Atmospheric Analysis & Consulting, Inc.

CLIENT	: Soil Water Air Protection Enterprise
PROJECT NAME	: Bridgeton Sanitary Landfill Air Quality Assessment
AAC PROJECT NO.	: 130850
REPORT DATE	: 07/11/2013

On July 10, 2013, Atmospheric Analysis & Consulting, Inc. received four (4) Six-Liter Summa Canisters for Volatile Organic Compounds analysis by EPA method TO-15. Upon receipt each sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab ID	Return Pressure (mmHga)
U1 W6-Canister	130850-64203	571.2
U2 V-Canister	130850-64204	458.6
D-1 W2-Canister	130850-64205	615.0
D-2 K-Canister	130850-64206	537.2

An initial reading of each canister's vacuum was taken and recorded. Subsequently, each canister was brought to positive pressure using UHP-He and the final pressure was recorded.

TO-15 Analysis - Up to a 500 mL aliquot of sample is concentrated, put through a water and CO_2 management system, cryofocused and injected into the GC/MS (full scan mode) for analysis following EPA Method TO-15 as specified in the SOW.

No problems were encountered during receiving, preparation and/ or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# TO.15.10.

I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized the release of the data contained in this hardcopy data package.

If you have any questions or require further explanation of data results, please contact the undersigned.

Marcus Hueppe
Laboratory Director

This report consists of 60 pages.

ACCREDITED IN ACCORDANCE WITH nelac Certificate#E87837

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

SAMPLE RECEIPT / LOG-IN REPORT

AAC Project **130850** **Received By: J. Zachman**

Sample Receipt Date	Project Desc	Clients ID	Matrix	Sampling Date/Time	Sampled By	Sample #	Analysis Requested
7/10/2013 1215	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-1 W6 Canister	Summa Canister	7/5/2013	Client	64203	TO15 ASTM D5504
7/10/2013 1215	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-2 V Canister	Summa Canister	7/5/2013	Client	64204	TO15 ASTM D5504
7/10/2013 1215	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-1 W2 Canister	Summa Canister	7/5/2013	Client	64205	TO15 ASTM D5504
7/10/2013 1215	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-2 K Canister	Summa Canister	7/5/2013	Client	64206	TO15 ASTM D5504

TURN AROUND TIME: Normal (10days)

Lab Due Date: 7/17/2013

Total Samples: 4

REMARKS:
Client returned 4 x Summa canisters + 4 x Flows. "Standard TAT for all analyses. If possible deliver report within 2 weeks. Provide Level IV QC package for all analyses."

CANISTER PRESSURE LOG

Client: Soil Water Air Protection Ent Project No.: 130850

Date: 7/10/2013

Canister #	Sample #	Initial Pressure	Final Pressure
668	64203	571.2	1027.9
800	64204	458.6	1022.8
812	64205	615.0	1020.8
671	64206	537.2	1016.2

1

AAC# 130850

CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE	Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011	Date: **July 5th, 2013**
Project Manager: PAUL ROSENFELD, PH.D.		Page 1 of 1
Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401		
Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT		
Sampled By: John Blank	Sampler Signature: John Blank	

LAB ID	SAMPLE ID NUMBER		Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Carbonyls - EPA TO-11A	Carboxlylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation	Flow #		
64203	U-1 W6	Canister		July 5th	4 Hr	X	X												Canister #	668	715
64204	U-2 V	Canister		July 5th	4 Hr	X	X												Canister #	800	694
64205	D-1 W2	Canister		July 5th	4 Hr	X	X												Canister #	812	709
64206	D-2 K	Canister		July 5th	4 Hr	X	X												Canister #	671	698

REQUESTED TESTS / ANALYSES

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.		QC Requirements: Provide Level IV QC Package for all Analyses.	
Relinquished By: **John Blank**	Date: **July 5th, 2013** 12 Noon	Received By:	Date: **Time:**
Relinquished By:	Date: Time:	Received By:	Date: **Time:**
Relinquished By:	Date: Time:	Received By:	Date: 7/10/13 **Time:** 1215

– Fed Ex

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **U-1 W6** **Canister #668** **Flow Control #715**

AAC Batch ID: 130850 AAC Sample ID: 61203

SAMPLING INFORMATION

Start Date/Time: **July 5th, 2013 / 9:05** Stop Date/Time: **July 5th, 2013 / 13:05**

Start Temp/Pressure*: **23C / 30.09 psi** Stop Temp/Pressure*: **29C / 30.08psi**

Initial Can Pressure**: **-30** Final Can Pressure**: **- 6**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John Blank July 5th 2013

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: 4 – Hour

Canister Serial No.: **# 668** Flow Controller Serial No: **# 715**

Initial Pressure: 6.0 Certified Flow Rate: 18.0

Return Pressure: 571.2 Certified By/Date: JJ 7/1/13

Final Pressure: 1027.9 Flow Rate upon Return: 21.3

Date Shipped From Lab: 7/1/13 Shipped By: JJ

Date Returned to Lab: 7/10/13 Received By: JJ

Flow Controller Certification File ID: M502/06271305

Canister Certification File ID: M503/06271306

Certification Type: SIM ____ SCAN ✓ NJLL ____ PAMS ____ Other ____

07/11/13 7/11/13

Chemist Signature/Date *Lab Manager Signature/Date*

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **U-2 Verizon** **Canister # 800** **Flow Control # 694**

AAC Batch ID: 130850 AAC Sample ID: 64204

SAMPLING INFORMATION

Start Date/Time: **July 5th, 2013 / 9:20** Stop Date/Time: **July 5th, 2013 / 13:20**

Start Temp/Pressure*: **23C / 30.09 psi** Stop Temp/Pressure*: **29C / 30.08psi**

Initial Can Pressure**: **-30** Final Can Pressure**: **- 12**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John Blank **July 5th 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: 4 – Hour

Canister Serial No.: **# 800** Flow Controller Serial No: **# 694**

Initial Pressure: 6.0 Certified Flow Rate: 18.0

Return Pressure: 458.6 Certified By/Date: JJ 7/1/13

Final Pressure: 1022.8 Flow Rate upon Return: 17.7

Date Shipped From Lab: 7/1/13 Shipped By: JJ

Date Returned to Lab: 7/10/13 Received By: JJ

Flow Controller Certification File ID: M502/062705

Canister Certification File ID: M405/061213

Certification Type: SIM ____ SCAN ✓ NJLL ____ PAMS ____ Other ____

07/11/13 7/11/13

Chemist Signature/Date *Lab Manager Signature/Date*

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.: **D-1 W2** **Canister # 812** **Flow Control # 709**

AAC Batch ID: 130850 AAC Sample ID: 64205

SAMPLING INFORMATION

Start Date/Time: **July 5th, 2013 / 8:45** Stop Date/Time: **July 5th, 2013 / 12:45**

Start Temp/Pressure*: **23C / 30.09 psi** Stop Temp/Pressure*: **29C / 30.08psi**

Initial Can Pressure**: **-28.5** Final Can Pressure**: **- 4**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John Blank July 5th 2013

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: 4 – Hour

Canister Serial No.: **# 812** Flow Controller Serial No: **# 709**

Initial Pressure: 7.7 Certified Flow Rate: 18.0

Return Pressure: 615.0 Certified By/Date: JJ 7/1/13

Final Pressure: 1020.8 Flow Rate upon Return: 21.8

Date Shipped From Lab: 7/1/13 Shipped By: JJ

Date Returned to Lab: 7/10/13 Received By: JJ

Flow Controller Certification File ID: M602062305

Canister Certification File ID: M603/06213006

Certification Type: SIM ____ SCAN ✓ NJLL ____ PAMS ____ Other ____

07/11/13 7/11/13

Chemist Signature/Date *Lab Manager Signature/Date*

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.

Atmospheric Analysis and Consulting Inc.
Canister Sampling Field Data Sheet

GENERAL INFORMATION

Project Name and/or ID No.: **Bridgeton Sanitary Landfill**

Site Address and/or ID No: **13570 St Charles Rock Rd, Bridgeton, MO 63044**

Sample Name and/or ID No.:**D-2 K** **Canister # 671** **Flow Control # 698**

AAC Batch ID: 130850 AAC Sample ID: 64206

SAMPLING INFORMATION

Start Date/Time: **July 5th, 2013 / 8:55** Stop Date/Time: **July 5th, 2013 / 12:55**

Start Temp/Pressure*: **23C / 30.09 psi** Stop Temp/Pressure*: **29C / 30.08psi**

Initial Can Pressure**: **-29.5** Final Can Pressure**: **- 8**

** Ambient Barometric Reading where sample is being taken (C / inHg) ** Flow Controller Gauge Reading (inHg)*

Comments: _____

John Blank

John Blank **July 5th 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

Canister Size: 6 – Liter Sampling Period: 4 – Hour

Canister Serial No.: **# 671** Flow Controller Serial No: **# 698**

Initial Pressure: 6.0 Certified Flow Rate: 18.0

Return Pressure: 537.2 Certified By/Date: JJ 7/1/13

Final Pressure: 10/6.2 Flow Rate upon Return: 21.3

Date Shipped From Lab: 7/1/13 Shipped By: JJ

Date Returned to Lab: 7/10/13 Received By: JJ

Flow Controller Certification File ID: M602/0627/1305

Canister Certification File ID: M603/0627/1307

Certification Type: SIM ____ SCAN ✓ NJLL ____ PAMS ____ Other ____

07/11/13 MH 7/11/13

Chemist Signature/Date *Lab Manager Signature/Date*

Sampler is required to fill out all highlighted sections during sampling.
All remaining sections will be completed upon return by the laboratory.
All remaining sections will be completed upon return by the laboratory.

TO-15 REPORTS

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U1 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U2 V-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64203				130850-64204				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.80				2.23				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.47	J	1.0	0.90	0.49	J	1.0	1.12	0.5
Propene	0.81	J	1.0	1.80	1.07	J	1.0	2.23	1.0
Dichlorodifluoromethane	0.63	J	1.0	0.90	0.67	J	1.0	1.12	0.5
Chloromethane	0.54	J	1.0	0.90	0.49	J	1.0	1.12	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Vinyl Chloride	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Methanol	26.2		1.0	9.00	20.5		1.0	11.2	5.0
1,3-Butadiene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Bromomethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Chloroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Ethanol	2.54	J	1.0	3.60	3.41	J	1.0	4.46	2.0
Vinyl Bromide	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Acetone	10.1		1.0	3.60	7.78		1.0	4.46	2.0
Trichlorofluoromethane	0.29	J	1.0	0.90	0.31	J	1.0	1.12	0.5
2-Propanol (IPA)	1.19	J	1.0	3.60	2.74	J	1.0	4.46	2.0
Acrylonitrile	<SRL	U	1.0	1.80	<SRL	U	1.0	2.23	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	1.80	<SRL	U	1.0	2.23	1.0
Allyl Chloride	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Carbon Disulfide	NR	U	1.0	0.90	NR	U	1.0	1.12	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Vinyl Acetate	<SRL	U	1.0	1.80	<SRL	U	1.0	2.23	1.0
2-Butanone (MEK)	<SRL	U	1.0	1.80	<SRL	U	1.0	2.23	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Hexane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Chloroform	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Ethyl Acetate	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Tetrahydrofuran	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,2-Dichloroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : **Soil Water Air Protection Enterprise**
PROJECT NO : **130850**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **07/10/2013**
DATE REPORTED : **07/11/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U1 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U2 V-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64203				130850-64204				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.80				2.23				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Carbon Tetrachloride	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Cyclohexane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Bromodichloromethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,4-Dioxane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
2,2,4-Trimethylpentane	0.14	J	1.0	0.90	0.18	J	1.0	1.12	0.5
Heptane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,1,2-Trichloroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Toluene	0.40	J	1.0	0.90	0.45	J	1.0	1.12	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Dibromochloromethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Chlorobenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Ethylbenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
m & p-Xylenes	0.14	J	1.0	1.80	0.18	J	1.0	2.23	1.0
Bromoform	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Styrene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
o-Xylene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
4-Ethyltoluene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,2,4-Trimethylbenzene	<SRL	U	1.0	0.90	0.11	J	1.0	1.12	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.90	<SRL	U	1.0	1.12	0.5
BFB-Surrogate Std. % Recovery	103%				100%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U1 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U2 V-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64203				130850-64204				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.80				2.23				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	1.7	J	1.0	3.2	1.7	J	1.0	3.9	1.8
Propene	1.4	J	1.0	3.1	1.8	J	1.0	3.8	1.7
Dichlorodifluoromethane	3.1	J	1.0	4.4	3.3	J	1.0	5.5	2.5
Chloromethane	1.1	J	1.0	1.9	1.0	J	1.0	2.3	1.0
Dichlorotetrafluoroethane	<SRL	U	1.0	6.3	<SRL	U	1.0	7.8	3.5
Vinyl Chloride	<SRL	U	1.0	2.3	<SRL	U	1.0	2.9	1.3
Methanol	34.3		1.0	11.8	26.8		1.0	14.6	6.6
1,3-Butadiene	<SRL	U	1.0	2.0	<SRL	U	1.0	2.5	1.1
Bromomethane	<SRL	U	1.0	3.5	<SRL	U	1.0	4.3	1.9
Chloroethane	<SRL	U	1.0	2.4	<SRL	U	1.0	2.9	1.3
Dichlorofluoromethane	<SRL	U	1.0	3.8	<SRL	U	1.0	4.7	2.1
Ethanol	4.8	J	1.0	6.8	6.4	J	1.0	8.4	3.8
Vinyl Bromide	<SRL	U	1.0	3.9	<SRL	U	1.0	4.9	2.2
Acetone	24.1		1.0	8.5	18.5		1.0	10.6	4.8
Trichlorofluoromethane	1.6	J	1.0	5.1	1.8	J	1.0	6.3	2.8
2-Propanol (IPA)	2.9	J	1.0	8.8	6.7	J	1.0	11.0	4.9
Acrylonitrile	<SRL	U	1.0	3.9	<SRL	U	1.0	4.8	2.2
1,1-Dichloroethene	<SRL	U	1.0	3.6	<SRL	U	1.0	4.4	2.0
Methylene Chloride (DCM)	<SRL	U	1.0	6.3	<SRL	U	1.0	7.7	3.5
Allyl Chloride	<SRL	U	1.0	2.8	<SRL	U	1.0	3.5	1.6
Carbon Disulfide	NR	U	1.0	2.8	NR	U	1.0	3.5	1.6
Trichlorotrifluoroethane	<SRL	U	1.0	6.9	<SRL	U	1.0	8.5	3.8
trans-1,2-Dichloroethene	<SRL	U	1.0	3.6	<SRL	U	1.0	4.4	2.0
1,1-Dichloroethane	<SRL	U	1.0	3.6	<SRL	U	1.0	4.5	2.0
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	3.2	<SRL	U	1.0	4.0	1.8
Vinyl Acetate	<SRL	U	1.0	6.3	<SRL	U	1.0	7.9	3.5
2-Butanone (MEK)	<SRL	U	1.0	5.3	<SRL	U	1.0	6.6	2.9
cis-1,2-Dichloroethene	<SRL	U	1.0	3.6	<SRL	U	1.0	4.4	2.0
Hexane	<SRL	U	1.0	3.2	<SRL	U	1.0	3.9	1.8
Chloroform	<SRL	U	1.0	4.4	<SRL	U	1.0	5.4	2.4
Ethyl Acetate	<SRL	U	1.0	3.2	<SRL	U	1.0	4.0	1.8
Tetrahydrofuran	<SRL	U	1.0	2.7	<SRL	U	1.0	3.3	1.5
1,2-Dichloroethane	<SRL	U	1.0	3.6	<SRL	U	1.0	4.5	2.0
1,1,1-Trichloroethane	<SRL	U	1.0	4.9	<SRL	U	1.0	6.1	2.7

