Atmospheric Analysis & Consulting, Inc.

CLIENT	: Soil Water Air Protection Enterprise
PROJECT NAME	: Bridgeton Sanitary Landfill Air Quality Assessment
AAC PROJECT NO.	: 130537
REPORT DATE	: 05/07/2013

On May 3, 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)
U-1 W5-Canister	130537-62774	554.9
U-2 W8-Canister	130537-62775	470.4
D-1 W9-Canister	130537-62776	576.3
D-2 W2-Canister	130537-62777	687.5

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 72 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 **130537** **Received By: J. Zachman**

Sample Receipt Date	Project Desc	Clients ID	Matrix	Sampling Date/Time	Sampled By	Sample #	Analysis Requested
5/3/2013 1055	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-1 W5	Summa Canister	5/1/2013 0830-1230	Client	62774	TO15 ASTM D5504
5/3/2013 1055	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-2 W8	Summa Canister	5/1/2013 0950-1350	Client	62775	TO15 ASTM D5504
5/3/2013 1055	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-1 W9	Summa Canister	5/1/2013 0930-1330	Client	62776	TO15 ASTM D5504
5/3/2013 1055	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-2 W2	Summa Canister	5/1/2013 0948-1348	Client	62777	TO15 ASTM D5504

TURN AROUND TIME: Normal (10days)

Lab Due Date: 5/10/2013

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.: 130537

Date: 5/3/2013

Canister #	Sample #	Initial Pressure	Final Pressure
705	62774	554.9	1028.9
704	62775	470.4	1017.4
716	62776	576.3	1017.0
706	62777	687.5	1016.7

1

AAC#130537

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: **01-May-13**
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	Carboxylic 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	Special Instructions / Conditions of Receipt	
62774	U-1 W5	Canister		01-May	4 Hr	X	X												Canister #	1605
62775	U-2 W8	Canister		01-May	4 Hr	X	X												Canister #	2178
62776	D-1 W9	Canister		01-May	4 Hr	X	X												Canister #	716
62777	D-2 W2	Canister		01-May	4 Hr	X	X												Canister #	1609

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: **05/01/2013**	12 Noon	Received By:	Date:	**Time:**
Relinquished By:	Date:	Time:	Received By:	Date:	**Time:**
Relinquished By:	Date:	Time:	Received By:	Date: 5/13/2013	**Time:** 1055

- 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 W5 Canister**

AAC Batch ID: 130537 AAC Sample ID: 02774

SAMPLING INFORMATION

Start Date/Time: **May 1st, 2013** - 8:30 Stop Date/Time: **May 1st, 2013** 12:30

Start Temp/Pressure*: 18.8 C / 30.01 Stop Temp/Pressure*: 27.2 C / 30.07

Initial Can Pressure**: -30 Final Can Pressure**: -10

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

Comments: _____

John Blank - **May 1st, 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

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

Canister Serial No.: 705 Flow Controller Serial No: 803

Initial Pressure: 0.4 Certified Flow Rate: 17.9 mL/min

Return Pressure: 554.9 Certified By/Date: WESLEY HORN / 4/10/13

Final Pressure: 1028.9 Flow Rate upon Return: NA

Date Shipped From Lab: 4/5/2013 Shipped By: JZ

Date Returned to Lab: 5/3/2013 Received By: JZ

Flow Controller Certification File ID: M503/04091306

Canister Certification File ID: M503/03271315

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

05/07/13 5/6/13

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 W8 Canister**

AAC Batch ID: 130537 AAC Sample ID: 62775

SAMPLING INFORMATION

Start Date/Time: **May 1st, 2013** - 8:50 Stop Date/Time: **May 1st, 2013** 12:50

Start Temp/Pressure*: 18.8 C / 30.01 Stop Temp/Pressure*: 27.2 C / 30.07

Initial Can Pressure**: -30 Final Can Pressure**: -10

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

Comments: _____

John Blank - **May 1st, 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

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

Canister Serial No.: 704 Flow Controller Serial No: 805

Initial Pressure: 0.6 Certified Flow Rate: 18.1 mL/min

Return Pressure: 470.4 Certified By/Date: WESLEY HORN / 4/10/13

Final Pressure: 1017.4 Flow Rate upon Return: NA

Date Shipped From Lab: 4/5/2013 Shipped By: JZ

Date Returned to Lab: 5/3/2013 Received By: JZ

Flow Controller Certification File ID: M503/09091306

Canister Certification File ID: M503/04011308

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

05/07/13 5/8/13

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 W9 Canister**

AAC Batch ID: 130537 AAC Sample ID: 62776

SAMPLING INFORMATION

Start Date/Time: **May 1st, 2013** - 9:30 Stop Date/Time: **May 1st, 2013** 13:30

Start Temp/Pressure*: 18.8 C / 30.01 Stop Temp/Pressure*: 27.2 C / 30.07

Initial Can Pressure**: -30 Final Can Pressure**: -8

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

Comments: _____

John Blank - **May 1st, 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

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

Canister Serial No.: 716 Flow Controller Serial No: 804

Initial Pressure: 0.5 Certified Flow Rate: 18.0 mL/min

Return Pressure: 576.3 Certified By/Date: WESLEY HORN / 4/10/13

Final Pressure: 1017.0 Flow Rate upon Return: NA

Date Shipped From Lab: 4/5/2013 Shipped By: JZ

Date Returned to Lab: 5/3/2013 Received By: JZ

Flow Controller Certification File ID: 1503/0409306

Canister Certification File ID: 1503/0401309

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

05/07/13 5/8/13

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 W2 Canister**

AAC Batch ID: 130537 AAC Sample ID: 62777

SAMPLING INFORMATION

Start Date/Time: **May 1st, 2013 - 9:48** Stop Date/Time: **May 1st, 2013 13:48**

Start Temp/Pressure*: **18.8 C / 30.01** Stop Temp/Pressure*: **27.2 C / 30.07**

Initial Can Pressure**: -30 Final Can Pressure**: -4

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

Comments: _____

John Blank - **May 1st, 2013**

Sampler Name (Print) *Sampler Signature/Date*

LABORATORY INFORMATION

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

Canister Serial No.: 706 Flow Controller Serial No: 709

Initial Pressure: 0.7 Certified Flow Rate: 18.0 mL/min

Return Pressure: 687.5 Certified By/Date: WESLEY HORN / 4/10/13

Final Pressure: 1016.7 Flow Rate upon Return: NA

Date Shipped From Lab: 4/5/2013 Shipped By: JZ

Date Returned to Lab: 5/3/2013 Received By: JZ

Flow Controller Certification File ID: 4503/04101305

Canister Certification File ID: 4503/03071321

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

05/07/13 5/8/13

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.

TO-15 REPORTS

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130537
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 05/03/2013
DATE REPORTED : 05/07/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W5-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62774				130537-62775				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.85				2.16				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.46	J	1.0	0.93	0.43	J	1.0	1.08	0.5
Propene	<SRL	U	1.0	1.85	1.43	J	1.0	2.16	1.0
Dichlorodifluoromethane	0.59	J	1.0	0.93	0.61	J	1.0	1.08	0.5
Chloromethane	0.52	J	1.0	0.93	0.54	J	1.0	1.08	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Vinyl Chloride	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Methanol	18.9		1.0	9.27	13.6		1.0	10.8	5.0
1,3-Butadiene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Bromomethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Chloroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Ethanol	3.17	J	1.0	3.71	2.96	J	1.0	4.33	2.0
Vinyl Bromide	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Acetone	5.62		1.0	3.71	8.22		1.0	4.33	2.0
Trichlorofluoromethane	0.30	J	1.0	0.93	0.28	J	1.0	1.08	0.5
2-Propanol (IPA)	2.15	J	1.0	3.71	12.7		1.0	4.33	2.0
Acrylonitrile	<SRL	U	1.0	1.85	<SRL	U	1.0	2.16	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	1.85	<SRL	U	1.0	2.16	1.0
Allyl Chloride	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Carbon Disulfide	NR	U	1.0	0.93	NR	U	1.0	1.08	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Vinyl Acetate	<SRL	U	1.0	1.85	<SRL	U	1.0	2.16	1.0
2-Butanone (MEK)	<SRL	U	1.0	1.85	0.50	J	1.0	2.16	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Hexane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Chloroform	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Ethyl Acetate	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Tetrahydrofuran	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,2-Dichloroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130537
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 05/03/2013
DATE REPORTED : 05/07/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W5-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62774				130537-62775				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.85				2.16				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Carbon Tetrachloride	0.09	J	1.0	0.93	0.11	J	1.0	1.08	0.5
Cyclohexane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Bromodichloromethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,4-Dioxane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
2,2,4-Trimethylpentane	0.15	J	1.0	0.93	0.17	J	1.0	1.08	0.5
Heptane	0.13	J	1.0	0.93	0.17	J	1.0	1.08	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,1,2-Trichloroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Toluene	0.57	J	1.0	0.93	0.58	J	1.0	1.08	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Dibromochloromethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Chlorobenzene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Ethylbenzene	0.11	J	1.0	0.93	0.17	J	1.0	1.08	0.5
m & p-Xylenes	0.39	J	1.0	1.85	0.63	J	1.0	2.16	1.0
Bromoform	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Styrene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
o-Xylene	0.19	J	1.0	0.93	0.41	J	1.0	1.08	0.5
4-Ethyltoluene	<SRL	U	1.0	0.93	0.22	J	1.0	1.08	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	0.93	0.41	J	1.0	1.08	0.5
1,2,4-Trimethylbenzene	0.26	J	1.0	0.93	1.41		1.0	1.08	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.93	<SRL	U	1.0	1.08	0.5
BFB-Surrogate Std. % Recovery	111%				109%				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**	**DATE RECEIVED**	**: 05/03/2013**
PROJECT NO	**: 130537**	**DATE REPORTED**	**: 05/07/2013**
MATRIX	**: AIR**		
UNITS	**: ug/m3**		

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W5-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62774				130537-62775				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.85				2.16				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	1.6	J	1.0	3.3	1.5	J	1.0	3.8	1.8
Propene	<SRL	U	1.0	3.2	2.5	J	1.0	3.7	1.7
Dichlorodifluoromethane	2.9	J	1.0	4.6	3.0	J	1.0	5.3	2.5
Chloromethane	1.1	J	1.0	1.9	1.1	J	1.0	2.2	1.0
Dichlorotetrafluoroethane	<SRL	U	1.0	6.5	<SRL	U	1.0	7.6	3.5
Vinyl Chloride	<SRL	U	1.0	2.4	<SRL	U	1.0	2.8	1.3
Methanol	24.7		1.0	12.1	17.8		1.0	14.2	6.6
1,3-Butadiene	<SRL	U	1.0	2.1	<SRL	U	1.0	2.4	1.1
Bromomethane	<SRL	U	1.0	3.6	<SRL	U	1.0	4.2	1.9
Chloroethane	<SRL	U	1.0	2.4	<SRL	U	1.0	2.9	1.3
Dichlorofluoromethane	<SRL	U	1.0	3.9	<SRL	U	1.0	4.6	2.1
Ethanol	6.0	J	1.0	7.0	5.6	J	1.0	8.2	3.8
Vinyl Bromide	<SRL	U	1.0	4.1	<SRL	U	1.0	4.7	2.2
Acetone	13.3		1.0	8.8	19.5		1.0	10.3	4.8
Trichlorofluoromethane	1.7	J	1.0	5.2	1.6	J	1.0	6.1	2.8
2-Propanol (IPA)	5.3	J	1.0	9.1	31.1		1.0	10.6	4.9
Acrylonitrile	<SRL	U	1.0	4.0	<SRL	U	1.0	4.7	2.2
1,1-Dichloroethene	<SRL	U	1.0	3.7	<SRL	U	1.0	4.3	2.0
Methylene Chloride (DCM)	<SRL	U	1.0	6.4	<SRL	U	1.0	7.5	3.5
Allyl Chloride	<SRL	U	1.0	2.9	<SRL	U	1.0	3.4	1.6
Carbon Disulfide	NR	U	1.0	2.9	NR	U	1.0	3.4	1.6
Trichlorotrifluoroethane	<SRL	U	1.0	7.1	<SRL	U	1.0	8.3	3.8
trans-1,2-Dichloroethene	<SRL	U	1.0	3.7	<SRL	U	1.0	4.3	2.0
1,1-Dichloroethane	<SRL	U	1.0	3.8	<SRL	U	1.0	4.4	2.0
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	3.3	<SRL	U	1.0	3.9	1.8
Vinyl Acetate	<SRL	U	1.0	6.5	<SRL	U	1.0	7.6	3.5
2-Butanone (MEK)	<SRL	U	1.0	5.5	1.5	J	1.0	6.4	2.9
cis-1,2-Dichloroethene	<SRL	U	1.0	3.7	<SRL	U	1.0	4.3	2.0
Hexane	<SRL	U	1.0	3.3	<SRL	U	1.0	3.8	1.8
Chloroform	<SRL	U	1.0	4.5	<SRL	U	1.0	5.3	2.4
Ethyl Acetate	<SRL	U	1.0	3.3	<SRL	U	1.0	3.9	1.8
Tetrahydrofuran	<SRL	U	1.0	2.7	<SRL	U	1.0	3.2	1.5
1,2-Dichloroethane	<SRL	U	1.0	3.8	<SRL	U	1.0	4.4	2.0
1,1,1-Trichloroethane	<SRL	U	1.0	5.1	<SRL	U	1.0	5.9	2.7

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT	**: Soil Water Air Protection Enterprise**	**DATE RECEIVED**	**: 05/03/2013**
PROJECT NO	**: 130537**	**DATE REPORTED**	**: 05/07/2013**
MATRIX	**: AIR**		
UNITS	**: ug/m3**		

