10.26	ppbv	100
51) Chlorobenzene	22.285	112	347306	9.97	ppbv	100
52) Ethylbenzene	22.364	91	577267	10.04	ppbv	100
53) m&p-Xylene	22.547	91	882786	20.14	ppbv	100
54) o-Xylene	23.197	91	441442	10.15	ppbv	100

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
InstName : HP5973K
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

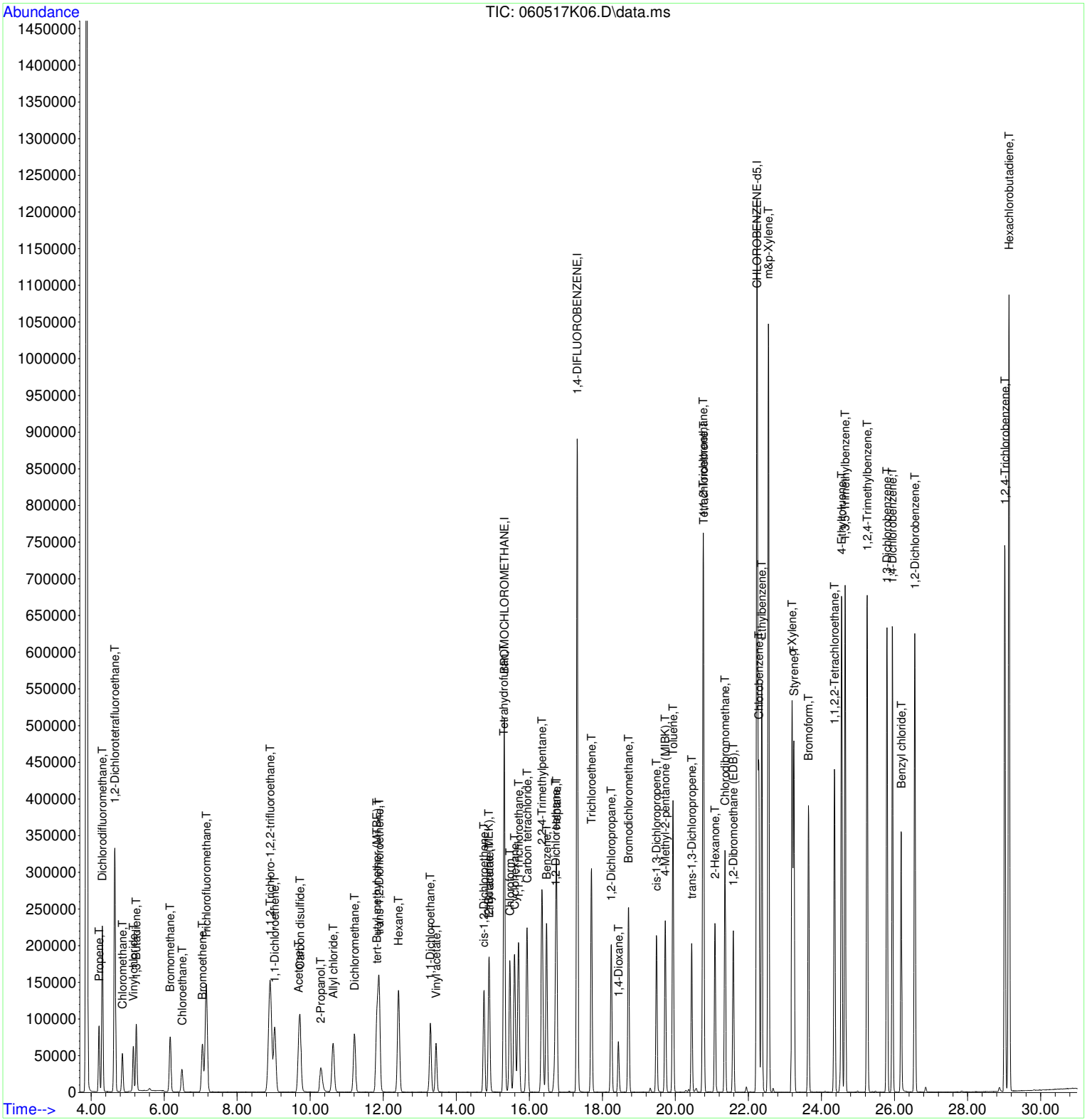
Quant Time: Jun 06 11:23:26 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:23:11 2017
Response via : Initial Calibration

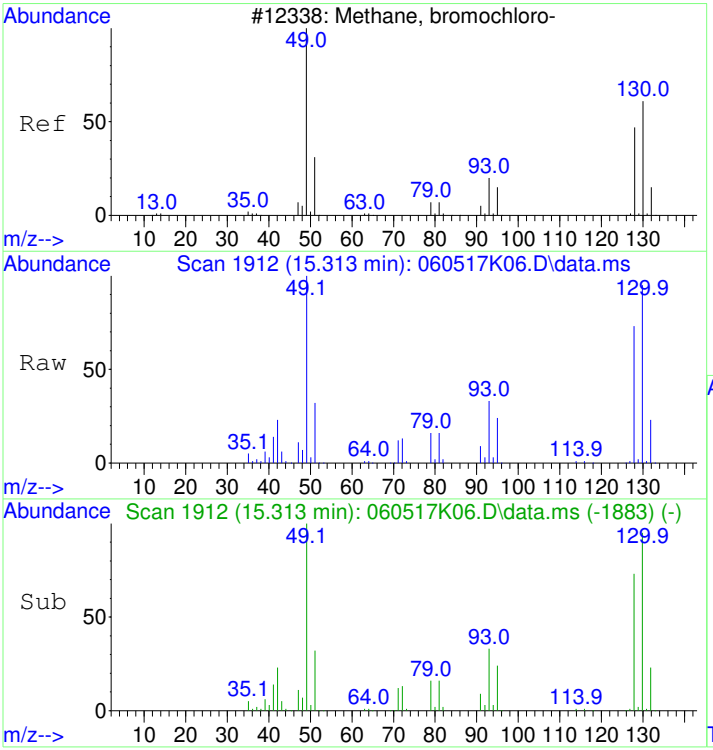
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Styrene	23.246	104	358339	9.85	ppbv	100
56)	Bromoform	23.642	173	264351	10.47	ppbv	100
57)	1,1,2,2-Tetrachloroethane	24.353	83	312918	9.51	ppbv	100
58)	4-Ethyltoluene	24.554	105	657295	10.13	ppbv	100
59)	1,3,5-Trimethylbenzene	24.645	105	549502	9.85	ppbv	100
60)	1,2,4-Trimethylbenzene	25.254	105	554639	10.09	ppbv	100
61)	1,3-Dichlorobenzene	25.795	146	394416	9.79	ppbv	100
62)	1,4-Dichlorobenzene	25.947	146	395724	10.09	ppbv	100
63)	Benzyl chloride	26.185	91	374763	13.84	ppbv	100
64)	1,2-Dichlorobenzene	26.556	146	381672	9.44	ppbv	100
65)	1,2,4-Trichlorobenzene	29.026	180	353887	8.30	ppbv	100
66)	Hexachlorobutadiene	29.135	225	337153	8.65	ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
InstName : HP5973K
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:23:26 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:23:11 2017
Response via : Initial Calibration

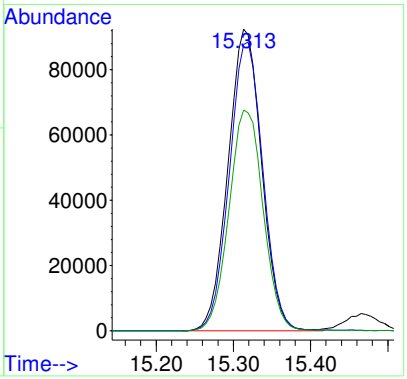


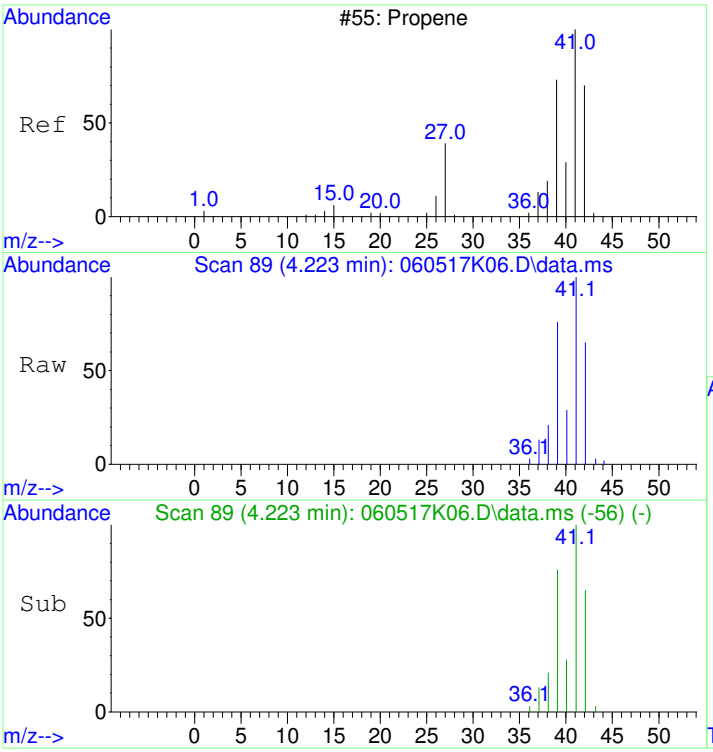


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 49 Resp: 280259

Ion	Ratio	Lower	Upper
49	100		
130	95.6	75.6	115.6
128	74.4	54.4	94.4

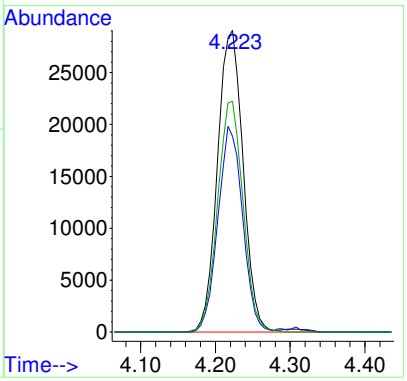


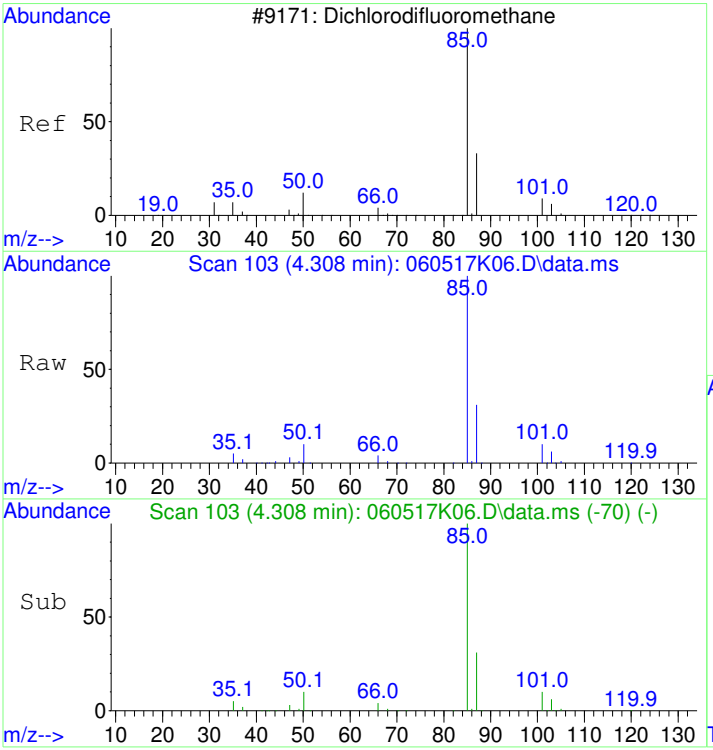


#2
Propene
Concen: 9.99 ppbv
RT: 4.223 min Scan# 89
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 41 Resp: 69635

Ion	Ratio	Lower	Upper
41	100		
42	66.4	46.4	86.4
39	75.4	55.4	95.4

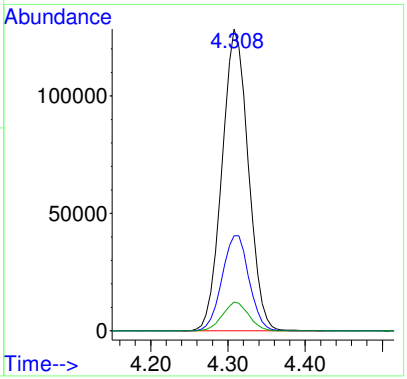


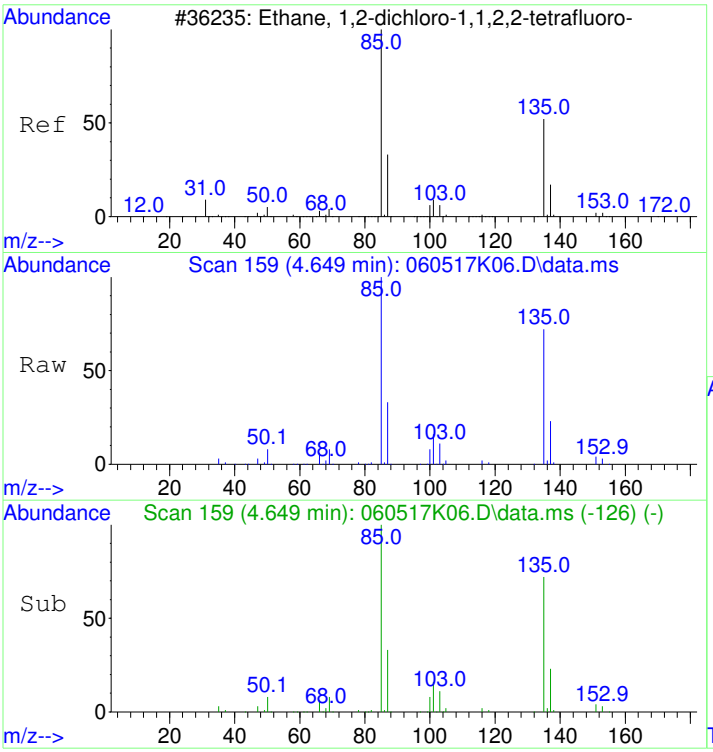


#3
Dichlorodifluoromethane
Concen: 9.43 ppbv
RT: 4.308 min Scan# 103
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 85 Resp: 304126

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.4	52.4
101	9.5	0.0	29.5

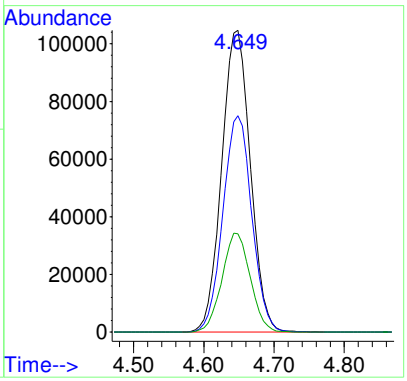


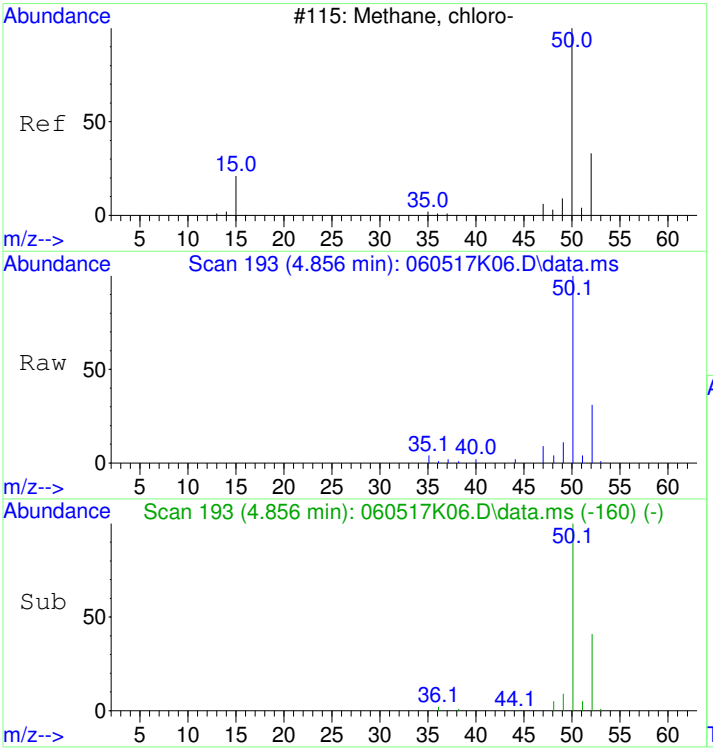


#4
1,2-Dichlorotetrafluoroethane
Concen: 9.13 ppbv
RT: 4.649 min Scan# 159
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 85 Resp: 297771

Ion	Ratio	Lower	Upper
85	100		
135	72.1	52.1	92.1
87	32.2	12.2	52.2

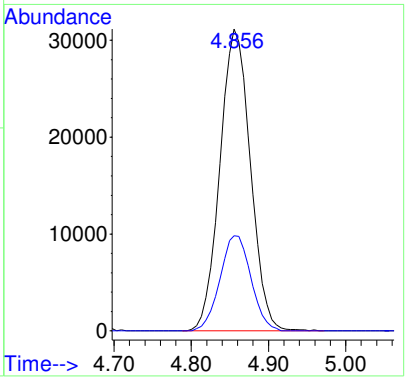


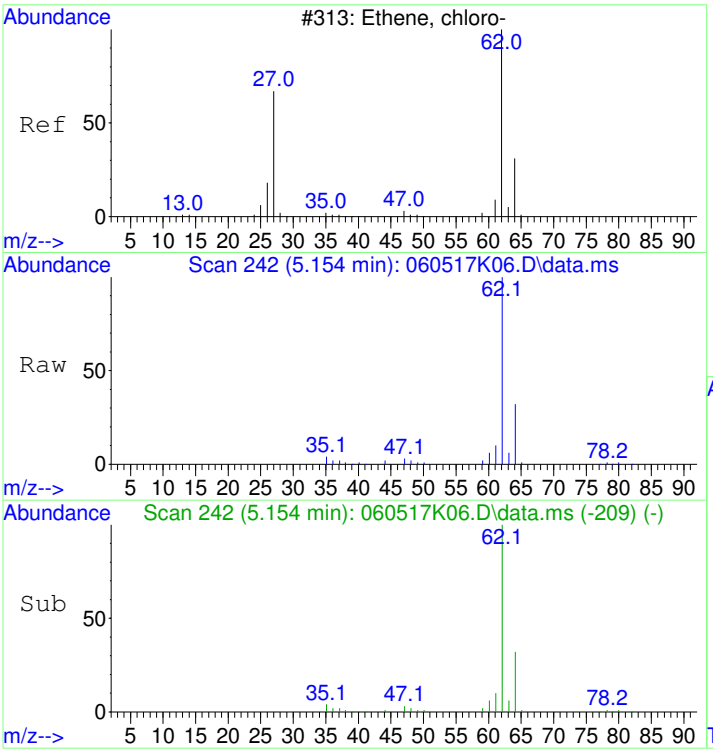


#5
Chloromethane
Concen: 9.52 ppbv
RT: 4.856 min Scan# 193
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 50 Resp: 85544

Ion	Ratio	Lower	Upper
50	100		
52	32.0	12.0	52.0

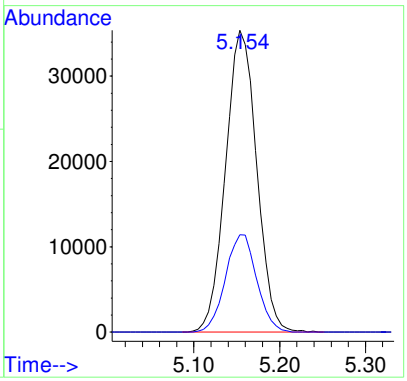


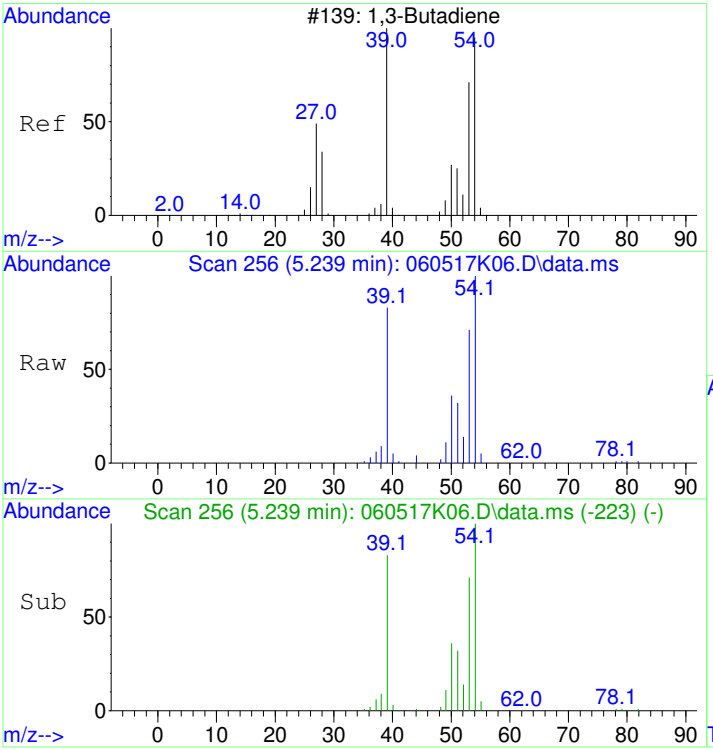


#6
Vinyl chloride
Concen: 9.65 ppbv
RT: 5.154 min Scan# 242
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 62 Resp: 89232

Ion	Ratio	Lower	Upper
62	100		
64	32.5	12.5	52.5

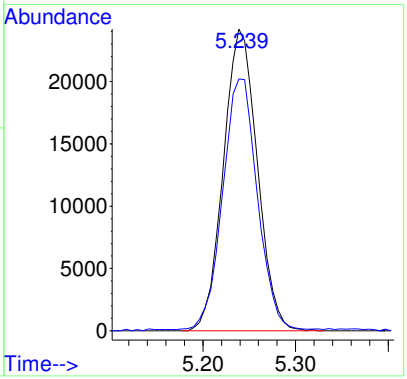


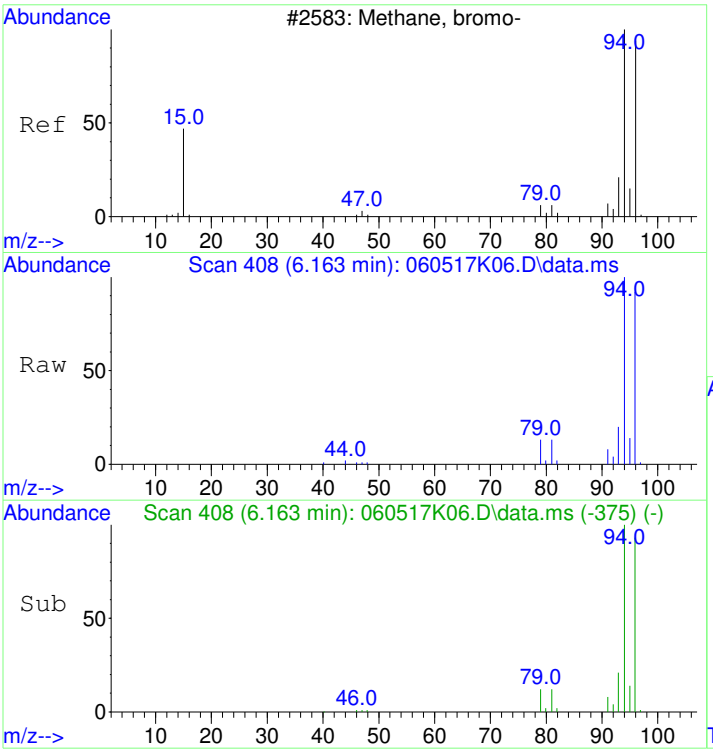


#7
1,3-Butadiene
Concen: 9.27 ppbv
RT: 5.239 min Scan# 256
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 54 Resp: 61690

Ion	Ratio	Lower	Upper
54	100		
39	84.7	64.7	104.7

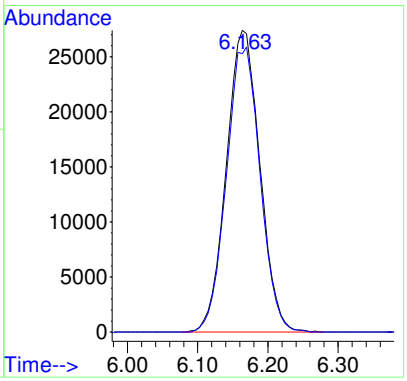


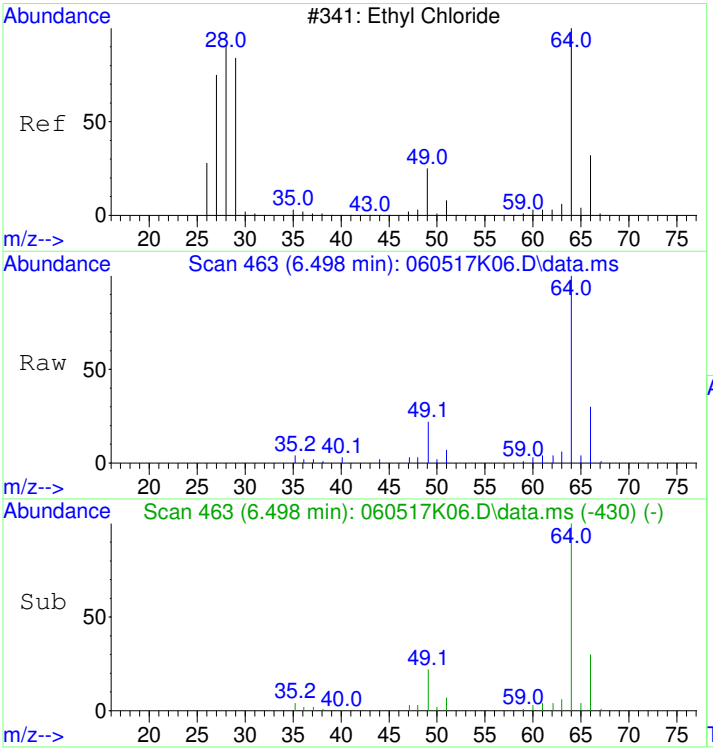


#8
Bromomethane
Concen: 9.49 ppbv
RT: 6.163 min Scan# 408
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 94 Resp: 91227

Ion	Ratio	Lower	Upper
94	100		
96	94.7	74.7	114.7

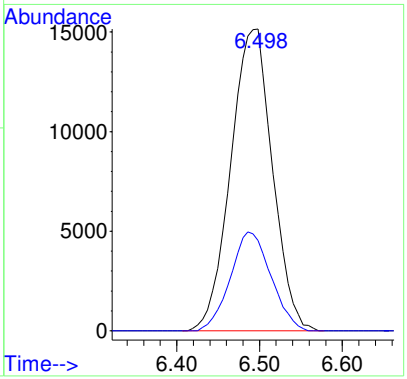


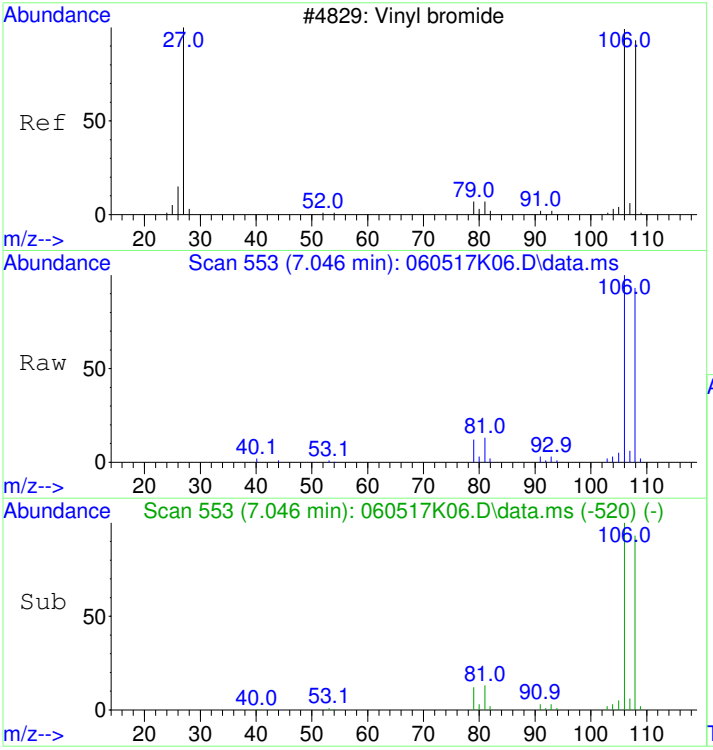


#9
Chloroethane
Concen: 9.21 ppbv
RT: 6.498 min Scan# 463
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 64 Resp: 53074

Ion	Ratio	Lower	Upper
64	100		
66	31.8	11.8	51.8

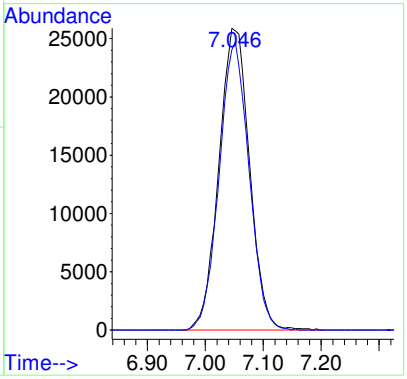


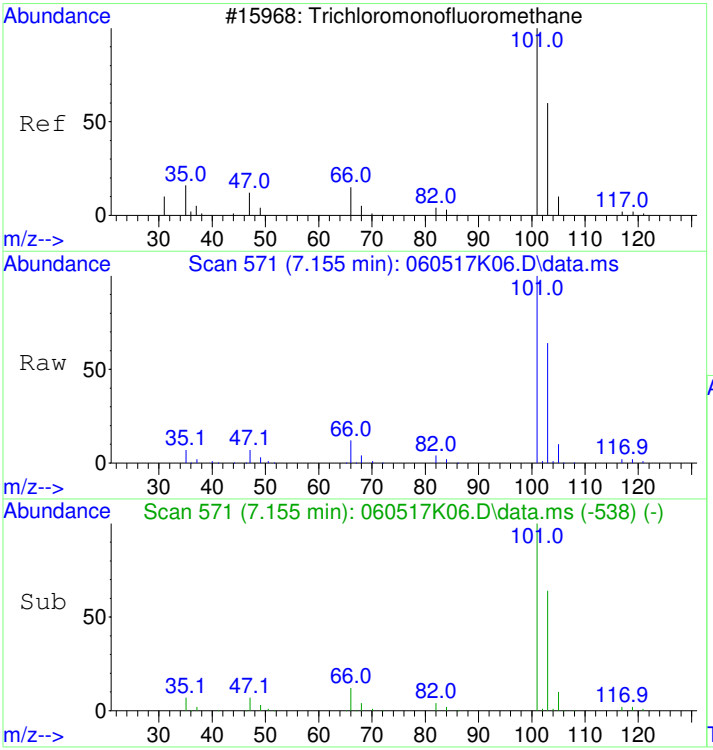


#10
Bromoethene
Concen: 9.76 ppbv
RT: 7.046 min Scan# 553
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:106 Resp: 95636

Ion	Ratio	Lower	Upper
106	100		
108	92.6	0.0	212.6

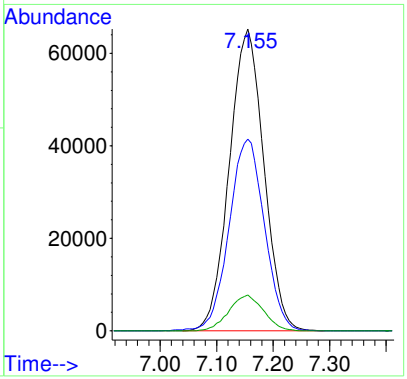


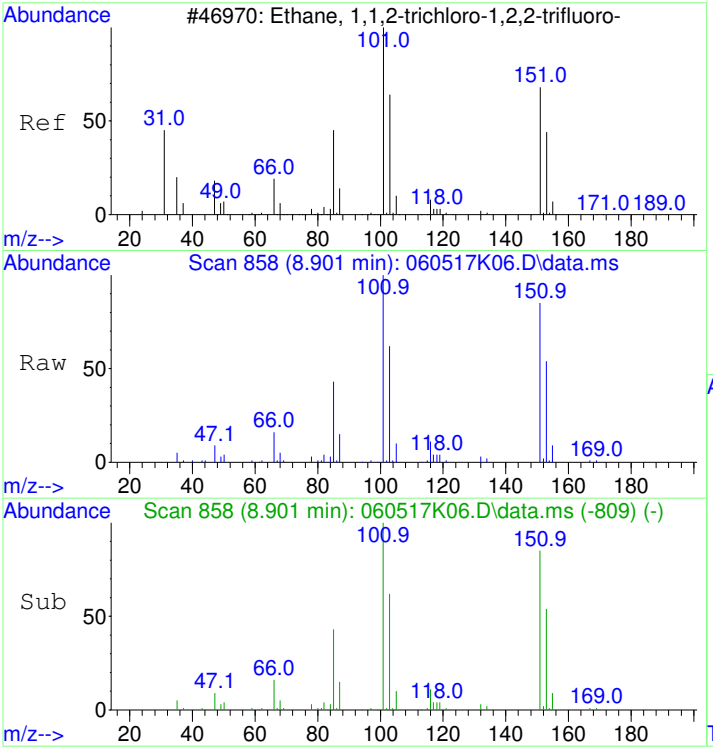


#11
Trichlorofluoromethane
Concen: 8.93 ppbv
RT: 7.155 min Scan# 571
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:101 Resp: 276897

Ion	Ratio	Lower	Upper
101	100		
103	65.1	45.1	85.1
66	11.9	0.0	31.9

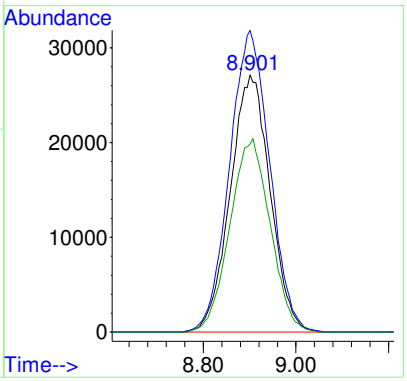


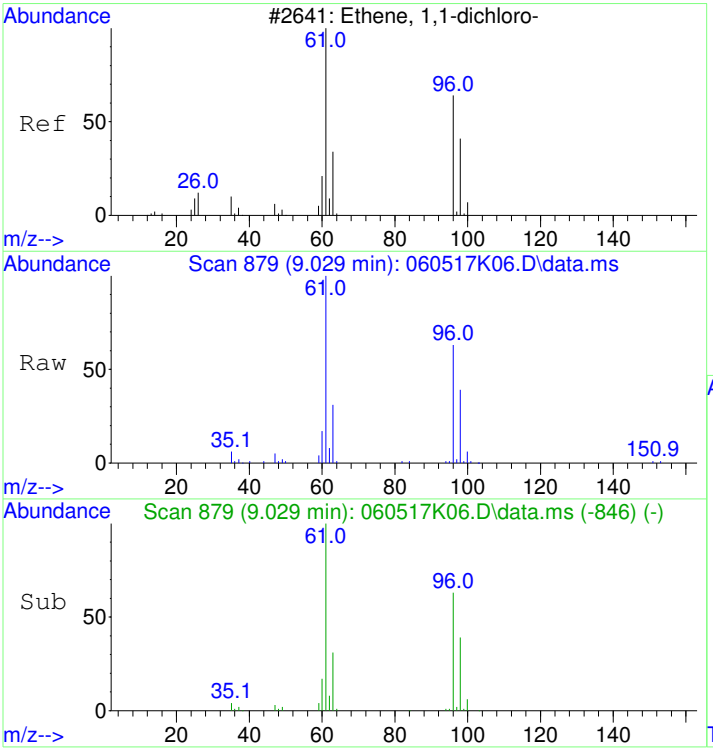


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 8.42 ppbv
RT: 8.901 min Scan# 858
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:151 Resp: 162520

Ion	Ratio	Lower	Upper
151	100		
101	117.8	97.8	137.8
103	75.7	55.7	95.7

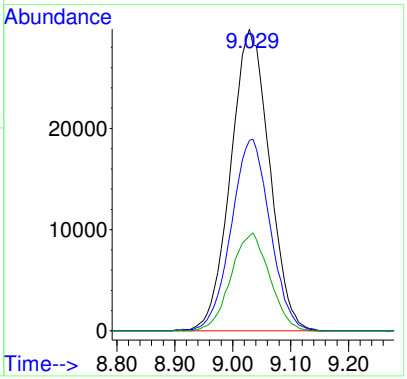


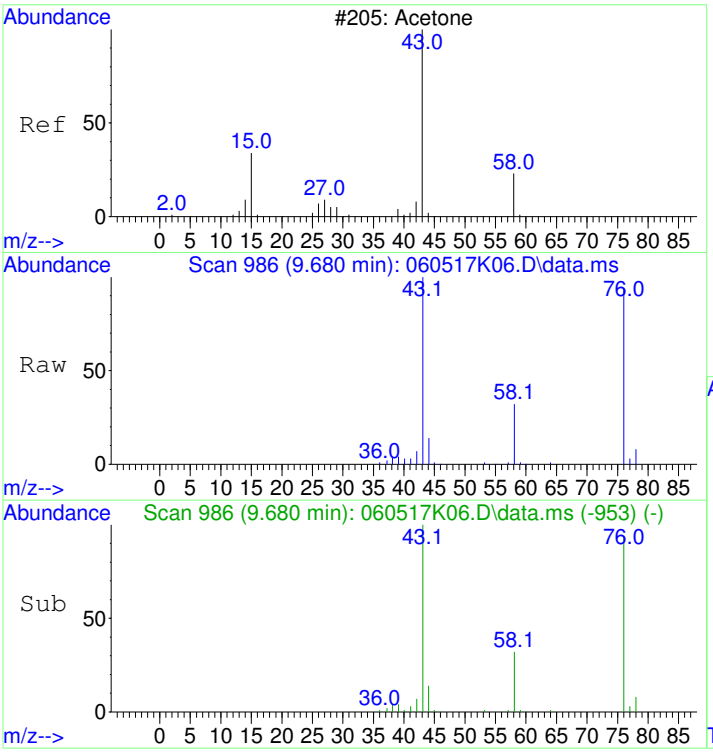


#13
1,1-Dichloroethene
Concen: 9.49 ppbv
RT: 9.029 min Scan# 879
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 61 Resp: 138404

Ion	Ratio	Lower	Upper
61	100		
96	63.8	43.8	83.8
63	32.4	12.4	52.4

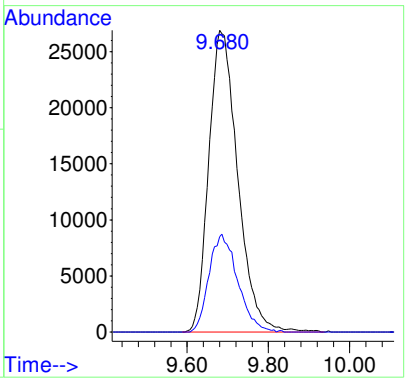


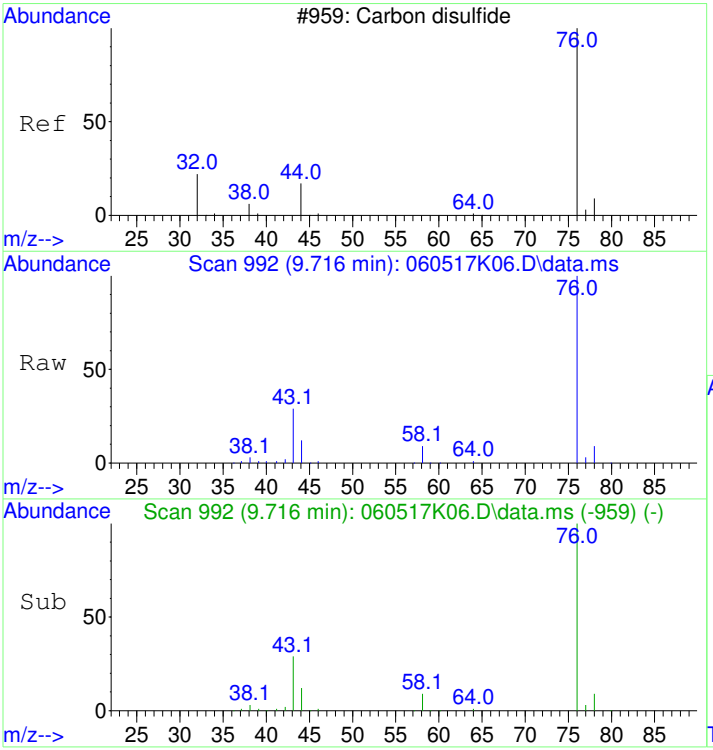


#14
Acetone
Concen: 9.66 ppbv
RT: 9.680 min Scan# 986
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 43 Resp: 133267

Ion	Ratio	Lower	Upper
43	100		
58	32.0	12.0	52.0

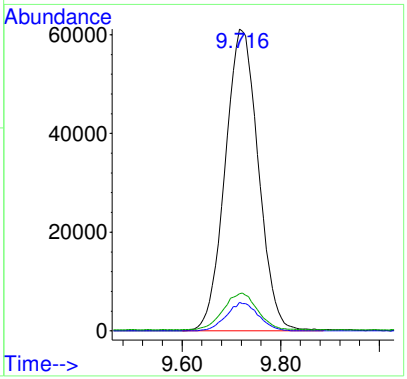


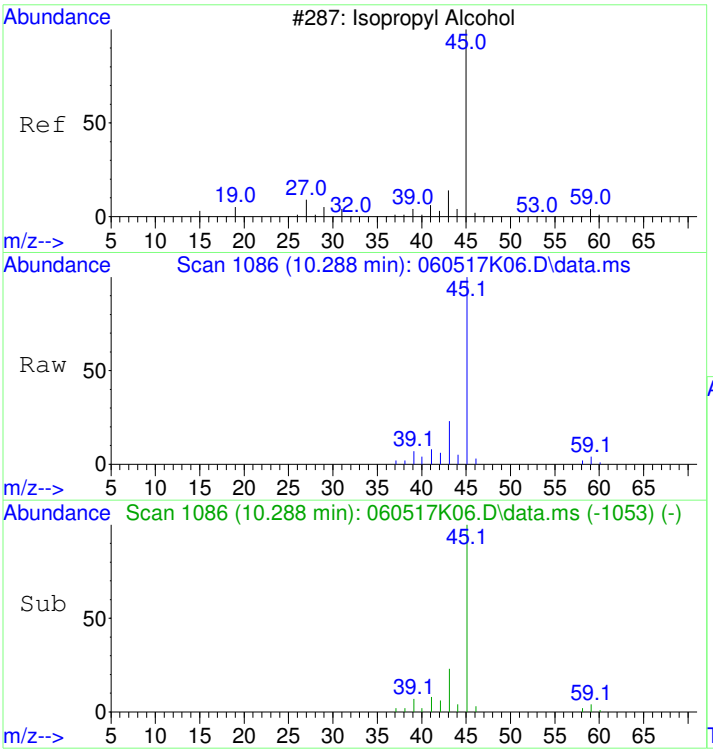


#15
Carbon disulfide
Concen: 9.27 ppbv
RT: 9.716 min Scan# 992
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 76 Resp: 286320

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.0
44	12.4	0.0	32.4

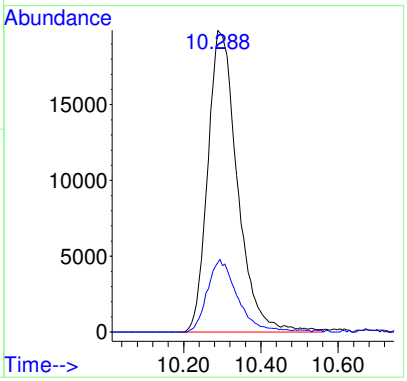


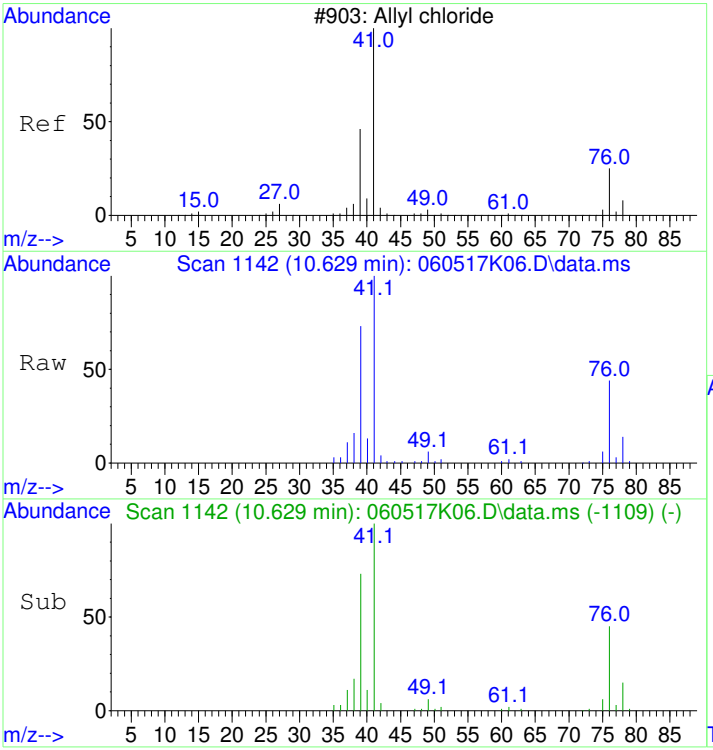


#16
2-Propanol
Concen: 10.78 ppbv
RT: 10.288 min Scan# 1086
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 45 Resp: 106176

Ion	Ratio	Lower	Upper
45	100		
43	24.7	4.7	44.7

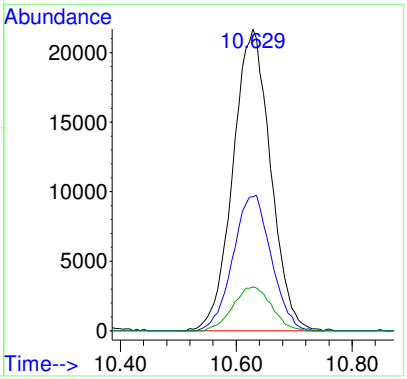


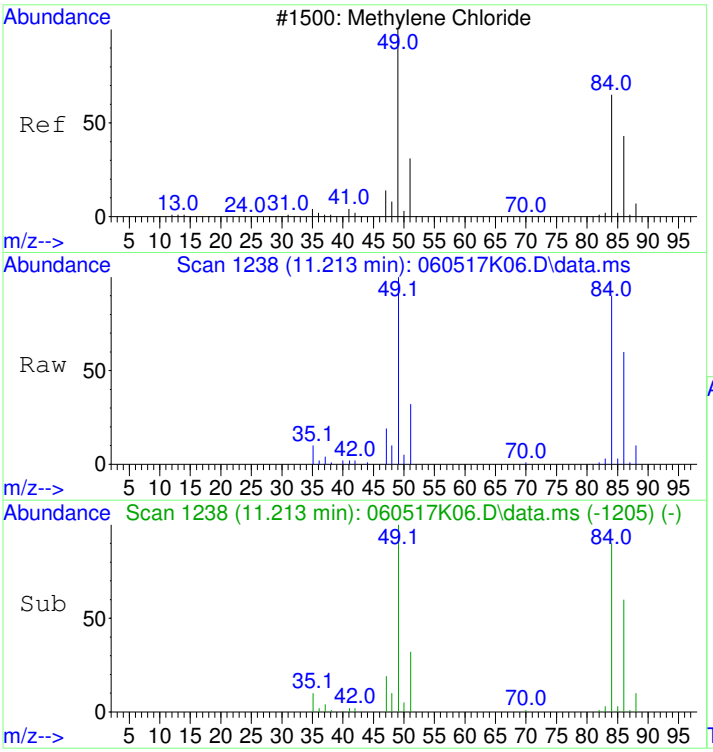


#17
Allyl chloride
Concen: 10.19 ppbv
RT: 10.629 min Scan# 1142
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 41 Resp: 97819

Ion	Ratio	Lower	Upper
41	100		
76	45.6	25.6	65.6
78	15.0	0.0	35.0

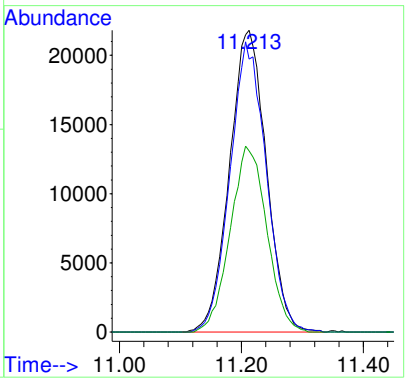


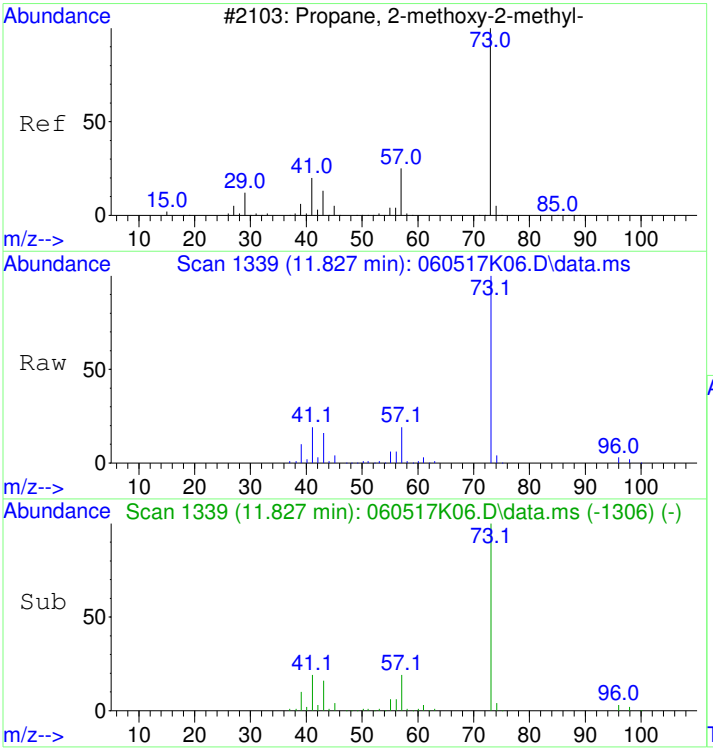


#18
Dichloromethane
Concen: 7.19 ppbv
RT: 11.213 min Scan# 1238
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 49 Resp: 91612

Ion	Ratio	Lower	Upper
49	100		
84	94.2	74.2	114.2
86	61.1	41.1	81.1

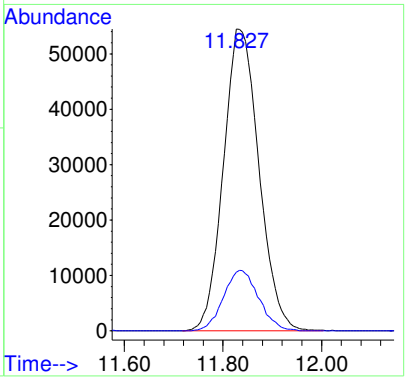


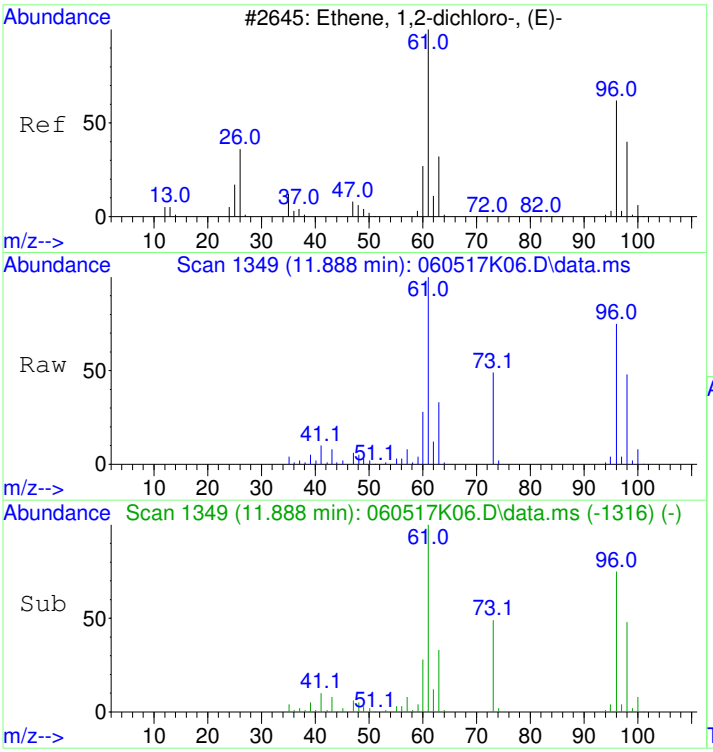


#19
tert-Butyl methyl ether (MTBE)
Concen: 10.23 ppbv
RT: 11.827 min Scan# 1339
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 73 Resp: 272983

Ion	Ratio	Lower	Upper
73	100		
57	19.8	0.0	39.8

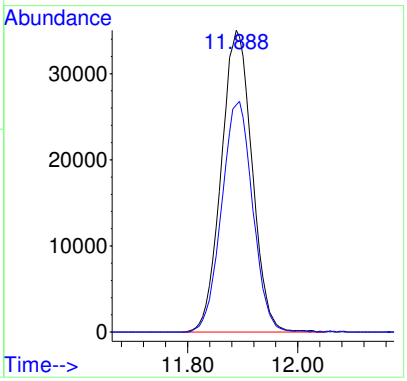


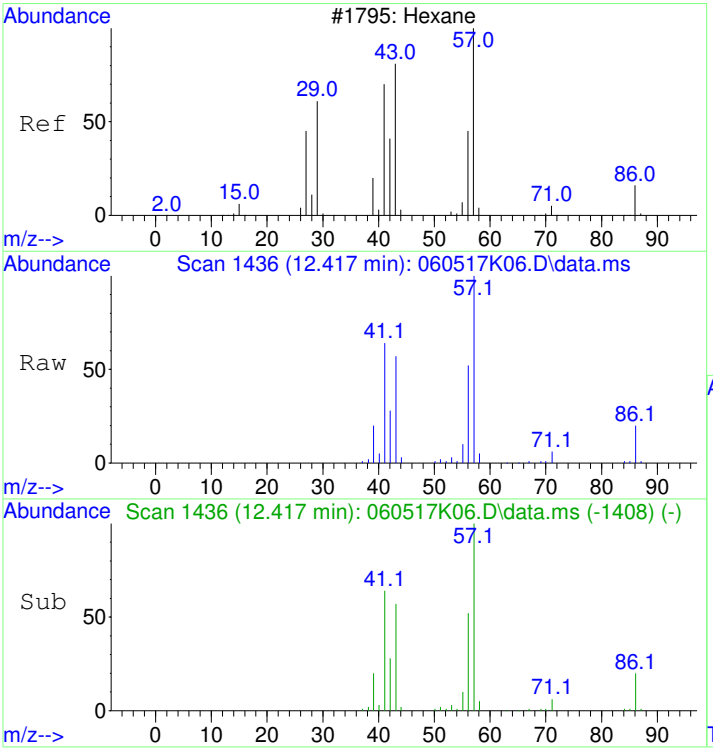


#20
trans-1,2-Dichloroethene
Concen: 9.73 ppbv
RT: 11.888 min Scan# 1349
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 61 Resp: 136281

Ion	Ratio	Lower	Upper
61	100		
96	76.8	56.8	96.8

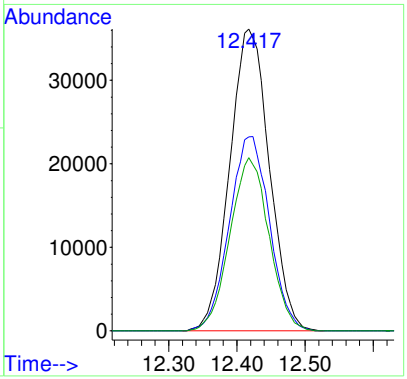


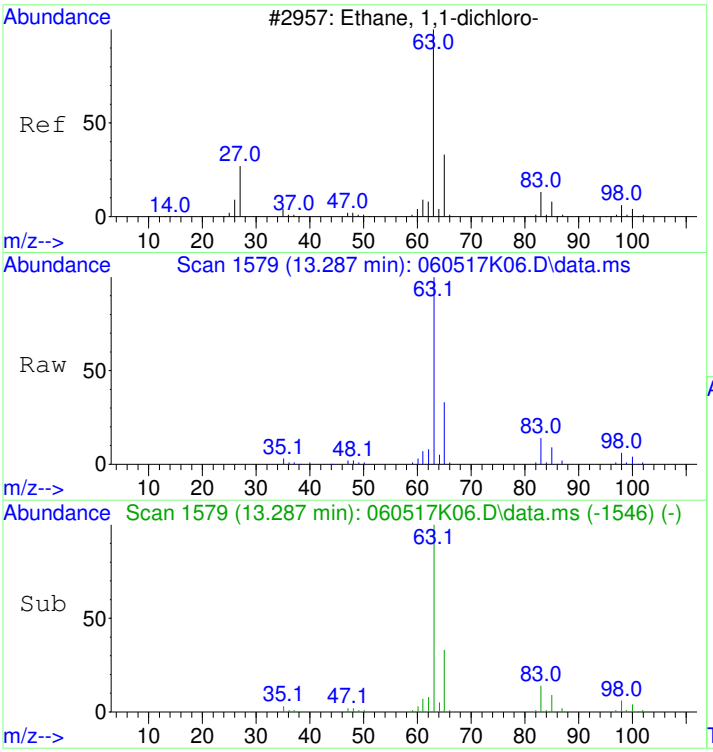


#21
Hexane
Concen: 9.85 ppbv
RT: 12.417 min Scan# 1436
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 57 Resp: 145389

Ion	Ratio	Lower	Upper
57	100		
41	65.2	45.2	85.2
43	56.6	36.6	76.6

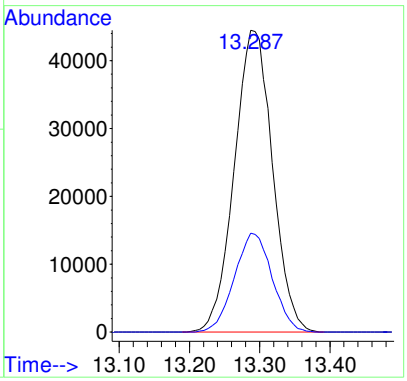


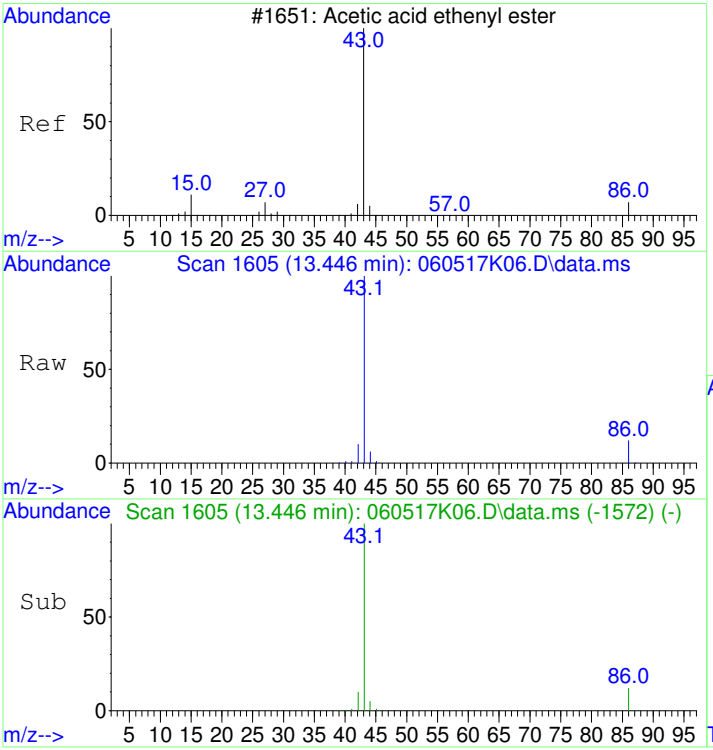


#22
1,1-Dichloroethane
Concen: 8.86 ppbv
RT: 13.287 min Scan# 1579
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 63 Resp: 168064

Ion	Ratio	Lower	Upper
63	100		
65	32.5	12.5	52.5

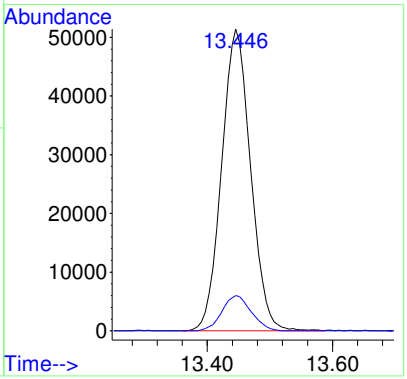


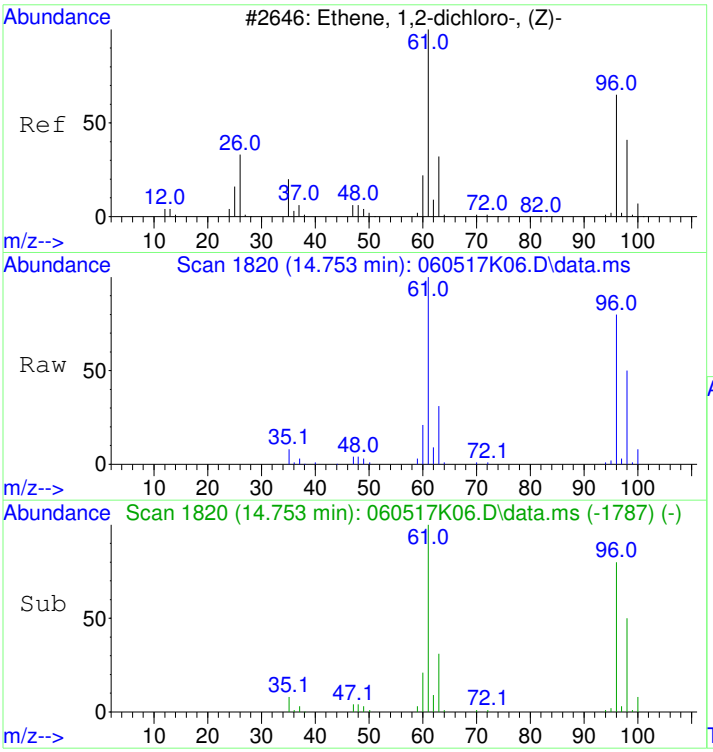


#23
Vinyl acetate
Concen: 11.39 ppbv
RT: 13.446 min Scan# 1605
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 43 Resp: 165370

Ion	Ratio	Lower	Upper
43	100		
86	11.8	0.0	31.8

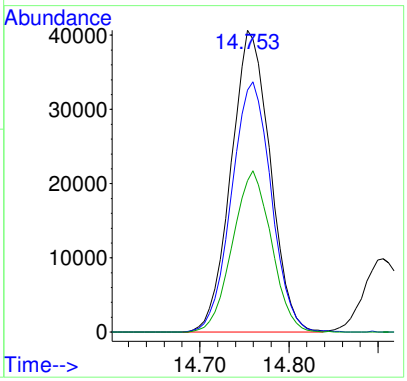


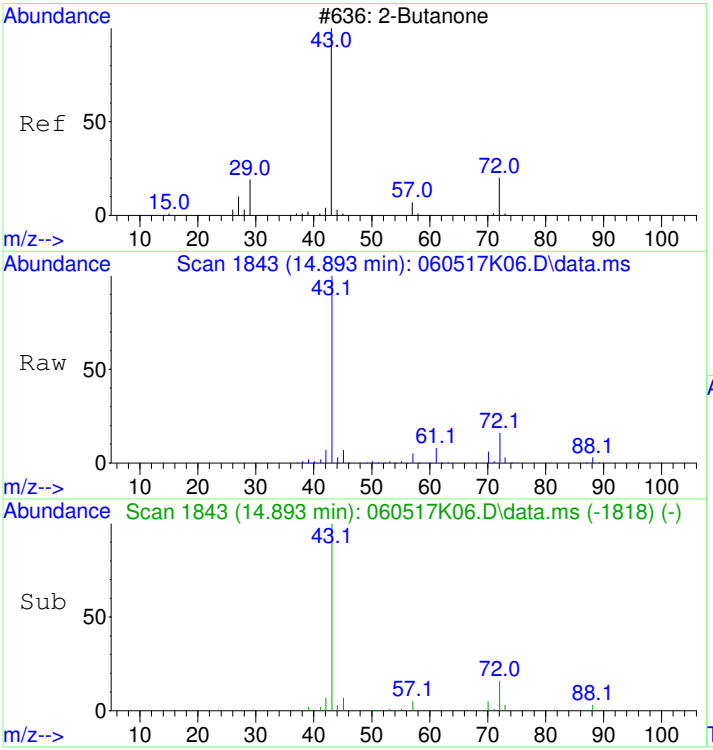


#24
cis-1,2-Dichloroethene
Concen: 9.81 ppbv
RT: 14.753 min Scan# 1820
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 61 Resp: 123506

Ion	Ratio	Lower	Upper
61	100		
96	84.3	64.3	104.3
98	53.1	33.1	73.1

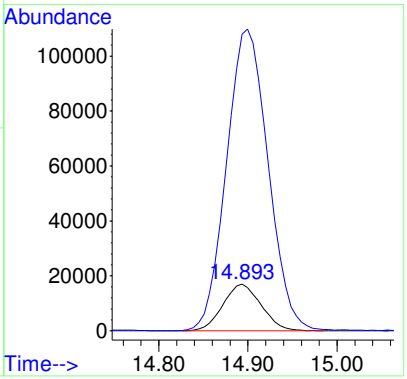


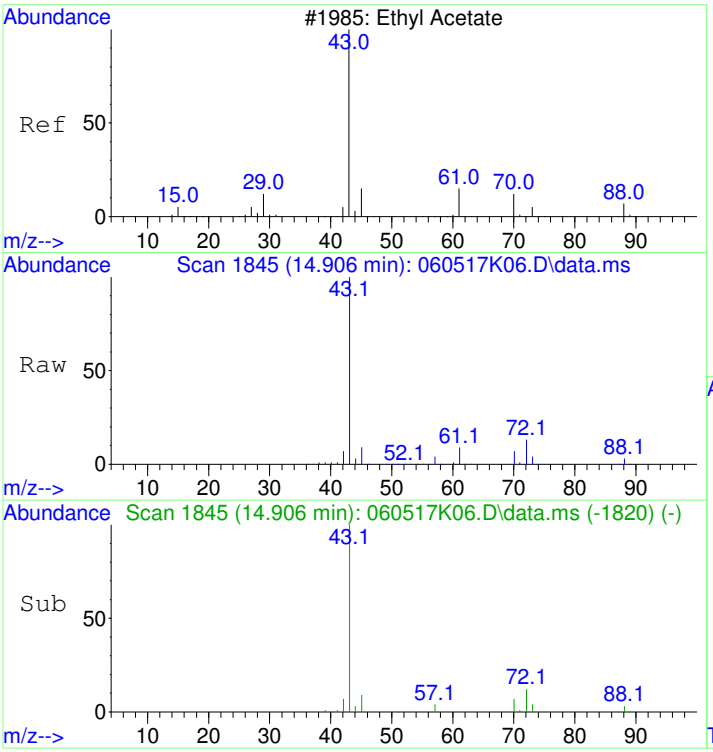


#25
2-Butanone (MEK)
Concen: 10.28 ppbv
RT: 14.893 min Scan# 1843
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 72 Resp: 50432

Ion	Ratio	Lower	Upper
72	100		
43	707.6	697.6	717.6

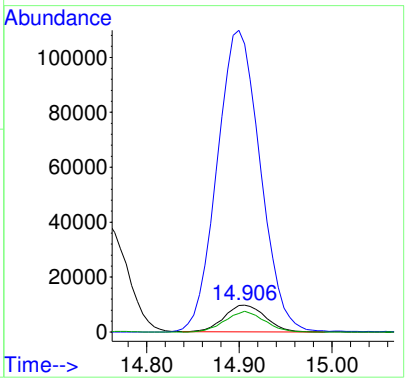


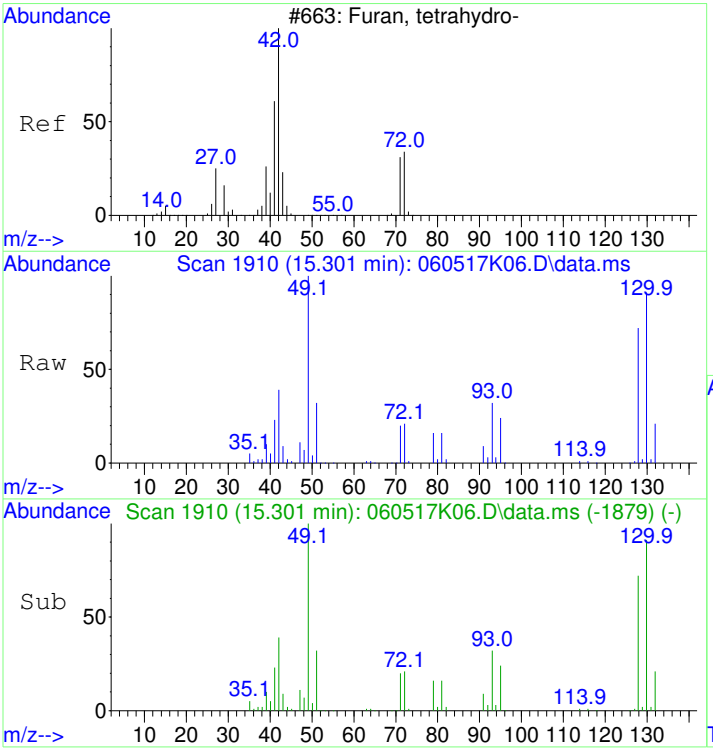


#26
Ethyl acetate
Concen: 10.35 ppbv
RT: 14.906 min Scan# 1845
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 61 Resp: 30189

Ion	Ratio	Lower	Upper
61	100		
43	1182.3	1172.3	1192.3
70	73.8	63.8	83.8

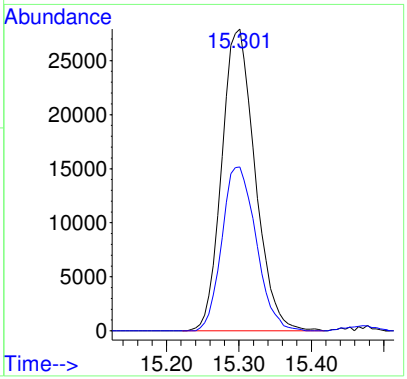


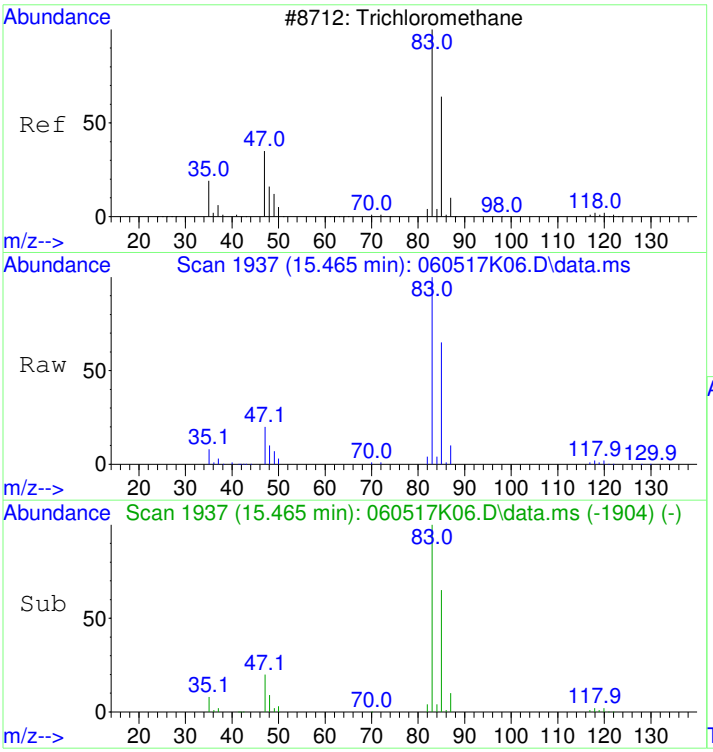


#27
Tetrahydrofuran
Concen: 9.62 ppbv
RT: 15.301 min Scan# 1910
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 42 Resp: 89408

Ion	Ratio	Lower	Upper
42	100		
72	55.6	35.6	75.6

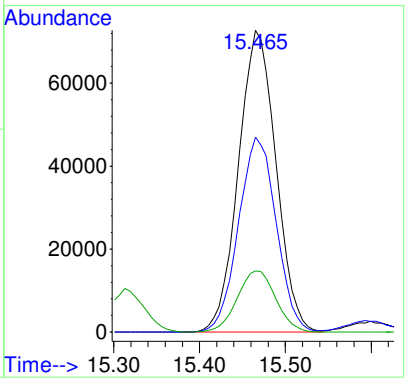


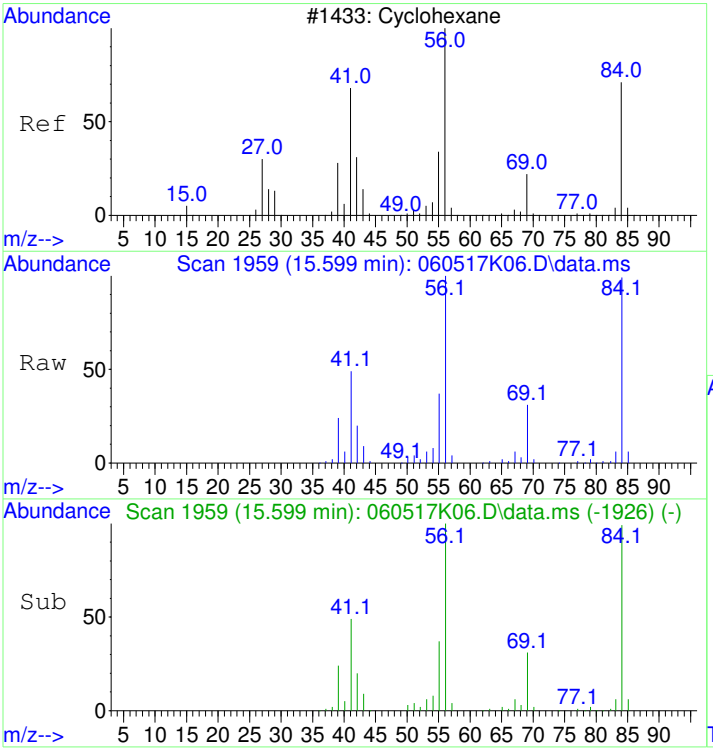


#28
Chloroform
Concen: 9.65 ppbv
RT: 15.465 min Scan# 1937
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 83 Resp: 221119

Ion	Ratio	Lower	Upper
83	100		
85	65.0	45.0	85.0
47	20.8	0.8	40.8

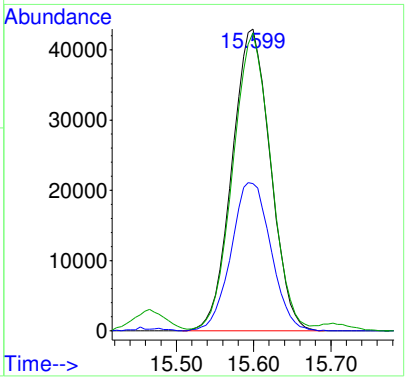


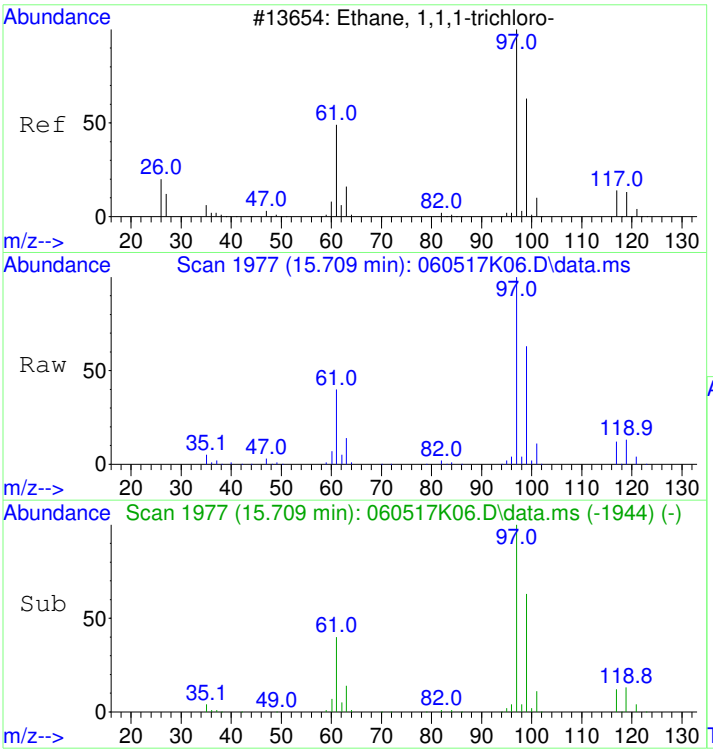


#29
Cyclohexane
Concen: 9.97 ppbv
RT: 15.599 min Scan# 1959
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 56 Resp: 148551

Ion	Ratio	Lower	Upper
56	100		
41	50.8	30.8	70.8
84	100.0	80.0	120.0

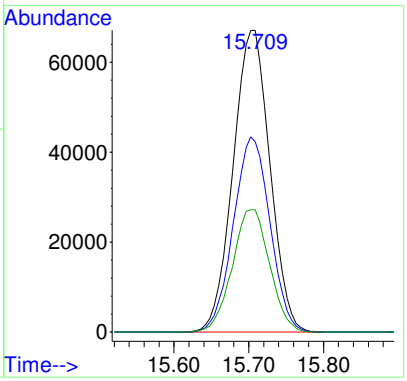


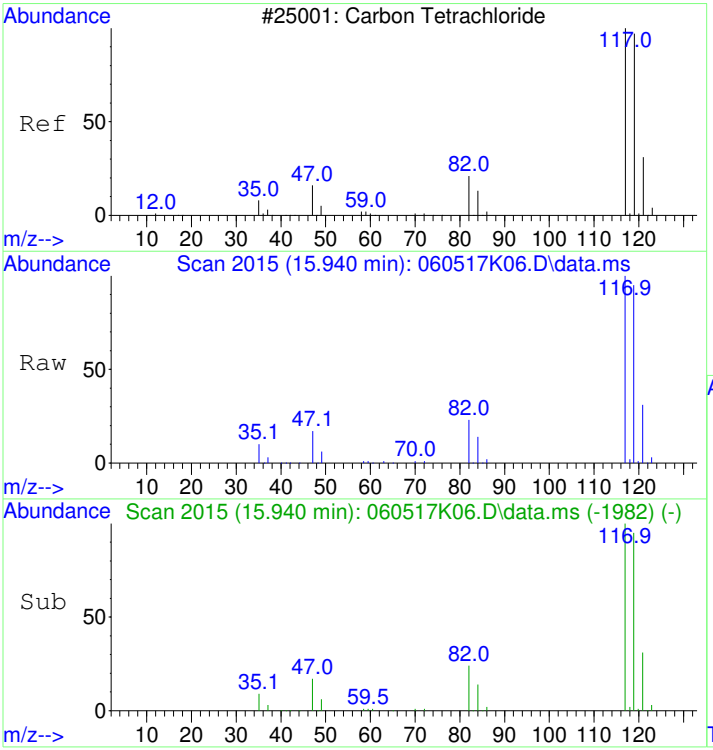


#30
1,1,1-Trichloroethane
Concen: 9.39 ppbv
RT: 15.709 min Scan# 1977
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 97 Resp: 229844

Ion	Ratio	Lower	Upper
97	100		
99	64.3	44.3	84.3
61	41.1	21.1	61.1

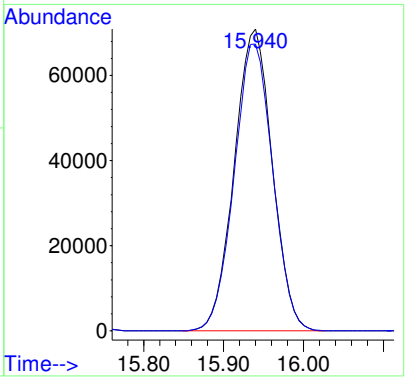


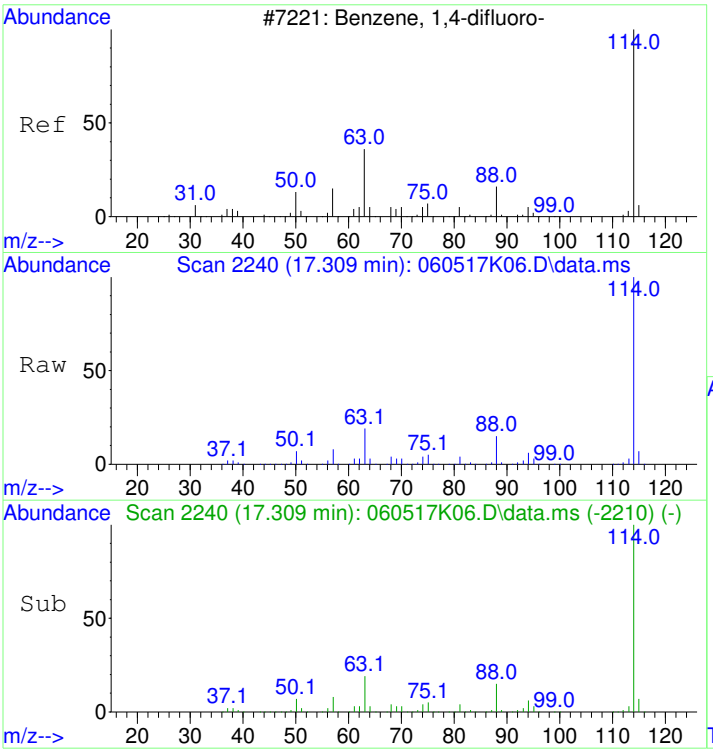


#31
Carbon tetrachloride
Concen: 9.49 ppbv
RT: 15.940 min Scan# 2015
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:117 Resp: 234374

Ion	Ratio	Lower	Upper
117	100		
119	96.1	76.1	116.1

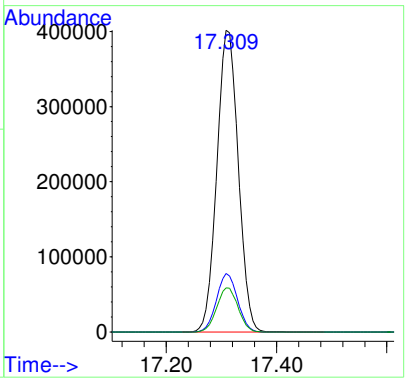


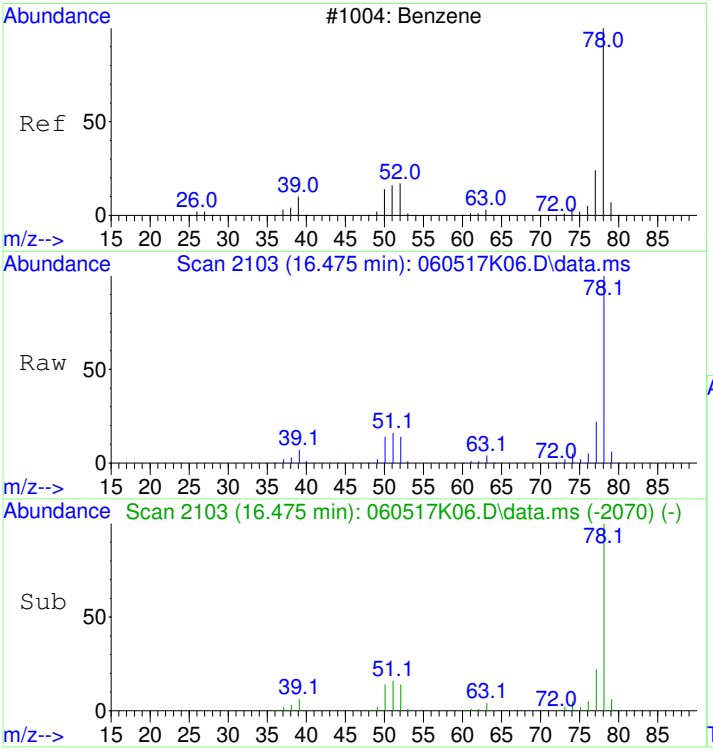


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.309 min Scan# 2240
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:114 Resp: 1080054

Ion	Ratio	Lower	Upper
114	100		
63	19.1	0.0	39.1
88	14.7	0.0	34.7

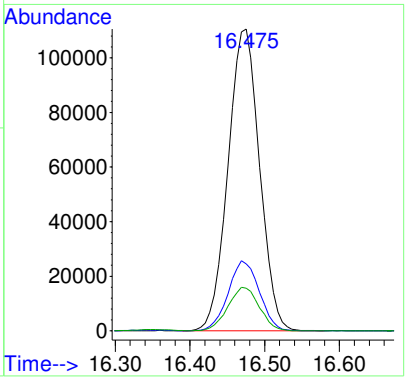


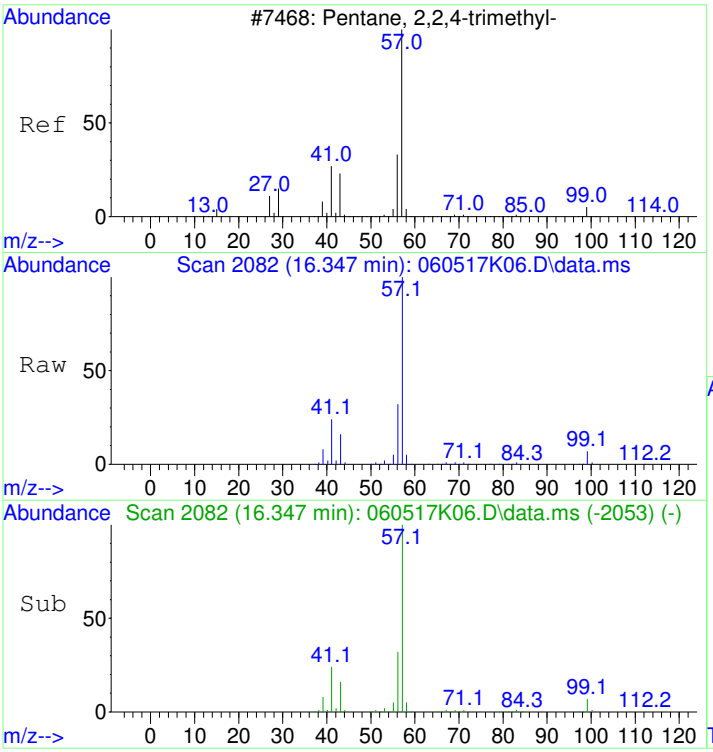


#33
Benzene
Concen: 9.74 ppbv
RT: 16.475 min Scan# 2103
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 78 Resp: 323654

Ion	Ratio	Lower	Upper
78	100		
77	22.9	2.9	42.9
50	14.4	0.0	34.4

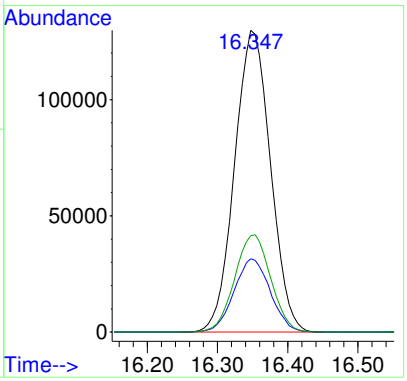


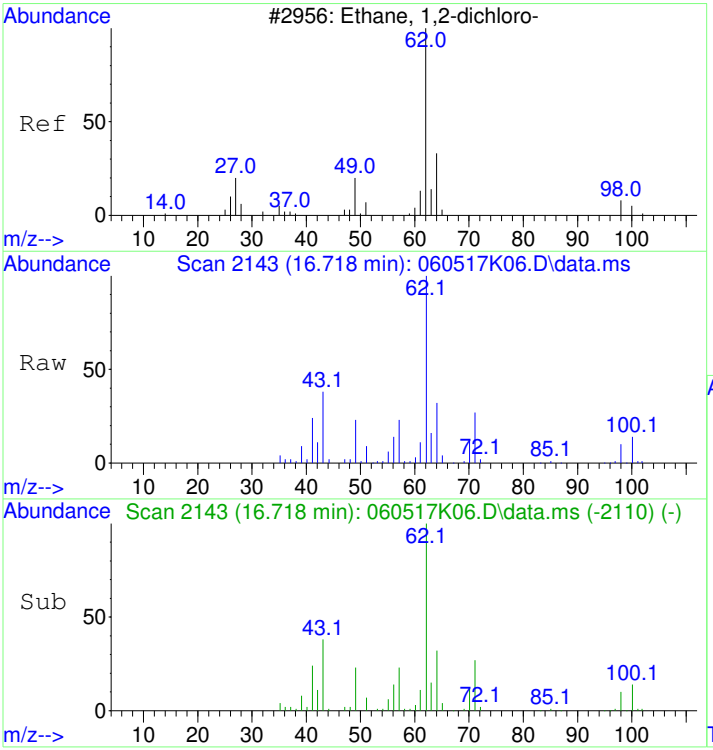


#34
2,2,4-Trimethylpentane
Concen: 9.92 ppbv
RT: 16.347 min Scan# 2082
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 57 Resp: 461250

Ion	Ratio	Lower	Upper
57	100		
41	24.6	4.6	44.6
56	32.4	12.4	52.4

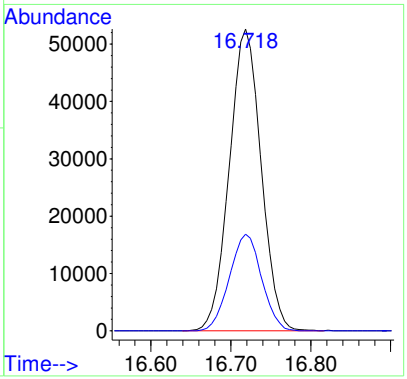


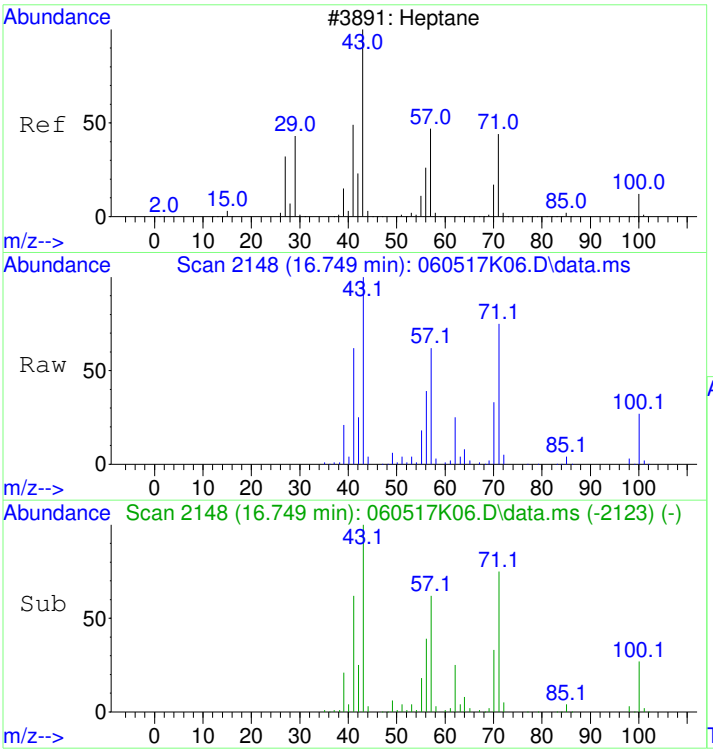


#35
1,2-Dichloroethane
Concen: 9.36 ppbv
RT: 16.718 min Scan# 2143
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 62 Resp: 145405

Ion	Ratio	Lower	Upper
62	100		
64	32.4	12.4	52.4

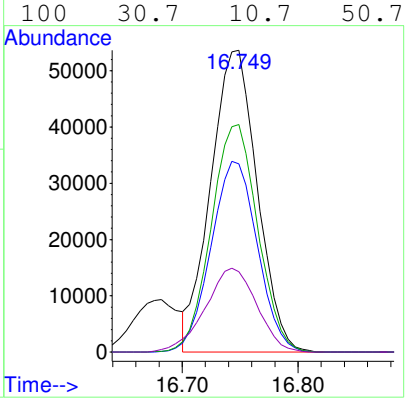


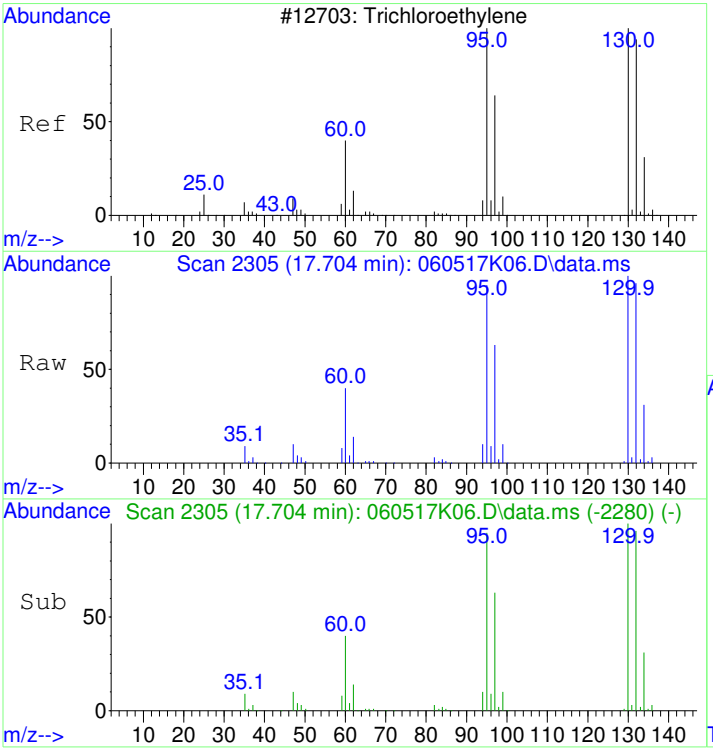


#36
Heptane
Concen: 9.61 ppbv
RT: 16.749 min Scan# 2148
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 43 Resp: 150058

Ion	Ratio	Lower	Upper
43	100		
57	63.1	43.1	83.1
71	75.3	55.3	95.3
100	30.7	10.7	50.7

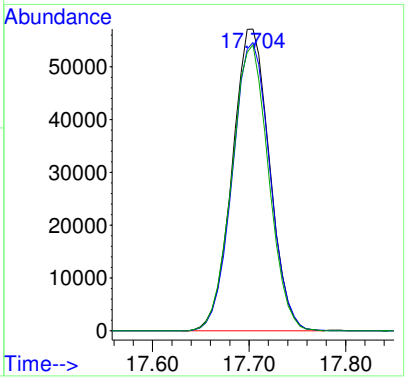


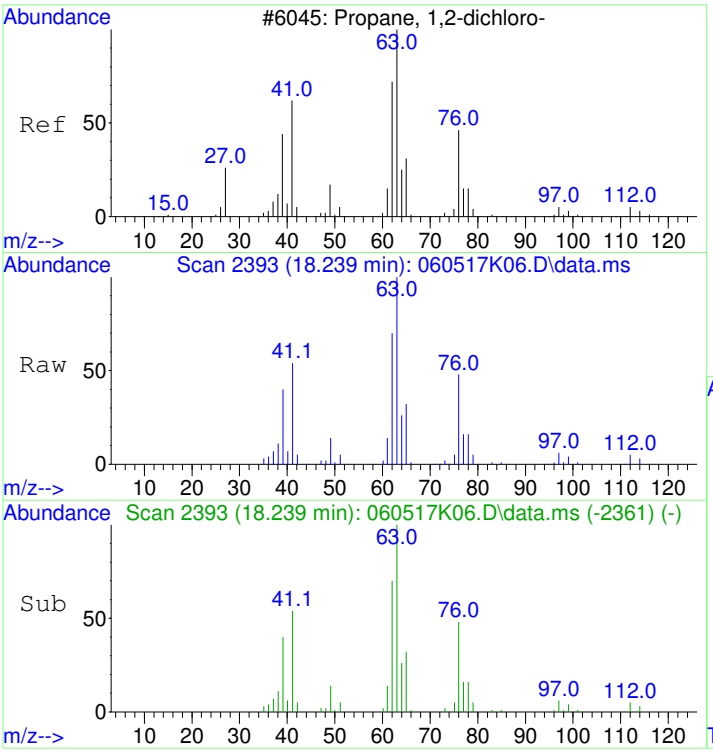


#37
Trichloroethene
Concen: 10.26 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:130 Resp: 153353

Ion	Ratio	Lower	Upper
130	100		
132	95.8	75.8	115.8
95	93.6	73.6	113.6

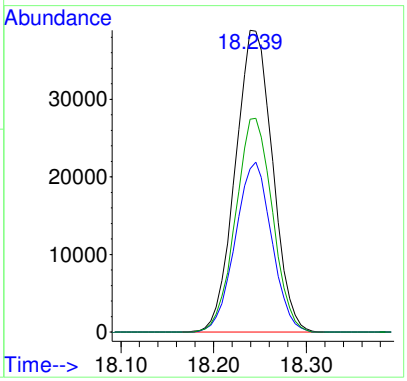


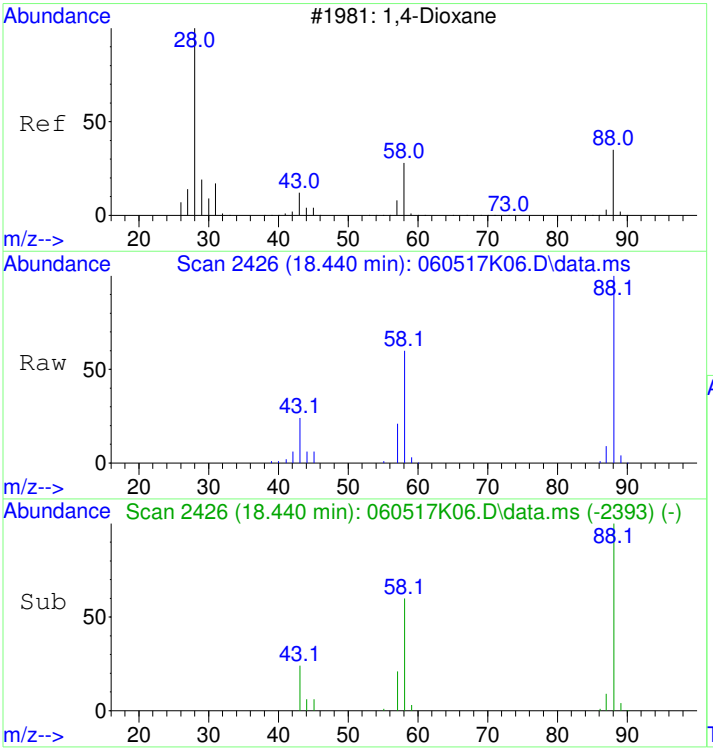


#38
1,2-Dichloropropane
Concen: 9.79 ppbv
RT: 18.239 min Scan# 2393
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 63 Resp: 108411

Ion	Ratio	Lower	Upper
63	100		
41	55.1	35.1	75.1
62	70.1	50.1	90.1

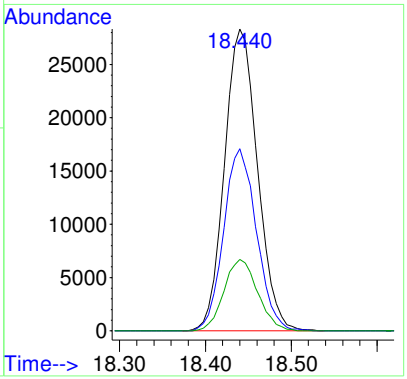


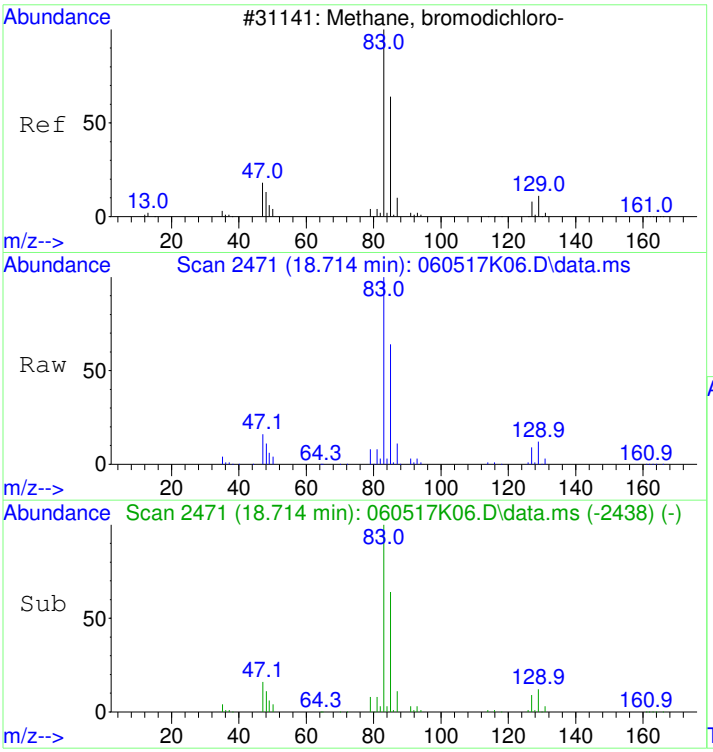


#39
1,4-Dioxane
Concen: 10.93 ppbv
RT: 18.440 min Scan# 2426
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 88 Resp: 75753

Ion	Ratio	Lower	Upper
88	100		
58	60.1	40.1	80.1
43	24.2	4.2	44.2

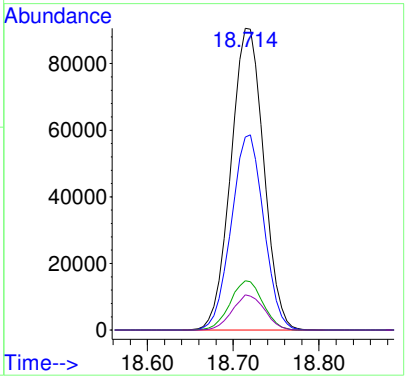


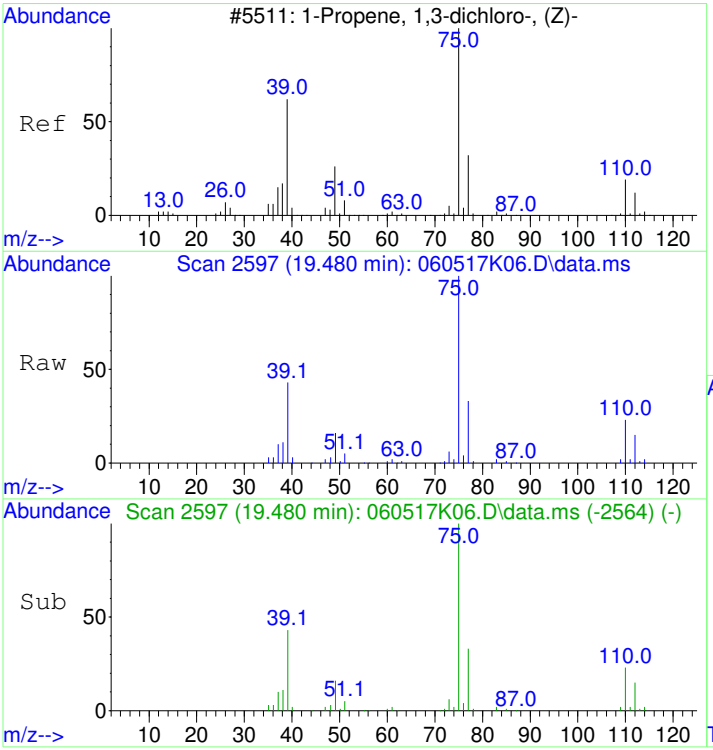


#40
Bromodichloromethane
Concen: 9.34 ppbv
RT: 18.714 min Scan# 2471
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 83 Resp: 240706

Ion	Ratio	Lower	Upper
83	100		
85	63.9	43.9	83.9
47	16.3	0.0	36.3
129	11.5	0.0	31.5

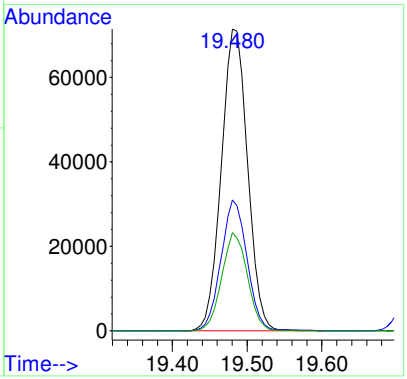


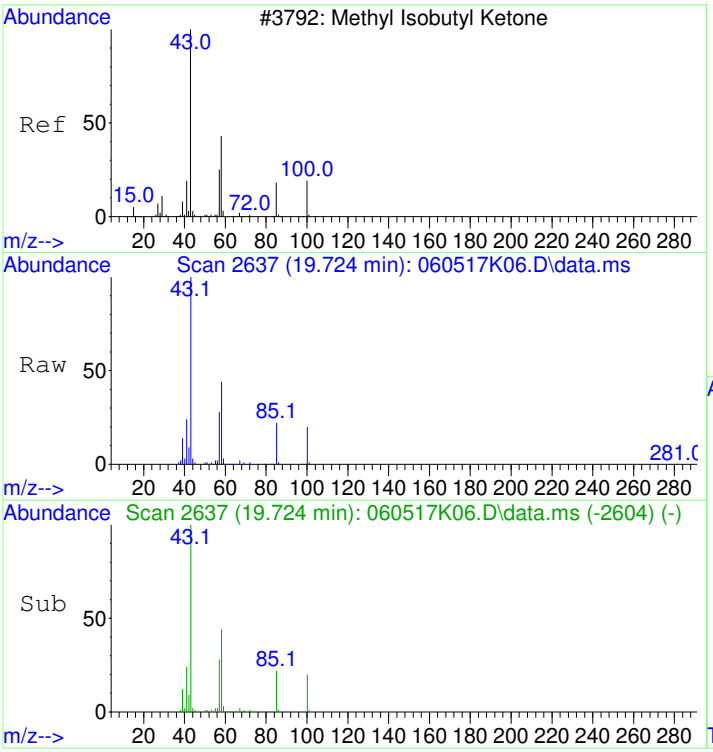


#41
cis-1,3-Dichloropropene
Concen: 10.33 ppbv
RT: 19.480 min Scan# 2597
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 75 Resp: 174348

Ion	Ratio	Lower	Upper
75	100		
39	43.1	23.1	63.1
77	31.7	11.7	51.7

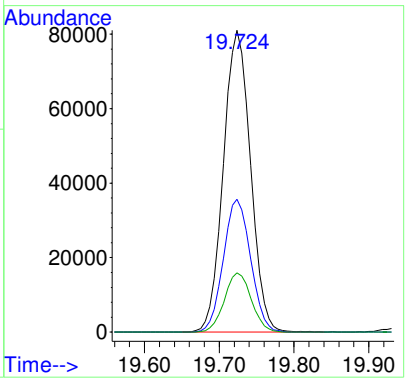


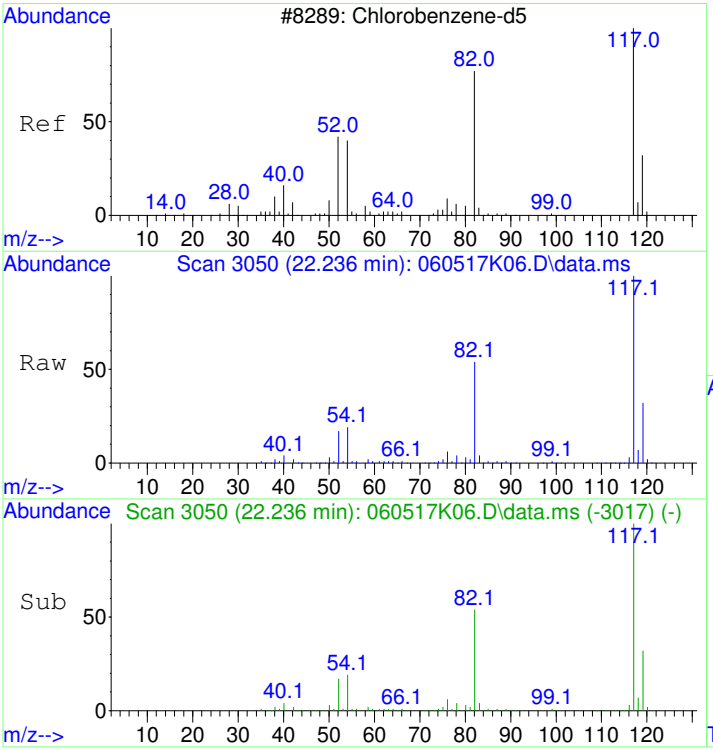


#42
4-Methyl-2-pentanone (MIBK)
Concen: 10.45 ppbv
RT: 19.724 min Scan# 2637
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 43 Resp: 204201

Ion	Ratio	Lower	Upper
43	100		
58	44.2	24.2	64.2
100	19.4	0.0	39.4

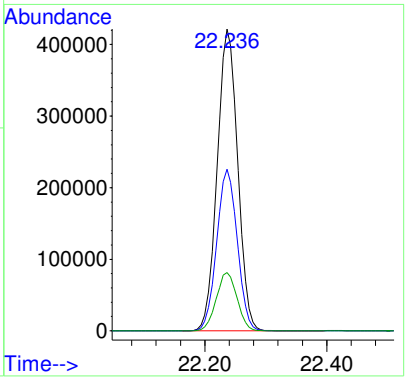


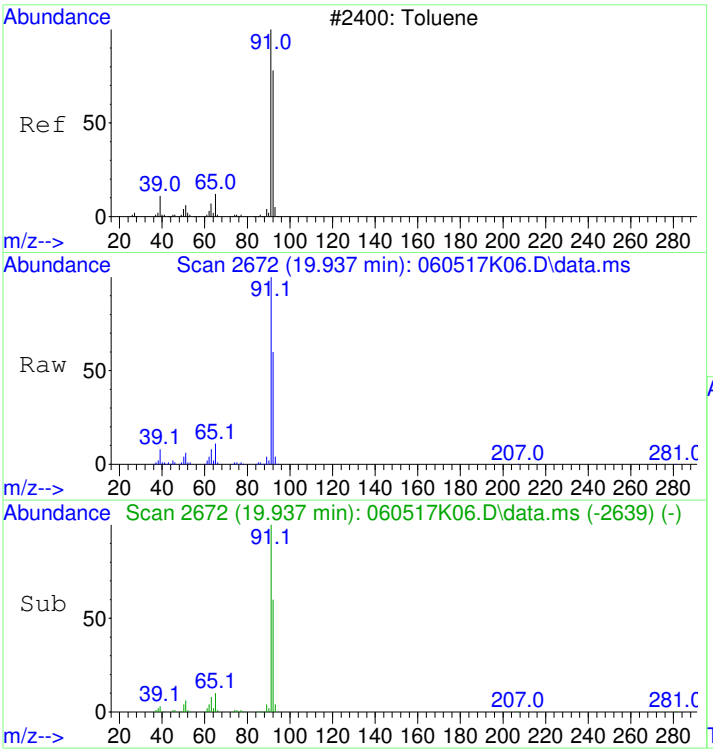


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:117 Resp: 984303

Ion	Ratio	Lower	Upper
117	100		
82	53.7	33.7	73.7
54	19.6	0.0	39.6

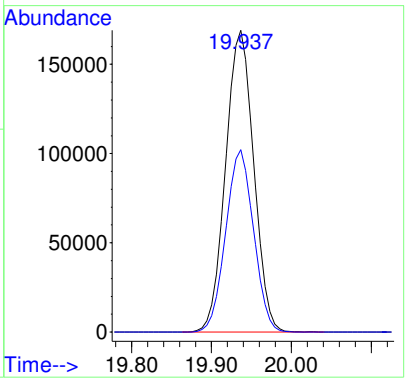


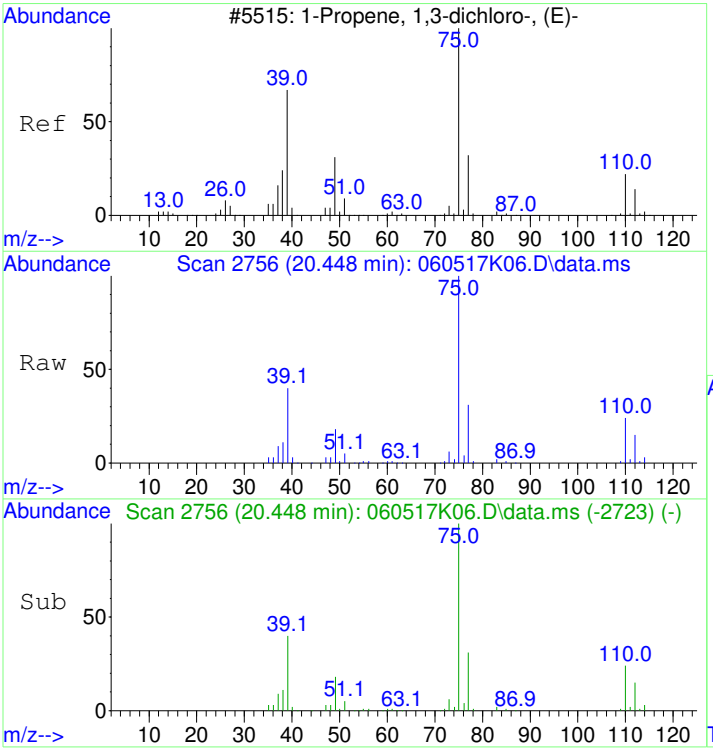


#44
Toluene
Concen: 10.08 ppbv
RT: 19.937 min Scan# 2672
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 91 Resp: 414267

Ion	Ratio	Lower	Upper
91	100		
92	59.8	39.8	79.8

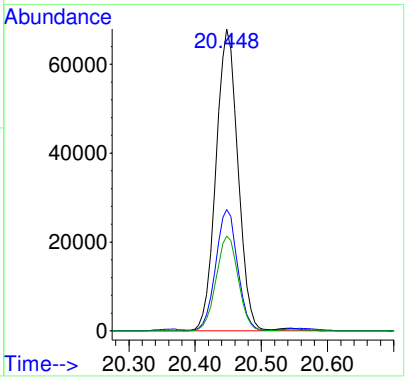


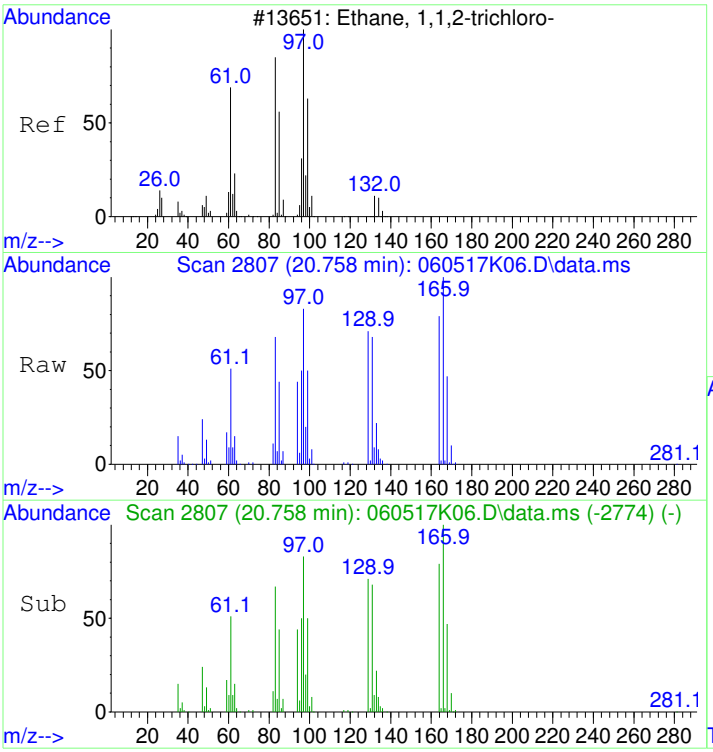


#45
trans-1,3-Dichloropropene
Concen: 9.62 ppbv
RT: 20.448 min Scan# 2756
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 75 Resp: 157147

Ion	Ratio	Lower	Upper
75	100		
39	39.8	19.8	59.8
77	31.5	11.5	51.5

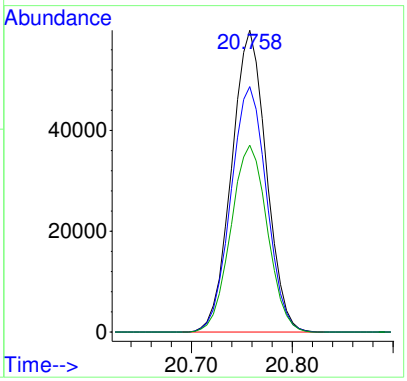


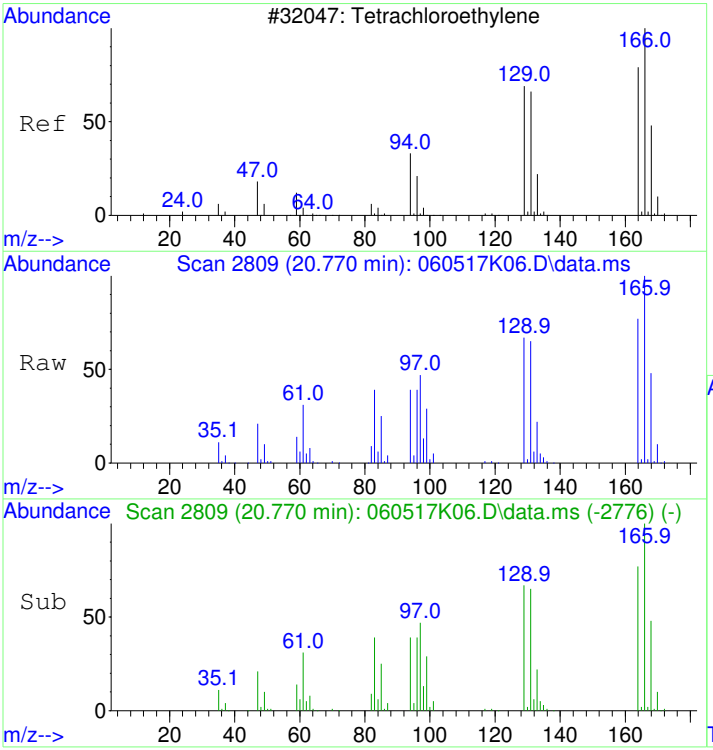


#46
1,1,2-Trichloroethane
Concen: 9.96 ppbv
RT: 20.758 min Scan# 2807
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 97 Resp: 143254

Ion	Ratio	Lower	Upper
97	100		
83	83.8	63.8	103.8
61	65.1	45.1	85.1

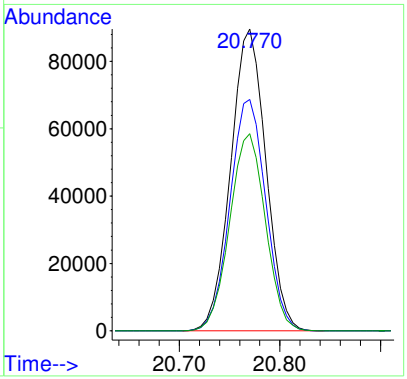


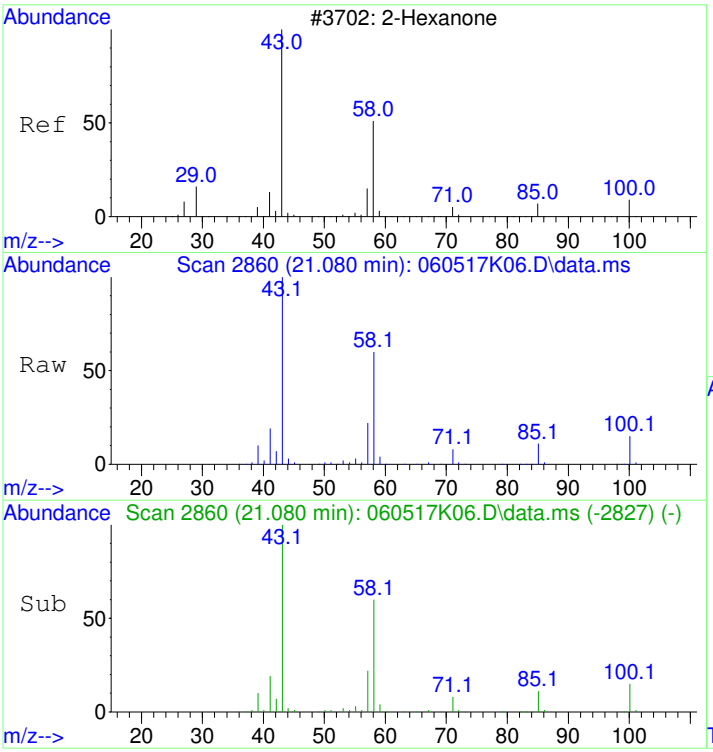


#47
Tetrachloroethene
Concen: 9.88 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:166 Resp: 218056

Ion	Ratio	Lower	Upper
166	100		
164	77.9	57.9	97.9
131	66.1	46.1	86.1

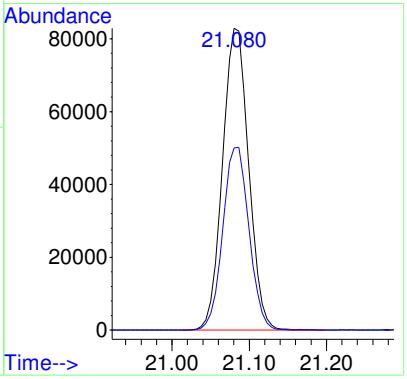


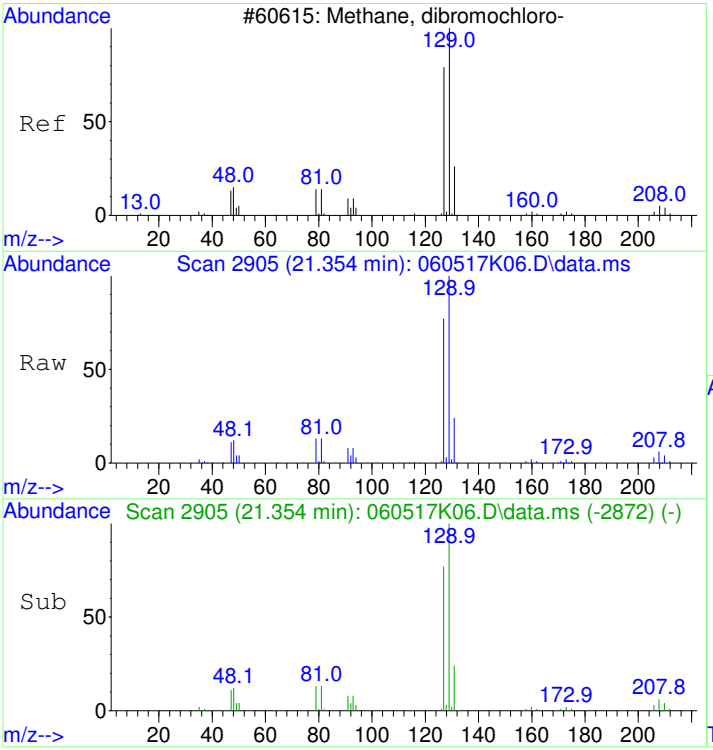


#48
2-Hexanone
Concen: 10.85 ppbv
RT: 21.080 min Scan# 2860
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 43 Resp: 194780

Ion	Ratio	Lower	Upper
43	100		
58	60.8	40.8	80.8

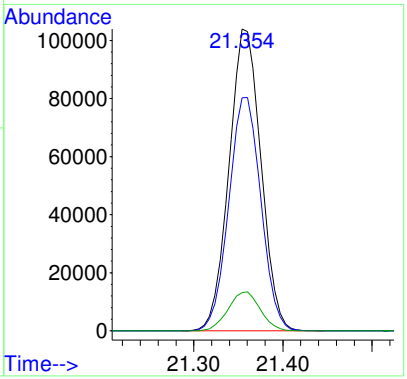


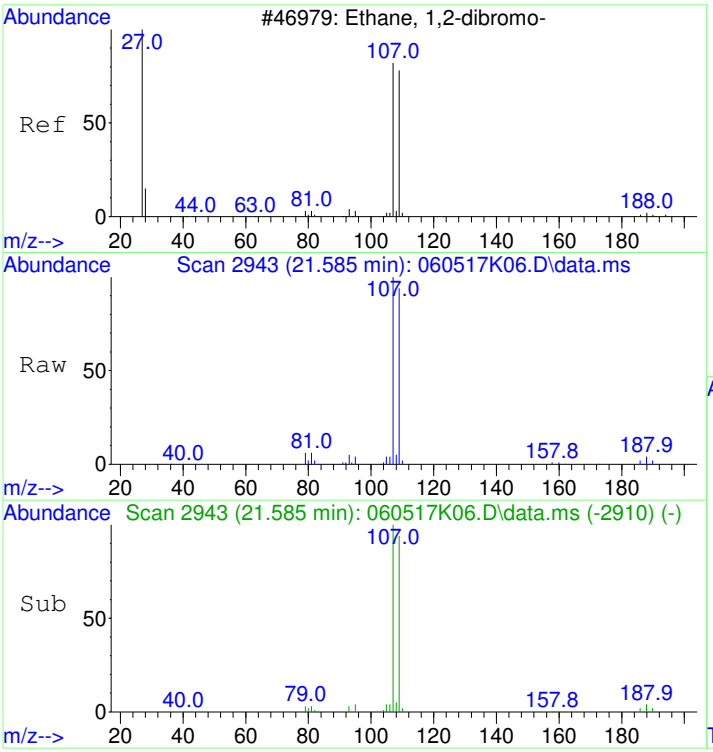


#49
Chlorodibromomethane
Concen: 9.87 ppbv
RT: 21.354 min Scan# 2905
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:129 Resp: 257986

Ion	Ratio	Lower	Upper
129	100		
127	77.7	57.7	97.7
79	13.0	0.0	33.0

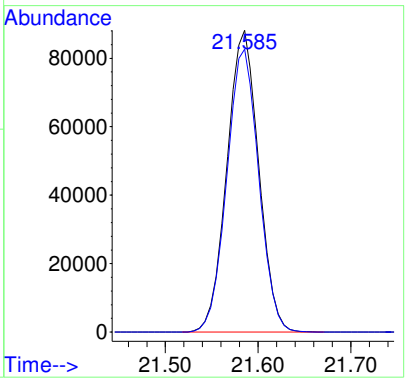


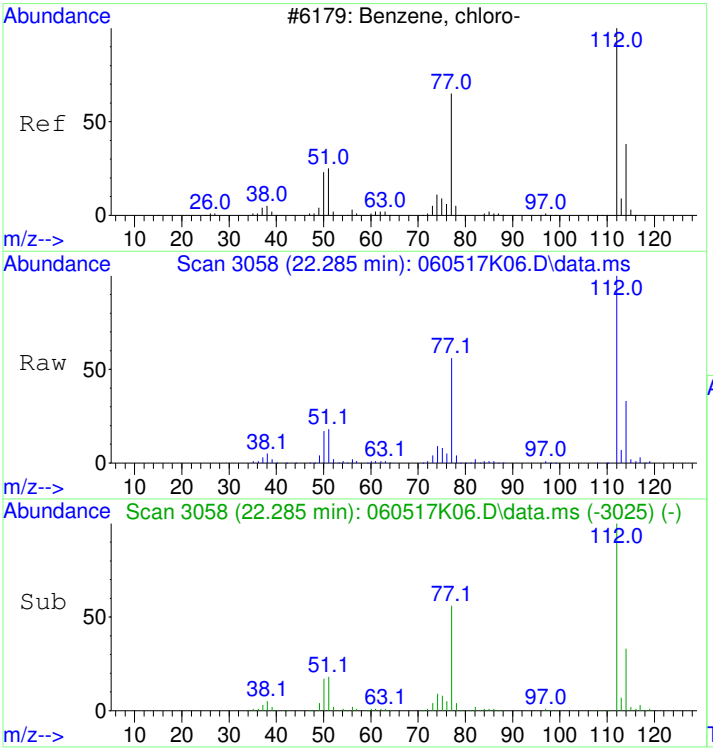


#50
1,2-Dibromoethane (EDB)
Concen: 10.26 ppbv
RT: 21.585 min Scan# 2943
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:107 Resp: 209696

Ion	Ratio	Lower	Upper
107	100		
109	94.3	74.3	114.3

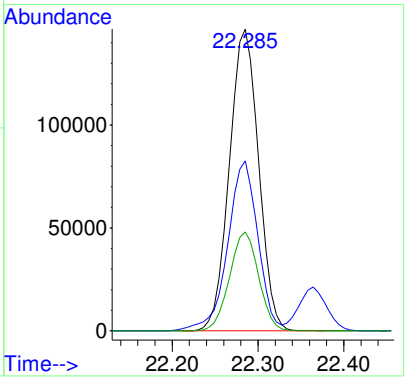


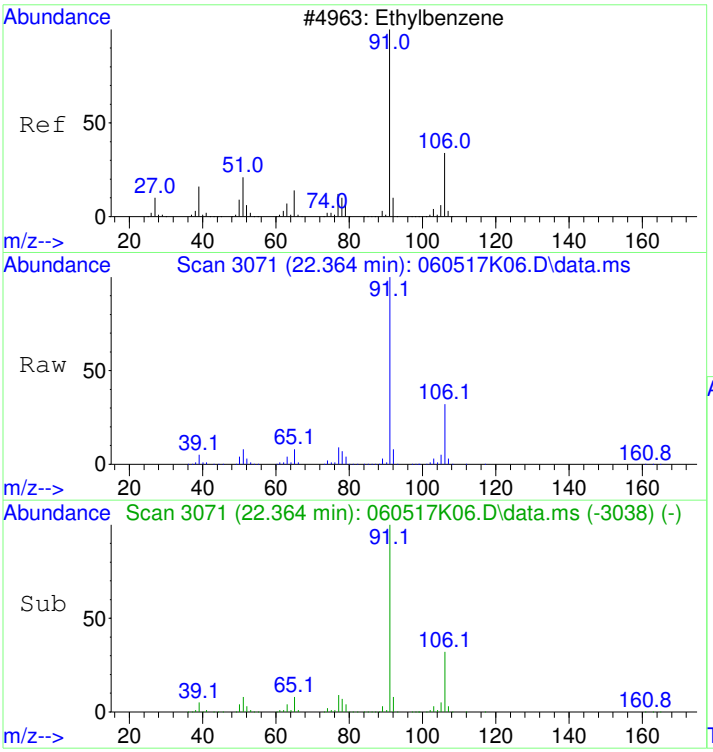


#51
Chlorobenzene
Concen: 9.97 ppbv
RT: 22.285 min Scan# 3058
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:112 Resp: 347306

Ion	Ratio	Lower	Upper
112	100		
77	58.1	38.1	78.1
114	32.6	12.6	52.6

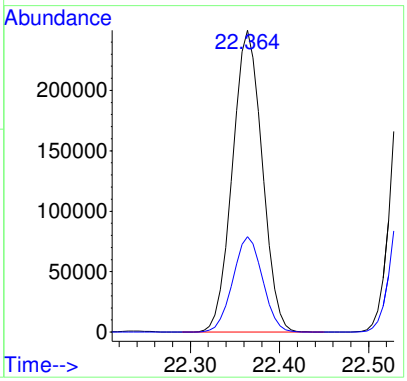


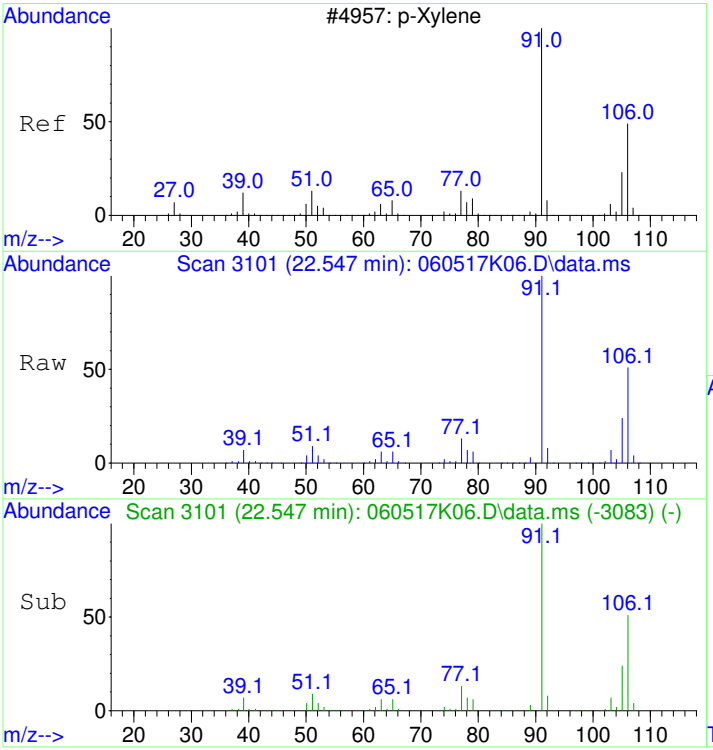


#52
Ethylbenzene
Concen: 10.04 ppbv
RT: 22.364 min Scan# 3071
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 91 Resp: 577267

Ion	Ratio	Lower	Upper
91	100		
106	31.5	11.5	51.5

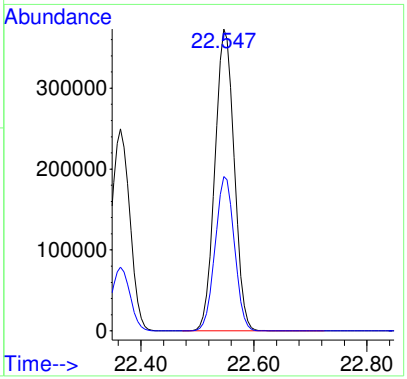


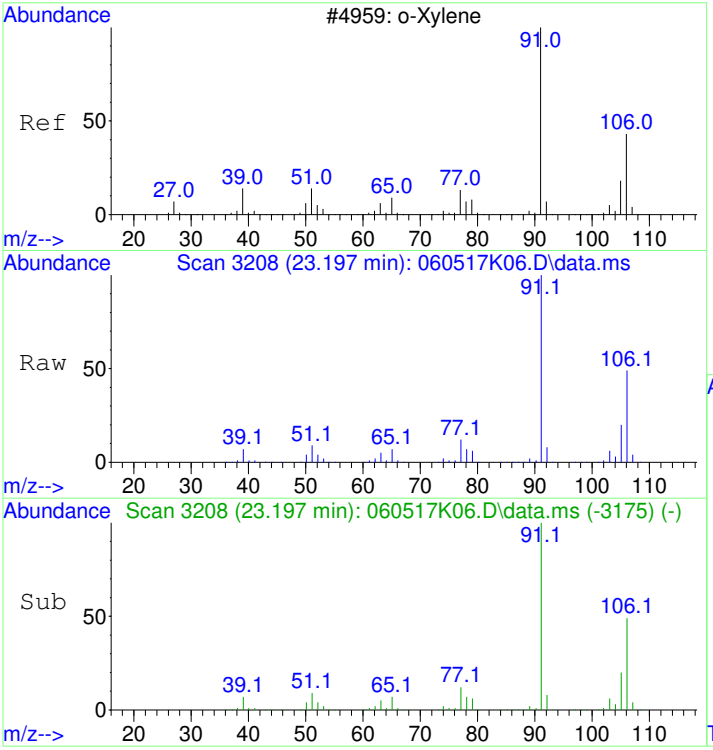


#53
m&p-Xylene
Concen: 20.14 ppbv
RT: 22.547 min Scan# 3101
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 91 Resp: 882786

Ion	Ratio	Lower	Upper
91	100		
106	51.1	31.1	71.1

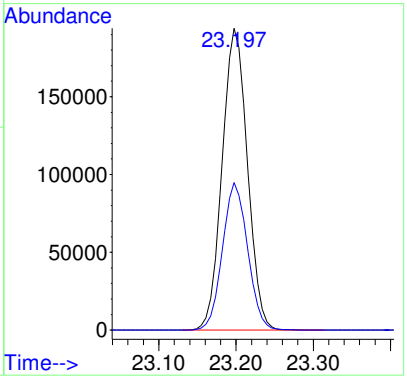


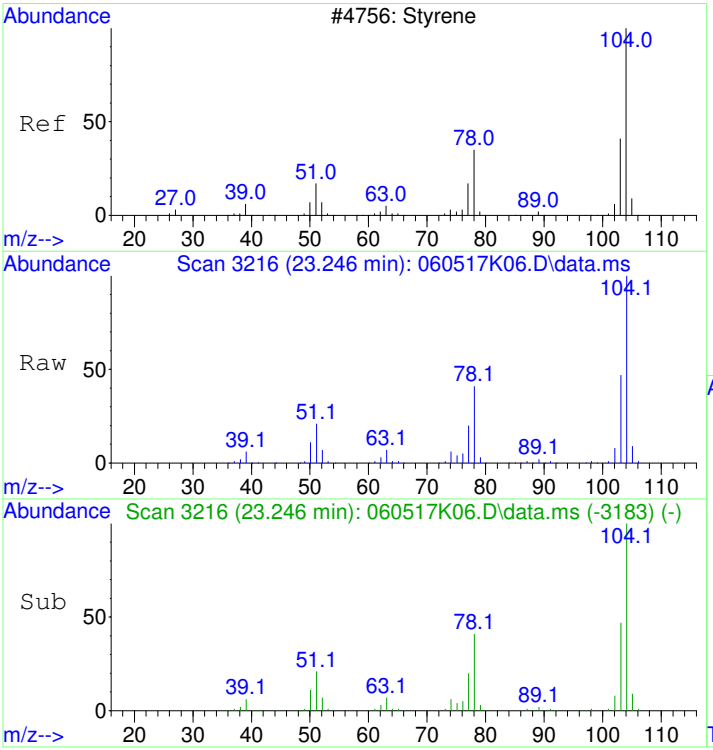


#54
o-Xylene
Concen: 10.15 ppbv
RT: 23.197 min Scan# 3208
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 91 Resp: 441442

Ion	Ratio	Lower	Upper
91	100		
106	48.6	28.6	68.6

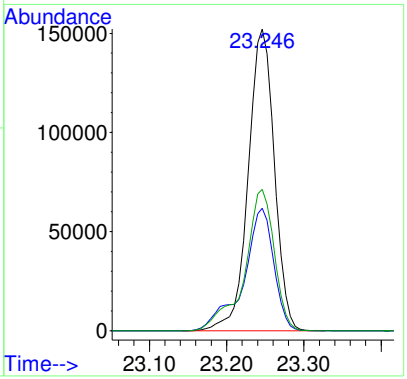


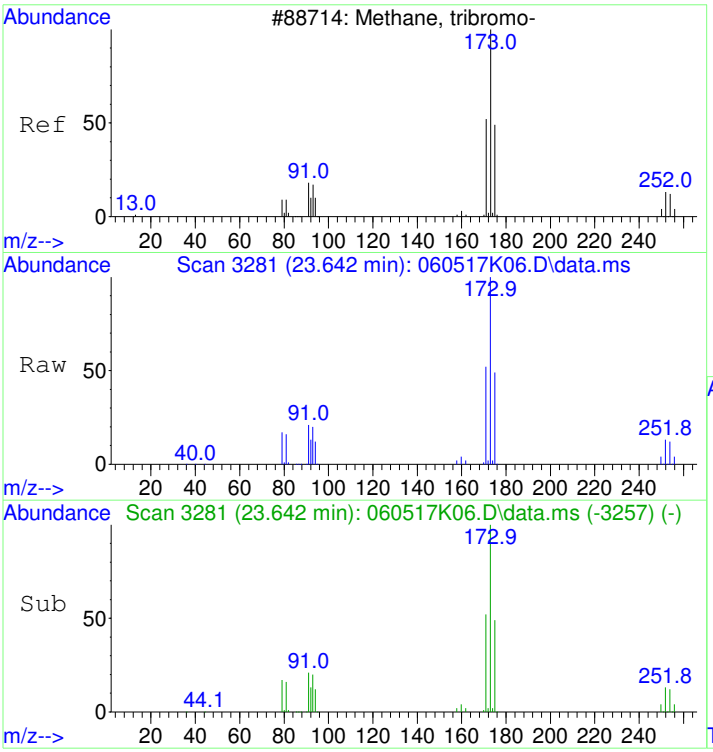


#55
Styrene
Concen: 9.85 ppbv
RT: 23.246 min Scan# 3216
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:104 Resp: 358339

Ion	Ratio	Lower	Upper
104	100		
78	47.1	27.1	67.1
103	53.1	33.1	73.1

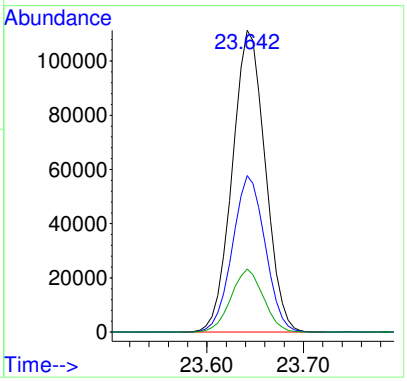


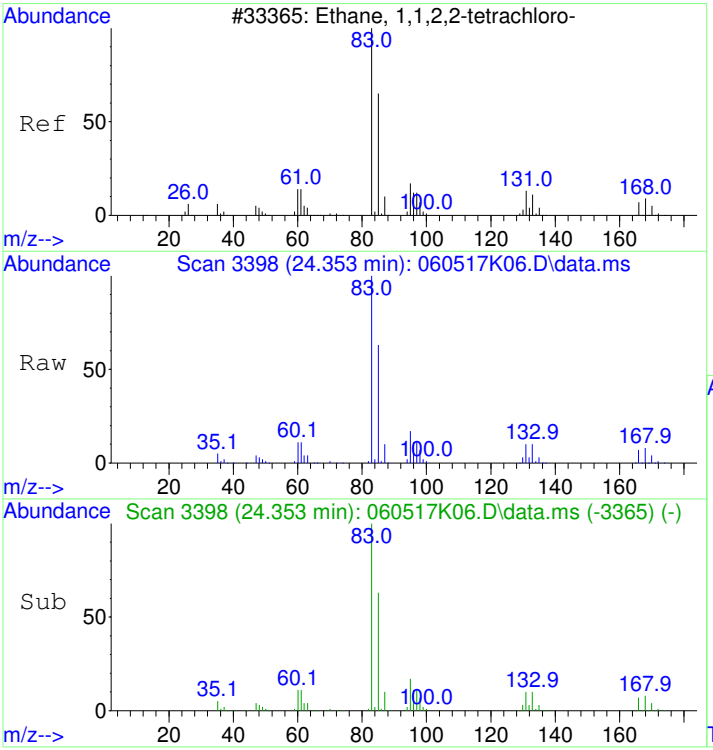


#56
Bromoform
Concen: 10.47 ppbv
RT: 23.642 min Scan# 3281
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:173 Resp: 264351

Ion	Ratio	Lower	Upper
173	100		
171	51.5	31.5	71.5
91	20.4	0.4	40.4

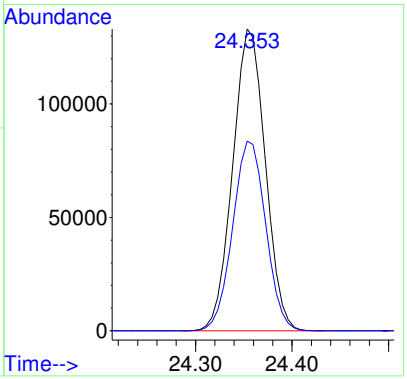


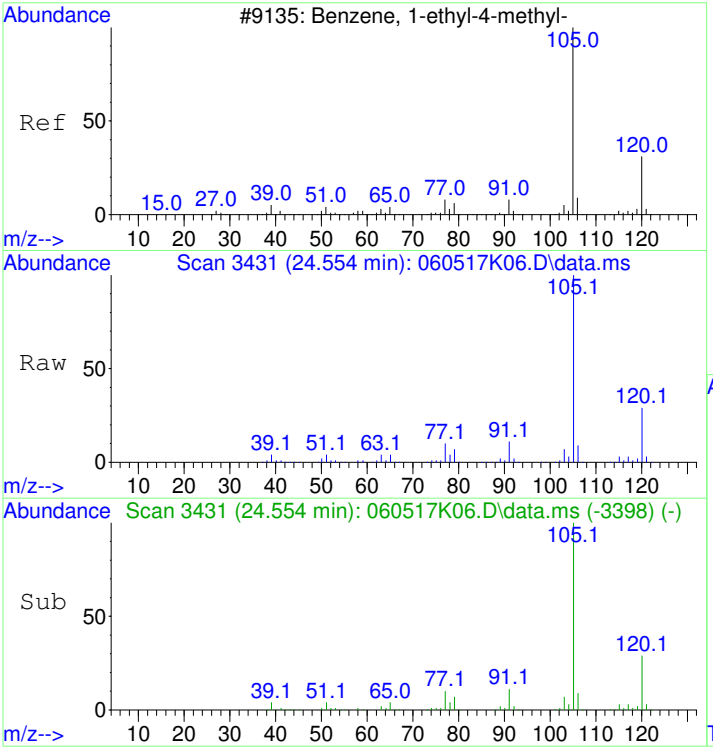


#57
1,1,2,2-Tetrachloroethane
Concen: 9.51 ppbv
RT: 24.353 min Scan# 3398
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 83 Resp: 312918

Ion	Ratio	Lower	Upper
83	100		
85	63.7	43.7	83.7

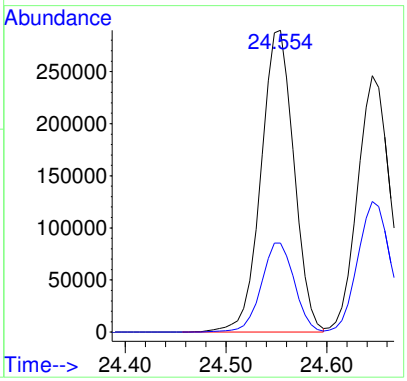


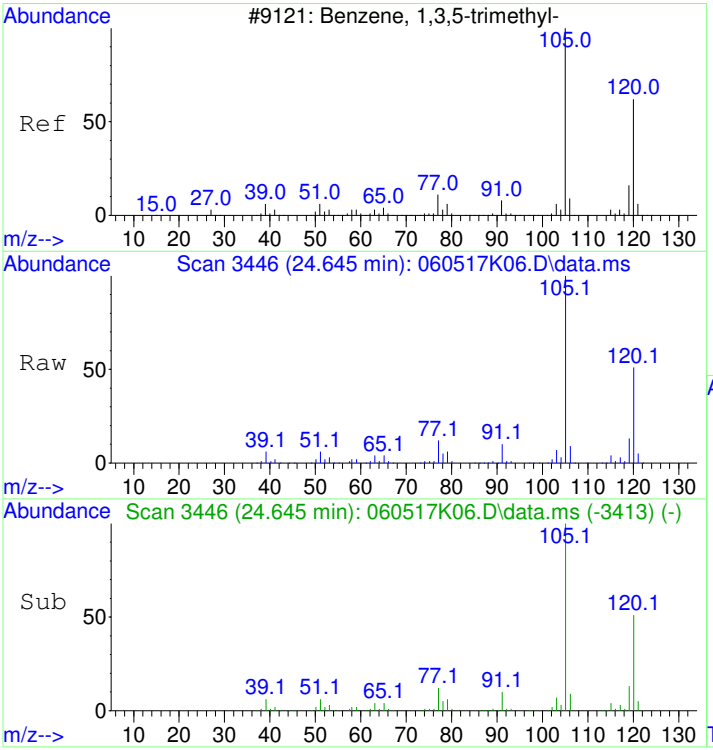


#58
4-Ethyltoluene
Concen: 10.13 ppbv
RT: 24.554 min Scan# 3431
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:105 Resp: 657295