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U1 W6-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U2 V-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64203				130850-64204				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.80				2.23				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	<SRL	U	1.0	2.9	<SRL	U	1.0	3.6	1.6
Carbon Tetrachloride	<SRL	U	1.0	5.7	<SRL	U	1.0	7.0	3.1
Cyclohexane	<SRL	U	1.0	3.1	<SRL	U	1.0	3.8	1.7
1,2-Dichloropropane	<SRL	U	1.0	4.2	<SRL	U	1.0	5.2	2.3
Bromodichloromethane	<SRL	U	1.0	6.0	<SRL	U	1.0	7.5	3.4
1,4-Dioxane	<SRL	U	1.0	3.2	<SRL	U	1.0	4.0	1.8
Trichloroethene (TCE)	<SRL	U	1.0	4.8	<SRL	U	1.0	6.0	2.7
2,2,4-Trimethylpentane	0.7	J	1.0	4.2	0.8	J	1.0	5.2	2.3
Heptane	<SRL	U	1.0	3.7	<SRL	U	1.0	4.6	2.0
cis-1,3-Dichloropropene	<SRL	U	1.0	4.1	<SRL	U	1.0	5.1	2.3
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	3.7	<SRL	U	1.0	4.6	2.0
trans-1,3-Dichloropropene	<SRL	U	1.0	4.1	<SRL	U	1.0	5.1	2.3
1,1,2-Trichloroethane	<SRL	U	1.0	4.9	<SRL	U	1.0	6.1	2.7
Toluene	1.5	J	1.0	3.4	1.7	J	1.0	4.2	1.9
2-Hexanone (MBK)	<SRL	U	1.0	3.7	<SRL	U	1.0	4.6	2.0
Dibromochloromethane	<SRL	U	1.0	7.7	<SRL	U	1.0	9.5	4.3
1,2-Dibromoethane	<SRL	U	1.0	6.9	<SRL	U	1.0	8.6	3.8
Tetrachloroethene (PCE)	<SRL	U	1.0	6.1	<SRL	U	1.0	7.6	3.4
Chlorobenzene	<SRL	U	1.0	4.1	<SRL	U	1.0	5.1	2.3
Ethylbenzene	<SRL	U	1.0	3.9	<SRL	U	1.0	4.8	2.2
m & p-Xylenes	0.6	J	1.0	7.8	0.8	J	1.0	9.7	4.3
Bromoform	<SRL	U	1.0	9.3	<SRL	U	1.0	11.5	5.2
Styrene	<SRL	U	1.0	3.8	<SRL	U	1.0	4.8	2.1
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	6.2	<SRL	U	1.0	7.7	3.4
o-Xylene	<SRL	U	1.0	3.9	<SRL	U	1.0	4.8	2.2
4-Ethyltoluene	<SRL	U	1.0	4.4	<SRL	U	1.0	5.5	2.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	4.4	<SRL	U	1.0	5.5	2.5
1,2,4-Trimethylbenzene	<SRL	U	1.0	4.4	0.6	J	1.0	5.5	2.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	4.7	<SRL	U	1.0	5.8	2.6
1,3-Dichlorobenzene	<SRL	U	1.0	5.4	<SRL	U	1.0	6.7	3.0
1,4-Dichlorobenzene	<SRL	U	1.0	5.4	<SRL	U	1.0	6.7	3.0
1,2-Dichlorobenzene	<SRL	U	1.0	5.4	<SRL	U	1.0	6.7	3.0
1,2,4-Trichlorobenzene	<SRL	U	1.0	6.7	<SRL	U	1.0	8.3	3.7
Hexachlorobutadiene	<SRL	U	1.0	9.6	<SRL	U	1.0	11.9	5.3
BFB-Surrogate Std. % Recovery	103%				100%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 K-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64205				130850-64206				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.66				1.89				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.50	J	1.0	0.83	0.47	J	1.0	0.95	0.5
Propene	0.95	J	1.0	1.66	0.79	J	1.0	1.89	1.0
Dichlorodifluoromethane	0.61	J	1.0	0.83	0.59	J	1.0	0.95	0.5
Chloromethane	0.41	J	1.0	0.83	0.45	J	1.0	0.95	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Vinyl Chloride	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Methanol	10.7		1.0	8.30	24.4		1.0	9.46	5.0
1,3-Butadiene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Bromomethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Chloroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Ethanol	3.80		1.0	3.32	3.35	J	1.0	3.78	2.0
Vinyl Bromide	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Acetone	6.12		1.0	3.32	4.88		1.0	3.78	2.0
Trichlorofluoromethane	0.30	J	1.0	0.83	0.26	J	1.0	0.95	0.5
2-Propanol (IPA)	1.39	J	1.0	3.32	1.66	J	1.0	3.78	2.0
Acrylonitrile	<SRL	U	1.0	1.66	<SRL	U	1.0	1.89	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	1.66	<SRL	U	1.0	1.89	1.0
Allyl Chloride	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Carbon Disulfide	NR	U	1.0	0.83	NR	U	1.0	0.95	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Vinyl Acetate	<SRL	U	1.0	1.66	<SRL	U	1.0	1.89	1.0
2-Butanone (MEK)	<SRL	U	1.0	1.66	<SRL	U	1.0	1.89	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Hexane	0.48	J	1.0	0.83	<SRL	U	1.0	0.95	0.5
Chloroform	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Ethyl Acetate	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Tetrahydrofuran	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,2-Dichloroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 K-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64205				130850-64206				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.66				1.89				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	0.38	J	1.0	0.83	<SRL	U	1.0	0.95	0.5
Carbon Tetrachloride	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Cyclohexane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Bromodichloromethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,4-Dioxane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
2,2,4-Trimethylpentane	0.30	J	1.0	0.83	0.23	J	1.0	0.95	0.5
Heptane	0.12	J	1.0	0.83	<SRL	U	1.0	0.95	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,1,2-Trichloroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Toluene	0.45	J	1.0	0.83	0.72	J	1.0	0.95	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Dibromochloromethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Chlorobenzene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Ethylbenzene	0.08	J	1.0	0.83	0.19	J	1.0	0.95	0.5
m & p-Xylenes	0.20	J	1.0	1.66	0.55	J	1.0	1.89	1.0
Bromoform	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Styrene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
o-Xylene	<SRL	U	1.0	0.83	0.26	J	1.0	0.95	0.5
4-Ethyltoluene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,2,4-Trimethylbenzene	0.08	J	1.0	0.83	0.17	J	1.0	0.95	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.83	<SRL	U	1.0	0.95	0.5
BFB-Surrogate Std. % Recovery	103%				104%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 K-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64205				130850-64206				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.66				1.89				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	1.8	J	1.0	2.9	1.7	J	1.0	3.3	1.8
Propene	1.6	J	1.0	2.9	1.4	J	1.0	3.3	1.7
Dichlorodifluoromethane	3.0	J	1.0	4.1	2.9	J	1.0	4.7	2.5
Chloromethane	0.9	J	1.0	1.7	0.9	J	1.0	2.0	1.0
Dichlorotetrafluoroethane	<SRL	U	1.0	5.8	<SRL	U	1.0	6.6	3.5
Vinyl Chloride	<SRL	U	1.0	2.1	<SRL	U	1.0	2.4	1.3
Methanol	14.1		1.0	10.9	32.0		1.0	12.4	6.6
1,3-Butadiene	<SRL	U	1.0	1.8	<SRL	U	1.0	2.1	1.1
Bromomethane	<SRL	U	1.0	3.2	<SRL	U	1.0	3.7	1.9
Chloroethane	<SRL	U	1.0	2.2	<SRL	U	1.0	2.5	1.3
Dichlorofluoromethane	<SRL	U	1.0	3.5	<SRL	U	1.0	4.0	2.1
Ethanol	7.2		1.0	6.3	6.3	J	1.0	7.1	3.8
Vinyl Bromide	<SRL	U	1.0	3.6	<SRL	U	1.0	4.1	2.2
Acetone	14.5		1.0	7.9	11.6		1.0	9.0	4.8
Trichlorofluoromethane	1.7	J	1.0	4.7	1.5	J	1.0	5.3	2.8
2-Propanol (IPA)	3.4	J	1.0	8.2	4.1	J	1.0	9.3	4.9
Acrylonitrile	<SRL	U	1.0	3.6	<SRL	U	1.0	4.1	2.2
1,1-Dichloroethene	<SRL	U	1.0	3.3	<SRL	U	1.0	3.8	2.0
Methylene Chloride (DCM)	<SRL	U	1.0	5.8	<SRL	U	1.0	6.6	3.5
Allyl Chloride	<SRL	U	1.0	2.6	<SRL	U	1.0	3.0	1.6
Carbon Disulfide	NR	U	1.0	2.6	NR	U	1.0	2.9	1.6
Trichlorotrifluoroethane	<SRL	U	1.0	6.4	<SRL	U	1.0	7.2	3.8
trans-1,2-Dichloroethene	<SRL	U	1.0	3.3	<SRL	U	1.0	3.8	2.0
1,1-Dichloroethane	<SRL	U	1.0	3.4	<SRL	U	1.0	3.8	2.0
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	3.0	<SRL	U	1.0	3.4	1.8
Vinyl Acetate	<SRL	U	1.0	5.8	<SRL	U	1.0	6.7	3.5
2-Butanone (MEK)	<SRL	U	1.0	4.9	<SRL	U	1.0	5.6	2.9
cis-1,2-Dichloroethene	<SRL	U	1.0	3.3	<SRL	U	1.0	3.8	2.0
Hexane	1.7	J	1.0	2.9	<SRL	U	1.0	3.3	1.8
Chloroform	<SRL	U	1.0	4.1	<SRL	U	1.0	4.6	2.4
Ethyl Acetate	<SRL	U	1.0	3.0	<SRL	U	1.0	3.4	1.8
Tetrahydrofuran	<SRL	U	1.0	2.4	<SRL	U	1.0	2.8	1.5
1,2-Dichloroethane	<SRL	U	1.0	3.4	<SRL	U	1.0	3.8	2.0
1,1,1-Trichloroethane	<SRL	U	1.0	4.5	<SRL	U	1.0	5.2	2.7

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130850
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 07/10/2013
DATE REPORTED : 07/11/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 K-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130850-64205				130850-64206				
Date Sampled	07/05/2013				07/05/2013				
Date Analyzed	07/11/2013				07/11/2013				
Can Dilution Factor	1.66				1.89				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	1.2	J	1.0	2.7	<SRL	U	1.0	3.0	1.6
Carbon Tetrachloride	<SRL	U	1.0	5.2	<SRL	U	1.0	6.0	3.1
Cyclohexane	<SRL	U	1.0	2.9	<SRL	U	1.0	3.3	1.7
1,2-Dichloropropane	<SRL	U	1.0	3.8	<SRL	U	1.0	4.4	2.3
Bromodichloromethane	<SRL	U	1.0	5.6	<SRL	U	1.0	6.3	3.4
1,4-Dioxane	<SRL	U	1.0	3.0	<SRL	U	1.0	3.4	1.8
Trichloroethene (TCE)	<SRL	U	1.0	4.5	<SRL	U	1.0	5.1	2.7
2,2,4-Trimethylpentane	1.4	J	1.0	3.9	1.1	J	1.0	4.4	2.3
Heptane	0.5	J	1.0	3.4	<SRL	U	1.0	3.9	2.0
cis-1,3-Dichloropropene	<SRL	U	1.0	3.8	<SRL	U	1.0	4.3	2.3
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	3.4	<SRL	U	1.0	3.9	2.0
trans-1,3-Dichloropropene	<SRL	U	1.0	3.8	<SRL	U	1.0	4.3	2.3
1,1,2-Trichloroethane	<SRL	U	1.0	4.5	<SRL	U	1.0	5.2	2.7
Toluene	1.7	J	1.0	3.1	2.7	J	1.0	3.6	1.9
2-Hexanone (MBK)	<SRL	U	1.0	3.4	<SRL	U	1.0	3.9	2.0
Dibromochloromethane	<SRL	U	1.0	7.1	<SRL	U	1.0	8.1	4.3
1,2-Dibromoethane	<SRL	U	1.0	6.4	<SRL	U	1.0	7.3	3.8
Tetrachloroethene (PCE)	<SRL	U	1.0	5.6	<SRL	U	1.0	6.4	3.4
Chlorobenzene	<SRL	U	1.0	3.8	<SRL	U	1.0	4.4	2.3
Ethylbenzene	0.4	J	1.0	3.6	0.8	J	1.0	4.1	2.2
m & p-Xylenes	0.9	J	1.0	7.2	2.4	J	1.0	8.2	4.3
Bromoform	<SRL	U	1.0	8.6	<SRL	U	1.0	9.8	5.2
Styrene	<SRL	U	1.0	3.5	<SRL	U	1.0	4.0	2.1
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	5.7	<SRL	U	1.0	6.5	3.4
o-Xylene	<SRL	U	1.0	3.6	1.2	J	1.0	4.1	2.2
4-Ethyltoluene	<SRL	U	1.0	4.1	<SRL	U	1.0	4.6	2.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	4.1	<SRL	U	1.0	4.6	2.5
1,2,4-Trimethylbenzene	0.4	J	1.0	4.1	0.8	J	1.0	4.6	2.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	4.3	<SRL	U	1.0	4.9	2.6
1,3-Dichlorobenzene	<SRL	U	1.0	5.0	<SRL	U	1.0	5.7	3.0
1,4-Dichlorobenzene	<SRL	U	1.0	5.0	<SRL	U	1.0	5.7	3.0
1,2-Dichlorobenzene	<SRL	U	1.0	5.0	<SRL	U	1.0	5.7	3.0
1,2,4-Trichlorobenzene	<SRL	U	1.0	6.2	<SRL	U	1.0	7.0	3.7
Hexachlorobutadiene	<SRL	U	1.0	8.9	<SRL	U	1.0	10.1	5.3
BFB-Surrogate Std. % Recovery	103%				104%				70-130%

U - Compound was analyzed for, but was not detected at or above the SRL.
J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Sample Reporting Limit (SRL) and the Sample Quantitation Limit (SQL).
SQL - Sample Quantitation Limit is the Limit Of Quantitation (LOQ) x Dilution Factors.
NR - Not Reported on these analysis.

