COMPLETE SAMPLE DELIVERY GROUP FILE (CSF) RECEIPT/TRACKING FORM

1216607 - R8 SDMS

U.S. Environmental Protection Agency
Region 8 Superfund Program
Contract Laboratory Program

Audit Number R8-2011- 223 Site Name: Smuggler Stamp Mill

Date CSF Received: 11-21-2011 Site Manager: Robert Parker

Received By: J. MacDonald Case Number: 41926

Lab. Name: Mitkem Laboratories SDG Number: H3Q0

Number of Samples/Matrix: 20 soils

CFS Relinquished By:

Print Name Frances MacDonald Date 01/11/12 Signature Frances MacDonald

CSF Received By:

Print Name Rodney Vargas Date 01/11/12 Signature Rodney Vargas

CFS Relinquished By:

Print Name _____ Date _____ Signature _____

CSF Received By:

Print Name _____ Date _____ Signature _____

CSF Relinquished By:

Print Name _____ Date _____ Signature _____

CFS Received By:

Print Name _____ Date _____ Signature _____

CFS Relinquished By:

Print Name _____ Date _____ Signature _____

1. Custody Seal present, signed, & dated? Yes ✓ No ____
2. COC /Traffic Reports present, signed, & dated? Yes ✓ No ____
3. Air bill present, signed, & dated? Yes ✓ No ____
4. Form DC-1 present? Yes ✓ No ____
5. Form DC-2 present? Yes ✓ No ____
6. Laboratory documents legible? (complete audit only) Yes ✓ No ____
7. Original documents included in CSF? (complete audit only) Yes ✓ No ____
8. Raw data present for all analytical fractions? Yes ✓ No ____
9. Percent solids form for soils present? Yes ✓ No ____
10. Cover page present? Yes ____ No ✓
11. Records of communication present? Yes ✓ No ____
12. Form 1's present for all analytical fractions? Yes ✓ No ____
13. Electronic data deliverables including CCS Report & Superset Deliverables available in EDM? Yes ✓ No ____

14. List RPM and contractors who receive or who have access to electronic DAT files in EDM:

D Beckmann Robert Parker

K. Alexander LBS

15: Comments:

Frances MacDonald Frances MacDonald 11-21-2011

Signature Print Name Date

Report Date:
17-Nov-11 15:43

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

Computer Science Corporation
15000 Conference Center Drive
Chantilly, VA 20151-3808

Work Order: K2198
SDG No: H30Q0
Case No: 41926

Attn: Nazy Abousaeedi

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
K2198-01	H30Q0	Soil	26-Oct-11 09:05	28-Oct-11 09:00
K2198-02	H30Q1	Soil	25-Oct-11 14:47	28-Oct-11 09:00
K2198-02	H30Q1	Soil	26-Oct-11 14:47	28-Oct-11 09:00
K2198-03	H30Q2	Soil	25-Oct-11 15:15	28-Oct-11 09:00
K2198-04	H30Q3	Soil	25-Oct-11 15:40	28-Oct-11 09:00
K2198-05	H30Q4	Soil	25-Oct-11 17:10	28-Oct-11 09:00
K2198-06	H30Q6	Soil	25-Oct-11 16:50	28-Oct-11 09:00
K2198-07	H30Q8	Soil	26-Oct-11 13:00	28-Oct-11 09:00
K2198-08	H30Q9	Soil	26-Oct-11 13:45	28-Oct-11 09:00
K2198-09	H30R0	Soil	26-Oct-11 17:05	28-Oct-11 09:00
K2198-10	H30R1	Soil	26-Oct-11 16:30	28-Oct-11 09:00
K2198-11	H30S4	Soil	25-Oct-11 09:55	28-Oct-11 09:00
K2198-12	H30S5	Soil	25-Oct-11 10:36	28-Oct-11 09:00
K2198-13	H30S8	Soil	24-Oct-11 14:00	28-Oct-11 09:00
K2198-14	H30S9	Soil	24-Oct-11 15:25	28-Oct-11 09:00
K2198-15	H30T0	Soil	24-Oct-11 16:11	28-Oct-11 09:00
K2198-16	H30T1	Soil	24-Oct-11 15:22	28-Oct-11 09:00
K2198-17	H30T2	Soil	24-Oct-11 16:45	28-Oct-11 09:00
K2198-18	H30T3	Soil	24-Oct-11 17:30	28-Oct-11 09:00
K2198-19	H30T4	Soil	24-Oct-11 17:45	28-Oct-11 09:00
K2198-20	H30T5	Soil	25-Oct-11 10:15	28-Oct-11 09:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Mitkem Laboratories.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.mitkem.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Pennsylvania	68-00520
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2247 Testing

Authorized by:

Yihai Ding
Laboratory Director

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

LABORATORY NAME Mitkem Laboratories
CITY/STATE Warwick, RI
CASE NO. 41926 SDG NO. H30Q0
SDG NOs. TO FOLLOW – – –
MOD. REF. NO. –
CONTRACT NO. EP-W-11-033
SOW NO. SOM01.2

All documents delivered in the Complete SDG File (CSF) must be original documents where possible.

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
1. **Inventory Sheet** (Form DC-2) (Do not number)	1	14		
2. **SDG Case Narrative**	15	18	✓	
3. **SDG Cover Sheet/Traffic Report**			✓	
4. **Trace Volatiles Data**				
a. QC Summary				
Deuterated Monitoring Compound Recovery (Form II VOA-1 and VOA-2)	N/A	N/A	N/A	
Matrix Spike/Matrix Spike Duplicate Recovery (Form III VOA) (if requested by USEPA Region)				
Method Blank Summary (Form IV VOA)				
GC/MS Instrument Performance Check (Form V VOA)				
Internal Standard Area and RT Summary (Form VIII VOA)				
b. Sample Data				
TCL Results - Organics Analysis Data Sheet (Form I VOA-1 and VOA-2)				
Tentatively Identified Compounds (Form I VOA-TIC)				
Reconstructed total ion chromatograms (RIC) for each sample				
For each sample:				
Raw Spectra and background-subtracted mass spectra of target compounds identified				
Quantitation reports				
Mass Spectra of all reported TICs with three best library matches				
c. Standards Data (All Instruments)				
Initial Calibration Data (Form VI VOA-1, VOA-2, VOA-3)				
RICs and Quantitation Reports for all Standards				
Continuing Calibration Data (Form VII VOA-1, VOA-2, VOA-3)				
RICs and Quantitation Reports for all Standards				
d. Raw/Quality Control (QC) Data				
BFB				
Blank Data	N/A	N/A	N/A	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2 (CON'T)

CASE NO. 41926	SDG NO. H30Q0	SDG NOS. TO FOLLOW —
—	—	MOD. REF. NO. —

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
Matrix Spike/Matrix Spike Duplicate Data (if requested by USEPA Region)	N/a	N/a	N/A	
e. Trace SIM Data (Place at the end of the Trace Volatiles Section)	N/a	N/a	N/A	
[Form I VOA-SIM; Form II VOA-SIM1 and VOA-SIM2; Form IV-VOA-SIM; Form VI VOA-SIM; Form VII VOA-SIM; Form VIII VOA-SIM; and all raw data for QC, Samples, and Standards.]				
5. **Low/Med Volatiles Data**				
a. QC Summary				
Deuterated Monitoring Compound Recovery (Form II VOA-1, VOA-2, VOA-3, VOA-4)	19	20	✓	
Matrix Spike/Matrix Spike Duplicate Recovery (Form III VOA-1 and VOA-2) (if requested by USEPA Region)	21	21	✓	
Method Blank Summary (Form IV VOA)	22	23	✓	
GC/MS Instrument Performance Check (Form V VOA)	24	26	✓	
Internal Standard Area and RT Summary (Form VIII VOA)	27	29	✓	
b. Sample Data	30	199		
TCL Results - Organics Analysis Data Sheet (Form I VOA-1 and VOA-2)			✓	
Tentatively Identified Compounds (Form I VOA-TIC)			✓	
Reconstructed total ion chromatograms (RIC) for each sample			✓	
For each sample:				
Raw Spectra and background-subtracted mass spectra of target compounds identified			✓	
Quantitation reports			✓	
Mass Spectra of all reported TICs with three best library matches			✓	
c. Standards Data (All Instruments)	200	234		
Initial Calibration Data (Form VI VOA-1, VOA-2, VOA-3)			✓	
RICs and Quantitation Reports for all Standards			✓	
Continuing Calibration Data (Form VII VOA-1, VOA-2, VOA-3)			✓	
RICs and Quantitation Reports for all Standards			✓	
d. Raw/Quality Control (QC) Data				
BFB	227	244	✓	
Blank Data	245	265	✓	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2 (CON'T)

CASE NO. 41926 SDG NO. H30Q0 SDG NOS. TO FOLLOW —

— — MOD. REF. NO. —

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
Martix Spike/Matrix Spike Duplicate Data (if requested by USEPA Region)	266	275	✓	
6. **Semivolatiles Data**				
a. QC Summary				
Deuterated Monitoring Compound Recovery (Form II SV-1, SV-2, SV-3, SV-4)	276	277	✓	
Matrix Spike/Matrix Spike Duplicate Recovery Summary (Form III SV-1 and SV-2) (if requested by USEPA Region)	278	278	✓	
Method Blank Summary (Form IV SV)	279	279	✓	
GC/MS Instrument Performance Check (Form V SV)	280	284	✓	
Internal Standard Area and RT Summary (Form VIII SV-1 and SV-2)	285	292	✓	
b. Sample Data	293	808		
TCL Results - Organics Analysis Data Sheet (Form I SV-1 and SV-2)			✓	
Tentatively Identified Compounds (Form I SV-TIC)			✓	
Reconstructed total ion chromatograms (RICs) for each sample			✓	
For each sample:	293	808		
Raw Spectra and background-subtracted mass spectra of target compounds			✓	
Quantitation reports			✓	
Mass Spectra of TICs with three best library matches			✓	
GPC chromatograms (if GPC is required)			✓	
c. Standards Data (All Instruments)	809	873		
Initial Calibration Data (Form VI SV-1, SV-2, SV-3)			✓	
RICs and Quantitation Reports for all Standards			✓	
Continuing Calibration Data (Form VII SV-1, SV-2, SV-3)			✓	
RICs and Quantitation Reports for all Standards			✓	
d. Raw QC Data				
DFTPP	874	896	✓	
Blank Data	897	910	✓	
MS/MSD Data (if requested by USEPA Region)	911	922	✓	
e. Raw GPC Data	923	932	✓	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2 (CON'T)

CASE NO. 41926 SDG NO. H30Q0 SDG NOS. TO FOLLOW —

— — MOD. REF. NO. —

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
f. Semivolatile SIM Data	N/A	N/A	N/A	
[Form I SV-SIM; Form II SV-SIM1 and SV-SIM2; Form III SV-SIM1 and SV-SIM2 (if required); Form IV SV-SIM; Form VI SV-SIM; Form VII SV-SIM; Form VIII SV-SIM1 and SV-SIM2; and all raw data for QC, Samples, and Standards.]				
7. **Pesticides Data**				
a. QC Summary				
Surrogate Recovery Summary (Form II PEST-1 and PEST-2)	N/A	N/A	N/A	
Matrix Spike/Matrix Spike Duplicate Recovery Summary (Form III PEST-1 and PEST-2)				
Laboratory Control Sample Recovery (Form III PEST-3 and PEST-4)				
Method Blank Summary (Form IV PEST)				
b. Sample Data	N/A	N/A		
TCL Results - Organics Analysis Data Sheet (Form I PEST)				
Chromatograms (Primary Column)				
Chromatograms from second GC column confirmation				
GC Integration report or data system printout				
Manual work sheets				
For pesticides by GC/MS				
Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (samples & standards)				
c. Standards Data	N/A	N/A		
Initial Calibration of Single Component Analytes (Form VI PEST-1 and PEST-2)				
Toxaphene Initial Calibration (Form VI PEST-3 and PEST-4)				
Analyte Resolution Summary (Form VI PEST-5, per column)				
Performance Evaluation Mixture (Form VI PEST-6)				
Individual Standard Mixture A (Form VI PEST-7)				
Individual Standard Mixture B (Form VI PEST-8)				
Individual Standard Mixture C (Form VI PEST-9 and PEST-10)				
Calibration Verification Summary (Form VII PEST-1)				
Calibration Verification Summary (Form VII PEST-2)				
Calibration Verification Summary (Form VII PEST-3)			N/A	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2 (CON'T)

CASE NO. 41926 SDG NO. H30Q0 SDG NOS. TO FOLLOW —

— — MOD. REF. NO. —

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
Calibration Verification Summary (Form VII PEST-4)			N/A	
Analytical Sequence (Form VIII PEST)				
Florisil Cartridge Check (Form IX PEST-1)				
Pesticide GPC Calibration (Form IX PEST-2)				
Identification Summary for Single Component Analytes (Form X PEST-1)				
Identification Summary for Toxaphene (Form X PEST-2)				
Chromatograms and data system printouts A printout of Retention Times and corresponding peak areas or peak heights				
d. Raw QC Data				
Blank Data	N/A	N/A		
Matrix Spike/Matrix Spike Duplicate Data				
Laboratory Control Sample Data				
e. Raw GPC Data				
f. Raw Florisil Data	N/A	N/A	N/A	
8. **Aroclor Data**				
a. QC Summary				
Surrogate Recovery Summary (Form II ARO-1 and ARO-2)	933	933	✓	
Matrix Spike/Matrix Spike Duplicate Summary (Form III ARO-1 and ARO-2)	934	935	✓	
Laboratory Control Sample Recovery (Form III ARO-3 and ARO-4)	936	936	✓	
Method Blank Summary (Form IV ARO)	937	938	✓	
b. Sample Data	939	1038		
TCL Results - Organics Analysis Data Sheet (Form I ARO)			✓	
Chromatograms (Primary Column)			✓	
Chromatograms from second GC column confirmation			✓	
GC Integration report or data system printout			✓	
Manual work sheets			✓	
For Aroclors by GC/MS				
Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (samples & standards)			N/A	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2 (CON'T)

CASE NO. 41926 SDG NO. H30Q0 SDG NOS. TO FOLLOW —

— — MOD. REF. NO. —

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
c. Standards Data	1039	1180		
Aroclors Initial Calibration (Form VI ARO-1, ARO-2, and ARO-3)			✓	
Calibration Verification Summary (Form VII ARO-1)			✓	
Analytical Sequence (Form VIII ARO)			✓	
Identification Summary for Multicomponent Analytes (Form X ARO)			✓	
Chromatograms and data system printouts A printout of Retention Times and corresponding peak areas or peak heights			✓	
d. Raw QC Data				
Blank Data	1181	1203	✓	
Matrix Spike/Matrix Spike Duplicate Data	1204	1216	✓	
Laboratory Control Sample (LCS) Data	1217	1224	✓	
e. Raw GPC Data (if performed)	N/A	N/A	N/A	
9. **Miscellaneous Data**				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	1225	1252	✓	
Internal sample and sample extract transfer chain-of-custody records	1253	1260	✓	
Screening records	N/A	N/A	N/A	
All instrument output, including strip charts from screening activities (describe or list)				
Primary, Intermediate and Working Standard Logbook Pages	1264	1275	✓	
—	N/A	N/A	N/A	
10. **EPA Shipping/Receiving Documents**				
Airbills (No. of shipments 2)	1276	1277	✓	
Chain of Custody Records	1278	1281	✓	
Sample Tags (in a plastic bag, if present)			N/A	
Sample Log-in Sheet (Lab & DC-1)	1282	1292	✓	
Miscellaneous Shipping/Receiving Records (describe or list)				
PE Instructions	N/A	N/A	N/A	
—	N/A	N/A	N/A	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2 (CON'T)

CASE NO. 41926 SDG NO. H30Q0 SDG NOS. TO FOLLOW —

— — MOD. REF. NO. —

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK USEPA
11. **Internal Lab Sample Transfer Records and Tracking Sheets** (describe or list)				
/	N/A	N/A	N/A	
	N/A	N/A	N/A	
12. **Other Records** (describe or list)				
Telephone Communication Log	N/A	N/A	N/A	
E-mail(s)	1273	1278	✓	
—	N/A	N/A	N/A	

13. **Comments**

/

Completed by: (CLP Lab) Jennifer Emerson (Signature) Jennifer Emerson/Data Keyer of Specialist (Printed Name/Title) 11/17/11 (Date)

Verified by: (CLP Lab) Agnes R Huntley (Signature) Agnes Huntley/CLP Project Manager (Printed Name/Title) 11/17/11 (Date)

Audited by: (USEPA) (Signature) (Printed Name/Title) (Date)

Spectrum Analytical, Inc., featuring Hanibal Technology Rhode Island Division submits the enclosed data package in response to USEPA Case # 41926 and SDG# H30Q0. Analyses were performed for twenty soil samples that were received on October 28, 2011.

The analyses were performed under USEPA Contract # EP-W-11-033.

Please note that five sample-shipping coolers were received on October 28. The temperature of the coolers was measured at 6.5°C, 9.0°C, 8.5°C, 9.0°C and 8.0°C.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis		
H30Q0	K2198-01A		S	
H30Q0MS	K2198-01AMS		S	
H30Q0MSD	K2198-01AMSD		S	
H30Q0	K2198-01B			A
H30Q0MS	K2198-01BMS			A
H30Q0MSD	K2198-01BMSD			A
H30Q0	K2198-01C	V		
H30Q0MS	K2198-01CMS	V		
H30Q0MSD	K2198-01CMSD	V		
H30Q1	K2198-02A		S	
H30Q1	K2198-02B			A
H30Q1	K2198-02C	V		
H30Q2	K2198-03A		S	
H30Q2	K2198-03B			A
H30Q2	K2198-03C	V		
H30Q3	K2198-04A		S	
H30Q3	K2198-04B			A
H30Q3	K2198-04C	V		
H30Q4	K2198-05A		S	
H30Q4	K2198-05B			A
H30Q4	K2198-05C	V		
H30Q6	K2198-06A		S	
H30Q6	K2198-06B			A
H30Q6	K2198-06C	V		
H30Q8	K2198-07A		S	
H30Q8	K2198-07B			A
H30Q8	K2198-07C	V		
H30Q9	K2198-08A		S	
H30Q9	K2198-08B			A
H30Q9	K2198-08C	V		
H30R0	K2198-09A		S	
H30R0	K2198-09B			A

H30R0	K2198-09C	V		
H30R1	K2198-10A		S	
H30R1	K2198-10B			A
H30R1	K2198-10C	V		
H30S4	K2198-11A		S	
H30S4	K2198-11B			A
H30S4	K2198-11C	V		
H30S5	K2198-12A		S	
H30S5	K2198-12B			A
H30S5	K2198-12C	V		
H30S8	K2198-13A		S	
H30S8	K2198-13B			A
H30S8	K2198-13C	V		
H30S9	K2198-14A		S	
H30S9	K2198-14B			A
H30S9	K2198-14C	V		
H30T0	K2198-15A		S	
H30T0	K2198-15B			A
H30T0	K2198-15C	V		
H30T1	K2198-16A		S	
H30T1	K2198-16B			A
H30T1	K2198-16C	V		
H30T2	K2198-17A		S	
H30T2	K2198-17B			A
H30T2	K2198-17C	V		
H30T3	K2198-18A		S	
H30T3	K2198-18B			A
H30T3	K2198-18C	V		
H30T4	K2198-19A		S	
H30T4	K2198-19B			A
H30T4	K2198-19C	V		
H30T5	K2198-20A		S	
H30T5	K2198-20B			A
H30T5	K2198-20C	V		

V = Low/Medium Volatiles
S = Semivolatiles
A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

SAMPLE RECEIPT:

The TR/COC lists the matrices as soil and sediment; however, the laboratory was only scheduled with samples under the soil matrix. The lab would like to confirm if they only need to perform laboratory QC on either the soil or sediment matrix per SDG (for reporting purposes the matrix for all samples would be soil as scheduled). Per Region 8, the lab shall report all sediment samples as soil samples, and perform laboratory QC on only one matrix per SDG. The lab shall note the issue in the SDG Narrative and proceed with analysis. The laboratory performed laboratory QC on sample H30Q0 for VOA, SVOA and Aroclors.

The laboratory received VOA samples in unpreserved 4 oz jars. In accordance with previous direction from Region 8, the laboratory will follow the same procedure as described for the field core/storage containers (e.g., EnCoreTM or equivalent) and note the issue in the SDG Narrative.

Sample tags were not received with the samples. In accordance with previous direction from Region 8, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the sample. The Resolution will be applied to all samples received for this Case.

Low/Medium Volatile Analysis:

I. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

II. METHODS

Samples were analyzed following procedures in laboratory test code: EPA CLP SOM 1.2 VOC

The following equation was used to calculate the concentration of target analytes for low-level soil samples:

$$\text{Concentration } (\mu\text{g/Kg}) = \frac{(\text{Amt})(\text{DF})(\text{UF})(5)}{\left(\frac{Ws * (100 - M)}{100}\right)}$$

where: Amt = on-column amount on raw data
DF = Dilution factor
UF = ng unit correction factor
Ws = Weight of sample extracted (g)
M = %moisture (not decanted)

The following equation was used to calculate the Amt in the previous equations:

$$Amt = \frac{(A_x)(IS)}{(A_{is})(RRF)}$$

where: A_x = area of the characteristic ion for the compound to be measured
A_{is} = area of the characteristic ion for the associated internal standard
IS = concentration of internal standard in ug/L
RRF = relative response factor

III. PREPARATION

Soil Samples were prepared following procedures in laboratory test code: SW5035

IV. INSTRUMENTATION

The following instrumentation was used:
Instrument Code: V5
Instrument Type: GCMS-VOA
Description: HP6890 / HP6890
Manufacturer: Hewlett-Packard
Model: 6890 / 6890

Trap used for instrument V5: OI Analytical #10 trap containing 8 cm each of Tenax, silica gel and carbon molecular sieve.

GC column used: 30 m x 0.25 mm id (1.4 um film thickness) DB-624 capillary column.

V. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

Secondary ion 65 was used in the quantitation of 1,1-dichloroethene-d2 instead of primary ion 63 due to the interference with target compound 1,1-dichloroethene in the calibration standards.

B. Blanks:

All method blanks were within the acceptance criteria.

C. DMC Recoveries:

DMC recoveries were within the QC limits with the exception of the following:

H30Q0MS: recovery is below criteria for 1,2-Dichloroethane-d4 at 78% with criteria of (79-122).

H30Q9: recovery is below criteria for Vinyl chloride-d3 at 65% with criteria of (68-122).

H30R0: recovery is below criteria for Chloroethane-d5 at 56% with criteria of (61-130).

D. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

Duplicate matrix spikes were performed on sample H30Q0.

Spike recoveries were within the advisory QC limits.

Replicate RPDs were within the advisory QC limits.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

No sample in this SDG required analysis at dilution.

G. Samples:

cis-1,3-Dichloropropene-d4 was detected in method blanks and in samples. The volatile organic deuterated monitoring compound spike solution contains both the cis- and trans-1,3-dichloropropene isomers. cis-1,3-Dichloropropene-d4 is not a dueterated monitoring compound for SOM01.2, while the trans isomer is. The cis isomer is considered a laboratory artifact, and is not reported as a tentatively identified compound.

Alkanes were determined as part of tentatively identified compounds. The alkanes are reported on the Alkane Narrative Report following the SDG Narrative.

No other unusual observations were made for the analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

Semivolatile Analysis:

I. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

II. METHODS

Samples were analyzed following procedures in laboratory test code: EPA CLP SOM 1.2 BNA

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration } (\mu g/Kg) = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{V_t}{V_i}\right)\left(\frac{1}{Ws}\right)\left(\frac{100}{(100-m)}\right)$$

where: Amt = on-column amount on raw data
DF = Dilution factor
UF = ng unit correction factor
Ws = Weight of sample extracted (g)
M = %moisture (not decanted)

The following equation was used to calculate the Amt in the previous equations:

$$Amt = \frac{(A_x)(IS)}{(A_{is})(RRF)}$$

where: A_x = area of the characteristic ion for the compound to be measured
A_{is} = area of the characteristic ion for the associated internal standard
IS = concentration of internal standard in ug/L
RRF = relative response factor

III. PREPARATION

Soil Samples were prepared following procedures in laboratory test code: SW3550B

IV. INSTRUMENTATION

The following instrumentation was used to perform
Instrument Code: S2
Instrument Type: GCMS-SEMI
Description: HP5890 II / HP5972
Manufacturer: Hewlett-Packard
Model: 5890 / 5972

GC Column used: 30 m X 0.25 mm ID [0.25 um thickness] Rxi-5sil MS capillary column.

V. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

Ion 71 was used instead of ion 99 for phenol-d5. Ion 71 was used instead of ion 99 as phenol-d5 closely elutes with bis (2-chloroethyl) ether-d8, which also uses ion 99 for quantitation. This causes the recovery of phenol-d5 to be higher. These two compounds have co-eluted in the high level calibration standard.

B. Blanks:

All method blanks were within the SOW criteria.

C. DMC Recoveries:

DMC recoveries were within the QC limits with the following exceptions:

H30Q0MSD: recovery is below criteria for Pyrene-d10 at 47% with criteria of (51-120).

H30Q1: recovery is below criteria for Pyrene-d10 at 49% with criteria of (51-120).

H30Q4: recovery is below criteria for Benzo(a)pyrene-d12 at 30% with criteria of (43-111) and Pyrene-d10 at 47% with criteria of (51-120).

H30Q6: recovery is below criteria for Benzo(a)pyrene-d12 at 31% with criteria of (43-111) and Pyrene-d10 at 48% with criteria of (51-120).

H30Q8: recovery is below criteria for Benzo(a)pyrene-d12 at 39% with criteria of (43-111) and Pyrene-d10 at 50% with criteria of (51-120).

H30Q9: recovery is below criteria for Pyrene-d10 at 39% with criteria of (51-120).

H30R0: recovery is below criteria for Benzo(a)pyrene-d12 at 32% with criteria of (43-111) and Pyrene-d10 at 42% with criteria of (51-120).

H30R1: recovery is below criteria for Benzo(a)pyrene-d12 at 37% with criteria of (43-111) and Pyrene-d10 at 47% with criteria of (51-120).

H30S9: recovery is below criteria for Benzo(a)pyrene-d12 at 39% with criteria of (43-111), Fluorene-d10 at 40% with criteria of (40-108) and Pyrene-d10 at 47% with criteria of (51-120).