Ion	Ratio	Lower	Upper
105	100		
120	29.6	9.6	49.6

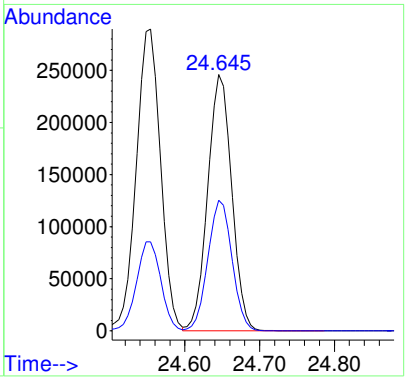


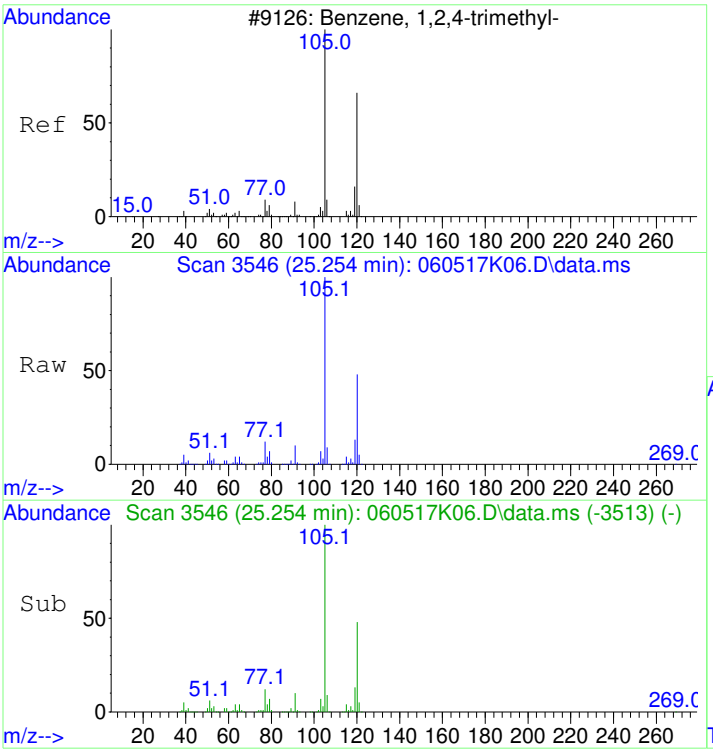


#59
1,3,5-Trimethylbenzene
Concen: 9.85 ppbv
RT: 24.645 min Scan# 3446
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:105 Resp: 549502

Ion	Ratio	Lower	Upper
105	100		
120	51.1	31.1	71.1

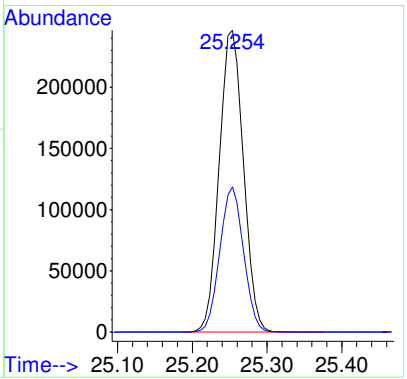


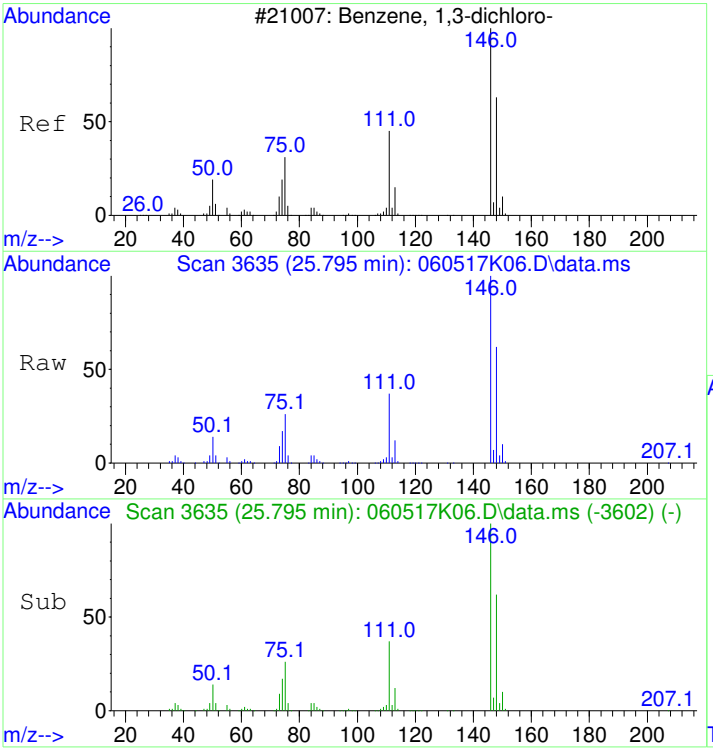


#60
1,2,4-Trimethylbenzene
Concen: 10.09 ppbv
RT: 25.254 min Scan# 3546
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:105 Resp: 554639

Ion	Ratio	Lower	Upper
105	100		
120	47.1	27.1	67.1

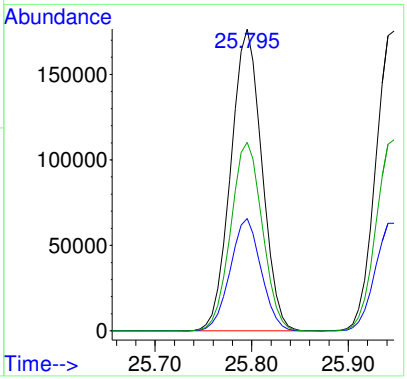


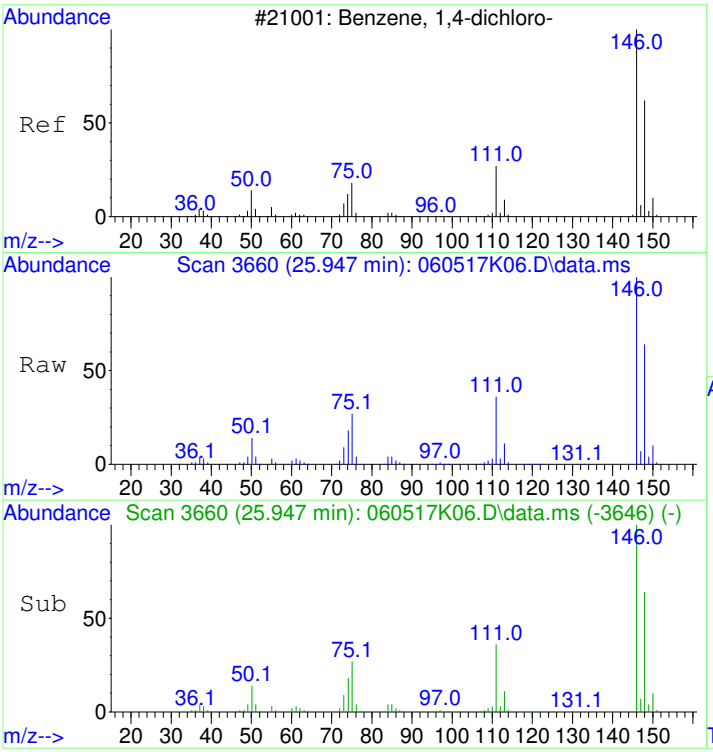


#61
1,3-Dichlorobenzene
Concen: 9.79 ppbv
RT: 25.795 min Scan# 3635
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:146 Resp: 394416

Ion	Ratio	Lower	Upper
146	100		
111	37.0	17.0	57.0
148	63.5	43.5	83.5

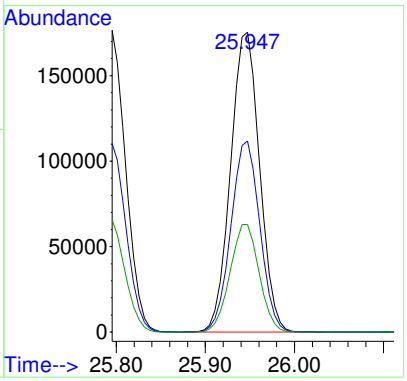


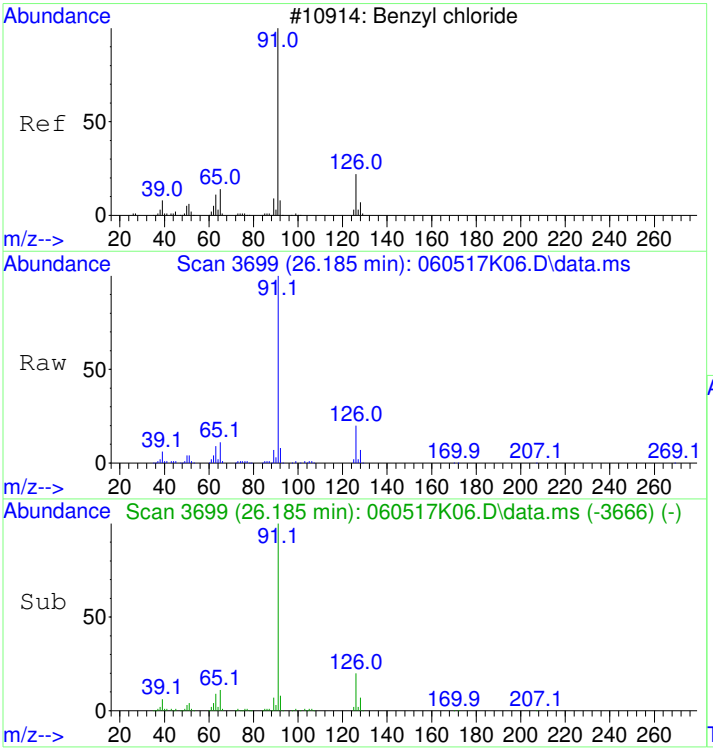


#62
1,4-Dichlorobenzene
Concen: 10.09 ppbv
RT: 25.947 min Scan# 3660
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:146 Resp: 395724

Ion	Ratio	Lower	Upper
146	100		
148	63.5	43.5	83.5
111	35.9	15.9	55.9

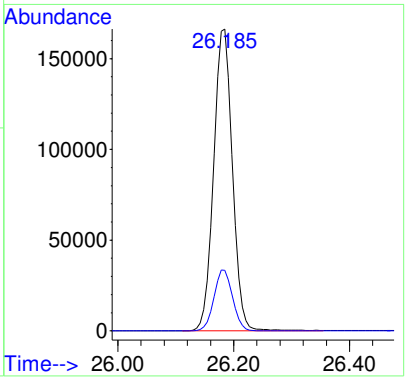


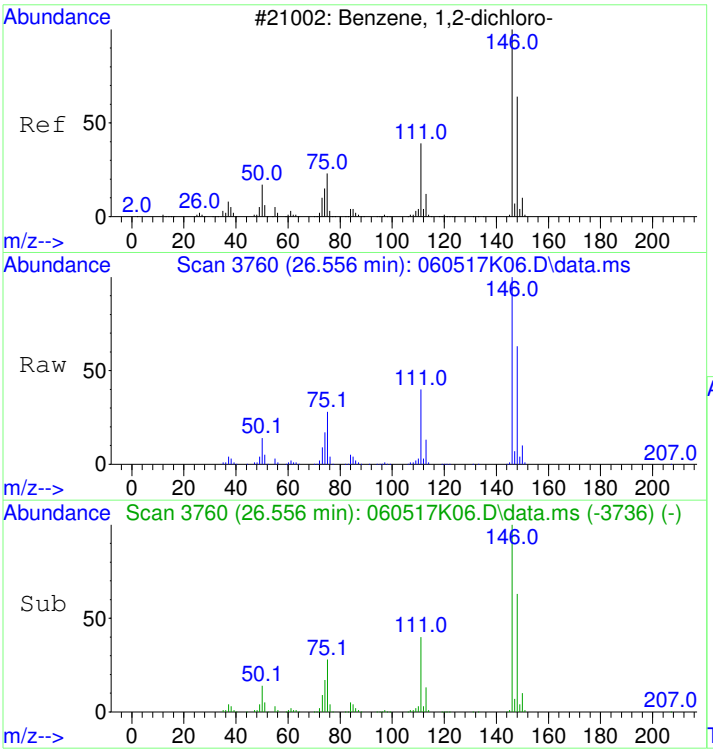


#63
Benzyl chloride
Concen: 13.84 ppbv
RT: 26.185 min Scan# 3699
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion: 91 Resp: 374763

Ion	Ratio	Lower	Upper
91	100		
126	19.9	0.0	39.9

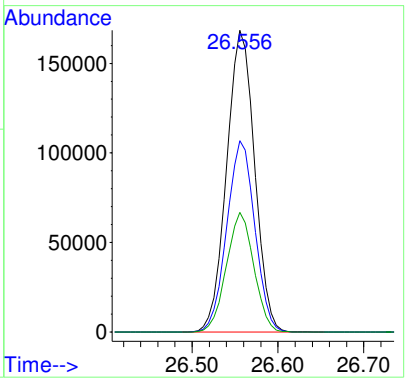


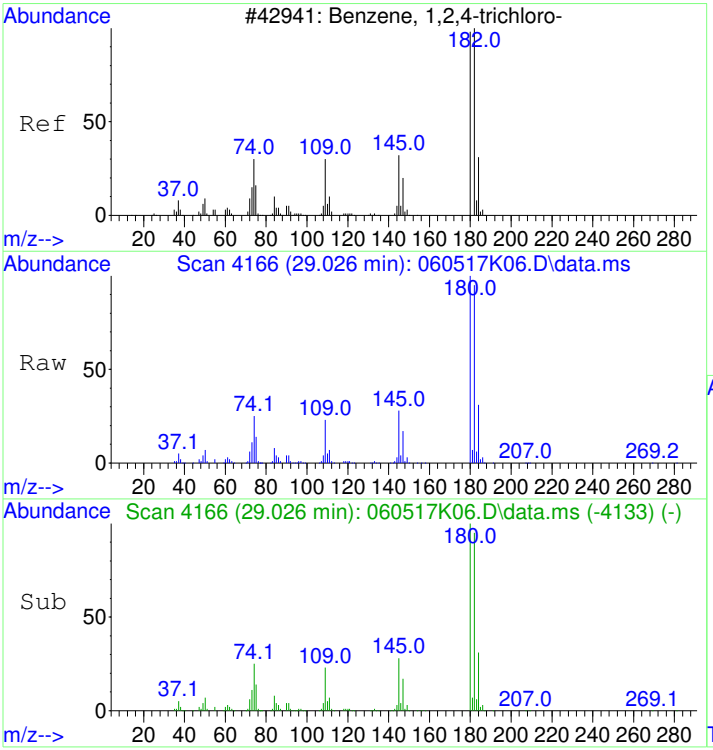


#64
1,2-Dichlorobenzene
Concen: 9.44 ppbv
RT: 26.556 min Scan# 3760
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:146 Resp: 381672

Ion	Ratio	Lower	Upper
146	100		
148	63.5	43.5	83.5
111	38.8	18.8	58.8

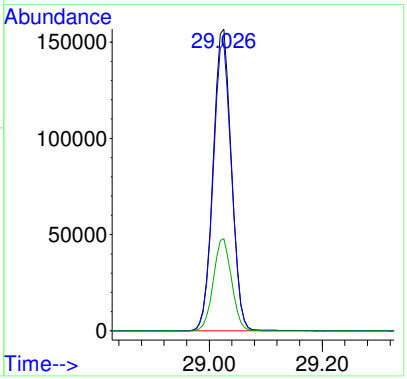


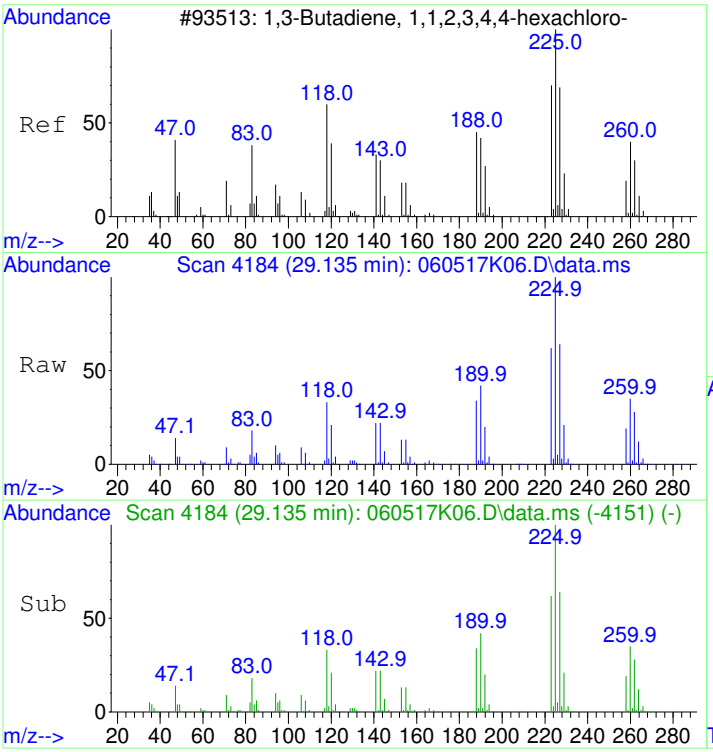


#65
1,2,4-Trichlorobenzene
Concen: 8.30 ppbv
RT: 29.026 min Scan# 4166
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:180 Resp: 353887

Ion	Ratio	Lower	Upper
180	100		
182	95.4	75.4	115.4
184	30.2	10.2	50.2

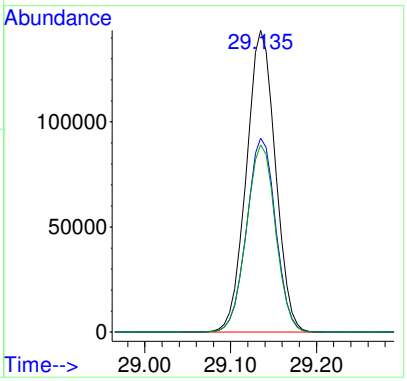




#66
Hexachlorobutadiene
Concen: 8.65 ppbv
RT: 29.135 min Scan# 4184
Delta R.T. 0.000 min
Lab File: 060517K06.D
Acq: 5 Jun 2017 6:29 pm

Tgt Ion:225 Resp: 337153

Ion	Ratio	Lower	Upper
225	100		
227	64.5	44.5	84.5
223	62.6	42.6	82.6



LSC Area Percent Report

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Title : TO15

Signal : TIC: 060517K06.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.223	79	89	95	rBV	89749	211442	5.46%	0.396%
2	4.308	95	103	146	rVV	226127	542454	14.00%	1.015%
3	4.649	146	159	184	rVV	332333	946911	24.43%	1.772%
4	4.856	184	193	218	rVB	52575	144492	3.73%	0.270%
5	5.154	232	242	249	rBV	61174	156332	4.03%	0.292%
6	5.239	249	256	396	rVB	92025	308860	7.97%	0.578%
7	6.163	396	408	449	rVB	75088	253622	6.54%	0.474%
8	6.492	449	462	539	rVB2	30852	108473	2.80%	0.203%
9	7.052	539	554	561	rBV2	65214	245899	6.34%	0.460%
10	7.155	561	571	733	rVB3	147048	629371	16.24%	1.177%
11	8.901	834	858	972	rVV4	152539	1326376	34.22%	2.481%
12	9.716	972	992	1072	rVV2	106272	577126	14.89%	1.080%
13	10.294	1072	1087	1126	rVV	33031	178329	4.60%	0.334%
14	10.629	1126	1142	1221	rVV3	66797	307423	7.93%	0.575%
15	11.207	1221	1237	1294	rVB2	79408	333024	8.59%	0.623%
16	11.882	1322	1348	1420	rVV3	159755	1019774	26.31%	1.908%
17	12.417	1420	1436	1564	rVV2	138679	569306	14.69%	1.065%
18	13.293	1564	1580	1594	rVV	94016	351623	9.07%	0.658%
19	13.446	1594	1605	1725	rVB	66957	226716	5.85%	0.424%
20	14.760	1808	1821	1833	rBV	138563	428402	11.05%	0.801%
21	14.899	1833	1844	1888	rVB2	184486	596586	15.39%	1.116%
22	15.313	1896	1912	1926	rBV2	509139	1634483	42.17%	3.058%
23	15.465	1926	1937	1948	rVV	179662	554958	14.32%	1.038%
24	15.599	1948	1959	1968	rVV	188009	673139	17.37%	1.259%
25	15.703	1968	1976	2001	rVV	204097	691424	17.84%	1.294%
26	15.940	2001	2015	2037	rVV	224057	746475	19.26%	1.397%
27	16.347	2065	2082	2093	rBV	276332	988004	25.49%	1.848%
28	16.469	2093	2102	2123	rVV	230122	676310	17.45%	1.265%
29	16.743	2123	2147	2183	rVB2	318035	1144284	29.52%	2.141%
30	17.309	2227	2240	2285	rVB	890623	2384255	61.52%	4.461%
31	17.704	2292	2305	2331	rBV	304839	813257	20.98%	1.521%
32	18.245	2382	2394	2411	rVB	201458	554245	14.30%	1.037%
33	18.440	2413	2426	2459	rBV	69240	185963	4.80%	0.348%
34	18.720	2459	2472	2490	rVB	251799	665457	17.17%	1.245%
35	19.480	2587	2597	2617	rVB	213746	522270	13.48%	0.977%
36	19.724	2626	2637	2659	rBV	233844	586871	15.14%	1.098%
37	19.937	2659	2672	2690	rVB	397626	970970	25.05%	1.817%
38	20.448	2747	2756	2767	rBV	202268	462483	11.93%	0.865%
39	20.764	2794	2808	2827	rBV2	762215	1975194	50.96%	3.695%
40	21.080	2849	2860	2882	rBV	230401	545829	14.08%	1.021%

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Title : TO15

41	21.354	2890	2905	2931	rBV	329629	820321	21.17%	1.535%
42	21.585	2931	2943	2967	rVB	220270	527347	13.61%	0.987%
43	22.236	3037	3050	3064	rBV2	1216963	3875744	100.00%	7.251%
44	22.364	3064	3071	3090	rVV	556349	1289877	33.28%	2.413%
45	22.547	3090	3101	3115	rVV	1047239	2483575	64.08%	4.646%
46	23.197	3196	3208	3237	rVB2	533903	2285775	58.98%	4.276%
47	23.642	3269	3281	3293	rBV	390946	929273	23.98%	1.739%
48	24.353	3388	3398	3416	rBV	440308	1042640	26.90%	1.951%
49	24.548	3416	3430	3438	rVV	675977	1545969	39.89%	2.892%
50	24.645	3438	3446	3470	rVB	690889	1539286	39.72%	2.880%
51	25.254	3534	3546	3562	rBV	677357	1526525	39.39%	2.856%
52	25.795	3623	3635	3648	rBV	633174	1431737	36.94%	2.679%
53	25.941	3648	3659	3683	rVB	634675	1442583	37.22%	2.699%
54	26.178	3688	3698	3750	rBV	354989	811771	20.94%	1.519%
55	26.556	3750	3760	3801	rVB	624913	1411740	36.43%	2.641%
56	29.019	4156	4165	4174	rBV	744363	1686554	43.52%	3.155%
57	29.135	4174	4184	4486	rVB	1085082	2562448	66.11%	4.794%

Sum of corrected areas: 53451577

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

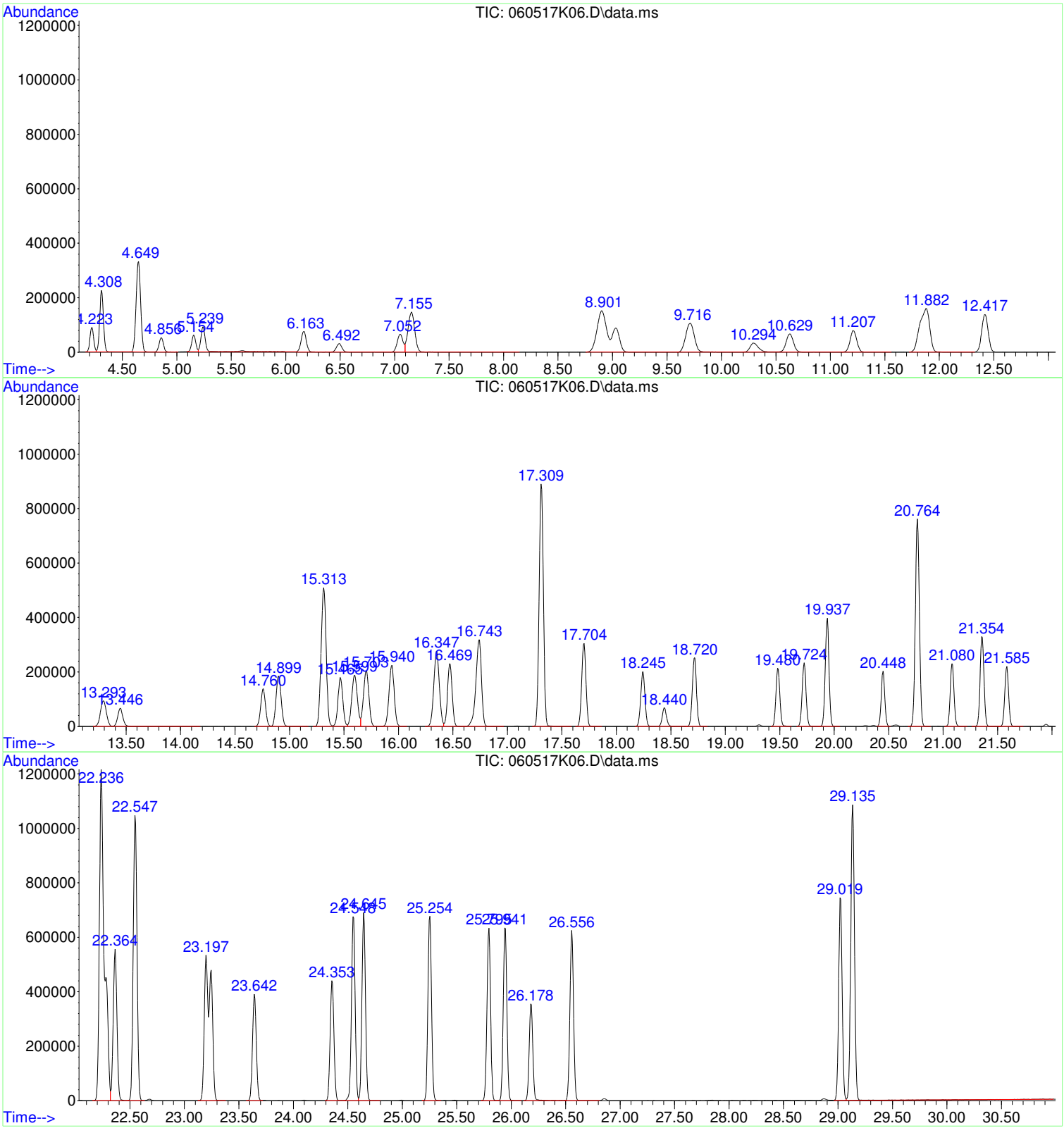


Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K06.D
Acq On : 5 Jun 2017 6:29 pm
Operator : LLH
Sample : S17F006-CAL4
Misc : 10ppbv 1723026
ALS Vial : 32 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2017\METHOD\060517K_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\2017\DATA\060517K_FSAA\
  Data File : 060517K06.D
  Acq On    :  5 Jun 2017   6:29 pm
  Operator  : LLH
  Sample    : S17F006-CAL4
  Misc      : 10ppbv 1723026
  ALS Vial  : 32   Sample Multiplier: 1

  Quant Method : D:\msdchem\1\2017\METHOD\060517K_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|
-------------------------------------------------------------------------------
```

S17F006-CAL5

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K07.D
InstName : HP5973K
Acq On : 5 Jun 2017 7:18 pm
Operator : LLH
Sample : S17F006-CAL5
Misc : 15ppbv 1723027
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:25:36 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:25 2017
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards							
1)	BROMOCHLOROMETHANE	15.313	49	285172	20.00	ppbv	0.00
32)	1,4-DIFLUOROBENZENE	17.315	114	1099961	18.80	ppbv	0.00
43)	CHLOROBENZENE-d5	22.236	117	1006859	20.00	ppbv	0.00
Target Compounds							Qvalue
2)	Propene	4.223	41	107448	14.71	ppbv	99
3)	Dichlorodifluoromethane	4.308	85	459783	13.42	ppbv	100
4)	1,2-Dichlorotetrafluor...	4.649	85	455923	13.14	ppbv	100
5)	Chloromethane	4.855	50	131115	13.93	ppbv	98
6)	Vinyl chloride	5.153	62	137671	13.95	ppbv	100
7)	1,3-Butadiene	5.239	54	95114	13.67	ppbv	99
8)	Bromomethane	6.163	94	139728	13.61	ppbv	100
9)	Chloroethane	6.492	64	80869	13.40	ppbv	99
10)	Bromoethene	7.052	106	145089	14.07	ppbv	97
11)	Trichlorofluoromethane	7.155	101	418684	12.52	ppbv	99
12)	1,1,2-Trichloro-1,2,2-...	8.907	151	247442	12.00	ppbv	99
13)	1,1-Dichloroethene	9.029	61	212238	13.61	ppbv	99
14)	Acetone	9.680	43	202492	13.94	ppbv	100
15)	Carbon disulfide	9.716	76	434585	13.38	ppbv	100
16)	2-Propanol	10.294	45	168877	16.16	ppbv	98
17)	Allyl chloride	10.629	41	151316	14.93	ppbv	100
18)	Dichloromethane	11.213	49	137651	10.64	ppbv	100
19)	tert-Butyl methyl ethe...	11.833	73	423637	14.96	ppbv	99
20)	trans-1,2-Dichloroethene	11.888	61	207484	14.03	ppbv	99
21)	Hexane	12.417	57	223473	14.13	ppbv	99
22)	1,1-Dichloroethane	13.287	63	254892	12.66	ppbv	99
23)	Vinyl acetate	13.445	43	260800	16.64	ppbv	100
24)	cis-1,2-Dichloroethene	14.759	61	190408	14.00	ppbv	99
25)	2-Butanone (MEK)	14.887	72	77471	14.49	ppbv	99
26)	Ethyl acetate	14.905	61	45864	14.59	ppbv	98
27)	Tetrahydrofuran	15.295	42	138269	13.91	ppbv	99
28)	Chloroform	15.465	83	333869	13.63	ppbv	100
29)	Cyclohexane	15.599	56	227900	14.33	ppbv	100
30)	1,1,1-Trichloroethane	15.702	97	348741	13.37	ppbv	100
31)	Carbon tetrachloride	15.940	117	356504	13.52	ppbv	99
33)	Benzene	16.469	78	494403	13.85	ppbv	99
34)	2,2,4-Trimethylpentane	16.347	57	705243	14.15	ppbv	100
35)	1,2-Dichloroethane	16.718	62	220803	13.29	ppbv	100
36)	Heptane	16.743	43	229364	13.79	ppbv	99
37)	Trichloroethene	17.704	130	233641	14.57	ppbv	99
38)	1,2-Dichloropropane	18.245	63	164887	13.94	ppbv	100
39)	1,4-Dioxane	18.440	88	117178	14.97	ppbv	100
40)	Bromodichloromethane	18.720	83	368206	13.41	ppbv	100
41)	cis-1,3-Dichloropropene	19.486	75	268427	14.68	ppbv	100
42)	4-Methyl-2-pentanone (...	19.724	43	312494	14.60	ppbv	99
44)	Toluene	19.937	91	635756	14.26	ppbv	100
45)	trans-1,3-Dichloropropene	20.448	75	246252	13.95	ppbv	99
46)	1,1,2-Trichloroethane	20.758	97	219678	14.19	ppbv	99
47)	Tetrachloroethene	20.770	166	335673	14.11	ppbv	100
48)	2-Hexanone	21.080	43	300598	14.88	ppbv	99
49)	Chlorodibromomethane	21.360	129	396938	14.09	ppbv	100
50)	1,2-Dibromoethane (EDB)	21.585	107	324957	14.73	ppbv	100
51)	Chlorobenzene	22.285	112	536258	14.21	ppbv	99
52)	Ethylbenzene	22.364	91	882074	14.14	ppbv	100
53)	m&p-Xylene	22.546	91	1344071	28.24	ppbv	99
54)	o-Xylene	23.197	91	679766	14.32	ppbv	100

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K07.D
InstName : HP5973K
Acq On : 5 Jun 2017 7:18 pm
Operator : LLH
Sample : S17F006-CAL5
Misc : 15ppbv 1723027
ALS Vial : 32 Sample Multiplier: 1

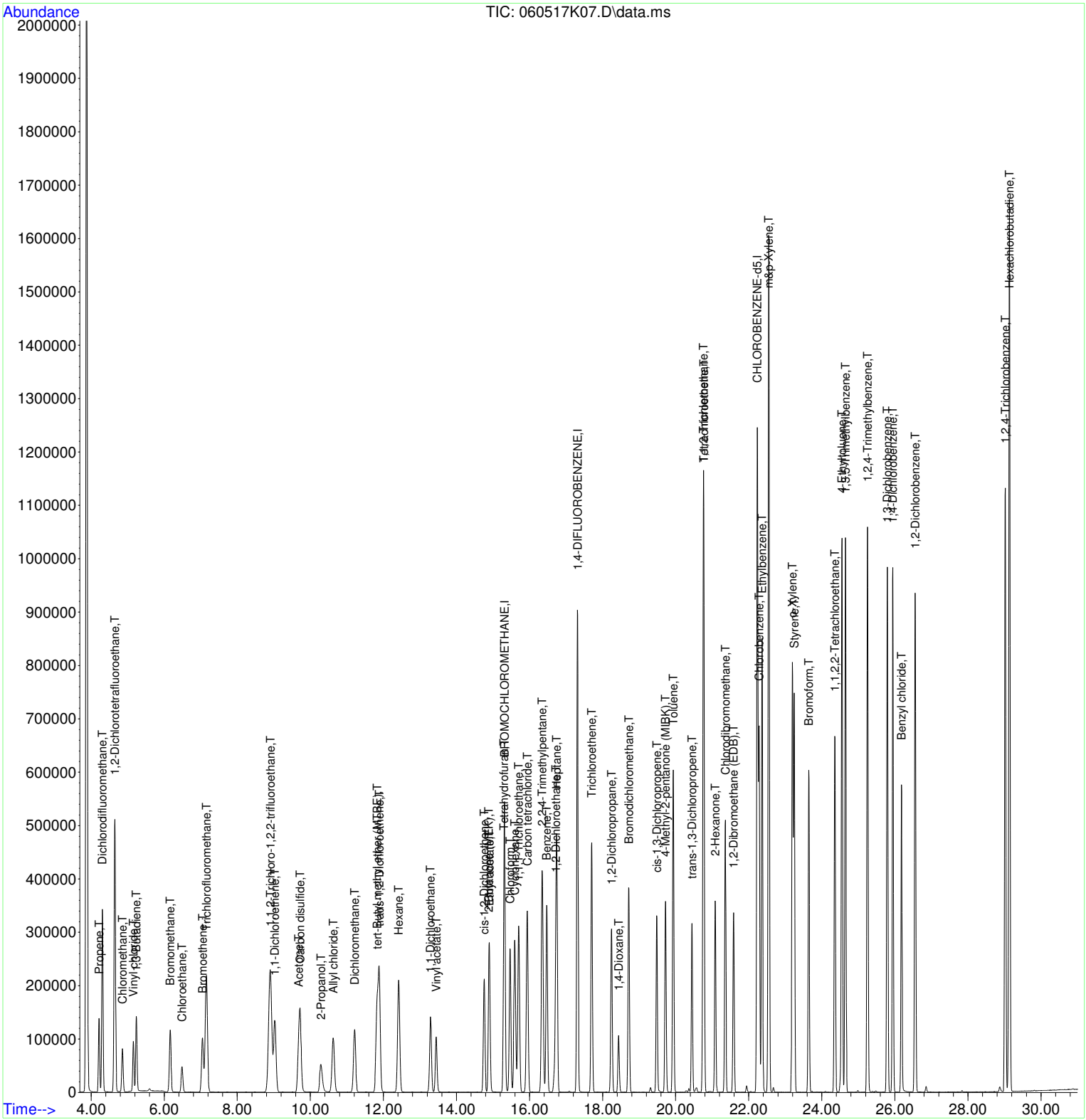
Quant Time: Jun 06 11:25:36 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:25 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	553456	13.88 ppbv	100
56) Bromoform	23.641	173	412553	14.98 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	481898	13.67 ppbv	99
58) 4-Ethyltoluene	24.554	105	1010502	14.11 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	843262	13.99 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	851892	14.25 ppbv	99
61) 1,3-Dichlorobenzene	25.795	146	607310	14.02 ppbv	99
62) 1,4-Dichlorobenzene	25.947	146	610613	14.33 ppbv	99
63) Benzyl chloride	26.178	91	607345	19.35 ppbv	100
64) 1,2-Dichlorobenzene	26.555	146	588129	13.57 ppbv	100
65) 1,2,4-Trichlorobenzene	29.025	180	543429	12.06 ppbv	100
66) Hexachlorobutadiene	29.135	225	516330	12.48 ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K07.D
InstName : HP5973K
Acq On : 5 Jun 2017 7:18 pm
Operator : LLH
Sample : S17F006-CAL5
Misc : 15ppbv 1723027
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:25:36 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:25 2017
Response via : Initial Calibration



S17F006-CAL6

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K08.D
InstName : HP5973K
Acq On : 5 Jun 2017 8:09 pm
Operator : LLH
Sample : S17F006-CAL6
Misc : 20ppbv 1723028
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:25:59 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:48 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.313	49	293775	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1133808	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1044396	20.00 ppbv	0.00
Target Compounds					Qvalue
2) Propene	4.217	41	146641	19.92 ppbv	99
3) Dichlorodifluoromethane	4.308	85	620177	18.14 ppbv	100
4) 1,2-Dichlorotetrafluor...	4.643	85	617528	17.75 ppbv	100
5) Chloromethane	4.856	50	180091	19.17 ppbv	99
6) Vinyl chloride	5.154	62	186980	18.89 ppbv	99
7) 1,3-Butadiene	5.239	54	129312	18.56 ppbv	98
8) Bromomethane	6.163	94	190705	18.60 ppbv	99
9) Chloroethane	6.486	64	110471	18.31 ppbv	99
10) Bromoethene	7.052	106	199811	19.32 ppbv	98
11) Trichlorofluoromethane	7.155	101	562508	16.89 ppbv	100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	333350	16.17 ppbv	100
13) 1,1-Dichloroethene	9.029	61	289370	18.45 ppbv	99
14) Acetone	9.674	43	276267	19.06 ppbv	100
15) Carbon disulfide	9.722	76	588468	18.17 ppbv	100
16) 2-Propanol	10.288	45	235914	22.00 ppbv	96
17) Allyl chloride	10.623	41	208064	20.31 ppbv	99
18) Dichloromethane	11.213	49	186555	14.80 ppbv	99
19) tert-Butyl methyl ethe...	11.827	73	583798	20.33 ppbv	99
20) trans-1,2-Dichloroethene	11.888	61	280884	19.01 ppbv	99
21) Hexane	12.417	57	306148	19.19 ppbv	99
22) 1,1-Dichloroethane	13.293	63	347471	17.26 ppbv	99
23) Vinyl acetate	13.446	43	364856	22.55 ppbv	100
24) cis-1,2-Dichloroethene	14.760	61	259041	18.87 ppbv	100
25) 2-Butanone (MEK)	14.893	72	105933	19.65 ppbv	98
26) Ethyl acetate	14.906	61	63099	19.91 ppbv	99
27) Tetrahydrofuran	15.295	42	190289	19.03 ppbv	98
28) Chloroform	15.465	83	453517	18.53 ppbv	100
29) Cyclohexane	15.599	56	309089	19.28 ppbv	99
30) 1,1,1-Trichloroethane	15.703	97	473273	18.10 ppbv	100
31) Carbon tetrachloride	15.940	117	482429	18.24 ppbv	99
33) Benzene	16.475	78	672034	18.78 ppbv	100
34) 2,2,4-Trimethylpentane	16.347	57	962622	19.16 ppbv	99
35) 1,2-Dichloroethane	16.718	62	296362	17.84 ppbv	100
36) Heptane	16.743	43	310492	18.64 ppbv	99
37) Trichloroethene	17.704	130	319562	19.80 ppbv	99
38) 1,2-Dichloropropane	18.245	63	225584	19.01 ppbv	99
39) 1,4-Dioxane	18.440	88	159231	19.97 ppbv	100
40) Bromodichloromethane	18.714	83	499723	18.17 ppbv	100
41) cis-1,3-Dichloropropene	19.480	75	370799	19.91 ppbv	100
42) 4-Methyl-2-pentanone (...	19.724	43	427093	19.68 ppbv	99
44) Toluene	19.937	91	866188	19.19 ppbv	100
45) trans-1,3-Dichloropropene	20.448	75	339323	18.68 ppbv	99
46) 1,1,2-Trichloroethane	20.758	97	300529	19.22 ppbv	99
47) Tetrachloroethene	20.770	166	459556	19.12 ppbv	100
48) 2-Hexanone	21.080	43	411936	19.88 ppbv	99
49) Chlorodibromomethane	21.360	129	542404	19.03 ppbv	100
50) 1,2-Dibromoethane (EDB)	21.585	107	444365	19.84 ppbv	100
51) Chlorobenzene	22.285	112	731094	19.21 ppbv	98
52) Ethylbenzene	22.364	91	1206112	19.16 ppbv	100
53) m&p-Xylene	22.547	91	1835159	38.15 ppbv	100
54) o-Xylene	23.198	91	930066	19.27 ppbv	100

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K08.D
InstName : HP5973K
Acq On : 5 Jun 2017 8:09 pm
Operator : LLH
Sample : S17F006-CAL6
Misc : 20ppbv 1723028
ALS Vial : 32 Sample Multiplier: 1

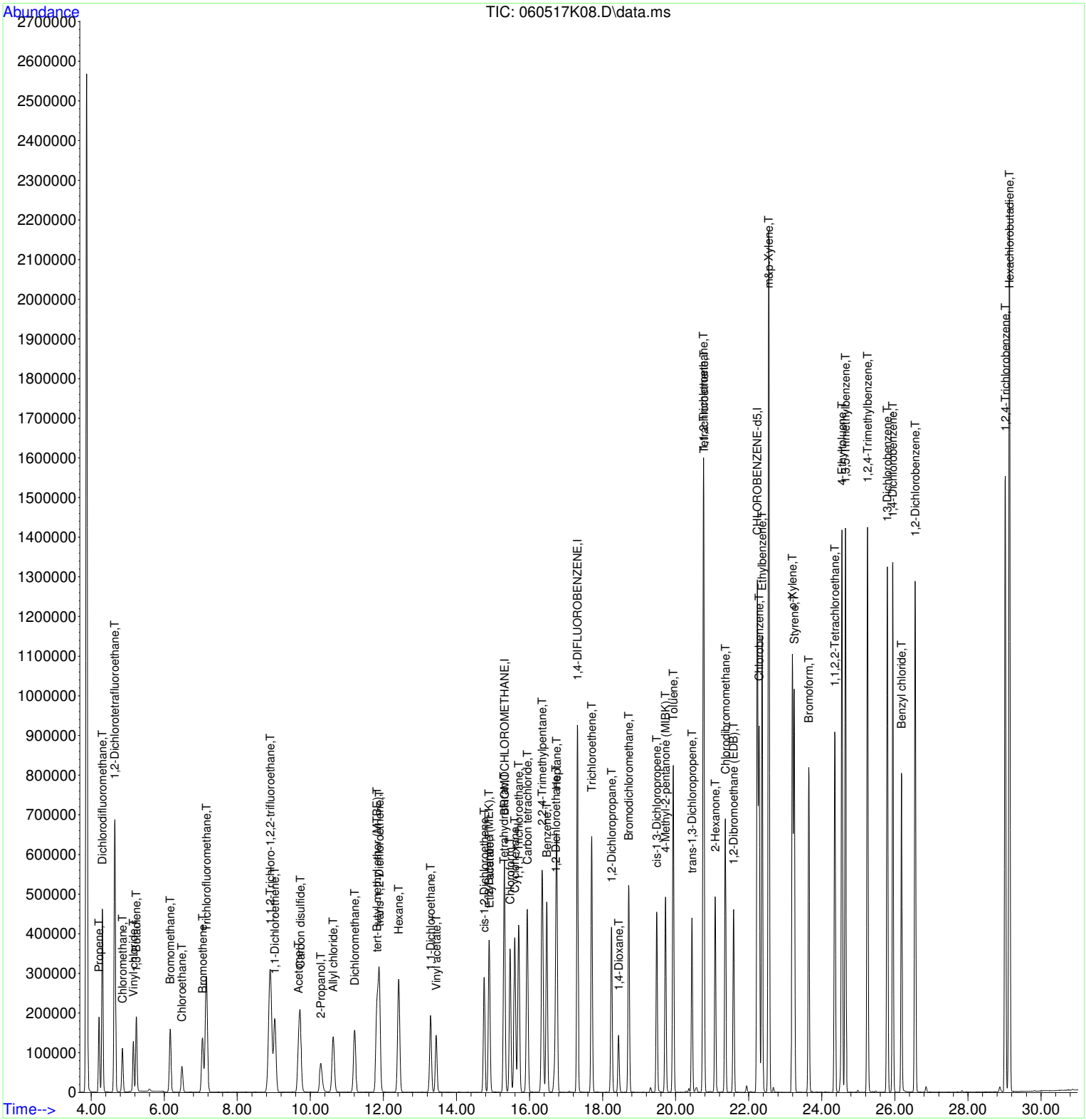
Quant Time: Jun 06 11:25:59 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:48 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	758488	18.72 ppbv	99
56) Bromoform	23.642	173	564168	20.01 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	657596	18.47 ppbv	100
58) 4-Ethyltoluene	24.554	105	1378722	18.92 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	1141760	18.74 ppbv	99
60) 1,2,4-Trimethylbenzene	25.254	105	1162723	19.15 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	832768	18.95 ppbv	100
62) 1,4-Dichlorobenzene	25.947	146	836872	19.32 ppbv	100
63) Benzyl chloride	26.178	91	851617	25.28 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	804392	18.37 ppbv	100
65) 1,2,4-Trichlorobenzene	29.026	180	752095	16.57 ppbv	100
66) Hexachlorobutadiene	29.135	225	697902	16.79 ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K08.D
InstName : HP5973K
Acq On : 5 Jun 2017 8:09 pm
Operator : LLH
Sample : S17F006-CAL6
Misc : 20ppbv 1723028
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 06 11:25:59 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:25:48 2017
Response via : Initial Calibration



S17F006-SCV1

SCV REPORT

Instrument Name: HP5973K
Sample Name: S17F006-SCV1
Misc Info: 10ppbv 1722109
Date Acquired: 6/5/2017 21:00
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

1 OUT

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	70.0	130.0	#N/A	Internal
2)	Propene	4.22	11.00	10.79	98%	70.0	130.0	pass	Subset
3)	Dichlorodifluoromethane	4.31	11.00	10.20	93%	70.0	130.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	4.65	10.60	10.06	95%	70.0	130.0	pass	Primary
5)	Chloromethane	4.86	11.00	10.55	96%	70.0	130.0	pass	Primary
6)	Vinyl chloride	5.16	11.00	10.88	99%	70.0	130.0	pass	Primary
7)	1,3-Butadiene	5.24	10.30	10.21	99%	70.0	130.0	pass	Subset
8)	Bromomethane	6.17	11.00	10.94	99%	70.0	130.0	pass	Primary
9)	Chloroethane	6.49	11.00	10.68	97%	70.0	130.0	pass	Primary
10)	Bromoethene	7.05	10.40	10.40	100%	70.0	130.0	pass	Subset
11)	Trichlorofluoromethane	7.16	10.10	9.49	94%	70.0	130.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.90	9.90	9.24	93%	70.0	130.0	pass	Primary
13)	1,1-Dichloroethene	9.03	10.90	10.10	93%	70.0	130.0	pass	Primary
14)	Acetone	9.68	11.00	10.57	96%	70.0	130.0	pass	Subset
15)	Carbon disulfide	9.72	10.70	9.88	92%	70.0	130.0	pass	Subset
16)	2-Propanol	10.29	9.00	8.68	96%	70.0	130.0	pass	Subset
17)	Allyl chloride	10.63	11.00	10.94	99%	70.0	130.0	pass	Subset
18)	Dichloromethane	11.21	10.30	8.66	84%	70.0	130.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	11.83	10.70	10.85	101%	70.0	130.0	pass	Subset
20)	trans-1,2-Dichloroethene	11.89	11.00	10.36	94%	70.0	130.0	pass	Subset
21)	Hexane	12.42	10.50	10.45	99%	70.0	130.0	pass	Subset
22)	1,1-Dichloroethane	13.29	10.40	9.74	94%	70.0	130.0	pass	Primary
23)	Vinyl acetate	13.45	10.80	4.36	40%	70.0	130.0	FAIL	Subset
24)	cis-1,2-Dichloroethene	14.76	11.00	10.63	97%	70.0	130.0	pass	Primary
25)	2-Butanone (MEK)	14.89	10.70	10.45	98%	70.0	130.0	pass	Subset
26)	Ethyl acetate	14.91	10.70	10.76	101%	70.0	130.0	pass	Subset
27)	Tetrahydrofuran	15.29	10.20	10.11	99%	70.0	130.0	pass	Subset
28)	Chloroform	15.47	11.00	10.35	94%	70.0	130.0	pass	Primary
29)	Cyclohexane	15.60	10.70	10.63	99%	70.0	130.0	pass	Subset
30)	1,1,1-Trichloroethane	15.70	10.90	10.11	93%	70.0	130.0	pass	Primary
31)	Carbon tetrachloride	15.94	11.00	10.11	92%	70.0	130.0	pass	Primary
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	70.0	130.0	#N/A	Internal
33)	Benzene	16.48	11.00	10.65	97%	**70.0**	130.0	pass	Primary
34)	2,2,4-Trimethylpentane	16.35	10.60	10.54	99%	70.0	130.0	pass	Subset
35)	1,2-Dichloroethane	16.72	10.90	10.04	92%	70.0	130.0	pass	Primary
36)	Heptane	16.74	10.60	10.19	96%	70.0	130.0	pass	Subset
37)	Trichloroethene	17.70	11.00	11.05	100%	70.0	130.0	pass	Primary
38)	1,2-Dichloropropane	18.25	11.00	10.72	97%	70.0	130.0	pass	Primary
39)	1,4-Dioxane	18.44	9.30	10.10	109%	70.0	130.0	pass	Subset
40)	Bromodichloromethane	18.71	10.60	9.84	93%	70.0	130.0	pass	Subset
41)	cis-1,3-Dichloropropene	19.49	11.00	11.06	101%	70.0	130.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	19.72	10.10	10.21	101%	70.0	130.0	pass	Subset
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	70.0	130.0	#N/A	Internal
44)	Toluene	19.94	11.00	10.87	99%	70.0	130.0	pass	Primary
45)	trans-1,3-Dichloropropene	20.45	11.00	10.28	93%	70.0	130.0	pass	Primary
46)	1,1,2-Trichloroethane	20.76	11.00	10.72	97%	70.0	130.0	pass	Primary
47)	Tetrachloroethene	20.77	11.00	10.67	97%	70.0	130.0	pass	Primary
48)	2-Hexanone	21.08	9.70	9.54	98%	70.0	130.0	pass	Subset
49)	Chlorodibromomethane	21.36	10.70	10.25	96%	70.0	130.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	21.59	11.00	10.83	98%	70.0	130.0	pass	Primary

REVIEWED
By EM at 11:29 am, Jun 06, 2017

51)	Chlorobenzene	22.28	11.00	10.56	96%	70.0	130.0	pass	Primary
52)	Ethylbenzene	22.36	11.00	10.65	97%	70.0	130.0	pass	Primary
53)	m&p-Xylene	22.55	22.00	21.00	95%	70.0	130.0	pass	Primary
54)	o-Xylene	23.20	11.00	10.66	97%	70.0	130.0	pass	Primary
55)	Styrene	23.25	10.60	9.70	91%	70.0	130.0	pass	Primary
56)	Bromoform	23.64	10.80	10.37	96%	70.0	130.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	24.35	11.00	9.86	90%	70.0	130.0	pass	Primary
58)	4-Ethyltoluene	24.55	10.30	10.16	99%	70.0	130.0	pass	Subset
59)	1,3,5-Trimethylbenzene	24.65	11.00	10.18	93%	70.0	130.0	pass	Primary
60)	1,2,4-Trimethylbenzene	25.25	10.50	9.92	94%	70.0	130.0	pass	Primary
61)	1,3-Dichlorobenzene	25.80	10.50	9.25	88%	70.0	130.0	pass	Primary
62)	1,4-Dichlorobenzene	25.95	10.60	9.10	86%	70.0	130.0	pass	Primary
63)	Benzyl chloride	26.18	10.30	9.20	89%	70.0	130.0	pass	Subset
64)	1,2-Dichlorobenzene	26.56	10.30	9.30	90%	70.0	130.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.03	9.00	6.34	70%	70.0	130.0	pass	Primary
66)	Hexachlorobutadiene	29.14	9.00	8.66	96%	70.0	130.0	pass	Primary

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K09.D
InstName : HP5973K
Acq On : 5 Jun 2017 9:00 pm
Operator : LLH
Sample : S17F006-SCV1
Misc : 10ppbv 1722109
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Jun 06 11:28:32 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	296228	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1142021	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	1035759	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	78870	10.79	ppbv		99
3) Dichlorodifluoromethane	4.314	85	343241	10.20	ppbv		99
4) 1,2-Dichlorotetrafluor...	4.649	85	345881	10.06	ppbv		100
5) Chloromethane	4.862	50	97768	10.55	ppbv		98
6) Vinyl chloride	5.160	62	106463	10.88	ppbv		100
7) 1,3-Butadiene	5.245	54	70261	10.21	ppbv		98
8) Bromomethane	6.170	94	110661	10.94	ppbv		100
9) Chloroethane	6.492	64	63565	10.68	ppbv		99
10) Bromoethene	7.052	106	106526	10.40	ppbv		99
11) Trichlorofluoromethane	7.155	101	310380	9.49	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	187640	9.24	ppbv		99
13) 1,1-Dichloroethene	9.029	61	156914	10.10	ppbv		99
14) Acetone	9.680	43	151092	10.57	ppbv		100
15) Carbon disulfide	9.722	76	315084	9.88	ppbv		100
16) 2-Propanol	10.294	45	93857	8.68	ppbv		98
17) Allyl chloride	10.629	41	111516	10.94	ppbv		99
18) Dichloromethane	11.213	49	105749	8.66	ppbv		99
19) tert-Butyl methyl ethe...	11.833	73	311159	10.85	ppbv		99
20) trans-1,2-Dichloroethene	11.888	61	150913	10.36	ppbv		100
21) Hexane	12.424	57	165663	10.45	ppbv		100
22) 1,1-Dichloroethane	13.293	63	193569	9.74	ppbv		99
23) Vinyl acetate	13.446	43	71376	4.36	ppbv		99
24) cis-1,2-Dichloroethene	14.760	61	144791	10.63	ppbv		99
25) 2-Butanone (MEK)	14.893	72	55940	10.45	ppbv		100
26) Ethyl acetate	14.906	61	33885	10.76	ppbv	#	97
27) Tetrahydrofuran	15.295	42	100323	10.11	ppbv		98
28) Chloroform	15.465	83	249722	10.35	ppbv		100
29) Cyclohexane	15.599	56	169039	10.63	ppbv		99
30) 1,1,1-Trichloroethane	15.703	97	261214	10.11	ppbv		100
31) Carbon tetrachloride	15.940	117	264102	10.11	ppbv		99
33) Benzene	16.475	78	376202	10.65	ppbv		99
34) 2,2,4-Trimethylpentane	16.347	57	525018	10.54	ppbv		100
35) 1,2-Dichloroethane	16.719	62	164038	10.04	ppbv		100
36) Heptane	16.743	43	167308	10.19	ppbv		99
37) Trichloroethene	17.704	130	176638	11.05	ppbv		99
38) 1,2-Dichloropropane	18.246	63	125735	10.72	ppbv		99
39) 1,4-Dioxane	18.440	88	80343	10.10	ppbv		99
40) Bromodichloromethane	18.714	83	266893	9.84	ppbv		100
41) cis-1,3-Dichloropropene	19.487	75	205944	11.06	ppbv		99
42) 4-Methyl-2-pentanone (...	19.724	43	220469	10.21	ppbv		100
44) Toluene	19.937	91	477705	10.87	ppbv		99
45) trans-1,3-Dichloropropene	20.448	75	183992	10.28	ppbv		100
46) 1,1,2-Trichloroethane	20.758	97	162997	10.72	ppbv		99
47) Tetrachloroethene	20.770	166	249561	10.67	ppbv		100
48) 2-Hexanone	21.080	43	194382	9.54	ppbv		100
49) Chlorodibromomethane	21.360	129	284268	10.25	ppbv		99
50) 1,2-Dibromoethane (EDB)	21.585	107	236605	10.83	ppbv		100
51) Chlorobenzene	22.285	112	390160	10.56	ppbv		99
52) Ethylbenzene	22.364	91	651112	10.65	ppbv		100
53) m&p-Xylene	22.547	91	982096	21.00	ppbv		99
54) o-Xylene	23.198	91	502423	10.66	ppbv		100

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K09.D
InstName : HP5973K
Acq On : 5 Jun 2017 9:00 pm
Operator : LLH
Sample : S17F006-SCV1
Misc : 10ppbv 1722109
ALS Vial : 38 Sample Multiplier: 1

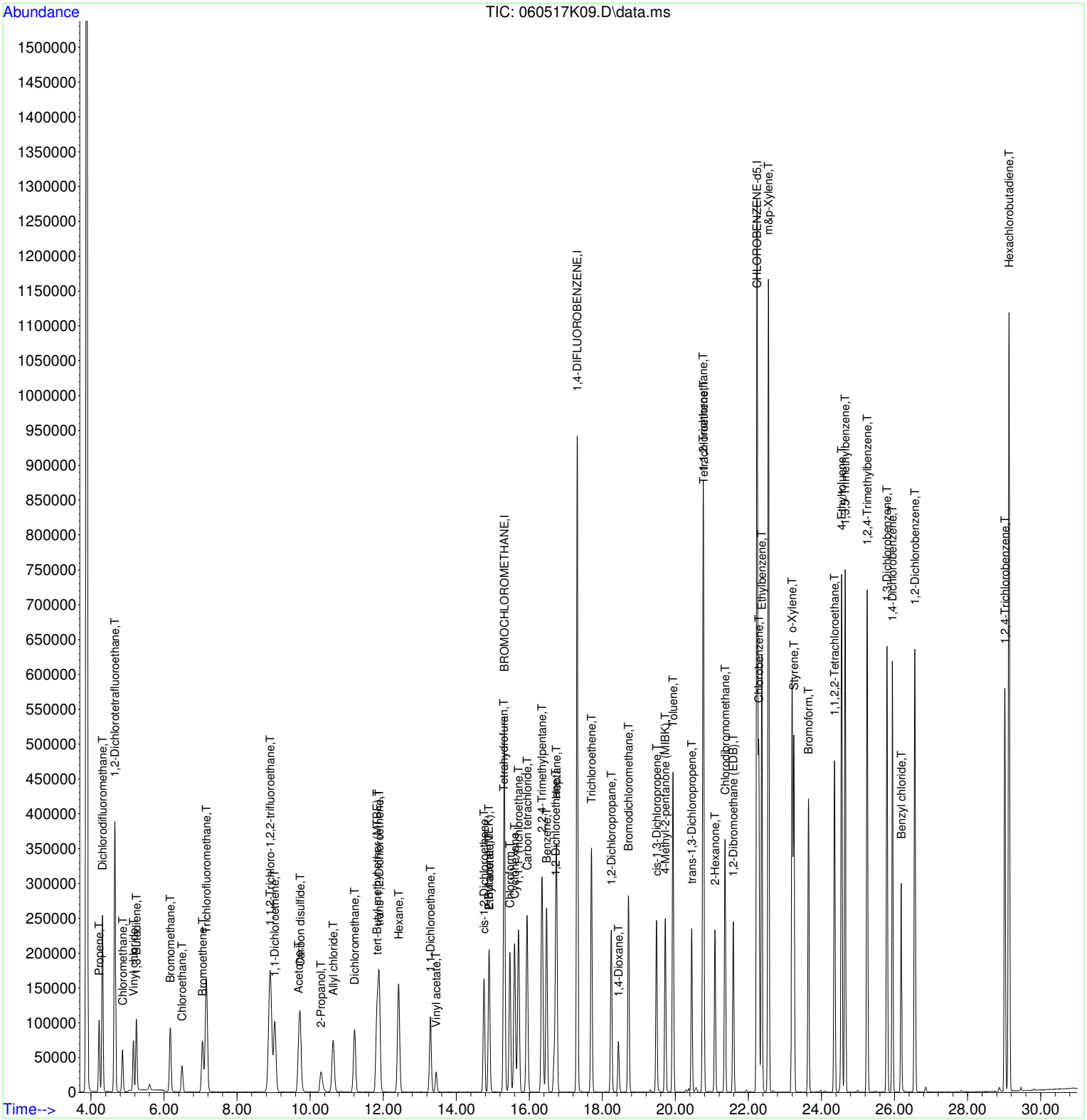
Quant Time: Jun 06 11:28:32 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	383673	9.70 ppbv	100
56) Bromoform	23.642	173	286876	10.37 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	341261	9.86 ppbv	100
58) 4-Ethyltoluene	24.554	105	723119	10.16 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	602513	10.18 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	587573	9.92 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	396585	9.25 ppbv	99
62) 1,4-Dichlorobenzene	25.947	146	384944	9.10 ppbv	100
63) Benzyl chloride	26.185	91	315070	9.20 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	395899	9.30 ppbv	100
65) 1,2,4-Trichlorobenzene	29.026	180	279775	6.34 ppbv	100
66) Hexachlorobutadiene	29.135	225	347940	8.66 ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060517K_FSAA\
Data File : 060517K09.D
InstName : HP5973K
Acq On : 5 Jun 2017 9:00 pm
Operator : LLH
Sample : S17F006-SCV1
Misc : 10ppbv 1722109
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Jun 06 11:28:32 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



SEQUENCE

S17F030

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B17F038	SEQUENCE #:	S17F030	06/08/17
BATCH #:	N / A	ANALYSIS:	TO15	HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
DOCUMENTATION	ANALYST: Bench sheet(s) attached? REVIEWER: Bench sheet(s) reviewed?	☐	Y	Y	
	ANALYST: Sequence log(s) attached? REVIEWER: Sequence log(s) reviewed?	☐	Y	Y	
	ANALYST: Every run has a PDF in LIMS? REVIEWER: Every PDF reviewed?	☐	Y	Y	
INITIAL CALIBRATION	Date of Initial Calibration used: If applicable, note date of "Last Update" in Comments.	06/05/2017 Tue Jun 06 11:26:11 2017			ICAL = OK SCV = Vinyl Acetate
	Initial Calibration ID (LIMS number):	1706003			
	ICAL within QC criteria?	✔			
	SCV within QC criteria?	✔			
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 = 55%
	CB(s) or storage blank(s) within QC criteria?	✔			
	Other instrument checks within QC criteria? Specify if applicable.	✔			
BATCH QCs	Method blanks < 1/2 QL?	☐	Y	Y	CLEAN
	LCS(s) or SRM(s) within QC criteria?	☐	Y	Y	OK
	MSs/MSDs and/or DUPs within QC criteria?	☐	Y	Y	
	Other method-specific QCs within QC criteria? Specify if applicable.	✔			

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B17F038	SEQUENCE #:	S17F030	06/08/17
BATCH #:	N / A	ANALYSIS:	TO15	HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
IS / SS	Internal standards within QC criteria?	☐	Y	Y	
	Surrogates within QC criteria?	☑			
SAMPLE DATA	Were samples prepared & analyzed within holding time?	☐	Y	Y	
	If samples need to be re-run, were RE(s) made in LIMS?	☐	Y	Y	some samples were either >LR or needs lower RL - will rerun
	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.	☐	Y	Y	ZAR 06/13/17

APPROVALS	ANALYST INITIALS & DATE:	LLH 06/09/17/17
	REVIEWED BY:	Estrellita Manuel (affiliate) Digitally signed by Estrellita Manuel (affiliate) Date: 2017.06.13 11:52:46 -07'00' SIGN HERE

COMMENTS

*** Dichloromethane contamination slightly above 1/2 MDL, see Discrepancy Report D15-011. EM 06/06/17

Injection Log

Directory: d:\MSDCHEM\1\2017\DATA\060817K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	33	060817K01.D	1.	IBL		7 Jun 2017 18:10
2	31	060817K02.D	1.	S17F030-TUN1	BFB 1538040	8 Jun 2017 07:34
3	32	060817K03.D	1.	S17F030-CCV1@B17F038-BS1	10ppbv 1723026@1723029	8 Jun 2017 08:23
4	31	060817K04.D	1.	S17F030-CRL1	1.0ppbv 1723023	8 Jun 2017 09:11
5	33	060817K05.D	1.	B17F038-BLK1	200ml BLANK	8 Jun 2017 10:02
6	11	060817K06.D	4.18	1706010-02RE3	20ml AMCO-PZ14-0606-003 CAN #864	8 Jun 2017 10:51
7	12	060817K07.D	2.06	1706011-03	20ml SG131-10 CAN #1981	8 Jun 2017 11:40
8	13	060817K08.D	2.12	1706011-02	20ml SG145-6 CAN #1099	8 Jun 2017 12:29
9	33	060817K09.D	1.	S17F030-IBL1	200ml BLANK	8 Jun 2017 13:21
10	14	060817K10.D	2.07	1706011-04	200ml F5-062-4ft CAN #652	8 Jun 2017 14:12
11	15	060817K11.D	2.07	1706011-08	200ml F5-054-3ft CAN #1969	8 Jun 2017 15:03
12	16	060817K12.D	2.12	1706011-05	200ml F5-038-3ft CAN #1112	8 Jun 2017 15:54
13	17	060817K13.D	2.17	1706011-06	200ml F5-060-3ft CAN #1992	8 Jun 2017 16:45
14	18	060817K14.D	2.07	1706011-07	200ml F5-058-3ft CAN #846	8 Jun 2017 17:36
15	33	060817K15.D	1.	S17F030-IBL2	200ml BLANK	8 Jun 2017 18:27
16	19	060817K16.D	2.17	1706011-01	200ml PH01-3ft CAN #631	8 Jun 2017 19:18
17	10	060817K17.D	2.07	1706011-09	200ml F6-006-4ft CAN #1107	8 Jun 2017 20:10
18	11	060817K18.D	2.1	1706011-10	200ml F6-008-3ft CAN #649	8 Jun 2017 21:01
19	12	060817K19.D	2.06	1706011-03RE1	200ml SG131-10 CAN #1981	8 Jun 2017 21:52
20	33	060817K20.D	1.	S17F030-IBL3	200ml BLANK	8 Jun 2017 22:43
21	11	060817K21.D	17.53	1706010-02RE4	20ml RE-REPRESS CAN #864	8 Jun 2017 23:32
22	12	060817K22.D	178.2	1706011-02RE1	20ml 2ND CAN #629	9 Jun 2017 00:21
23	12	060817K23.D	178.2	B17F038-DUP1	20ml 1706011-02RE1 CAN #629	9 Jun 2017 01:10
24	33	060817K24.D	1.	S17F030-IBL4	200ml BLANK	9 Jun 2017 02:01

GC/MS QA-QC Check Report

Tune File : D:\msdchem\1\2017\DATA\060817K_FSAA\060817K02.D
Tune Time : 8 Jun 2017 7:34 am

Daily Calibration File : D:\msdchem\1\2017\DATA\060817K_FSAA\060817K03.D

File	Sample	Surrogate Recovery %		Internal Standard Responses	
			317583	1233690	1124960
060817K03.D	S17F030-CCV1	317583	1233693	1124961	
060817K04.D	S17F030-CRL1	319782	1248034	1106711	
060817K05.D	B17F038-BLK1	307944	1211926	1068259	
060817K06.D	1706010-02RE3	324818	1307135	1255615	
060817K07.D	1706011-03	382110	1462219	1290709	
060817K08.D	1706011-02	351071	1348646	1186858	
060817K09.D	S17F030-IBL1	327572	1284770	1129833	
060817K10.D	1706011-04	318451	1243659	1114723	
060817K11.D	1706011-08	326743	1263675	1120950	
060817K12.D	1706011-05	336554	1293022	1150395	
060817K13.D	1706011-06	337012	1301423	1151888	
060817K14.D	1706011-07	325415	1258074	1118322	
060817K15.D	S17F030-IBL2	319057	1261375	1109954	
060817K16.D	1706011-01	315716	1237386	1104881	
060817K17.D	1706011-09	326081	1262140	1124479	
060817K18.D	1706011-10	333902	1286638	1156731	
060817K19.D	1706011-03RE1	335597	1287573	1170089	
060817K20.D	S17F030-IBL3	336698	1299995	1141208	
060817K21.D	1706010-02RE4	332293	1296745	1221236	