Marcus Hueppe
Laboratoy Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

TO-15 QC REPORT

ANALYSIS DATE : 07/11/2013 **INSTRUMENT ID** : GC/MS-03
ANALYST : JJG **CALIBRATION STD ID** : PS041813-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 07/02/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
4-BFB (surrogate standard)	10.00	10.12	101
Chlorodifluoromethane	10.10	10.97	109
Propene	11.00	11.43	104
Dichlorodifluoromethane	9.80	11.16	114
Chloromethane	10.10	10.48	104
Dichlorotetrafluoroethane	10.10	10.44	103
Vinyl Chloride	10.20	10.43	102
Methanol	4.90	5.49	112
1,3-Butadiene	10.50	10.93	104
Bromomethane	10.20	9.11	89
Chloroethane	10.00	8.32	83
Dichlorofluoromethane	10.00	10.43	104
Ethanol	9.80	9.55	97
Vinyl Bromide	10.20	10.40	102
Acetone	10.80	9.98	92
Trichlorofluoromethane	10.10	11.45	113
2-Propanol (IPA)	11.00	11.31	103
Acrylonitrile	10.50	10.86	103
1,1-Dichloroethene	10.50	11.38	108
Methylene Chloride (DCM)	10.40	9.66	93
Allyl Chloride	11.00	10.80	98
Carbon Disulfide	10.50	9.81	93
Trichlorotrifluoroethane	10.40	11.02	106
trans-1,2-Dichloroethene	10.40	10.58	102
1,1-Dichloroethane	10.40	10.47	101
Methyl Tert Butyl Ether (MTBE)	10.60	11.21	106
Vinyl Acetate	9.70	10.00	103
2-Butanone (MEK)	10.60	10.64	100
cis-1,2-Dichloroethene	10.60	10.17	96
Hexane	10.70	10.66	100
Chloroform	10.60	11.43	108
Ethyl Acetate	11.00	11.76	107
Tetrahydrofuran	10.80	10.75	100
1,2-Dichloroethane	10.40	11.57	111
1,1,1-Trichloroethane	10.50	11.47	109

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

ANALYSIS DATE : 07/11/2013
ANALYST : JJG
INSTRUMENT ID : GC/MS-03
CALIBRATION STD ID : PS041813-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 07/02/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
Benzene	10.50	10.02	95
Carbon Tetrachloride	10.10	11.12	110
Cyclohexane	10.50	9.82	94
1,2-Dichloropropane	10.50	10.35	99
Bromodichloromethane	10.30	11.03	107
1,4-Dioxane	10.30	10.18	99
Trichloroethene (TCE)	10.30	10.04	97
2,2,4-Trimethylpentane	10.90	10.90	100
Heptane	10.70	10.50	98
cis-1,3-Dichloropropene	11.00	11.18	102
4-Methyl-2-pentanone (MiBK)	10.30	10.29	100
trans-1,3-Dichloropropene	9.80	9.86	101
1,1,2-Trichloroethane	10.60	10.52	99
Toluene	10.60	10.48	99
2-Hexanone (MBK)	10.80	10.86	101
Dibromochloromethane	11.00	11.91	108
1,2-Dibromoethane	10.40	10.44	100
Tetrachloroethene (PCE)	10.40	10.68	103
Chlorobenzene	10.60	10.39	98
Ethylbenzene	10.50	10.49	100
m & p-Xylenes	20.60	19.58	95
Bromoform	10.30	10.66	103
Styrene	10.40	10.41	100
1,1,2,2-Tetrachloroethane	10.60	10.41	98
o-Xylene	10.60	10.64	100
4-Ethyltoluene	10.40	10.53	101
1,3,5-Trimethylbenzene	10.20	9.94	97
1,2,4-Trimethylbenzene	10.20	10.34	101
Benzyl Chloride (a-Chlorotoluene)	10.00	10.28	103
1,3-Dichlorobenzene	10.00	10.18	102
1,4-Dichlorobenzene	10.00	9.88	99
1,2-Dichlorobenzene	10.00	9.67	97
1,2,4-Trichlorobenzene	9.30	9.47	102
Hexachlorobutadiene	9.80	10.31	105

* - %REC should be 70-130%

Marcus Hueppe
Laboratory Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Quality Control/Quality Assurance Report

CLIENT ID	**: Laboratory Control Spike**	**DATE ANALYZED**	**: 07/11/2013**
AAC ID	**: LCS/LCSD**	**DATE REPORTED**	**: 07/11/2013**
MEDIA	**: Air**	**UNITS**	**: ppbv**

TO-15 Laboratory Control Spike Recovery

Compound	Sample Conc.	Spike Added	Spike Res	Dup Spike Res	Spike % Rec *	Spike Dup % Rec *	RPD** %
1,1-Dichloroethene	0.0	10.50	11.38	11.43	108	109	0.4
Methylene Chloride (DCM)	0.0	10.40	9.66	10.32	93	99	6.6
Benzene	0.0	10.50	10.02	9.95	95	95	0.7
Trichloroethene (TCE)	0.0	10.30	10.04	10.00	97	97	0.4
Toluene	0.0	10.60	10.48	10.39	99	98	0.9
Tetrachloroethene (PCE)	0.0	10.40	10.68	10.21	103	98	4.5
Chlorobenzene	0.0	10.60	10.39	10.28	98	97	1.1
Ethylbenzene	0.0	10.50	10.49	10.49	100	100	0.0
m & p-Xylenes	0.0	20.60	19.58	19.89	95	97	1.6
o-Xylene	0.0	10.60	10.64	10.90	100	103	2.4

* Must be 70-130%

** Must be < 25%

Marcus Hueppe
Laboratory Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 07/11/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 07/11/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 071113	RL
Chlorodifluoromethane	<RL	0.5
Propene	<RL	1.0
Dichlorodifluoromethane	<RL	0.5
Chloromethane	<RL	0.5
Dichlorotetrafluoroethane	<RL	0.5
Vinyl Chloride	<RL	0.5
Methanol	<RL	5.0
1,3-Butadiene	<RL	0.5
Bromomethane	<RL	0.5
Chloroethane	<RL	0.5
Dichlorofluoromethane	<RL	0.5
Ethanol	<RL	2.0
Vinyl Bromide	<RL	0.5
Acetone	<RL	2.0
Trichlorofluoromethane	<RL	0.5
2-Propanol (IPA)	<RL	2.0
Acrylonitrile	<RL	1.0
1,1-Dichloroethene	<RL	0.5
Methylene Chloride (DCM)	<RL	1.0
Allyl Chloride	<RL	0.5
Carbon Disulfide	<RL	0.5
Trichlorotrifluoroethane	<RL	0.5
trans-1,2-Dichloroethene	<RL	0.5
1,1-Dichloroethane	<RL	0.5
Methyl Tert Butyl Ether (MTBE)	<RL	0.5
Vinyl Acetate	<RL	1.0
2-Butanone (MEK)	<RL	1.0
cis-1,2-Dichloroethene	<RL	0.5
Hexane	<RL	0.5
Chloroform	<RL	0.5
Ethyl Acetate	<RL	0.5
Tetrahydrofuran	<RL	0.5
1,2-Dichloroethane	<RL	0.5
1,1,1-Trichloroethane	<RL	0.5
Benzene	<RL	0.5
Carbon Tetrachloride	<RL	0.5
Cyclohexane	<RL	0.5
1,2-Dichloropropane	<RL	0.5
Bromodichloromethane	<RL	0.5
1,4-Dioxane	<RL	0.5
Trichloroethene (TCE)	<RL	0.5
2,2,4-Trimethylpentane	<RL	0.5
Heptane	<RL	0.5

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 07/11/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 07/11/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 071113	RL
cis-1,3-Dichloropropene	<RL	0.5
4-Methyl-2-pentanone (MiBK)	<RL	0.5
trans-1,3-Dichloropropene	<RL	0.5
1,1,2-Trichloroethane	<RL	0.5
Toluene	<RL	0.5
2-Hexanone (MBK)	<RL	0.5
Dibromochloromethane	<RL	0.5
1,2-Dibromoethane	<RL	0.5
Tetrachloroethene (PCE)	<RL	0.5
Chlorobenzene	<RL	0.5
Ethylbenzene	<RL	0.5
m & p-Xylenes	<RL	1.0
Bromoform	<RL	0.5
Styrene	<RL	0.5
1,1,2,2-Tetrachloroethane	<RL	0.5
o-Xylene	<RL	0.5
4-Ethyltoluene	<RL	0.5
1,3,5-Trimethylbenzene	<RL	0.5
1,2,4-Trimethylbenzene	<RL	0.5
Benzyl Chloride (a-Chlorotoluene)	<RL	0.5
1,3-Dichlorobenzene	<RL	0.5
1,4-Dichlorobenzene	<RL	0.5
1,2-Dichlorobenzene	<RL	0.5
1,2,4-Trichlorobenzene	<RL	0.5
Hexachlorobutadiene	<RL	0.5
System Monitoring Compounds		
BFB-Surrogate Std. % Recovery	104%	--

RL - Reporting Limit

Marcus Hueppe
Laboratory Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Quality Control/Quality Assurance Report

AAC ID	**: 130850-64203**	**DATE ANALYZED**	**: 07/11/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 07/11/2013**
		UNITS	**: ppbv**

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Chlorodifluoromethane	<SRL	<SRL	0.0
Propene	<SRL	<SRL	0.0
Dichlorodifluoromethane	<SRL	<SRL	0.0
Chloromethane	<SRL	<SRL	0.0
Dichlorotetrafluoroethane	<SRL	<SRL	0.0
Vinyl Chloride	<SRL	<SRL	0.0
Methanol	26.2	24.0	8.8
1,3-Butadiene	<SRL	<SRL	0.0
Bromomethane	<SRL	<SRL	0.0
Chloroethane	<SRL	<SRL	0.0
Dichlorofluoromethane	<SRL	<SRL	0.0
Ethanol	<SRL	<SRL	0.0
Vinyl Bromide	<SRL	<SRL	0.0
Acetone	10.1	10.1	0.0
Trichlorofluoromethane	<SRL	<SRL	0.0
2-Propanol (IPA)	<SRL	<SRL	0.0
Acrylonitrile	<SRL	<SRL	0.0
1,1-Dichloroethene	<SRL	<SRL	0.0
Methylene Chloride (DCM)	<SRL	<SRL	0.0
Allyl Chloride	<SRL	<SRL	0.0
Carbon Disulfide	<SRL	<SRL	0.0
Trichlorotrifluoroethane	<SRL	<SRL	0.0
trans-1,2-Dichloroethene	<SRL	<SRL	0.0
1,1-Dichloroethane	<SRL	<SRL	0.0
Methyl Tert Butyl Ether (MTBE)	<SRL	<SRL	0.0
Vinyl Acetate	<SRL	<SRL	0.0
2-Butanone (MEK)	<SRL	<SRL	0.0
cis-1,2-Dichloroethene	<SRL	<SRL	0.0
Hexane	<SRL	<SRL	0.0
Chloroform	<SRL	<SRL	0.0
Ethyl Acetate	<SRL	<SRL	0.0
Tetrahydrofuran	<SRL	<SRL	0.0
1,2-Dichloroethane	<SRL	<SRL	0.0
1,1,1-Trichloroethane	<SRL	<SRL	0.0
Benzene	<SRL	<SRL	0.0
Carbon Tetrachloride	<SRL	<SRL	0.0

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Quality Control/Quality Assurance Report

AAC ID	**: 130850-64203**	**DATE ANALYZED**	**: 07/11/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 07/11/2013**
		UNITS	**: ppbv**

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Cyclohexane	<SRL	<SRL	0.0
1,2-Dichloropropane	<SRL	<SRL	0.0
Bromodichloromethane	<SRL	<SRL	0.0
1,4-Dioxane	<SRL	<SRL	0.0
Trichloroethene (TCE)	<SRL	<SRL	0.0
2,2,4-Trimethylpentane	<SRL	<SRL	0.0
Heptane	<SRL	<SRL	0.0
cis-1,3-Dichloropropene	<SRL	<SRL	0.0
4-Methyl-2-pentanone (MiBK)	<SRL	<SRL	0.0
trans-1,3-Dichloropropene	<SRL	<SRL	0.0
1,1,2-Trichloroethane	<SRL	<SRL	0.0
Toluene	<SRL	<SRL	0.0
2-Hexanone (MBK)	<SRL	<SRL	0.0
Dibromochloromethane	<SRL	<SRL	0.0
1,2-Dibromoethane	<SRL	<SRL	0.0
Tetrachloroethene (PCE)	<SRL	<SRL	0.0
Chlorobenzene	<SRL	<SRL	0.0
Ethylbenzene	<SRL	<SRL	0.0
m & p-Xylenes	<SRL	<SRL	0.0
Bromoform	<SRL	<SRL	0.0
Styrene	<SRL	<SRL	0.0
1,1,2,2-Tetrachloroethane	<SRL	<SRL	0.0
o-Xylene	<SRL	<SRL	0.0
4-Ethyltoluene	<SRL	<SRL	0.0
1,3,5-Trimethylbenzene	<SRL	<SRL	0.0
1,2,4-Trimethylbenzene	<SRL	<SRL	0.0
Benzyl Chloride (a-Chlorotoluene)	<SRL	<SRL	0.0
1,3-Dichlorobenzene	<SRL	<SRL	0.0
1,4-Dichlorobenzene	<SRL	<SRL	0.0
1,2-Dichlorobenzene	<SRL	<SRL	0.0
1,2,4-Trichlorobenzene	<SRL	<SRL	0.0
Hexachlorobutadiene	<SRL	<SRL	0.0
System Monitoring Compounds			
BFB-Surrogate Std. % Recovery	103%	104%	0.9

SRL - Sample Reporting Limit

Marcus Hueppe
Laboratory Director

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

TO-15 RAW DATA

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111305.D
Acq On : 11 Jul 2013 10:50
Operator : JJG
Sample : 130850-64203 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:32:14 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	82434	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	486381	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	456419	10.00 ppbv	-0.02
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	287466	10.32 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.20%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.817	51	6376	0.26 ppbv #	94
3) Propene	4.799	42	2950	0.45 ppbv #	55
4) Dichlorodifluoromethane	4.908	85	13103	0.35 ppbv	98
5) Chloromethane	5.288	52	1301	0.30 ppbv #	52
6) Dichlorotetrafluoroethane	0.000		0	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	92510m	14.54 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	11408m	1.41 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	43507m	5.64 ppbv	
16) Trichlorofluoromethane	7.658	103	4367	0.16 ppbv #	96
17) 2-Propanol(IPA)	8.237	45	19528m	0.66 ppbv	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	0.000		0	N.D. d	
21) AllylChloride	9.396	39	333	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	0.000		0	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	1017	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	12.492	83	589	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

7/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111305.D
Acq On : 11 Jul 2013 10:50
Operator : JJG
Sample : 130850-64203 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:32:14 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

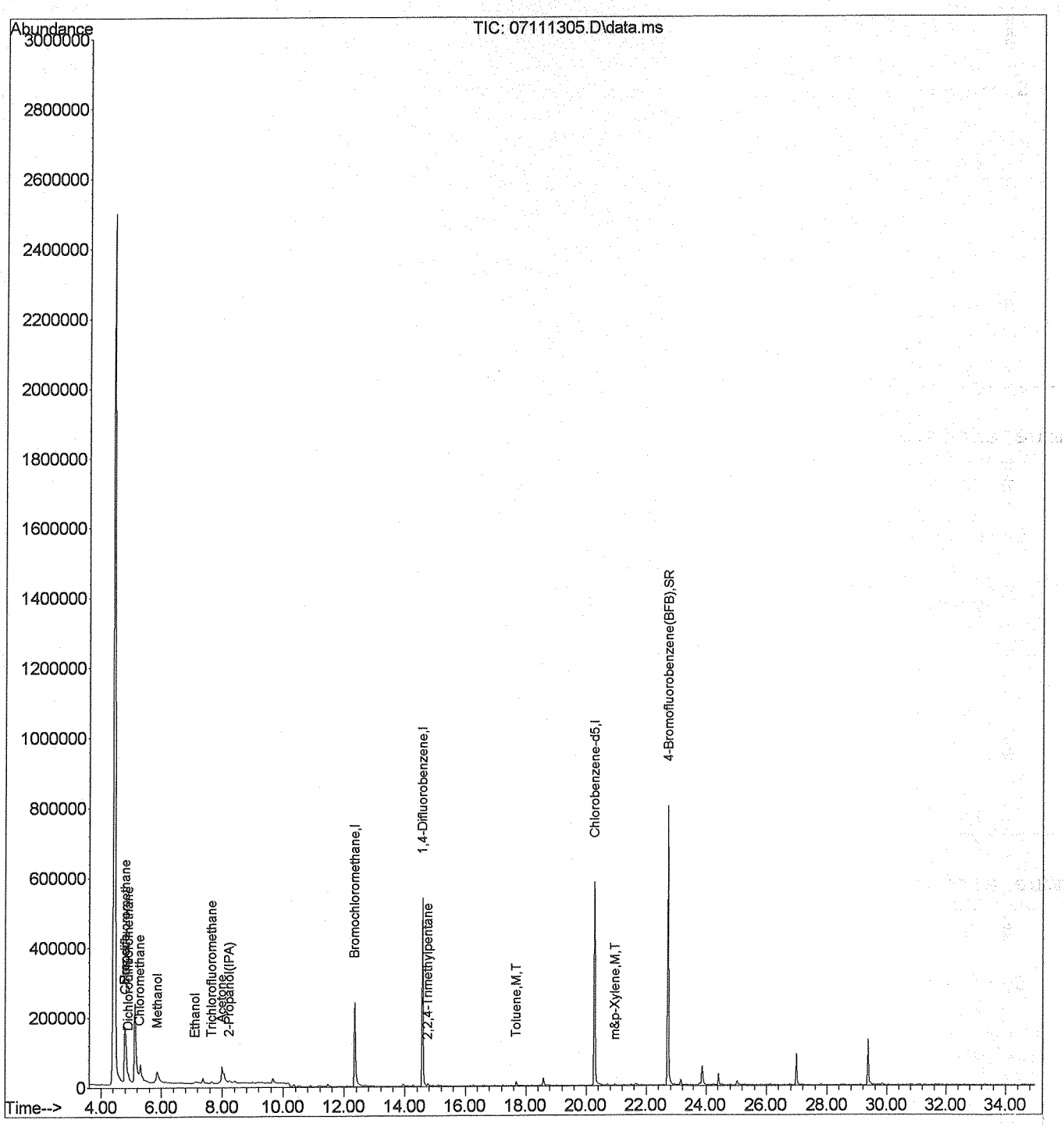
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	13.616	62	114	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	0.000		0	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	7045	0.08 ppbv	94
45) Heptane	15.096	71	448	N.D.	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	125	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	11095	0.22 ppbv #	94
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	291	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	347	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	2585	N.D.	
58) m&p-Xylene	20.963	106	1939	0.08 ppbv #	80
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	418	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	1913	N.D.	
64) 4-Ethyltoluene	23.584	120	362	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	118	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	811	N.D.	
67) BenzylChloride(a-Chlor...	25.189	91	244	N.D.	
68) 1,3-Dichlorobenzene	25.046	146	280	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	854	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	151	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1214	N.D.	
72) Hexachlorobutadiene	30.057	225	263	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111305.D
Acq On : 11 Jul 2013 10:50
Operator : JJG
Sample : 130850-64203 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:32:14 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111307.D
Acq On : 11 Jul 2013 12:26
Operator : JJG
Sample : 130850-64204 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 11 13:38:55 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	81248	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	470282	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	455639	10.00 ppbv	-0.02
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	279016	10.03 ppbv	0.00
Spiked Amount 10.000			Recovery = 100.30%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	5413	0.22 ppbv #	96
3) Propene	4.799	42	3099	0.48 ppbv #	70
4) Dichlorodifluoromethane	4.908	85	11134	0.30 ppbv	97
5) Chloromethane	5.288	52	930	0.22 ppbv #	22
6) Dichlorotetrafluoroethane	0.000		0	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	57600m	9.18 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.134	45	12137m	1.53 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	26528m	3.49 ppbv	
16) Trichlorofluoromethane	7.659	103	3769	0.14 ppbv #	96
17) 2-Propanol(IPA)	8.220	45	35692m	1.23 ppbv	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	0.000		0	N.D. d	
21) AllylChloride	9.378	39	67	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	0.000		0	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	869	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	12.511	83	401	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111307.D
Acq On : 11 Jul 2013 12:26
Operator : JJG
Sample : 130850-64204 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 11 13:38:55 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