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	U-1 W5-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	U-2 W8-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62774				130537-62775				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.85				2.16				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	<SRL	U	1.0	3.0	<SRL	U	1.0	3.5	1.6
Carbon Tetrachloride	0.6	J	1.0	5.8	0.7	J	1.0	6.8	3.1
Cyclohexane	<SRL	U	1.0	3.2	<SRL	U	1.0	3.7	1.7
1,2-Dichloropropane	<SRL	U	1.0	4.3	<SRL	U	1.0	5.0	2.3
Bromodichloromethane	<SRL	U	1.0	6.2	<SRL	U	1.0	7.2	3.4
1,4-Dioxane	<SRL	U	1.0	3.3	<SRL	U	1.0	3.9	1.8
Trichloroethene (TCE)	<SRL	U	1.0	5.0	<SRL	U	1.0	5.8	2.7
2,2,4-Trimethylpentane	0.7	J	1.0	4.3	0.8	J	1.0	5.1	2.3
Heptane	0.5	J	1.0	3.8	0.7	J	1.0	4.4	2.0
cis-1,3-Dichloropropene	<SRL	U	1.0	4.2	<SRL	U	1.0	4.9	2.3
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	3.8	<SRL	U	1.0	4.4	2.0
trans-1,3-Dichloropropene	<SRL	U	1.0	4.2	<SRL	U	1.0	4.9	2.3
1,1,2-Trichloroethane	<SRL	U	1.0	5.1	<SRL	U	1.0	5.9	2.7
Toluene	2.2	J	1.0	3.5	2.2	J	1.0	4.1	1.9
2-Hexanone (MBK)	<SRL	U	1.0	3.8	<SRL	U	1.0	4.4	2.0
Dibromochloromethane	<SRL	U	1.0	7.9	<SRL	U	1.0	9.2	4.3
1,2-Dibromoethane	<SRL	U	1.0	7.1	<SRL	U	1.0	8.3	3.8
Tetrachloroethene (PCE)	<SRL	U	1.0	6.3	<SRL	U	1.0	7.3	3.4
Chlorobenzene	<SRL	U	1.0	4.3	<SRL	U	1.0	5.0	2.3
Ethylbenzene	0.5	J	1.0	4.0	0.8	J	1.0	4.7	2.2
m & p-Xylenes	1.7	J	1.0	8.1	2.7	J	1.0	9.4	4.3
Bromoform	<SRL	U	1.0	9.6	<SRL	U	1.0	11.2	5.2
Styrene	<SRL	U	1.0	3.9	<SRL	U	1.0	4.6	2.1
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	6.4	<SRL	U	1.0	7.4	3.4
o-Xylene	0.8	J	1.0	4.0	1.8	J	1.0	4.7	2.2
4-Ethyltoluene	<SRL	U	1.0	4.6	1.1	J	1.0	5.3	2.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	4.6	2.0	J	1.0	5.3	2.5
1,2,4-Trimethylbenzene	1.3	J	1.0	4.6	6.9		1.0	5.3	2.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	4.8	<SRL	U	1.0	5.6	2.6
1,3-Dichlorobenzene	<SRL	U	1.0	5.6	<SRL	U	1.0	6.5	3.0
1,4-Dichlorobenzene	<SRL	U	1.0	5.6	<SRL	U	1.0	6.5	3.0
1,2-Dichlorobenzene	<SRL	U	1.0	5.6	<SRL	U	1.0	6.5	3.0
1,2,4-Trichlorobenzene	<SRL	U	1.0	6.9	<SRL	U	1.0	8.0	3.7
Hexachlorobutadiene	<SRL	U	1.0	9.9	<SRL	U	1.0	11.5	5.3
BFB-Surrogate Std. % Recovery	111%				109%				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

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Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130537
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 05/03/2013
DATE REPORTED : 05/07/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W9-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62776				130537-62777				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.76				1.48				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	0.39	J	1.0	0.88	0.33	J	1.0	0.74	0.5
Propene	0.79	J	1.0	1.76	2.07		1.0	1.48	1.0
Dichlorodifluoromethane	0.60	J	1.0	0.88	0.59	J	1.0	0.74	0.5
Chloromethane	0.51	J	1.0	0.88	0.55	J	1.0	0.74	0.5
Dichlorotetrafluoroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Vinyl Chloride	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Methanol	15.5		1.0	8.82	16.3		1.0	7.4	5.0
1,3-Butadiene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Bromomethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Chloroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Dichlorofluoromethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Ethanol	3.39	J	1.0	3.53	3.09		1.0	2.96	2.0
Vinyl Bromide	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Acetone	6.51		1.0	3.53	13.0		1.0	2.96	2.0
Trichlorofluoromethane	0.28	J	1.0	0.88	0.28	J	1.0	0.74	0.5
2-Propanol (IPA)	1.64	J	1.0	3.53	25.8		1.0	2.96	2.0
Acrylonitrile	<SRL	U	1.0	1.76	<SRL	U	1.0	1.48	1.0
1,1-Dichloroethene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Methylene Chloride (DCM)	<SRL	U	1.0	1.76	<SRL	U	1.0	1.48	1.0
Allyl Chloride	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Carbon Disulfide	NR	U	1.0	0.88	NR	U	1.0	0.74	0.5
Trichlorotrifluoroethane	<SRL	U	1.0	0.88	0.09	J	1.0	0.74	0.5
trans-1,2-Dichloroethene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,1-Dichloroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Vinyl Acetate	<SRL	U	1.0	1.76	<SRL	U	1.0	1.48	1.0
2-Butanone (MEK)	0.48	J	1.0	1.76	0.55	J	1.0	1.48	1.0
cis-1,2-Dichloroethene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Hexane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Chloroform	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Ethyl Acetate	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Tetrahydrofuran	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,2-Dichloroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,1,1-Trichloroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130537
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 05/03/2013
DATE REPORTED : 05/07/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W9-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62776				130537-62777				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.76				1.48				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	0.42	J	1.0	0.88	0.34	J	1.0	0.74	0.5
Carbon Tetrachloride	0.09	J	1.0	0.88	0.09	J	1.0	0.74	0.5
Cyclohexane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,2-Dichloropropane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Bromodichloromethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,4-Dioxane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Trichloroethene (TCE)	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
2,2,4-Trimethylpentane	0.18	J	1.0	0.88	0.10	J	1.0	0.74	0.5
Heptane	0.12	J	1.0	0.88	0.09	J	1.0	0.74	0.5
cis-1,3-Dichloropropene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
trans-1,3-Dichloropropene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,1,2-Trichloroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Toluene	0.83	J	1.0	0.88	0.98		1.0	0.74	0.5
2-Hexanone (MBK)	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Dibromochloromethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,2-Dibromoethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Tetrachloroethene (PCE)	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Chlorobenzene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Ethylbenzene	0.14	J	1.0	0.88	0.12	J	1.0	0.74	0.5
m & p-Xylenes	0.44	J	1.0	1.76	0.35	J	1.0	1.48	1.0
Bromoform	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Styrene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
o-Xylene	0.21	J	1.0	0.88	0.16	J	1.0	0.74	0.5
4-Ethyltoluene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,2,4-Trimethylbenzene	0.26	J	1.0	0.88	0.22	J	1.0	0.74	0.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,3-Dichlorobenzene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,4-Dichlorobenzene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,2-Dichlorobenzene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
1,2,4-Trichlorobenzene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
Hexachlorobutadiene	<SRL	U	1.0	0.88	<SRL	U	1.0	0.74	0.5
BFB-Surrogate Std. % Recovery	112%				106%				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
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Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130537
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 05/03/2013
DATE REPORTED : 05/07/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W9-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62776				130537-62777				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.76				1.48				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	1.4	J	1.0	3.1	1.2	J	1.0	2.6	1.8
Propene	1.4	J	1.0	3.0	3.6		1.0	2.5	1.7
Dichlorodifluoromethane	3.0	J	1.0	4.4	2.9	J	1.0	3.7	2.5
Chloromethane	1.1	J	1.0	1.8	1.1	J	1.0	1.5	1.0
Dichlorotetrafluoroethane	<SRL	U	1.0	6.2	<SRL	U	1.0	5.2	3.5
Vinyl Chloride	<SRL	U	1.0	2.3	<SRL	U	1.0	1.9	1.3
Methanol	20.4		1.0	11.6	21.4		1.0	9.7	6.6
1,3-Butadiene	<SRL	U	1.0	2.0	<SRL	U	1.0	1.6	1.1
Bromomethane	<SRL	U	1.0	3.4	<SRL	U	1.0	2.9	1.9
Chloroethane	<SRL	U	1.0	2.3	<SRL	U	1.0	2.0	1.3
Dichlorofluoromethane	<SRL	U	1.0	3.7	<SRL	U	1.0	3.1	2.1
Ethanol	6.4	J	1.0	6.7	5.8		1.0	5.6	3.8
Vinyl Bromide	<SRL	U	1.0	3.9	<SRL	U	1.0	3.2	2.2
Acetone	15.5		1.0	8.4	30.8		1.0	7.0	4.8
Trichlorofluoromethane	1.6	J	1.0	5.0	1.6	J	1.0	4.2	2.8
2-Propanol (IPA)	4.0	J	1.0	8.7	63.3		1.0	7.3	4.9
Acrylonitrile	<SRL	U	1.0	3.8	<SRL	U	1.0	3.2	2.2
1,1-Dichloroethene	<SRL	U	1.0	3.5	<SRL	U	1.0	2.9	2.0
Methylene Chloride (DCM)	<SRL	U	1.0	6.1	<SRL	U	1.0	5.1	3.5
Allyl Chloride	<SRL	U	1.0	2.8	<SRL	U	1.0	2.3	1.6
Carbon Disulfide	NR	U	1.0	2.7	NR	U	1.0	2.3	1.6
Trichlorotrifluoroethane	<SRL	U	1.0	6.8	0.7	J	1.0	5.7	3.8
trans-1,2-Dichloroethene	<SRL	U	1.0	3.5	<SRL	U	1.0	2.9	2.0
1,1-Dichloroethane	<SRL	U	1.0	3.6	<SRL	U	1.0	3.0	2.0
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1.0	3.2	<SRL	U	1.0	2.7	1.8
Vinyl Acetate	<SRL	U	1.0	6.2	<SRL	U	1.0	5.2	3.5
2-Butanone (MEK)	1.4	J	1.0	5.2	1.6	J	1.0	4.4	2.9
cis-1,2-Dichloroethene	<SRL	U	1.0	3.5	<SRL	U	1.0	2.9	2.0
Hexane	<SRL	U	1.0	3.1	<SRL	U	1.0	2.6	1.8
Chloroform	<SRL	U	1.0	4.3	<SRL	U	1.0	3.6	2.4
Ethyl Acetate	<SRL	U	1.0	3.2	<SRL	U	1.0	2.7	1.8
Tetrahydrofuran	<SRL	U	1.0	2.6	<SRL	U	1.0	2.2	1.5
1,2-Dichloroethane	<SRL	U	1.0	3.6	<SRL	U	1.0	3.0	2.0
1,1,1-Trichloroethane	<SRL	U	1.0	4.8	<SRL	U	1.0	4.0	2.7

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Soil Water Air Protection Enterprise
PROJECT NO : 130537
MATRIX : AIR
UNITS : ug/m3

DATE RECEIVED : 05/03/2013
DATE REPORTED : 05/07/2013

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	D-1 W9-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	D-2 W2-Canister			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	130537-62776				130537-62777				
Date Sampled	05/01/2013				05/01/2013				
Date Analyzed	05/07/2013				05/07/2013				
Can Dilution Factor	1.76				1.48				
	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Benzene	1.4	J	1.0	2.8	1.1	J	1.0	2.4	1.6
Carbon Tetrachloride	0.6	J	1.0	5.6	0.6	J	1.0	4.7	3.1
Cyclohexane	<SRL	U	1.0	3.0	<SRL	U	1.0	2.5	1.7
1,2-Dichloropropane	<SRL	U	1.0	4.1	<SRL	U	1.0	3.4	2.3
Bromodichloromethane	<SRL	U	1.0	5.9	<SRL	U	1.0	5.0	3.4
1,4-Dioxane	<SRL	U	1.0	3.2	<SRL	U	1.0	2.7	1.8
Trichloroethene (TCE)	<SRL	U	1.0	4.7	<SRL	U	1.0	4.0	2.7
2,2,4-Trimethylpentane	0.8	J	1.0	4.1	0.5	J	1.0	3.5	2.3
Heptane	0.5	J	1.0	3.6	0.4	J	1.0	3.0	2.0
cis-1,3-Dichloropropene	<SRL	U	1.0	4.0	<SRL	U	1.0	3.4	2.3
4-Methyl-2-pentanone (MiBK)	<SRL	U	1.0	3.6	<SRL	U	1.0	3.0	2.0
trans-1,3-Dichloropropene	<SRL	U	1.0	4.0	<SRL	U	1.0	3.4	2.3
1,1,2-Trichloroethane	<SRL	U	1.0	4.8	<SRL	U	1.0	4.0	2.7
Toluene	3.1	J	1.0	3.3	3.7		1.0	2.8	1.9
2-Hexanone (MBK)	<SRL	U	1.0	3.6	<SRL	U	1.0	3.0	2.0
Dibromochloromethane	<SRL	U	1.0	7.5	<SRL	U	1.0	6.3	4.3
1,2-Dibromoethane	<SRL	U	1.0	6.8	<SRL	U	1.0	5.7	3.8
Tetrachloroethene (PCE)	<SRL	U	1.0	6.0	<SRL	U	1.0	5.0	3.4
Chlorobenzene	<SRL	U	1.0	4.1	<SRL	U	1.0	3.4	2.3
Ethylbenzene	0.6	J	1.0	3.8	0.5	J	1.0	3.2	2.2
m & p-Xylenes	1.9	J	1.0	7.7	1.5	J	1.0	6.4	4.3
Bromoform	<SRL	U	1.0	9.1	<SRL	U	1.0	7.6	5.2
Styrene	<SRL	U	1.0	3.8	<SRL	U	1.0	3.1	2.1
1,1,2,2-Tetrachloroethane	<SRL	U	1.0	6.1	<SRL	U	1.0	5.1	3.4
o-Xylene	0.9	J	1.0	3.8	0.7	J	1.0	3.2	2.2
4-Ethyltoluene	<SRL	U	1.0	4.3	<SRL	U	1.0	3.6	2.5
1,3,5-Trimethylbenzene	<SRL	U	1.0	4.3	<SRL	U	1.0	3.6	2.5
1,2,4-Trimethylbenzene	1.3	J	1.0	4.3	1.1	J	1.0	3.6	2.5
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1.0	4.6	<SRL	U	1.0	3.8	2.6
1,3-Dichlorobenzene	<SRL	U	1.0	5.3	<SRL	U	1.0	4.4	3.0
1,4-Dichlorobenzene	<SRL	U	1.0	5.3	<SRL	U	1.0	4.4	3.0
1,2-Dichlorobenzene	<SRL	U	1.0	5.3	<SRL	U	1.0	4.4	3.0
1,2,4-Trichlorobenzene	<SRL	U	1.0	6.5	<SRL	U	1.0	5.5	3.7
Hexachlorobutadiene	<SRL	U	1.0	9.4	<SRL	U	1.0	7.9	5.3
BFB-Surrogate Std. % Recovery	112%				106%				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

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TO-15 QC REPORT

ANALYSIS DATE : 05/07/2013
ANALYST : JJG
INSTRUMENT ID : GC/MS-03
CALIBRATION STD ID : PS040413-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 04/18/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
4-BFB (surrogate standard)	10.00	10.51	105
Chlorodifluoromethane	10.10	9.43	93
Propene	11.00	10.34	94
Dichlorodifluoromethane	9.80	10.16	104
Chloromethane	10.10	9.24	91
Dichlorotetrafluoroethane	10.10	10.30	102
Vinyl Chloride	10.20	9.61	94
Methanol	4.90	4.40	90
1,3-Butadiene	10.50	9.51	91
Bromomethane	10.20	8.77	86
Chloroethane	10.00	8.45	85
Dichlorofluoromethane	10.00	10.20	102
Ethanol	9.80	8.90	91
Vinyl Bromide	10.20	10.62	104
Acetone	10.80	8.26	76
Trichlorofluoromethane	10.10	10.71	106
2-Propanol (IPA)	11.00	8.90	81
Acrylonitrile	10.50	9.59	91
1,1-Dichloroethene	10.50	9.87	94
Methylene Chloride (DCM)	10.40	9.32	90
Allyl Chloride	11.00	10.65	97
Carbon Disulfide	10.50	8.78	84
Trichlorotrifluoroethane	10.40	10.10	97
trans-1,2-Dichloroethene	10.40	9.95	96
1,1-Dichloroethane	10.40	9.87	95
Methyl Tert Butyl Ether (MTBE)	10.60	10.92	103
Vinyl Acetate	9.70	9.86	102
2-Butanone (MEK)	10.60	10.29	97
cis-1,2-Dichloroethene	10.60	9.99	94
Hexane	10.70	10.04	94
Chloroform	10.60	10.71	101
Ethyl Acetate	11.00	10.64	97
Tetrahydrofuran	10.80	9.86	91
1,2-Dichloroethane	10.40	10.76	103
1,1,1-Trichloroethane	10.50	11.26	107