```
060817K22.D
         1706011-02RE1       364830    1419845    1236181
-------------------------------------------------------------------------
060817K23.D
         B17F038-DUP1        338552    1352765    1181132
-------------------------------------------------------------------------
060817K24.D
         S17F030-IBL4        313523    1260193    1116073
-------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Fri Jun 09 09:29:01 2017  HP5973K
```

Sequence Report

I	Name	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
	IB - DELAY	T3	40	40	200	DELAY.CTD3	6/7/2017 6:10:14 PM	Completed
	BFB	T1	40	40	50	TO-15_A.CTD3	6/8/2017 7:34:01 AM	Completed
	CCV1	T2	40	0	100	TO-15_A.CTD3	6/8/2017 8:23:23 AM	Completed
	CRL1	T1	40	0	20	TO-15_A.CTD3	6/8/2017 9:11:36 AM	Completed
	BLANK	T3	40	0	200	TO-15_A.CTD3	6/8/2017 10:02:38 AM	Completed
	1706010-02RE3	T1	40	0	20	TO-15_A.CTD3	6/8/2017 10:51:33 AM	Completed
	1706011-03	T2	40	0	20	TO-15_A.CTD3	6/8/2017 11:40:28 AM	Completed
	1706011-02	T3	40	0	20	TO-15_A.CTD3	6/8/2017 12:29:40 PM	Completed
	IBL	T3	40	0	200	TO-15_A.CTD3	6/8/2017 1:21:11 PM	Completed
	1706011-04	T4	40	0	200	TO-15_A.CTD3	6/8/2017 2:12:10 PM	Completed
	1706011-08	T5	40	0	200	TO-15_A.CTD3	6/8/2017 3:03:47 PM	Completed
	1706011-05	T6	40	0	200	TO-15_A.CTD3	6/8/2017 3:54:42 PM	Completed
	1706011-06	T7	40	0	200	TO-15_A.CTD3	6/8/2017 4:45:35 PM	Completed
	1706011-07	T8	40	0	200	TO-15_A.CTD3	6/8/2017 5:36:33 PM	Completed
	IBL	T3	40	0	200	TO-15_A.CTD3	6/8/2017 6:27:38 PM	Completed
	1706011-01	T9	40	0	200	TO-15_A.CTD3	6/8/2017 7:18:43 PM	Completed
	1706011-09	T10	40	0	200	TO-15_A.CTD3	6/8/2017 8:10:11 PM	Completed
	1706011-10	T11	40	0	200	TO-15_A.CTD3	6/8/2017 9:01:13 PM	Completed
	1706011-03RE1	T2	40	0	200	TO-15_A.CTD3	6/8/2017 9:52:09 PM	Completed
	IBL	T3	40	0	200	TO-15_A.CTD3	6/8/2017 10:43:40 PM	Completed
	1706010-02RE4	T1	40	0	20	TO-15_A.CTD3	6/8/2017 11:32:43 PM	Completed
	1706011-02RE1 2ND CAN	T3	40	0	20	TO-15_A.CTD3	6/9/2017 12:21:35 AM	Completed
	1706011-02RE1 DUP	T3	40	0	20	TO-15_A.CTD3	6/9/2017 1:10:14 AM	Completed
	IBL	T3	40	0	200	TO-15_A.CTD3	6/9/2017 2:01:04 AM	Completed

Analysis Sequence

S17F030

Project: R17S62
R17S65
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 1706003 Printed: 06/09/2017 11:11 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S17F030-TUN1	MS Tune	1	6/8/17 7:34	1538040		LLH	060817K02.D	
S17F030-CCV1	CCV	2	6/8/17 8:23	1723026		LLH	060817K03.D	
B17F038-BS1	LCS	3	6/8/17 8:23			LLH	060817K03.D	
S17F030-CRL1	CRL	4	6/8/17 9:11	1723023		LLH	060817K04.D	
B17F038-BLK1	Blank	5	6/8/17 10:02		1707044	LLH	060817K05.D	
1706010-02RE3 A	AMCO-PZ14-0606-003	6	6/8/17 10:51		1707044	LLH	060817K06.D	
1706011-03 A	SG131-10	7	6/8/17 11:40		1707044	LLH	060817K07.D	
1706011-02 A	SG145-6	8	6/8/17 12:29		1707044	LLH	060817K08.D	
S17F030-IBL1	Instrument Blank	9	6/8/17 13:21		1707044	LLH	060817K09.D	
1706011-04 A	F5-062-4ft	10	6/8/17 14:12		1707044	LLH	060817K10.D	
1706011-08 A	F5-054-3ft	11	6/8/17 15:03		1707044	LLH	060817K11.D	
1706011-05 A	F5-038-3ft	12	6/8/17 15:54		1707044	LLH	060817K12.D	
1706011-06 A	F5-060-3ft	13	6/8/17 16:45		1707044	LLH	060817K13.D	
1706011-07 A	F5-058-3ft	14	6/8/17 17:36		1707044	LLH	060817K14.D	
S17F030-IBL2	Instrument Blank	15	6/8/17 18:27		1707044	LLH	060817K15.D	
1706011-01 A	PH01-3ft	16	6/8/17 19:18		1707044	LLH	060817K16.D	
1706011-09 A	F6-006-4ft	17	6/8/17 20:10		1707044	LLH	060817K17.D	
1706011-10 A	F6-008-3ft	18	6/8/17 21:01		1707044	LLH	060817K18.D	
1706011-03RE1 A	SG131-10	19	6/8/17 21:52		1707044	LLH	060817K19.D	
S17F030-IBL3	Instrument Blank	20	6/8/17 22:43		1707044	LLH	060817K20.D	
1706010-02RE4 A	AMCO-PZ14-0606-003	21	6/8/17 23:32		1707044	LLH	060817K21.D	

Analysis Sequence

S17F030

(Continued)

Project: R17S62
R17S65

Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 1706003 Printed: 06/09/2017 11:11 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
1706011-02RE1 A	SG145-6	22	6/9/17 0:21		1707044	LLH	060817K22.D	
B17F038-DUP1	Duplicate	23	6/9/17 1:10		1707044	LLH	060817K23.D	
S17F030-IBL4	Instrument Blank	24	6/9/17 2:01		1707044	LLH	060817K24.D	

Sequence Comments

Reagents

Reagent #	Description

SEQUENCE DATA

S17F030

S17F030-TUN1

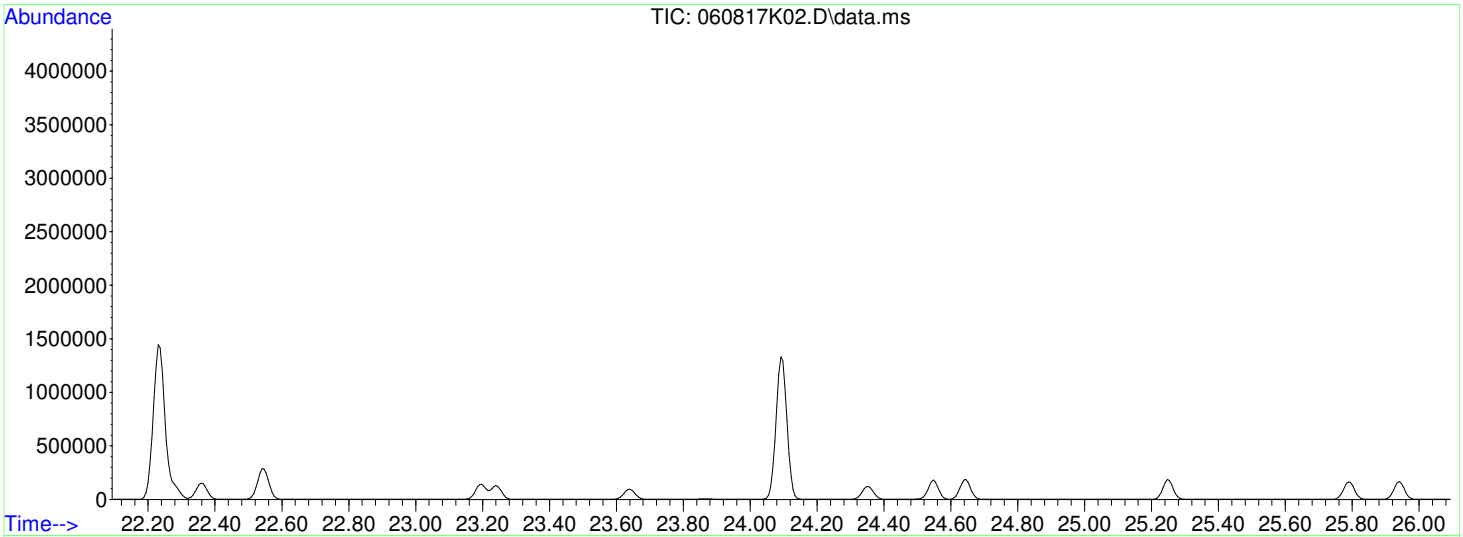
Table of Contents

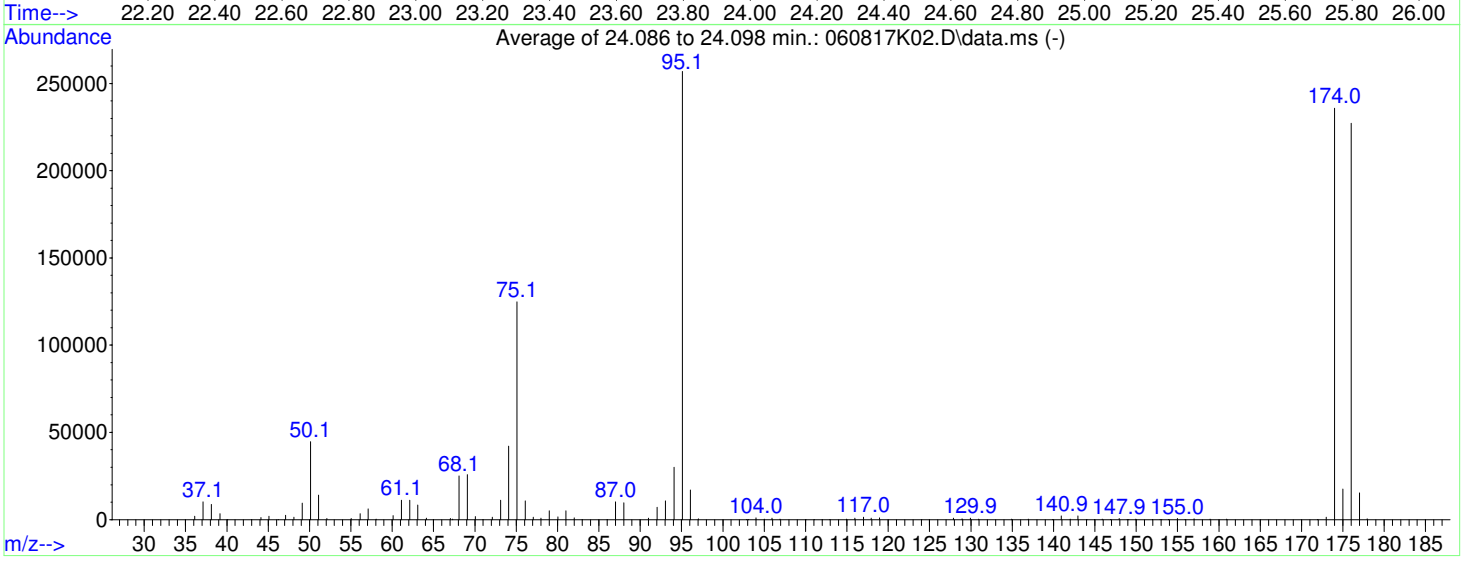
Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K02.D
InstName : HP5973K
Acq On : 8 Jun 2017 7:34 am
Operator : LLH
Sample : S17F030-TUN1
Misc : BFB 1538040
ALS Vial : 31 Sample Multiplier: 1

REVIEWED
By LLH at 9:15 am, Jun 08, 2017

Integration File: lscint.p

Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Title : TO15
Last Update : Tue Jun 06 11:26:11 2017

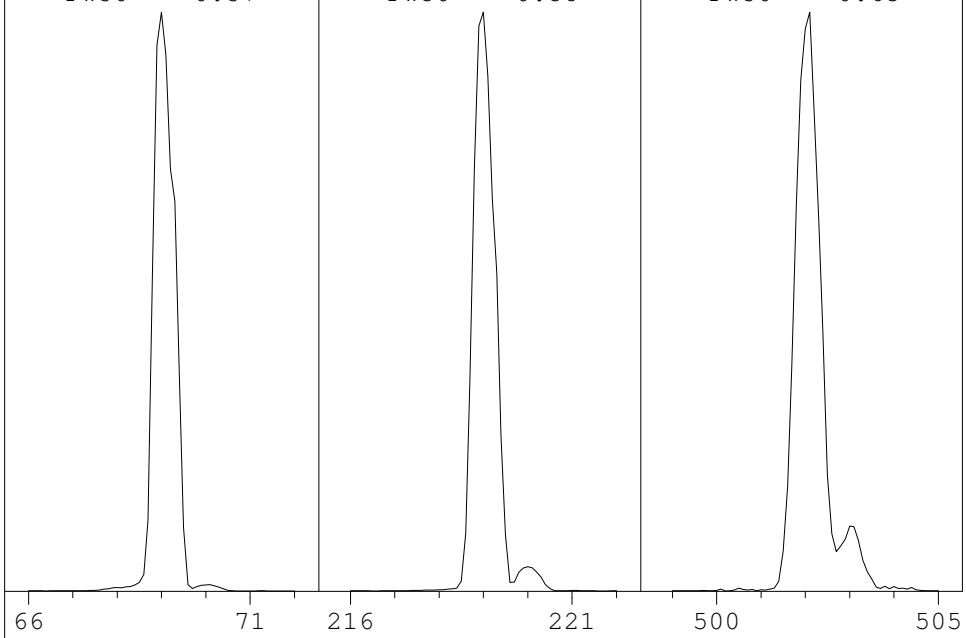




AutoFind: Scans 3354, 3355, 3356; Background Corrected with Scan 3343

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.4	44685	PASS
75	95	30	66	48.6	124816	PASS
95	95	100	100	100.0	256832	PASS
96	95	5	9	6.6	17023	PASS
173	174	0.00	2	0.6	1316	PASS
174	95	50	120	91.8	235883	PASS
175	174	4	9	7.4	17487	PASS
176	174	93	101	96.3	227179	PASS
177	176	5	9	6.7	15275	PASS

Mass	69.00	Mass	219.00	Mass	502.10
Ab	459100	Ab	319566	Ab	31999
Pw50	0.57	Pw50	0.58	Pw50	0.63

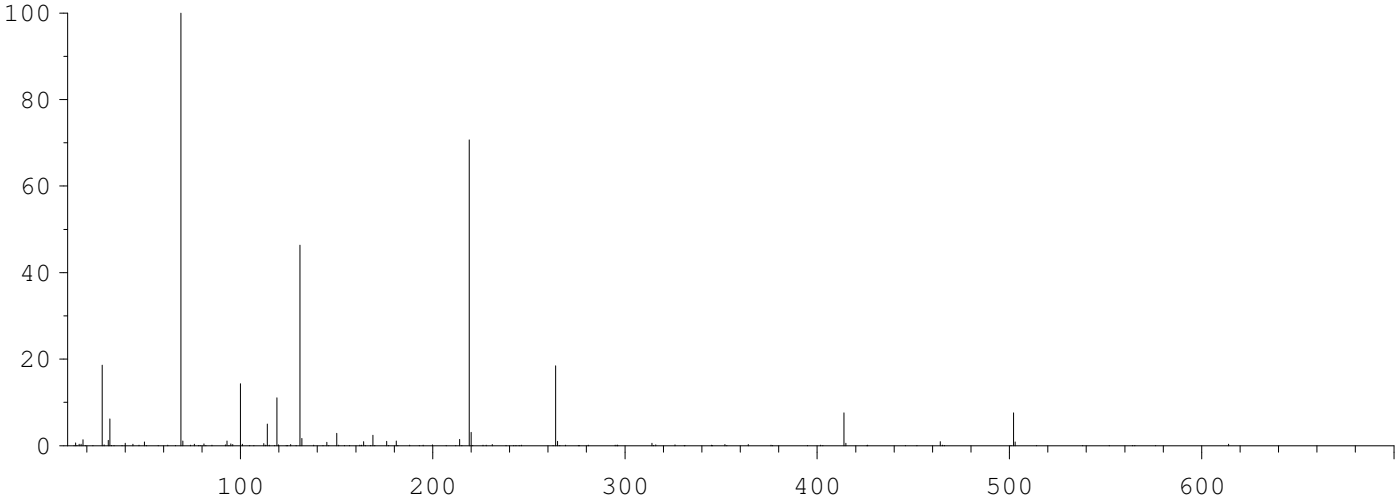


Ion Pol	Pos	MassGain	72
		MassOffs	-8
Emission	34.6	AmuGain	1985
EIEnrgy	69.9	AmuOffs	131
Filament	1	Wid219	-0.024
		DC Pol	Pos
Repeller	32.13		
IonFcus	90.2	HEDEnab	On
EntLens	14.5	EMVolts	1141
EntOffs	20.08		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
138 peaks Base: 69.10 Abundance: 397376



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.10	397376	100.00	70.00	4424	1.11
219.00	280960	70.70	220.00	12252	4.36
502.10	30328	7.63	503.10	3307	10.90

Air/Water Check: H20~1.35% N2~18.64% O2~6.18% CO2~0.39% N2/H2O~1377.83%

Column(1) Flow: 1.496 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 263095
Repeller Maximum 35 volts using ion 219; Gain Factor 2.63

MassGain Values(Samples): 76(3) 72(2) 71(1) 71(0) 72(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Entrance Lens Offset:	20.1	20.1	20.1	20.1	20.1	20.1	20.1

S17F030-CCV1

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

REVIEWED
By LLH at 9:14 am, Jun 08, 2017

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	113	0.00
2	T	Propene	0.493	0.446	9.5	112	0.00
3	T	Dichlorodifluoromethane	2.272	2.013	11.4	111	0.00
4	T	1,2-Dichlorotetrafluoroetha	2.321	2.077	10.5	112	0.00
5	T	Chloromethane	0.626	0.554	11.5	113	0.00
6	T	Vinyl chloride	0.661	0.596	9.8	113	0.00
7	T	1,3-Butadiene	0.465	0.416	10.5	114	0.00
8	T	Bromomethane	0.683	0.617	9.7	115	0.00
9	T	Chloroethane	0.402	0.361	10.2	113	0.00
10	T	Bromoethene	0.692	0.631	8.8	113	0.00
11	T	Trichlorofluoromethane	2.209	1.960	11.3	112	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	1.371	1.221	10.9	112	0.00
13	T	1,1-Dichloroethene	1.049	0.948	9.6	112	0.00
14	T	Acetone	0.965	0.857	11.2	112	0.00
15	T	Carbon disulfide	2.153	1.912	11.2	112	0.00
16	T	2-Propanol	0.730	0.692	5.2	114	0.00
17	T	Allyl chloride	0.688	0.630	8.4	112	0.00
18	T	Dichloromethane	0.824	0.677	17.8	114	0.00
19	T	tert-Butyl methyl ether (MT	1.936	1.797	7.2	113	0.00
20	T	trans-1,2-Dichloroethene	0.983	0.873	11.2	112	0.00
21	T	Hexane	1.071	0.988	7.7	113	0.00
22	T	1,1-Dichloroethane	1.341	1.208	9.9	113	0.00
23	T	Vinyl acetate	1.106	1.068	3.4	113	0.00
24	T	cis-1,2-Dichloroethene	0.920	0.843	8.4	113	0.00
25	T	2-Butanone (MEK)	0.362	0.336	7.2	114	0.00
26	T	Ethyl acetate	0.213	0.194	8.9	111	0.00
27	T	Tetrahydrofuran	0.670	0.619	7.6	115	0.00
28	T	Chloroform	1.629	1.464	10.1	112	0.00
29	T	Cyclohexane	1.074	0.992	7.6	114	0.00
30	T	1,1,1-Trichloroethane	1.744	1.573	9.8	112	0.00
31	T	Carbon tetrachloride	1.763	1.594	9.6	112	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	114	0.00
33	T	Benzene	0.581	0.523	10.0	114	0.00
34	T	2,2,4-Trimethylpentane	0.820	0.753	8.2	114	0.00
35	T	1,2-Dichloroethane	0.269	0.239	11.2	112	0.00
36	T	Heptane	0.270	0.242	10.4	113	0.00
37	T	Trichloroethene	0.263	0.238	9.5	112	0.00
38	T	1,2-Dichloropropane	0.193	0.174	9.8	113	0.00
39	T	1,4-Dioxane	0.131	0.124	5.3	114	0.00
40	T	Bromodichloromethane	0.446	0.398	10.8	113	0.00
41	T	cis-1,3-Dichloropropene	0.307	0.287	6.5	113	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.356	0.329	7.6	112	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	114	0.00
44	T	Toluene	0.848	0.769	9.3	113	0.00
45	T	trans-1,3-Dichloropropene	0.346	0.326	5.8	113	0.00
46	T	1,1,2-Trichloroethane	0.294	0.263	10.5	113	0.00
47	T	Tetrachloroethene	0.452	0.407	10.0	113	0.00
48	T	2-Hexanone	0.393	0.372	5.3	113	0.00
49	T	Chlorodibromomethane	0.536	0.483	9.9	113	0.00
50	T	1,2-Dibromoethane (EDB)	0.422	0.384	9.0	113	0.00
51	T	Chlorobenzene	0.713	0.635	10.9	113	0.00

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	1.181	1.063	10.0	113	0.00
53 T	m&p-Xylene	0.903	0.812	10.1	112	0.00
54 T	o-Xylene	0.910	0.834	8.4	113	0.00
55 T	Styrene	0.764	0.698	8.6	113	0.00
56 T	Bromoform	0.534	0.497	6.9	113	0.00
57 T	1,1,2,2-Tetrachloroethane	0.668	0.598	10.5	113	0.00
58 T	4-Ethyltoluene	1.375	1.260	8.4	112	0.00
59 T	1,3,5-Trimethylbenzene	1.142	1.026	10.2	112	0.00
60 T	1,2,4-Trimethylbenzene	1.144	1.039	9.2	112	0.00
61 T	1,3-Dichlorobenzene	0.828	0.742	10.4	111	0.00
62 T	1,4-Dichlorobenzene	0.817	0.736	9.9	111	0.00
63 T	Benzyl chloride	0.661	0.685	-3.6	113	0.00
64 T	1,2-Dichlorobenzene	0.822	0.730	11.2	112	0.00
65 T	1,2,4-Trichlorobenzene	0.852	0.729	14.4	109	0.00
66 T	Hexachlorobutadiene	0.776	0.678	12.6	112	0.00

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

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	317583	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1233693	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	1124961	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	77925	9.95	ppbv		99
3) Dichlorodifluoromethane	4.314	85	338755	9.39	ppbv		100
4) 1,2-Dichlorotetrafluor...	4.649	85	333184	9.04	ppbv		100
5) Chloromethane	4.861	50	96756	9.74	ppbv		100
6) Vinyl chloride	5.160	62	101243	9.65	ppbv		100
7) 1,3-Butadiene	5.245	54	70059	9.50	ppbv		98
8) Bromomethane	6.169	94	104800	9.66	ppbv		100
9) Chloroethane	6.492	64	60197	9.43	ppbv		98
10) Bromoethene	7.052	106	108213	9.85	ppbv		98
11) Trichlorofluoromethane	7.161	101	311268	8.87	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	182299	8.38	ppbv		99
13) 1,1-Dichloroethene	9.035	61	154995	9.30	ppbv		99
14) Acetone	9.686	43	149721	9.77	ppbv		100
15) Carbon disulfide	9.722	76	321895	9.42	ppbv		100
16) 2-Propanol	10.294	45	120906	10.43	ppbv		99
17) Allyl chloride	10.629	41	110007	10.06	ppbv		99
18) Dichloromethane	11.219	49	104207	7.96	ppbv		99
19) tert-Butyl methyl ethe...	11.833	73	308198	10.03	ppbv		100
20) trans-1,2-Dichloroethene	11.888	61	152507	9.77	ppbv		99
21) Hexane	12.417	57	164763	9.69	ppbv		99
22) 1,1-Dichloroethane	13.287	63	189856	8.91	ppbv		99
23) Vinyl acetate	13.445	43	186473	10.62	ppbv		99
24) cis-1,2-Dichloroethene	14.759	61	139151	9.52	ppbv		100
25) 2-Butanone (MEK)	14.893	72	57629	10.04	ppbv		97
26) Ethyl acetate	14.905	61	33617	9.96	ppbv	#	97
27) Tetrahydrofuran	15.295	42	103149	9.69	ppbv		98
28) Chloroform	15.465	83	248660	9.61	ppbv		100
29) Cyclohexane	15.599	56	168618	9.89	ppbv		99
30) 1,1,1-Trichloroethane	15.702	97	257205	9.29	ppbv		100
31) Carbon tetrachloride	15.934	117	263166	9.40	ppbv		100
33) Benzene	16.469	78	367420	9.63	ppbv		99
34) 2,2,4-Trimethylpentane	16.353	57	524095	9.74	ppbv		100
35) 1,2-Dichloroethane	16.718	62	163434	9.26	ppbv		100
36) Heptane	16.743	43	169845	9.58	ppbv		99
37) Trichloroethene	17.704	130	171724	9.94	ppbv		98
38) 1,2-Dichloropropane	18.245	63	122310	9.65	ppbv		99
39) 1,4-Dioxane	18.440	88	86546	10.07	ppbv		100
40) Bromodichloromethane	18.714	83	271522	9.27	ppbv		100
41) cis-1,3-Dichloropropene	19.480	75	196166	9.75	ppbv		100
42) 4-Methyl-2-pentanone (...	19.724	43	228730	9.80	ppbv		99
44) Toluene	19.937	91	467133	9.79	ppbv		99
45) trans-1,3-Dichloropropene	20.448	75	177667	9.14	ppbv		100
46) 1,1,2-Trichloroethane	20.758	97	161475	9.78	ppbv		99
47) Tetrachloroethene	20.770	166	247302	9.74	ppbv		100
48) 2-Hexanone	21.080	43	219600	9.93	ppbv		100
49) Chlorodibromomethane	21.354	129	290923	9.65	ppbv		99
50) 1,2-Dibromoethane (EDB)	21.585	107	237375	10.00	ppbv		100
51) Chlorobenzene	22.285	112	392619	9.79	ppbv		99
52) Ethylbenzene	22.364	91	651884	9.81	ppbv		100
53) m&p-Xylene	22.546	91	986437	19.42	ppbv		100
54) o-Xylene	23.197	91	496970	9.71	ppbv		100

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

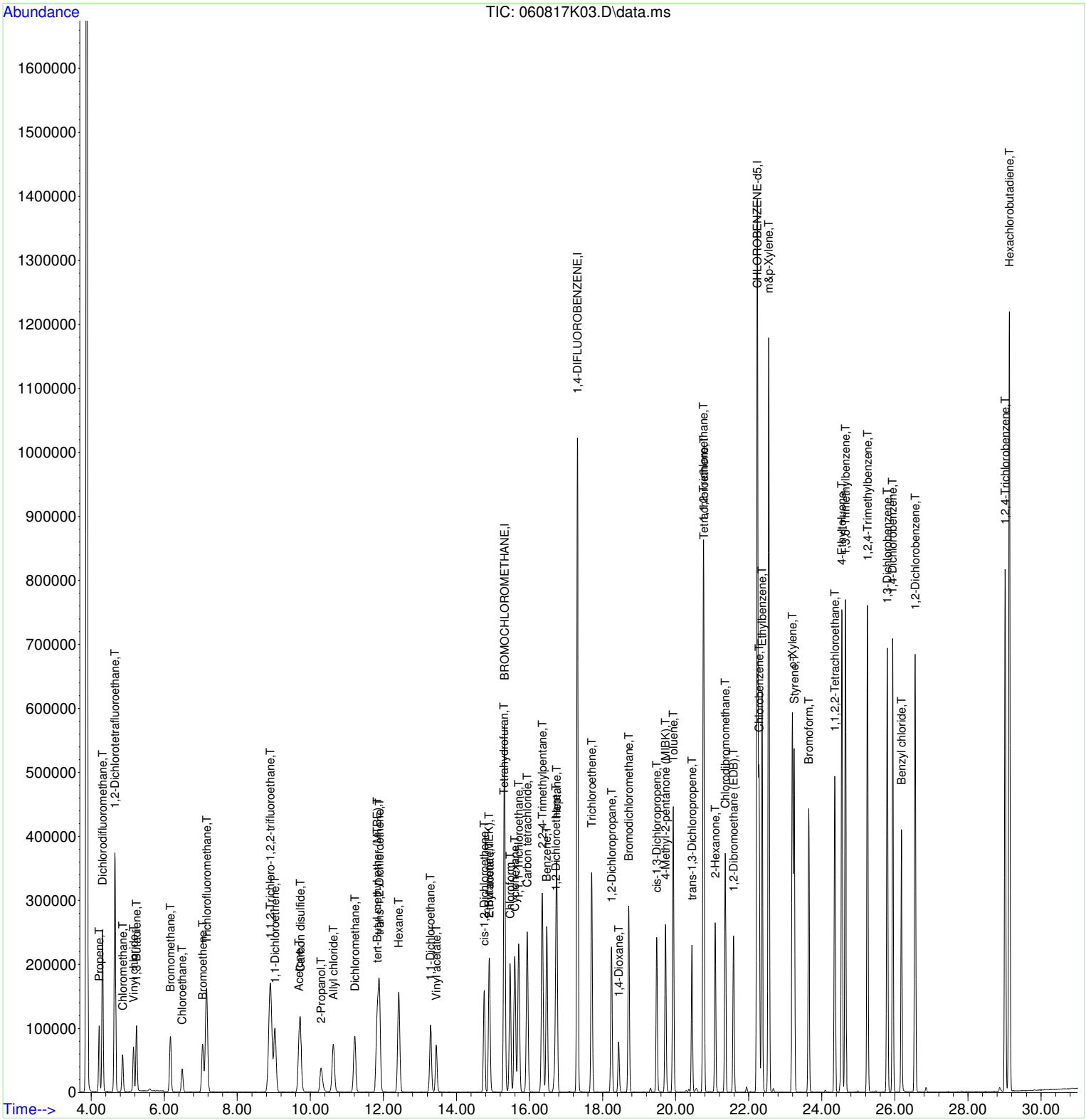
Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	404581	9.41 ppbv	100
56) Bromoform	23.641	173	299297	9.96 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	353226	9.40 ppbv	99
58) 4-Ethyltoluene	24.548	105	736955	9.53 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	617321	9.61 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	619358	9.63 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	438310	9.41 ppbv	100
62) 1,4-Dichlorobenzene	25.941	146	439011	9.55 ppbv	100
63) Benzyl chloride	26.178	91	423811	11.40 ppbv	100
64) 1,2-Dichlorobenzene	26.555	146	426784	9.23 ppbv	100
65) 1,2,4-Trichlorobenzene	29.019	180	385579	8.05 ppbv	100
66) Hexachlorobutadiene	29.135	225	377599	8.65 ppbv	99

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

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



LCS REPORT

REVIEWED
By LLH at 9:14 am, Jun 08, 2017

Instrument Name: HP5973K
Sample Name: S17F030-CCV1@B17F038-BS1
Misc Info: 10ppbv 1723026@1723029
Date Acquired: 6/8/2017 8:23
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	70.0	130.0	#N/A
2)	Propene	4.22	11.00	9.95	90%	72.0	121.0	pass
3)	Dichlorodifluoromethane	4.31	10.60	9.39	89%	68.0	129.0	pass
4)	1,2-Dichlorotetrafluoroethane	4.65	10.10	9.04	90%	67.0	127.0	pass
5)	Chloromethane	4.86	11.00	9.74	89%	70.0	123.0	pass
6)	Vinyl chloride	5.16	10.70	9.65	90%	69.0	125.0	pass
7)	1,3-Butadiene	5.24	10.60	9.50	90%	75.0	121.0	pass
8)	Bromomethane	6.17	10.70	9.66	90%	66.0	125.0	pass
9)	Chloroethane	6.49	10.50	9.43	90%	67.0	125.0	pass
10)	Bromoethene	7.05	10.80	9.85	91%	68.0	124.0	pass
11)	Trichlorofluoromethane	7.16	10.00	8.87	89%	68.0	133.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.90	9.40	8.38	89%	64.0	125.0	pass
13)	1,1-Dichloroethene	9.03	10.30	9.30	90%	73.0	128.0	pass
14)	Acetone	9.69	11.00	9.77	89%	67.0	141.0	pass
15)	Carbon disulfide	9.72	10.60	9.42	89%	45.0	158.0	pass
16)	2-Propanol	10.29	11.00	10.43	95%	72.0	132.0	pass
17)	Allyl chloride	10.63	11.00	10.06	91%	75.0	132.0	pass
18)	Dichloromethane	11.22	9.70	7.96	82%	73.0	116.0	pass
19)	tert-Butyl methyl ether (MTBE)	11.83	10.80	10.03	93%	74.0	131.0	pass
20)	trans-1,2-Dichloroethene	11.89	11.00	9.77	89%	80.0	123.0	pass
21)	Hexane	12.42	10.50	9.69	92%	75.0	124.0	pass
22)	1,1-Dichloroethane	13.29	9.90	8.91	90%	72.0	125.0	pass
23)	Vinyl acetate	13.45	11.00	10.62	97%	31.0	171.0	pass
24)	cis-1,2-Dichloroethene	14.76	10.40	9.52	92%	77.0	129.0	pass
25)	2-Butanone (MEK)	14.89	10.80	10.04	93%	69.0	137.0	pass
26)	Ethyl acetate	14.91	10.90	9.96	91%	75.0	127.0	pass
27)	Tetrahydrofuran	15.29	10.50	9.69	92%	78.0	120.0	pass
28)	Chloroform	15.47	10.70	9.61	90%	77.0	126.0	pass
29)	Cyclohexane	15.60	10.70	9.89	92%	76.0	124.0	pass
30)	1,1,1-Trichloroethane	15.70	10.30	9.29	90%	74.0	133.0	pass
31)	Carbon tetrachloride	15.93	10.40	9.40	90%	71.0	141.0	pass
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	70.0	130.0	#N/A
33)	Benzene	16.47	10.70	9.63	90%	81.0	125.0	pass
34)	2,2,4-Trimethylpentane	16.35	10.60	9.74	92%	82.0	125.0	pass
35)	1,2-Dichloroethane	16.72	10.40	9.26	89%	61.0	153.0	pass
36)	Heptane	16.74	10.70	9.58	89%	80.0	129.0	pass
37)	Trichloroethene	17.70	11.00	9.94	90%	73.0	128.0	pass
38)	1,2-Dichloropropane	18.25	10.70	9.65	90%	77.0	129.0	pass
39)	1,4-Dioxane	18.44	10.60	10.07	95%	58.0	140.0	pass
40)	Bromodichloromethane	18.71	10.40	9.27	89%	76.0	137.0	pass
41)	cis-1,3-Dichloropropene	19.48	10.40	9.75	94%	80.0	136.0	pass
42)	4-Methyl-2-pentanone (MIBK)	19.72	10.60	9.80	92%	65.0	140.0	pass
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	70.0	130.0	#N/A
44)	Toluene	19.94	10.80	9.79	91%	78.0	133.0	pass
45)	trans-1,3-Dichloropropene	20.45	9.70	9.14	94%	79.0	146.0	pass
46)	1,1,2-Trichloroethane	20.76	10.90	9.78	90%	74.0	134.0	pass
47)	Tetrachloroethene	20.77	10.80	9.74	90%	73.0	130.0	pass

48)	2-Hexanone	21.08	10.50	9.93	95%	50.0	162.0	pass
49)	Chlorodibromomethane	21.35	10.70	9.65	90%	81.0	135.0	pass
50)	1,2-Dibromoethane (EDB)	21.59	11.00	10.00	91%	78.0	133.0	pass
51)	Chlorobenzene	22.28	11.00	9.79	89%	81.0	126.0	pass
52)	Ethylbenzene	22.36	10.90	9.81	90%	82.0	130.0	pass
53)	m&p-Xylene	22.55	21.60	19.42	90%	82.0	131.0	pass
54)	o-Xylene	23.20	10.60	9.71	92%	82.0	132.0	pass
55)	Styrene	23.25	10.30	9.41	91%	65.0	141.0	pass
56)	Bromoform	23.64	10.70	9.96	93%	84.0	137.0	pass
57)	1,1,2,2-Tetrachloroethane	24.35	10.50	9.40	90%	73.0	127.0	pass
58)	4-Ethyltoluene	24.55	10.40	9.53	92%	81.0	127.0	pass
59)	1,3,5-Trimethylbenzene	24.65	10.70	9.61	90%	77.0	132.0	pass
60)	1,2,4-Trimethylbenzene	25.25	10.60	9.63	91%	78.0	131.0	pass
61)	1,3-Dichlorobenzene	25.80	10.50	9.41	90%	79.0	124.0	pass
62)	1,4-Dichlorobenzene	25.94	10.60	9.55	90%	75.0	127.0	pass
63)	Benzyl chloride	26.18	11.00	11.40	104%	67.0	156.0	pass
64)	1,2-Dichlorobenzene	26.56	10.40	9.23	89%	77.0	124.0	pass
65)	1,2,4-Trichlorobenzene	29.02	9.40	8.05	86%	55.0	132.0	pass
66)	Hexachlorobutadiene	29.13	9.90	8.65	87%	52.0	131.0	pass

B17F038-BS1

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

REVIEWED
By LLH at 9:14 am, Jun 08, 2017

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	113	0.00
2	T	Propene	0.493	0.446	9.5	112	0.00
3	T	Dichlorodifluoromethane	2.272	2.013	11.4	111	0.00
4	T	1,2-Dichlorotetrafluoroetha	2.321	2.077	10.5	112	0.00
5	T	Chloromethane	0.626	0.554	11.5	113	0.00
6	T	Vinyl chloride	0.661	0.596	9.8	113	0.00
7	T	1,3-Butadiene	0.465	0.416	10.5	114	0.00
8	T	Bromomethane	0.683	0.617	9.7	115	0.00
9	T	Chloroethane	0.402	0.361	10.2	113	0.00
10	T	Bromoethene	0.692	0.631	8.8	113	0.00
11	T	Trichlorofluoromethane	2.209	1.960	11.3	112	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	1.371	1.221	10.9	112	0.00
13	T	1,1-Dichloroethene	1.049	0.948	9.6	112	0.00
14	T	Acetone	0.965	0.857	11.2	112	0.00
15	T	Carbon disulfide	2.153	1.912	11.2	112	0.00
16	T	2-Propanol	0.730	0.692	5.2	114	0.00
17	T	Allyl chloride	0.688	0.630	8.4	112	0.00
18	T	Dichloromethane	0.824	0.677	17.8	114	0.00
19	T	tert-Butyl methyl ether (MT	1.936	1.797	7.2	113	0.00
20	T	trans-1,2-Dichloroethene	0.983	0.873	11.2	112	0.00
21	T	Hexane	1.071	0.988	7.7	113	0.00
22	T	1,1-Dichloroethane	1.341	1.208	9.9	113	0.00
23	T	Vinyl acetate	1.106	1.068	3.4	113	0.00
24	T	cis-1,2-Dichloroethene	0.920	0.843	8.4	113	0.00
25	T	2-Butanone (MEK)	0.362	0.336	7.2	114	0.00
26	T	Ethyl acetate	0.213	0.194	8.9	111	0.00
27	T	Tetrahydrofuran	0.670	0.619	7.6	115	0.00
28	T	Chloroform	1.629	1.464	10.1	112	0.00
29	T	Cyclohexane	1.074	0.992	7.6	114	0.00
30	T	1,1,1-Trichloroethane	1.744	1.573	9.8	112	0.00
31	T	Carbon tetrachloride	1.763	1.594	9.6	112	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	114	0.00
33	T	Benzene	0.581	0.523	10.0	114	0.00
34	T	2,2,4-Trimethylpentane	0.820	0.753	8.2	114	0.00
35	T	1,2-Dichloroethane	0.269	0.239	11.2	112	0.00
36	T	Heptane	0.270	0.242	10.4	113	0.00
37	T	Trichloroethene	0.263	0.238	9.5	112	0.00
38	T	1,2-Dichloropropane	0.193	0.174	9.8	113	0.00
39	T	1,4-Dioxane	0.131	0.124	5.3	114	0.00
40	T	Bromodichloromethane	0.446	0.398	10.8	113	0.00
41	T	cis-1,3-Dichloropropene	0.307	0.287	6.5	113	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.356	0.329	7.6	112	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	114	0.00
44	T	Toluene	0.848	0.769	9.3	113	0.00
45	T	trans-1,3-Dichloropropene	0.346	0.326	5.8	113	0.00
46	T	1,1,2-Trichloroethane	0.294	0.263	10.5	113	0.00
47	T	Tetrachloroethene	0.452	0.407	10.0	113	0.00
48	T	2-Hexanone	0.393	0.372	5.3	113	0.00
49	T	Chlorodibromomethane	0.536	0.483	9.9	113	0.00
50	T	1,2-Dibromoethane (EDB)	0.422	0.384	9.0	113	0.00
51	T	Chlorobenzene	0.713	0.635	10.9	113	0.00

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	1.181	1.063	10.0	113	0.00
53 T	m&p-Xylene	0.903	0.812	10.1	112	0.00
54 T	o-Xylene	0.910	0.834	8.4	113	0.00
55 T	Styrene	0.764	0.698	8.6	113	0.00
56 T	Bromoform	0.534	0.497	6.9	113	0.00
57 T	1,1,2,2-Tetrachloroethane	0.668	0.598	10.5	113	0.00
58 T	4-Ethyltoluene	1.375	1.260	8.4	112	0.00
59 T	1,3,5-Trimethylbenzene	1.142	1.026	10.2	112	0.00
60 T	1,2,4-Trimethylbenzene	1.144	1.039	9.2	112	0.00
61 T	1,3-Dichlorobenzene	0.828	0.742	10.4	111	0.00
62 T	1,4-Dichlorobenzene	0.817	0.736	9.9	111	0.00
63 T	Benzyl chloride	0.661	0.685	-3.6	113	0.00
64 T	1,2-Dichlorobenzene	0.822	0.730	11.2	112	0.00
65 T	1,2,4-Trichlorobenzene	0.852	0.729	14.4	109	0.00
66 T	Hexachlorobutadiene	0.776	0.678	12.6	112	0.00

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

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	317583	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1233693	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	1124961	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	77925	9.95	ppbv		99
3) Dichlorodifluoromethane	4.314	85	338755	9.39	ppbv		100
4) 1,2-Dichlorotetrafluor...	4.649	85	333184	9.04	ppbv		100
5) Chloromethane	4.861	50	96756	9.74	ppbv		100
6) Vinyl chloride	5.160	62	101243	9.65	ppbv		100
7) 1,3-Butadiene	5.245	54	70059	9.50	ppbv		98
8) Bromomethane	6.169	94	104800	9.66	ppbv		100
9) Chloroethane	6.492	64	60197	9.43	ppbv		98
10) Bromoethene	7.052	106	108213	9.85	ppbv		98
11) Trichlorofluoromethane	7.161	101	311268	8.87	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	182299	8.38	ppbv		99
13) 1,1-Dichloroethene	9.035	61	154995	9.30	ppbv		99
14) Acetone	9.686	43	149721	9.77	ppbv		100
15) Carbon disulfide	9.722	76	321895	9.42	ppbv		100
16) 2-Propanol	10.294	45	120906	10.43	ppbv		99
17) Allyl chloride	10.629	41	110007	10.06	ppbv		99
18) Dichloromethane	11.219	49	104207	7.96	ppbv		99
19) tert-Butyl methyl ethe...	11.833	73	308198	10.03	ppbv		100
20) trans-1,2-Dichloroethene	11.888	61	152507	9.77	ppbv		99
21) Hexane	12.417	57	164763	9.69	ppbv		99
22) 1,1-Dichloroethane	13.287	63	189856	8.91	ppbv		99
23) Vinyl acetate	13.445	43	186473	10.62	ppbv		99
24) cis-1,2-Dichloroethene	14.759	61	139151	9.52	ppbv		100
25) 2-Butanone (MEK)	14.893	72	57629	10.04	ppbv		97
26) Ethyl acetate	14.905	61	33617	9.96	ppbv	#	97
27) Tetrahydrofuran	15.295	42	103149	9.69	ppbv		98
28) Chloroform	15.465	83	248660	9.61	ppbv		100
29) Cyclohexane	15.599	56	168618	9.89	ppbv		99
30) 1,1,1-Trichloroethane	15.702	97	257205	9.29	ppbv		100
31) Carbon tetrachloride	15.934	117	263166	9.40	ppbv		100
33) Benzene	16.469	78	367420	9.63	ppbv		99
34) 2,2,4-Trimethylpentane	16.353	57	524095	9.74	ppbv		100
35) 1,2-Dichloroethane	16.718	62	163434	9.26	ppbv		100
36) Heptane	16.743	43	169845	9.58	ppbv		99
37) Trichloroethene	17.704	130	171724	9.94	ppbv		98
38) 1,2-Dichloropropane	18.245	63	122310	9.65	ppbv		99
39) 1,4-Dioxane	18.440	88	86546	10.07	ppbv		100
40) Bromodichloromethane	18.714	83	271522	9.27	ppbv		100
41) cis-1,3-Dichloropropene	19.480	75	196166	9.75	ppbv		100
42) 4-Methyl-2-pentanone (...	19.724	43	228730	9.80	ppbv		99
44) Toluene	19.937	91	467133	9.79	ppbv		99
45) trans-1,3-Dichloropropene	20.448	75	177667	9.14	ppbv		100
46) 1,1,2-Trichloroethane	20.758	97	161475	9.78	ppbv		99
47) Tetrachloroethene	20.770	166	247302	9.74	ppbv		100
48) 2-Hexanone	21.080	43	219600	9.93	ppbv		100
49) Chlorodibromomethane	21.354	129	290923	9.65	ppbv		99
50) 1,2-Dibromoethane (EDB)	21.585	107	237375	10.00	ppbv		100
51) Chlorobenzene	22.285	112	392619	9.79	ppbv		99
52) Ethylbenzene	22.364	91	651884	9.81	ppbv		100
53) m&p-Xylene	22.546	91	986437	19.42	ppbv		100
54) o-Xylene	23.197	91	496970	9.71	ppbv		100

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

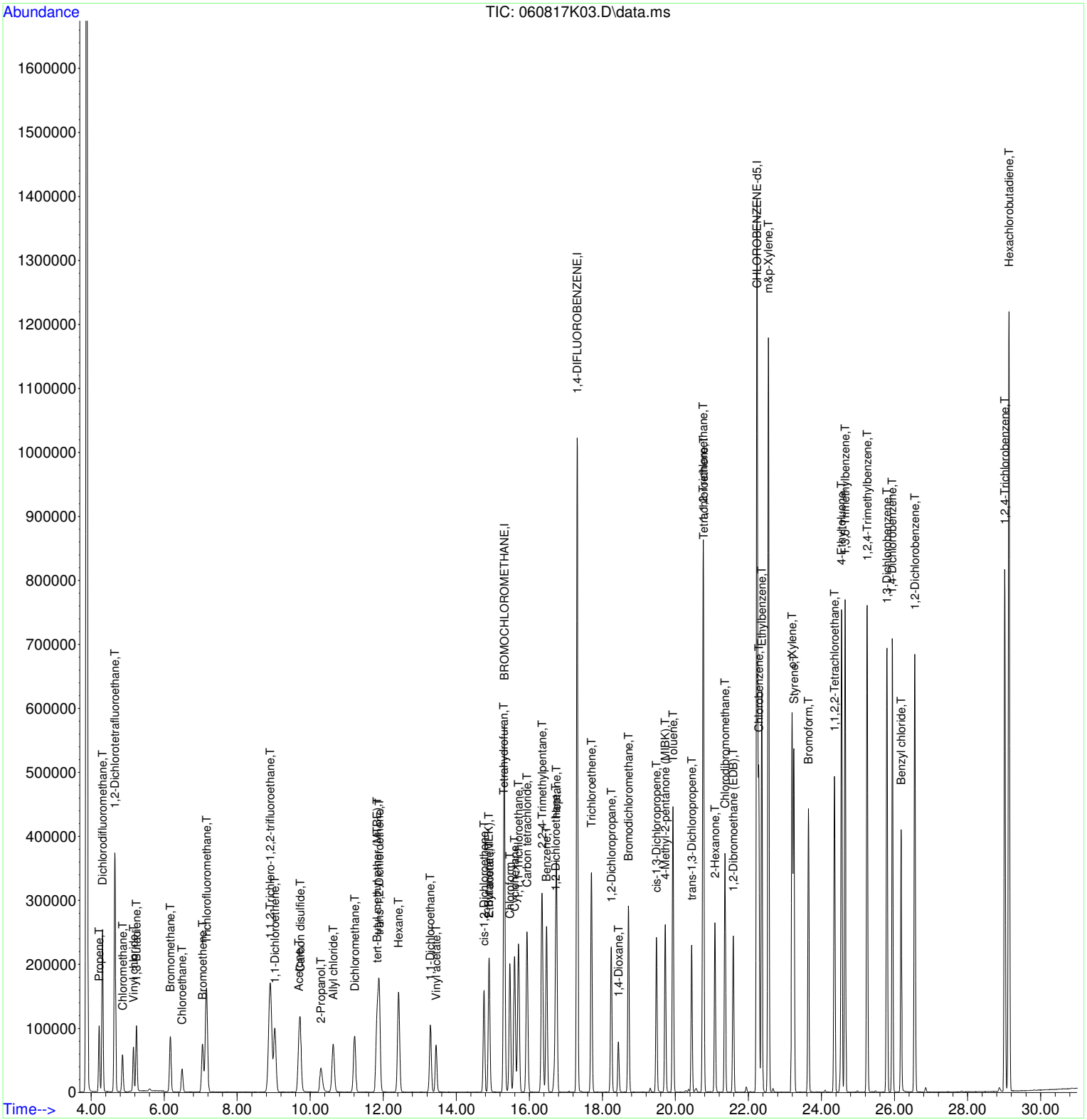
Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	404581	9.41 ppbv	100
56) Bromoform	23.641	173	299297	9.96 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	353226	9.40 ppbv	99
58) 4-Ethyltoluene	24.548	105	736955	9.53 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	617321	9.61 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	619358	9.63 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	438310	9.41 ppbv	100
62) 1,4-Dichlorobenzene	25.941	146	439011	9.55 ppbv	100
63) Benzyl chloride	26.178	91	423811	11.40 ppbv	100
64) 1,2-Dichlorobenzene	26.555	146	426784	9.23 ppbv	100
65) 1,2,4-Trichlorobenzene	29.019	180	385579	8.05 ppbv	100
66) Hexachlorobutadiene	29.135	225	377599	8.65 ppbv	99

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

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K03.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:23 am
Operator : LLH
Sample : S17F030-CCV1@B17F038-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 08 09:11:09 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



LCS REPORT

REVIEWED
By LLH at 9:14 am, Jun 08, 2017

Instrument Name: HP5973K
Sample Name: S17F030-CCV1@B17F038-BS1
Misc Info: 10ppbv 1723026@1723029
Date Acquired: 6/8/2017 8:23
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	70.0	130.0	#N/A
2)	Propene	4.22	11.00	9.95	90%	72.0	121.0	pass
3)	Dichlorodifluoromethane	4.31	10.60	9.39	89%	68.0	129.0	pass
4)	1,2-Dichlorotetrafluoroethane	4.65	10.10	9.04	90%	67.0	127.0	pass
5)	Chloromethane	4.86	11.00	9.74	89%	70.0	123.0	pass
6)	Vinyl chloride	5.16	10.70	9.65	90%	69.0	125.0	pass
7)	1,3-Butadiene	5.24	10.60	9.50	90%	75.0	121.0	pass
8)	Bromomethane	6.17	10.70	9.66	90%	66.0	125.0	pass
9)	Chloroethane	6.49	10.50	9.43	90%	67.0	125.0	pass
10)	Bromoethene	7.05	10.80	9.85	91%	68.0	124.0	pass
11)	Trichlorofluoromethane	7.16	10.00	8.87	89%	68.0	133.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.90	9.40	8.38	89%	64.0	125.0	pass
13)	1,1-Dichloroethene	9.03	10.30	9.30	90%	73.0	128.0	pass
14)	Acetone	9.69	11.00	9.77	89%	67.0	141.0	pass
15)	Carbon disulfide	9.72	10.60	9.42	89%	45.0	158.0	pass
16)	2-Propanol	10.29	11.00	10.43	95%	72.0	132.0	pass
17)	Allyl chloride	10.63	11.00	10.06	91%	75.0	132.0	pass
18)	Dichloromethane	11.22	9.70	7.96	82%	73.0	116.0	pass
19)	tert-Butyl methyl ether (MTBE)	11.83	10.80	10.03	93%	74.0	131.0	pass
20)	trans-1,2-Dichloroethene	11.89	11.00	9.77	89%	80.0	123.0	pass
21)	Hexane	12.42	10.50	9.69	92%	75.0	124.0	pass
22)	1,1-Dichloroethane	13.29	9.90	8.91	90%	72.0	125.0	pass
23)	Vinyl acetate	13.45	11.00	10.62	97%	31.0	171.0	pass
24)	cis-1,2-Dichloroethene	14.76	10.40	9.52	92%	77.0	129.0	pass
25)	2-Butanone (MEK)	14.89	10.80	10.04	93%	69.0	137.0	pass
26)	Ethyl acetate	14.91	10.90	9.96	91%	75.0	127.0	pass
27)	Tetrahydrofuran	15.29	10.50	9.69	92%	78.0	120.0	pass
28)	Chloroform	15.47	10.70	9.61	90%	77.0	126.0	pass
29)	Cyclohexane	15.60	10.70	9.89	92%	76.0	124.0	pass
30)	1,1,1-Trichloroethane	15.70	10.30	9.29	90%	74.0	133.0	pass
31)	Carbon tetrachloride	15.93	10.40	9.40	90%	71.0	141.0	pass
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	70.0	130.0	#N/A
33)	Benzene	16.47	10.70	9.63	90%	81.0	125.0	pass
34)	2,2,4-Trimethylpentane	16.35	10.60	9.74	92%	82.0	125.0	pass
35)	1,2-Dichloroethane	16.72	10.40	9.26	89%	61.0	153.0	pass
36)	Heptane	16.74	10.70	9.58	89%	80.0	129.0	pass
37)	Trichloroethene	17.70	11.00	9.94	90%	73.0	128.0	pass
38)	1,2-Dichloropropane	18.25	10.70	9.65	90%	77.0	129.0	pass
39)	1,4-Dioxane	18.44	10.60	10.07	95%	58.0	140.0	pass
40)	Bromodichloromethane	18.71	10.40	9.27	89%	76.0	137.0	pass
41)	cis-1,3-Dichloropropene	19.48	10.40	9.75	94%	80.0	136.0	pass
42)	4-Methyl-2-pentanone (MIBK)	19.72	10.60	9.80	92%	65.0	140.0	pass
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	70.0	130.0	#N/A
44)	Toluene	19.94	10.80	9.79	91%	78.0	133.0	pass
45)	trans-1,3-Dichloropropene	20.45	9.70	9.14	94%	79.0	146.0	pass
46)	1,1,2-Trichloroethane	20.76	10.90	9.78	90%	74.0	134.0	pass
47)	Tetrachloroethene	20.77	10.80	9.74	90%	73.0	130.0	pass

48)	2-Hexanone	21.08	10.50	9.93	95%	50.0	162.0	pass
49)	Chlorodibromomethane	21.35	10.70	9.65	90%	81.0	135.0	pass
50)	1,2-Dibromoethane (EDB)	21.59	11.00	10.00	91%	78.0	133.0	pass
51)	Chlorobenzene	22.28	11.00	9.79	89%	81.0	126.0	pass
52)	Ethylbenzene	22.36	10.90	9.81	90%	82.0	130.0	pass
53)	m&p-Xylene	22.55	21.60	19.42	90%	82.0	131.0	pass
54)	o-Xylene	23.20	10.60	9.71	92%	82.0	132.0	pass
55)	Styrene	23.25	10.30	9.41	91%	65.0	141.0	pass
56)	Bromoform	23.64	10.70	9.96	93%	84.0	137.0	pass
57)	1,1,2,2-Tetrachloroethane	24.35	10.50	9.40	90%	73.0	127.0	pass
58)	4-Ethyltoluene	24.55	10.40	9.53	92%	81.0	127.0	pass
59)	1,3,5-Trimethylbenzene	24.65	10.70	9.61	90%	77.0	132.0	pass
60)	1,2,4-Trimethylbenzene	25.25	10.60	9.63	91%	78.0	131.0	pass
61)	1,3-Dichlorobenzene	25.80	10.50	9.41	90%	79.0	124.0	pass
62)	1,4-Dichlorobenzene	25.94	10.60	9.55	90%	75.0	127.0	pass
63)	Benzyl chloride	26.18	11.00	11.40	104%	67.0	156.0	pass
64)	1,2-Dichlorobenzene	26.56	10.40	9.23	89%	77.0	124.0	pass
65)	1,2,4-Trichlorobenzene	29.02	9.40	8.05	86%	55.0	132.0	pass
66)	Hexachlorobutadiene	29.13	9.90	8.65	87%	52.0	131.0	pass

S17F030-CRL1

QLS REPORT

REVIEWED
By LLH at 9:44 am, Jun 08, 2017

Instrument Name: HP5973K
Sample Name: S17F030-CRL1
Misc Info: 1.0ppbv 1723023
Date Acquired: 6/8/2017 9:11
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

1 OUT

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	TYPE
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	60.0	140.0	#N/A	Internal
2)	Propene	4.23	1.10	1.13	103%	60.0	140.0	pass	Subset
3)	Dichlorodifluoromethane	4.31	1.06	1.04	99%	60.0	140.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	4.65	1.01	1.01	100%	60.0	140.0	pass	Primary
5)	Chloromethane	4.86	1.10	1.22	111%	60.0	140.0	pass	Primary
6)	Vinyl chloride	5.17	1.07	1.10	103%	60.0	140.0	pass	Primary
7)	1,3-Butadiene	5.24	1.06	1.13	107%	60.0	140.0	pass	Subset
8)	Bromomethane	6.17	1.07	1.08	101%	60.0	140.0	pass	Primary
9)	Chloroethane	6.50	1.05	1.05	100%	60.0	140.0	pass	Primary
10)	Bromoethene	7.06	1.08	1.09	101%	60.0	140.0	pass	Subset
11)	Trichlorofluoromethane	7.16	1.00	0.96	96%	60.0	140.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.91	0.94	0.94	100%	60.0	140.0	pass	Primary
13)	1,1-Dichloroethene	9.04	1.03	0.98	95%	60.0	140.0	pass	Primary
14)	Acetone	9.72	1.10	1.09	99%	60.0	140.0	pass	Subset
15)	Carbon disulfide	9.73	1.06	1.09	103%	60.0	140.0	pass	Subset
16)	2-Propanol	10.32	1.10	0.97	88%	60.0	140.0	pass	Subset
17)	Allyl chloride	10.62	1.10	1.05	96%	60.0	140.0	pass	Subset
18)	Dichloromethane	11.21	0.97	1.20	124%	60.0	140.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	11.86	1.08	1.01	93%	60.0	140.0	pass	Subset
20)	trans-1,2-Dichloroethene	11.89	1.10	1.08	98%	60.0	140.0	pass	Subset
21)	Hexane	12.42	1.05	0.98	94%	60.0	140.0	pass	Subset
22)	1,1-Dichloroethane	13.29	0.99	0.95	96%	60.0	140.0	pass	Primary
23)	Vinyl acetate	13.45	1.10	0.92	83%	60.0	140.0	pass	Subset
24)	cis-1,2-Dichloroethene	14.76	1.04	0.95	92%	60.0	140.0	pass	Primary
25)	2-Butanone (MEK)	14.91	1.08	1.05	97%	60.0	140.0	pass	Subset
26)	Ethyl acetate	14.92	1.09	1.06	97%	60.0	140.0	pass	Subset
27)	Tetrahydrofuran	15.33	1.05	0.97	92%	60.0	140.0	pass	Subset
28)	Chloroform	15.47	1.07	1.05	98%	60.0	140.0	pass	Primary
29)	Cyclohexane	15.60	1.07	1.01	95%	60.0	140.0	pass	Subset
30)	1,1,1-Trichloroethane	15.70	1.03	0.97	94%	60.0	140.0	pass	Primary
31)	Carbon tetrachloride	15.93	1.04	0.99	95%	60.0	140.0	pass	Primary
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	60.0	140.0	#N/A	Internal
33)	Benzene	16.47	1.07	1.03	96%	60.0	140.0	pass	Primary
34)	2,2,4-Trimethylpentane	16.35	1.06	0.98	93%	60.0	140.0	pass	Subset
35)	1,2-Dichloroethane	16.71	1.04	0.98	94%	60.0	140.0	pass	Primary
36)	Heptane	16.74	1.07	0.99	93%	60.0	140.0	pass	Subset
37)	Trichloroethene	17.70	1.10	1.05	95%	60.0	140.0	pass	Primary
38)	1,2-Dichloropropane	18.25	1.07	1.00	94%	60.0	140.0	pass	Primary
39)	1,4-Dioxane	18.46	1.06	0.87	82%	60.0	140.0	pass	Subset
40)	Bromodichloromethane	18.71	1.04	1.00	97%	60.0	140.0	pass	Subset
41)	cis-1,3-Dichloropropene	19.48	1.04	0.89	86%	60.0	140.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	19.73	1.06	0.90	85%	60.0	140.0	pass	Subset
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	60.0	140.0	#N/A	Internal
44)	Toluene	19.94	1.08	1.00	93%	60.0	140.0	pass	Primary
45)	trans-1,3-Dichloropropene	20.45	0.97	0.82	85%	60.0	140.0	pass	Primary
46)	1,1,2-Trichloroethane	20.76	1.09	1.04	95%	60.0	140.0	pass	Primary
47)	Tetrachloroethene	20.76	1.08	1.02	95%	60.0	140.0	pass	Primary
48)	2-Hexanone	21.09	1.05	0.82	78%	60.0	140.0	pass	Subset
49)	Chlorodibromomethane	21.35	1.07	0.99	93%	60.0	140.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	21.59	1.10	1.01	91%	60.0	140.0	pass	Primary

51)	Chlorobenzene	22.28	1.10	1.08	98%	60.0	140.0	pass	Primary
52)	Ethylbenzene	22.36	1.09	1.00	92%	60.0	140.0	pass	Primary
53)	m&p-Xylene	22.55	2.16	1.99	92%	60.0	140.0	pass	Primary
54)	o-Xylene	23.20	1.06	0.92	86%	60.0	140.0	pass	Primary
55)	Styrene	23.25	1.03	0.91	88%	60.0	140.0	pass	Primary
56)	Bromoform	23.64	1.07	0.91	85%	60.0	140.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	24.35	1.05	0.98	93%	60.0	140.0	pass	Primary
58)	4-Ethyltoluene	24.55	1.04	0.85	81%	60.0	140.0	pass	Subset
59)	1,3,5-Trimethylbenzene	24.65	1.07	0.96	90%	60.0	140.0	pass	Primary
60)	1,2,4-Trimethylbenzene	25.25	1.06	0.90	85%	60.0	140.0	pass	Primary
61)	1,3-Dichlorobenzene	25.79	1.05	0.94	90%	60.0	140.0	pass	Primary
62)	1,4-Dichlorobenzene	25.94	1.06	0.94	89%	60.0	140.0	pass	Primary
63)	Benzyl chloride	26.18	1.10	0.60	55%	60.0	140.0	FAIL	Subset
64)	1,2-Dichlorobenzene	26.56	1.04	0.94	90%	60.0	140.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.03	0.94	0.85	91%	60.0	140.0	pass	Primary
66)	Hexachlorobutadiene	29.14	0.99	0.95	96%	60.0	140.0	pass	Primary

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K04.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:11 am
Operator : LLH
Sample : S17F030-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 08 09:43:20 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	319782	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1248034	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	1106711	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.229	41	8922	1.13	ppbv		98
3) Dichlorodifluoromethane	4.314	85	37924	1.04	ppbv		100
4) 1,2-Dichlorotetrafluor...	4.649	85	37628	1.01	ppbv		100
5) Chloromethane	4.855	50	12207	1.22	ppbv		97
6) Vinyl chloride	5.166	62	11604	1.10	ppbv		98
7) 1,3-Butadiene	5.245	54	8426	1.13	ppbv		91
8) Bromomethane	6.170	94	11823	1.08	ppbv		98
9) Chloroethane	6.498	64	6737	1.05	ppbv		96
10) Bromoethene	7.064	106	12068	1.09	ppbv		98
11) Trichlorofluoromethane	7.155	101	33881	0.96	ppbv		99
12) 1,1,2-Trichloro-1,2,2-...	8.907	151	20584	0.94	ppbv		99
13) 1,1-Dichloroethene	9.041	61	16475	0.98	ppbv		99
14) Acetone	9.722	43	16771	1.09	ppbv		100
15) Carbon disulfide	9.728	76	37634	1.09	ppbv		97
16) 2-Propanol	10.325	45	11297	0.97	ppbv		94
17) Allyl chloride	10.623	41	11565	1.05	ppbv		99
18) Dichloromethane	11.213	49	15879	1.20	ppbv		99
19) tert-Butyl methyl ethe...	11.858	73	31147	1.01	ppbv		98
20) trans-1,2-Dichloroethene	11.894	61	16933	1.08	ppbv		99
21) Hexane	12.423	57	16826	0.98	ppbv		96
22) 1,1-Dichloroethane	13.287	63	20458	0.95	ppbv		98
23) Vinyl acetate	13.452	43	16181	0.92	ppbv		99
24) cis-1,2-Dichloroethene	14.760	61	14036	0.95	ppbv		99
25) 2-Butanone (MEK)	14.906	72	6042	1.05	ppbv	#	91
26) Ethyl acetate	14.924	61	3608	1.06	ppbv	#	91
27) Tetrahydrofuran	15.325	42	10388	0.97	ppbv		100
28) Chloroform	15.465	83	27416	1.05	ppbv		98
29) Cyclohexane	15.599	56	17377	1.01	ppbv		98
30) 1,1,1-Trichloroethane	15.702	97	27087	0.97	ppbv		99
31) Carbon tetrachloride	15.934	117	27897	0.99	ppbv		99
33) Benzene	16.469	78	39777	1.03	ppbv		99
34) 2,2,4-Trimethylpentane	16.353	57	53470	0.98	ppbv		99
35) 1,2-Dichloroethane	16.712	62	17419	0.98	ppbv		97
36) Heptane	16.743	43	17819	0.99	ppbv		98
37) Trichloroethene	17.704	130	18308	1.05	ppbv		99
38) 1,2-Dichloropropane	18.245	63	12863	1.00	ppbv		98
39) 1,4-Dioxane	18.458	88	7541	0.87	ppbv		98
40) Bromodichloromethane	18.714	83	29751	1.00	ppbv		99
41) cis-1,3-Dichloropropene	19.480	75	18208	0.89	ppbv		99
42) 4-Methyl-2-pentanone (...	19.730	43	21288	0.90	ppbv		99
44) Toluene	19.937	91	47155	1.00	ppbv		100
45) trans-1,3-Dichloropropene	20.448	75	15766	0.82	ppbv		98
46) 1,1,2-Trichloroethane	20.758	97	16849	1.04	ppbv		98
47) Tetrachloroethene	20.764	166	25603	1.02	ppbv		99
48) 2-Hexanone	21.086	43	17761	0.82	ppbv		99
49) Chlorodibromomethane	21.354	129	29378	0.99	ppbv		100
50) 1,2-Dibromoethane (EDB)	21.585	107	23483	1.01	ppbv		100
51) Chlorobenzene	22.285	112	42737	1.08	ppbv		84
52) Ethylbenzene	22.364	91	65351	1.00	ppbv		99
53) m&p-Xylene	22.547	91	99674	1.99	ppbv		99
54) o-Xylene	23.197	91	46173	0.92	ppbv		99

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K04.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:11 am
Operator : LLH
Sample : S17F030-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

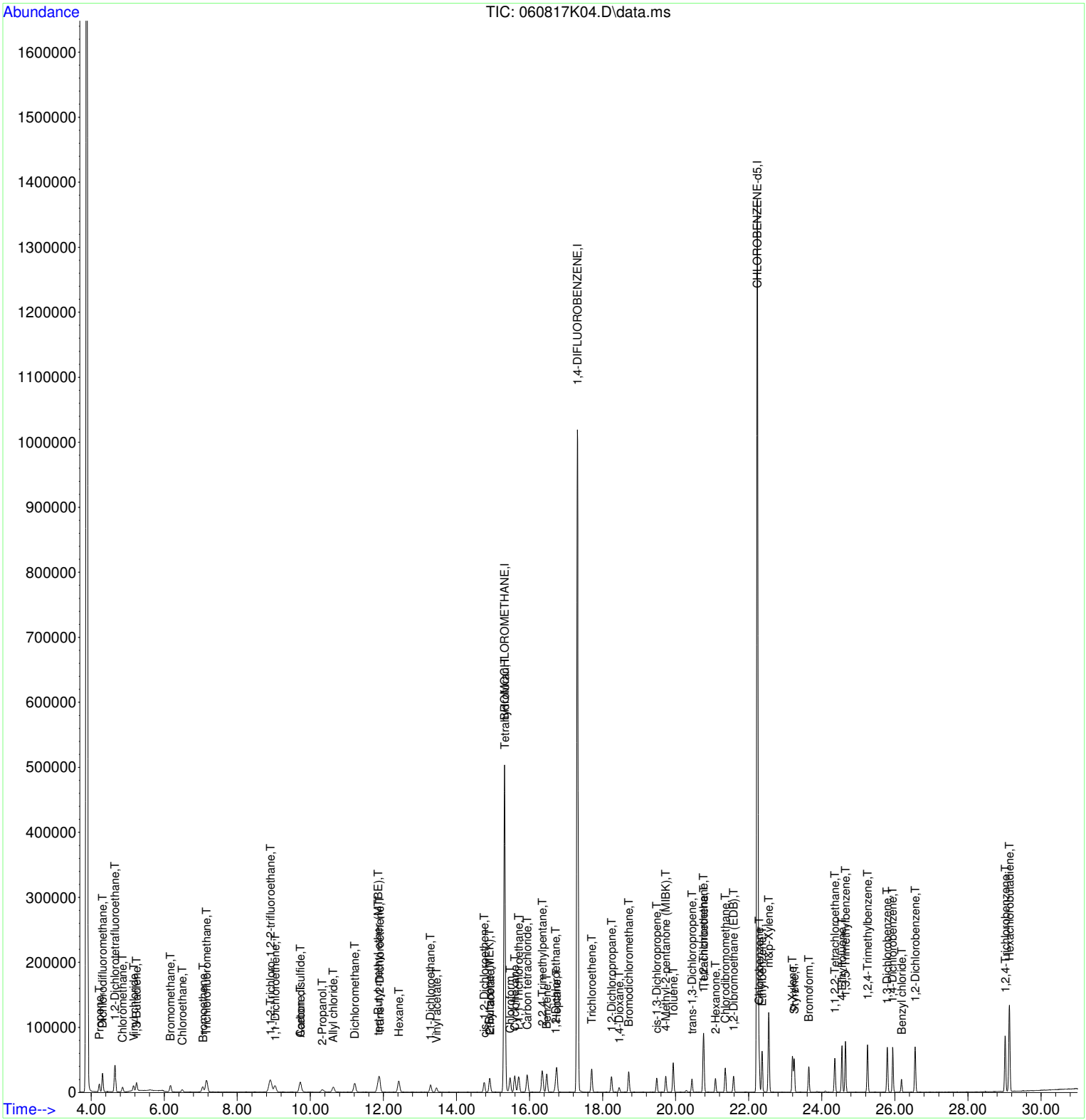
Quant Time: Jun 08 09:43:20 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	38269	0.91 ppbv	99
56) Bromoform	23.642	173	26907	0.91 ppbv	98
57) 1,1,2,2-Tetrachloroethane	24.353	83	36092	0.98 ppbv	98
58) 4-Ethyltoluene	24.554	105	64350	0.85 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	60768	0.96 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	56946	0.90 ppbv	99
61) 1,3-Dichlorobenzene	25.789	146	43207	0.94 ppbv	99
62) 1,4-Dichlorobenzene	25.941	146	42572	0.94 ppbv	99
63) Benzyl chloride	26.184	91	22088	0.60 ppbv	100
64) 1,2-Dichlorobenzene	26.556	146	42747	0.94 ppbv	99
65) 1,2,4-Trichlorobenzene	29.026	180	40232	0.85 ppbv	100
66) Hexachlorobutadiene	29.135	225	40983	0.95 ppbv	99

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

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K04.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:11 am
Operator : LLH
Sample : S17F030-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 08 09:43:20 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



B17F038-BLK1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K05.D
InstName : HP5973K
Acq On : 8 Jun 2017 10:02 am
Operator : LLH
Sample : B17F038-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 08 10:33:59 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	307944	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1211926	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1068259	20.00	ppbv	0.00

Target Compounds Qvalue

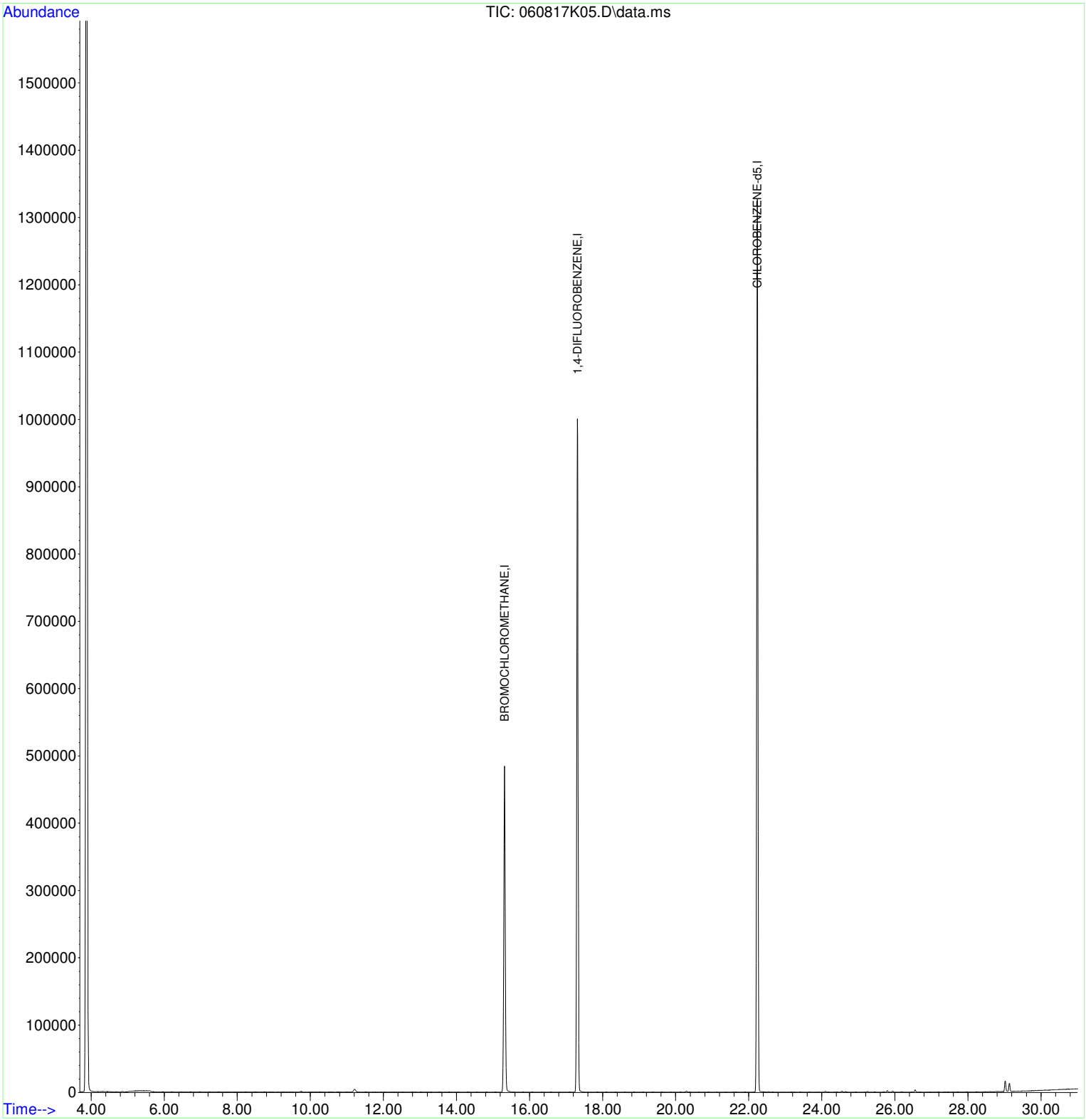
(#) = qualifier out of range (m) = manual integration (+) = signals summed

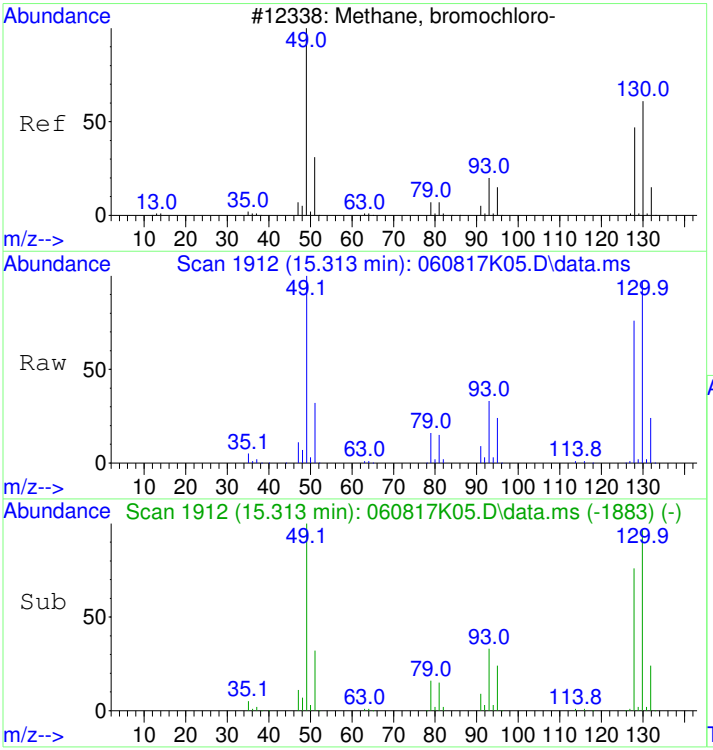
REVIEWED
By LLH at 10:34 am, Jun 08, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K05.D
InstName : HP5973K
Acq On : 8 Jun 2017 10:02 am
Operator : LLH
Sample : B17F038-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 08 10:33:59 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

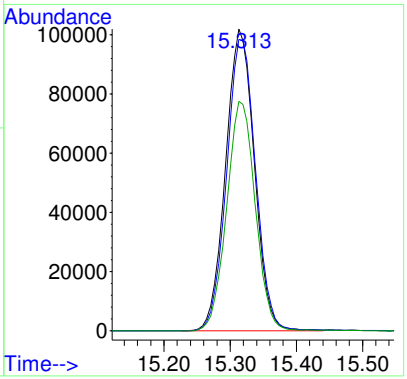


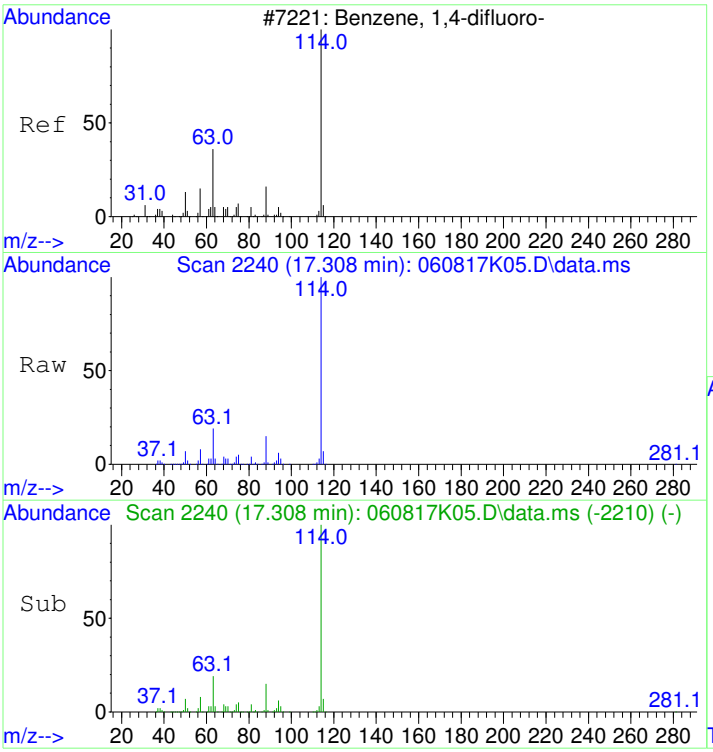


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060817K05.D
Acq: 8 Jun 2017 10:02 am

Tgt Ion: 49 Resp: 307944

Ion	Ratio	Lower	Upper
49	100		
130	97.5	75.6	115.6
128	75.7	54.4	94.4

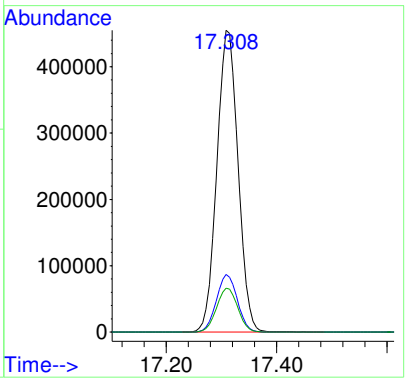


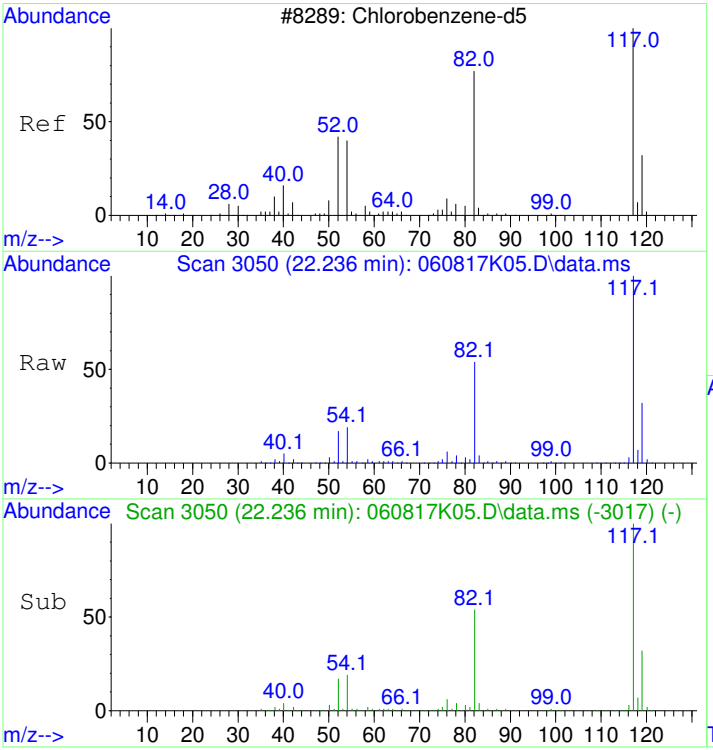


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 060817K05.D
Acq: 8 Jun 2017 10:02 am

Tgt Ion:114 Resp: 1211926

Ion	Ratio	Lower	Upper
114	100		
63	18.8	0.0	39.1
88	14.5	0.0	34.7

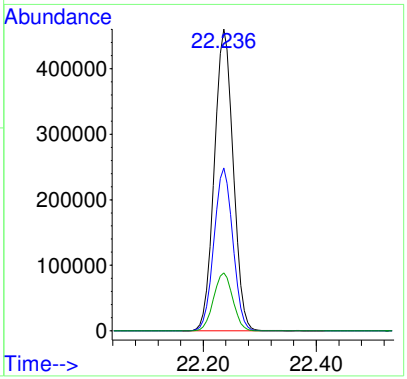




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K05.D
Acq: 8 Jun 2017 10:02 am

Tgt Ion:117 Resp: 1068259

Ion	Ratio	Lower	Upper
117	100		
82	54.0	33.7	73.7
54	19.5	0.0	39.6



1706011-02

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K08.D
InstName : HP5973K
Acq On : 8 Jun 2017 12:29 pm
Operator : LLH
Sample : 1706011-02
Misc : 20ml SG145-6 CAN #1099
ALS Vial : 13 Sample Multiplier: 2.12

REPORT

rerun 2nd can dil'n

Quant Time: Jun 08 13:30:27 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