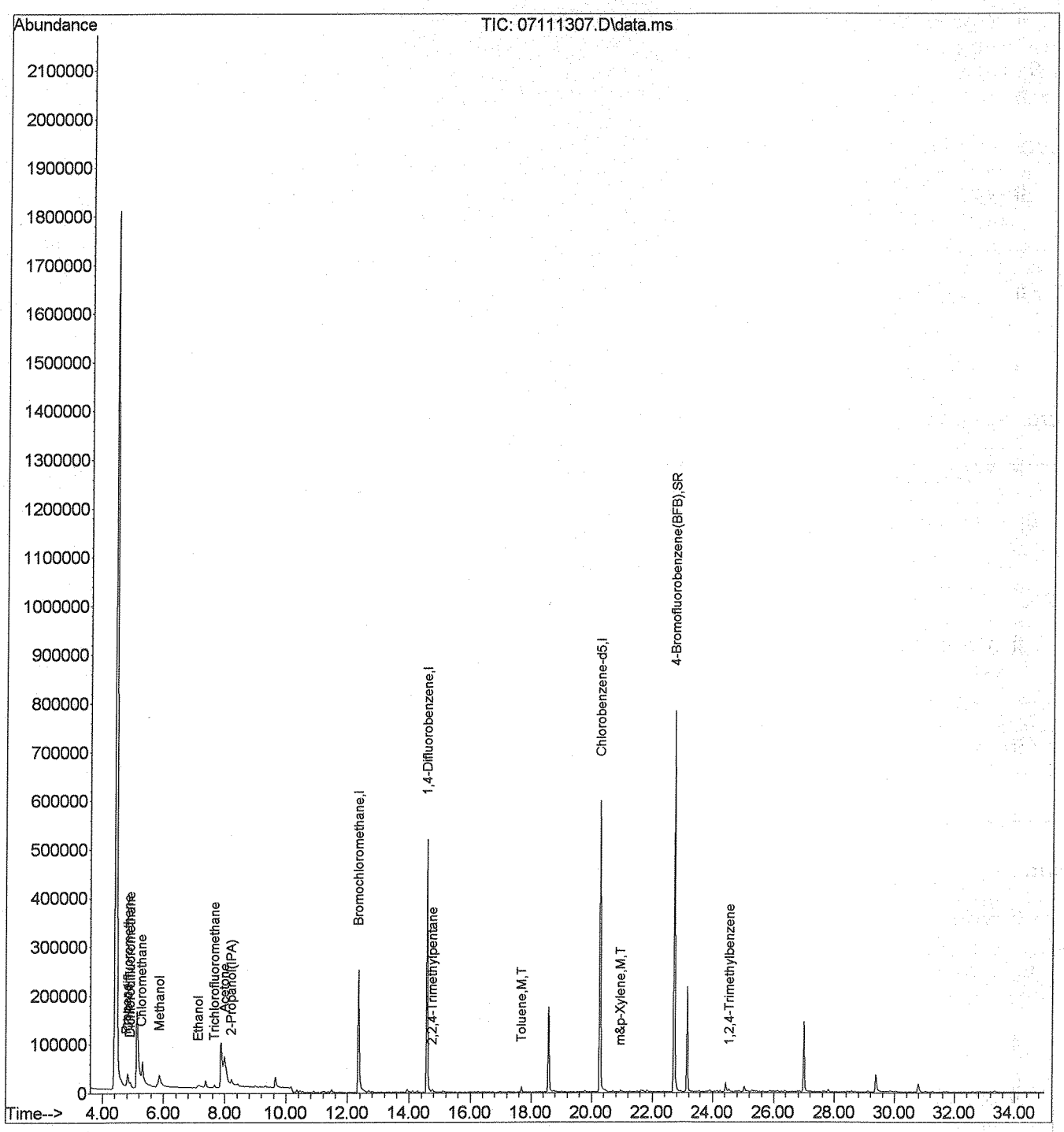
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	15.274	63	232	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	6287	0.08 ppbv #	96
45) Heptane	15.096	71	430	N.D.	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	131	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	9750	0.20 ppbv #	95
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.001	129	384	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	611	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	1919	N.D.	
58) m&p-Xylene	20.945	106	1881	0.08 ppbv #	91
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	401	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	2024	N.D.	
64) 4-Ethyltoluene	23.691	120	108	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	233	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	1397	0.05 ppbv #	91
67) BenzylChloride(a-Chlor...	25.296	91	569	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	136	N.D.	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	373	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111307.D
Acq On : 11 Jul 2013 12:26
Operator : JJG
Sample : 130850-64204 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 11 13:38:55 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111308.D
Acq On : 11 Jul 2013 13:14
Operator : JJG
Sample : 130850-64205 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 13:48:24 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	78966	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	460292	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	445308	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	280444	10.32 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.20%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	7205	0.30 ppbv #	96
3) Propene	4.799	42	3568	0.57 ppbv #	60
4) Dichlorodifluoromethane	4.908	85	13491	0.37 ppbv	97
5) Chloromethane	5.288	52	1046	0.25 ppbv #	12
6) Dichlorotetrafluoroethane	0.000		0	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.885	31	39439m	6.47 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	17695m	2.29 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	27261m	3.69 ppbv	
16) Trichlorofluoromethane	7.659	103	4658	0.18 ppbv	91
17) 2-Propanol(IPA)	8.220	45	23702m	0.84 ppbv	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	0.000		0	N.D. d	
21) AllylChloride	9.324	39	394	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	0.000		0	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	0.000		0	N.D. d	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	11.476	86	635	0.29 ppbv	84
31) Chloroform	12.511	83	615	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

07/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111308.D
Acq On : 11 Jul 2013 13:14
Operator : JJG
Sample : 130850-64205 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 13:48:24 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

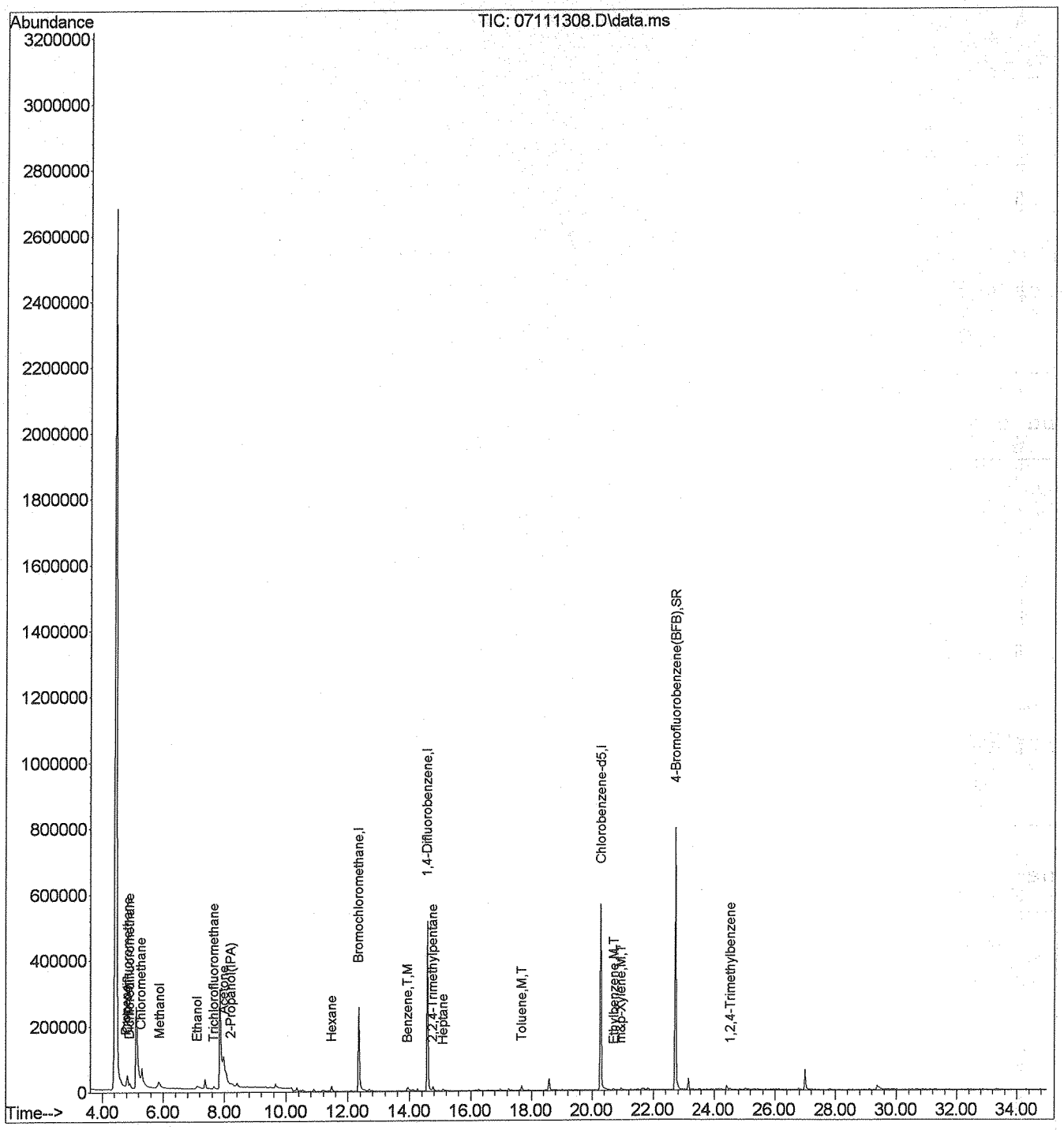
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	9000	0.23 ppbv	92
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.008	69	109	N.D.	
40) 1,2-Dichloropropane	0.000		0	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	14555	0.18 ppbv #	93
45) Heptane	15.096	71	854	0.07 ppbv #	42
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.594	58	235	N.D.	
48) trans-1,3-Dichloropropene	0.000		0	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	13201	0.27 ppbv #	94
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	140	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	142	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	3134	0.05 ppbv #	95
58) m&p-Xylene	20.945	106	2879	0.12 ppbv #	75
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	387	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	0.000		0	N.D. d	
64) 4-Ethyltoluene	23.673	120	240	N.D.	
65) 1,3,5-Trimethylbenzene	23.798	120	302	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	1278	0.05 ppbv #	87
67) BenzylChloride(a-Chlor...	0.000		0	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	0.000		0	N.D.	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	310	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111308.D
Acq On : 11 Jul 2013 13:14
Operator : JJG
Sample : 130850-64205 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 13:48:24 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111309.D
Acq On : 11 Jul 2013 14:02
Operator : JJG
Sample : 130850-64206 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 15:00:59 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	12.350	128	84700	10.00	ppbv		0.00
36) 1,4-Difluorobenzene	14.579	114	475604	10.00	ppbv		0.00
55) Chlorobenzene-d5	20.285	117	448797	10.00	ppbv		0.00
System Monitoring Compounds							
63) 4-Bromofluorobenzene(BFB)	22.710	174	284591	10.39	ppbv		0.00
Spiked Amount 10.000			Recovery = 103.90%				
Target Compounds							Qvalue
2) Chlorodifluoromethane	4.836	51	6471	0.25	ppbv	#	93
3) Propene	4.799	42	2850	0.42	ppbv	#	70
4) Dichlorodifluoromethane	4.908	85	12114	0.31	ppbv		96
5) Chloromethane	5.306	52	1090	0.24	ppbv	#	1
6) Dichlorotetrafluoroethane	0.000		0	N.D.			
7) VinylChloride	0.000		0	N.D.			
8) Methanol	5.831	31	84426m	12.91	ppbv		
9) 1,3-Butadiene	0.000		0	N.D.			
10) Bromomethane	0.000		0	N.D.			
11) Chloroethane	0.000		0	N.D.			
12) Dichlorofluoromethane	0.000		0	N.D.			
13) Ethanol	7.098	45	14700m	1.77	ppbv		
14) VinylBromide	0.000		0	N.D.			
15) Acetone	7.966	58	20401	2.58	ppbv	#	
16) Trichlorofluoromethane	7.659	103	4047	0.14	ppbv	#	97
17) 2-Propanol(IPA)	8.201	45	26620m	0.88	ppbv		
18) Acrylonitrile	0.000		0	N.D.			
19) 1,1-Dichloroethene	0.000		0	N.D.			
20) MethyleneChloride(DCM)	0.000		0	N.D.			
21) AllylChloride	0.000		0	N.D.			
22) CarbonDisulfide	0.000		0	N.D.			
23) Trichlorotrifluoroethane	0.000		0	N.D.			
24) trans-1,2-Dichloroethene	0.000		0	N.D.			
25) 1,1-Dichloroethane	0.000		0	N.D.			
26) MethylTertButylEther(M...	0.000		0	N.D.			
27) VinylAcetate	10.888	43	1043	N.D.			
28) 2-Butanone(MEK)	0.000		0	N.D.			
29) cis-1,2-Dichloroethene	0.000		0	N.D.			
30) Hexane	0.000		0	N.D.			
31) Chloroform	12.493	83	511	N.D.			
32) EthylAcetate	0.000		0	N.D.			