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ANALYSIS DATE : 05/07/2013
ANALYST : JJG

INSTRUMENT ID : GC/MS-03
CALIBRATION STD ID : PS040413-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 04/18/2013 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC**
Benzene	10.50	9.58	91
Carbon Tetrachloride	10.10	11.12	110
Cyclohexane	10.50	9.64	92
1,2-Dichloropropane	10.50	9.50	90
Bromodichloromethane	10.30	10.73	104
1,4-Dioxane	10.30	9.38	91
Trichloroethene (TCE)	10.30	10.39	101
2,2,4-Trimethylpentane	10.90	10.18	93
Heptane	10.70	10.08	94
cis-1,3-Dichloropropene	11.00	10.76	98
4-Methyl-2-pentanone (MiBK)	10.30	9.47	92
trans-1,3-Dichloropropene	9.80	9.96	102
1,1,2-Trichloroethane	10.60	10.24	97
Toluene	10.60	10.00	94
2-Hexanone (MBK)	10.80	9.78	91
Dibromochloromethane	11.00	11.69	106
1,2-Dibromoethane	10.40	10.22	98
Tetrachloroethene (PCE)	10.40	10.50	101
Chlorobenzene	10.60	10.22	96
Ethylbenzene	10.50	10.19	97
m & p-Xylenes	20.60	19.02	92
Bromoform	10.30	10.53	102
Styrene	10.40	9.93	95
1,1,2,2-Tetrachloroethane	10.60	9.75	92
o-Xylene	10.60	10.24	97
4-Ethyltoluene	10.40	10.01	96
1,3,5-Trimethylbenzene	10.20	9.41	92
1,2,4-Trimethylbenzene	10.20	10.22	100
Benzyl Chloride (a-Chlorotoluene)	10.00	11.37	114
1,3-Dichlorobenzene	10.00	10.56	106
1,4-Dichlorobenzene	10.00	9.68	97
1,2-Dichlorobenzene	10.00	9.70	97
1,2,4-Trichlorobenzene	9.30	9.64	104
Hexachlorobutadiene	9.80	10.29	105

* - %REC should be 70-130%

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Quality Control/Quality Assurance Report

CLIENT ID	: Laboratory Control Spike	DATE ANALYZED	: 05/07/2013
AAC ID	: LCS/LCSD	DATE REPORTED	: 05/07/2013
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	9.87	9.88	94	94	0.1
Methylene Chloride (DCM)	0.0	10.40	9.32	9.27	90	89	0.5
Benzene	0.0	10.50	9.58	9.45	91	90	1.4
Trichloroethene (TCE)	0.0	10.30	10.39	10.23	101	99	1.6
Toluene	0.0	10.60	10.00	10.14	94	96	1.4
Tetrachloroethene (PCE)	0.0	10.40	10.50	10.46	101	101	0.4
Chlorobenzene	0.0	10.60	10.22	9.95	96	94	2.7
Ethylbenzene	0.0	10.50	10.19	9.88	97	94	3.1
m & p-Xylenes	0.0	20.60	19.02	18.76	92	91	1.4
o-Xylene	0.0	10.60	10.24	9.78	97	92	4.6

* Must be 70-130%

** Must be < 25%

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Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 05/07/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 05/07/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Method Blank	RL
AAC ID	MB 050713	
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

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Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 05/07/2013**
UNITS	**: ppbv**	**REPORT DATE**	**: 05/07/2013**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 050713	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	105%	--

RL - Reporting Limit

Marcus Hueppe
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Quality Control/Quality Assurance Report

AAC ID	**: 130537-62774**	**DATE ANALYZED**	**: 05/07/2013**
MATRIX	**: Air**	**DATE REPORTED**	**: 05/07/2013**
		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	18.9	19.8	4.7
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	5.62	5.84	3.8
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

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Quality Control/Quality Assurance Report

AAC ID	: 130537-62774	DATE ANALYZED	: 05/07/2013
MATRIX	: Air	DATE REPORTED	: 05/07/2013
		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	111%	108%	2.7

SRL - Sample Reporting Limit

Marcus Hueppe
Laboratory Director

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TO-15 RAW DATA

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071305.D
Acq On : 7 May 2013 12:10
Operator : JJG
Sample : 130537-62774 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:03:27 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	12.350	128	159128	10.00	ppbv		0.00
36) 1,4-Difluorobenzene	14.579	114	880856	10.00	ppbv		0.00
55) Chlorobenzene-d5	20.285	117	806928	10.00	ppbv		0.00
System Monitoring Compounds							
63) 4-Bromofluorobenzene(BFB)	22.711	174	529607	11.12	ppbv		0.00
Spiked Amount 10.000			Recovery = 111.20%				
Target Compounds							Qvalue
2) Chlorodifluoromethane	4.817	51	8293	0.25	ppbv	#	97
3) Propene	0.000		0	N.D.	d		
4) Dichlorodifluoromethane	4.908	85	16358	0.32	ppbv		99
5) Chloromethane	5.288	52	1586	0.28	ppbv	#	61
6) Dichlorotetrafluoroethane	5.324	135	188	N.D.			
7) VinylChloride	0.000		0	N.D.			
8) Methanol	5.867	31	56001m	10.17	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	13517m	1.71	ppbv		
14) VinylBromide	0.000		0	N.D.			
15) Acetone	7.984	58	30024m	3.03	ppbv		
16) Trichlorofluoromethane	7.659	103	4618	0.16	ppbv	#	98
17) 2-Propanol(IPA)	8.220	45	39150m	1.16	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	9.215	39	537	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	10.906	43	836	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	12.493	83	393	N.D.			
32) EthylAcetate	0.000		0	N.D.	d		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071305.D
Acq On : 7 May 2013 12:10
Operator : JJG
Sample : 130537-62774 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:03:27 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.778	72	371	N.D.	
34) 1,2-Dichloroethane	13.616	62	121	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	13.973	117	2575	0.05 ppbv	96
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	15.400	63	227	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	14.758	57	10392	0.08 ppbv #	94
45) Heptane	15.096	71	1629	0.07 ppbv	88
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.594	58	279	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	134	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	26625	0.31 ppbv	96
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	835	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	1029	N.D.	
56) Chlorobenzene	20.285	114	118	N.D.	
57) Ethylbenzene	20.713	91	6954	0.06 ppbv #	96
58) m&p-Xylene	20.945	106	9069	0.21 ppbv #	91
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.659	104	1319	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8139	0.10 ppbv #	93
64) 4-Ethyltoluene	0.000		0	N.D. d	
65) 1,3,5-Trimethylbenzene	0.000		0	N.D. d	
66) 1,2,4-Trimethylbenzene	24.529	120	6769	0.14 ppbv #	92
67) BenzylChloride(a-Chlor...	25.171	91	491	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	935	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	1287	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	817	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	2306	N.D.	
72) Hexachlorobutadiene	30.075	225	898	N.D.	

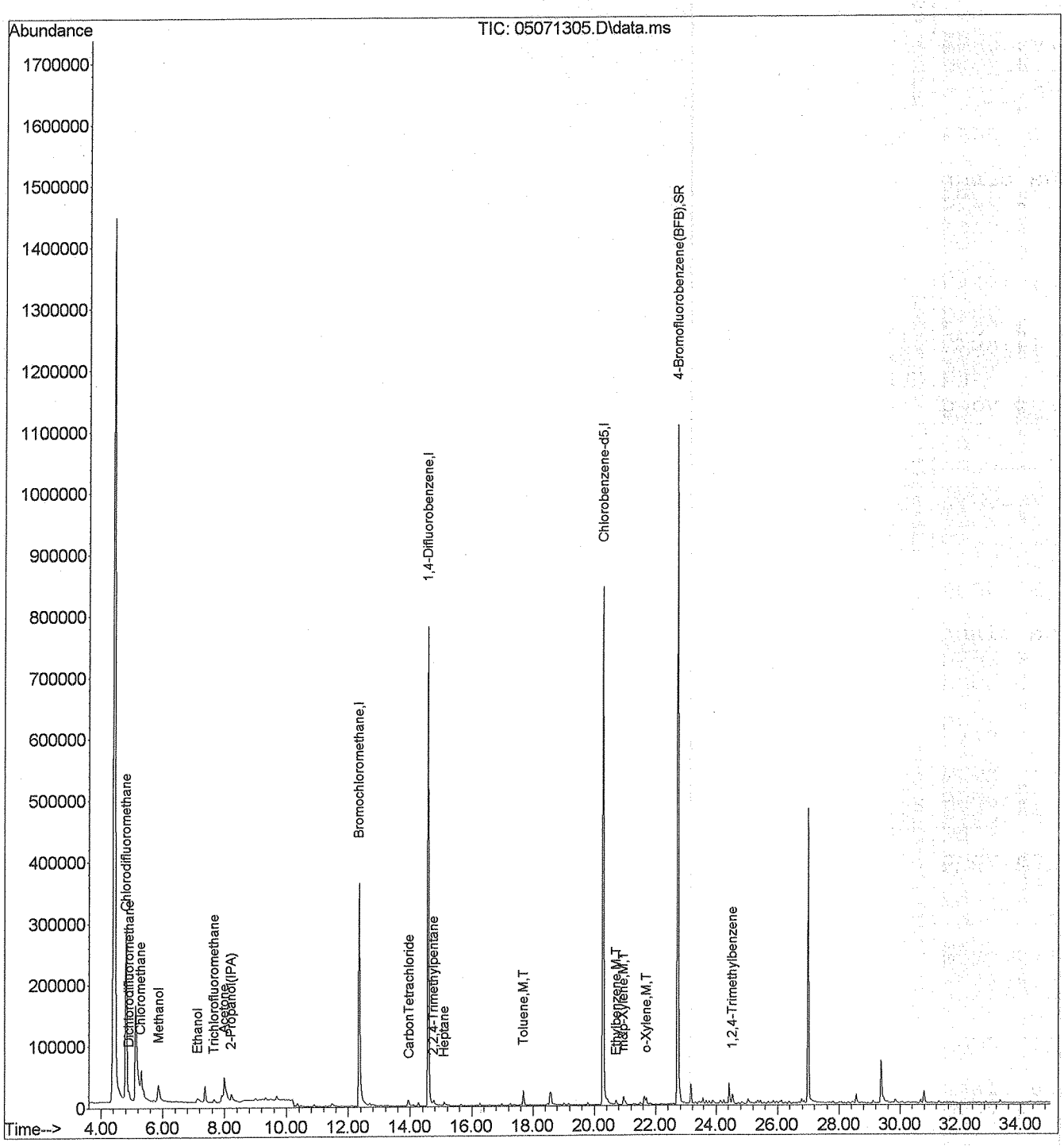
(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071305.D
Acq On : 7 May 2013 12:10
Operator : JJG
Sample : 130537-62774 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:03:27 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071307.D
Acq On : 7 May 2013 13:45
Operator : JJG
Sample : 130537-62775 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 14:58:23 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	12.350	128	159558	10.00	ppbv		0.00
36) 1,4-Difluorobenzene	14.579	114	858348	10.00	ppbv		0.00
55) Chlorobenzene-d5	20.285	117	802056	10.00	ppbv		0.00
System Monitoring Compounds							
63) 4-Bromofluorobenzene(BFB)	22.710	174	516680	10.92	ppbv		0.00
Spiked Amount 10.000			Recovery = 109.20%				
Target Compounds							Qvalue
2) Chlorodifluoromethane	4.835	51	6743	0.20	ppbv	#	95
3) Propene	4.799	42	6069	0.66	ppbv	#	88
4) Dichlorodifluoromethane	4.908	85	14478	0.28	ppbv		97
5) Chloromethane	5.306	52	1448	0.25	ppbv	#	15
6) Dichlorotetrafluoroethane	5.324	135	123	N.D.			
7) VinylChloride	0.000		0	N.D.			
8) Methanol	5.867	31	35974m	6.27	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	7.097	45	10907m	1.37	ppbv		
14) VinylBromide	0.000		0	N.D.			
15) Acetone	7.984	58	37793m	3.80	ppbv		
16) Trichlorofluoromethane	7.658	103	3808	0.13	ppbv		93
17) 2-Propanol(IPA)	8.183	45	198408m	5.85	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	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	684	N.D.			
28) 2-Butanone(MEK)	11.512	72	2208	0.23	ppbv		90
29) cis-1,2-Dichloroethene	0.000		0	N.D.			
30) Hexane	11.476	86	147	N.D.			
31) Chloroform	12.493	83	498	N.D.			
32) EthylAcetate	12.100	43	1840	N.D.			

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071307.D
Acq On : 7 May 2013 13:45
Operator : JJG
Sample : 130537-62775 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 14:58:23 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.778	72	134	N.D.	
34) 1,2-Dichloroethane	13.616	62	118	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	13.973	117	2155	0.05 ppbv	97
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	14.775	57	9913	0.08 ppbv #	92
45) Heptane	15.114	71	1706	0.08 ppbv #	6
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.576	58	275	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	22381	0.27 ppbv #	96
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.001	129	359	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	607	N.D.	
56) Chlorobenzene	20.285	114	148	N.D.	
57) Ethylbenzene	20.713	91	8488	0.08 ppbv #	97
58) m&p-Xylene	20.945	106	12458	0.29 ppbv #	90
59) Bromoform	21.837	173	135	N.D.	
60) Styrene	21.658	104	1382	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	15465	0.19 ppbv	96
64) 4-Ethyltoluene	23.673	120	3638	0.10 ppbv #	85
65) 1,3,5-Trimethylbenzene	23.780	120	9529	0.19 ppbv #	95
66) 1,2,4-Trimethylbenzene	24.529	120	31973	0.65 ppbv	90
67) BenzylChloride(a-Chlor...	25.189	91	135	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	383	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	886	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	308	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1243	N.D.	
72) Hexachlorobutadiene	30.075	225	316	N.D.	