Internal Standards								
1) BROMOCHLOROMETHANE	15.325	49	351071	20.00	ppbv		0.01	
32) 1,4-DIFLUOROBENZENE	17.315	114	1348646	18.80	ppbv		0.00	
43) CHLOROBENZENE-d5	22.236	117	1186858	20.00	ppbv		0.00	
Target Compounds							Qvalue	
2) Propene	4.205	41	32864	3.79	ppbv	#	76	
15) Carbon disulfide	9.735	76	21199	0.56	ppbv	#	81	
20) trans-1,2-Dichloroethene	11.906	61	1315289	76.21	ppbv		98	OC
24) cis-1,2-Dichloroethene	14.766	61	609432	37.74	ppbv		99	OC
28) Chloroform	15.471	83	20985	0.73	ppbv		98	
33) Benzene	16.481	78	23908	0.57	ppbv		99	
37) Trichloroethene	17.692	130	9859766	522.28	ppbv	#	44	OC

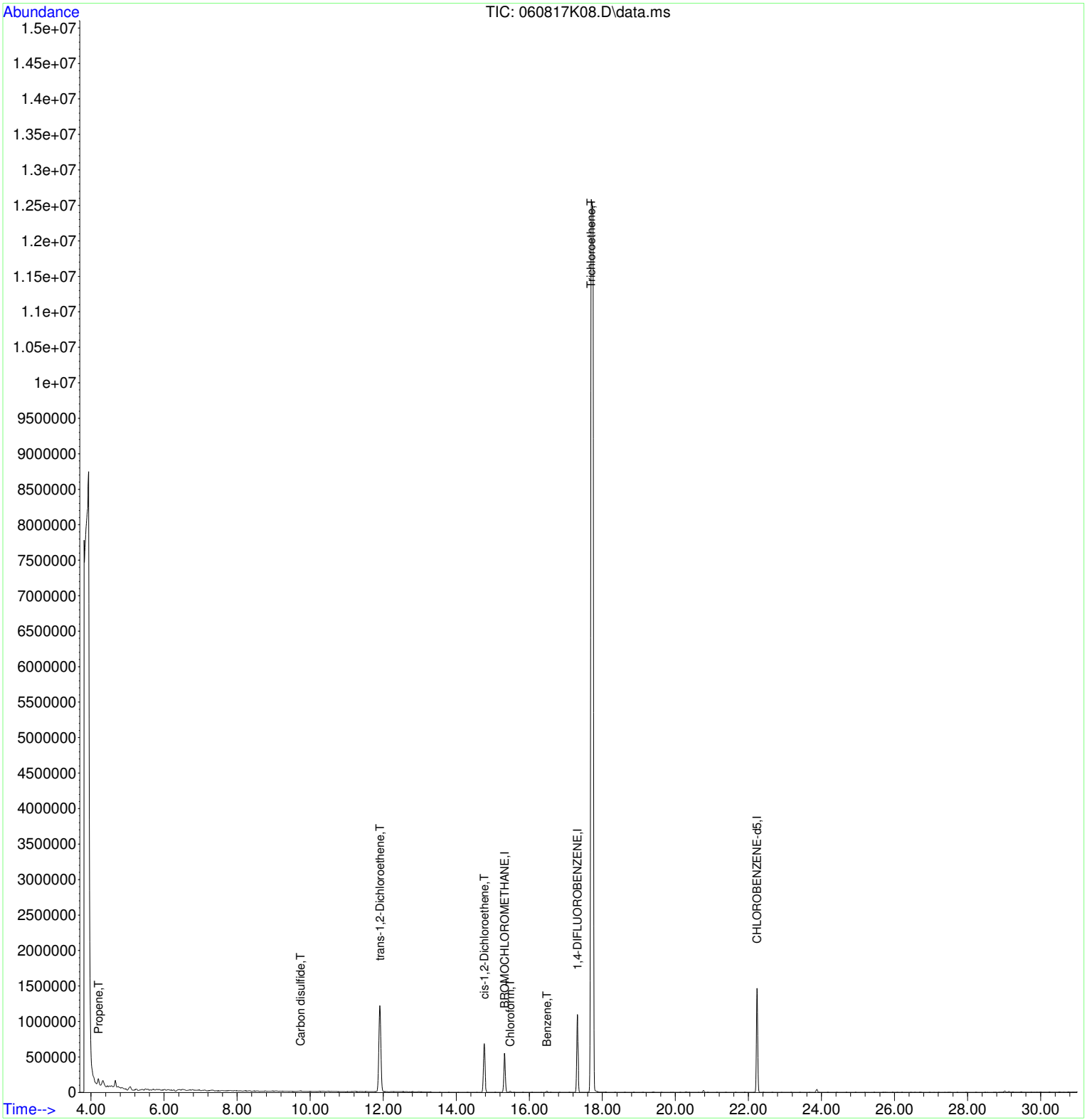
(#) = qualifier out of range (m) = manual integration (+) = signals summed

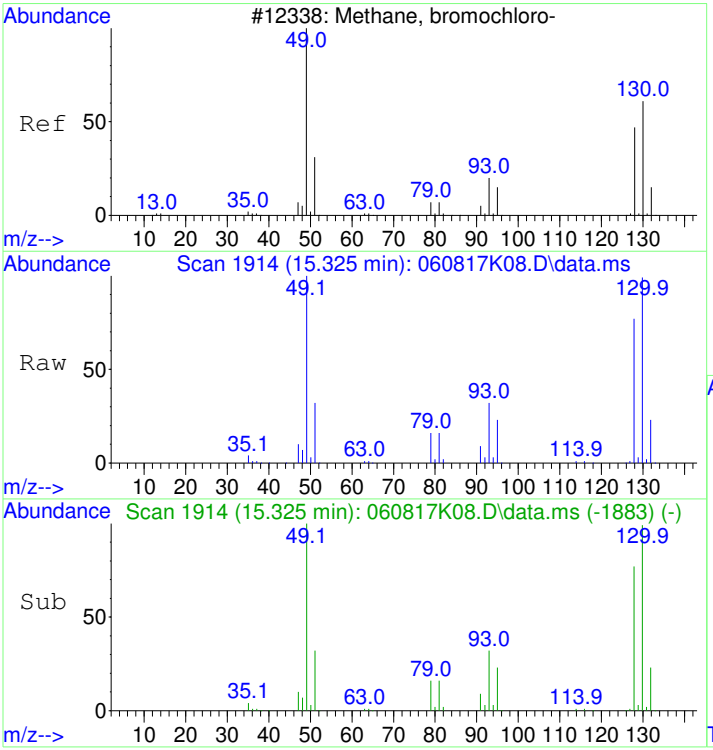
REVIEWED
By LLH at 1:31 pm, Jun 08, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K08.D
InstName : HP5973K
Acq On : 8 Jun 2017 12:29 pm
Operator : LLH
Sample : 1706011-02
Misc : 20ml SG145-6 CAN #1099
ALS Vial : 13 Sample Multiplier: 2.12

Quant Time: Jun 08 13:30:27 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

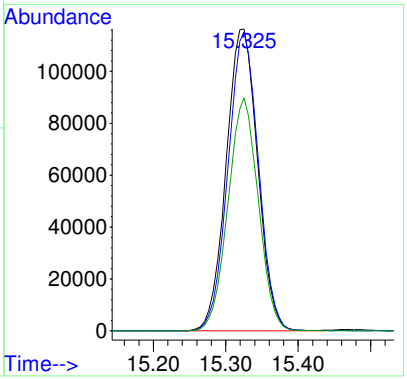


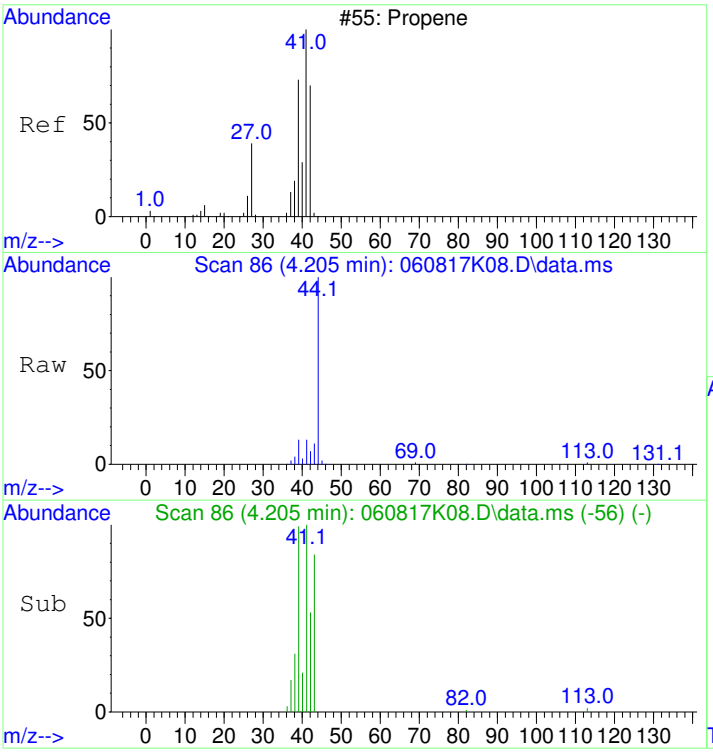


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.325 min Scan# 1914
Delta R.T. 0.012 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 49 Resp: 351071

Ion	Ratio	Lower	Upper
49	100		
130	95.8	75.6	115.6
128	74.2	54.4	94.4

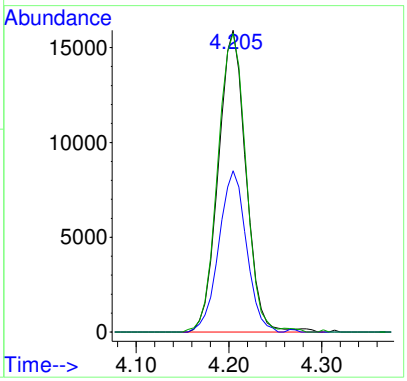


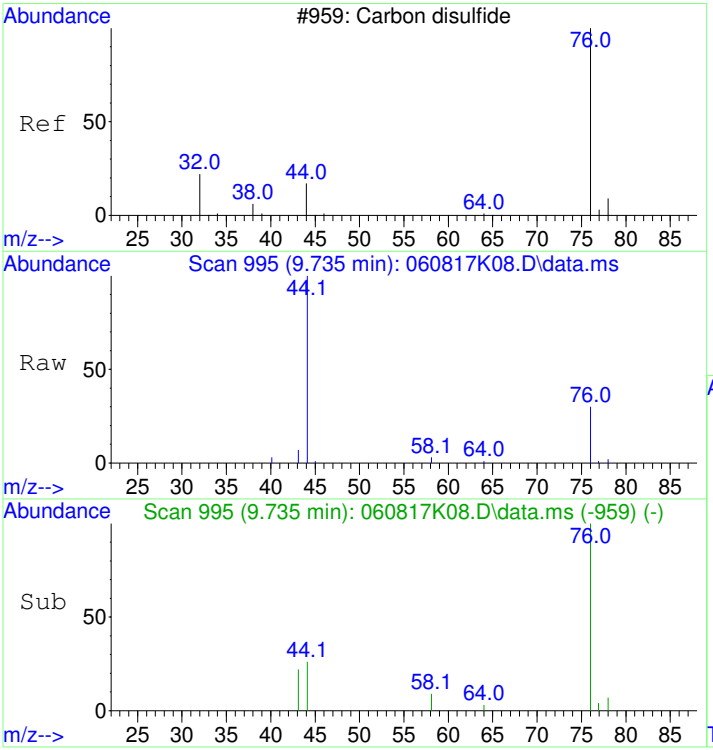


#2
Propene
Concen: 3.79 ppbv
RT: 4.205 min Scan# 86
Delta R.T. -0.018 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 41 Resp: 32864

Ion	Ratio	Lower	Upper
41	100		
42	53.4	46.4	86.4
39	101.6	55.4	95.4#

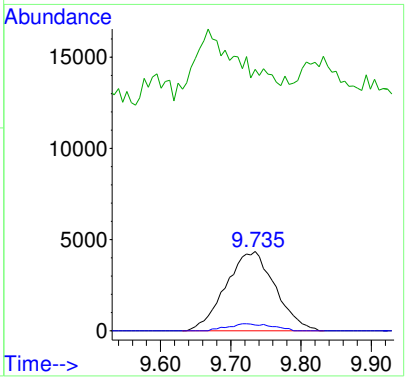


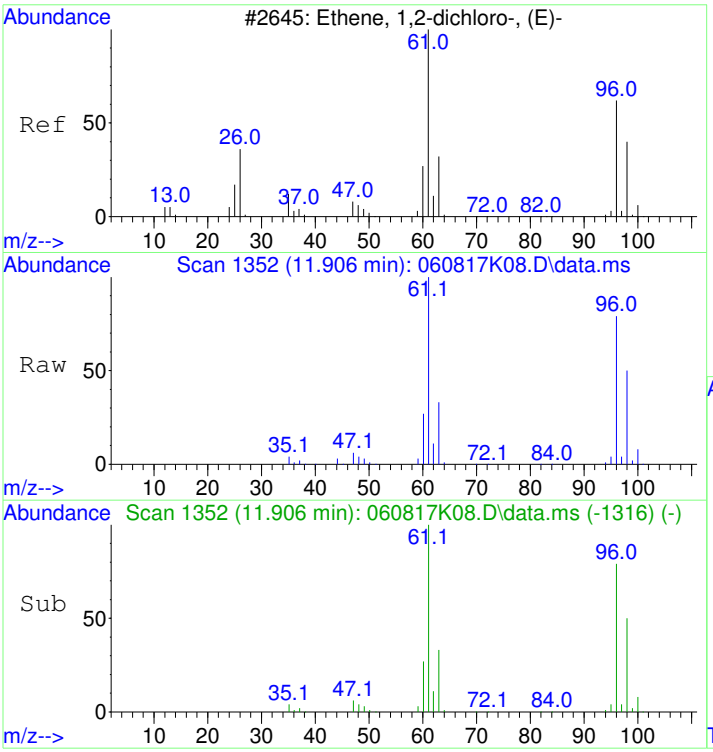


#15
Carbon disulfide
Concen: 0.56 ppbv
RT: 9.735 min Scan# 995
Delta R.T. 0.018 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 76 Resp: 21199

Ion	Ratio	Lower	Upper
76	100		
78	8.2	0.0	29.0
44	0.0	0.0	32.4

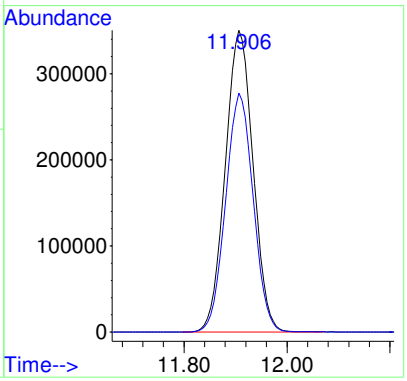


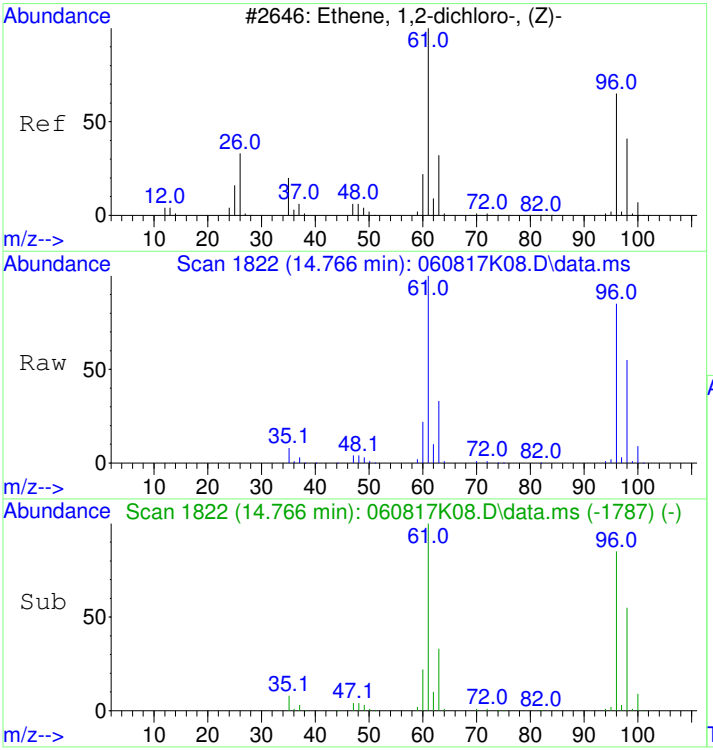


#20
trans-1,2-Dichloroethene
Concen: 76.21 ppbv
RT: 11.906 min Scan# 1352
Delta R.T. 0.018 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 61 Resp: 1315289

Ion	Ratio	Lower	Upper
61	100		
96	78.6	56.8	96.8

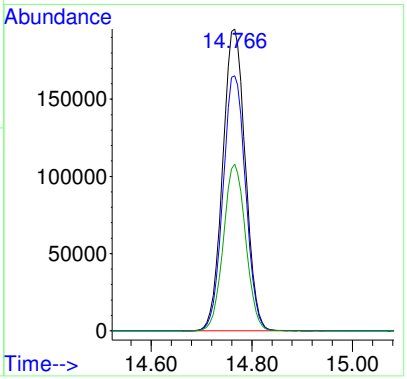


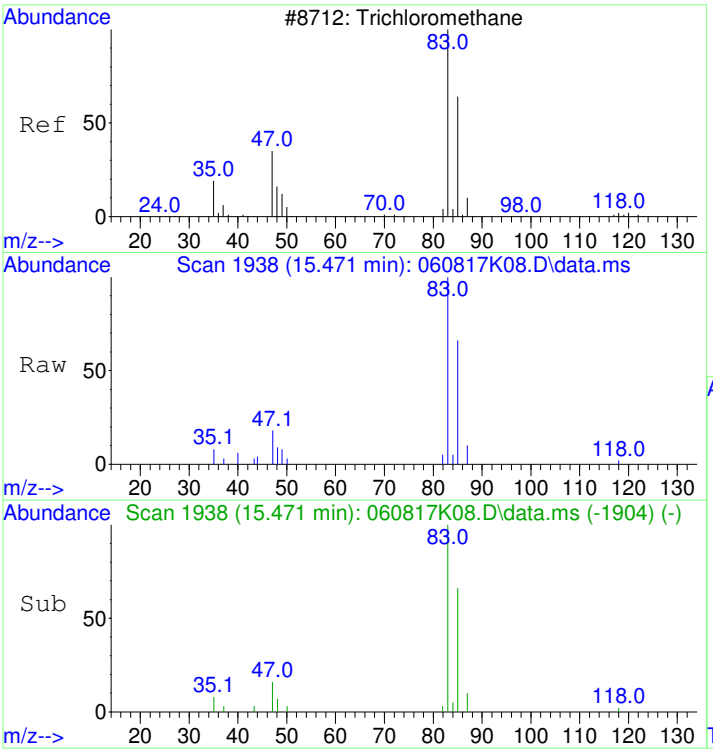


#24
cis-1,2-Dichloroethene
Concen: 37.74 ppbv
RT: 14.766 min Scan# 1822
Delta R.T. 0.012 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 61 Resp: 609432

Ion	Ratio	Lower	Upper
61	100		
96	84.6	64.3	104.3
98	54.3	33.1	73.1

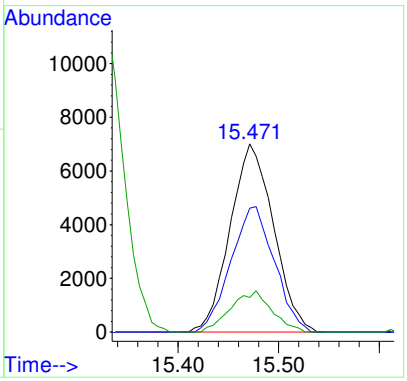


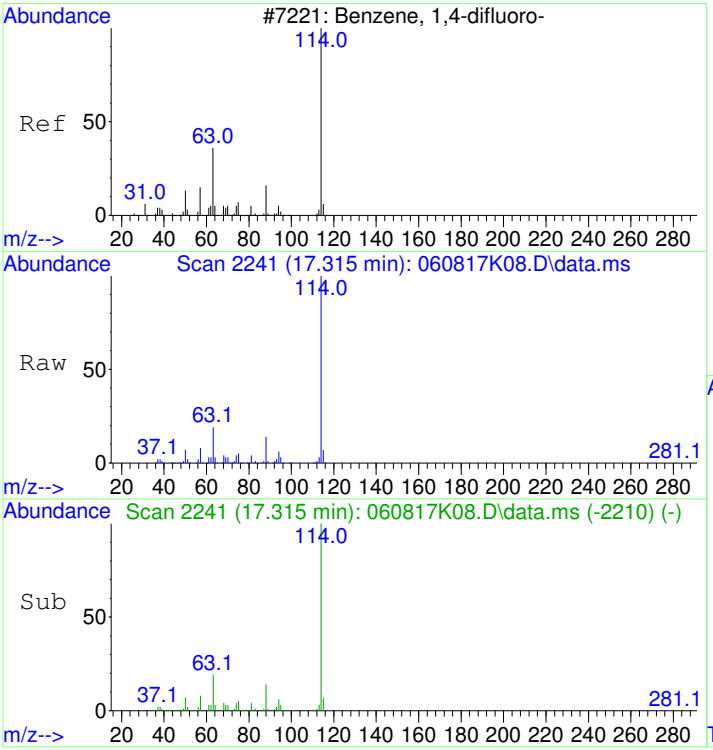


#28
Chloroform
Concen: 0.73 ppbv
RT: 15.471 min Scan# 1938
Delta R.T. 0.006 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 83 Resp: 20985

Ion	Ratio	Lower	Upper
83	100		
85	66.8	45.0	85.0
47	20.7	0.8	40.8

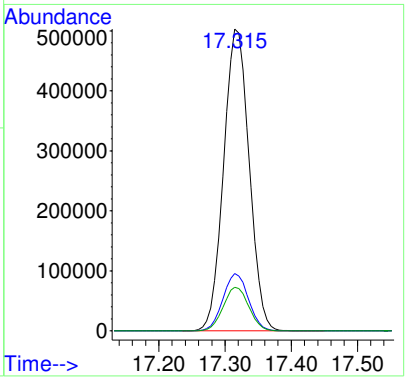


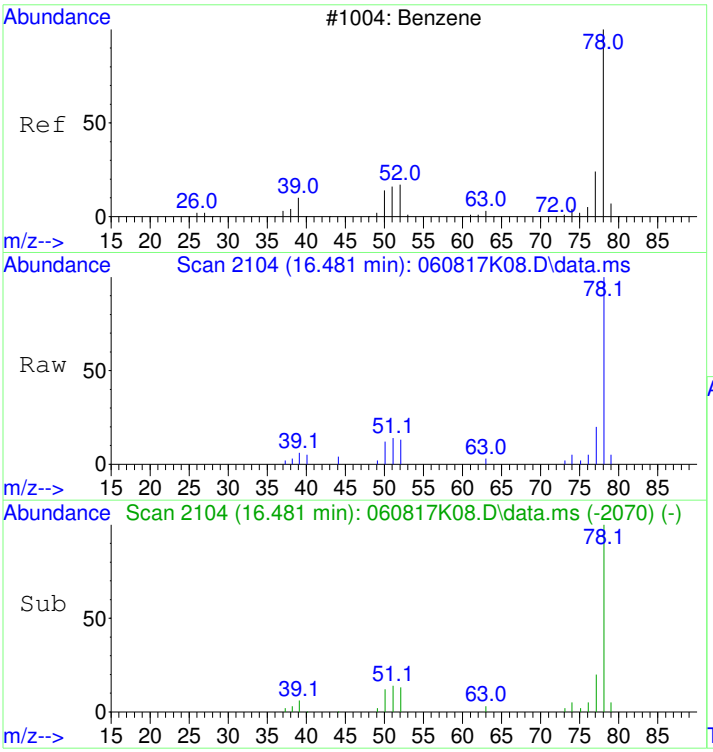


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion:114 Resp: 1348646

Ion	Ratio	Lower	Upper
114	100		
63	18.9	0.0	39.1
88	14.4	0.0	34.7

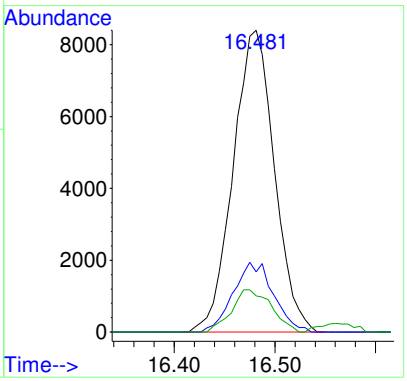


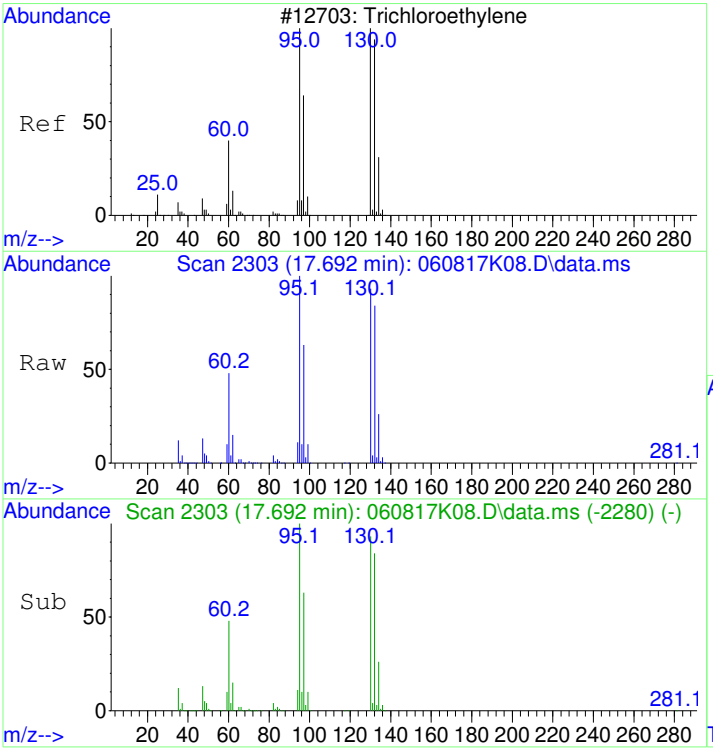


#33
Benzene
Concen: 0.57 ppbv
RT: 16.481 min Scan# 2104
Delta R.T. 0.006 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion: 78 Resp: 23908

Ion	Ratio	Lower	Upper
78	100		
77	22.6	2.9	42.9
50	13.5	0.0	34.4

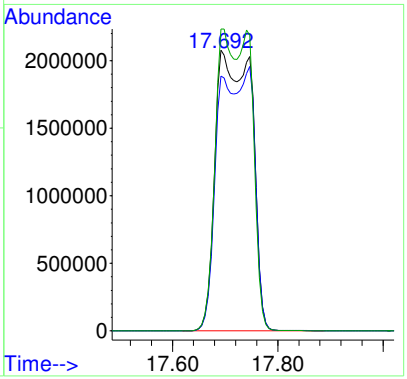


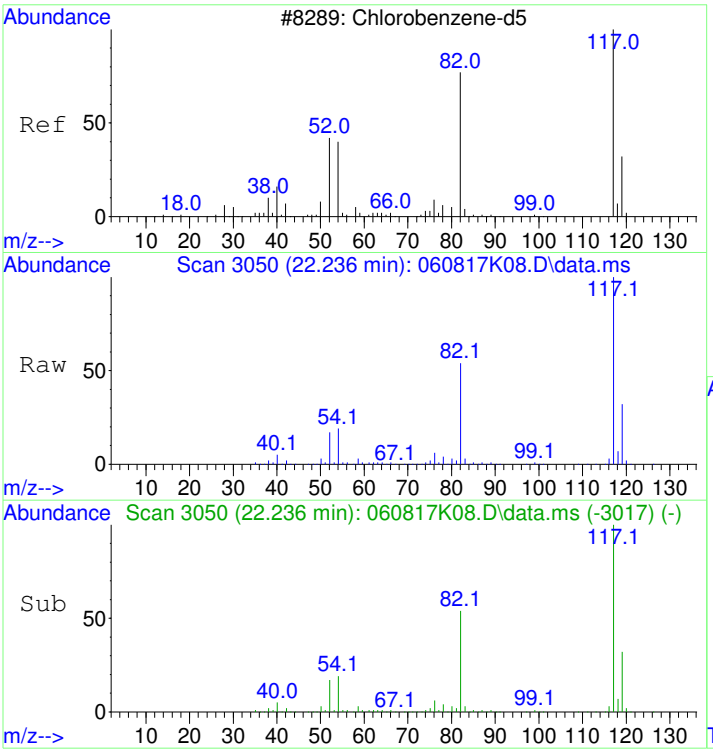


#37
Trichloroethene
Concen: 522.28 ppbv
RT: 17.692 min Scan# 2303
Delta R.T. -0.012 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion:130 Resp: 9859766

Ion	Ratio	Lower	Upper
130	100		
132	0.0	75.8	115.8#
95	105.7	73.6	113.6

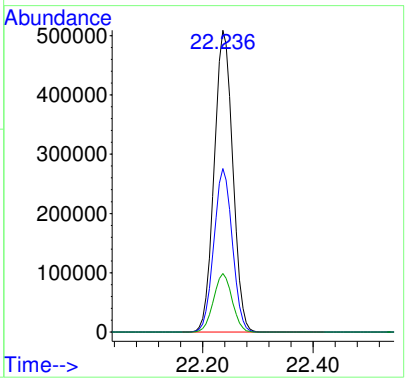




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060817K08.D
Acq: 8 Jun 2017 12:29 pm

Tgt Ion:117 Resp: 1186858

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.7	73.7
54	19.4	0.0	39.6



S17F030-IBL1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K09.D
InstName : HP5973K
Acq On : 8 Jun 2017 1:21 pm
Operator : LLH
Sample : S17F030-IBL1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 08 13:54:41 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	327572	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1284770	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1129833	20.00 ppbv	0.00
Target Compounds					Qvalue
37) Trichloroethene	17.704	130	21070	1.17 ppbv	99

CO

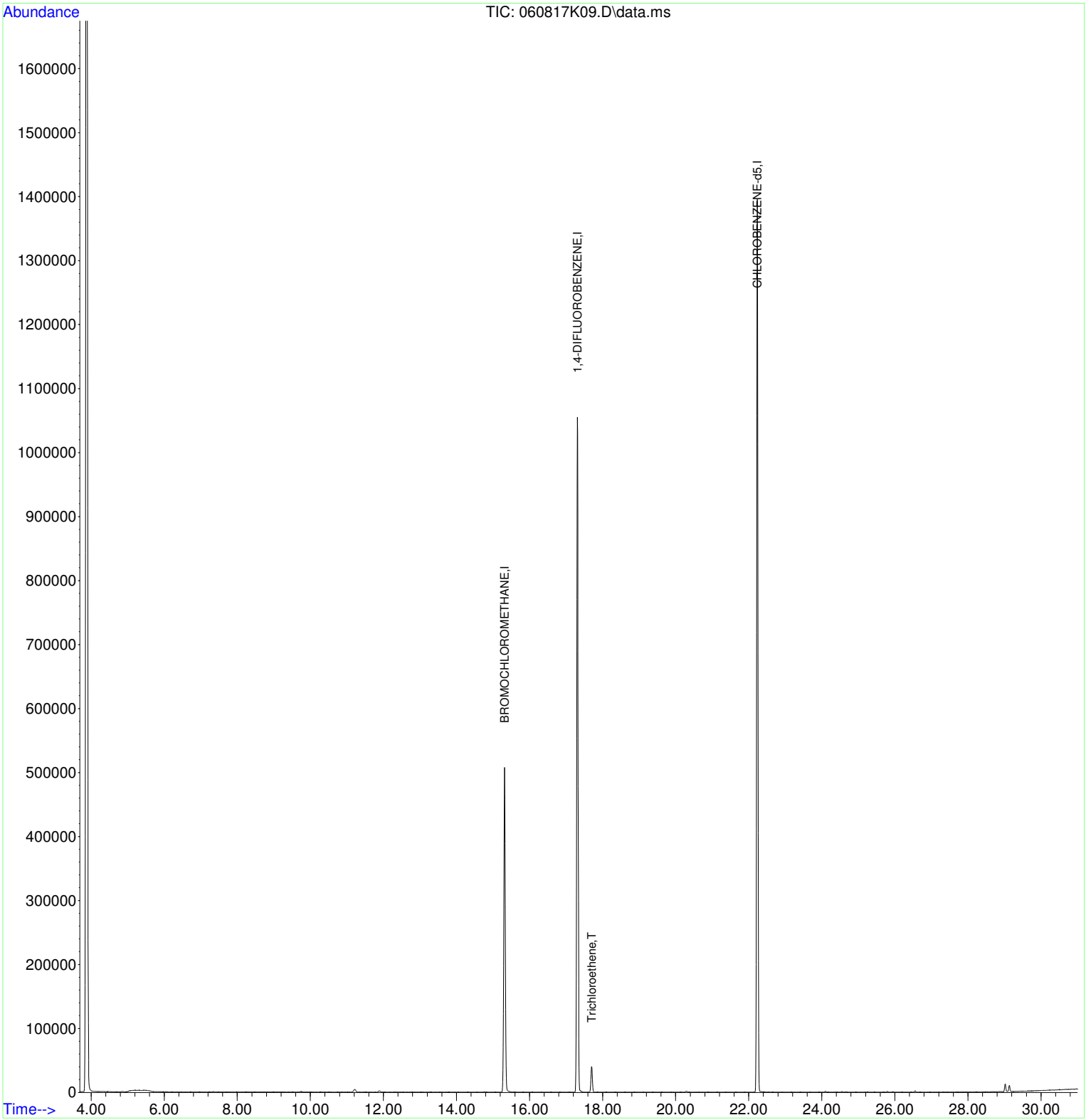
(#) = qualifier out of range (m) = manual integration (+) = signals summed

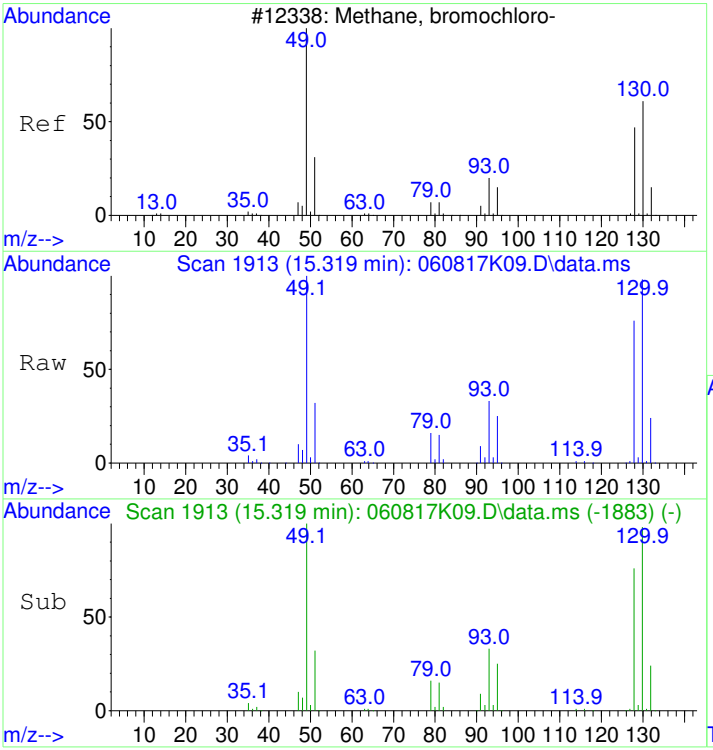
REVIEWED
By LLH at 1:55 pm, Jun 08, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K09.D
InstName : HP5973K
Acq On : 8 Jun 2017 1:21 pm
Operator : LLH
Sample : S17F030-IBL1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 08 13:54:41 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

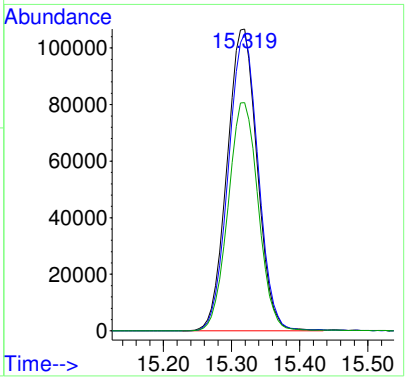


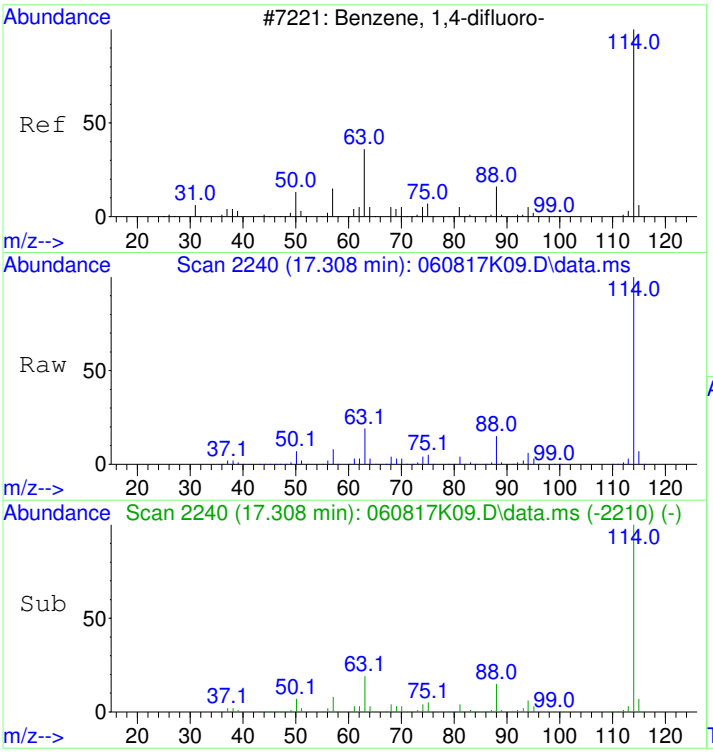


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K09.D
Acq: 8 Jun 2017 1:21 pm

Tgt Ion: 49 Resp: 327572

Ion	Ratio	Lower	Upper
49	100		
130	97.0	75.6	115.6
128	75.6	54.4	94.4

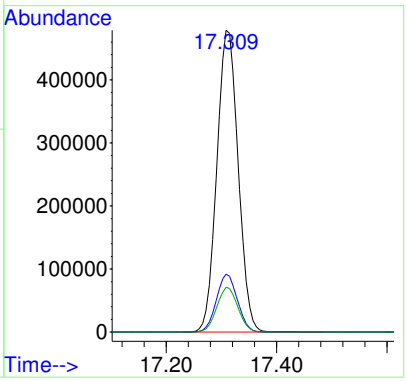


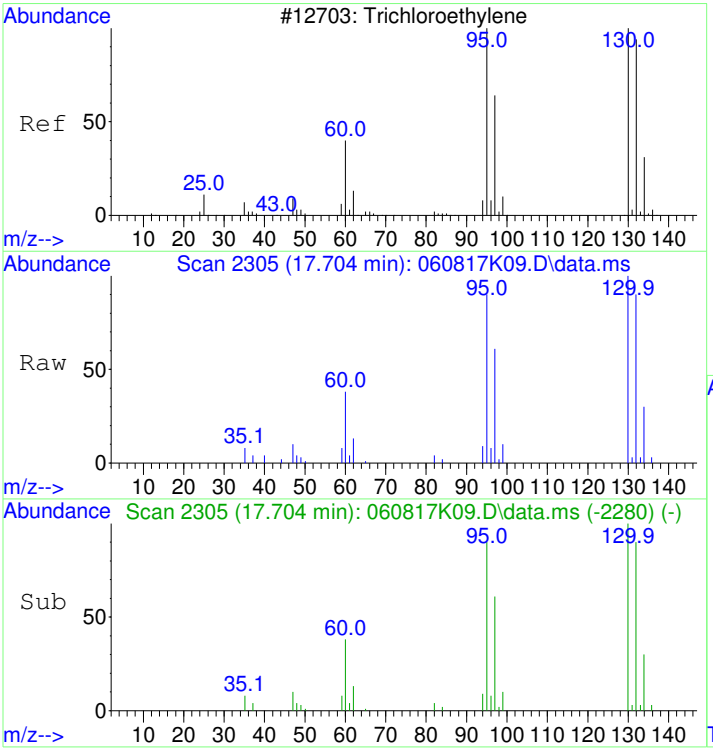


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 060817K09.D
Acq: 8 Jun 2017 1:21 pm

Tgt Ion:114 Resp: 1284770

Ion	Ratio	Lower	Upper
114	100		
63	18.9	0.0	39.1
88	14.7	0.0	34.7

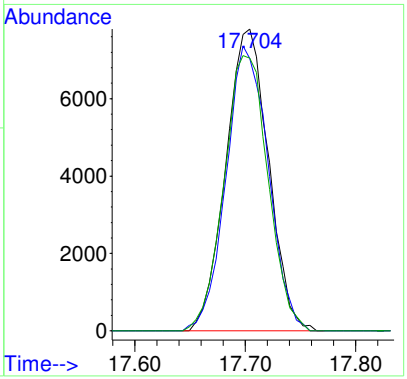


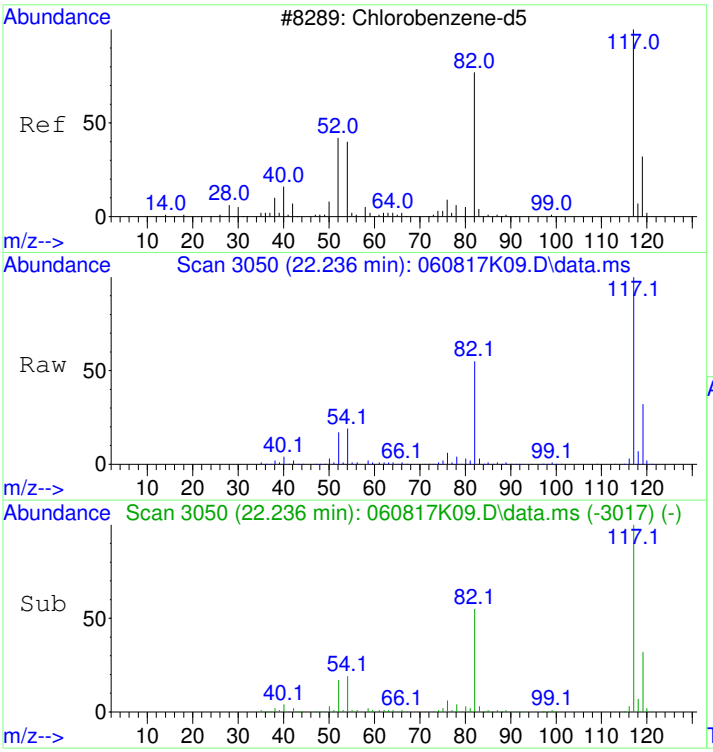


#37
Trichloroethene
Concen: 1.17 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K09.D
Acq: 8 Jun 2017 1:21 pm

Tgt Ion:130 Resp: 21070

Ion	Ratio	Lower	Upper
130	100		
132	93.3	75.8	115.8
95	93.8	73.6	113.6

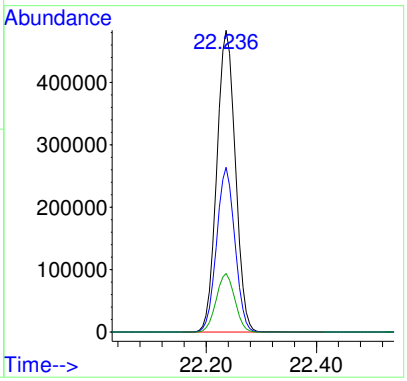




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K09.D
Acq: 8 Jun 2017 1:21 pm

Tgt Ion:117 Resp: 1129833

Ion	Ratio	Lower	Upper
117	100		
82	53.7	33.7	73.7
54	19.4	0.0	39.6



1706011-04

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K10.D
InstName : HP5973K
Acq On : 8 Jun 2017 2:12 pm
Operator : LLH
Sample : 1706011-04
Misc : 200ml F5-062-4ft CAN #652
ALS Vial : 14 Sample Multiplier: 2.07

REPORT

rerun 100ml repress for CHCl3

Quant Time: Jun 08 15:12:52 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	318451	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1243659	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1114723	20.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	4.211	41	7157	0.91	ppbv #	67
5) Chloromethane	4.849	50	5244	0.53	ppbv	97
14) Acetone	9.704	43	29125	1.90	ppbv	98
15) Carbon disulfide	9.728	76	29968	0.87	ppbv	78
16) 2-Propanol	10.325	45	6383	0.55	ppbv	89
17) Allyl chloride	10.708	41	8271	~~0.75 ppbv~~	#	39
18) Dichloromethane	11.219	49	11091	0.84	ppbv	97
28) Chloroform	15.465	83	760754	29.33	ppbv	100 OC
37) Trichloroethene	17.704	130	39513	2.27	ppbv	98
40) Bromodichloromethane	18.714	83	30415	1.03	ppbv	99
44) Toluene	19.937	91	71217	1.51	ppbv	98
47) Tetrachloroethene	20.764	166	42952	1.71	ppbv	99
57) 1,1,2,2-Tetrachloroethane	24.493	83	45493	~~1.22 ppbv~~	#	1

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

AFTER Q DELETE

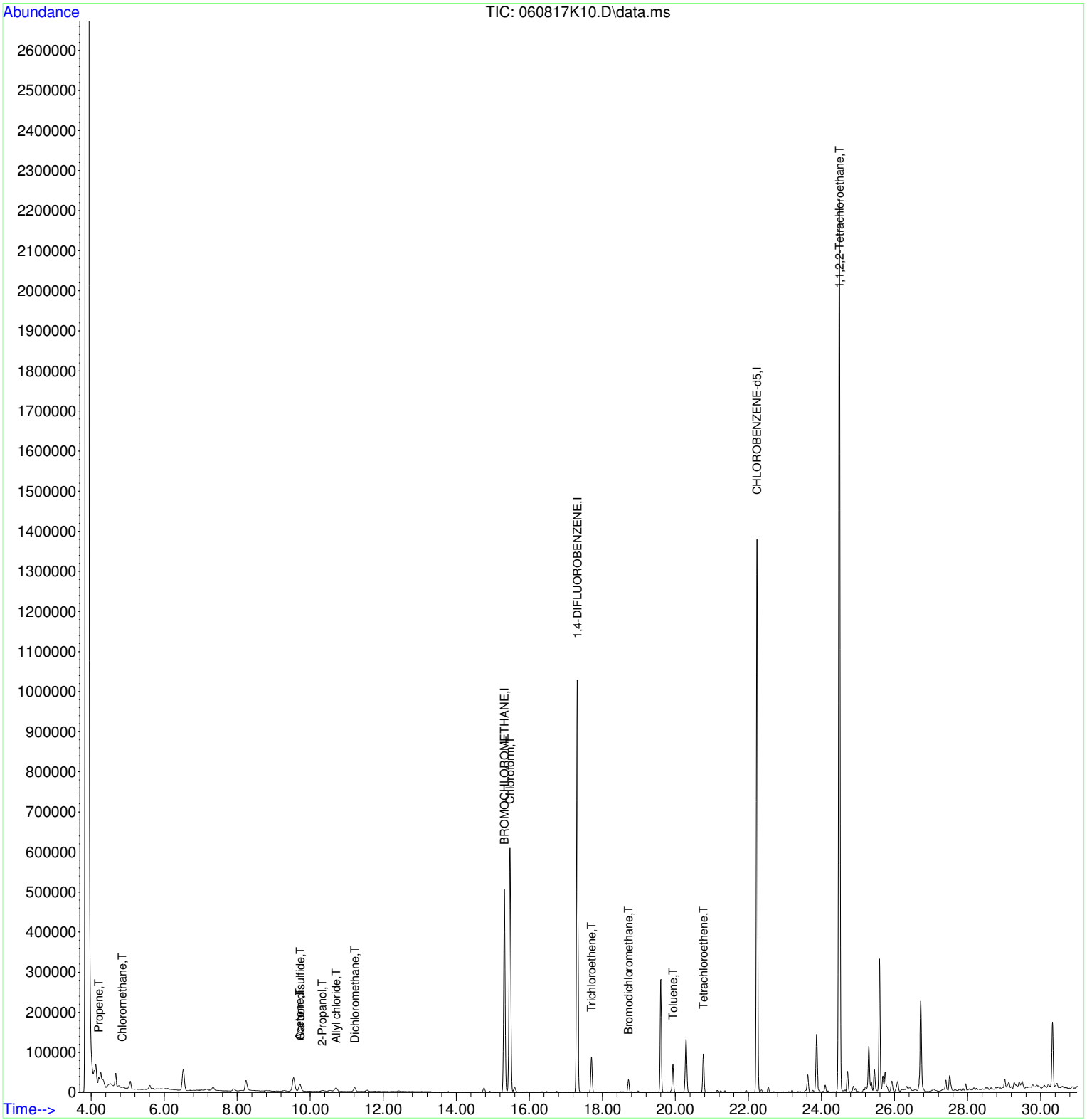
REVIEWED
By LLH at 3:50 pm, Jun 08, 2017

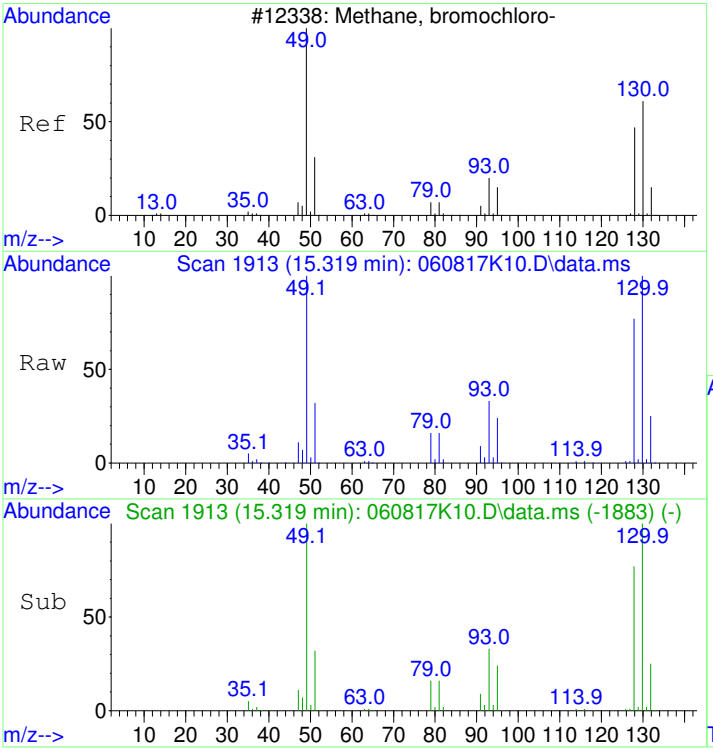
Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K10.D
InstName : HP5973K
Acq On : 8 Jun 2017 2:12 pm
Operator : LLH
Sample : 1706011-04
Misc : 200ml F5-062-4ft CAN #652
ALS Vial : 14 Sample Multiplier: 2.07

Quant Time: Jun 08 15:12:52 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

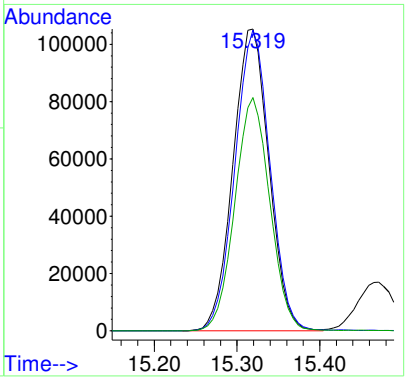


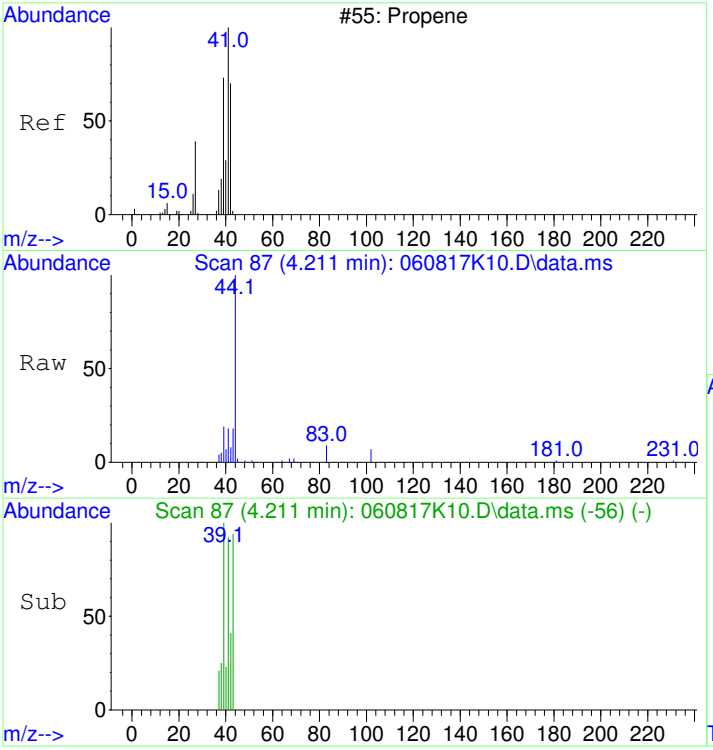


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 49 Resp: 318451

Ion	Ratio	Lower	Upper
49	100		
130	97.6	75.6	115.6
128	75.4	54.4	94.4

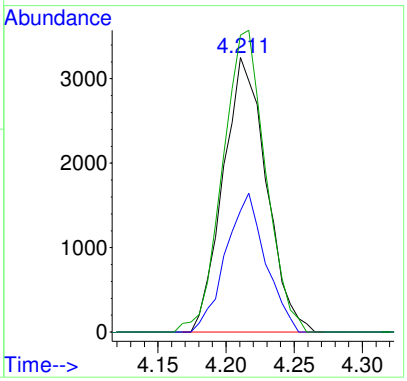


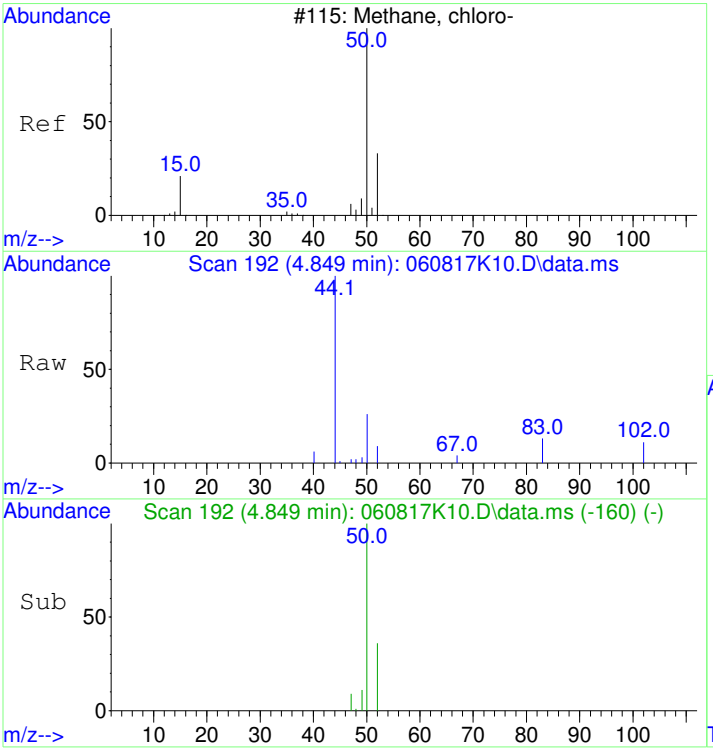


#2
Propene
Concen: 0.91 ppbv
RT: 4.211 min Scan# 87
Delta R.T. -0.012 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 41 Resp: 7157

Ion	Ratio	Lower	Upper
41	100		
42	46.5	46.4	86.4
39	109.0	55.4	95.4#

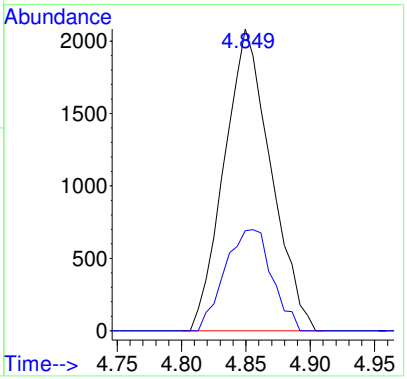


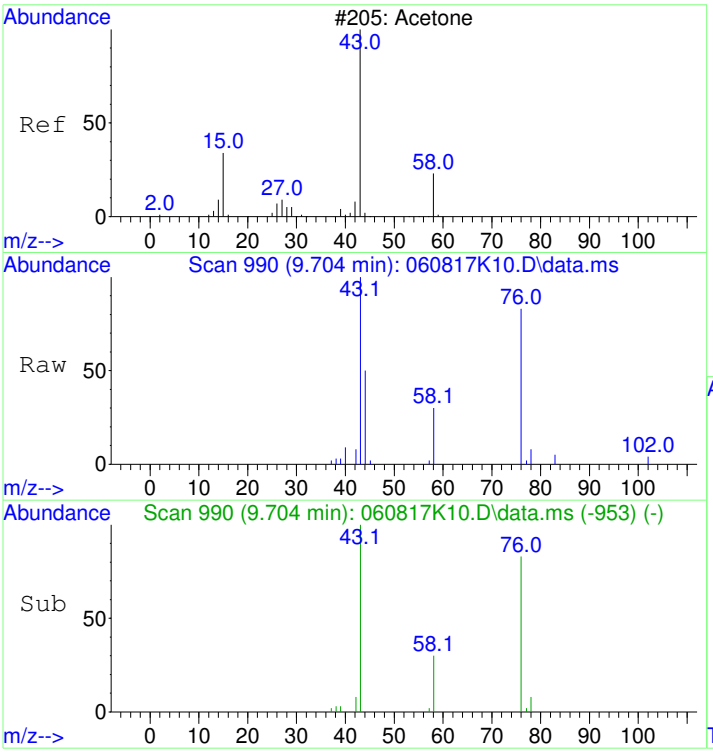


#5
Chloromethane
Concen: 0.53 ppbv
RT: 4.849 min Scan# 192
Delta R.T. -0.006 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 50 Resp: 5244

Ion	Ratio	Lower	Upper
50	100		
52	33.8	12.0	52.0

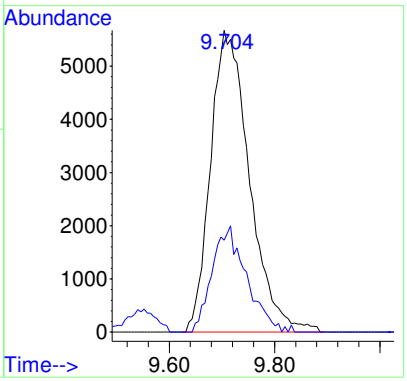


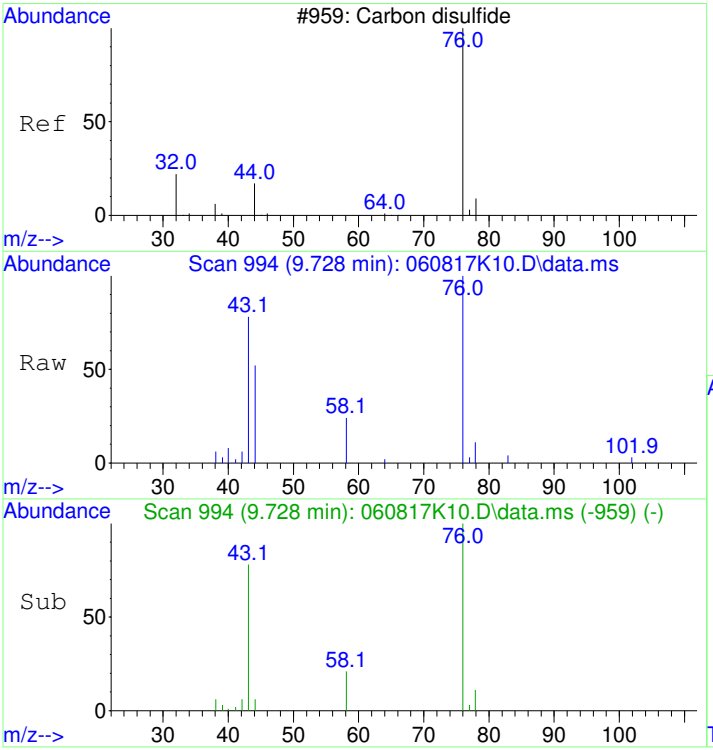


#14
Acetone
Concen: 1.90 ppbv
RT: 9.704 min Scan# 990
Delta R.T. 0.024 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 43 Resp: 29125

Ion	Ratio	Lower	Upper
43	100		
58	30.8	12.0	52.0

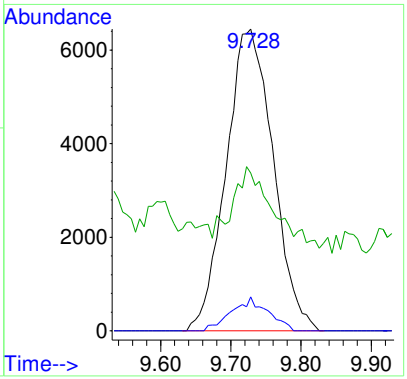


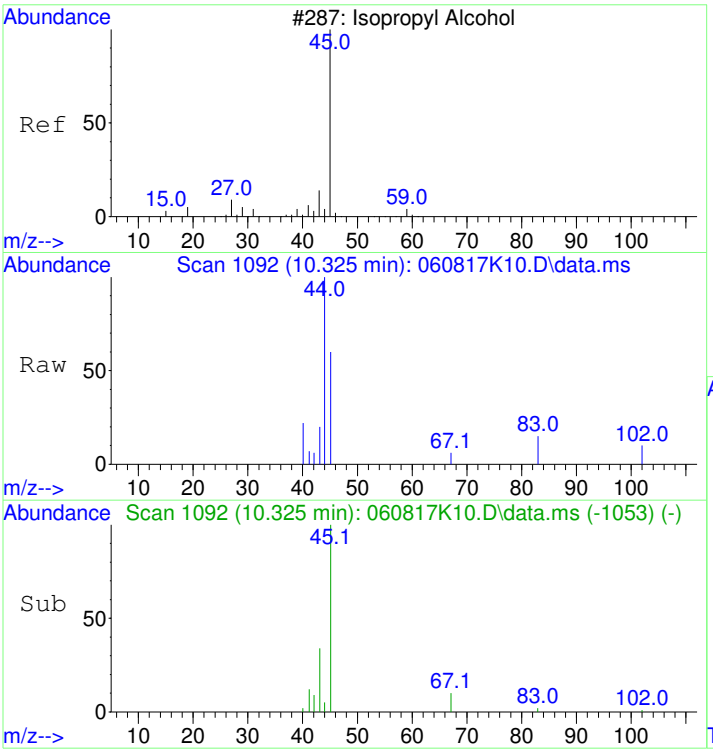


#15
Carbon disulfide
Concen: 0.87 ppbv
RT: 9.728 min Scan# 994
Delta R.T. 0.012 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 76 Resp: 29968

Ion	Ratio	Lower	Upper
76	100		
78	8.6	0.0	29.0
44	27.1	0.0	32.4

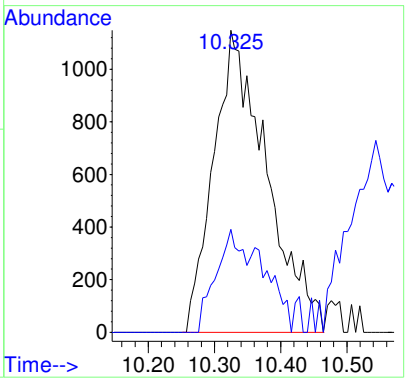




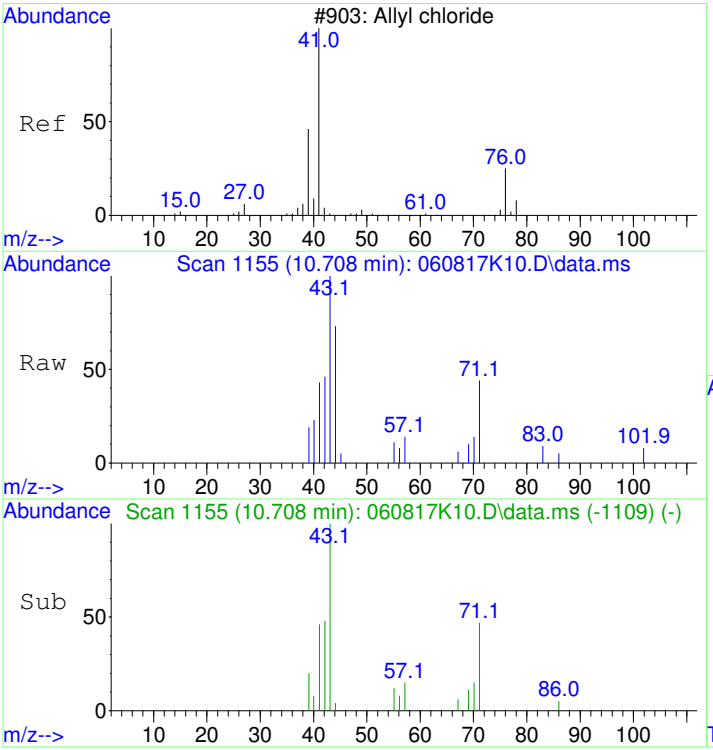
#16
2-Propanol
Concen: 0.55 ppbv
RT: 10.325 min Scan# 1092
Delta R.T. 0.036 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 45 Resp: 6383

Ion	Ratio	Lower	Upper
45	100		
43	30.0	4.7	44.7



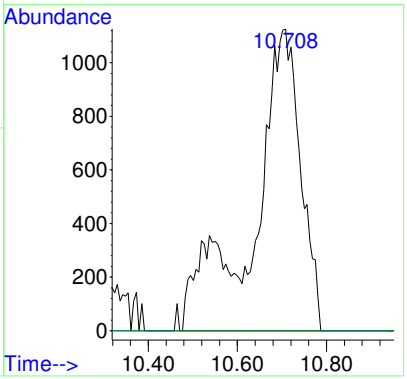
ok



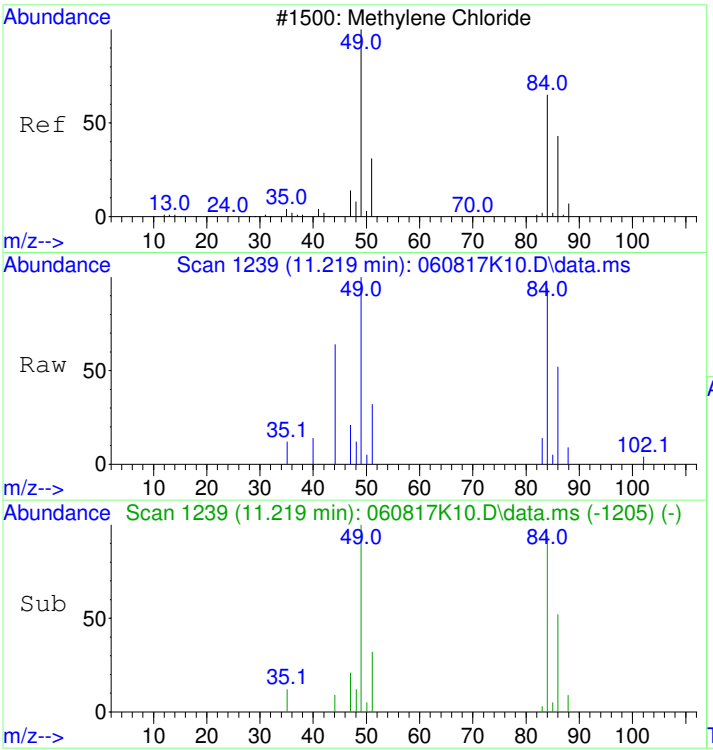
#17
Allyl chloride
Concen: 0.75 ppbv
RT: 10.708 min Scan# 1155
Delta R.T. 0.079 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 41 Resp: 8271

Ion	Ratio	Lower	Upper
41	100		
76	0.0	25.6	65.6#
78	0.0	0.0	35.0



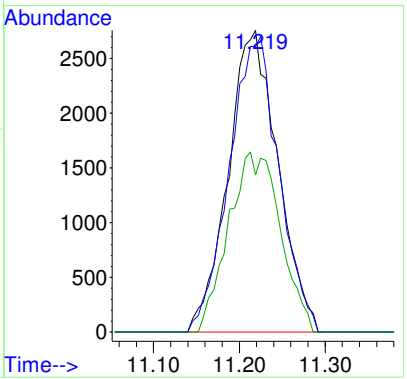
RT/spectra off

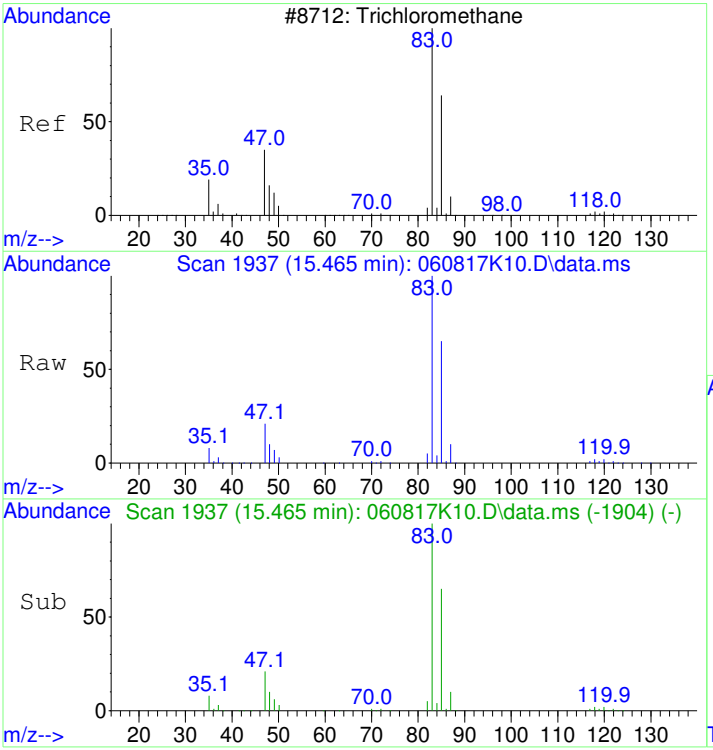


#18
Dichloromethane
Concen: 0.84 ppbv
RT: 11.219 min Scan# 1239
Delta R.T. 0.006 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 49 Resp: 11091

Ion	Ratio	Lower	Upper
49	100		
84	97.8	74.2	114.2
86	62.2	41.1	81.1

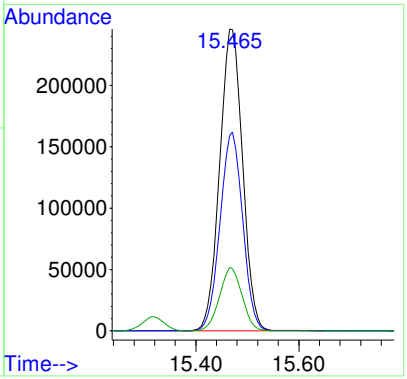


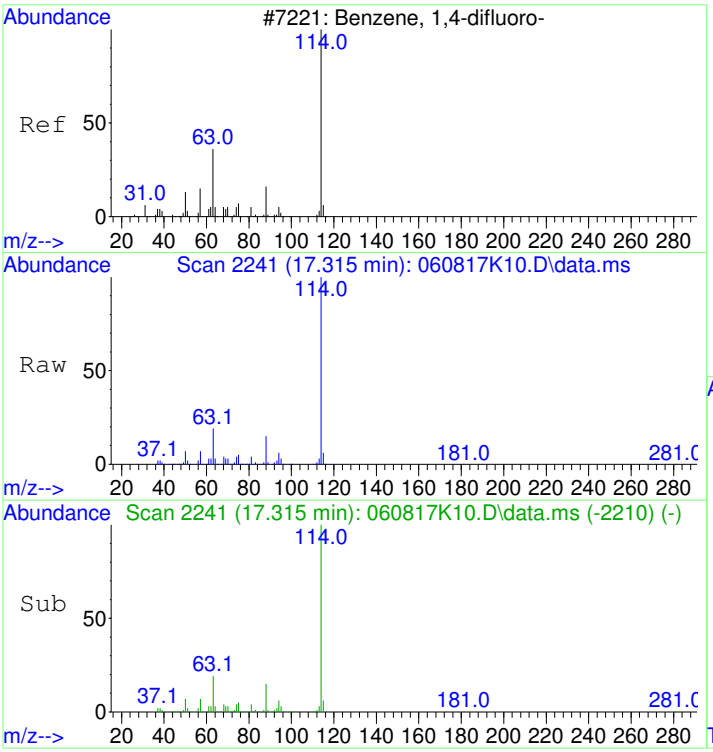


#28
Chloroform
Concen: 29.33 ppbv
RT: 15.465 min Scan# 1937
Delta R.T. -0.000 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 83 Resp: 760754

Ion	Ratio	Lower	Upper
83	100		
85	65.0	45.0	85.0
47	20.6	0.8	40.8

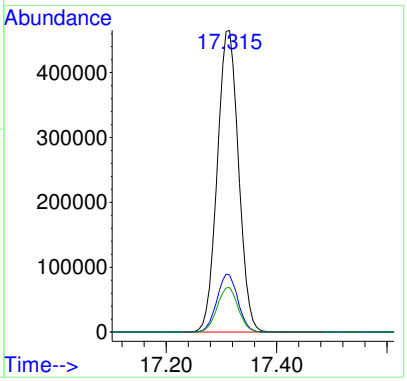


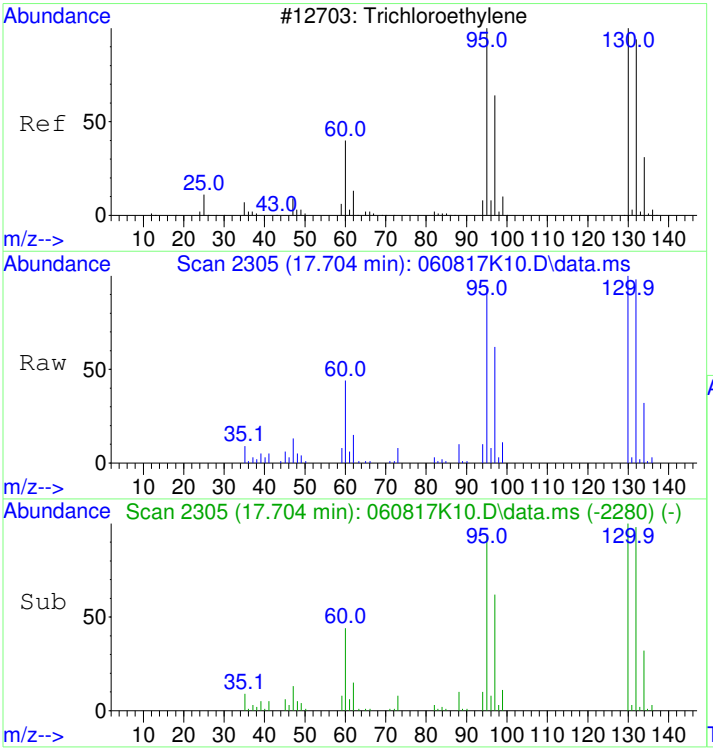


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion:114 Resp: 1243659

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.6	0.0	34.7

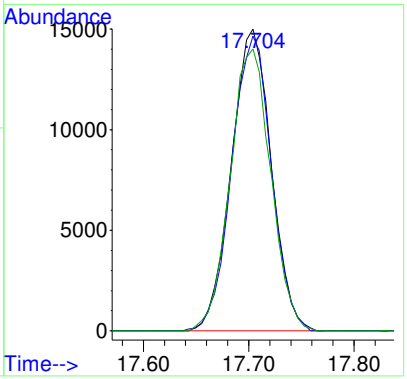


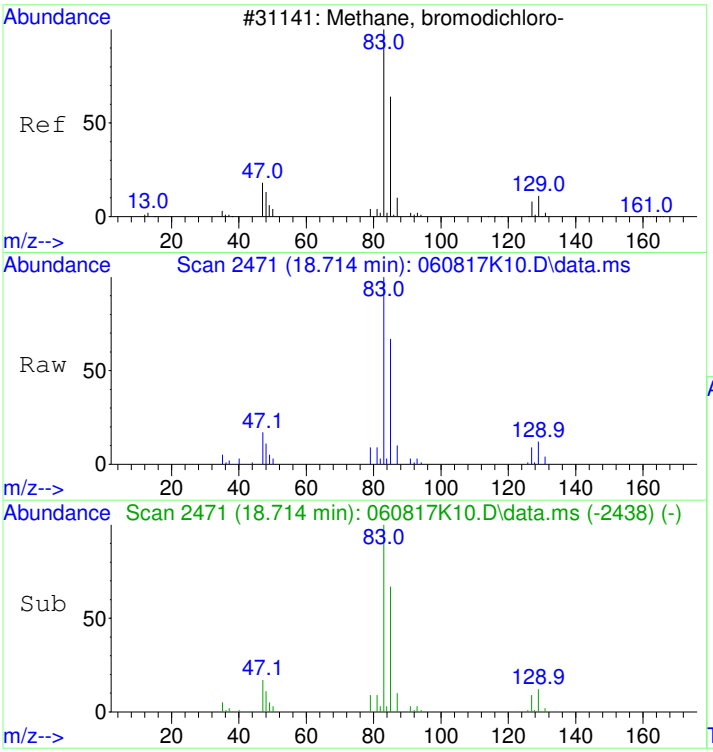


#37
Trichloroethene
Concen: 2.27 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion:130 Resp: 39513

Ion	Ratio	Lower	Upper
130	100		
132	97.3	75.8	115.8
95	95.2	73.6	113.6

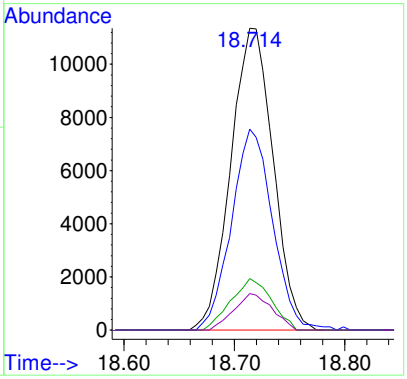


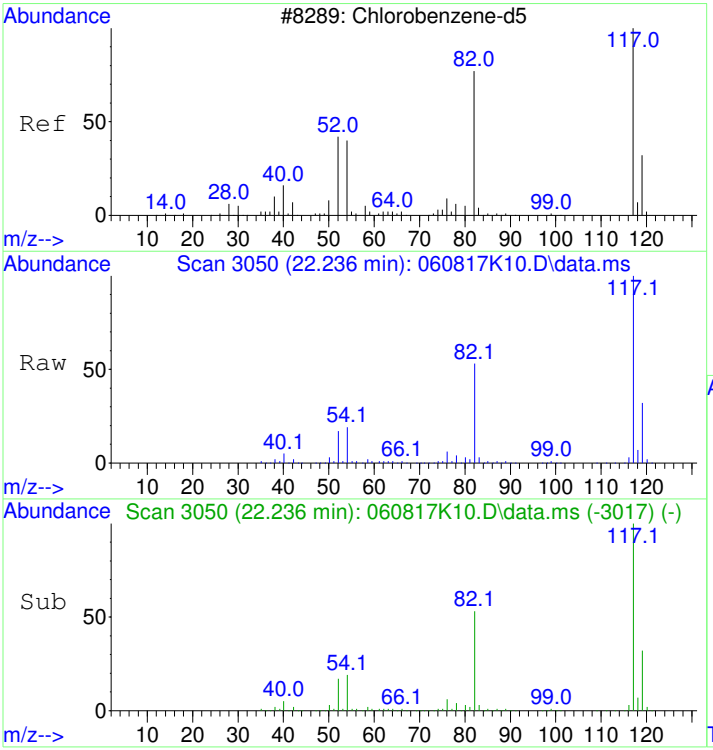


#40
Bromodichloromethane
Concen: 1.03 ppbv
RT: 18.714 min Scan# 2471
Delta R.T. -0.000 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 83 Resp: 30415

Ion	Ratio	Lower	Upper
83	100		
85	64.9	43.9	83.9
47	16.3	0.0	36.3
129	10.9	0.0	31.5

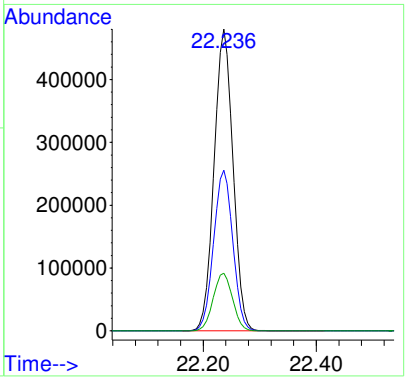


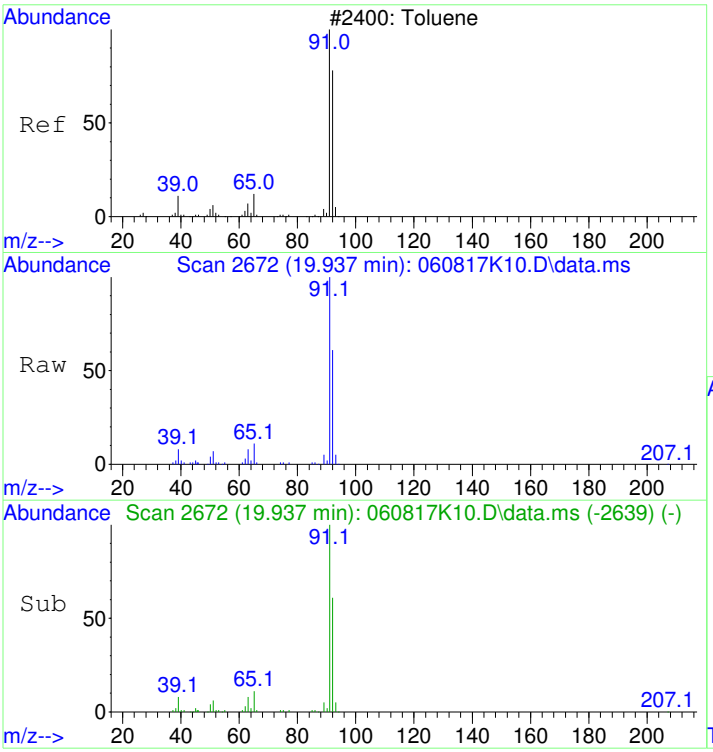


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion:117 Resp: 1114723

Ion	Ratio	Lower	Upper
117	100		
82	54.0	33.7	73.7
54	19.5	0.0	39.6

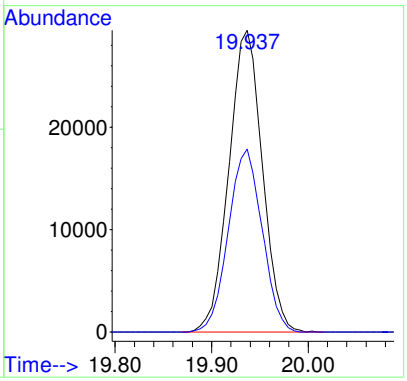


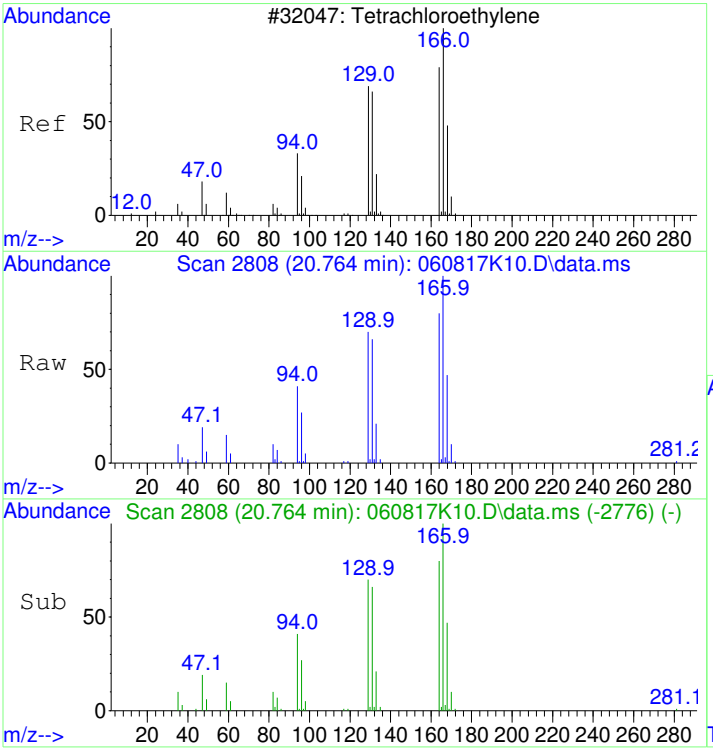


#44
Toluene
Concen: 1.51 ppbv
RT: 19.937 min Scan# 2672
Delta R.T. -0.000 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 91 Resp: 71217

Ion	Ratio	Lower	Upper
91	100		
92	61.1	39.8	79.8

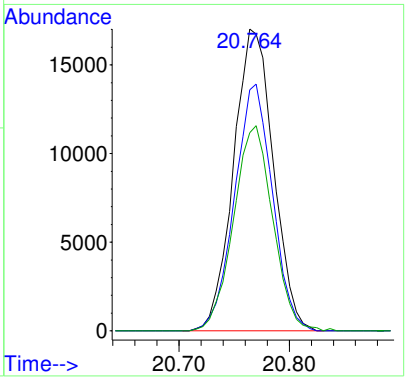


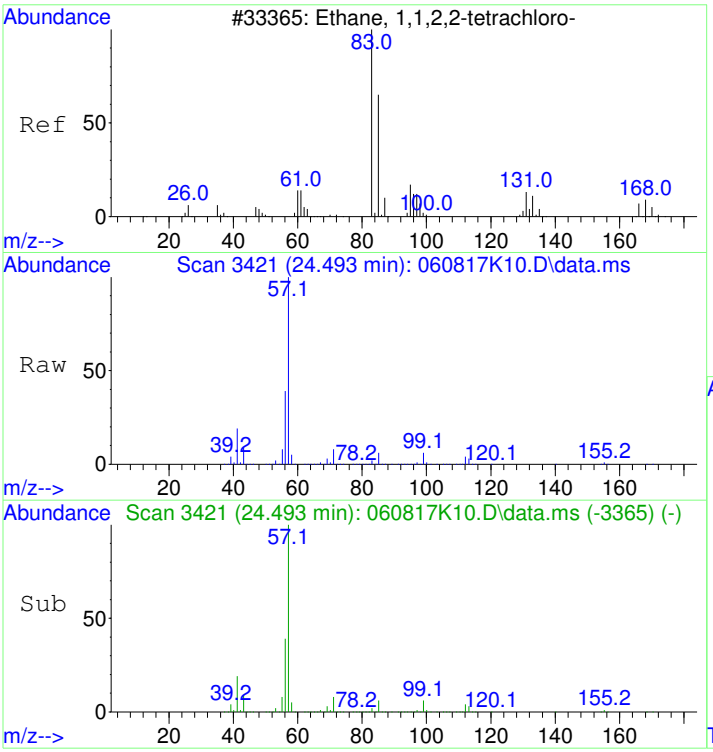


#47
Tetrachloroethene
Concen: 1.71 ppbv
RT: 20.764 min Scan# 2808
Delta R.T. -0.006 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion:166 Resp: 42952

Ion	Ratio	Lower	Upper
166	100		
164	77.8	57.9	97.9
131	67.0	46.1	86.1

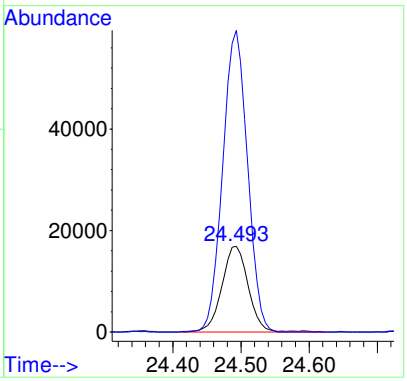




#57
1,1,2,2-Tetrachloroethane
Concen: 1.22 ppbv
RT: 24.493 min Scan# 3421
Delta R.T. 0.140 min
Lab File: 060817K10.D
Acq: 8 Jun 2017 2:12 pm

Tgt Ion: 83 Resp: 45493

Ion	Ratio	Lower	Upper
83	100		
85	329.2	43.7	83.7#



RT/spectra off

1706011-08

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K11.D
InstName : HP5973K
Acq On : 8 Jun 2017 3:03 pm
Operator : LLH
Sample : 1706011-08
Misc : 200ml F5-054-3ft CAN #1969
ALS Vial : 15 Sample Multiplier: 2.07

REPORT

Quant Time: Jun 08 15:37:54 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	326743	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1263675	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1120950	20.00 ppbv	0.00
Target Compounds					Qvalue
14) Acetone	9.722	43	14820	0.94 ppbv	99

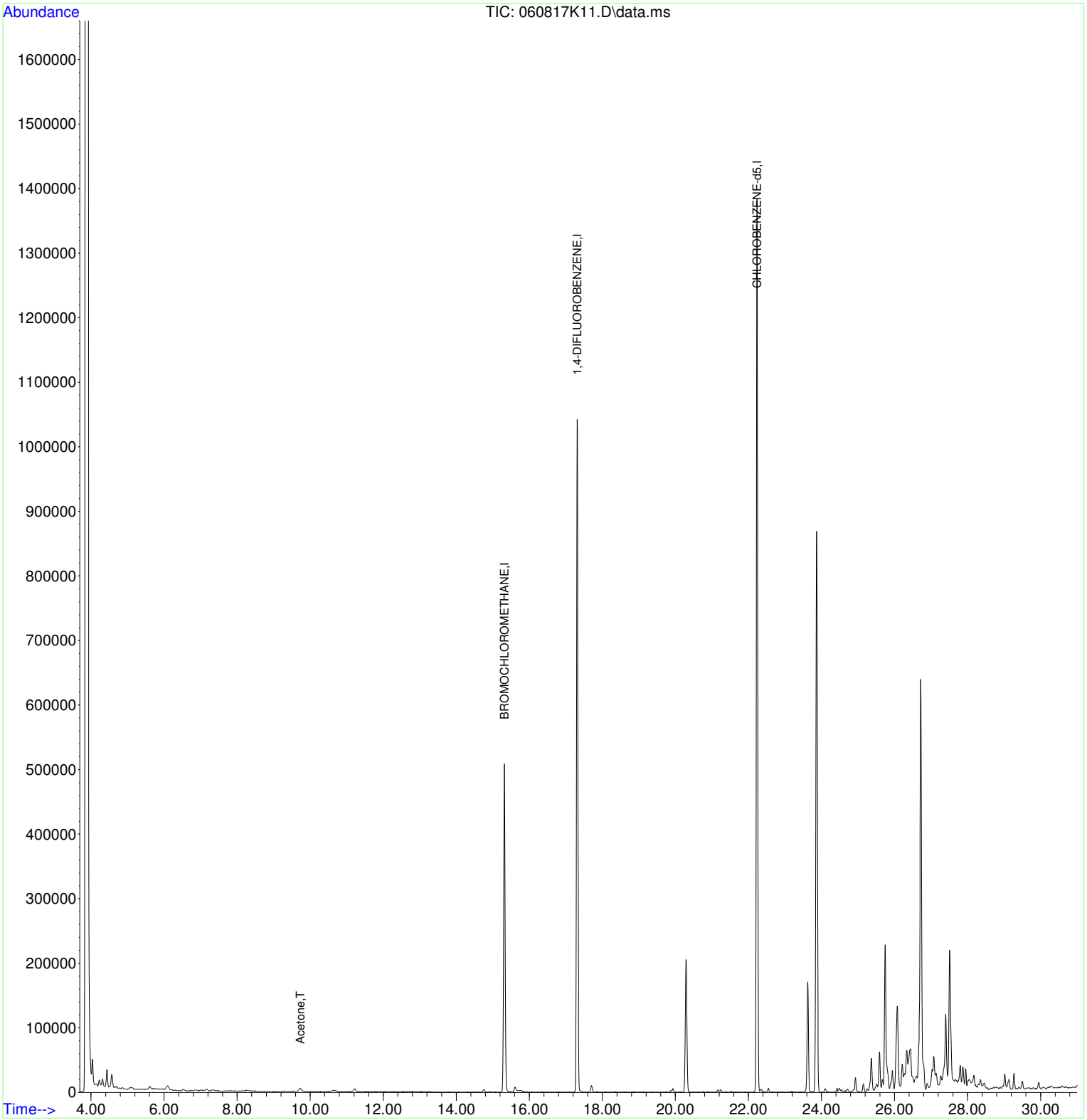
(#) = qualifier out of range (m) = manual integration (+) = signals summed

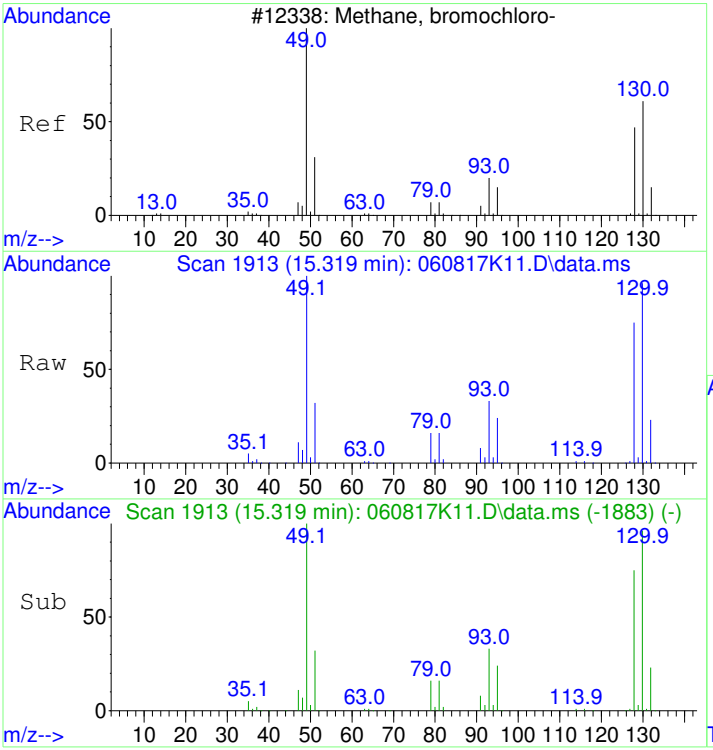
REVIEWED
By LLH at 3:39 pm, Jun 08, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K11.D
InstName : HP5973K
Acq On : 8 Jun 2017 3:03 pm
Operator : LLH
Sample : 1706011-08
Misc : 200ml F5-054-3ft CAN #1969
ALS Vial : 15 Sample Multiplier: 2.07

Quant Time: Jun 08 15:37:54 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

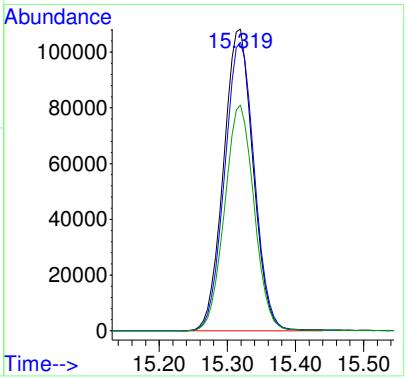


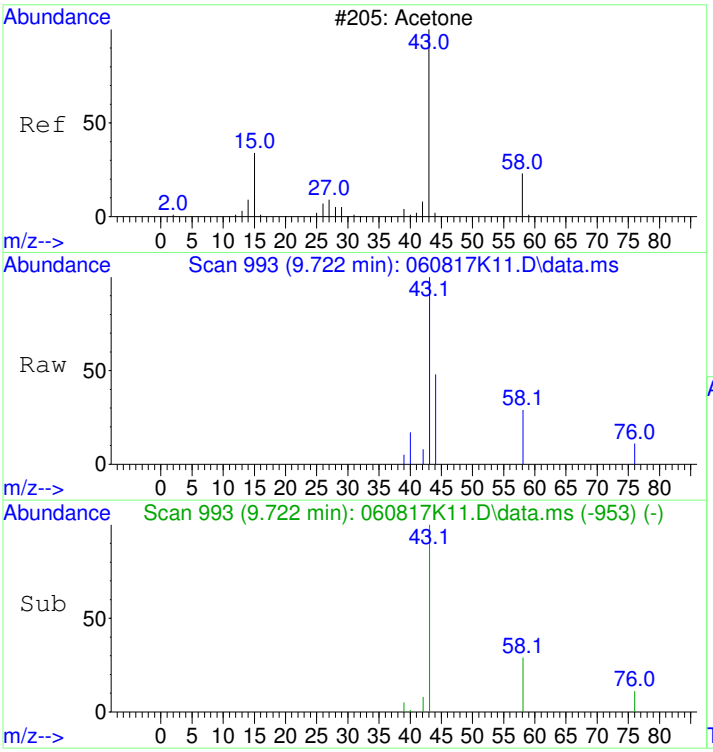


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K11.D
Acq: 8 Jun 2017 3:03 pm

Tgt Ion: 49 Resp: 326743

Ion	Ratio	Lower	Upper
49	100		
130	96.1	75.6	115.6
128	74.5	54.4	94.4

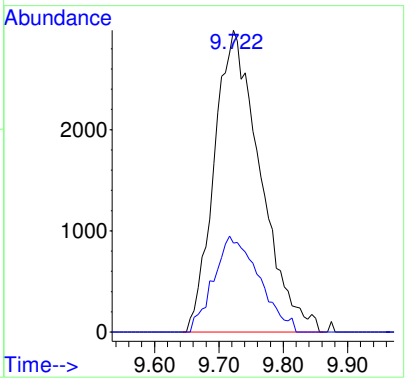


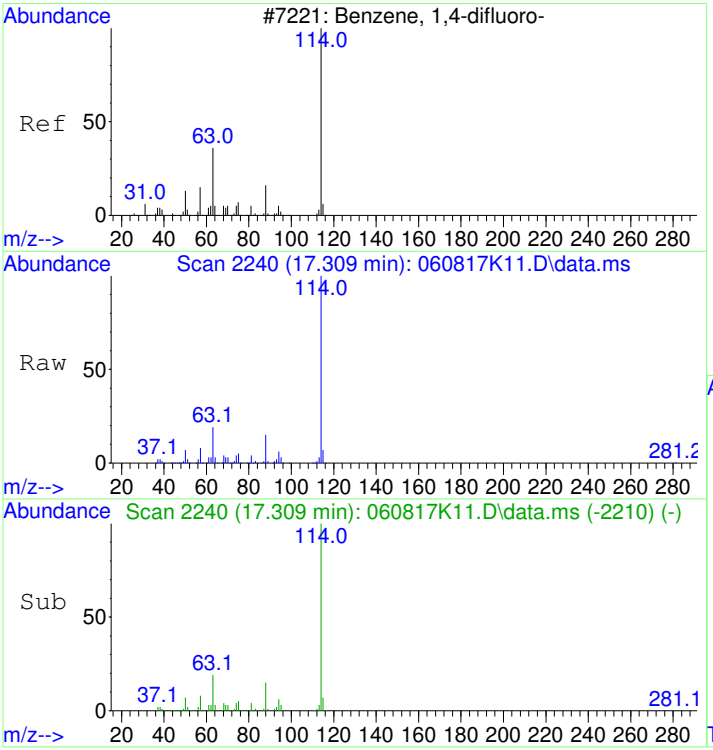


#14
Acetone
Concen: 0.94 ppbv
RT: 9.722 min Scan# 993
Delta R.T. 0.043 min
Lab File: 060817K11.D
Acq: 8 Jun 2017 3:03 pm

Tgt Ion: 43 Resp: 14820

Ion	Ratio	Lower	Upper
43	100		
58	31.2	12.0	52.0

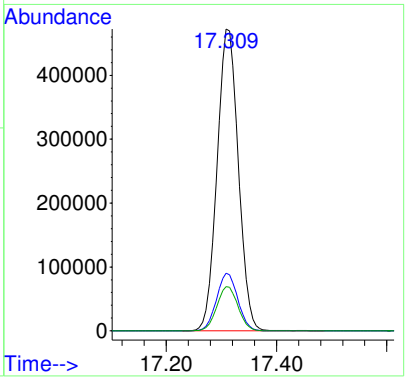


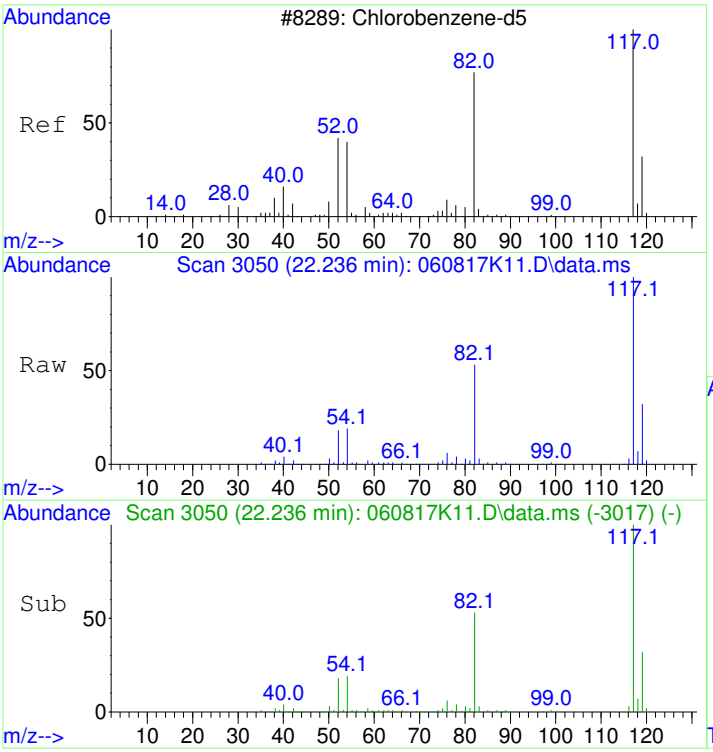


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.309 min Scan# 2240
Delta R.T. 0.000 min
Lab File: 060817K11.D
Acq: 8 Jun 2017 3:03 pm

Tgt Ion:114 Resp: 1263675

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.6	0.0	34.7

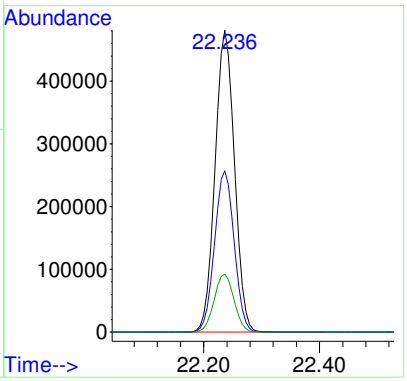




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060817K11.D
Acq: 8 Jun 2017 3:03 pm

Tgt Ion:117 Resp: 1120950

Ion	Ratio	Lower	Upper
117	100		
82	54.1	33.7	73.7
54	19.6	0.0	39.6



1706011-05

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K12.D
InstName : HP5973K
Acq On : 8 Jun 2017 3:54 pm
Operator : LLH
Sample : 1706011-05
Misc : 200ml F5-038-3ft CAN #1112
ALS Vial : 16 Sample Multiplier: 2.12

REPORT

Quant Time: Jun 08 16:30:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	336554	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1293022	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1150395	20.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	4.217	41	6920	0.83	ppbv #	73
13) 1,1-Dichloroethene	9.029	61	9447	0.54	ppbv	99
14) Acetone	9.722	43	18366	1.13	ppbv	100
18) Dichloromethane	11.213	49	9332	0.67	ppbv	97
24) cis-1,2-Dichloroethene	14.760	61	77180	4.99	ppbv	99
28) Chloroform	15.471	83	305984	11.16	ppbv	99
37) Trichloroethene	17.704	130	326972	18.07	ppbv	99
44) Toluene	19.937	91	34286	0.70	ppbv	99
47) Tetrachloroethene	20.770	166	40247	1.55	ppbv	99

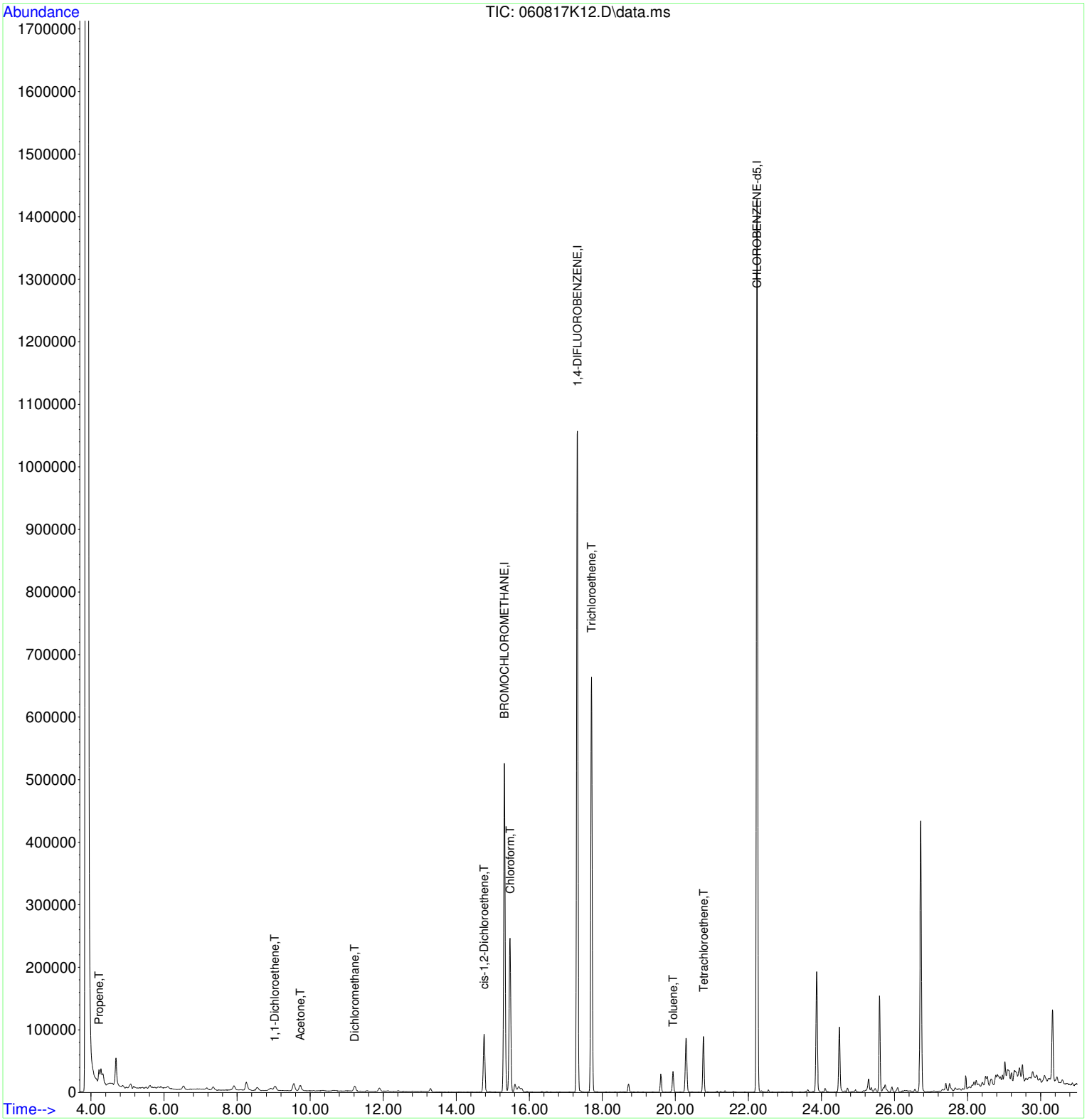
(#) = qualifier out of range (m) = manual integration (+) = signals summed

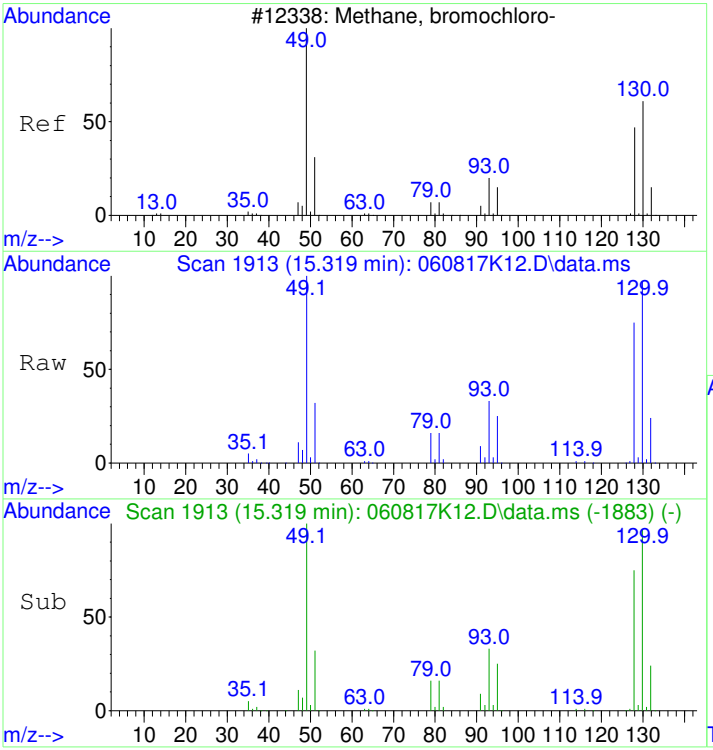
REVIEWED
By LLH at 4:32 pm, Jun 08, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K12.D
InstName : HP5973K
Acq On : 8 Jun 2017 3:54 pm
Operator : LLH
Sample : 1706011-05
Misc : 200ml F5-038-3ft CAN #1112
ALS Vial : 16 Sample Multiplier: 2.12

Quant Time: Jun 08 16:30:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

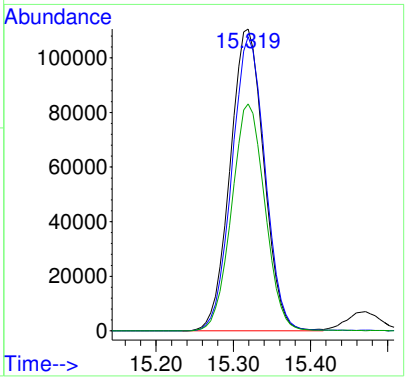


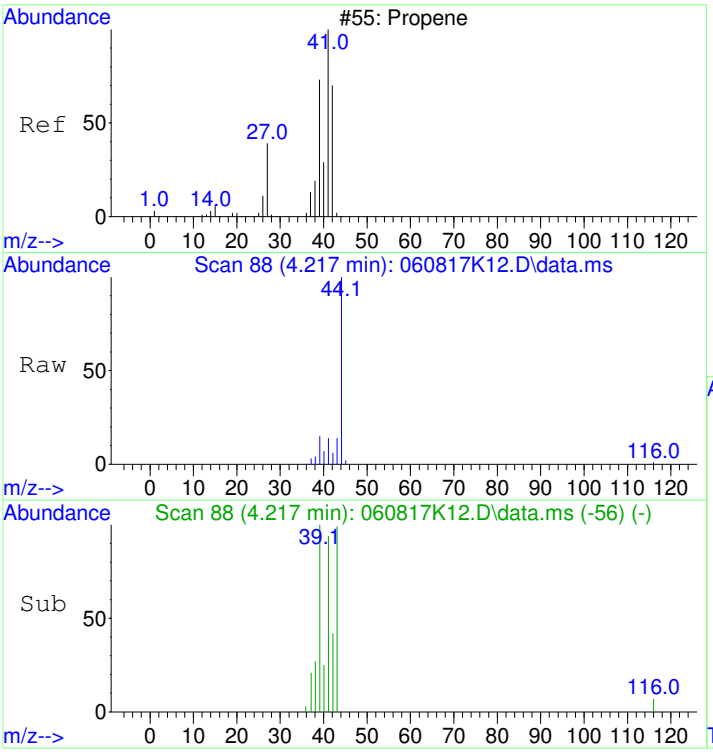


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 49 Resp: 336554

Ion	Ratio	Lower	Upper
49	100		
130	95.6	75.6	115.6
128	74.2	54.4	94.4

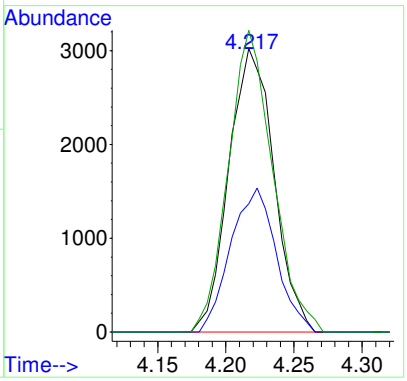


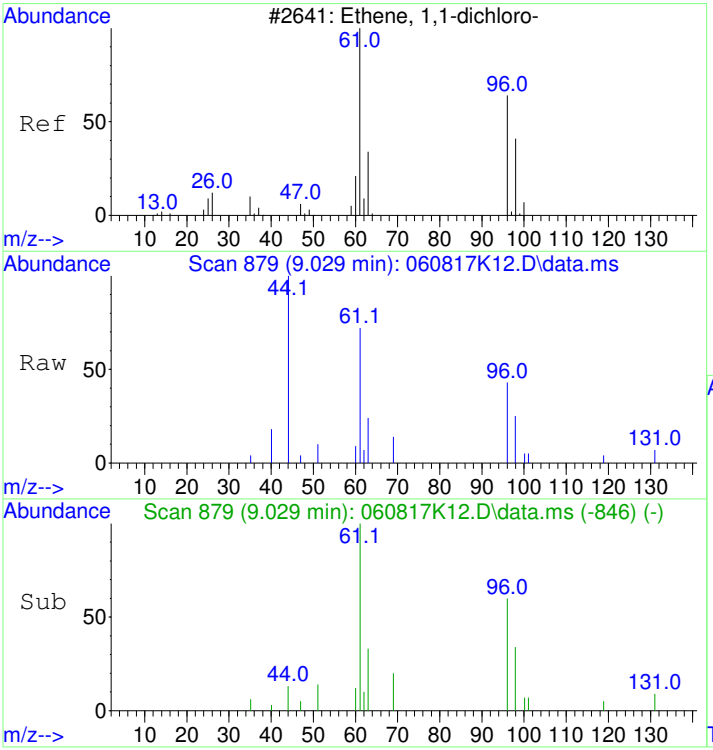


#2
Propene
Concen: 0.83 ppbv
RT: 4.217 min Scan# 88
Delta R.T. -0.006 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 41 Resp: 6920

Ion	Ratio	Lower	Upper
41	100		
42	51.4	46.4	86.4
39	104.7	55.4	95.4#

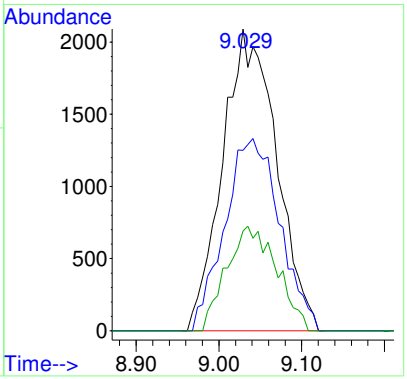


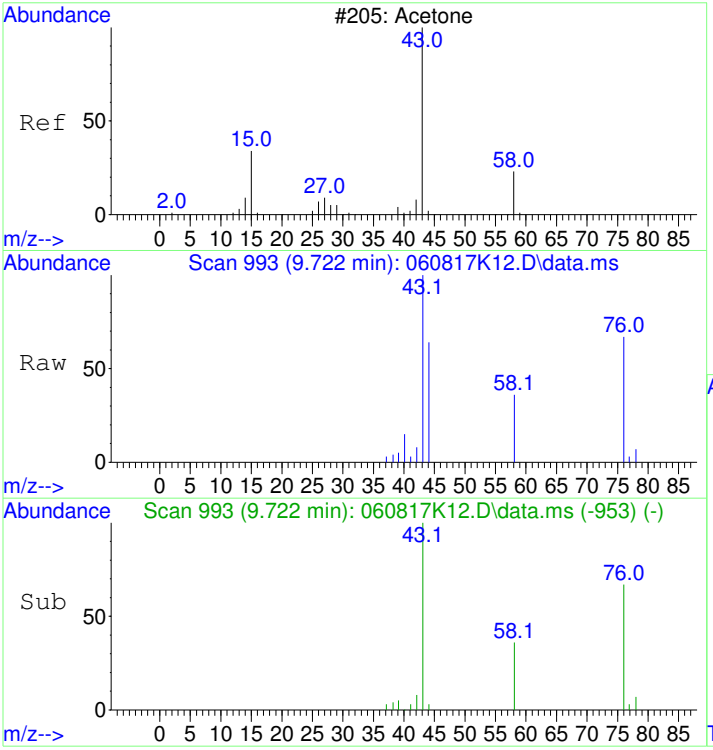


#13
1,1-Dichloroethene
Concen: 0.54 ppbv
RT: 9.029 min Scan# 879
Delta R.T. 0.000 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 61 Resp: 9447

Ion	Ratio	Lower	Upper
61	100		
96	65.1	43.8	83.8
63	32.2	12.4	52.4

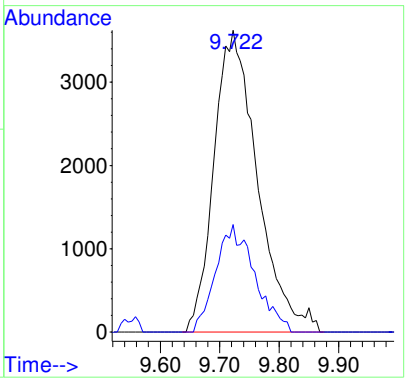




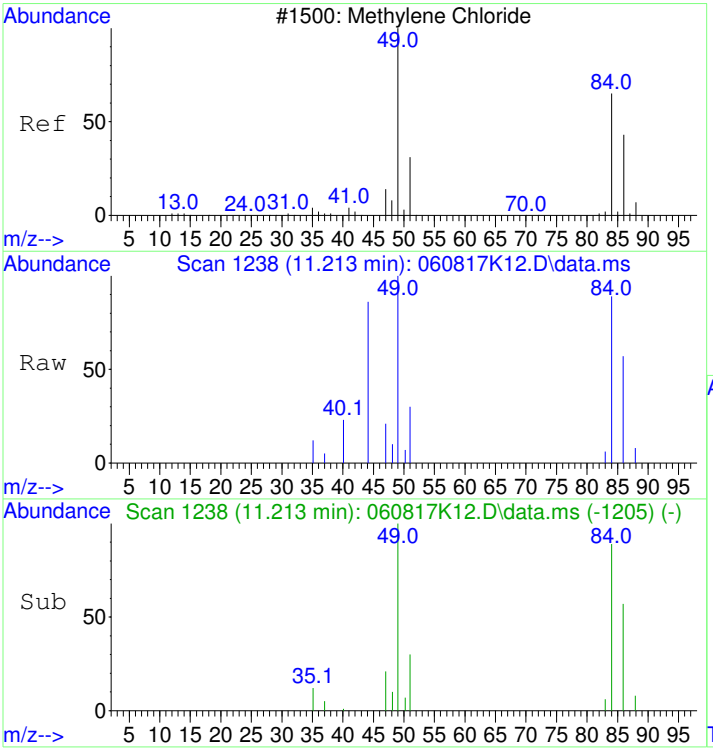
#14
Acetone
Concen: 1.13 ppbv
RT: 9.722 min Scan# 993
Delta R.T. 0.043 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 43 Resp: 18366

Ion	Ratio	Lower	Upper
43	100		
58	31.8	12.0	52.0



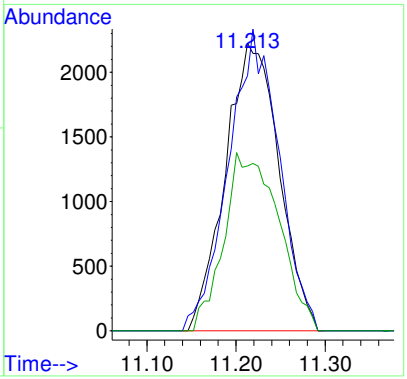
OK

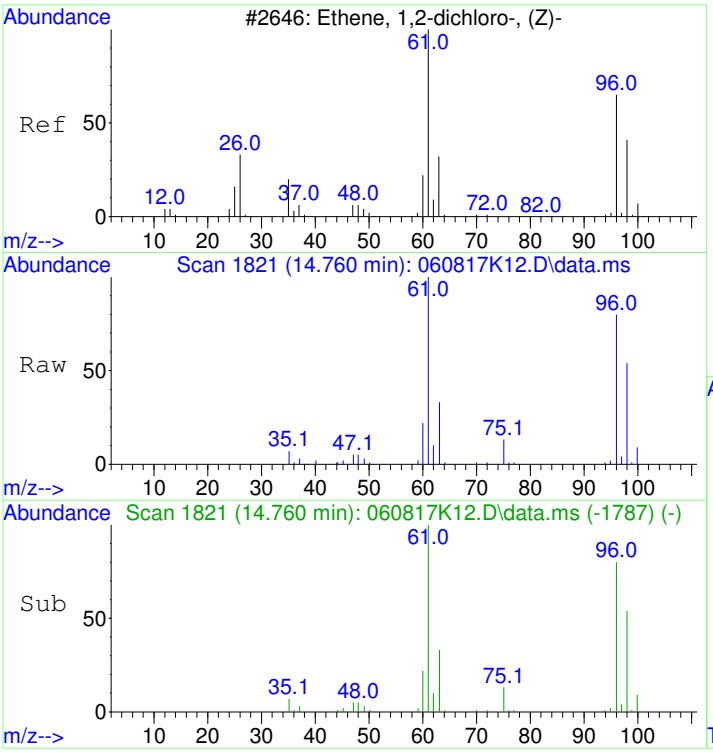


#18
Dichloromethane
Concen: 0.67 ppbv
RT: 11.213 min Scan# 1238
Delta R.T. 0.000 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 49 Resp: 9332

Ion	Ratio	Lower	Upper
49	100		
84	98.3	74.2	114.2
86	62.6	41.1	81.1

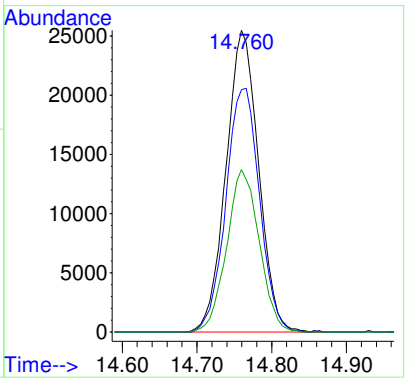


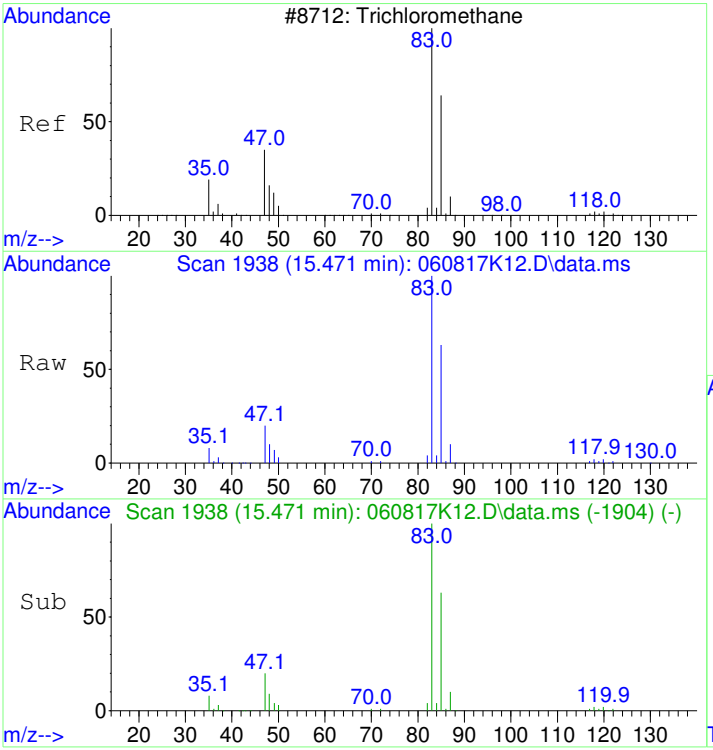


#24
cis-1,2-Dichloroethene
Concen: 4.99 ppbv
RT: 14.760 min Scan# 1821
Delta R.T. 0.006 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 61 Resp: 77180

Ion	Ratio	Lower	Upper
61	100		
96	83.4	64.3	104.3
98	53.6	33.1	73.1

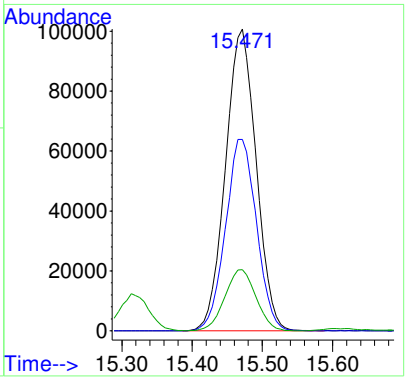


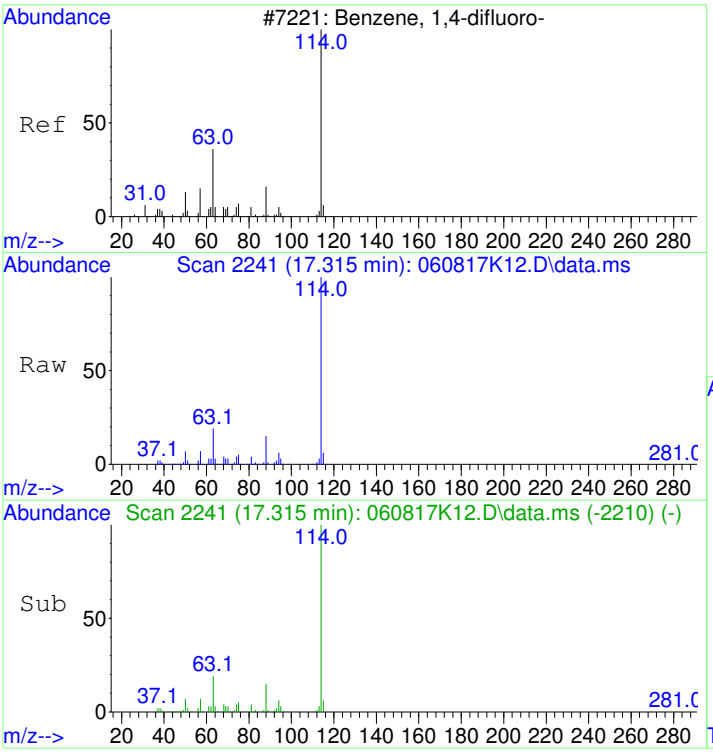


#28
Chloroform
Concen: 11.16 ppbv
RT: 15.471 min Scan# 1938
Delta R.T. 0.006 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 83 Resp: 305984

Ion	Ratio	Lower	Upper
83	100		
85	64.2	45.0	85.0
47	20.6	0.8	40.8

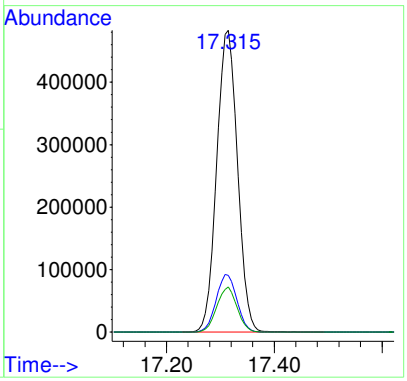


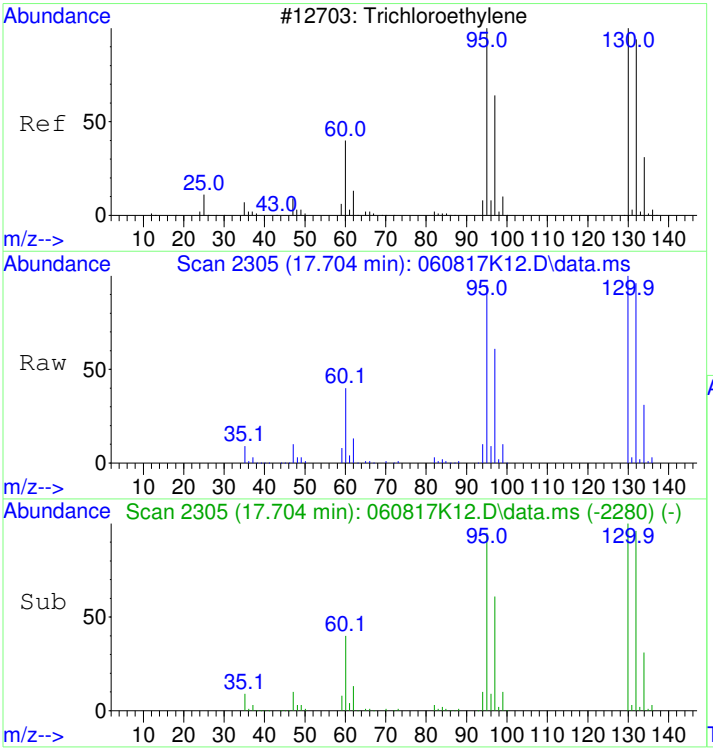


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion:114 Resp: 1293022

Ion	Ratio	Lower	Upper
114	100		
63	19.1	0.0	39.1
88	14.5	0.0	34.7

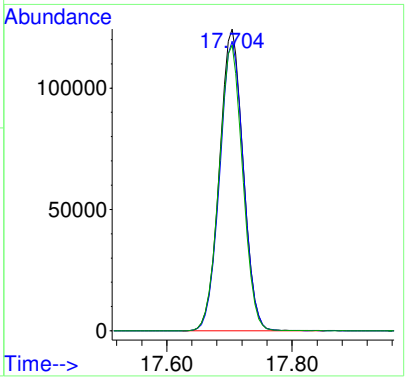


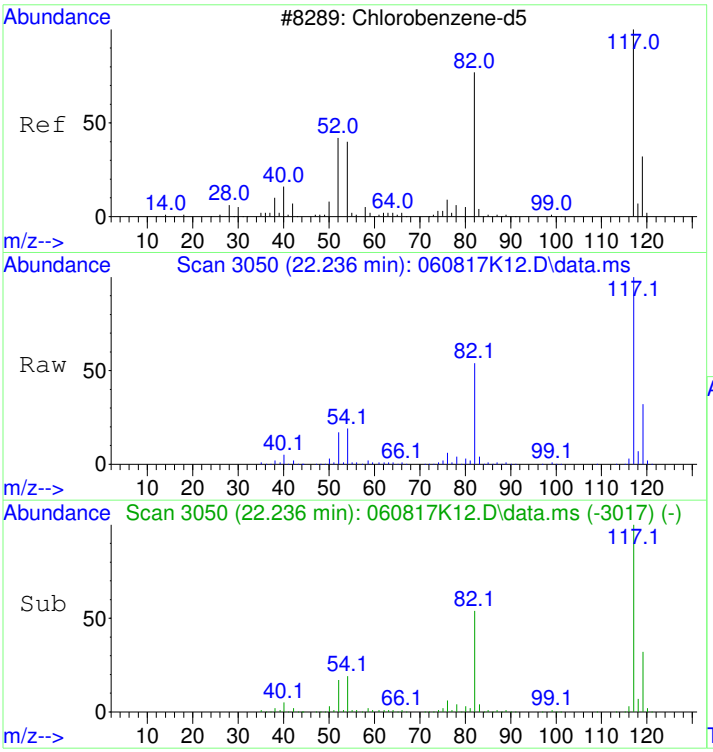


#37
Trichloroethene
Concen: 18.07 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. 0.000 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion:130 Resp: 326972

Ion	Ratio	Lower	Upper
130	100		
132	96.4	75.8	115.8
95	94.6	73.6	113.6

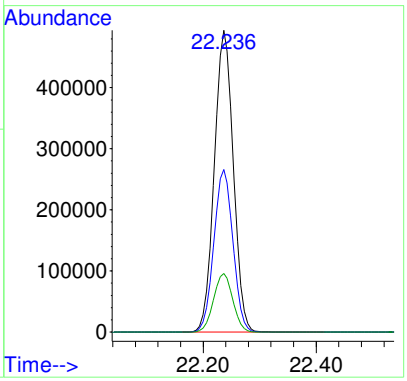


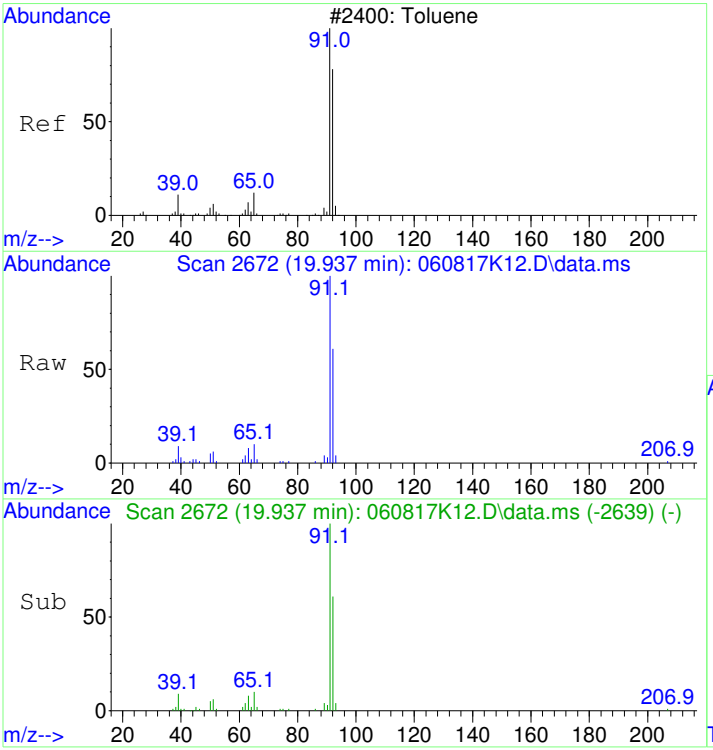


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion:117 Resp: 1150395

Ion	Ratio	Lower	Upper
117	100		
82	54.1	33.7	73.7
54	19.6	0.0	39.6

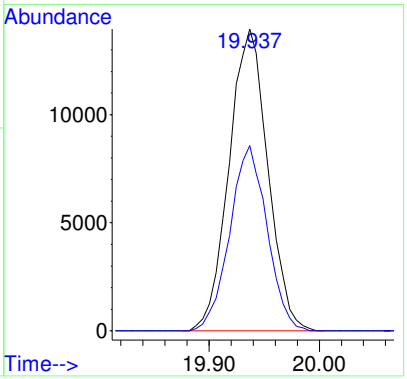


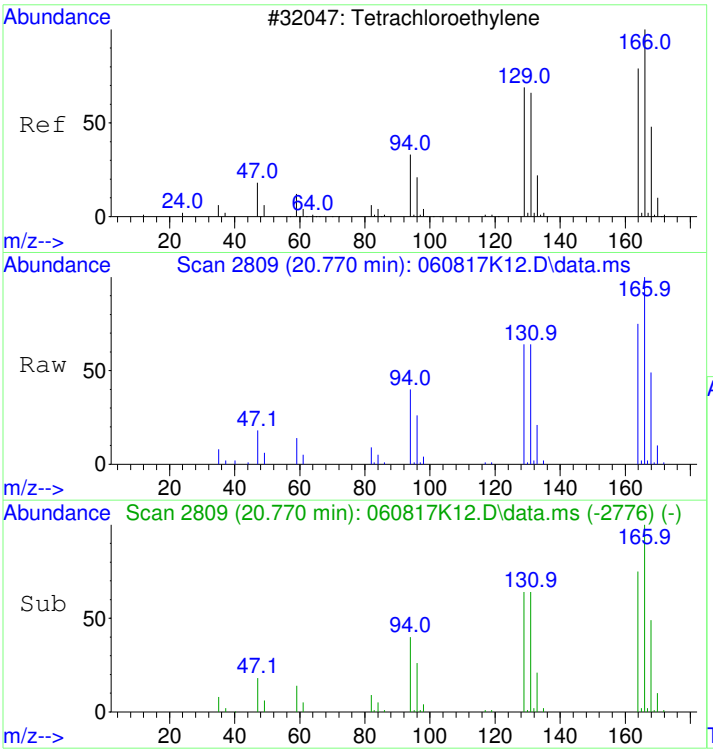


#44
Toluene
Concen: 0.70 ppbv
RT: 19.937 min Scan# 2672
Delta R.T. 0.000 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion: 91 Resp: 34286

Ion	Ratio	Lower	Upper
91	100		
92	58.9	39.8	79.8

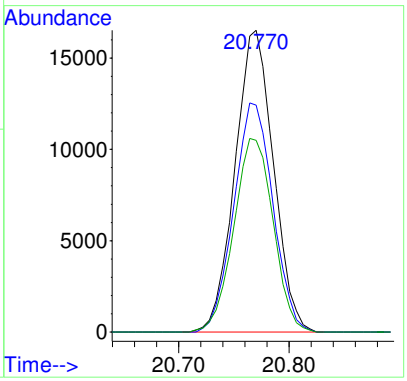




#47
Tetrachloroethene
Concen: 1.55 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. 0.000 min
Lab File: 060817K12.D
Acq: 8 Jun 2017 3:54 pm

Tgt Ion:166 Resp: 40247

Ion	Ratio	Lower	Upper
166	100		
164	77.4	57.9	97.9
131	65.7	46.1	86.1



1706011-06

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K13.D
InstName : HP5973K
Acq On : 8 Jun 2017 4:45 pm
Operator : LLH
Sample : 1706011-06
Misc : 200ml F5-060-3ft CAN #1992
ALS Vial : 17 Sample Multiplier: 2.17

REPORT

Quant Time: Jun 09 09:23:11 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	337012	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1301423	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1151888	20.00	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	9.716	43	13682	0.84	ppbv	100
37) Trichloroethene	17.704	130	340073	18.67	ppbv	99
47) Tetrachloroethene	20.770	166	234349	9.01	ppbv	100

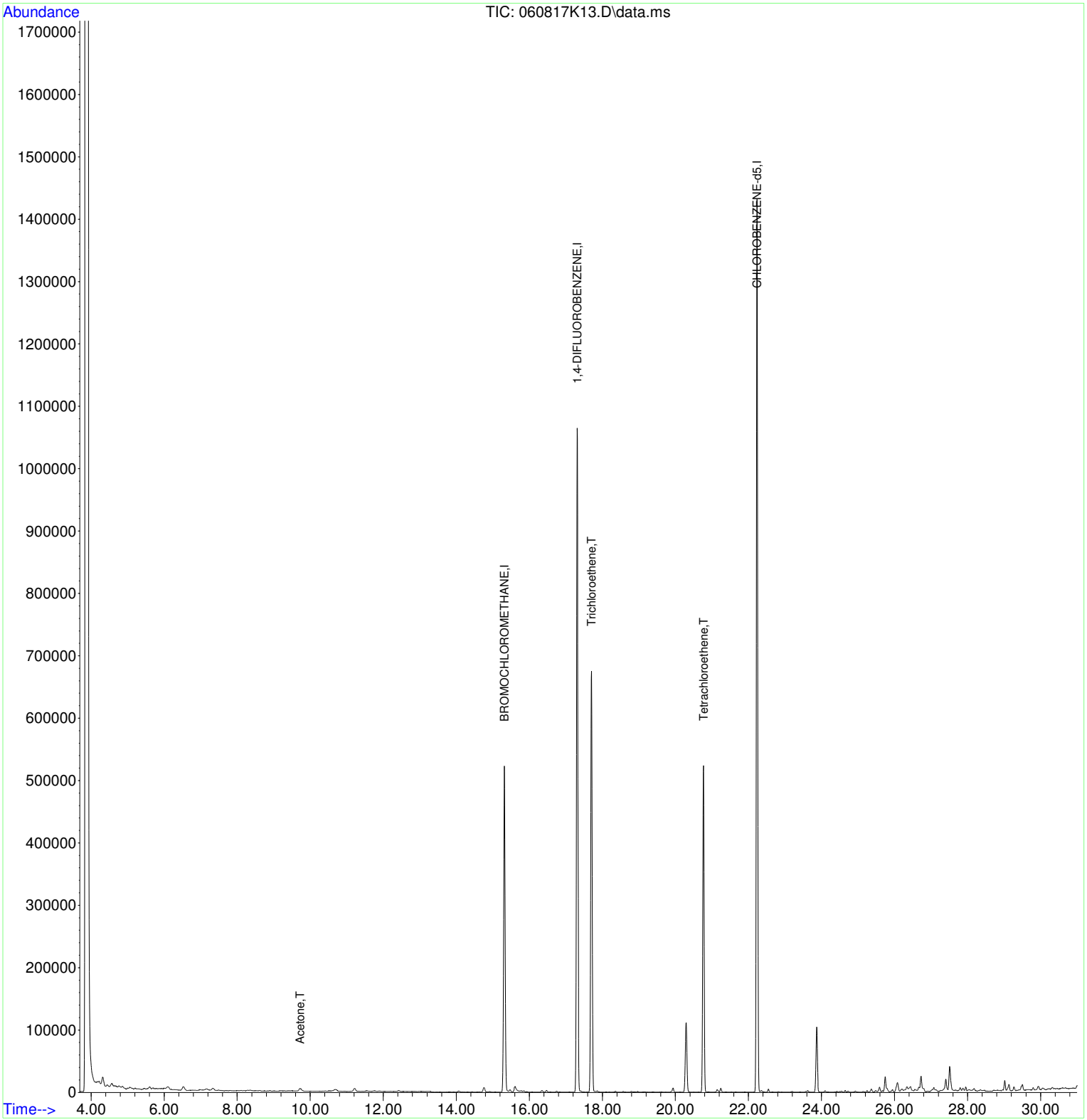
(#) = qualifier out of range (m) = manual integration (+) = signals summed

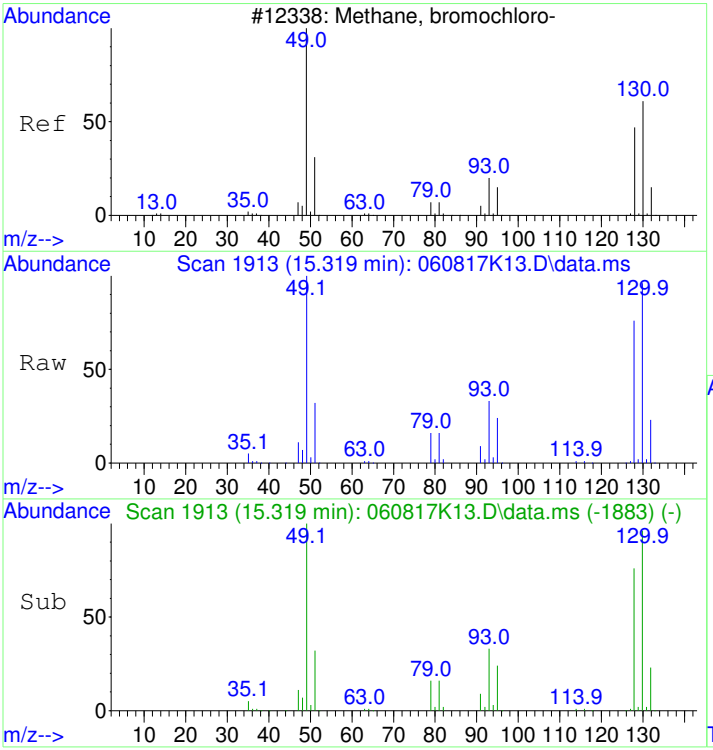
REVIEWED
By LLH at 10:21 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K13.D
InstName : HP5973K
Acq On : 8 Jun 2017 4:45 pm
Operator : LLH
Sample : 1706011-06
Misc : 200ml F5-060-3ft CAN #1992
ALS Vial : 17 Sample Multiplier: 2.17

Quant Time: Jun 09 09:23:11 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

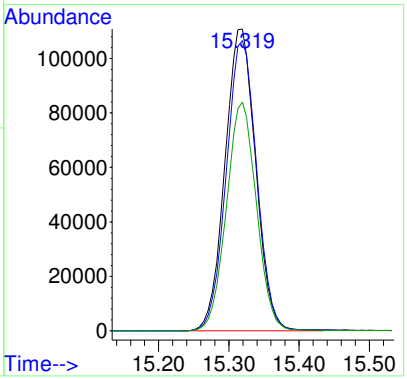


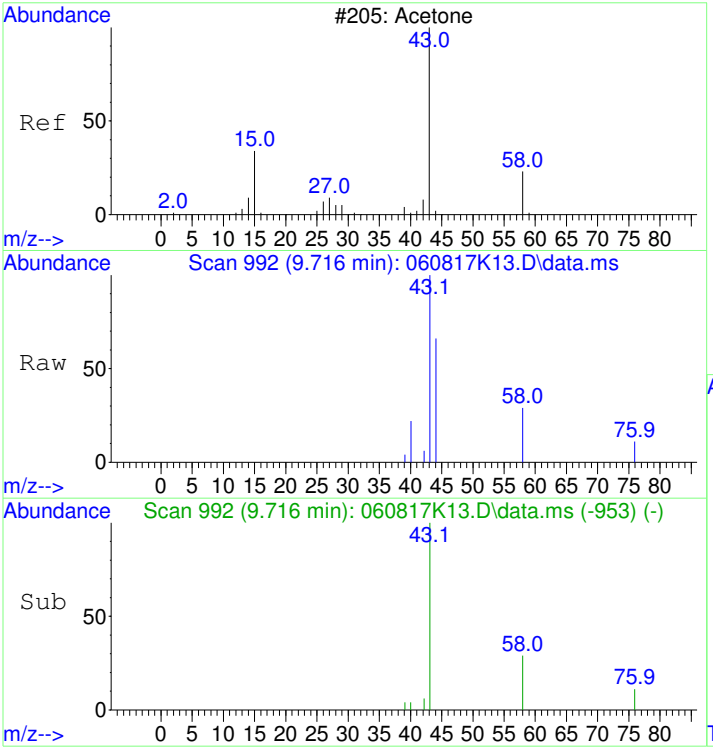


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K13.D
Acq: 8 Jun 2017 4:45 pm

Tgt Ion: 49 Resp: 337012

Ion	Ratio	Lower	Upper
49	100		
130	95.4	75.6	115.6
128	74.1	54.4	94.4

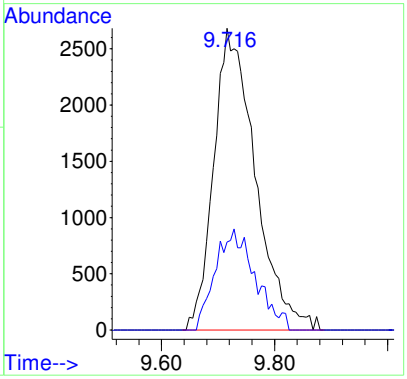


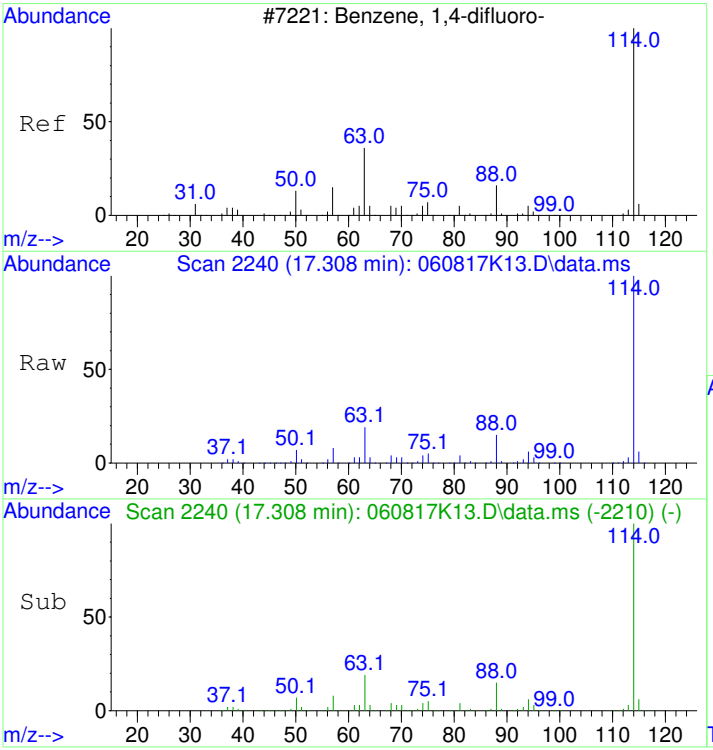


#14
Acetone
Concen: 0.84 ppbv
RT: 9.716 min Scan# 992
Delta R.T. 0.036 min
Lab File: 060817K13.D
Acq: 8 Jun 2017 4:45 pm

Tgt Ion: 43 Resp: 13682

Ion	Ratio	Lower	Upper
43	100		
58	31.9	12.0	52.0

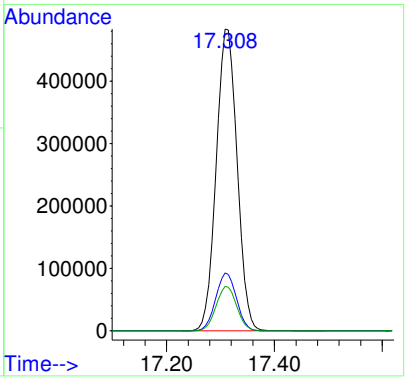


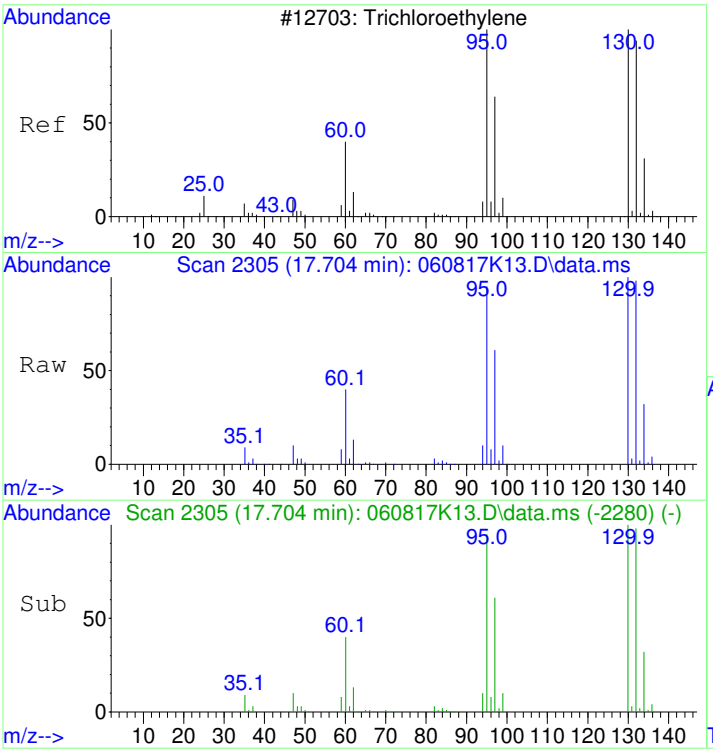


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 060817K13.D
Acq: 8 Jun 2017 4:45 pm

Tgt Ion:114 Resp: 1301423

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.6	0.0	34.7

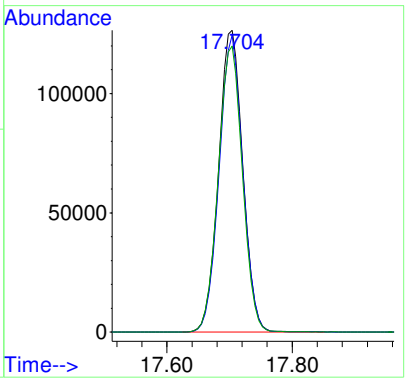


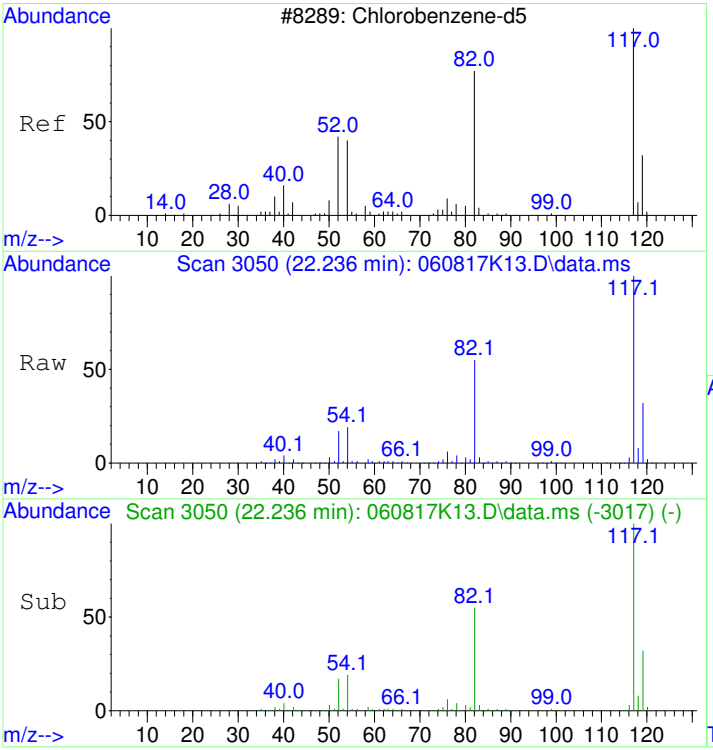


#37
Trichloroethene
Concen: 18.67 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K13.D
Acq: 8 Jun 2017 4:45 pm

Tgt Ion:130 Resp: 340073

Ion	Ratio	Lower	Upper
130	100		
132	96.0	75.8	115.8
95	94.8	73.6	113.6

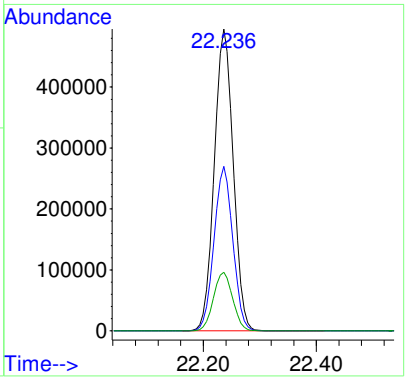


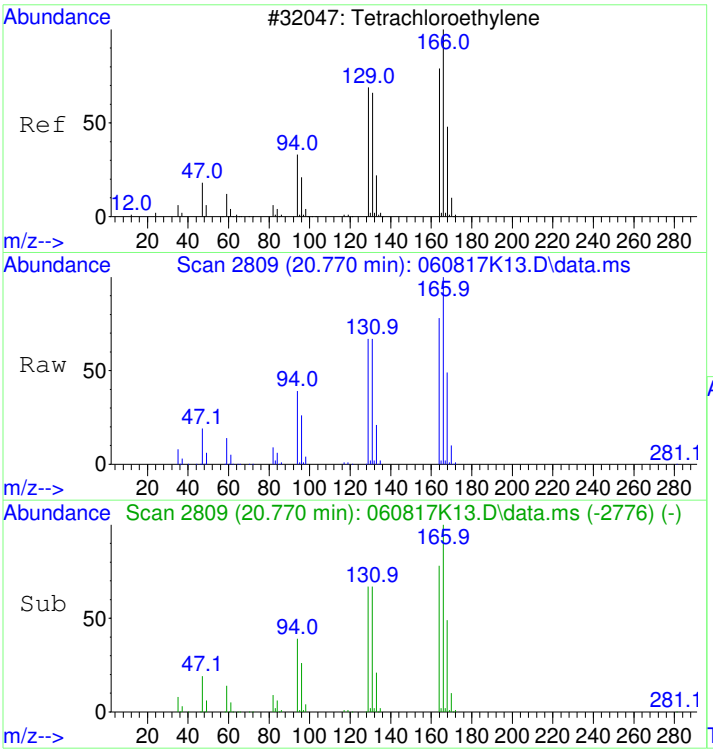


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K13.D
Acq: 8 Jun 2017 4:45 pm

Tgt Ion:117 Resp: 1151888

Ion	Ratio	Lower	Upper
117	100		
82	54.1	33.7	73.7
54	19.7	0.0	39.6

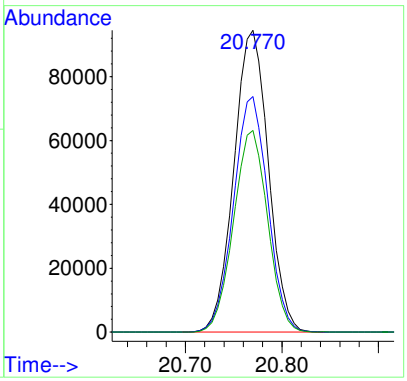




#47
Tetrachloroethene
Concen: 9.01 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. -0.000 min
Lab File: 060817K13.D
Acq: 8 Jun 2017 4:45 pm

Tgt Ion:166 Resp: 234349

Ion	Ratio	Lower	Upper
166	100		
164	77.7	57.9	97.9
131	66.2	46.1	86.1



1706011-07

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K14.D
InstName : HP5973K
Acq On : 8 Jun 2017 5:36 pm
Operator : LLH
Sample : 1706011-07
Misc : 200ml F5-058-3ft CAN #846
ALS Vial : 18 Sample Multiplier: 2.07

REPORT

Quant Time: Jun 09 09:23:30 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	325415	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1258074	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1118322	20.00	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	9.729	43	11111	0.71	ppbv	98

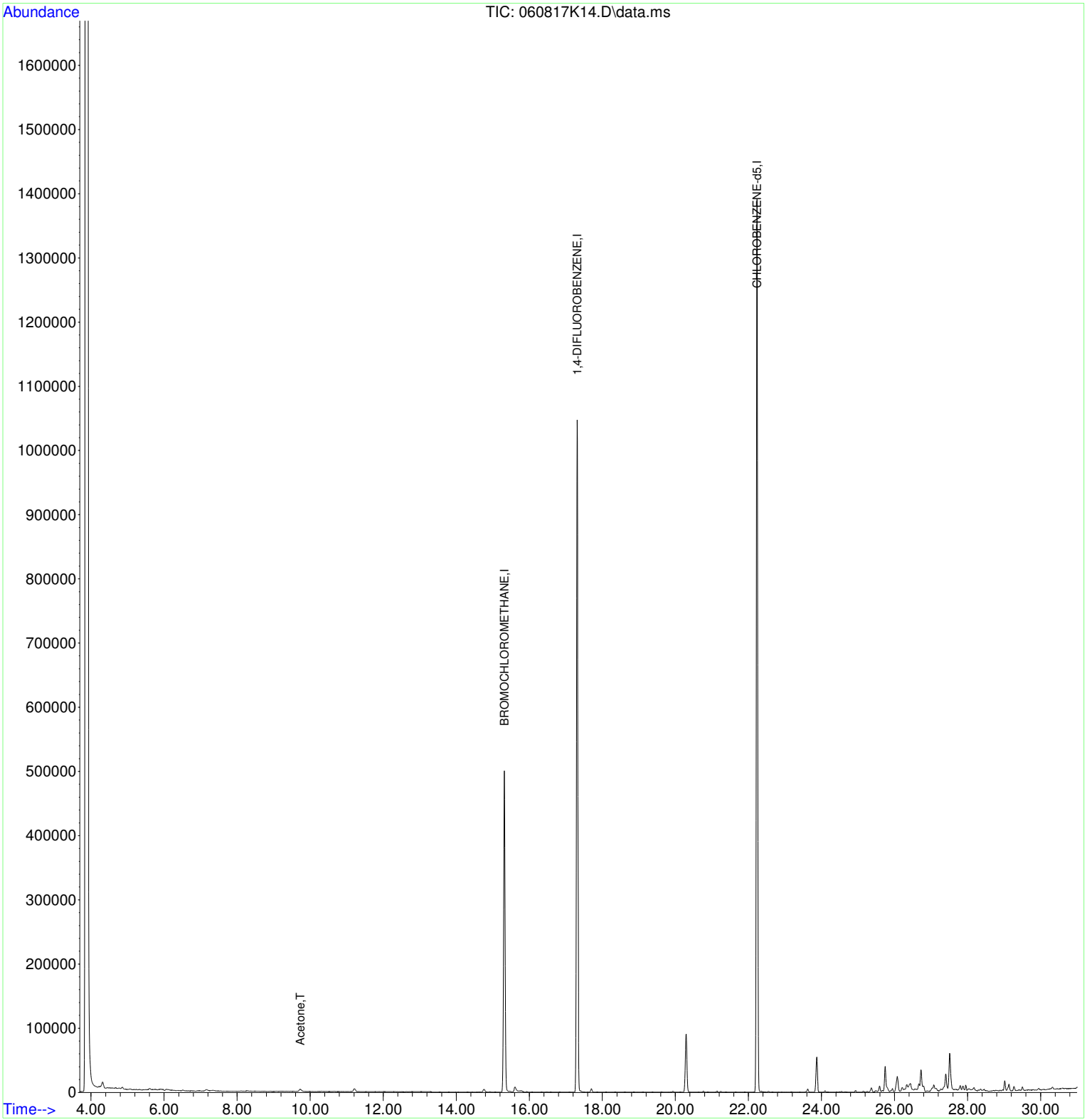
(#) = qualifier out of range (m) = manual integration (+) = signals summed

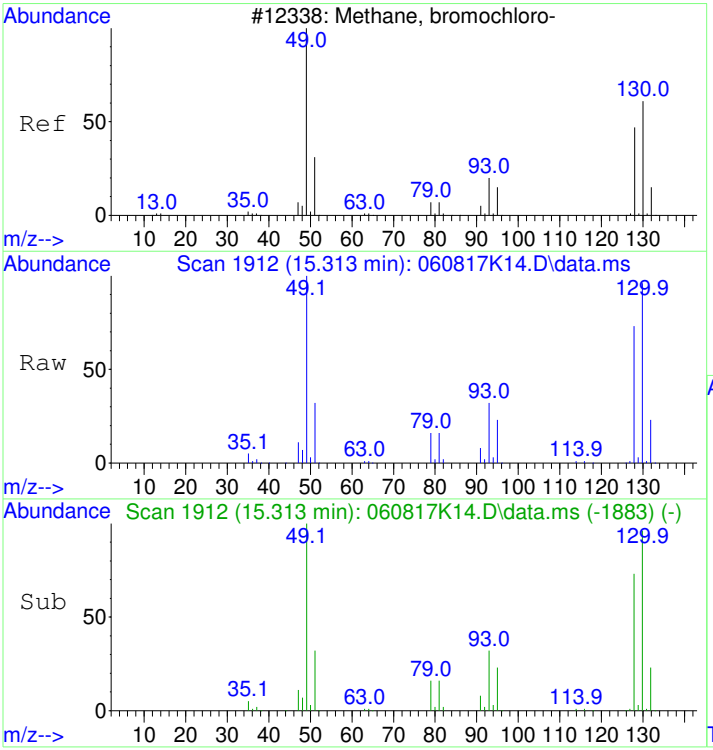
REVIEWED
By LLH at 10:22 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K14.D
InstName : HP5973K
Acq On : 8 Jun 2017 5:36 pm
Operator : LLH
Sample : 1706011-07
Misc : 200ml F5-058-3ft CAN #846
ALS Vial : 18 Sample Multiplier: 2.07

Quant Time: Jun 09 09:23:30 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

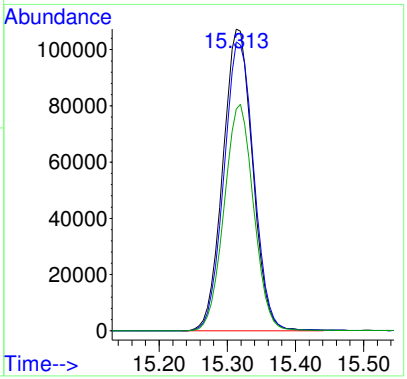


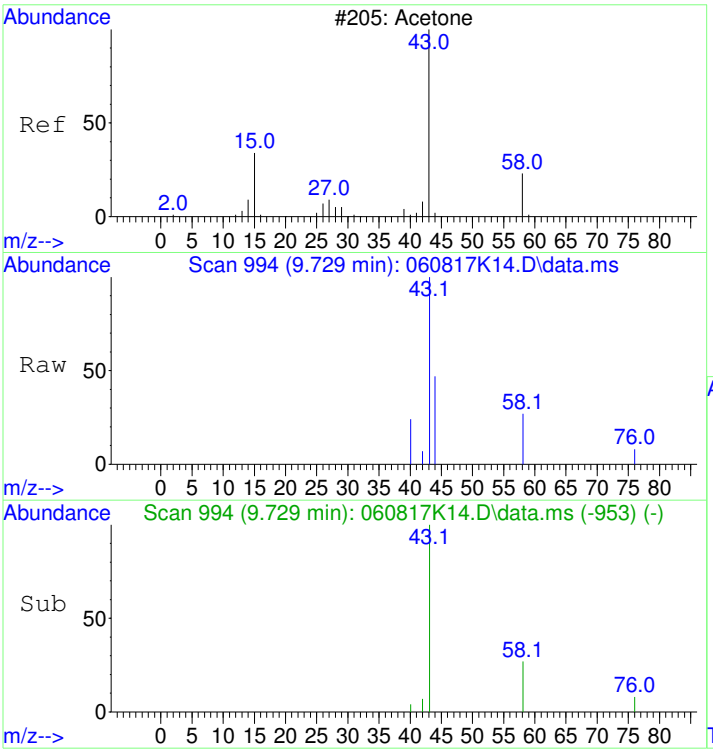


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060817K14.D
Acq: 8 Jun 2017 5:36 pm

Tgt Ion: 49 Resp: 325415

Ion	Ratio	Lower	Upper
49	100		
130	96.0	75.6	115.6
128	74.3	54.4	94.4

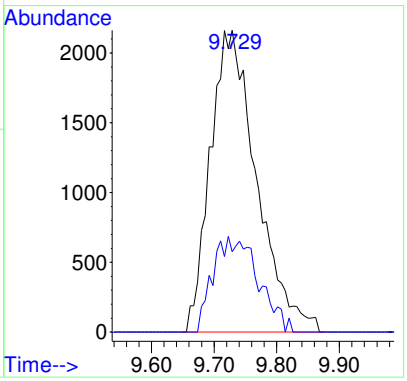


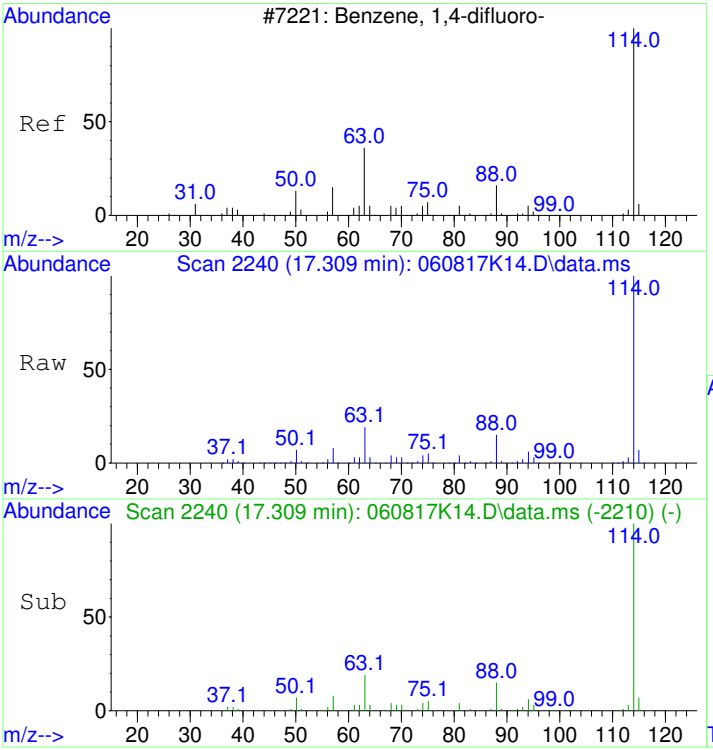


#14
Acetone
Concen: 0.71 ppbv
RT: 9.729 min Scan# 994
Delta R.T. 0.049 min
Lab File: 060817K14.D
Acq: 8 Jun 2017 5:36 pm

Tgt Ion: 43 Resp: 11111

Ion	Ratio	Lower	Upper
43	100		
58	30.9	12.0	52.0

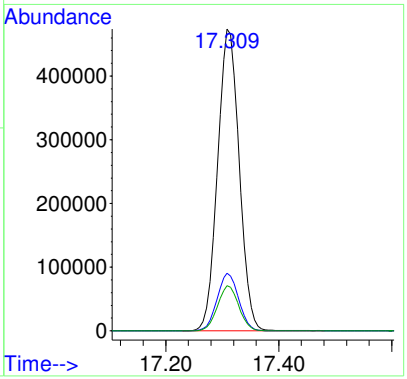


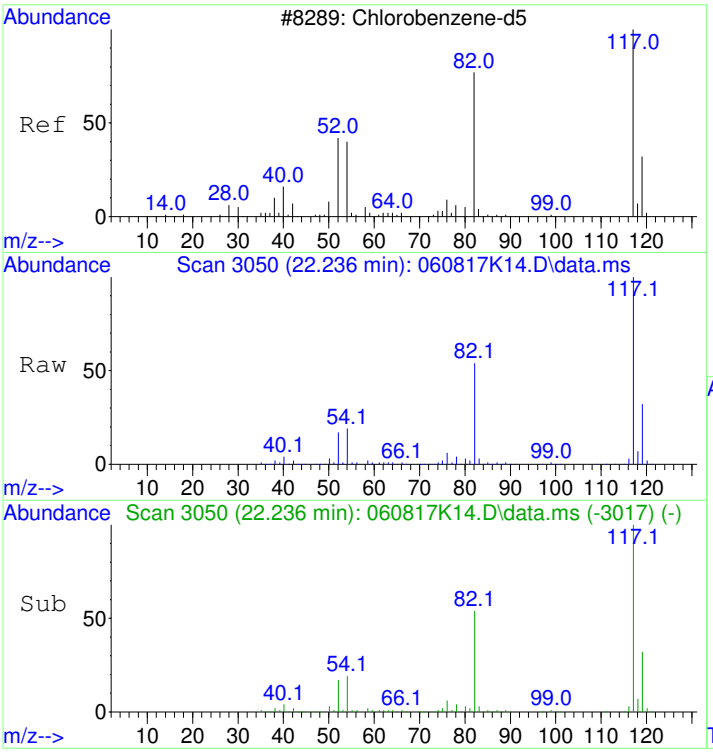


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.309 min Scan# 2240
Delta R.T. 0.000 min
Lab File: 060817K14.D
Acq: 8 Jun 2017 5:36 pm

Tgt Ion:114 Resp: 1258074

Ion	Ratio	Lower	Upper
114	100		
63	18.9	0.0	39.1
88	14.7	0.0	34.7

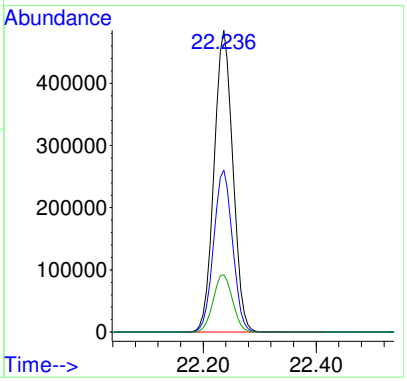




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060817K14.D
Acq: 8 Jun 2017 5:36 pm

Tgt Ion:117 Resp: 1118322

Ion	Ratio	Lower	Upper
117	100		
82	54.2	33.7	73.7
54	19.6	0.0	39.6



S17F030-IBL2

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K15.D
InstName : HP5973K
Acq On : 8 Jun 2017 6:27 pm
Operator : LLH
Sample : S17F030-IBL2
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 09:23:41 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.313	49	319057	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1261375	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1109954	20.00 ppbv	0.00

Target Compounds Qvalue

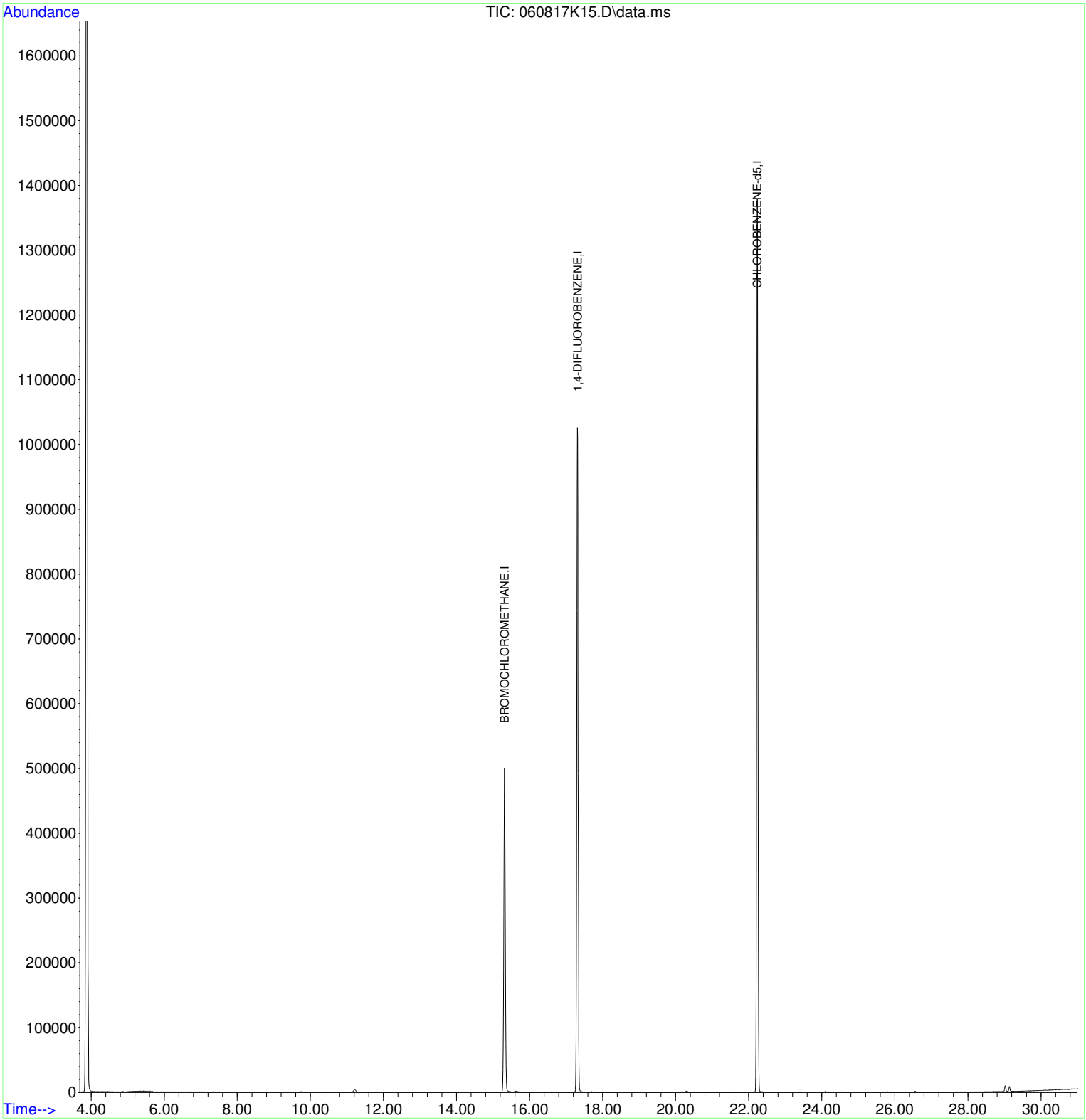
(#) = qualifier out of range (m) = manual integration (+) = signals summed

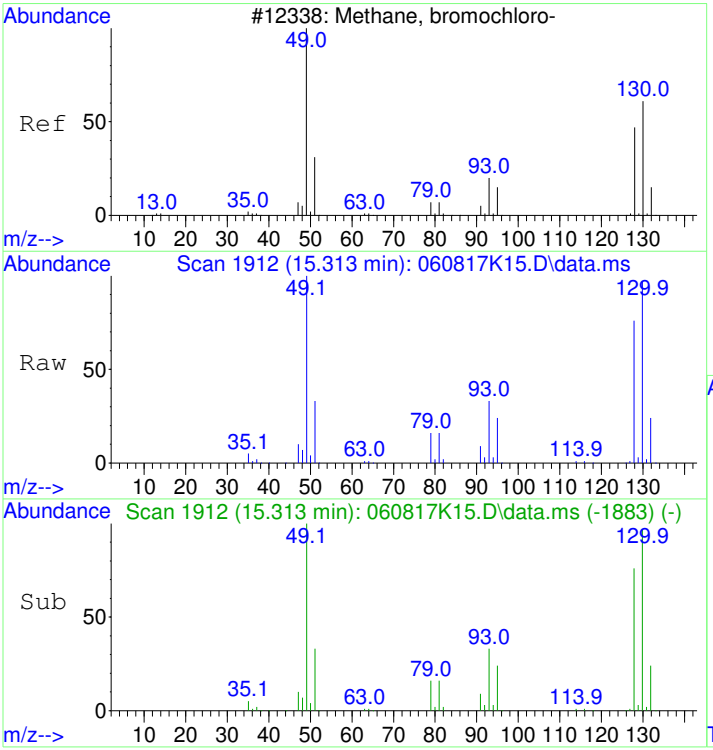
REVIEWED
By LLH at 9:40 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K15.D
InstName : HP5973K
Acq On : 8 Jun 2017 6:27 pm
Operator : LLH
Sample : S17F030-IBL2
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 09:23:41 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

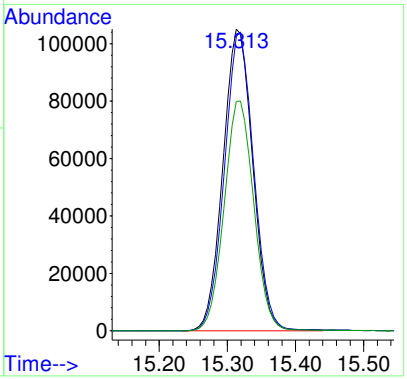


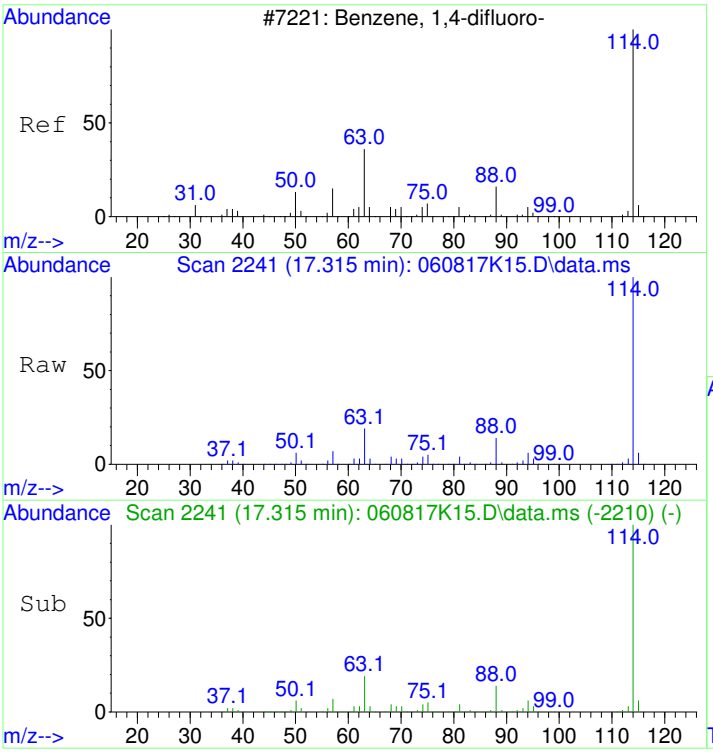


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060817K15.D
Acq: 8 Jun 2017 6:27 pm

Tgt Ion: 49 Resp: 319057

Ion	Ratio	Lower	Upper
49	100		
130	97.2	75.6	115.6
128	75.6	54.4	94.4

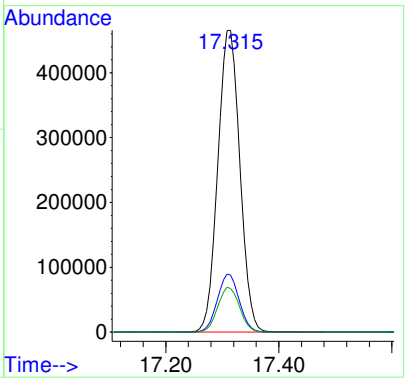


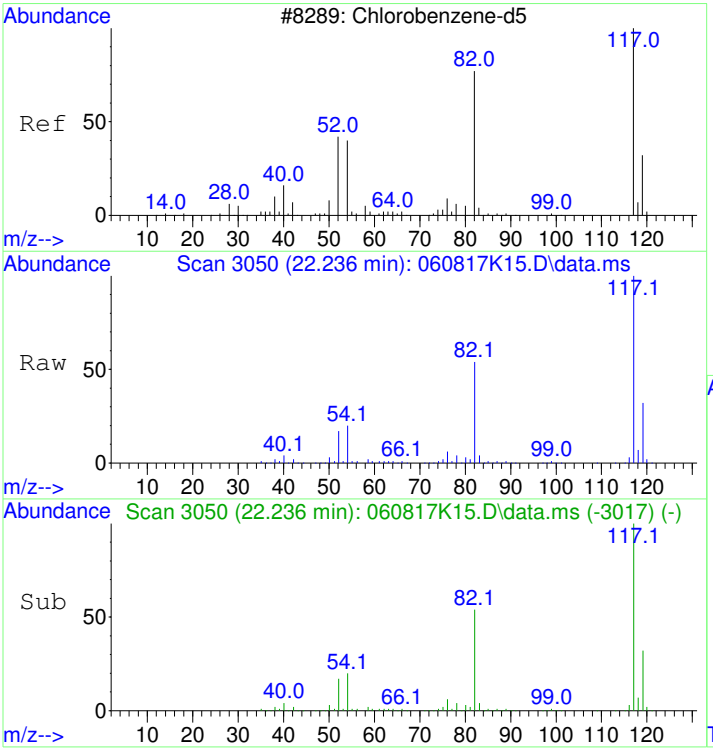


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K15.D
Acq: 8 Jun 2017 6:27 pm

Tgt Ion:114 Resp: 1261375

Ion	Ratio	Lower	Upper
114	100		
63	18.9	0.0	39.1
88	14.6	0.0	34.7

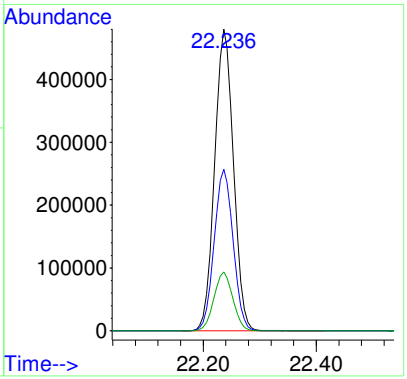




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K15.D
Acq: 8 Jun 2017 6:27 pm

Tgt Ion:117 Resp: 1109954

Ion	Ratio	Lower	Upper
117	100		
82	53.9	33.7	73.7
54	19.5	0.0	39.6



1706011-01

Quantitation Report (Not Reviewed)

REPORT

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K16.D
InstName : HP5973K
Acq On : 8 Jun 2017 7:18 pm
Operator : LLH
Sample : 1706011-01
Misc : 200ml PH01-3ft CAN #631
ALS Vial : 19 Sample Multiplier: 2.17

Quant Time: Jun 09 09:23:52 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	315716	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1237386	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1104881	20.00 ppbv	0.00
Target Compounds					Qvalue
14) Acetone	9.716	43	22338	1.47 ppbv	98

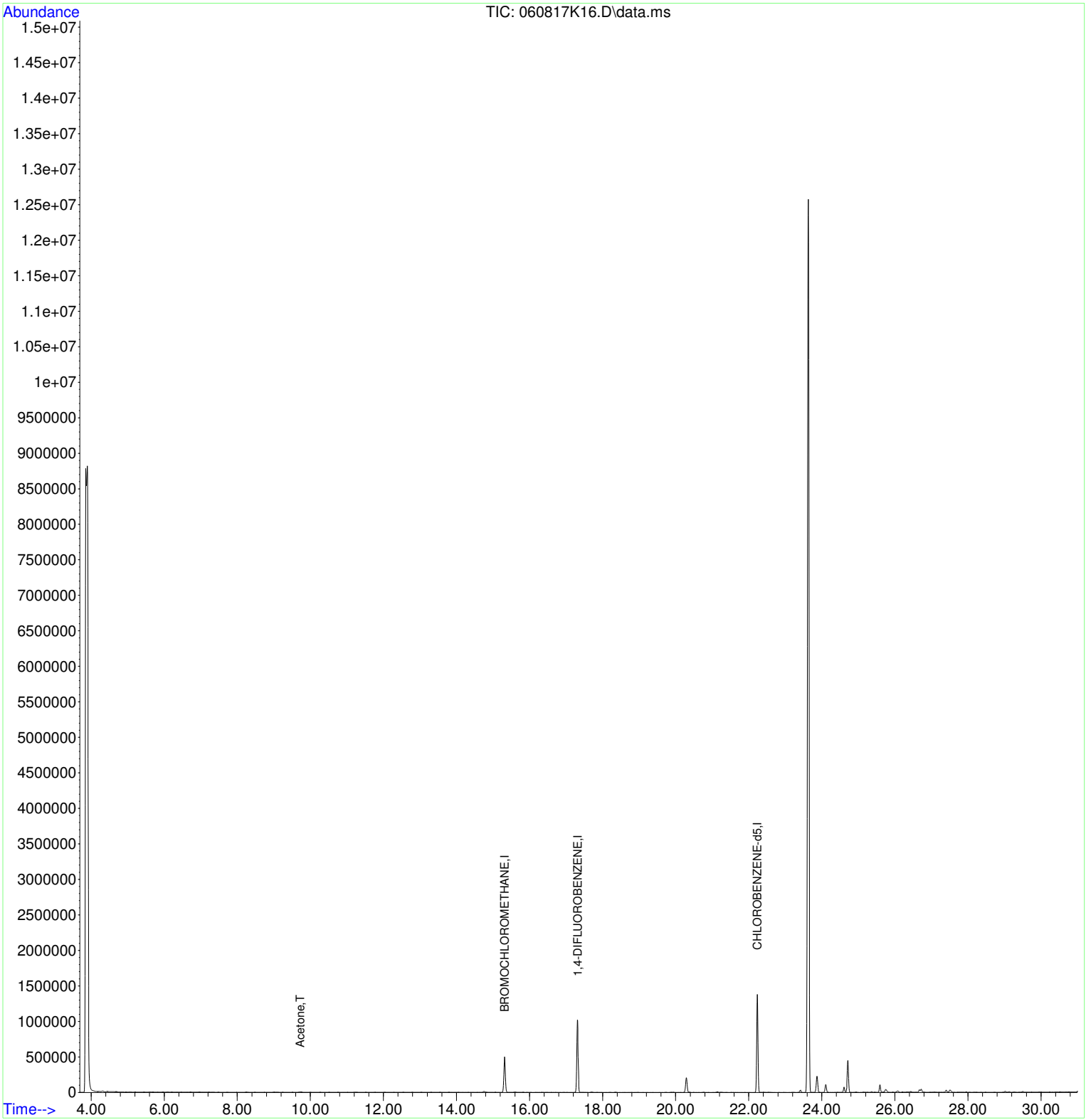
(#) = qualifier out of range (m) = manual integration (+) = signals summed

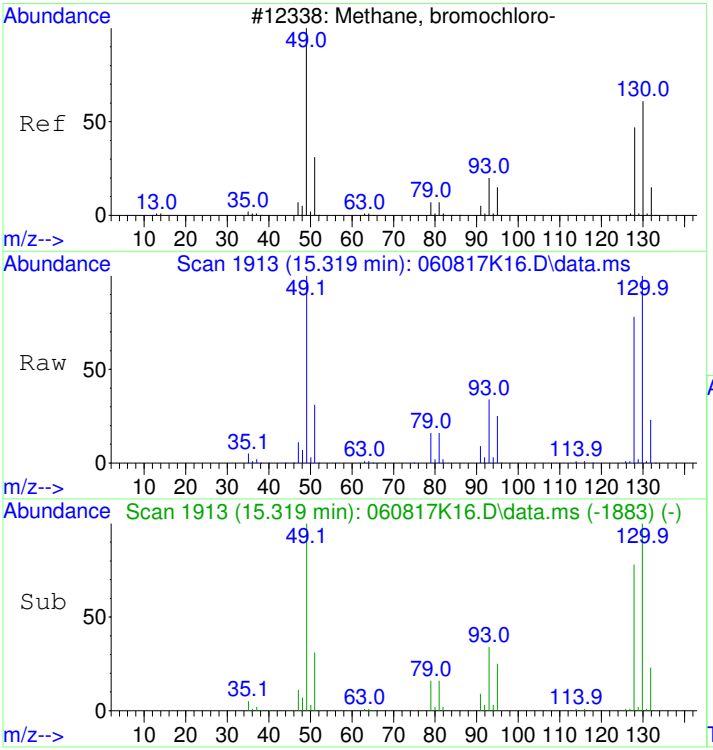
REVIEWED
By LLH at 10:22 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K16.D
InstName : HP5973K
Acq On : 8 Jun 2017 7:18 pm
Operator : LLH
Sample : 1706011-01
Misc : 200ml PH01-3ft CAN #631
ALS Vial : 19 Sample Multiplier: 2.17

Quant Time: Jun 09 09:23:52 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

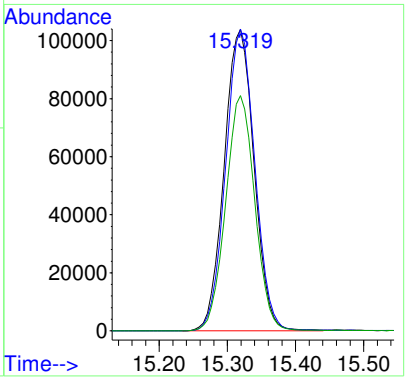


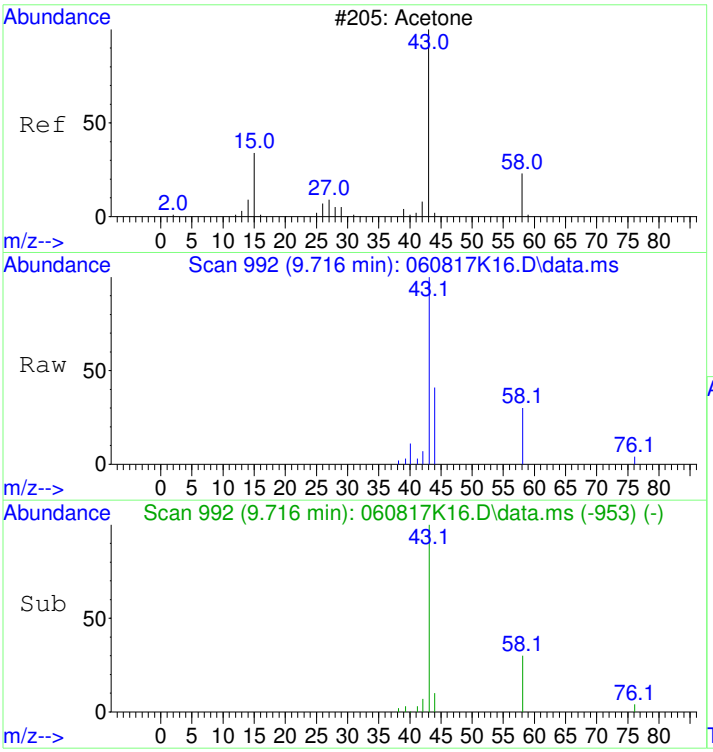


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K16.D
Acq: 8 Jun 2017 7:18 pm

Tgt Ion: 49 Resp: 315716

Ion	Ratio	Lower	Upper
49	100		
130	97.7	75.6	115.6
128	76.1	54.4	94.4

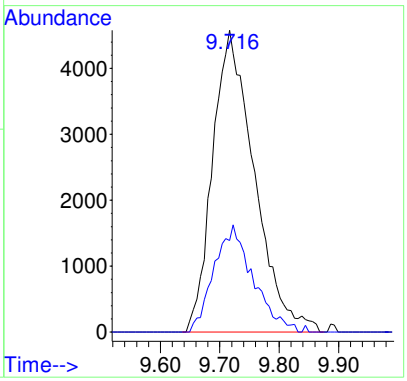


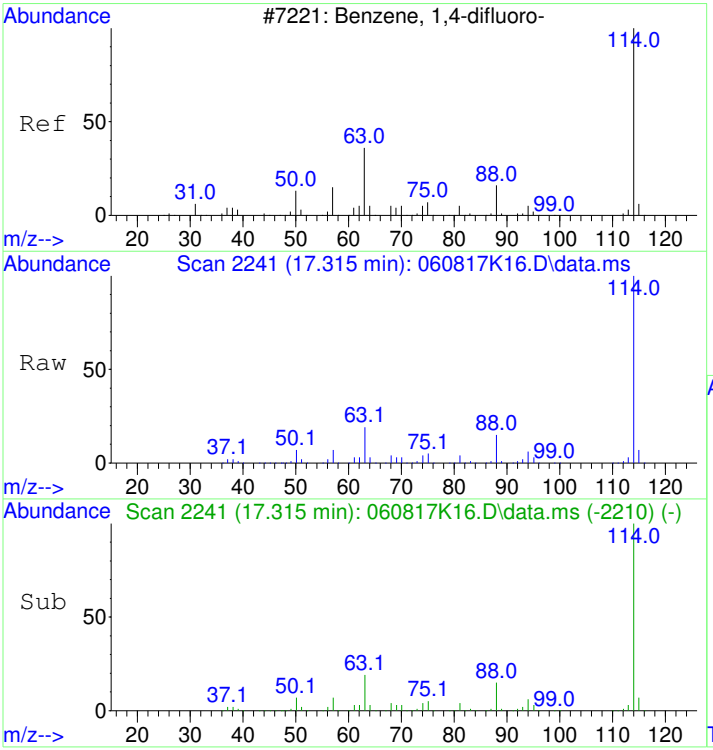


#14
Acetone
Concen: 1.47 ppbv
RT: 9.716 min Scan# 992
Delta R.T. 0.036 min
Lab File: 060817K16.D
Acq: 8 Jun 2017 7:18 pm

Tgt Ion: 43 Resp: 22338

Ion	Ratio	Lower	Upper
43	100		
58	33.1	12.0	52.0

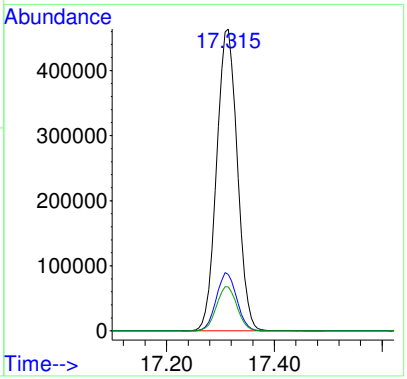


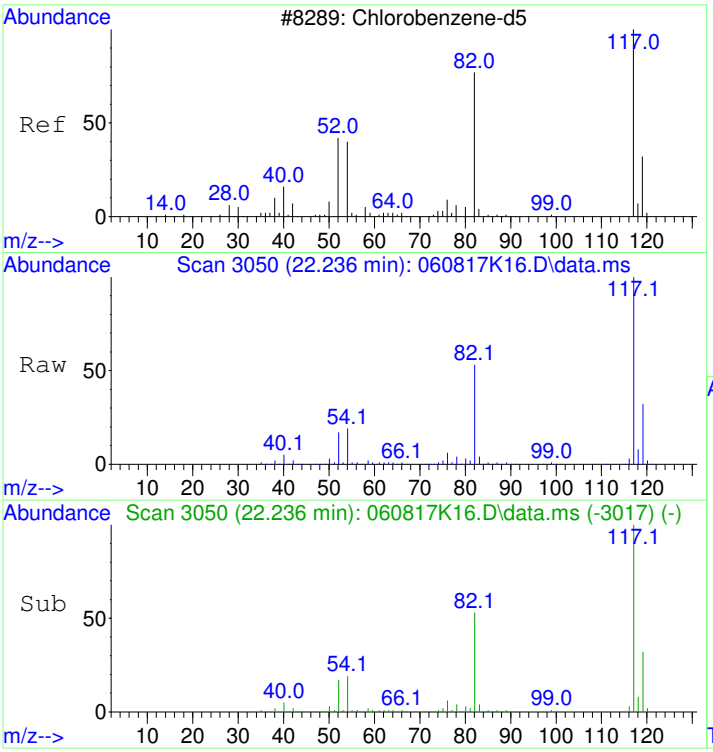


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K16.D
Acq: 8 Jun 2017 7:18 pm

Tgt Ion:114 Resp: 1237386

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.5	0.0	34.7

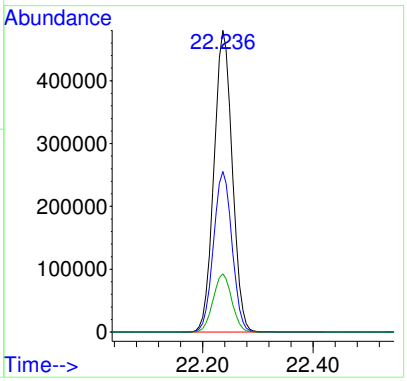




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K16.D
Acq: 8 Jun 2017 7:18 pm

Tgt Ion:117 Resp: 1104881

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.7	73.7
54	19.6	0.0	39.6



1706011-09

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K17.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:10 pm
Operator : LLH
Sample : 1706011-09
Misc : 200ml F6-006-4ft CAN #1107
ALS Vial : 10 Sample Multiplier: 2.07

REPORT

rerun 30ml repress for >LR

Quant Time: Jun 09 09:24:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) BROMOCHLOROMETHANE	15.319	49	326081	20.00	ppbv	0.00	
32) 1,4-DIFLUOROBENZENE	17.315	114	1262140	18.80	ppbv	0.00	
43) CHLOROBENZENE-d5	22.236	117	1124479	20.00	ppbv	0.00	
Target Compounds						Qvalue	
2) Propene	4.217	41	15225	1.89	ppbv	# 74	
6) Vinyl chloride	5.160	62	15914	1.48	ppbv	99	
12) 1,1,2-Trichloro-1,2,2-...	8.913	151	16701	0.75	ppbv	98	
13) 1,1-Dichloroethene	9.041	61	40923	2.39	ppbv	100	
14) Acetone	9.722	43	22838	1.45	ppbv	99	
15) Carbon disulfide	9.741	76	29534	0.84	ppbv	# 82	
18) Dichloromethane	11.219	49	18678	1.39	ppbv	99	
20) trans-1,2-Dichloroethene	11.900	61	27455	1.71	ppbv	99	
22) 1,1-Dichloroethane	13.293	63	38286	1.75	ppbv	100	
24) cis-1,2-Dichloroethene	14.766	61	366546	24.44	ppbv	99	OC
28) Chloroform	15.471	83	806984	30.39	ppbv	100	OC
30) 1,1,1-Trichloroethane	15.709	97	25452	0.90	ppbv	99	
37) Trichloroethene	17.704	130	1366591	77.35	ppbv	99	OC
40) Bromodichloromethane	18.720	83	35330	1.18	ppbv	99	
44) Toluene	19.937	91	24280	0.51	ppbv	98	
47) Tetrachloroethene	20.770	166	177512	6.99	ppbv	100	

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

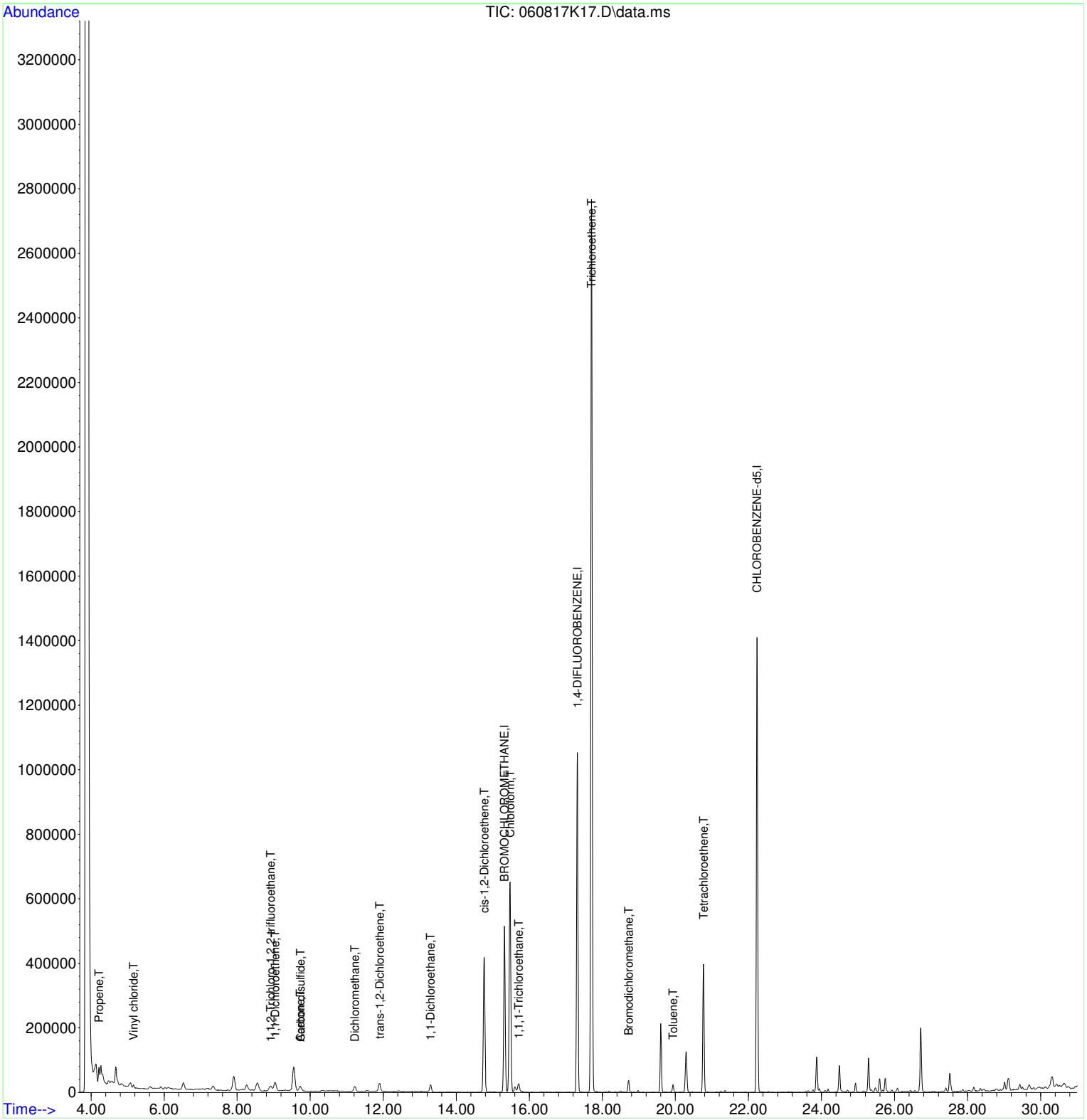
REVIEWED
By LLH at 10:36 am, Jun 09, 2017

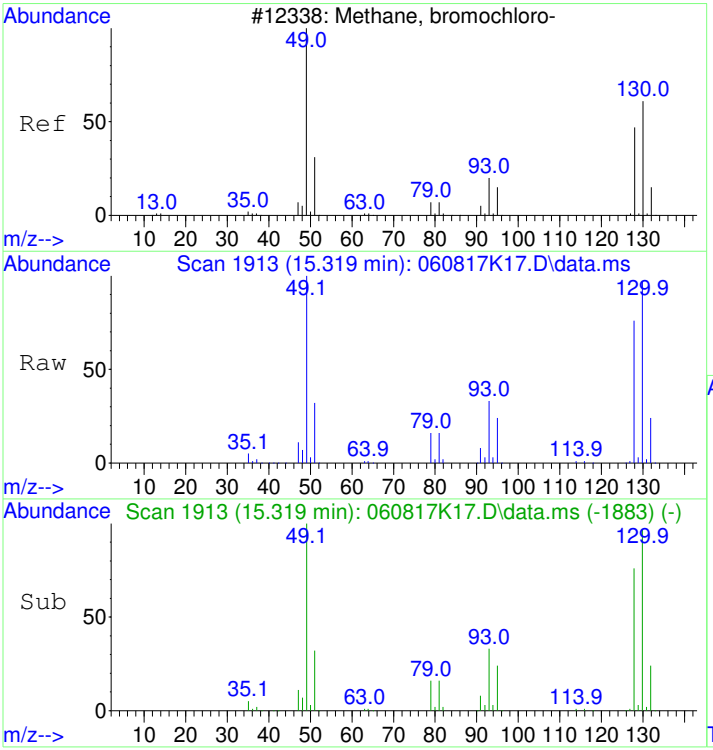
Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K17.D
InstName : HP5973K
Acq On : 8 Jun 2017 8:10 pm
Operator : LLH
Sample : 1706011-09
Misc : 200ml F6-006-4ft CAN #1107
ALS Vial : 10 Sample Multiplier: 2.07

Quant Time: Jun 09 09:24:03 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

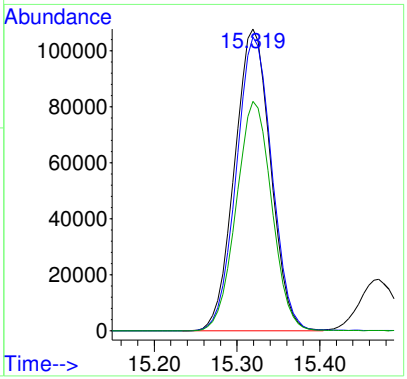


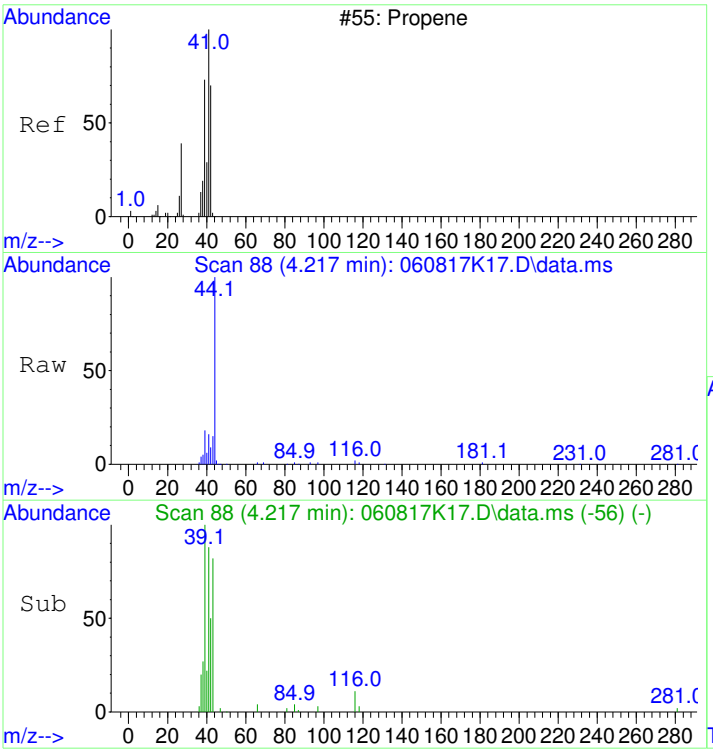


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 49 Resp: 326081

Ion	Ratio	Lower	Upper
49	100		
130	96.2	75.6	115.6
128	75.1	54.4	94.4

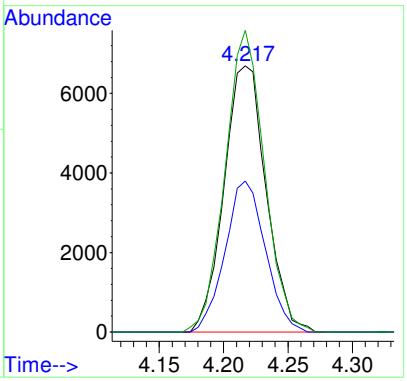


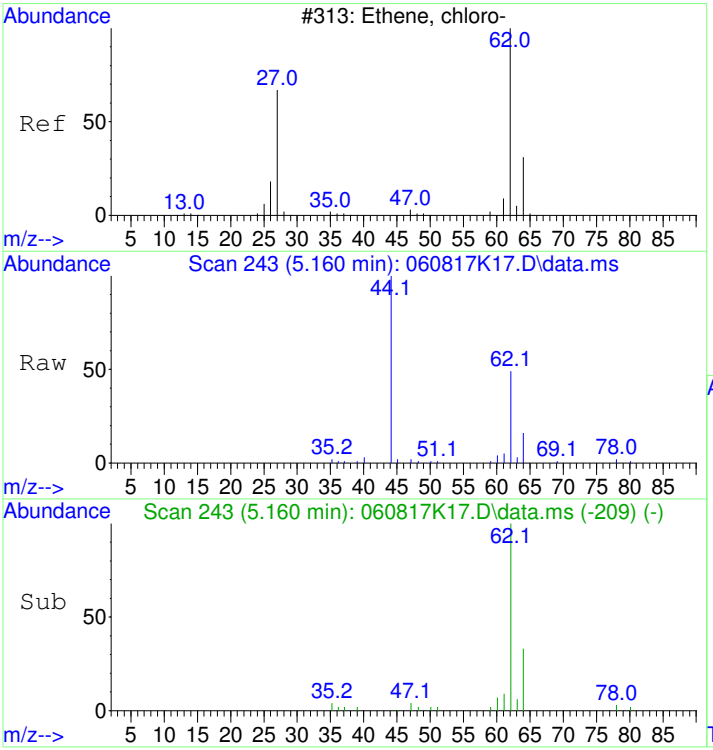


#2
Propene
Concen: 1.89 ppbv
RT: 4.217 min Scan# 88
Delta R.T. -0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 41 Resp: 15225

Ion	Ratio	Lower	Upper
41	100		
42	54.4	46.4	86.4
39	105.8	55.4	95.4#

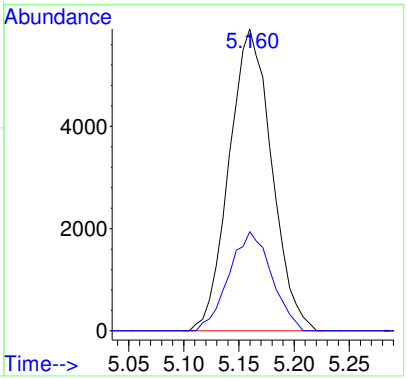


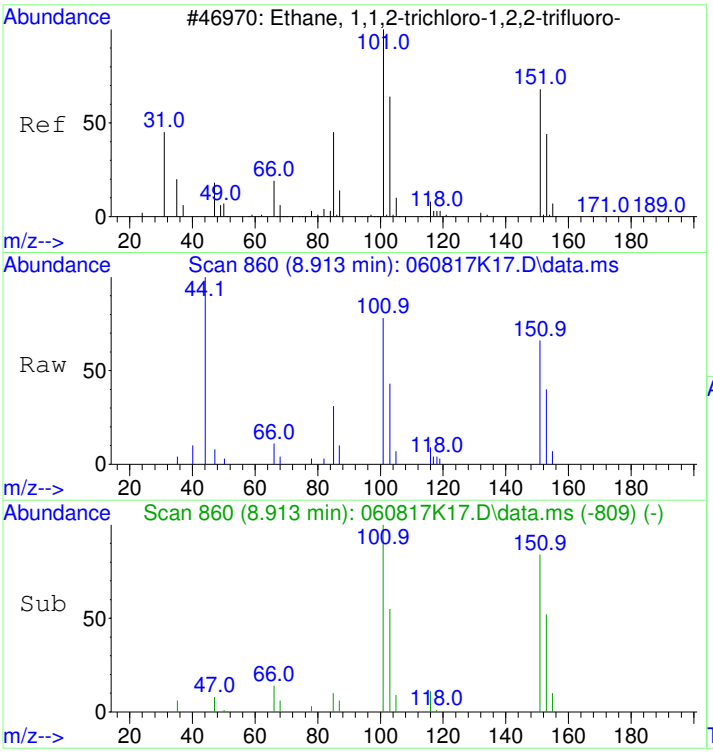


#6
Vinyl chloride
Concen: 1.48 ppbv
RT: 5.160 min Scan# 243
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 62 Resp: 15914

Ion	Ratio	Lower	Upper
62	100		
64	32.9	12.5	52.5

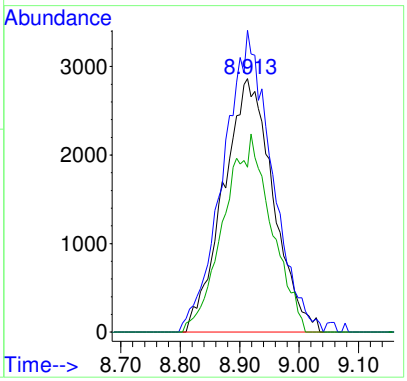


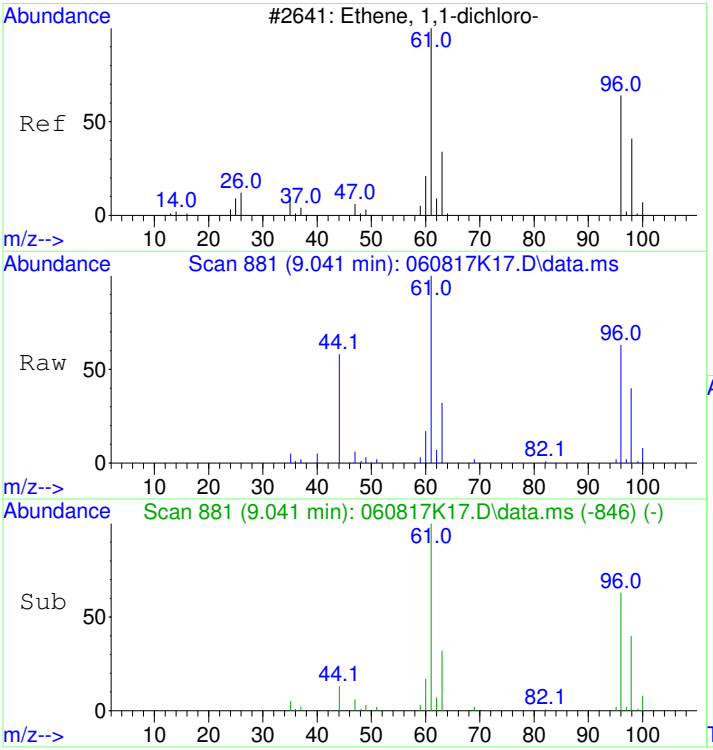


#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 0.75 ppbv
RT: 8.913 min Scan# 860
Delta R.T. 0.012 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion:151 Resp: 16701

Ion	Ratio	Lower	Upper
151	100		
101	115.9	97.8	137.8
103	74.4	55.7	95.7

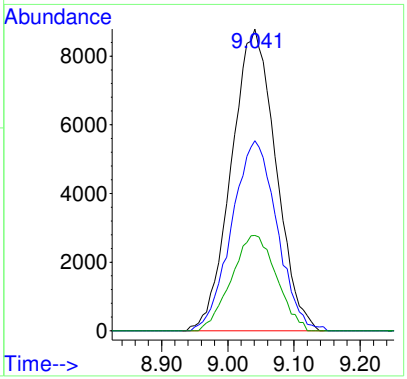


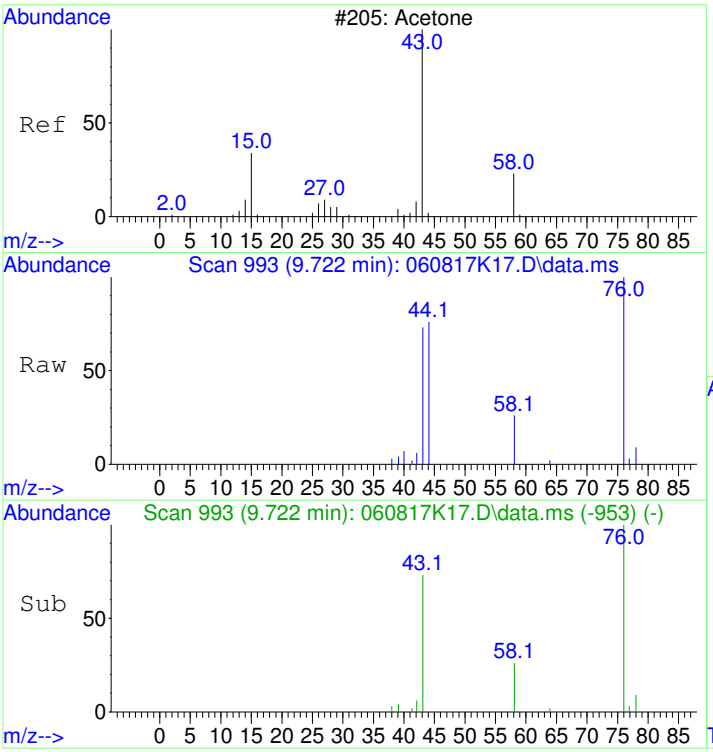


#13
1,1-Dichloroethene
Concen: 2.39 ppbv
RT: 9.041 min Scan# 881
Delta R.T. 0.012 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 61 Resp: 40923

Ion	Ratio	Lower	Upper
61	100		
96	64.2	43.8	83.8
63	32.1	12.4	52.4

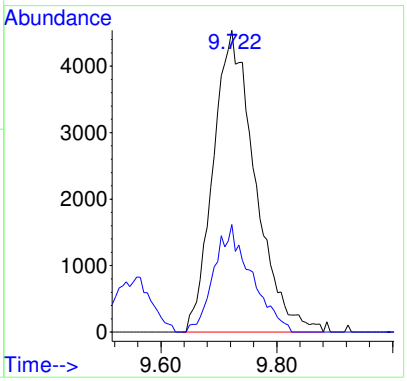


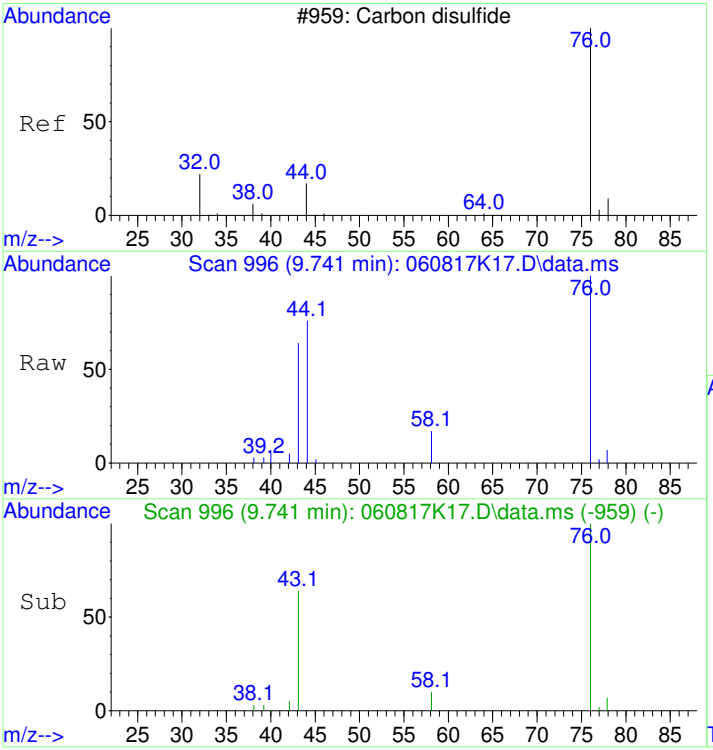


#14
Acetone
Concen: 1.45 ppbv
RT: 9.722 min Scan# 993
Delta R.T. 0.043 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 43 Resp: 22838

Ion	Ratio	Lower	Upper
43	100		
58	31.6	12.0	52.0

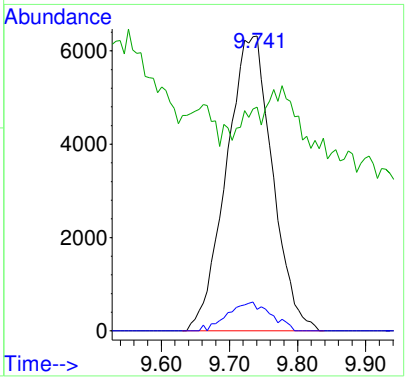




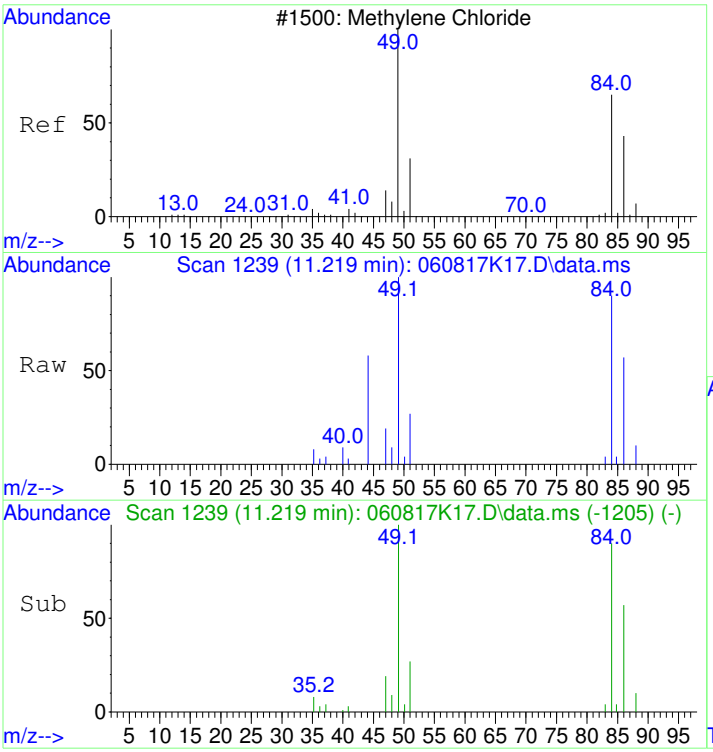
#15
Carbon disulfide
Concen: 0.84 ppbv
RT: 9.741 min Scan# 996
Delta R.T. 0.024 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 76 Resp: 29534

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	29.0
44	0.0	0.0	32.4



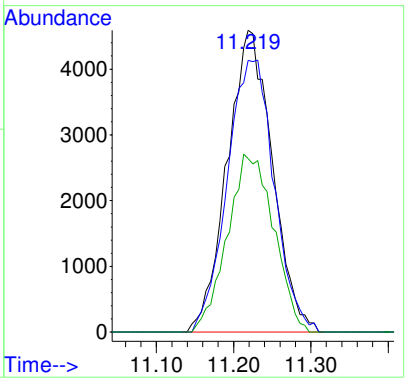
ok

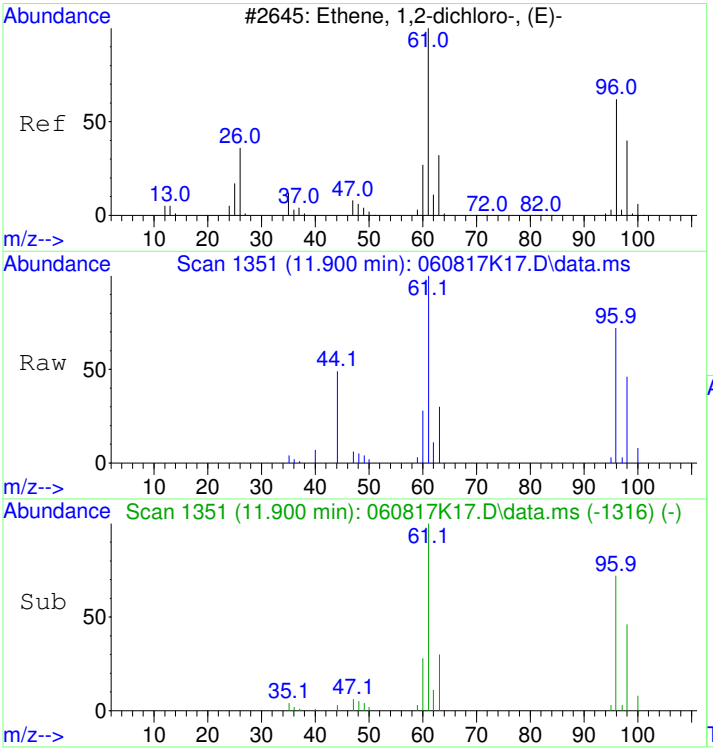


#18
Dichloromethane
Concen: 1.39 ppbv
RT: 11.219 min Scan# 1239
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 49 Resp: 18678

Ion	Ratio	Lower	Upper
49	100		
84	93.6	74.2	114.2
86	60.4	41.1	81.1

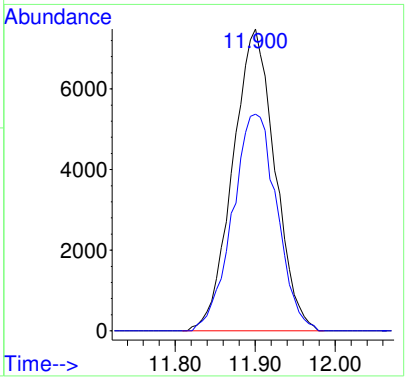


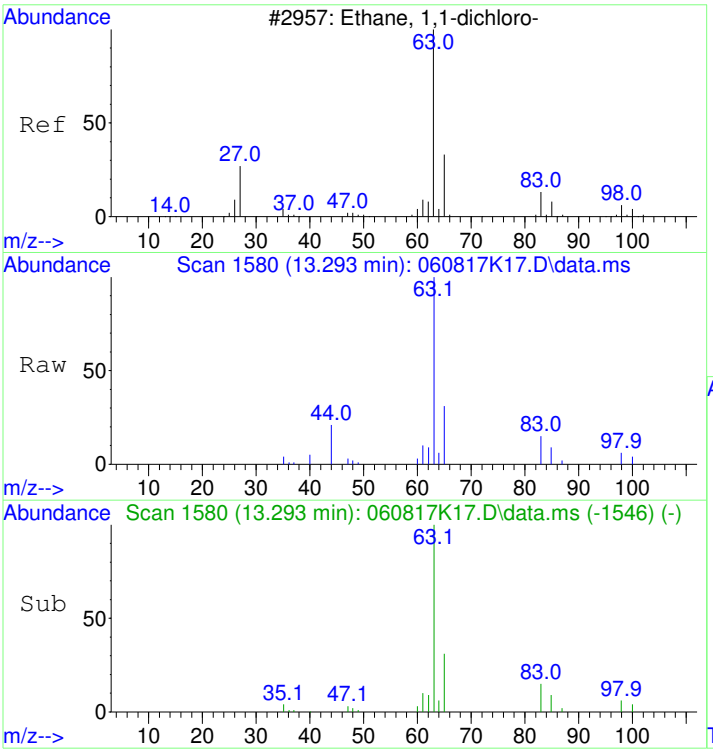


#20
trans-1,2-Dichloroethene
Concen: 1.71 ppbv
RT: 11.900 min Scan# 1351
Delta R.T. 0.012 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 61 Resp: 27455

Ion	Ratio	Lower	Upper
61	100		
96	75.5	56.8	96.8

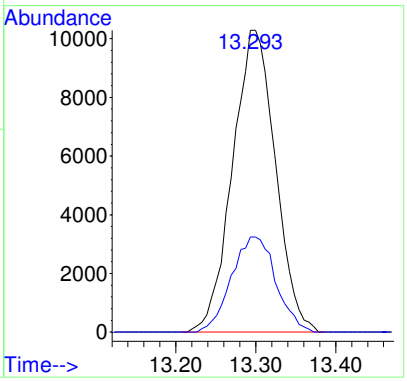


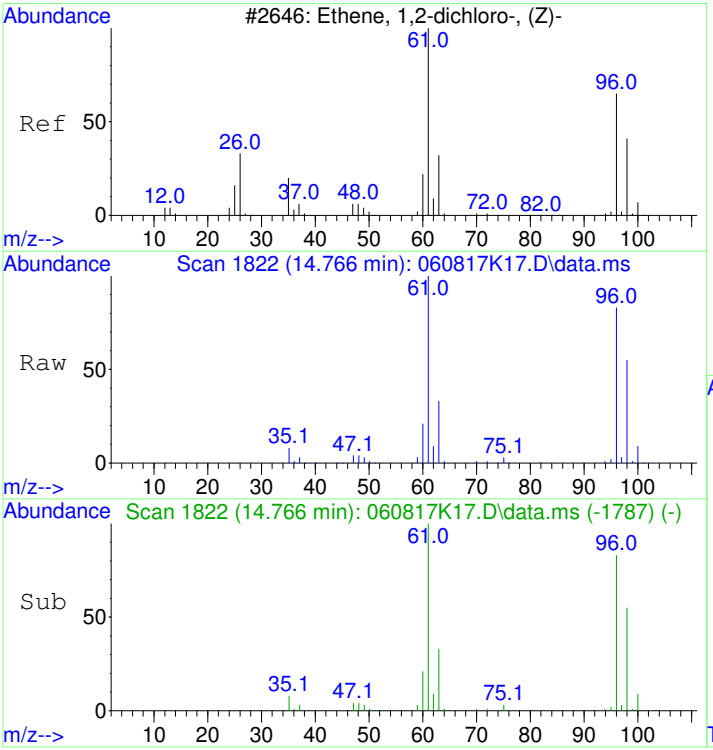


#22
1,1-Dichloroethane
Concen: 1.75 ppbv
RT: 13.293 min Scan# 1580
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 63 Resp: 38286

Ion	Ratio	Lower	Upper
63	100		
65	32.7	12.5	52.5

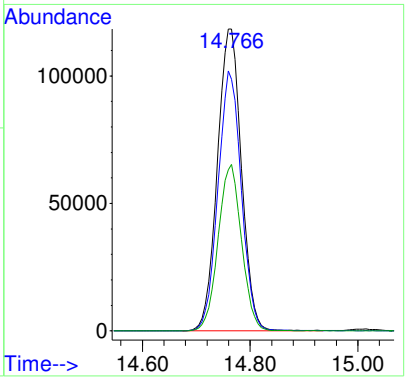


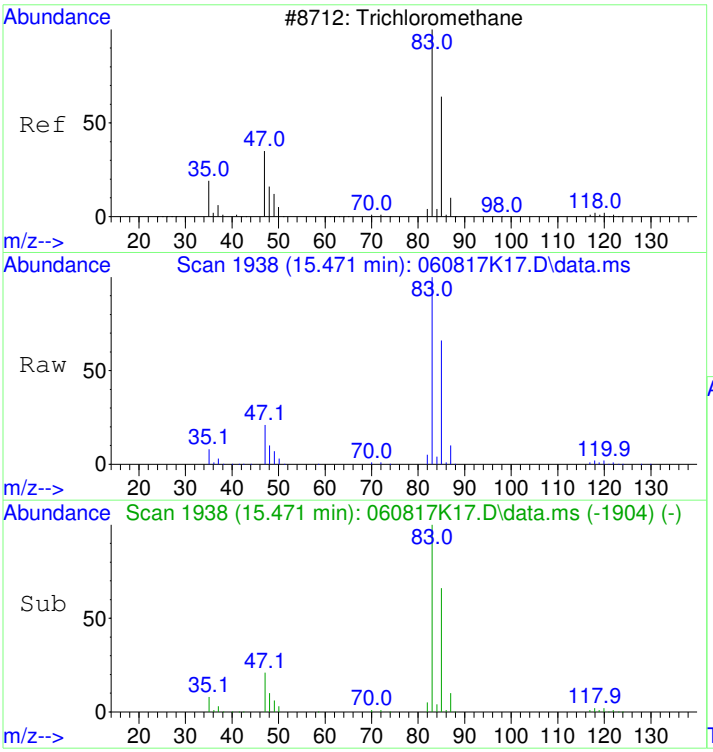


#24
cis-1,2-Dichloroethene
Concen: 24.44 ppbv
RT: 14.766 min Scan# 1822
Delta R.T. 0.012 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 61 Resp: 366546

Ion	Ratio	Lower	Upper
61	100		
96	83.6	64.3	104.3
98	53.6	33.1	73.1

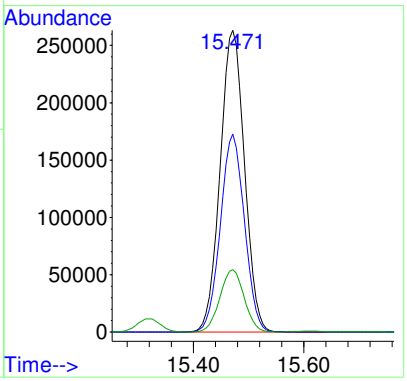


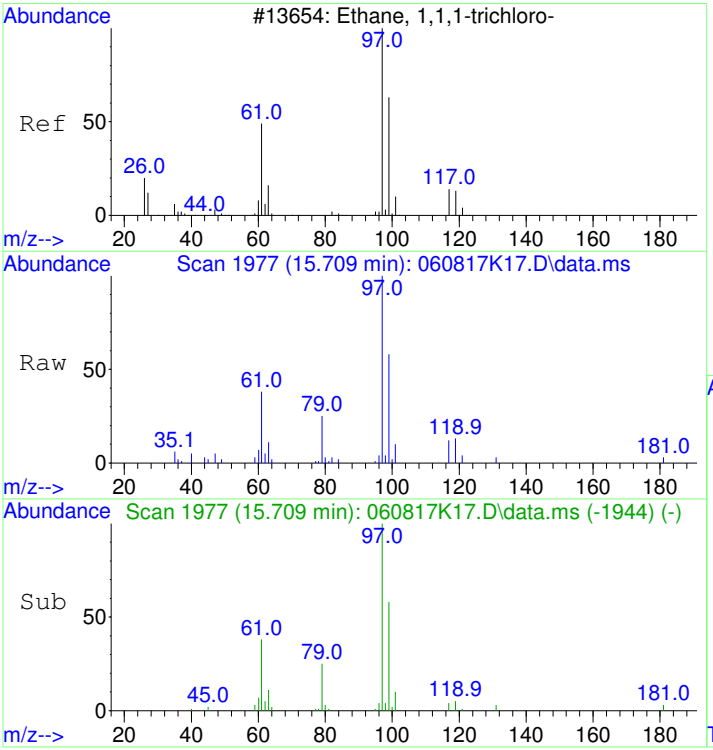


#28
Chloroform
Concen: 30.39 ppbv
RT: 15.471 min Scan# 1938
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 83 Resp: 806984

Ion	Ratio	Lower	Upper
83	100		
85	64.8	45.0	85.0
47	20.6	0.8	40.8

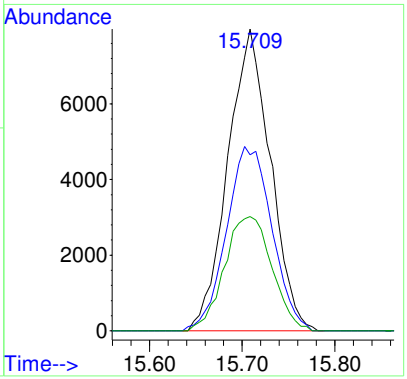


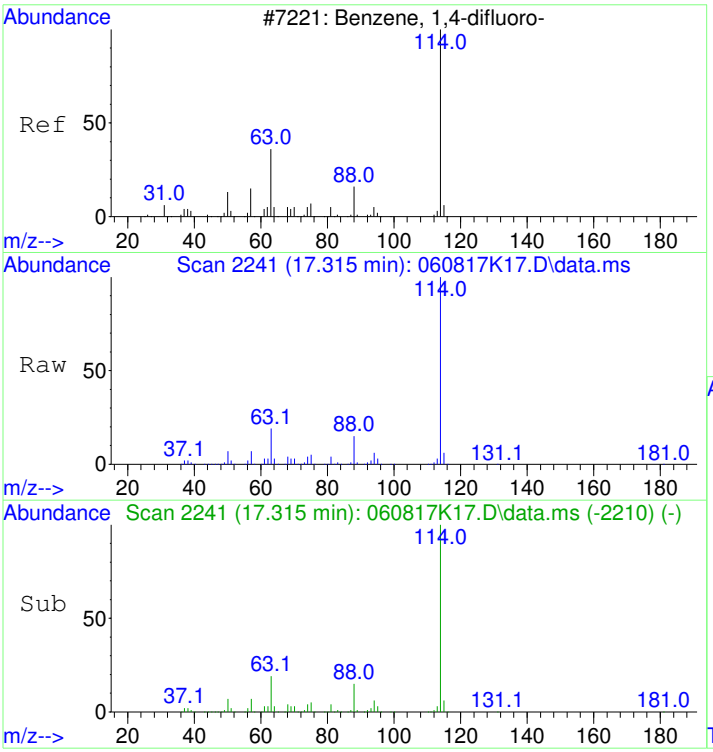


#30
1,1,1-Trichloroethane
Concen: 0.90 ppbv
RT: 15.709 min Scan# 1977
Delta R.T. -0.000 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 97 Resp: 25452

Ion	Ratio	Lower	Upper
97	100		
99	65.2	44.3	84.3
61	42.1	21.1	61.1

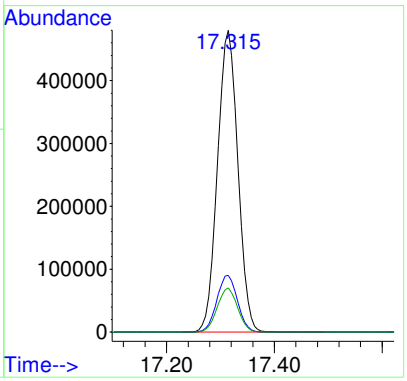


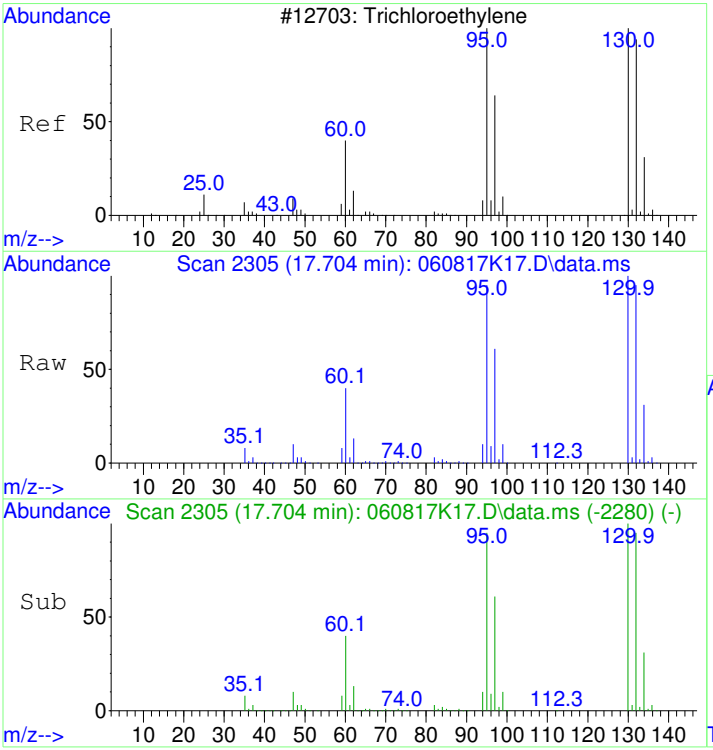


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion:114 Resp: 1262140

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.6	0.0	34.7

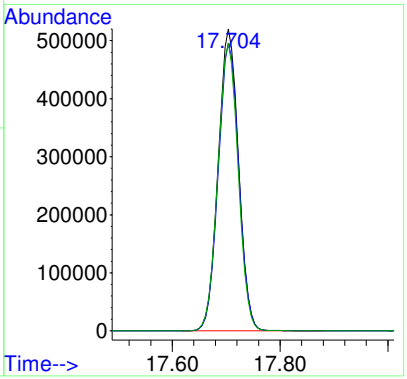


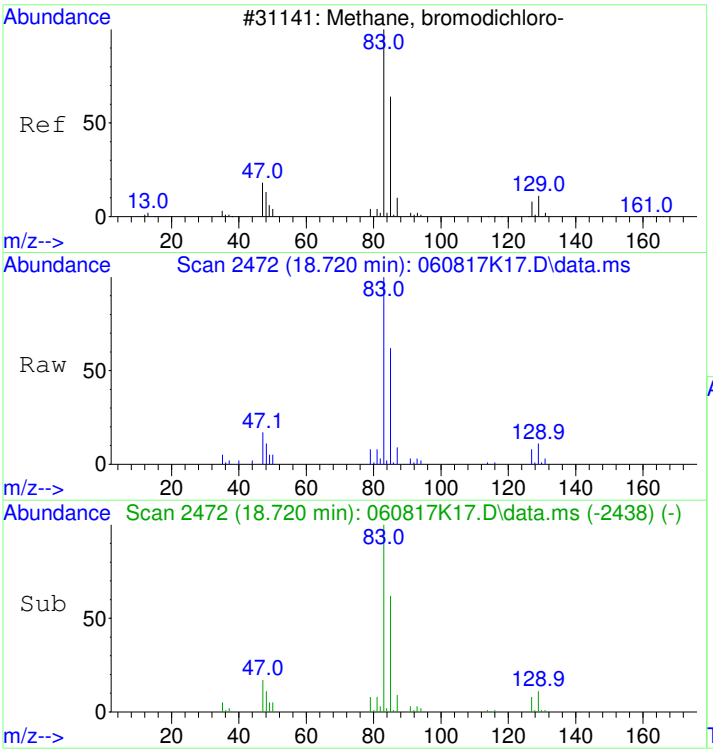


#37
Trichloroethene
Concen: 77.35 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion:130 Resp: 1366591

Ion	Ratio	Lower	Upper
130	100		
132	95.9	75.8	115.8
95	94.9	73.6	113.6

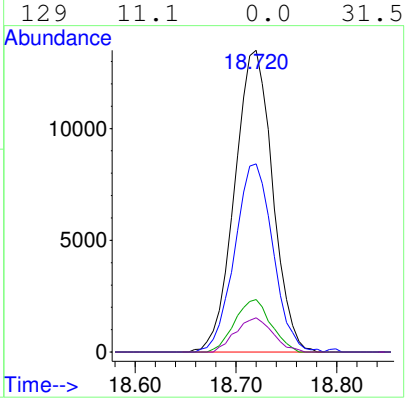


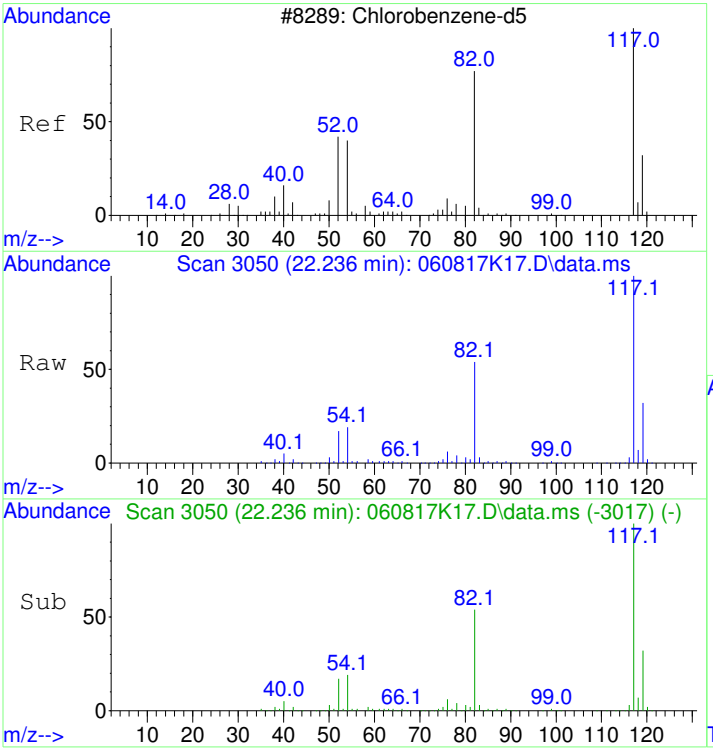


#40
Bromodichloromethane
Concen: 1.18 ppbv
RT: 18.720 min Scan# 2472
Delta R.T. 0.006 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 83 Resp: 35330

Ion	Ratio	Lower	Upper
83	100		
85	62.8	43.9	83.9
47	16.6	0.0	36.3
129	11.1	0.0	31.5

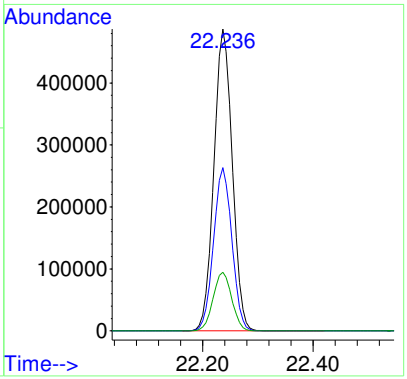


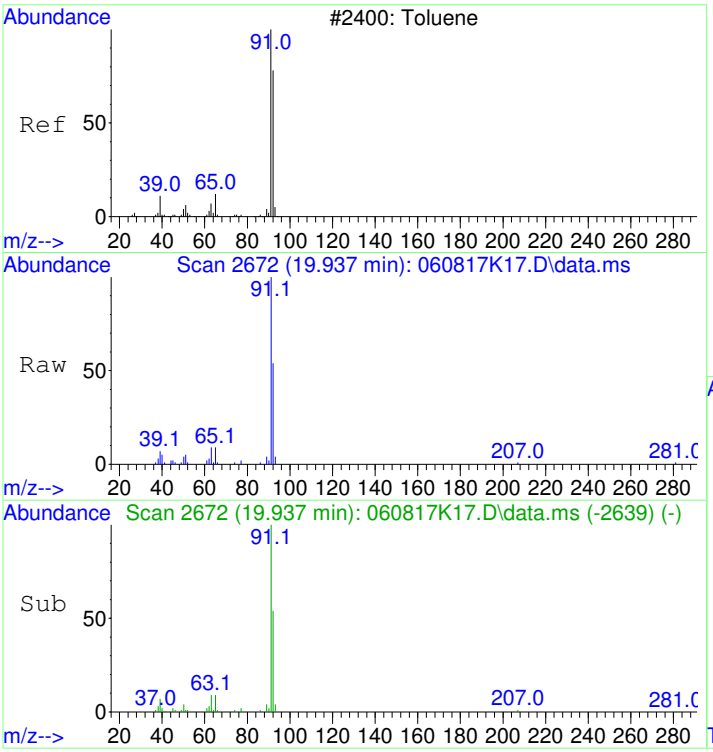


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion:117 Resp: 1124479

Ion	Ratio	Lower	Upper
117	100		
82	54.0	33.7	73.7
54	19.7	0.0	39.6

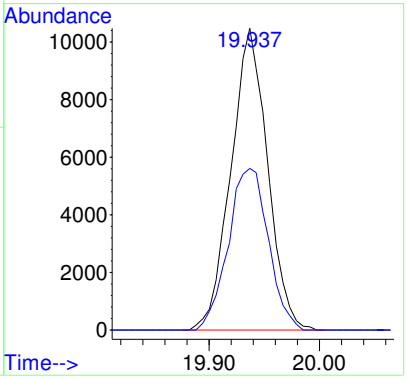


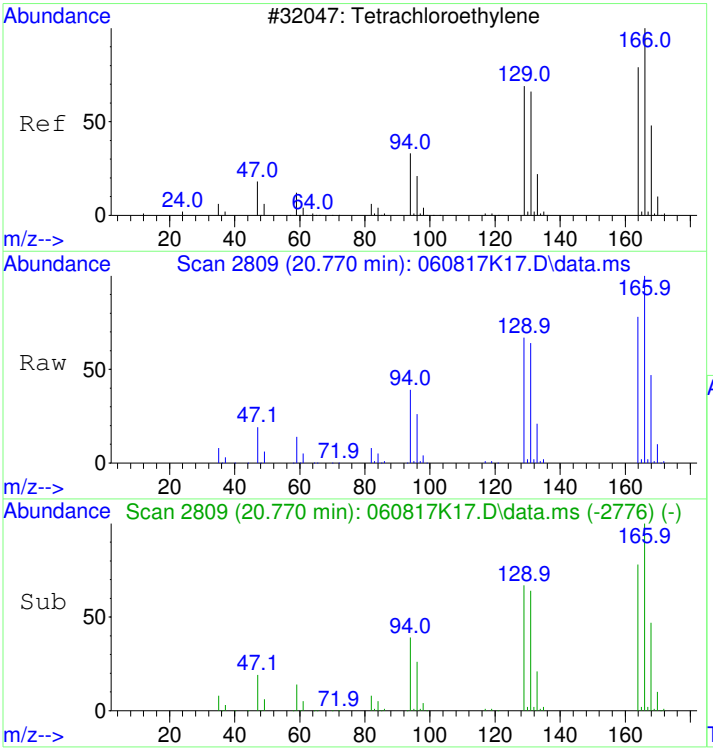


#44
Toluene
Concen: 0.51 ppbv
RT: 19.937 min Scan# 2672
Delta R.T. -0.000 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion: 91 Resp: 24280

Ion	Ratio	Lower	Upper
91	100		
92	58.6	39.8	79.8

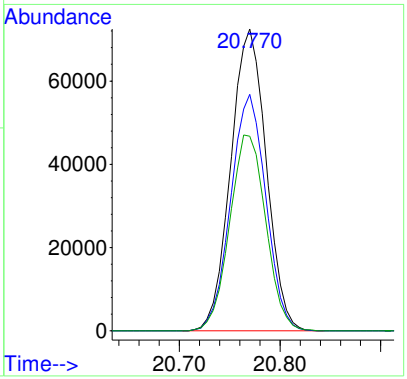




#47
Tetrachloroethene
Concen: 6.99 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. -0.000 min
Lab File: 060817K17.D
Acq: 8 Jun 2017 8:10 pm

Tgt Ion:166 Resp: 177512

Ion	Ratio	Lower	Upper
166	100		
164	77.7	57.9	97.9
131	66.0	46.1	86.1



1706011-10

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K18.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:01 pm
Operator : LLH
Sample : 1706011-10
Misc : 200ml F6-008-3ft CAN #649
ALS Vial : 11 Sample Multiplier: 2.1

REPORT

rerun 30ml repress for >LR

Quant Time: Jun 09 09:24:18 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)		
Internal Standards								
1) BROMOCHLOROMETHANE	15.319	49	333902	20.00	ppbv	0.00		
32) 1,4-DIFLUOROBENZENE	17.314	114	1286638	18.80	ppbv	0.00		
43) CHLOROBENZENE-d5	22.236	117	1156731	20.00	ppbv	0.00		
Target Compounds						Qvalue		
2) Propene	4.217	41	21629	2.63	ppbv	# 72		
5) Chloromethane	4.855	50	6935	0.66	ppbv	98		
6) Vinyl chloride	5.159	62	18881	1.71	ppbv	96		
12) 1,1,2-Trichloro-1,2,2-...	8.919	151	20758	0.91	ppbv	98		
13) 1,1-Dichloroethene	9.041	61	49744	2.84	ppbv	99		
14) Acetone	9.704	43	165660	10.28	ppbv	100		
15) Carbon disulfide	9.734	76	50892	1.42	ppbv	# 68		
16) 2-Propanol	10.331	45	34111	2.80	ppbv	91		
18) Dichloromethane	11.231	49	23918	1.74	ppbv	99		
20) trans-1,2-Dichloroethene	11.900	61	33443	2.04	ppbv	98		
22) 1,1-Dichloroethane	13.293	63	46085	2.06	ppbv	100		
24) cis-1,2-Dichloroethene	14.759	61	431981	28.12	ppbv	99	oc	
28) Chloroform	15.471	83	1244143	45.75	ppbv	100	oc	
30) 1,1,1-Trichloroethane	15.708	97	33441	1.15	ppbv	99		
37) Trichloroethene	17.704	130	1721283	95.57	ppbv	99	oc	
40) Bromodichloromethane	18.720	83	57278	1.87	ppbv	99		
44) Toluene	19.936	91	83288	1.70	ppbv	100		
47) Tetrachloroethene	20.770	166	217491	8.33	ppbv	100		

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

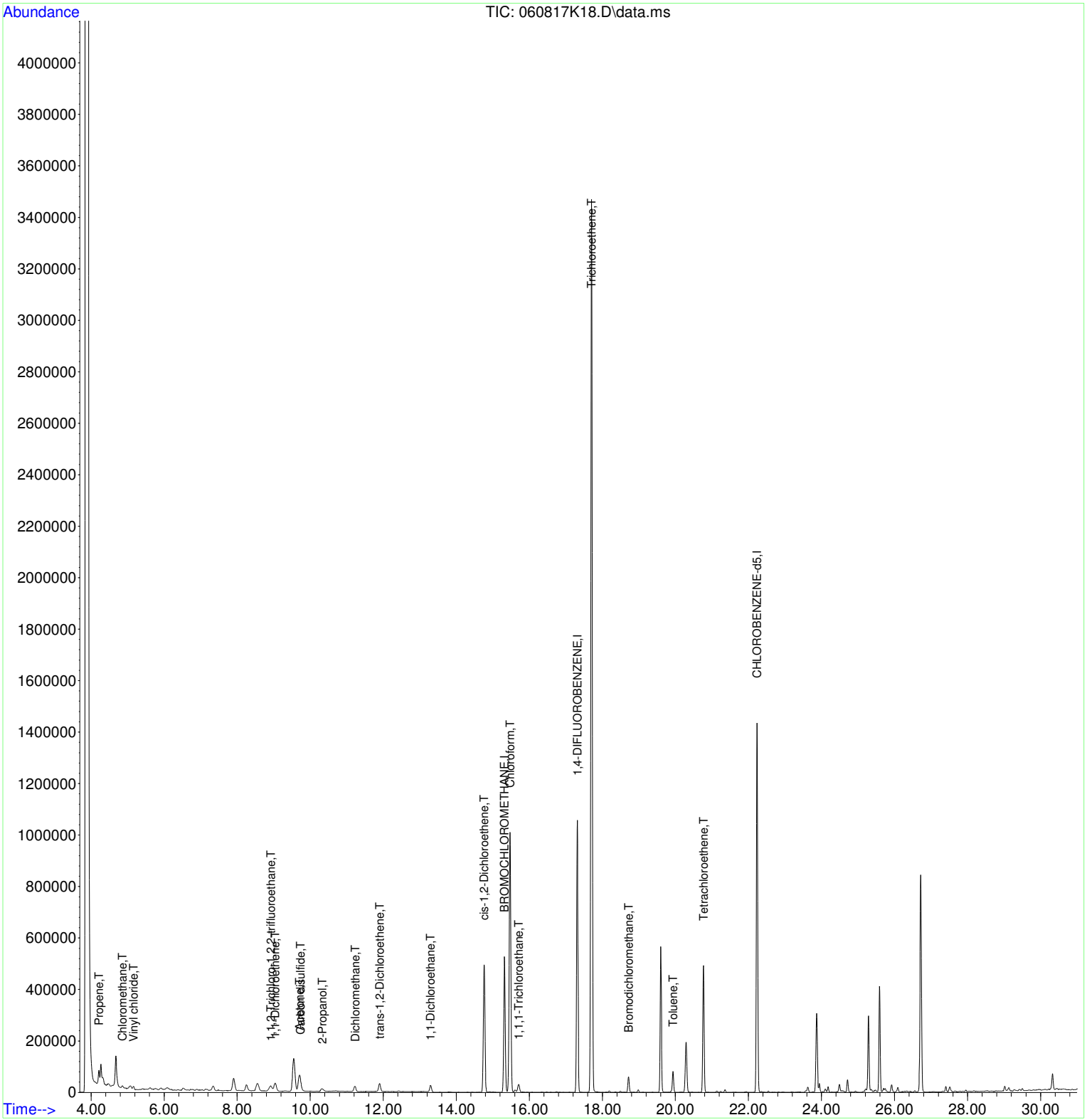
REVIEWED
By LLH at 10:44 am, Jun 09, 2017

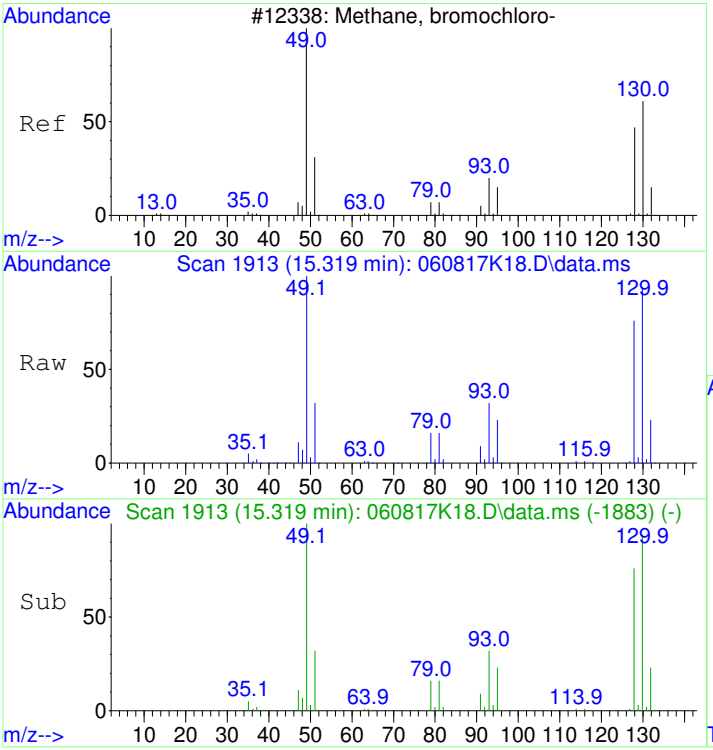
Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K18.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:01 pm
Operator : LLH
Sample : 1706011-10
Misc : 200ml F6-008-3ft CAN #649
ALS Vial : 11 Sample Multiplier: 2.1

Quant Time: Jun 09 09:24:18 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

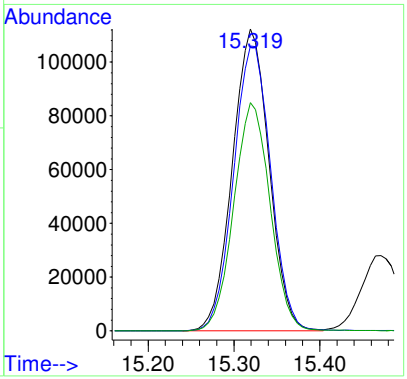


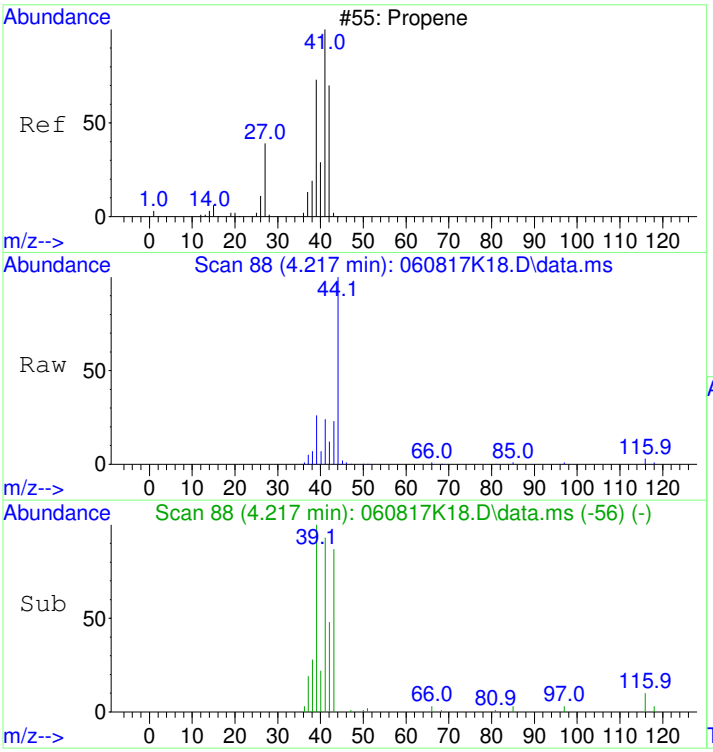


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 49 Resp: 333902

Ion	Ratio	Lower	Upper
49	100		
130	96.0	75.6	115.6
128	75.0	54.4	94.4

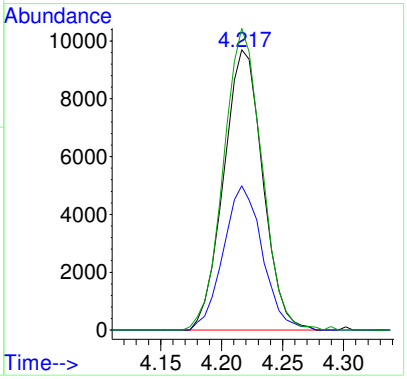


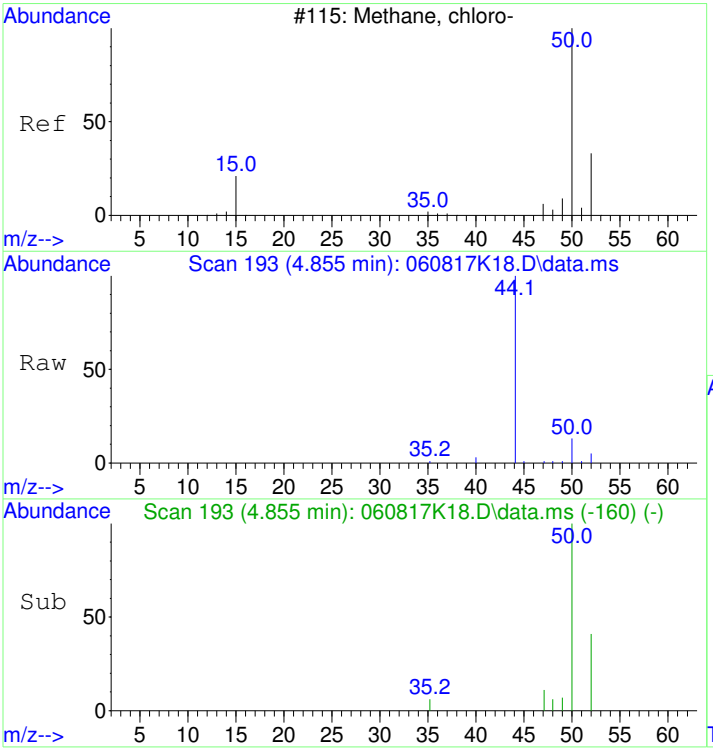


#2
Propene
Concen: 2.63 ppbv
RT: 4.217 min Scan# 88
Delta R.T. -0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 41 Resp: 21629

Ion	Ratio	Lower	Upper
41	100		
42	51.5	46.4	86.4
39	105.6	55.4	95.4#

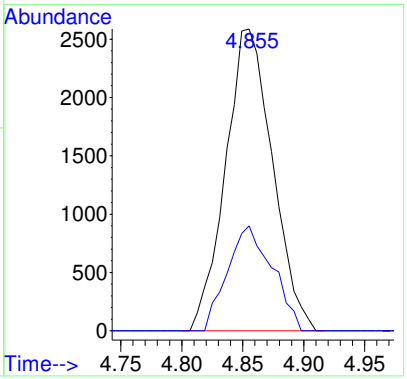




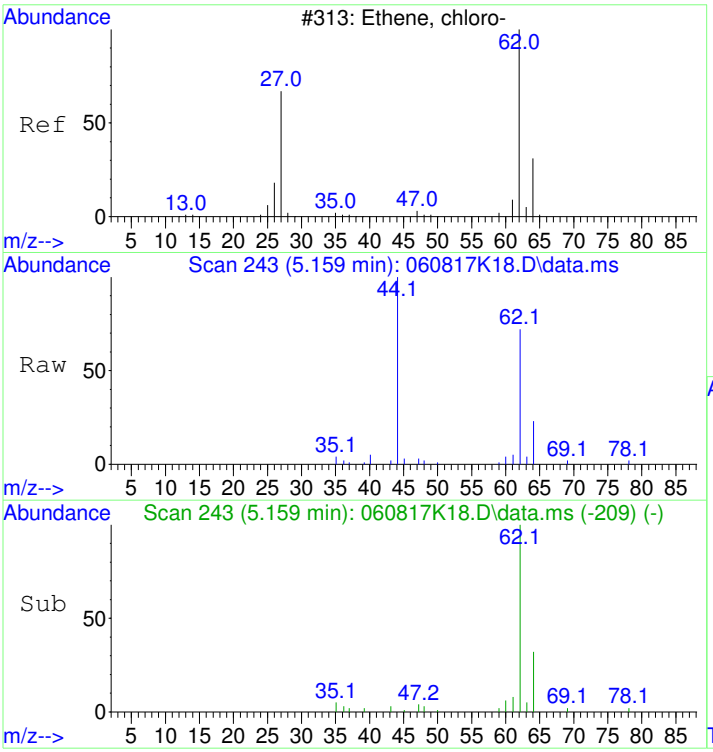
#5
Chloromethane
Concen: 0.66 ppbv
RT: 4.855 min Scan# 193
Delta R.T. -0.000 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 50 Resp: 6935

Ion	Ratio	Lower	Upper
50	100		
52	33.1	12.0	52.0



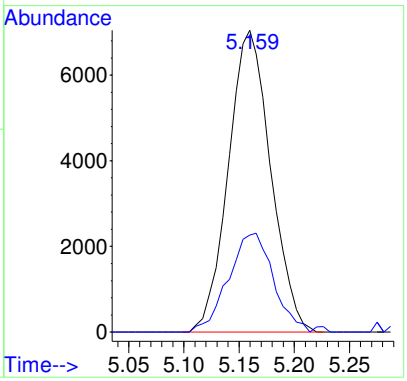
ok

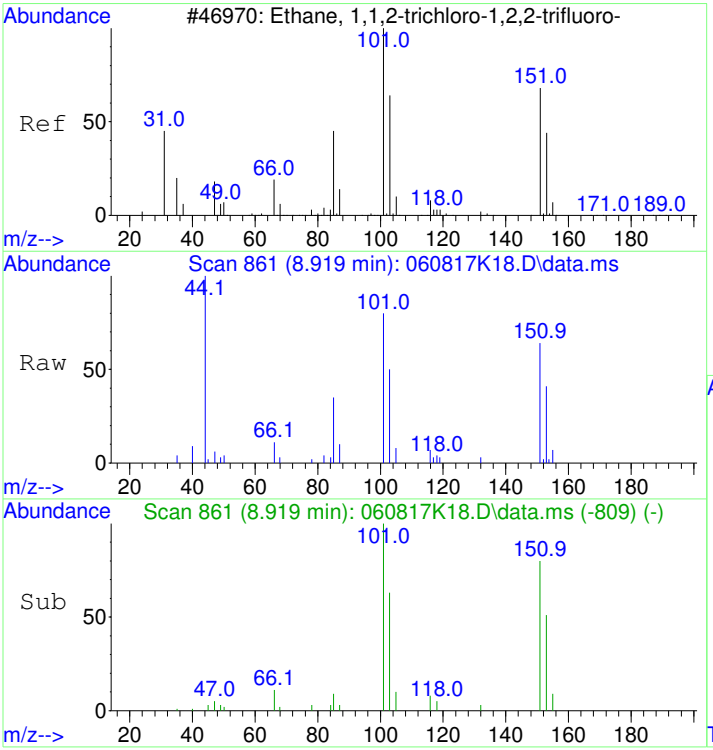


#6
Vinyl chloride
Concen: 1.71 ppbv
RT: 5.159 min Scan# 243
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 62 Resp: 18881

Ion	Ratio	Lower	Upper
62	100		
64	34.7	12.5	52.5

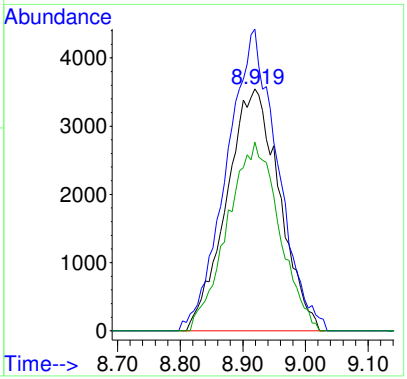


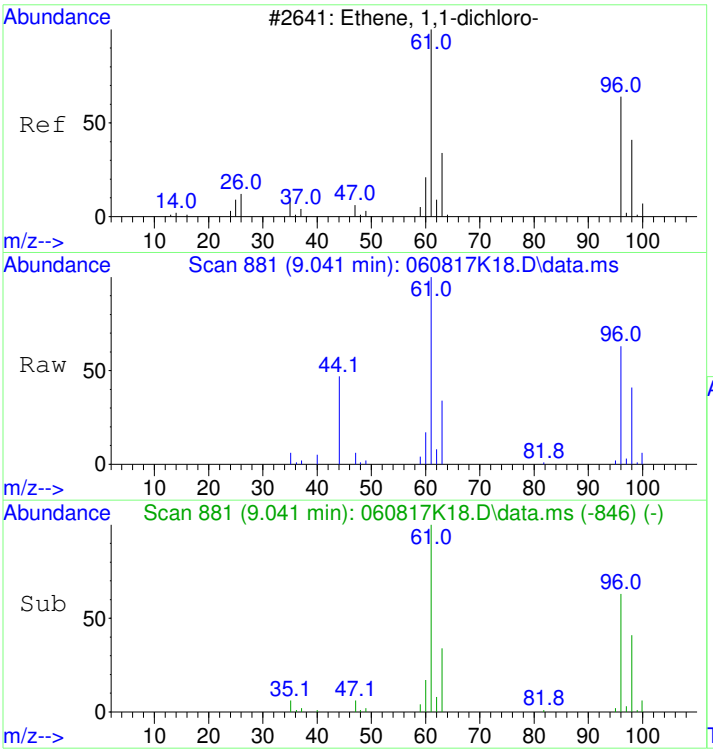


#12
1,1,2-Trichloro-1,2,2-trifluoroetnane
Concen: 0.91 ppbv
RT: 8.919 min Scan# 861
Delta R.T. 0.018 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion:151 Resp: 20758

Ion	Ratio	Lower	Upper
151	100		
101	120.7	97.8	137.8
103	76.6	55.7	95.7

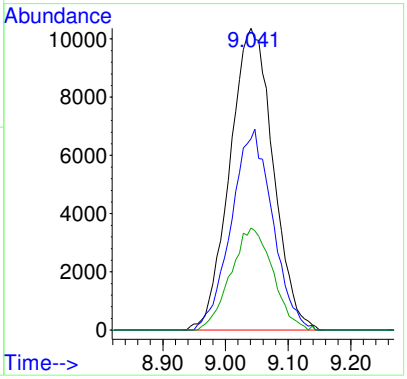


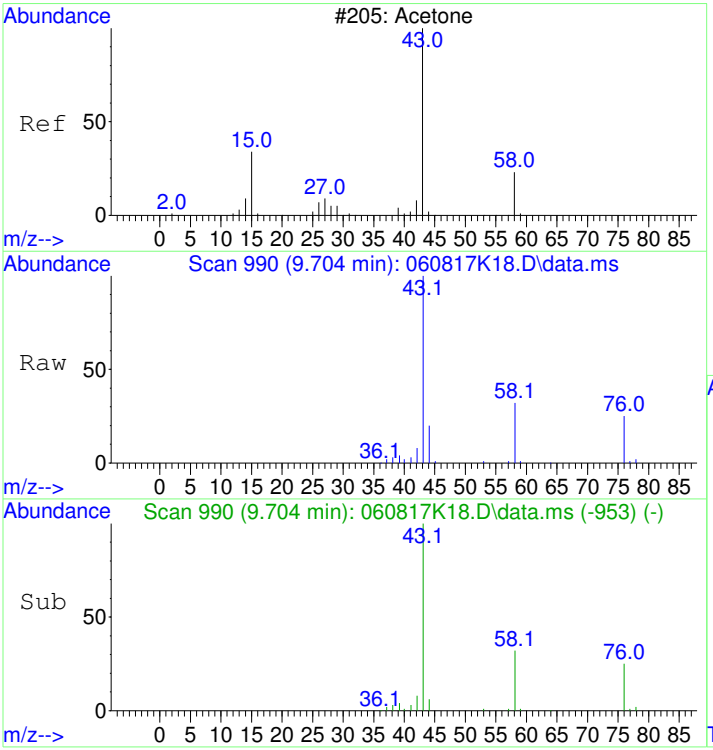


#13
1,1-Dichloroethene
Concen: 2.84 ppbv
RT: 9.041 min Scan# 881
Delta R.T. 0.012 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 61 Resp: 49744

Ion	Ratio	Lower	Upper
61	100		
96	63.4	43.8	83.8
63	32.9	12.4	52.4

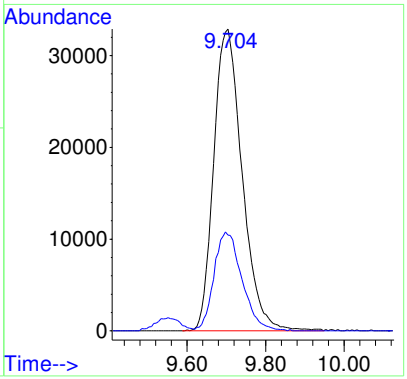


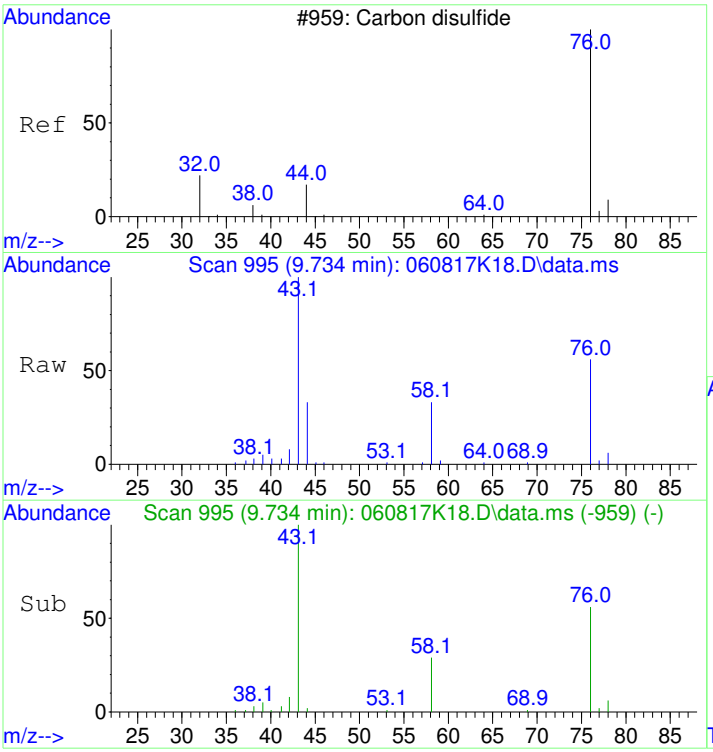


#14
Acetone
Concen: 10.28 ppbv
RT: 9.704 min Scan# 990
Delta R.T. 0.024 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 43 Resp: 165660

Ion	Ratio	Lower	Upper
43	100		
58	32.2	12.0	52.0



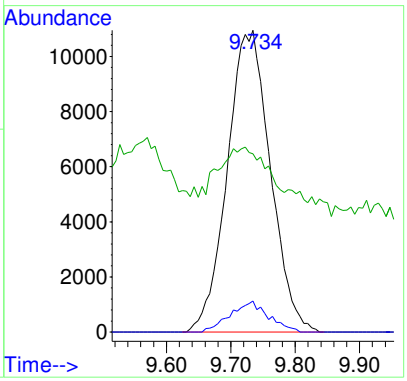


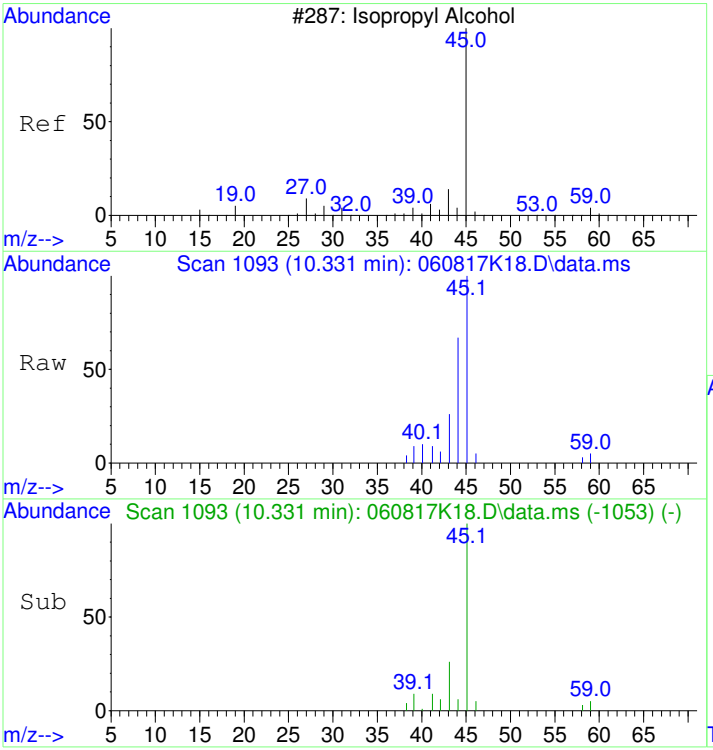
#15
Carbon disulfide
Concen: 1.42 ppbv
RT: 9.734 min Scan# 995
Delta R.T. 0.018 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 76 Resp: 50892

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	29.0
44	33.8	0.0	32.4#

ok

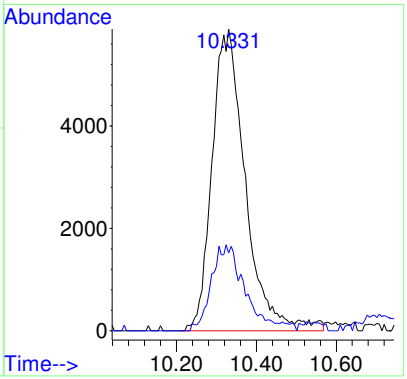


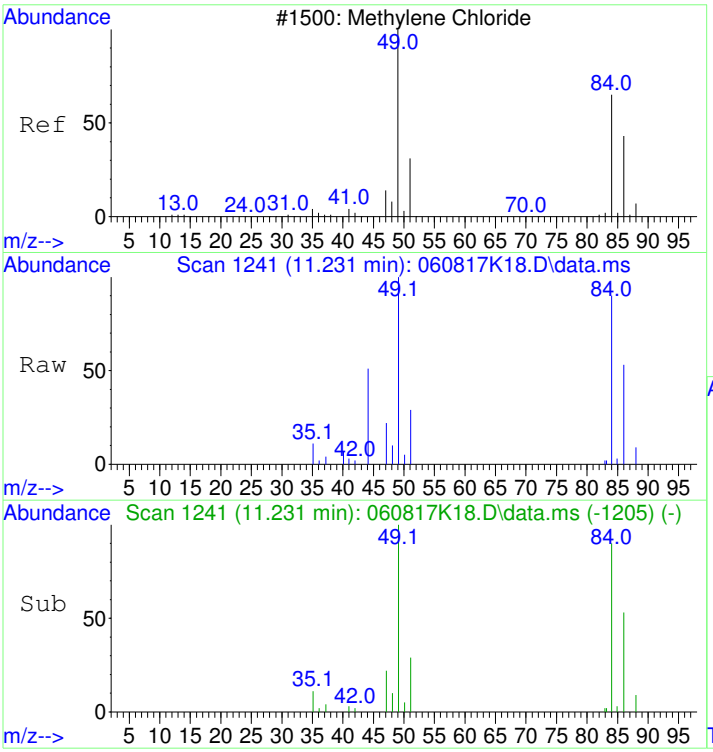


#16
2-Propanol
Concen: 2.80 ppbv
RT: 10.331 min Scan# 1093
Delta R.T. 0.042 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 45 Resp: 34111

Ion	Ratio	Lower	Upper
45	100		
43	29.1	4.7	44.7

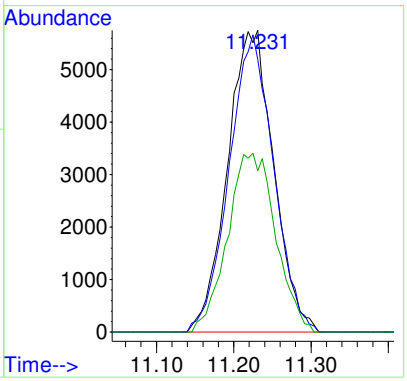


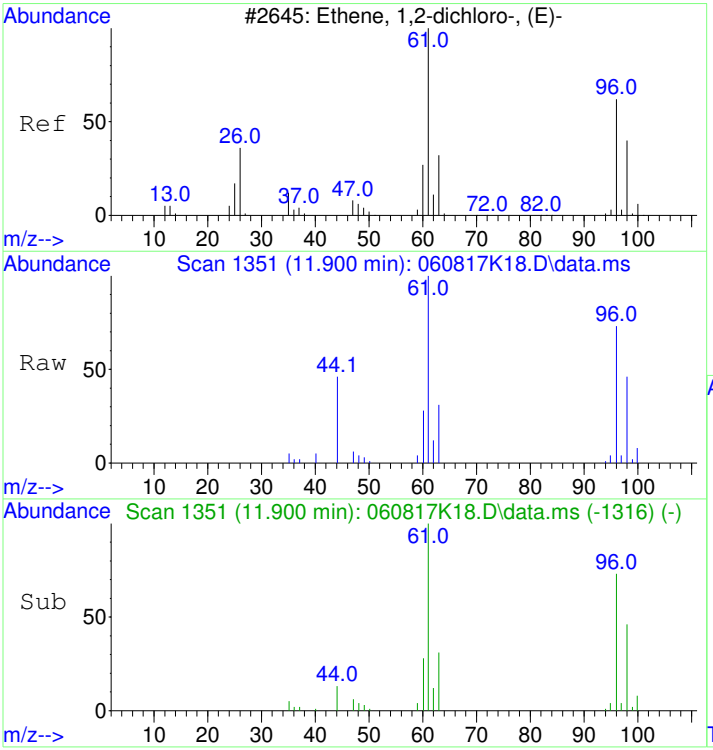


#18
Dichloromethane
Concen: 1.74 ppbv