8/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111309.D
Acq On : 11 Jul 2013 14:02
Operator : JJG
Sample : 130850-64206 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 15:00:59 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

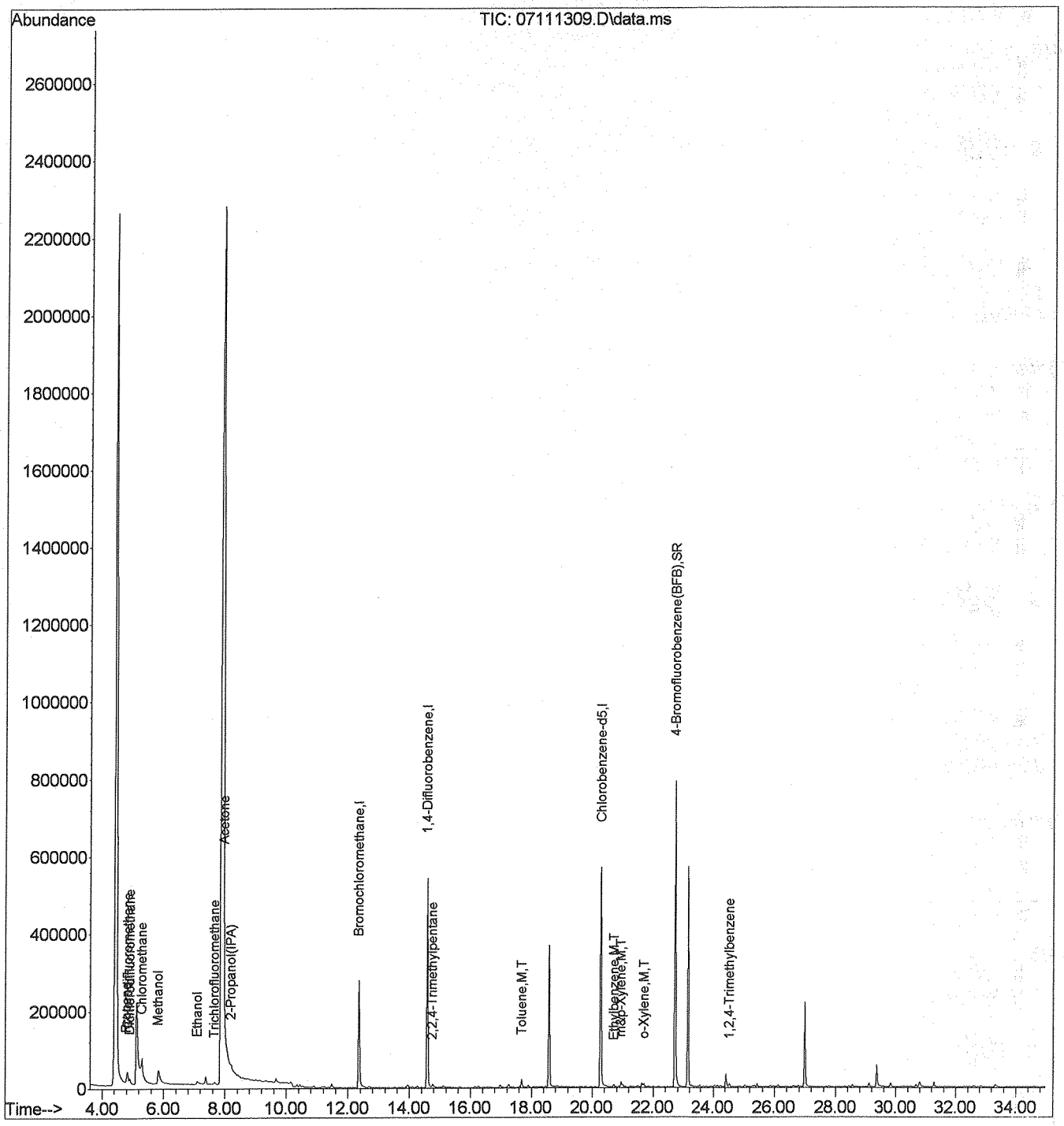
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	14.026	69	114	N.D.	
40) 1,2-Dichloropropane	0.000		0	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	9679	0.12 ppbv #	93
45) Heptane	0.000		0	N.D. d	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.558	58	218	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	309	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	18695	0.38 ppbv	97
51) 2-Hexanone(MBK)	18.234	58	737	N.D.	
52) Dibromochloromethane	19.019	129	336	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	506	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	6513	0.10 ppbv #	93
58) m&p-Xylene	20.945	106	6877	0.29 ppbv #	85
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	705	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	7433	0.14 ppbv #	98
64) 4-Ethyltoluene	23.691	120	443	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	740	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	2564	0.09 ppbv #	67
67) BenzylChloride(a-Chlor...	25.296	91	573	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	442	N.D.	
70) 1,2-Dichlorobenzene	0.000		0	N.D.	
71) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111309.D
Acq On : 11 Jul 2013 14:02
Operator : JJG
Sample : 130850-64206 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 15:00:59 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



TO-15 RAW QC & ICAL SUMMARY

MS #3 Instrument Logbook

Sequence Name: C:\msdchem\1\sequence\2013\071113.S
Comment: GCMS-03
Operator: JJG
Data Path: C:\MSDCHEM\1\MS03\2013\071113\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info
1)	Sample	1	07111301 TO15-5MS TO15 BFB 071113
2)	Sample	1	07111302 TO15-5MS TO15 CCV 071113
3)	Sample	1	07111303 TO15-5MS TO15 LCSD 071113
4)	Sample	1	07111304 TO15-5MS TO15 MB 071113
5)	Sample	2	07111305 TO15-5MS 130850-64203 x1
6)	Sample	2	07111306 TO15-5MS 130850-64203 x1 dp
7)	Sample	3	07111307 TO15-5MS 130850-64204 x1
8)	Sample	4	07111308 TO15-5MS 130850-64205 x1
9)	Sample	5	07111309 TO15-5MS 130850-64206 x1
10)	Sample	1	07111310 TO15-5MS Flow Check#071013-01
11)	Sample	2	07111311 TO15-5MS Can Check#000771
12)	Sample	3	07111312 TO15-5MS Can Check#000762
13)	Sample	4	07111313 TO15-5MS Can Check#000766
14)	Sample	5	07111314 TO15-5MS Can Check#000685
15)	Sample	6	07111315 TO15-5MS Can Check#000735
16)	Sample	7	07111316 TO15-5MS Can Check#000777
17)	Sample	8	07111317 TO15-5MS Can Check#000795
18)	Sample	9	07111318 TO15-5MS Can Check#000780
19)	Sample	10	07111319 TO15-5MS Can Check#000770
20)	Sample	11	07111320 TO15-5MS Can Check#000781
21)	Sample	12	07111321 TO15-5MS Can Check#000758
22)	Sample	13	07111322 TO15-5MS Can Check#000787
23)	Sample	14	07111323 TO15-5MS Can Check#000785
24)	Sample	15	07111324 TO15-5MS Can Check#000745
25)	Sample	16	07111325 TO15-5MS Can Check#000789
26)	Sample	1	07111326 TO15-5MS Flow Check#071013-01

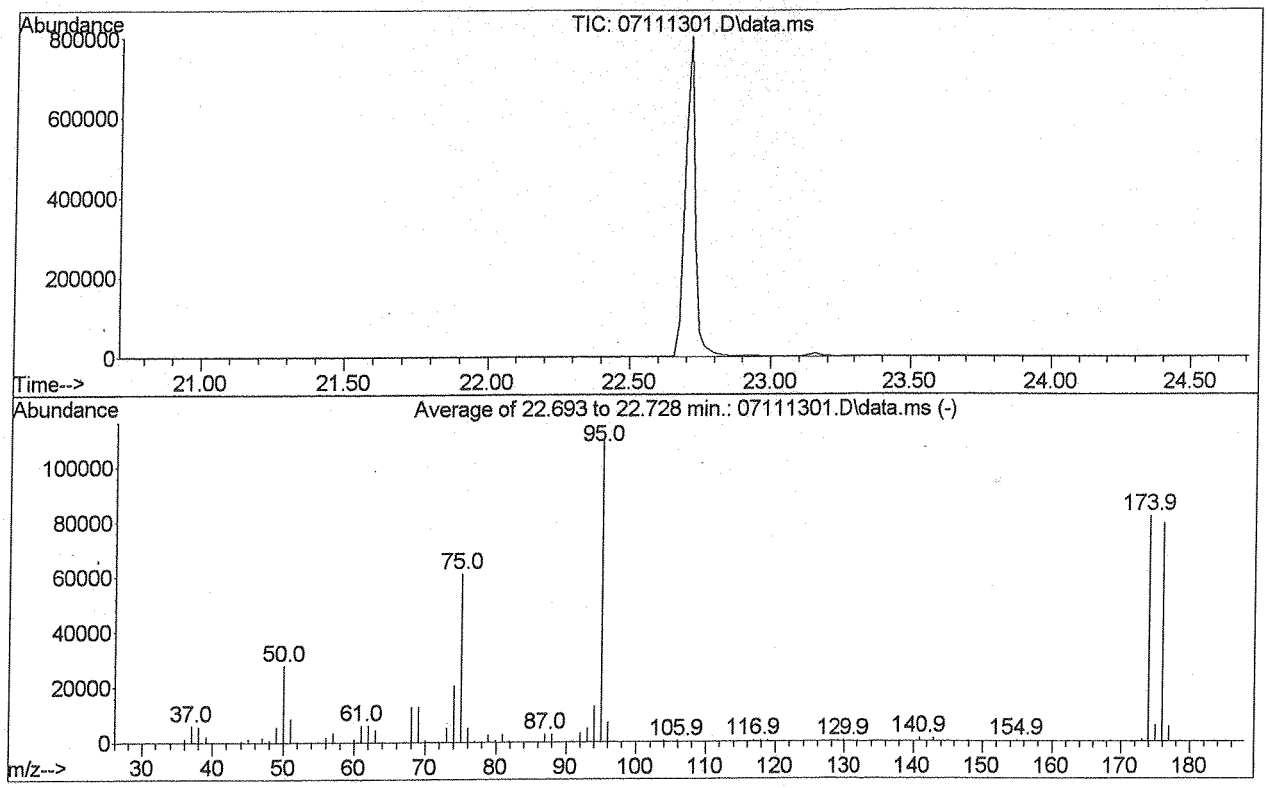
Comments: _____

Analyst: _____ **Date:** 07/11/13

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111301.D
Acq On : 11 Jul 2013 7:37 am
Operator : JJG
Sample : TO15 BFB 071113
Misc : IS/Surr: PS082712-02 + 500mL cc#000765
ALS Vial : 1 Sample Multiplier: 1

Integration File: PAMS.P

Method : C:\msdchem\1\METHODS\2013\070213.M
Title : TO-15/TO-14
Last Update : Wed Jul 03 08:16:39 2013



AutoFind: Scans 1064, 1065, 1066; Background Corrected with Scan 1059

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.1	27813	PASS
75	95	30	60	55.2	61200	PASS
95	95	100	100	100.0	110917	PASS
96	95	5	9	6.4	7115	PASS
173	174	0.00	2	1.0	803	PASS
174	95	50	100	73.7	81776	PASS
175	174	5	9	7.4	6037	PASS
176	174	95	101	97.0	79309	PASS
177	176	5	9	6.7	5341	PASS

7/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111302.D
Acq On : 11 Jul 2013 8:25
Operator : JJG
Sample : TO15 CCV 071113
Misc : IS/Surr: PS082712-02 + Cal: PS041813-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:31:48 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	84756	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	453077	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.267	117	451052	10.00	ppbv	-0.02
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	278621	10.12	ppbv	0.00
Spiked Amount 10.000			Recovery = 101.20%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	280644	10.97	ppbv	99
3) Propene	4.781	42	76696	11.43	ppbv	96
4) Dichlorodifluoromethane	4.908	85	432769	11.16	ppbv	99
5) Chloromethane	5.288	52	46866m	10.48	ppbv	
6) Dichlorotetrafluoroethane	5.324	135	233888	10.44	ppbv	99
7) VinylChloride	5.650	62	149858m	10.43	ppbv	
8) Methanol	5.867	31	35913m	5.49	ppbv	
9) 1,3-Butadiene	5.849	54	108674m	10.93	ppbv	
10) Bromomethane	6.428	96	88674m	9.11	ppbv	
11) Chloroethane	6.736	66	22226	8.32	ppbv	89
12) Dichlorofluoromethane	7.007	67	357940	10.43	ppbv	99
13) Ethanol	7.061	45	79253m	9.55	ppbv	
14) VinylBromide	7.260	108	114880m	10.40	ppbv	
15) Acetone	7.966	58	79111m	9.98	ppbv	
16) Trichlorofluoromethane	7.677	103	323988	11.45	ppbv	99
17) 2-Propanol(IPA)	8.165	45	342930m	11.31	ppbv	
18) Acrylonitrile	8.961	52	113930m	10.86	ppbv	
19) 1,1-Dichloroethene	8.726	96	134295	11.38	ppbv	98
20) MethyleneChloride(DCM)	9.323	84	98807m	9.66	ppbv	
21) AllylChloride	9.305	39	164654m	10.80	ppbv	
22) CarbonDisulfide	9.486	76	323244m	9.81	ppbv	
23) Trichlorotrifluoroethane	8.998	103	187741	11.02	ppbv	99
24) trans-1,2-Dichloroethene	10.424	96	120374m	10.58	ppbv	
25) 1,1-Dichloroethane	10.905	63	300947	10.47	ppbv	99
26) MethylTertButylEther(M...	10.442	73	385450	11.21	ppbv	96
27) VinylAcetate	10.888	43	449813	10.00	ppbv	99
28) 2-Butanone(MEK)	11.423	72	56601	10.64	ppbv	79
29) cis-1,2-Dichloroethene	11.904	96	125339	10.17	ppbv	94
30) Hexane	11.458	86	25198	10.66	ppbv	79
31) Chloroform	12.493	83	354105	11.43	ppbv	99
32) EthylAcetate	12.011	43	450603	11.76	ppbv	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111302.D
Acq On : 11 Jul 2013 8:25
Operator : JJG
Sample : TO15 CCV 071113
Misc : IS/Surr: PS082712-02 + Cal: PS041813-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:31:48 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