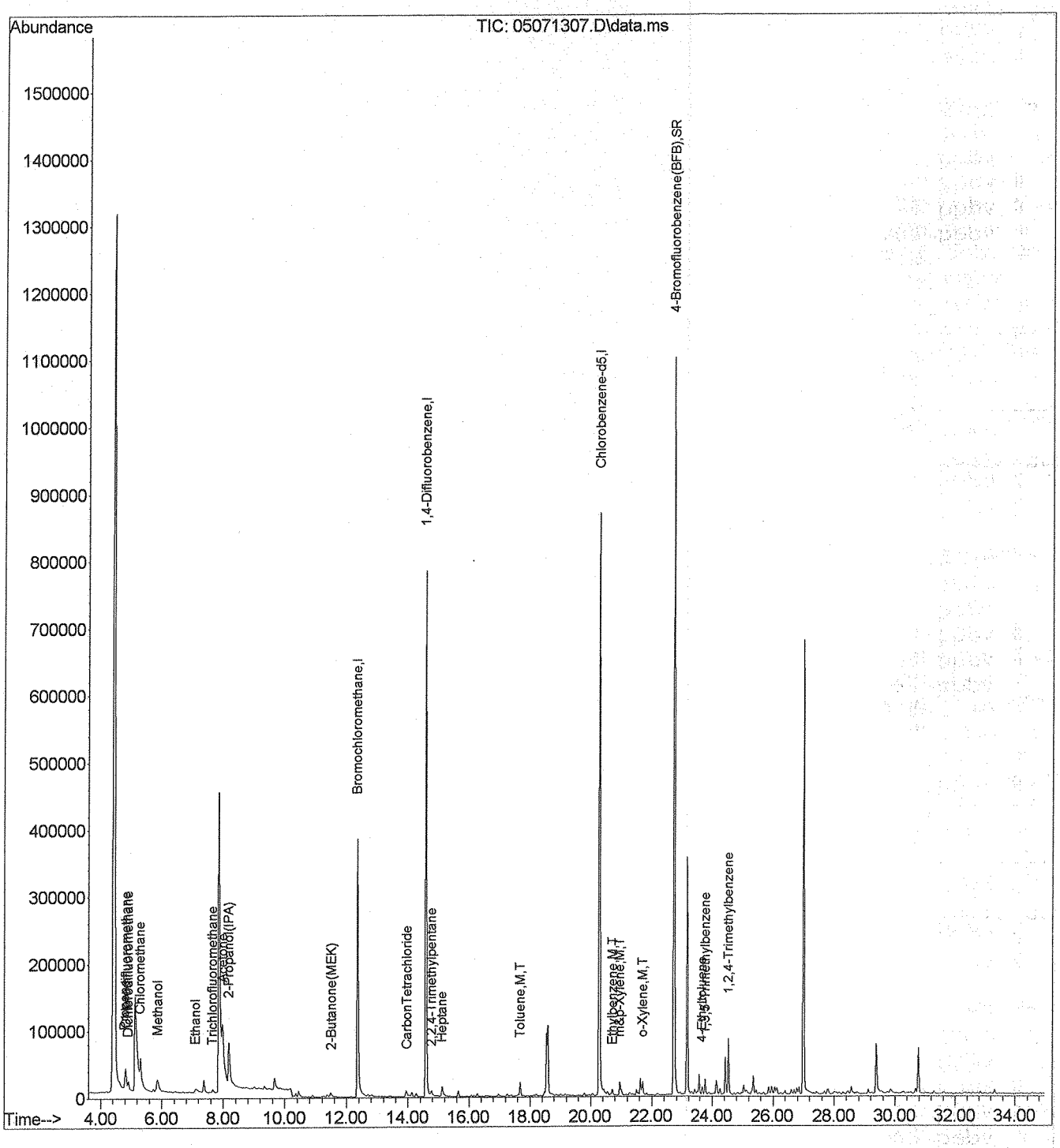
(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071307.D
Acq On : 7 May 2013 13:45
Operator : JJG
Sample : 130537-62775 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 14:58:23 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071308.D
Acq On : 7 May 2013 14:33
Operator : JJG
Sample : 130537-62776 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 15:08:55 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	12.350	128	160151	10.00	ppbv		0.00
36) 1,4-Difluorobenzene	14.579	114	884608	10.00	ppbv		0.00
55) Chlorobenzene-d5	20.285	117	797920	10.00	ppbv		0.00
System Monitoring Compounds							
63) 4-Bromofluorobenzene(BFB)	22.711	174	524937	11.15	ppbv		0.00
Spiked Amount 10.000			Recovery = 111.50%				
Target Compounds							Qvalue
2) Chlorodifluoromethane	4.817	51	7444	0.22	ppbv	#	97
3) Propene	4.799	42	4115	0.45	ppbv	#	63
4) Dichlorodifluoromethane	4.908	85	17335	0.34	ppbv		99
5) Chloromethane	5.288	52	1664	0.29	ppbv	#	31
6) Dichlorotetrafluoroethane	5.324	135	271	N.D.			
7) VinylChloride	0.000		0	N.D.			
8) Methanol	5.867	31	49479m	8.81	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	7.098	45	15281m	1.92	ppbv		
14) VinylBromide	0.000		0	N.D.			
15) Acetone	7.966	58	36815m	3.69	ppbv		
16) Trichlorofluoromethane	7.659	103	4765	0.16	ppbv	#	84
17) 2-Propanol(IPA)	8.220	45	31728m	0.93	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	9.360	39	197	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	1117	N.D.			
28) 2-Butanone(MEK)	11.494	72	2688	0.27	ppbv	#	54
29) cis-1,2-Dichloroethene	0.000		0	N.D.			
30) Hexane	0.000		0	N.D.	d		
31) Chloroform	12.511	83	352	N.D.			
32) EthylAcetate	0.000		0	N.D.	d		

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071308.D
Acq On : 7 May 2013 14:33
Operator : JJG
Sample : 130537-62776 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 15:08:55 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

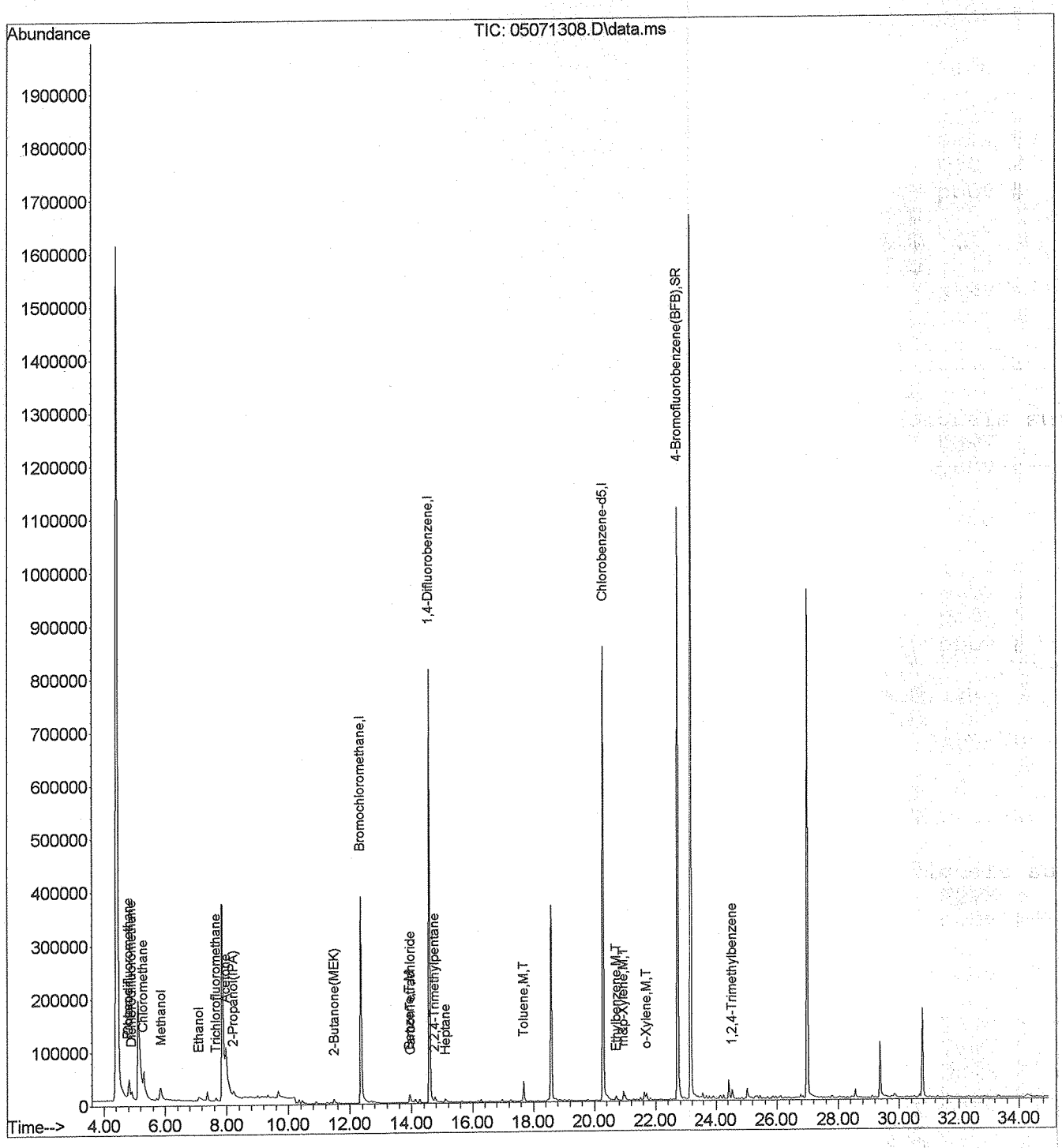
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D. d	
34) 1,2-Dichloroethane	13.616	62	125	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	13.937	78	17004	0.24 ppbv	95
38) CarbonTetrachloride	13.973	117	2551	0.05 ppbv	99
39) Cyclohexane	14.026	69	133	N.D.	
40) 1,2-Dichloropropane	15.275	63	133	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	14.758	57	12260	0.10 ppbv #	93
45) Heptane	15.114	71	1485	0.07 ppbv #	74
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.559	58	714	N.D.	
48) trans-1,3-Dichloropropene	17.664	75	542	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	40237m	0.47 ppbv	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	494	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	875	N.D.	
56) Chlorobenzene	0.000		0	N.D.	
57) Ethylbenzene	20.713	91	8148	0.08 ppbv	97
58) m&p-Xylene	20.945	106	10551	0.25 ppbv #	81
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	889	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	9546	0.12 ppbv #	94
64) 4-Ethyltoluene	23.691	120	1364	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1722	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	7199	0.15 ppbv #	97
67) BenzylChloride(a-Chlor...	25.189	91	128	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	265	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	670	N.D.	
70) 1,2-Dichlorobenzene	25.867	146	260	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1098	N.D.	
72) Hexachlorobutadiene	30.075	225	159	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071308.D
Acq On : 7 May 2013 14:33
Operator : JJG
Sample : 130537-62776 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 07 15:08:55 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



5/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071309.D
Acq On : 7 May 2013 15:21
Operator : JJG
Sample : 130537-62777 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	155788	10.00 ppbv		0.00
36) 1,4-Difluorobenzene	14.579	114	859903	10.00 ppbv		0.00
55) Chlorobenzene-d5	20.285	117	817244	10.00 ppbv		0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.711	174	512090	10.62 ppbv		0.00
Spiked Amount 10.000			Recovery = 106.20%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	7025	0.22 ppbv	#	90
3) Propene	4.781	42	12541	1.40 ppbv		95
4) Dichlorodifluoromethane	4.908	85	20295	0.40 ppbv		97
5) Chloromethane	5.306	52	2085	0.37 ppbv	#	44
6) Dichlorotetrafluoroethane	5.324	135	243	N.D.		
7) VinylChloride	0.000		0	N.D.		
8) Methanol	5.867	31	58863m	11.02 ppbv		
9) 1,3-Butadiene	0.000		0	N.D.		
10) Bromomethane	0.000		0	N.D.	d	
11) Chloroethane	6.591	66	123	N.D.		
12) Dichlorofluoromethane	0.000		0	N.D.		
13) Ethanol	7.098	45	16243m	2.09 ppbv		
14) VinylBromide	0.000		0	N.D.		
15) Acetone	7.966	58	85069m	8.76 ppbv		
16) Trichlorofluoromethane	7.659	103	5360	0.19 ppbv	#	99
17) 2-Propanol(IPA)	8.165	45	576431m	17.42 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	9.360	39	121	N.D.		
22) CarbonDisulfide	0.000		0	N.D.	d	
23) Trichlorotrifluoroethane	8.998	103	1447	0.06 ppbv		97
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	801	N.D.		
28) 2-Butanone(MEK)	11.477	72	3501	0.37 ppbv	#	14
29) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Hexane	0.000		0	N.D.	d	
31) Chloroform	12.493	83	351	N.D.		
32) EthylAcetate	0.000		0	N.D.	d	

5/6/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071309.D
Acq On : 7 May 2013 15:21
Operator : JJG
Sample : 130537-62777 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