RT: 11.231 min Scan# 1241
Delta R.T. 0.018 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 49 Resp: 23918

Ion	Ratio	Lower	Upper
49	100		
84	94.9	74.2	114.2
86	61.6	41.1	81.1

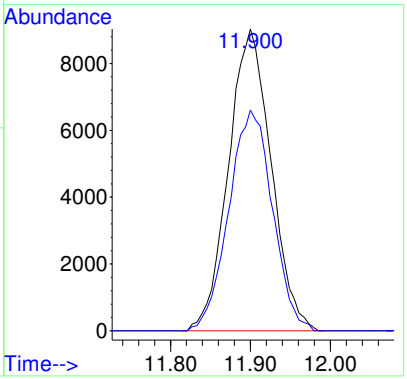


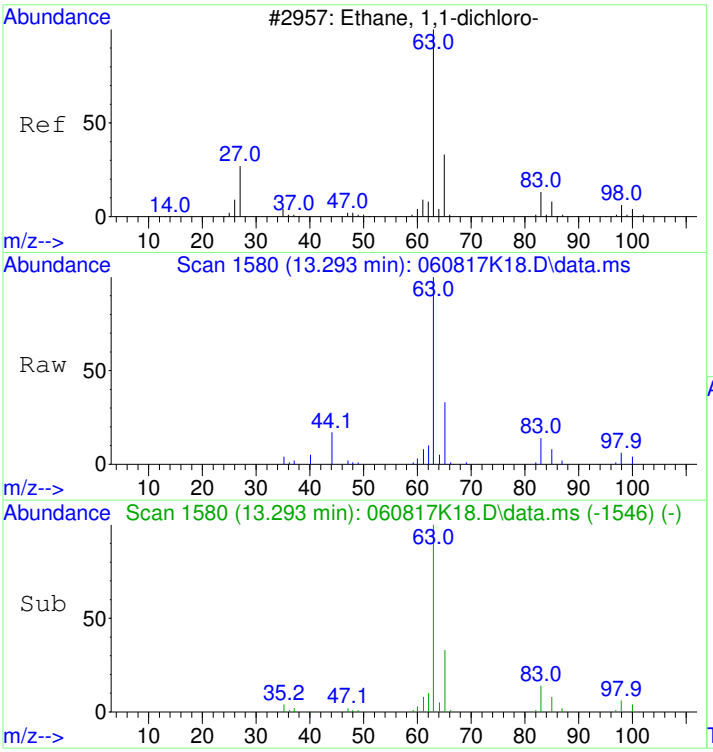


#20
trans-1,2-Dichloroethene
Concen: 2.04 ppbv
RT: 11.900 min Scan# 1351
Delta R.T. 0.012 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 61 Resp: 33443

Ion	Ratio	Lower	Upper
61	100		
96	74.9	56.8	96.8

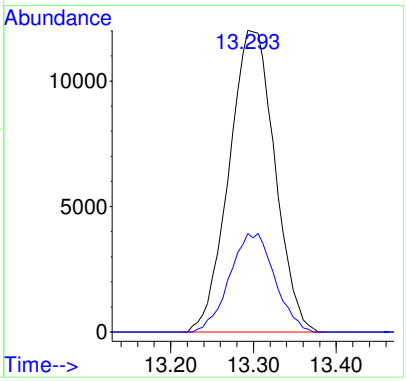


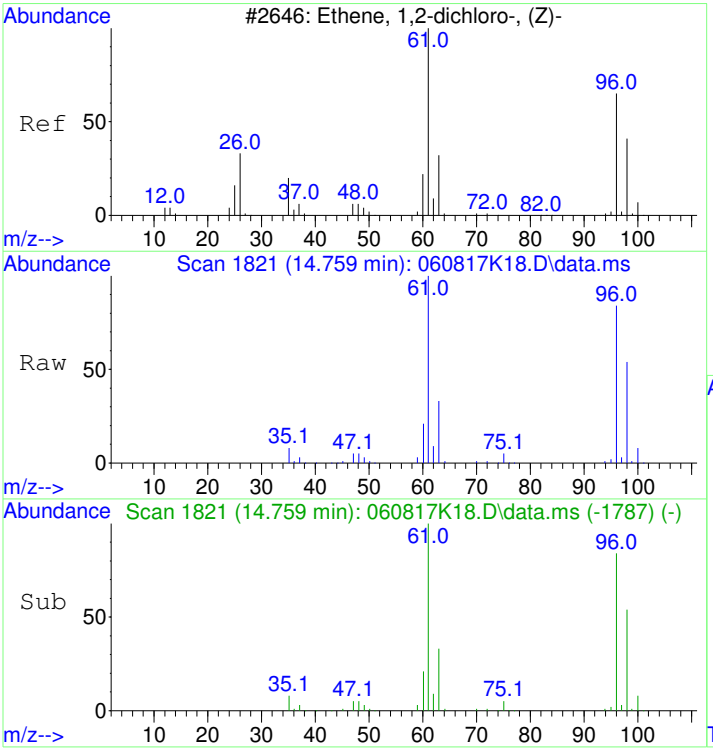


#22
1,1-Dichloroethane
Concen: 2.06 ppbv
RT: 13.293 min Scan# 1580
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 63 Resp: 46085

Ion	Ratio	Lower	Upper
63	100		
65	32.3	12.5	52.5

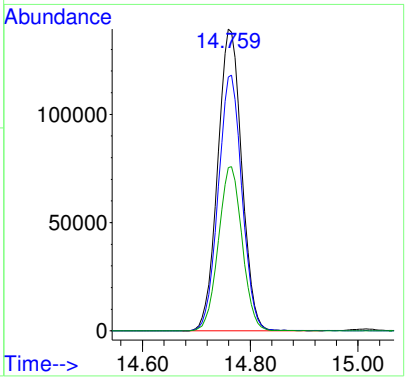


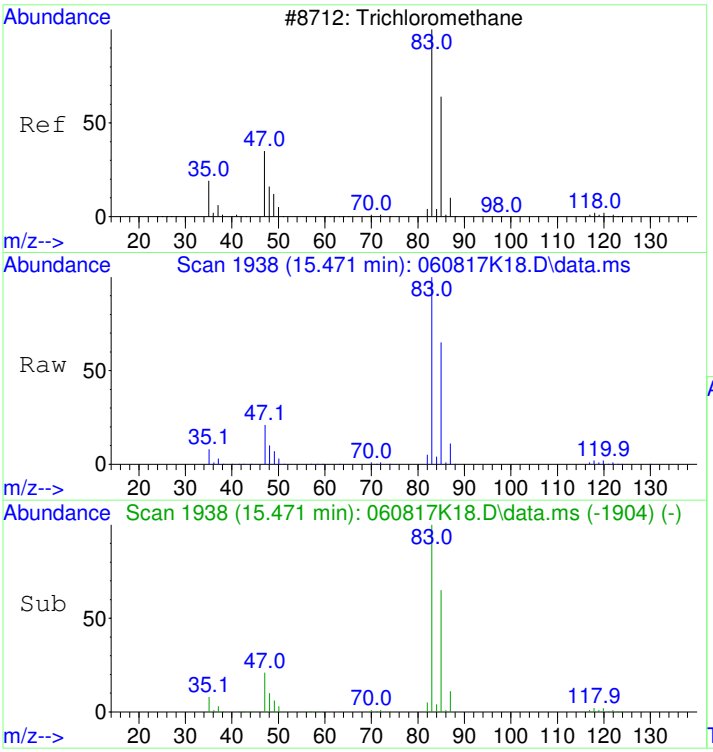


#24
cis-1,2-Dichloroethene
Concen: 28.12 ppbv
RT: 14.759 min Scan# 1821
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 61 Resp: 431981

Ion	Ratio	Lower	Upper
61	100		
96	83.6	64.3	104.3
98	53.6	33.1	73.1

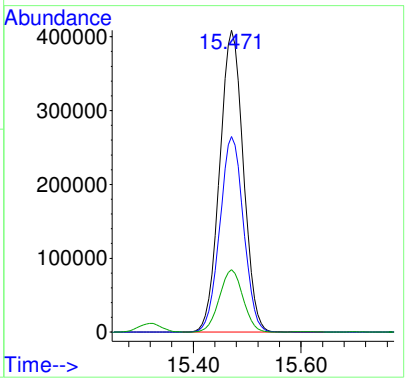


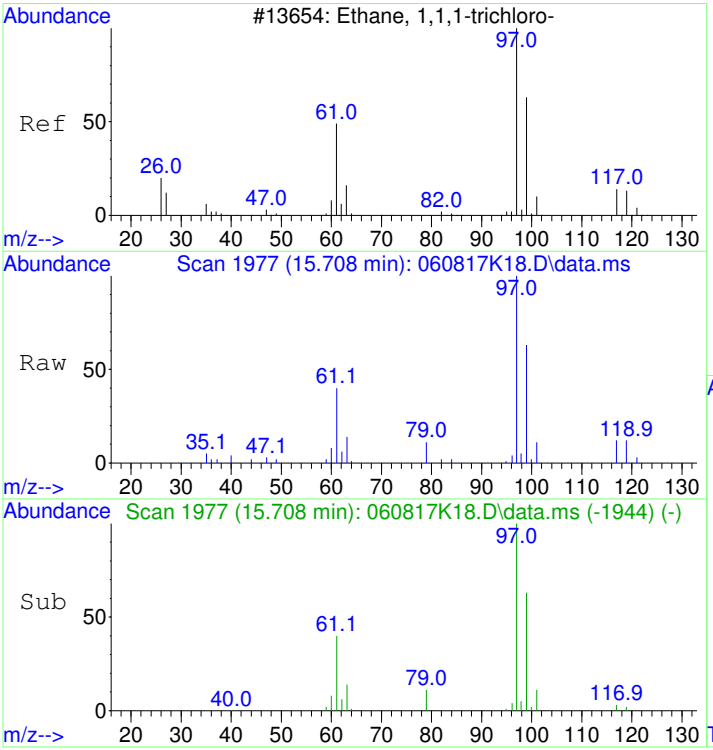


#28
Chloroform
Concen: 45.75 ppbv
RT: 15.471 min Scan# 1938
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 83 Resp: 1244143

Ion	Ratio	Lower	Upper
83	100		
85	64.9	45.0	85.0
47	20.6	0.8	40.8

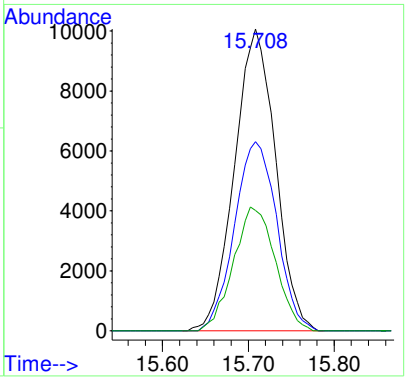


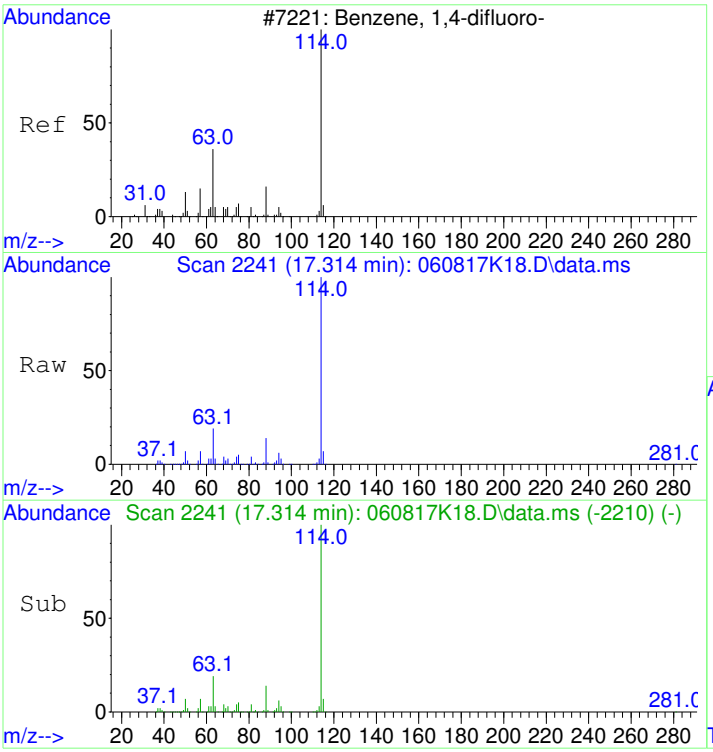


#30
1,1,1-Trichloroethane
Concen: 1.15 ppbv
RT: 15.708 min Scan# 1977
Delta R.T. -0.000 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 97 Resp: 33441

Ion	Ratio	Lower	Upper
97	100		
99	64.7	44.3	84.3
61	41.8	21.1	61.1

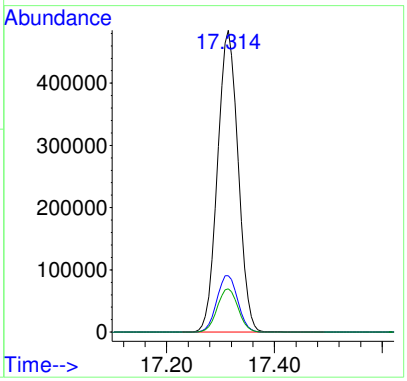


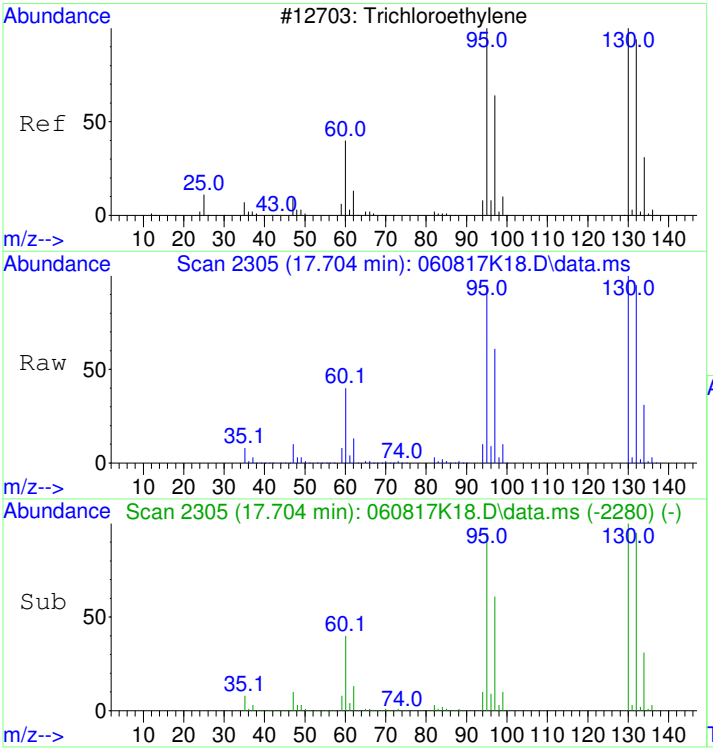


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion:114 Resp: 1286638

Ion	Ratio	Lower	Upper
114	100		
63	19.1	0.0	39.1
88	14.5	0.0	34.7

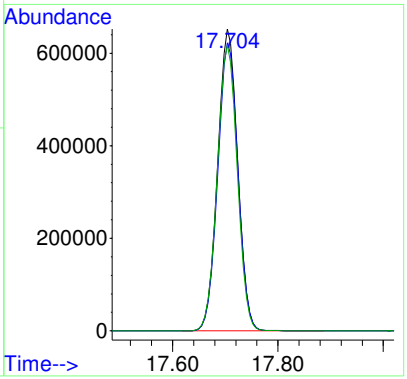


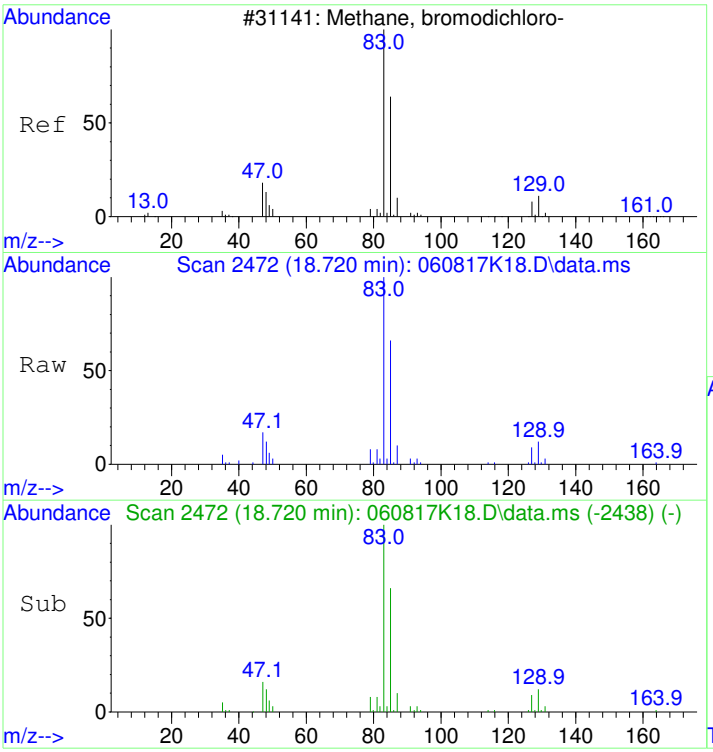


#37
Trichloroethene
Concen: 95.57 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion:130 Resp: 1721283

Ion	Ratio	Lower	Upper
130	100		
132	96.2	75.8	115.8
95	94.8	73.6	113.6

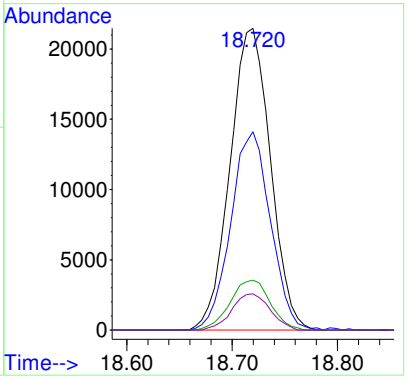


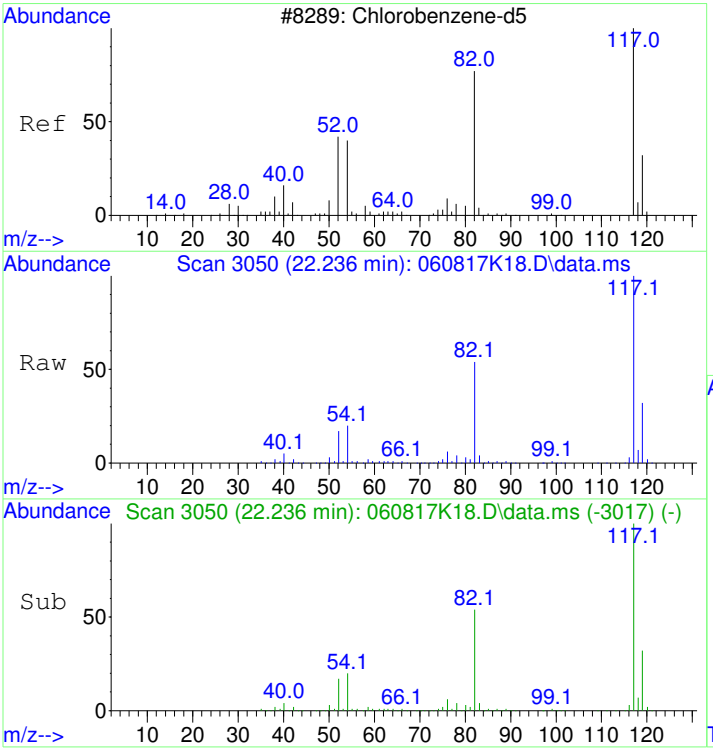


#40
Bromodichloromethane
Concen: 1.87 ppbv
RT: 18.720 min Scan# 2472
Delta R.T. 0.006 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 83 Resp: 57278

Ion	Ratio	Lower	Upper
83	100		
85	64.5	43.9	83.9
47	16.4	0.0	36.3
129	11.4	0.0	31.5

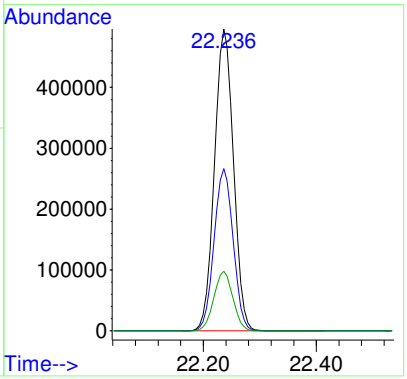


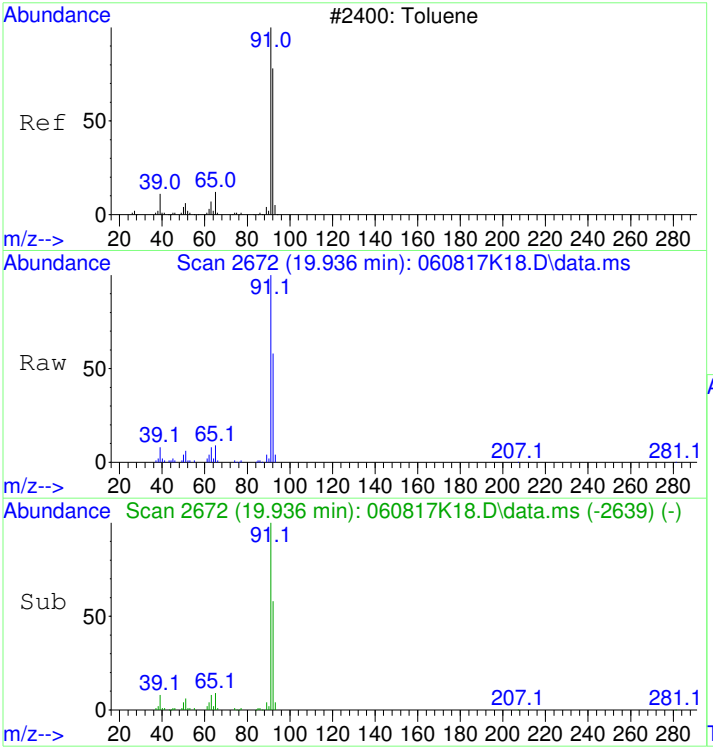


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion:117 Resp: 1156731

Ion	Ratio	Lower	Upper
117	100		
82	54.0	33.7	73.7
54	19.7	0.0	39.6

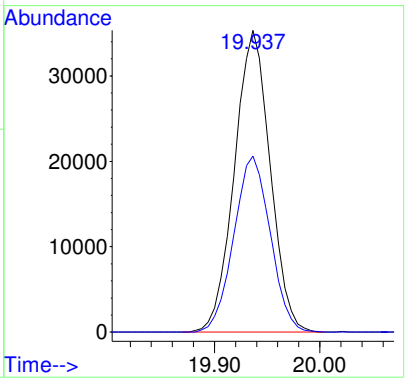


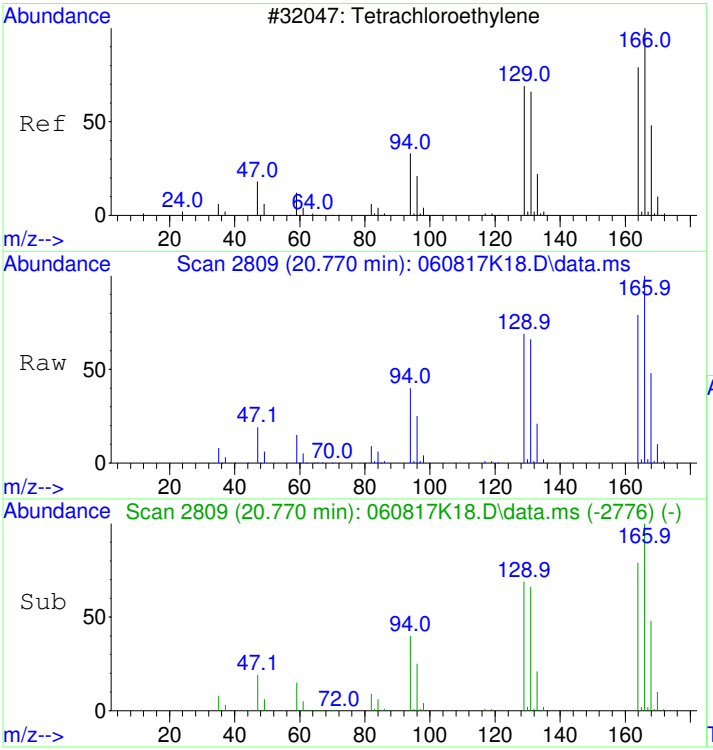


#44
Toluene
Concen: 1.70 ppbv
RT: 19.936 min Scan# 2672
Delta R.T. -0.000 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion: 91 Resp: 83288

Ion	Ratio	Lower	Upper
91	100		
92	59.6	39.8	79.8

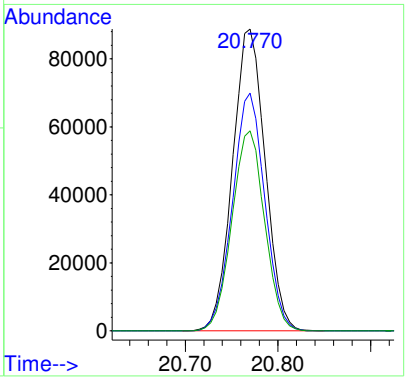




#47
Tetrachloroethene
Concen: 8.33 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. -0.000 min
Lab File: 060817K18.D
Acq: 8 Jun 2017 9:01 pm

Tgt Ion:166 Resp: 217491

Ion	Ratio	Lower	Upper
166	100		
164	77.8	57.9	97.9
131	66.2	46.1	86.1



1706011-03RE1

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K19.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:52 pm
Operator : LLH
Sample : 1706011-03RE1
Misc : 200ml SG131-10 CAN #1981
ALS Vial : 12 Sample Multiplier: 2.06

REPORT

rerun 20ml repress for TCE

Quant Time: Jun 09 09:24:33 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)		
Internal Standards								
1) BROMOCHLOROMETHANE	15.319	49	335597	20.00	ppbv	0.00		
32) 1,4-DIFLUOROBENZENE	17.315	114	1287573	18.80	ppbv	0.00		
43) CHLOROBENZENE-d5	22.236	117	1170089	20.00	ppbv	0.00		
Target Compounds						Qvalue		
2) Propene	4.210	41	14612	1.77	ppbv	# 74		
3) Dichlorodifluoromethane	4.308	85	20736	~~0.54~~	~~ppbv~~	# 83		
5) Chloromethane	4.855	50	11211	1.07	ppbv	92		
9) Chloroethane	6.492	64	9621	1.43	ppbv	100		
14) Acetone	9.692	43	293459	18.12	ppbv	99		
15) Carbon disulfide	9.728	76	18930	0.52	ppbv	# 82		
17) Allyl chloride	10.696	41	6099	~~0.53~~	~~ppbv~~	# 39		
20) trans-1,2-Dichloroethene	11.900	61	226074	13.70	ppbv	99		
21) Hexane	12.429	57	17388	0.97	ppbv	98		
24) cis-1,2-Dichloroethene	14.766	61	508279	32.92	ppbv	99	oc	
25) 2-Butanone (MEK)	14.905	72	4858	0.80	ppbv	# 1		
26) Ethyl acetate	14.912	61	7358	2.06	ppbv	# 42		
29) Cyclohexane	15.605	56	34413	1.91	ppbv	# 70		
33) Benzene	16.475	78	32185	0.81	ppbv	96		
36) Heptane	16.755	43	11661	0.63	ppbv	95		
37) Trichloroethene	17.704	130	4811399	266.95	ppbv	99	oc	
44) Toluene	19.937	91	75724	1.53	ppbv	99		

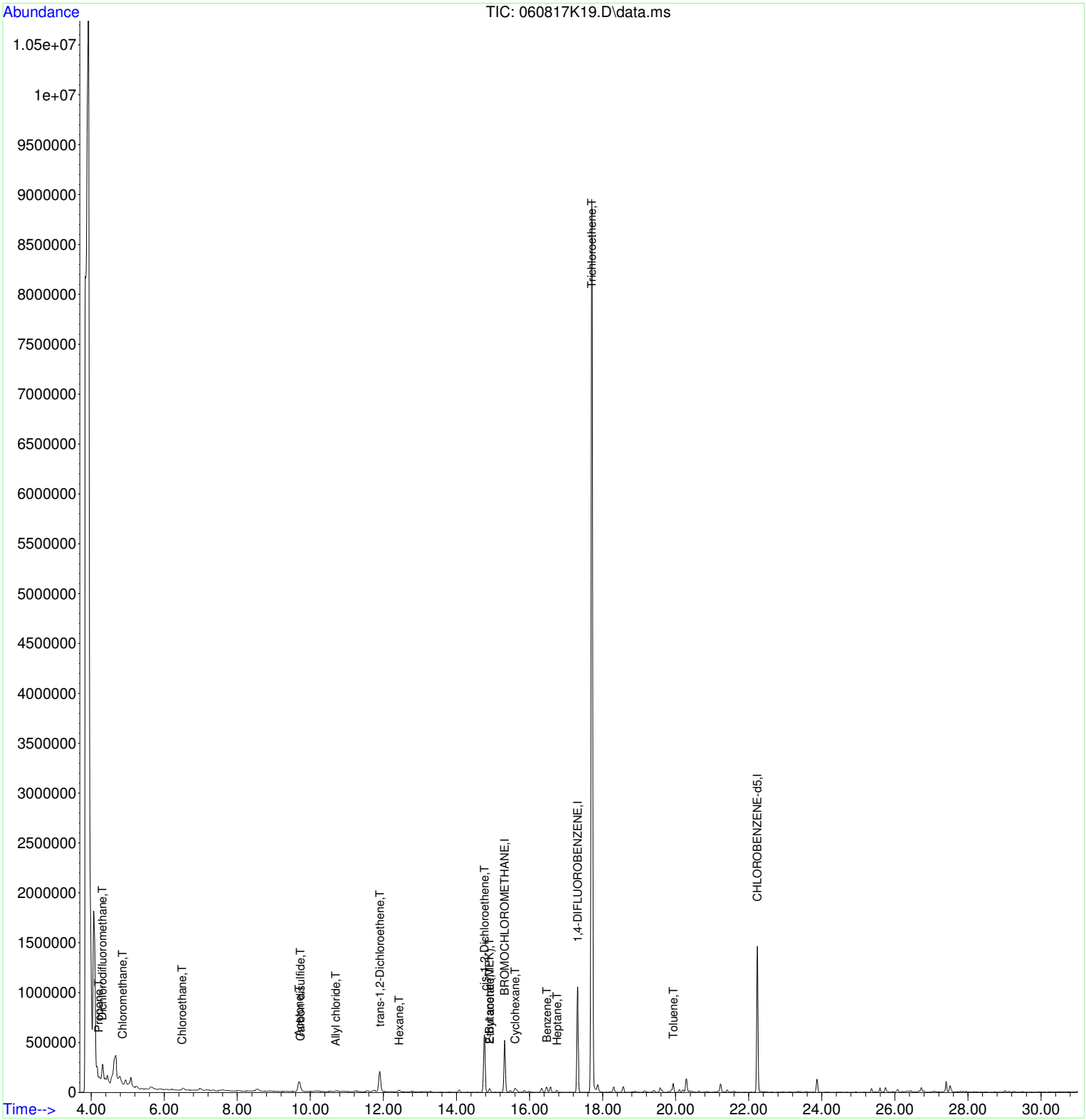
(#) = qualifier out of range (m) = manual integration (+) = signals summed

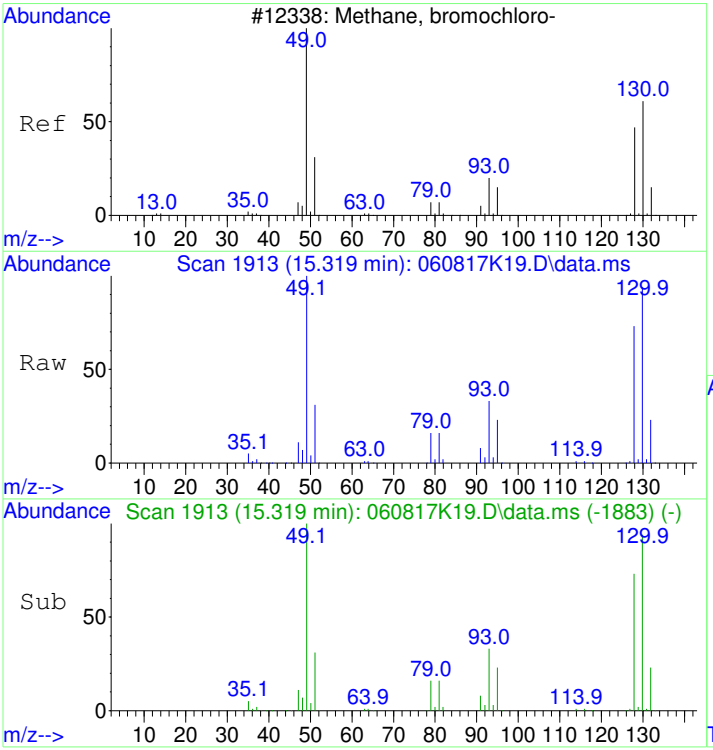
AFTER Q DELETE

REVIEWED
By LLH at 10:47 am, Jun 09, 2017

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K19.D
InstName : HP5973K
Acq On : 8 Jun 2017 9:52 pm
Operator : LLH
Sample : 1706011-03RE1
Misc : 200ml SG131-10 CAN #1981
ALS Vial : 12 Sample Multiplier: 2.06

Quant Time: Jun 09 09:24:33 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

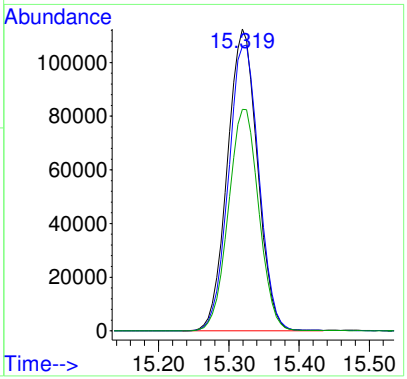


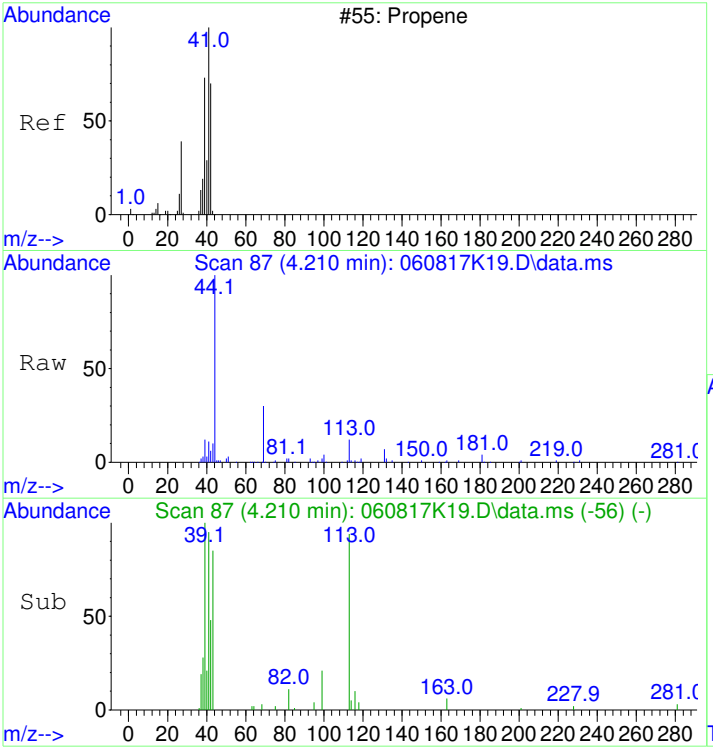


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 49 Resp: 335597

Ion	Ratio	Lower	Upper
49	100		
130	95.5	75.6	115.6
128	74.1	54.4	94.4

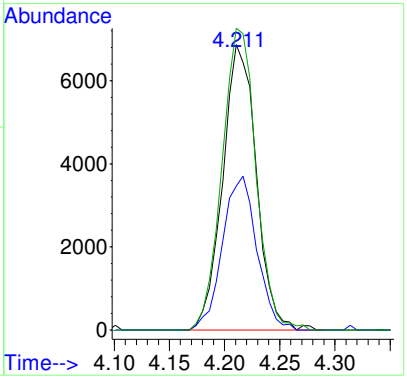


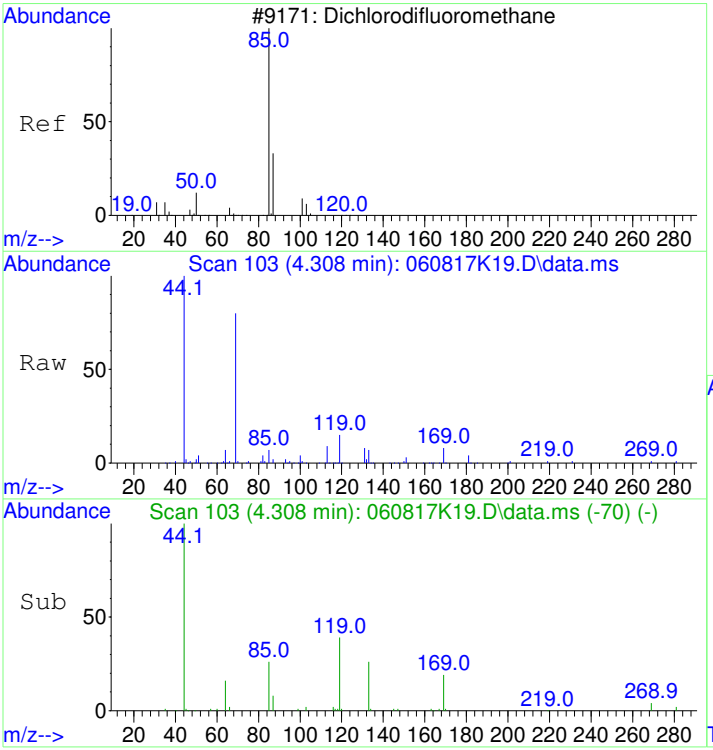


#2
Propene
Concen: 1.77 ppbv
RT: 4.210 min Scan# 87
Delta R.T. -0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 41 Resp: 14612

Ion	Ratio	Lower	Upper
41	100		
42	55.1	46.4	86.4
39	106.9	55.4	95.4#

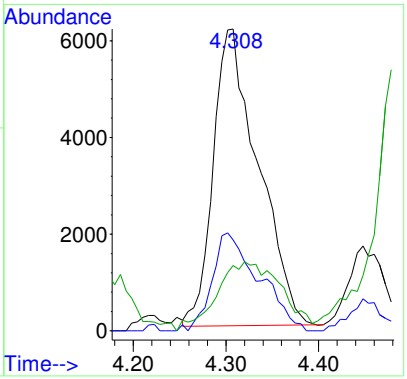




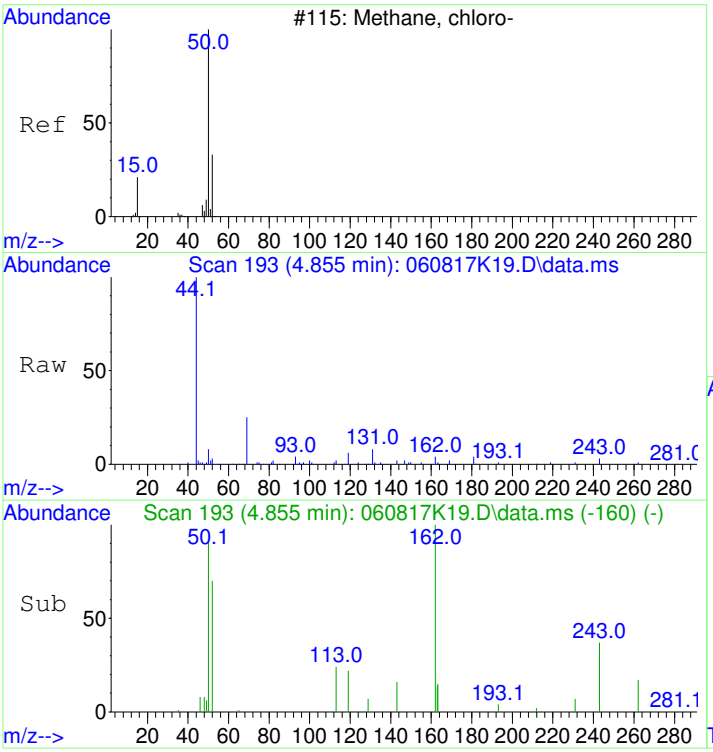
#3
Dichlorodifluoromethane
Concen: 0.54 ppbv
RT: 4.308 min Scan# 103
Delta R.T. -0.000 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 85 Resp: 20736

Ion	Ratio	Lower	Upper
85	100		
87	34.2	12.4	52.4
101	33.5	0.0	29.5#



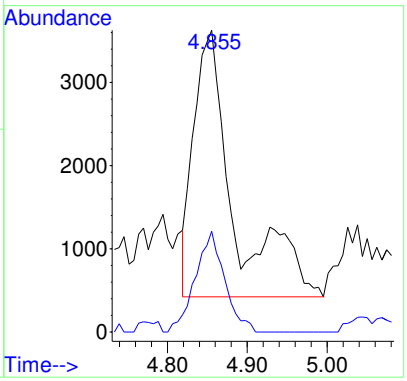
spectra off



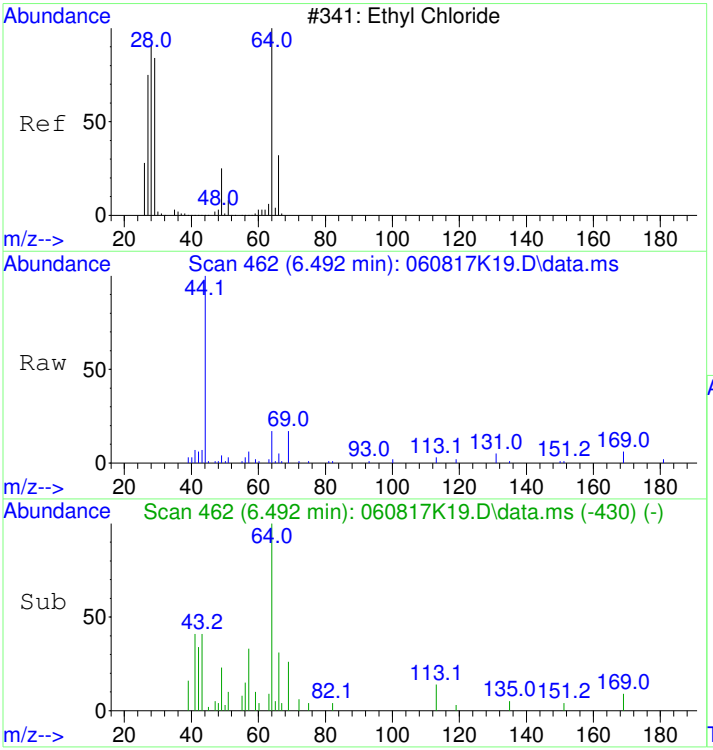
#5
Chloromethane
Concen: 1.07 ppbv
RT: 4.855 min Scan# 193
Delta R.T. -0.000 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 50 Resp: 11211

Ion	Ratio	Lower	Upper
50	100		
52	27.6	12.0	52.0



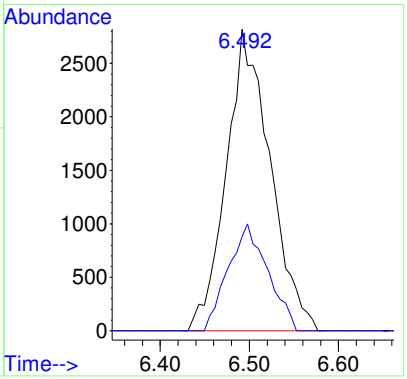
ok



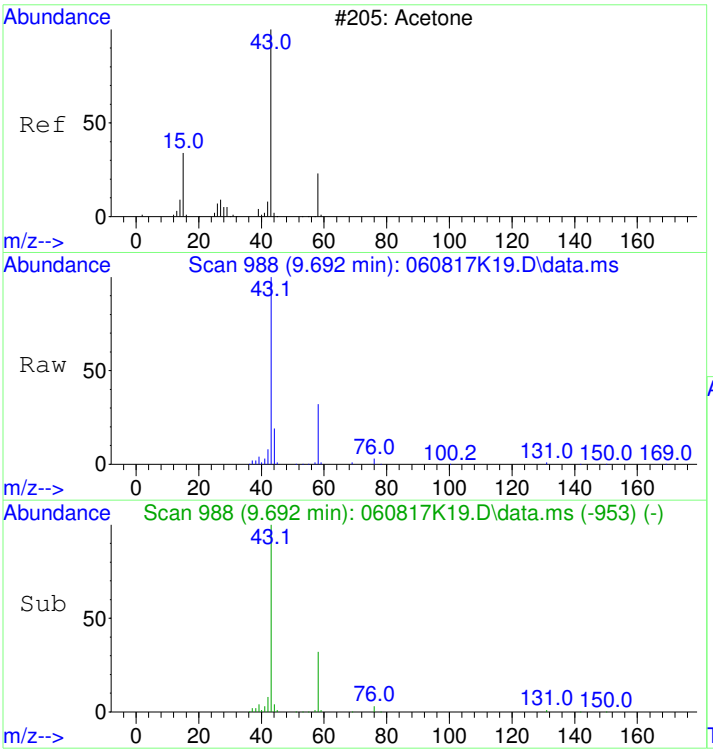
#9
Chloroethane
Concen: 1.43 ppbv
RT: 6.492 min Scan# 462
Delta R.T. -0.006 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 64 Resp: 9621

Ion	Ratio	Lower	Upper
64	100		
66	31.9	11.8	51.8



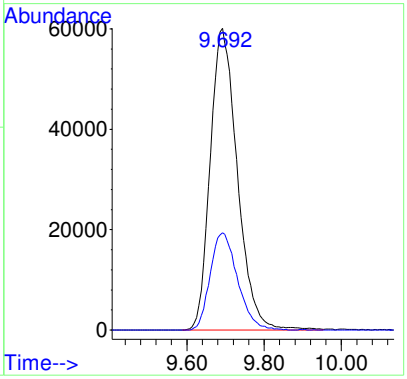
ok

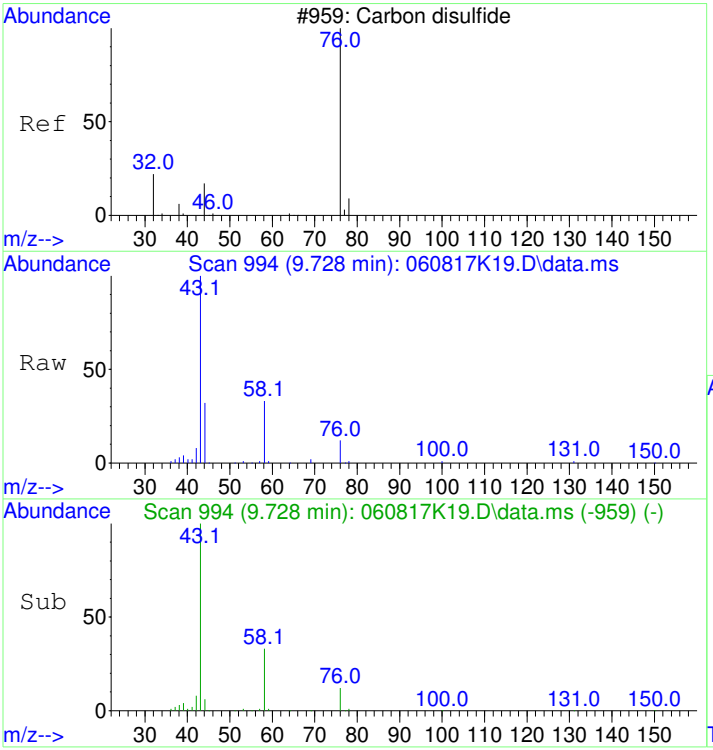


#14
Acetone
Concen: 18.12 ppbv
RT: 9.692 min Scan# 988
Delta R.T. 0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 43 Resp: 293459

Ion	Ratio	Lower	Upper
43	100		
58	32.6	12.0	52.0

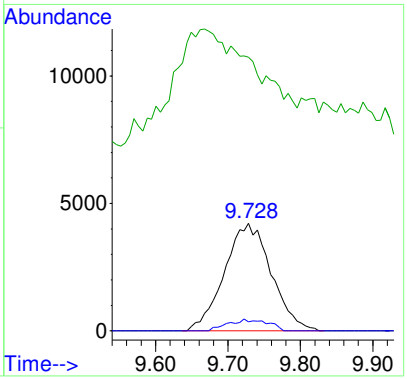




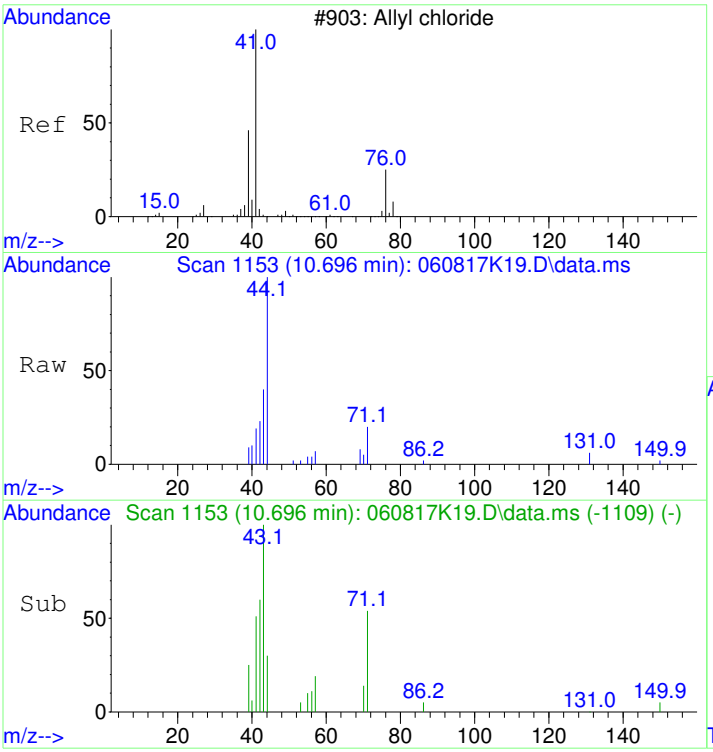
#15
Carbon disulfide
Concen: 0.52 ppbv
RT: 9.728 min Scan# 994
Delta R.T. 0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 76 Resp: 18930

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.0
44	0.0	0.0	32.4



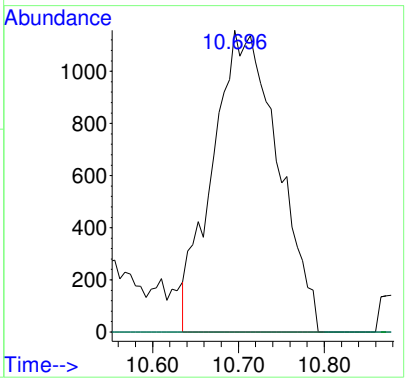
ok



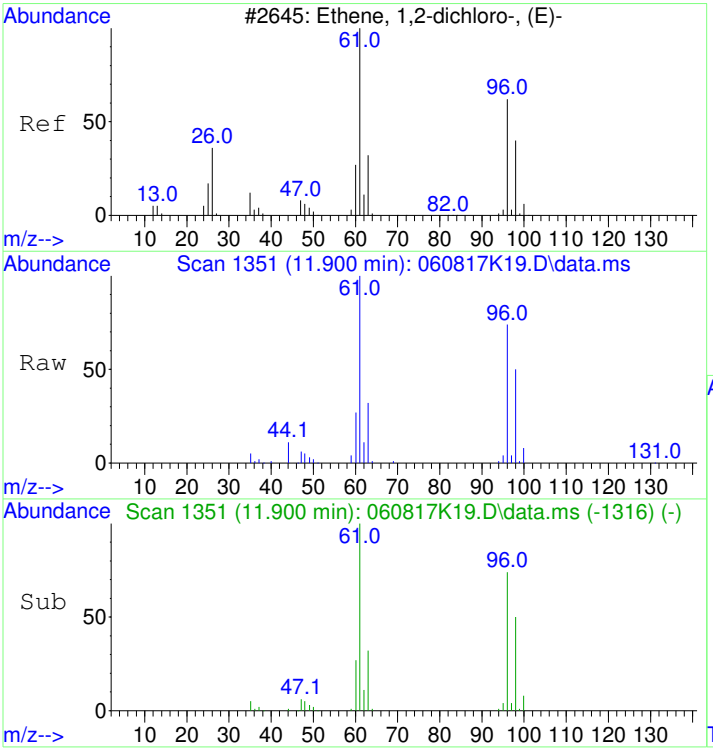
#17
Allyl chloride
Concen: 0.53 ppbv
RT: 10.696 min Scan# 1153
Delta R.T. 0.067 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 41 Resp: 6099

Ion	Ratio	Lower	Upper
41	100		
76	0.0	25.6	65.6#
78	0.0	0.0	35.0



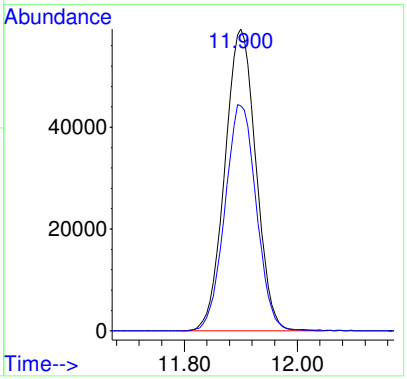
RT/spectra off

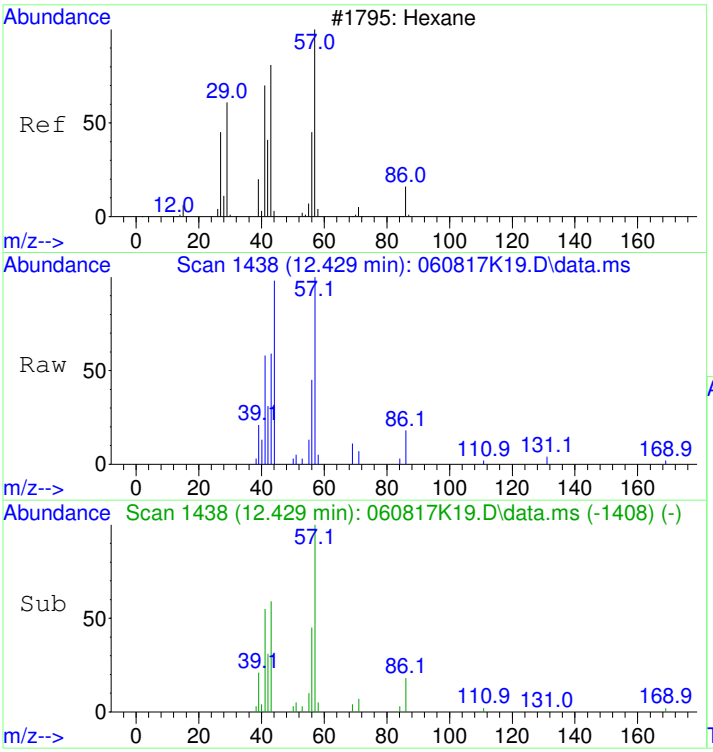


#20
trans-1,2-Dichloroethene
Concen: 13.70 ppbv
RT: 11.900 min Scan# 1351
Delta R.T. 0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 61 Resp: 226074

Ion	Ratio	Lower	Upper
61	100		
96	75.8	56.8	96.8

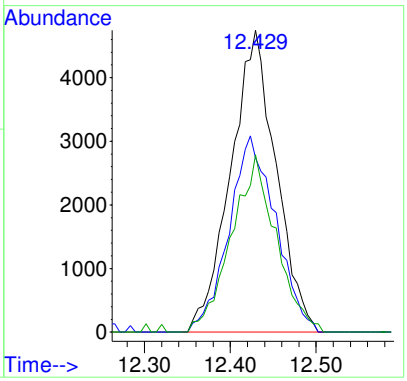


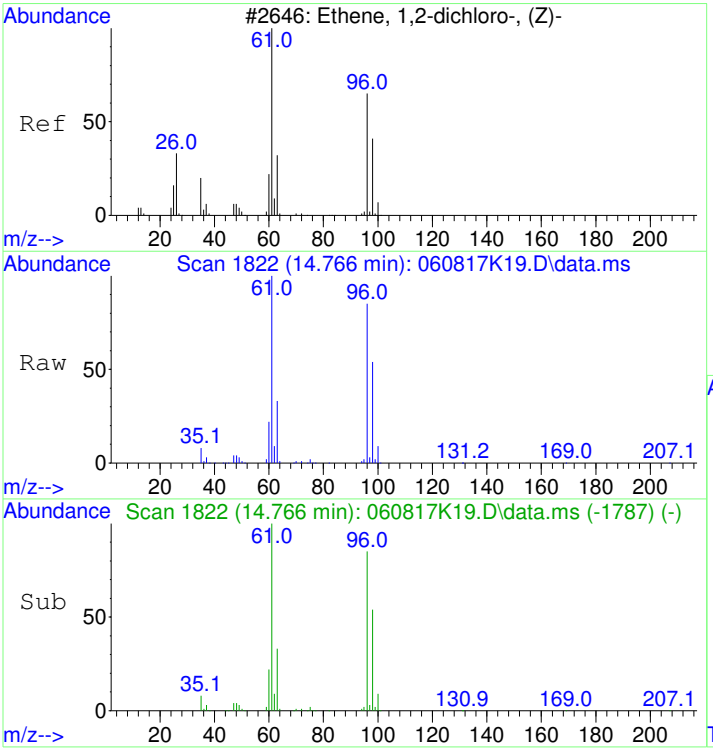


#21
Hexane
Concen: 0.97 ppbv
RT: 12.429 min Scan# 1438
Delta R.T. 0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 57 Resp: 17388

Ion	Ratio	Lower	Upper
57	100		
41	67.0	45.2	85.2
43	57.8	36.6	76.6

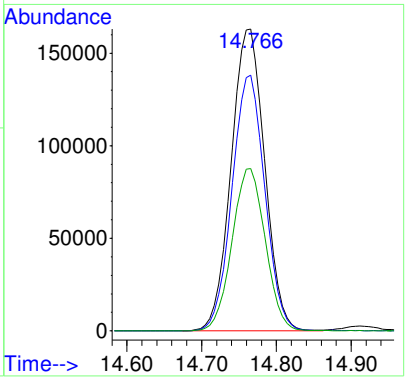


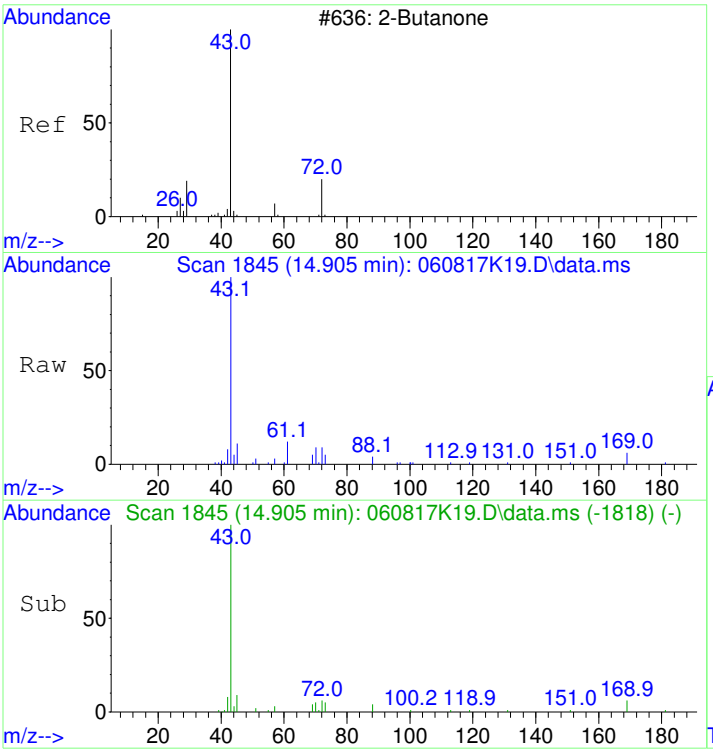


#24
cis-1,2-Dichloroethene
Concen: 32.92 ppbv
RT: 14.766 min Scan# 1822
Delta R.T. 0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 61 Resp: 508279

Ion	Ratio	Lower	Upper
61	100		
96	83.2	64.3	104.3
98	53.3	33.1	73.1

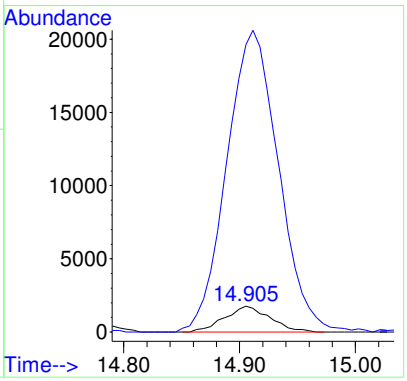


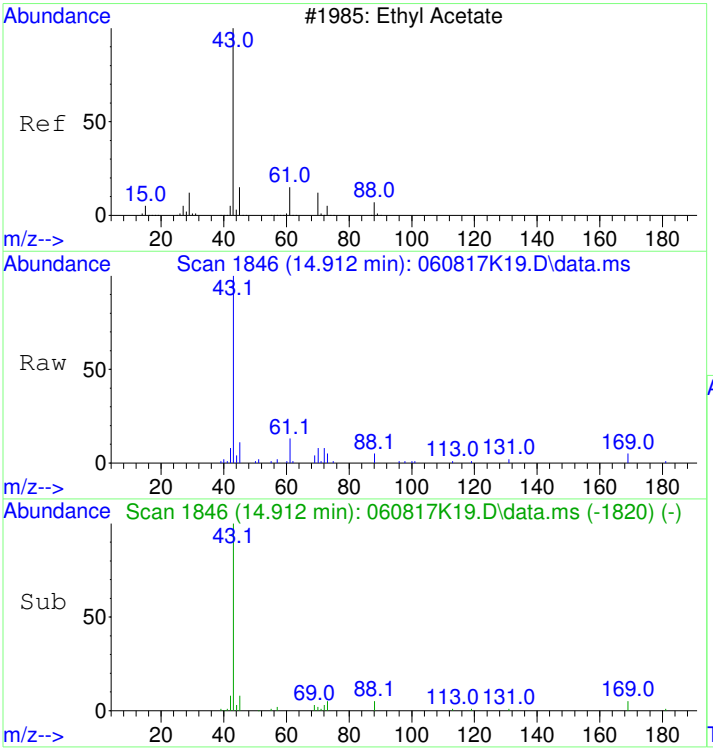


#25
2-Butanone (MEK)
Concen: 0.80 ppbv
RT: 14.905 min Scan# 1845
Delta R.T. 0.012 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 72 Resp: 4858

Ion	Ratio	Lower	Upper
72	100		
43	1322.2	697.6	717.6#

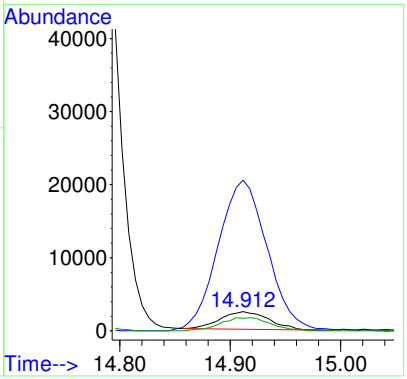


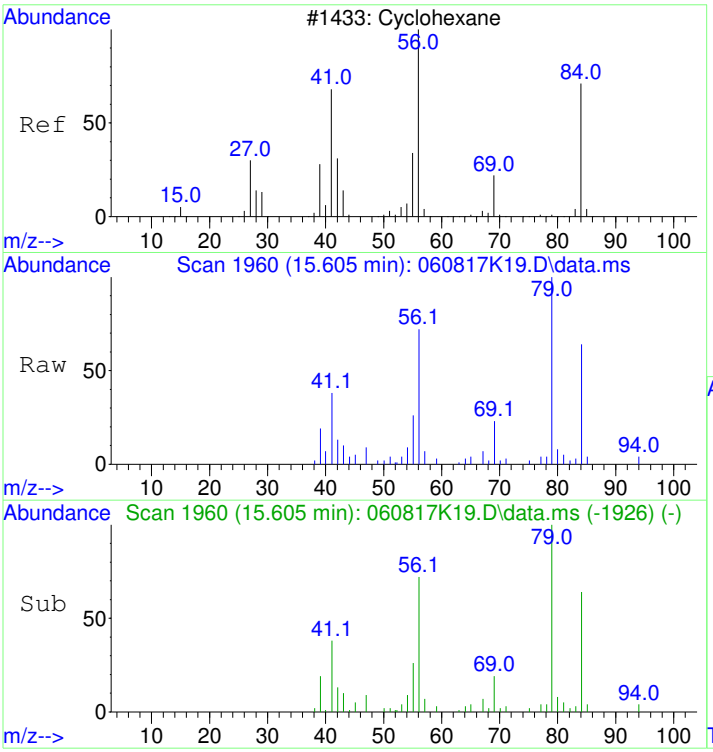


#26
Ethyl acetate
Concen: 2.06 ppbv
RT: 14.912 min Scan# 1846
Delta R.T. 0.006 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 61 Resp: 7358

Ion	Ratio	Lower	Upper
61	100		
43	872.9	1172.3	1192.3#
70	77.1	63.8	83.8

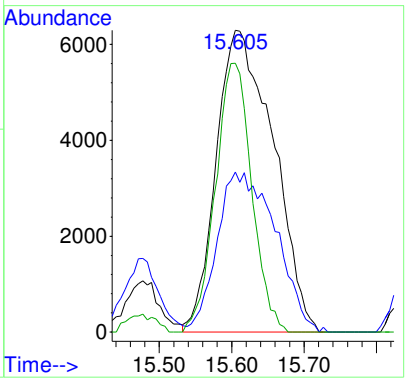


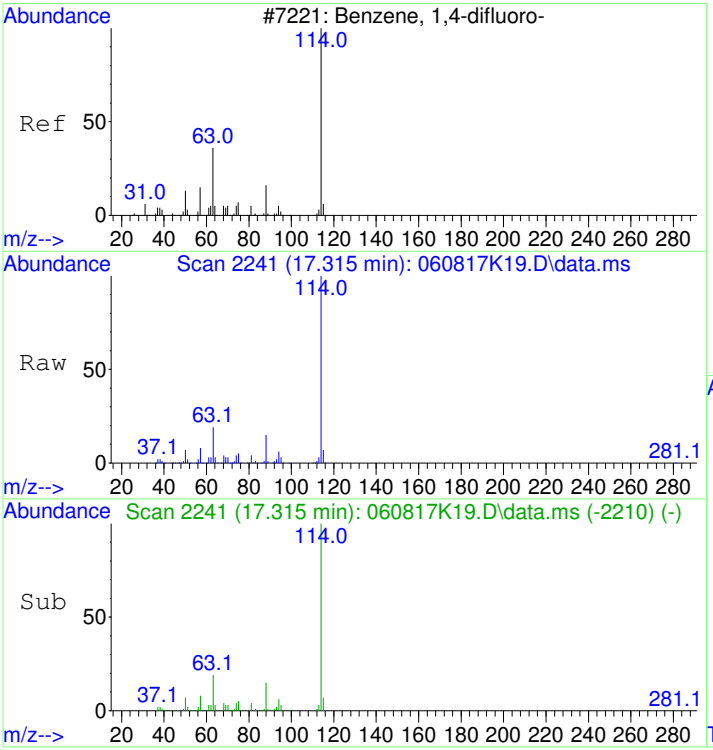


#29
Cyclohexane
Concen: 1.91 ppbv
RT: 15.605 min Scan# 1960
Delta R.T. 0.006 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 56 Resp: 34413

Ion	Ratio	Lower	Upper
56	100		
41	54.4	30.8	70.8
84	56.8	80.0	120.0#

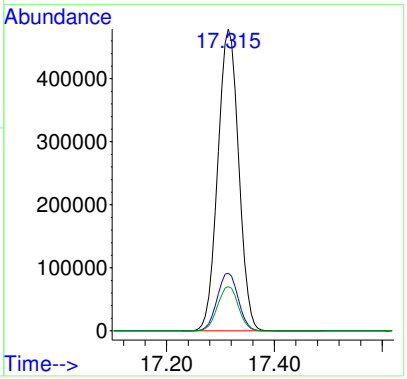


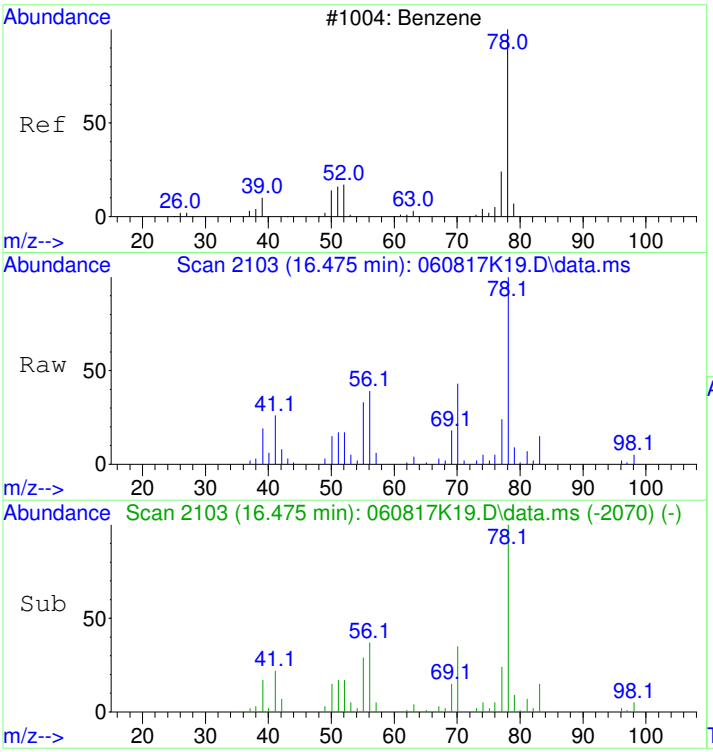


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion:114 Resp: 1287573

Ion	Ratio	Lower	Upper
114	100		
63	19.3	0.0	39.1
88	14.6	0.0	34.7

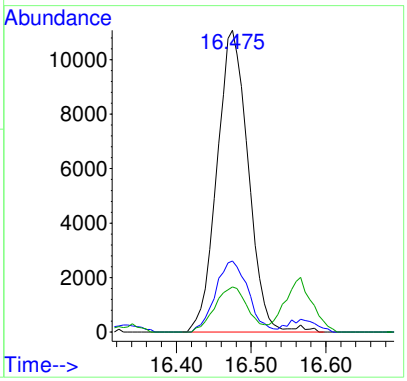


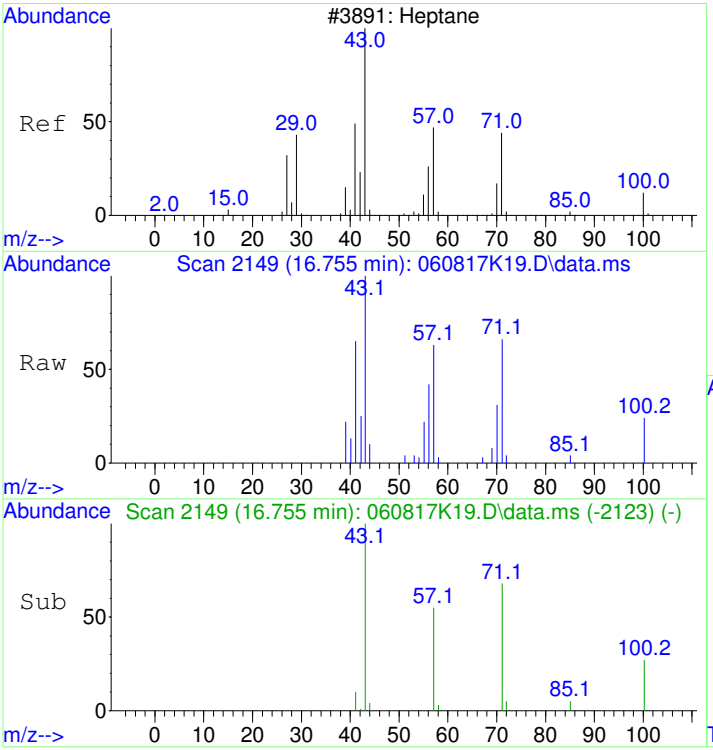


#33
Benzene
Concen: 0.81 ppbv
RT: 16.475 min Scan# 2103
Delta R.T. -0.000 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 78 Resp: 32185

Ion	Ratio	Lower	Upper
78	100		
77	24.7	2.9	42.9
50	16.0	0.0	34.4

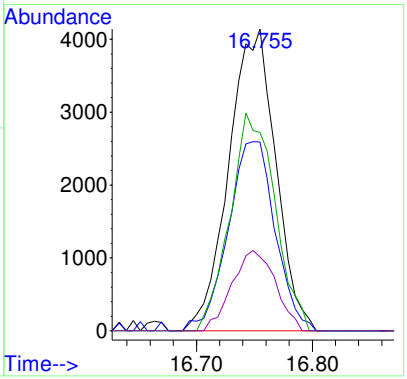


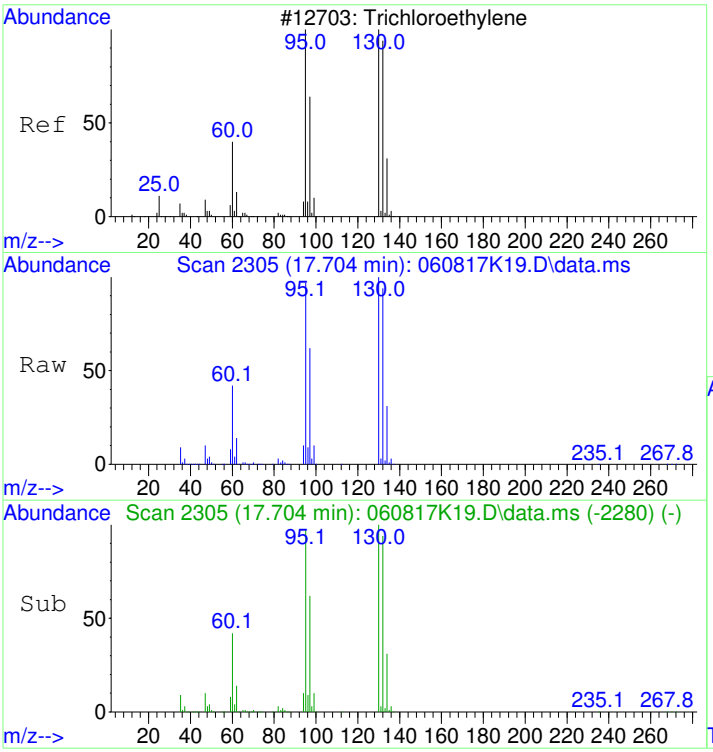


#36
Heptane
Concen: 0.63 ppbv
RT: 16.755 min Scan# 2149
Delta R.T. 0.006 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 43 Resp: 11661

Ion	Ratio	Lower	Upper
43	100		
57	62.8	43.1	83.1
71	69.2	55.3	95.3
100	24.6	10.7	50.7

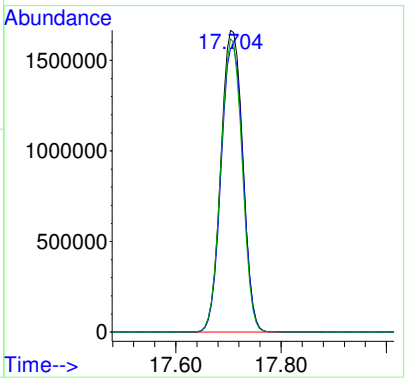


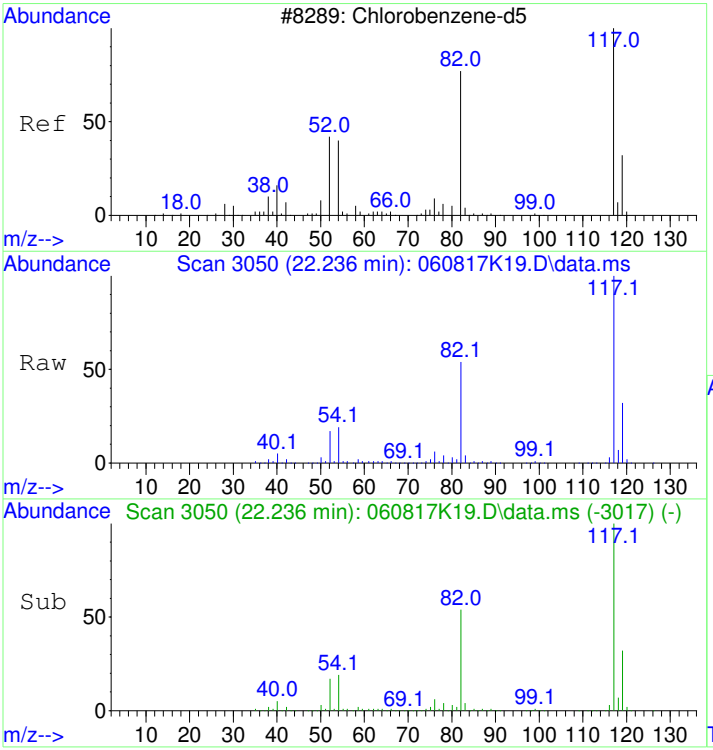


#37
Trichloroethene
Concen: 266.95 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion:130 Resp: 4811399

Ion	Ratio	Lower	Upper
130	100		
132	95.1	75.8	115.8
95	95.1	73.6	113.6

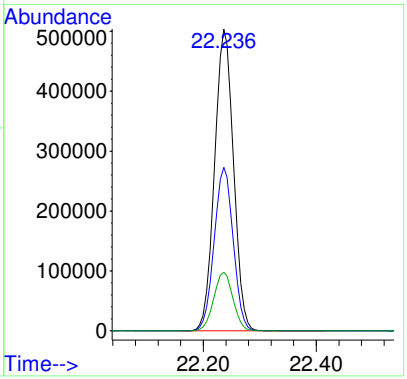


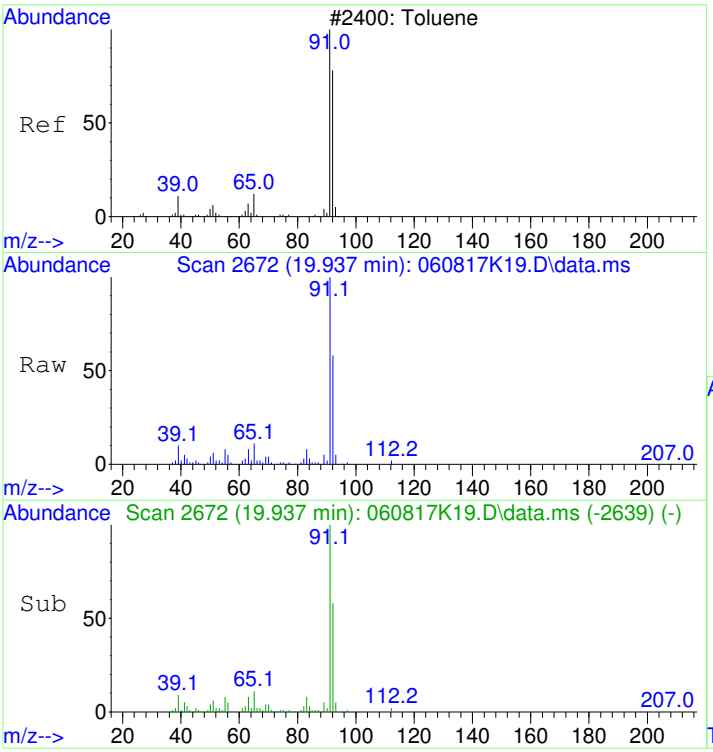


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion:117 Resp: 1170089

Ion	Ratio	Lower	Upper
117	100		
82	54.5	33.7	73.7
54	19.7	0.0	39.6

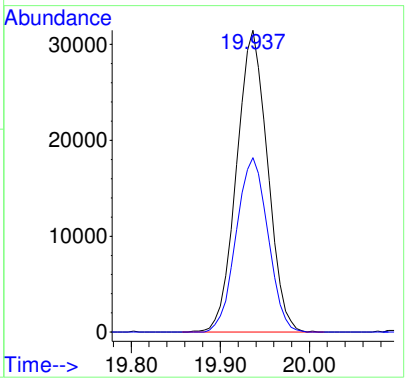




#44
Toluene
Concen: 1.53 ppbv
RT: 19.937 min Scan# 2672
Delta R.T. -0.000 min
Lab File: 060817K19.D
Acq: 8 Jun 2017 9:52 pm

Tgt Ion: 91 Resp: 75724

Ion	Ratio	Lower	Upper
91	100		
92	59.3	39.8	79.8



S17F030-IBL3

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K20.D
InstName : HP5973K
Acq On : 8 Jun 2017 10:43 pm
Operator : LLH
Sample : S17F030-IBL3
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 09:24:52 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	336698	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1299995	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1141208	20.00	ppbv	0.00

Target Compounds Qvalue

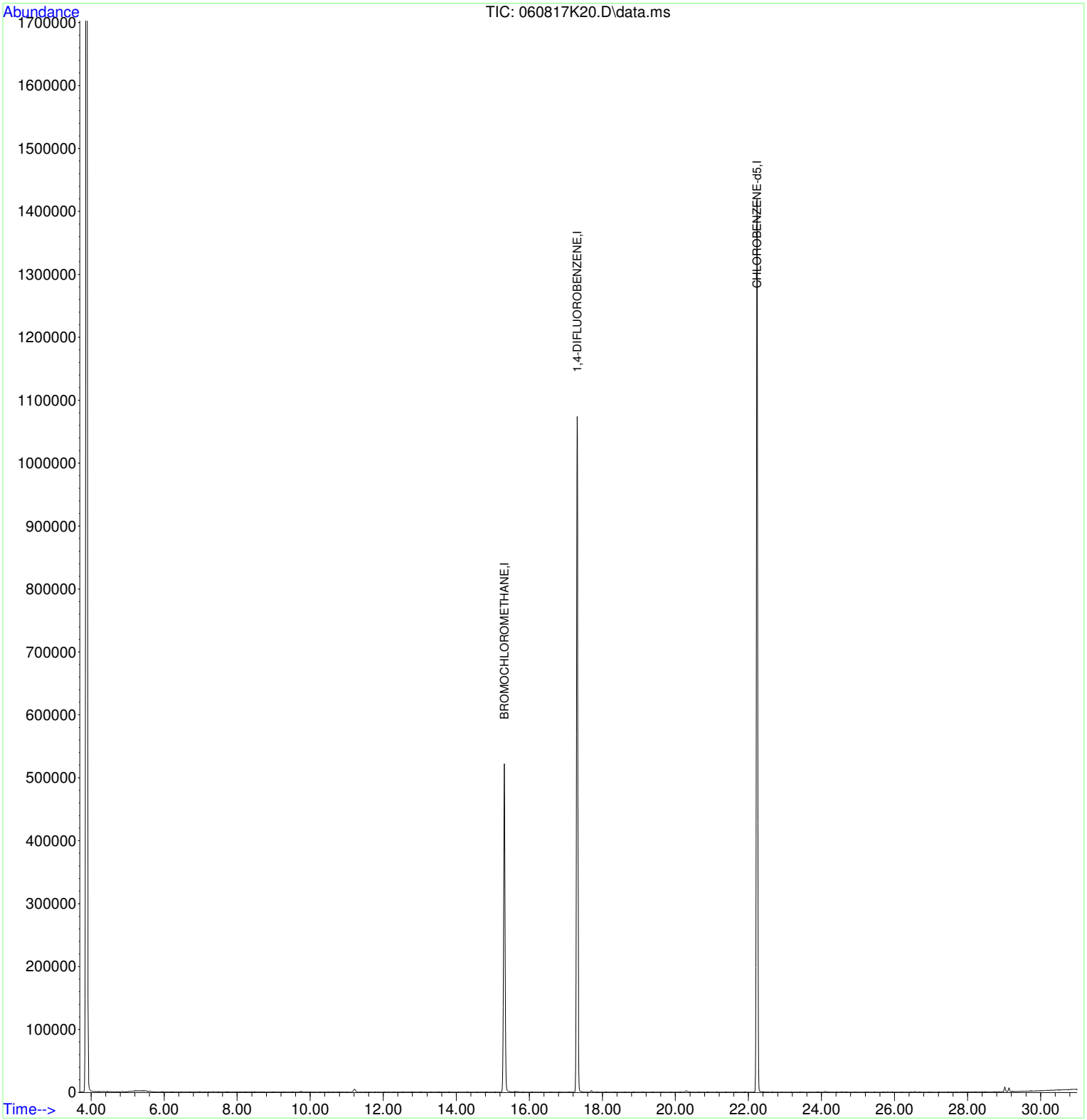
(#) = qualifier out of range (m) = manual integration (+) = signals summed

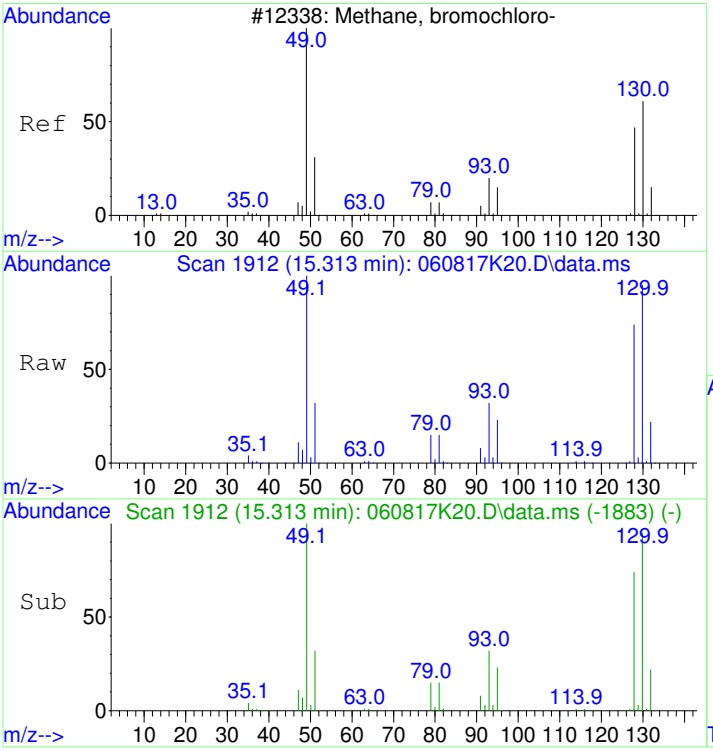
REVIEWED
By LLH at 9:45 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K20.D
InstName : HP5973K
Acq On : 8 Jun 2017 10:43 pm
Operator : LLH
Sample : S17F030-IBL3
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 09:24:52 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

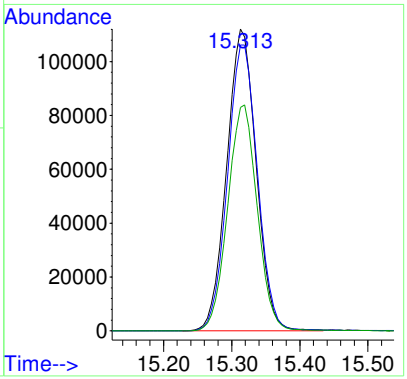


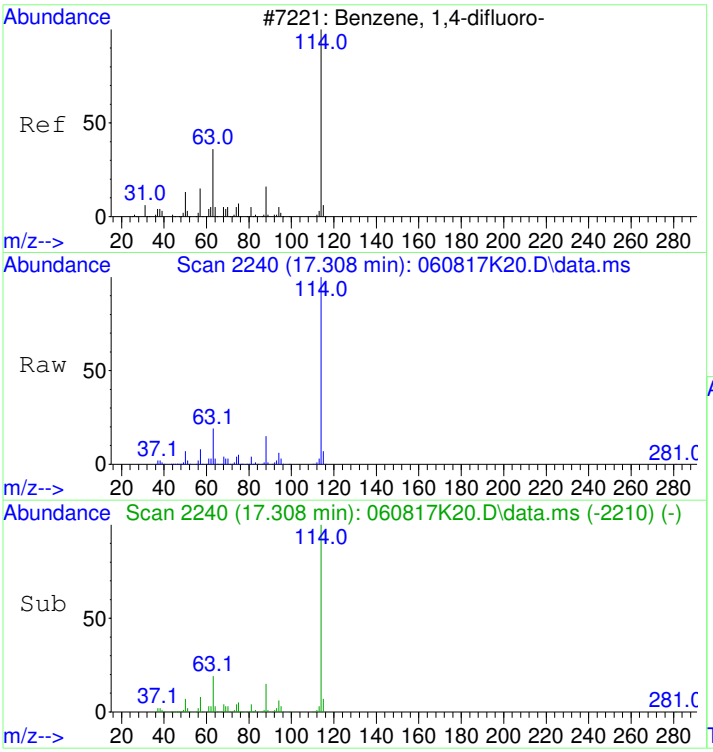


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. -0.000 min
Lab File: 060817K20.D
Acq: 8 Jun 2017 10:43 pm

Tgt Ion: 49 Resp: 336698

Ion	Ratio	Lower	Upper
49	100		
130	95.9	75.6	115.6
128	74.9	54.4	94.4

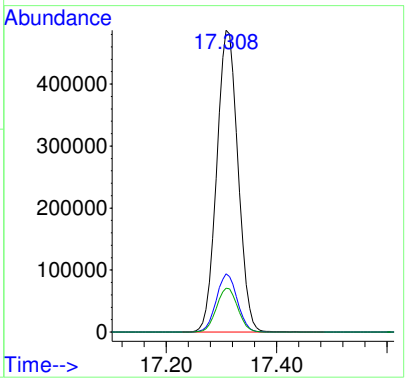


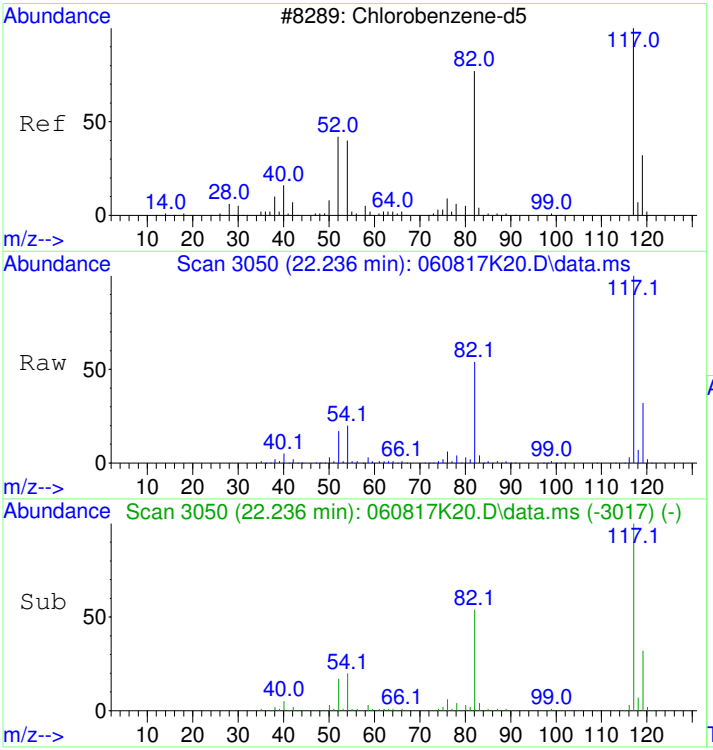


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 060817K20.D
Acq: 8 Jun 2017 10:43 pm

Tgt Ion:114 Resp: 1299995

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.6	0.0	34.7

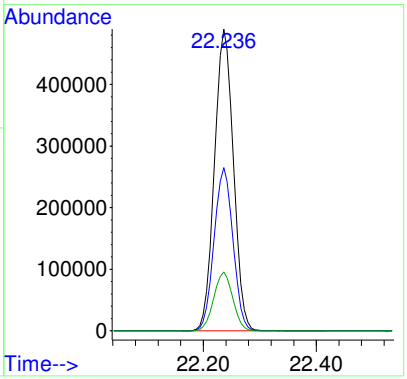




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K20.D
Acq: 8 Jun 2017 10:43 pm

Tgt Ion:117 Resp: 1141208

Ion	Ratio	Lower	Upper
117	100		
82	54.0	33.7	73.7
54	19.5	0.0	39.6



1706011-02RE1

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K22.D
InstName : HP5973K
Acq On : 9 Jun 2017 12:21 am
Operator : LLH
Sample : 1706011-02RE1
Misc : 20ml 2ND CAN #629
ALS Vial : 12 Sample Multiplier: 178.2

report TCE

rerun 100ml 2nd can for trans/cis12DCE

Quant Time: Jun 09 09:25:22 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	364830	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.314	114	1419845	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1236181	20.00	ppbv	0.00
Target Compounds						Qvalue
20) trans-1,2-Dichloroethene	11.888	61	16971	0.95	ppbv	100
37) Trichloroethene	17.704	130	370415	18.64	ppbv	100

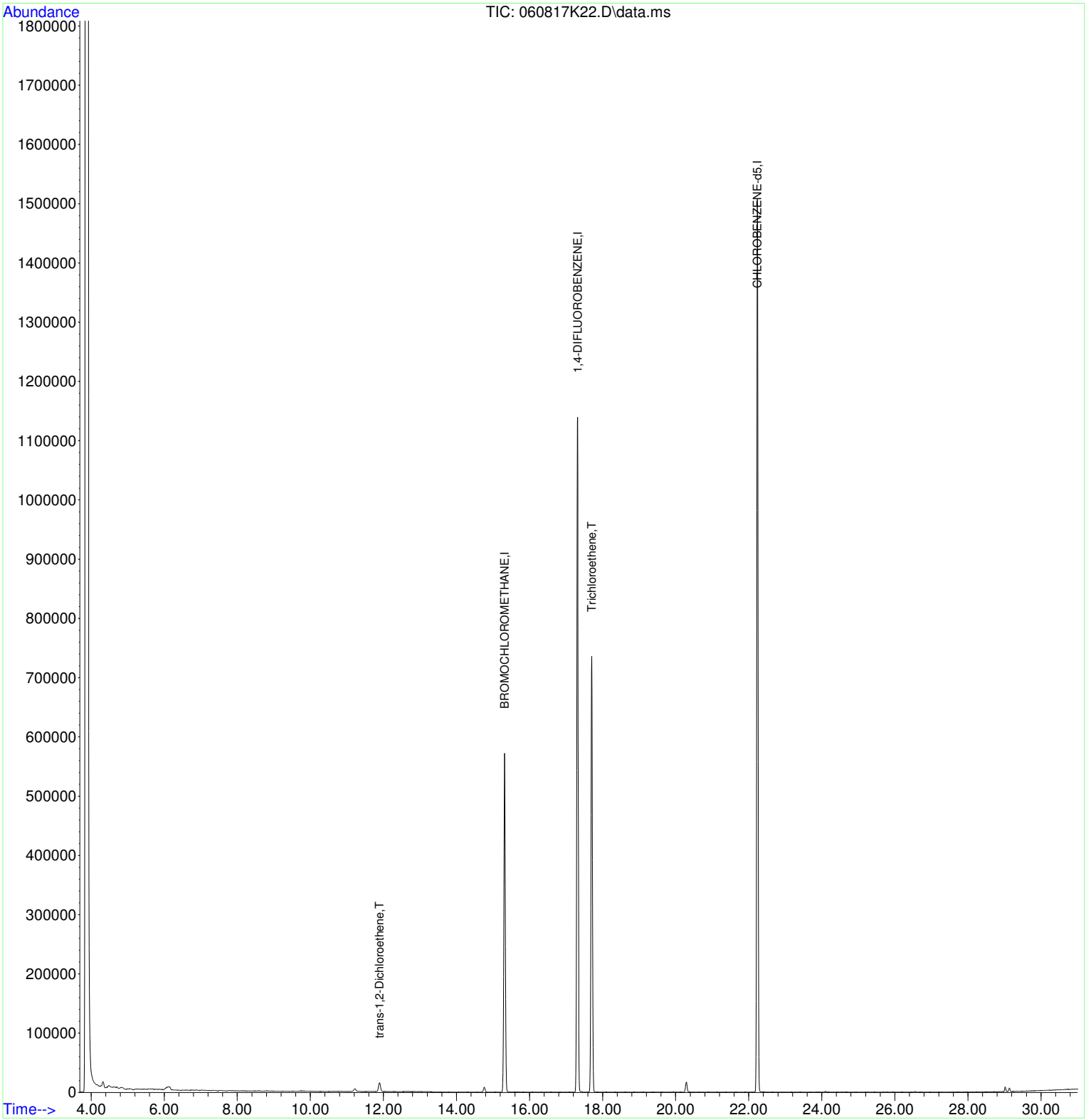
(#) = qualifier out of range (m) = manual integration (+) = signals summed

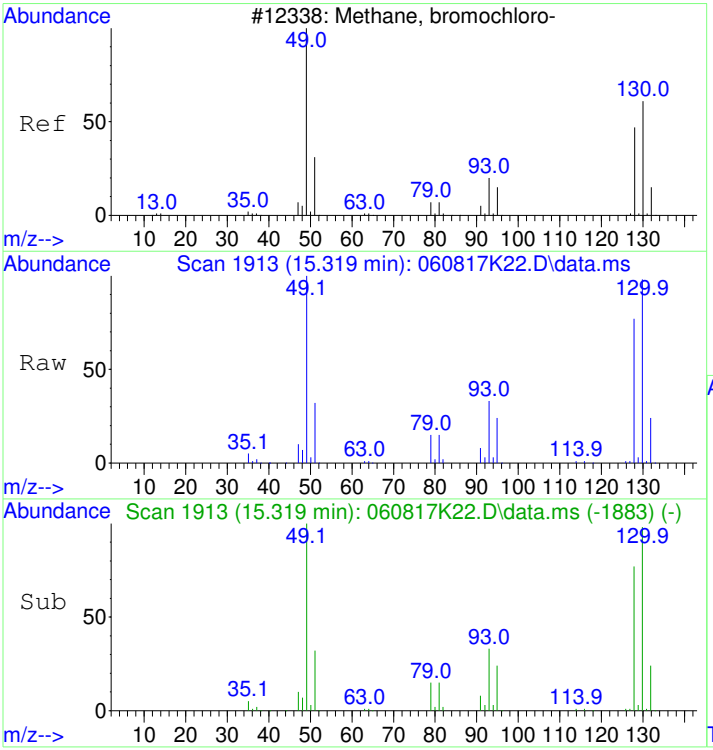
REVIEWED
By LLH at 10:57 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K22.D
InstName : HP5973K
Acq On : 9 Jun 2017 12:21 am
Operator : LLH
Sample : 1706011-02RE1
Misc : 20ml 2ND CAN #629
ALS Vial : 12 Sample Multiplier: 178.2

Quant Time: Jun 09 09:25:22 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

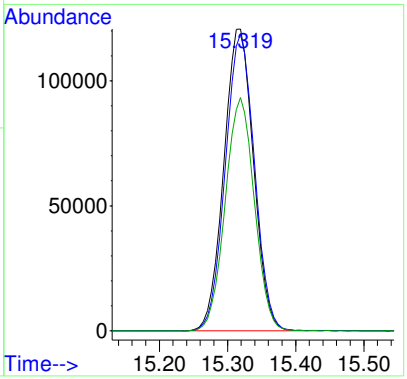


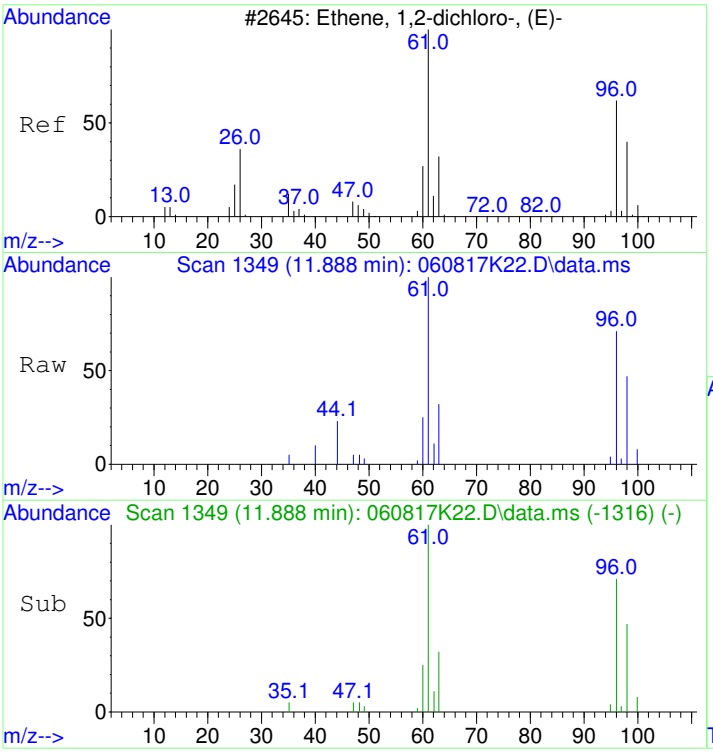


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060817K22.D
Acq: 9 Jun 2017 12:21 am

Tgt Ion: 49 Resp: 364830

Ion	Ratio	Lower	Upper
49	100		
130	96.5	75.6	115.6
128	75.7	54.4	94.4

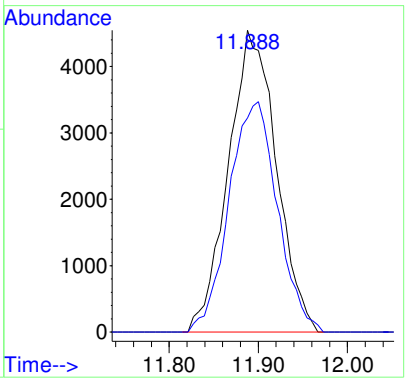


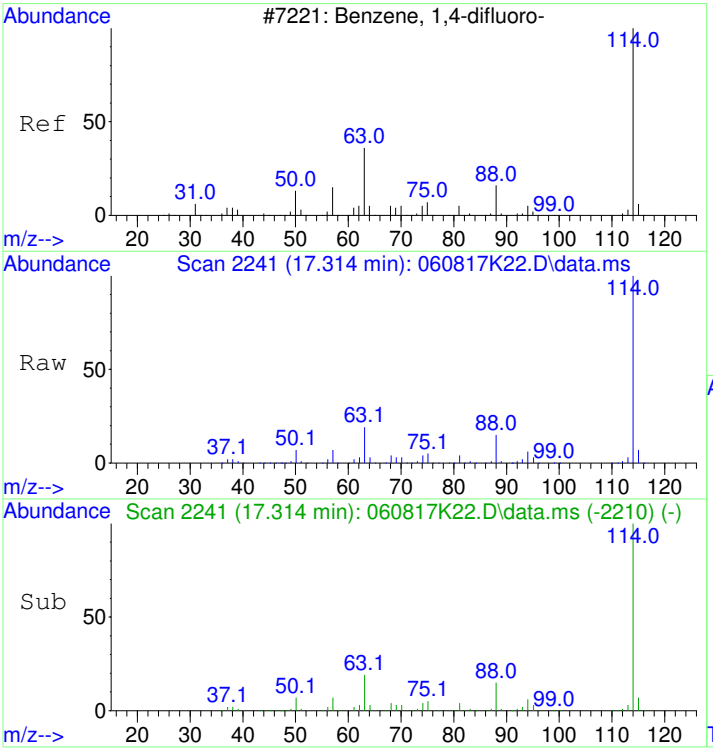


#20
trans-1,2-Dichloroethene
Concen: 0.95 ppbv
RT: 11.888 min Scan# 1349
Delta R.T. -0.000 min
Lab File: 060817K22.D
Acq: 9 Jun 2017 12:21 am

Tgt Ion: 61 Resp: 16971

Ion	Ratio	Lower	Upper
61	100		
96	77.0	56.8	96.8

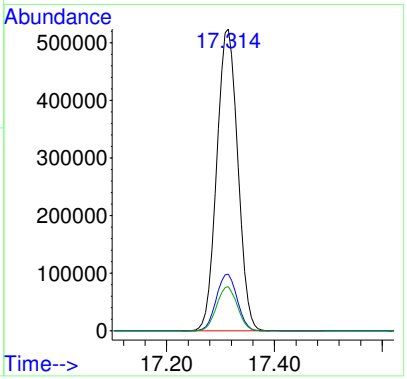


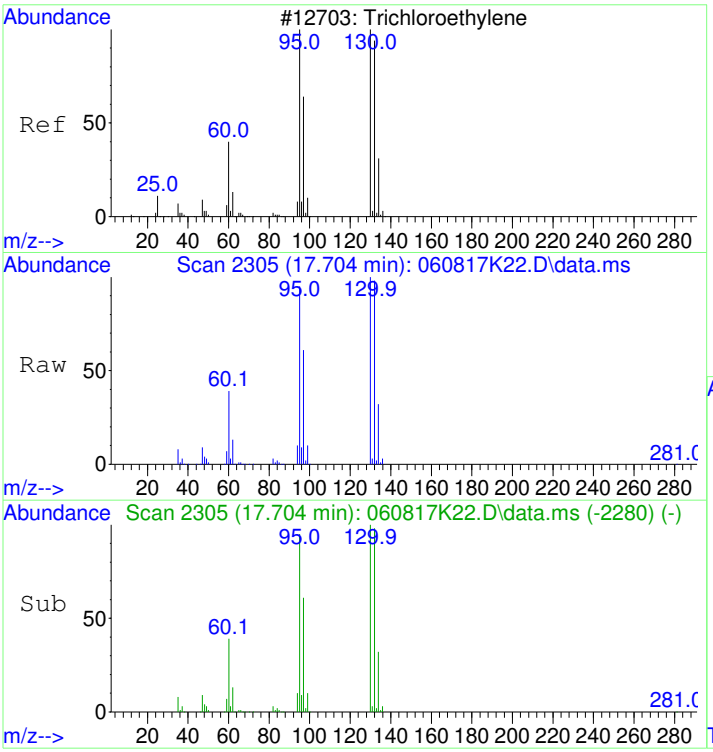


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K22.D
Acq: 9 Jun 2017 12:21 am

Tgt Ion:114 Resp: 1419845

Ion	Ratio	Lower	Upper
114	100		
63	18.7	0.0	39.1
88	14.4	0.0	34.7

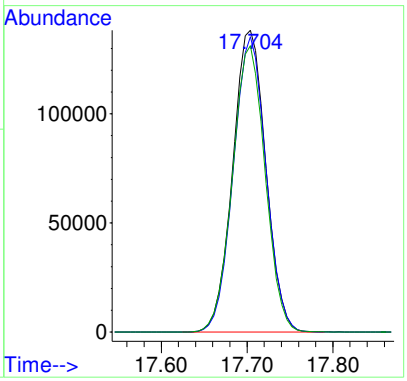


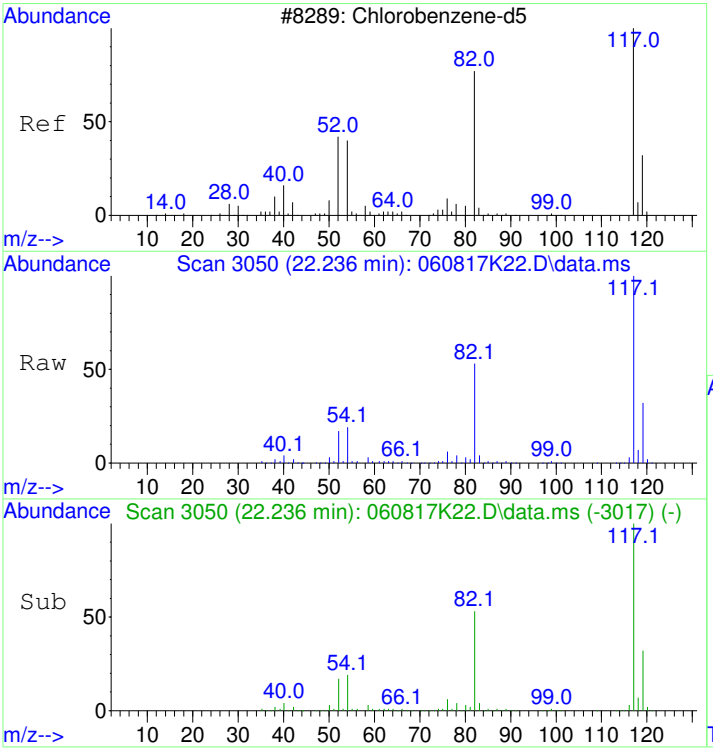


#37
Trichloroethene
Concen: 18.64 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K22.D
Acq: 9 Jun 2017 12:21 am

Tgt Ion:130 Resp: 370415

Ion	Ratio	Lower	Upper
130	100		
132	96.3	75.8	115.8
95	93.6	73.6	113.6

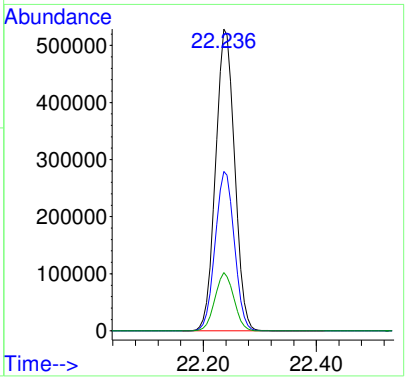




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K22.D
Acq: 9 Jun 2017 12:21 am

Tgt Ion:117 Resp: 1236181

Ion	Ratio	Lower	Upper
117	100		
82	53.2	33.7	73.7
54	19.1	0.0	39.6



B17F038-DUP1

Quantitation Report (Not Reviewed)

REPORT

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K23.D
InstName : HP5973K
Acq On : 9 Jun 2017 1:10 am
Operator : LLH
Sample : B17F038-DUP1
Misc : 20ml 1706011-02RE1 CAN #629
ALS Vial : 12 Sample Multiplier: 178.2

Quant Time: Jun 09 09:25:58 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	338552	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.314	114	1352765	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1181132	20.00	ppbv	0.00
Target Compounds						Qvalue
20) trans-1,2-Dichloroethene	11.900	61	15535	0.93	ppbv	99
37) Trichloroethene	17.704	130	353503	18.67	ppbv	99

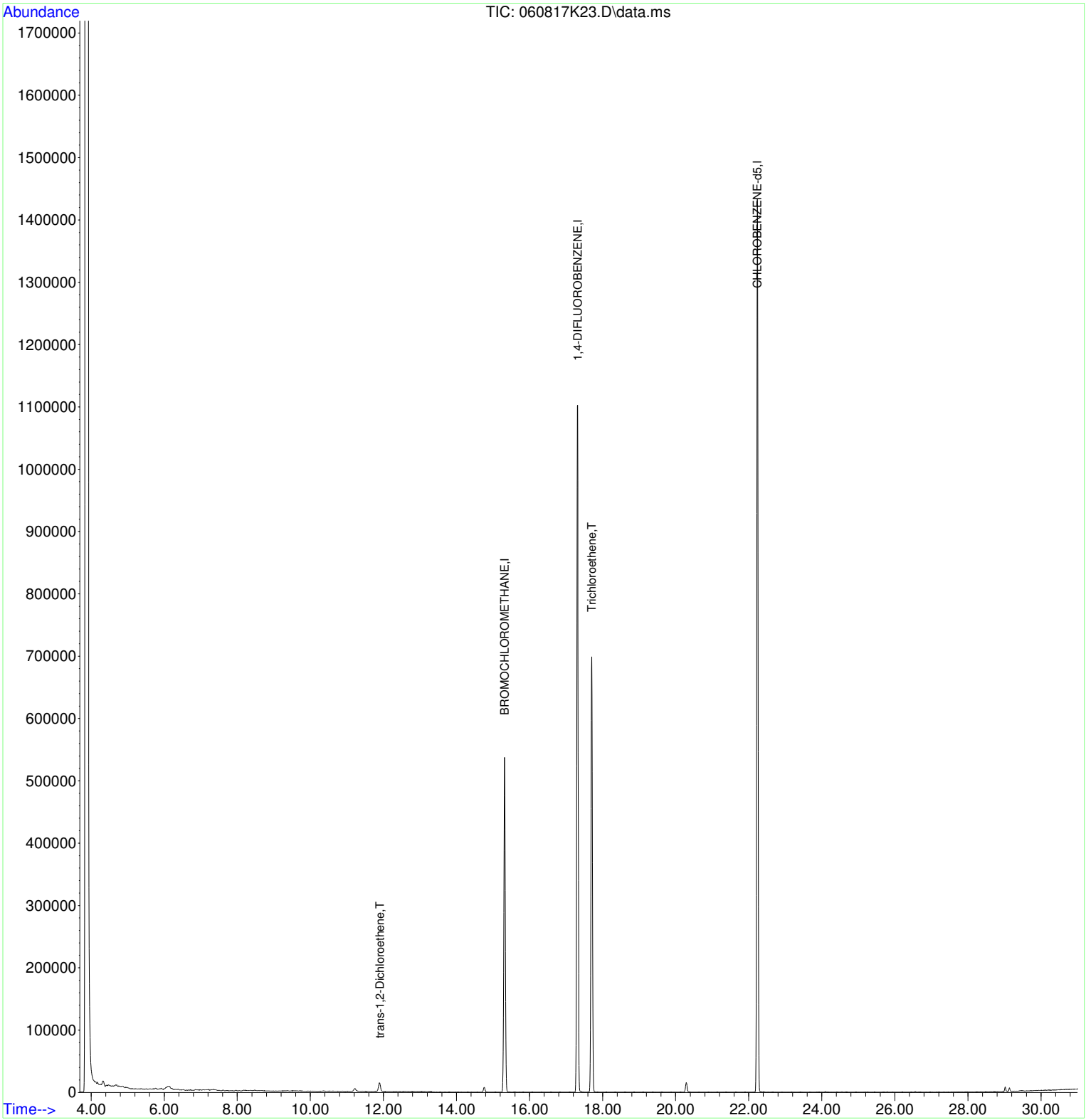
(#) = qualifier out of range (m) = manual integration (+) = signals summed

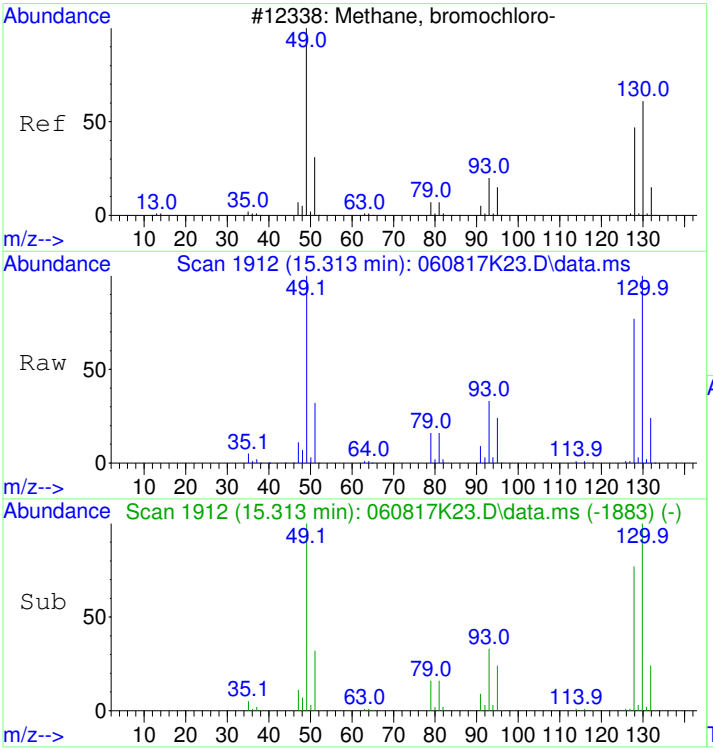
REVIEWED
By LLH at 9:50 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K23.D
InstName : HP5973K
Acq On : 9 Jun 2017 1:10 am
Operator : LLH
Sample : B17F038-DUP1
Misc : 20ml 1706011-02RE1 CAN #629
ALS Vial : 12 Sample Multiplier: 178.2

Quant Time: Jun 09 09:25:58 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

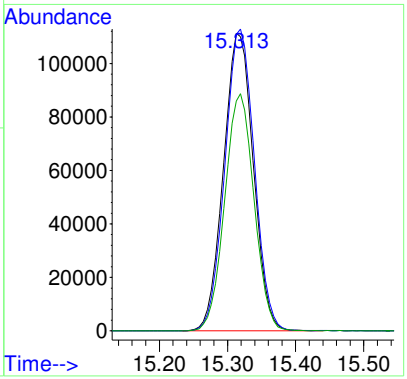


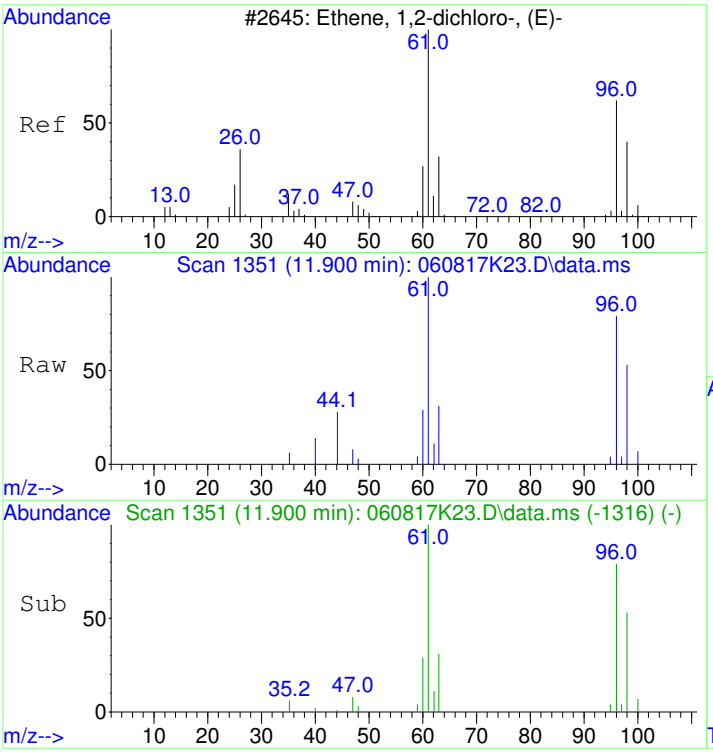


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060817K23.D
Acq: 9 Jun 2017 1:10 am

Tgt Ion: 49 Resp: 338552

Ion	Ratio	Lower	Upper
49	100		
130	100.1	75.6	115.6
128	78.0	54.4	94.4

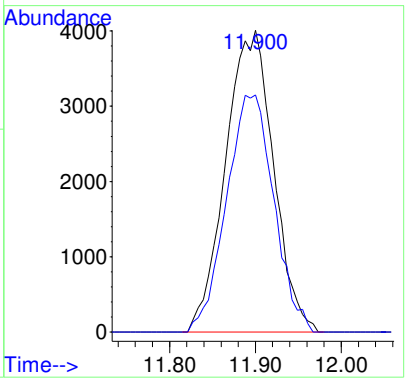


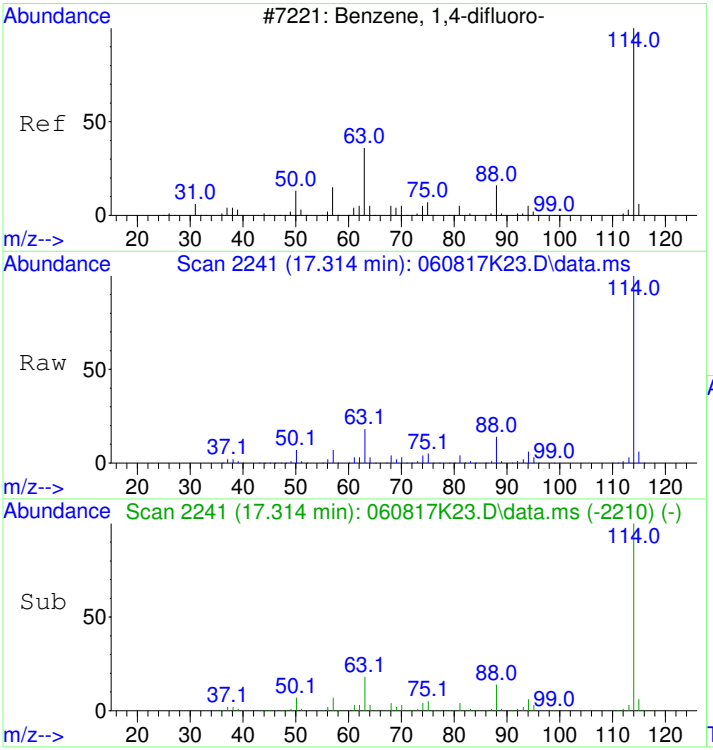


#20
trans-1,2-Dichloroethene
Concen: 0.93 ppbv
RT: 11.900 min Scan# 1351
Delta R.T. 0.012 min
Lab File: 060817K23.D
Acq: 9 Jun 2017 1:10 am

Tgt Ion: 61 Resp: 15535

Ion	Ratio	Lower	Upper
61	100		
96	77.9	56.8	96.8

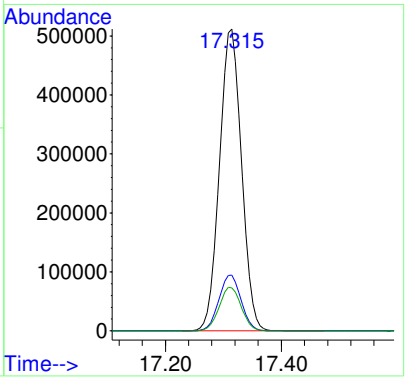


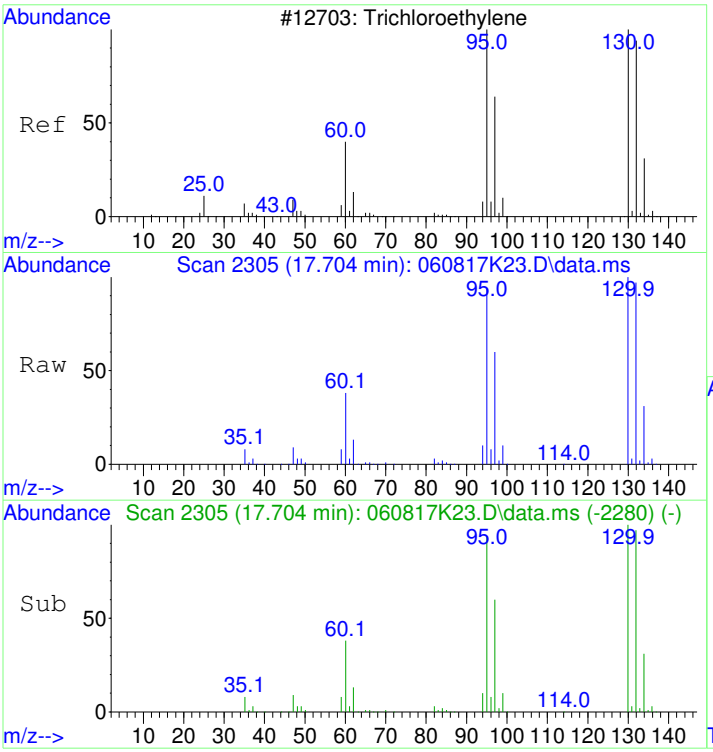


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060817K23.D
Acq: 9 Jun 2017 1:10 am

Tgt Ion:114 Resp: 1352765

Ion	Ratio	Lower	Upper
114	100		
63	18.6	0.0	39.1
88	14.5	0.0	34.7

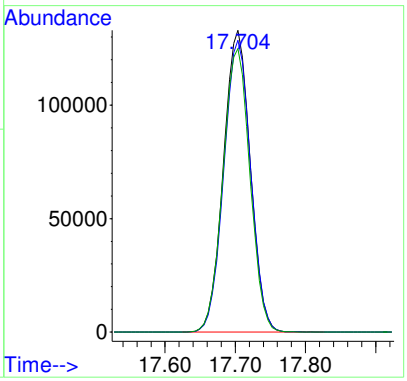


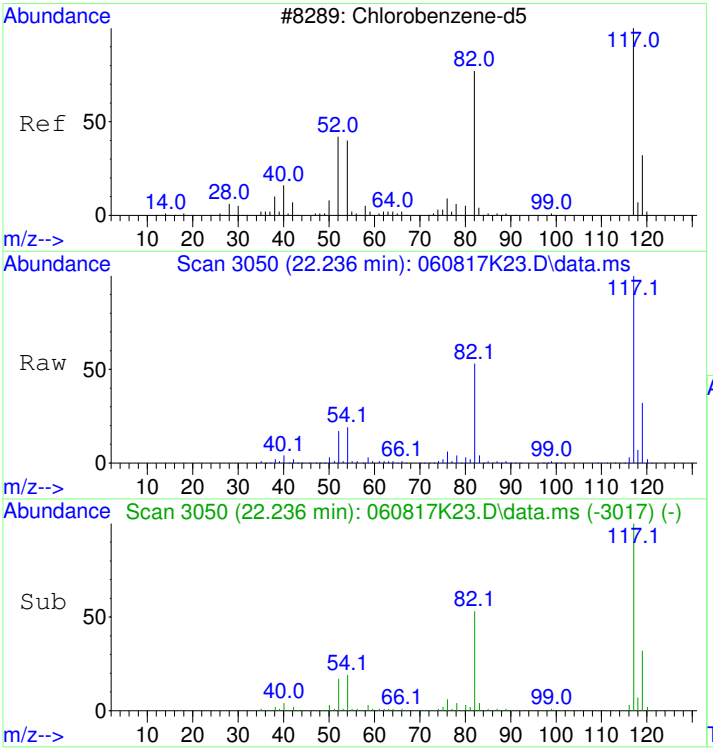


#37
Trichloroethene
Concen: 18.67 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060817K23.D
Acq: 9 Jun 2017 1:10 am

Tgt Ion:130 Resp: 353503

Ion	Ratio	Lower	Upper
130	100		
132	96.8	75.8	115.8
95	94.3	73.6	113.6

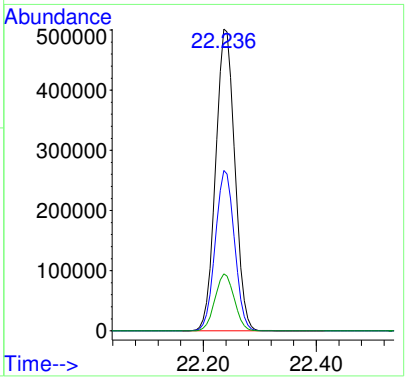




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K23.D
Acq: 9 Jun 2017 1:10 am

Tgt Ion:117 Resp: 1181132

Ion	Ratio	Lower	Upper
117	100		
82	53.1	33.7	73.7
54	19.0	0.0	39.6



S17F030-IBL4

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K24.D
InstName : HP5973K
Acq On : 9 Jun 2017 2:01 am
Operator : LLH
Sample : S17F030-IBL4
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 09:26:55 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	313523	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1260193	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1116073	20.00	ppbv	0.00

Target Compounds	Qvalue

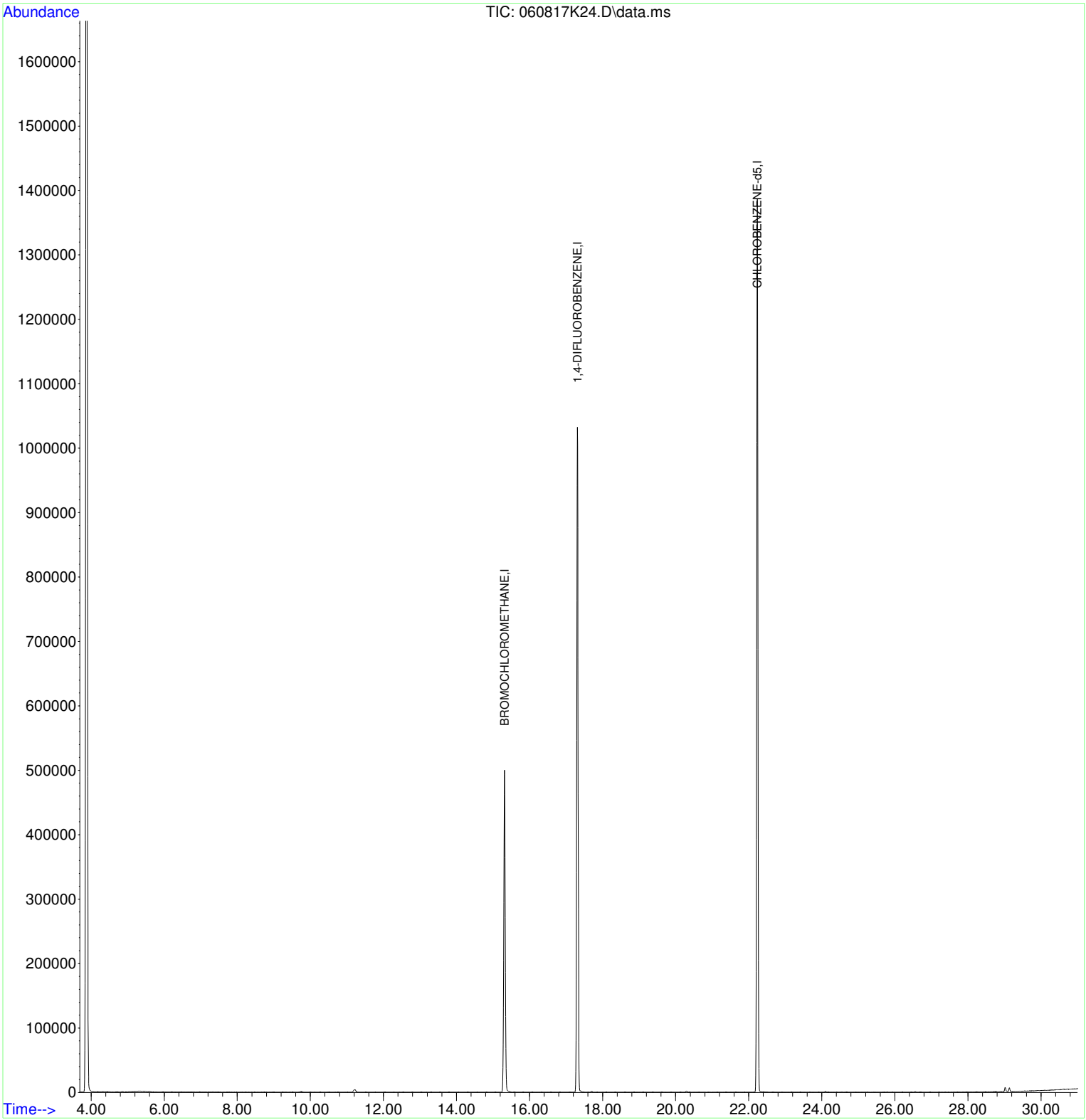
(#) = qualifier out of range (m) = manual integration (+) = signals summed

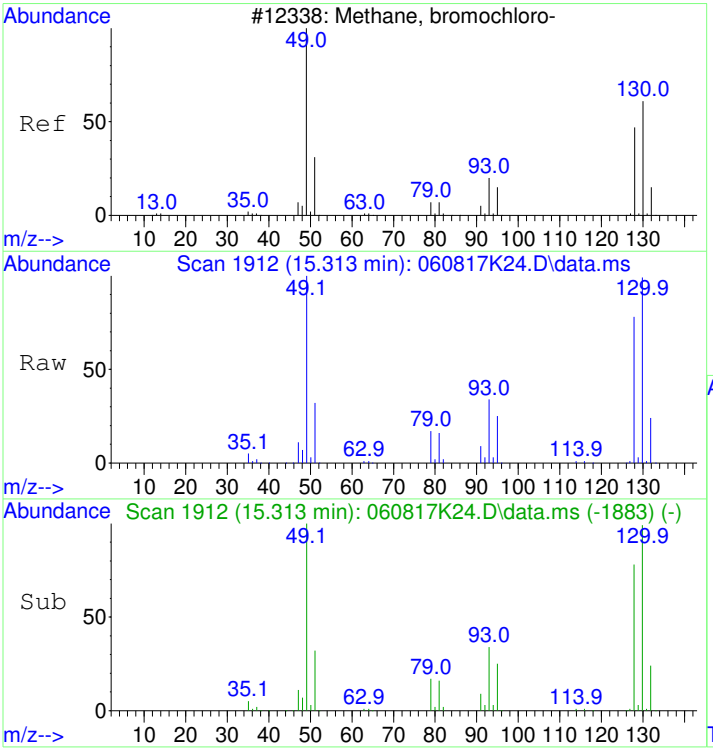
REVIEWED
By LLH at 9:50 am, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060817K_FSAA\
Data File : 060817K24.D
InstName : HP5973K
Acq On : 9 Jun 2017 2:01 am
Operator : LLH
Sample : S17F030-IBL4
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 09:26:55 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

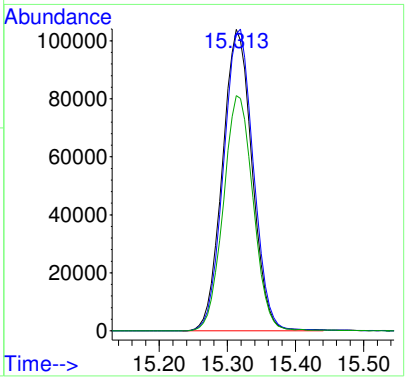


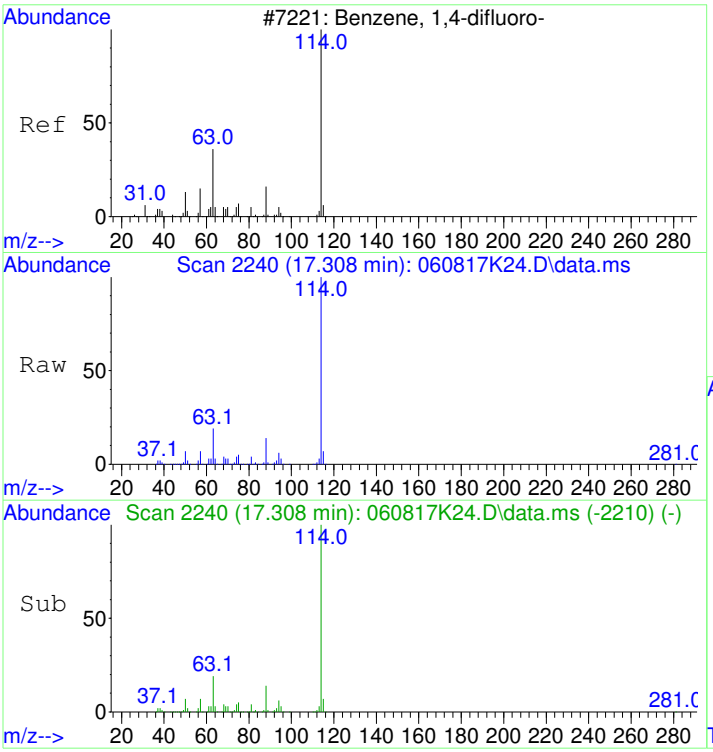


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060817K24.D
Acq: 9 Jun 2017 2:01 am

Tgt Ion: 49 Resp: 313523

Ion	Ratio	Lower	Upper
49	100		
130	100.6	75.6	115.6
128	78.3	54.4	94.4

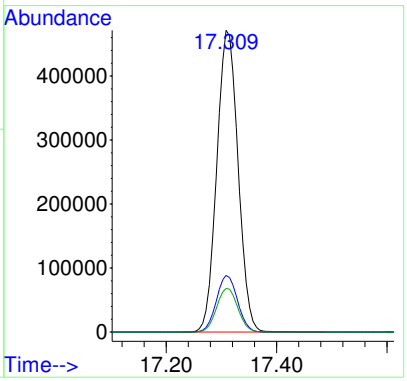


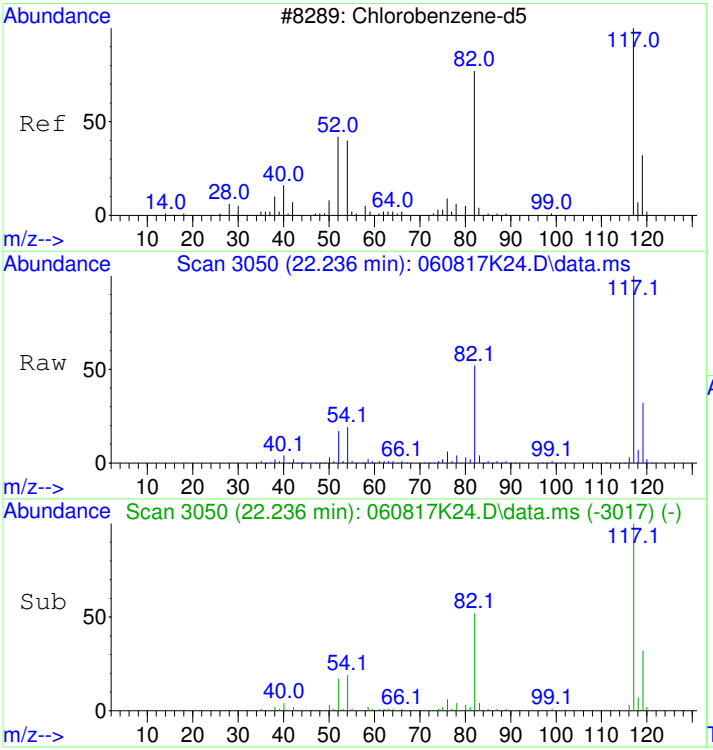


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 060817K24.D
Acq: 9 Jun 2017 2:01 am

Tgt Ion:114 Resp: 1260193

Ion	Ratio	Lower	Upper
114	100		
63	18.7	0.0	39.1
88	14.5	0.0	34.7

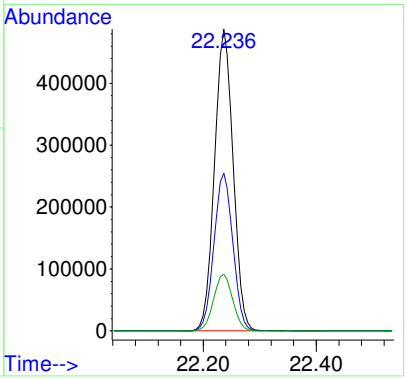




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060817K24.D
Acq: 9 Jun 2017 2:01 am

Tgt Ion:117 Resp: 1116073

Ion	Ratio	Lower	Upper
117	100		
82	52.9	33.7	73.7
54	19.2	0.0	39.6



SEQUENCE

S17F039

ANALYST / REVIEWER - DATA REVIEW CHECKLIST

BATCH #:	B17F043	SEQUENCE #:	S17F039	06/09/17	
BATCH #:	N / A	ANALYSIS:	TO15	HP5973K	

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
DOCUMENTATION	ANALYST: Bench sheet(s) attached? REVIEWER: Bench sheet(s) reviewed?	☐	Y	Y	
	ANALYST: Sequence log(s) attached? REVIEWER: Sequence log(s) reviewed?	☐	Y	Y	
	ANALYST: Every run has a PDF in LIMS? REVIEWER: Every PDF reviewed?	☐	Y	Y	
INITIAL CALIBRATION	Date of Initial Calibration used: If applicable, note date of "Last Update" in Comments.	06/05/2017 Tue Jun 06 11:26:11 2017			ICAL = OK SCV = Vinyl Acetate
	Initial Calibration ID (LIMS number):	1706003			
	ICAL within QC criteria?	☑			
	SCV within QC criteria?	☑			
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 = 49%
	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 #:	B17F043	SEQUENCE #:	S17F039	06/09/17
BATCH #:	N / A	ANALYSIS:	TO15	HP5973K

	CHECKLIST ITEM	N/A	ANALYST Y/N	REVIEWER Y/N	IDENTIFY OUTLIERS / COMMENTS
IS / SS	Internal standards within QC criteria?	☐	Y	Y	
	Surrogates within QC criteria?	☑			
SAMPLE DATA	Were samples prepared & analyzed within holding time?	☐	Y	Y	
	If samples need to be re-run, were RE(s) made in LIMS?	☑			
	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.	☐	Y		

APPROVALS	ANALYST INITIALS & DATE:	LLH 06/12/17
	REVIEWED BY:	Estrellita Manuel (affiliate) Digitally signed by Estrellita Manuel (affiliate) Date: 2017.06.13 12:26:31 -07'00' SIGN HERE

COMMENTS

*** Dichloromethane contamination slightly above 1/2 MDL, see Discrepancy Report D15-011. EM 06/06/17

Injection Log

Directory: d:\MSDCHEM\1\2017\DATA\060917K_FSAA

Table of Contents

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	31	060917K01.D	1.	S17F039-TUN1	BFB 1538040	9 Jun 2017 10:20
2	32	060917K02.D	1.	S17F039-CCV1@B17F043-BS1	10ppbv 1723026@1723029	9 Jun 2017 11:10
3	31	060917K03.D	1.	S17F039-CRL1	1.0ppbv 1723023	9 Jun 2017 11:58
4	33	060917K04.D	1.	B17F043-BLK1	200ml BLANK	9 Jun 2017 12:49
5	11	060917K05.D	4.16	1706011-03RE2	20ml REPRESS	9 Jun 2017 13:38
6	12	060917K06.D	3.17	1706011-04RE1	100ml REPRESS	9 Jun 2017 14:27
7	13	060917K07.D	3.31	1706011-09RE1	30ml REPRESS	9 Jun 2017 15:17
8	14	060917K08.D	3.36	1706011-10RE1	30ml REPRESS	9 Jun 2017 16:07
9	15	060917K09.D	217.4	1706011-02RE2	100ml 2ND CAN REPRESS	9 Jun 2017 16:56
10	33	060917K10.D	1.	S17F039-IBL1	200ml BLANK	9 Jun 2017 17:47

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2017\DATA\060917K_FSAA\060917K01.D
Tune Time : 9 Jun 2017 10:20 am

Daily Calibration File : D:\msdchem\1\2017\DATA\060917K_FSAA\060917K02.D

File	Sample	Surrogate Recovery %			Internal Standard Responses
			311007	1218670	1108040
060917K02.D	S17F039-CCV1		311007	1218666	1108037
060917K03.D	S17F039-CRL1		309477	1222001	1081593
060917K04.D	B17F043-BLK1		305243	1215025	1074956
060917K05.D	1706011-03RE2		302221	1210420	1080262
060917K06.D	1706011-04RE1		298069	1177139	1056726
060917K07.D	1706011-09RE1		301420	1187215	1049028
060917K08.D	1706011-10RE1		295856	1170378	1043916
060917K09.D	1706011-02RE2		303203	1242074	1095359
060917K10.D	S17F039-IBL1		285867	1186284	1050422

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

Created: Mon Jun 12 09:12:48 2017 HP5973K

Analysis Sequence

S17F039

Project: R17S65
Analysis: VOCs, Soil Gas

Instrument: HP5973K **Calibration ID:** 1706003 Printed: 06/12/2017 9:23 am

Lab Number	Sample Name	Order	Analyzed Date	STD ID	ISTD ID	Sequenced By	File ID	Comments
S17F039-TUN1	MS Tune	1	6/9/17 10:20	1538040		LLH	060917K01.D	
S17F039-CCV1	CCV	2	6/9/17 11:10	1723026		LLH	060917K02.D	
B17F043-BS1	LCS	3	6/9/17 11:10			LLH	060917K02.D	
S17F039-CRL1	CRL	4	6/9/17 11:58	1723023		LLH	060917K03.D	
B17F043-BLK1	Blank	5	6/9/17 12:49		1707044	LLH	060917K04.D	
1706011-03RE2 A	SG131-10	6	6/9/17 13:38		1707044	LLH	060917K05.D	
1706011-04RE1 A	F5-062-4ft	7	6/9/17 14:27		1707044	LLH	060917K06.D	
1706011-09RE1 A	F6-006-4ft	8	6/9/17 15:17		1707044	LLH	060917K07.D	
1706011-10RE1 A	F6-008-3ft	9	6/9/17 16:07		1707044	LLH	060917K08.D	
1706011-02RE2 A	SG145-6	10	6/9/17 16:56		1707044	LLH	060917K09.D	
S17F039-IBL1	Instrument Blank	11	6/9/17 17:47		1707044	LLH	060917K10.D	

Sequence Comments

Reagents

Reagent # **Description**

Table of Contents

Sequence Report

ID	Name	Pos.	Int Std	Cal Std	Sample	Method	Inject	Status
	BFB	T1	40	40	50	TO-15_A.CTD3	6/9/2017 10:20:39 AM	Completed
	CCV1	T2	40	0	100	TO-15_A.CTD3	6/9/2017 11:10:01 AM	Completed
	CRL1	T1	40	0	20	TO-15_A.CTD3	6/9/2017 11:58:19 AM	Completed
	BLANK	T3	40	0	200	TO-15_A.CTD3	6/9/2017 12:49:14 PM	Completed
	1706011-03RE2	T1	40	0	20	TO-15_A.CTD3	6/9/2017 1:38:38 PM	Completed
	1706011-04RE1	T2	40	0	100	TO-15_A.CTD3	6/9/2017 2:27:56 PM	Completed
	1706011-09RE1	T3	40	0	30	TO-15_A.CTD3	6/9/2017 3:17:54 PM	Completed
	1706011-10RE1	T4	40	0	30	TO-15_A.CTD3	6/9/2017 4:07:09 PM	Completed
	1706011-02RE2 2ND CAN	T5	40	0	100	TO-15_A.CTD3	6/9/2017 4:56:28 PM	Completed
	BLANK	T3	40	0	200	TO-15_A.CTD3	6/9/2017 5:47:20 PM	Completed

SEQUENCE DATA

S17F039

S17F039-TUN1

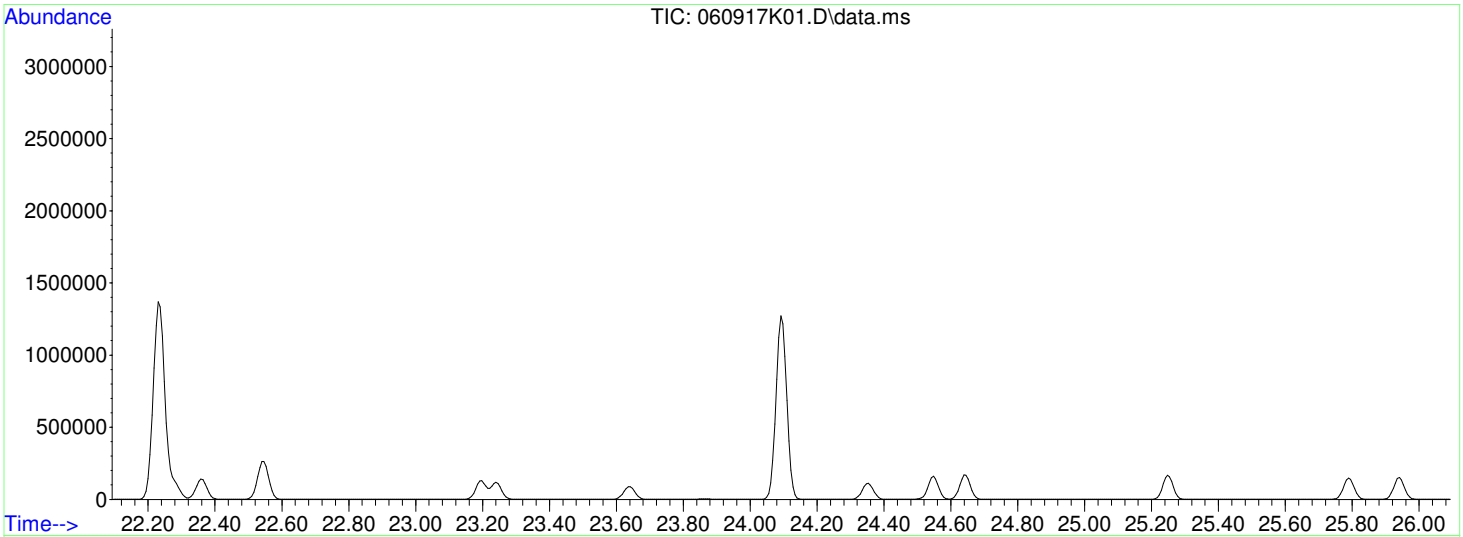
Table of Contents

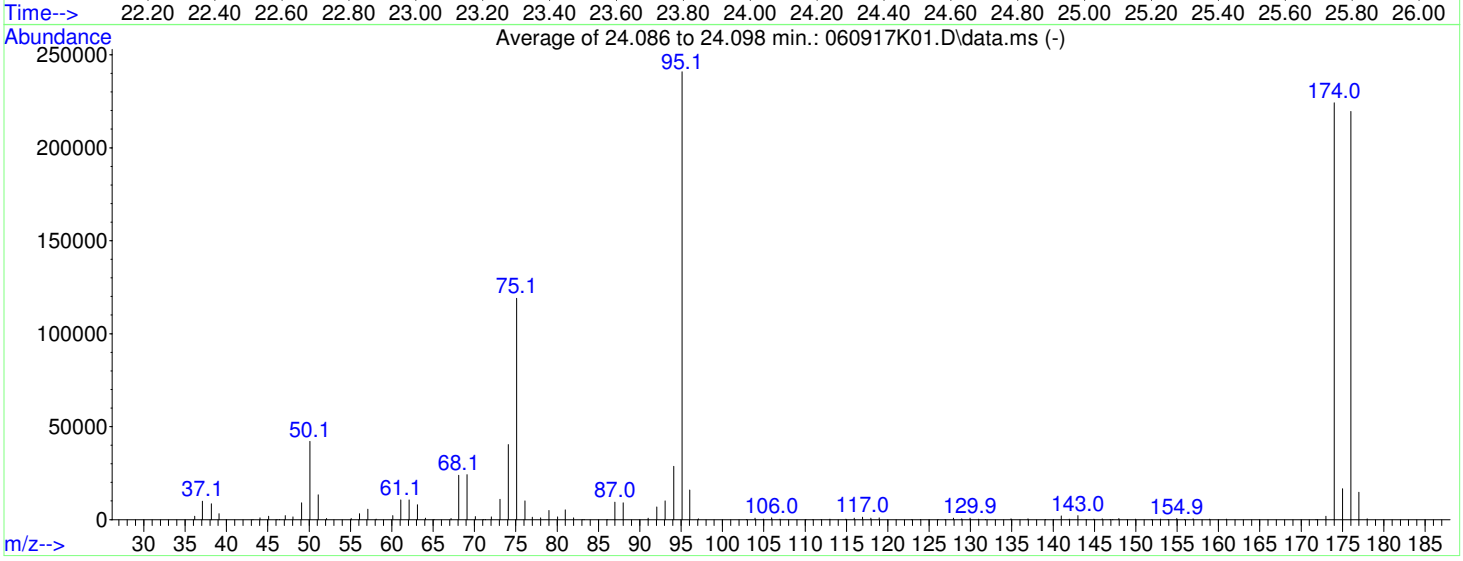
Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K01.D
InstName : HP5973K
Acq On : 9 Jun 2017 10:20 am
Operator : LLH
Sample : S17F039-TUN1
Misc : BFB 1538040
ALS Vial : 31 Sample Multiplier: 1

REVIEWED
By LLH at 11:00 am, Jun 09, 2017

Integration File: lscint.p

Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Title : TO15
Last Update : Tue Jun 06 11:26:11 2017



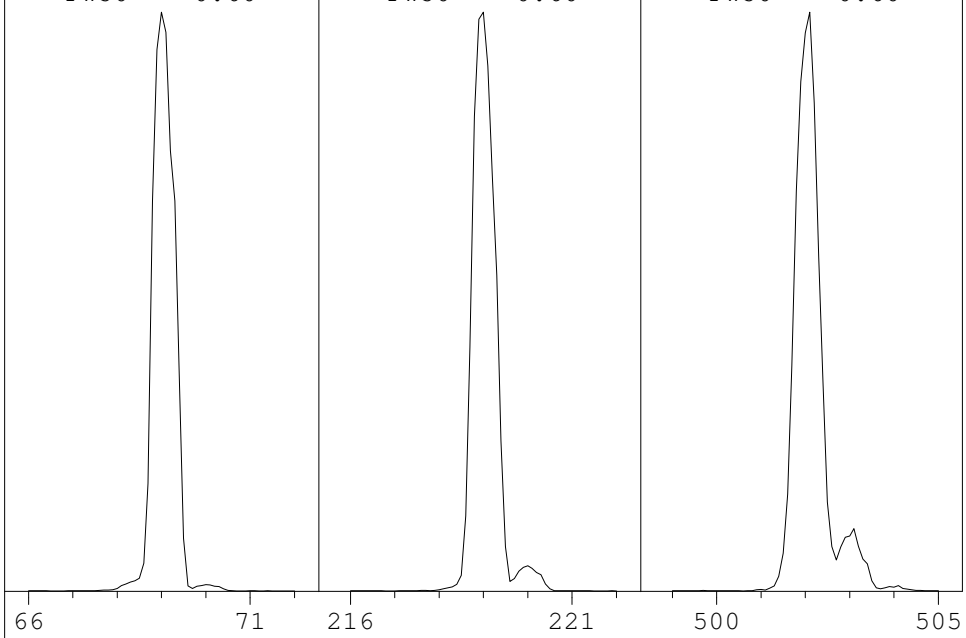


AutoFind: Scans 3354, 3355, 3356; Background Corrected with Scan 3343

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.5	42075	PASS
75	95	30	66	49.4	119112	PASS
95	95	100	100	100.0	240981	PASS
96	95	5	9	6.6	15954	PASS
173	174	0.00	2	0.8	1773	PASS
174	95	50	120	93.0	224149	PASS
175	174	4	9	7.4	16685	PASS
176	174	93	101	97.9	219477	PASS
177	176	5	9	6.7	14749	PASS

Fri Jun 09 09:53:47 2017 Instrum
C:\msdchem\1\5973N\BFB060917.u US03960556

Mass	69.00	Mass	219.00	Mass	502.10
Ab	522866	Ab	363063	Ab	41094
Pw50	0.60	Pw50	0.60	Pw50	0.60

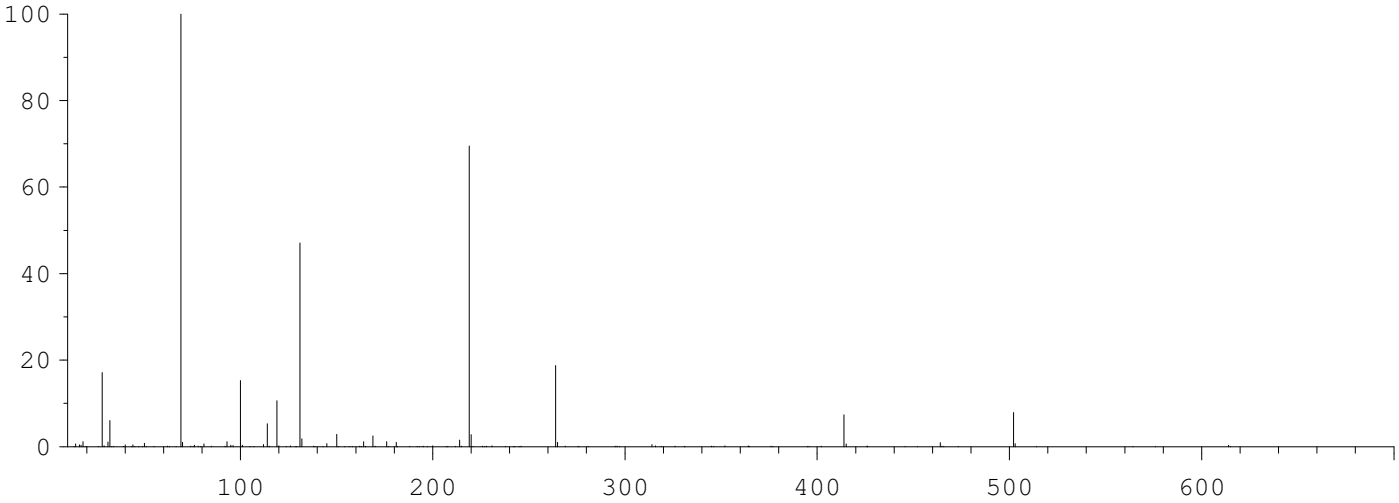


Ion Pol	Pos	MassGain	72
		MassOffs	-8
Emission	34.6	AmuGain	1985
EIEnrgy	69.9	AmuOffs	131
Filament	1	Wid219	-0.024
		DC Pol	Pos
Repeller	32.13		
IonFcus	90.2	HEDEnab	On
EntLens	14.5	EMVolts	1141
EntOffs	20.08		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	Turbo Speed	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
140 peaks Base: 69.00 Abundance: 477376



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	477376	100.00	69.90	4634	0.97
219.00	331840	69.51	220.00	13361	4.03
502.10	37552	7.87	503.10	3569	9.50

Air/Water Check: H20~1.15% N2~17.09% O2~6.04% CO2~0.39% N2/H2O~1487.96%

Column(1) Flow: 1.496 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 257868
Repeller Maximum 35 volts using ion 219; Gain Factor 2.58

MassGain Values(Samples): 76(3) 72(2) 71(1) 71(0) 72(FS)

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Entrance Lens Offset:	20.1	20.1	20.1	20.1	20.1	20.1	20.1

S17F039-CCV1

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

REVIEWED
By LLH at 12:29 pm, Jun 09, 2017

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	111	0.00
2	T	Propene	0.493	0.424	14.0	104	0.00
3	T	Dichlorodifluoromethane	2.272	2.010	11.5	109	0.00
4	T	1,2-Dichlorotetrafluoroetha	2.321	2.060	11.2	109	0.00
5	T	Chloromethane	0.626	0.534	14.7	107	0.00
6	T	Vinyl chloride	0.661	0.589	10.9	110	0.00
7	T	1,3-Butadiene	0.465	0.414	11.0	111	0.00
8	T	Bromomethane	0.683	0.608	11.0	111	0.00
9	T	Chloroethane	0.402	0.352	12.4	108	0.00
10	T	Bromoethene	0.692	0.624	9.8	110	0.00
11	T	Trichlorofluoromethane	2.209	1.972	10.7	111	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	1.371	1.230	10.3	111	0.00
13	T	1,1-Dichloroethene	1.049	0.934	11.0	108	0.00
14	T	Acetone	0.965	0.838	13.2	108	0.00
15	T	Carbon disulfide	2.153	1.881	12.6	108	0.00
16	T	2-Propanol	0.730	0.672	7.9	108	0.00
17	T	Allyl chloride	0.688	0.612	11.0	107	0.00
18	T	Dichloromethane	0.824	0.661	19.8	109	0.00
19	T	tert-Butyl methyl ether (MT	1.936	1.787	7.7	110	0.01
20	T	trans-1,2-Dichloroethene	0.983	0.872	11.3	109	0.00
21	T	Hexane	1.071	0.968	9.6	109	0.00
22	T	1,1-Dichloroethane	1.341	1.183	11.8	108	0.00
23	T	Vinyl acetate	1.106	1.054	4.7	109	0.00
24	T	cis-1,2-Dichloroethene	0.920	0.823	10.5	108	0.00
25	T	2-Butanone (MEK)	0.362	0.328	9.4	109	0.00
26	T	Ethyl acetate	0.213	0.192	9.9	108	0.00
27	T	Tetrahydrofuran	0.670	0.598	10.7	109	0.00
28	T	Chloroform	1.629	1.455	10.7	109	0.00
29	T	Cyclohexane	1.074	0.972	9.5	109	0.00
30	T	1,1,1-Trichloroethane	1.744	1.591	8.8	111	0.00
31	T	Carbon tetrachloride	1.763	1.617	8.3	112	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	113	0.00
33	T	Benzene	0.581	0.517	11.0	111	0.00
34	T	2,2,4-Trimethylpentane	0.820	0.742	9.5	110	0.00
35	T	1,2-Dichloroethane	0.269	0.236	12.3	110	0.00
36	T	Heptane	0.270	0.236	12.6	109	0.00
37	T	Trichloroethene	0.263	0.237	9.9	110	0.00
38	T	1,2-Dichloropropane	0.193	0.173	10.4	111	0.00
39	T	1,4-Dioxane	0.131	0.121	7.6	110	0.00
40	T	Bromodichloromethane	0.446	0.398	10.8	111	0.00
41	T	cis-1,3-Dichloropropene	0.307	0.286	6.8	111	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.356	0.323	9.3	109	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	113	0.00
44	T	Toluene	0.848	0.764	9.9	110	0.00
45	T	trans-1,3-Dichloropropene	0.346	0.326	5.8	112	0.00
46	T	1,1,2-Trichloroethane	0.294	0.264	10.2	111	0.00
47	T	Tetrachloroethene	0.452	0.405	10.4	111	0.00
48	T	2-Hexanone	0.393	0.368	6.4	110	0.00
49	T	Chlorodibromomethane	0.536	0.485	9.5	112	0.00
50	T	1,2-Dibromoethane (EDB)	0.422	0.381	9.7	111	0.00
51	T	Chlorobenzene	0.713	0.634	11.1	111	0.00

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	1.181	1.056	10.6	110	0.00
53 T	m&p-Xylene	0.903	0.810	10.3	110	0.00
54 T	o-Xylene	0.910	0.832	8.6	111	0.00
55 T	Styrene	0.764	0.694	9.2	110	0.00
56 T	Bromoform	0.534	0.503	5.8	113	0.00
57 T	1,1,2,2-Tetrachloroethane	0.668	0.594	11.1	110	0.00
58 T	4-Ethyltoluene	1.375	1.250	9.1	110	0.00
59 T	1,3,5-Trimethylbenzene	1.142	1.017	10.9	110	0.00
60 T	1,2,4-Trimethylbenzene	1.144	1.036	9.4	110	0.00
61 T	1,3-Dichlorobenzene	0.828	0.739	10.7	109	0.00
62 T	1,4-Dichlorobenzene	0.817	0.732	10.4	109	0.00
63 T	Benzyl chloride	0.661	0.691	-4.5	112	0.00
64 T	1,2-Dichlorobenzene	0.822	0.724	11.9	109	0.00
65 T	1,2,4-Trichlorobenzene	0.852	0.711	16.5	105	0.00
66 T	Hexachlorobutadiene	0.776	0.674	13.1	110	0.00

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

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	311007	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1218666	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1108037	20.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	4.223	41	72511	9.45	ppbv	99
3) Dichlorodifluoromethane	4.314	85	331324	9.38	ppbv	100
4) 1,2-Dichlorotetrafluor...	4.649	85	323535	8.96	ppbv	100
5) Chloromethane	4.862	50	91351	9.39	ppbv	99
6) Vinyl chloride	5.160	62	98074	9.54	ppbv	99
7) 1,3-Butadiene	5.245	54	68287	9.45	ppbv	98
8) Bromomethane	6.169	94	101130	9.52	ppbv	99
9) Chloroethane	6.498	64	57533	9.20	ppbv	98
10) Bromoethene	7.052	106	104728	9.74	ppbv	99
11) Trichlorofluoromethane	7.155	101	306636	8.93	ppbv	100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	179736	8.43	ppbv	99
13) 1,1-Dichloroethene	9.029	61	149661	9.17	ppbv	99
14) Acetone	9.686	43	143386	9.56	ppbv	99
15) Carbon disulfide	9.722	76	310017	9.26	ppbv	100
16) 2-Propanol	10.294	45	114957	10.13	ppbv	99
17) Allyl chloride	10.623	41	104755	9.79	ppbv	98
18) Dichloromethane	11.213	49	99666	7.77	ppbv	99
19) tert-Butyl methyl ethe...	11.839	73	300159	9.97	ppbv	100
20) trans-1,2-Dichloroethene	11.888	61	149213	9.76	ppbv	100
21) Hexane	12.417	57	157985	9.49	ppbv	99
22) 1,1-Dichloroethane	13.293	63	182157	8.73	ppbv	99
23) Vinyl acetate	13.445	43	180303	10.48	ppbv	100
24) cis-1,2-Dichloroethene	14.759	61	133107	9.30	ppbv	100
25) 2-Butanone (MEK)	14.893	72	55089	9.80	ppbv	99
26) Ethyl acetate	14.905	61	32499	9.83	ppbv	98
27) Tetrahydrofuran	15.295	42	97699	9.38	ppbv	99
28) Chloroform	15.465	83	242037	9.56	ppbv	100
29) Cyclohexane	15.599	56	161664	9.68	ppbv	99
30) 1,1,1-Trichloroethane	15.702	97	254764	9.39	ppbv	100
31) Carbon tetrachloride	15.940	117	261508	9.54	ppbv	100
33) Benzene	16.469	78	358566	9.51	ppbv	100
34) 2,2,4-Trimethylpentane	16.347	57	509676	9.59	ppbv	100
35) 1,2-Dichloroethane	16.718	62	159344	9.14	ppbv	100
36) Heptane	16.743	43	163610	9.34	ppbv	99
37) Trichloroethene	17.704	130	169228	9.92	ppbv	99
38) 1,2-Dichloropropane	18.245	63	119985	9.58	ppbv	100
39) 1,4-Dioxane	18.440	88	83351	9.82	ppbv	99
40) Bromodichloromethane	18.714	83	268158	9.27	ppbv	100
41) cis-1,3-Dichloropropene	19.480	75	192846	9.70	ppbv	99
42) 4-Methyl-2-pentanone (...	19.724	43	221894	9.63	ppbv	99
44) Toluene	19.931	91	457414	9.73	ppbv	99
45) trans-1,3-Dichloropropene	20.448	75	175346	9.16	ppbv	99
46) 1,1,2-Trichloroethane	20.752	97	159243	9.79	ppbv	99
47) Tetrachloroethene	20.770	166	242612	9.70	ppbv	100
48) 2-Hexanone	21.080	43	213897	9.82	ppbv	99
49) Chlorodibromomethane	21.354	129	287784	9.70	ppbv	100
50) 1,2-Dibromoethane (EDB)	21.585	107	232289	9.94	ppbv	100
51) Chlorobenzene	22.285	112	386331	9.78	ppbv	99
52) Ethylbenzene	22.364	91	637823	9.75	ppbv	100
53) m&p-Xylene	22.546	91	968977	19.37	ppbv	99
54) o-Xylene	23.197	91	488824	9.69	ppbv	100

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

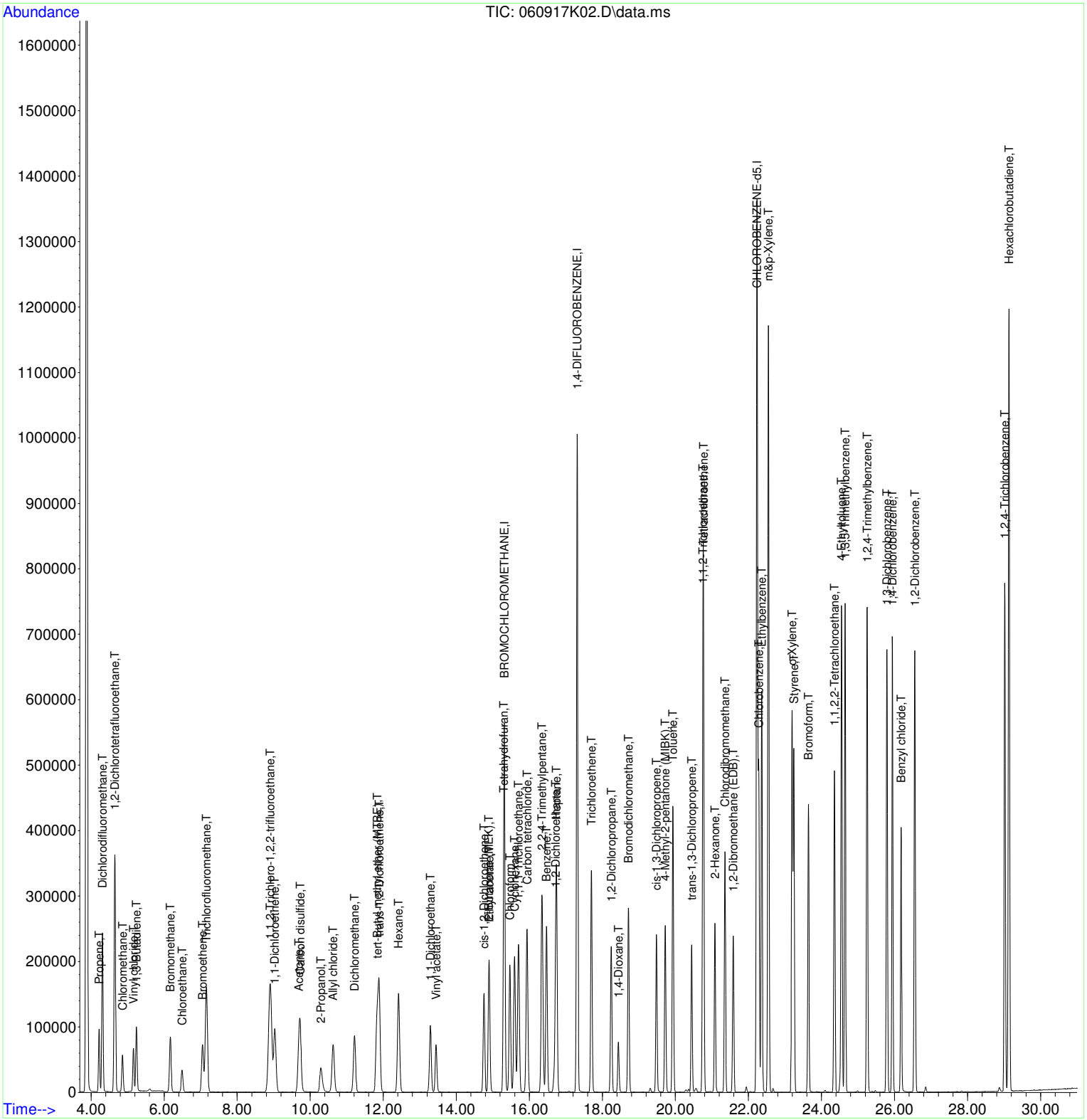
Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	395870	9.35 ppbv	99
56) Bromoform	23.642	173	298206	10.08 ppbv	99
57) 1,1,2,2-Tetrachloroethane	24.353	83	345254	9.33 ppbv	99
58) 4-Ethyltoluene	24.548	105	720081	9.46 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	602859	9.53 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	608543	9.60 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	429858	9.37 ppbv	100
62) 1,4-Dichlorobenzene	25.947	146	429902	9.49 ppbv	100
63) Benzyl chloride	26.178	91	421060	11.50 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	416880	9.15 ppbv	99
65) 1,2,4-Trichlorobenzene	29.019	180	370307	7.85 ppbv	100
66) Hexachlorobutadiene	29.135	225	369942	8.61 ppbv	100

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

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



REVIEWED
By LLH at 12:29 pm, Jun 09, 2017

LCS REPORT

Instrument Name: HP5973K
Sample Name: S17F039-CCV1@B17F043-BS1
Misc Info: 10ppbv 1723026@1723029
Date Acquired: 6/9/2017 11:10
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	70.0	130.0	#N/A
2)	Propene	4.22	11.00	9.45	86%	72.0	121.0	pass
3)	Dichlorodifluoromethane	4.31	10.60	9.38	88%	68.0	129.0	pass
4)	1,2-Dichlorotetrafluoroethane	4.65	10.10	8.96	89%	67.0	127.0	pass
5)	Chloromethane	4.86	11.00	9.39	85%	70.0	123.0	pass
6)	Vinyl chloride	5.16	10.70	9.54	89%	69.0	125.0	pass
7)	1,3-Butadiene	5.24	10.60	9.45	89%	75.0	121.0	pass
8)	Bromomethane	6.17	10.70	9.52	89%	66.0	125.0	pass
9)	Chloroethane	6.50	10.50	9.20	88%	67.0	125.0	pass
10)	Bromoethene	7.05	10.80	9.74	90%	68.0	124.0	pass
11)	Trichlorofluoromethane	7.16	10.00	8.93	89%	68.0	133.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.90	9.40	8.43	90%	64.0	125.0	pass
13)	1,1-Dichloroethene	9.03	10.30	9.17	89%	73.0	128.0	pass
14)	Acetone	9.69	11.00	9.56	87%	67.0	141.0	pass
15)	Carbon disulfide	9.72	10.60	9.26	87%	45.0	158.0	pass
16)	2-Propanol	10.29	11.00	10.13	92%	72.0	132.0	pass
17)	Allyl chloride	10.62	11.00	9.79	89%	75.0	132.0	pass
18)	Dichloromethane	11.21	9.70	7.77	80%	73.0	116.0	pass
19)	tert-Butyl methyl ether (MTBE)	11.84	10.80	9.97	92%	74.0	131.0	pass
20)	trans-1,2-Dichloroethene	11.89	11.00	9.76	89%	80.0	123.0	pass
21)	Hexane	12.42	10.50	9.49	90%	75.0	124.0	pass
22)	1,1-Dichloroethane	13.29	9.90	8.73	88%	72.0	125.0	pass
23)	Vinyl acetate	13.45	11.00	10.48	95%	31.0	171.0	pass
24)	cis-1,2-Dichloroethene	14.76	10.40	9.30	89%	77.0	129.0	pass
25)	2-Butanone (MEK)	14.89	10.80	9.80	91%	69.0	137.0	pass
26)	Ethyl acetate	14.91	10.90	9.83	90%	75.0	127.0	pass
27)	Tetrahydrofuran	15.29	10.50	9.38	89%	78.0	120.0	pass
28)	Chloroform	15.47	10.70	9.56	89%	77.0	126.0	pass
29)	Cyclohexane	15.60	10.70	9.68	91%	76.0	124.0	pass
30)	1,1,1-Trichloroethane	15.70	10.30	9.39	91%	74.0	133.0	pass
31)	Carbon tetrachloride	15.94	10.40	9.54	92%	71.0	141.0	pass
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	70.0	130.0	#N/A
33)	Benzene	16.47	10.70	9.51	89%	81.0	125.0	pass
34)	2,2,4-Trimethylpentane	16.35	10.60	9.59	90%	82.0	125.0	pass
35)	1,2-Dichloroethane	16.72	10.40	9.14	88%	61.0	153.0	pass
36)	Heptane	16.74	10.70	9.34	87%	80.0	129.0	pass
37)	Trichloroethene	17.70	11.00	9.92	90%	73.0	128.0	pass
38)	1,2-Dichloropropane	18.25	10.70	9.58	90%	77.0	129.0	pass
39)	1,4-Dioxane	18.44	10.60	9.82	93%	58.0	140.0	pass
40)	Bromodichloromethane	18.71	10.40	9.27	89%	76.0	137.0	pass
41)	cis-1,3-Dichloropropene	19.48	10.40	9.70	93%	80.0	136.0	pass
42)	4-Methyl-2-pentanone (MIBK)	19.72	10.60	9.63	91%	65.0	140.0	pass
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	70.0	130.0	#N/A
44)	Toluene	19.93	10.80	9.73	90%	78.0	133.0	pass
45)	trans-1,3-Dichloropropene	20.45	9.70	9.16	94%	79.0	146.0	pass
46)	1,1,2-Trichloroethane	20.75	10.90	9.79	90%	74.0	134.0	pass
47)	Tetrachloroethene	20.77	10.80	9.70	90%	73.0	130.0	pass

48)	2-Hexanone	21.08	10.50	9.82	93%	50.0	162.0	pass
49)	Chlorodibromomethane	21.35	10.70	9.70	91%	81.0	135.0	pass
50)	1,2-Dibromoethane (EDB)	21.59	11.00	9.94	90%	78.0	133.0	pass
51)	Chlorobenzene	22.28	11.00	9.78	89%	81.0	126.0	pass
52)	Ethylbenzene	22.36	10.90	9.75	89%	82.0	130.0	pass
53)	m&p-Xylene	22.55	21.60	19.37	90%	82.0	131.0	pass
54)	o-Xylene	23.20	10.60	9.69	91%	82.0	132.0	pass
55)	Styrene	23.25	10.30	9.35	91%	65.0	141.0	pass
56)	Bromoform	23.64	10.70	10.08	94%	84.0	137.0	pass
57)	1,1,2,2-Tetrachloroethane	24.35	10.50	9.33	89%	73.0	127.0	pass
58)	4-Ethyltoluene	24.55	10.40	9.46	91%	81.0	127.0	pass
59)	1,3,5-Trimethylbenzene	24.65	10.70	9.53	89%	77.0	132.0	pass
60)	1,2,4-Trimethylbenzene	25.25	10.60	9.60	91%	78.0	131.0	pass
61)	1,3-Dichlorobenzene	25.80	10.50	9.37	89%	79.0	124.0	pass
62)	1,4-Dichlorobenzene	25.95	10.60	9.49	90%	75.0	127.0	pass
63)	Benzyl chloride	26.18	11.00	11.50	105%	67.0	156.0	pass
64)	1,2-Dichlorobenzene	26.56	10.40	9.15	88%	77.0	124.0	pass
65)	1,2,4-Trichlorobenzene	29.02	9.40	7.85	83%	55.0	132.0	pass
66)	Hexachlorobutadiene	29.13	9.90	8.61	87%	52.0	131.0	pass

B17F043-BS1

Evaluate Continuing Calibration Report

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

REVIEWED
By LLH at 12:29 pm, Jun 09, 2017

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	111	0.00
2	T	Propene	0.493	0.424	14.0	104	0.00
3	T	Dichlorodifluoromethane	2.272	2.010	11.5	109	0.00
4	T	1,2-Dichlorotetrafluoroetha	2.321	2.060	11.2	109	0.00
5	T	Chloromethane	0.626	0.534	14.7	107	0.00
6	T	Vinyl chloride	0.661	0.589	10.9	110	0.00
7	T	1,3-Butadiene	0.465	0.414	11.0	111	0.00
8	T	Bromomethane	0.683	0.608	11.0	111	0.00
9	T	Chloroethane	0.402	0.352	12.4	108	0.00
10	T	Bromoethene	0.692	0.624	9.8	110	0.00
11	T	Trichlorofluoromethane	2.209	1.972	10.7	111	0.00
12	T	1,1,2-Trichloro-1,2,2-trifl	1.371	1.230	10.3	111	0.00
13	T	1,1-Dichloroethene	1.049	0.934	11.0	108	0.00
14	T	Acetone	0.965	0.838	13.2	108	0.00
15	T	Carbon disulfide	2.153	1.881	12.6	108	0.00
16	T	2-Propanol	0.730	0.672	7.9	108	0.00
17	T	Allyl chloride	0.688	0.612	11.0	107	0.00
18	T	Dichloromethane	0.824	0.661	19.8	109	0.00
19	T	tert-Butyl methyl ether (MT	1.936	1.787	7.7	110	0.01
20	T	trans-1,2-Dichloroethene	0.983	0.872	11.3	109	0.00
21	T	Hexane	1.071	0.968	9.6	109	0.00
22	T	1,1-Dichloroethane	1.341	1.183	11.8	108	0.00
23	T	Vinyl acetate	1.106	1.054	4.7	109	0.00
24	T	cis-1,2-Dichloroethene	0.920	0.823	10.5	108	0.00
25	T	2-Butanone (MEK)	0.362	0.328	9.4	109	0.00
26	T	Ethyl acetate	0.213	0.192	9.9	108	0.00
27	T	Tetrahydrofuran	0.670	0.598	10.7	109	0.00
28	T	Chloroform	1.629	1.455	10.7	109	0.00
29	T	Cyclohexane	1.074	0.972	9.5	109	0.00
30	T	1,1,1-Trichloroethane	1.744	1.591	8.8	111	0.00
31	T	Carbon tetrachloride	1.763	1.617	8.3	112	0.00
32	I	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	113	0.00
33	T	Benzene	0.581	0.517	11.0	111	0.00
34	T	2,2,4-Trimethylpentane	0.820	0.742	9.5	110	0.00
35	T	1,2-Dichloroethane	0.269	0.236	12.3	110	0.00
36	T	Heptane	0.270	0.236	12.6	109	0.00
37	T	Trichloroethene	0.263	0.237	9.9	110	0.00
38	T	1,2-Dichloropropane	0.193	0.173	10.4	111	0.00
39	T	1,4-Dioxane	0.131	0.121	7.6	110	0.00
40	T	Bromodichloromethane	0.446	0.398	10.8	111	0.00
41	T	cis-1,3-Dichloropropene	0.307	0.286	6.8	111	0.00
42	T	4-Methyl-2-pentanone (MIBK)	0.356	0.323	9.3	109	0.00