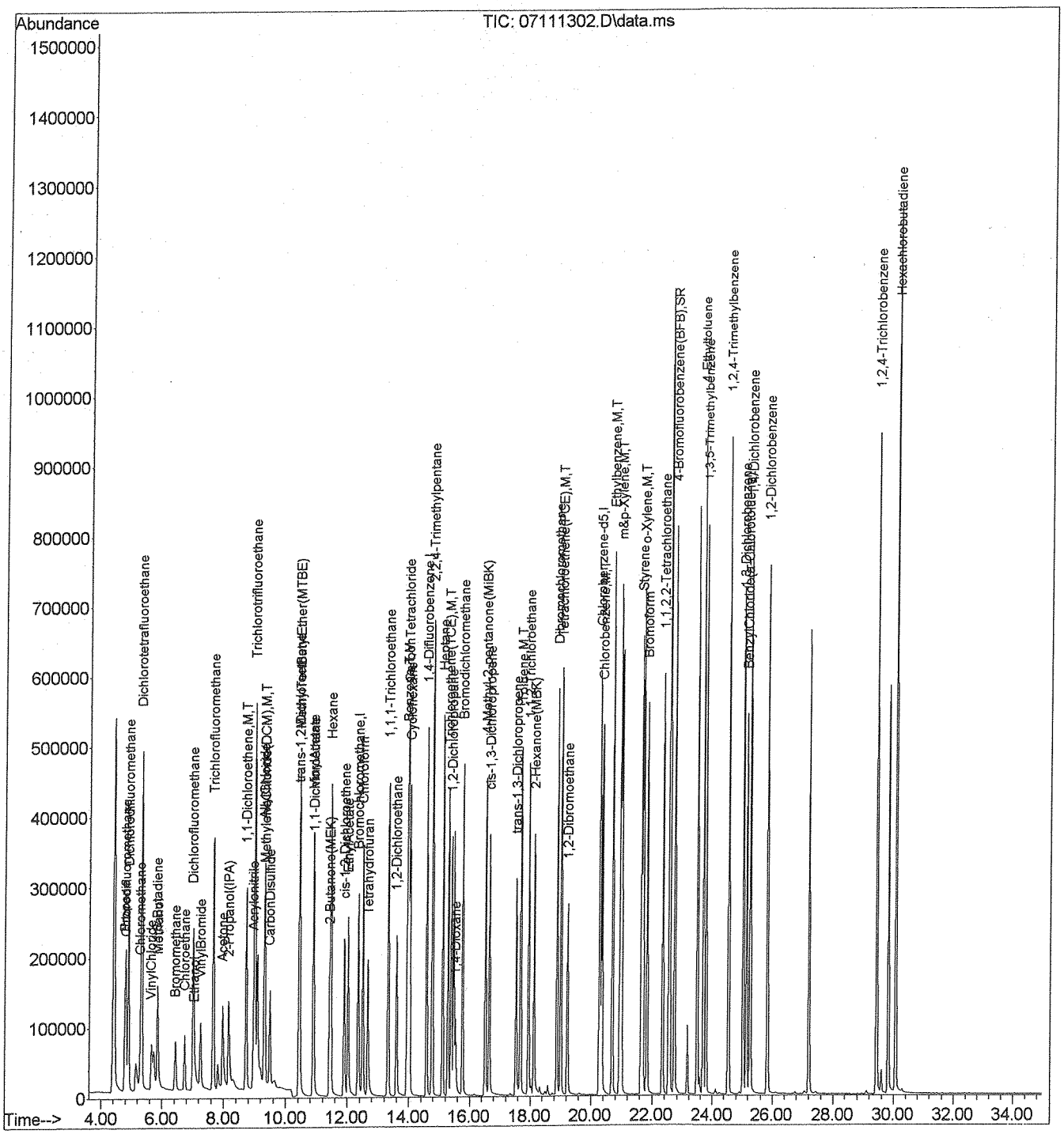
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
33) Tetrahydrofuran	12.671	72	57631	10.75	ppbv		88
34) 1,2-Dichloroethane	13.580	62	307823	11.57	ppbv	#	99
35) 1,1,1-Trichloroethane	13.331	97	409174	11.47	ppbv		98
37) Benzene	13.937	78	377783	10.02	ppbv		98
38) CarbonTetrachloride	13.973	117	407117	11.12	ppbv		100
39) Cyclohexane	14.026	69	56425	9.82	ppbv		93
40) 1,2-Dichloropropane	15.399	63	171668	10.35	ppbv		95
41) Bromodichloromethane	15.756	85	254985	11.03	ppbv		99
42) 1,4-Dioxane	15.524	88	86542m	10.18	ppbv		
43) Trichloroethene(TCE)	15.292	130	168256	10.04	ppbv		96
44) 2,2,4-Trimethylpentane	14.775	57	873615	10.90	ppbv		98
45) Heptane	15.096	71	127738	10.50	ppbv	#	75
46) cis-1,3-Dichloropropene	16.647	75	260463	11.18	ppbv		95
47) 4-Methyl-2-pentanone(M...	16.523	58	166642	10.29	ppbv		92
48) trans-1,3-Dichloropropene	17.521	75	245460	9.86	ppbv	#	90
49) 1,1,2-Trichloroethane	17.931	97	176828	10.52	ppbv		96
50) Toluene	17.682	91	495785	10.48	ppbv		99
51) 2-Hexanone(MBK)	18.127	58	213068	10.86	ppbv		93
52) Dibromochloromethane	18.876	129	393537	11.91	ppbv		99
53) 1,2-Dibromoethane	19.233	107	285980	10.44	ppbv		100
54) Tetrachloroethene(PCE)	19.019	166	245094	10.68	ppbv		97
56) Chlorobenzene	20.356	114	124023	10.39	ppbv		98
57) Ethylbenzene	20.695	91	716700	10.49	ppbv		98
58) m&p-Xylene	20.945	106	473653	19.58	ppbv		96
59) Bromoform	21.819	173	372045	10.66	ppbv		98
60) Styrene	21.640	104	393605	10.41	ppbv		97
61) 1,1,2,2-Tetrachloroethane	22.336	83	406768	10.41	ppbv		99
62) o-Xylene	21.694	91	580550	10.64	ppbv		98
64) 4-Ethyltoluene	23.673	120	211527	10.53	ppbv		97
65) 1,3,5-Trimethylbenzene	23.780	120	283254	9.94	ppbv		96
66) 1,2,4-Trimethylbenzene	24.529	120	290141	10.34	ppbv		96
67) BenzylChloride(a-Chlor...	25.153	91	563881	10.28	ppbv		99
68) 1,3-Dichlorobenzene	25.046	146	427268	10.18	ppbv		98
69) 1,4-Dichlorobenzene	25.260	146	412507m	9.88	ppbv		
70) 1,2-Dichlorobenzene	25.831	146	415763m	9.67	ppbv		
71) 1,2,4-Trichlorobenzene	29.433	180	408344m	9.47	ppbv		
72) Hexachlorobutadiene	30.075	225	398646	10.31	ppbv		97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111302.D
Acq On : 11 Jul 2013 8:25
Operator : JJG
Sample : TO15 CCV 071113
Misc : IS/Surr: PS082712-02 + Cal: PS041813-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:31:48 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



7/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111303.D
Acq On : 11 Jul 2013 9:12
Operator : JJG
Sample : TO15 LCSD 071113
Misc : IS/Surr: PS082712-02 + Cal: PS041813-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 10:32:54 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	86420	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	475206	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	466822	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	285732	10.03	ppbv	0.00
Spiked Amount 10.000			Recovery = 100.30%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.727	51	299386	11.48	ppbv	99
3) Propene	4.691	42	84726	12.38	ppbv	94
4) Dichlorodifluoromethane	4.836	85	453015	11.46	ppbv	99
5) Chloromethane	5.234	52	47942	10.52	ppbv	97
6) Dichlorotetrafluoroethane	5.288	135	253593	11.10	ppbv	92
7) VinylChloride	5.614	62	152796	10.43	ppbv	99
8) Methanol	5.831	31	36314m	5.44	ppbv	
9) 1,3-Butadiene	5.813	54	116480m	11.49	ppbv	
10) Bromomethane	6.392	96	95332m	9.61	ppbv	
11) Chloroethane	6.699	66	23322	8.56	ppbv	93
12) Dichlorofluoromethane	6.989	67	373086	10.66	ppbv	100
13) Ethanol	7.025	45	79496m	9.40	ppbv	
14) VinylBromide	7.224	108	118400m	10.51	ppbv	
15) Acetone	7.930	58	81364m	10.07	ppbv	
16) Trichlorofluoromethane	7.640	103	324974	11.27	ppbv	100
17) 2-Propanol(IPA)	8.129	45	341579	11.05	ppbv	96
18) Acrylonitrile	8.943	52	119914m	11.21	ppbv	
19) 1,1-Dichloroethene	8.708	96	137485	11.43	ppbv	98
20) MethyleneChloride(DCM)	9.305	84	107642m	10.32	ppbv	
21) AllylChloride	9.269	39	171634m	11.04	ppbv	
22) CarbonDisulfide	9.468	76	342391m	10.19	ppbv	
23) Trichlorotrifluoroethane	8.980	103	188230	10.83	ppbv	97
24) trans-1,2-Dichloroethene	10.406	96	120790m	10.41	ppbv	
25) 1,1-Dichloroethane	10.888	63	306507	10.46	ppbv	99
26) MethylTertButylEther(M...	10.424	73	395978	11.29	ppbv	97
27) VinylAcetate	10.870	43	454979	9.92	ppbv	99
28) 2-Butanone(MEK)	11.405	72	59219	10.92	ppbv	87
29) cis-1,2-Dichloroethene	11.886	96	132513	10.55	ppbv	95
30) Hexane	11.458	86	26123	10.84	ppbv	94
31) Chloroform	12.493	83	358751	11.35	ppbv	98
32) EthylAcetate	12.011	43	458758	11.74	ppbv	98

07/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111303.D
Acq On : 11 Jul 2013 9:12
Operator : JJG
Sample : TO15 LCSD 071113
Misc : IS/Surr: PS082712-02 + Cal: PS041813-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 10:32:54 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) Tetrahydrofuran	12.653	72	58400	10.68	ppbv	82
34) 1,2-Dichloroethane	13.580	62	313242	11.54	ppbv	100
35) 1,1,1-Trichloroethane	13.313	97	414648	11.40	ppbv	97
37) Benzene	13.937	78	393609	9.95	ppbv	98
38) CarbonTetrachloride	13.955	117	418846	10.91	ppbv	98
39) Cyclohexane	14.026	69	60324	10.01	ppbv	98
40) 1,2-Dichloropropane	15.381	63	177503	10.20	ppbv	96
41) Bromodichloromethane	15.756	85	263468	10.86	ppbv	98
42) 1,4-Dioxane	15.524	88	89453m	10.03	ppbv	
43) Trichloroethene(TCE)	15.292	130	175783	10.00	ppbv	99
44) 2,2,4-Trimethylpentane	14.757	57	914923	10.88	ppbv	97
45) Heptane	15.096	71	132463	10.38	ppbv	83
46) cis-1,3-Dichloropropene	16.647	75	263529	10.78	ppbv	97
47) 4-Methyl-2-pentanone(M...	16.523	58	174993	10.30	ppbv	96
48) trans-1,3-Dichloropropene	17.521	75	257506	9.86	ppbv	91
49) 1,1,2-Trichloroethane	17.931	97	185865	10.55	ppbv	98
50) Toluene	17.664	91	515486	10.39	ppbv	98
51) 2-Hexanone(MBK)	18.110	58	225660	10.97	ppbv	89
52) Dibromochloromethane	18.876	129	402962	11.62	ppbv	99
53) 1,2-Dibromoethane	19.233	107	297143	10.35	ppbv	100
54) Tetrachloroethene(PCE)	19.019	166	245785	10.21	ppbv	97
56) Chlorobenzene	20.356	114	126921	10.28	ppbv	97
57) Ethylbenzene	20.695	91	741773	10.49	ppbv	99
58) m&p-Xylene	20.945	106	497996	19.89	ppbv	94
59) Bromoform	21.819	173	379091	10.50	ppbv	98
60) Styrene	21.640	104	393294	10.05	ppbv	98
61) 1,1,2,2-Tetrachloroethane	22.336	83	414180	10.24	ppbv	99
62) o-Xylene	21.694	91	615135	10.90	ppbv	99
64) 4-Ethyltoluene	23.673	120	214664	10.32	ppbv	99
65) 1,3,5-Trimethylbenzene	23.780	120	297966	10.10	ppbv	97
66) 1,2,4-Trimethylbenzene	24.529	120	298380	10.28	ppbv	95
67) BenzylChloride(a-Chlor...	25.153	91	577623m	10.17	ppbv	
68) 1,3-Dichlorobenzene	25.046	146	434922	10.02	ppbv	99
69) 1,4-Dichlorobenzene	25.260	146	427843m	9.90	ppbv	
70) 1,2-Dichlorobenzene	25.831	146	432109m	9.71	ppbv	
71) 1,2,4-Trichlorobenzene	29.433	180	417820m	9.36	ppbv	
72) Hexachlorobutadiene	30.075	225	408489m	10.21	ppbv	

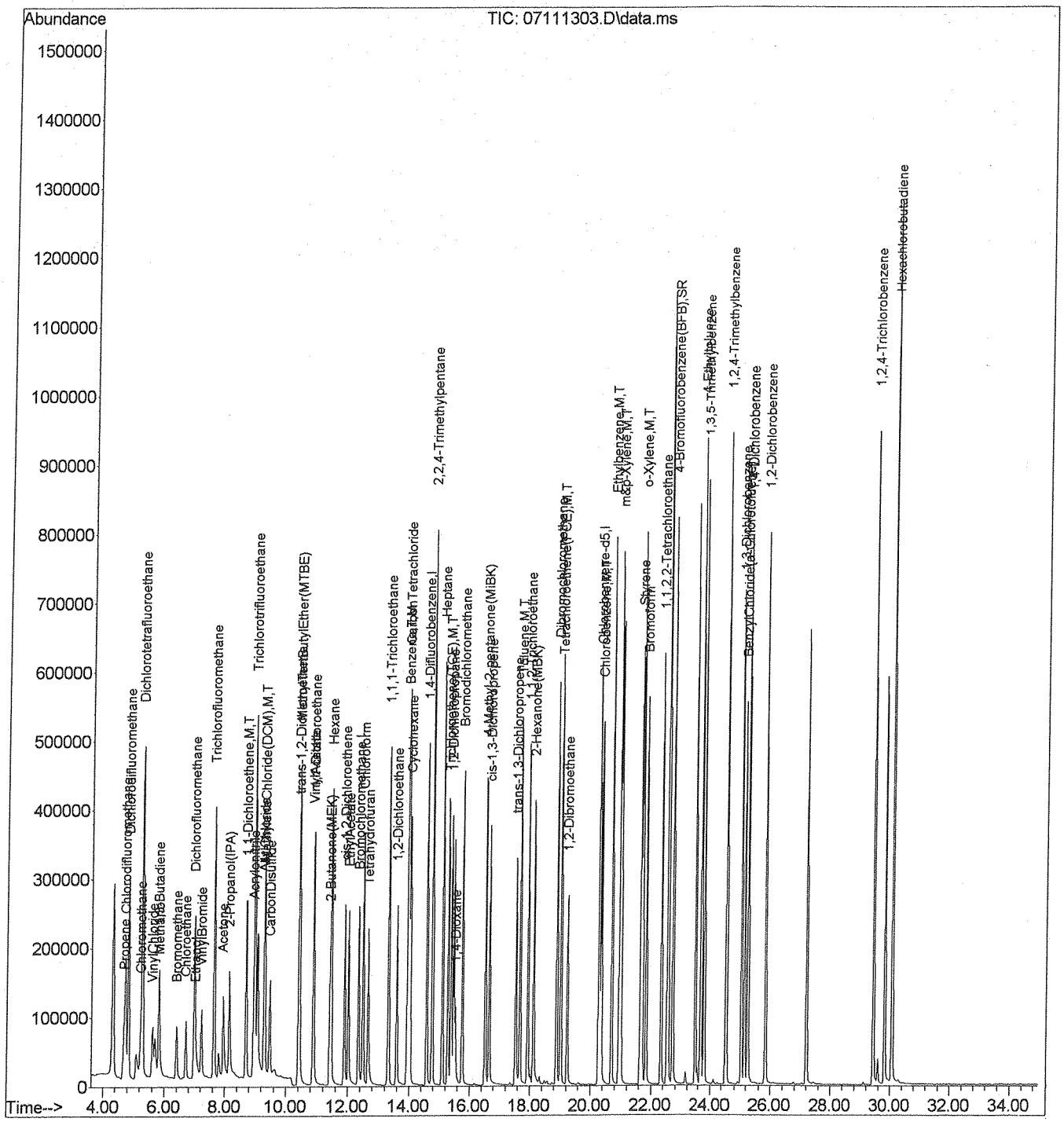
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7/11/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111303.D
Acq On : 11 Jul 2013 9:12
Operator : JJG
Sample : TO15 LCSD 071113
Misc : IS/Surr: PS082712-02 + Cal: PS041813-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 10:32:54 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111304.D
Acq On : 11 Jul 2013 10:02
Operator : JJG
Sample : TO15 MB 071113
Misc : IS/Surr: PS082712-02 + 500mL cc#000765
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 10:34:41 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	85279	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	488366	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	453988	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	287317	10.37	ppbv	0.00
Spiked Amount 10.000			Recovery = 103.70%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	0.000		0	N.D.		
3) Propene	0.000		0	N.D.	d	
4) Dichlorodifluoromethane	0.000		0	N.D.		
5) Chloromethane	0.000		0	N.D.		
6) Dichlorotetrafluoroethane	0.000		0	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	0.000		0	N.D.	d	
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	0.000		0	N.D.	d	
11) Chloroethane	0.000		0	N.D.		
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	0.000		0	N.D.	d	
14) VinylBromide	0.000		0	N.D.		
15) Acetone	0.000		0	N.D.	d	
16) Trichlorofluoromethane	0.000		0	N.D.		
17) 2-Propanol(IPA)	8.310	45	925	N.D.		
18) Acrylonitrile	0.000		0	N.D.		
19) 1,1-Dichloroethene	0.000		0	N.D.		
20) MethyleneChloride(DCM)	0.000		0	N.D.	d	
21) AllylChloride	9.305	39	109	N.D.		
22) CarbonDisulfide	9.523	76	1313	N.D.		
23) Trichlorotrifluoroethane	0.000		0	N.D.		
24) trans-1,2-Dichloroethene	0.000		0	N.D.		
25) 1,1-Dichloroethane	0.000		0	N.D.		
26) MethylTertButylEther(M...	0.000		0	N.D.		
27) VinylAcetate	0.000		0	N.D.		
28) 2-Butanone(MEK)	0.000		0	N.D.		
29) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Hexane	0.000		0	N.D.		
31) Chloroform	0.000		0	N.D.		
32) EthylAcetate	12.136	43	265	N.D.		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111304.D
Acq On : 11 Jul 2013 10:02
Operator : JJG
Sample : TO15 MB 071113
Misc : IS/Surr: PS082712-02 + 500mL cc#000765
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 10:34:41 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