H30T0: recovery is below criteria for Benzo(a)pyrene-d12 at 35% with criteria of (43-111), Dimethylphthalate-d6 at 40% with criteria of (43-111), Fluorene-d10 at 35% with criteria of (40-108) and Pyrene-d10 at 40% with criteria of (51-120).

H30T2: recovery is below criteria for Benzo(a)pyrene-d12 at 40% with criteria of (43-111) and Pyrene-d10 at 51% with criteria of (51-120).

H30T5: recovery is below criteria for Benzo(a)pyrene-d12 at 42% with criteria of (43-111) and Pyrene-d10 at 51% with criteria of (51-120).

D. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

Duplicate matrix spikes were performed on sample H30Q0.

Spike recoveries were within the advisory QC limits with the exception of the following:

H30Q0MSD: recovery is below criteria for Pyrene at 32% with criteria of (35-142).

Replicate RPDs were within the advisory QC limits.

E Internal Standards:

Internal standard area counts were within QC criteria.

F. Dilutions:

No sample in this SDG required analysis at dilution.

G. Samples:

Alkanes were determined as part of tentatively identified compounds. The alkanes are reported on the Alkane Narrative Report following the SDG Narrative.

No other unusual observations were made for the analysis.

H. Manual Integration:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting
- M2 peak co-elution
- M3 rising or falling baseline
- M4 retention time shift
- M5 miscellaneous - under this category, the justification is explained
- M6 software did not integrate peak
- M7 partial peak integration

Manual integration was performed on the following:

H30T3: Benzo(a)pyrene-d12 due to M6
H30T5: Benzo(a)pyrene-d12 due to M6
STD0202Y: Benzo(a)pyrene, Benzo(a)pyrene-d12, Benzo(b)fluoranthene, Benzo(k)fluoranthene due to M6

Aroclor Analysis:

I. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

II. METHODS

Samples were analyzed following procedures in laboratory test code: EPA CLP

SOM 1.2 ARO

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = CAL - AMT on raw data
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

III. PREPARATION

Soil Samples were prepared following procedures in laboratory test code: SW3550B

IV. INSTRUMENTATION

The following instrumentation was used to perform
Instrument Code: E2
Instrument Type: GC-ECD
Description: HP5890 II +
Manufacturer: Hewlett-Packard
Model: 5890

GC Columns used:
CLPPest: 30 m X 0.53 mm ID [0.50 um thickness] capillary column and
CLPPestII: 30 m X 0.53 mm ID [0.42 um thickness] capillary column

V. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate percent recoveries were within the QC limits with the following exceptions:

H30Q4: recovery is below criteria for Tetrachloro-m-xylene on rear column at 30% with criteria of (30-150) and Tetrachloro-m-xylene on front column at 29% with criteria of (30-150).

H30Q6: recovery is below criteria for Tetrachloro-m-xylene on rear column at 28% with criteria of (30-150) and Tetrachloro-m-xylene on front column at 26% with criteria of (30-150).

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control sample were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

Duplicate matrix spikes were performed on sample H30Q0.

Spike recoveries were within the advisory QC limits.

Replicate RPDs were within the advisory QC limits with the exception of Aroclor-1016 on the rear column.

E. Dilutions:

No sample in this SDG required analysis at dilution.

F. Samples:

No other unusual observations were made for the analysis.

G. Manual Integration:

No manual integrations were performed on any sample or standard.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes R Huntley

Agnes Huntley
CLP Project Manager
11/17/11

ALKANE NARRATIVE REPORT

Report Date: 11/16/2011

SDG: H30Q0

Client Sample ID: H30R1 Lab Sample ID: K2198-10C File ID: V5N2711.D

Compound	RT	Est. Conc.	Q
Cyclic Alkane	10.402	22	J

ALKANE NARRATIVE REPORT
Report Date: 11/17/2011
SDG: H30Q0

Client Sample ID: H30Q2 Lab Sample ID: K2198-03A File ID: S2H5254.D

Compound	RT	Est. Conc.	Q
Cyclic Alkane	9.549	100	J

Client Sample ID: H30Q6 Lab Sample ID: K2198-06A File ID: S2H5257.D

Compound	RT	Est. Conc.	Q
Straight-chain Alkane	4.208	170	J
Branched Alkane	5.14	130	J
Straight-chain Alkane	5.28	480	J
Straight-chain Alkane	5.752	210	J

Client Sample ID: H30R1 Lab Sample ID: K2198-10A File ID: S2H5261.D

Compound	RT	Est. Conc.	Q
Straight-chain Alkane	3.567	560	J
Cyclic Alkane	10.13	4300	J

Client Sample ID: H30S4 Lab Sample ID: K2198-11A File ID: S2H5262.D

Compound	RT	Est. Conc.	Q
Branched Alkane	7.009	510	J

Client Sample ID: H30T0 Lab Sample ID: K2198-15A File ID: S2H5266.D

Compound	RT	Est. Conc.	Q
Straight-chain Alkane	10.76	770	J

Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number H30Q0

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-11-033	Case No.	41926
Analysis Price	$430	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) H30Q0	08) H30Q6	15) H30S8	22) H30T5
02) H30Q0MS	09) H30Q8	16) H30S9	
03) H30Q0MSD	10) H30Q9	17) H30T0	
04) H30Q1	11) H30R0	18) H30T1	
05) H30Q2	12) H30R1	19) H30T2	
06) H30Q3	13) H30S4	20) H30T3	
07) H30Q4	14) H30S5	21) H30T4	

First Sample in SDG	Last Sample in SDG
H30Q0	H30T5

First Sample Receipt Date	Last Sample Receipt Date
10/28/2011	10/28/2011

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature Agnes R Huntley Date 11/02/2011

SDG H30Q0

USEPA
DateShipped: 10/27/2011
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Site #: 41926
Contact Name: Jeff Miller
Contact Phone: 720-219-7891

No: 8-102711-105926-0003
Cooler #:
Lab: Spectrum Analytical
Lab Phone: 401-732-3400

Lab #	CLP Sample #	Analyses	Matrix	Collected	Sample Time	Preservative	MS/MSD
	H30Q0	Volatiles (VOAs)	Soil	10/26/2011	09:05		
	H30Q0	Semivolatiles (SVOAs)/PCBs	Soil	10/26/2011	09:05		
	H30Q1	Volatiles (VOAs)	Soil	10/25/2011	14:47		
	H30Q1	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	14:47		
	H30Q2	Volatiles (VOAs)	Soil	10/25/2011	15:15		
	H30Q2	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	15:15		
	H30Q3	Volatiles (VOAs)	Soil	10/25/2011	15:40		
	H30Q3	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	15:40		
	H30Q4	Volatiles (VOAs)	Soil	10/25/2011	17:10		
	H30Q4	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	17:10		
	H30Q6	Volatiles (VOAs)	Soil	10/25/2011	16:50		
	H30Q6	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	16:50		
	H30Q8	Volatiles (VOAs)	Soil	10/26/2011	13:00		
	H30Q8	Semivolatiles (SVOAs)/PCBs	Soil	10/26/2011	13:00		
	H30Q9	Volatiles (VOAs)	Soil	10/26/2011	13:45		
	H30Q9	Semivolatiles (SVOAs)/PCBs	Soil	10/26/2011	13:45		
	H30R0	Volatiles (VOAs)	Soil	10/26/2011	17:05		
	H30R0	Semivolatiles (SVOAs)/PCBs	Soil	10/26/2011	17:05		
	H30R1	Volatiles (VOAs)	Soil	10/26/2011	16:30		
	H30R1	Semivolatiles (SVOAs)/PCBs	Soil	10/26/2011	16:30		

Special Instructions: Results to jeff.miller@urscorp.com, amy.k.gray@urscorp.com

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Jen Pistrum	10/27/11	FedEx	10/27/11	1400		FEDEX	10-28-11	Danielle Nelson	10-28-11	9:00

6.5°C 9.0°C 9.5°C 10.0°C 9.5°C

SDG H30000

USEPA
DateShipped: 10/27/2011
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Site #: 41926
Contact Name: Jeff Miller
Contact Phone: 720-219-7891

No: 8-102711-105926-0003
Cooler #:
Lab: Spectrum Analytical
Lab Phone: 401-732-3400

Lab #	CLP Sample #	Analyses	Matrix	Collected	Sample Time	Preservative	MS/MSD
	H30S4	Volatiles (VOAs)	Soil	10/25/2011	09:55		
	H30S4	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	09:55		
	H30S5	Volatiles (VOAs)	Soil	10/25/2011	10:36		
	H30S5	Semivolatiles (SVOAs)/PCBs	Soil	10/25/2011	10:36		
	H30S7	Volatiles (VOAs)	Surface Water	10/26/2011	10:30	HCl	
	H30S8	Volatiles (VOAs)	Sediment	10/24/2011	14:00		
	H30S9	Volatiles (VOAs)	Sediment	10/24/2011	15:25		
	H30T0	Volatiles (VOAs)	Sediment	10/24/2011	16:11		
	H30T1	Volatiles (VOAs)	Sediment	10/24/2011	15:22		
	H30T2	Volatiles (VOAs)	Sediment	10/24/2011	16:45		
	H30T3	Volatiles (VOAs)	Sediment	10/24/2011	17:30		
	H30T4	Volatiles (VOAs)	Sediment	10/24/2011	17:45		
SDG Final Sample ←	H30T5	Volatiles (VOAs)	Sediment	10/25/2011	10:15		
	H30T6	Volatiles (VOAs)	Sediment	10/25/2011	11:35		
	H30T7	Volatiles (VOAs)	Sediment	10/25/2011	12:40		
	H30T9	Volatiles (VOAs)	Surface Water	10/24/2011	14:00	HCl	
	H30W0	Volatiles (VOAs)	Surface Water	10/24/2011	15:25	HCl	
	H30W1	Volatiles (VOAs)	Surface Water	10/24/2011	16:11	HCl	
	H30W2	Volatiles (VOAs)	Surface Water	10/24/2011	15:22	HCl	
	H30W3	Volatiles (VOAs)	Surface Water	10/24/2011	16:45	HCl	

Special Instructions: Results to jeff.miller@urscorp.com, amy.k.gray@urscorp.com

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Jen Pitman	10/27/11	FedEx	10/27/11	1400		FedEx	10-28-11	Zamir Mun	10-28-11	9:00

6.5°C 9.0°C 9.5°C 10.0°C 9.5°C

USEPA
DateShipped: 10/26/2011
CarrierName: FedEx
AirbillNo: -

CHAIN OF CUSTODY RECORD
Site #: 41926
Contact Name: Jeff Miller
Contact Phone: 720-219-7891

No: 8-102611-105817-0002
Cooler #:
Lab: ChemTech Consulting Group
Lab Phone: 908-789-8900

Lab #	CLP Sample #	Analyses	Matrix	Collected	Sample Time	Preservative	MS/MSD
	H30S8	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	14:00		
	H30S9	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	15:25		
	H30T0	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	16:11		
	H30T1	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	15:22		
	H30T2	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	16:45		
	H30T3	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	17:30		
	H30T4	Semivolatiles (SVOAs)/PCBs	Sediment	10/24/2011	17:45		
	H30T5	Semivolatiles (SVOAs)/PCBs	Sediment	10/25/2011	10:15		
	H30T6	Semivolatiles (SVOAs)/PCBs	Sediment	10/25/2011	11:35		
	H30T7	Semivolatiles (SVOAs)/PCBs	Sediment	10/25/2011	12:40		
	H30T9	Semivolatiles (SVOAs)	Surface Water	10/24/2011	14:00		
	H30T9	Aroclors	Surface Water	10/24/2011	14:00		
	H30W0	Semivolatiles (SVOAs)	Surface Water	10/24/2011	15:25		
	H30W0	Aroclors	Surface Water	10/24/2011	15:25		
	H30W1	Semivolatiles (SVOAs)	Surface Water	10/24/2011	16:11		
	H30W1	Aroclors	Surface Water	10/24/2011	16:11		
	H30W2	Semivolatiles (SVOAs)	Surface Water	10/24/2011	15:22		
	H30W2	Aroclors	Surface Water	10/24/2011	15:22		
	H30W3	Semivolatiles (SVOAs)	Surface Water	10/24/2011	16:45		
	H30W3	Aroclors	Surface Water	10/24/2011	16:45		

SDG-Final Sampler

Temp: 4°C

Special Instructions: Results to jeff.miller@urs.com, amy.k.gray@urs.com

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	10/26/11	FedEx	10/26/11	1300				[illegible]	10/27/11	9:15
									[illegible]	10-28-11	9:00

9.0°C 9.0°C 9.5°C 8.0°C 8.5°C

2C - FORM II VOA-3

SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJ5	75	85	92	69	86	81	101
02	H30Q1	83	96	95	80	96	90	107
03	H30Q2	82	93	94	83	93	93	102
04	H30Q3	76	82	90	71	89	82	97
05	H30Q4	77	84	91	82	89	85	94
06	H30Q6	81	86	91	91	93	93	92
07	H30Q8	75	83	87	89	88	90	100
08	H30Q9	65 *	91	83	108	98	94	111
09	H30R0	82	56 *	83	99	93	99	94
10	H30R1	79	99	95	105	95	97	115
11	H30S4	88	102	103	63	98	108	120
12	H30S5	83	94	92	66	99	100	109
13	H30S8	79	92	91	64	93	98	99
14	H30S9	81	91	91	74	96	97	99
15	H30T0	77	94	89	73	93	96	105
16	H30T1	77	87	83	94	93	99	94
17	H30T2	74	88	88	72	93	95	98
18	H30T3	74	85	85	87	88	92	93
19	H30T4	77	86	81	83	95	100	92
20	H30T5	78	88	87	84	93	100	98
21	VBLKK5	73	83	82	85	91	86	93
22	H30Q0	83	91	95	64	92	84	109
23	H30Q0MS	77	84	97	66	87	78 *	98
24	H30Q0MSD	75	80	89	74	87	80	98
25	VHBLKK5	81	95	86	103	95	103	90

			QC LIMITS
VDMC1	(VCL)	= Vinyl chloride-d3	(68-122)
VDMC2	(CLA)	= Chloroethane-d5	(61-130)
VDMC3	(DCE)	= 1,1-Dichloroethene-d2	(45-132)
VDMC4	(BUT)	= 2-Butanone-d5	(20-182)
VDMC5	(CLF)	= Chloroform-d	(72-123)
VDMC6	(DCA)	= 1,2-Dichloroethane-d4	(79-122)
VDMC7	(BEN)	= Benzene-d6	(80-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

2D - FORM II VOA-4

SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (DXE) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT OUT
01	VBLKJ5	92	98	93	61	68	81	88	0
02	H30Q1	99	99	99	61	81	93	83	0
03	H30Q2	96	94	97	64	90	89	93	0
04	H30Q3	86	96	85	46	61	69	83	0
05	H30Q4	86	92	94	73	75	85	89	0
06	H30Q6	84	90	93	74	89	89	91	0
07	H30Q8	89	96	106	75	87	95	91	0
08	H30Q9	111	96	88	99	95	95	97	1
09	H30R0	85	90	96	82	120	94	90	1
10	H30R1	107	98	75	105	97	86	101	0
11	H30S4	114	103	110	70	121	98	99	0
12	H30S5	104	99	102	61	102	95	94	0
13	H30S8	95	92	90	50	92	94	91	0
14	H30S9	91	93	91	57	90	95	90	0
15	H30T0	98	96	95	67	97	97	97	0
16	H30T1	87	90	97	78	81	89	88	0
17	H30T2	93	94	96	66	97	97	92	0
18	H30T3	91	90	93	70	90	90	94	0
19	H30T4	90	90	96	64	94	91	98	0
20	H30T5	93	94	101	73	104	98	93	0
21	VBLKK5	87	91	89	71	77	83	86	0
22	H30Q0	96	103	88	47	75	78	95	0
23	H30Q0MS	85	94	84	57	71	72	88	1
24	H30Q0MSD	89	96	93	61	70	81	94	0
25	VHBLKK5	87	88	98	85	107	98	91	0

			QC LIMITS
VDMC8	(DPA)	= 1,2-Dichloropropane-d6	(74-124)
VDMC9	(TOL)	= Toluene-d8	(78-121)
VDMC10	(TDP)	= trans-1,3-Dichloropropene-d4	(72-130)
VDMC11	(HEX)	= 2-Hexanone-d5	(17-184)
VDMC12	(DXE)	= 1,4-Dioxane-d8	(50-150)
VDMC13	(TCA)	= 1,1,2,2-Tetrachloroethane-d2	(56-161)
VDMC14	(DCZ)	= 1,2-Dichlorobenzene-d4	(70-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

3B - FORM III VOA-2

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix Spike - EPA Sample No.: H30Q0 Level: (LOW/MED) LOW

COMPOUND	SPIKE ADDED (µg/Kg)	SAMPLE CONCENTRATION (µg/Kg)	MS CONCENTRATION (µg/Kg)	MS %REC	#	QC. LIMITS REC.
1,1-Dichloroethene	59.8104	0.0000	54.2597	91		59-172
Benzene	59.8104	0.0000	65.2559	109		66-142
Trichloroethene	59.8104	0.0000	68.2069	114		62-137
Toluene	59.8104	0.0000	66.0050	110		59-139
Chlorobenzene	59.8104	0.0000	64.2765	107		60-133

COMPOUND	SPIKE ADDED (µg/Kg)	MSD CONCENTRATION (µg/Kg)	MSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	59.8104	51.7858	87		5		0-22	59-172
Benzene	59.8104	63.8533	107		2		0-21	66-142
Trichloroethene	59.8104	68.3385	114		0		0-24	62-137
Toluene	59.8104	64.9351	109		2		0-21	59-139
Chlorobenzene	59.8104	65.4319	109		2		0-21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

4A - FORM IV VOA

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: V5N2702.D Lab Sample ID: MB-62569

Instrument ID: V5

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/06/2011

Level: (TRACE or LOW/MED) LOW Time Analyzed: 23:44

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	H30Q1	K2198-02C	V5N2703.D	0:11
02	H30Q2	K2198-03C	V5N2704.D	0:38
03	H30Q3	K2198-04C	V5N2705.D	1:03
04	H30Q4	K2198-05C	V5N2706.D	1:30
05	H30Q6	K2198-06C	V5N2707.D	1:58
06	H30Q8	K2198-07C	V5N2708.D	2:25
07	H30Q9	K2198-08C	V5N2709.D	2:56
08	H30R0	K2198-09C	V5N2710.D	3:21
09	H30R1	K2198-10C	V5N2711.D	3:50
10	H30S4	K2198-11C	V5N2712.D	4:17
11	H30S5	K2198-12C	V5N2713.D	4:45
12	H30S8	K2198-13C	V5N2714.D	5:12
13	H30S9	K2198-14C	V5N2715.D	5:39
14	H30T0	K2198-15C	V5N2716.D	6:07
15	H30T1	K2198-16C	V5N2717.D	6:34
16	H30T2	K2198-17C	V5N2718.D	7:02
17	H30T3	K2198-18C	V5N2719.D	7:29
18	H30T4	K2198-19C	V5N2720.D	7:56
19	H30T5	K2198-20C	V5N2721.D	8:23

COMMENTS:

4A - FORM IV VOA

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: V5N2725.D Lab Sample ID: MB-62780

Instrument ID: V5

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/07/2011

Level: (TRACE or LOW/MED) LOW Time Analyzed: 10:12

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	H30Q0	K2198-01C	V5N2727.D	11:35
02	H30Q0MS	K2198-01CMS	V5N2730.D	12:57
03	H30Q0MSD	K2198-01CMSD	V5N2731.D	13:24
04	VHBLKK5	VHBLKK5	V5N2748.D	21:05

COMMENTS:

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB5N

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: V5N1310.D BFB Injection Date: 10/04/2011

Instrument ID: V5 BFB Injection Time: 16:43

GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.2
75	30.0 - 80.0% of mass 95	42.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 -120% of mass 95	78.7
175	5.0 - 9.0% of mass 174	6.5 (8.2)1
176	95.0 - 101% of mass 174	78.4 (99.6)1
177	5.0 - 9.0% of mass 176	4.8 (6.2)2

1 - Value is % mass 174 2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0505N	VSTD0505N	V5N1311.D	10/04/2011	17:11
02	VSTD0055N	VSTD0055N	V5N1312.D	10/04/2011	17:39
03	VSTD2005N	VSTD2005N	V5N1313.D	10/04/2011	18:08
04	VSTD1005N	VSTD1005N	V5N1314.D	10/04/2011	18:36
05	VSTD0105N	VSTD0105N	V5N1315.D	10/04/2011	19:04

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: V5N2700.D BFB Injection Date: 11/06/2011

Instrument ID: V5 BFB Injection Time: 22:49

GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.6
75	30.0 - 80.0% of mass 95	43.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 -120% of mass 95	70.9
175	5.0 - 9.0% of mass 174	5.8 (8.2)1
176	95.0 - 101% of mass 174	70.1 (98.8)1
177	5.0 - 9.0% of mass 176	4.6 (6.6)2

1 - Value is % mass 174 2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050J5	VSTD050J5	V5N2701.D	11/06/2011	23:16
02	VBLKJ5	MB-62569	V5N2702.D	11/06/2011	23:44
03	H30Q1	K2198-02C	V5N2703.D	11/07/2011	0:11
04	H30Q2	K2198-03C	V5N2704.D	11/07/2011	0:38
05	H30Q3	K2198-04C	V5N2705.D	11/07/2011	1:03
06	H30Q4	K2198-05C	V5N2706.D	11/07/2011	1:30
07	H30Q6	K2198-06C	V5N2707.D	11/07/2011	1:58
08	H30Q8	K2198-07C	V5N2708.D	11/07/2011	2:25
09	H30Q9	K2198-08C	V5N2709.D	11/07/2011	2:56
10	H30R0	K2198-09C	V5N2710.D	11/07/2011	3:21
11	H30R1	K2198-10C	V5N2711.D	11/07/2011	3:50
12	H30S4	K2198-11C	V5N2712.D	11/07/2011	4:17
13	H30S5	K2198-12C	V5N2713.D	11/07/2011	4:45
14	H30S8	K2198-13C	V5N2714.D	11/07/2011	5:12
15	H30S9	K2198-14C	V5N2715.D	11/07/2011	5:39
16	H30T0	K2198-15C	V5N2716.D	11/07/2011	6:07
17	H30T1	K2198-16C	V5N2717.D	11/07/2011	6:34
18	H30T2	K2198-17C	V5N2718.D	11/07/2011	7:02
19	H30T3	K2198-18C	V5N2719.D	11/07/2011	7:29
20	H30T4	K2198-19C	V5N2720.D	11/07/2011	7:56
21	H30T5	K2198-20C	V5N2721.D	11/07/2011	8:23
22	VSTD050K5	VSTD050K5	V5N2724.D	11/07/2011	9:45

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: V5N2700.D BFB Injection Date: 11/06/2011

Instrument ID: V5 BFB Injection Time: 22:49

GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.6
75	30.0 - 80.0% of mass 95	43.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 -120% of mass 95	70.9
175	5.0 - 9.0% of mass 174	5.8 (8.2)1
176	95.0 - 101% of mass 174	70.1 (98.8)1
177	5.0 - 9.0% of mass 176	4.6 (6.6)2

1 - Value is % mass 174 2 - Value is % mass 176

23	VBLKK5	MB-62780	V5N2725.D	11/07/2011	10:12
24	H30Q0	K2198-01C	V5N2727.D	11/07/2011	11:35
25	H30Q0MS	K2198-01CMS	V5N2730.D	11/07/2011	12:57
26	H30Q0MSD	K2198-01CMSD	V5N2731.D	11/07/2011	13:24
27	VHBLKK5	VHBLKK5	V5N2748.D	11/07/2011	21:05
28	VSTD050L5	VSTD050L5	V5N2749.D	11/07/2011	21:33

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####): VSTD050J5 Date Analyzed: 11/06/2011

Lab File ID (Standard): V5N2701.D Time Analyzed: 23:16

Instrument ID: V5 Heated Purge: (Y/N) Y

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	184155	9.427	270116	6.315	70335	12.168
	UPPER LIMIT	368310	9.927	540232	6.815	140670	12.668
	LOWER LIMIT	92078	8.927	135058	5.815	35168	11.668
	EPA SAMPLE NO.						
01	VBLKJ5	246579	9.426	345444	6.325	91770	12.178
02	H30Q1	228645	9.431	314640	6.318	78192	12.183
03	H30Q2	248975	9.426	334304	6.326	81162	12.179
04	H30Q3	206930	9.432	270166	6.320	72601	12.184
05	H30Q4	223360	9.432	286528	6.320	84345	12.184
06	H30Q6	213567	9.432	258467	6.320	77980	12.184
07	H30Q8	197116	9.438	267759	6.326	79374	12.179
08	H30Q9	214478	9.431	305403	6.319	67636	12.172
09	H30R0	173263	9.432	211841	6.320	73058	12.185
10	H30R1	241286	9.427	367259	6.314	70417	12.179
11	H30S4	209317	9.432	325970	6.319	60318	12.184
12	H30S5	222415	9.431	317220	6.319	66365	12.183
13	H30S8	206207	9.438	270582	6.325	66131	12.178
14	H30S9	210510	9.426	273184	6.326	70381	12.179
15	H30T0	187656	9.430	252514	6.318	56870	12.183

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####): VSTD050J5 Date Analyzed: 11/06/2011

Lab File ID (Standard): V5N2701.D Time Analyzed: 23:16

Instrument ID: V5 Heated Purge: (Y/N) Y

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	184155	9.427	270116	6.315	70335	12.168
	UPPER LIMIT	368310	9.927	540232	6.815	140670	12.668
	LOWER LIMIT	92078	8.927	135058	5.815	35168	11.668
	EPA SAMPLE NO.						
16	H30T1	258330	9.432	319828	6.320	98463	12.173
17	H30T2	233621	9.426	313371	6.325	85544	12.178
18	H30T3	244216	9.428	312087	6.316	88290	12.181
19	H30T4	293596	9.427	360347	6.326	105745	12.179
20	H30T5	262168	9.427	342017	6.315	89318	12.179

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####): VSTD050K5 Date Analyzed: 11/07/2011