43	I	CHLOROBENZENE-d5	1.000	1.000	0.0	113	0.00
44	T	Toluene	0.848	0.764	9.9	110	0.00
45	T	trans-1,3-Dichloropropene	0.346	0.326	5.8	112	0.00
46	T	1,1,2-Trichloroethane	0.294	0.264	10.2	111	0.00
47	T	Tetrachloroethene	0.452	0.405	10.4	111	0.00
48	T	2-Hexanone	0.393	0.368	6.4	110	0.00
49	T	Chlorodibromomethane	0.536	0.485	9.5	112	0.00
50	T	1,2-Dibromoethane (EDB)	0.422	0.381	9.7	111	0.00
51	T	Chlorobenzene	0.713	0.634	11.1	111	0.00

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
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	1.181	1.056	10.6	110	0.00
53 T	m&p-Xylene	0.903	0.810	10.3	110	0.00
54 T	o-Xylene	0.910	0.832	8.6	111	0.00
55 T	Styrene	0.764	0.694	9.2	110	0.00
56 T	Bromoform	0.534	0.503	5.8	113	0.00
57 T	1,1,2,2-Tetrachloroethane	0.668	0.594	11.1	110	0.00
58 T	4-Ethyltoluene	1.375	1.250	9.1	110	0.00
59 T	1,3,5-Trimethylbenzene	1.142	1.017	10.9	110	0.00
60 T	1,2,4-Trimethylbenzene	1.144	1.036	9.4	110	0.00
61 T	1,3-Dichlorobenzene	0.828	0.739	10.7	109	0.00
62 T	1,4-Dichlorobenzene	0.817	0.732	10.4	109	0.00
63 T	Benzyl chloride	0.661	0.691	-4.5	112	0.00
64 T	1,2-Dichlorobenzene	0.822	0.724	11.9	109	0.00
65 T	1,2,4-Trichlorobenzene	0.852	0.711	16.5	105	0.00
66 T	Hexachlorobutadiene	0.776	0.674	13.1	110	0.00

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

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	311007	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1218666	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1108037	20.00	ppbv	0.00
Target Compounds						Qvalue
2) Propene	4.223	41	72511	9.45	ppbv	99
3) Dichlorodifluoromethane	4.314	85	331324	9.38	ppbv	100
4) 1,2-Dichlorotetrafluor...	4.649	85	323535	8.96	ppbv	100
5) Chloromethane	4.862	50	91351	9.39	ppbv	99
6) Vinyl chloride	5.160	62	98074	9.54	ppbv	99
7) 1,3-Butadiene	5.245	54	68287	9.45	ppbv	98
8) Bromomethane	6.169	94	101130	9.52	ppbv	99
9) Chloroethane	6.498	64	57533	9.20	ppbv	98
10) Bromoethene	7.052	106	104728	9.74	ppbv	99
11) Trichlorofluoromethane	7.155	101	306636	8.93	ppbv	100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	179736	8.43	ppbv	99
13) 1,1-Dichloroethene	9.029	61	149661	9.17	ppbv	99
14) Acetone	9.686	43	143386	9.56	ppbv	99
15) Carbon disulfide	9.722	76	310017	9.26	ppbv	100
16) 2-Propanol	10.294	45	114957	10.13	ppbv	99
17) Allyl chloride	10.623	41	104755	9.79	ppbv	98
18) Dichloromethane	11.213	49	99666	7.77	ppbv	99
19) tert-Butyl methyl ethe...	11.839	73	300159	9.97	ppbv	100
20) trans-1,2-Dichloroethene	11.888	61	149213	9.76	ppbv	100
21) Hexane	12.417	57	157985	9.49	ppbv	99
22) 1,1-Dichloroethane	13.293	63	182157	8.73	ppbv	99
23) Vinyl acetate	13.445	43	180303	10.48	ppbv	100
24) cis-1,2-Dichloroethene	14.759	61	133107	9.30	ppbv	100
25) 2-Butanone (MEK)	14.893	72	55089	9.80	ppbv	99
26) Ethyl acetate	14.905	61	32499	9.83	ppbv	98
27) Tetrahydrofuran	15.295	42	97699	9.38	ppbv	99
28) Chloroform	15.465	83	242037	9.56	ppbv	100
29) Cyclohexane	15.599	56	161664	9.68	ppbv	99
30) 1,1,1-Trichloroethane	15.702	97	254764	9.39	ppbv	100
31) Carbon tetrachloride	15.940	117	261508	9.54	ppbv	100
33) Benzene	16.469	78	358566	9.51	ppbv	100
34) 2,2,4-Trimethylpentane	16.347	57	509676	9.59	ppbv	100
35) 1,2-Dichloroethane	16.718	62	159344	9.14	ppbv	100
36) Heptane	16.743	43	163610	9.34	ppbv	99
37) Trichloroethene	17.704	130	169228	9.92	ppbv	99
38) 1,2-Dichloropropane	18.245	63	119985	9.58	ppbv	100
39) 1,4-Dioxane	18.440	88	83351	9.82	ppbv	99
40) Bromodichloromethane	18.714	83	268158	9.27	ppbv	100
41) cis-1,3-Dichloropropene	19.480	75	192846	9.70	ppbv	99
42) 4-Methyl-2-pentanone (...	19.724	43	221894	9.63	ppbv	99
44) Toluene	19.931	91	457414	9.73	ppbv	99
45) trans-1,3-Dichloropropene	20.448	75	175346	9.16	ppbv	99
46) 1,1,2-Trichloroethane	20.752	97	159243	9.79	ppbv	99
47) Tetrachloroethene	20.770	166	242612	9.70	ppbv	100
48) 2-Hexanone	21.080	43	213897	9.82	ppbv	99
49) Chlorodibromomethane	21.354	129	287784	9.70	ppbv	100
50) 1,2-Dibromoethane (EDB)	21.585	107	232289	9.94	ppbv	100
51) Chlorobenzene	22.285	112	386331	9.78	ppbv	99
52) Ethylbenzene	22.364	91	637823	9.75	ppbv	100
53) m&p-Xylene	22.546	91	968977	19.37	ppbv	99
54) o-Xylene	23.197	91	488824	9.69	ppbv	100

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

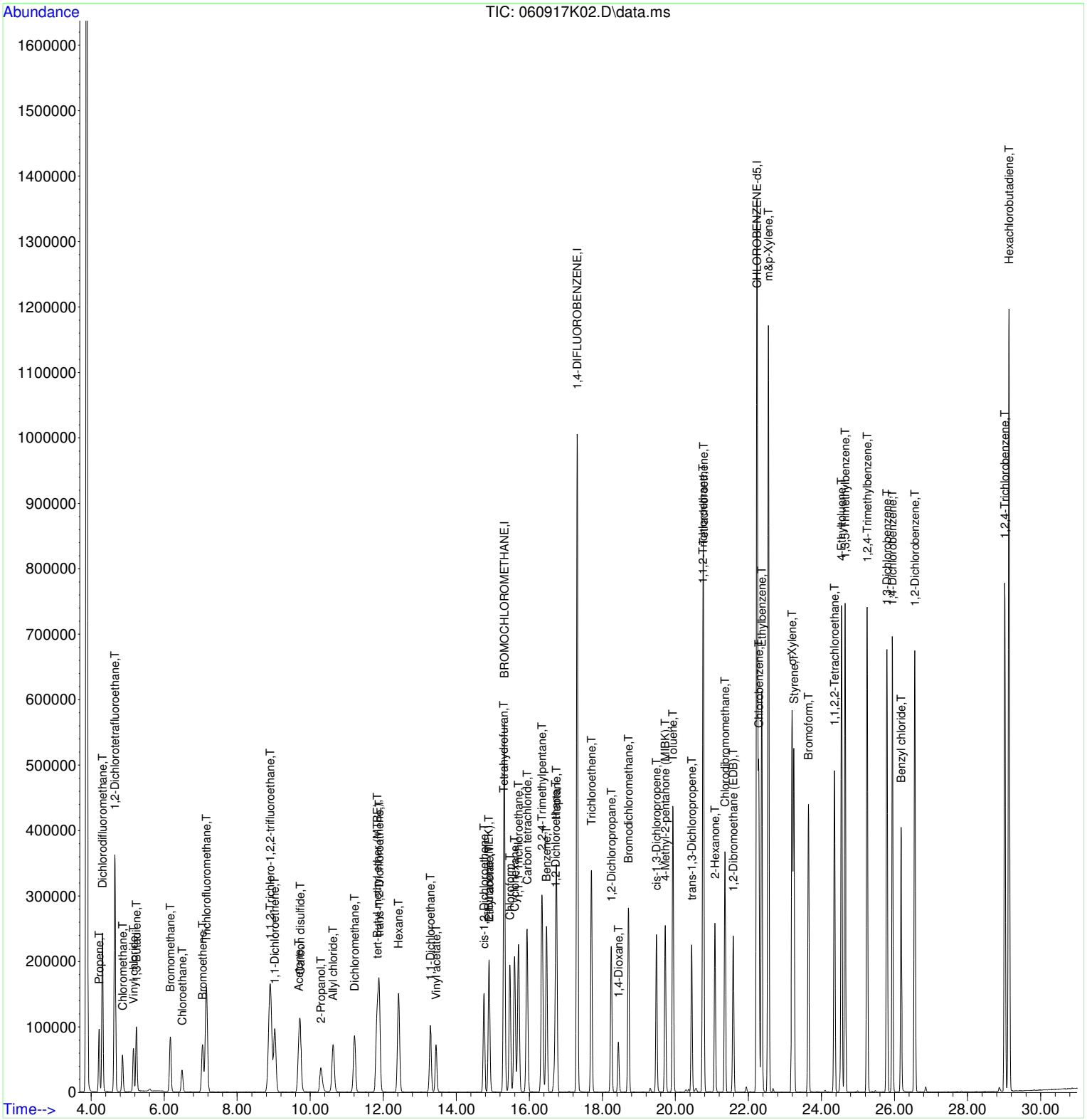
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	395870	9.35 ppbv	99
56) Bromoform	23.642	173	298206	10.08 ppbv	99
57) 1,1,2,2-Tetrachloroethane	24.353	83	345254	9.33 ppbv	99
58) 4-Ethyltoluene	24.548	105	720081	9.46 ppbv	100
59) 1,3,5-Trimethylbenzene	24.645	105	602859	9.53 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	608543	9.60 ppbv	100
61) 1,3-Dichlorobenzene	25.795	146	429858	9.37 ppbv	100
62) 1,4-Dichlorobenzene	25.947	146	429902	9.49 ppbv	100
63) Benzyl chloride	26.178	91	421060	11.50 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	416880	9.15 ppbv	99
65) 1,2,4-Trichlorobenzene	29.019	180	370307	7.85 ppbv	100
66) Hexachlorobutadiene	29.135	225	369942	8.61 ppbv	100

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

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K02.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:10 am
Operator : LLH
Sample : S17F039-CCV1@B17F043-BS1
Misc : 10ppbv 1723026@1723029
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 09 11:41:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



REVIEWED
By LLH at 12:29 pm, Jun 09, 2017

LCS REPORT

Instrument Name: HP5973K
Sample Name: S17F039-CCV1@B17F043-BS1
Misc Info: 10ppbv 1723026@1723029
Date Acquired: 6/9/2017 11:10
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	70.0	130.0	#N/A
2)	Propene	4.22	11.00	9.45	86%	72.0	121.0	pass
3)	Dichlorodifluoromethane	4.31	10.60	9.38	88%	68.0	129.0	pass
4)	1,2-Dichlorotetrafluoroethane	4.65	10.10	8.96	89%	67.0	127.0	pass
5)	Chloromethane	4.86	11.00	9.39	85%	70.0	123.0	pass
6)	Vinyl chloride	5.16	10.70	9.54	89%	69.0	125.0	pass
7)	1,3-Butadiene	5.24	10.60	9.45	89%	75.0	121.0	pass
8)	Bromomethane	6.17	10.70	9.52	89%	66.0	125.0	pass
9)	Chloroethane	6.50	10.50	9.20	88%	67.0	125.0	pass
10)	Bromoethene	7.05	10.80	9.74	90%	68.0	124.0	pass
11)	Trichlorofluoromethane	7.16	10.00	8.93	89%	68.0	133.0	pass
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.90	9.40	8.43	90%	64.0	125.0	pass
13)	1,1-Dichloroethene	9.03	10.30	9.17	89%	73.0	128.0	pass
14)	Acetone	9.69	11.00	9.56	87%	67.0	141.0	pass
15)	Carbon disulfide	9.72	10.60	9.26	87%	45.0	158.0	pass
16)	2-Propanol	10.29	11.00	10.13	92%	72.0	132.0	pass
17)	Allyl chloride	10.62	11.00	9.79	89%	75.0	132.0	pass
18)	Dichloromethane	11.21	9.70	7.77	80%	73.0	116.0	pass
19)	tert-Butyl methyl ether (MTBE)	11.84	10.80	9.97	92%	74.0	131.0	pass
20)	trans-1,2-Dichloroethene	11.89	11.00	9.76	89%	80.0	123.0	pass
21)	Hexane	12.42	10.50	9.49	90%	75.0	124.0	pass
22)	1,1-Dichloroethane	13.29	9.90	8.73	88%	72.0	125.0	pass
23)	Vinyl acetate	13.45	11.00	10.48	95%	31.0	171.0	pass
24)	cis-1,2-Dichloroethene	14.76	10.40	9.30	89%	77.0	129.0	pass
25)	2-Butanone (MEK)	14.89	10.80	9.80	91%	69.0	137.0	pass
26)	Ethyl acetate	14.91	10.90	9.83	90%	75.0	127.0	pass
27)	Tetrahydrofuran	15.29	10.50	9.38	89%	78.0	120.0	pass
28)	Chloroform	15.47	10.70	9.56	89%	77.0	126.0	pass
29)	Cyclohexane	15.60	10.70	9.68	91%	76.0	124.0	pass
30)	1,1,1-Trichloroethane	15.70	10.30	9.39	91%	74.0	133.0	pass
31)	Carbon tetrachloride	15.94	10.40	9.54	92%	71.0	141.0	pass
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	70.0	130.0	#N/A
33)	Benzene	16.47	10.70	9.51	89%	81.0	125.0	pass
34)	2,2,4-Trimethylpentane	16.35	10.60	9.59	90%	82.0	125.0	pass
35)	1,2-Dichloroethane	16.72	10.40	9.14	88%	61.0	153.0	pass
36)	Heptane	16.74	10.70	9.34	87%	80.0	129.0	pass
37)	Trichloroethene	17.70	11.00	9.92	90%	73.0	128.0	pass
38)	1,2-Dichloropropane	18.25	10.70	9.58	90%	77.0	129.0	pass
39)	1,4-Dioxane	18.44	10.60	9.82	93%	58.0	140.0	pass
40)	Bromodichloromethane	18.71	10.40	9.27	89%	76.0	137.0	pass
41)	cis-1,3-Dichloropropene	19.48	10.40	9.70	93%	80.0	136.0	pass
42)	4-Methyl-2-pentanone (MIBK)	19.72	10.60	9.63	91%	65.0	140.0	pass
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	70.0	130.0	#N/A
44)	Toluene	19.93	10.80	9.73	90%	78.0	133.0	pass
45)	trans-1,3-Dichloropropene	20.45	9.70	9.16	94%	79.0	146.0	pass
46)	1,1,2-Trichloroethane	20.75	10.90	9.79	90%	74.0	134.0	pass
47)	Tetrachloroethene	20.77	10.80	9.70	90%	73.0	130.0	pass

48)	2-Hexanone	21.08	10.50	9.82	93%	50.0	162.0	pass
49)	Chlorodibromomethane	21.35	10.70	9.70	91%	81.0	135.0	pass
50)	1,2-Dibromoethane (EDB)	21.59	11.00	9.94	90%	78.0	133.0	pass
51)	Chlorobenzene	22.28	11.00	9.78	89%	81.0	126.0	pass
52)	Ethylbenzene	22.36	10.90	9.75	89%	82.0	130.0	pass
53)	m&p-Xylene	22.55	21.60	19.37	90%	82.0	131.0	pass
54)	o-Xylene	23.20	10.60	9.69	91%	82.0	132.0	pass
55)	Styrene	23.25	10.30	9.35	91%	65.0	141.0	pass
56)	Bromoform	23.64	10.70	10.08	94%	84.0	137.0	pass
57)	1,1,2,2-Tetrachloroethane	24.35	10.50	9.33	89%	73.0	127.0	pass
58)	4-Ethyltoluene	24.55	10.40	9.46	91%	81.0	127.0	pass
59)	1,3,5-Trimethylbenzene	24.65	10.70	9.53	89%	77.0	132.0	pass
60)	1,2,4-Trimethylbenzene	25.25	10.60	9.60	91%	78.0	131.0	pass
61)	1,3-Dichlorobenzene	25.80	10.50	9.37	89%	79.0	124.0	pass
62)	1,4-Dichlorobenzene	25.95	10.60	9.49	90%	75.0	127.0	pass
63)	Benzyl chloride	26.18	11.00	11.50	105%	67.0	156.0	pass
64)	1,2-Dichlorobenzene	26.56	10.40	9.15	88%	77.0	124.0	pass
65)	1,2,4-Trichlorobenzene	29.02	9.40	7.85	83%	55.0	132.0	pass
66)	Hexachlorobutadiene	29.13	9.90	8.61	87%	52.0	131.0	pass

S17F039-CRL1

REVIEWED
By LLH at 12:32 pm, Jun 09, 2017

QLS REPORT

Instrument Name: HP5973K
Sample Name: S17F039-CRL1
Misc Info: 1.0ppbv 1723023
Date Acquired: 6/9/2017 11:58
QLast Update: Tue Jun 06 11:26:11 2017
Operator: LLH

1 OUT

#	Name	Ret Time	Amount	Concentration	%R	QC	LIMIT	STATUS	TYPE
1)	BROMOCHLOROMETHANE	15.31	#N/A	20.00	#N/A	60.0	140.0	#N/A	Internal
2)	Propene	4.22	1.10	0.98	89%	60.0	140.0	pass	Subset
3)	Dichlorodifluoromethane	4.31	1.06	0.97	92%	60.0	140.0	pass	Primary
4)	1,2-Dichlorotetrafluoroethane	4.65	1.01	0.93	92%	60.0	140.0	pass	Primary
5)	Chloromethane	4.86	1.10	1.10	100%	60.0	140.0	pass	Primary
6)	Vinyl chloride	5.16	1.07	1.02	96%	60.0	140.0	pass	Primary
7)	1,3-Butadiene	5.24	1.06	1.04	98%	60.0	140.0	pass	Subset
8)	Bromomethane	6.17	1.07	1.00	93%	60.0	140.0	pass	Primary
9)	Chloroethane	6.50	1.05	0.97	92%	60.0	140.0	pass	Primary
10)	Bromoethene	7.05	1.08	1.00	93%	60.0	140.0	pass	Subset
11)	Trichlorofluoromethane	7.16	1.00	0.93	93%	60.0	140.0	pass	Primary
12)	1,1,2-Trichloro-1,2,2-trifluoroethane	8.90	0.94	0.85	91%	60.0	140.0	pass	Primary
13)	1,1-Dichloroethene	9.03	1.03	0.88	85%	60.0	140.0	pass	Primary
14)	Acetone	9.71	1.10	1.02	92%	60.0	140.0	pass	Subset
15)	Carbon disulfide	9.72	1.06	1.01	95%	60.0	140.0	pass	Subset
16)	2-Propanol	10.33	1.10	0.88	80%	60.0	140.0	pass	Subset
17)	Allyl chloride	10.63	1.10	0.93	85%	60.0	140.0	pass	Subset
18)	Dichloromethane	11.21	0.97	1.14	117%	60.0	140.0	pass	Primary
19)	tert-Butyl methyl ether (MTBE)	11.86	1.08	0.89	83%	60.0	140.0	pass	Subset
20)	trans-1,2-Dichloroethene	11.89	1.10	1.00	91%	60.0	140.0	pass	Subset
21)	Hexane	12.42	1.05	0.88	84%	60.0	140.0	pass	Subset
22)	1,1-Dichloroethane	13.29	0.99	0.89	90%	60.0	140.0	pass	Primary
23)	Vinyl acetate	13.45	1.10	0.82	75%	60.0	140.0	pass	Subset
24)	cis-1,2-Dichloroethene	14.75	1.04	0.86	83%	60.0	140.0	pass	Primary
25)	2-Butanone (MEK)	14.91	1.08	0.92	85%	60.0	140.0	pass	Subset
26)	Ethyl acetate	14.91	1.09	0.89	82%	60.0	140.0	pass	Subset
27)	Tetrahydrofuran	15.32	1.05	0.89	85%	60.0	140.0	pass	Subset
28)	Chloroform	15.47	1.07	0.96	90%	60.0	140.0	pass	Primary
29)	Cyclohexane	15.59	1.07	0.92	86%	60.0	140.0	pass	Subset
30)	1,1,1-Trichloroethane	15.70	1.03	0.91	88%	60.0	140.0	pass	Primary
31)	Carbon tetrachloride	15.93	1.04	0.93	89%	60.0	140.0	pass	Primary
32)	1,4-DIFLUOROBENZENE	17.31	#N/A	18.80	#N/A	60.0	140.0	#N/A	Internal
33)	Benzene	16.47	1.07	0.93	87%	60.0	140.0	pass	Primary
34)	2,2,4-Trimethylpentane	16.35	1.06	0.85	81%	60.0	140.0	pass	Subset
35)	1,2-Dichloroethane	16.71	1.04	0.90	87%	60.0	140.0	pass	Primary
36)	Heptane	16.75	1.07	0.84	79%	60.0	140.0	pass	Subset
37)	Trichloroethene	17.70	1.10	0.95	86%	60.0	140.0	pass	Primary
38)	1,2-Dichloropropane	18.24	1.07	0.91	85%	60.0	140.0	pass	Primary
39)	1,4-Dioxane	18.45	1.06	0.75	71%	60.0	140.0	pass	Subset
40)	Bromodichloromethane	18.71	1.04	0.92	89%	60.0	140.0	pass	Subset
41)	cis-1,3-Dichloropropene	19.48	1.04	0.79	76%	60.0	140.0	pass	Primary
42)	4-Methyl-2-pentanone (MIBK)	19.74	1.06	0.79	75%	60.0	140.0	pass	Subset
43)	CHLOROBENZENE-d5	22.24	#N/A	20.00	#N/A	60.0	140.0	#N/A	Internal
44)	Toluene	19.94	1.08	0.90	83%	60.0	140.0	pass	Primary
45)	trans-1,3-Dichloropropene	20.45	0.97	0.74	76%	60.0	140.0	pass	Primary
46)	1,1,2-Trichloroethane	20.75	1.09	0.95	87%	60.0	140.0	pass	Primary
47)	Tetrachloroethene	20.76	1.08	0.94	87%	60.0	140.0	pass	Primary
48)	2-Hexanone	21.09	1.05	0.71	68%	60.0	140.0	pass	Subset
49)	Chlorodibromomethane	21.36	1.07	0.91	85%	60.0	140.0	pass	Subset
50)	1,2-Dibromoethane (EDB)	21.59	1.10	0.92	84%	60.0	140.0	pass	Primary

51)	Chlorobenzene	22.28	1.10	0.98	89%	60.0	140.0	pass	Primary
52)	Ethylbenzene	22.36	1.09	0.92	84%	60.0	140.0	pass	Primary
53)	m&p-Xylene	22.55	2.16	1.80	84%	60.0	140.0	pass	Primary
54)	o-Xylene	23.20	1.06	0.81	77%	60.0	140.0	pass	Primary
55)	Styrene	23.25	1.03	0.81	78%	60.0	140.0	pass	Primary
56)	Bromoform	23.64	1.07	0.83	77%	60.0	140.0	pass	Subset
57)	1,1,2,2-Tetrachloroethane	24.35	1.05	0.88	84%	60.0	140.0	pass	Primary
58)	4-Ethyltoluene	24.55	1.04	0.72	69%	60.0	140.0	pass	Subset
59)	1,3,5-Trimethylbenzene	24.65	1.07	0.86	81%	60.0	140.0	pass	Primary
60)	1,2,4-Trimethylbenzene	25.25	1.06	0.76	72%	60.0	140.0	pass	Primary
61)	1,3-Dichlorobenzene	25.80	1.05	0.84	80%	60.0	140.0	pass	Primary
62)	1,4-Dichlorobenzene	25.95	1.06	0.82	77%	60.0	140.0	pass	Primary
63)	Benzyl chloride	26.18	1.10	0.54	49%	60.0	140.0	FAIL	Subset
64)	1,2-Dichlorobenzene	26.56	1.04	0.85	82%	60.0	140.0	pass	Primary
65)	1,2,4-Trichlorobenzene	29.03	0.94	0.71	75%	60.0	140.0	pass	Primary
66)	Hexachlorobutadiene	29.14	0.99	0.86	87%	60.0	140.0	pass	Primary

Quantitation Report (QT Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

M.I. Performed By:
LLH at 12:32 pm, Jun 09, 2017

Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	309477	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1222001	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	1081593	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	7507	0.98	ppbv		97
3) Dichlorodifluoromethane	4.308	85	34132	0.97	ppbv		99
4) 1,2-Dichlorotetrafluor...	4.649	85	33390	0.93	ppbv		99
5) Chloromethane	4.862	50	10611	1.10	ppbv		100
6) Vinyl chloride	5.160	62	10461	1.02	ppbv		97
7) 1,3-Butadiene	5.245	54	7486	1.04	ppbv		87
8) Bromomethane	6.170	94	10537	1.00	ppbv		97
9) Chloroethane	6.498	64	6019	0.97	ppbv	#	43
10) Bromoethene	7.046	106	10717	1.00	ppbv		98
11) Trichlorofluoromethane	7.155	101	31688	0.93	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	18116	0.85	ppbv		98
13) 1,1-Dichloroethene	9.035	61	14250	0.88	ppbv		98
14) Acetone	9.710	43	15165	1.02	ppbv		98
15) Carbon disulfide	9.722	76	33589	1.01	ppbv		99
16) 2-Propanol	10.331	45	9946	0.88	ppbv		90
17) Allyl chloride	10.629	41	9944	0.93	ppbv		98
18) Dichloromethane	11.213	49	14524	1.14	ppbv		98
19) tert-Butyl methyl ethe...	11.864	73	26703	0.89	ppbv		99
20) trans-1,2-Dichloroethene	11.888	61	15243	1.00	ppbv		97
21) Hexane	12.423	57	14527	0.88	ppbv		96
22) 1,1-Dichloroethane	13.293	63	18492	0.89	ppbv		99
23) Vinyl acetate	13.445	43	14101	0.82	ppbv		100
24) cis-1,2-Dichloroethene	14.753	61	12287	0.86	ppbv		99
25) 2-Butanone (MEK)	14.906	72	5151	0.92	ppbv	#	96
26) Ethyl acetate	14.906	61	2927	0.89	ppbv	#	92
27) Tetrahydrofuran	15.319	42	9203	0.89	ppbv		98
28) Chloroform	15.471	83	24298	0.96	ppbv		99
29) Cyclohexane	15.593	56	15219	0.92	ppbv		98
30) 1,1,1-Trichloroethane	15.703	97	24447	0.91	ppbv		98
31) Carbon tetrachloride	15.934	117	25317	0.93	ppbv		99
33) Benzene	16.469	78	35044	0.93	ppbv		100
34) 2,2,4-Trimethylpentane	16.353	57	45552	0.85	ppbv		98
35) 1,2-Dichloroethane	16.712	62	15750	0.90	ppbv		100
36) Heptane	16.749	43	14760m	0.84	ppbv		
37) Trichloroethene	17.704	130	16249	0.95	ppbv		99
38) 1,2-Dichloropropane	18.239	63	11408	0.91	ppbv		98
39) 1,4-Dioxane	18.452	88	6385	0.75	ppbv		97
40) Bromodichloromethane	18.714	83	26737	0.92	ppbv		98
41) cis-1,3-Dichloropropene	19.480	75	15694	0.79	ppbv		99
42) 4-Methyl-2-pentanone (...	19.736	43	18310	0.79	ppbv		98
44) Toluene	19.937	91	41071	0.90	ppbv		100
45) trans-1,3-Dichloropropene	20.448	75	13871	0.74	ppbv		98
46) 1,1,2-Trichloroethane	20.752	97	15002	0.95	ppbv		98
47) Tetrachloroethene	20.764	166	22914	0.94	ppbv		98
48) 2-Hexanone	21.086	43	15127	0.71	ppbv		98
49) Chlorodibromomethane	21.360	129	26394	0.91	ppbv		100
50) 1,2-Dibromoethane (EDB)	21.585	107	21050	0.92	ppbv		99
51) Chlorobenzene	22.279	112	37627	0.98	ppbv	#	80
52) Ethylbenzene	22.364	91	58480	0.92	ppbv		99
53) m&p-Xylene	22.547	91	88138	1.80	ppbv		99
54) o-Xylene	23.197	91	40122	0.81	ppbv		98

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

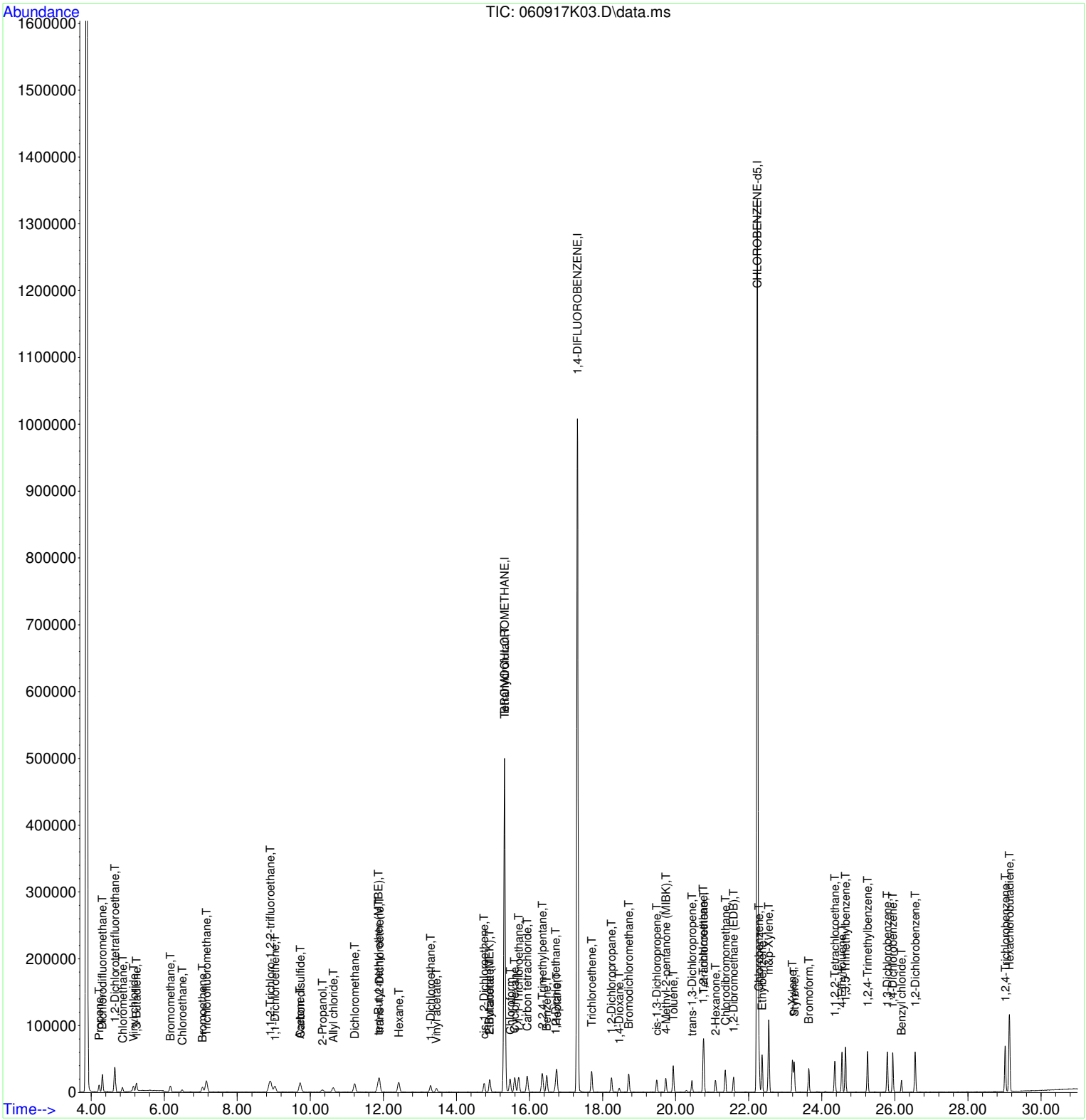
Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	33348	0.81 ppbv	100
56) Bromoform	23.642	173	23881	0.83 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	31939	0.88 ppbv	99
58) 4-Ethyltoluene	24.554	105	53302	0.72 ppbv	99
59) 1,3,5-Trimethylbenzene	24.645	105	53251	0.86 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	47197	0.76 ppbv	98
61) 1,3-Dichlorobenzene	25.795	146	37491	0.84 ppbv	99
62) 1,4-Dichlorobenzene	25.947	146	36176	0.82 ppbv	99
63) Benzyl chloride	26.178	91	19346	0.54 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	37736	0.85 ppbv	99
65) 1,2,4-Trichlorobenzene	29.026	180	32513	0.71 ppbv	99
66) Hexachlorobutadiene	29.135	225	36212	0.86 ppbv	99

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

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration



Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Before Manual Integration

Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) BROMOCHLOROMETHANE	15.313	49	309477	20.00	ppbv		0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	1222001	18.80	ppbv		0.00
43) CHLOROBENZENE-d5	22.236	117	1081593	20.00	ppbv		0.00
Target Compounds							Qvalue
2) Propene	4.223	41	7507	0.98	ppbv		97
3) Dichlorodifluoromethane	4.308	85	34132	0.97	ppbv		99
4) 1,2-Dichlorotetrafluor...	4.649	85	33390	0.93	ppbv		99
5) Chloromethane	4.862	50	10611	1.10	ppbv		100
6) Vinyl chloride	5.160	62	10461	1.02	ppbv		97
7) 1,3-Butadiene	5.245	54	7486	1.04	ppbv		87
8) Bromomethane	6.170	94	10537	1.00	ppbv		97
9) Chloroethane	6.498	64	6019	0.97	ppbv	#	43
10) Bromoethene	7.046	106	10717	1.00	ppbv		98
11) Trichlorofluoromethane	7.155	101	31688	0.93	ppbv		100
12) 1,1,2-Trichloro-1,2,2-...	8.901	151	18116	0.85	ppbv		98
13) 1,1-Dichloroethene	9.035	61	14250	0.88	ppbv		98
14) Acetone	9.710	43	15165	1.02	ppbv		98
15) Carbon disulfide	9.722	76	33589	1.01	ppbv		99
16) 2-Propanol	10.331	45	9946	0.88	ppbv		90
17) Allyl chloride	10.629	41	9944	0.93	ppbv		98
18) Dichloromethane	11.213	49	14524	1.14	ppbv		98
19) tert-Butyl methyl ethe...	11.864	73	26703	0.89	ppbv		99
20) trans-1,2-Dichloroethene	11.888	61	15243	1.00	ppbv		97
21) Hexane	12.423	57	14527	0.88	ppbv		96
22) 1,1-Dichloroethane	13.293	63	18492	0.89	ppbv		99
23) Vinyl acetate	13.445	43	14101	0.82	ppbv		100
24) cis-1,2-Dichloroethene	14.753	61	12287	0.86	ppbv		99
25) 2-Butanone (MEK)	14.906	72	5151	0.92	ppbv	#	96
26) Ethyl acetate	14.906	61	2927	0.89	ppbv	#	92
27) Tetrahydrofuran	15.319	42	9203	0.89	ppbv		98
28) Chloroform	15.471	83	24298	0.96	ppbv		99
29) Cyclohexane	15.593	56	15219	0.92	ppbv		98
30) 1,1,1-Trichloroethane	15.703	97	24447	0.91	ppbv		98
31) Carbon tetrachloride	15.934	117	25317	0.93	ppbv		99
33) Benzene	16.469	78	35044	0.93	ppbv		100
34) 2,2,4-Trimethylpentane	16.353	57	45552	0.85	ppbv		98
35) 1,2-Dichloroethane	16.712	62	15750	0.90	ppbv		100
36) Heptane	16.749	43	17448	0.99	ppbv		88
37) Trichloroethene	17.704	130	16249	0.95	ppbv		99
38) 1,2-Dichloropropane	18.239	63	11408	0.91	ppbv		98
39) 1,4-Dioxane	18.452	88	6385	0.75	ppbv		97
40) Bromodichloromethane	18.714	83	26737	0.92	ppbv		98
41) cis-1,3-Dichloropropene	19.480	75	15694	0.79	ppbv		99
42) 4-Methyl-2-pentanone (...	19.736	43	18310	0.79	ppbv		98
44) Toluene	19.937	91	41071	0.90	ppbv		100
45) trans-1,3-Dichloropropene	20.448	75	13871	0.74	ppbv		98
46) 1,1,2-Trichloroethane	20.752	97	15002	0.95	ppbv		98
47) Tetrachloroethene	20.764	166	22914	0.94	ppbv		98
48) 2-Hexanone	21.086	43	15127	0.71	ppbv		98
49) Chlorodibromomethane	21.360	129	26394	0.91	ppbv		100
50) 1,2-Dibromoethane (EDB)	21.585	107	21050	0.92	ppbv		99
51) Chlorobenzene	22.279	112	37627	0.98	ppbv	#	80
52) Ethylbenzene	22.364	91	58480	0.92	ppbv		99
53) m&p-Xylene	22.547	91	88138	1.80	ppbv		99
54) o-Xylene	23.197	91	40122	0.81	ppbv		98

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

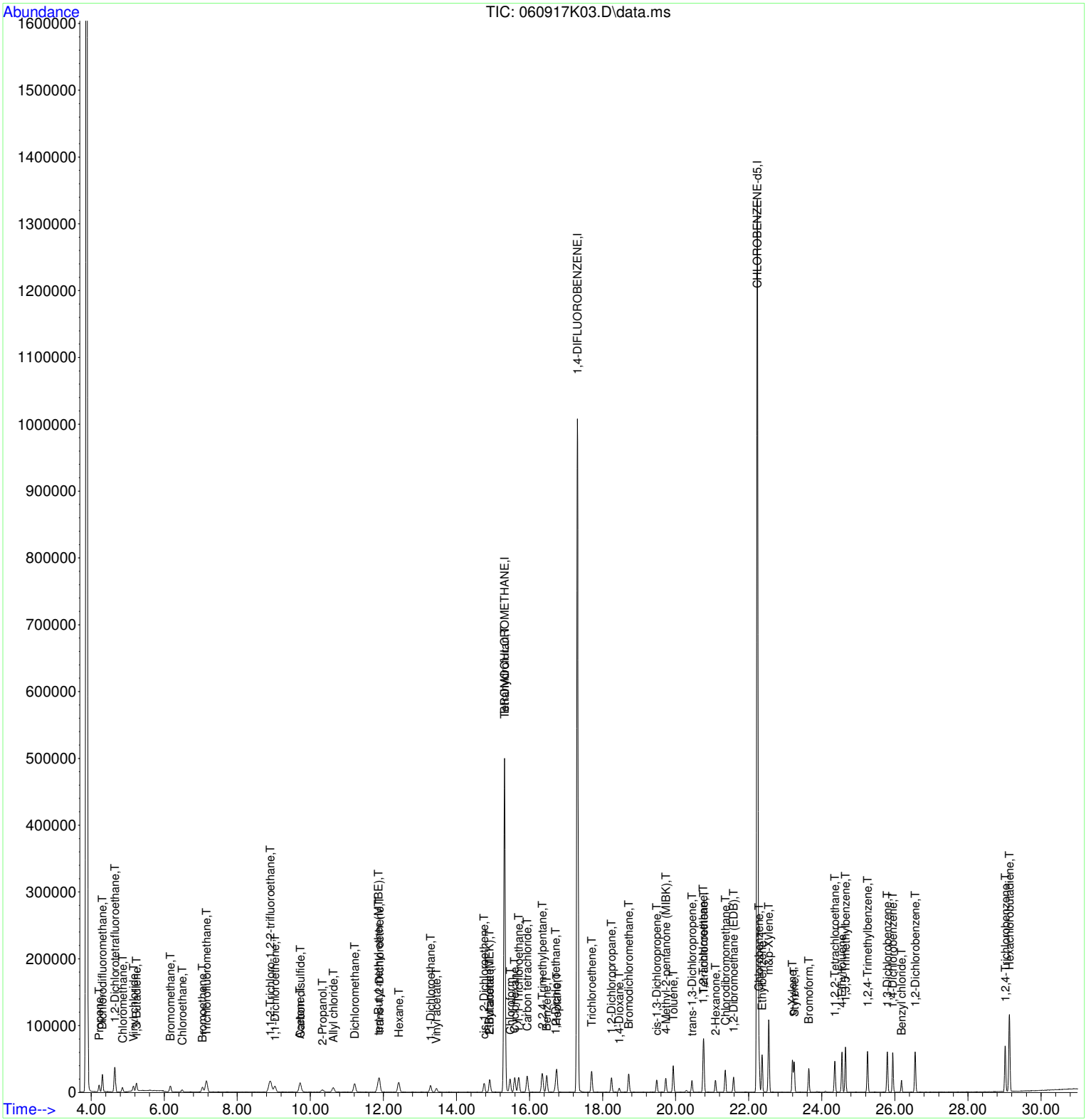
Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Styrene	23.246	104	33348	0.81 ppbv	100
56) Bromoform	23.642	173	23881	0.83 ppbv	100
57) 1,1,2,2-Tetrachloroethane	24.353	83	31939	0.88 ppbv	99
58) 4-Ethyltoluene	24.554	105	53302	0.72 ppbv	99
59) 1,3,5-Trimethylbenzene	24.645	105	53251	0.86 ppbv	100
60) 1,2,4-Trimethylbenzene	25.254	105	47197	0.76 ppbv	98
61) 1,3-Dichlorobenzene	25.795	146	37491	0.84 ppbv	99
62) 1,4-Dichlorobenzene	25.947	146	36176	0.82 ppbv	99
63) Benzyl chloride	26.178	91	19346	0.54 ppbv	99
64) 1,2-Dichlorobenzene	26.556	146	37736	0.85 ppbv	99
65) 1,2,4-Trichlorobenzene	29.026	180	32513	0.71 ppbv	99
66) Hexachlorobutadiene	29.135	225	36212	0.86 ppbv	99

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

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

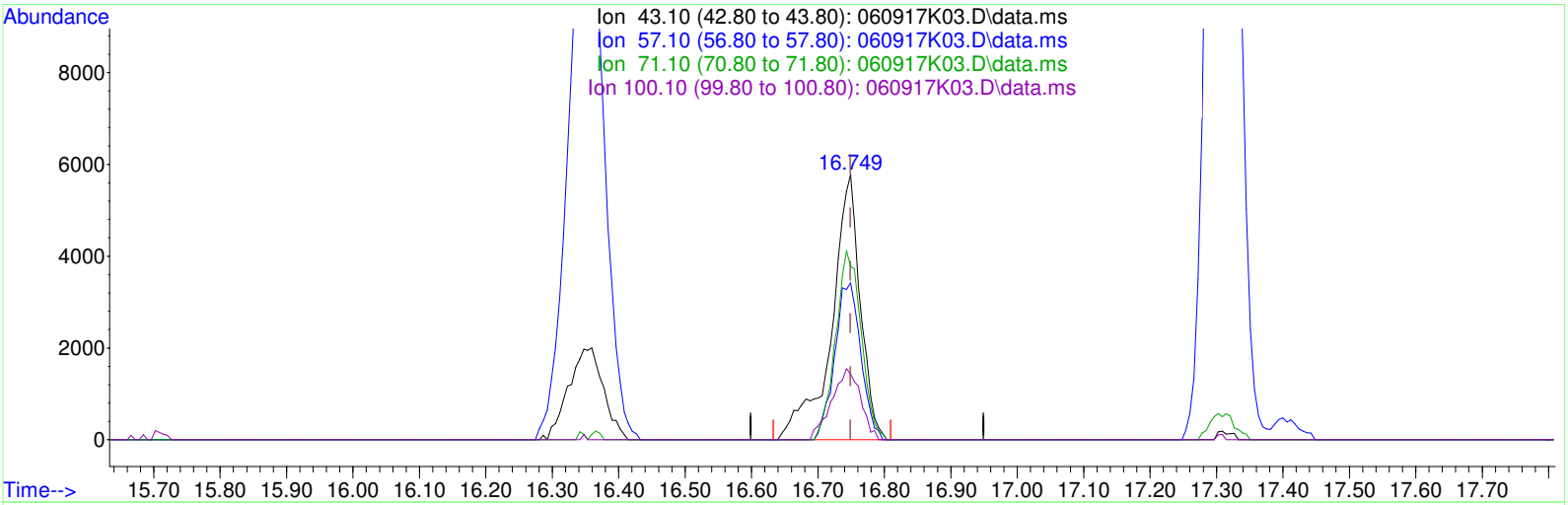
Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

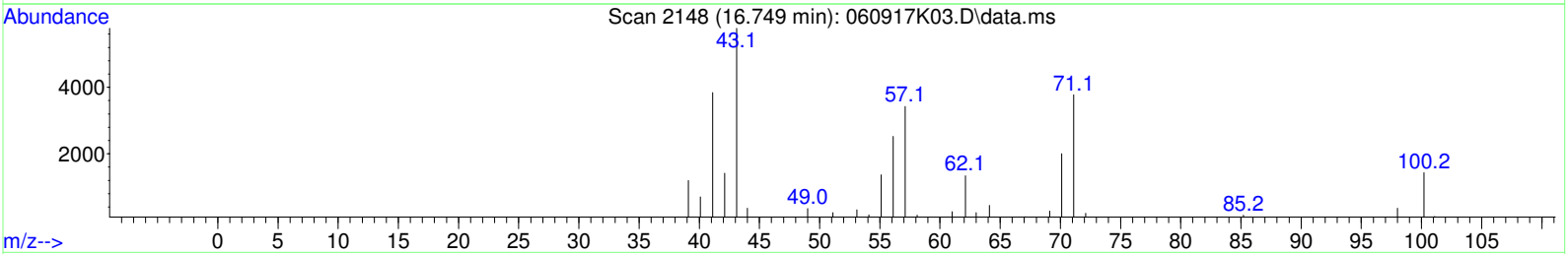


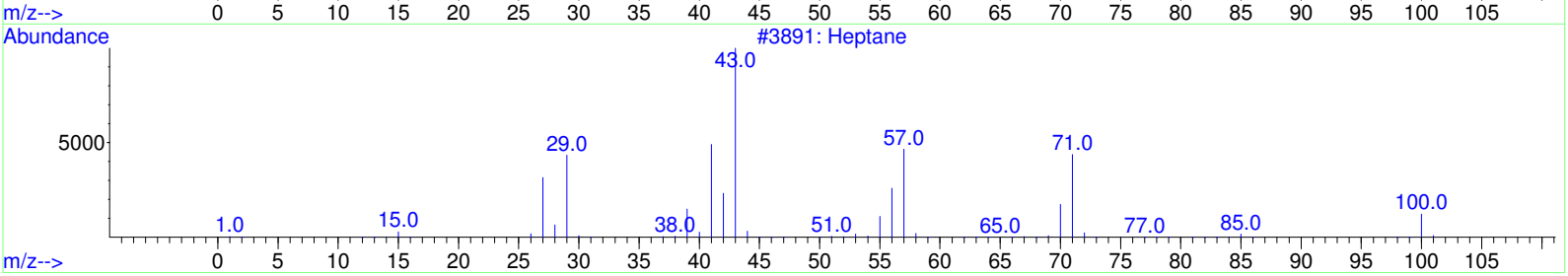
Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Before MI:
Peak SUMMED

Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration







TIC: 060917K03.D\data.ms

(36) Heptane (T)

16.749min (-0.000) 0.99 ppbv

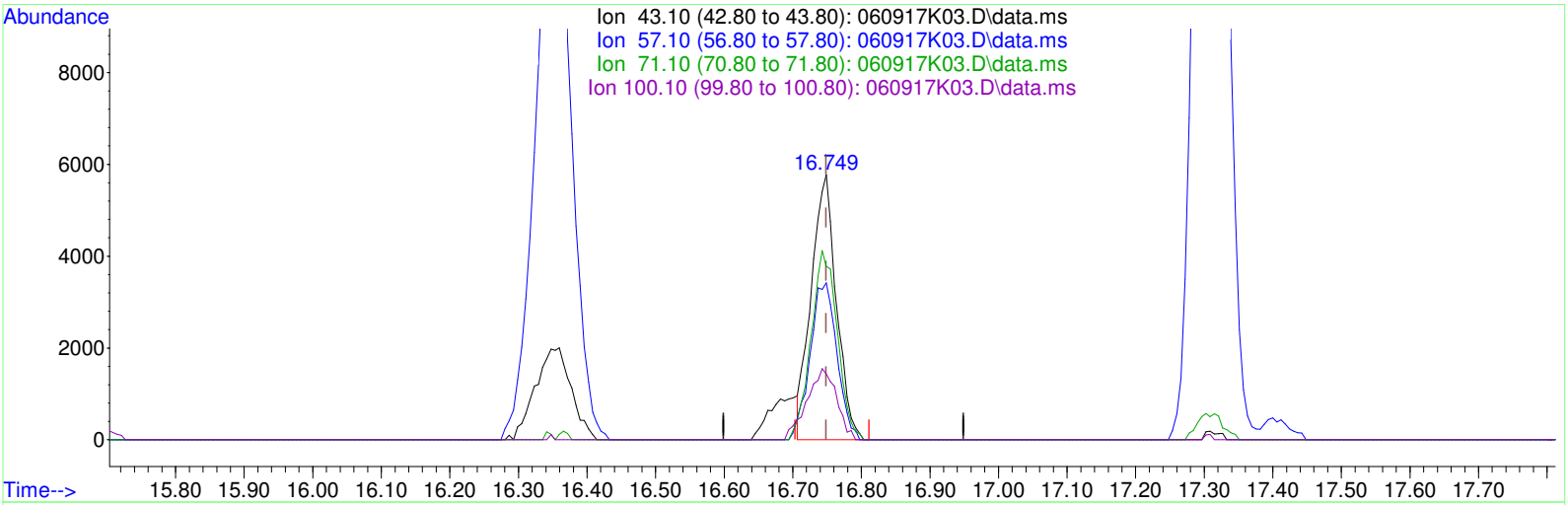
response 17448

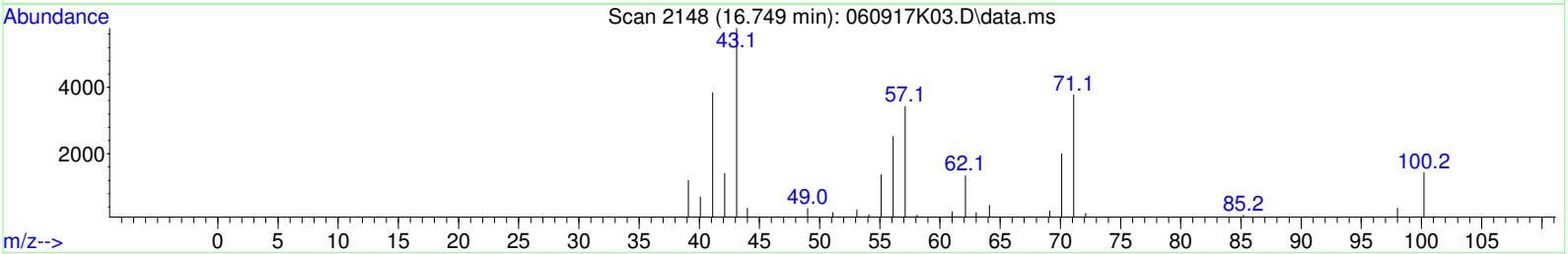
Ion	Exp%	Act%
43.10	100.00	100.00
57.10	63.10	53.47
71.10	75.30	62.98
100.10	30.70	26.67

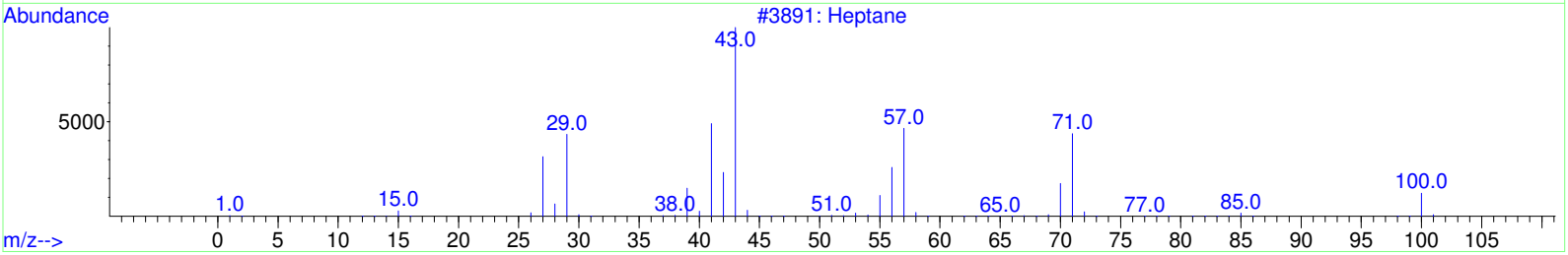
Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K03.D
InstName : HP5973K
Acq On : 9 Jun 2017 11:58 am
Operator : LLH
Sample : S17F039-CRL1
Misc : 1.0ppbv 1723023
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 09 12:30:06 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration







TIC: 060917K03.D\data.ms

(36) Heptane (T)

16.749min (-0.000) 0.84 ppbv m

response 14760

Ion	Exp%	Act%
43.10	100.00	100.00
57.10	63.10	63.20
71.10	75.30	74.44
100.10	30.70	31.53

B17F043-BLK1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K04.D
InstName : HP5973K
Acq On : 9 Jun 2017 12:49 pm
Operator : LLH
Sample : B17F043-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 14:07:22 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.313	49	305243	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	1215025	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1074956	20.00	ppbv	0.00

Target Compounds	Qvalue

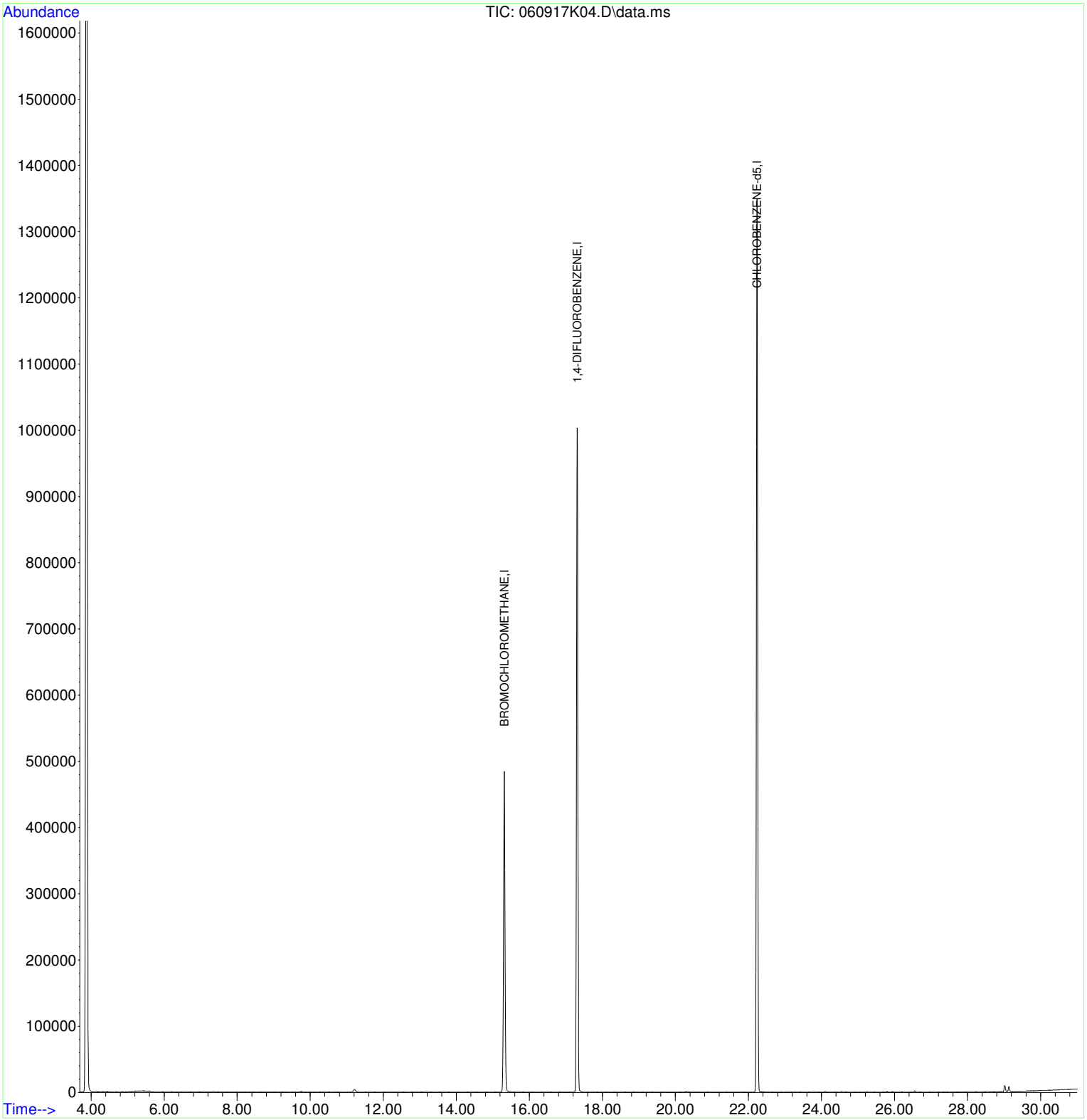
(#) = qualifier out of range (m) = manual integration (+) = signals summed

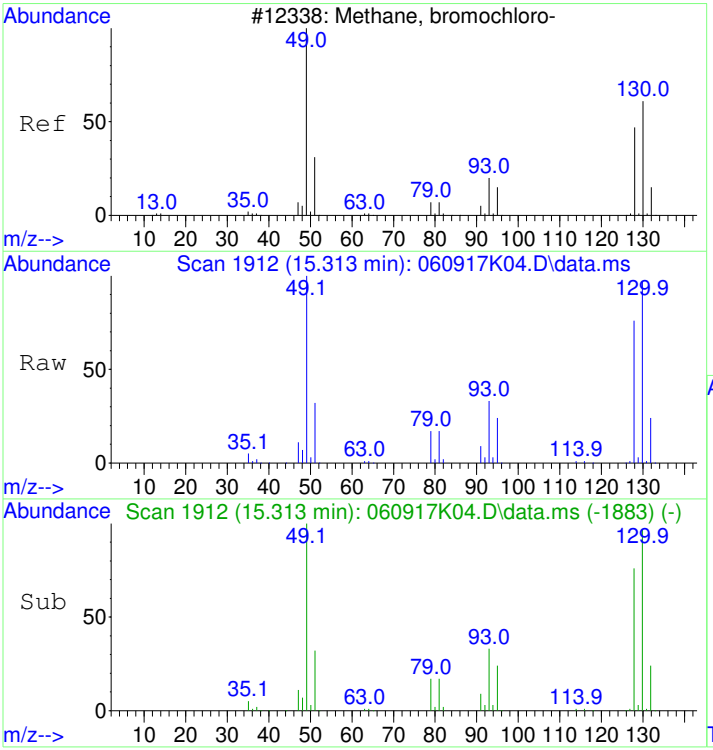
REVIEWED
By LLH at 2:07 pm, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K04.D
InstName : HP5973K
Acq On : 9 Jun 2017 12:49 pm
Operator : LLH
Sample : B17F043-BLK1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 09 14:07:22 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

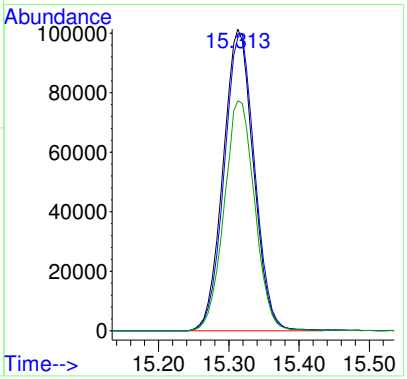


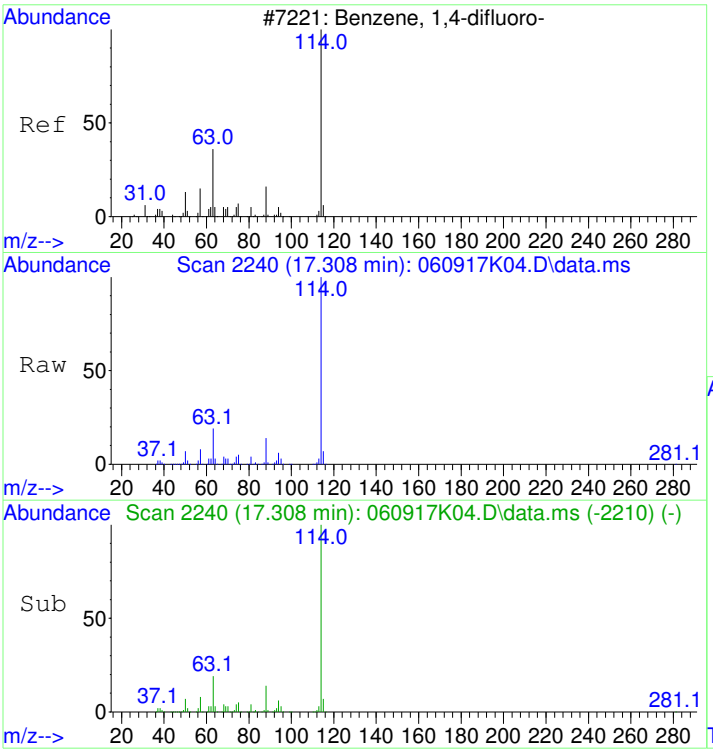


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060917K04.D
Acq: 9 Jun 2017 12:49 pm

Tgt Ion: 49 Resp: 305243

Ion	Ratio	Lower	Upper
49	100		
130	98.8	75.6	115.6
128	76.6	54.4	94.4

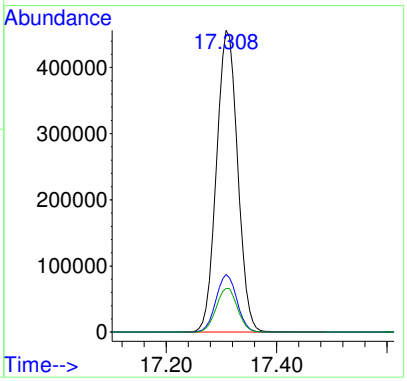


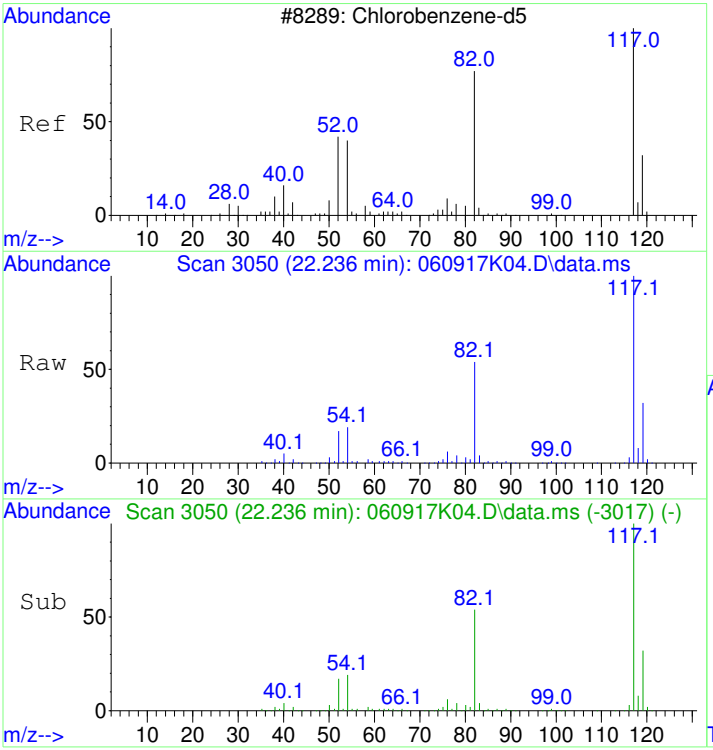


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 060917K04.D
Acq: 9 Jun 2017 12:49 pm

Tgt Ion:114 Resp: 1215025

Ion	Ratio	Lower	Upper
114	100		
63	18.8	0.0	39.1
88	14.6	0.0	34.7

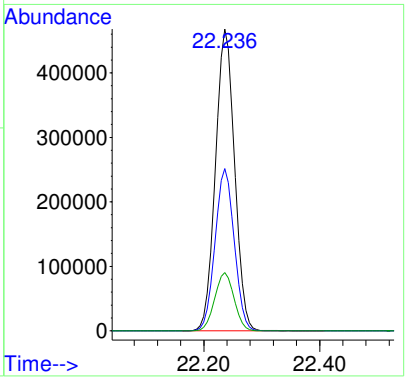




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060917K04.D
Acq: 9 Jun 2017 12:49 pm

Tgt Ion:117 Resp: 1074956

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.7	73.7
54	19.5	0.0	39.6



1706011-03RE2

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K05.D
InstName : HP5973K
Acq On : 9 Jun 2017 1:38 pm
Operator : LLH
Sample : 1706011-03RE2
Misc : 20ml REPRESS
ALS Vial : 11 Sample Multiplier: 4.16

report cis12DCE, TCE

Quant Time: Jun 09 14:49:18 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	302221	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1210420	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1080262	20.00	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	9.716	43	12568	0.86	ppbv	99
20) trans-1,2-Dichloroethene	11.894	61	9338	0.63	ppbv	98
24) cis-1,2-Dichloroethene	14.760	61	19580	1.41	ppbv	100
37) Trichloroethene	17.704	130	222006	13.10	ppbv	99

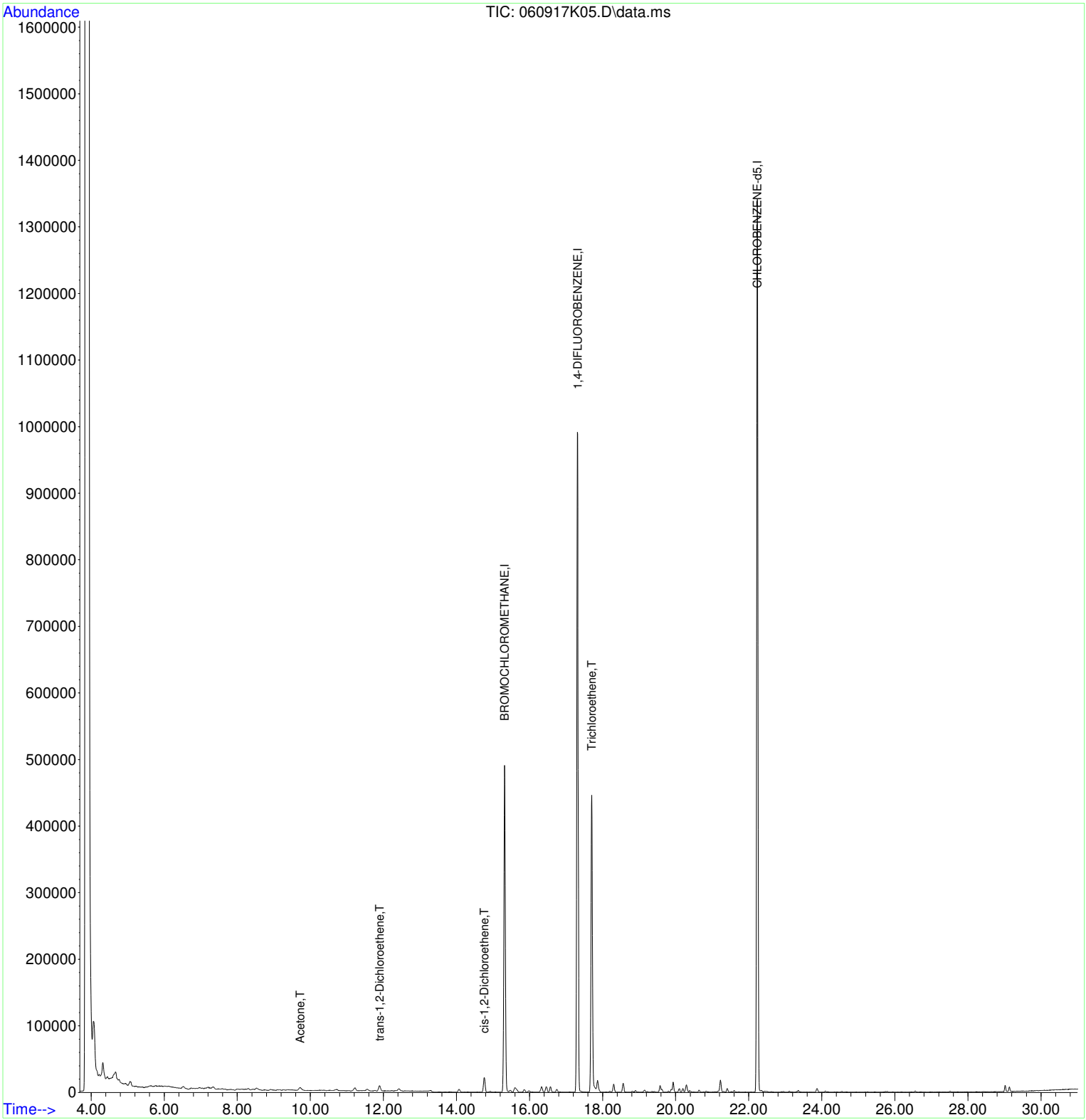
(#) = qualifier out of range (m) = manual integration (+) = signals summed

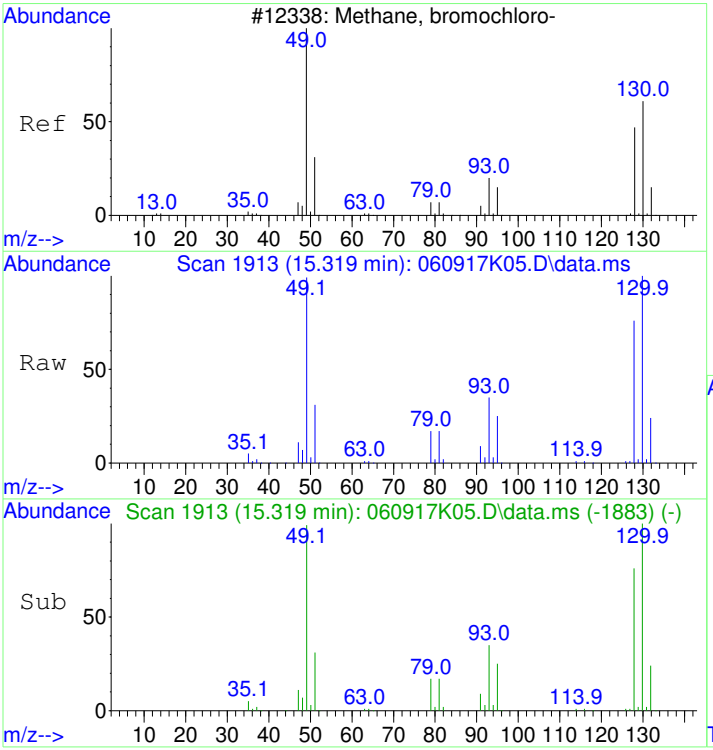
REVIEWED
By LLH at 2:52 pm, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K05.D
InstName : HP5973K
Acq On : 9 Jun 2017 1:38 pm
Operator : LLH
Sample : 1706011-03RE2
Misc : 20ml REPRESS
ALS Vial : 11 Sample Multiplier: 4.16

Quant Time: Jun 09 14:49:18 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

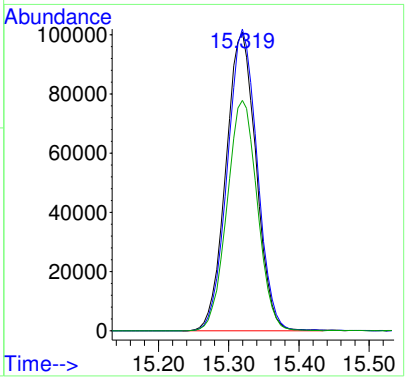


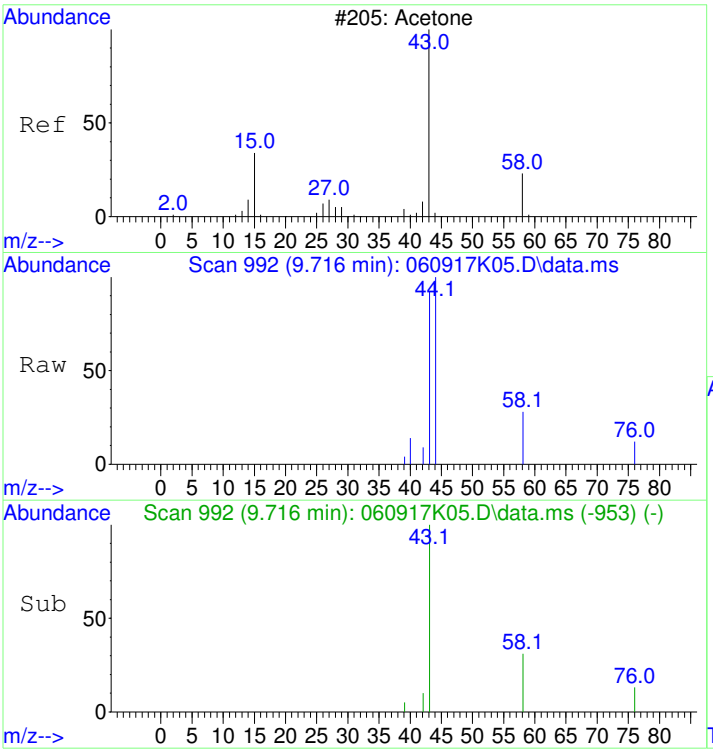


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion: 49 Resp: 302221

Ion	Ratio	Lower	Upper
49	100		
130	99.5	75.6	115.6
128	77.3	54.4	94.4

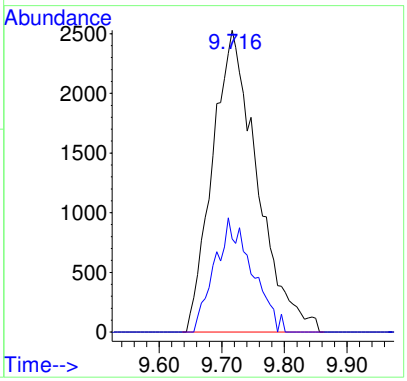


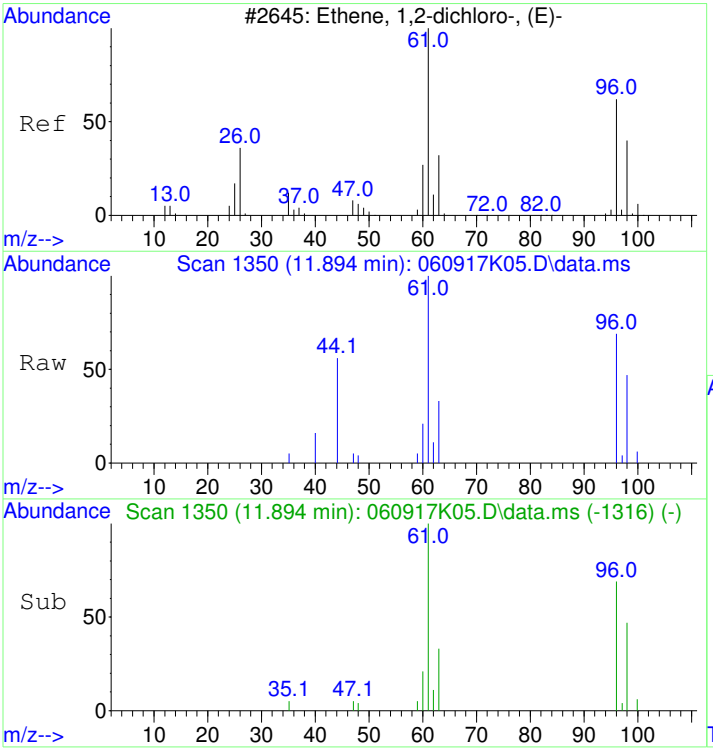


#14
Acetone
Concen: 0.86 ppbv
RT: 9.716 min Scan# 992
Delta R.T. 0.037 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion: 43 Resp: 12568

Ion	Ratio	Lower	Upper
43	100		
58	31.5	12.0	52.0

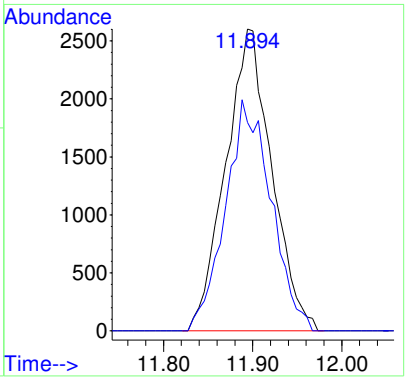


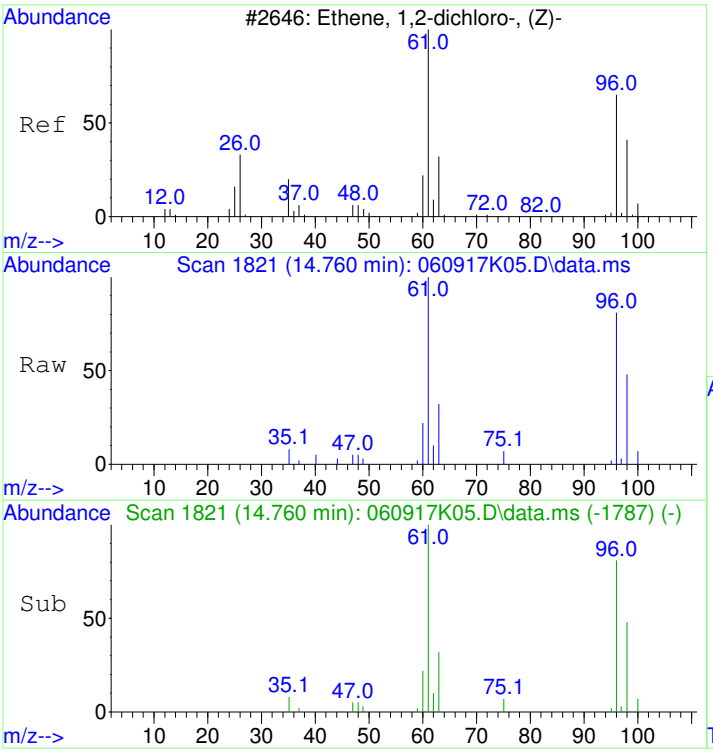


#20
trans-1,2-Dichloroethene
Concen: 0.63 ppbv
RT: 11.894 min Scan# 1350
Delta R.T. 0.006 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion: 61 Resp: 9338

Ion	Ratio	Lower	Upper
61	100		
96	75.4	56.8	96.8

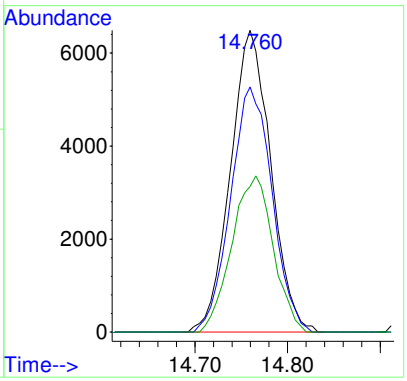


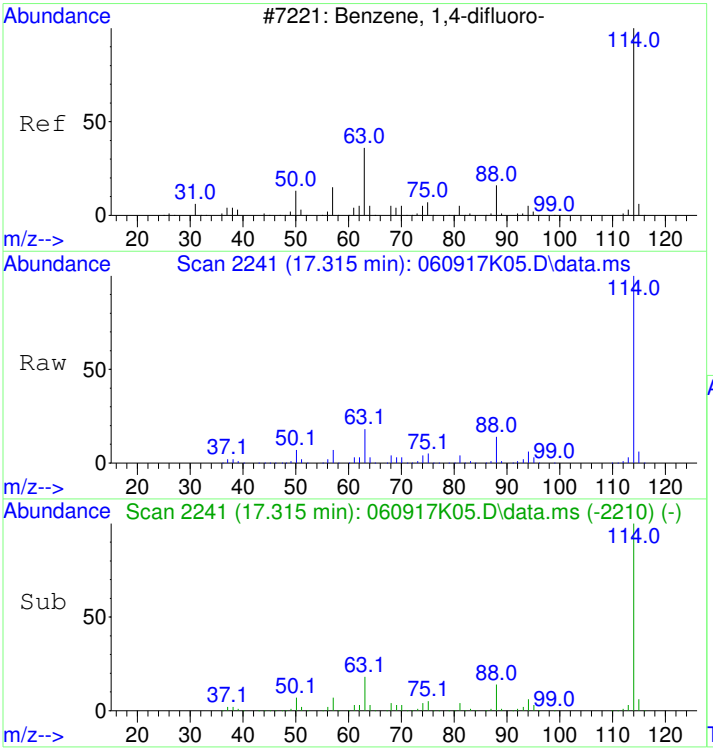


#24
cis-1,2-Dichloroethene
Concen: 1.41 ppbv
RT: 14.760 min Scan# 1821
Delta R.T. 0.006 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion: 61 Resp: 19580

Ion	Ratio	Lower	Upper
61	100		
96	83.6	64.3	104.3
98	53.0	33.1	73.1

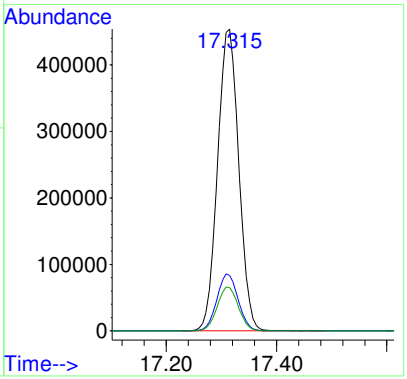


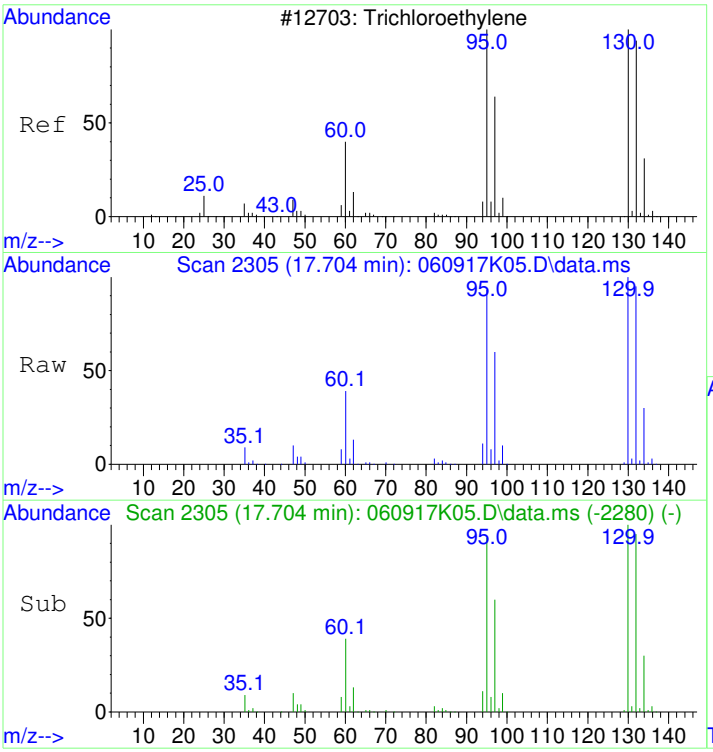


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion:114 Resp: 1210420

Ion	Ratio	Lower	Upper
114	100		
63	18.8	0.0	39.1
88	14.5	0.0	34.7

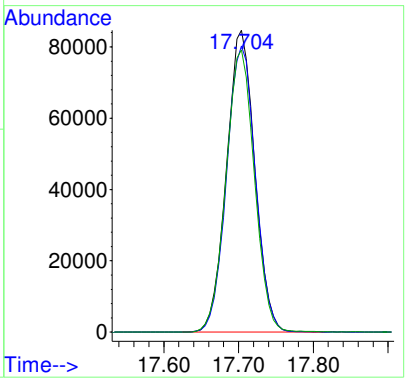


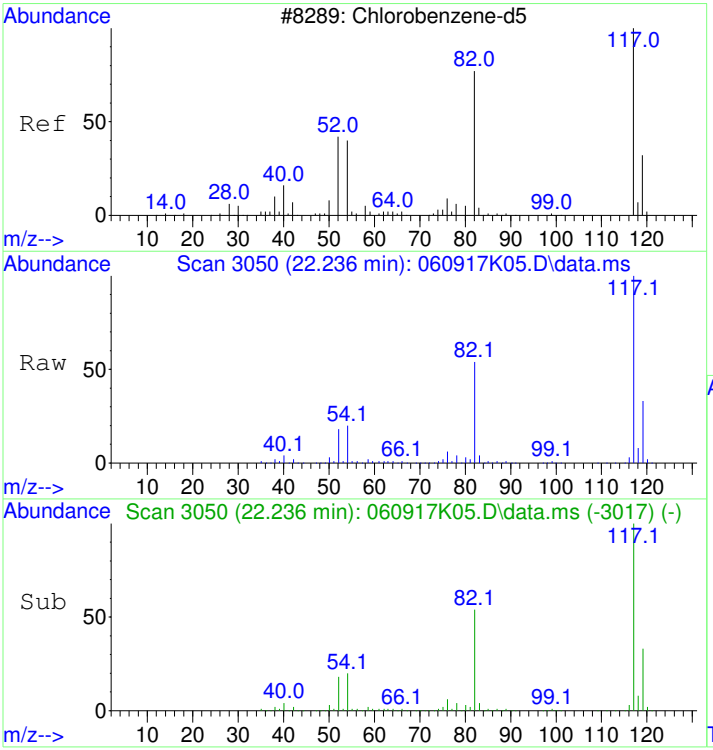


#37
Trichloroethene
Concen: 13.10 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. 0.000 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion:130 Resp: 222006

Ion	Ratio	Lower	Upper
130	100		
132	96.7	75.8	115.8
95	94.3	73.6	113.6

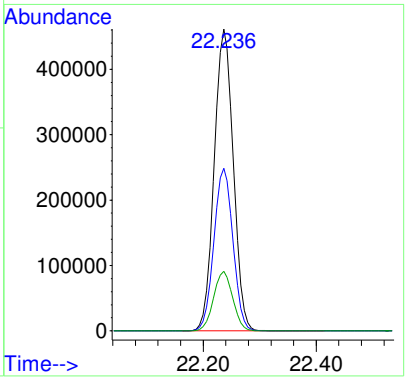




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060917K05.D
Acq: 9 Jun 2017 1:38 pm

Tgt Ion:117 Resp: 1080262

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.7	73.7
54	19.7	0.0	39.6



1706011-04RE1

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K06.D
InstName : HP5973K
Acq On : 9 Jun 2017 2:27 pm
Operator : LLH
Sample : 1706011-04RE1
Misc : 100ml REPRESS
ALS Vial : 12 Sample Multiplier: 3.17

report CHCl3

Quant Time: Jun 09 15:43:20 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	298069	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1177139	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1056726	20.00 ppbv	0.00
Target Compounds					Qvalue
14) Acetone	9.722	43	9660	0.67 ppbv	96
18) Dichloromethane	11.231	49	6848	0.56 ppbv	98
28) Chloroform	15.471	83	236667	9.75 ppbv	99
37) Trichloroethene	17.704	130	11483	0.70 ppbv	99
47) Tetrachloroethene	20.764	166	13423	0.56 ppbv	98

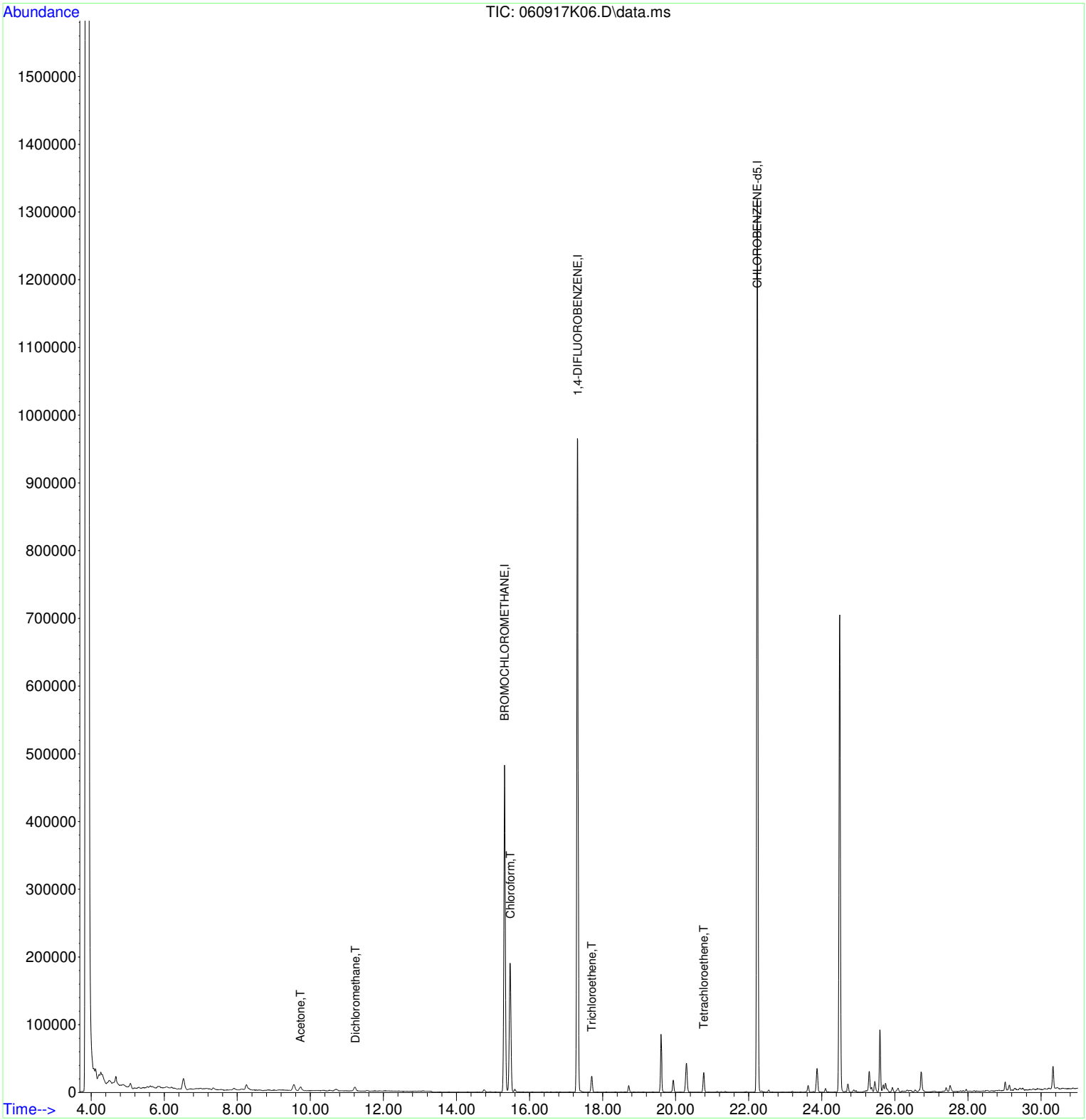
(#) = qualifier out of range (m) = manual integration (+) = signals summed

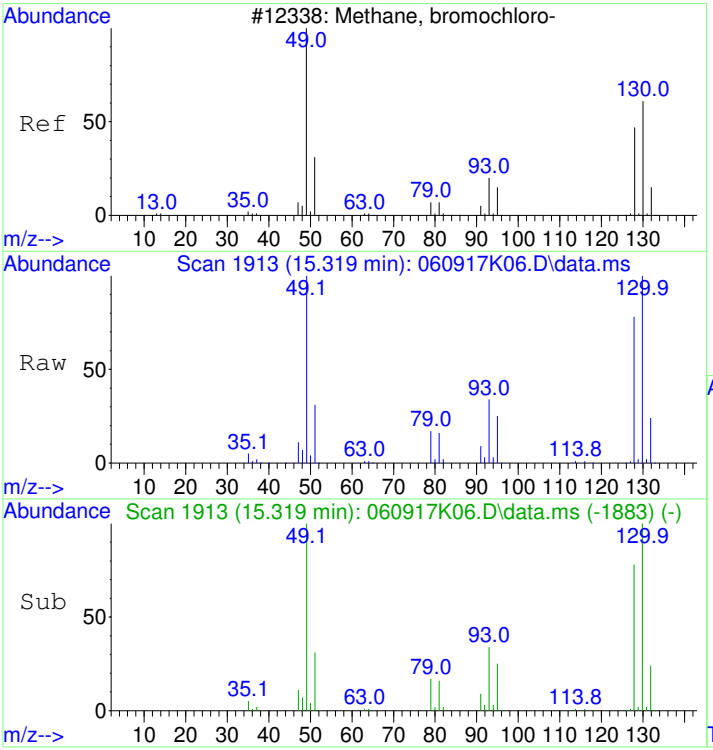
REVIEWED
By LLH at 3:46 pm, Jun 09, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K06.D
InstName : HP5973K
Acq On : 9 Jun 2017 2:27 pm
Operator : LLH
Sample : 1706011-04RE1
Misc : 100ml REPRESS
ALS Vial : 12 Sample Multiplier: 3.17

Quant Time: Jun 09 15:43:20 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

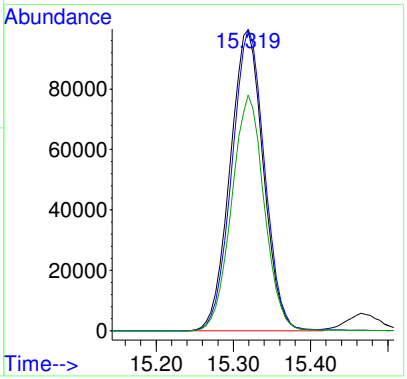


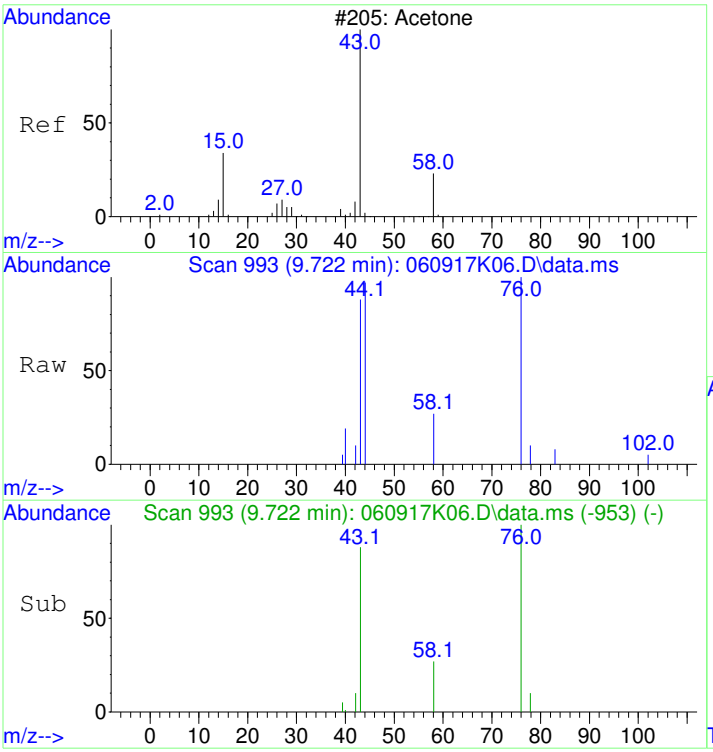


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion: 49 Resp: 298069

Ion	Ratio	Lower	Upper
49	100		
130	98.5	75.6	115.6
128	76.7	54.4	94.4

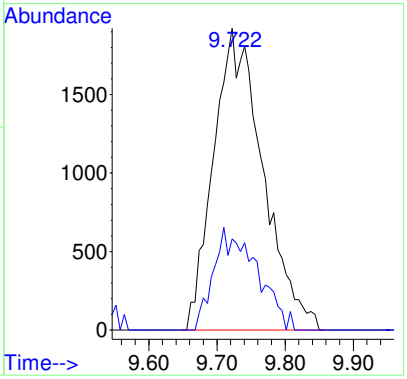


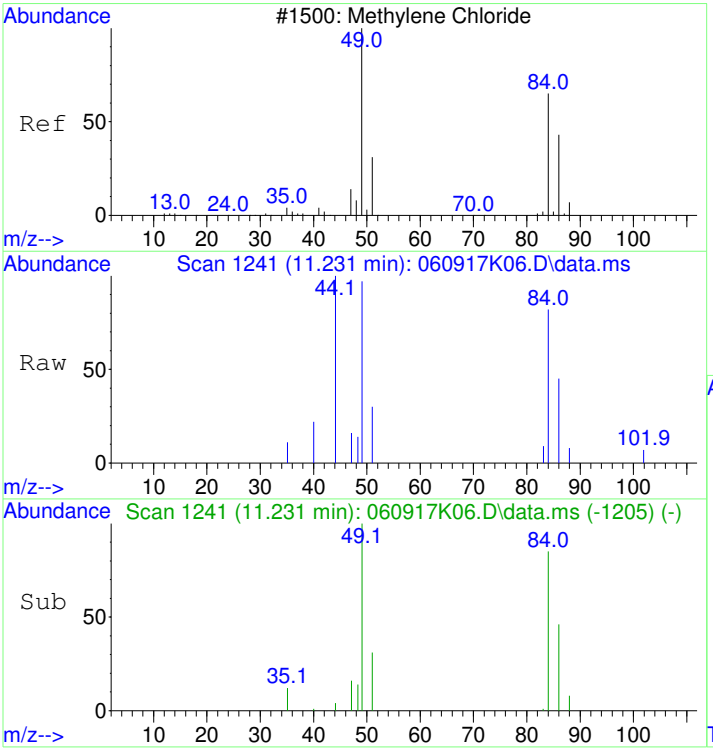


#14
Acetone
Concen: 0.67 ppbv
RT: 9.722 min Scan# 993
Delta R.T. 0.043 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion: 43 Resp: 9660

Ion	Ratio	Lower	Upper
43	100		
58	29.6	12.0	52.0

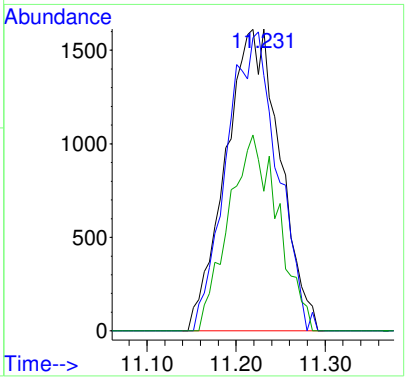


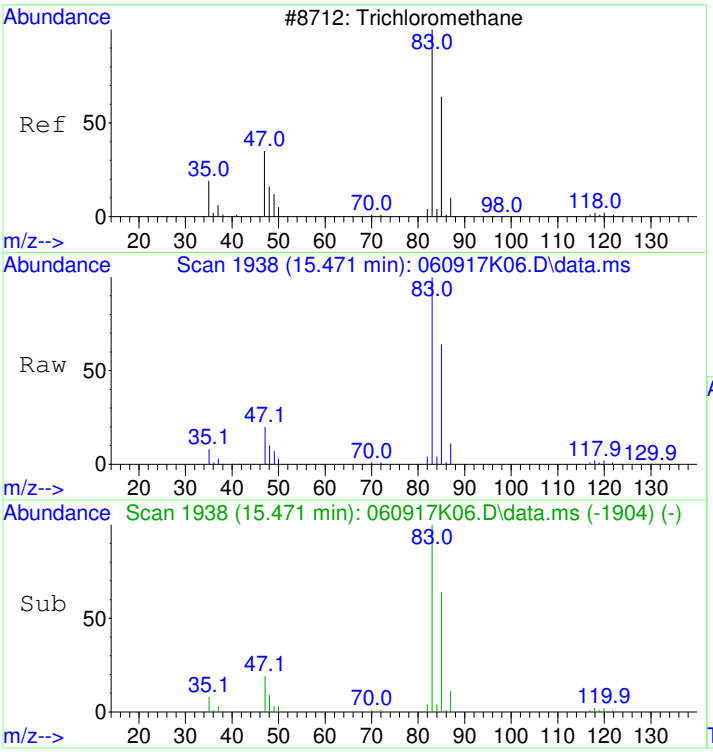


#18
Dichloromethane
Concen: 0.56 ppbv
RT: 11.231 min Scan# 1241
Delta R.T. 0.018 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion: 49 Resp: 6848

Ion	Ratio	Lower	Upper
49	100		
84	92.3	74.2	114.2
86	58.8	41.1	81.1

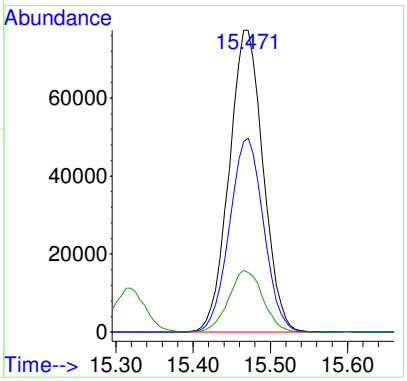


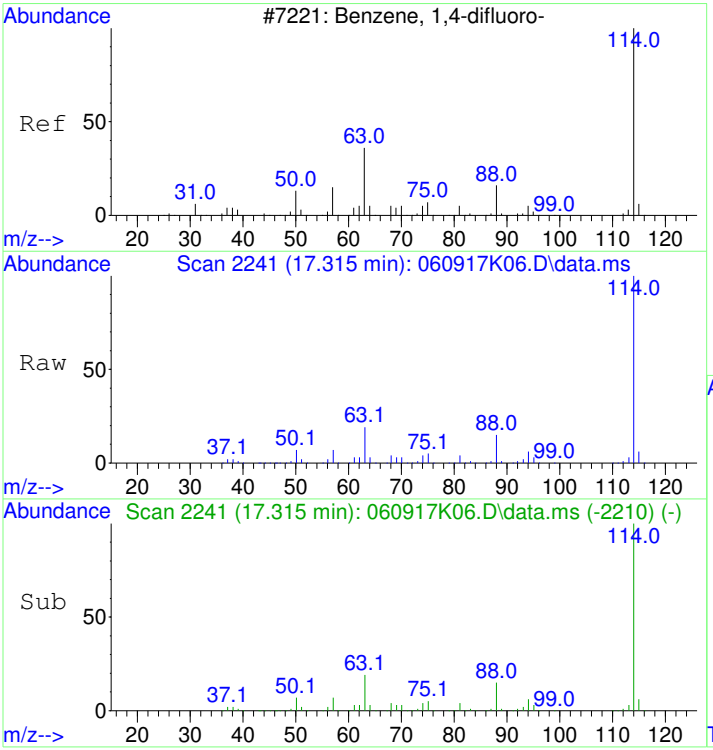


#28
Chloroform
Concen: 9.75 ppbv
RT: 15.471 min Scan# 1938
Delta R.T. 0.006 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion: 83 Resp: 236667

Ion	Ratio	Lower	Upper
83	100		
85	64.5	45.0	85.0
47	20.6	0.8	40.8

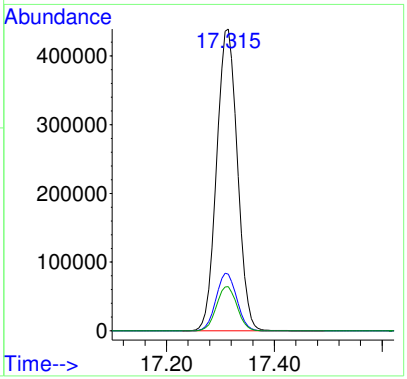


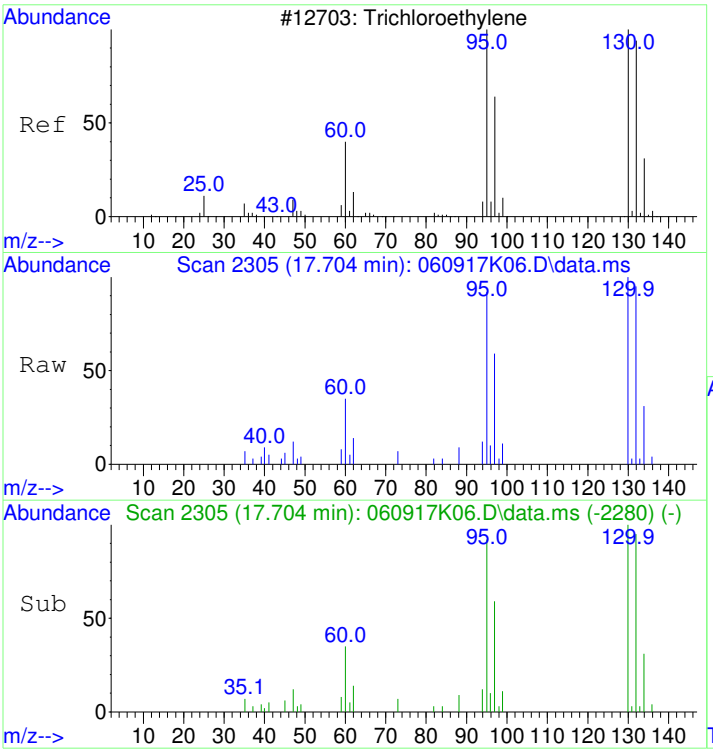


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion:114 Resp: 1177139

Ion	Ratio	Lower	Upper
114	100		
63	19.0	0.0	39.1
88	14.6	0.0	34.7

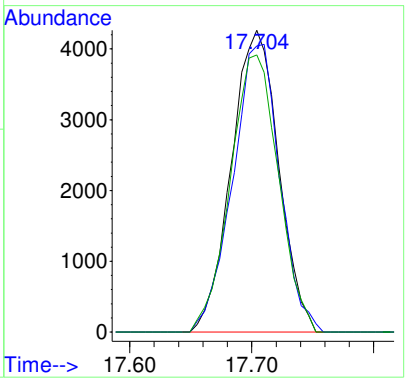


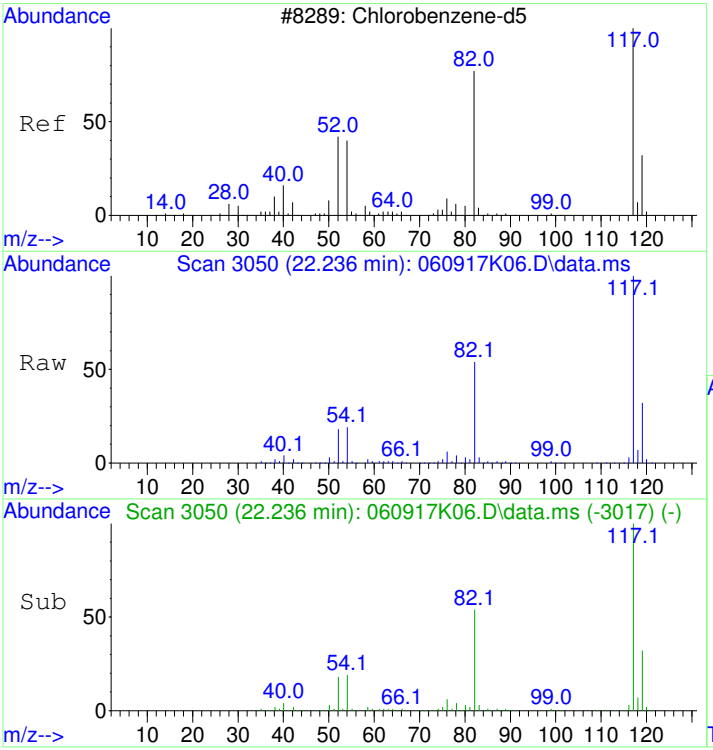


#37
Trichloroethene
Concen: 0.70 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. 0.000 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion:130 Resp: 11483

Ion	Ratio	Lower	Upper
130	100		
132	94.9	75.8	115.8
95	93.5	73.6	113.6

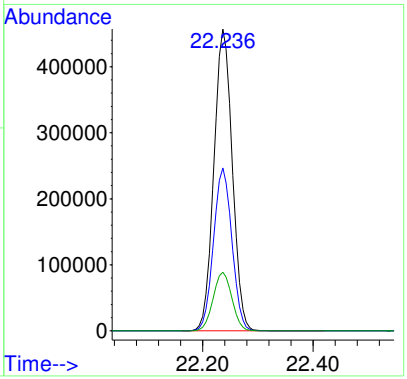


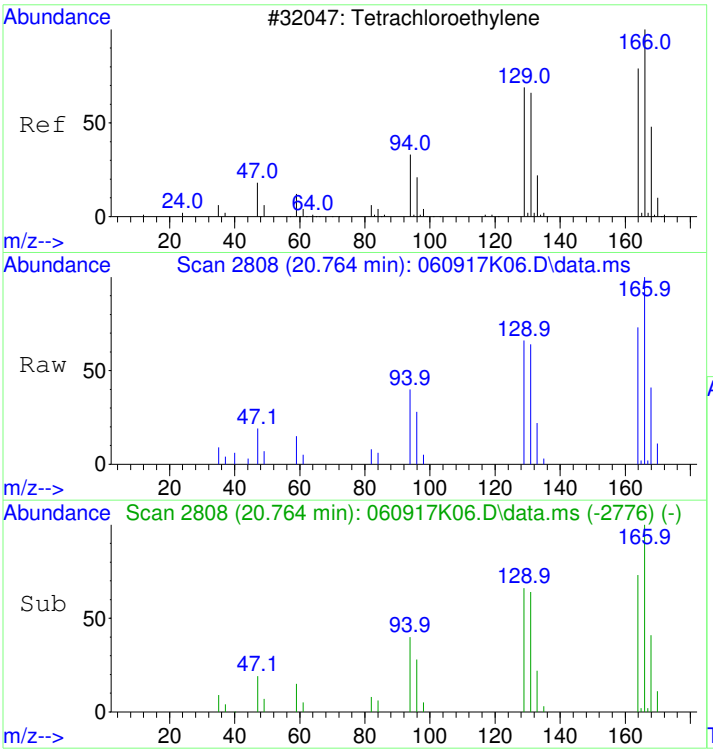


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. 0.000 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion:117 Resp: 1056726

Ion	Ratio	Lower	Upper
117	100		
82	53.9	33.7	73.7
54	19.7	0.0	39.6

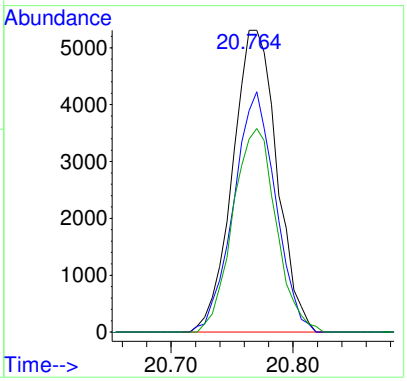




#47
Tetrachloroethene
Concen: 0.56 ppbv
RT: 20.764 min Scan# 2808
Delta R.T. -0.006 min
Lab File: 060917K06.D
Acq: 9 Jun 2017 2:27 pm

Tgt Ion:166 Resp: 13423

Ion	Ratio	Lower	Upper
166	100		
164	75.2	57.9	97.9
131	65.7	46.1	86.1



1706011-09RE1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K07.D
InstName : HP5973K
Acq On : 9 Jun 2017 3:17 pm
Operator : LLH
Sample : 1706011-09RE1
Misc : 30ml REPRESS
ALS Vial : 13 Sample Multiplier: 3.31

report cis12DCE, CHCl3, TCE

Quant Time: Jun 09 17:23:26 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	301420	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1187215	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1049028	20.00	ppbv	0.00
Target Compounds						Qvalue
24) cis-1,2-Dichloroethene	14.760	61	28533	2.06	ppbv	99
28) Chloroform	15.471	83	72591	2.96	ppbv	99
37) Trichloroethene	17.704	130	116547	7.01	ppbv	99
47) Tetrachloroethene	20.764	166	15262	0.64	ppbv	98

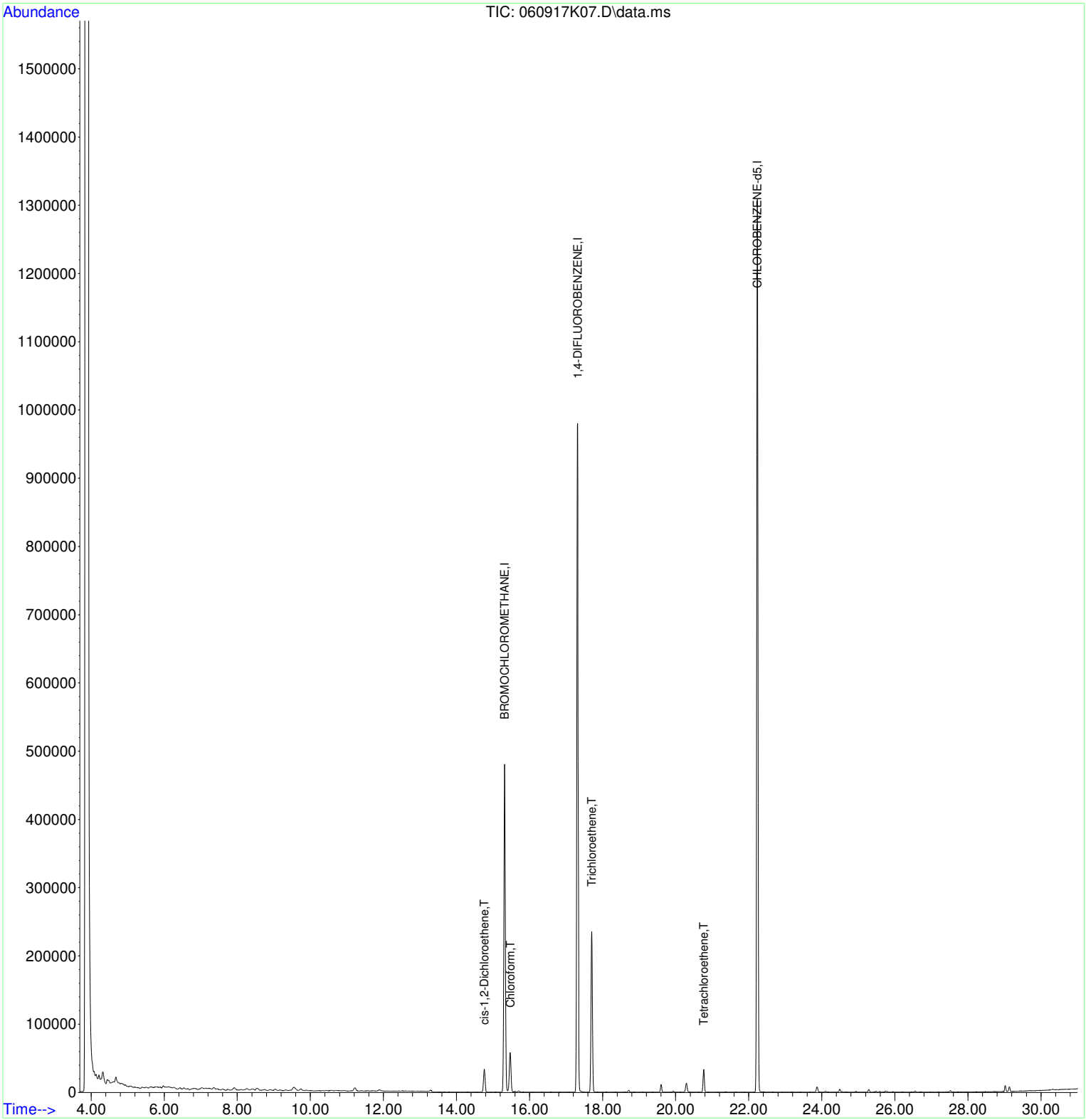
(#) = qualifier out of range (m) = manual integration (+) = signals summed

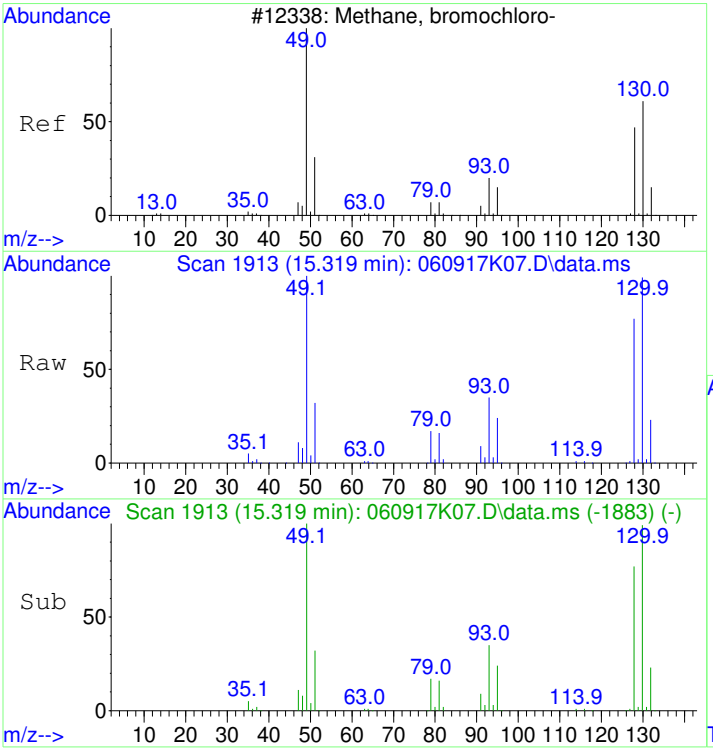
REVIEWED
By LLH at 9:11 am, Jun 12, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K07.D
InstName : HP5973K
Acq On : 9 Jun 2017 3:17 pm
Operator : LLH
Sample : 1706011-09RE1
Misc : 30ml REPRESS
ALS Vial : 13 Sample Multiplier: 3.31

Quant Time: Jun 09 17:23:26 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

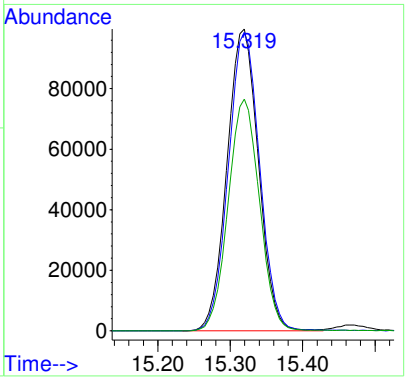


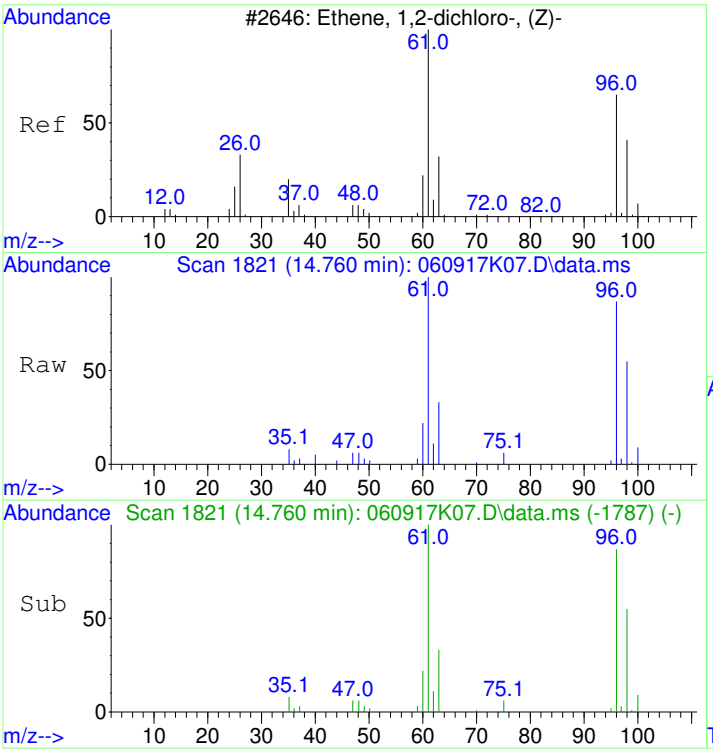


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion: 49 Resp: 301420

Ion	Ratio	Lower	Upper
49	100		
130	98.3	75.6	115.6
128	76.3	54.4	94.4

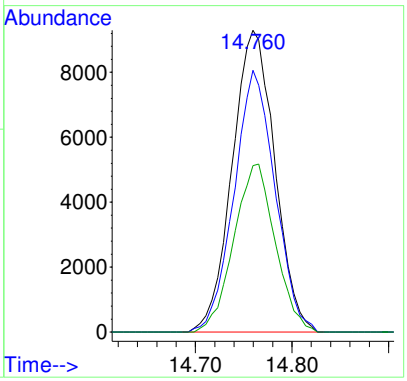


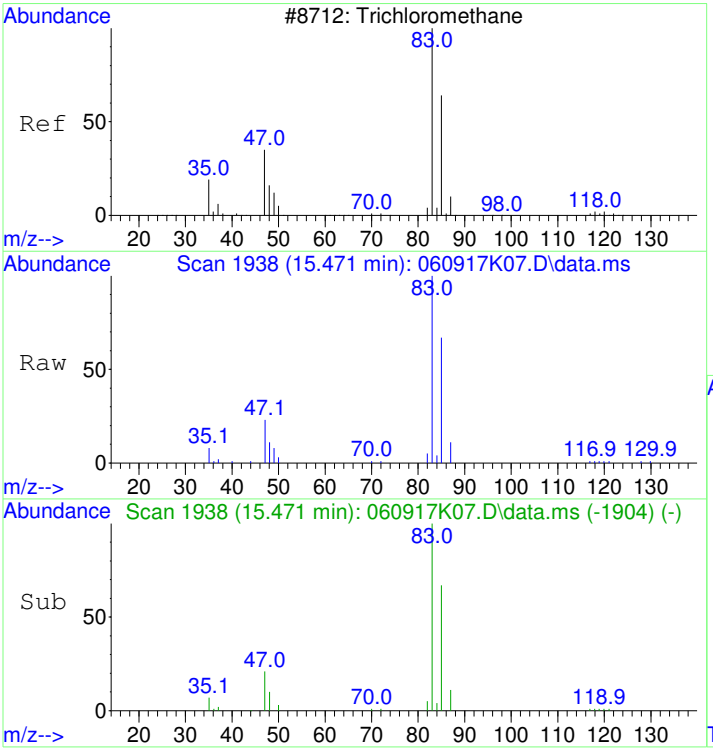


#24
cis-1,2-Dichloroethene
Concen: 2.06 ppbv
RT: 14.760 min Scan# 1821
Delta R.T. 0.006 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion: 61 Resp: 28533

Ion	Ratio	Lower	Upper
61	100		
96	83.4	64.3	104.3
98	54.0	33.1	73.1

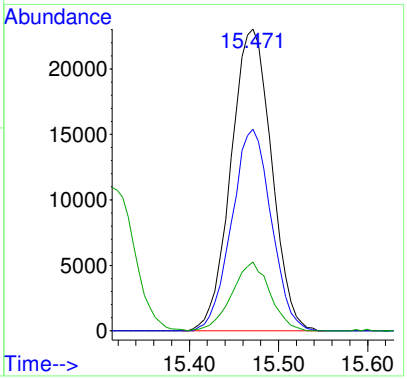


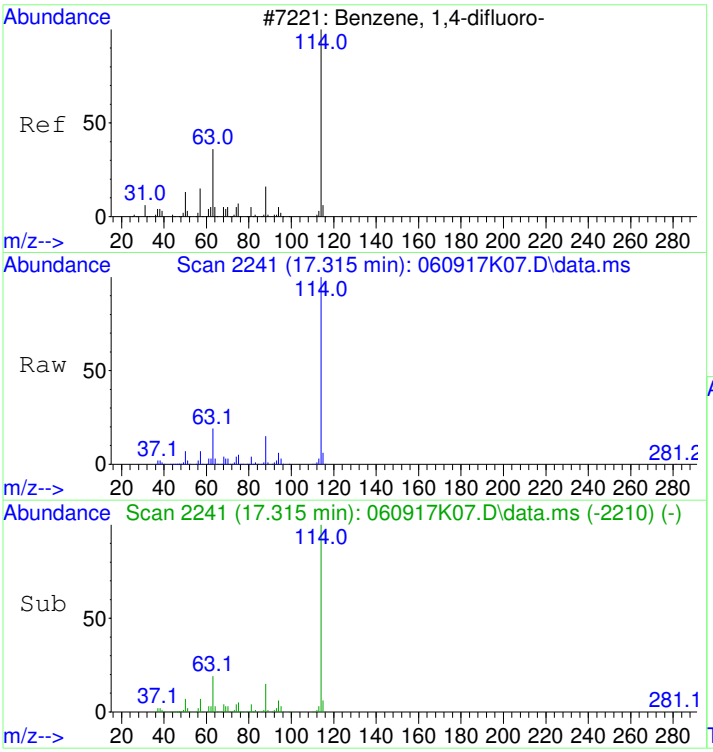


#28
Chloroform
Concen: 2.96 ppbv
RT: 15.471 min Scan# 1938
Delta R.T. 0.006 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion: 83 Resp: 72591

Ion	Ratio	Lower	Upper
83	100		
85	65.2	45.0	85.0
47	21.5	0.8	40.8

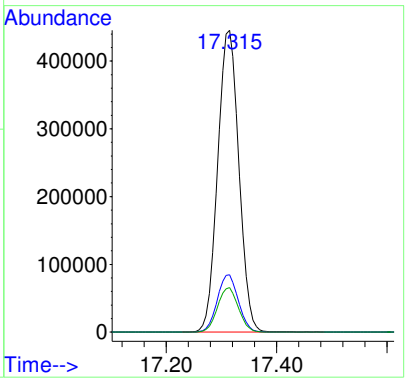


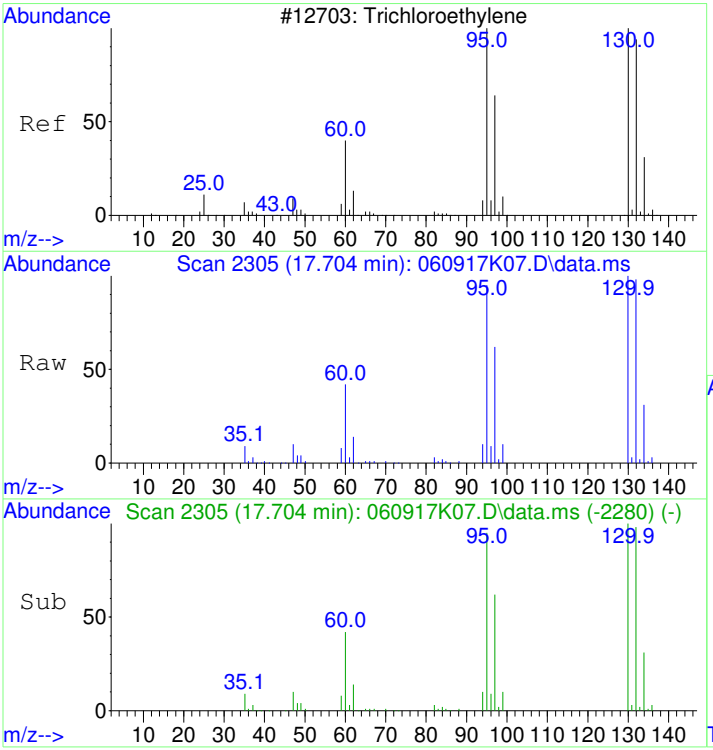


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion:114 Resp: 1187215

Ion	Ratio	Lower	Upper
114	100		
63	18.9	0.0	39.1
88	14.5	0.0	34.7

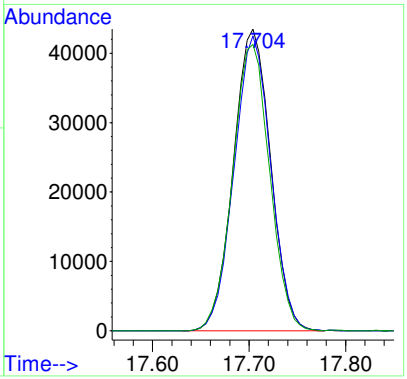


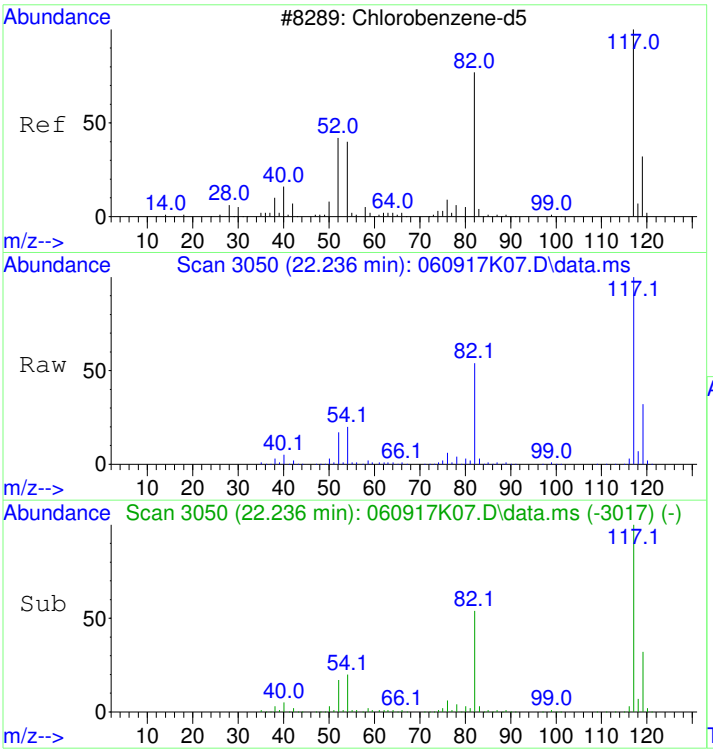


#37
Trichloroethene
Concen: 7.01 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion:130 Resp: 116547

Ion	Ratio	Lower	Upper
130	100		
132	96.7	75.8	115.8
95	94.5	73.6	113.6

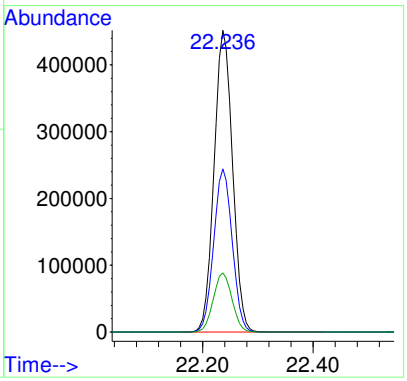


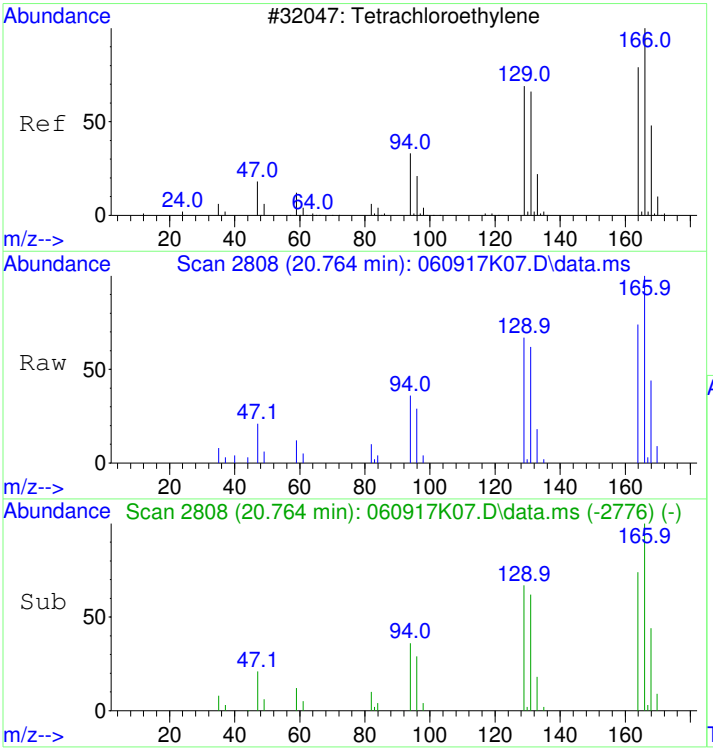


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion:117 Resp: 1049028

Ion	Ratio	Lower	Upper
117	100		
82	54.2	33.7	73.7
54	19.8	0.0	39.6

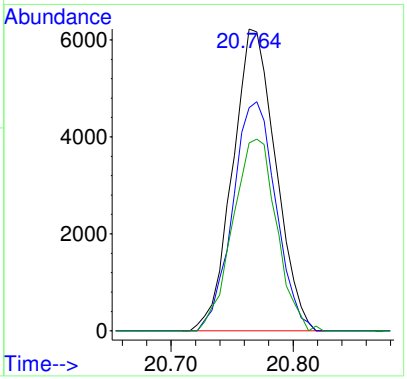




#47
Tetrachloroethene
Concen: 0.64 ppbv
RT: 20.764 min Scan# 2808
Delta R.T. -0.006 min
Lab File: 060917K07.D
Acq: 9 Jun 2017 3:17 pm

Tgt Ion:166 Resp: 15262

Ion	Ratio	Lower	Upper
166	100		
164	76.1	57.9	97.9
131	64.4	46.1	86.1



1706011-10RE1

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K08.D
InstName : HP5973K
Acq On : 9 Jun 2017 4:07 pm
Operator : LLH
Sample : 1706011-10RE1
Misc : 30ml REPRESS
ALS Vial : 14 Sample Multiplier: 3.36

report cis12DCE, CHCl3, TCE

Quant Time: Jun 09 17:24:35 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	295856	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.314	114	1170378	18.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1043916	20.00	ppbv	0.00
Target Compounds						Qvalue
14) Acetone	9.722	43	14580	1.02	ppbv	95
18) Dichloromethane	11.225	49	6419	0.53	ppbv	98
24) cis-1,2-Dichloroethene	14.765	61	32238	2.37	ppbv	99
28) Chloroform	15.465	83	107886	4.48	ppbv	100
37) Trichloroethene	17.704	130	141943	8.66	ppbv	99
47) Tetrachloroethene	20.770	166	17054	0.72	ppbv	98

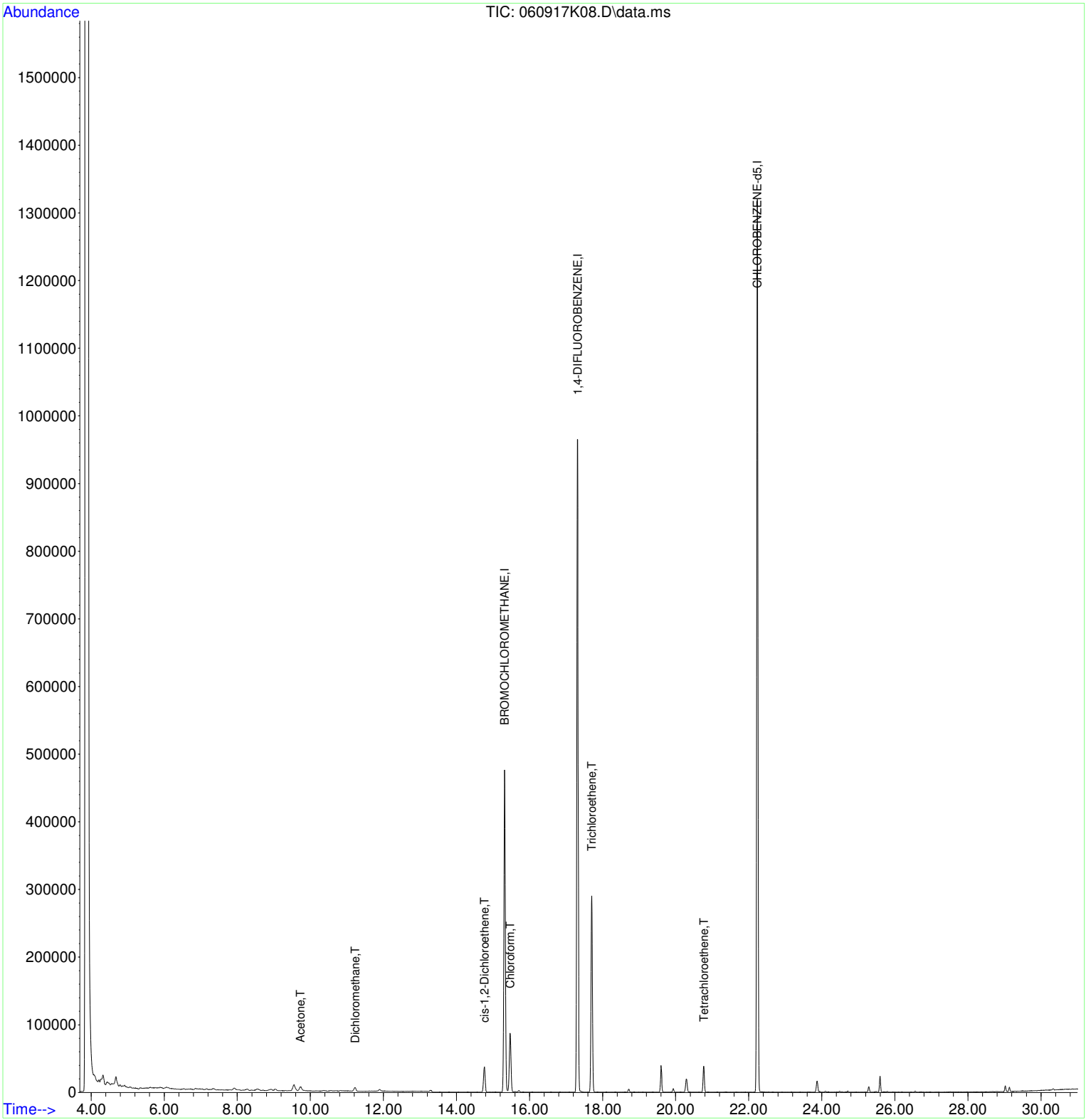
(#) = qualifier out of range (m) = manual integration (+) = signals summed

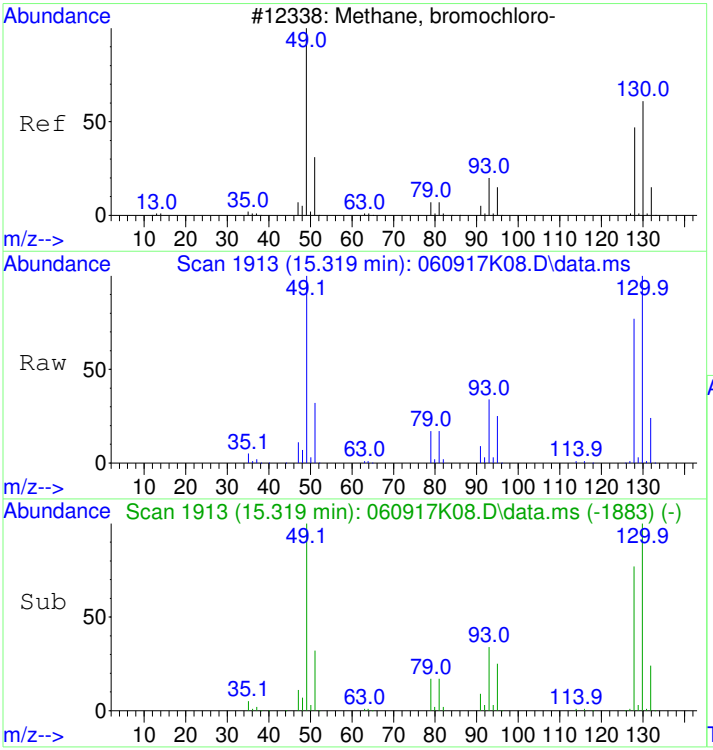
REVIEWED
By LLH at 9:10 am, Jun 12, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K08.D
InstName : HP5973K
Acq On : 9 Jun 2017 4:07 pm
Operator : LLH
Sample : 1706011-10RE1
Misc : 30ml REPRESS
ALS Vial : 14 Sample Multiplier: 3.36

Quant Time: Jun 09 17:24:35 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

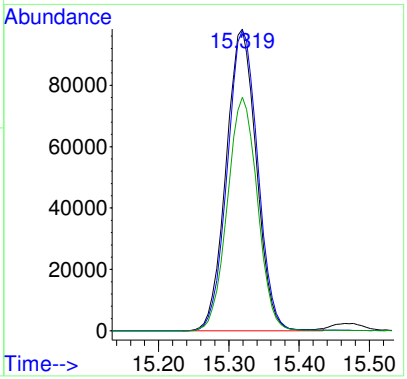


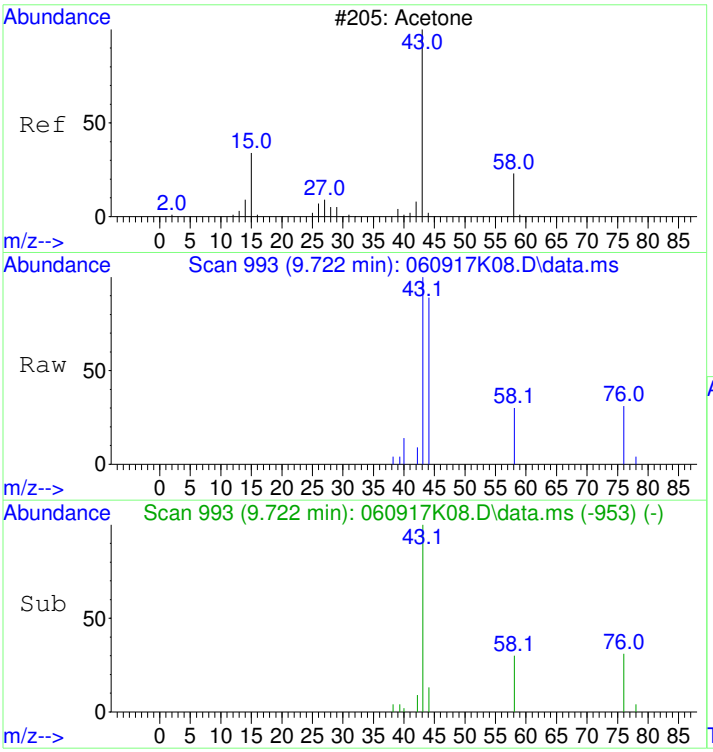


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion: 49 Resp: 295856

Ion	Ratio	Lower	Upper
49	100		
130	99.6	75.6	115.6
128	76.6	54.4	94.4

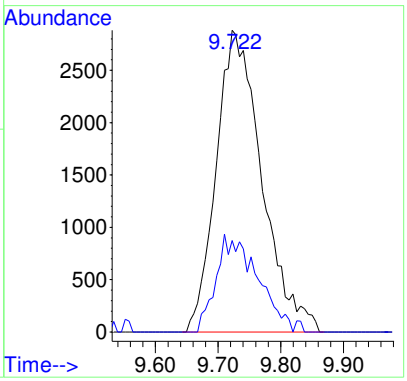


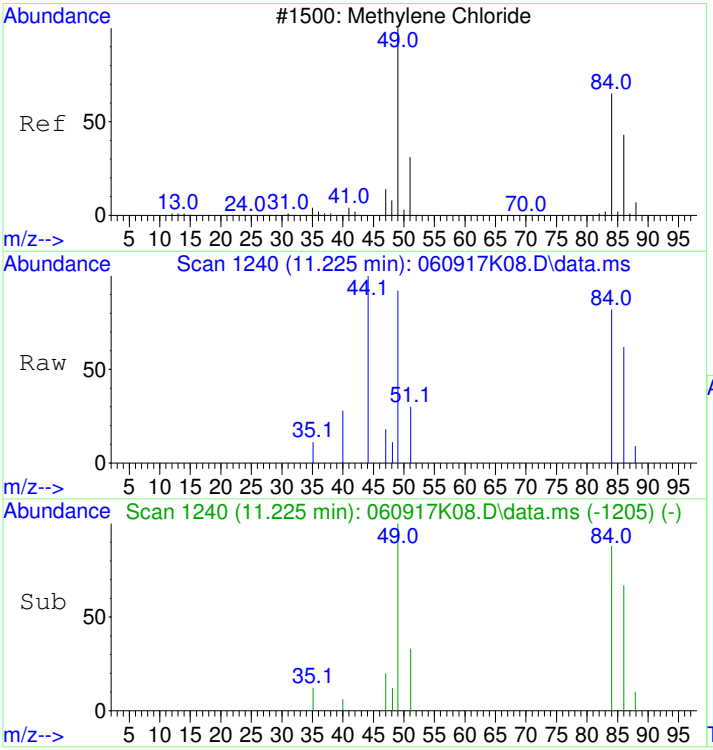


#14
Acetone
Concen: 1.02 ppbv
RT: 9.722 min Scan# 993
Delta R.T. 0.042 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion: 43 Resp: 14580

Ion	Ratio	Lower	Upper
43	100		
58	29.1	12.0	52.0

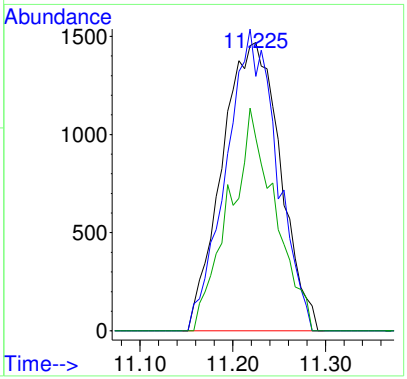


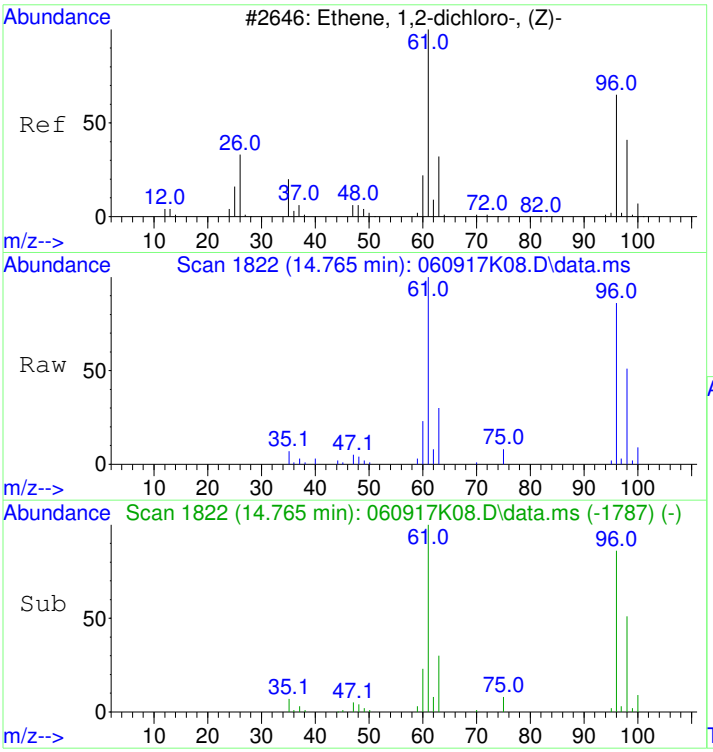


#18
Dichloromethane
Concen: 0.53 ppbv
RT: 11.225 min Scan# 1240
Delta R.T. 0.012 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion: 49 Resp: 6419

Ion	Ratio	Lower	Upper
49	100		
84	91.0	74.2	114.2
86	61.1	41.1	81.1

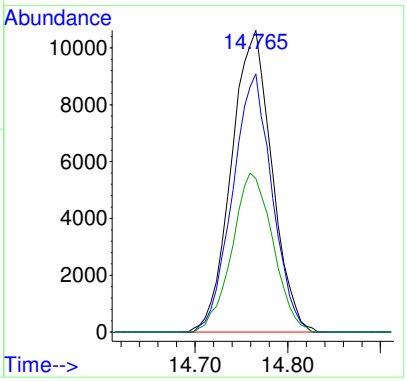


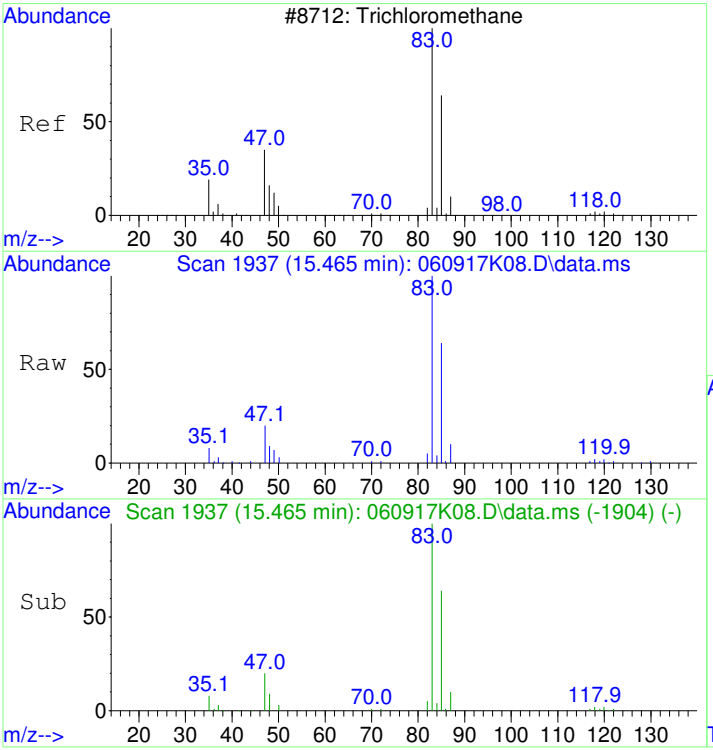


#24
cis-1,2-Dichloroethene
Concen: 2.37 ppbv
RT: 14.765 min Scan# 1822
Delta R.T. 0.012 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion: 61 Resp: 32238

Ion	Ratio	Lower	Upper
61	100		
96	83.4	64.3	104.3
98	53.2	33.1	73.1

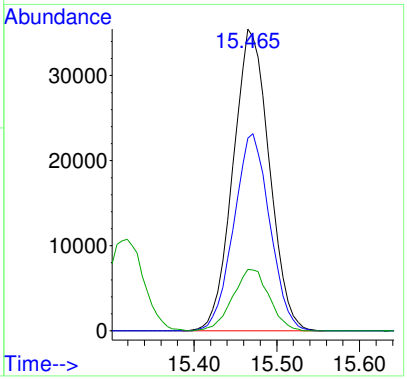


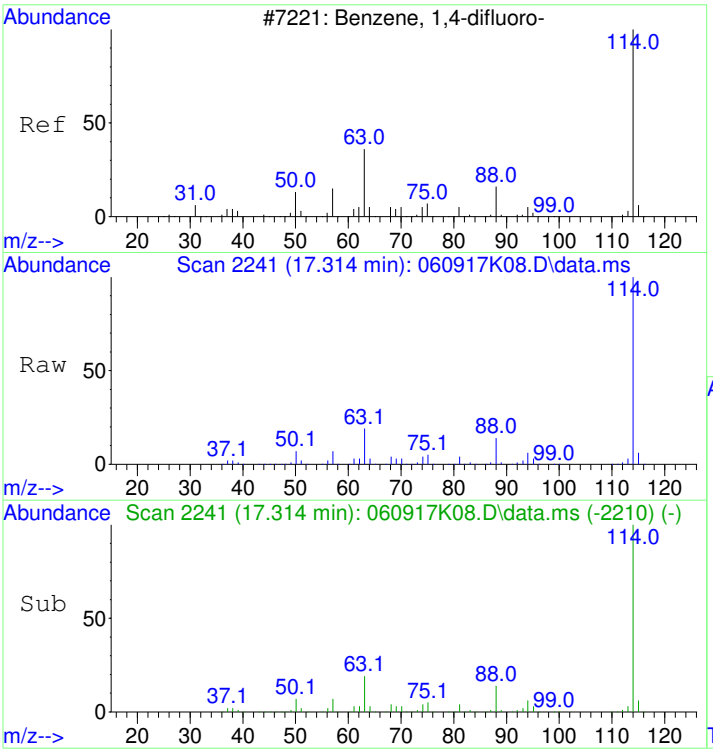


#28
Chloroform
Concen: 4.48 ppbv
RT: 15.465 min Scan# 1937
Delta R.T. -0.000 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion: 83 Resp: 107886

Ion	Ratio	Lower	Upper
83	100		
85	65.0	45.0	85.0
47	20.5	0.8	40.8

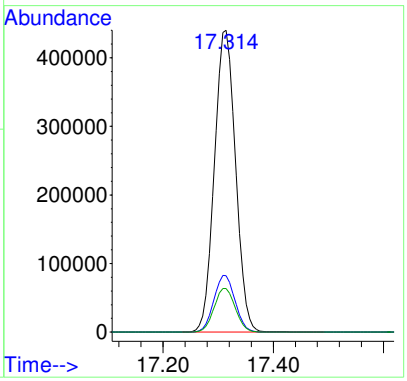


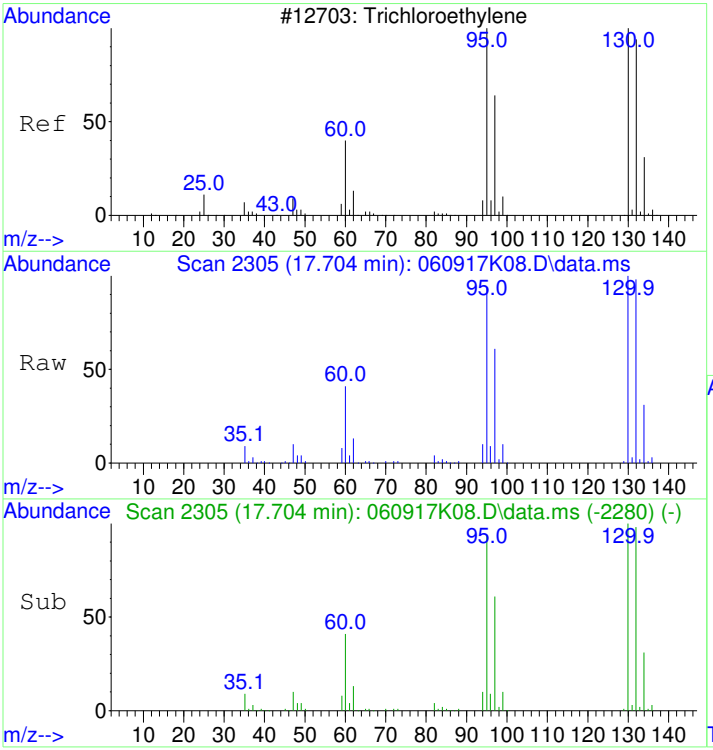


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion:114 Resp: 1170378

Ion	Ratio	Lower	Upper
114	100		
63	18.8	0.0	39.1
88	14.5	0.0	34.7

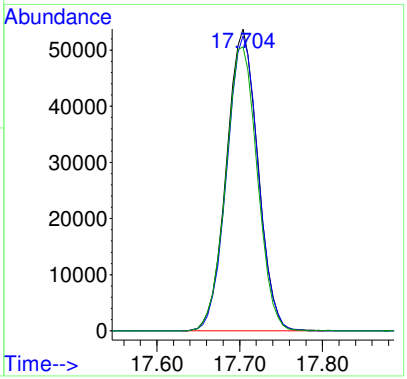


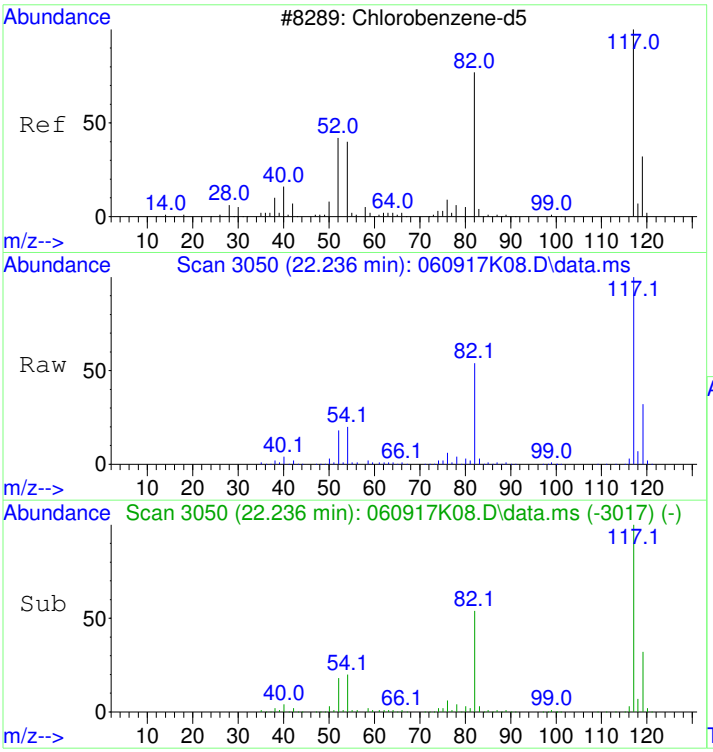


#37
Trichloroethene
Concen: 8.66 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion:130 Resp: 141943

Ion	Ratio	Lower	Upper
130	100		
132	97.3	75.8	115.8
95	94.3	73.6	113.6

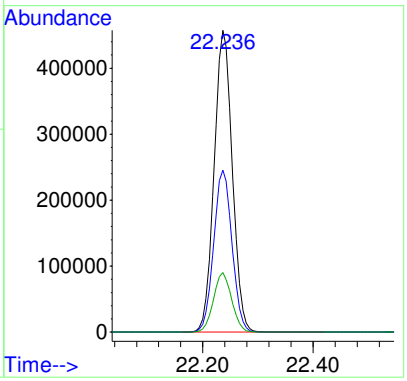


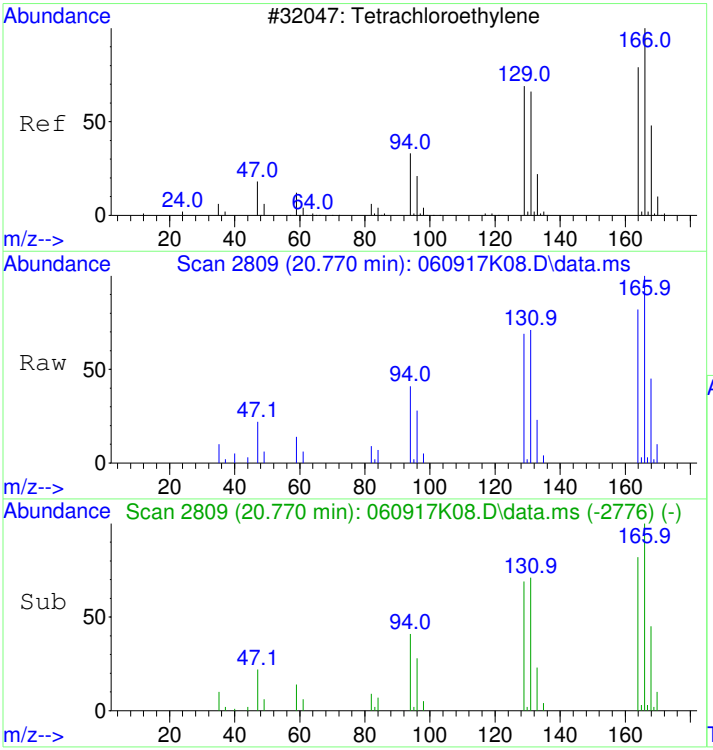


#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion:117 Resp: 1043916

Ion	Ratio	Lower	Upper
117	100		
82	54.0	33.7	73.7
54	19.7	0.0	39.6

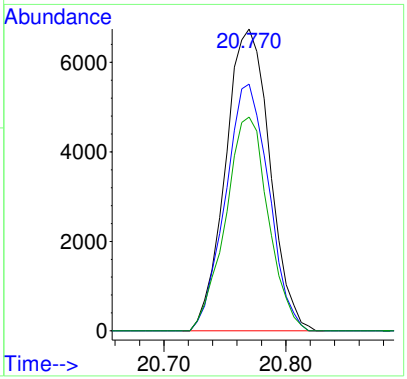




#47
Tetrachloroethene
Concen: 0.72 ppbv
RT: 20.770 min Scan# 2809
Delta R.T. -0.000 min
Lab File: 060917K08.D
Acq: 9 Jun 2017 4:07 pm

Tgt Ion:166 Resp: 17054

Ion	Ratio	Lower	Upper
166	100		
164	79.9	57.9	97.9
131	68.2	46.1	86.1



1706011-02RE2

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K09.D
InstName : HP5973K
Acq On : 9 Jun 2017 4:56 pm
Operator : LLH
Sample : 1706011-02RE2
Misc : 100ml 2ND CAN REPRESS
ALS Vial : 15 Sample Multiplier: 217.4

report trans/cis12DCE

see -02RE1 for TCE

Quant Time: Jun 12 09:07:16 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	303203	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.314	114	1242074	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	1095359	20.00 ppbv	0.00
Target Compounds					Qvalue
20) trans-1,2-Dichloroethene	11.888	61	59396	3.99 ppbv	98
24) cis-1,2-Dichloroethene	14.753	61	25523	1.83 ppbv	98
37) Trichloroethene	17.704	130	1362538	78.37 ppbv	99 OC

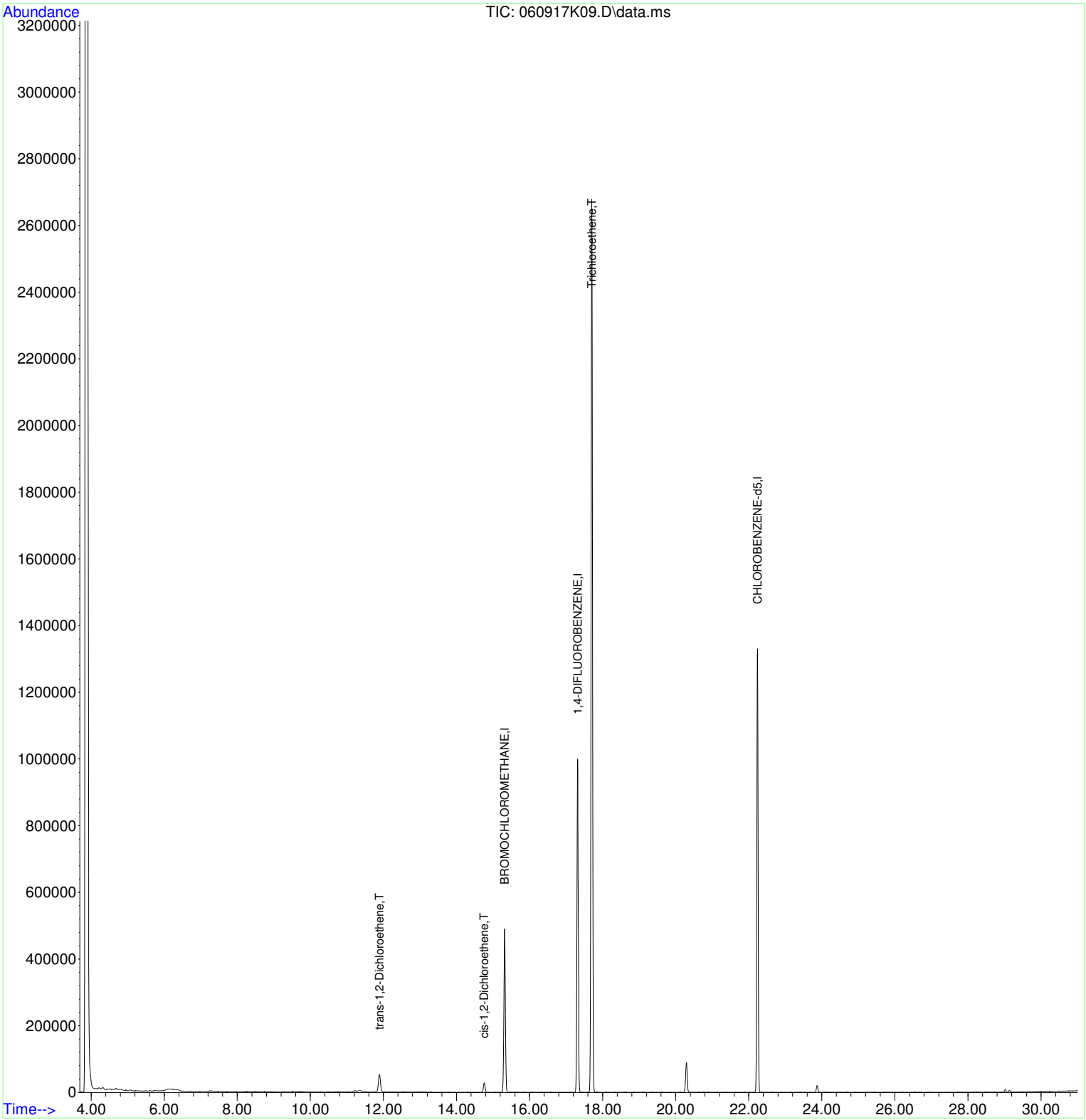
(#) = qualifier out of range (m) = manual integration (+) = signals summed

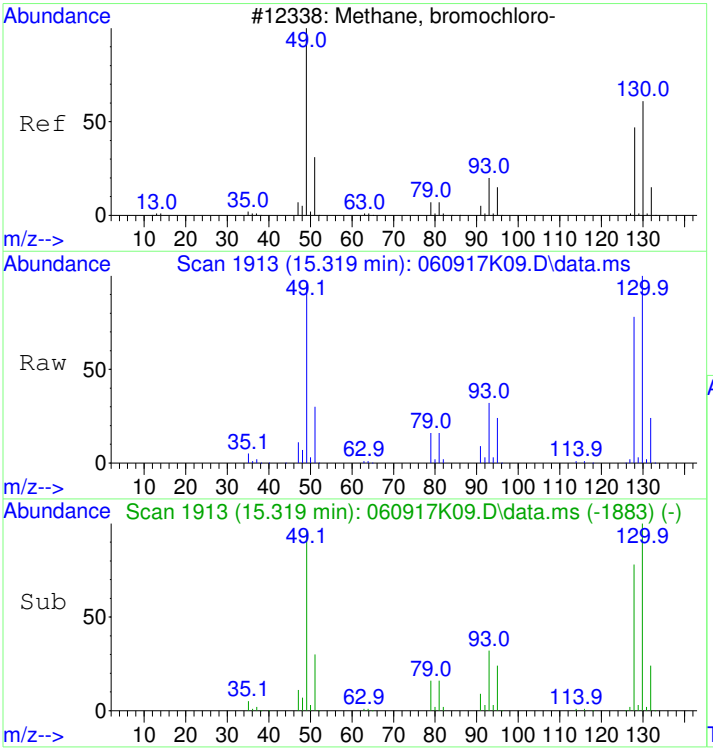
REVIEWED
By LLH at 9:09 am, Jun 12, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K09.D
InstName : HP5973K
Acq On : 9 Jun 2017 4:56 pm
Operator : LLH
Sample : 1706011-02RE2
Misc : 100ml 2ND CAN REPRESS
ALS Vial : 15 Sample Multiplier: 217.4

Quant Time: Jun 12 09:07:16 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

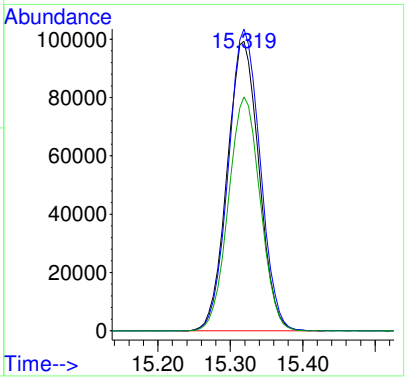


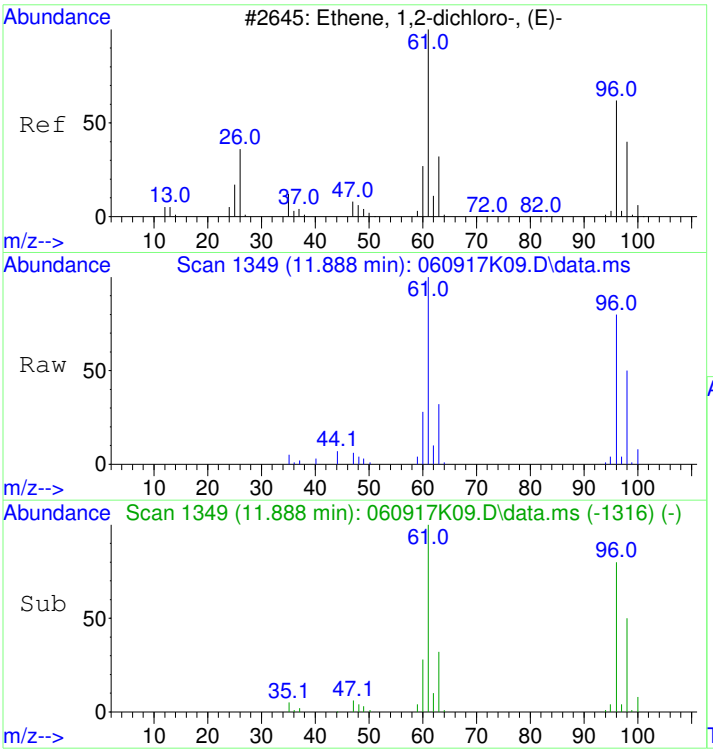


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.006 min
Lab File: 060917K09.D
Acq: 9 Jun 2017 4:56 pm

Tgt Ion: 49 Resp: 303203

Ion	Ratio	Lower	Upper
49	100		
130	103.8	75.6	115.6
128	80.6	54.4	94.4

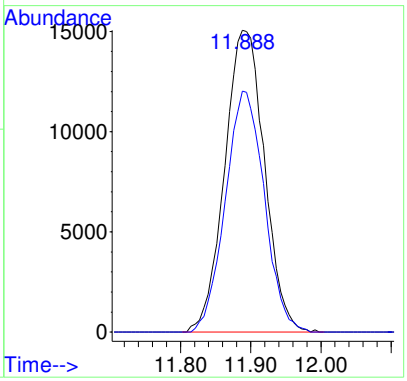


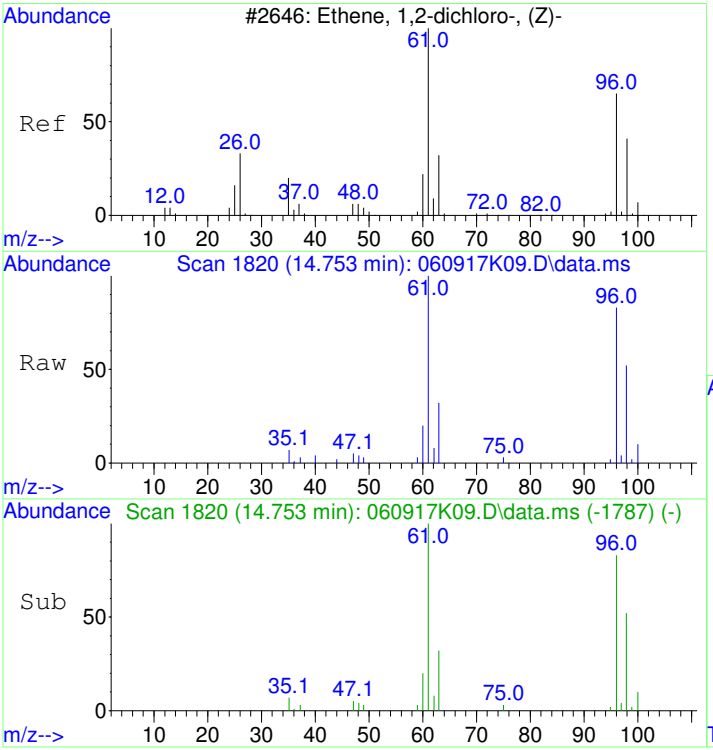


#20
trans-1,2-Dichloroethene
Concen: 3.99 ppbv
RT: 11.888 min Scan# 1349
Delta R.T. -0.000 min
Lab File: 060917K09.D
Acq: 9 Jun 2017 4:56 pm

Tgt Ion: 61 Resp: 59396

Ion	Ratio	Lower	Upper
61	100		
96	78.1	56.8	96.8

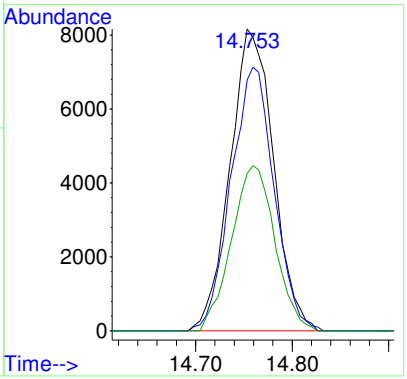


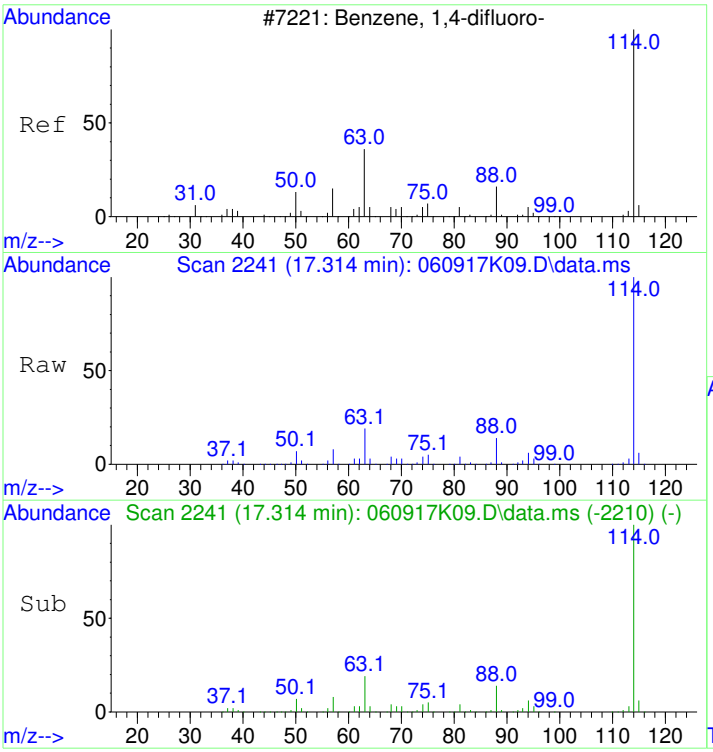


#24
cis-1,2-Dichloroethene
Concen: 1.83 ppbv
RT: 14.753 min Scan# 1820
Delta R.T. -0.000 min
Lab File: 060917K09.D
Acq: 9 Jun 2017 4:56 pm

Tgt Ion: 61 Resp: 25523

Ion	Ratio	Lower	Upper