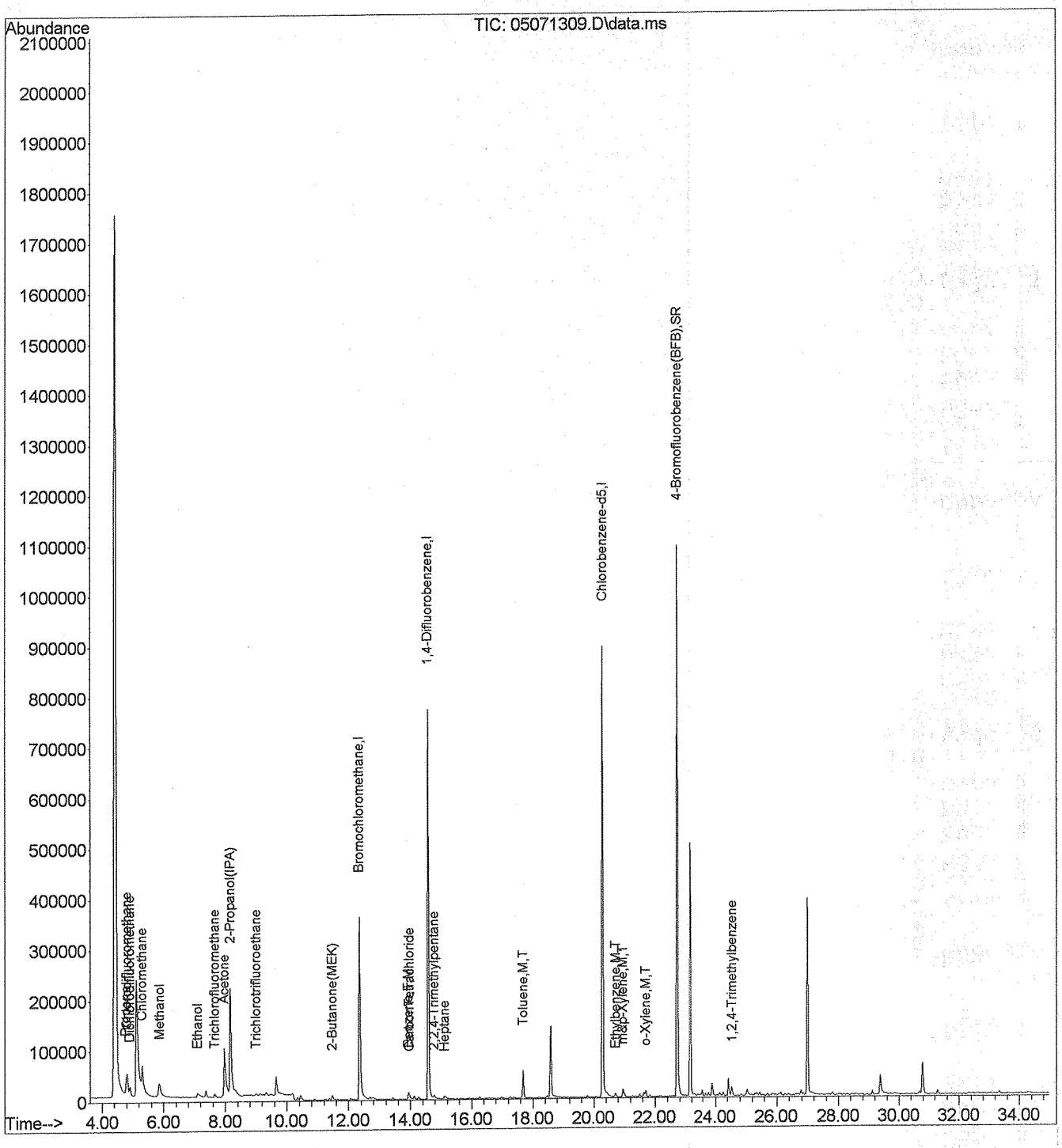
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D. d	
34) 1,2-Dichloroethane	13.616	62	144	N.D.	
35) 1,1,1-Trichloroethane	13.331	97	431	N.D.	
37) Benzene	13.937	78	15466	0.23 ppbv	98
38) CarbonTetrachloride	13.973	117	2981	0.06 ppbv	94
39) Cyclohexane	0.000		0	N.D.	
40) 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	14.775	57	9025	0.07 ppbv #	96
45) Heptane	15.114	71	1376	0.06 ppbv #	85
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.576	58	432	N.D.	
48) trans-1,3-Dichloropropene	17.664	75	1020	N.D.	
49) 1,1,2-Trichloroethane	17.860	97	112	N.D.	
50) Toluene	17.682	91	54097m	0.66 ppbv	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	173	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	470	N.D.	
56) Chlorobenzene	20.285	114	114	N.D.	
57) Ethylbenzene	20.713	91	8271	0.08 ppbv #	97
58) m&p-Xylene	20.945	106	10221	0.24 ppbv #	89
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.676	104	767	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	9678	0.11 ppbv #	95
64) 4-Ethyltoluene	0.000		0	N.D. d	
65) 1,3,5-Trimethylbenzene	0.000		0	N.D. d	
66) 1,2,4-Trimethylbenzene	24.547	120	7539	0.15 ppbv	99
67) BenzylChloride(a-Chlor...	25.296	91	1411	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	140	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	503	N.D.	
70) 1,2-Dichlorobenzene	25.867	146	229	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	550	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\050713\
Data File : 05071309.D
Acq On : 7 May 2013 15:21
Operator : JJG
Sample : 130537-62777 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 16:00:42 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



TO-15 RAW QC & ICAL SUMMARY

MS #3 Instrument Logbook

Sequence Name: C:\msdchem\1\sequence\2013\050713.S
Comment: GCMS-03
Operator: JJG
Data Path: C:\MSDCHEM\1\MS03\2013\050713\
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	05071301 TO15-5MS TO15 BFB 050713
2)	Sample	1	05071302 TO15-5MS TO15 CCV 050713
3)	Sample	1	05071303 TO15-5MS TO15 LCSD 050713
4)	Sample	1	05071304 TO15-5MS TO15 MB 050713
5)	Sample	2	05071305 TO15-5MS 130537-62774 x1
6)	Sample	2	05071306 TO15-5MS 130537-62774 x1 dp
7)	Sample	3	05071307 TO15-5MS 130537-62775 x1
8)	Sample	4	05071308 TO15-5MS 130537-62776 x1
9)	Sample	5	05071309 TO15-5MS 130537-62777 x1
10)	Sample	14	05071310 TO15-5MS Lab Air 050713 x1
11)	Sample	15	05071311 TO15-5MS Lab Air 050713 x1
12)	Sample	16	05071312 TO15-5MS Lab Air 050713 x1
13)	Sample	1	05071313 TO15-5MS Can Check#000701
14)	Sample	2	05071314 TO15-5MS Can Check#000730
15)	Sample	3	05071315 TO15-5MS Can Check#000723
16)	Sample	4	05071316 TO15-5MS Can Check#000734
17)	Sample	5	05071317 TO15-5MS Can Check#000669
18)	Sample	6	05071318 TO15-5MS Can Check#000489
19)	Sample	7	05071319 TO15-5MS Can Check#000628
20)	Sample	8	05071320 TO15-5MS Can Check#000442
21)	Sample	9	05071321 TO15-5MS Can Check#000555
22)	Sample	10	05071322 TO15-5MS Can Check#000755
23)	Sample	11	05071323 TO15-5MS Can Check#000725
24)	Sample	12	05071324 TO15-5MS Can Check#000787
25)	Sample	13	05071325 TO15-5MS Can Check#000744
26)	Sample	14	05071326 TO15-5MS Can Check#000797
27)	Sample	15	05071327 TO15-5MS Can Check#000770
28)	Sample	16	05071328 TO15-5MS Can Check#000748

5/7/13

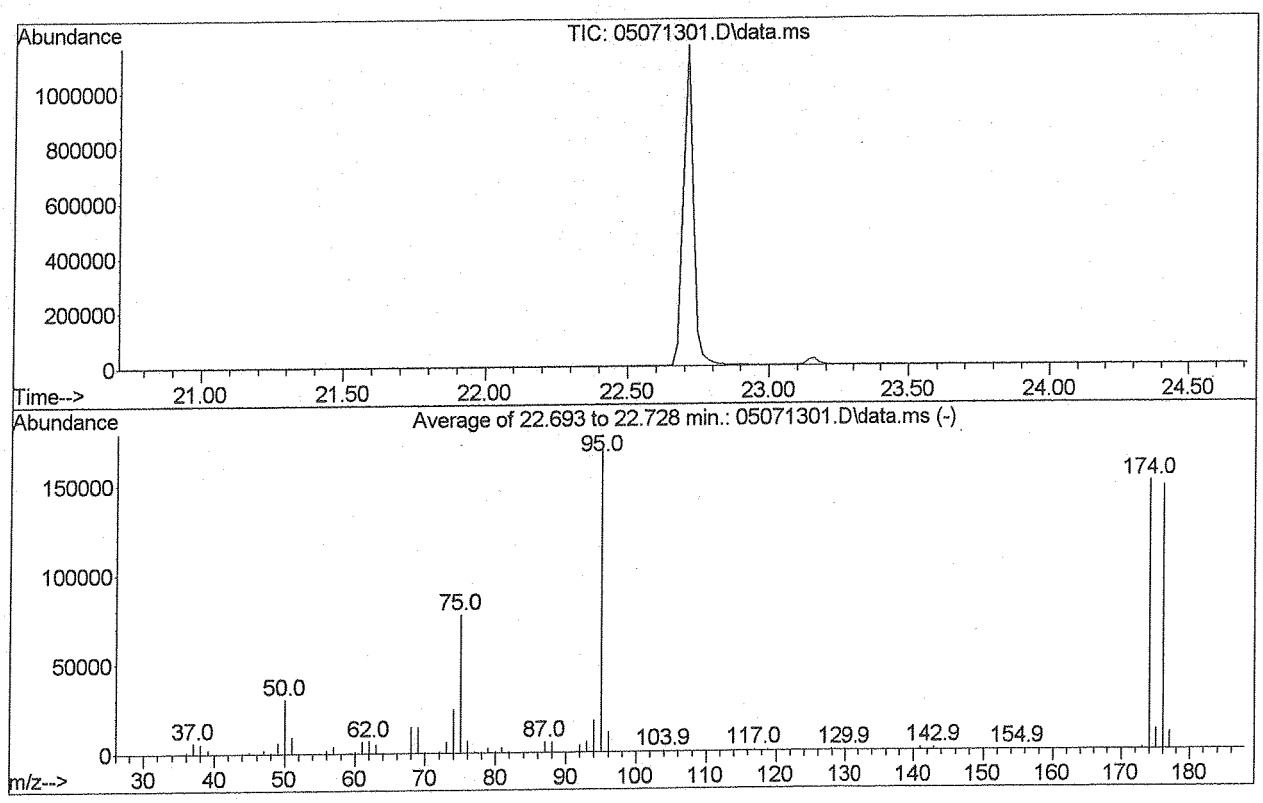
Comments:_____

Analyst: JJG **Date:** 05/07/13

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071301.D
Acq On : 7 May 2013 9:02 am
Operator : JJG
Sample : TO15 BFB 050713
Misc : IS/Surr: PS082712-02 + 500mL cc#000470
ALS Vial : 1 Sample Multiplier: 1

Integration File: PAMS.P

Method : C:\msdchem\1\METHODS\2013\041813.M
Title : TO-15/TO-14
Last Update : Thu Apr 18 19:34:22 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	17.7	30205	PASS
75	95	30	60	45.2	77128	PASS
95	95	100	100	100.0	170701	PASS
96	95	5	9	6.7	11358	PASS
173	174	0.00	2	0.8	1249	PASS
174	95	50	100	87.9	150109	PASS
175	174	5	9	7.4	11093	PASS
176	174	95	101	98.3	147496	PASS
177	176	5	9	6.5	9624	PASS

5/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071302.D
Acq On : 7 May 2013 9:49
Operator : JJG
Sample : TO15 CCV 050713
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:58:15 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	167438	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	868957	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	820466	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	508992	10.51	ppbv	0.00
Spiked Amount 10.000			Recovery = 105.10%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	330997	9.43	ppbv	97
3) Propene	4.781	42	99201m	10.34	ppbv	
4) Dichlorodifluoromethane	4.908	85	548019	10.16	ppbv	100
5) Chloromethane	5.288	52	55929m	9.24	ppbv	
6) Dichlorotetrafluoroethane	5.342	135	373320	10.30	ppbv	87
7) VinylChloride	5.668	62	194598m	9.61	ppbv	
8) Methanol	5.867	31	26978m	4.40	ppbv	
9) 1,3-Butadiene	5.867	54	126442m	9.51	ppbv	
10) Bromomethane	6.446	96	120495m	8.77	ppbv	
11) Chloroethane	6.736	66	29459	8.45	ppbv	93
12) Dichlorofluoromethane	7.025	67	408565m	10.20	ppbv	
13) Ethanol	7.061	45	74210m	8.90	ppbv	
14) VinylBromide	7.260	108	167391m	10.62	ppbv	
15) Acetone	7.966	58	86152m	8.26	ppbv	
16) Trichlorofluoromethane	7.677	103	333212	10.71	ppbv	100
17) 2-Propanol(IPA)	8.165	45	316722m	8.90	ppbv	
18) Acrylonitrile	8.961	52	146764m	9.59	ppbv	
19) 1,1-Dichloroethene	8.726	96	196367	9.87	ppbv	97
20) MethyleneChloride(DCM)	9.323	84	175959m	9.32	ppbv	
21) AllylChloride	9.305	39	172001m	10.65	ppbv	
22) CarbonDisulfide	9.486	76	571026m	8.78	ppbv	
23) Trichlorotrifluoroethane	8.998	103	275729	10.10	ppbv	97
24) trans-1,2-Dichloroethene	10.424	96	211324	9.95	ppbv	96
25) 1,1-Dichloroethane	10.906	63	435675	9.87	ppbv	100
26) MethylTertButylEther(M...	10.460	73	599111	10.92	ppbv	98
27) VinylAcetate	10.888	43	535177m	9.86	ppbv	
28) 2-Butanone(MEK)	11.423	72	105668m	10.29	ppbv	
29) cis-1,2-Dichloroethene	11.904	96	235139	9.99	ppbv	99
30) Hexane	11.476	86	47113	10.04	ppbv	95
31) Chloroform	12.510	83	486110	10.71	ppbv	98
32) EthylAcetate	12.029	43	535311	10.64	ppbv	99

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071302.D
Acq On : 7 May 2013 9:49
Operator : JJG
Sample : TO15 CCV 050713
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:58:15 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) Tetrahydrofuran	12.671	72	105043m	9.86	ppbv	
34) 1,2-Dichloroethane	13.598	62	354972	10.76	ppbv	97
35) 1,1,1-Trichloroethane	13.331	97	536288	11.26	ppbv	99
37) Benzene	13.937	78	659739	9.58	ppbv	99
38) CarbonTetrachloride	13.973	117	538027	11.12	ppbv	99
39) Cyclohexane	14.026	69	97871	9.64	ppbv	98
40) 1,2-Dichloropropane	15.399	63	269733	9.50	ppbv	95
41) Bromodichloromethane	15.756	85	346410	10.73	ppbv	98
42) 1,4-Dioxane	15.524	88	158034m	9.38	ppbv	
43) Trichloroethene(TCE)	15.292	130	320755	10.39	ppbv	99
44) 2,2,4-Trimethylpentane	14.775	57	1245924	10.18	ppbv	98
45) Heptane	15.114	71	221755	10.08	ppbv	98
46) cis-1,3-Dichloropropene	16.647	75	404428	10.76	ppbv	94
47) 4-Methyl-2-pentanone(M...	16.523	58	243842	9.47	ppbv	97
48) trans-1,3-Dichloropropene	17.539	75	367420	9.96	ppbv	99
49) 1,1,2-Trichloroethane	17.931	97	305463	10.24	ppbv	97
50) Toluene	17.682	91	834365	10.00	ppbv	99
51) 2-Hexanone(MBK)	18.127	58	310431	9.78	ppbv	94
52) Dibromochloromethane	18.876	129	612579	11.69	ppbv	99
53) 1,2-Dibromoethane	19.233	107	483414	10.22	ppbv	100
54) Tetrachloroethene(PCE)	19.019	166	454599	10.50	ppbv	100
56) Chlorobenzene	20.356	114	225544	10.22	ppbv	99
57) Ethylbenzene	20.695	91	1115544	10.19	ppbv	99
58) m&p-Xylene	20.945	106	829768	19.02	ppbv	93
59) Bromoform	21.837	173	573423	10.53	ppbv	99
60) Styrene	21.640	104	700250	9.93	ppbv	98
61) 1,1,2,2-Tetrachloroethane	22.336	83	647321	9.75	ppbv	99
62) o-Xylene	21.694	91	868575	10.24	ppbv	99
64) 4-Ethyltoluene	23.673	120	361014	10.01	ppbv	99
65) 1,3,5-Trimethylbenzene	23.780	120	484555	9.41	ppbv	95
66) 1,2,4-Trimethylbenzene	24.529	120	517937	10.22	ppbv	96
67) BenzylChloride(a-Chlor...	25.153	91	869116	11.37	ppbv	100
68) 1,3-Dichlorobenzene	25.046	146	817451	10.56	ppbv	99
69) 1,4-Dichlorobenzene	25.260	146	761883m	9.68	ppbv	
70) 1,2-Dichlorobenzene	25.831	146	802306m	9.70	ppbv	
71) 1,2,4-Trichlorobenzene	29.433	180	751313m	9.64	ppbv	
72) Hexachlorobutadiene	30.075	225	605613	10.29	ppbv	99