Lab File ID (Standard): V5N2724.D Time Analyzed: 9:45

Instrument ID: V5 Heated Purge: (Y/N) Y

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	206756	9.432	242917	6.319	87745	12.172
	UPPER LIMIT	413512	9.932	485834	6.819	175490	12.672
	LOWER LIMIT	103378	8.932	121459	5.819	43873	11.672
	EPA SAMPLE NO.						
01	VBLKK5	257526	9.427	325591	6.326	97710	12.179
02	H30Q0	232444	9.429	332991	6.317	70455	12.181
03	H30Q0MS	225651	9.426	300837	6.314	78733	12.179
04	H30Q0MSD	237777	9.431	319097	6.318	82248	12.183
05	VHBLKK5	313909	9.426	378911	6.314	127972	12.178

IS1 (CBZ) = Chlorobenzene-d5

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2727.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.9	U
74-87-3	Chloromethane	5.9	U
75-01-4	Vinyl chloride	5.9	U
74-83-9	Bromomethane	5.9	U
75-00-3	Chloroethane	5.9	U
75-69-4	Trichlorofluoromethane	5.9	U
75-35-4	1,1-Dichloroethene	5.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.9	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	5.9	U
79-20-9	Methyl acetate	5.9	U
75-09-2	Methylene chloride	5.9	U
156-60-5	trans-1,2-Dichloroethene	5.9	U
1634-04-4	Methyl tert-butyl ether	5.9	U
75-34-3	1,1-Dichloroethane	5.9	U
156-59-2	cis-1,2-Dichloroethene	5.9	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	5.9	U
67-66-3	Chloroform	5.9	U
71-55-6	1,1,1-Trichloroethane	5.9	U
110-82-7	Cyclohexane	5.9	U
56-23-5	Carbon tetrachloride	5.9	U
71-43-2	Benzene	5.9	U
107-06-2	1,2-Dichloroethane	5.9	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2727.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.9	U
108-87-2	Methylcyclohexane	5.9	U
78-87-5	1,2-Dichloropropane	5.9	U
75-27-4	Bromodichloromethane	5.9	U
10061-01-5	cis-1,3-Dichloropropene	5.9	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	5.9	U
10061-02-6	trans-1,3-Dichloropropene	5.9	U
79-00-5	1,1,2-Trichloroethane	5.9	U
127-18-4	Tetrachloroethene	5.9	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	5.9	U
106-93-4	1,2-Dibromoethane	5.9	U
108-90-7	Chlorobenzene	5.9	U
100-41-4	Ethylbenzene	5.9	U
179601-23-1	m,p-Xylene	5.9	U
95-47-6	o-Xylene	5.9	U
100-42-5	Styrene	5.9	U
75-25-2	Bromoform	5.9	U
98-82-8	Isopropylbenzene	5.9	U
79-34-5	1,1,2,2-Tetrachloroethane	5.9	U
541-73-1	1,3-Dichlorobenzene	5.9	U
106-46-7	1,4-Dichlorobenzene	5.9	U
95-50-1	1,2-Dichlorobenzene	5.9	U
96-12-8	1,2-Dibromo-3-chloropropane	5.9	U
120-82-1	1,2,4-Trichlorobenzene	5.9	U
87-61-6	1,2,3-Trichlorobenzene	5.9	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2727.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E96679[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111107.B\V5N2727.D
Report Date: 09-Nov-2011 08:00

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2727.D
Lab Smp Id: K2198-01C Client Smp ID: H30Q0
Inj Date : 07-NOV-2011 11:35
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-01C,,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.147	2.168	(0.340)	131789	41.5647	42
$ 80 Chloroethane-d5	69	2.577	2.597	(0.408)	92950	45.3211	45(Q)
$ 81 1,1-Dichloroethene-d2	65	3.355	3.364	(0.531)	31270	47.5488	48(Q)
$ 82 2-Butanone-d5	46	5.074	5.071	(0.803)	56311	63.6808	64
$ 83 Chloroform-d	84	5.376	5.385	(0.851)	175312	46.1501	46(Q)
$ 23 1,2-Dichloroethane-d4	65	5.887	5.896	(0.932)	86369	42.1236	42(Q)
$ 84 Benzene-d6	84	5.910	5.907	(0.627)	336899	54.7364	55
* 26 1,4-Difluorobenzene	114	6.316	6.325	(1.000)	332991	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.723	6.732	(0.713)	121557	47.7894	48
$ 94 1,4-Dioxane-d8	96	6.920	6.917	(1.096)	14648	750.584	750
$ 33 Toluene-d8	98	7.838	7.835	(0.831)	293426	51.6427	52
$ 86 trans-1,3-Dichloropropene-d4	79	8.128	8.114	(0.862)	84460	44.1019	44
$ 87 2-Hexanone-d5	63	8.592	8.578	(0.911)	22850	46.6933	47
* 42 Chlorobenzene-d5	117	9.429	9.426	(1.000)	232444	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.938	10.924	(1.160)	65216	39.1722	39
* 78 1,4-Dichlorobenzene-d4	152	12.181	12.167	(1.000)	70455	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.634	12.631	(1.037)	62657	47.6045	48(Q)

Data File: \\avogadro\organics\V5.I\111107.B\V5N2727.D
Report Date: 09-Nov-2011 08:00

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111107.B\V5N2727.D
Report Date: 09-Nov-2011 08:00

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2727.D
Lab Smp Id: K2198-01C Client Smp ID: H30Q0
Inj Date : 07-NOV-2011 11:35
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-01C,,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

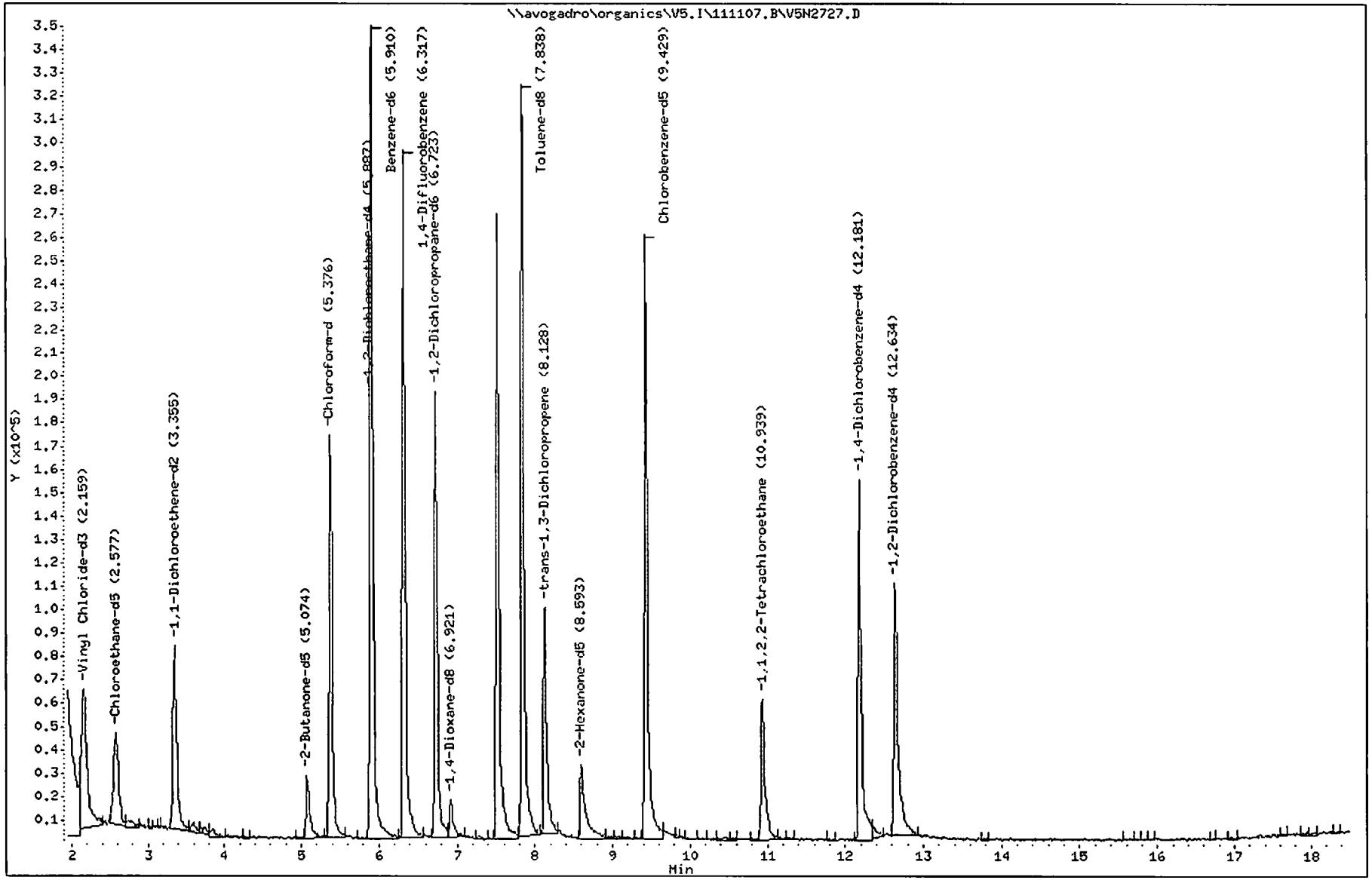
Data File: \\avogadro\organics\V5.I\111107.B\V5N2727.D
Date : 07-NOV-2011 11:35
Client ID: H30Q0
Sample Info: 5C,K2198-01C,,62780

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-02C

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5N2703.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 22 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.3	U
74-87-3	Chloromethane	6.3	U
75-01-4	Vinyl chloride	6.3	U
74-83-9	Bromomethane	6.3	U
75-00-3	Chloroethane	6.3	U
75-69-4	Trichlorofluoromethane	6.3	U
75-35-4	1,1-Dichloroethene	6.3	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.3	U
67-64-1	Acetone	13	U
75-15-0	Carbon disulfide	6.3	U
79-20-9	Methyl acetate	6.3	U
75-09-2	Methylene chloride	6.3	U
156-60-5	trans-1,2-Dichloroethene	6.3	U
1634-04-4	Methyl tert-butyl ether	6.3	U
75-34-3	1,1-Dichloroethane	6.3	U
156-59-2	cis-1,2-Dichloroethene	6.3	U
78-93-3	2-Butanone	13	U
74-97-5	Bromochloromethane	6.3	U
67-66-3	Chloroform	6.3	U
71-55-6	1,1,1-Trichloroethane	6.3	U
110-82-7	Cyclohexane	6.3	U
56-23-5	Carbon tetrachloride	6.3	U
71-43-2	Benzene	6.3	U
107-06-2	1,2-Dichloroethane	6.3	U
123-91-1	1,4-Dioxane	130	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-02C

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5N2703.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 22 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.3	U
108-87-2	Methylcyclohexane	6.3	U
78-87-5	1,2-Dichloropropane	6.3	U
75-27-4	Bromodichloromethane	6.3	U
10061-01-5	cis-1,3-Dichloropropene	6.3	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	6.3	U
10061-02-6	trans-1,3-Dichloropropene	6.3	U
79-00-5	1,1,2-Trichloroethane	6.3	U
127-18-4	Tetrachloroethene	6.3	U
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	6.3	U
106-93-4	1,2-Dibromoethane	6.3	U
108-90-7	Chlorobenzene	6.3	U
100-41-4	Ethylbenzene	6.3	U
179601-23-1	m,p-Xylene	6.3	U
95-47-6	o-Xylene	6.3	U
100-42-5	Styrene	6.3	U
75-25-2	Bromoform	6.3	U
98-82-8	Isopropylbenzene	6.3	U
79-34-5	1,1,2,2-Tetrachloroethane	6.3	U
541-73-1	1,3-Dichlorobenzene	6.3	U
106-46-7	1,4-Dichlorobenzene	6.3	U
95-50-1	1,2-Dichlorobenzene	6.3	U
96-12-8	1,2-Dibromo-3-chloropropane	6.3	U
120-82-1	1,2,4-Trichlorobenzene	6.3	U
87-61-6	1,2,3-Trichlorobenzene	6.3	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H30Q1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-02C

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5N2703.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 22 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966790[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2703.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2703.D
Lab Smp Id: K2198-02C Client Smp ID: H30Q1
Inj Date : 07-NOV-2011 00:11
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-02C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.100	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.160	2.173	(0.342)	124269	41.4789	41
$ 80 Chloroethane-d5	69	2.590	2.603	(0.410)	93130	48.0573	47(Q)
$ 81 1,1-Dichloroethene-d2	65	3.357	3.369	(0.531)	29557	47.5653	47(Q)
$ 82 2-Butanone-d5	46	5.075	5.076	(0.803)	66823	79.9761	78
$ 83 Chloroform-d	84	5.377	5.390	(0.851)	173110	48.2283	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.888	5.901	(0.932)	87493	45.1606	44(Q)
$ 84 Benzene-d6	84	5.911	5.912	(0.627)	324448	53.5893	53
* 26 1,4-Difluorobenzene	114	6.318	6.319	(1.000)	314640	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.724	6.725	(0.713)	124332	49.6925	49
$ 94 1,4-Dioxane-d8	96	6.922	6.911	(1.096)	14873	806.563	790
$ 33 Toluene-d8	98	7.839	7.840	(0.831)	275581	49.3079	48
$ 86 trans-1,3-Dichloropropene-d4	79	8.118	8.119	(0.861)	93170	49.4583	48
$ 87 2-Hexanone-d5	63	8.594	8.572	(0.911)	29400	61.0762	60
* 42 Chlorobenzene-d5	117	9.430	9.431	(1.000)	228645	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.928	10.929	(1.159)	75786	46.2774	45
* 78 1,4-Dichlorobenzene-d4	152	12.182	12.172	(1.000)	78192	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.635	12.625	(1.037)	60979	41.7454	41(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2703.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2703.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2703.D
Lab Smp Id: K2198-02C Client Smp ID: H30Q1
Inj Date : 07-NOV-2011 00:11
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-02C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

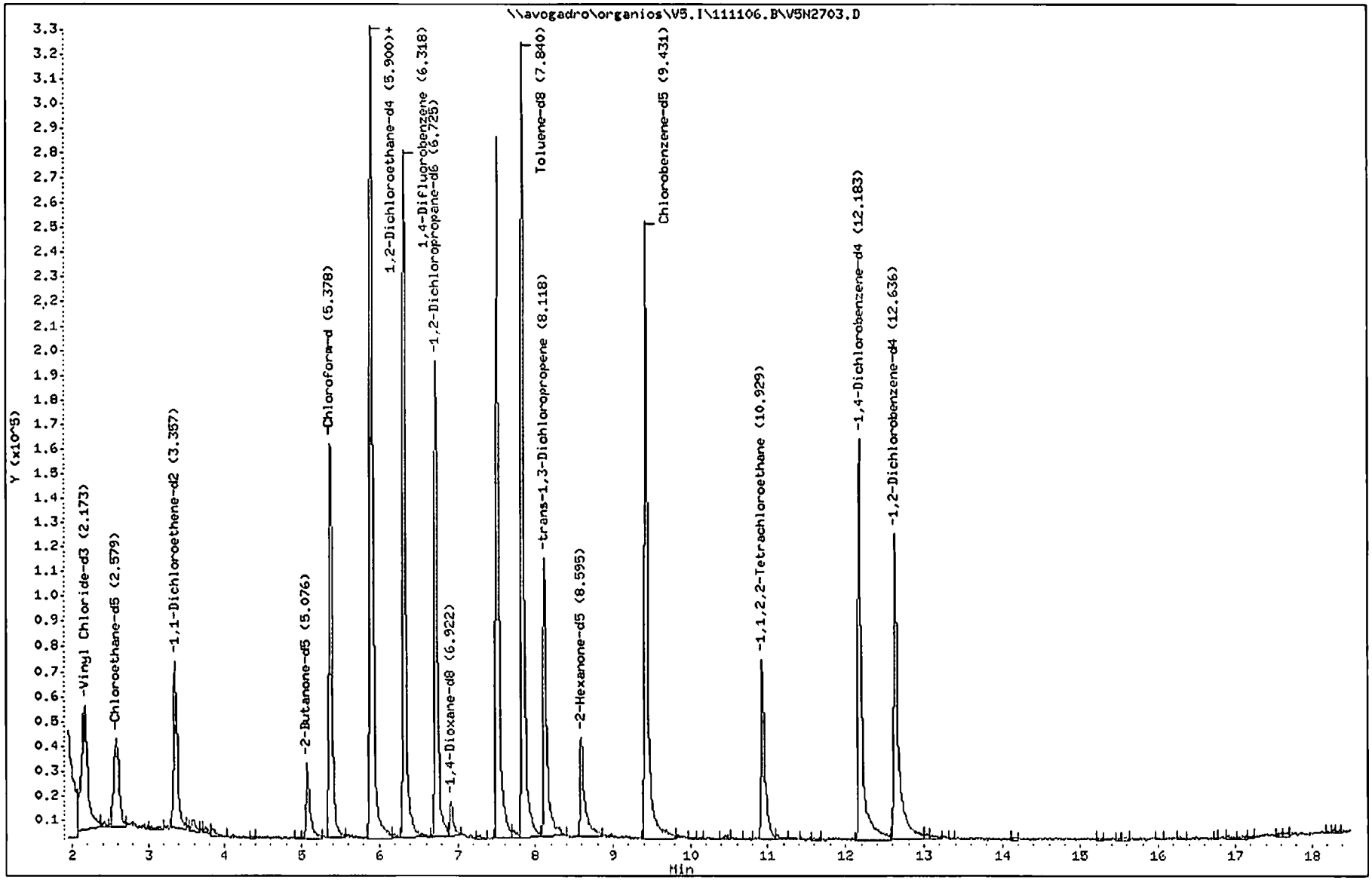
Data File: \\avogadro\organics\V5.I\111106.B\V5N2703.D
Date : 07-NOV-2011 00:11
Client ID: H30Q1
Sample Info: 5C,K2198-02C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q2

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-03C

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2704.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 16 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.0	U
74-87-3	Chloromethane	6.0	U
75-01-4	Vinyl chloride	6.0	U
74-83-9	Bromomethane	6.0	U
75-00-3	Chloroethane	6.0	U
75-69-4	Trichlorofluoromethane	6.0	U
75-35-4	1,1-Dichloroethene	6.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	6.0	U
79-20-9	Methyl acetate	6.0	U
75-09-2	Methylene chloride	6.0	U
156-60-5	trans-1,2-Dichloroethene	6.0	U
1634-04-4	Methyl tert-butyl ether	6.0	U
75-34-3	1,1-Dichloroethane	6.0	U
156-59-2	cis-1,2-Dichloroethene	6.0	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	6.0	U
67-66-3	Chloroform	6.0	U
71-55-6	1,1,1-Trichloroethane	6.0	U
110-82-7	Cyclohexane	6.0	U
56-23-5	Carbon tetrachloride	6.0	U
71-43-2	Benzene	6.0	U
107-06-2	1,2-Dichloroethane	6.0	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q2

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-03C

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2704.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 16 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.0	U
108-87-2	Methylcyclohexane	6.0	U
78-87-5	1,2-Dichloropropane	6.0	U
75-27-4	Bromodichloromethane	6.0	U
10061-01-5	cis-1,3-Dichloropropene	6.0	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	6.0	U
10061-02-6	trans-1,3-Dichloropropene	6.0	U
79-00-5	1,1,2-Trichloroethane	6.0	U
127-18-4	Tetrachloroethene	6.0	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	6.0	U
106-93-4	1,2-Dibromoethane	6.0	U
108-90-7	Chlorobenzene	6.0	U
100-41-4	Ethylbenzene	6.0	U
179601-23-1	m,p-Xylene	6.0	U
95-47-6	o-Xylene	6.0	U
100-42-5	Styrene	6.0	U
75-25-2	Bromoform	6.0	U
98-82-8	Isopropylbenzene	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U
541-73-1	1,3-Dichlorobenzene	6.0	U
106-46-7	1,4-Dichlorobenzene	6.0	U
95-50-1	1,2-Dichlorobenzene	6.0	U
96-12-8	1,2-Dibromo-3-chloropropane	6.0	U
120-82-1	1,2,4-Trichlorobenzene	6.0	U
87-61-6	1,2,3-Trichlorobenzene	6.0	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q2

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-03C

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2704.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 16 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2704.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2704.D
Lab Smp Id: K2198-03C Client Smp ID: H30Q2
Inj Date : 07-NOV-2011 00:38
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-03C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.900	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.168	2.173	(0.343)	130028	40.8482	42
$ 80 Chloroethane-d5	69	2.586	2.603	(0.409)	96038	46.6429	48(Q)
$ 81 1,1-Dichloroethene-d2	65	3.364	3.369	(0.532)	30978	46.9198	48(Q)
$ 82 2-Butanone-d5	46	5.071	5.076	(0.802)	73767	83.0938	85
$ 83 Chloroform-d	84	5.385	5.390	(0.851)	177084	46.4335	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.901	(0.932)	95766	46.5232	47(Q)
$ 84 Benzene-d6	84	5.907	5.912	(0.627)	334975	50.8102	52
* 26 1,4-Difluorobenzene	114	6.325	6.319	(1.000)	334304	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.732	6.725	(0.714)	130981	48.0754	49
$ 94 1,4-Dioxane-d8	96	6.918	6.911	(1.094)	17697	903.258	920
$ 33 Toluene-d8	98	7.847	7.840	(0.832)	284731	46.7851	48
$ 86 trans-1,3-Dichloropropene-d4	79	8.125	8.119	(0.862)	99364	48.4393	49
$ 87 2-Hexanone-d5	63	8.590	8.572	(0.911)	33305	63.5389	65(Q)
* 42 Chlorobenzene-d5	117	9.426	9.431	(1.000)	248975	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.936	10.929	(1.160)	79119	44.3677	45
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.172	(1.000)	81162	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.631	12.625	(1.037)	70811	46.7023	48(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2704.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2704.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2704.D
Lab Smp Id: K2198-03C Client Smp ID: H30Q2
Inj Date : 07-NOV-2011 00:38
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-03C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

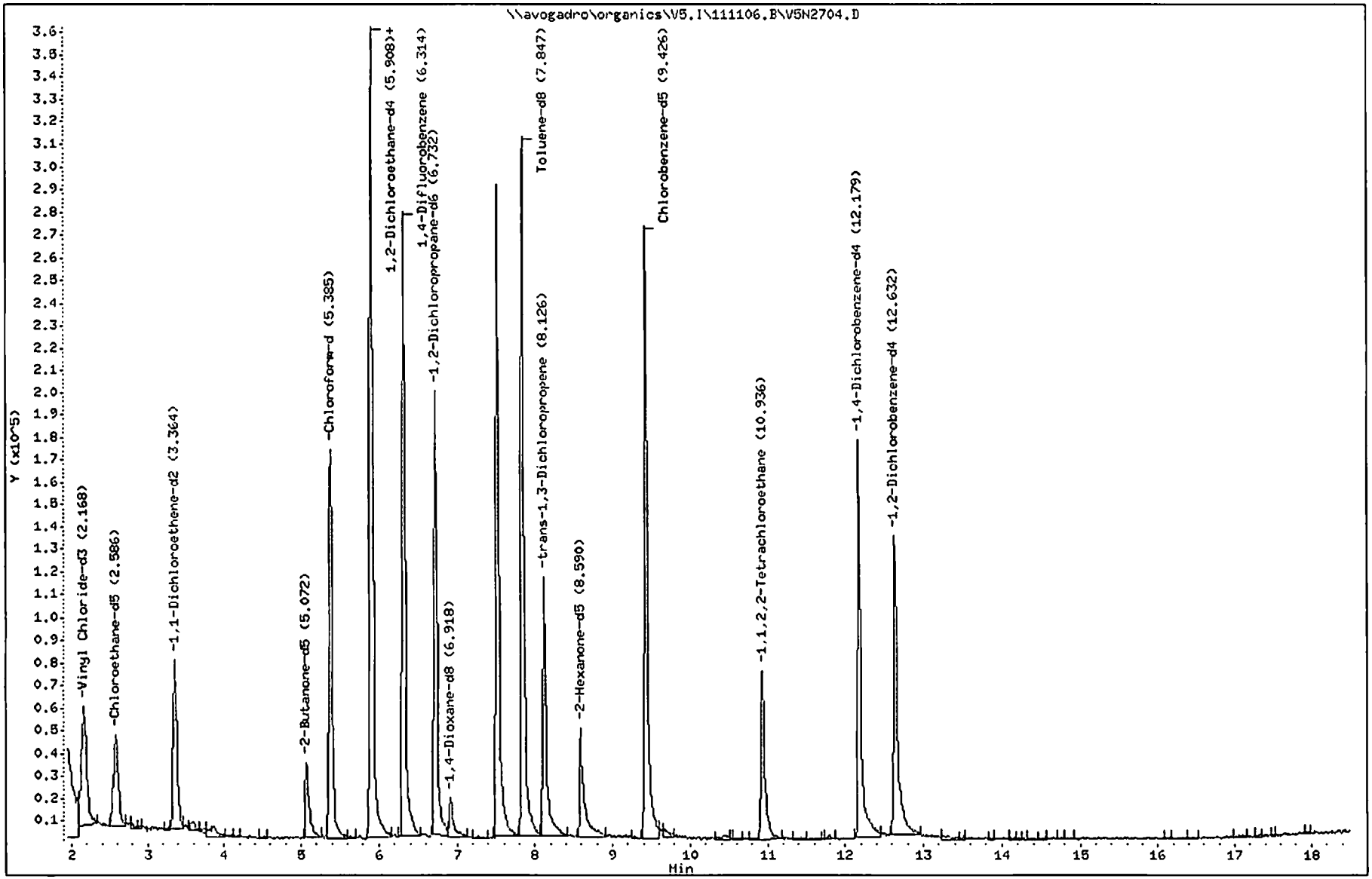
Data File: \\avogadro\organics\V5.I\111106.B\V5N2704.D
Date : 07-NOV-2011 00:38
Client ID: H3OQ2
Sample Info: 5G,K2198-03C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q3

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-04C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2705.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 19 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.9	U
74-87-3	Chloromethane	5.9	U
75-01-4	Vinyl chloride	5.9	U
74-83-9	Bromomethane	5.9	U
75-00-3	Chloroethane	5.9	U
75-69-4	Trichlorofluoromethane	5.9	U
75-35-4	1,1-Dichloroethene	5.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.9	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	5.9	U
79-20-9	Methyl acetate	5.9	U
75-09-2	Methylene chloride	5.9	U
156-60-5	trans-1,2-Dichloroethene	5.9	U
1634-04-4	Methyl tert-butyl ether	5.9	U
75-34-3	1,1-Dichloroethane	5.9	U
156-59-2	cis-1,2-Dichloroethene	5.9	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	5.9	U
67-66-3	Chloroform	5.9	U
71-55-6	1,1,1-Trichloroethane	5.9	U
110-82-7	Cyclohexane	5.9	U
56-23-5	Carbon tetrachloride	5.9	U
71-43-2	Benzene	5.9	U
107-06-2	1,2-Dichloroethane	5.9	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q3