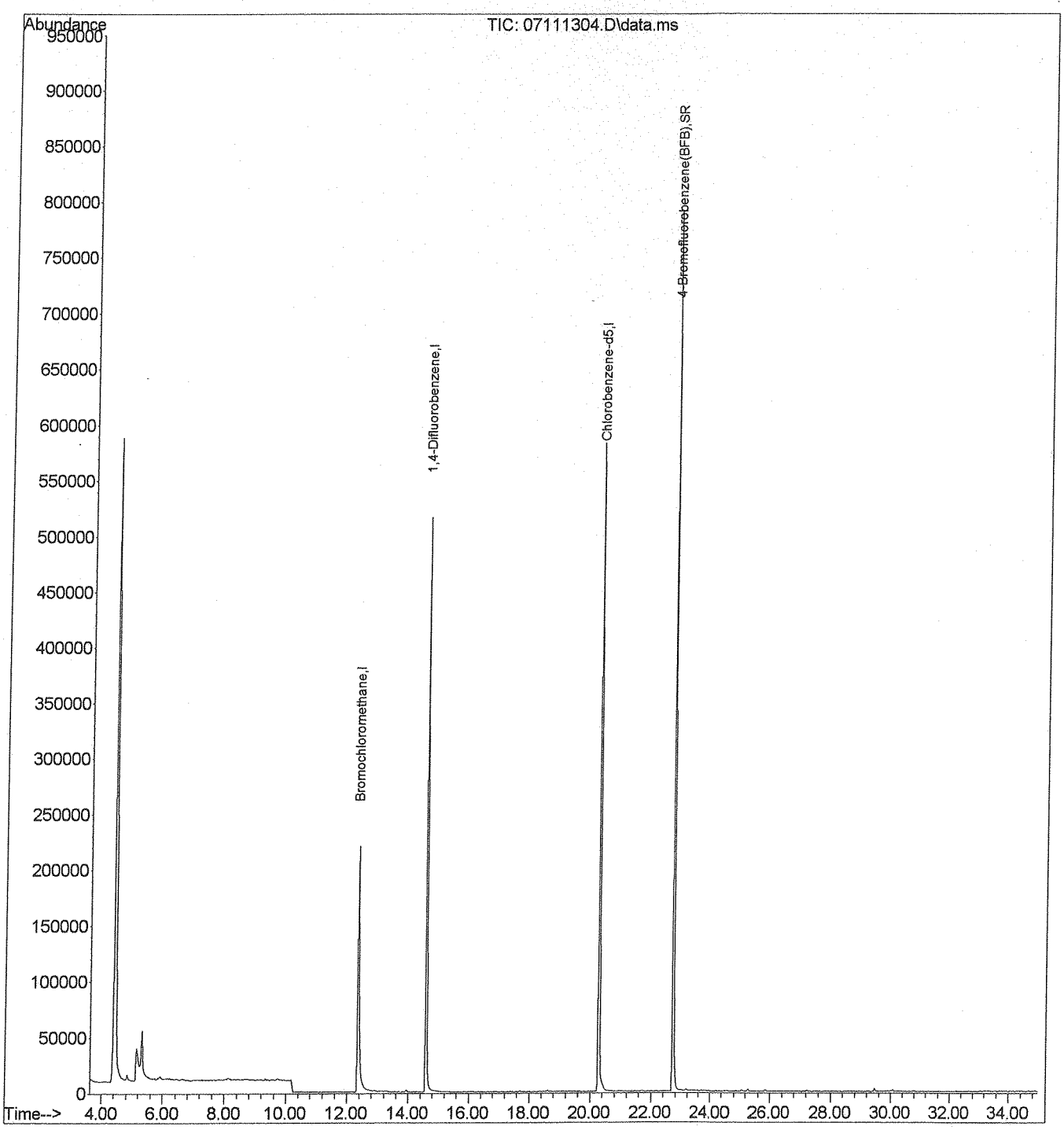
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.		
34) 1,2-Dichloroethane	0.000		0	N.D.		
35) 1,1,1-Trichloroethane	0.000		0	N.D.		
37) Benzene	0.000		0	N.D.	d	
38) CarbonTetrachloride	0.000		0	N.D.		
39) Cyclohexane	0.000		0	N.D.		
40) 1,2-Dichloropropane	0.000		0	N.D.		
41) Bromodichloromethane	0.000		0	N.D.		
42) 1,4-Dioxane	0.000		0	N.D.		
43) Trichloroethene(TCE)	0.000		0	N.D.		
44) 2,2,4-Trimethylpentane	0.000		0	N.D.		
45) Heptane	0.000		0	N.D.		
46) cis-1,3-Dichloropropene	0.000		0	N.D.		
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D.		
48) trans-1,3-Dichloropropene	0.000		0	N.D.		
49) 1,1,2-Trichloroethane	0.000		0	N.D.		
50) Toluene	17.700	91	1257	N.D.		
51) 2-Hexanone(MBK)	0.000		0	N.D.		
52) Dibromochloromethane	0.000		0	N.D.		
53) 1,2-Dibromoethane	0.000		0	N.D.		
54) Tetrachloroethene(PCE)	0.000		0	N.D.		
56) Chlorobenzene	0.000		0	N.D.		
57) Ethylbenzene	20.713	91	851	N.D.		
58) m&p-Xylene	20.963	106	114	N.D.		
59) Bromoform	0.000		0	N.D.		
60) Styrene	21.694	104	137	N.D.		
61) 1,1,2,2-Tetrachloroethane	22.354	83	122	N.D.		
62) o-Xylene	21.694	91	675	N.D.		
64) 4-Ethyltoluene	0.000		0	N.D.		
65) 1,3,5-Trimethylbenzene	0.000		0	N.D.		
66) 1,2,4-Trimethylbenzene	24.565	120	119	N.D.		
67) BenzylChloride(a-Chlor...	25.207	91	843	N.D.		
68) 1,3-Dichlorobenzene	25.064	146	1004	N.D.		
69) 1,4-Dichlorobenzene	25.296	146	1533	N.D.		
70) 1,2-Dichlorobenzene	25.867	146	745	N.D.		
71) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d	
72) Hexachlorobutadiene	30.075	225	686	N.D.		

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111304.D
Acq On : 11 Jul 2013 10:02
Operator : JJG
Sample : TO15 MB 071113
Misc : IS/Surr: PS082712-02 + 500mL cc#000765
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 10:34:41 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111305.D
Acq On : 11 Jul 2013 10:50
Operator : JJG
Sample : 130850-64203 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:32:14 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	82434	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	486381	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.267	117	456419	10.00 ppbv	-0.02
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.710	174	287466	10.32 ppbv	0.00
Spiked Amount 10.000			Recovery = 103.20%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.817	51	6376	0.26 ppbv #	94
3) Propene	4.799	42	2950	0.45 ppbv #	55
4) Dichlorodifluoromethane	4.908	85	13103	0.35 ppbv	98
5) Chloromethane	5.288	52	1301	0.30 ppbv #	52
6) Dichlorotetrafluoroethane	0.000		0	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	92510m	14.54 ppbv	
9) 1,3-Butadiene	0.000		0	N.D.	
10) Bromomethane	0.000		0	N.D. d	
11) Chloroethane	0.000		0	N.D. d	
12) Dichlorofluoromethane	0.000		0	N.D.	
13) Ethanol	7.116	45	11408m	1.41 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	43507m	5.64 ppbv	
16) Trichlorofluoromethane	7.658	103	4367	0.16 ppbv #	96
17) 2-Propanol(IPA)	8.237	45	19528m	0.66 ppbv	
18) Acrylonitrile	0.000		0	N.D.	
19) 1,1-Dichloroethene	0.000		0	N.D.	
20) MethyleneChloride(DCM)	0.000		0	N.D. d	
21) AllylChloride	9.396	39	333	N.D.	
22) CarbonDisulfide	0.000		0	N.D. d	
23) Trichlorotrifluoroethane	0.000		0	N.D. d	
24) trans-1,2-Dichloroethene	0.000		0	N.D.	
25) 1,1-Dichloroethane	0.000		0	N.D.	
26) MethylTertButylEther(M...	0.000		0	N.D.	
27) VinylAcetate	10.888	43	1017	N.D.	
28) 2-Butanone(MEK)	0.000		0	N.D. d	
29) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Hexane	0.000		0	N.D. d	
31) Chloroform	12.492	83	589	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111305.D
Acq On : 11 Jul 2013 10:50
Operator : JJG
Sample : 130850-64203 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

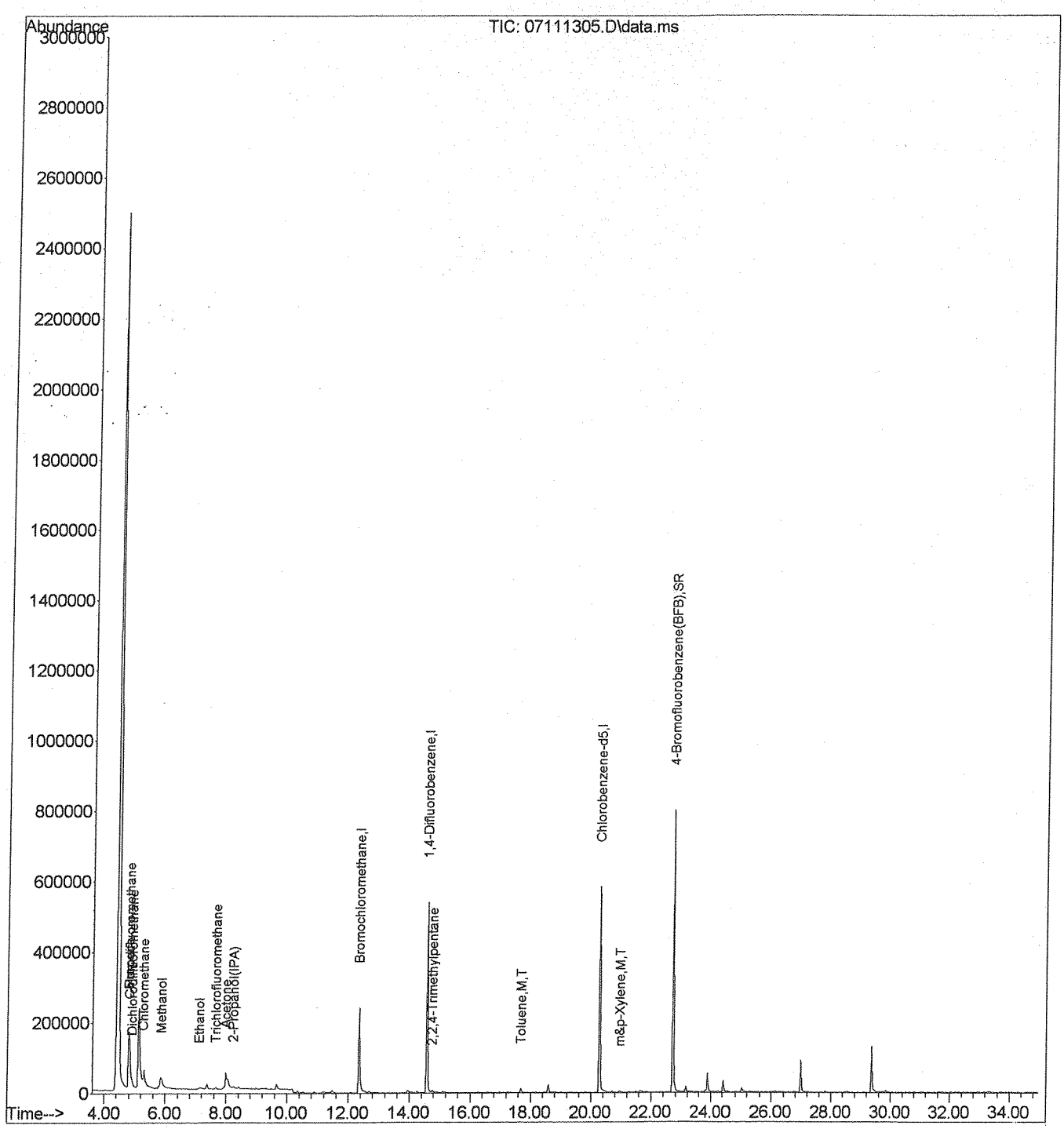
Quant Time: Jul 11 13:32:14 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	13.616	62	114	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	0.000		0	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	7045	0.08 ppbv	94
45) Heptane	15.096	71	448	N.D.	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	125	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	11095	0.22 ppbv #	94
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	291	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	347	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	2585	N.D.	
58) m&p-Xylene	20.963	106	1939	0.08 ppbv #	80
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	418	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	1913	N.D.	
64) 4-Ethyltoluene	23.584	120	362	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	118	N.D.	
66) 1,2,4-Trimethylbenzene	24.547	120	811	N.D.	
67) BenzylChloride(a-Chlor...	25.189	91	244	N.D.	
68) 1,3-Dichlorobenzene	25.046	146	280	N.D.	
69) 1,4-Dichlorobenzene	25.296	146	854	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	151	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1214	N.D.	
72) Hexachlorobutadiene	30.057	225	263	N.D.	