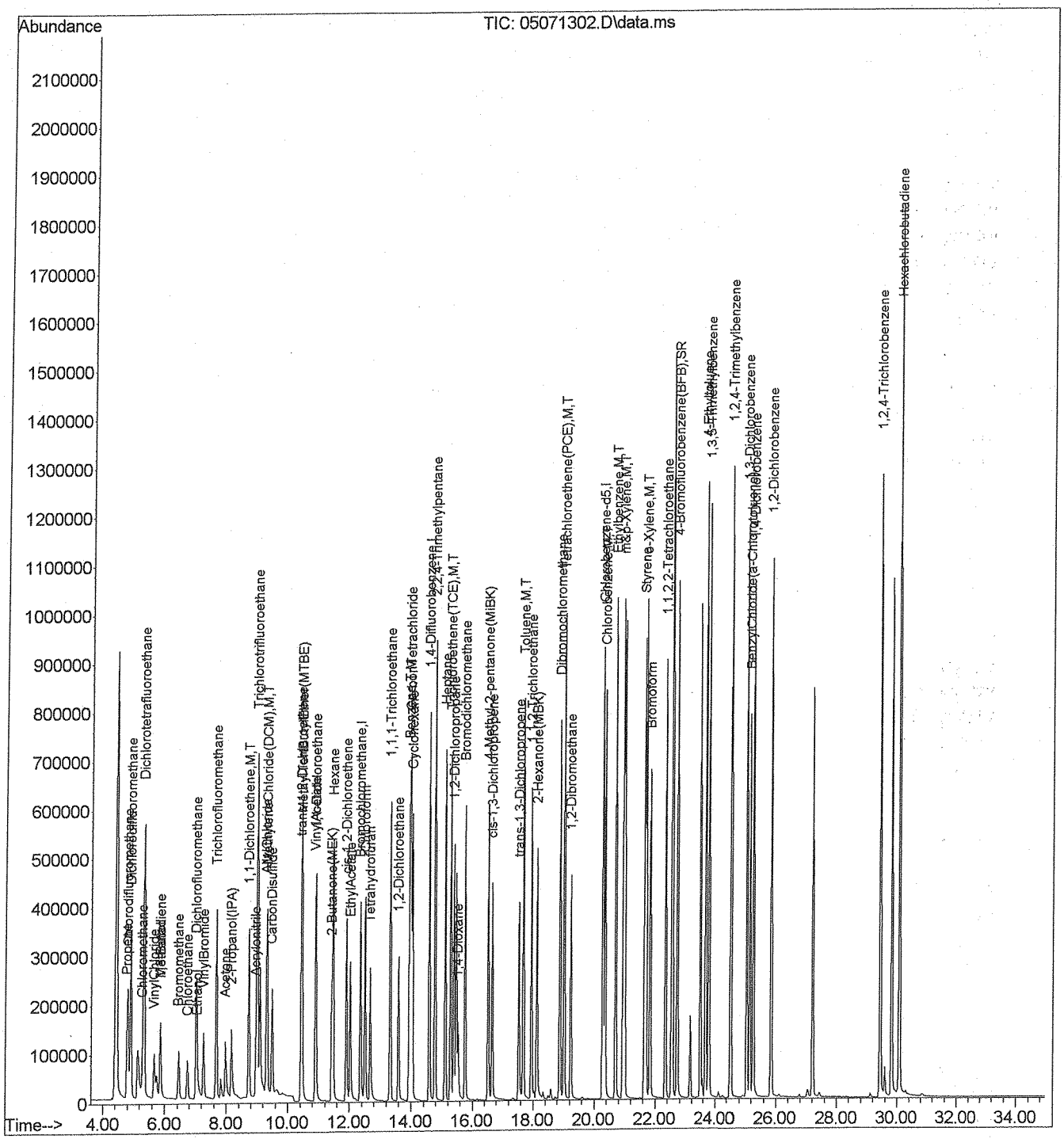
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071302.D
Acq On : 7 May 2013 9:49
Operator : JJG
Sample : TO15 CCV 050713
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:58:15 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071303.D
Acq On : 7 May 2013 10:35
Operator : JJG
Sample : TO15 LCSD 050713
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:00:25 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	166404	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	866660	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	846012	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.728	174	509367	10.20	ppbv	0.02
Spiked Amount 10.000			Recovery = 102.00%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	4.817	51	333788	9.57	ppbv	97
3) Propene	4.781	42	99108m	10.39	ppbv	
4) Dichlorodifluoromethane	4.908	85	553965	10.34	ppbv	100
5) Chloromethane	5.288	52	57287m	9.52	ppbv	
6) Dichlorotetrafluoroethane	5.342	135	383100	10.63	ppbv	84
7) VinylChloride	5.668	62	199581m	9.92	ppbv	
8) Methanol	5.867	31	26835m	4.40	ppbv	
9) 1,3-Butadiene	5.867	54	129484m	9.80	ppbv	
10) Bromomethane	6.446	96	126975m	9.30	ppbv	
11) Chloroethane	6.736	66	30627	8.84	ppbv	97
12) Dichlorofluoromethane	7.025	67	407168m	10.23	ppbv	
13) Ethanol	7.061	45	70747m	8.54	ppbv	
14) VinylBromide	7.260	108	164548m	10.50	ppbv	
15) Acetone	7.966	58	86623m	8.35	ppbv	
16) Trichlorofluoromethane	7.677	103	332012	10.74	ppbv	99
17) 2-Propanol(IPA)	8.165	45	312229m	8.83	ppbv	
18) Acrylonitrile	8.961	52	147692m	9.71	ppbv	
19) 1,1-Dichloroethene	8.726	96	195521m	9.88	ppbv	
20) MethyleneChloride(DCM)	9.323	84	173863m	9.27	ppbv	
21) AllylChloride	9.305	39	170732m	10.64	ppbv	
22) CarbonDisulfide	9.486	76	567004m	8.78	ppbv	
23) Trichlorotrifluoroethane	8.998	103	271475	10.01	ppbv	98
24) trans-1,2-Dichloroethene	10.424	96	213490m	10.12	ppbv	
25) 1,1-Dichloroethane	10.906	63	420953	9.60	ppbv	100
26) MethylTertButylEther(M...	10.460	73	584634	10.72	ppbv	98
27) VinylAcetate	10.888	43	529216m	9.81	ppbv	
28) 2-Butanone(MEK)	11.423	72	106860m	10.47	ppbv	
29) cis-1,2-Dichloroethene	11.904	96	231387	9.89	ppbv	97
30) Hexane	11.476	86	47526	10.19	ppbv	93
31) Chloroform	12.511	83	486594	10.79	ppbv	98
32) EthylAcetate	12.029	43	540848	10.82	ppbv #	99

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071303.D
Acq On : 7 May 2013 10:35
Operator : JJG
Sample : TO15 LCSD 050713
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:00:25 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

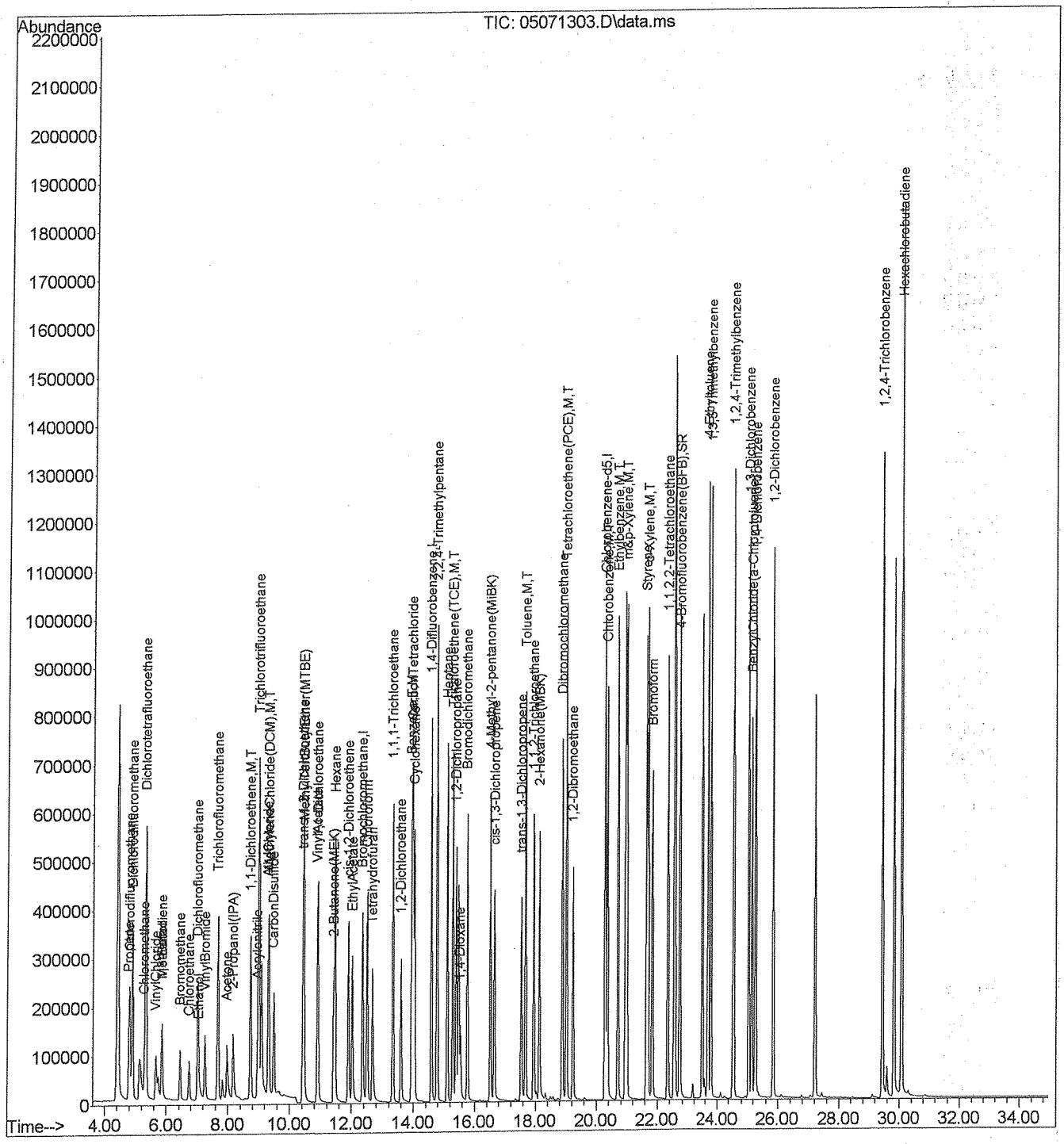
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) Tetrahydrofuran	12.671	72	101541m	9.59	ppbv	
34) 1,2-Dichloroethane	13.598	62	351030	10.71	ppbv	97
35) 1,1,1-Trichloroethane	13.331	97	539582	11.40	ppbv	98
37) Benzene	13.937	78	648992	9.45	ppbv	98
38) CarbonTetrachloride	13.973	117	528246	10.94	ppbv	98
39) Cyclohexane	14.026	69	95796	9.46	ppbv	95
40) 1,2-Dichloropropane	15.399	63	268530	9.49	ppbv	95
41) Bromodichloromethane	15.756	85	346608	10.77	ppbv	99
42) 1,4-Dioxane	15.524	88	158724m	9.45	ppbv	
43) Trichloroethene(TCE)	15.292	130	314916	10.23	ppbv	99
44) 2,2,4-Trimethylpentane	14.775	57	1259740	10.32	ppbv	98
45) Heptane	15.114	71	217661	9.92	ppbv	97
46) cis-1,3-Dichloropropene	16.666	75	407312	10.86	ppbv	99
47) 4-Methyl-2-pentanone(M...	16.523	58	250284	9.74	ppbv	98
48) trans-1,3-Dichloropropene	17.539	75	370571	10.07	ppbv	98
49) 1,1,2-Trichloroethane	17.932	97	296070	9.95	ppbv	97
50) Toluene	17.682	91	843699	10.14	ppbv	99
51) 2-Hexanone(MBK)	18.128	58	323608	10.22	ppbv	98
52) Dibromochloromethane	18.877	129	601022	11.50	ppbv	100
53) 1,2-Dibromoethane	19.233	107	489929	10.39	ppbv	99
54) Tetrachloroethene(PCE)	19.019	166	451933	10.46	ppbv	99
56) Chlorobenzene	20.357	114	226446	9.95	ppbv	98
57) Ethylbenzene	20.696	91	1114931	9.88	ppbv	99
58) m&p-Xylene	20.999	106	843902	18.76	ppbv	96
59) Bromoform	21.837	173	573941	10.23	ppbv	99
60) Styrene	21.641	104	708681	9.75	ppbv	98
61) 1,1,2,2-Tetrachloroethane	22.336	83	655100	9.57	ppbv	98
62) o-Xylene	21.694	91	854995	9.78	ppbv	98
64) 4-Ethyltoluene	23.673	120	371592	9.99	ppbv	100
65) 1,3,5-Trimethylbenzene	23.780	120	507655	9.56	ppbv	96
66) 1,2,4-Trimethylbenzene	24.529	120	508617	9.74	ppbv	95
67) BenzylChloride(a-Chlor...	25.154	91	867004	11.00	ppbv	99
68) 1,3-Dichlorobenzene	25.047	146	817493	10.24	ppbv	99
69) 1,4-Dichlorobenzene	25.260	146	778048m	9.59	ppbv	
70) 1,2-Dichlorobenzene	25.831	146	819958m	9.62	ppbv	
71) 1,2,4-Trichlorobenzene	29.433	180	784809m	9.76	ppbv	
72) Hexachlorobutadiene	30.075	225	617157m	10.17	ppbv	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071303.D
Acq On : 7 May 2013 10:35
Operator : JJG
Sample : TO15 LCSD 050713
Misc : IS/Surr: PS082712-02 + Cal: PS040413-01
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:00:25 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



5/7/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071304.D
Acq On : 7 May 2013 11:22
Operator : JJG
Sample : TO15 MB 050713
Misc : IS/Surr: PS082712-02 + 500mL cc#000470
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:01:08 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	12.350	128	163760	10.00	ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	888758	10.00	ppbv	0.00
55) Chlorobenzene-d5	20.285	117	828223	10.00	ppbv	0.00
System Monitoring Compounds						
63) 4-Bromofluorobenzene(BFB)	22.710	174	511796	10.47	ppbv	0.00
Spiked Amount 10.000			Recovery = 104.70%			
Target Compounds						Qvalue
2) Chlorodifluoromethane	0.000		0	N.D.		
3) Propene	4.817	42	128	N.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.		
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)	8.328	45	716	N.D.		
18) Acrylonitrile	9.070	52	141	N.D.		
19) 1,1-Dichloroethene	0.000		0	N.D.		
20) MethyleneChloride(DCM)	0.000		0	N.D.	d	
21) AllylChloride	0.000		0	N.D.		
22) CarbonDisulfide	9.504	76	2048	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	134	N.D.		