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-04C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2705.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 19 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.9	U
108-87-2	Methylcyclohexane	5.9	U
78-87-5	1,2-Dichloropropane	5.9	U
75-27-4	Bromodichloromethane	5.9	U
10061-01-5	cis-1,3-Dichloropropene	5.9	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	5.9	U
10061-02-6	trans-1,3-Dichloropropene	5.9	U
79-00-5	1,1,2-Trichloroethane	5.9	U
127-18-4	Tetrachloroethene	5.9	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	5.9	U
106-93-4	1,2-Dibromoethane	5.9	U
108-90-7	Chlorobenzene	5.9	U
100-41-4	Ethylbenzene	5.9	U
179601-23-1	m,p-Xylene	5.9	U
95-47-6	o-Xylene	5.9	U
100-42-5	Styrene	5.9	U
75-25-2	Bromoform	5.9	U
98-82-8	Isopropylbenzene	5.9	U
79-34-5	1,1,2,2-Tetrachloroethane	5.9	U
541-73-1	1,3-Dichlorobenzene	5.9	U
106-46-7	1,4-Dichlorobenzene	5.9	U
95-50-1	1,2-Dichlorobenzene	5.9	U
96-12-8	1,2-Dibromo-3-chloropropane	5.9	U
120-82-1	1,2,4-Trichlorobenzene	5.9	U
87-61-6	1,2,3-Trichlorobenzene	5.9	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q3

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-04C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2705.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 19 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2705.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2705.D
Lab Smp Id: K2198-04C Client Smp ID: H30Q3
Inj Date : 07-NOV-2011 01:03
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-04C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.200	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.150	2.173	(0.340)	97224	37.7938	36
$ 80 Chloroethane-d5	69	2.580	2.603	(0.408)	67845	40.7729	39
$ 81 1,1-Dichloroethene-d2	65	3.358	3.369	(0.531)	24138	45.2392	43(Q)
$ 82 2-Butanone-d5	46	5.077	5.076	(0.803)	50791	70.7952	68
$ 83 Chloroform-d	84	5.379	5.390	(0.851)	136896	44.4174	43(Q)
$ 23 1,2-Dichloroethane-d4	65	5.890	5.901	(0.932)	68192	40.9923	39
$ 84 Benzene-d6	84	5.913	5.912	(0.627)	265153	48.3913	47
* 26 1,4-Difluorobenzene	114	6.319	6.319	(1.000)	270166	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.726	6.725	(0.713)	97747	43.1668	42
$ 94 1,4-Dioxane-d8	96	6.923	6.911	(1.096)	9721	613.951	590
$ 33 Toluene-d8	98	7.841	7.840	(0.831)	243359	48.1119	46
$ 86 trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	72335	42.4277	41
$ 87 2-Hexanone-d5	63	8.607	8.572	(0.913)	20086	46.1059	44(Q)
* 42 Chlorobenzene-d5	117	9.432	9.431	(1.000)	206930	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.930	10.929	(1.159)	51146	34.5088	33
* 78 1,4-Dichlorobenzene-d4	152	12.184	12.172	(1.000)	72601	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.637	12.625	(1.037)	56054	41.3290	40(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2705.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2705.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2705.D
Lab Smp Id: K2198-04C Client Smp ID: H30Q3
Inj Date : 07-NOV-2011 01:03
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-04C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

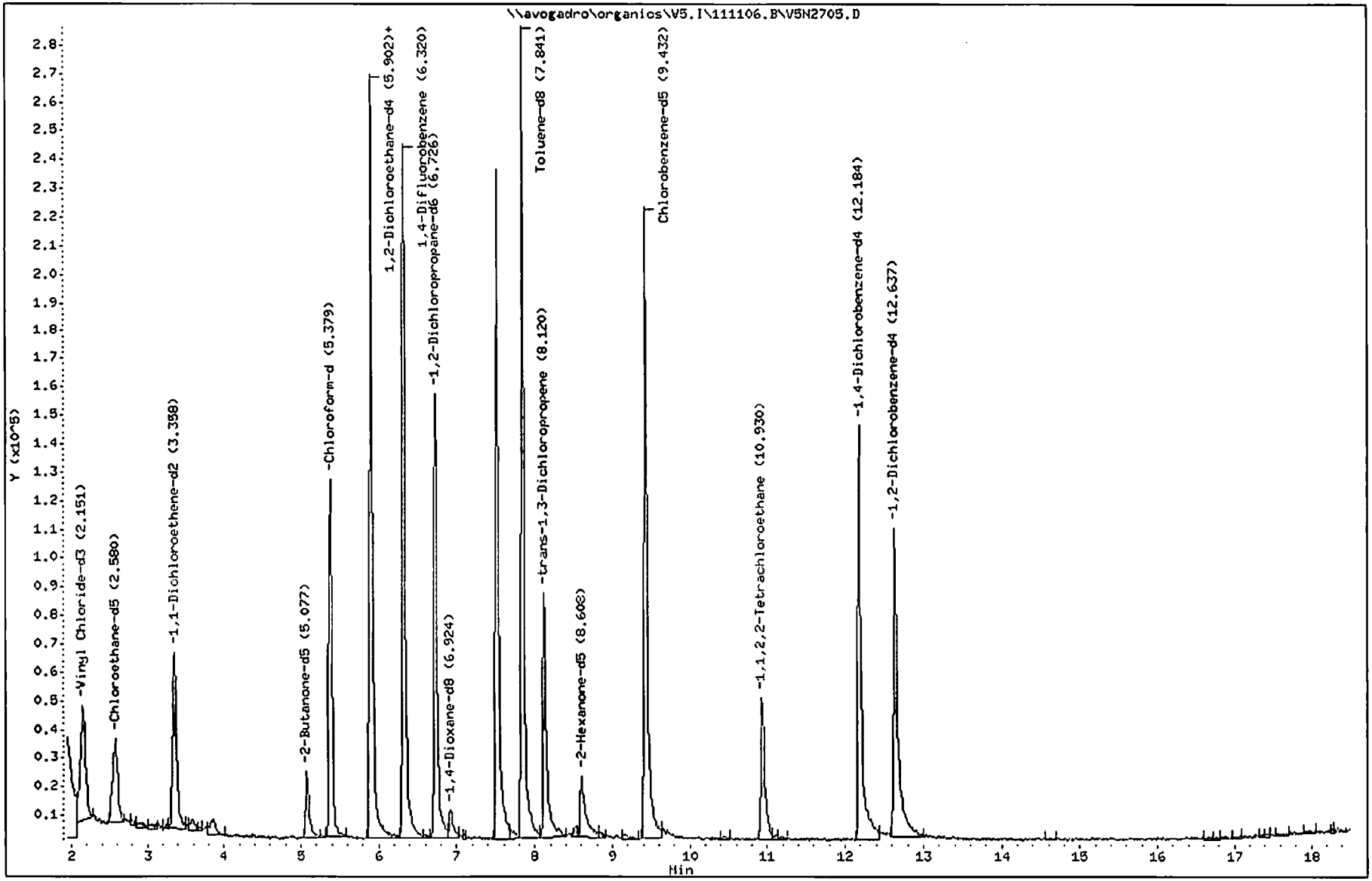
Data File: \\avogadro\organics\V5.I\111106.B\V5N2705.D
Date : 07-NOV-2011 01:03
Client ID: H3003
Sample Info: 5G,K2198-04C,,62569

Instrument: V5.I

Operator: SRC: LIHS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-05C

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5N2706.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 16 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.8	U
74-87-3	Chloromethane	5.8	U
75-01-4	Vinyl chloride	5.8	U
74-83-9	Bromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
75-69-4	Trichlorofluoromethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.8	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	5.8	U
79-20-9	Methyl acetate	5.8	U
75-09-2	Methylene chloride	5.8	U
156-60-5	trans-1,2-Dichloroethene	5.8	U
1634-04-4	Methyl tert-butyl ether	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	5.8	U
67-66-3	Chloroform	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
110-82-7	Cyclohexane	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
71-43-2	Benzene	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-05C

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5N2706.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 16 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.8	U
108-87-2	Methylcyclohexane	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
75-27-4	Bromodichloromethane	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	5.8	U
106-93-4	1,2-Dibromoethane	5.8	U
108-90-7	Chlorobenzene	5.8	U
100-41-4	Ethylbenzene	5.8	U
179601-23-1	m,p-Xylene	5.8	U
95-47-6	o-Xylene	5.8	U
100-42-5	Styrene	5.8	U
75-25-2	Bromoform	5.8	U
98-82-8	Isopropylbenzene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
541-73-1	1,3-Dichlorobenzene	5.8	U
106-46-7	1,4-Dichlorobenzene	5.8	U
95-50-1	1,2-Dichlorobenzene	5.8	U
96-12-8	1,2-Dibromo-3-chloropropane	5.8	U
120-82-1	1,2,4-Trichlorobenzene	5.8	U
87-61-6	1,2,3-Trichlorobenzene	5.8	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-05C

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V5N2706.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 16 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2706.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2706.D
Lab Smp Id: K2198-05C Client Smp ID: H30Q4
Inj Date : 07-NOV-2011 01:30
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-05C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.100	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.162	2.173	(0.342)	104370	38.2549	38
$ 80 Chloroethane-d5	69	2.591	2.603	(0.410)	74070	41.9720	41(Q)
$ 81 1,1-Dichloroethene-d2	65	3.358	3.369	(0.531)	25627	45.2871	44(Q)
$ 82 2-Butanone-d5	46	5.077	5.076	(0.803)	62669	82.3633	81
$ 83 Chloroform-d	84	5.390	5.390	(0.853)	146125	44.7045	44(Q)
$ 23 1,2-Dichloroethane-d4	65	5.901	5.901	(0.934)	75119	42.5778	42(Q)
$ 84 Benzene-d6	84	5.913	5.912	(0.627)	276715	46.7866	46
* 26 1,4-Difluorobenzene	114	6.319	6.319	(1.000)	286528	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.726	6.725	(0.713)	105392	43.1193	42
$ 94 1,4-Dioxane-d8	96	6.923	6.911	(1.096)	12603	750.517	740
$ 33 Toluene-d8	98	7.841	7.840	(0.831)	250867	45.9480	45
$ 86 trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	86187	46.8340	46
$ 87 2-Hexanone-d5	63	8.584	8.572	(0.910)	34347	73.0415	72(Q)
* 42 Chlorobenzene-d5	117	9.432	9.431	(1.000)	223360	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.930	10.929	(1.159)	67922	42.4568	42
* 78 1,4-Dichlorobenzene-d4	152	12.184	12.172	(1.000)	84345	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.637	12.625	(1.037)	70132	44.5089	44(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2706.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2706.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2706.D
Lab Smp Id: K2198-05C Client Smp ID: H30Q4
Inj Date : 07-NOV-2011 01:30
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-05C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

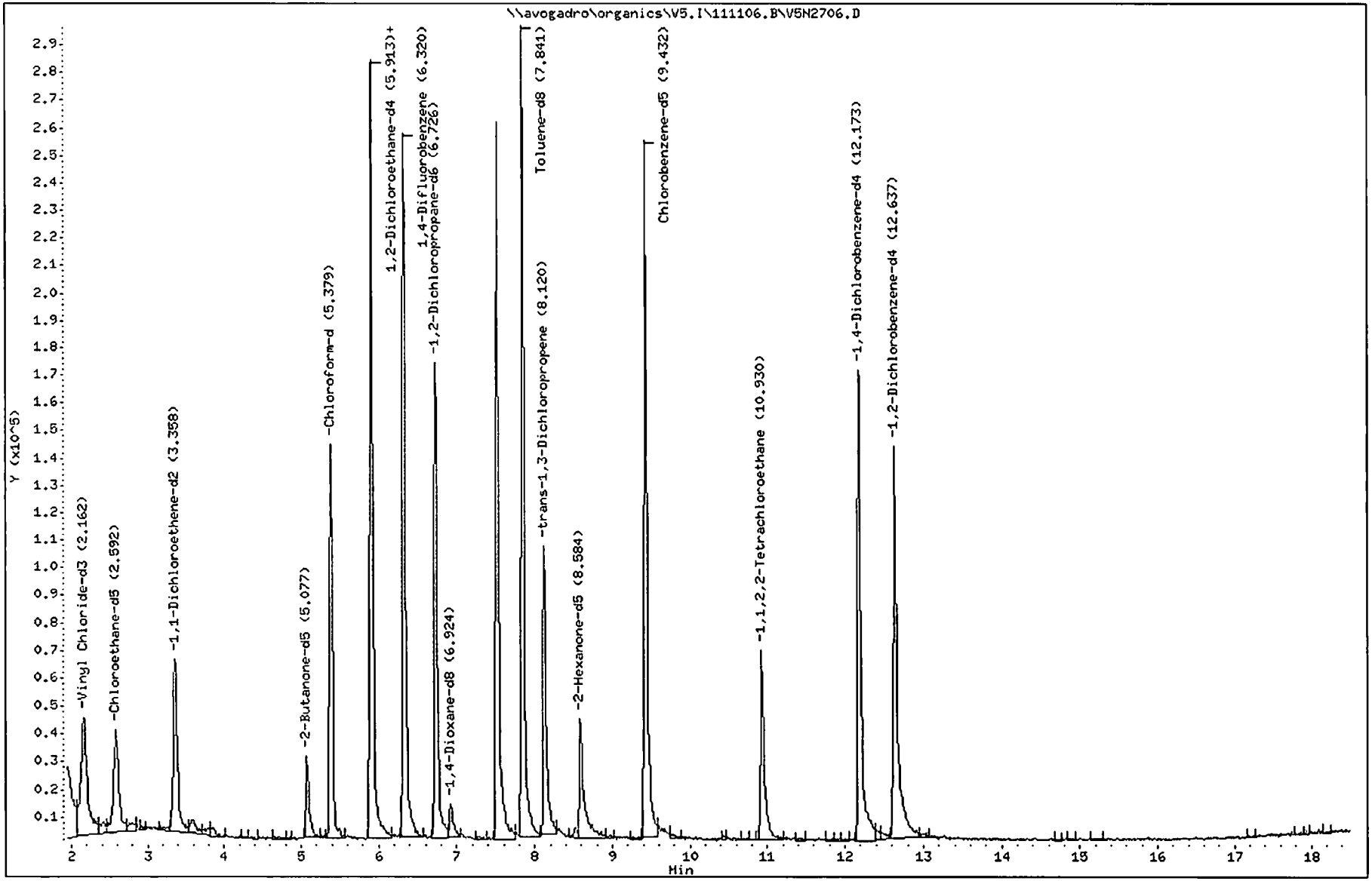
Data File: \\avogadro\organics\V5.I\111106.B\V5N2706.D
Date : 07-NOV-2011 01:30
Client ID: H30Q4
Sample Info: 5C,K2198-05C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q6

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-06C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2707.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 48 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	9.6	U
74-87-3	Chloromethane	9.6	U
75-01-4	Vinyl chloride	9.6	U
74-83-9	Bromomethane	9.6	U
75-00-3	Chloroethane	9.6	U
75-69-4	Trichlorofluoromethane	9.6	U
75-35-4	1,1-Dichloroethene	9.6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	9.6	U
67-64-1	Acetone	19	U
75-15-0	Carbon disulfide	9.6	U
79-20-9	Methyl acetate	9.6	U
75-09-2	Methylene chloride	9.6	U
156-60-5	trans-1,2-Dichloroethene	9.6	U
1634-04-4	Methyl tert-butyl ether	9.6	U
75-34-3	1,1-Dichloroethane	9.6	U
156-59-2	cis-1,2-Dichloroethene	9.6	U
78-93-3	2-Butanone	19	U
74-97-5	Bromochloromethane	9.6	U
67-66-3	Chloroform	9.6	U
71-55-6	1,1,1-Trichloroethane	9.6	U
110-82-7	Cyclohexane	9.6	U
56-23-5	Carbon tetrachloride	9.6	U
71-43-2	Benzene	9.6	U
107-06-2	1,2-Dichloroethane	9.6	U
123-91-1	1,4-Dioxane	190	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q6

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-06C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2707.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 48 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	9.6	U
108-87-2	Methylcyclohexane	9.6	U
78-87-5	1,2-Dichloropropane	9.6	U
75-27-4	Bromodichloromethane	9.6	U
10061-01-5	cis-1,3-Dichloropropene	9.6	U
108-10-1	4-Methyl-2-pentanone	19	U
108-88-3	Toluene	9.6	U
10061-02-6	trans-1,3-Dichloropropene	9.6	U
79-00-5	1,1,2-Trichloroethane	9.6	U
127-18-4	Tetrachloroethene	9.6	U
591-78-6	2-Hexanone	19	U
124-48-1	Dibromochloromethane	9.6	U
106-93-4	1,2-Dibromoethane	9.6	U
108-90-7	Chlorobenzene	9.6	U
100-41-4	Ethylbenzene	9.6	U
179601-23-1	m,p-Xylene	9.6	U
95-47-6	o-Xylene	9.6	U
100-42-5	Styrene	9.6	U
75-25-2	Bromoform	9.6	U
98-82-8	Isopropylbenzene	9.6	U
79-34-5	1,1,2,2-Tetrachloroethane	9.6	U
541-73-1	1,3-Dichlorobenzene	9.6	U
106-46-7	1,4-Dichlorobenzene	9.6	U
95-50-1	1,2-Dichlorobenzene	9.6	U
96-12-8	1,2-Dibromo-3-chloropropane	9.6	U
120-82-1	1,2,4-Trichlorobenzene	9.6	U
87-61-6	1,2,3-Trichlorobenzene	9.6	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H30Q6

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-06C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2707.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 48 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2707.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2707.D
Lab Smp Id: K2198-06C Client Smp ID: H30Q6
Inj Date : 07-NOV-2011 01:58
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-06C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.162	2.173	(0.342)	100176	40.7039	41
$ 80 Chloroethane-d5	69	2.592	2.603	(0.410)	68731	43.1749	43(Q)
$ 81 1,1-Dichloroethene-d2	65	3.358	3.369	(0.531)	23277	45.6001	46(Q)
$ 82 2-Butanone-d5	46	5.077	5.076	(0.803)	62758	91.4349	91
$ 83 Chloroform-d	84	5.390	5.390	(0.853)	137071	46.4873	46(Q)
$ 23 1,2-Dichloroethane-d4	65	5.901	5.901	(0.934)	73897	46.4325	46
$ 84 Benzene-d6	84	5.913	5.912	(0.627)	260926	46.1400	46
* 26 1,4-Difluorobenzene	114	6.319	6.319	(1.000)	258467	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.726	6.725	(0.713)	97970	41.9207	42
$ 94 1,4-Dioxane-d8	96	6.923	6.911	(1.096)	13463	888.772	890
$ 33 Toluene-d8	98	7.841	7.840	(0.831)	235896	45.1871	45
$ 86 trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	81873	46.5298	47
$ 87 2-Hexanone-d5	63	8.584	8.572	(0.910)	33404	74.2935	74(Q)
* 42 Chlorobenzene-d5	117	9.432	9.431	(1.000)	213567	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.930	10.929	(1.159)	68245	44.6147	45
* 78 1,4-Dichlorobenzene-d4	152	12.184	12.172	(1.000)	77980	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.637	12.625	(1.037)	66124	45.3906	45(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2707.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2707.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2707.D
Lab Smp Id: K2198-06C Client Smp ID: H30Q6
Inj Date : 07-NOV-2011 01:58
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-06C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

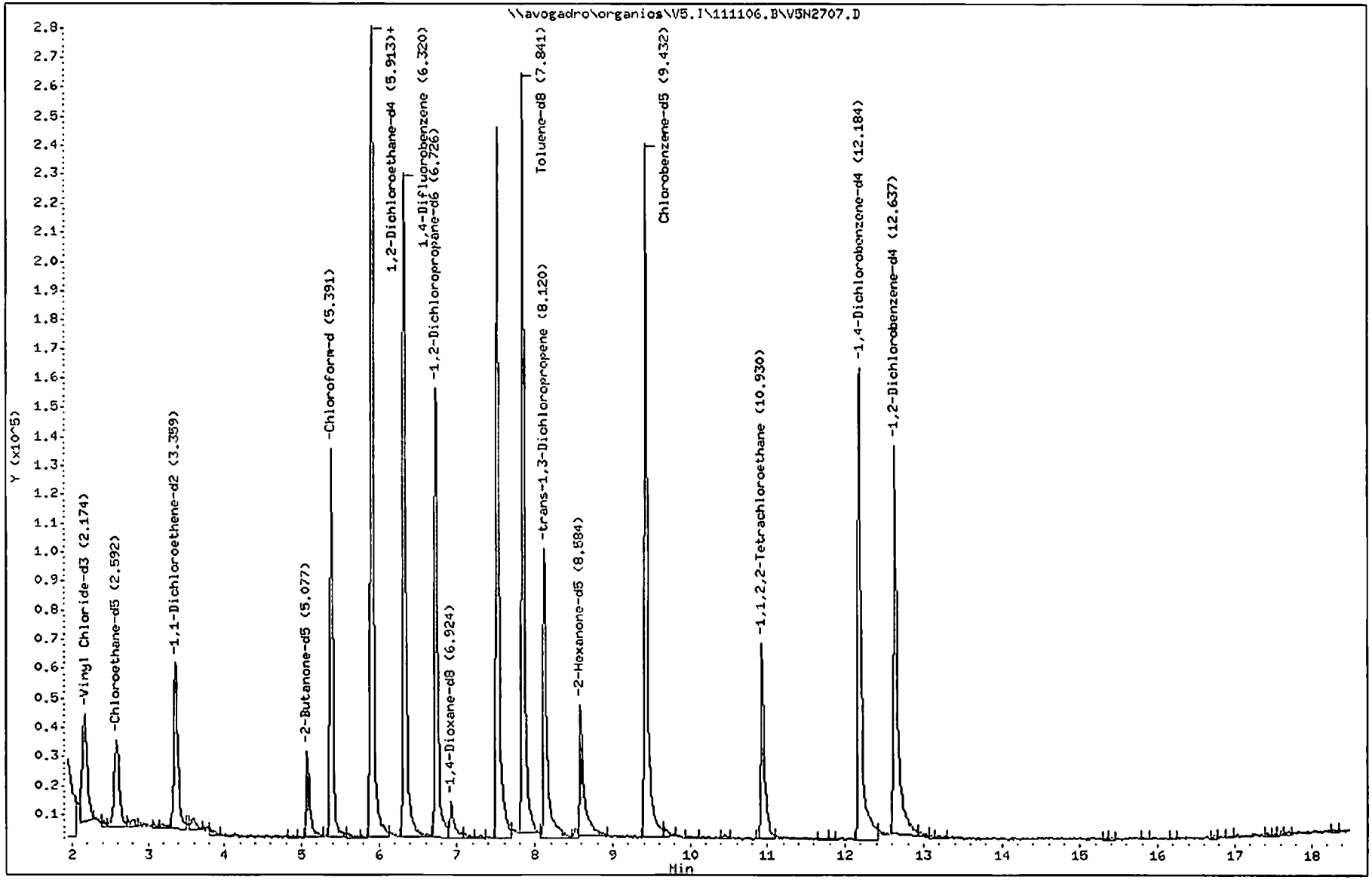
Data File: \\avogadro\organics\V5.I\111106.B\V5N2707.D
Date : 07-NOV-2011 01:58
Client ID: H30Q6
Sample Info: 5C,K2198-06C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q8

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-07C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2708.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 70 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	17	U
74-87-3	Chloromethane	17	U
75-01-4	Vinyl chloride	17	U
74-83-9	Bromomethane	17	U
75-00-3	Chloroethane	17	U
75-69-4	Trichlorofluoromethane	17	U
75-35-4	1,1-Dichloroethene	17	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	17	U
67-64-1	Acetone	33	U
75-15-0	Carbon disulfide	17	U
79-20-9	Methyl acetate	17	U
75-09-2	Methylene chloride	17	U
156-60-5	trans-1,2-Dichloroethene	17	U
1634-04-4	Methyl tert-butyl ether	17	U
75-34-3	1,1-Dichloroethane	17	U
156-59-2	cis-1,2-Dichloroethene	17	U
78-93-3	2-Butanone	33	U
74-97-5	Bromochloromethane	17	U
67-66-3	Chloroform	17	U
71-55-6	1,1,1-Trichloroethane	17	U
110-82-7	Cyclohexane	17	U
56-23-5	Carbon tetrachloride	17	U
71-43-2	Benzene	17	U
107-06-2	1,2-Dichloroethane	17	U
123-91-1	1,4-Dioxane	330	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q8

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-07C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2708.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 70 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	17	U
108-87-2	Methylcyclohexane	17	U
78-87-5	1,2-Dichloropropane	17	U
75-27-4	Bromodichloromethane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
108-10-1	4-Methyl-2-pentanone	33	U
108-88-3	Toluene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
79-00-5	1,1,2-Trichloroethane	17	U
127-18-4	Tetrachloroethene	17	U
591-78-6	2-Hexanone	33	U
124-48-1	Dibromochloromethane	17	U
106-93-4	1,2-Dibromoethane	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
179601-23-1	m,p-Xylene	17	U
95-47-6	o-Xylene	17	U
100-42-5	Styrene	17	U
75-25-2	Bromoform	17	U
98-82-8	Isopropylbenzene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
541-73-1	1,3-Dichlorobenzene	17	U
106-46-7	1,4-Dichlorobenzene	17	U
95-50-1	1,2-Dichlorobenzene	17	U
96-12-8	1,2-Dibromo-3-chloropropane	17	U
120-82-1	1,2,4-Trichlorobenzene	17	U
87-61-6	1,2,3-Trichlorobenzene	17	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q8