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

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111305.D
Acq On : 11 Jul 2013 10:50
Operator : JJG
Sample : 130850-64203 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:32:14 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111306.D
Acq On : 11 Jul 2013 11:38
Operator : JJG
Sample : 130850-64203 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:46:25 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	81342	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	482639	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.267	117	449373	10.00	ppbv	-0.02
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	285469	10.41	ppbv	0.00
Spiked Amount 10.000			Recovery = 104.10%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	6333	0.26	ppbv #	91
3) Propene	4.799	42	2959	0.46	ppbv #	81
4) Dichlorodifluoromethane	4.908	85	13024	0.35	ppbv	96
5) Chloromethane	5.288	52	1142	0.27	ppbv #	26
6) Dichlorotetrafluoroethane	0.000		0	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	5.867	31	83803m	13.35	ppbv	
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	0.000		0	N.D. d		
11) Chloroethane	0.000		0	N.D.		
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	7.134	45	11533m	1.45	ppbv	
14) VinylBromide	0.000		0	N.D.		
15) Acetone	7.984	58	42620m	5.60	ppbv	
16) Trichlorofluoromethane	7.658	103	4303	0.16	ppbv #	92
17) 2-Propanol(IPA)	8.237	45	19457m	0.67	ppbv	
18) Acrylonitrile	0.000		0	N.D.		
19) 1,1-Dichloroethene	0.000		0	N.D.		
20) MethyleneChloride(DCM)	0.000		0	N.D. d		
21) AllylChloride	9.323	39	250	N.D.		
22) CarbonDisulfide	0.000		0	N.D. d		
23) Trichlorotrifluoroethane	0.000		0	N.D. d		
24) trans-1,2-Dichloroethene	0.000		0	N.D.		
25) 1,1-Dichloroethane	0.000		0	N.D.		
26) MethylTertButylEther(M...	0.000		0	N.D.		
27) VinylAcetate	10.888	43	934	N.D.		
28) 2-Butanone(MEK)	0.000		0	N.D. d		
29) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Hexane	0.000		0	N.D. d		
31) Chloroform	12.492	83	664	N.D.		
32) EthylAcetate	0.000		0	N.D. d		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111306.D
Acq On : 11 Jul 2013 11:38
Operator : JJG
Sample : 130850-64203 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:46:25 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration

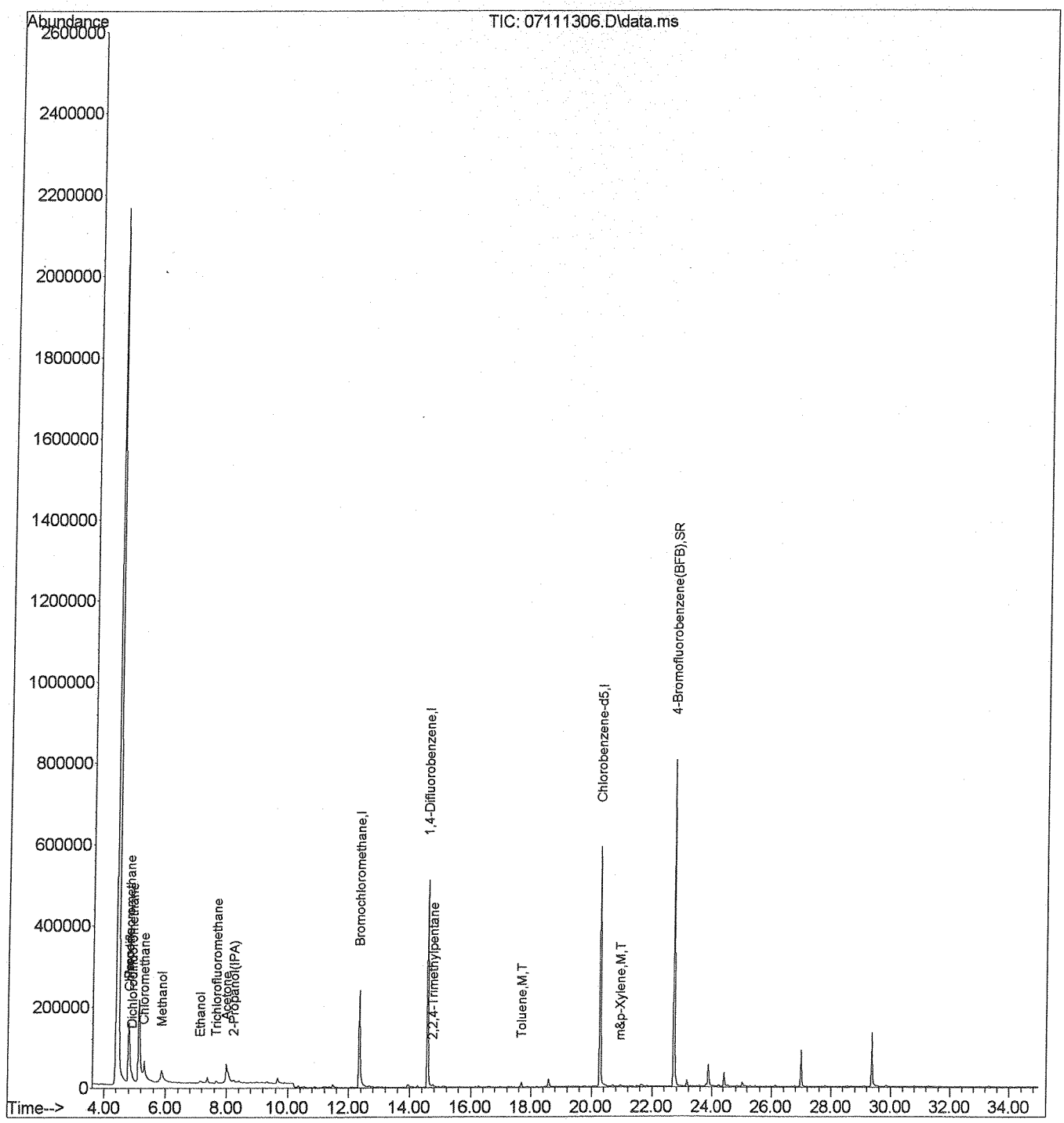
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	0.000		0	N.D. d	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	15.256	63	241	N.D.	
41) Bromodichloromethane	0.000		0	N.D.	
42) 1,4-Dioxane	0.000		0	N.D.	
43) Trichloroethene(TCE)	0.000		0	N.D.	
44) 2,2,4-Trimethylpentane	14.757	57	7423	0.09 ppbv #	93
45) Heptane	15.096	71	459	N.D.	
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	0.000		0	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	109	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	11166	0.22 ppbv #	93
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	145	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	271	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	2447	N.D.	
58) m&p-Xylene	20.945	106	1913	0.08 ppbv #	83
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	371	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	1791	N.D.	
64) 4-Ethyltoluene	23.566	120	245	N.D.	
65) 1,3,5-Trimethylbenzene	0.000		0	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	764	N.D.	
67) BenzylChloride(a-Chlor...	25.296	91	129	N.D.	
68) 1,3-Dichlorobenzene	0.000		0	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	483	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	165	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	581	N.D.	
72) Hexachlorobutadiene	0.000		0	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\071113\
Data File : 07111306.D
Acq On : 11 Jul 2013 11:38
Operator : JJG
Sample : 130850-64203 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 11 13:46:25 2013
Quant Method : C:\msdchem\1\METHODS\2013\070213.M
Quant Title : TO-15/TO-14
QLast Update : Wed Jul 03 08:16:39 2013
Response via : Initial Calibration



Method Path : C:\msdchem\1\METHODS\2013\
Method File : 070213.M
Title : TO-15/TO-14
Last Update : Wed Jul 03 08:16:39 2013
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.5	1	10	C:\msdchem\1\MS03\2013\070213\07021326.D
2	1.0	1	10	C:\msdchem\1\MS03\2013\070213\07021325.D
3	2.0	2	10	C:\msdchem\1\MS03\2013\070213\07021324.D
4	5.0	5	10	C:\msdchem\1\MS03\2013\070213\07021323.D
5	10	10	10	C:\msdchem\1\MS03\2013\070213\07021322.D
6	20	20	10	C:\msdchem\1\MS03\2013\070213\07021321.D
7	50	51	10	C:\msdchem\1\MS03\2013\070213\07021320.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.5	Jul 03 08:02 2013	Jul 03 07:58 2013	
2	1.0	Jul 03 08:02 2013	Jul 03 07:41 2013	
3	2.0	Jul 03 08:02 2013	Jul 03 07:39 2013	
4	5.0	Jul 03 08:01 2013	Jul 03 07:37 2013	
5	10	Jul 03 08:01 2013	Jul 03 07:33 2013	
6	20	Jul 03 08:01 2013	Jul 03 07:27 2013	
7	50	Jul 03 08:01 2013	Jul 03 07:00 2013	

070213.M Wed Jul 03 08:18:10 2013

Response Factor Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 070213.M
Title : TO-15/TO-14
Last Update : Wed Jul 03 08:16:39 2013
Response Via : Initial Calibration

Calibration Files
0.5 =07021326.D 1.0 =07021325.D 2.0 =07021324.D 5.0 =07021323.D 10 =07021322.D 20 =07021321.D
50 =07021320.D

		Compound	0.5	1.0	2.0	5.0	10	20	50	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------								
2)		Chlorodifluoro...	3.509	3.224	3.053	2.974	2.811	2.690	2.872	3.019	9.15
3)		Propene	0.803	0.833	0.776	0.789	0.748	0.766	0.826	0.792	3.92
4)		Dichlorodifluo...	4.893	4.799	4.664	4.595	4.321	4.182	4.567	4.574	5.49
5)		Chloromethane	0.541	0.516	0.603	0.567	0.549	0.448	0.469	0.527	10.35
6)		Dichlorotetraf...	2.795	2.759	2.710	2.658	2.586	2.315	2.676	2.643	6.04
7)		VinylChloride	1.822	1.673	1.768	1.749	1.667	1.483	1.709	1.696	6.40
8)		Methanol		1.293	1.035	0.883	0.810	0.701	0.780	0.917	23.55
9)		1,3-Butadiene	1.230	1.234	1.247	1.238	1.193	1.011	1.056	1.173	8.32
10)		Bromomethane	1.431	1.260	1.188	1.140	1.082	0.965	0.973	1.148	14.35
11)		Chloroethane	0.470	0.379	0.294	0.287	0.266	0.239	0.272	0.315	25.67
12)		Dichlorofluoro...	4.293	4.136	4.119	4.023	3.934	3.760	4.091	4.051	4.17
13)		Ethanol	1.301	1.140	1.062	0.957	0.837	0.763	0.792	0.979	20.41
14)		VinylBromide	1.290	1.272	1.297	1.332	1.305	1.268	1.361	1.303	2.55
15)		Acetone	1.198	1.023	0.943	0.866	0.849	0.837	0.831	0.935	14.44
16)		Trichlorofluor...	3.474	3.547	3.392	3.303	3.162	3.134	3.351	3.338	4.56
17)		2-Propanol(IPA)	4.040	3.870	3.832	3.643	3.402	3.157	3.094	3.577	10.27
18)		Acrylonitrile	1.242	1.230	1.210	1.295	1.241	1.249	1.196	1.237	2.56
19)	M,T	1,1-Dichloroet...	1.325	1.378	1.388	1.387	1.321	1.430	1.515	1.392	4.75
20)	M,T	MethyleneChlor...	1.417	1.260	1.215	1.149	1.126	1.142	1.140	1.207	8.67
21)		AllylChloride	2.169	2.065	1.901	1.741	1.596	1.545	1.573	1.799	13.98
22)		CarbonDisulfide	4.220	4.046	4.001	3.770	3.895	3.544	3.748	3.889	5.75
23)		Trichlorotrifl...	2.130	2.074	2.035	2.002	1.943	1.911	1.978	2.011	3.76
24)		trans-1,2-Dich...	1.294	1.329	1.326	1.349	1.300	1.345	1.456	1.343	4.03
25)		1,1-Dichloroet...	3.738	3.616	3.530	3.494	3.228	3.006	3.121	3.390	8.07
26)		MethylTertButy...	4.459	4.276	4.262	4.031	3.734	3.817	3.820	4.057	6.90
27)		VinylAcetate	5.682	5.572	5.515	5.518	5.039	4.888	4.921	5.305	6.42
28)		2-Butanone(MEK)	0.555	0.635	0.623	0.675	0.628	0.643	0.636	0.628	5.81

07/03/13

Response Factor Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 070213.M
Title : TO-15/TO-14

29)		cis-1,2-Dichlo...	1.507	1.439	1.480	1.478	1.404	1.404	1.464	1.454	2.71
30)		Hexane	0.285	0.288	0.282	0.284	0.265	0.271	0.278	0.279	3.01
31)		Chloroform	3.886	3.853	3.745	3.611	3.538	3.443	3.516	3.656	4.74
32)		EthylAcetate	4.617	4.764	4.793	4.657	4.390	4.229	4.207	4.522	5.43
33)		Tetrahydrofuran	0.655	0.680	0.629	0.645	0.613	0.609	0.598	0.633	4.59
34)		1,2-Dichloroet...	3.232	3.384	3.252	3.173	3.002	2.849	3.086	3.140	5.64
35)		1,1,1-Trichlor...	4.550	4.470	4.293	4.189	3.932	3.909	4.110	4.208	5.89
36)	I	1,4-Difluorobenzene	----------ISTD----------								
37)	T,M	Benzene	0.909	0.888	0.851	0.794	0.806	0.787	0.791	0.832	6.07
38)		CarbonTetrachl...	0.840	0.871	0.848	0.805	0.790	0.743	0.757	0.808	5.93
39)		Cyclohexane	0.141	0.137	0.135	0.121	0.121	0.115	0.117	0.127	8.28
40)		1,2-Dichloropr...	0.399	0.395	0.381	0.361	0.352	0.338	0.337	0.366	7.05
41)		Bromodichlorom...	0.536	0.534	0.522	0.506	0.502	0.478	0.495	0.510	4.15
42)		1,4-Dioxane	0.169	0.204	0.199	0.191	0.189	0.180	0.181	0.188	6.35
43)	M,T	Trichloroethen...	0.394	0.371	0.369	0.360	0.368	0.354	0.373	0.370	3.44
44)		2,2,4-Trimethy...	1.947	1.865	1.831	1.744	1.701	1.661	1.633	1.769	6.53
45)		Heptane	0.283	0.281	0.271	0.256	0.267	0.255	0.266	0.268	4.06
46)		cis-1,3-Dichlo...	0.522	0.524	0.529	0.515	0.516	0.498	0.496	0.514	2.47
47)		4-Methyl-2-pen...	0.356	0.383	0.371	0.360	0.351	0.344	0.339	0.357	4.24
48)		trans-1,3-Dich...	0.541	0.551	0.561	0.552	0.538	0.539	0.566	0.550	2.01
49)		1,1,2-Trichlor...	0.397	0.380	0.386	0.365	0.363	0.347	0.359	0.371	4.64
50)	M,T	Toluene	1.129	1.091	1.086	1.015	1.011	0.975	0.999	1.044	5.51
51)		2-Hexanone(MBK)	0.407	0.451	0.429	0.449	0.449	0.426	0.420	0.433	3.99
52)		Dibromochlorom...	0.725	0.719	0.736	0.727	0.726	0.717	0.757	0.730	1.85
53)		1,2-Dibromoethane	0.616	0.613	0.612	0.599	0.599	0.573	0.618	0.604	2.58
54)	M,T	Tetrachloroeth...	0.522	0.511	0.510	0.489	0.496	0.489	0.531	0.507	3.23
55)	I	Chlorobenzene-d5	----------ISTD----------								
56)	M,T	Chlorobenzene	0.275	0.271	0.261	0.256	0.261	0.262	0.267	0.265	2.51
57)	M,T	Ethylbenzene	1.619	1.598	1.551	1.507	1.487	1.416	1.420	1.514	5.32
58)	M,T	m&p-Xylene	0.567	0.567	0.546	0.529	0.515	0.502	0.528	0.536	4.66
59)		Bromoform	0.774	0.811	0.814	0.770	0.750	0.757	0.740	0.774	3.75
60)		Styrene	0.855	0.894	0.836	0.824	0.796	0.816	0.849	0.839	3.77
61)		1,1,2,2-Tetrac...	0.924	0.943	0.894	0.861	0.826	0.804	0.815	0.867	6.35
62)	M,T	o-Xylene	1.355	1.361	1.241	1.166	1.143	1.099	1.101	1.209	9.27
63)	SR	4-Bromofluorob...	0.606	0.607	0.612	0.615	0.593	0.606	0.634	0.610	2.06
64)		4-Ethyltoluene	0.442	0.456	0.450	0.453	0.432	0.426	0.459	0.446	2.76

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 070213.M
Title : TO-15/TO-14

65)	1,3,5-Trimethy...	0.659	0.674	0.637	0.610	0.606	0.602	0.636	0.632	4.38
66)	1,2,4-Trimethy...	0.619	0.648	0.608	0.617	0.607	0.610	0.646	0.622	2.86
67)	BenzylChloride...	1.021	1.169	1.187	1.242	1.266	1.279	1.353	1.217	8.68
68)	1,3-Dichlorobe...	0.910	0.954	0.934	0.891	0.912	0.930	0.980	0.930	3.20
69)	1,4-Dichlorobe...	0.929	1.001	0.946	0.887	0.869	0.893	0.956	0.926	5.00
70)	1,2-Dichlorobe...	0.935	1.011	0.990	0.940	0.914	0.912	0.971	0.953	4.02
71)	1,2,4-Trichlor...	0.891	0.961	0.947	0.939	0.960	0.957	1.040	0.956	4.63
72)	Hexachlorobuta...	0.901	0.899	0.856	0.844	0.832	0.821	0.845	0.857	3.67

(#) = Out of Range