61	100		
96	86.5	64.3	104.3
98	54.6	33.1	73.1

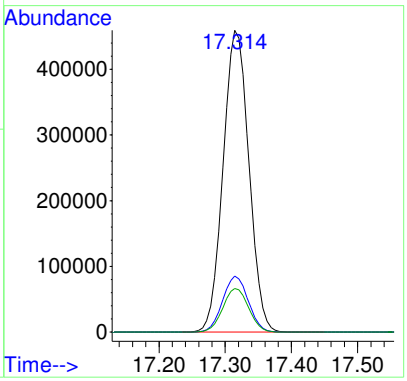


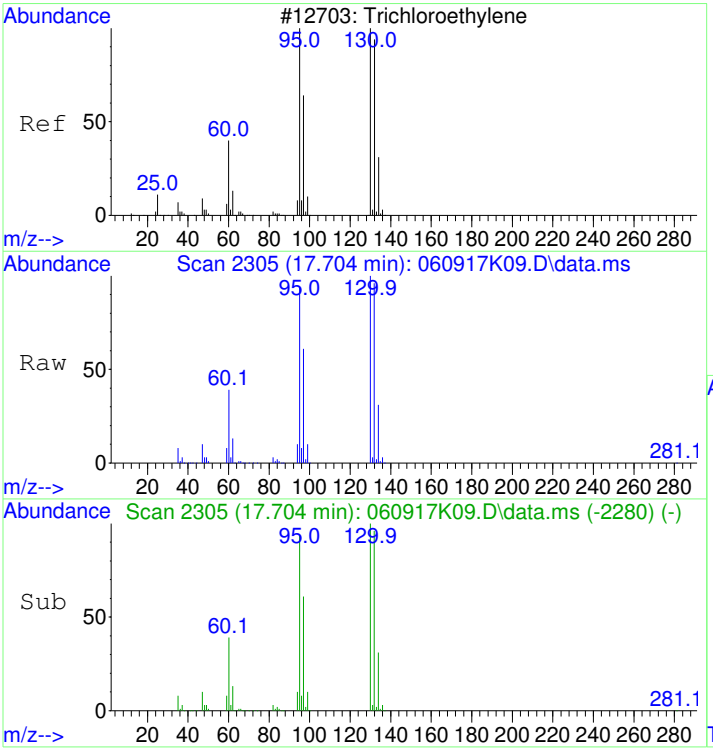


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060917K09.D
Acq: 9 Jun 2017 4:56 pm

Tgt Ion:114 Resp: 1242074

Ion	Ratio	Lower	Upper
114	100		
63	18.4	0.0	39.1
88	14.4	0.0	34.7

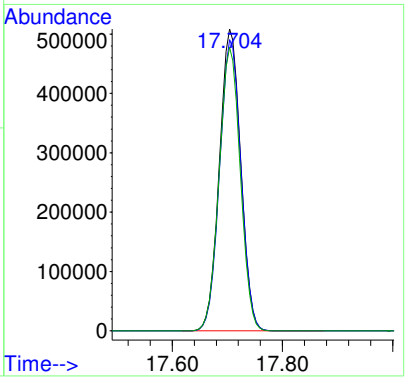


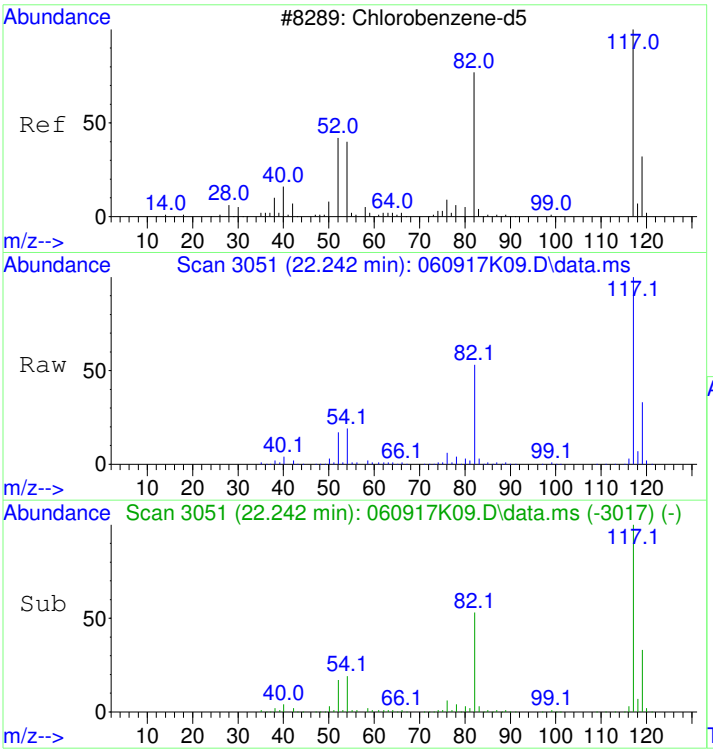


#37
Trichloroethene
Concen: 78.37 ppbv
RT: 17.704 min Scan# 2305
Delta R.T. -0.000 min
Lab File: 060917K09.D
Acq: 9 Jun 2017 4:56 pm

Tgt Ion:130 Resp: 1362538

Ion	Ratio	Lower	Upper
130	100		
132	96.4	75.8	115.8
95	93.1	73.6	113.6

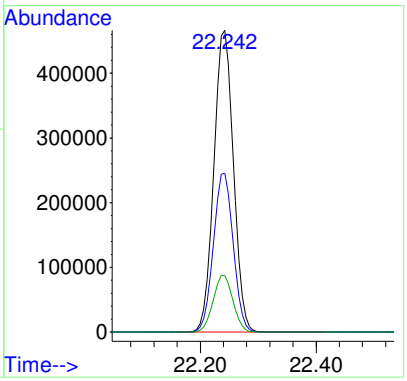




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.006 min
Lab File: 060917K09.D
Acq: 9 Jun 2017 4:56 pm

Tgt Ion:117 Resp: 1095359

Ion	Ratio	Lower	Upper
117	100		
82	53.2	33.7	73.7
54	19.0	0.0	39.6



S17F039-IBL1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K10.D
InstName : HP5973K
Acq On : 9 Jun 2017 5:47 pm
Operator : LLH
Sample : S17F039-IBL1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 12 09:09:41 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.313	49	285867	20.00 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	1186284	18.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	1050422	20.00 ppbv	0.00

Target Compounds Qvalue

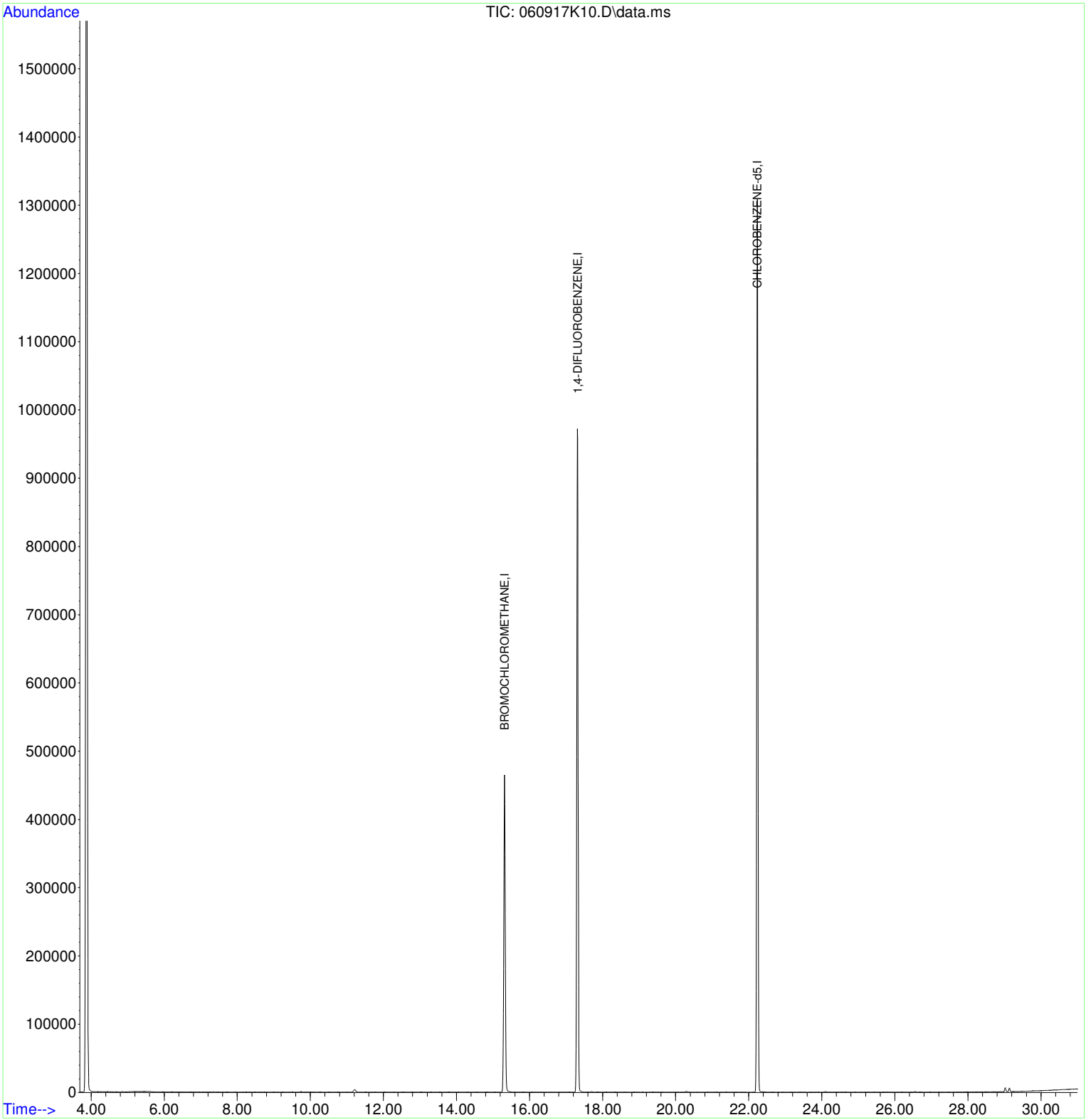
(#) = qualifier out of range (m) = manual integration (+) = signals summed

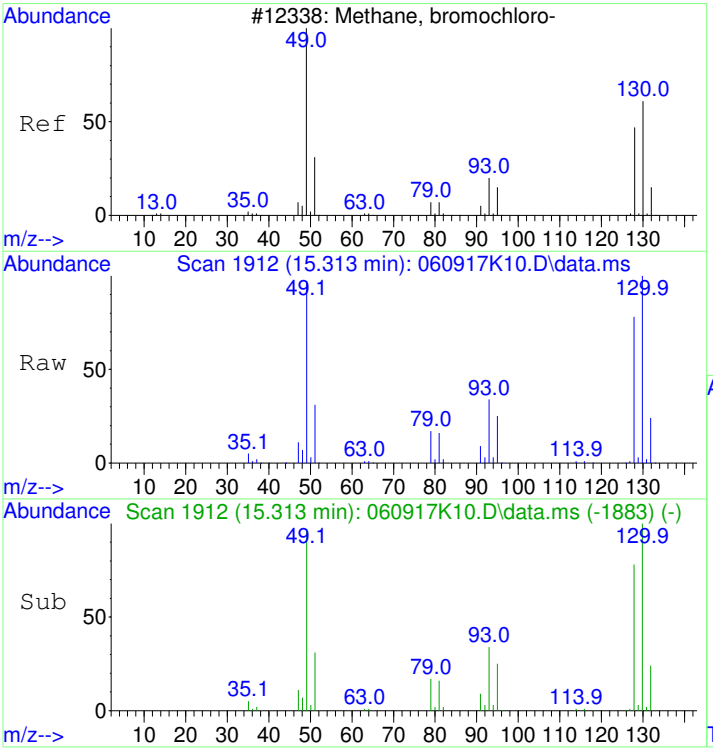
REVIEWED
By LLH at 9:09 am, Jun 12, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\060917K_FSAA\
Data File : 060917K10.D
InstName : HP5973K
Acq On : 9 Jun 2017 5:47 pm
Operator : LLH
Sample : S17F039-IBL1
Misc : 200ml BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 12 09:09:41 2017
Quant Method : D:\msdchem\1\2017\METHOD\060517K_TO15AA.M
Quant Title : TO15
QLast Update : Tue Jun 06 11:26:11 2017
Response via : Initial Calibration

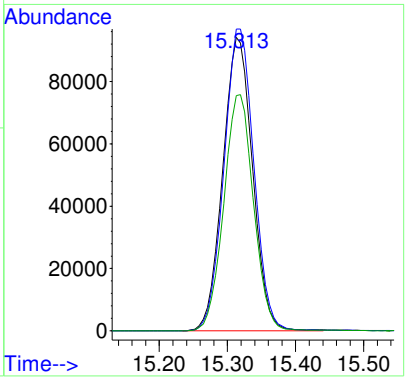


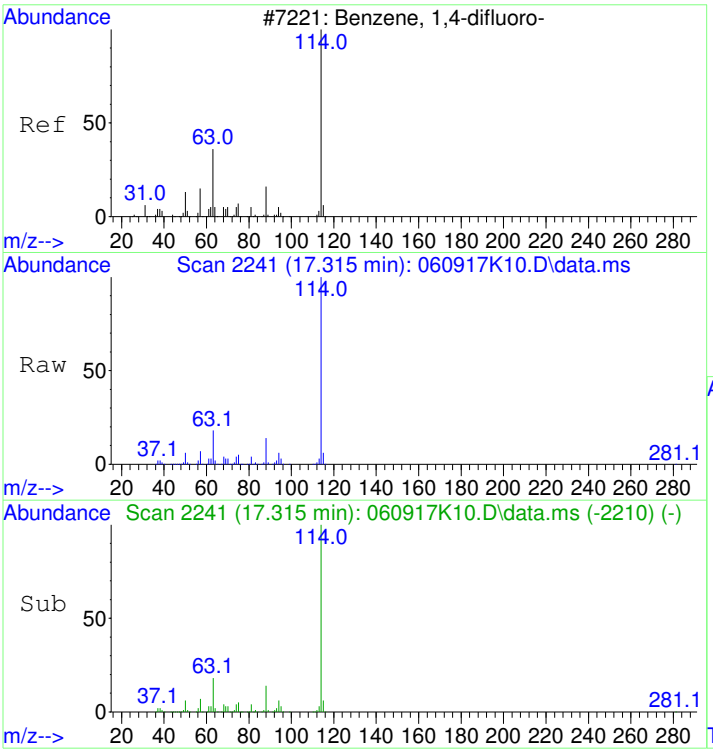


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. 0.000 min
Lab File: 060917K10.D
Acq: 9 Jun 2017 5:47 pm

Tgt Ion: 49 Resp: 285867

Ion	Ratio	Lower	Upper
49	100		
130	103.1	75.6	115.6
128	80.2	54.4	94.4

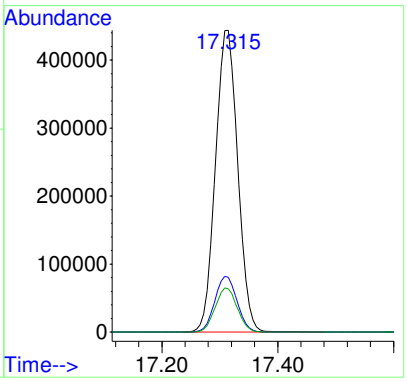


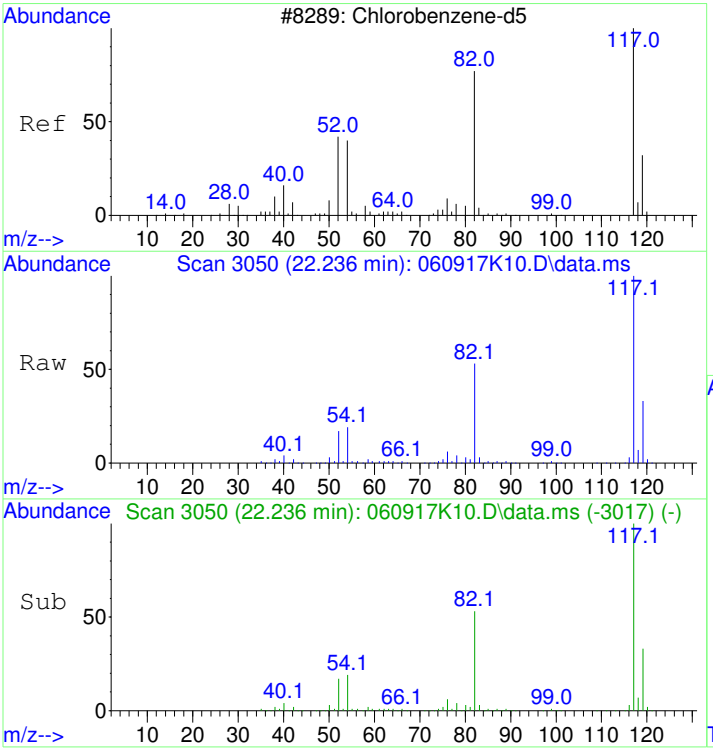


#32
1,4-DIFLUOROBENZENE
Concen: 18.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.006 min
Lab File: 060917K10.D
Acq: 9 Jun 2017 5:47 pm

Tgt Ion:114 Resp: 1186284

Ion	Ratio	Lower	Upper
114	100		
63	18.4	0.0	39.1
88	14.4	0.0	34.7

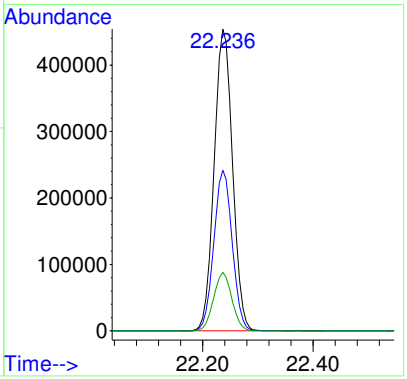




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.000 min
Lab File: 060917K10.D
Acq: 9 Jun 2017 5:47 pm

Tgt Ion:117 Resp: 1050422

Ion	Ratio	Lower	Upper
117	100		
82	53.2	33.7	73.7
54	19.2	0.0	39.6



Cannister Certifications

1706011-01

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\022017K_FSAA\
Data File : 022017K05.D
InstName : HP5973K
Acq On : 20 Feb 2017 3:11 pm
Operator : LLH
Sample : CAN #631
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 15:44:04 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.313	49	997681	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	2953078	19.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	2723560	20.00 ppbv	0.00

Target Compounds Qvalue

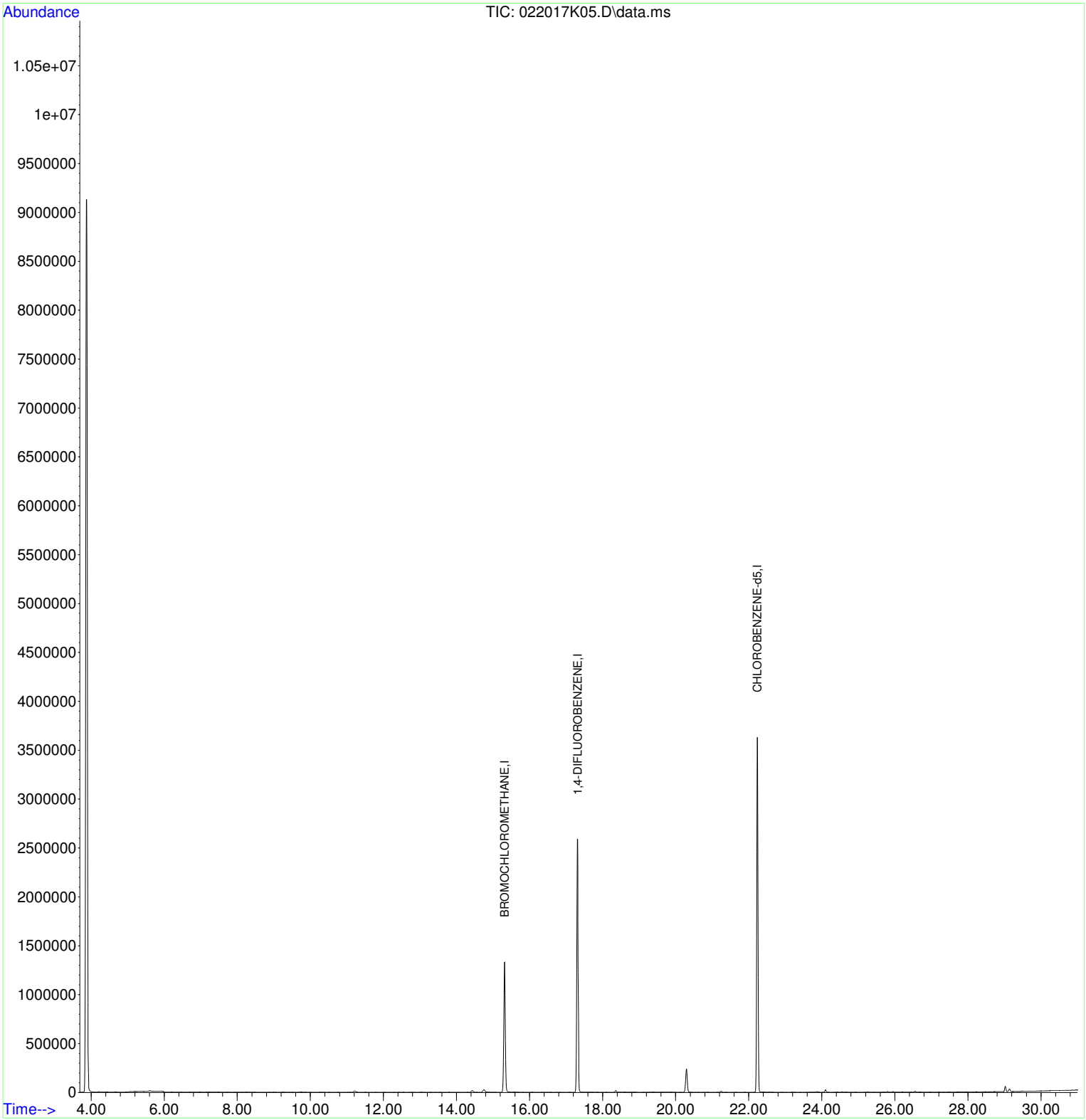
(#) = qualifier out of range (m) = manual integration (+) = signals summed

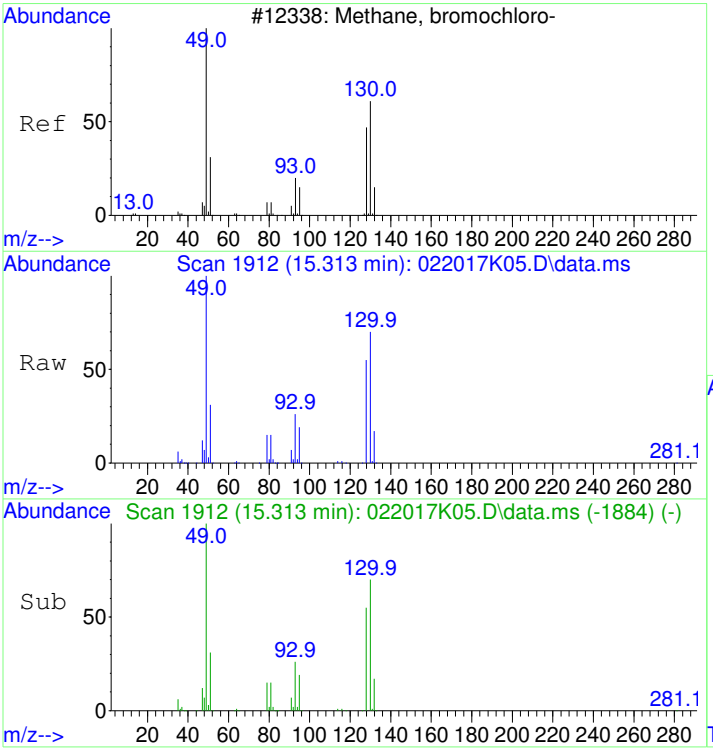
REVIEWED
By LLH at 3:44 pm, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\022017K_FSAA\
Data File : 022017K05.D
InstName : HP5973K
Acq On : 20 Feb 2017 3:11 pm
Operator : LLH
Sample : CAN #631
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 20 15:44:04 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

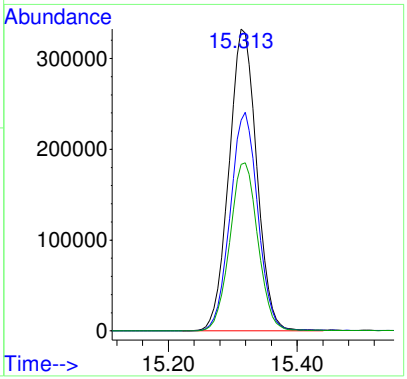


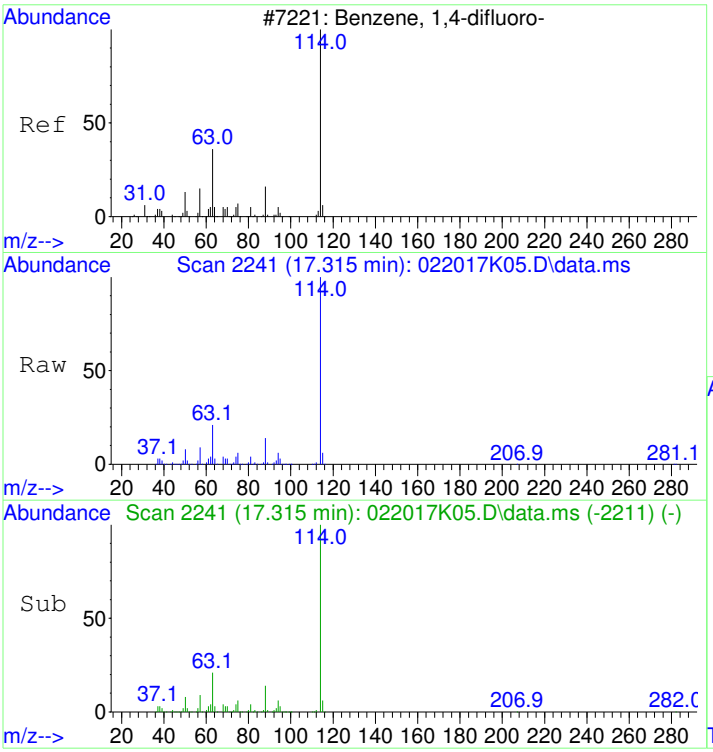


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. -0.006 min
Lab File: 022017K05.D
Acq: 20 Feb 2017 3:11 pm

Tgt Ion: 49 Resp: 997681

Ion	Ratio	Lower	Upper
49	100		
130	72.0	53.9	93.9
128	56.1	37.0	77.0

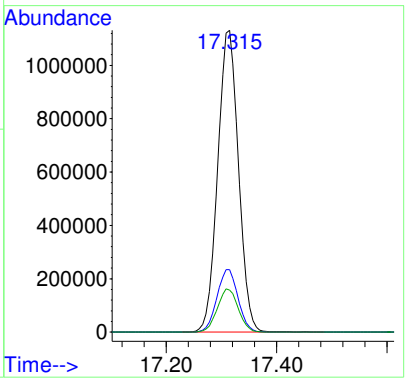


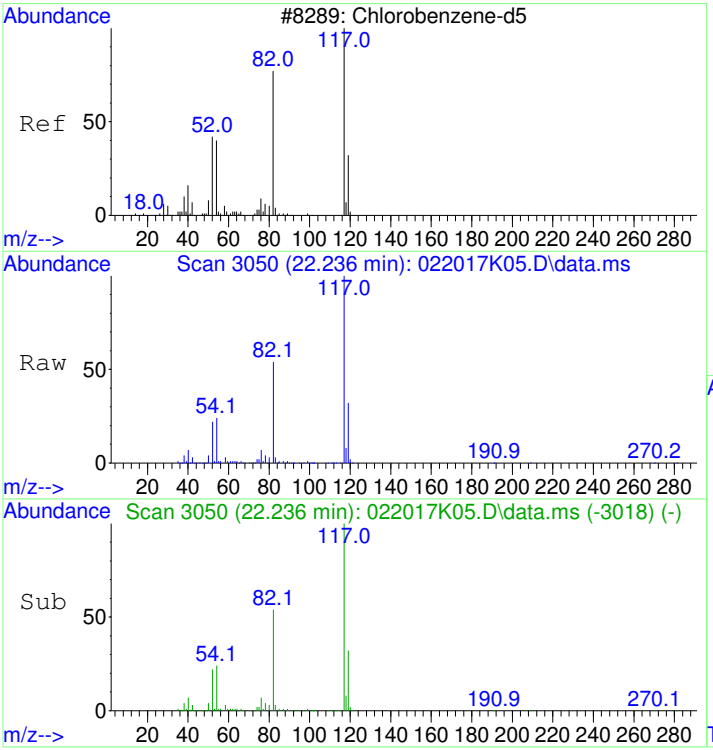


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 022017K05.D
Acq: 20 Feb 2017 3:11 pm

Tgt Ion:114 Resp: 2953078

Ion	Ratio	Lower	Upper
114	100		
63	21.0	0.2	40.2
88	14.4	0.0	34.1

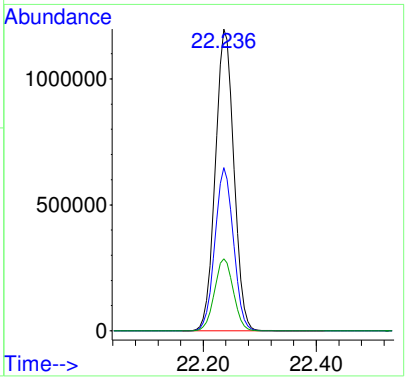




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.006 min
Lab File: 022017K05.D
Acq: 20 Feb 2017 3:11 pm

Tgt Ion:117 Resp: 2723560

Ion	Ratio	Lower	Upper
117	100		
82	54.1	33.4	73.4
54	24.3	2.4	42.4



1706011-02

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K10.D
InstName : HP5973K
Acq On : 17 Feb 2017 8:05 pm
Operator : LLH
Sample : CAN #1099
Misc : 200ml RECERTIFICATION
ALS Vial : 14 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 11:14:14 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	1004415	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	2987333	19.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2735699	20.00	ppbv	0.00

Target Compounds Qvalue

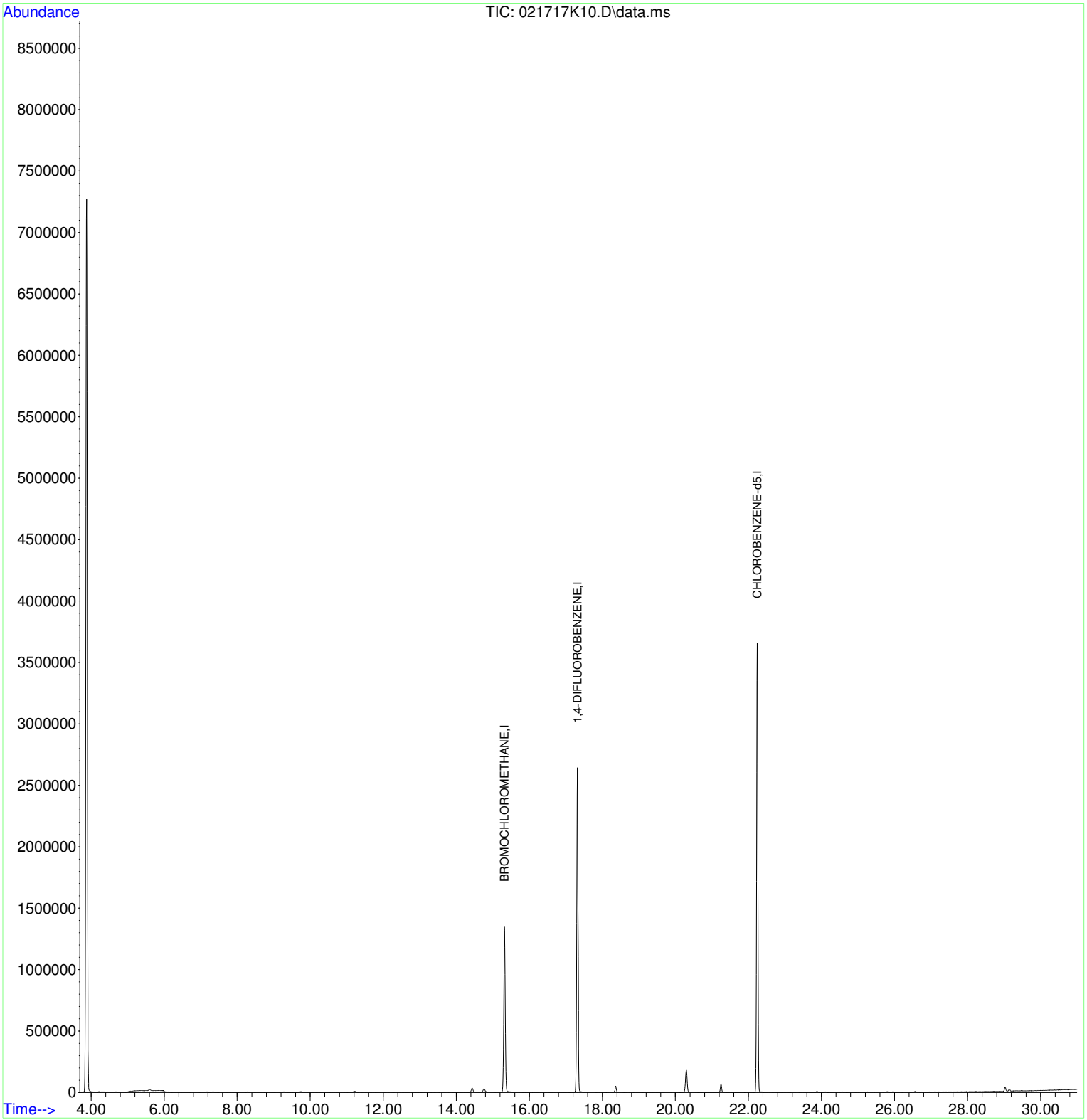
(#) = qualifier out of range (m) = manual integration (+) = signals summed

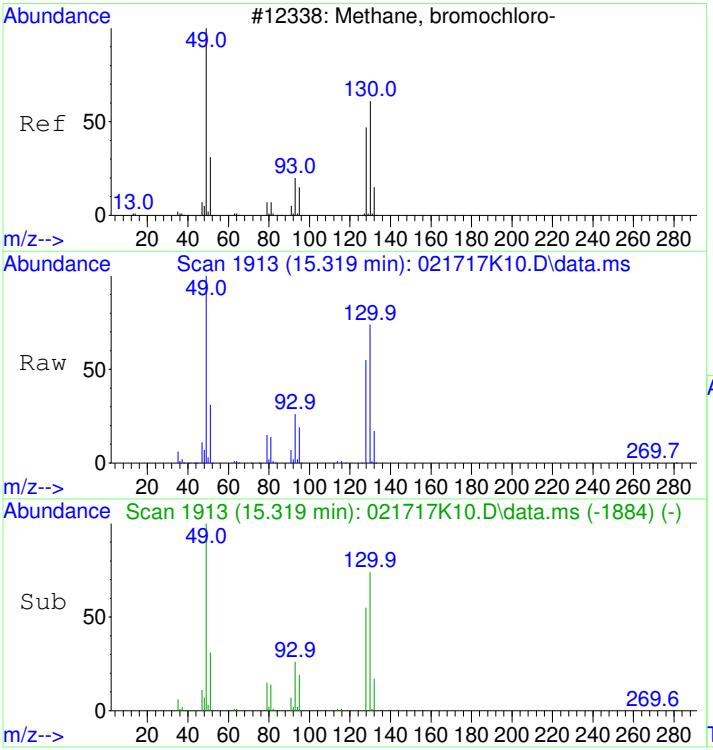
REVIEWED
By LLH at 11:14 am, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K10.D
InstName : HP5973K
Acq On : 17 Feb 2017 8:05 pm
Operator : LLH
Sample : CAN #1099
Misc : 200ml RECERTIFICATION
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 20 11:14:14 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

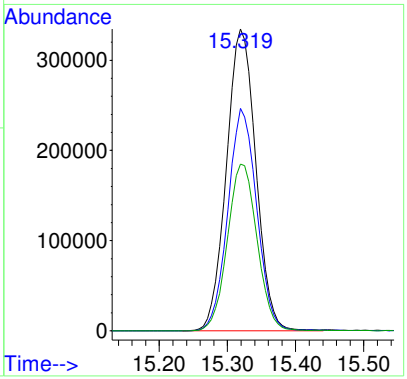


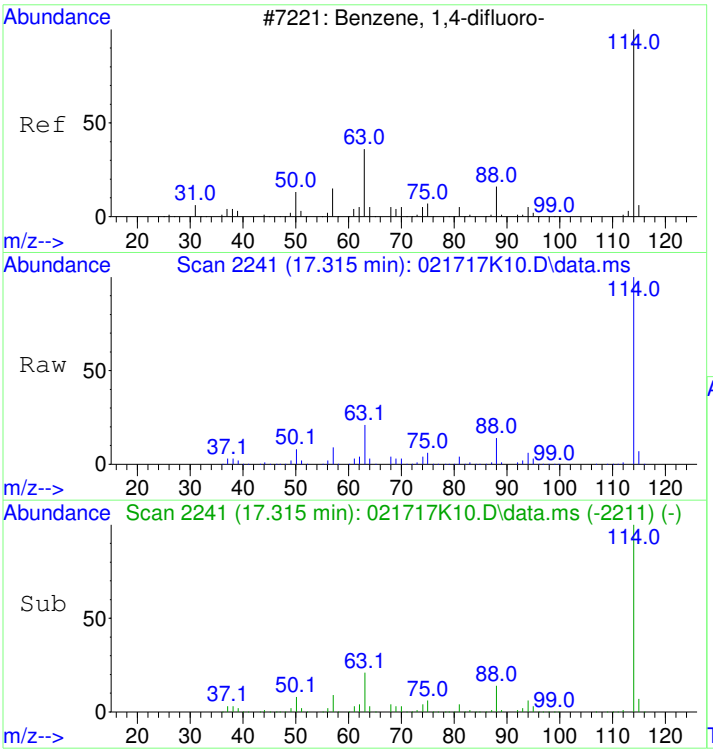


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021717K10.D
Acq: 17 Feb 2017 8:05 pm

Tgt Ion: 49 Resp: 1004415

Ion	Ratio	Lower	Upper
49	100		
130	72.3	53.9	93.9
128	55.5	37.0	77.0

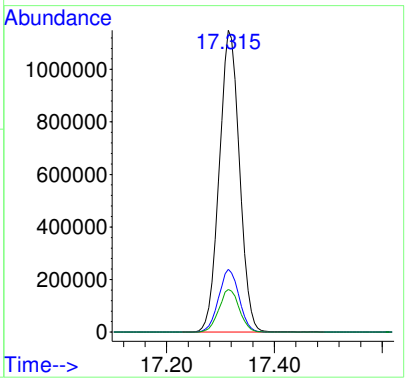


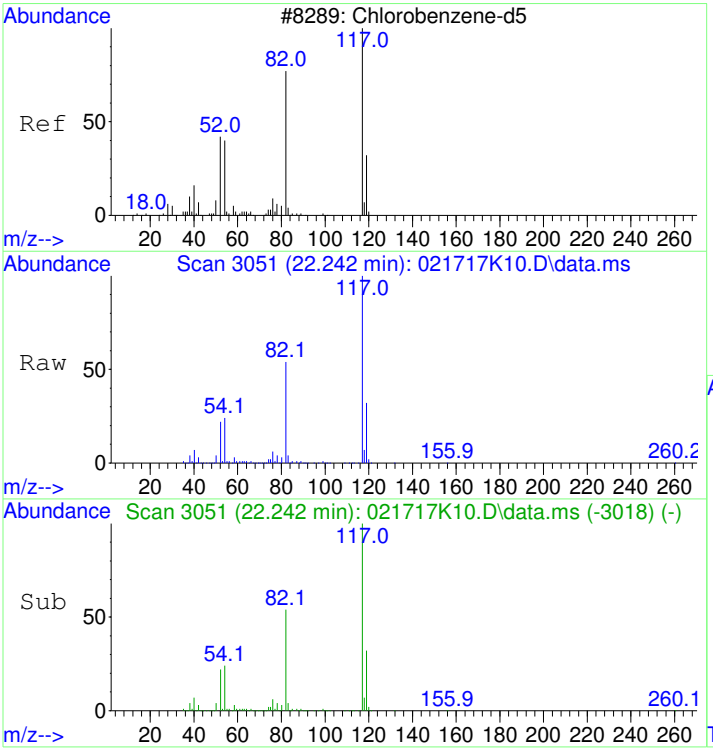


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021717K10.D
Acq: 17 Feb 2017 8:05 pm

Tgt Ion:114 Resp: 2987333

Ion	Ratio	Lower	Upper
114	100		
63	21.0	0.2	40.2
88	14.2	0.0	34.1

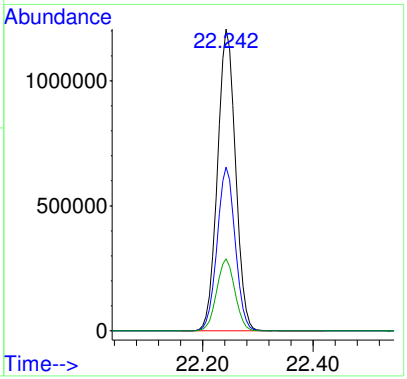




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021717K10.D
Acq: 17 Feb 2017 8:05 pm

Tgt Ion:117 Resp: 2735699

Ion	Ratio	Lower	Upper
117	100		
82	54.3	33.4	73.4
54	24.1	2.4	42.4



Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\data\040617NA_FSAA\
Data File : 040617NA05.D
Acq On : 6 Apr 2017 3:58 pm
InstName : AG5973N
Operator : EM
Sample : CAN 629
Misc : 200ml RECERTIFICATION
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 06 18:40:33 2017
Quant Method : D:\msdchem\1\2017\method\040617N_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 06 10:26:54 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.469	49	798093	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.450	114	2713819	20.00	ppbv	-0.01
43) CHLOROBENZENE-d5	22.347	117	2350208	20.00	ppbv	0.00
Target Compounds						Qvalue
18) Dichloromethane	11.461	49	24675	0.57	ppbv	# 70

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

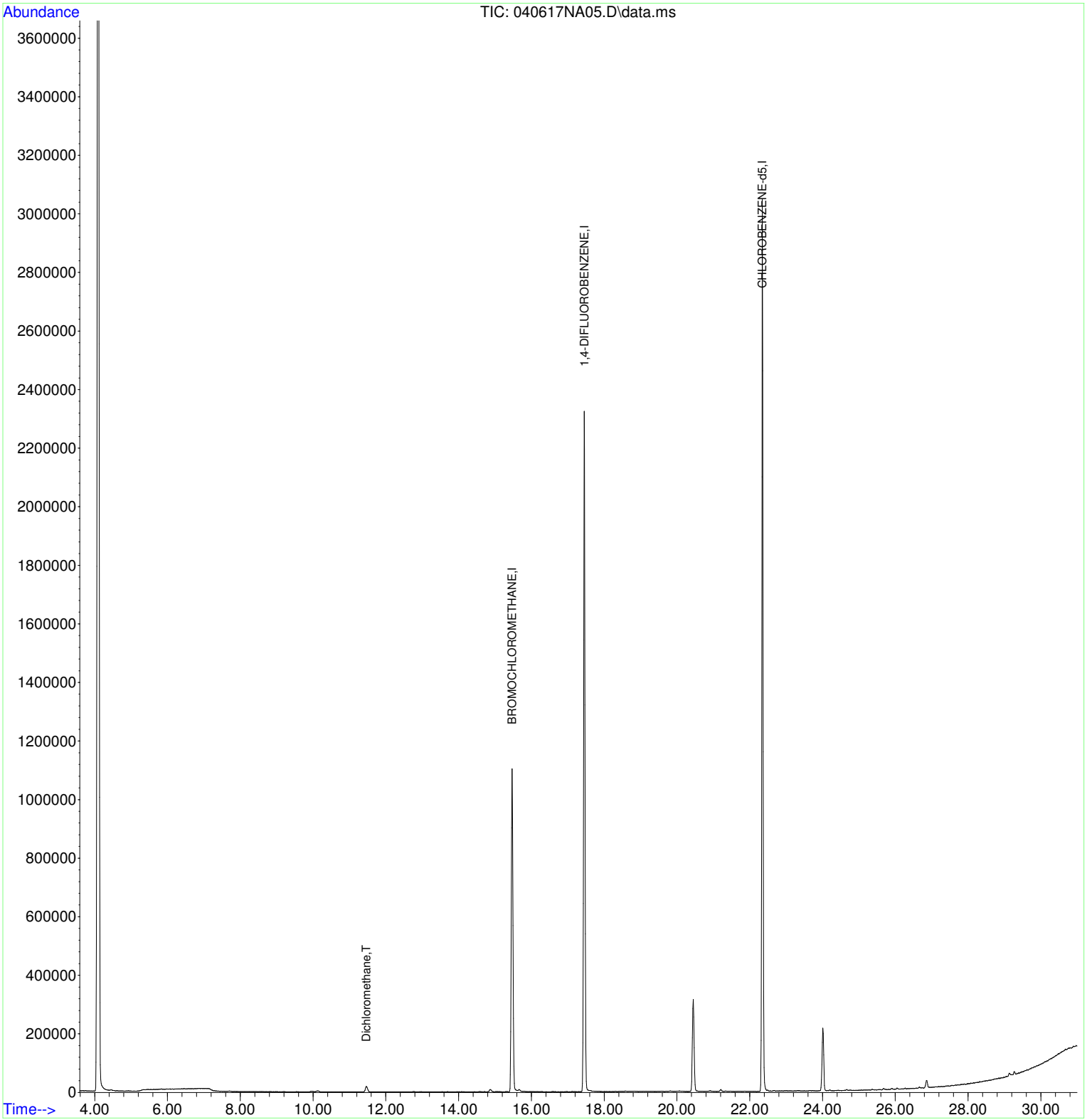
*see Discrepancy Report #D15-011

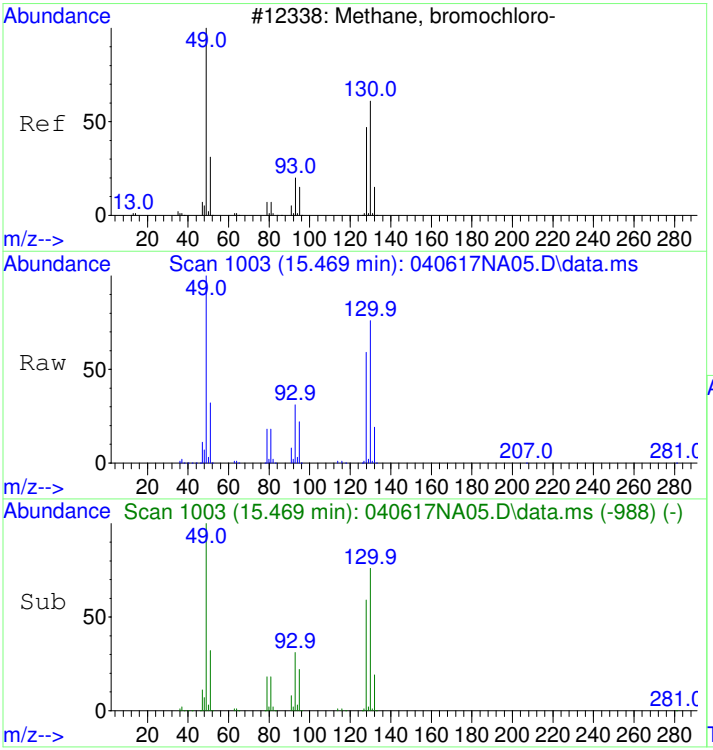
REVIEWED
By EM at 11:53 am, Apr 07, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\data\040617NA_FSAA\
Data File : 040617NA05.D
Acq On : 6 Apr 2017 3:58 pm
InstName : AG5973N
Operator : EM
Sample : CAN 629
Misc : 200ml RECERTIFICATION
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 06 18:40:33 2017
Quant Method : D:\msdchem\1\2017\method\040617N_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 06 10:26:54 2017
Response via : Initial Calibration

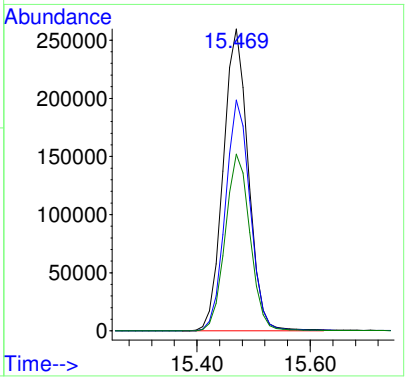


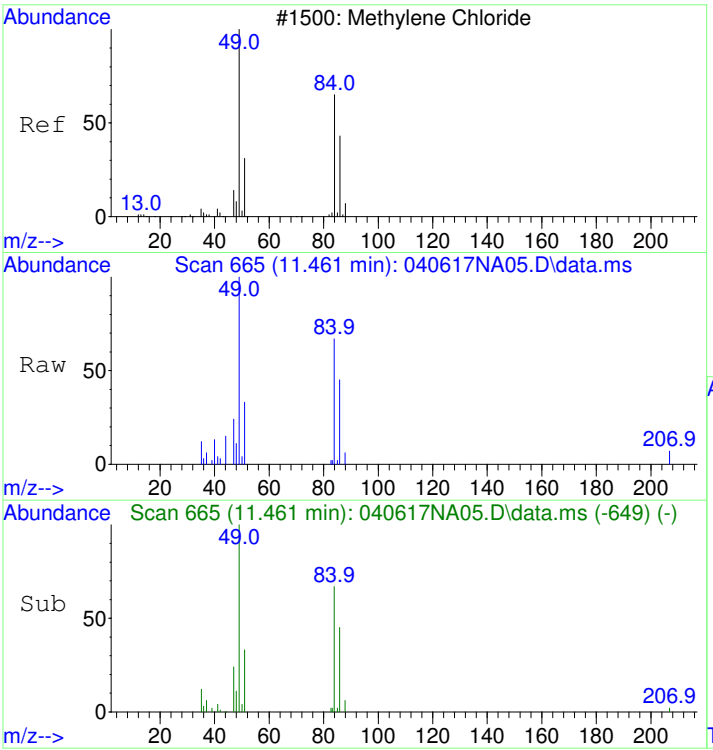


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.469 min Scan# 1003
Delta R.T. 0.000 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion: 49 Resp: 798093

Ion	Ratio	Lower	Upper
49	100		
130	75.3	59.3	99.3
128	58.0	41.2	81.2

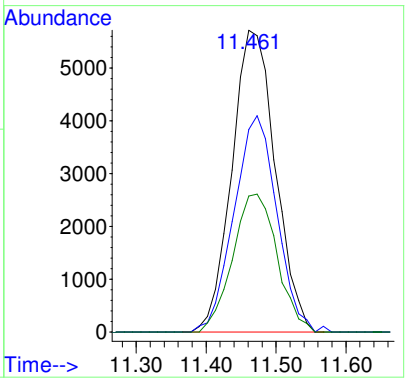


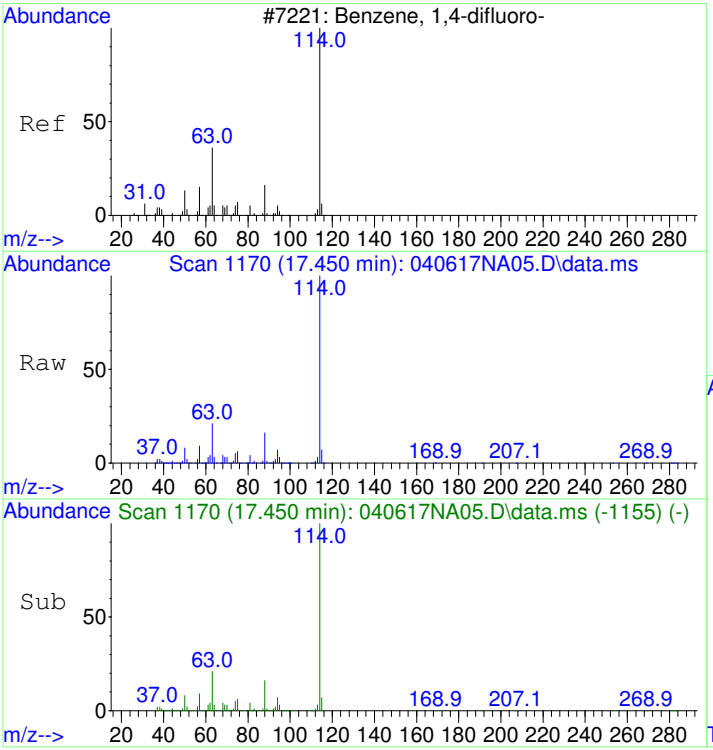


#18
Dichloromethane
Concen: 0.57 ppbv
RT: 11.461 min Scan# 665
Delta R.T. -0.012 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion: 49 Resp: 24675

Ion	Ratio	Lower	Upper
49	100		
84	70.9	54.2	94.2
86	0.0	27.4	67.4#

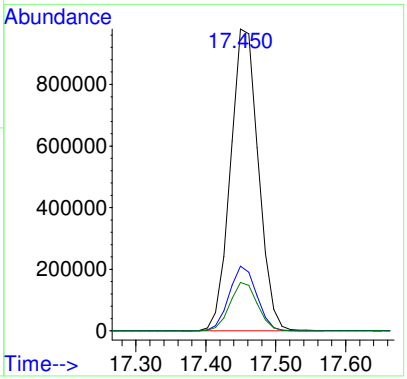


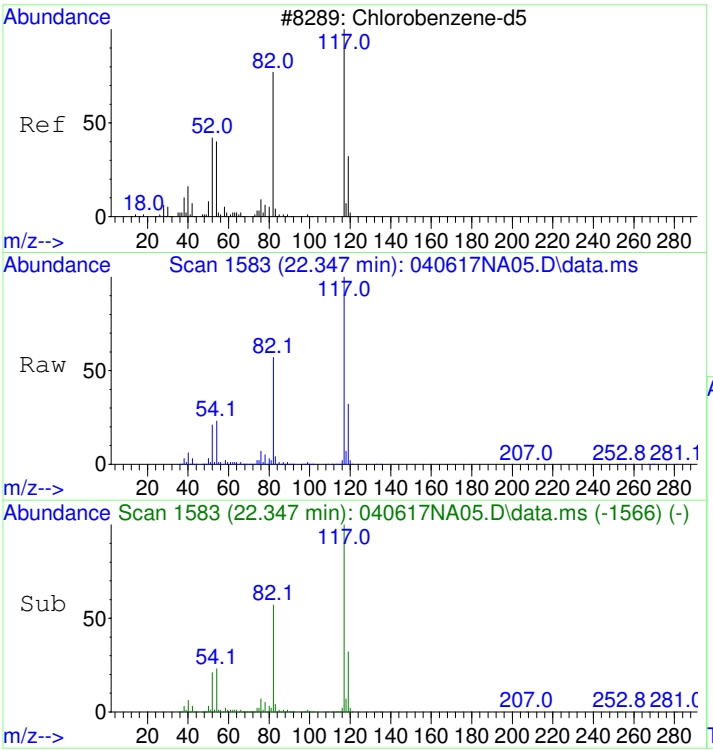


#32
1,4-DIFLUOROBENZENE
Concen: 20.00 ppbv
RT: 17.450 min Scan# 1170
Delta R.T. -0.012 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion:114 Resp: 2713819

Ion	Ratio	Lower	Upper
114	100		
63	21.2	0.6	40.6
88	15.8	0.0	35.7

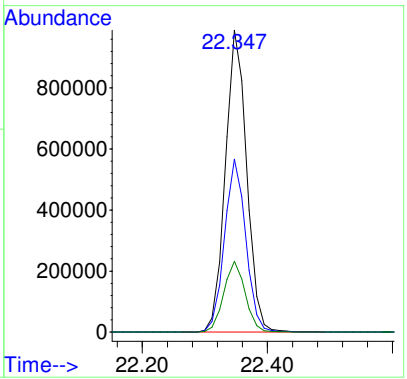




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.347 min Scan# 1583
Delta R.T. 0.000 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion:117 Resp: 2350208

Ion	Ratio	Lower	Upper
117	100		
82	57.1	35.8	75.8
54	23.6	2.5	42.5



Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K10.D
InstName : HP5973K
Acq On : 17 Feb 2017 8:05 pm
Operator : LLH
Sample : CAN #1099
Misc : 200ml RECERTIFICATION
ALS Vial : 14 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 11:14:14 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	1004415	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	2987333	19.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2735699	20.00 ppbv	0.00

Target Compounds Qvalue

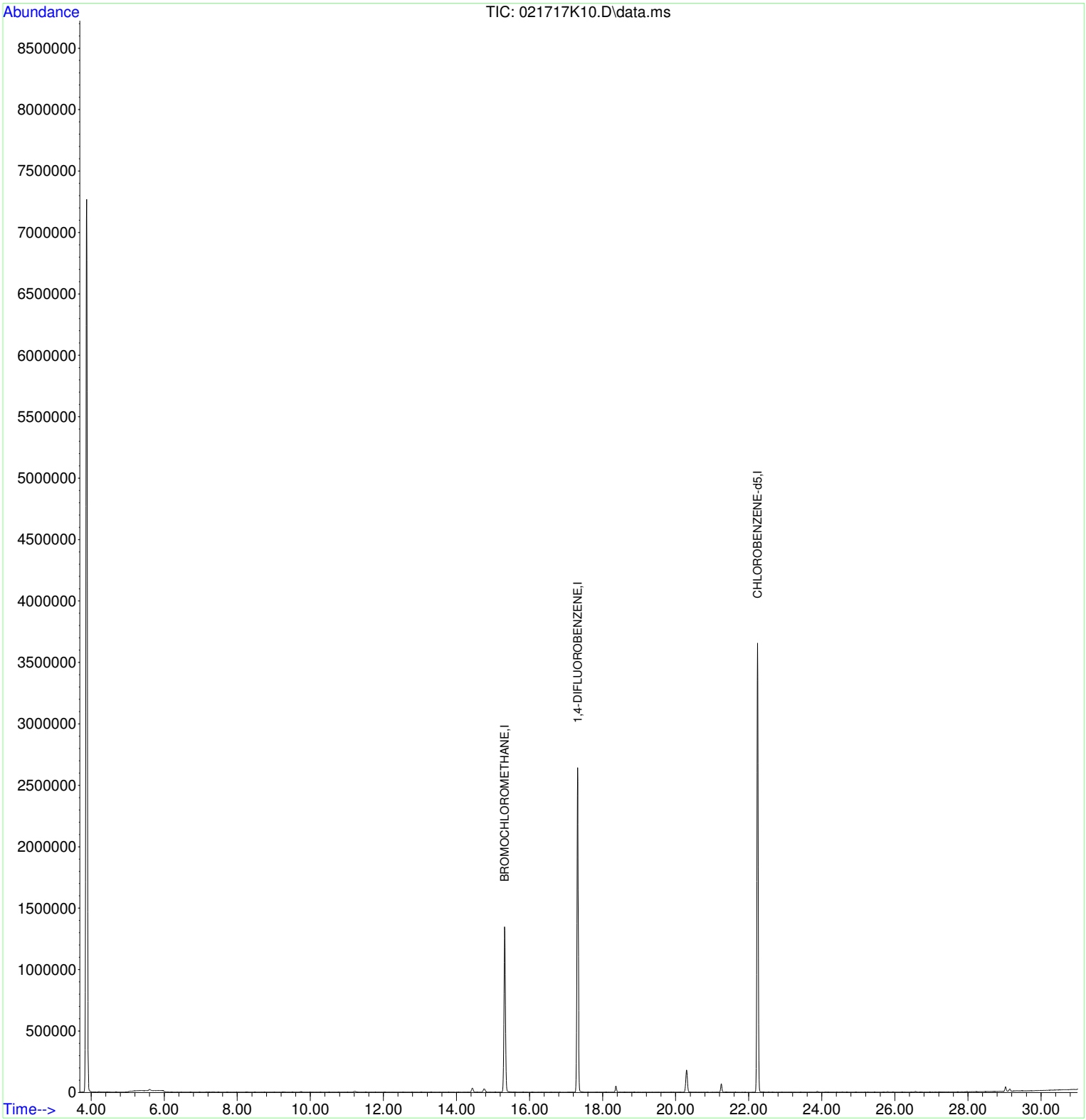
(#) = qualifier out of range (m) = manual integration (+) = signals summed

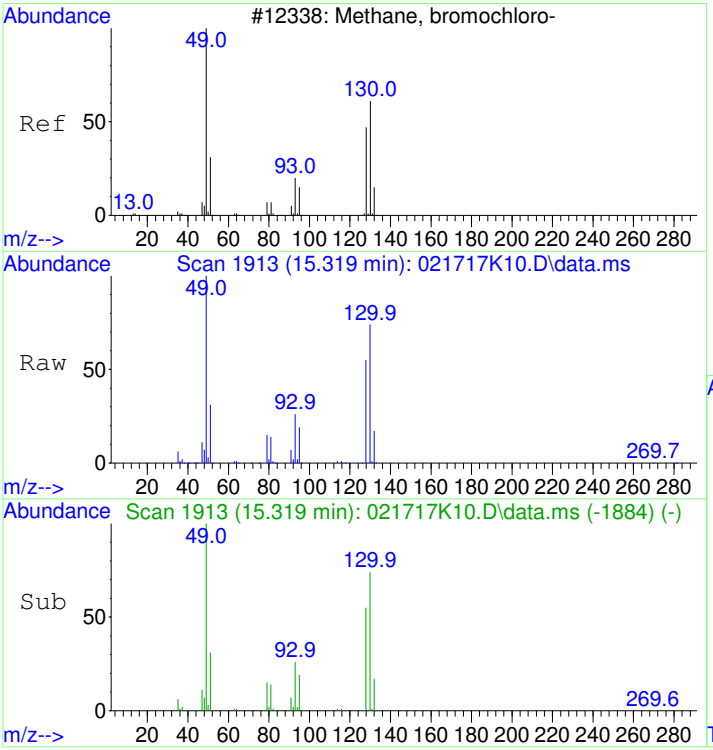
REVIEWED
By LLH at 11:14 am, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K10.D
InstName : HP5973K
Acq On : 17 Feb 2017 8:05 pm
Operator : LLH
Sample : CAN #1099
Misc : 200ml RECERTIFICATION
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 20 11:14:14 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

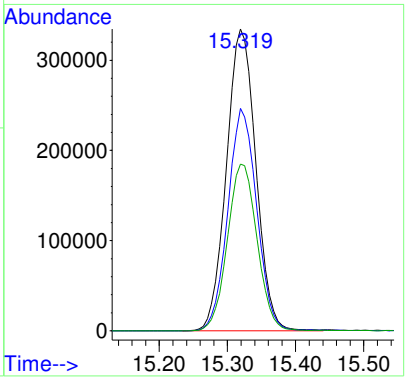


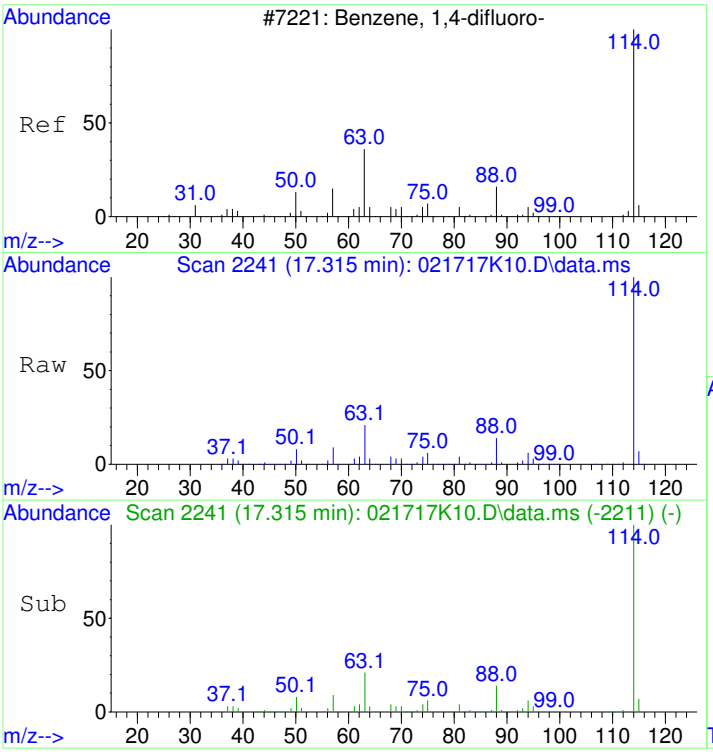


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021717K10.D
Acq: 17 Feb 2017 8:05 pm

Tgt Ion: 49 Resp: 1004415

Ion	Ratio	Lower	Upper
49	100		
130	72.3	53.9	93.9
128	55.5	37.0	77.0

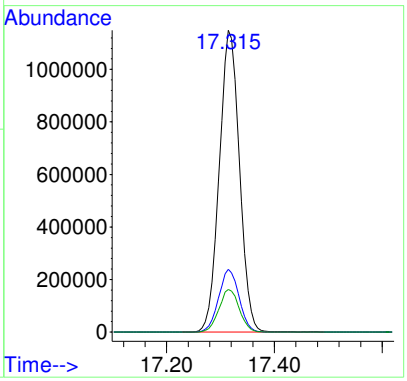


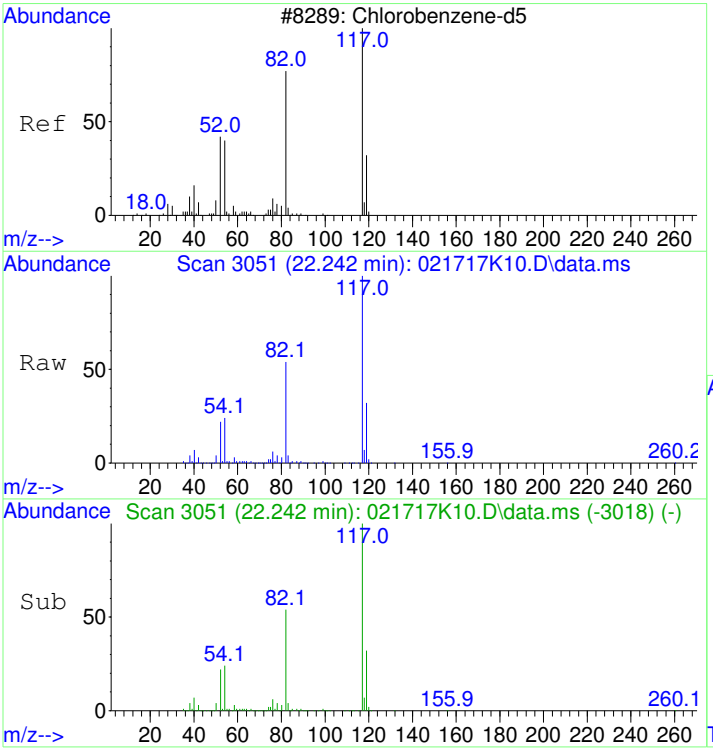


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021717K10.D
Acq: 17 Feb 2017 8:05 pm

Tgt Ion:114 Resp: 2987333

Ion	Ratio	Lower	Upper
114	100		
63	21.0	0.2	40.2
88	14.2	0.0	34.1

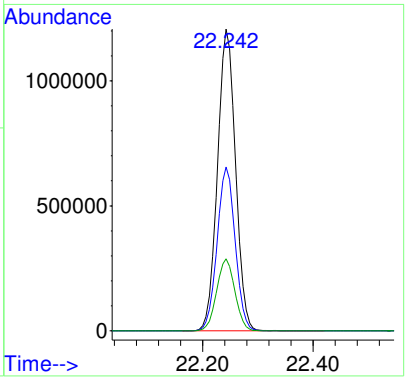




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021717K10.D
Acq: 17 Feb 2017 8:05 pm

Tgt Ion:117 Resp: 2735699

Ion	Ratio	Lower	Upper
117	100		
82	54.3	33.4	73.4
54	24.1	2.4	42.4



Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\data\040617NA_FSAA\
Data File : 040617NA05.D
Acq On : 6 Apr 2017 3:58 pm
InstName : AG5973N
Operator : EM
Sample : CAN 629
Misc : 200ml RECERTIFICATION
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 06 18:40:33 2017
Quant Method : D:\msdchem\1\2017\method\040617N_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 06 10:26:54 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.469	49	798093	20.00	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.450	114	2713819	20.00	ppbv	-0.01
43) CHLOROBENZENE-d5	22.347	117	2350208	20.00	ppbv	0.00
Target Compounds						Qvalue
18) Dichloromethane	11.461	49	24675	0.57	ppbv	# 70

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

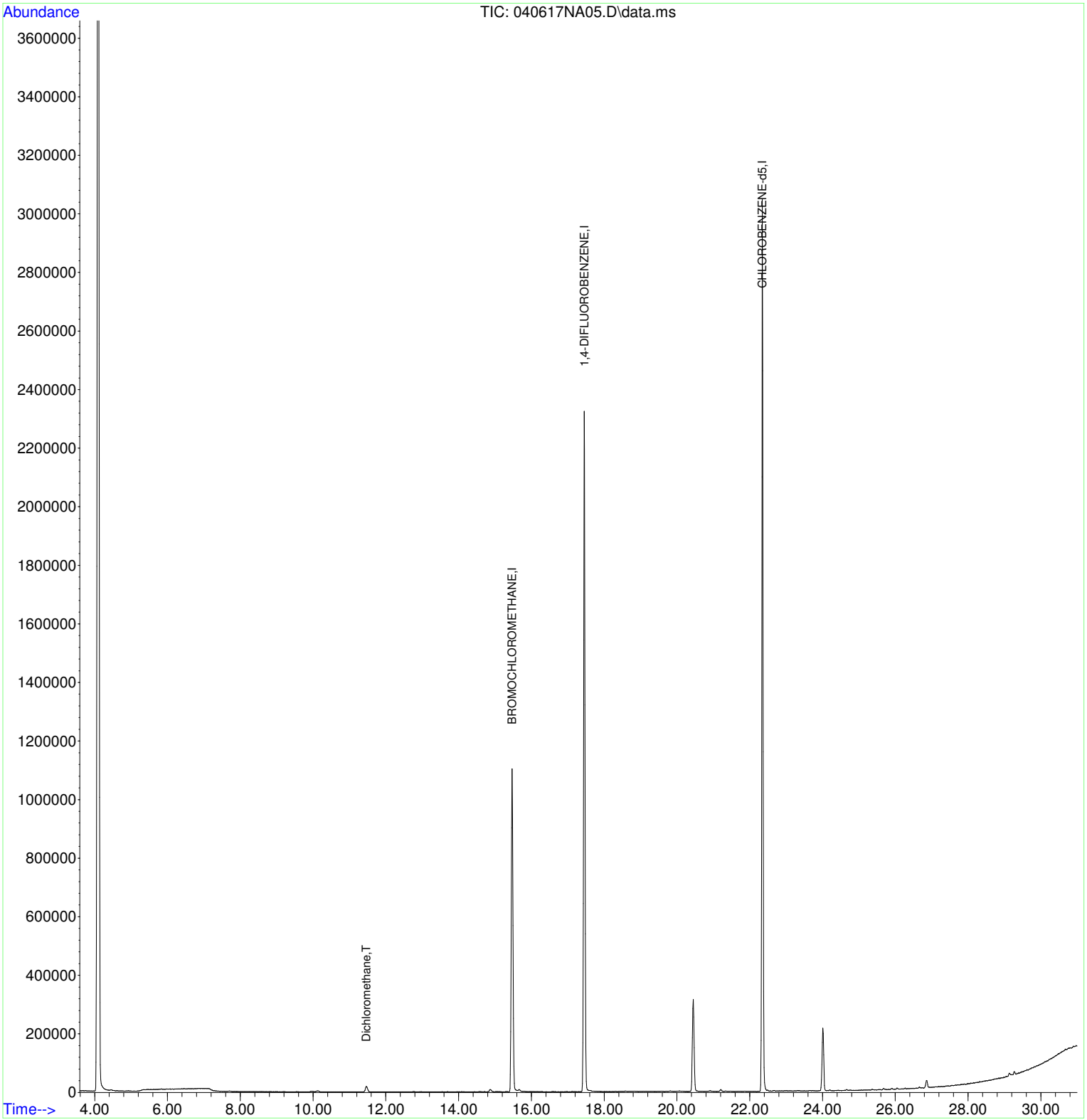
*see Discrepancy Report #D15-011

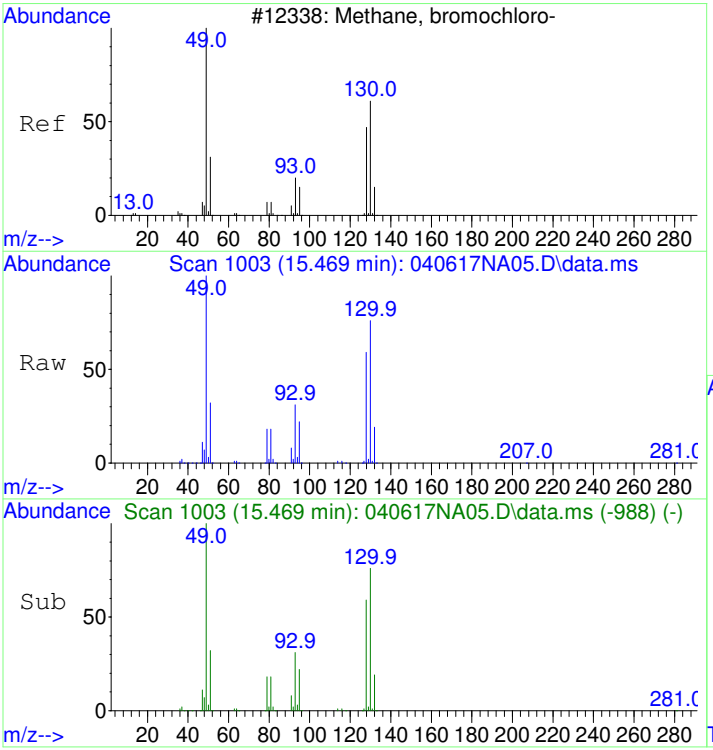
REVIEWED
By EM at 11:53 am, Apr 07, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\data\040617NA_FSAA\
Data File : 040617NA05.D
Acq On : 6 Apr 2017 3:58 pm
InstName : AG5973N
Operator : EM
Sample : CAN 629
Misc : 200ml RECERTIFICATION
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 06 18:40:33 2017
Quant Method : D:\msdchem\1\2017\method\040617N_TO15AA.M
Quant Title : TO15
QLast Update : Thu Apr 06 10:26:54 2017
Response via : Initial Calibration

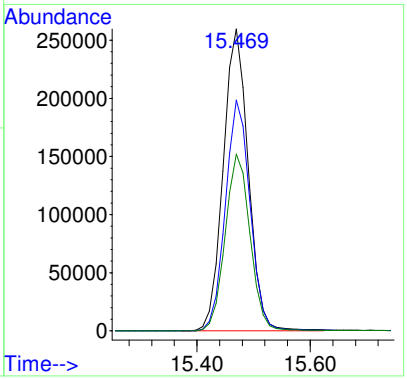


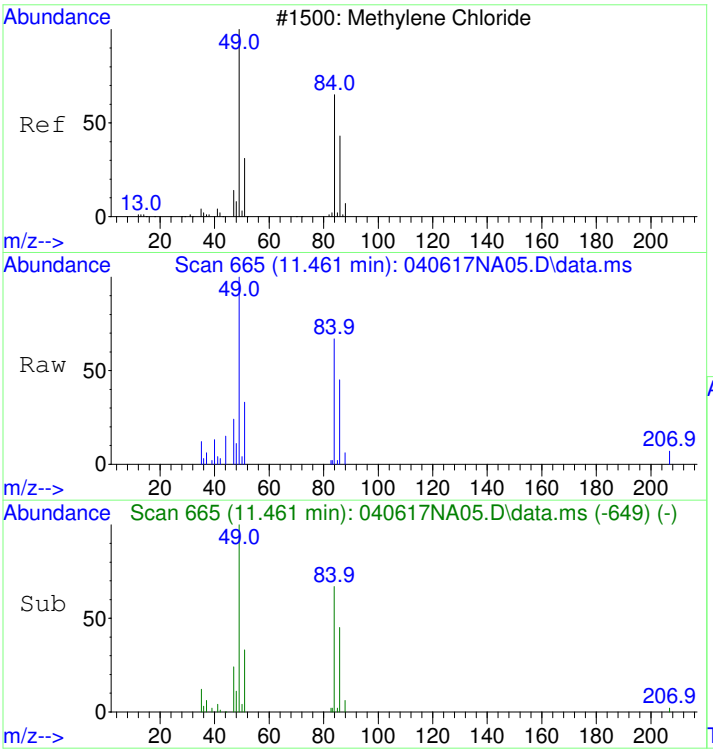


#1
BROMOCHLOROMETHANE
Concen: 20.00 ppbv
RT: 15.469 min Scan# 1003
Delta R.T. 0.000 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion: 49 Resp: 798093

Ion	Ratio	Lower	Upper
49	100		
130	75.3	59.3	99.3
128	58.0	41.2	81.2

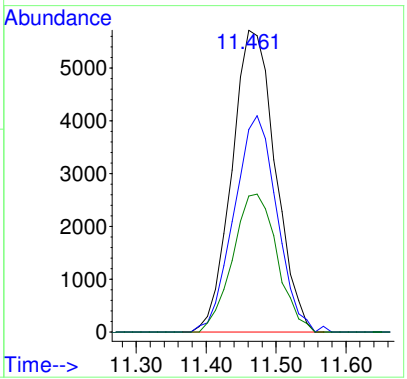


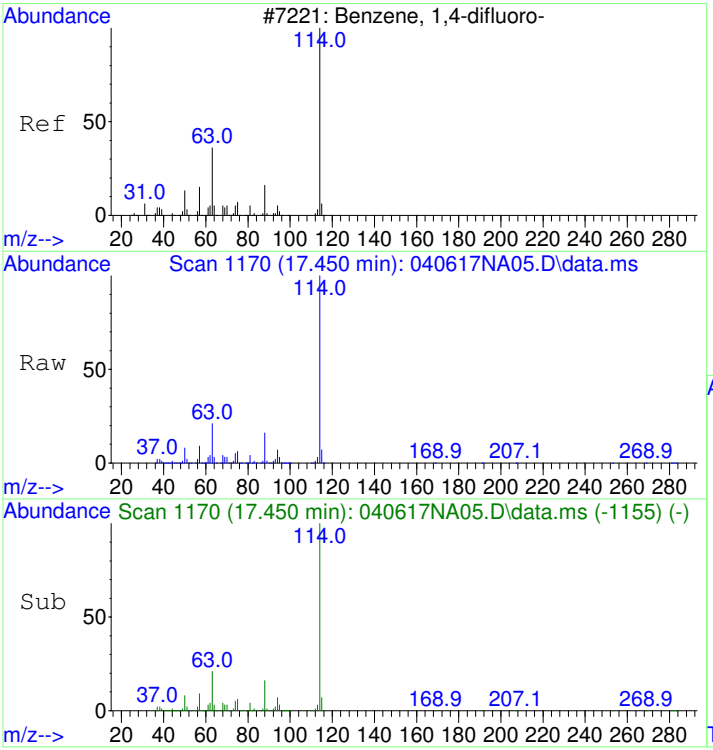


#18
Dichloromethane
Concen: 0.57 ppbv
RT: 11.461 min Scan# 665
Delta R.T. -0.012 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion: 49 Resp: 24675

Ion	Ratio	Lower	Upper
49	100		
84	70.9	54.2	94.2
86	0.0	27.4	67.4#

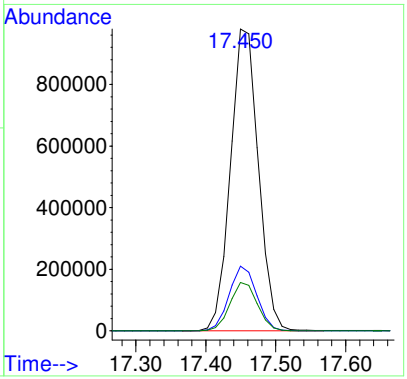


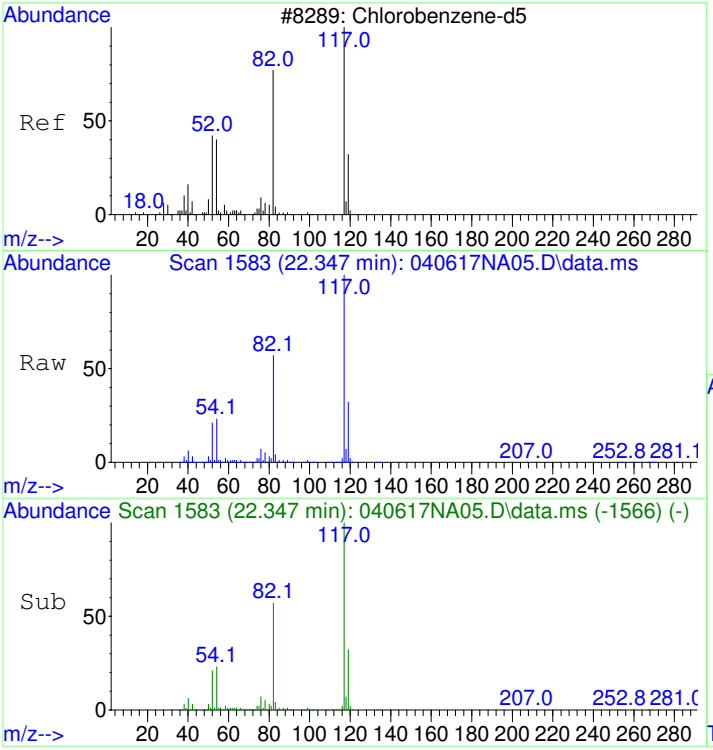


#32
1,4-DIFLUOROBENZENE
Concen: 20.00 ppbv
RT: 17.450 min Scan# 1170
Delta R.T. -0.012 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion:114 Resp: 2713819

Ion	Ratio	Lower	Upper
114	100		
63	21.2	0.6	40.6
88	15.8	0.0	35.7

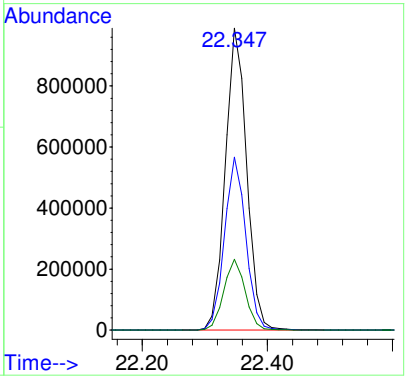




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.347 min Scan# 1583
Delta R.T. 0.000 min
Lab File: 040617NA05.D
Acq: 6 Apr 2017 3:58 pm

Tgt Ion:117 Resp: 2350208

Ion	Ratio	Lower	Upper
117	100		
82	57.1	35.8	75.8
54	23.6	2.5	42.5



1706011-03

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021617K_FSAA\
Data File : 021617K11.D
InstName : HP5973K
Acq On : 16 Feb 2017 7:40 pm
Operator : LLH
Sample : CAN #1981
Misc : 200ml RECERTIFICATION
ALS Vial : 22 Sample Multiplier: 1

CLEAN

Quant Time: Feb 17 12:10:36 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.313	49	1067924	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.309	114	3221018	19.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	2954605	20.00 ppbv	0.00

Target Compounds Qvalue

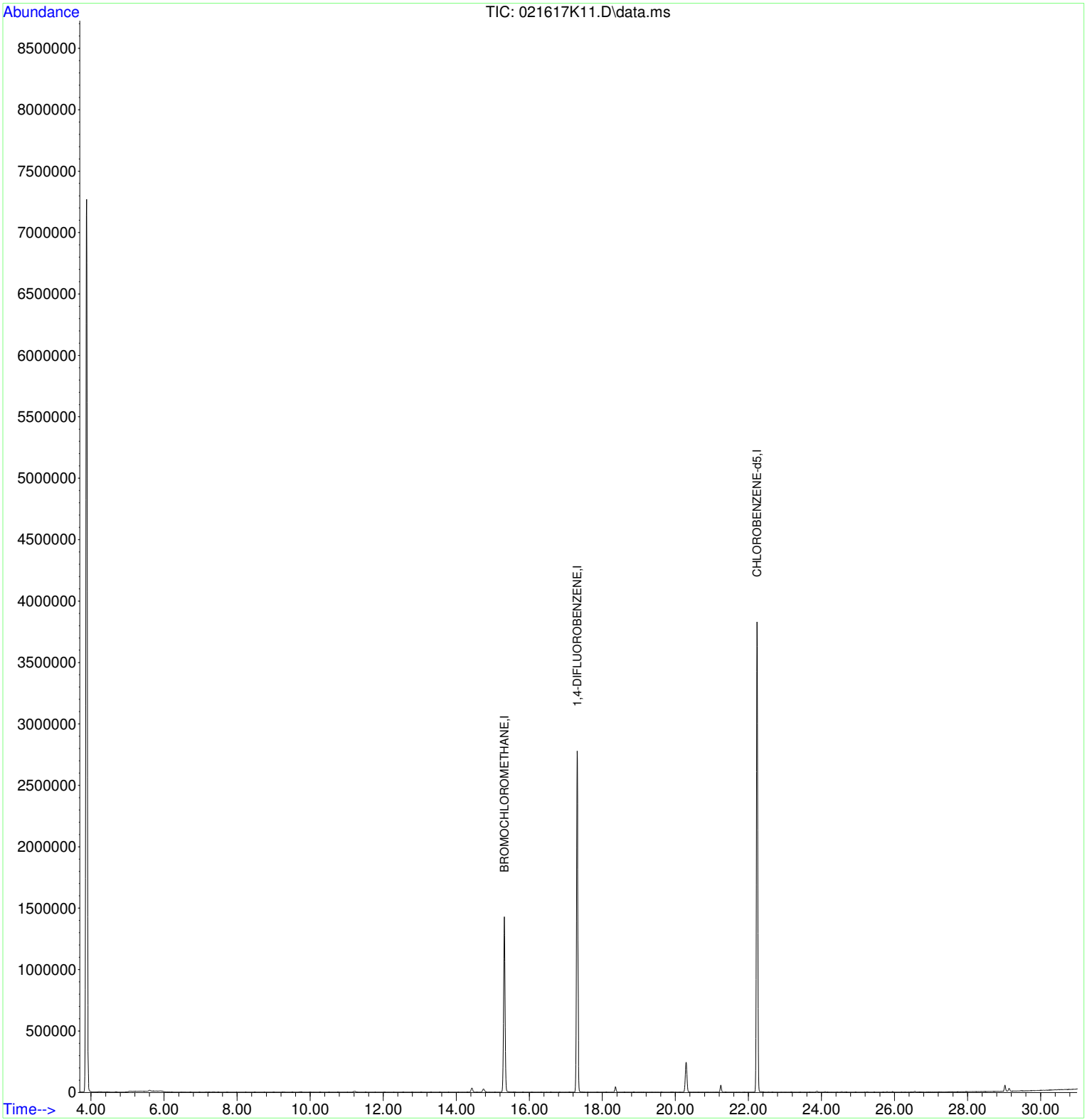
(#) = qualifier out of range (m) = manual integration (+) = signals summed

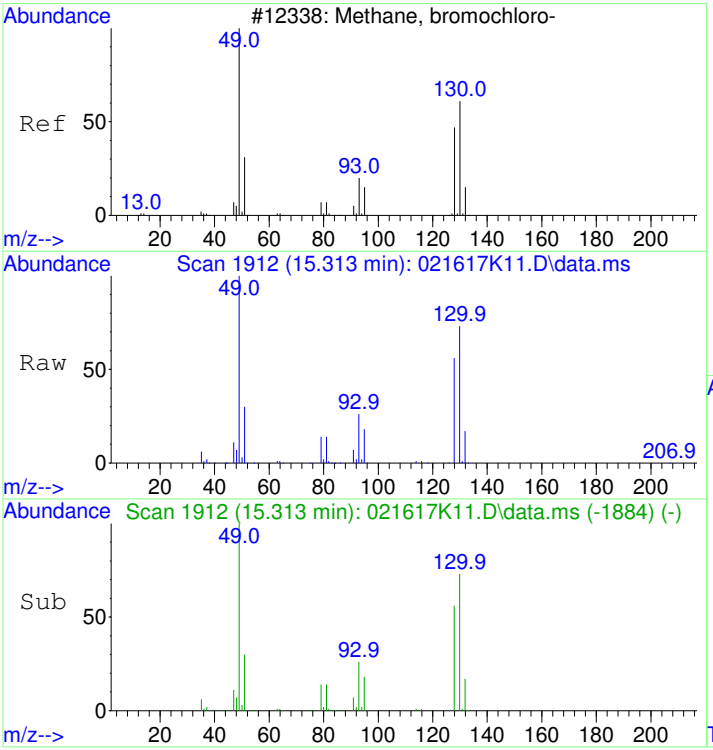
REVIEWED
By LLH at 12:10 pm, Feb 17, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021617K_FSAA\
Data File : 021617K11.D
InstName : HP5973K
Acq On : 16 Feb 2017 7:40 pm
Operator : LLH
Sample : CAN #1981
Misc : 200ml RECERTIFICATION
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 17 12:10:36 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

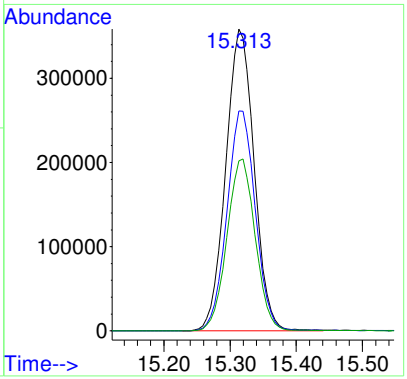


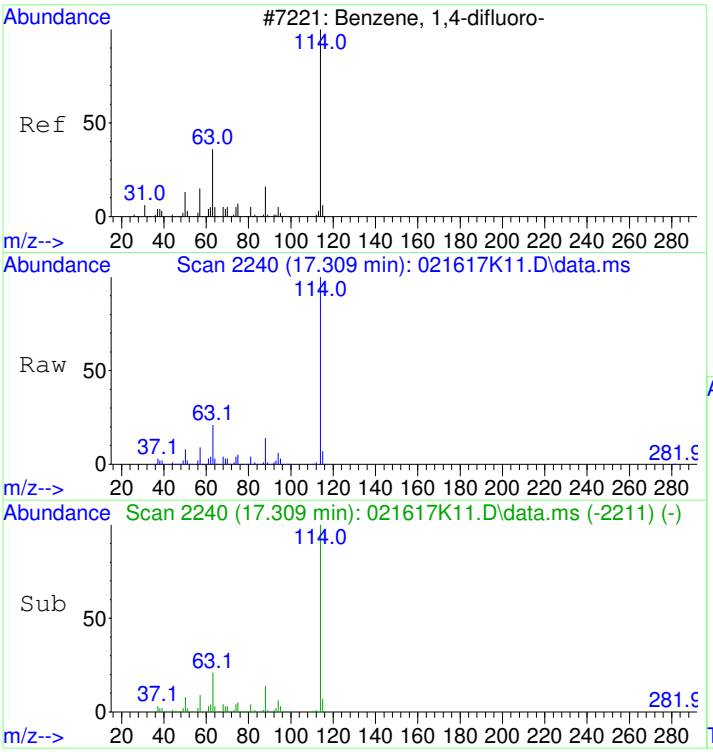


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. -0.006 min
Lab File: 021617K11.D
Acq: 16 Feb 2017 7:40 pm

Tgt Ion: 49 Resp: 1067924

Ion	Ratio	Lower	Upper
49	100		
130	73.0	53.9	93.9
128	56.9	37.0	77.0

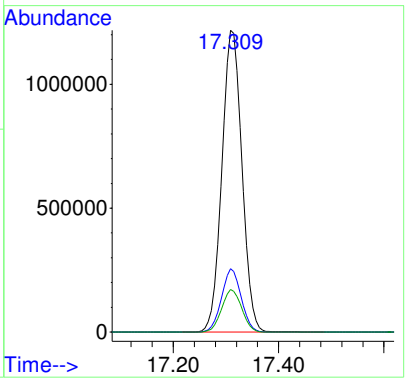


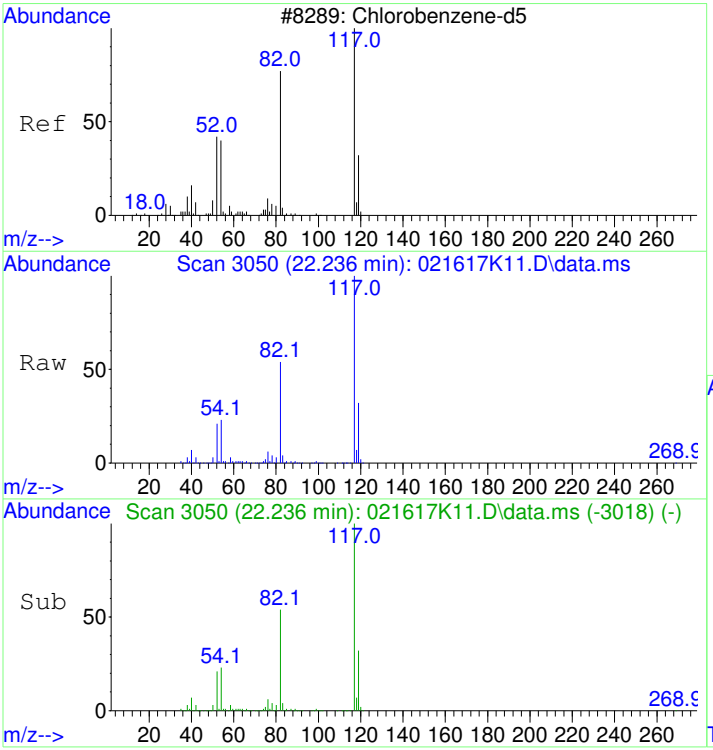


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.309 min Scan# 2240
Delta R.T. -0.006 min
Lab File: 021617K11.D
Acq: 16 Feb 2017 7:40 pm

Tgt Ion:114 Resp: 3221018

Ion	Ratio	Lower	Upper
114	100		
63	20.6	0.2	40.2
88	14.1	0.0	34.1

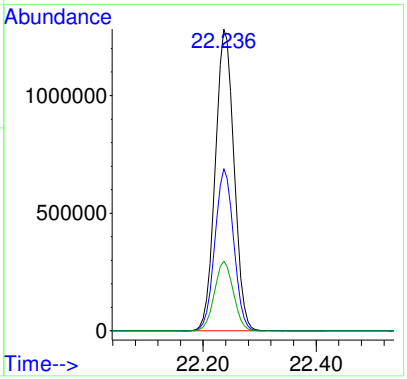




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.006 min
Lab File: 021617K11.D
Acq: 16 Feb 2017 7:40 pm

Tgt Ion:117 Resp: 2954605

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.4	73.4
54	23.3	2.4	42.4



1706011-04

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\022017K_FSAA\
Data File : 022017K07.D
InstName : HP5973K
Acq On : 20 Feb 2017 4:55 pm
Operator : LLH
Sample : CAN #652
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

CLEAN

Quant Time: Feb 21 10:41:04 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.313	49	971671	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.308	114	2854724	19.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	2645306	20.00 ppbv	0.00

Target Compounds Qvalue

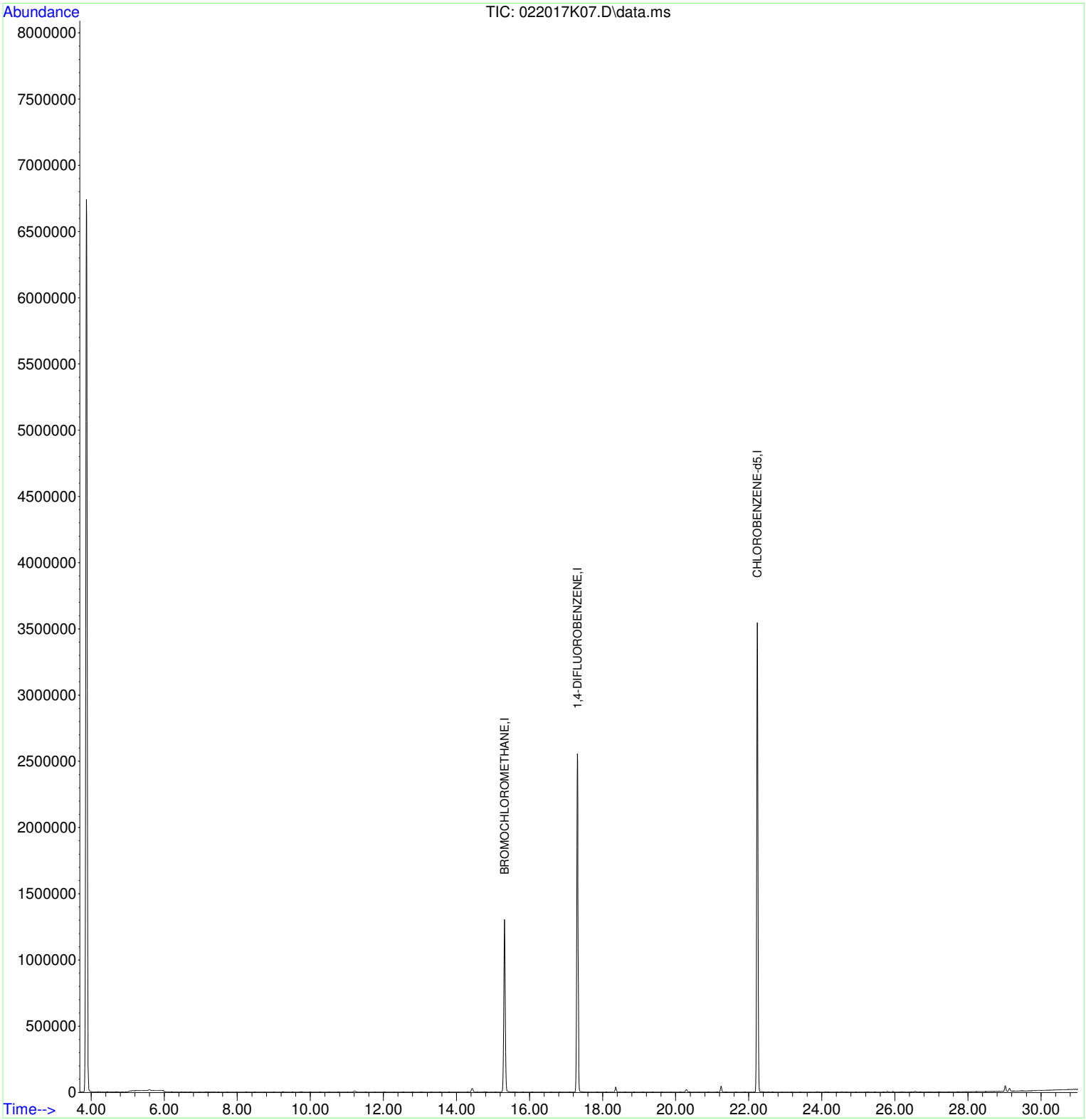
(#) = qualifier out of range (m) = manual integration (+) = signals summed

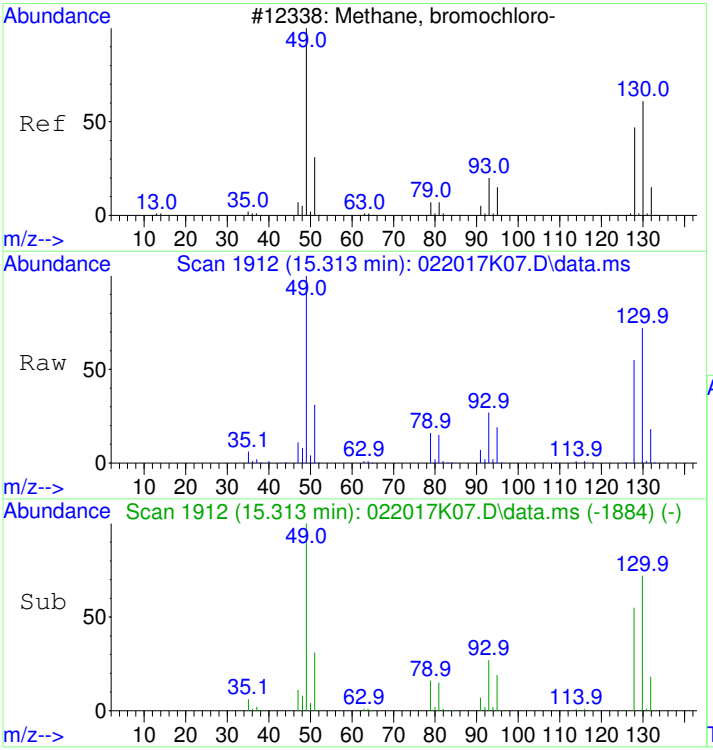
REVIEWED
By LLH at 10:41 am, Feb 21, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\022017K_FSAA\
Data File : 022017K07.D
InstName : HP5973K
Acq On : 20 Feb 2017 4:55 pm
Operator : LLH
Sample : CAN #652
Misc : 200ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 21 10:41:04 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

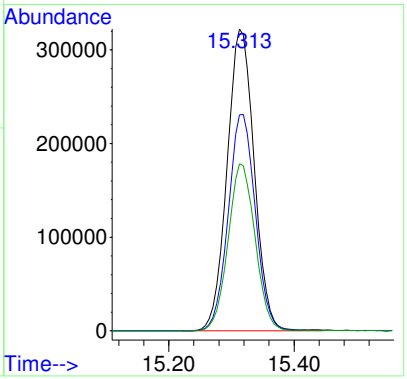


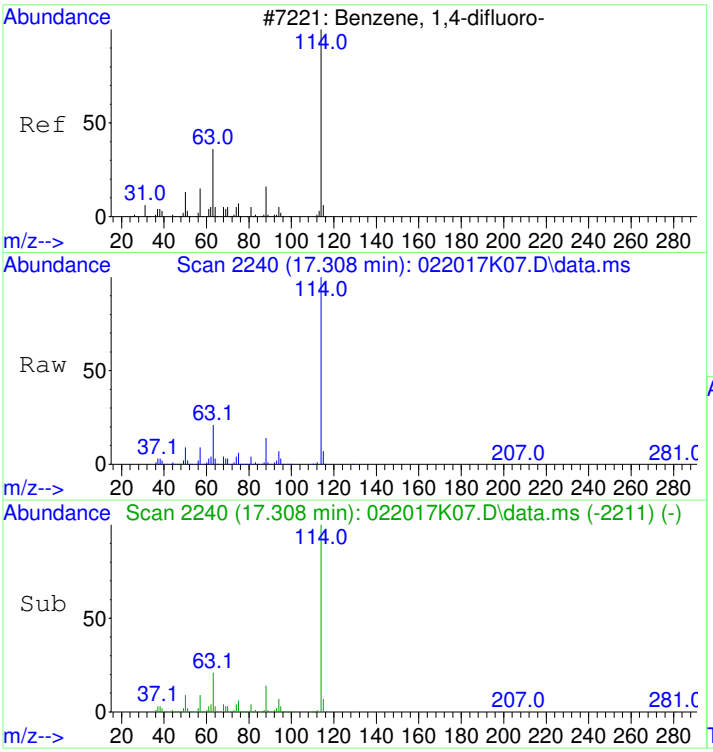


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.313 min Scan# 1912
Delta R.T. -0.006 min
Lab File: 022017K07.D
Acq: 20 Feb 2017 4:55 pm

Tgt Ion: 49 Resp: 971671

Ion	Ratio	Lower	Upper
49	100		
130	71.7	53.9	93.9
128	55.1	37.0	77.0

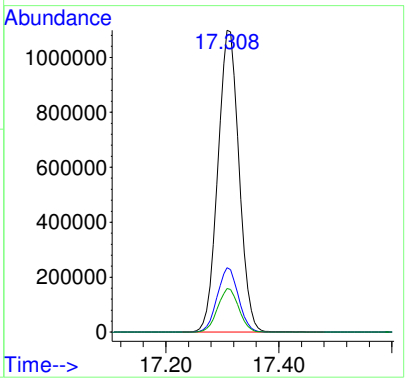


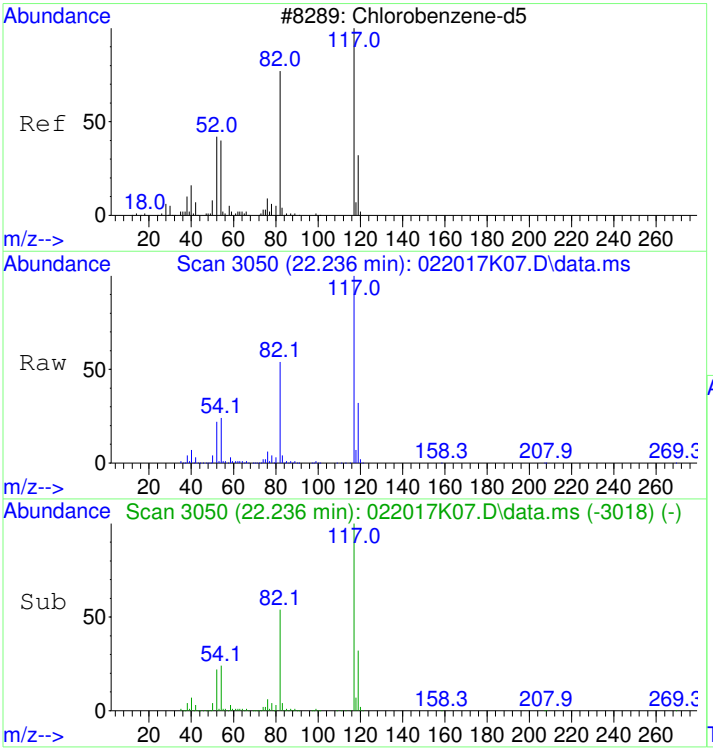


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.308 min Scan# 2240
Delta R.T. -0.006 min
Lab File: 022017K07.D
Acq: 20 Feb 2017 4:55 pm

Tgt Ion:114 Resp: 2854724

Ion	Ratio	Lower	Upper
114	100		
63	21.3	0.2	40.2
88	14.4	0.0	34.1

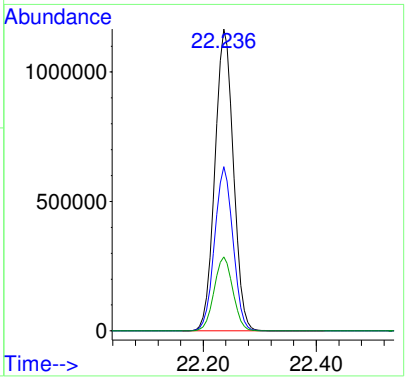




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.006 min
Lab File: 022017K07.D
Acq: 20 Feb 2017 4:55 pm

Tgt Ion:117 Resp: 2645306

Ion	Ratio	Lower	Upper
117	100		
82	54.2	33.4	73.4
54	24.7	2.4	42.4



1706011-05

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K17.D
InstName : HP5973K
Acq On : 18 Feb 2017 2:07 am
Operator : LLH
Sample : CAN #1112
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 11:16:37 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) BROMOCHLOROMETHANE	15.319	49	994843	19.60 ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	2930828	19.80 ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2685128	20.00 ppbv	0.00

Target Compounds Qvalue

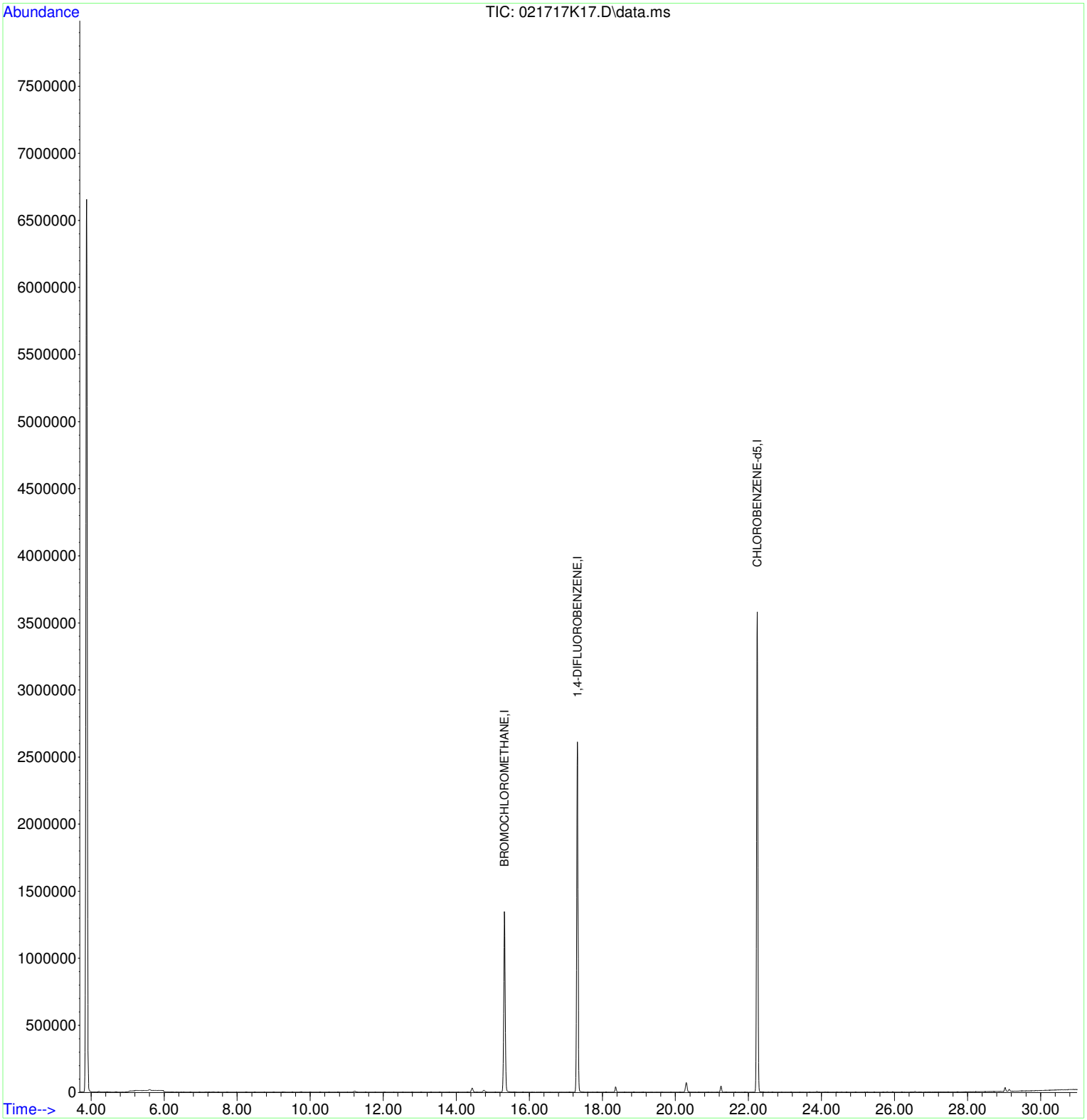
(#) = qualifier out of range (m) = manual integration (+) = signals summed

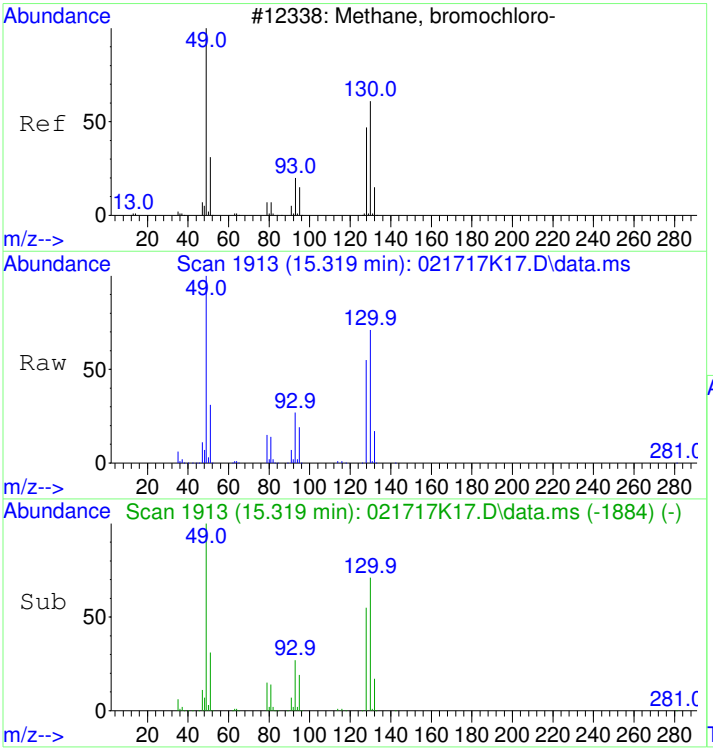
REVIEWED
By LLH at 11:16 am, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K17.D
InstName : HP5973K
Acq On : 18 Feb 2017 2:07 am
Operator : LLH
Sample : CAN #1112
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 20 11:16:37 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

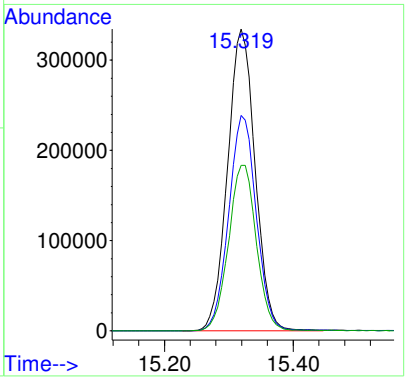


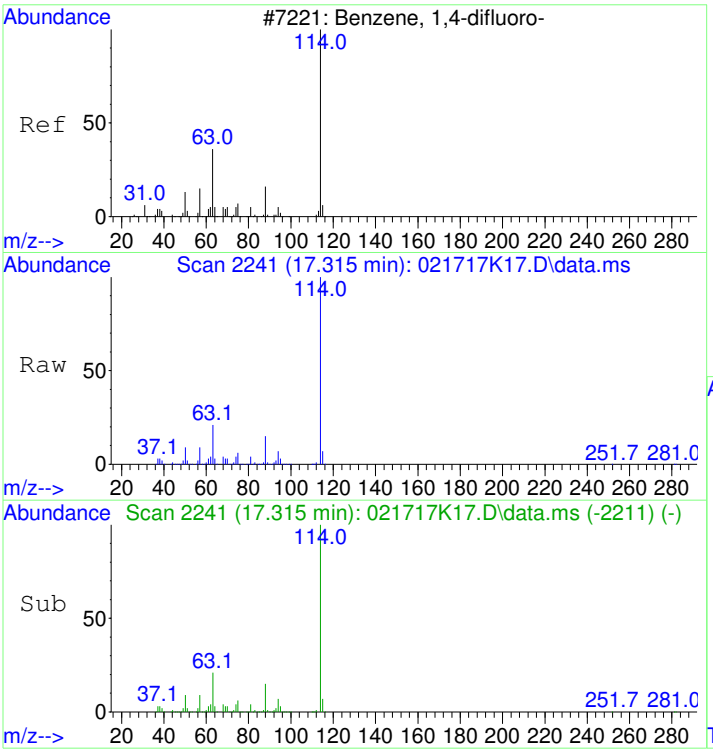


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021717K17.D
Acq: 18 Feb 2017 2:07 am

Tgt Ion: 49 Resp: 994843

Ion	Ratio	Lower	Upper
49	100		
130	71.5	53.9	93.9
128	55.4	37.0	77.0

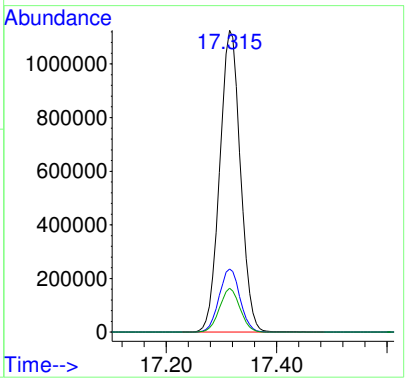


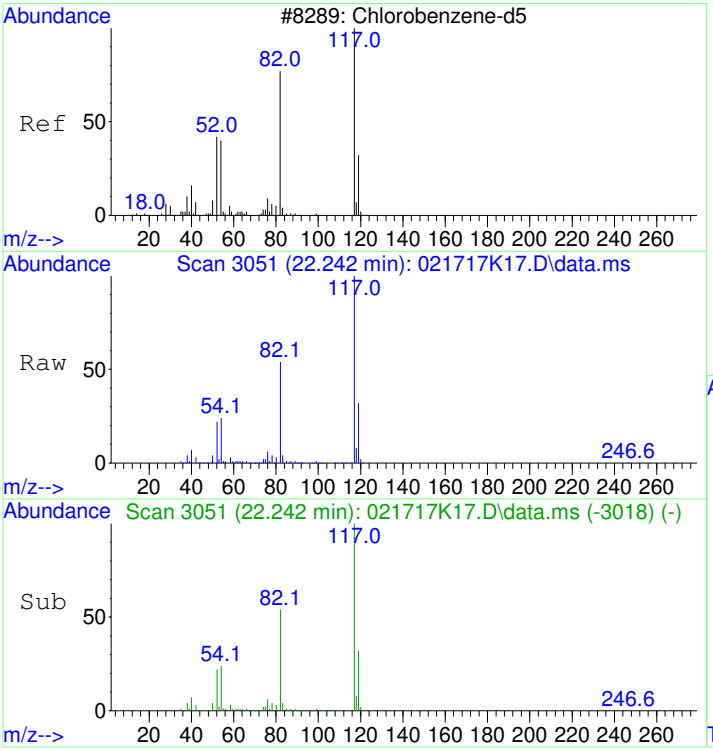


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021717K17.D
Acq: 18 Feb 2017 2:07 am

Tgt Ion:114 Resp: 2930828

Ion	Ratio	Lower	Upper
114	100		
63	21.1	0.2	40.2
88	14.3	0.0	34.1

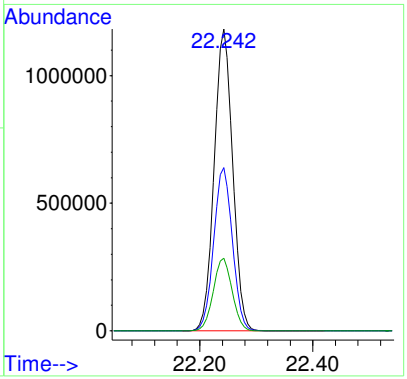




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021717K17.D
Acq: 18 Feb 2017 2:07 am

Tgt Ion:117 Resp: 2685128

Ion	Ratio	Lower	Upper
117	100		
82	54.6	33.4	73.4
54	24.5	2.4	42.4



1706011-06

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021617K_FSAA\
Data File : 021617K15.D
InstName : HP5973K
Acq On : 16 Feb 2017 11:10 pm
Operator : LLH
Sample : CAN #1992
Misc : 200ml RECERTIFICATION
ALS Vial : 26 Sample Multiplier: 1

CLEAN

Quant Time: Feb 17 12:11:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	1052902	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.314	114	3176141	19.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2908546	20.00	ppbv	0.00

Target Compounds Qvalue

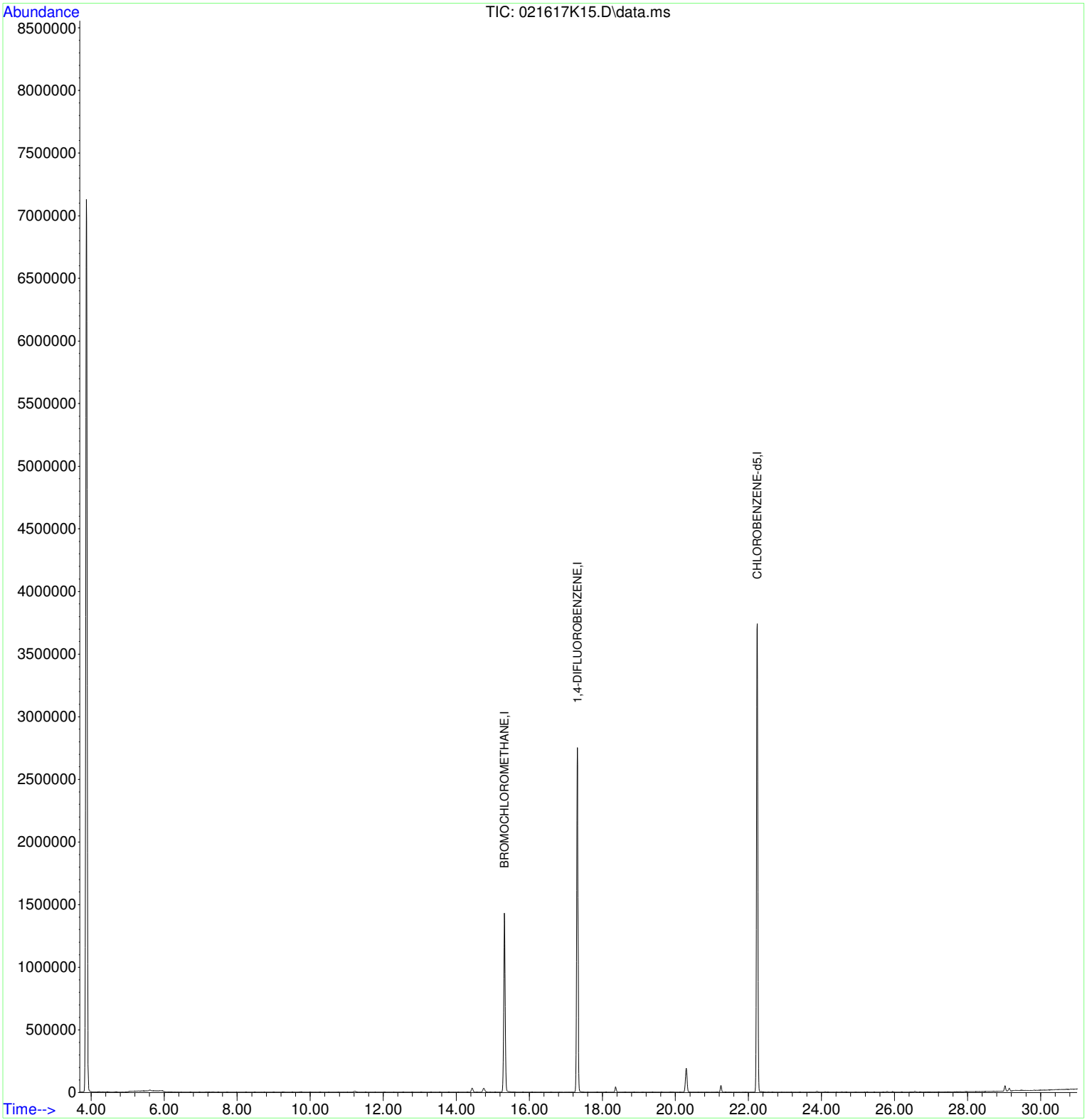
(#) = qualifier out of range (m) = manual integration (+) = signals summed

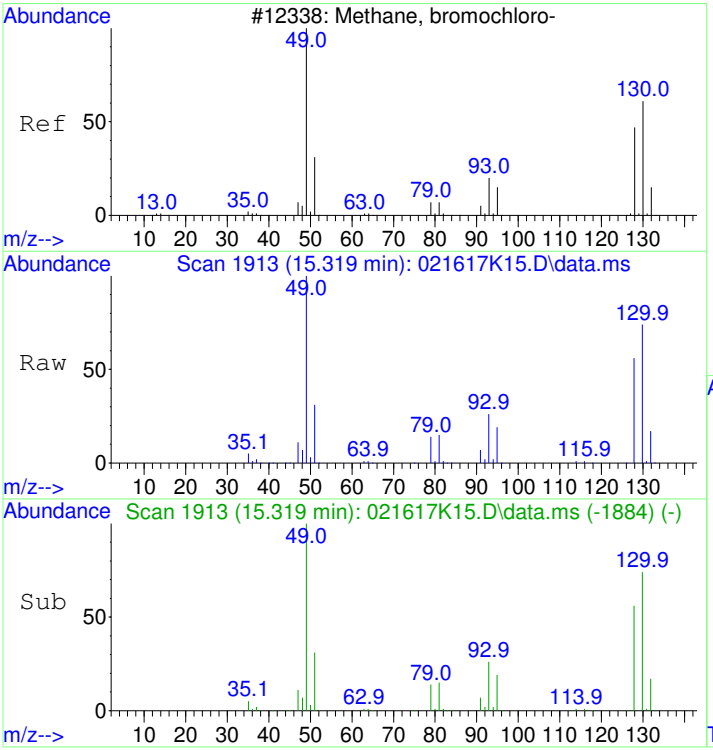
REVIEWED
By LLH at 12:12 pm, Feb 17, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021617K_FSAA\
Data File : 021617K15.D
InstName : HP5973K
Acq On : 16 Feb 2017 11:10 pm
Operator : LLH
Sample : CAN #1992
Misc : 200ml RECERTIFICATION
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 17 12:11:49 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

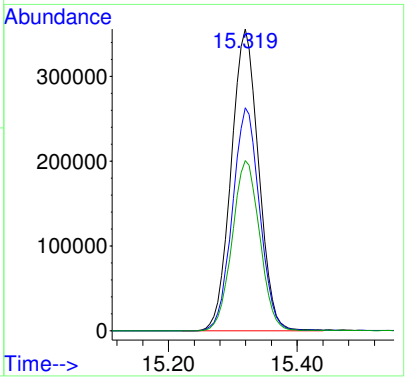


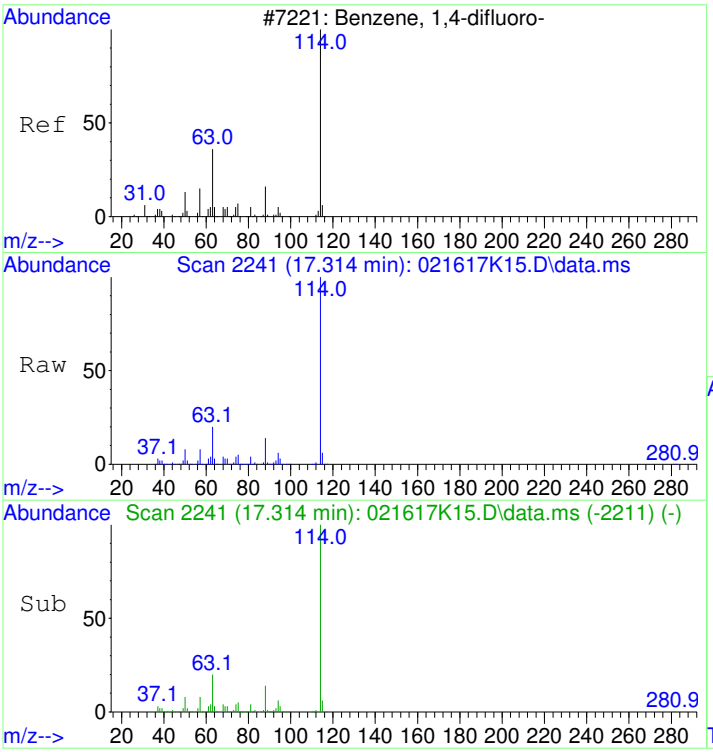


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021617K15.D
Acq: 16 Feb 2017 11:10 pm

Tgt Ion: 49 Resp: 1052902

Ion	Ratio	Lower	Upper
49	100		
130	73.5	53.9	93.9
128	56.8	37.0	77.0

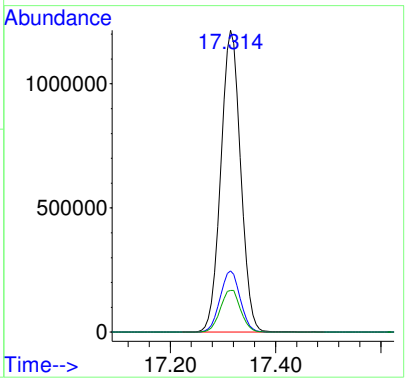


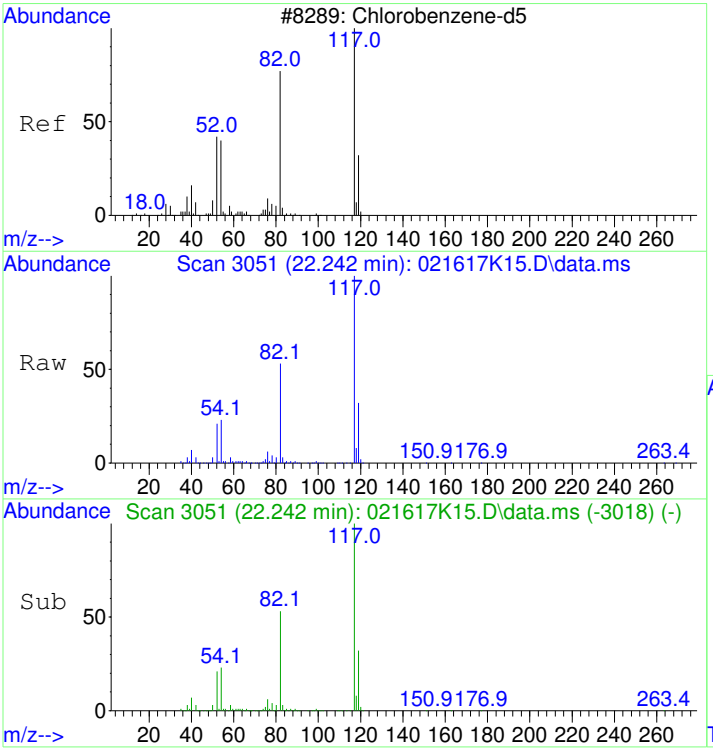


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021617K15.D
Acq: 16 Feb 2017 11:10 pm

Tgt Ion:114 Resp: 3176141

Ion	Ratio	Lower	Upper
114	100		
63	20.6	0.2	40.2
88	14.2	0.0	34.1

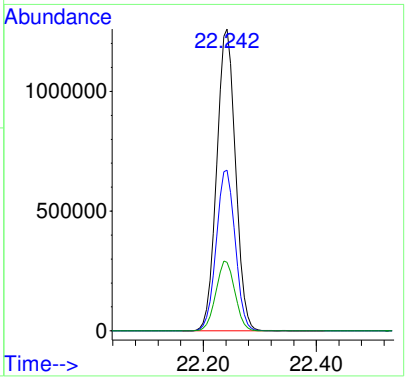




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021617K15.D
Acq: 16 Feb 2017 11:10 pm

Tgt Ion:117 Resp: 2908546

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.4	73.4
54	23.4	2.4	42.4



1706011-07

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K15.D
InstName : HP5973K
Acq On : 18 Feb 2017 12:23 am
Operator : LLH
Sample : CAN #846
Misc : 200ml RECERTIFICATION
ALS Vial : 19 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 11:15:54 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	990496	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	2927572	19.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2688686	20.00	ppbv	0.00

Target Compounds Qvalue

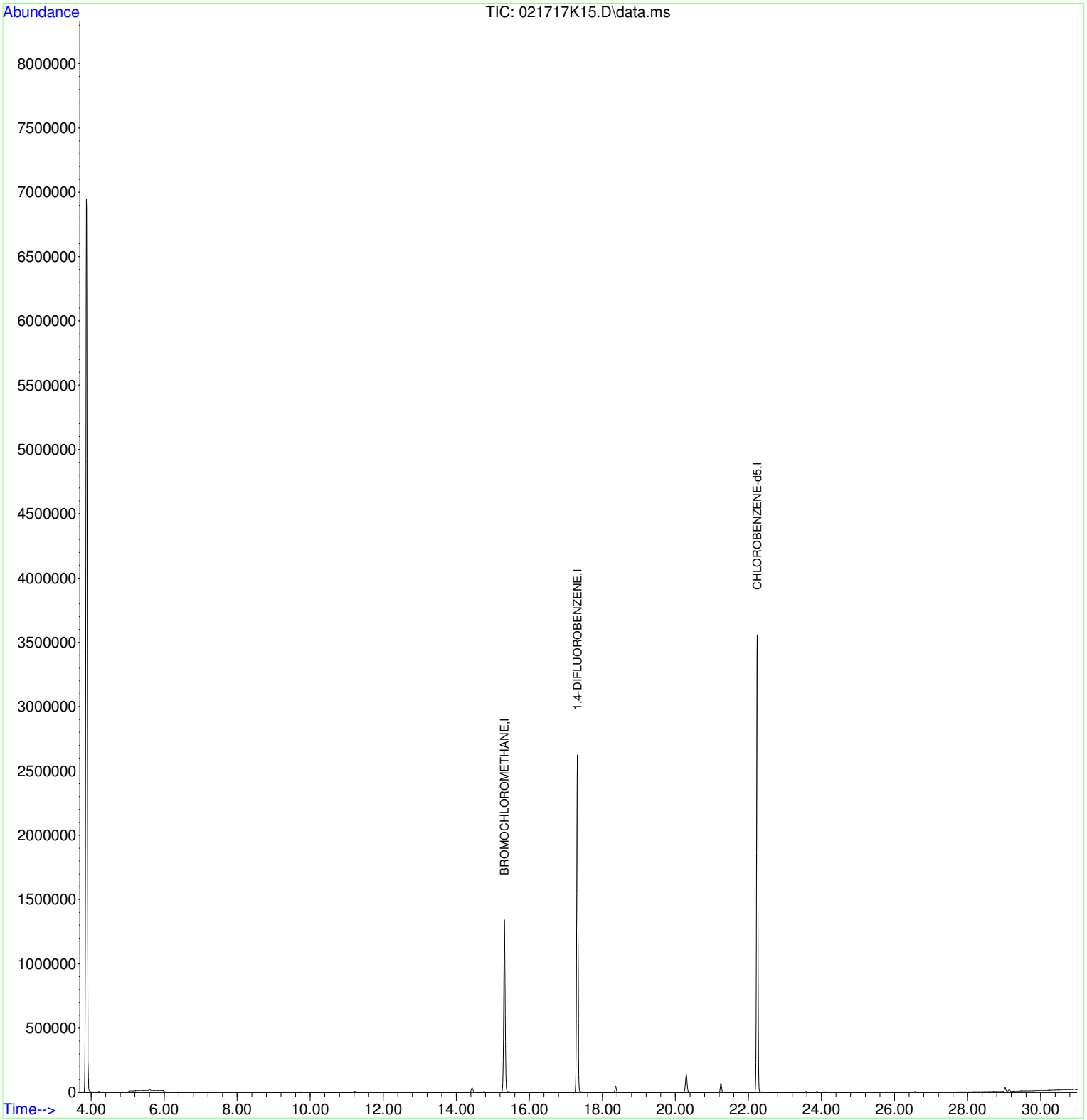
(#) = qualifier out of range (m) = manual integration (+) = signals summed

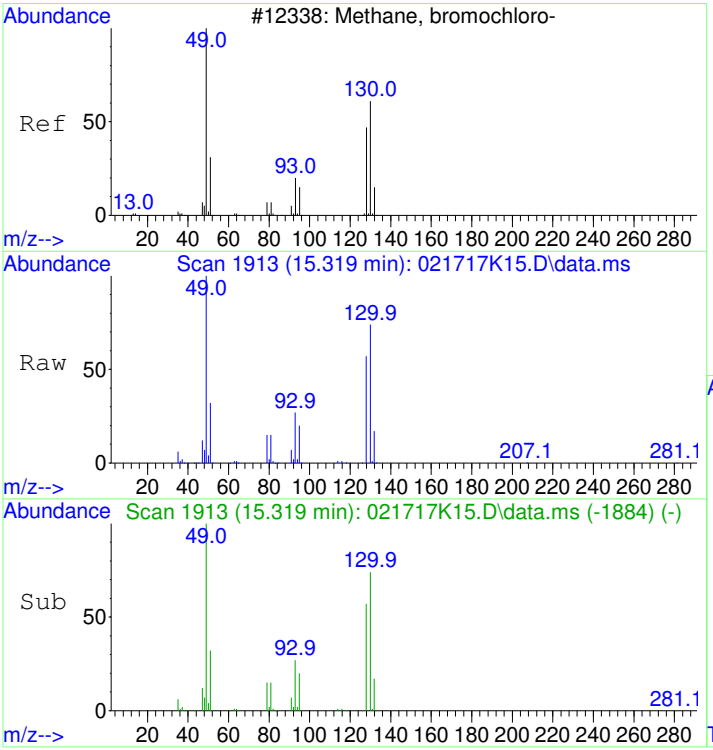
REVIEWED
By LLH at 11:16 am, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K15.D
InstName : HP5973K
Acq On : 18 Feb 2017 12:23 am
Operator : LLH
Sample : CAN #846
Misc : 200ml RECERTIFICATION
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 20 11:15:54 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

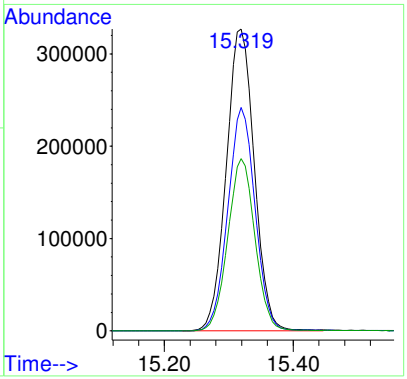


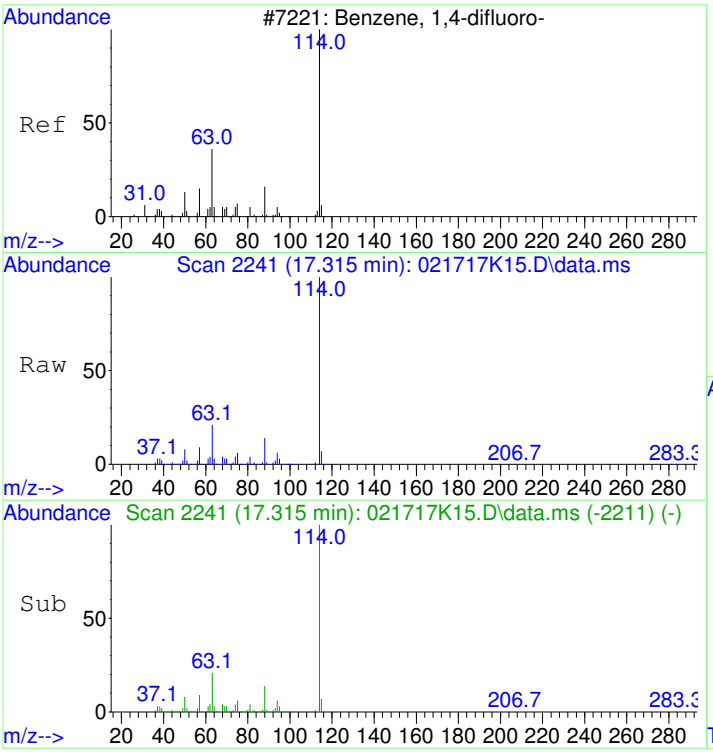


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021717K15.D
Acq: 18 Feb 2017 12:23 am

Tgt Ion: 49 Resp: 990496

Ion	Ratio	Lower	Upper
49	100		
130	72.1	53.9	93.9
128	55.3	37.0	77.0

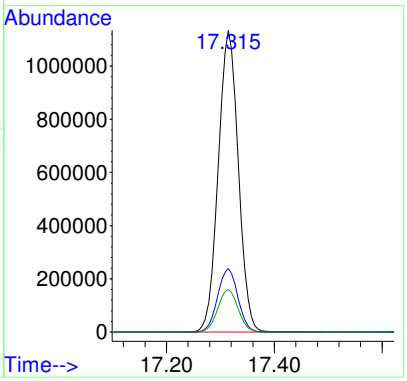


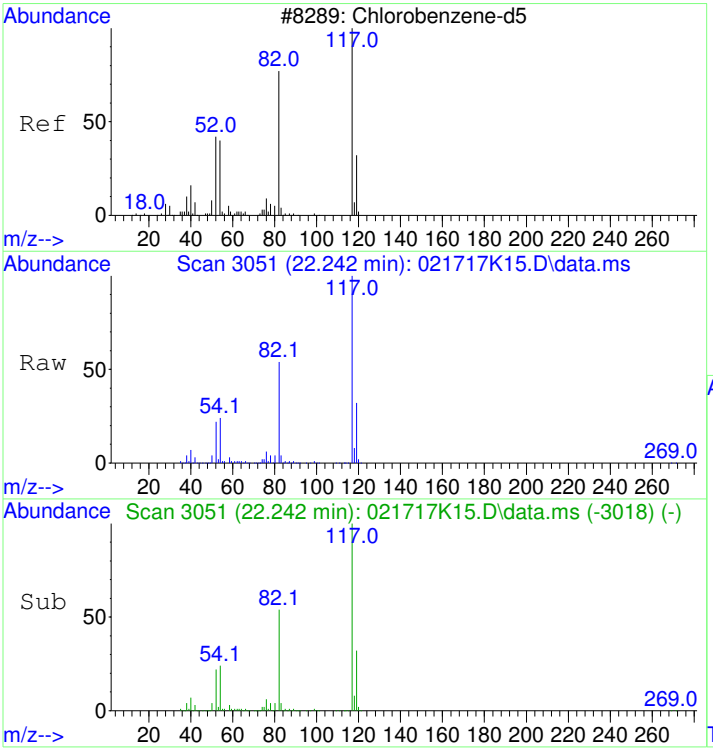


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021717K15.D
Acq: 18 Feb 2017 12:23 am

Tgt Ion:114 Resp: 2927572

Ion	Ratio	Lower	Upper
114	100		
63	21.3	0.2	40.2
88	14.3	0.0	34.1

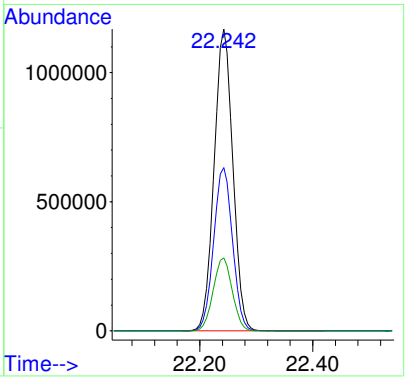




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021717K15.D
Acq: 18 Feb 2017 12:23 am

Tgt Ion:117 Resp: 2688686

Ion	Ratio	Lower	Upper
117	100		
82	54.5	33.4	73.4
54	24.6	2.4	42.4



1706011-08

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021617K_FSAA\
Data File : 021617K08.D
InstName : HP5973K
Acq On : 16 Feb 2017 5:06 pm
Operator : LLH
Sample : CAN #1969
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: Feb 17 12:07:40 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	1096787	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	3264627	19.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.236	117	2978635	20.00	ppbv	0.00

Target Compounds Qvalue

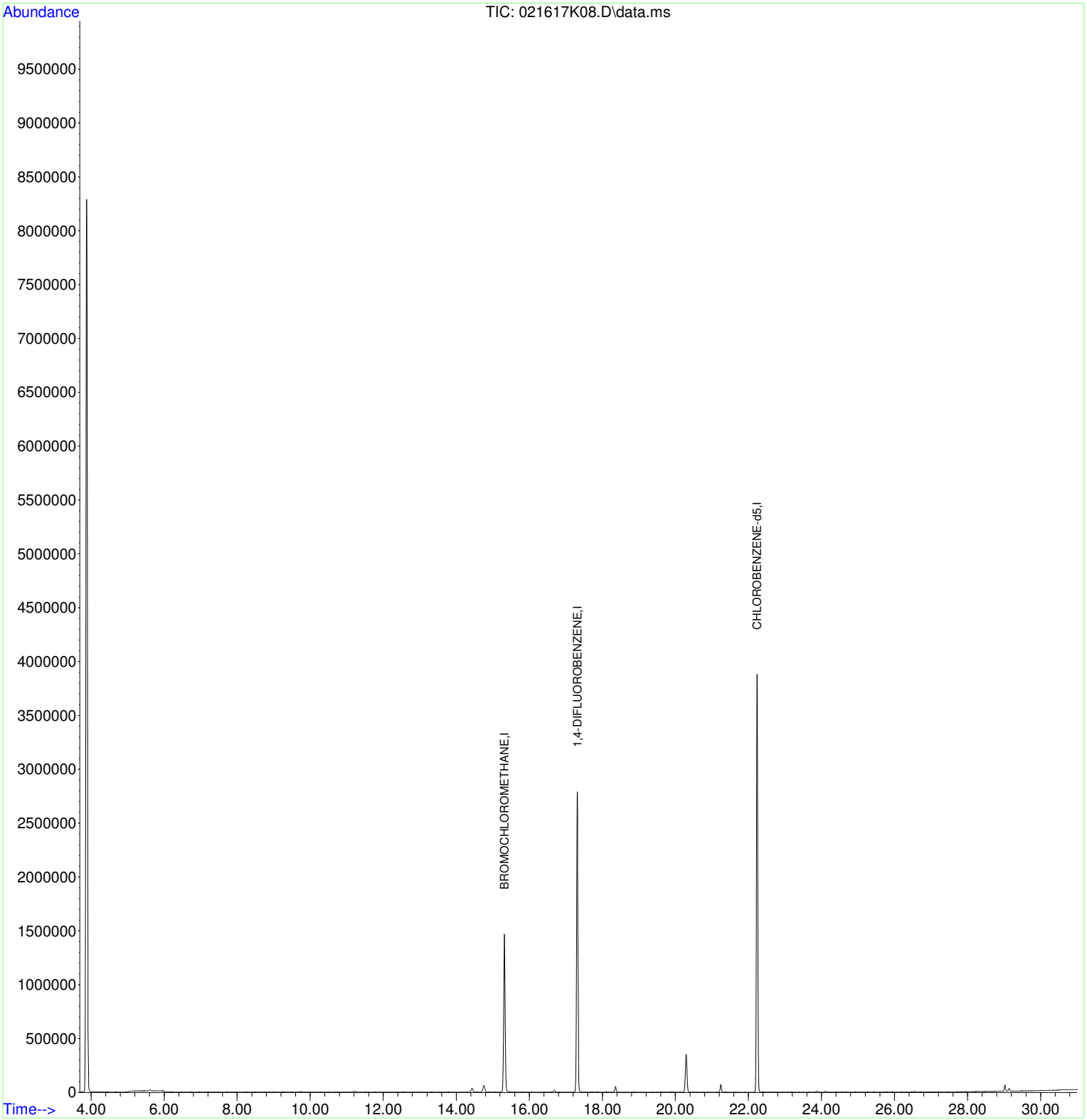
(#) = qualifier out of range (m) = manual integration (+) = signals summed

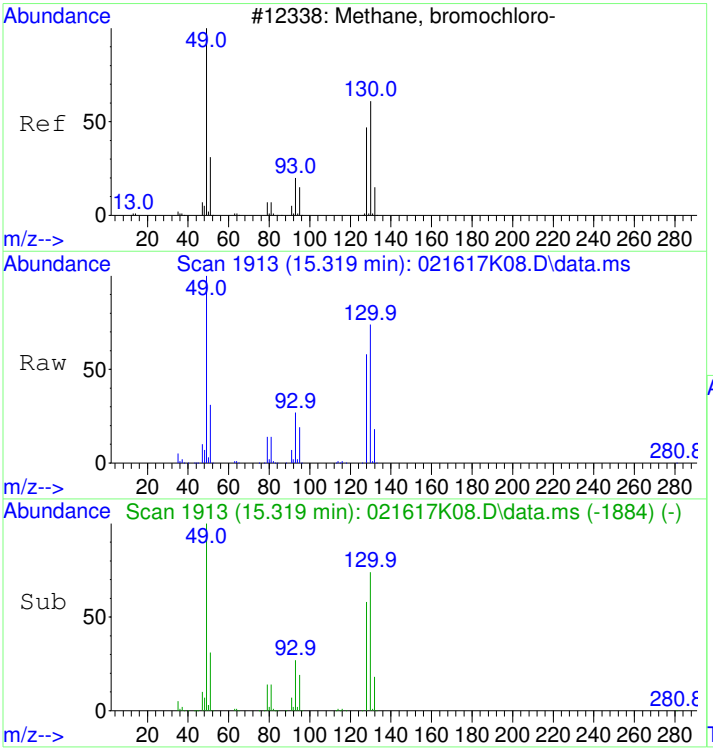
REVIEWED
By LLH at 12:08 pm, Feb 17, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021617K_FSAA\
Data File : 021617K08.D
InstName : HP5973K
Acq On : 16 Feb 2017 5:06 pm
Operator : LLH
Sample : CAN #1969
Misc : 200ml RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 12:07:40 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

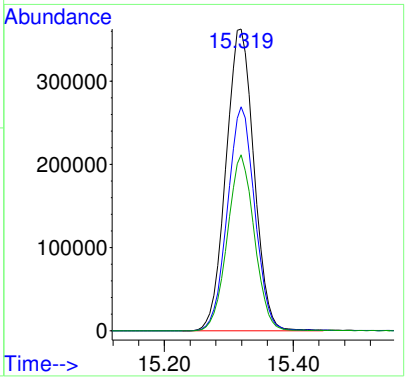


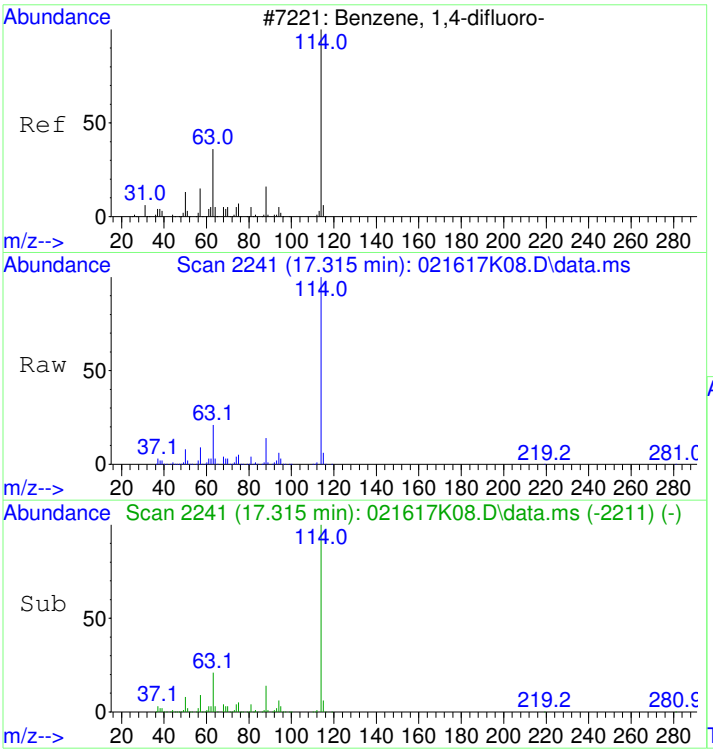


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021617K08.D
Acq: 16 Feb 2017 5:06 pm

Tgt Ion: 49 Resp: 1096787

Ion	Ratio	Lower	Upper
49	100		
130	72.4	53.9	93.9
128	56.1	37.0	77.0

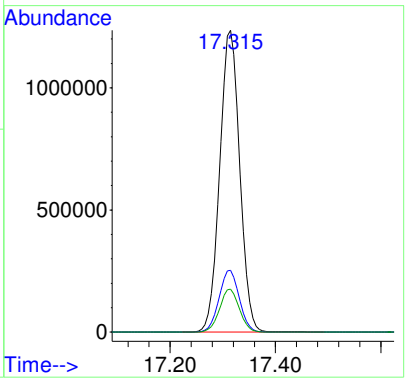


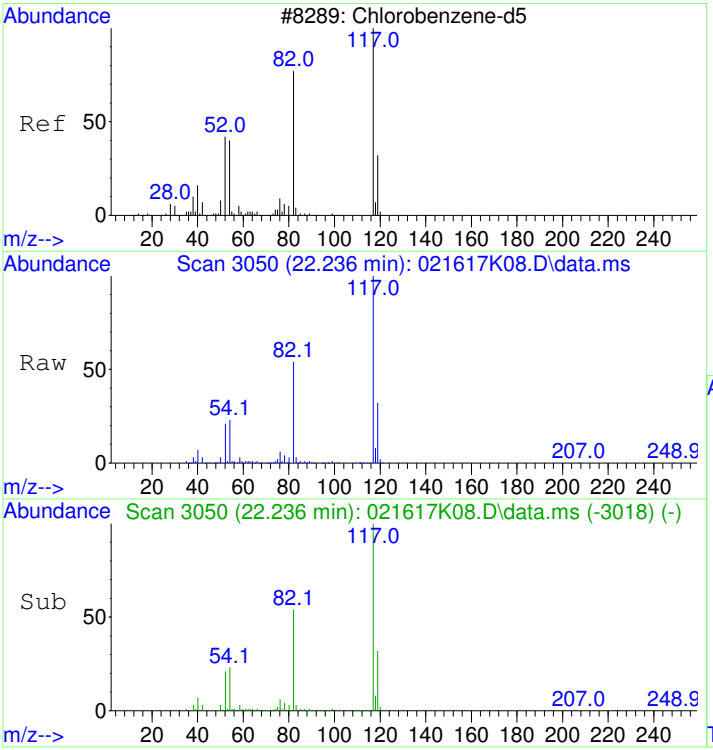


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021617K08.D
Acq: 16 Feb 2017 5:06 pm

Tgt Ion:114 Resp: 3264627

Ion	Ratio	Lower	Upper
114	100		
63	20.7	0.2	40.2
88	14.0	0.0	34.1

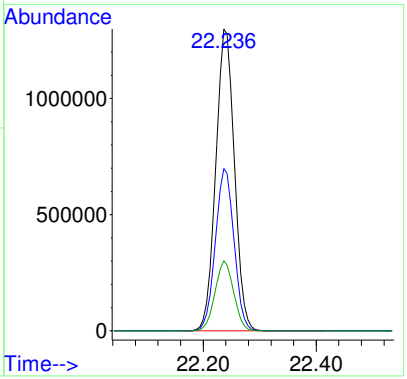




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.236 min Scan# 3050
Delta R.T. -0.006 min
Lab File: 021617K08.D
Acq: 16 Feb 2017 5:06 pm

Tgt Ion:117 Resp: 2978635

Ion	Ratio	Lower	Upper
117	100		
82	53.8	33.4	73.4
54	23.1	2.4	42.4



1706011-09

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K16.D
InstName : HP5973K
Acq On : 18 Feb 2017 1:15 am
Operator : LLH
Sample : CAN #1107
Misc : 200ml RECERTIFICATION
ALS Vial : 10 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 11:16:18 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	994192	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.315	114	2937650	19.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2689428	20.00	ppbv	0.00

Target Compounds Qvalue

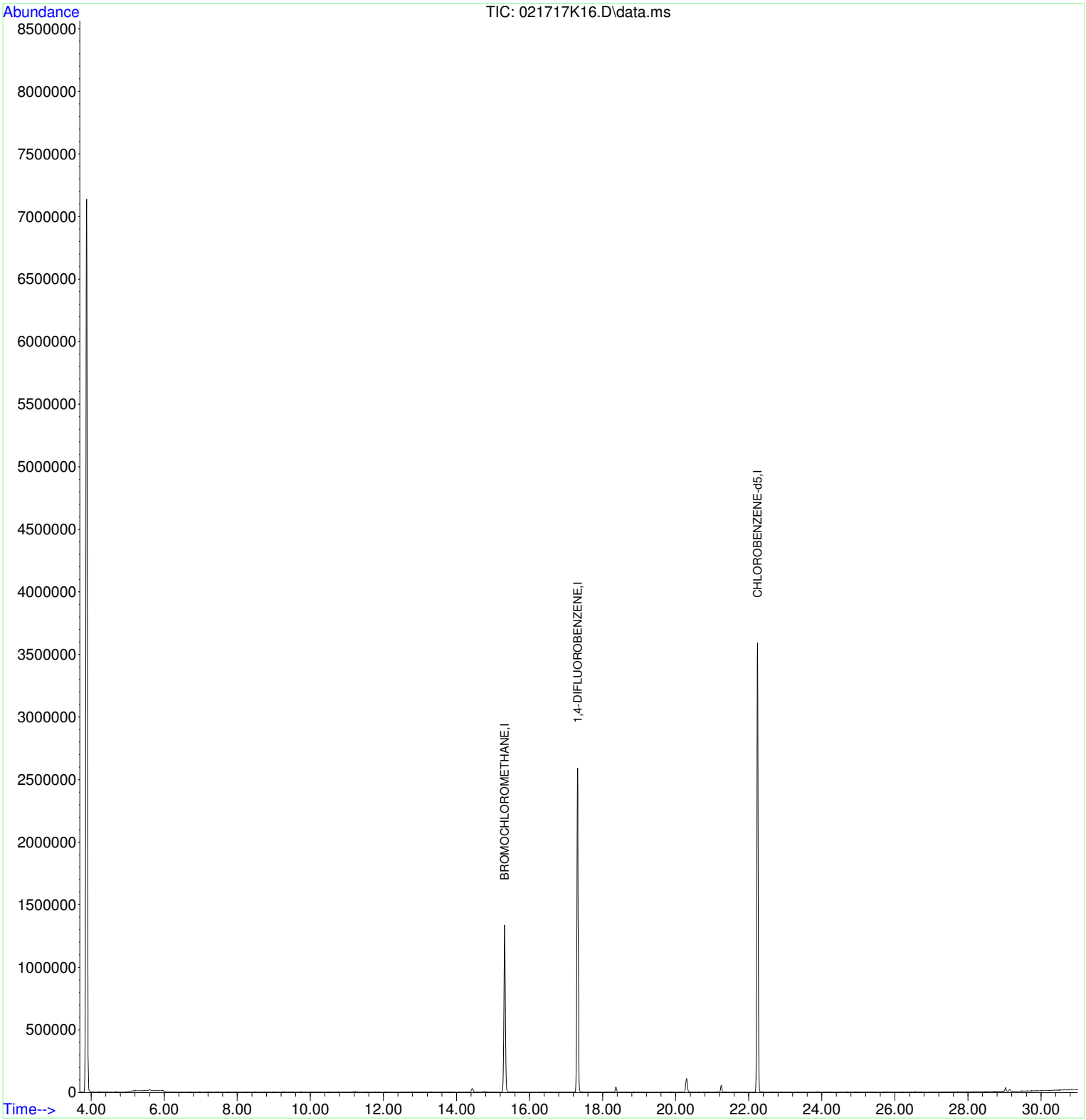
(#) = qualifier out of range (m) = manual integration (+) = signals summed

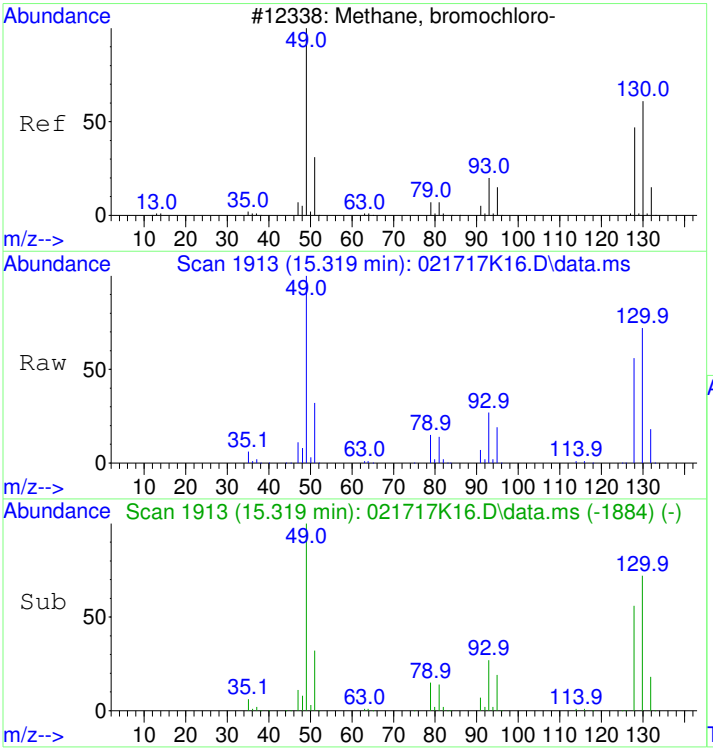
REVIEWED
By LLH at 11:16 am, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K16.D
InstName : HP5973K
Acq On : 18 Feb 2017 1:15 am
Operator : LLH
Sample : CAN #1107
Misc : 200ml RECERTIFICATION
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 20 11:16:18 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

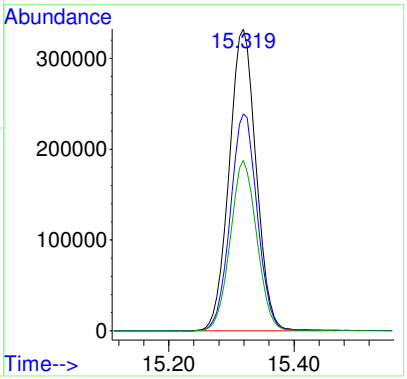


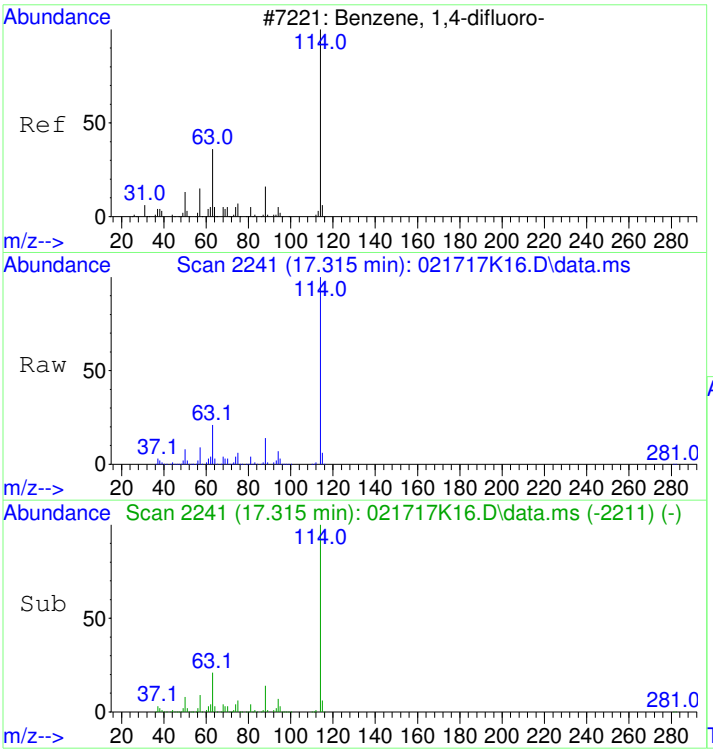


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021717K16.D
Acq: 18 Feb 2017 1:15 am

Tgt Ion: 49 Resp: 994192

Ion	Ratio	Lower	Upper
49	100		
130	71.9	53.9	93.9
128	55.5	37.0	77.0

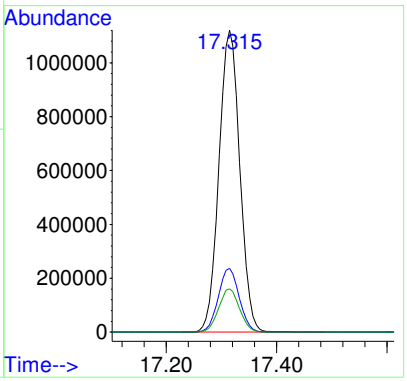


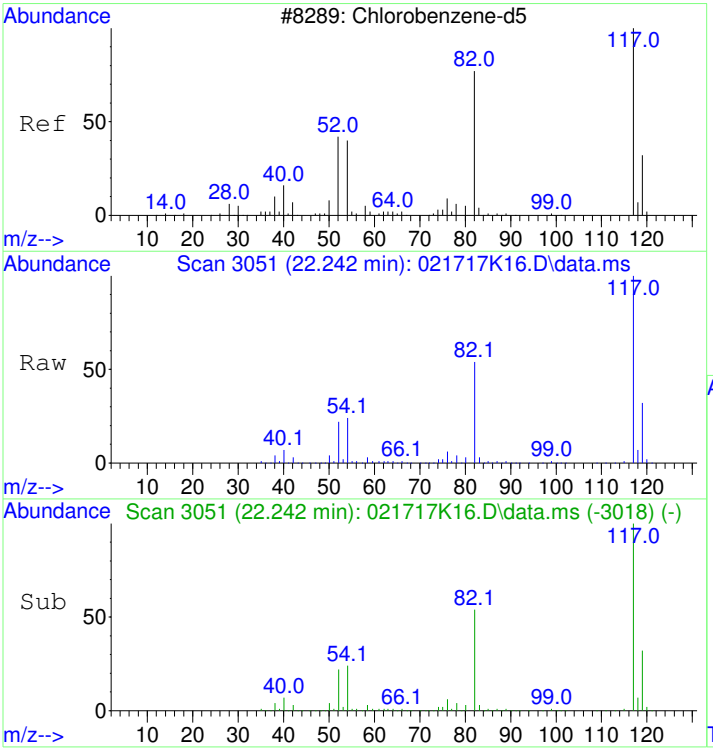


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.315 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021717K16.D
Acq: 18 Feb 2017 1:15 am

Tgt Ion:114 Resp: 2937650

Ion	Ratio	Lower	Upper
114	100		
63	21.2	0.2	40.2
88	14.3	0.0	34.1

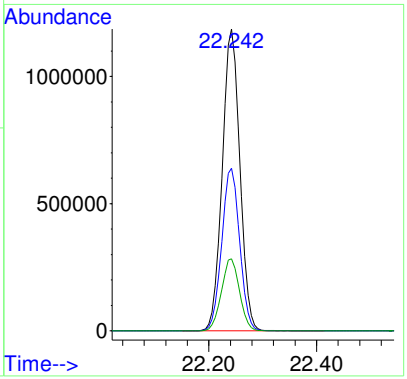




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021717K16.D
Acq: 18 Feb 2017 1:15 am

Tgt Ion:117 Resp: 2689428

Ion	Ratio	Lower	Upper
117	100		
82	54.8	33.4	73.4
54	24.5	2.4	42.4



1706011-10

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K14.D
InstName : HP5973K
Acq On : 17 Feb 2017 11:32 pm
Operator : LLH
Sample : CAN #649
Misc : 200ml RECERTIFICATION
ALS Vial : 18 Sample Multiplier: 1

CLEAN

Quant Time: Feb 20 11:15:31 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) BROMOCHLOROMETHANE	15.319	49	1005069	19.60	ppbv	0.00
32) 1,4-DIFLUOROBENZENE	17.314	114	2958107	19.80	ppbv	0.00
43) CHLOROBENZENE-d5	22.242	117	2738137	20.00	ppbv	0.00

Target Compounds Qvalue

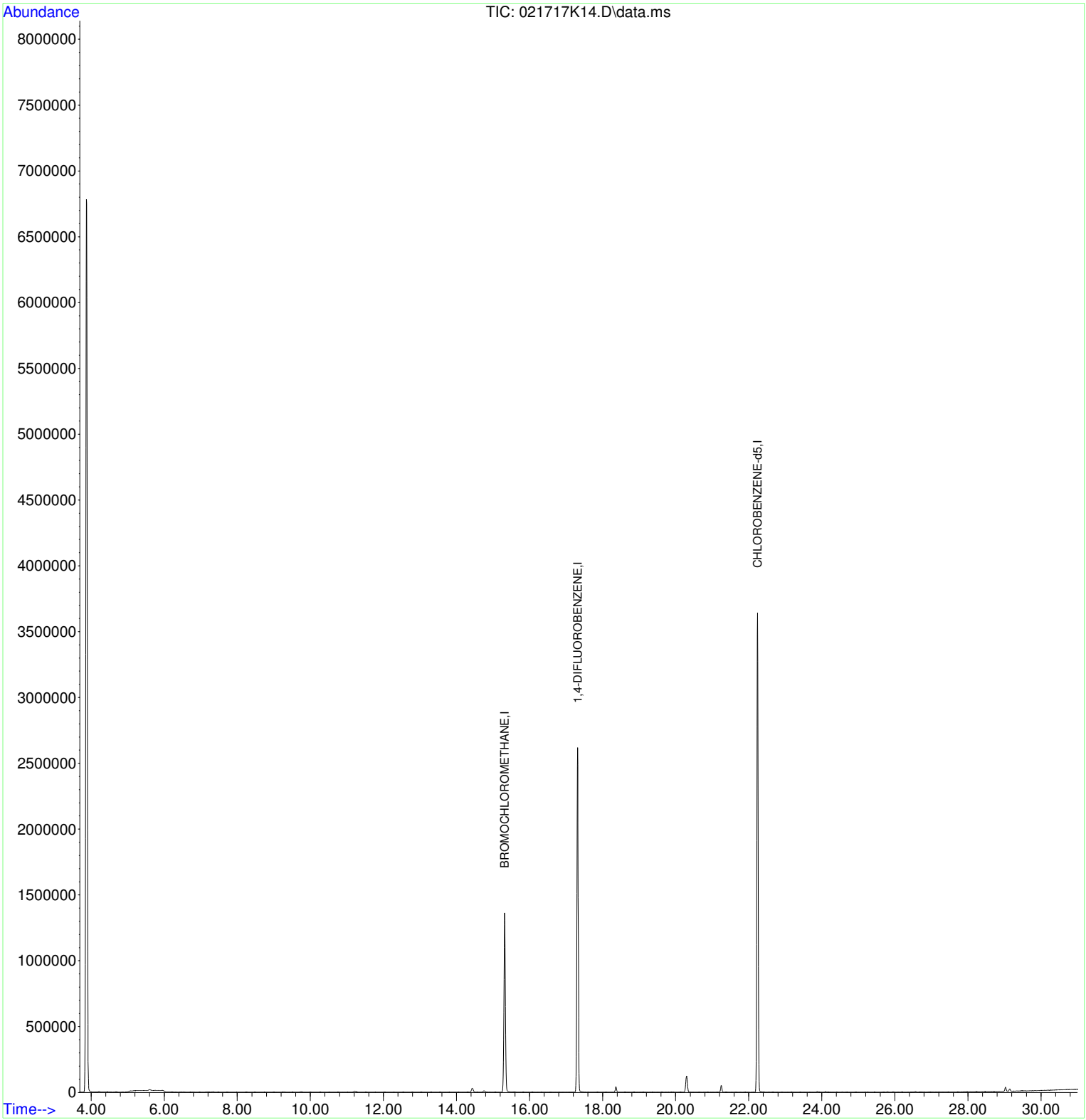
(#) = qualifier out of range (m) = manual integration (+) = signals summed

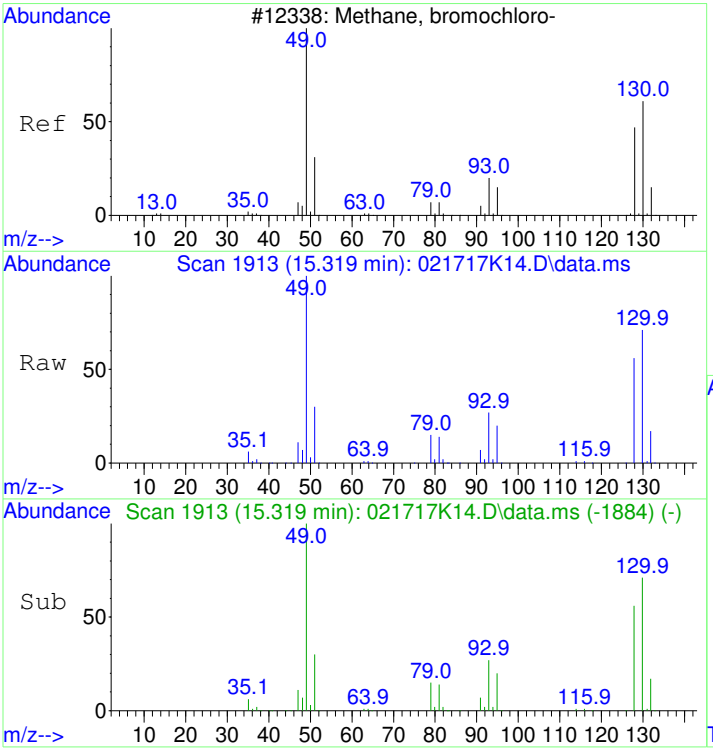
REVIEWED
By LLH at 11:15 am, Feb 20, 2017

Table of Contents

Data Path : D:\msdchem\1\2017\DATA\021717K_FSAA\
Data File : 021717K14.D
InstName : HP5973K
Acq On : 17 Feb 2017 11:32 pm
Operator : LLH
Sample : CAN #649
Misc : 200ml RECERTIFICATION
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 20 11:15:31 2017
Quant Method : D:\msdchem\1\2017\METHOD\020217K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Feb 03 14:13:09 2017
Response via : Initial Calibration

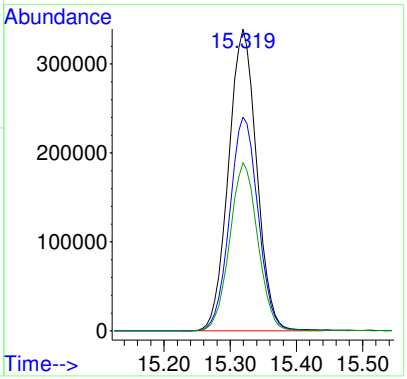


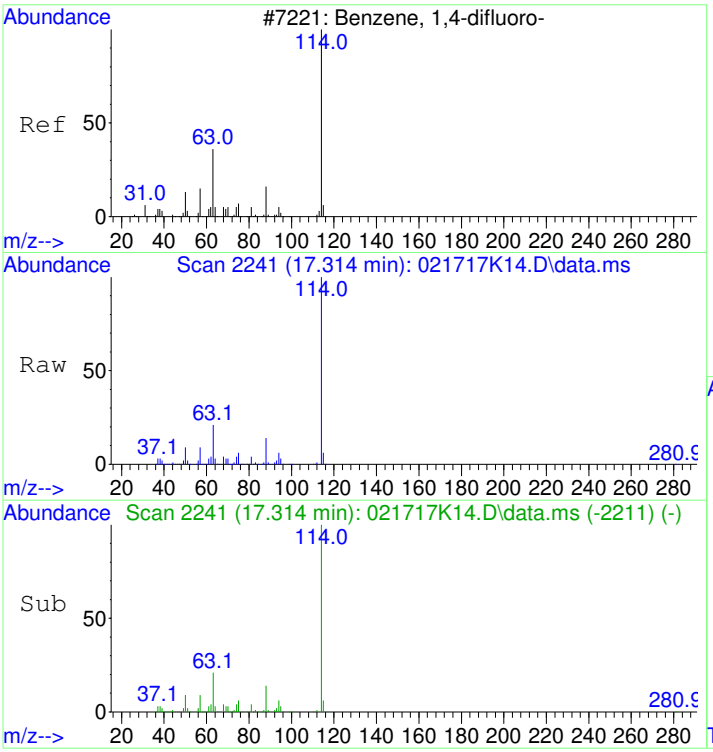


#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 15.319 min Scan# 1913
Delta R.T. 0.000 min
Lab File: 021717K14.D
Acq: 17 Feb 2017 11:32 pm

Tgt Ion: 49 Resp: 1005069

Ion	Ratio	Lower	Upper
49	100		
130	71.5	53.9	93.9
128	55.3	37.0	77.0

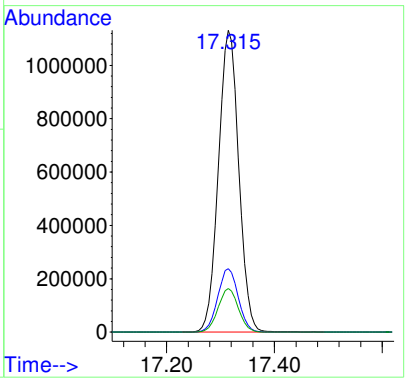


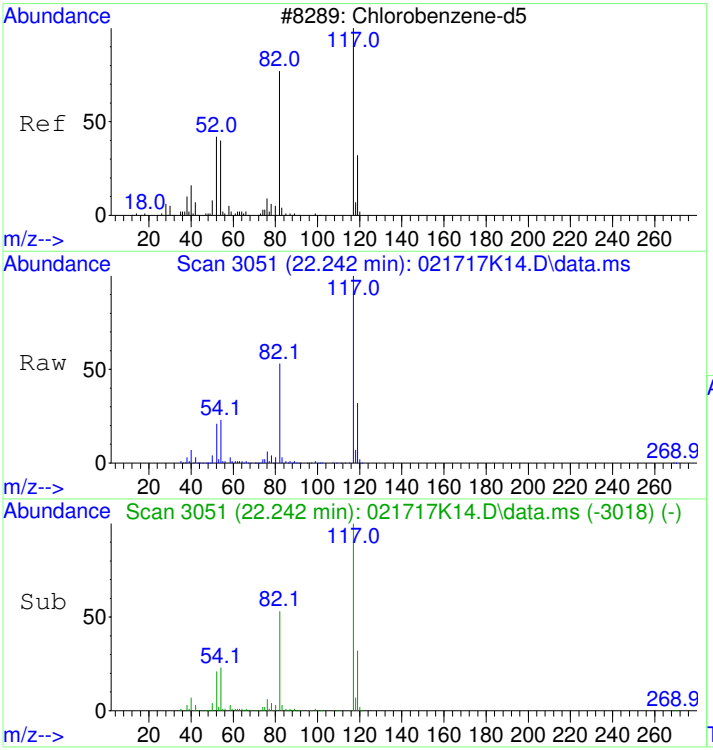


#32
1,4-DIFLUOROBENZENE
Concen: 19.80 ppbv
RT: 17.314 min Scan# 2241
Delta R.T. 0.000 min
Lab File: 021717K14.D
Acq: 17 Feb 2017 11:32 pm

Tgt Ion:114 Resp: 2958107

Ion	Ratio	Lower	Upper
114	100		
63	21.2	0.2	40.2
88	14.4	0.0	34.1

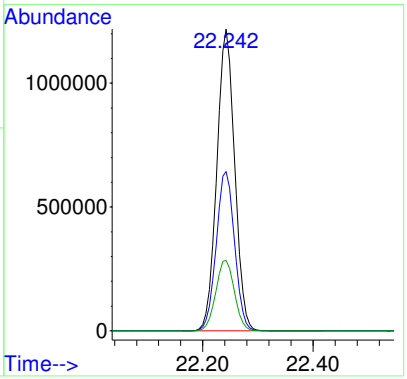




#43
CHLOROBENZENE-d5
Concen: 20.00 ppbv
RT: 22.242 min Scan# 3051
Delta R.T. 0.000 min
Lab File: 021717K14.D
Acq: 17 Feb 2017 11:32 pm

Tgt Ion:117 Resp: 2738137

Ion	Ratio	Lower	Upper
117	100		
82	54.2	33.4	73.4
54	24.4	2.4	42.4



THE LINDE GROUP

SHIPPED TO: USEPA Region 9
1337 S. 46th St. Bldg 201
Richmond, CA 94804

PAGE: 1 of 1

1538040

AU007498

CERTIFICATE OF ANALYSIS

WH 9/15/15

Sales#:	113219488	**Cylinder Size:**	6A (3.2" X 9.4")
Production#:	1350390	**Cylinder # :**	LC-104244
Certification Date:	Sep-01-2015	**Cylinder Pressure:**	1700 psig
P.O.# :	104725-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:	Sep-01-2016	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	10% Relative
Part Number:	34424	**NIST Traceable Certificate#:**	15-54610

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Bromofluorobenzene	460-00-4	100 ppb	107 ppb
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Sep-01-2015

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	1538040	09/01/16	
Analysis: TO15	SOP # 311	Rev. 3	

Analysis Date:	Instrument:		Analyst:
Criteria:			

Analyte	Ave Response, Expired	Comparison (explain in criteria section)	Fail criteria?
* See attached	TIC page	for BFB	response
File ID (1)			
File ID (2)			
File ID (3)			

Notes: Please refer to SOP 893 section 4.4 for extended use of BFB.

Approval Signatures	Approve (Y/N)	Signature	Print Name
Group Leader/Supervisor	Y		Ziyad Rajab
Technical Director	Y		Richard Bauer
Lab QAO	Y	Barbara Bates	Barbara Bates
		LAB QAO Signature Date	9-27-2016

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.

Extended expiration date: 9/1/17

Library Search Compound Report

Data Path : C:\msdchem\1\2016\data\083116_FSAA\
Data File : 083116N01.D
Acq On : 31 Aug 2016 10:26 am
Operator : LLH
Sample : S16H139-TUN1
Misc : BFB 1538040
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\msdchem\1\2016\method\082516N_TO15AA.M
Quant Title : TO15

TIC Library : C:\Database\NIST98.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Benzene, 1-bromo-3-fluoro- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.173	13.18 ppbv	5968750	CHLOROBENZENE-d5	22.335

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-bromo-3-fluoro-	174	C6H4BrF	001073-06-9	95
2	Benzene, 1-bromo-2-fluoro-	174	C6H4BrF	001072-85-1	94
3	Benzene, 1-bromo-2-fluoro-	174	C6H4BrF	001072-85-1	94
4	Benzene, 1-bromo-2-fluoro-	174	C6H4BrF	001072-85-1	94
5	p-Bromofluorobenzene	174	C6H4BrF	000460-00-4	90

Analytical Standard Record

EPA Region 9 Laboratory

1538040

Description:	TO/14A GC/MS Tuning Mix, Stock 100pp	**Expires:**	09/01/17
Standard Type:	Other Solution	**Prepared:**	09/01/15
Solvent:	Nitrogen	**Prepared By:**	Liza Hernandez
Final Volume (mls):	104000	**Department:**	Air
Vials:	1	**Last Edit:**	09/28/16 09:39 by LLH
Vendor:	Linde Spectra	**Lot Numbe**	1350390

Part #34424 Bar Code# AU007498 Cylinder # LC-104244
Do not use under 150psig.
Extended expiration date to 09/01/17 from the original exp date of 09/01/16. LLH 09/28/16

Analyte	CAS Number	Concentration (ppm)
4-Bromofluorobenzene	460-00-4	0.107

Analytical Standard Record
EPA Region 9 Laboratory
1639001

Description:	TO-14A 39 Component Mix Standard	**Expires:**	09/02/17
Standard Type:	Other Solution	**Prepared:**	09/02/16
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	09/19/16 10:47 by LLH
Vendor:	Linde Spectra	**Lot Numb**	1389094

Cylinder # AB-105715 39 component AU008424
Part # 34400

Analyte	CAS Number	Concentration (ppm)
1,2-Dibromoethane (EDB)	106-93-4	1.1
1,1,1-Trichloroethane	71-55-6	1.03
Benzene	71-43-2	1.07
1,4-Dichlorobenzene	106-46-7	1.06
1,3-Dichlorobenzene	541-73-1	1.05
1,3,5-Trimethylbenzene	108-67-8	1.07
1,2-Dichlorotetrafluoroethane	76-14-2	1.01
1,2-Dichloropropane	78-87-5	1.07
Carbon tetrachloride	56-23-5	1.04
1,2-Dichlorobenzene	95-50-1	1.04
Chlorobenzene	108-90-7	1.1
1,2,4-Trimethylbenzene	95-63-6	1.06
1,2,4-Trichlorobenzene	120-82-1	0.94
1,1-Dichloroethene	75-35-4	1.03
1,1-Dichloroethane	75-34-3	0.99
1,1,2-Trichloroethane	79-00-5	1.09
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.94
1,1,2,2-Tetrachloroethane	79-34-5	1.05
1,2-Dichloroethane	107-06-2	1.04
Ethylbenzene	100-41-4	1.09
Trichlorofluoromethane	75-69-4	1
Trichloroethene	79-01-6	1.1
trans-1,3-Dichloropropene	10061-02-6	0.97
Toluene	108-88-3	1.08
Tetrachloroethene	127-18-4	1.08
Styrene	100-42-5	1.03
o-Xylene	95-47-6	1.06
Bromomethane	74-83-9	1.07
Hexachlorobutadiene	87-68-3	0.99
Vinyl chloride	75-01-4	1.07

Analytical Standard Record

EPA Region 9 Laboratory

1639001

Dichloromethane	75-09-2	0.97
Dichlorodifluoromethane	75-71-8	1.06
cis-1,3-Dichloropropene	10061-01-5	1.04
cis-1,2-Dichloroethene	156-59-2	1.04
Chloromethane	74-87-3	1.1
Chloroform	67-66-3	1.07
Chloroethane	75-00-3	1.05
m&p-Xylene	179601-23-1	2.16

SCAN PRIMARY AU008424 1639001

THE LINDE GROUP Linde

SHIPPED TO: US EPA Region 9
1337 S. 46th St Bldg 201
Richmond, CA 94804

Ultra/ultra

CERTIFICATE OF ANALYSIS

Sales#:	114376313	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1389094	**Cylinder # :**	AB-105715
Certification Date:	Sep-02-2016	**Cylinder Pressure:**	1700 psig
P.O.# :	113911-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24086371	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Sep-02-2017	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative
Part Number:	34400	**NIST Traceable Certificate#:**	16-57530

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Freon-12 Dichlorodifluoromethane	75-71-8	1.00 ppm	1.06 ppm
Chloromethane	74-87-3	1.00 ppm	1.10 ppm
Freon-114 Dichlorotetrafluoromethane	76-14-2	1.00 ppm	1.01 ppm
Vinyl Chloride	75-01-4	1.00 ppm	1.07 ppm
Bromomethane	74-83-9	1.00 ppm	1.07 ppm
Chloroethane	75-00-3	1.00 ppm	1.05 ppm
Freon-11 Trichlorofluoromethane	75-69-4	1.00 ppm	1.00 ppm
1,1-Dichloroethene	75-35-4	1.00 ppm	1.03 ppm
Methylene Chloride Dichloromethane	75-09-2	1.00 ppm	0.97 ppm
Freon-113 112-Trichloro-122-trifluoro methane	76-13-1	1.00 ppm	0.94 ppm
1,1-Dichloroethane	75-34-3	1.00 ppm	0.99 ppm
Cis-1,2-Dichloroethylene	156-59-2	1.00 ppm	1.04 ppm
Chloroform	67-66-3	1.00 ppm	1.07 ppm
1,2-Dichloroethane	107-06-2	1.00 ppm	1.04 ppm
1,1,1-Trichloroethane	71-55-6	1.00 ppm	1.03 ppm
Benzene	71-43-2	1.00 ppm	1.07 ppm
Carbon Tetrachloride	56-23-5	1.00 ppm	1.04 ppm
1,2-Dichloropropane	78-87-5	1.00 ppm	1.07 ppm
Trichloroethylene	79-01-6	1.00 ppm	1.10 ppm
Cis-1,3-Dichloropropene	10061-01-5	1.00 ppm	1.04 ppm
Trans-1,3-Dichloropropene	10061-02-6	1.00 ppm	0.97 ppm
1,1,2-Trichloroethane	79-00-5	1.00 ppm	1.09 ppm
Toluene	108-88-3	1.00 ppm	1.08 ppm
1,2-Dibromoethane EDB	106-93-4	1.00 ppm	1.10 ppm
Tetrachloroethylene	127-18-4	1.00 ppm	1.08 ppm
Chlorobenzene	108-90-7	1.00 ppm	1.10 ppm
Ethylbenzene	100-41-4	1.00 ppm	1.09 ppm
P-Xylene	106-42-3	1.00 ppm	1.08 ppm

2.16

THE LINDE GROUP

163900 1

Linde

SHIPPED TO: US EPA Region 9
1337 S. 46th St Bldg 201
Richmond, CA 94804

PAGE: 2 of 2

CERTIFICATE OF ANALYSIS

Sales#:	114376313	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1389094	**Cylinder # :**	AB-105715
Certification Date:	Sep-02-2016	**Cylinder Pressure:**	1700 psig
P.O.# :	113911-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24086371	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Sep-02-2017	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative
Part Number:	34400	**NIST Traceable Certificate#:**	16-57530

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
M-Xylene	108-38-3	1.00 ppm	1.08 ppm
Styrene	100-42-5	1.00 ppm	1.03 ppm
O-Xylene	95-47-6	1.00 ppm	1.06 ppm
1,1,2,2-Tetrachloroethane	79-34-5	1.00 ppm	1.05 ppm
1,3,5-Trimethylbenzene	108-67-8	1.00 ppm	1.07 ppm
1,2,4-Trimethylbenzene	95-63-6	1.00 ppm	1.06 ppm
1,3-Dichlorobenzene	541-73-1	1.00 ppm	1.05 ppm
1,4-Dichlorobenzene	106-46-7	1.00 ppm	1.06 ppm
1,2-Dichlorobenzene	95-50-1	1.00 ppm	1.04 ppm
1,2,4-Trichlorobenzene	120-82-1	1.00 ppm	0.94 ppm
Hexachloro-1,3-Butadiene	87-68-3	1.00 ppm	0.99 ppm
Nitrogen	7727-37-9	Balance	Balance

Source Identification Number: 304354

ANALYST: Justin Kutz

DATE: Sep-02-2016

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

SCAN SUBSET A100 84 89 1639114

THE LINDE GROUP Linde

SHIPPED TO: US EPA Region 9
1337 S. 46th St. Bldg 201
Richmond, CA 94804

PAGE: 1 of 2

LM 9/23/16

CERTIFICATE OF ANALYSIS

Sales#:	114412305	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1390211	**Cylinder # :**	AB-105850
Certification Date:	Sep-13-2016	**Cylinder Pressure:**	1700 psig
P.O.# :	114198-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24086373	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Sep-13-2017	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative
Part Number:	34434	**NIST Traceable Certificate#:**	16-57530

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Propylene	115-07-1	1.00 ppm	1.10 ppm
1,3-Butadiene	106-99-0	1.00 ppm	1.06 ppm
Vinyl Bromide Bromoethene	593-60-2	1.00 ppm	1.08 ppm
Acetone	67-64-1	1.00 ppm	1.10 ppm
Isopropyl Alcohol 2 Propanol	67-63-0	1.00 ppm	1.10 ppm
Carbon Disulfide (Analytical Accuracy ± 10%)	75-15-0	1.00 ppm	1.06 ppm
Allyl Chloride	107-05-1	1.00 ppm	1.10 ppm
Trans-1,2-Dichloroethene	156-60-5	1.00 ppm	1.10 ppm
Methyl Tert-Butyl Ether	1634-04-4	1.00 ppm	1.08 ppm
Vinyl Acetate	108-05-4	1.00 ppm	1.10 ppm
Methyl Ethyl Ketone 2-Butanone	78-93-3	1.00 ppm	1.08 ppm
n-Hexane	110-54-3	1.00 ppm	1.05 ppm
Ethyl Acetate	141-78-6	1.00 ppm	1.09 ppm
Tetrahydrofuran	109-99-9	1.00 ppm	1.05 ppm
Cyclohexane	110-82-7	1.00 ppm	1.07 ppm
Bromodichloromethane	75-27-4	1.00 ppm	1.04 ppm
1,4-Dioxane	123-91-1	1.00 ppm	1.06 ppm
2,2,4-Trimethylpentane	540-84-1	1.00 ppm	1.06 ppm
n-Heptane	142-82-5	1.00 ppm	1.07 ppm
Methyl Isobutyl Ketone 4-Methyl-2-pentanone	108-10-1	1.00 ppm	1.06 ppm
Methyl Butyl Ketone 2-Hexanone	591-78-6	1.00 ppm	1.05 ppm
Dibromochloromethane	124-48-1	1.00 ppm	1.07 ppm
Bromoform	75-25-2	1.00 ppm	1.07 ppm

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

THE LINDE GROUP

163914

Linde

SHIPPED TO: US EPA Region 9
1337 S. 46th St. Bldg 201
Richmond, CA 94804

CERTIFICATE OF ANALYSIS

Sales#:	114412305	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1390211	**Cylinder # :**	AB-105850
Certification Date:	Sep-13-2016	**Cylinder Pressure:**	1700 psig
P.O.# :	114198-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24086373	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Sep-13-2017	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative
Part Number:	34434	**NIST Traceable Certificate#:**	16-57530

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Ethyltoluene	622-96-8	1.00 ppm	1.04 ppm
Benzyl Chloride (Analytical Accuracy ± 10%)	100-44-7	1.00 ppm	1.10 ppm
Nitrogen	7727-37-9	Balance	Balance

Source Identification Number: 304061

ANALYST: Lou Lorenzetti

DATE: Sep-13-2016

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

Analytical Standard Record

EPA Region 9 Laboratory

1639114

Description:	TO-15 25 Compound Subset Standard, 1pp	**Expires:**	09/13/17
Standard Type:	Other Solution	**Prepared:**	09/13/16
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	11/14/16 10:07 by EM
Vendor:	Linde Spectra	**Lot Numbe**	1390211

Linde Spectra via Restek; Cylinder# AB-105850; Bar code: AU008489
Part #34434

Analyte	CAS Number	Concentration (ppm)
Bromoform	75-25-2	1.07
1,4-Dioxane	123-91-1	1.06
2,2,4-Trimethylpentane	540-84-1	1.06
2-Butanone (MEK)	78-93-3	1.08
2-Hexanone	591-78-6	1.05
2-Propanol	67-63-0	1.1
4-Ethyltoluene	622-96-8	1.04
4-Methyl-2-pentanone (MIBK)	108-10-1	1.06
Acetone	67-64-1	1.1
Allyl chloride	107-05-1	1.1
Benzyl chloride	100-44-7	1.1
1,3-Butadiene	106-99-0	1.06
Bromoethene	593-60-2	1.08
Vinyl acetate	108-05-4	1.1
Carbon disulfide	75-15-0	1.06
Chlorodibromomethane	124-48-1	1.07
Cyclohexane	110-82-7	1.07
Ethyl acetate	141-78-6	1.09
Heptane	142-82-5	1.07
Hexane	110-54-3	1.05
Propene	115-07-1	1.1
tert-Butyl methyl ether (MTBE)	1634-04-4	1.08
Tetrahydrofuran	109-99-9	1.05
trans-1,2-Dichloroethene	156-60-5	1.1
Bromodichloromethane	75-27-4	1.04

Analytical Standard Record

EPA Region 9 Laboratory

1639115