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-07C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2708.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 70 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E96679[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2708.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2708.D
Lab Smp Id: K2198-07C Client Smp ID: H30Q8
Inj Date : 07-NOV-2011 02:25
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-07C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.156	2.173	(0.341)	95939	37.6295	38
$ 80 Chloroethane-d5	69	2.586	2.603	(0.409)	68634	41.6178	42(Q)
$ 81 1,1-Dichloroethene-d2	65	3.352	3.369	(0.530)	23027	43.5449	44(Q)
$ 82 2-Butanone-d5	46	5.071	5.076	(0.802)	63336	89.0747	89
$ 83 Chloroform-d	84	5.385	5.390	(0.851)	134232	43.9446	44(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.901	(0.932)	73920	44.8351	45
$ 84 Benzene-d6	84	5.907	5.912	(0.626)	260411	49.8921	50
* 26 1,4-Difluorobenzene	114	6.325	6.319	(1.000)	267759	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.732	6.725	(0.713)	95906	44.4625	44
$ 94 1,4-Dioxane-d8	96	6.918	6.911	(1.094)	13657	870.292	870
$ 33 Toluene-d8	98	7.847	7.840	(0.831)	230374	47.8124	48
$ 86 trans-1,3-Dichloropropene-d4	79	8.125	8.119	(0.861)	86288	53.1316	53
$ 87 2-Hexanone-d5	63	8.590	8.572	(0.910)	30956	74.5949	75(Q)
* 42 Chlorobenzene-d5	117	9.438	9.431	(1.000)	197116	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.936	10.929	(1.159)	67377	47.7234	48
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.172	(1.000)	79374	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.643	12.625	(1.038)	67340	45.4135	45(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2708.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2708.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2708.D
Lab Smp Id: K2198-07C Client Smp ID: H30Q8
Inj Date : 07-NOV-2011 02:25
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-07C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

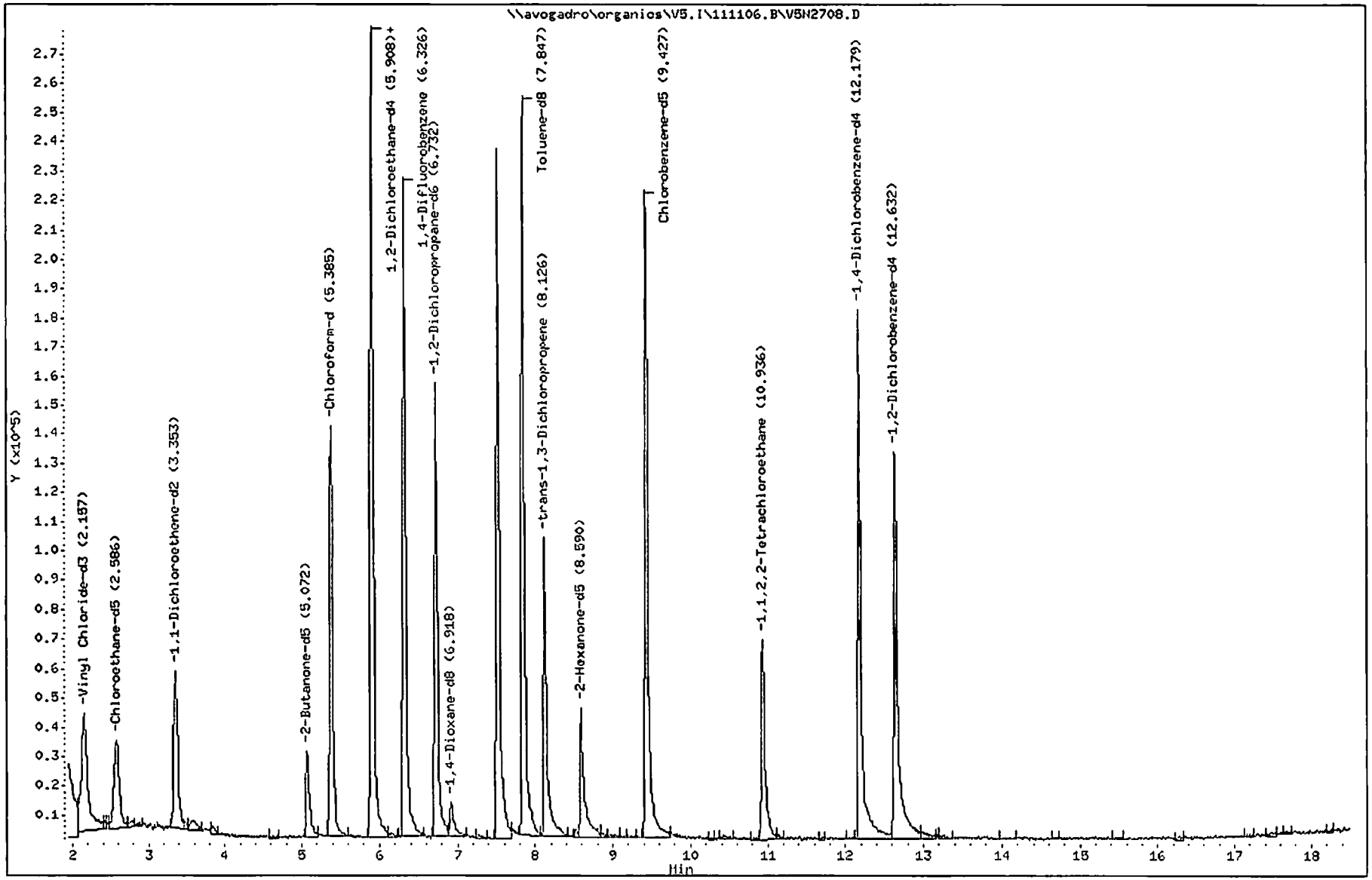
Data File: \\avogadro\organics\V5.I\111106.B\V5N2708.D
Date : 07-NOV-2011 02:28
Client ID: H3OQ8
Sample Info: 5C,K2198-07C,,62569

Instrument: V5.i

Operator: SRC: LIHS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q9

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-08C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2709.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 62 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	13	U
74-87-3	Chloromethane	13	U
75-01-4	Vinyl chloride	13	U
74-83-9	Bromomethane	13	U
75-00-3	Chloroethane	13	U
75-69-4	Trichlorofluoromethane	13	U
75-35-4	1,1-Dichloroethene	13	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	13	U
67-64-1	Acetone	100	
75-15-0	Carbon disulfide	13	U
79-20-9	Methyl acetate	13	U
75-09-2	Methylene chloride	13	U
156-60-5	trans-1,2-Dichloroethene	13	U
1634-04-4	Methyl tert-butyl ether	13	U
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	13	U
78-93-3	2-Butanone	25	U
74-97-5	Bromochloromethane	13	U
67-66-3	Chloroform	13	U
71-55-6	1,1,1-Trichloroethane	13	U
110-82-7	Cyclohexane	13	U
56-23-5	Carbon tetrachloride	13	U
71-43-2	Benzene	13	U
107-06-2	1,2-Dichloroethane	13	U
123-91-1	1,4-Dioxane	250	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q9

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-08C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2709.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 62 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	13	U
108-87-2	Methylcyclohexane	13	U
78-87-5	1,2-Dichloropropane	13	U
75-27-4	Bromodichloromethane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
79-00-5	1,1,2-Trichloroethane	13	U
127-18-4	Tetrachloroethene	13	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	13	U
106-93-4	1,2-Dibromoethane	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
179601-23-1	m,p-Xylene	13	U
95-47-6	o-Xylene	13	U
100-42-5	Styrene	13	U
75-25-2	Bromoform	13	U
98-82-8	Isopropylbenzene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
541-73-1	1,3-Dichlorobenzene	13	U
106-46-7	1,4-Dichlorobenzene	13	U
95-50-1	1,2-Dichlorobenzene	13	U
96-12-8	1,2-Dibromo-3-chloropropane	13	U
120-82-1	1,2,4-Trichlorobenzene	13	U
87-61-6	1,2,3-Trichlorobenzene	13	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q9

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-08C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2709.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 62 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	7785-70-8	1R-.alpha.-Pinene	10.570	83	NJ
02	79-92-5	Camphene	10.906	140	NJ
03		Unknown-01	11.301	15	J
04	5256-65-5	Cyclohexene, 3-methyl-6-(1-m	11.382	150	NJ
05	13466-78-9	3-Carene	11.766	530	NJ
06		Unknown-02	12.068	58	J
07	527-84-4	Benzene, 1-methyl-2-(1-methy	12.126	1400	NJ
08	7787-20-4	Bicyclo[2.2.1]heptan-2-one,	13.542	14	NJ
09	464-48-2	Bicyclo[2.2.1]heptan-2-one,	14.495	56	NJ
10	475-20-7	1,4-Methanoazulene, decahydr	17.224	14	NJ
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2709.D
Lab Smp Id: K2198-08C Client Smp ID: H30Q9
Inj Date : 07-NOV-2011 02:56
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-08C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 41
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.200	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.173	2.173	(0.344)	94091	32.3558	31(R)
$ 80 Chloroethane-d5	69	2.591	2.603	(0.410)	85443	45.4242	44
$ 81 1,1-Dichloroethene-d2	65	3.357	3.369	(0.531)	25042	41.5183	40(Q)
9 Acetone	43	3.450	3.450	(0.546)	22696	40.7895	39
$ 82 2-Butanone-d5	46	5.076	5.076	(0.803)	87929	108.419	100
$ 83 Chloroform-d	84	5.378	5.390	(0.851)	169985	48.7900	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.889	5.901	(0.932)	88730	47.1843	45(Q)
$ 84 Benzene-d6	84	5.912	5.912	(0.627)	315080	55.4795	53
* 26 1,4-Difluorobenzene	114	6.319	6.319	(1.000)	305403	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.725	6.725	(0.713)	129872	55.3354	53
$ 94 1,4-Dioxane-d8	96	6.923	6.911	(1.096)	17008	950.241	910
$ 33 Toluene-d8	98	7.840	7.840	(0.831)	250818	47.8415	46
$ 66 trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	77529	43.8739	42
$ 87 2-Hexanone-d5	63	8.583	8.572	(0.910)	44505	98.5627	95(Q)
* 42 Chlorobenzene-d5	117	9.431	9.431	(1.000)	214478	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.929	10.929	(1.159)	73099	47.5850	46
* 78 1,4-Dichlorobenzene-d4	152	12.172	12.172	(1.000)	67636	50.0000	(Q)
$ 90 1,2-Dichlorobenzene-d4	152	12.636	12.625	(1.038)	61170	48.4118	47(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2709.D
Lab Smp Id: K2198-08C Client Smp ID: H30Q9
Inj Date : 07-NOV-2011 02:56
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-08C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 41
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.200	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 42 Chlorobenzene-d5	9.431	635016	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
1R-.alpha.-Pinene					CAS #: 7785-70-8		
10.570	412366	32.4689405	31	96	NIST2002.L	15163	42
Camphene					CAS #: 79-92-5		
10.906	697437	54.9148365	53	98	NIST2002.L	15135	42
Unknown					CAS #:		
11.301	74710	5.88252940	5.7	0		0	42
Cyclohexene, 3-methyl-6-(1-methylethyl)-					CAS #: 5256-65-5		
11.382	753963	59.3656557	57	96	NIST2002.L	16375	42
3-Carene					CAS #: 13466-78-9		
11.766	2657561	209.251380	200	97	NIST2002.L	15125	42

Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D
Report Date: 09-Nov-2011 07:59

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
12.068	288063	22.6815685	22	0		0	42
Benzene, 1-methyl-2-(1-methylethyl)-				CAS #: 527-84-4			
12.126	6968981	548.724452	530	96	NIST2002.L	14395	42
Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet				CAS #: 7787-20-4			
13.542	71724	5.64742374	5.4	93	NIST2002.L	24201	42
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet				CAS #: 464-48-2			
14.495	280264	22.0674795	21	98	NIST2002.L	24208	42
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
17.224	69120	5.44236064	5.2	99	NIST2002.L	58865	42

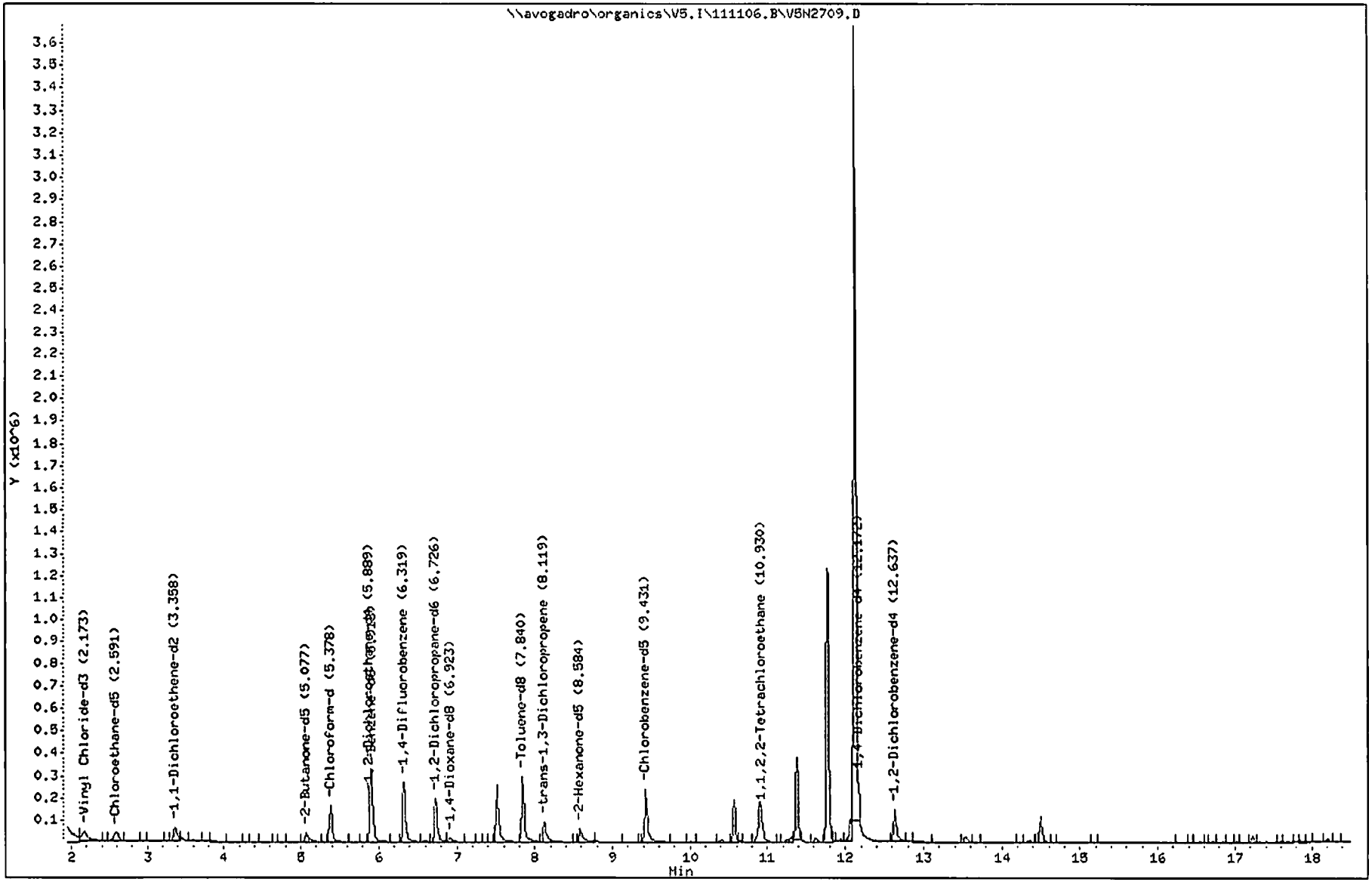
Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D
Date : 07-NOV-2011 02:56
Client ID: H3OQ9
Sample Info: 5C,K2198-08C,,62569

Instrument: V5.I

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

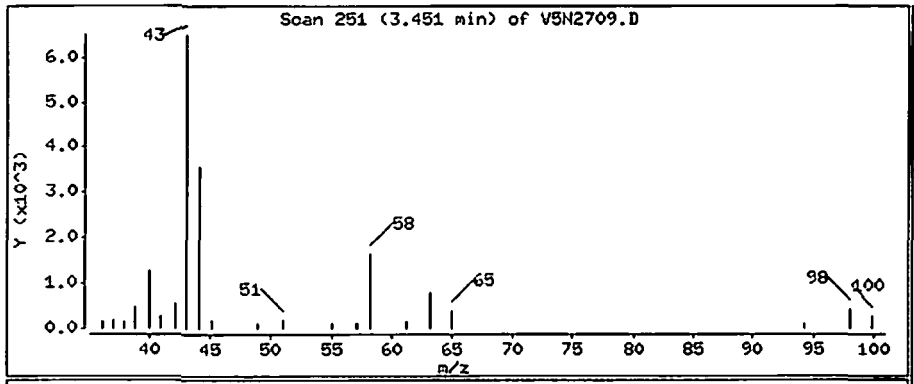
Client ID: H30Q9 Instrument: V5.i

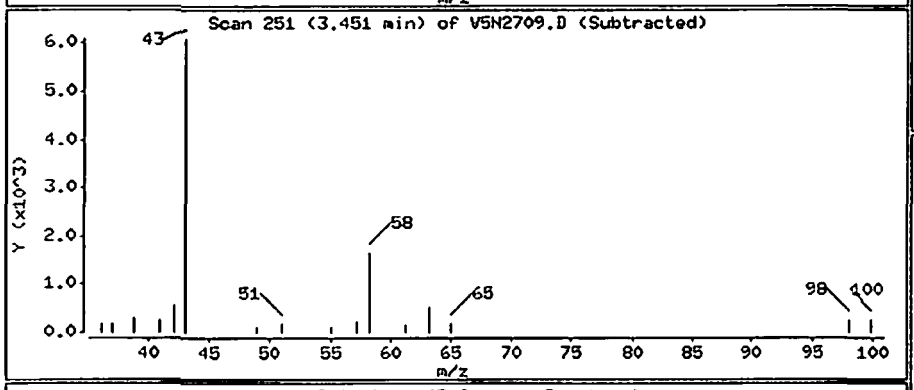
Sample Info: 5C,K2198-08C,,62569

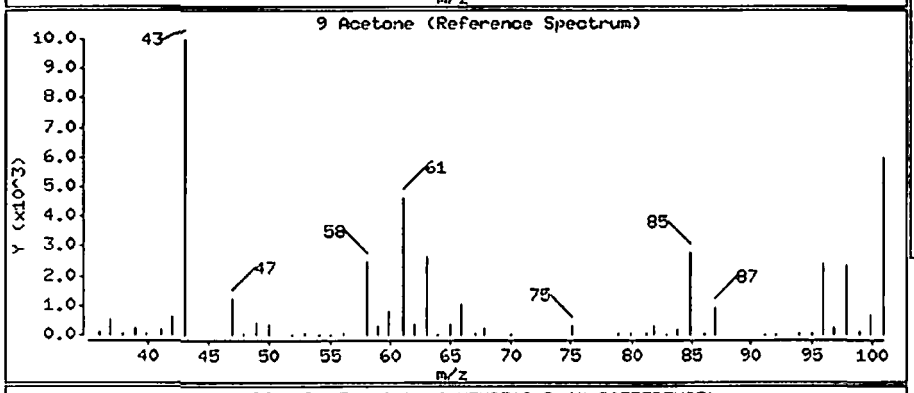
Operator: SRC: LIHS

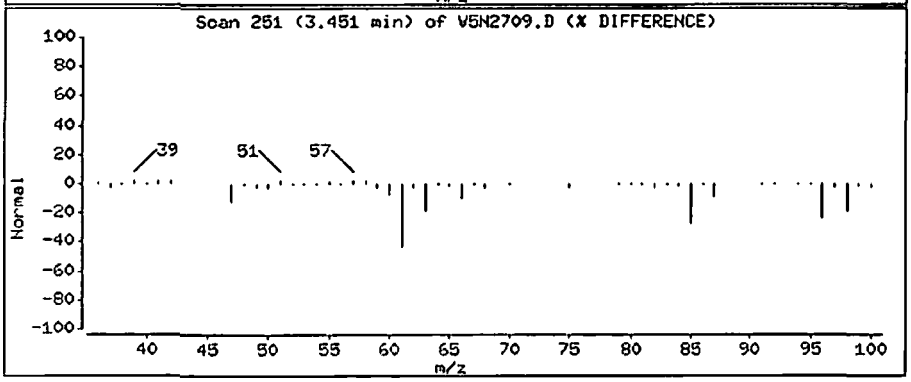
Column phase: DB-624 Column diameter: 0.25

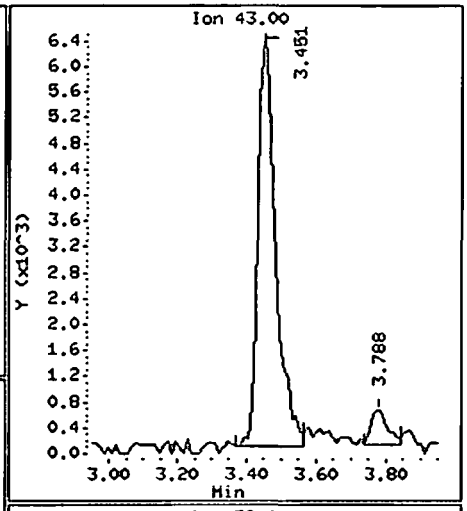
9 Acetone Concentration: 39 ug/Kg

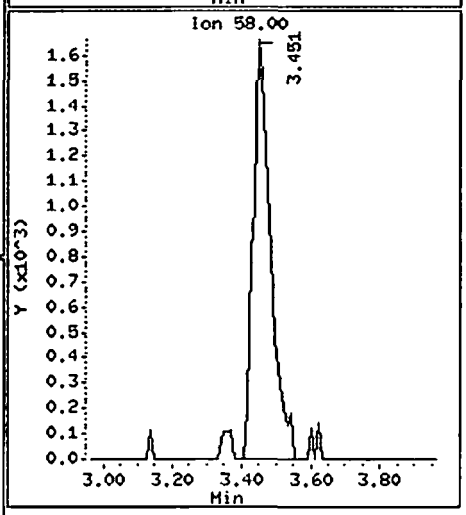












Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

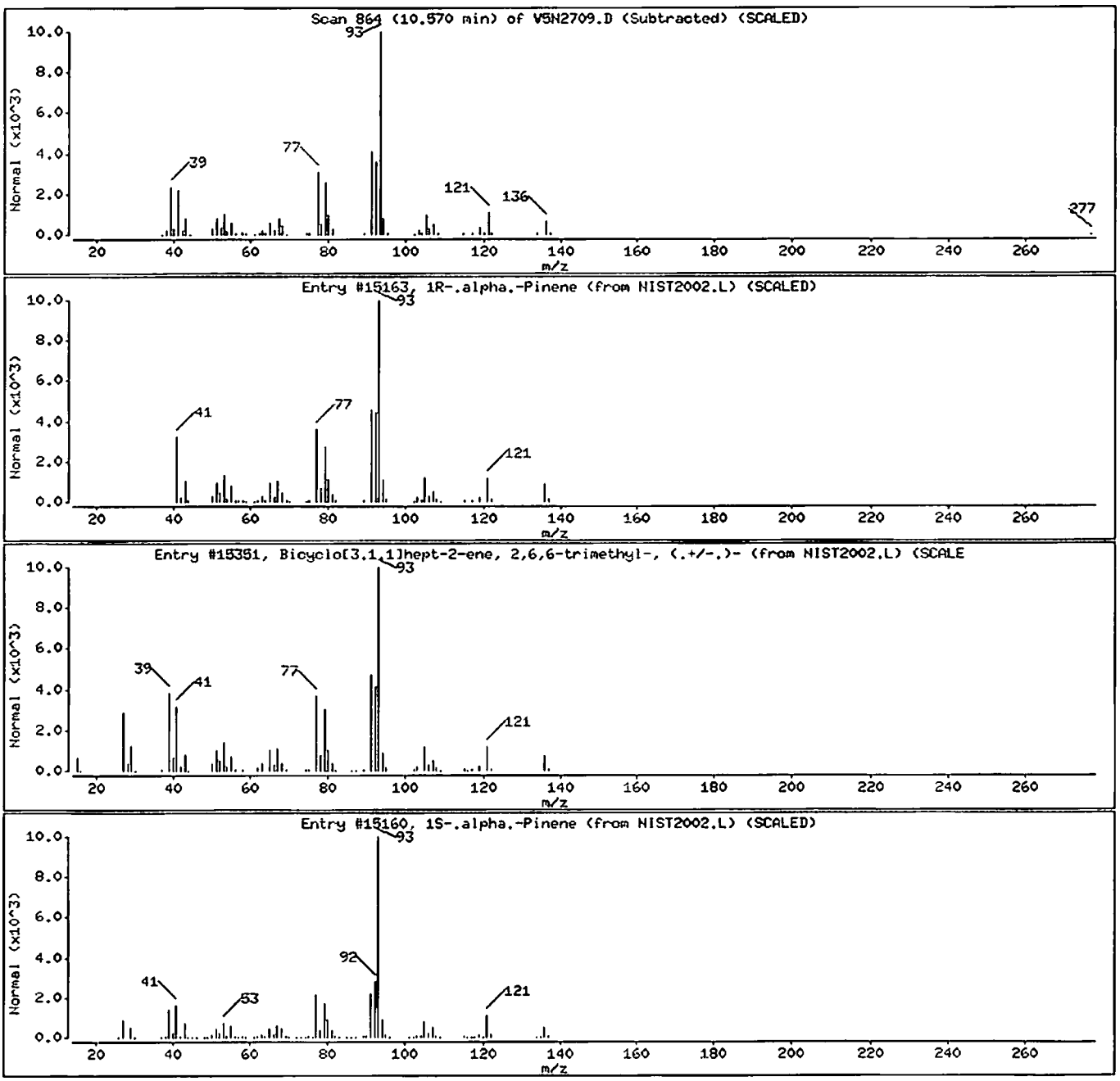
Client ID: H30Q9 Instrument: V5.i

Sample Info: 5G,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1R-.alpha.-Pinene	7785-70-8	NIST2002.L	15163	96	C10H16	136
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethy	2437-95-8	NIST2002.L	15351	95	C10H16	136
1S-.alpha.-Pinene	7785-26-4	NIST2002.L	15160	91	C10H16	136