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071304.D
Acq On : 7 May 2013 11:22
Operator : JJG
Sample : TO15 MB 050713
Misc : IS/Surr: PS082712-02 + 500mL cc#000470
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:01:08 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

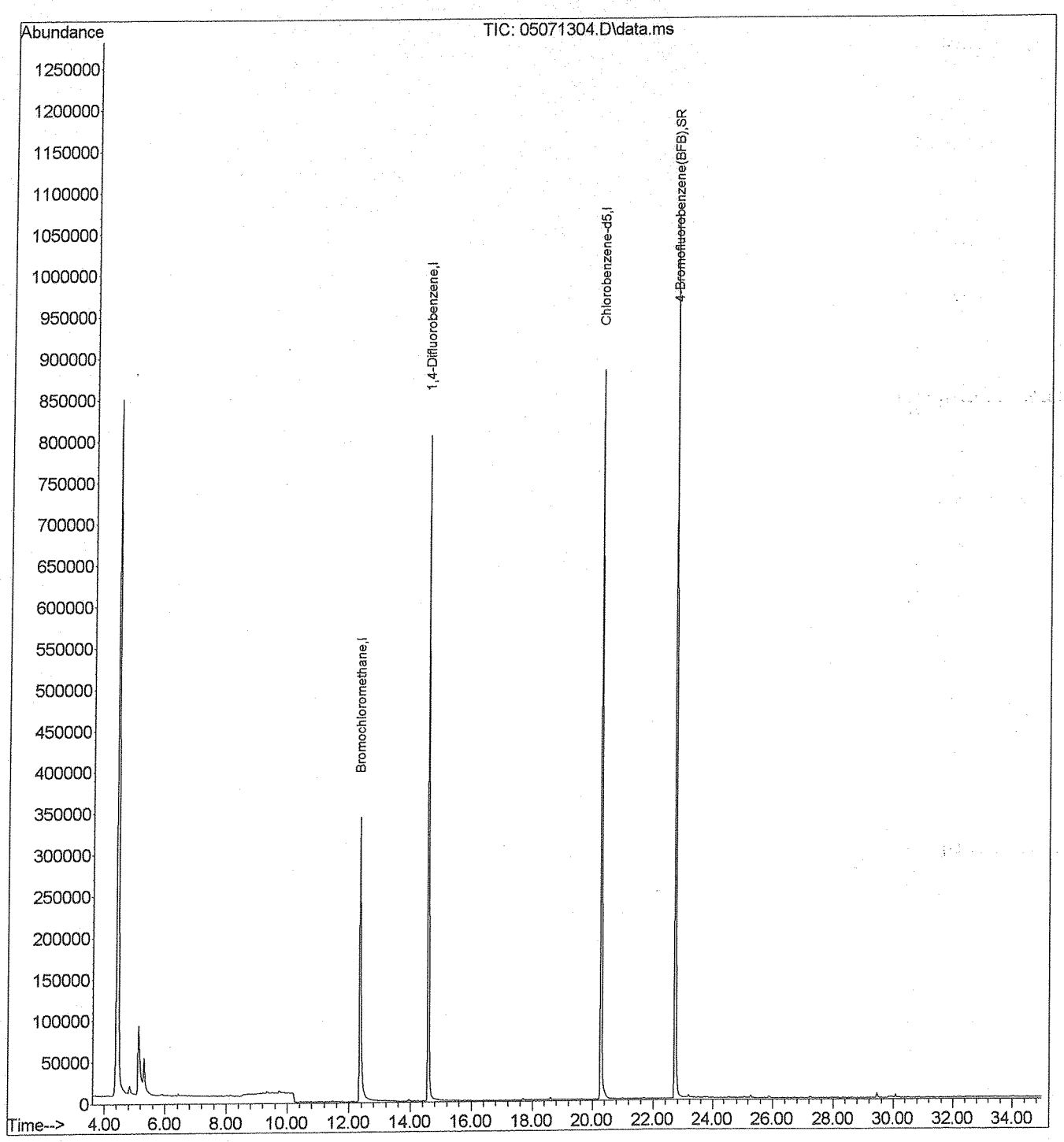
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	0.000		0	N.D.	
34) 1,2-Dichloroethane	0.000		0	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D.	d
38) CarbonTetrachloride	0.000		0	N.D.	
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	0.000		0	N.D.	
41) 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	2285	N.D.	
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	133	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	286	N.D.	
56) Chlorobenzene	20.357	114	230	N.D.	
57) Ethylbenzene	20.713	91	956	N.D.	
58) m&p-Xylene	21.016	106	401	N.D.	
59) Bromoform	21.837	173	129	N.D.	
60) Styrene	21.694	104	700	N.D.	
61) 1,1,2,2-Tetrachloroethane	22.354	83	317	N.D.	
62) o-Xylene	21.712	91	673	N.D.	
64) 4-Ethyltoluene	23.691	120	410	N.D.	
65) 1,3,5-Trimethylbenzene	23.798	120	338	N.D.	
66) 1,2,4-Trimethylbenzene	24.565	120	398	N.D.	
67) BenzylChloride(a-Chlor...	25.207	91	1121	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	2272	N.D.	
69) 1,4-Dichlorobenzene	0.000		0	N.D.	d
70) 1,2-Dichlorobenzene	25.867	146	2094	N.D.	
71) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d
72) Hexachlorobutadiene	30.075	225	1344	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071304.D
Acq On : 7 May 2013 11:22
Operator : JJG
Sample : TO15 MB 050713
Misc : IS/Surr: PS082712-02 + 500mL cc#000470
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:01:08 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071305.D
Acq On : 7 May 2013 12:10
Operator : JJG
Sample : 130537-62774 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:03:27 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	159128	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	880856	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	806928	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.711	174	529607	11.12 ppbv	0.00
Spiked Amount 10.000			Recovery = 111.20%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.817	51	8293	0.25 ppbv #	97
3) Propene	0.000		0	N.D. d	
4) Dichlorodifluoromethane	4.908	85	16358	0.32 ppbv	99
5) Chloromethane	5.288	52	1586	0.28 ppbv #	61
6) Dichlorotetrafluoroethane	5.324	135	188	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	56001m	10.17 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	13517m	1.71 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	7.984	58	30024m	3.03 ppbv	
16) Trichlorofluoromethane	7.659	103	4618	0.16 ppbv #	98
17) 2-Propanol(IPA)	8.220	45	39150m	1.16 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	9.215	39	537	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	10.906	43	836	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	12.493	83	393	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071305.D
Acq On : 7 May 2013 12:10
Operator : JJG
Sample : 130537-62774 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:03:27 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

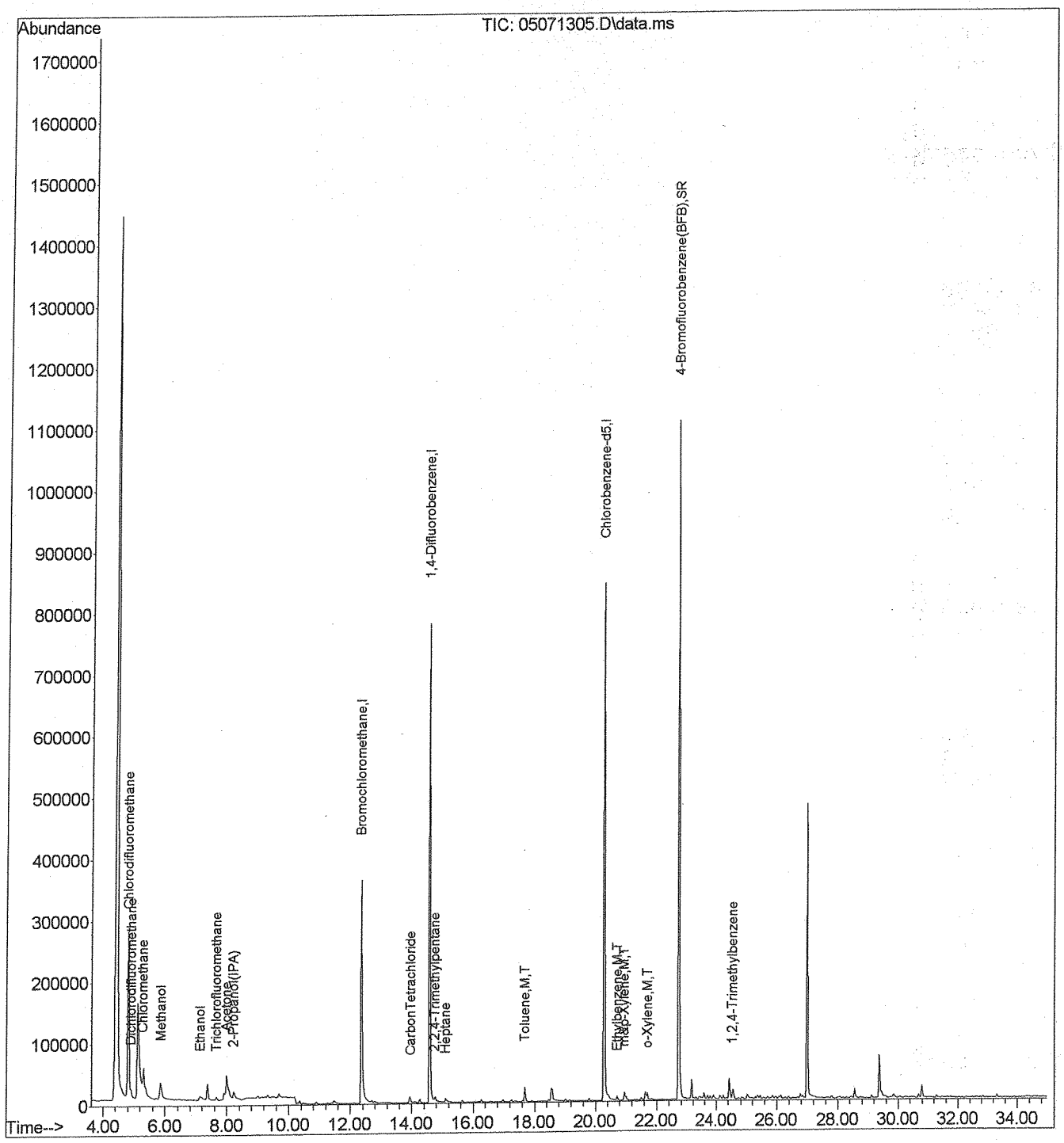
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.778	72	371	N.D.	
34) 1,2-Dichloroethane	13.616	62	121	N.D.	
35) 1,1,1-Trichloroethane	0.000		0	N.D.	
37) Benzene	0.000		0	N.D. d	
38) CarbonTetrachloride	13.973	117	2575	0.05 ppbv	96
39) Cyclohexane	0.000		0	N.D.	
40) 1,2-Dichloropropane	15.400	63	227	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	14.758	57	10392	0.08 ppbv #	94
45) Heptane	15.096	71	1629	0.07 ppbv	88
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.594	58	279	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	134	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	26625	0.31 ppbv	96
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	835	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	1029	N.D.	
56) Chlorobenzene	20.285	114	118	N.D.	
57) Ethylbenzene	20.713	91	6954	0.06 ppbv #	96
58) m&p-Xylene	20.945	106	9069	0.21 ppbv #	91
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.659	104	1319	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8139	0.10 ppbv #	93
64) 4-Ethyltoluene	0.000		0	N.D. d	
65) 1,3,5-Trimethylbenzene	0.000		0	N.D. d	
66) 1,2,4-Trimethylbenzene	24.529	120	6769	0.14 ppbv #	92
67) BenzylChloride(a-Chlor...	25.171	91	491	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	935	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	1287	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	817	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	2306	N.D.	
72) Hexachlorobutadiene	30.075	225	898	N.D.	

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071305.D
Acq On : 7 May 2013 12:10
Operator : JJG
Sample : 130537-62774 x1
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:03:27 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



5/10/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071306.D
Acq On : 7 May 2013 12:57
Operator : JJG
Sample : 130537-62774 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:05:21 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	12.350	128	155936	10.00 ppbv	0.00
36) 1,4-Difluorobenzene	14.579	114	857486	10.00 ppbv	0.00
55) Chlorobenzene-d5	20.285	117	819401	10.00 ppbv	0.00
System Monitoring Compounds					
63) 4-Bromofluorobenzene(BFB)	22.711	174	523354	10.82 ppbv	0.00
Spiked Amount 10.000			Recovery = 108.20%		
Target Compounds					Qvalue
2) Chlorodifluoromethane	4.836	51	8224	0.25 ppbv #	99
3) Propene	0.000		0	N.D. d	
4) Dichlorodifluoromethane	4.908	85	16462	0.33 ppbv	98
5) Chloromethane	5.306	52	1876	0.33 ppbv #	50
6) Dichlorotetrafluoroethane	5.324	135	306	N.D.	
7) VinylChloride	0.000		0	N.D.	
8) Methanol	5.867	31	57250m	10.67 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	13270m	1.71 ppbv	
14) VinylBromide	0.000		0	N.D.	
15) Acetone	8.002	58	30611m	3.15 ppbv	
16) Trichlorofluoromethane	7.659	103	4671	0.16 ppbv #	93
17) 2-Propanol(IPA)	8.220	45	39458m	1.19 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	0.000		0	N.D. 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	521	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	12.493	83	365	N.D.	
32) EthylAcetate	0.000		0	N.D. d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071306.D
Acq On : 7 May 2013 12:57
Operator : JJG
Sample : 130537-62774 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:05:21 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
33) Tetrahydrofuran	12.778	72	194	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	13.973	117	2475	0.05 ppbv	96
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	14.758	57	10378	0.09 ppbv #	93
45) Heptane	15.096	71	1448	0.07 ppbv #	63
46) cis-1,3-Dichloropropene	0.000		0	N.D.	
47) 4-Methyl-2-pentanone(M...	16.594	58	276	N.D.	
48) trans-1,3-Dichloropropene	17.682	75	112	N.D.	
49) 1,1,2-Trichloroethane	0.000		0	N.D.	
50) Toluene	17.682	91	26457	0.32 ppbv #	98
51) 2-Hexanone(MBK)	0.000		0	N.D.	
52) Dibromochloromethane	19.019	129	770	N.D.	
53) 1,2-Dibromoethane	0.000		0	N.D.	
54) Tetrachloroethene(PCE)	19.019	166	1022	N.D.	
56) Chlorobenzene	20.268	114	224	N.D.	
57) Ethylbenzene	20.713	91	6972	0.06 ppbv #	91
58) m&p-Xylene	20.963	106	8796	0.20 ppbv	99
59) Bromoform	0.000		0	N.D.	
60) Styrene	21.658	104	1170	N.D.	
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	
62) o-Xylene	21.694	91	8147	0.10 ppbv	96
64) 4-Ethyltoluene	23.691	120	1304	N.D.	
65) 1,3,5-Trimethylbenzene	23.780	120	1795	N.D.	
66) 1,2,4-Trimethylbenzene	24.529	120	6933	0.14 ppbv	95
67) BenzylChloride(a-Chlor...	25.189	91	122	N.D.	
68) 1,3-Dichlorobenzene	25.064	146	489	N.D.	
69) 1,4-Dichlorobenzene	25.278	146	804	N.D.	
70) 1,2-Dichlorobenzene	25.849	146	380	N.D.	
71) 1,2,4-Trichlorobenzene	29.451	180	1485	N.D.	
72) Hexachlorobutadiene	30.075	225	318	N.D.	