Description:	TO-15 25 Compound Subset Standarc	**Expires:**	09/13/17
Standard Type:	Other Solution	**Prepared:**	09/13/16
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	09/23/16 11:42 by LLH
Vendor:	Linde Spectra	**Lot Numb**	1390212

Linde/Spectra via Restek; Cylinder# AB-104709; Bar code: AU008490
Part # 34435 Material # 24087388

Analyte	CAS Number	Concentration (ppm)
Bromoform	75-25-2	0.108
1,4-Dioxane	123-91-1	0.093
2,2,4-Trimethylpentane	540-84-1	0.106
2-Butanone (MEK)	78-93-3	0.107
2-Hexanone	591-78-6	0.097
2-Propanol	67-63-0	0.09
4-Ethyltoluene	622-96-8	0.103
4-Methyl-2-pentanone (MIBK)	108-10-1	0.101
Acetone	67-64-1	0.11
Allyl chloride	107-05-1	0.11
Benzyl chloride	100-44-7	0.103
1,3-Butadiene	106-99-0	0.103
Bromoethene	593-60-2	0.104
Vinyl acetate	108-05-4	0.108
Carbon disulfide	75-15-0	0.107
Chlorodibromomethane	124-48-1	0.107
Cyclohexane	110-82-7	0.107
Ethyl acetate	141-78-6	0.107
Heptane	142-82-5	0.106
Hexane	110-54-3	0.105
Propene	115-07-1	0.11
tert-Butyl methyl ether (MTBE)	1634-04-4	0.107
Tetrahydrofuran	109-99-9	0.102
trans-1,2-Dichloroethene	156-60-5	0.11
Bromodichloromethane	75-27-4	0.106

SIM SUBSET SCV 1639115

THE LINDE GROUP AU008490 Linde

SHIPPED TO: US EPA Region 9
1337 S. 46th St. Bldg 201
Richmond, CA 94804

PAGE: 1 of 2

CERTIFICATE OF ANALYSIS

Sales#:	114412275	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1390212	**Cylinder # :**	AB-104709
Certification Date:	Sep-13-2016	**Cylinder Pressure:**	1700 psig
P.O.# :	114195-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24087388	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Sep-13-2017	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	10% Relative
Part Number:	34435	**NIST Traceable Certificate#:**	16-57530

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Propylene	115-07-1	100 ppb	110 ppb
1,3-Butadiene	106-99-0	100 ppb	103 ppb
Vinyl Bromide Bromoethene	593-60-2	100 ppb	104 ppb
Acetone	67-64-1	100 ppb	110 ppb
Isopropyl Alcohol 2-Propanol	67-63-0	100 ppb	90 ppb
Carbon Disulfide (Analytical Accuracy ± 20%)	75-15-0	100 ppb	107 ppb
Allyl Chloride	107-05-1	100 ppb	110 ppb
Trans-1,2-Dichloroethene	156-60-5	100 ppb	110 ppb
Methyl Tert-Butyl Ether	1634-04-4	100 ppb	107 ppb
Vinyl Acetate	108-05-4	100 ppb	108 ppb
Methyl Ethyl Ketone 2-Butanone	78-93-3	100 ppb	107 ppb
n-Hexane	110-54-3	100 ppb	105 ppb
Ethyl Acetate	141-78-6	100 ppb	107 ppb
Tetrahydrofuran	109-99-9	100 ppb	102 ppb
Cyclohexane	110-82-7	100 ppb	107 ppb
Bromodichloromethane	75-27-4	100 ppb	106 ppb
1,4-Dioxane	123-91-1	100 ppb	93 ppb
2,2,4-Trimethylpentane	540-84-1	100 ppb	106 ppb
n-Heptane	142-82-5	100 ppb	106 ppb
Methyl Isobutyl Ketone 4-Methyl-2-Pentanone	108-10-1	100 ppb	101 ppb
Methyl Butyl Ketone 2-Hexanone	591-78-6	100 ppb	97 ppb
Dibromochloromethane	124-48-1	100 ppb	107 ppb
Bromoform	75-25-2	100 ppb	108 ppb

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

1639115

THE LINDE GROUP

Linde

SHIPPED TO: US EPA Region 9
1337 S. 46th St. Bldg 201
Richmond, CA 94804

PAGE: 2 of 2

CERTIFICATE OF ANALYSIS

Sales#:	114412275	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1390212	**Cylinder # :**	AB-104709
Certification Date:	Sep-13-2016	**Cylinder Pressure:**	1700 psig
P.O.# :	114195-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24087388	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Sep-13-2017	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	10% Relative
Part Number:	34435	**NIST Traceable Certificate#:**	16-57530

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Ethyltoluene	622-96-8	100 ppb	103 ppb
Benzyl Chloride (Analytical Accuracy ± 20%)	100-44-7	100 ppb	103 ppb
Nitrogen	7727-37-9	Balance	Balance

Source Identification Number: 303025

ANALYST: Lou Lorenzetti

DATE: Sep-13-2016

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

Analytical Standard Record

EPA Region 9 Laboratory

1707044

Description:	TO-14A Internal Standard Mix, Stock	**Expires:**	01/26/18
Standard Type:	Other Solution	**Prepared:**	01/26/17
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	110000	**Department:**	Air
Vials:	1	**Last Edit:**	02/13/17 13:25 by LLH
Vendor:	Scott/Air Liquide	**Lot Numb**	160-400844159-1

Part # 26353, Cylinder #: ST0000167301 AU008897

Analyte	CAS Number	Concentration (ppm)
Chlorobenzene-d5	3114-55-4	0.11
Bromochloromethane	74-97-5	0.11
1,4-Difluorobenzene	540-36-3	0.1

Airgas
an Air Liquide company

1Std 1707044

Airgas Specialty Ga
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

AU008897

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04NI99CA98C000	Reference Number:	160-400844159-1
Cylinder Number:	ST0000167301	Cylinder Volume:	3.7 LG
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	1800 PSIG
Analysis Date:	Jan 26, 2017	Valve Outlet:	180
Lot Number:	160-400844159-1		

Expiration Date: Jan 26, 2018

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	100.00 PPB	100.00 PPB	+/- 10%
BROMOCHLOROMETHANE	100.00 PPB	110.00 PPB	+/- 10%
CHLOROBENZENE-D5	100.00 PPB	110.00 PPB	+/- 10%
NITROGEN	Balance		

Permanent Notes: RESTEK P/N 26353

Approved for Release

Analytical Standard Record
EPA Region 9 Laboratory
1719047

Description:	TO-14A 39 Component Mix Standard	**Expires:**	04/28/18
Standard Type:	Analyte Spike	**Prepared:**	04/28/17
Solvent:	Nitrogen	**Prepared By:**	** Vendor **
Final Volume (mls):	98000	**Department:**	Air
Vials:	1	**Last Edit:**	05/09/17 16:30 by LLH
Vendor:	Linde Spectra	**Lot Numb**	1415285

Cylinder # AB-106486 39 component AU009149
CAT NO. 34421 LINDE

Analyte	CAS Number	Concentration (ppm)
1,2-Dibromoethane (EDB)	106-93-4	0.11
1,1,1-Trichloroethane	71-55-6	0.109
Benzene	71-43-2	0.11
1,4-Dichlorobenzene	106-46-7	0.106
1,3-Dichlorobenzene	541-73-1	0.105
1,3,5-Trimethylbenzene	108-67-8	0.11
1,2-Dichlorotetrafluoroethane	76-14-2	0.106
1,2-Dichloropropane	78-87-5	0.11
Carbon tetrachloride	56-23-5	0.11
1,2-Dichlorobenzene	95-50-1	0.103
Chlorobenzene	108-90-7	0.11
1,2,4-Trimethylbenzene	95-63-6	0.105
1,2,4-Trichlorobenzene	120-82-1	0.09
1,1-Dichloroethene	75-35-4	0.109
1,1-Dichloroethane	75-34-3	0.104
1,1,2-Trichloroethane	79-00-5	0.11
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.099
1,1,2,2-Tetrachloroethane	79-34-5	0.11
1,2-Dichloroethane	107-06-2	0.109
Ethylbenzene	100-41-4	0.11
Trichlorofluoromethane	75-69-4	0.101
Trichloroethene	79-01-6	0.11
trans-1,3-Dichloropropene	10061-02-6	0.11
Toluene	108-88-3	0.11
Tetrachloroethene	127-18-4	0.11
Styrene	100-42-5	0.106
o-Xylene	95-47-6	0.11
Bromomethane	74-83-9	0.11
Hexachlorobutadiene	87-68-3	0.09
Vinyl chloride	75-01-4	0.11

Analytical Standard Record

EPA Region 9 Laboratory

1719047

Dichloromethane	75-09-2	0.103
Dichlorodifluoromethane	75-71-8	0.11
cis-1,3-Dichloropropene	10061-01-5	0.11
cis-1,2-Dichloroethene	156-59-2	0.11
Chloromethane	74-87-3	0.11
Chloroform	67-66-3	0.11
Chloroethane	75-00-3	0.11
m&p-Xylene	179601-23-1	0.22

SIM PRIMARY SCV AU009149 1719017

THE LINDE GROUP

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

PAGE: 1 of 2

WK05 | 09/17

CERTIFICATE OF ANALYSIS

Sales#:	115135916	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1415285	**Cylinder # :**	AB-106486
Certification Date:	Apr-28-2017	**Cylinder Pressure:**	1700 psig
P.O.# :	120488-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24087264	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Apr-28-2018	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	10% Relative
Part Number:	34421	**NIST Traceable Certificate#:**	16-61708

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Freon-12 Dichlorodifluoromethane	75-71-8	100 ppb	110 ppb
Chloromethane	74-87-3	100 ppb	110 ppb
Freon-114 Dichlorotetrafluoroethane	76-14-2	100 ppb	106 ppb
Vinyl Chloride	75-01-4	100 ppb	110 ppb
Bromomethane	74-83-9	100 ppb	110 ppb
Chloroethane	75-00-3	100 ppb	110 ppb
Freon-11 Trichlorofluoromethane	75-69-4	100 ppb	101 ppb
1,1-Dichloroethene	75-35-4	100 ppb	109 ppb
Methylene Chloride	75-09-2	100 ppb	103 ppb
Freon-113 112-trichloro-122-trifluoro methane	76-13-1	100 ppb	99 ppb
1,1-Dichloroethane	75-34-3	100 ppb	104 ppb
Cis-1,2-Dichloroethylene	156-59-2	100 ppb	110 ppb
Chloroform	67-66-3	100 ppb	110 ppb
1,2-Dichloroethane	107-06-2	100 ppb	109 ppb
1,1,1-Trichloroethane	71-55-6	100 ppb	109 ppb
Benzene	71-43-2	100 ppb	110 ppb
Carbon Tetrachloride	56-23-5	100 ppb	110 ppb
1,2-Dichloropropane	78-87-5	100 ppb	110 ppb
Trichloroethylene	79-01-6	100 ppb	110 ppb
Cis-1,3-Dichloropropene	10061-01-5	100 ppb	110 ppb
Trans-1,3-Dichloropropene	10061-02-6	100 ppb	110 ppb
1,1,2-Trichloroethane	79-00-5	100 ppb	110 ppb
Toluene	108-88-3	100 ppb	110 ppb
1,2-Dibromoethane	106-93-4	100 ppb	110 ppb
Tetrachloroethylene	127-18-4	100 ppb	110 ppb
Chlorobenzene	108-90-7	100 ppb	110 ppb
Ethylbenzene	100-41-4	100 ppb	110 ppb
P-Xylene	106-42-3	100 ppb	110 ppb

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

THE LINDE GROUP

17119047

Linde

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

PAGE: 2 of 2

CERTIFICATE OF ANALYSIS

Sales#:	115135916	**Cylinder Size:**	185 (3.2" X 9.4")
Production#:	1415285	**Cylinder # :**	AB-106486
Certification Date:	Apr-28-2017	**Cylinder Pressure:**	1700 psig
P.O.# :	120488-Restek	**Cylinder Valve:**	CGA 180 / Aluminum
Blend Type:	CERTIFIED	**Cylinder Volume:**	0.8 Liter
Material#:	24087264	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	98 Liters
Expiration Date:	Apr-28-2018	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	10% Relative
Part Number:	34421	**NIST Traceable Certificate#:**	16-61708

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
M-Xylene	108-38-3	100 ppb	110 ppb
Styrene	100-42-5	100 ppb	106 ppb
O-Xylene	95-47-6	100 ppb	110 ppb
1,1,2,2-Tetrachloroethane	79-34-5	100 ppb	110 ppb
1,3,5-Trimethylbenzene	108-67-8	100 ppb	110 ppb
1,2,4-Trimethylbenzene	95-63-6	100 ppb	105 ppb
1,3-Dichlorobenzene	541-73-1	100 ppb	105 ppb
1,4-Dichlorobenzene	106-46-7	100 ppb	106 ppb
1,2-Dichlorobenzene	95-50-1	100 ppb	103 ppb
1,2,4-Trichlorobenzene	120-82-1	100 ppb	90 ppb
Hexachloro-1,3-Butadiene	87-68-3	100 ppb	90 ppb
Nitrogen	7727-37-9	Balance	Balance

Source Identification Number: 308296

ANALYST: Justin Kutz

DATE: Apr-28-2017

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

Analytical Standard Record
EPA Region 9 Laboratory
1721078

Description:	TO-15 SCV Std, 10 ppbv	**Expires:**	06/21/17
Standard Type:	Other Solution	**Prepared:**	05/24/17
Solvent:	Zero Grade Air	**Prepared By:**	Estrellita Manuel
Final Volume (mls):	2000	**Department:**	Air
Vials:	1	**Last Edit:**	05/24/17 12:59 by EM
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0103
Bromoethene	593-60-2	0.0104
Bromodichloromethane	75-27-4	0.0106
Benzyl chloride	100-44-7	0.0103
Benzene	71-43-2	0.011
Allyl chloride	107-05-1	0.011
Acetone	67-64-1	0.011
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0101
4-Ethyltoluene	622-96-8	0.0103
2-Propanol	67-63-0	0.009
2-Hexanone	591-78-6	0.0097
2-Butanone (MEK)	78-93-3	0.0107
2,2,4-Trimethylpentane	540-84-1	0.0106
1,4-Dioxane	123-91-1	0.0093
1,1,1-Trichloroethane	71-55-6	0.0109
1,2-Dibromoethane (EDB)	106-93-4	0.011
1,1,2,2-Tetrachloroethane	79-34-5	0.011
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0099
1,1,2-Trichloroethane	79-00-5	0.011
1,1-Dichloroethane	75-34-3	0.0104
1,1-Dichloroethene	75-35-4	0.0109
1,4-Dichlorobenzene	106-46-7	0.0106
1,2,4-Trimethylbenzene	95-63-6	0.0105
1,3-Dichlorobenzene	541-73-1	0.0105
1,2-Dichlorobenzene	95-50-1	0.0103
1,2-Dichloroethane	107-06-2	0.0109
1,2-Dichloropropane	78-87-5	0.011
1,2-Dichlorotetrafluoroethane	76-14-2	0.0106
1,3,5-Trimethylbenzene	108-67-8	0.011
Carbon disulfide	75-15-0	0.0107

Analytical Standard Record
EPA Region 9 Laboratory
1721078

1,2,4-Trichlorobenzene	120-82-1	0.009
Tetrahydrofuran	109-99-9	0.0102
Bromoform	75-25-2	0.0108
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	0.0106
Hexachlorobutadiene	87-68-3	0.009
Tetrachloroethene	127-18-4	0.011
Heptane	142-82-5	0.0106
Toluene	108-88-3	0.011
trans-1,2-Dichloroethene	156-60-5	0.011
trans-1,3-Dichloropropene	10061-02-6	0.011
Trichloroethene	79-01-6	0.011
Trichlorofluoromethane	75-69-4	0.0101
Vinyl acetate	108-05-4	0.0108
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0107
cis-1,2-Dichloroethene	156-59-2	0.011
Vinyl chloride	75-01-4	0.011
Carbon tetrachloride	56-23-5	0.011
Chlorobenzene	108-90-7	0.011
Chlorodibromomethane	124-48-1	0.0107
Chloroethane	75-00-3	0.011
Hexane	110-54-3	0.0105
Chloromethane	74-87-3	0.011
Bromomethane	74-83-9	0.011
cis-1,3-Dichloropropene	10061-01-5	0.011
Cyclohexane	110-82-7	0.0107
Dichlorodifluoromethane	75-71-8	0.011
Dichloromethane	75-09-2	0.0103
Ethyl acetate	141-78-6	0.0107
Ethylbenzene	100-41-4	0.011
Chloroform	67-66-3	0.011

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1719047	TO-14A 39 Component Mix Stand	04/28/17	** Vendor **	04/28/18	05/09/17 16:30 by LLH	200
1639115	TO-15 25 Compound Subset Stand	09/13/16	** Vendor **	09/13/17	09/23/16 11:42 by LLH	200

Analytical Standard Record
EPA Region 9 Laboratory
1722109

Description:	TO-15 SCV 10 ppbv (VIRTUAL)	**Expires:**	06/21/17
Standard Type:	Analyte Spike	**Prepared:**	06/02/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/02/17 11:07 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.011
1,4-Dioxane	123-91-1	0.0093
2,2,4-Trimethylpentane	540-84-1	0.0106
2-Butanone (MEK)	78-93-3	0.0107
2-Hexanone	591-78-6	0.0097
2-Propanol	67-63-0	0.009
Bromoform	75-25-2	0.0108
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0101
1,3-Dichlorobenzene	541-73-1	0.0105
Allyl chloride	107-05-1	0.011
Benzene	71-43-2	0.011
Benzyl chloride	100-44-7	0.0103
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.0106
1,1,1-Trichloroethane	71-55-6	0.0109
4-Ethyltoluene	622-96-8	0.0103
1,2-Dichlorobenzene	95-50-1	0.0103
1,1,2,2-Tetrachloroethane	79-34-5	0.011
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0099
1,1,2-Trichloroethane	79-00-5	0.011
1,1-Dichloroethane	75-34-3	0.0104
1,1-Dichloroethene	75-35-4	0.0109
1,2,4-Trichlorobenzene	120-82-1	0.009
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.011
1,4-Dichlorobenzene	106-46-7	0.0106
1,2-Dichloroethane	107-06-2	0.0109
1,2-Dichloropropane	78-87-5	0.011
1,2-Dichlorotetrafluoroethane	76-14-2	0.0106
1,3,5-Trimethylbenzene	108-67-8	0.011

Analytical Standard Record

EPA Region 9 Laboratory

1722109

1,3-Butadiene	106-99-0	0.0103
Bromomethane	74-83-9	0.011
1,2,4-Trimethylbenzene	95-63-6	0.0105
Tetrahydrofuran	109-99-9	0.0102
Hexane	110-54-3	0.0105
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	0.0106
Bromoethene	593-60-2	0.0104
Tetrachloroethene	127-18-4	0.011
Ethylbenzene	100-41-4	0.011
Toluene	108-88-3	0.011
trans-1,2-Dichloroethene	156-60-5	0.011
trans-1,3-Dichloropropene	10061-02-6	0.011
Trichloroethene	79-01-6	0.011
Trichlorofluoromethane	75-69-4	0.0101
Vinyl acetate	108-05-4	0.0108
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0107
cis-1,2-Dichloroethene	156-59-2	0.011
Carbon disulfide	75-15-0	0.0107
Carbon tetrachloride	56-23-5	0.011
Chlorobenzene	108-90-7	0.011
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.0107
Chloroethane	75-00-3	0.011
Hexachlorobutadiene	87-68-3	0.009
Chloromethane	74-87-3	0.011
Heptane	142-82-5	0.0106
cis-1,3-Dichloropropene	10061-01-5	0.011
Cyclohexane	110-82-7	0.0107
Dichlorodifluoromethane	75-71-8	0.011
Dichloromethane	75-09-2	0.0103
Ethyl acetate	141-78-6	0.0107
Vinyl chloride	75-01-4	0.011
Chloroform	67-66-3	0.011

Analytical Standard Record

EPA Region 9 Laboratory

1722109

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1721078	TO-15 SCV Std, 10 ppbv	05/24/17	Estrellita Manuel	06/21/17	05/24/17 12:59 by EM	200
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40

Analytical Standard Record

EPA Region 9 Laboratory

1723021

Description:	TO-15 LOW Std, 10 ppbv	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	2500	**Department:**	Air
Vials:	2	**Last Edit:**	06/05/17 10:06 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0106
Bromoethene	593-60-2	0.0108
Bromodichloromethane	75-27-4	0.0104
Benzyl chloride	100-44-7	0.011
Benzene	71-43-2	0.0107
Allyl chloride	107-05-1	0.011
Acetone	67-64-1	0.011
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0106
4-Ethyltoluene	622-96-8	0.0104
2-Propanol	67-63-0	0.011
2-Hexanone	591-78-6	0.0105
2-Butanone (MEK)	78-93-3	0.0108
2,2,4-Trimethylpentane	540-84-1	0.0106
1,4-Dioxane	123-91-1	0.0106
1,1,1-Trichloroethane	71-55-6	0.0103
1,2-Dibromoethane (EDB)	106-93-4	0.011
1,1,2,2-Tetrachloroethane	79-34-5	0.0105
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0094
1,1,2-Trichloroethane	79-00-5	0.0109
1,1-Dichloroethane	75-34-3	0.0099
1,1-Dichloroethene	75-35-4	0.0103
1,4-Dichlorobenzene	106-46-7	0.0106
1,2,4-Trimethylbenzene	95-63-6	0.0106
1,3-Dichlorobenzene	541-73-1	0.0105
1,2-Dichlorobenzene	95-50-1	0.0104
1,2-Dichloroethane	107-06-2	0.0104
1,2-Dichloropropane	78-87-5	0.0107
1,2-Dichlorotetrafluoroethane	76-14-2	0.0101
1,3,5-Trimethylbenzene	108-67-8	0.0107
Carbon disulfide	75-15-0	0.0106

Analytical Standard Record
EPA Region 9 Laboratory
1723021

1,2,4-Trichlorobenzene	120-82-1	0.0094
Tetrahydrofuran	109-99-9	0.0105
Bromoform	75-25-2	0.0107
m&p-Xylene	179601-23-1	0.0216
o-Xylene	95-47-6	0.0106
Propene	115-07-1	0.011
Styrene	100-42-5	0.0103
Hexachlorobutadiene	87-68-3	0.0099
Tetrachloroethene	127-18-4	0.0108
Heptane	142-82-5	0.0107
Toluene	108-88-3	0.0108
trans-1,2-Dichloroethene	156-60-5	0.011
trans-1,3-Dichloropropene	10061-02-6	0.0097
Trichloroethene	79-01-6	0.011
Trichlorofluoromethane	75-69-4	0.01
Vinyl acetate	108-05-4	0.011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0108
cis-1,2-Dichloroethene	156-59-2	0.0104
Vinyl chloride	75-01-4	0.0107
Carbon tetrachloride	56-23-5	0.0104
Chlorobenzene	108-90-7	0.011
Chlorodibromomethane	124-48-1	0.0107
Chloroethane	75-00-3	0.0105
Hexane	110-54-3	0.0105
Chloromethane	74-87-3	0.011
Bromomethane	74-83-9	0.0107
cis-1,3-Dichloropropene	10061-01-5	0.0104
Cyclohexane	110-82-7	0.0107
Dichlorodifluoromethane	75-71-8	0.0106
Dichloromethane	75-09-2	0.0097
Ethyl acetate	141-78-6	0.0109
Ethylbenzene	100-41-4	0.0109
Chloroform	67-66-3	0.0107

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1639001	TO-14A 39 Component Mix Stand	09/02/16	** Vendor **	09/02/17	09/19/16 10:47 by LLH	25
1639114	TO-15 25 Compound Subset Stand	09/13/16	** Vendor **	09/13/17	11/14/16 10:07 by EM	25

Analytical Standard Record
EPA Region 9 Laboratory
1723022

Description:	TO-15 CAL Std, 20 ppbv	**Expires:**	07/04/17
Standard Type:	Analyte Spike	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	2500	**Department:**	Air
Vials:	2	**Last Edit:**	06/05/17 10:08 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
1,3-Butadiene	106-99-0	0.0212
Bromoethene	593-60-2	0.0216
Bromodichloromethane	75-27-4	0.0208
Benzyl chloride	100-44-7	0.022
Benzene	71-43-2	0.0214
Allyl chloride	107-05-1	0.022
Acetone	67-64-1	0.022
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0212
4-Ethyltoluene	622-96-8	0.0208
2-Propanol	67-63-0	0.022
2-Hexanone	591-78-6	0.021
2-Butanone (MEK)	78-93-3	0.0216
2,2,4-Trimethylpentane	540-84-1	0.0212
1,4-Dioxane	123-91-1	0.0212
1,1,1-Trichloroethane	71-55-6	0.0206
1,2-Dibromoethane (EDB)	106-93-4	0.022
1,1,2,2-Tetrachloroethane	79-34-5	0.021
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0188
1,1,2-Trichloroethane	79-00-5	0.0218
1,1-Dichloroethane	75-34-3	0.0198
1,1-Dichloroethene	75-35-4	0.0206
1,4-Dichlorobenzene	106-46-7	0.0212
1,2,4-Trimethylbenzene	95-63-6	0.0212
1,3-Dichlorobenzene	541-73-1	0.021
1,2-Dichlorobenzene	95-50-1	0.0208
1,2-Dichloroethane	107-06-2	0.0208
1,2-Dichloropropane	78-87-5	0.0214
1,2-Dichlorotetrafluoroethane	76-14-2	0.0202
1,3,5-Trimethylbenzene	108-67-8	0.0214
Carbon disulfide	75-15-0	0.0212

Analytical Standard Record
EPA Region 9 Laboratory
1723022

1,2,4-Trichlorobenzene	120-82-1	0.0188
Tetrahydrofuran	109-99-9	0.021
Bromoform	75-25-2	0.0214
m&p-Xylene	179601-23-1	0.0432
o-Xylene	95-47-6	0.0212
Propene	115-07-1	0.022
Styrene	100-42-5	0.0206
Hexachlorobutadiene	87-68-3	0.0198
Tetrachloroethene	127-18-4	0.0216
Heptane	142-82-5	0.0214
Toluene	108-88-3	0.0216
trans-1,2-Dichloroethene	156-60-5	0.022
trans-1,3-Dichloropropene	10061-02-6	0.0194
Trichloroethene	79-01-6	0.022
Trichlorofluoromethane	75-69-4	0.02
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0216
cis-1,2-Dichloroethene	156-59-2	0.0208
Vinyl chloride	75-01-4	0.0214
Carbon tetrachloride	56-23-5	0.0208
Chlorobenzene	108-90-7	0.022
Chlorodibromomethane	124-48-1	0.0214
Chloroethane	75-00-3	0.021
Hexane	110-54-3	0.021
Chloromethane	74-87-3	0.022
Bromomethane	74-83-9	0.0214
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0214
Dichlorodifluoromethane	75-71-8	0.0212
Dichloromethane	75-09-2	0.0194
Ethyl acetate	141-78-6	0.0218
Ethylbenzene	100-41-4	0.0218
Chloroform	67-66-3	0.0214

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1639001	TO-14A 39 Component Mix Stand	09/02/16	** Vendor **	09/02/17	09/19/16 10:47 by LLH	50
1639114	TO-15 25 Compound Subset Stand	09/13/16	** Vendor **	09/13/17	11/14/16 10:07 by EM	50

Analytical Standard Record

EPA Region 9 Laboratory

1723023

Description:	TO-15 CAL1 1.0 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:11 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0011
1,4-Dioxane	123-91-1	0.00106
2,2,4-Trimethylpentane	540-84-1	0.00106
2-Butanone (MEK)	78-93-3	0.00108
2-Hexanone	591-78-6	0.00105
2-Propanol	67-63-0	0.0011
Bromoform	75-25-2	0.00107
4-Methyl-2-pentanone (MIBK)	108-10-1	0.00106
1,3-Dichlorobenzene	541-73-1	0.00105
Allyl chloride	107-05-1	0.0011
Benzene	71-43-2	0.00107
Benzyl chloride	100-44-7	0.0011
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.00104
1,1,1-Trichloroethane	71-55-6	0.00103
4-Ethyltoluene	622-96-8	0.00104
1,2-Dichlorobenzene	95-50-1	0.00104
1,1,2,2-Tetrachloroethane	79-34-5	0.00105
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.00094
1,1,2-Trichloroethane	79-00-5	0.00109
1,1-Dichloroethane	75-34-3	0.00099
1,1-Dichloroethene	75-35-4	0.00103
1,2,4-Trichlorobenzene	120-82-1	0.00094
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.0011
1,4-Dichlorobenzene	106-46-7	0.00106
1,2-Dichloroethane	107-06-2	0.00104
1,2-Dichloropropane	78-87-5	0.00107
1,2-Dichlorotetrafluoroethane	76-14-2	0.00101
1,3,5-Trimethylbenzene	108-67-8	0.00107

Analytical Standard Record

EPA Region 9 Laboratory

1723023

1,3-Butadiene	106-99-0	0.00106
Bromomethane	74-83-9	0.00107
1,2,4-Trimethylbenzene	95-63-6	0.00106
Tetrahydrofuran	109-99-9	0.00105
Hexane	110-54-3	0.00105
m&p-Xylene	179601-23-1	0.00216
o-Xylene	95-47-6	0.00106
Propene	115-07-1	0.0011
Styrene	100-42-5	0.00103
Bromoethene	593-60-2	0.00108
Tetrachloroethene	127-18-4	0.00108
Ethylbenzene	100-41-4	0.00109
Toluene	108-88-3	0.00108
trans-1,2-Dichloroethene	156-60-5	0.0011
trans-1,3-Dichloropropene	10061-02-6	0.00097
Trichloroethene	79-01-6	0.0011
Trichlorofluoromethane	75-69-4	0.001
Vinyl acetate	108-05-4	0.0011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.00108
cis-1,2-Dichloroethene	156-59-2	0.00104
Carbon disulfide	75-15-0	0.00106
Carbon tetrachloride	56-23-5	0.00104
Chlorobenzene	108-90-7	0.0011
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.00107
Chloroethane	75-00-3	0.00105
Hexachlorobutadiene	87-68-3	0.00099
Chloromethane	74-87-3	0.0011
Heptane	142-82-5	0.00107
cis-1,3-Dichloropropene	10061-01-5	0.00104
Cyclohexane	110-82-7	0.00107
Dichlorodifluoromethane	75-71-8	0.00106
Dichloromethane	75-09-2	0.00097
Ethyl acetate	141-78-6	0.00109
Vinyl chloride	75-01-4	0.00107
Chloroform	67-66-3	0.00107

Analytical Standard Record

EPA Region 9 Laboratory

1723023

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40
1723021	TO-15 LOW Std, 10 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:06 by LLH	20

Analytical Standard Record

EPA Region 9 Laboratory

1723024

Description:	TO-15 CAL2 2.0 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:13 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0022
1,4-Dioxane	123-91-1	0.00212
2,2,4-Trimethylpentane	540-84-1	0.00212
2-Butanone (MEK)	78-93-3	0.00216
2-Hexanone	591-78-6	0.0021
2-Propanol	67-63-0	0.0022
Bromoform	75-25-2	0.00214
4-Methyl-2-pentanone (MIBK)	108-10-1	0.00212
1,3-Dichlorobenzene	541-73-1	0.0021
Allyl chloride	107-05-1	0.0022
Benzene	71-43-2	0.00214
Benzyl chloride	100-44-7	0.0022
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.00208
1,1,1-Trichloroethane	71-55-6	0.00206
4-Ethyltoluene	622-96-8	0.00208
1,2-Dichlorobenzene	95-50-1	0.00208
1,1,2,2-Tetrachloroethane	79-34-5	0.0021
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.00188
1,1,2-Trichloroethane	79-00-5	0.00218
1,1-Dichloroethane	75-34-3	0.00198
1,1-Dichloroethene	75-35-4	0.00206
1,2,4-Trichlorobenzene	120-82-1	0.00188
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.0022
1,4-Dichlorobenzene	106-46-7	0.00212
1,2-Dichloroethane	107-06-2	0.00208
1,2-Dichloropropane	78-87-5	0.00214
1,2-Dichlorotetrafluoroethane	76-14-2	0.00202
1,3,5-Trimethylbenzene	108-67-8	0.00214

Analytical Standard Record

EPA Region 9 Laboratory

1723024

1,3-Butadiene	106-99-0	0.00212
Bromomethane	74-83-9	0.00214
1,2,4-Trimethylbenzene	95-63-6	0.00212
Tetrahydrofuran	109-99-9	0.0021
Hexane	110-54-3	0.0021
m&p-Xylene	179601-23-1	0.00432
o-Xylene	95-47-6	0.00212
Propene	115-07-1	0.0022
Styrene	100-42-5	0.00206
Bromoethene	593-60-2	0.00216
Tetrachloroethene	127-18-4	0.00216
Ethylbenzene	100-41-4	0.00218
Toluene	108-88-3	0.00216
trans-1,2-Dichloroethene	156-60-5	0.0022
trans-1,3-Dichloropropene	10061-02-6	0.00194
Trichloroethene	79-01-6	0.0022
Trichlorofluoromethane	75-69-4	0.002
Vinyl acetate	108-05-4	0.0022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.00216
cis-1,2-Dichloroethene	156-59-2	0.00208
Carbon disulfide	75-15-0	0.00212
Carbon tetrachloride	56-23-5	0.00208
Chlorobenzene	108-90-7	0.0022
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.00214
Chloroethane	75-00-3	0.0021
Hexachlorobutadiene	87-68-3	0.00198
Chloromethane	74-87-3	0.0022
Heptane	142-82-5	0.00214
cis-1,3-Dichloropropene	10061-01-5	0.00208
Cyclohexane	110-82-7	0.00214
Dichlorodifluoromethane	75-71-8	0.00212
Dichloromethane	75-09-2	0.00194
Ethyl acetate	141-78-6	0.00218
Vinyl chloride	75-01-4	0.00214
Chloroform	67-66-3	0.00214

Analytical Standard Record

EPA Region 9 Laboratory

1723024

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1723022	TO-15 CAL Std, 20 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:08 by LLH	20
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40

Analytical Standard Record

EPA Region 9 Laboratory

1723025

Description:	TO-15 CAL3 5.0 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:13 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0055
1,4-Dioxane	123-91-1	0.0053
2,2,4-Trimethylpentane	540-84-1	0.0053
2-Butanone (MEK)	78-93-3	0.0054
2-Hexanone	591-78-6	0.00525
2-Propanol	67-63-0	0.0055
Bromoform	75-25-2	0.00535
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0053
1,3-Dichlorobenzene	541-73-1	0.00525
Allyl chloride	107-05-1	0.0055
Benzene	71-43-2	0.00535
Benzyl chloride	100-44-7	0.0055
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.0052
1,1,1-Trichloroethane	71-55-6	0.00515
4-Ethyltoluene	622-96-8	0.0052
1,2-Dichlorobenzene	95-50-1	0.0052
1,1,2,2-Tetrachloroethane	79-34-5	0.00525
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0047
1,1,2-Trichloroethane	79-00-5	0.00545
1,1-Dichloroethane	75-34-3	0.00495
1,1-Dichloroethene	75-35-4	0.00515
1,2,4-Trichlorobenzene	120-82-1	0.0047
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.0055
1,4-Dichlorobenzene	106-46-7	0.0053
1,2-Dichloroethane	107-06-2	0.0052
1,2-Dichloropropane	78-87-5	0.00535
1,2-Dichlorotetrafluoroethane	76-14-2	0.00505
1,3,5-Trimethylbenzene	108-67-8	0.00535

Analytical Standard Record

EPA Region 9 Laboratory

1723025

1,3-Butadiene	106-99-0	0.0053
Bromomethane	74-83-9	0.00535
1,2,4-Trimethylbenzene	95-63-6	0.0053
Tetrahydrofuran	109-99-9	0.00525
Hexane	110-54-3	0.00525
m&p-Xylene	179601-23-1	0.0108
o-Xylene	95-47-6	0.0053
Propene	115-07-1	0.0055
Styrene	100-42-5	0.00515
Bromoethene	593-60-2	0.0054
Tetrachloroethene	127-18-4	0.0054
Ethylbenzene	100-41-4	0.00545
Toluene	108-88-3	0.0054
trans-1,2-Dichloroethene	156-60-5	0.0055
trans-1,3-Dichloropropene	10061-02-6	0.00485
Trichloroethene	79-01-6	0.0055
Trichlorofluoromethane	75-69-4	0.005
Vinyl acetate	108-05-4	0.0055
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0054
cis-1,2-Dichloroethene	156-59-2	0.0052
Carbon disulfide	75-15-0	0.0053
Carbon tetrachloride	56-23-5	0.0052
Chlorobenzene	108-90-7	0.0055
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.00535
Chloroethane	75-00-3	0.00525
Hexachlorobutadiene	87-68-3	0.00495
Chloromethane	74-87-3	0.0055
Heptane	142-82-5	0.00535
cis-1,3-Dichloropropene	10061-01-5	0.0052
Cyclohexane	110-82-7	0.00535
Dichlorodifluoromethane	75-71-8	0.0053
Dichloromethane	75-09-2	0.00485
Ethyl acetate	141-78-6	0.00545
Vinyl chloride	75-01-4	0.00535
Chloroform	67-66-3	0.00535

Analytical Standard Record

EPA Region 9 Laboratory

1723025

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40
1723022	TO-15 CAL Std, 20 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:08 by LLH	50

Analytical Standard Record
EPA Region 9 Laboratory
1723026

Description:	TO-15 CAL4 10 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:14 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.011
1,4-Dioxane	123-91-1	0.0106
2,2,4-Trimethylpentane	540-84-1	0.0106
2-Butanone (MEK)	78-93-3	0.0108
2-Hexanone	591-78-6	0.0105
2-Propanol	67-63-0	0.011
Bromoform	75-25-2	0.0107
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0106
1,3-Dichlorobenzene	541-73-1	0.0105
Allyl chloride	107-05-1	0.011
Benzene	71-43-2	0.0107
Benzyl chloride	100-44-7	0.011
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.0104
1,1,1-Trichloroethane	71-55-6	0.0103
4-Ethyltoluene	622-96-8	0.0104
1,2-Dichlorobenzene	95-50-1	0.0104
1,1,2,2-Tetrachloroethane	79-34-5	0.0105
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0094
1,1,2-Trichloroethane	79-00-5	0.0109
1,1-Dichloroethane	75-34-3	0.0099
1,1-Dichloroethene	75-35-4	0.0103
1,2,4-Trichlorobenzene	120-82-1	0.0094
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.011
1,4-Dichlorobenzene	106-46-7	0.0106
1,2-Dichloroethane	107-06-2	0.0104
1,2-Dichloropropane	78-87-5	0.0107
1,2-Dichlorotetrafluoroethane	76-14-2	0.0101
1,3,5-Trimethylbenzene	108-67-8	0.0107

Analytical Standard Record

EPA Region 9 Laboratory

1723026

1,3-Butadiene	106-99-0	0.0106
Bromomethane	74-83-9	0.0107
1,2,4-Trimethylbenzene	95-63-6	0.0106
Tetrahydrofuran	109-99-9	0.0105
Hexane	110-54-3	0.0105
m&p-Xylene	179601-23-1	0.0216
o-Xylene	95-47-6	0.0106
Propene	115-07-1	0.011
Styrene	100-42-5	0.0103
Bromoethene	593-60-2	0.0108
Tetrachloroethene	127-18-4	0.0108
Ethylbenzene	100-41-4	0.0109
Toluene	108-88-3	0.0108
trans-1,2-Dichloroethene	156-60-5	0.011
trans-1,3-Dichloropropene	10061-02-6	0.0097
Trichloroethene	79-01-6	0.011
Trichlorofluoromethane	75-69-4	0.01
Vinyl acetate	108-05-4	0.011
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0108
cis-1,2-Dichloroethene	156-59-2	0.0104
Carbon disulfide	75-15-0	0.0106
Carbon tetrachloride	56-23-5	0.0104
Chlorobenzene	108-90-7	0.011
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.0107
Chloroethane	75-00-3	0.0105
Hexachlorobutadiene	87-68-3	0.0099
Chloromethane	74-87-3	0.011
Heptane	142-82-5	0.0107
cis-1,3-Dichloropropene	10061-01-5	0.0104
Cyclohexane	110-82-7	0.0107
Dichlorodifluoromethane	75-71-8	0.0106
Dichloromethane	75-09-2	0.0097
Ethyl acetate	141-78-6	0.0109
Vinyl chloride	75-01-4	0.0107
Chloroform	67-66-3	0.0107

Analytical Standard Record

EPA Region 9 Laboratory

1723026

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40
1723022	TO-15 CAL Std, 20 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:08 by LLH	100

Analytical Standard Record

EPA Region 9 Laboratory

1723027

Description:	TO-15 CAL5 15 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:15 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.0165
1,4-Dioxane	123-91-1	0.0159
2,2,4-Trimethylpentane	540-84-1	0.0159
2-Butanone (MEK)	78-93-3	0.0162
2-Hexanone	591-78-6	0.0158
2-Propanol	67-63-0	0.0165
Bromoform	75-25-2	0.016
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0159
1,3-Dichlorobenzene	541-73-1	0.0158
Allyl chloride	107-05-1	0.0165
Benzene	71-43-2	0.016
Benzyl chloride	100-44-7	0.0165
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.0156
1,1,1-Trichloroethane	71-55-6	0.0154
4-Ethyltoluene	622-96-8	0.0156
1,2-Dichlorobenzene	95-50-1	0.0156
1,1,2,2-Tetrachloroethane	79-34-5	0.0158
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0141
1,1,2-Trichloroethane	79-00-5	0.0164
1,1-Dichloroethane	75-34-3	0.0148
1,1-Dichloroethene	75-35-4	0.0154
1,2,4-Trichlorobenzene	120-82-1	0.0141
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.0165
1,4-Dichlorobenzene	106-46-7	0.0159
1,2-Dichloroethane	107-06-2	0.0156
1,2-Dichloropropane	78-87-5	0.016
1,2-Dichlorotetrafluoroethane	76-14-2	0.0152
1,3,5-Trimethylbenzene	108-67-8	0.016

Analytical Standard Record

EPA Region 9 Laboratory

1723027

1,3-Butadiene	106-99-0	0.0159
Bromomethane	74-83-9	0.016
1,2,4-Trimethylbenzene	95-63-6	0.0159
Tetrahydrofuran	109-99-9	0.0158
Hexane	110-54-3	0.0158
m&p-Xylene	179601-23-1	0.0324
o-Xylene	95-47-6	0.0159
Propene	115-07-1	0.0165
Styrene	100-42-5	0.0154
Bromoethene	593-60-2	0.0162
Tetrachloroethene	127-18-4	0.0162
Ethylbenzene	100-41-4	0.0164
Toluene	108-88-3	0.0162
trans-1,2-Dichloroethene	156-60-5	0.0165
trans-1,3-Dichloropropene	10061-02-6	0.0146
Trichloroethene	79-01-6	0.0165
Trichlorofluoromethane	75-69-4	0.015
Vinyl acetate	108-05-4	0.0165
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0162
cis-1,2-Dichloroethene	156-59-2	0.0156
Carbon disulfide	75-15-0	0.0159
Carbon tetrachloride	56-23-5	0.0156
Chlorobenzene	108-90-7	0.0165
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.016
Chloroethane	75-00-3	0.0158
Hexachlorobutadiene	87-68-3	0.0148
Chloromethane	74-87-3	0.0165
Heptane	142-82-5	0.016
cis-1,3-Dichloropropene	10061-01-5	0.0156
Cyclohexane	110-82-7	0.016
Dichlorodifluoromethane	75-71-8	0.0159
Dichloromethane	75-09-2	0.0146
Ethyl acetate	141-78-6	0.0164
Vinyl chloride	75-01-4	0.016
Chloroform	67-66-3	0.016

Analytical Standard Record

EPA Region 9 Laboratory

1723027

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40
1723022	TO-15 CAL Std, 20 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:08 by LLH	150

Analytical Standard Record
EPA Region 9 Laboratory
1723028

Description:	TO-15 CAL6 20 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Other Solution	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:15 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.022
1,4-Dioxane	123-91-1	0.0212
2,2,4-Trimethylpentane	540-84-1	0.0212
2-Butanone (MEK)	78-93-3	0.0216
2-Hexanone	591-78-6	0.021
2-Propanol	67-63-0	0.022
Bromoform	75-25-2	0.0214
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0212
1,3-Dichlorobenzene	541-73-1	0.021
Allyl chloride	107-05-1	0.022
Benzene	71-43-2	0.0214
Benzyl chloride	100-44-7	0.022
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.0208
1,1,1-Trichloroethane	71-55-6	0.0206
4-Ethyltoluene	622-96-8	0.0208
1,2-Dichlorobenzene	95-50-1	0.0208
1,1,2,2-Tetrachloroethane	79-34-5	0.021
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0188
1,1,2-Trichloroethane	79-00-5	0.0218
1,1-Dichloroethane	75-34-3	0.0198
1,1-Dichloroethene	75-35-4	0.0206
1,2,4-Trichlorobenzene	120-82-1	0.0188
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.022
1,4-Dichlorobenzene	106-46-7	0.0212
1,2-Dichloroethane	107-06-2	0.0208
1,2-Dichloropropane	78-87-5	0.0214
1,2-Dichlorotetrafluoroethane	76-14-2	0.0202
1,3,5-Trimethylbenzene	108-67-8	0.0214

Analytical Standard Record

EPA Region 9 Laboratory

1723028

1,3-Butadiene	106-99-0	0.0212
Bromomethane	74-83-9	0.0214
1,2,4-Trimethylbenzene	95-63-6	0.0212
Tetrahydrofuran	109-99-9	0.021
Hexane	110-54-3	0.021
m&p-Xylene	179601-23-1	0.0432
o-Xylene	95-47-6	0.0212
Propene	115-07-1	0.022
Styrene	100-42-5	0.0206
Bromoethene	593-60-2	0.0216
Tetrachloroethene	127-18-4	0.0216
Ethylbenzene	100-41-4	0.0218
Toluene	108-88-3	0.0216
trans-1,2-Dichloroethene	156-60-5	0.022
trans-1,3-Dichloropropene	10061-02-6	0.0194
Trichloroethene	79-01-6	0.022
Trichlorofluoromethane	75-69-4	0.02
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0216
cis-1,2-Dichloroethene	156-59-2	0.0208
Carbon disulfide	75-15-0	0.0212
Carbon tetrachloride	56-23-5	0.0208
Chlorobenzene	108-90-7	0.022
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.0214
Chloroethane	75-00-3	0.021
Hexachlorobutadiene	87-68-3	0.0198
Chloromethane	74-87-3	0.022
Heptane	142-82-5	0.0214
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0214
Dichlorodifluoromethane	75-71-8	0.0212
Dichloromethane	75-09-2	0.0194
Ethyl acetate	141-78-6	0.0218
Vinyl chloride	75-01-4	0.0214
Chloroform	67-66-3	0.0214

Analytical Standard Record

EPA Region 9 Laboratory

1723028

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40
1723022	TO-15 CAL Std, 20 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:08 by LLH	200

Analytical Standard Record

EPA Region 9 Laboratory

1723029

Description:	TO-15 LCS 10 ppbv (VIRTUAL)	**Expires:**	07/04/17
Standard Type:	Analyte Spike	**Prepared:**	06/05/17
Solvent:	Zero Grade Air	**Prepared By:**	Liza Hernandez
Final Volume (mls):	200	**Department:**	Air
Vials:	1	**Last Edit:**	06/05/17 10:16 by LLH
Vendor:	*Prepared*	**Lot Numb**	-

Analyte	CAS Number	Concentration (ppm)
Acetone	67-64-1	0.022
1,4-Dioxane	123-91-1	0.0212
2,2,4-Trimethylpentane	540-84-1	0.0212
2-Butanone (MEK)	78-93-3	0.0216
2-Hexanone	591-78-6	0.021
2-Propanol	67-63-0	0.022
Bromoform	75-25-2	0.0214
4-Methyl-2-pentanone (MIBK)	108-10-1	0.0212
1,3-Dichlorobenzene	541-73-1	0.021
Allyl chloride	107-05-1	0.022
Benzene	71-43-2	0.0214
Benzyl chloride	100-44-7	0.022
Bromochloromethane	74-97-5	0.022
Bromodichloromethane	75-27-4	0.0208
1,1,1-Trichloroethane	71-55-6	0.0206
4-Ethyltoluene	622-96-8	0.0208
1,2-Dichlorobenzene	95-50-1	0.0208
1,1,2,2-Tetrachloroethane	79-34-5	0.021
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0188
1,1,2-Trichloroethane	79-00-5	0.0218
1,1-Dichloroethane	75-34-3	0.0198
1,1-Dichloroethene	75-35-4	0.0206
1,2,4-Trichlorobenzene	120-82-1	0.0188
1,4-Difluorobenzene	540-36-3	0.02
1,2-Dibromoethane (EDB)	106-93-4	0.022
1,4-Dichlorobenzene	106-46-7	0.0212
1,2-Dichloroethane	107-06-2	0.0208
1,2-Dichloropropane	78-87-5	0.0214
1,2-Dichlorotetrafluoroethane	76-14-2	0.0202
1,3,5-Trimethylbenzene	108-67-8	0.0214

Analytical Standard Record

EPA Region 9 Laboratory

1723029

1,3-Butadiene	106-99-0	0.0212
Bromomethane	74-83-9	0.0214
1,2,4-Trimethylbenzene	95-63-6	0.0212
Tetrahydrofuran	109-99-9	0.021
Hexane	110-54-3	0.021
m&p-Xylene	179601-23-1	0.0432
o-Xylene	95-47-6	0.0212
Propene	115-07-1	0.022
Styrene	100-42-5	0.0206
Bromoethene	593-60-2	0.0216
Tetrachloroethene	127-18-4	0.0216
Ethylbenzene	100-41-4	0.0218
Toluene	108-88-3	0.0216
trans-1,2-Dichloroethene	156-60-5	0.022
trans-1,3-Dichloropropene	10061-02-6	0.0194
Trichloroethene	79-01-6	0.022
Trichlorofluoromethane	75-69-4	0.02
Vinyl acetate	108-05-4	0.022
tert-Butyl methyl ether (MTBE)	1634-04-4	0.0216
cis-1,2-Dichloroethene	156-59-2	0.0208
Carbon disulfide	75-15-0	0.0212
Carbon tetrachloride	56-23-5	0.0208
Chlorobenzene	108-90-7	0.022
Chlorobenzene-d5	3114-55-4	0.022
Chlorodibromomethane	124-48-1	0.0214
Chloroethane	75-00-3	0.021
Hexachlorobutadiene	87-68-3	0.0198
Chloromethane	74-87-3	0.022
Heptane	142-82-5	0.0214
cis-1,3-Dichloropropene	10061-01-5	0.0208
Cyclohexane	110-82-7	0.0214
Dichlorodifluoromethane	75-71-8	0.0212
Dichloromethane	75-09-2	0.0194
Ethyl acetate	141-78-6	0.0218
Vinyl chloride	75-01-4	0.0214
Chloroform	67-66-3	0.0214

Analytical Standard Record

EPA Region 9 Laboratory

1723029

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
1707044	TO-14A Internal Standard Mix, Sto	01/26/17	** Vendor **	01/26/18	02/13/17 13:25 by LLH	40
1723022	TO-15 CAL Std, 20 ppbv	06/05/17	Liza Hernandez	07/04/17	06/05/17 10:08 by LLH	200