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

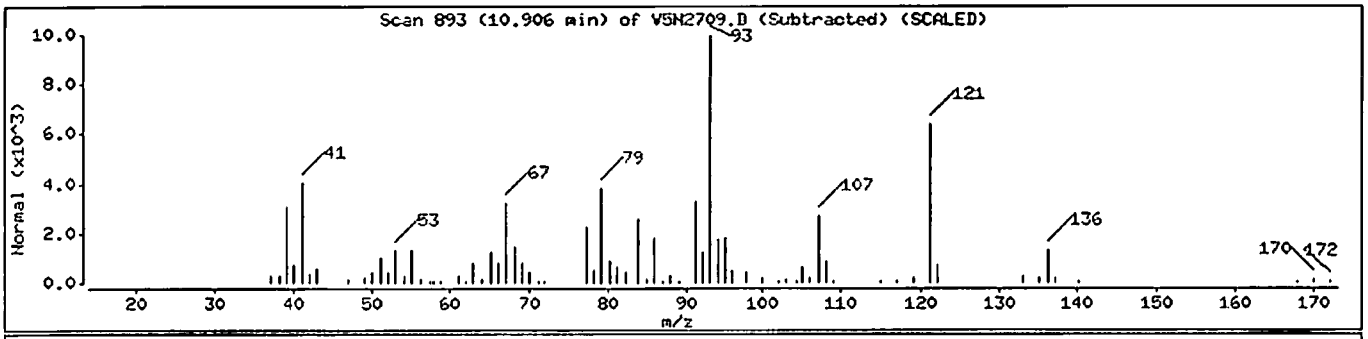
Client ID: H3009 Instrument: V5.i

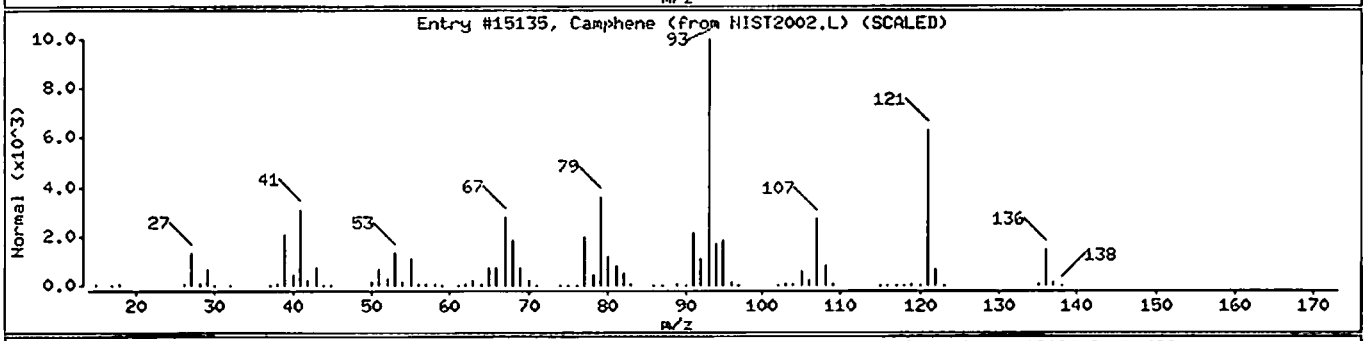
Sample Info: SG,K2198-08C,,62569

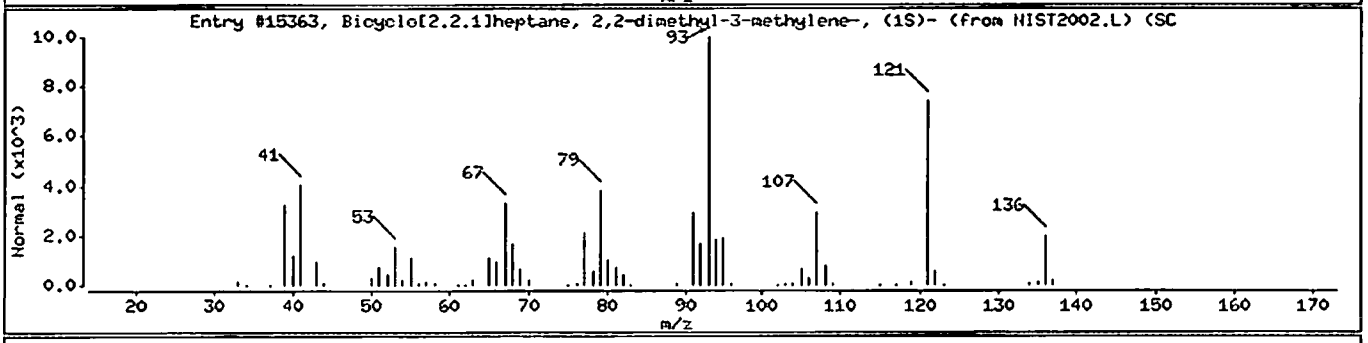
Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Camphene	79-92-5	NIST2002.L	15135	98	C10H16	136
Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-me	5794-04-7	NIST2002.L	15363	95	C10H16	136







Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

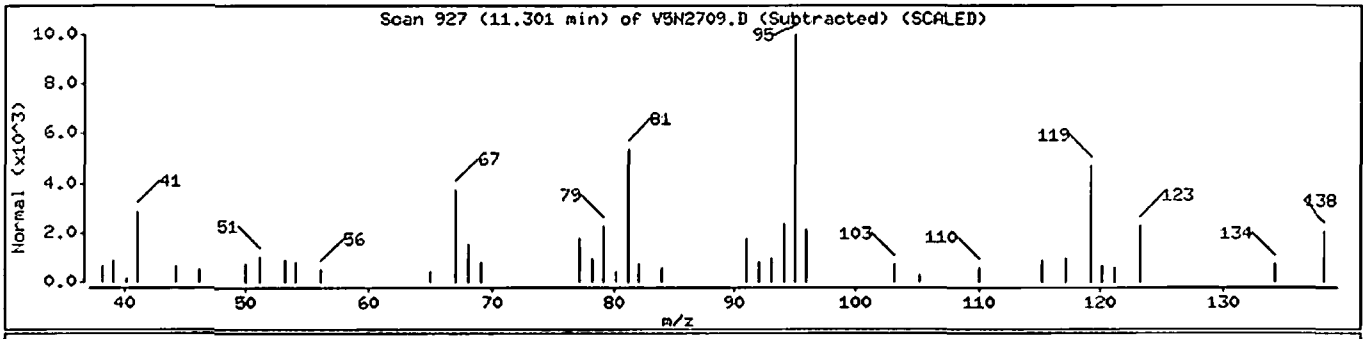
Client ID: H30Q9 Instrument: V5.i

Sample Info: 5C,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

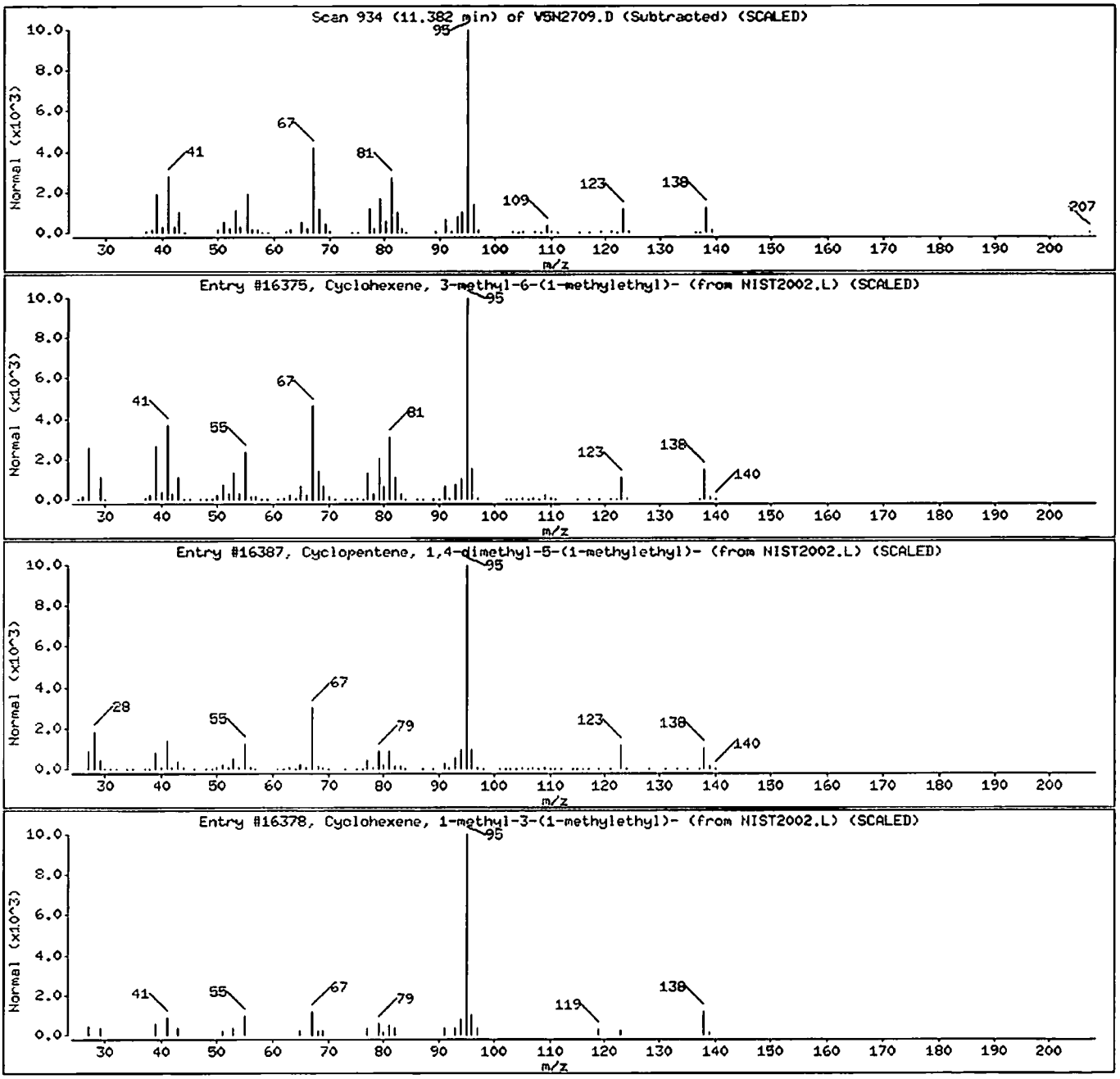
Client ID: H3OQ9 Instrument: V5.i

Sample Info: 5G,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexene, 3-methyl-6-(1-methylethyl)-	5256-65-5	NIST2002.L	16375	96	C10H18	138
Cyclopentene, 1,4-dimethyl-5-(1-methylet	61142-33-4	NIST2002.L	16387	90	C10H18	138
Cyclohexene, 1-methyl-3-(1-methylethyl)-	13828-31-4	NIST2002.L	16378	90	C10H18	138



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

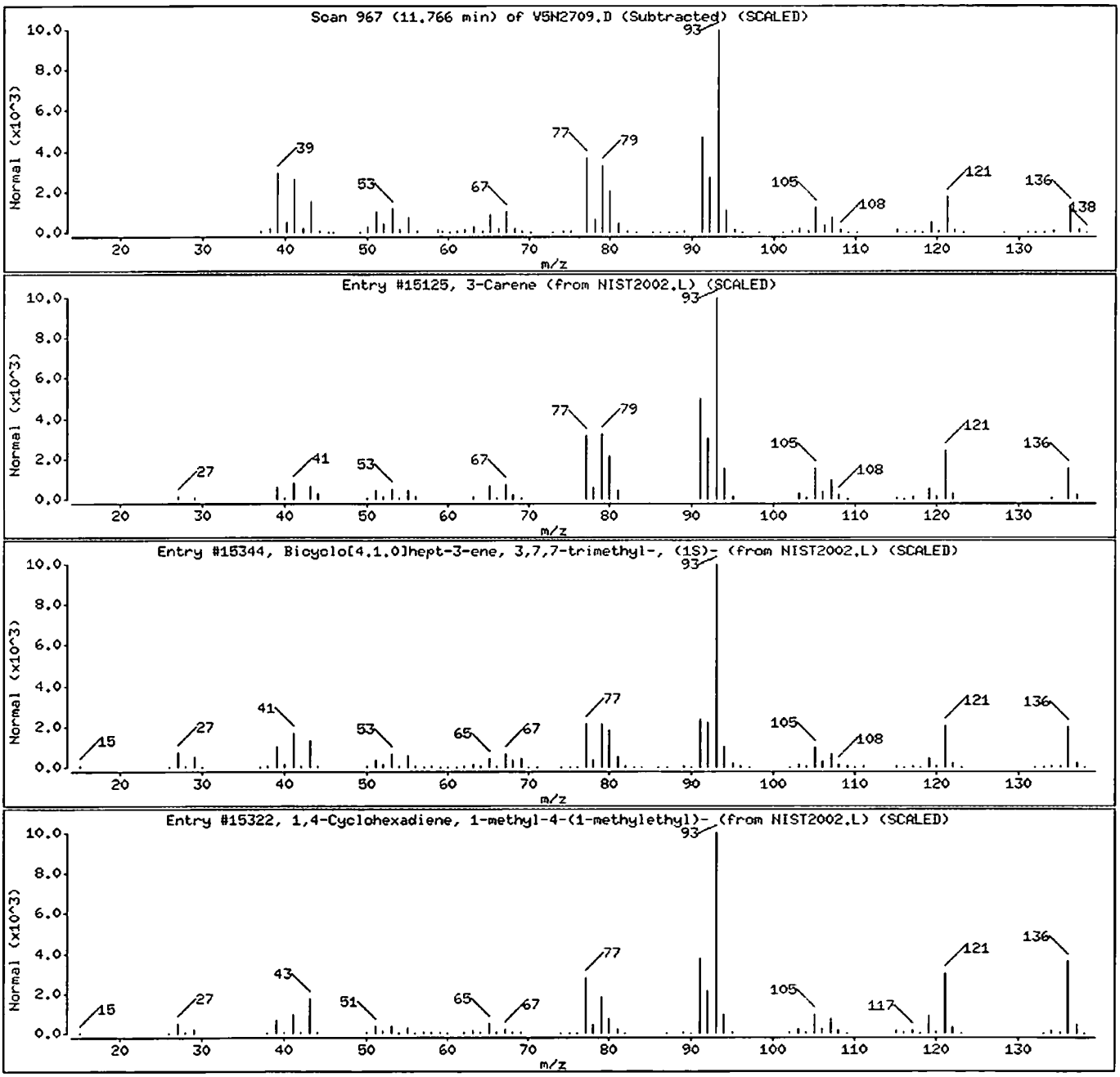
Client ID: H30Q9 Instrument: V5.i

Sample Info: 5G,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Carene	13466-78-9	NIST2002.L	15125	97	C10H16	136
Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethy	498-15-7	NIST2002.L	15344	96	C10H16	136
1,4-Cyclohexadiene, 1-methyl-4-(1-methyl	99-85-4	NIST2002.L	15322	94	C10H16	136



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

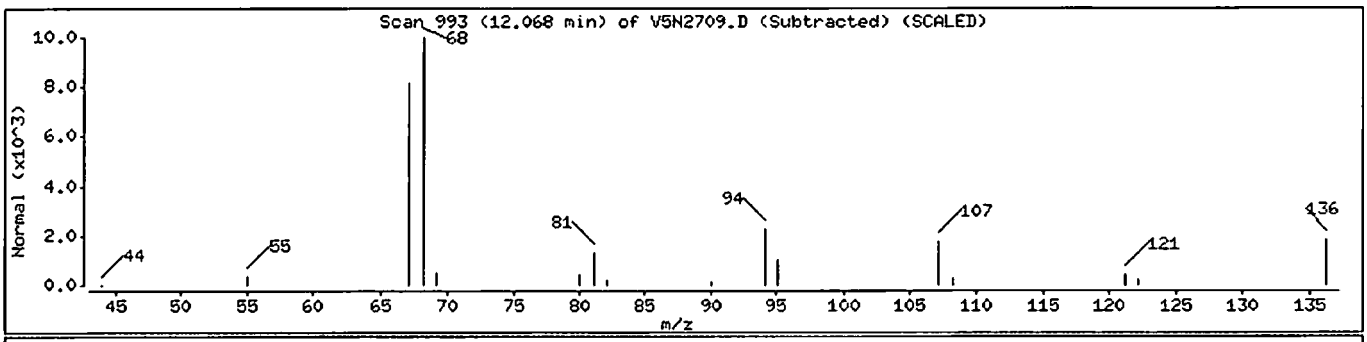
Client ID: H30Q9 Instrument: V5.i

Sample Info: 5C,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

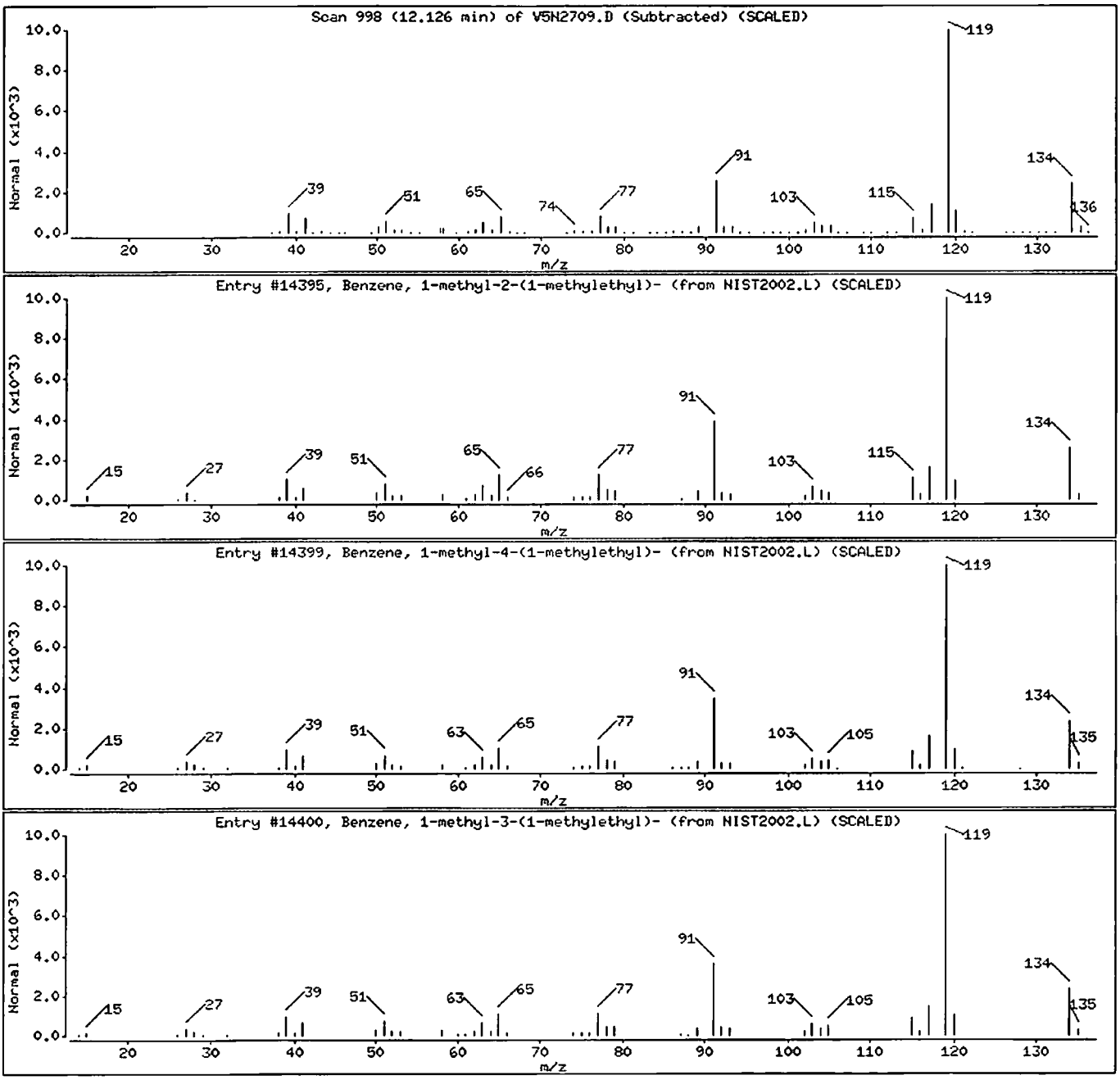
Client ID: H30Q9 Instrument: V5.i

Sample Info: 5G,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-methyl-2-(1-methylethyl)-	527-84-4	NIST2002.L	14395	96	C10H14	134
Benzene, 1-methyl-4-(1-methylethyl)-	99-87-6	NIST2002.L	14399	96	C10H14	134
Benzene, 1-methyl-3-(1-methylethyl)-	535-77-3	NIST2002.L	14400	95	C10H14	134



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

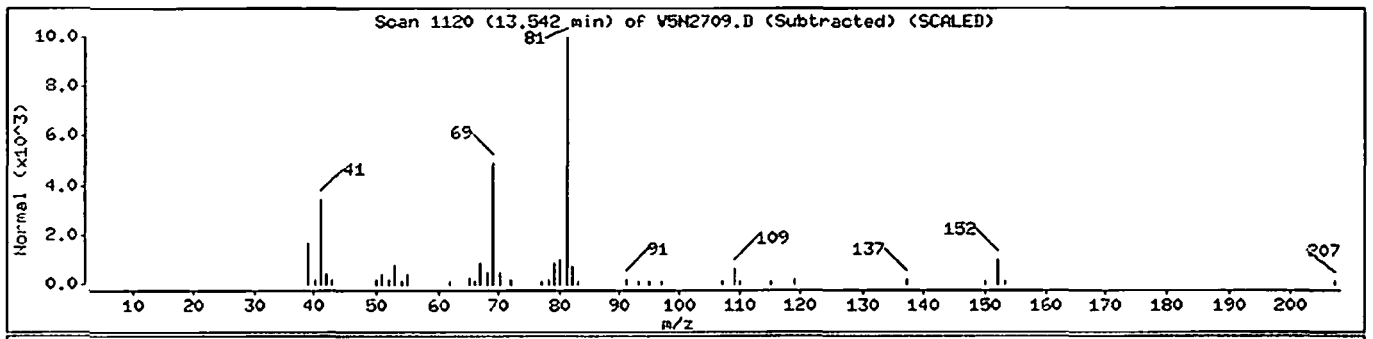
Client ID: H3OQ9 Instrument: V5.i

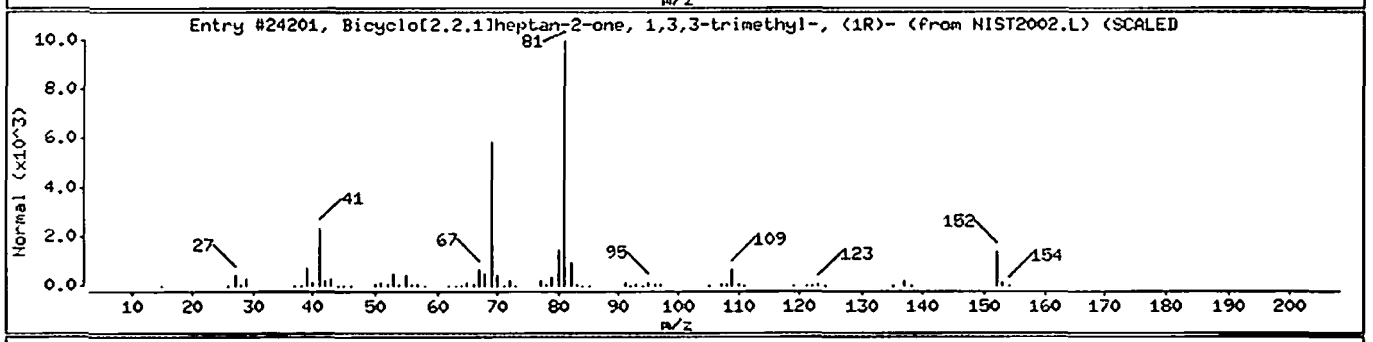
Sample Info: 5C,K2198-08C,,62569

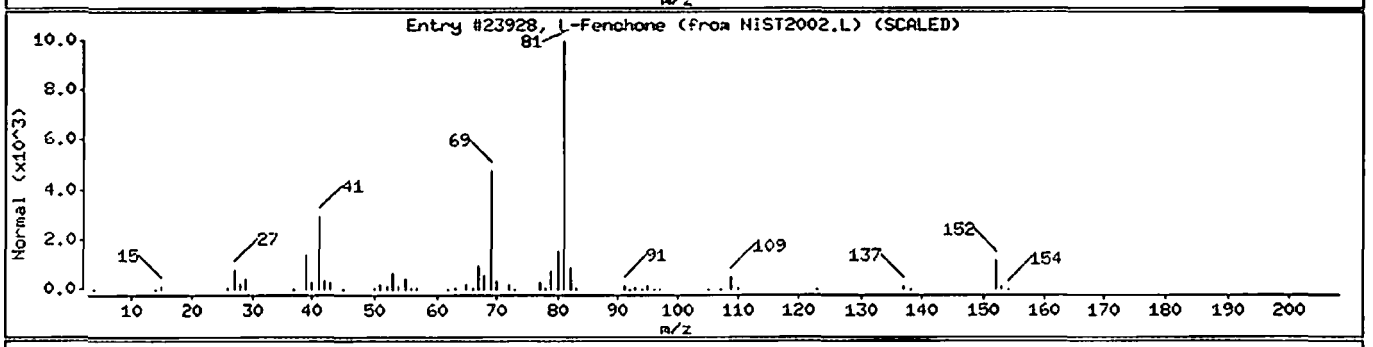
Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet	7787-20-4	NIST2002.L	24201	93	C10H16O	152
L-Fenchone	126-21-6	NIST2002.L	23928	90	C10H16O	152







Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

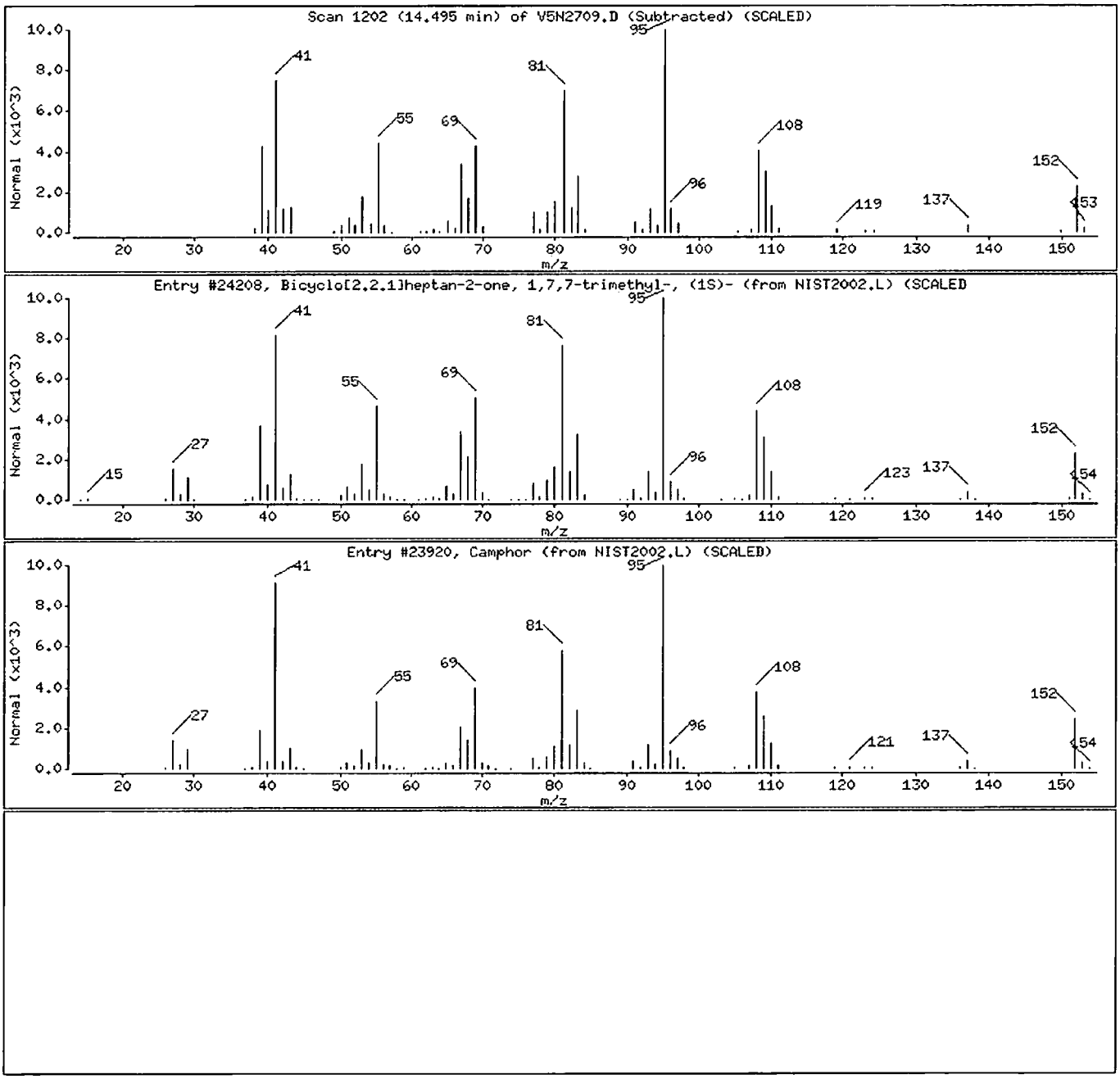
Client ID: H30Q9 Instrument: V5.i

Sample Info: 5G,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet	464-48-2	NIST2002.L	24208	98	C10H16O	152
Camphor	76-22-2	NIST2002.L	23920	97	C10H16O	152



Data File: \\avogadro\organics\V5.I\111106.B\V5N2709.D

Date : 07-NOV-2011 02:56

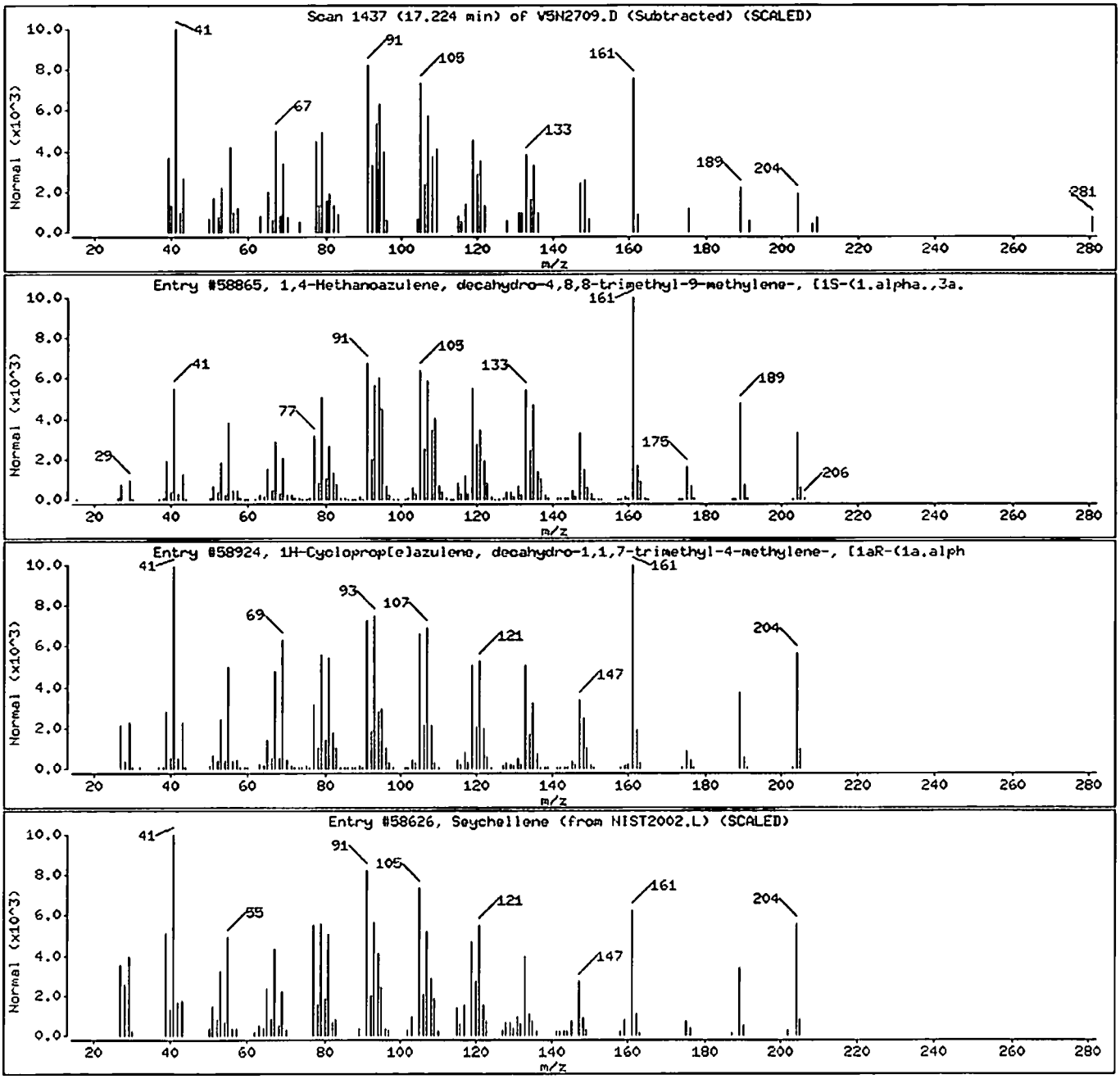
Client ID: H3OQ9 Instrument: V5.i

Sample Info: 5C,K2198-08C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST2002.L	58865	99	C15H24	204
1H-Cyclopropl[e]azulene, decahydro-1,1,7-	489-39-4	NIST2002.L	58924	93	C15H24	204
Seychellene	20085-93-2	NIST2002.L	58626	90	C15H24	204



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30R0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-09C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2710.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 74 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	19	U
74-87-3	Chloromethane	19	U
75-01-4	Vinyl chloride	19	U
74-83-9	Bromomethane	19	U
75-00-3	Chloroethane	19	U
75-69-4	Trichlorofluoromethane	19	U
75-35-4	1,1-Dichloroethene	19	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	19	U
67-64-1	Acetone	39	U
75-15-0	Carbon disulfide	19	U
79-20-9	Methyl acetate	19	U
75-09-2	Methylene chloride	19	U
156-60-5	trans-1,2-Dichloroethene	19	U
1634-04-4	Methyl tert-butyl ether	19	U
75-34-3	1,1-Dichloroethane	19	U
156-59-2	cis-1,2-Dichloroethene	19	U
78-93-3	2-Butanone	39	U
74-97-5	Bromochloromethane	19	U
67-66-3	Chloroform	19	U
71-55-6	1,1,1-Trichloroethane	19	U
110-82-7	Cyclohexane	19	U
56-23-5	Carbon tetrachloride	19	U
71-43-2	Benzene	19	U
107-06-2	1,2-Dichloroethane	19	U
123-91-1	1,4-Dioxane	390	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30R0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-09C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2710.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 74 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	19	U
108-87-2	Methylcyclohexane	19	U
78-87-5	1,2-Dichloropropane	19	U
75-27-4	Bromodichloromethane	19	U
10061-01-5	cis-1,3-Dichloropropene	19	U
108-10-1	4-Methyl-2-pentanone	39	U
108-88-3	Toluene	19	U
10061-02-6	trans-1,3-Dichloropropene	19	U
79-00-5	1,1,2-Trichloroethane	19	U
127-18-4	Tetrachloroethene	19	U
591-78-6	2-Hexanone	39	U
124-48-1	Dibromochloromethane	19	U
106-93-4	1,2-Dibromoethane	19	U
108-90-7	Chlorobenzene	19	U
100-41-4	Ethylbenzene	19	U
179601-23-1	m,p-Xylene	19	U
95-47-6	o-Xylene	19	U
100-42-5	Styrene	19	U
75-25-2	Bromoform	19	U
98-82-8	Isopropylbenzene	19	U
79-34-5	1,1,2,2-Tetrachloroethane	19	U
541-73-1	1,3-Dichlorobenzene	19	U
106-46-7	1,4-Dichlorobenzene	19	U
95-50-1	1,2-Dichlorobenzene	19	U
96-12-8	1,2-Dibromo-3-chloropropane	19	U
120-82-1	1,2,4-Trichlorobenzene	19	U
87-61-6	1,2,3-Trichlorobenzene	19	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30R0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-09C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2710.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 74 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2710.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2710.D
Lab Smp Id: K2198-09C Client Smp ID: H30R0
Inj Date : 07-NOV-2011 03:21
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-09C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.150	2.173	(0.340)	82750	41.0238	41
$ 80 Chloroethane-d5	69	2.534	2.603	(0.401)	36312	27.8307	28(R)
$ 81 1,1-Dichloroethene-d2	65	3.323	3.369	(0.526)	17262	41.2596	41(Q)
$ 82 2-Butanone-d5	46	5.065	5.076	(0.802)	55818	99.2230	99
$ 83 Chloroform-d	84	5.379	5.390	(0.851)	111932	46.3167	46(Q)
$ 23 1,2-Dichloroethane-d4	65	5.890	5.901	(0.932)	64434	49.3975	49(Q)
$ 84 Benzene-d6	84	5.901	5.912	(0.626)	216586	47.2084	47
* 26 1,4-Difluorobenzene	114	6.320	6.319	(1.000)	211841	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.726	6.725	(0.713)	80715	42.5714	43
$ 94 1,4-Dioxane-d8	96	6.923	6.911	(1.096)	14861	1196.99	1200
$ 33 Toluene-d8	98	7.841	7.840	(0.831)	190793	45.0490	45
$ 86 trans-1,3-Dichloropropene-d4	79	8.120	8.119	(0.861)	68357	47.8853	48
$ 87 2-Hexanone-d5	63	8.584	8.572	(0.910)	29765	81.5993	82(Q)
* 42 Chlorobenzene-d5	117	9.432	9.431	(1.000)	173263	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.930	10.929	(1.159)	58043	46.7720	47
* 78 1,4-Dichlorobenzene-d4	152	12.184	12.172	(1.000)	73058	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.637	12.625	(1.037)	61118	44.7808	45(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2710.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2710.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2710.D
Lab Smp Id: K2198-09C Client Smp ID: H30R0
Inj Date : 07-NOV-2011 03:21
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-09C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

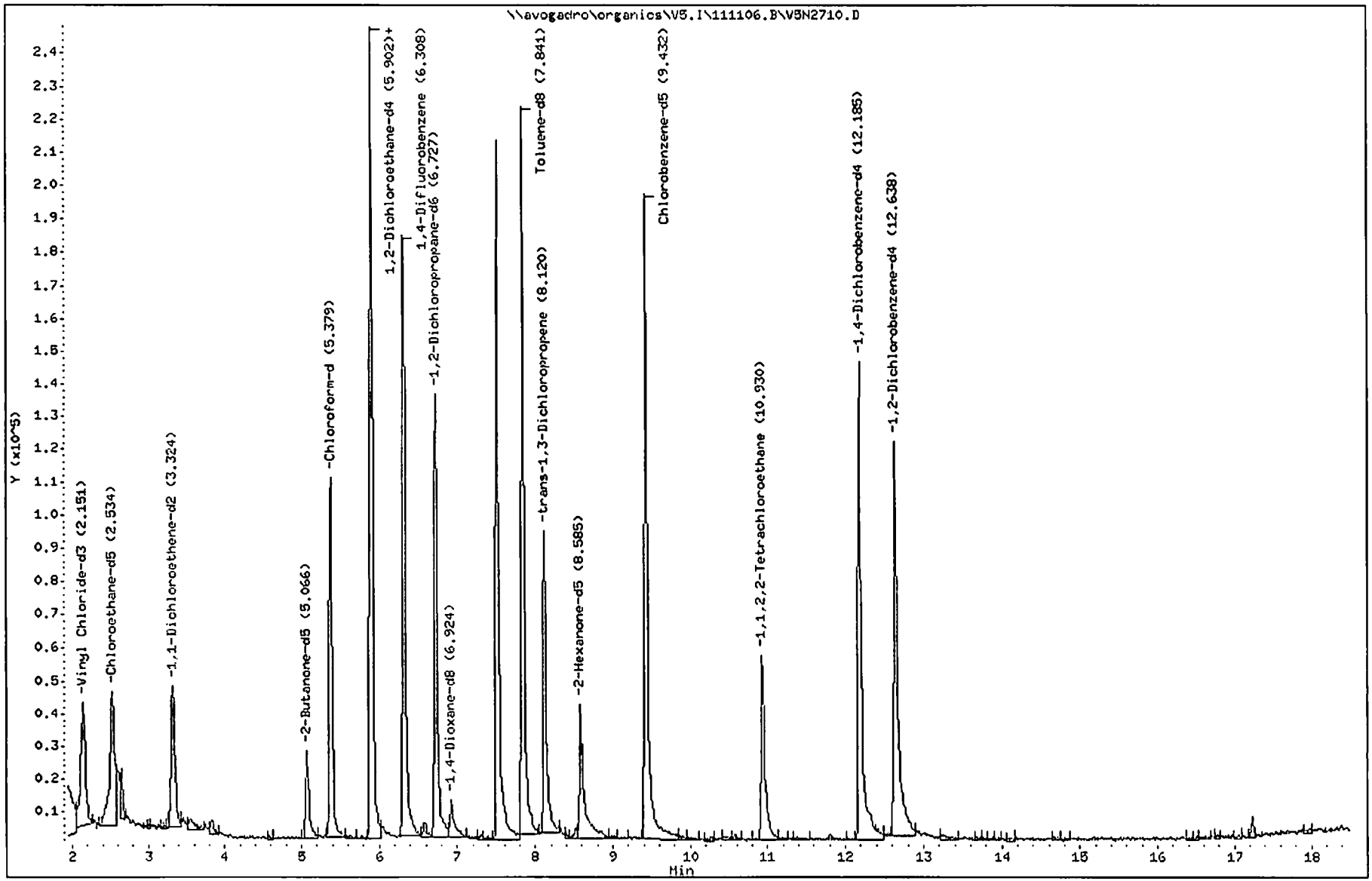
Data File: \\avogadro\organics\V5.I\111106.B\V5N2710.D
Date : 07-NOV-2011 03:21
Client ID: H30R0
Sample Info: 5C,K2198-09C,,62569

Instrument: V5.I

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30R1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-10C

Sample wt/vol: 4.80 (g/mL) G Lab File ID: V5N2711.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 54 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	11	U
67-64-1	Acetone	110	
75-15-0	Carbon disulfide	11	U
79-20-9	Methyl acetate	11	U
75-09-2	Methylene chloride	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl tert-butyl ether	11	U
75-34-3	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	23	U
74-97-5	Bromochloromethane	11	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
110-82-7	Cyclohexane	11	U
56-23-5	Carbon tetrachloride	11	U
71-43-2	Benzene	11	U
107-06-2	1,2-Dichloroethane	11	U
123-91-1	1,4-Dioxane	230	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30R1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-10C

Sample wt/vol: 4.80 (g/mL) G Lab File ID: V5N2711.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 54 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	11	U
108-87-2	Methylcyclohexane	11	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	23	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
591-78-6	2-Hexanone	23	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
179601-23-1	m,p-Xylene	11	U
95-47-6	o-Xylene	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	10	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
96-12-8	1,2-Dibromo-3-chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
87-61-6	1,2,3-Trichlorobenzene	11	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
H30R1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-10C

Sample wt/vol: 4.80 (g/mL) G Lab File ID: V5N2711.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 54 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	79-92-5	Camphene	10.902	300	NJ
02		Unknown-01	11.238	12	J
03	5256-65-5	Cyclohexene, 3-methyl-6-(1-m	11.296	15	NJ
04	5256-65-5	Cyclohexene, 3-methyl-6-(1-m	11.389	430	NJ
05	13466-78-9	3-Carene	11.773	340	NJ
06	5502-88-5	Cyclohexene, 1-methyl-4-(1-m	11.935	20	NJ
07	138-86-3	Limonene	12.063	98	NJ
08	99-87-6	Benzene, 1-methyl-4-(1-methy	12.144	4700	NJ
09	126-21-6	L-Fenchone	13.538	22	NJ
10		Unknown-02	14.339	20	J
11	464-49-3	Bicyclo[2.2.1]heptan-2-one,	14.502	81	NJ
	E96679[1]	Total Alkanes	N/A	22	J

[1] EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2711.D
Lab Smp Id: K2198-10C Client Smp ID: H30R1
Inj Date : 07-NOV-2011 03:50
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-10C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 43
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.800	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.168	2.173	(0.343)	137703	39.3776	41
$ 80 Chloroethane-d5	69	2.586	2.603	(0.410)	112147	49.5792	52(Q)
$ 81 1,1-Dichloroethene-d2	65	3.364	3.369	(0.533)	34608	47.7143	50(Q)
9 Acetone	43	3.445	3.450	(0.546)	32545	48.6389	51
$ 82 2-Butanone-d5	46	5.071	5.076	(0.803)	102489	105.088	110
$ 83 Chloroform-d	84	5.385	5.390	(0.853)	199081	47.5172	49(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.901	(0.934)	110208	48.7350	51(Q)
$ 84 Benzene-d6	84	5.907	5.912	(0.627)	366830	57.4152	60
* 26 1,4-Difluorobenzene	114	6.314	6.319	(1.000)	367259	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.732	6.725	(0.714)	141496	53.5898	56
$ 94 1,4-Dioxane-d8	96	6.918	6.911	(1.096)	20973	974.410	1000
$ 33 Toluene-d8	98	7.847	7.840	(0.832)	288371	48.8931	51
$ 86 trans-1,3-Dichloropropene-d4	79	8.126	8.119	(0.862)	74581	37.5164	39
$ 87 2-Hexanone-d5	63	8.578	8.572	(0.910)	53347	105.018	110(Q)
* 42 Chlorobenzene-d5	117	9.426	9.431	(1.000)	241286	50.0000	
49 Isopropylbenzene	105	10.564	10.604	(1.121)	34860	4.59405	4.8(Q)
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.924	10.929	(1.159)	73981	42.8085	45
* 78 1,4-Dichlorobenzene-d4	152	12.179	12.172	(1.000)	70417	50.0000	(Q)
$ 90 1,2-Dichlorobenzene-d4	152	12.631	12.625	(1.037)	66217	50.3364	52(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2711.D
Lab Smp Id: K2198-10C Client Smp ID: H30R1
Inj Date : 07-NOV-2011 03:50
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-10C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 43
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.800	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 42 Chlorobenzene-d5	9.427	700413	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Cyclic Alkane					CAS #:		
10.402	138303	9.87296392	10	0		0	42
Camphene					CAS #: 79-92-5		
10.902	1833017	130.852458	140	98	NIST2002.L	15134	42
Unknown					CAS #:		
11.238	75064	5.35852488	5.6	0		0	42
Cyclohexene, 3-methyl-6-(1-methylethyl)-					CAS #: 5256-65-5		
11.296	92526	6.60512028	6.9	91	NIST2002.L	16383	42
Cyclohexene, 3-methyl-6-(1-methylethyl)-					CAS #: 5256-65-5		
11.389	2674645	190.933295	200	96	NIST2002.L	16375	42

Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D
Report Date: 09-Nov-2011 07:59

RT	AREA	CONCENTRATIONS ON-COL(ug/L)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
3-Carene					CAS #: 13466-78-9		
11.773	2095773	149.609694	160	97	NIST2002.L	15125	42
Cyclohexene, 1-methyl-4-(1-methylethyl)-					CAS #: 5502-88-5		
11.935	125229	8.93964022	9.3	96	NIST2002.L	16376	42
Limonene					CAS #: 138-86-3		
12.063	607236	43.3484240	45	91	NIST2002.L	15128	42
Benzene, 1-methyl-4-(1-methylethyl)-					CAS #: 99-87-6		
12.144	29133310	2079.72214	2200	97	NIST2002.L	14399	42
L-Fenchone					CAS #: 126-21-6		
13.538	137525	9.81743808	10	94	NIST2002.L	23928	42
Unknown					CAS #:		
14.339	122931	8.77556609	9.1	0		0	42
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet					CAS #: 464-49-3		
14.502	499568	35.6623809	37	97	NIST2002.L	24211	42

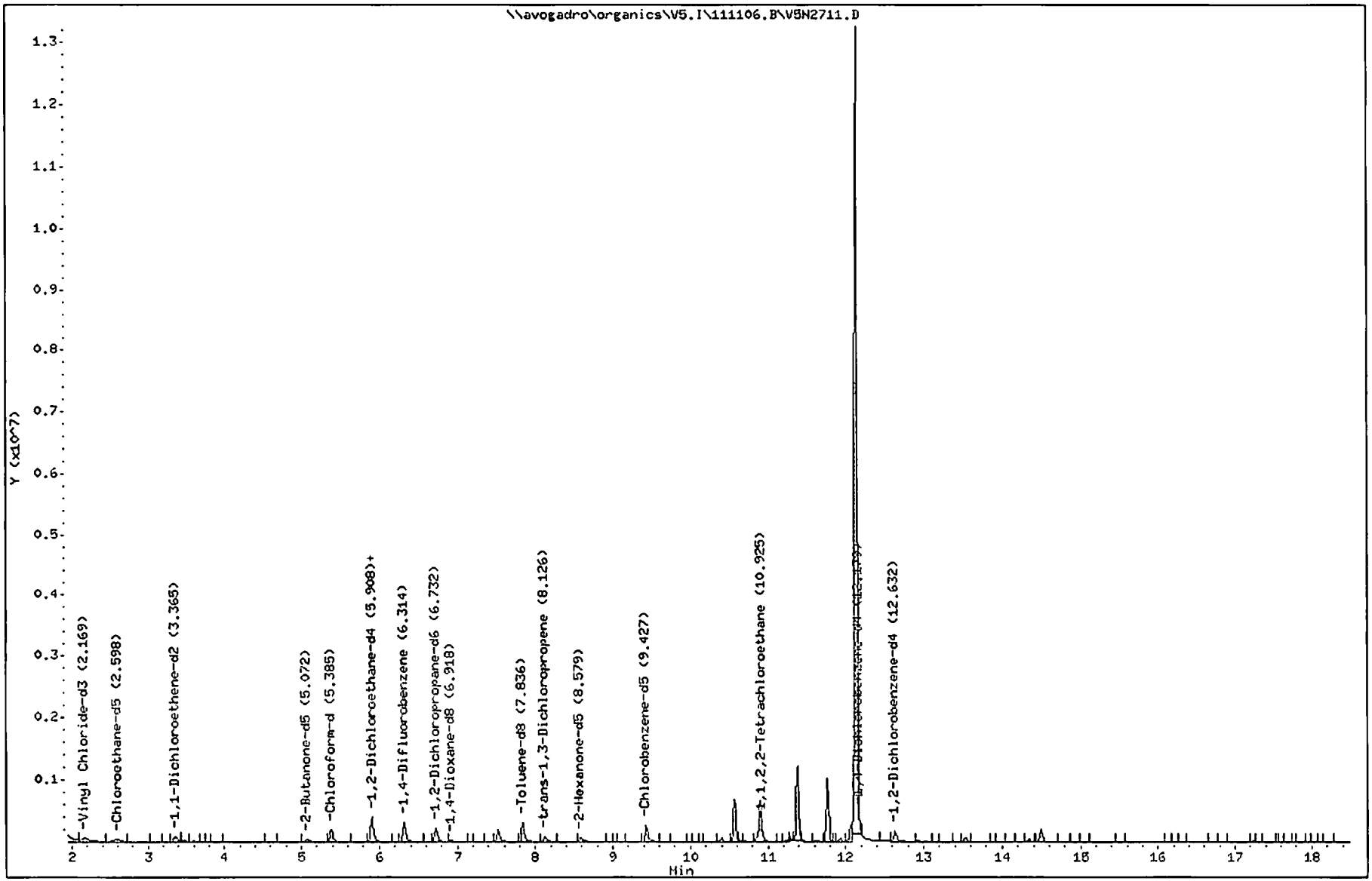
Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D
Date : 07-NOV-2011 03:50
Client ID: H30R1
Sample Info: 5C,K2198-10C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