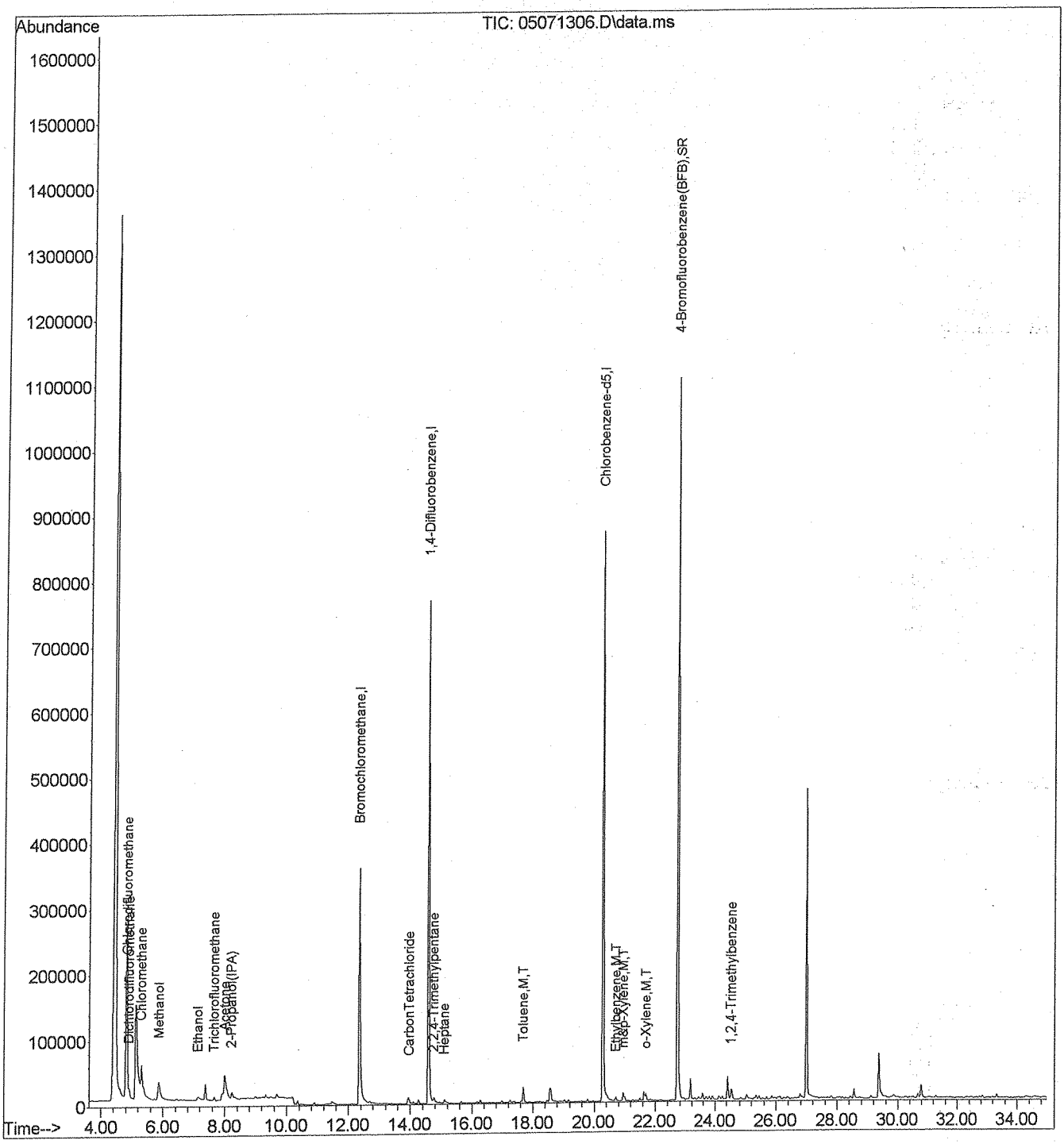
(#) = qualifier out of range (m) = manual integration (+) = signals summed

05/07/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS03\2013\050713\
Data File : 05071306.D
Acq On : 7 May 2013 12:57
Operator : JJG
Sample : 130537-62774 x1 dp
Misc : IS/Surr: PS082712-02 + 500mL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:05:21 2013
Quant Method : C:\msdchem\1\METHODS\2013\041813.M
Quant Title : TO-15/TO-14
QLast Update : Thu Apr 18 19:34:22 2013
Response via : Initial Calibration



Calibration Status Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 041813.M
Title : TO-15/TO-14
Last Update : Thu Apr 18 19:34:22 2013
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.5	1	10	C:\msdchem\1\MS03\2013\041813\04181312.D
2	1.0	1	10	C:\msdchem\1\MS03\2013\041813\04181311.D
3	2.0	2	10	C:\msdchem\1\MS03\2013\041813\04181310.D
4	5.0	5	10	C:\msdchem\1\MS03\2013\041813\04181309.D
5	10	10	10	C:\msdchem\1\MS03\2013\041813\04181308.D
6	20	20	10	C:\msdchem\1\MS03\2013\041813\04181307.D
7	50	51	10	C:\msdchem\1\MS03\2013\041813\04181306.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.5	Apr 18 19:27 2013	Apr 18 18:22 2013	18 Apr 2013 17:14
2	1.0	Apr 18 19:27 2013	Apr 18 18:19 2013	18 Apr 2013 16:27
3	2.0	Apr 18 19:27 2013	Apr 18 18:16 2013	18 Apr 2013 15:41
4	5.0	Apr 18 19:27 2013	Apr 18 18:12 2013	18 Apr 2013 14:56
5	10	Apr 18 19:26 2013	Apr 18 18:09 2013	18 Apr 2013 14:10
6	20	Apr 18 19:26 2013	Apr 18 17:51 2013	18 Apr 2013 13:24
7	50	Apr 18 19:26 2013	Apr 18 17:48 2013	18 Apr 2013 12:37

041813.M Thu Apr 18 19:35:59 2013

4/18/13

Response Factor Report MS03 Enhanced

Method Path : C:\msdchem\1\METHODS\2013\
Method File : 041813.M
Title : TO-15/TO-14
Last Update : Thu Apr 18 19:34:22 2013
Response Via : Initial Calibration

Calibration Files
0.5 =04181312.D 1.0 =04181311.D 2.0 =04181310.D 5.0 =04181309.D 10 =04181308.D 20 =04181307.D
50 =04181306.D

		Compound	0.5	1.0	2.0	5.0	10	20	50	Avg	%RSD
1)	I	Bromochloromethane	ISTD								
2)		Chlorodifluoro...	2.331	2.349	2.207	2.147	2.057	1.841	1.744	2.097	11.10
3)		Propene	0.617	0.618	0.586	0.590	0.574	0.526	0.500	0.573	7.75
4)		Dichlorodifluo...	3.497	3.598	3.458	3.260	3.167	2.826	2.740	3.221	10.35
5)		Chloromethane	0.384	0.420	0.409	0.387	0.367	0.310	0.255	0.362	16.23
6)		Dichlorotetraf...	2.316	2.434	2.322	2.237	2.162	1.950	1.738	2.166	11.22
7)		VinylChloride	1.221	1.283	1.246	1.234	1.252	1.112	1.115	1.209	5.61
8)		Methanol		0.506	0.439	0.384	0.370	0.343	0.295	0.390	19.02
9)		1,3-Butadiene	0.811	0.840	0.838	0.830	0.839	0.732	0.668	0.794	8.53
10)		Bromomethane	0.946	0.912	0.866	0.821	0.822	0.753	0.624	0.821	13.08
11)		Chloroethane	0.279	0.228	0.209	0.199	0.194	0.177	0.171	0.208	17.60
12)		Dichlorofluoro...	2.483	2.601	2.534	2.439	2.432	2.227	2.030	2.392	8.26
13)		Ethanol	0.598	0.564	0.525	0.519	0.488	0.425	0.367	0.498	16.01
14)		VinylBromide	0.923	0.971	0.977	0.980	0.982	0.904	0.853	0.941	5.29
15)		Acetone	0.841	0.776	0.679	0.550	0.538	0.506	0.472	0.623	22.99
16)		Trichlorofluor...	2.065	2.035	1.955	1.894	1.840	1.682	1.535	1.858	10.31
17)		2-Propanol(IPA)	2.559	2.647	2.472	2.287	1.909	1.581	1.417	2.125	23.14
18)		Acrylonitrile	0.926	0.982	0.941	0.996	0.940	0.868	0.743	0.914	9.42
19)	M,T	1,1-Dichloroet...	1.261	1.279	1.259	1.226	1.218	1.090	0.987	1.189	9.16
20)	M,T	MethyleneChlor...	1.365	1.275	1.133	1.126	1.117	1.011	0.864	1.127	14.57
21)		AllylChloride	1.095	1.091	1.066	1.027	0.943	0.818	0.708	0.964	15.54
22)		CarbonDisulfide	4.932	4.577	4.018	3.753	3.606	3.306	2.987	3.883	17.69
23)		Trichlorotrifl...	1.880	1.895	1.802	1.692	1.596	1.384	1.160	1.630	16.77
24)		trans-1,2-Dich...	1.311	1.399	1.360	1.306	1.288	1.150	1.063	1.268	9.40
25)		1,1-Dichloroet...	2.932	3.039	2.856	2.799	2.618	2.287	1.921	2.636	15.16
26)		MethylTertButy...	3.644	3.688	3.616	3.428	3.208	2.859	2.494	3.277	13.84
27)		VinylAcetate	3.406	3.442	3.484	3.480	3.358	3.064	2.466	3.243	11.47
28)		2-Butanone(MEK)	0.568	0.661	0.641	0.649	0.655	0.577	0.540	0.613	8.08

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29)		cis-1,2-Dichlo...	1.433	1.567	1.545	1.445	1.431	1.265	1.151	1.405	10.60
30)		Hexane	0.317	0.318	0.291	0.300	0.284	0.253	0.199	0.280	14.96
31)		Chloroform	2.984	3.039	2.875	2.783	2.641	2.472	2.177	2.710	11.28
32)		EthylAcetate	3.170	3.291	3.249	3.194	3.055	2.719	2.355	3.005	11.45
33)		Tetrahydrofuran	0.684	0.697	0.680	0.661	0.632	0.586	0.514	0.636	10.34
34)		1,2-Dichloroet...	2.152	2.177	2.147	1.955	1.914	1.800	1.647	1.970	10.24
35)		1,1,1-Trichlor...	3.142	3.189	3.018	2.881	2.849	2.549	2.286	2.845	11.46
36)	I	1,4-Difluorobenzene	----------ISTD----------								
37)	T,M	Benzene	0.966	0.934	0.847	0.796	0.769	0.690	0.544	0.792	18.29
38)		CarbonTetrachl...	0.629	0.646	0.607	0.570	0.549	0.496	0.403	0.557	15.22
39)		Cyclohexane	0.134	0.136	0.129	0.118	0.115	0.102	0.085	0.117	15.65
40)		1,2-Dichloropr...	0.382	0.380	0.355	0.325	0.317	0.292	0.234	0.327	16.06
41)		Bromodichlorom...	0.405	0.421	0.405	0.385	0.364	0.336	0.283	0.371	13.03
42)		1,4-Dioxane	0.215	0.222	0.204	0.192	0.192	0.176	0.156	0.194	11.78
43)	M,T	Trichloroethen...	0.397	0.402	0.377	0.362	0.359	0.321	0.267	0.355	13.30
44)		2,2,4-Trimethy...	1.651	1.655	1.571	1.460	1.399	1.213	0.907	1.408	19.18
45)		Heptane	0.272	0.289	0.280	0.263	0.254	0.232	0.185	0.253	14.04
46)		cis-1,3-Dichlo...	0.452	0.483	0.460	0.441	0.441	0.405	0.347	0.433	10.27
47)		4-Methyl-2-pen...	0.313	0.343	0.328	0.307	0.299	0.270	0.215	0.296	14.32
48)		trans-1,3-Dich...	0.424	0.456	0.456	0.437	0.425	0.416	0.357	0.425	7.88
49)		1,1,2-Trichlor...	0.390	0.396	0.376	0.351	0.338	0.303	0.249	0.343	15.30
50)	M,T	Toluene	1.105	1.101	1.058	0.989	0.932	0.845	0.690	0.960	15.80
51)		2-Hexanone(MBK)	0.378	0.405	0.410	0.375	0.372	0.340	0.277	0.365	12.45
52)		Dibromochlorom...	0.672	0.670	0.658	0.625	0.607	0.552	0.437	0.603	14.04
53)		1,2-Dibromoethane	0.594	0.624	0.603	0.548	0.544	0.492	0.403	0.544	14.01
54)	M,T	Tetrachloroeth...	0.586	0.594	0.551	0.503	0.488	0.426	0.341	0.498	18.27
55)	I	Chlorobenzene-d5	----------ISTD----------								
56)	M,T	Chlorobenzene	0.318	0.304	0.286	0.275	0.262	0.240	0.198	0.269	15.10
57)	M,T	Ethylbenzene	1.561	1.539	1.472	1.401	1.311	1.135	0.917	1.334	17.61
58)	M,T	m&p-Xylene	0.634	0.632	0.597	0.551	0.508	0.442	0.359	0.532	19.32
59)		Bromoform	0.759	0.771	0.740	0.686	0.656	0.577	0.454	0.663	17.24
60)		Styrene	0.958	0.975	0.946	0.881	0.859	0.759	0.638	0.860	14.28
61)		1,1,2,2-Tetrac...	0.933	0.957	0.925	0.862	0.784	0.678	0.526	0.809	19.64
62)	M,T	o-Xylene	1.247	1.208	1.163	1.075	0.994	0.848	0.698	1.033	19.47
63)	SR	4-Bromofluorob...	0.586	0.590	0.595	0.589	0.597	0.585	0.589	0.590	0.76
64)		4-Ethyltoluene	0.489	0.504	0.490	0.465	0.438	0.392	0.301	0.440	16.45

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65)	1,3,5-Trimethy...	0.732	0.727	0.693	0.670	0.623	0.525	0.425	0.628	18.23
66)	1,2,4-Trimethy...	0.688	0.714	0.683	0.653	0.613	0.545	0.427	0.618	16.41
67)	BenzylChloride...	0.903	0.848	0.935	1.003	1.018	0.953	0.863	0.932	7.01
68)	1,3-Dichlorobe...	1.025	1.051	1.060	1.015	0.956	0.828	0.670	0.944	15.30
69)	1,4-Dichlorobe...	1.121	1.134	1.072	0.993	0.920	0.814	0.657	0.959	18.28
70)	1,2-Dichlorobe...	1.220	1.211	1.112	1.034	0.964	0.841	0.671	1.008	19.89
71)	1,2,4-Trichlor...	1.059	1.130	1.066	0.991	0.936	0.826	0.645	0.950	17.61
72)	Hexachlorobuta...	0.887	0.876	0.817	0.749	0.680	0.579	0.432	0.717	23.26

(#) = Out of Range