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Date : 07-NOV-2011 03:50

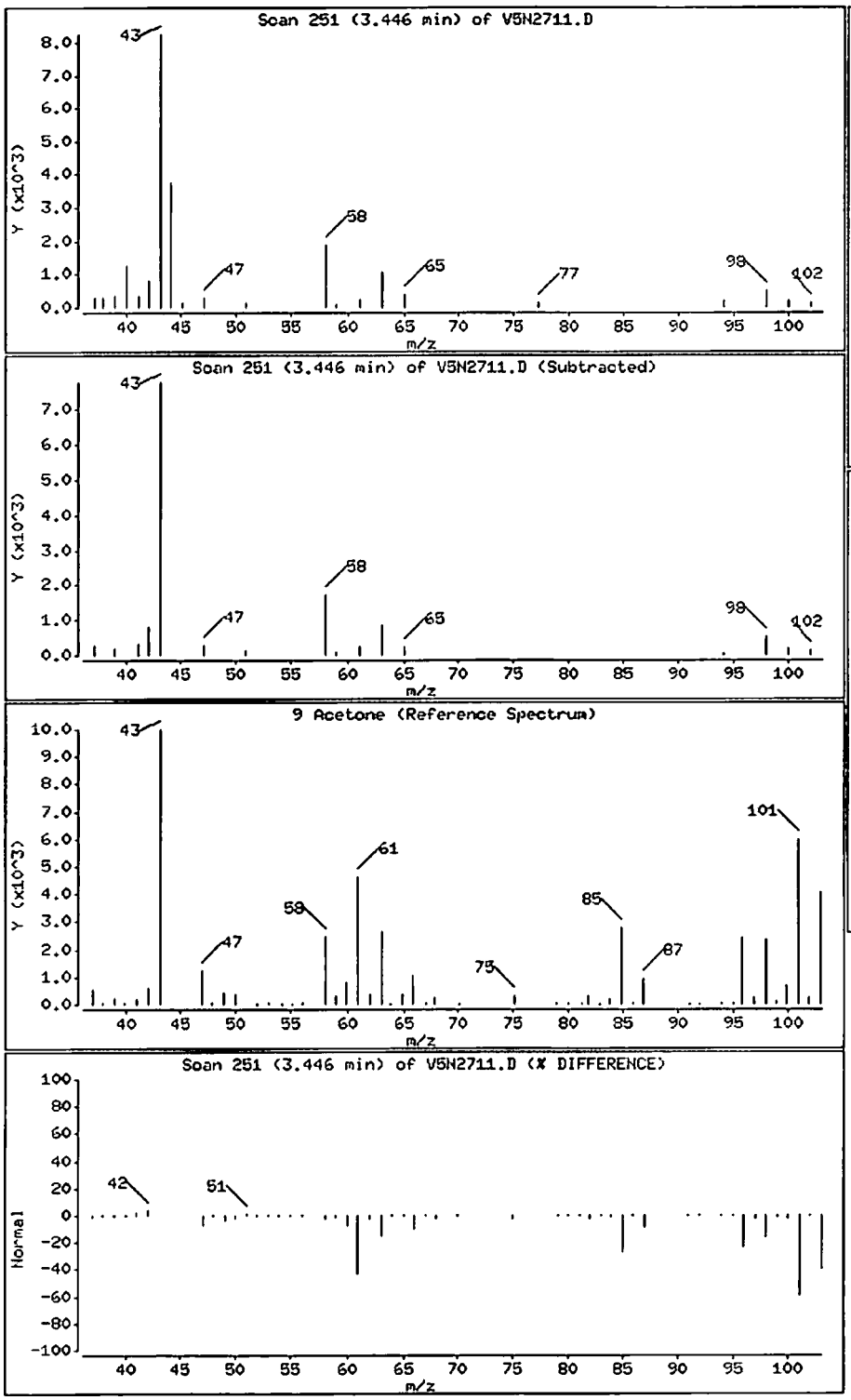
Client ID: H30R1 Instrument: V5.i

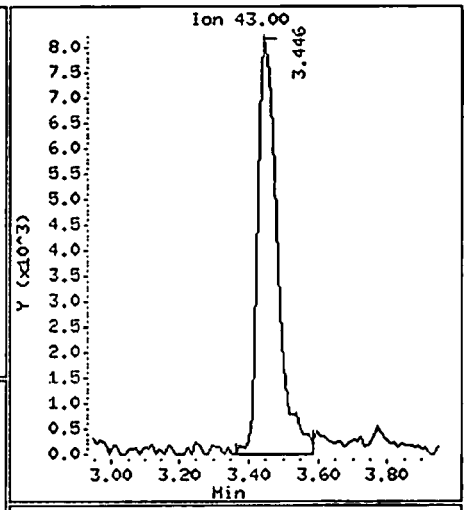
Sample Info: 5G,K2198-10C,,62569

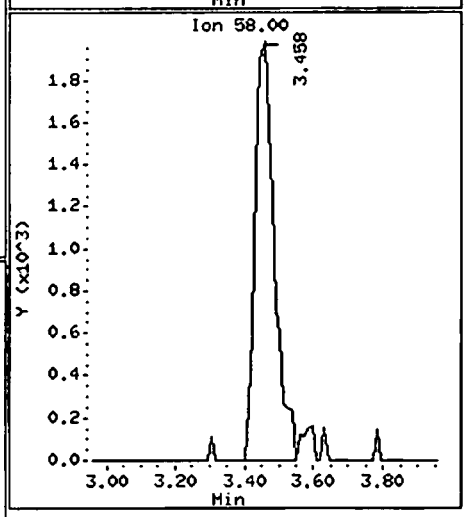
Operator: SRC: LIHS

Column phase: DB-624 Column diameter: 0.25

9 Acetone Concentration: 51 ug/Kg







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Date : 07-NOV-2011 03:50

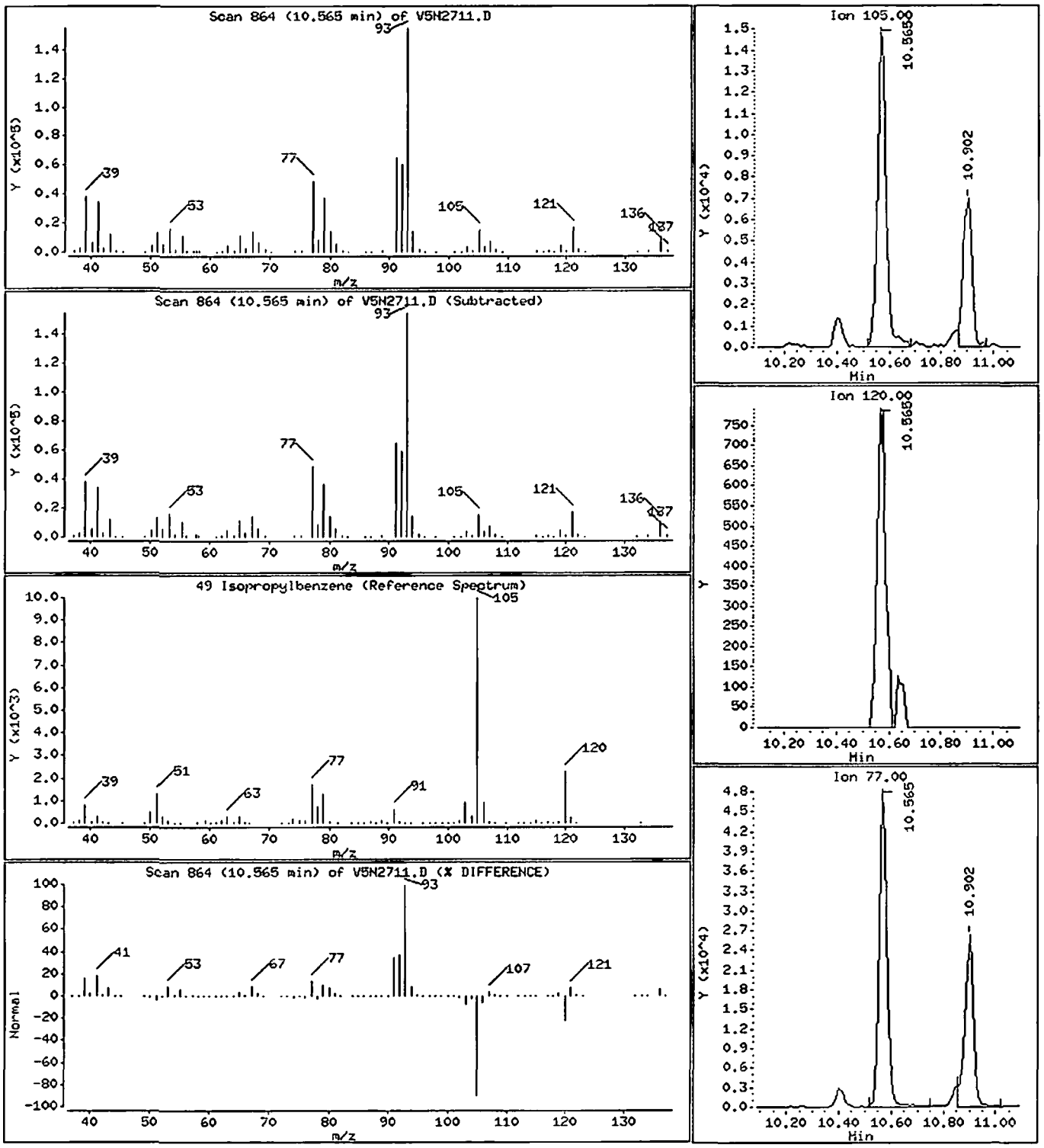
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

49 Isopropylbenzene Concentration: 4.8 ug/Kg



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Date : 07-NOV-2011 03:50

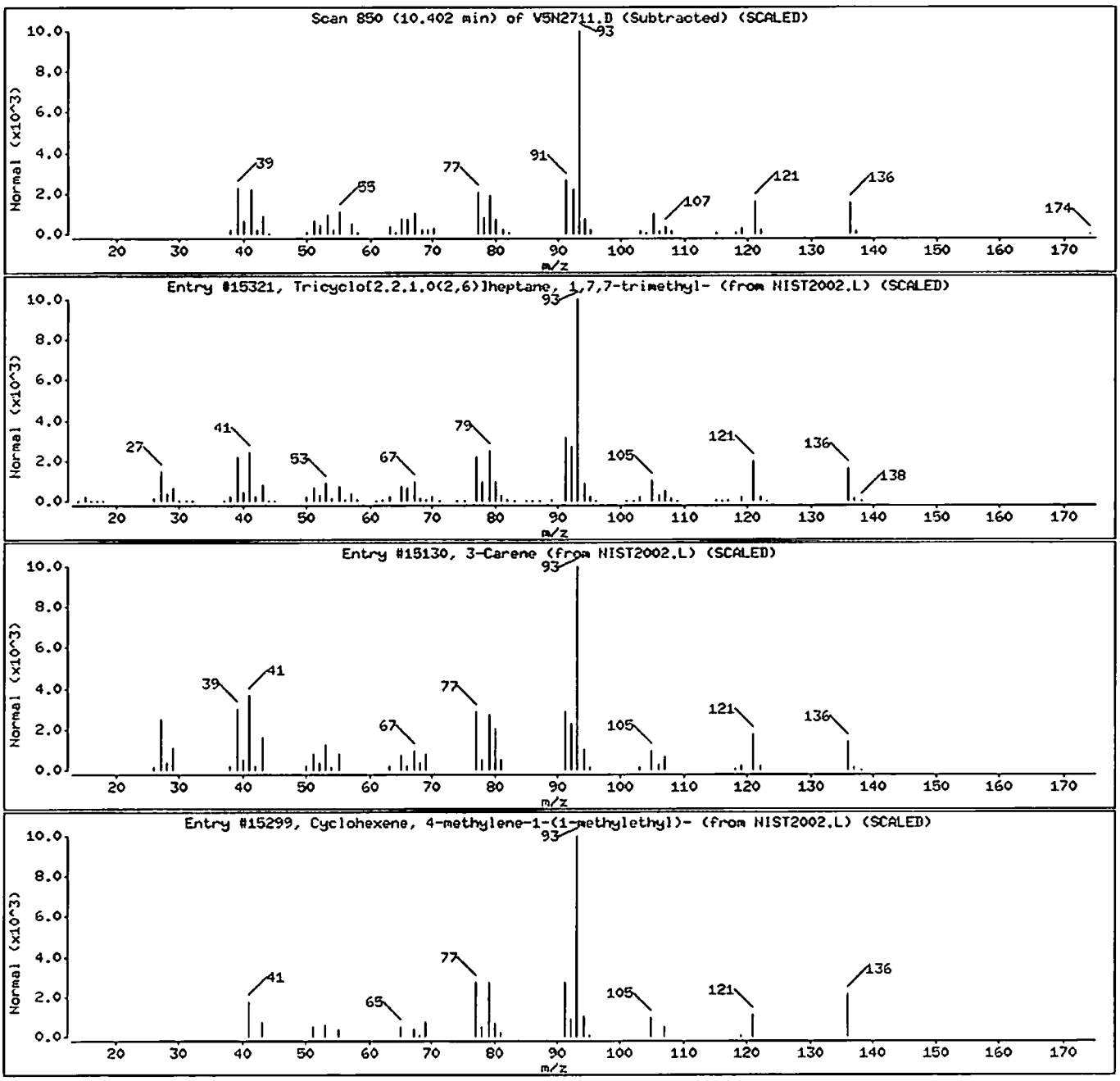
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclic Alkane						
Tricyclo[2.2.1.0(2,6)]heptane, 1,7,7-tri	508-32-7	NIST2002.L	15321	96	C10H16	136
3-Carene	13466-78-9	NIST2002.L	15130	91	C10H16	136
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	NIST2002.L	15299	90	C10H16	136



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Date : 07-NOV-2011 03:50

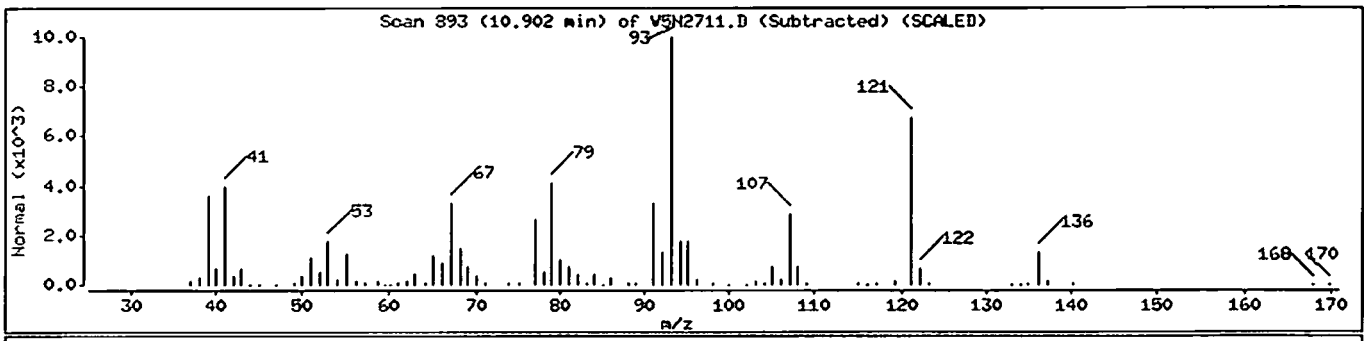
Client ID: H30R1 Instrument: V5.i

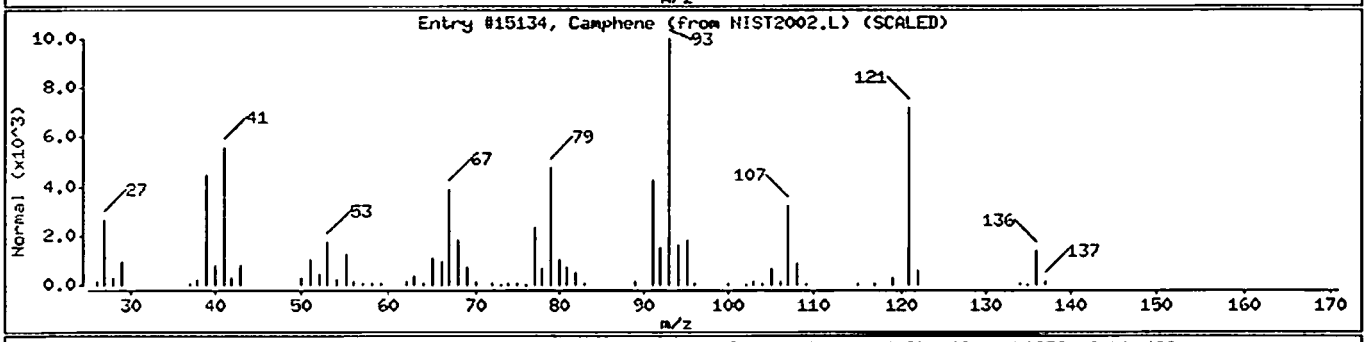
Sample Info: 5C,K2198-10C,,62569

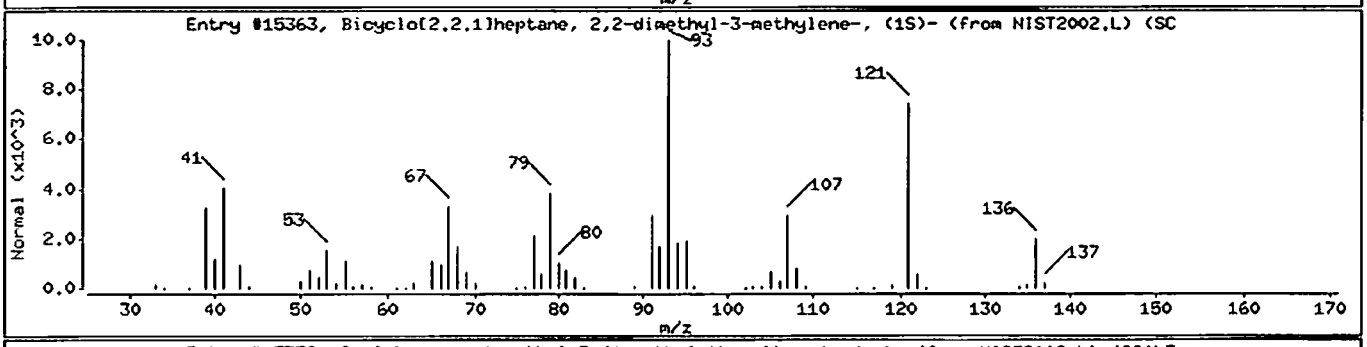
Operator: SRC: LIMS

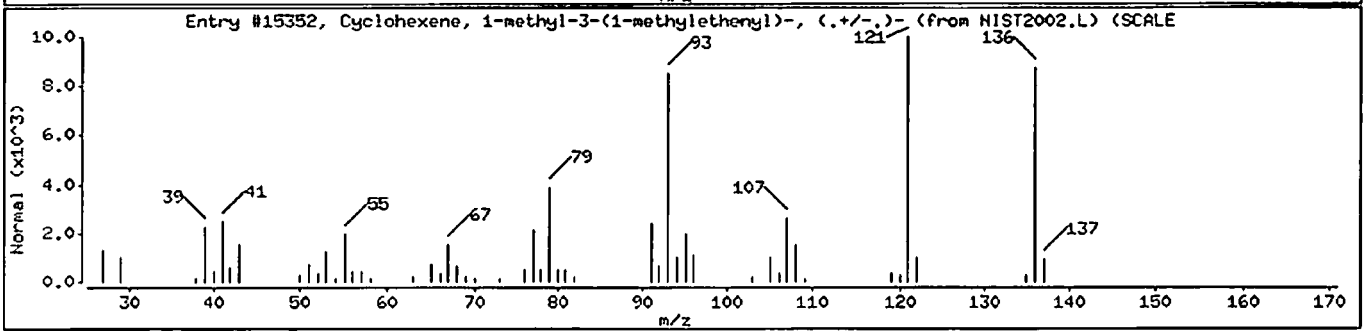
Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Camphene	79-92-5	NIST2002.L	15134	98	C10H16	136
Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-me	5794-04-7	NIST2002.L	15363	95	C10H16	136
Cyclohexene, 1-methyl-3-(1-methylethenyl	499-03-6	NIST2002.L	15352	86	C10H16	136









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Date : 07-NOV-2011 03:50

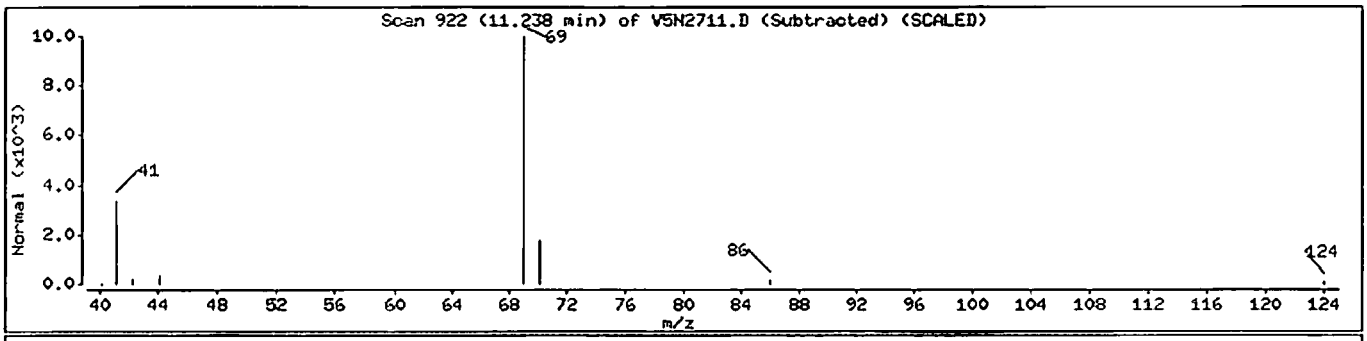
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIHS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Unknown			0	0		0



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Date : 07-NOV-2011 03:50

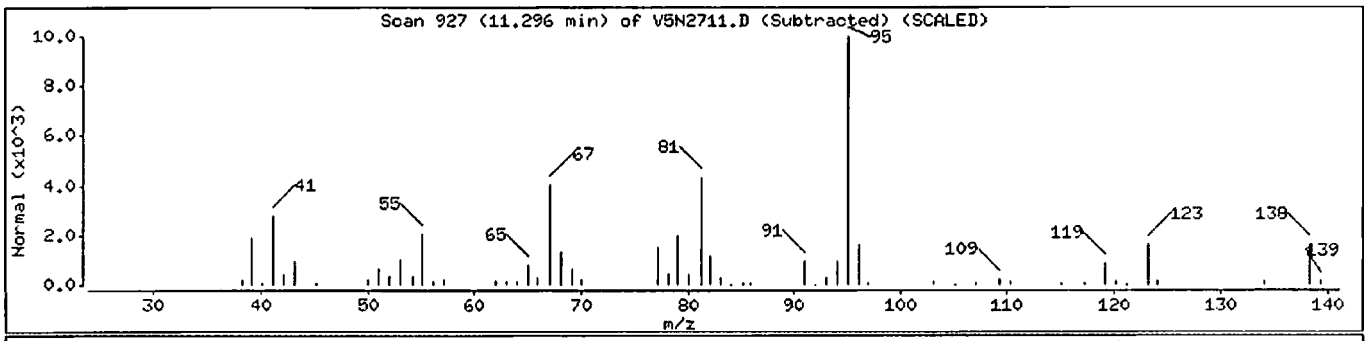
Client ID: H30R1 Instrument: V5.i

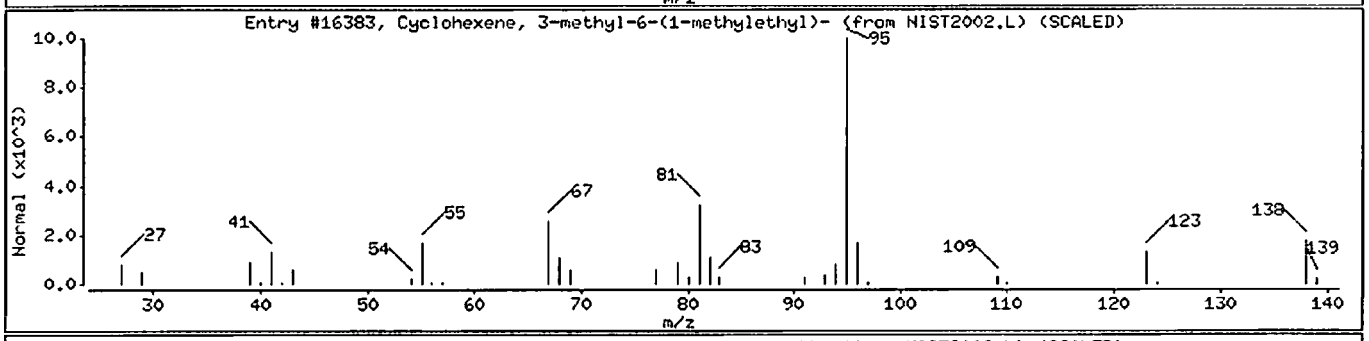
Sample Info: 5G,K2198-10C,,62569

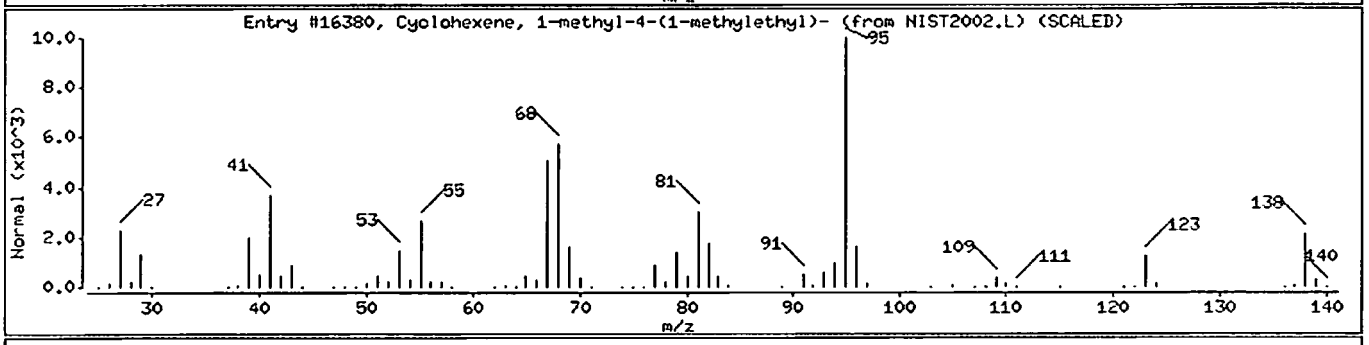
Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexene, 3-methyl-6-(1-methylethyl)-	5256-65-5	NIST2002.L	16383	91	C10H18	138
Cyclohexene, 1-methyl-4-(1-methylethyl)-	5502-88-5	NIST2002.L	16380	91	C10H18	138







Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D

Date : 07-NOV-2011 03:50

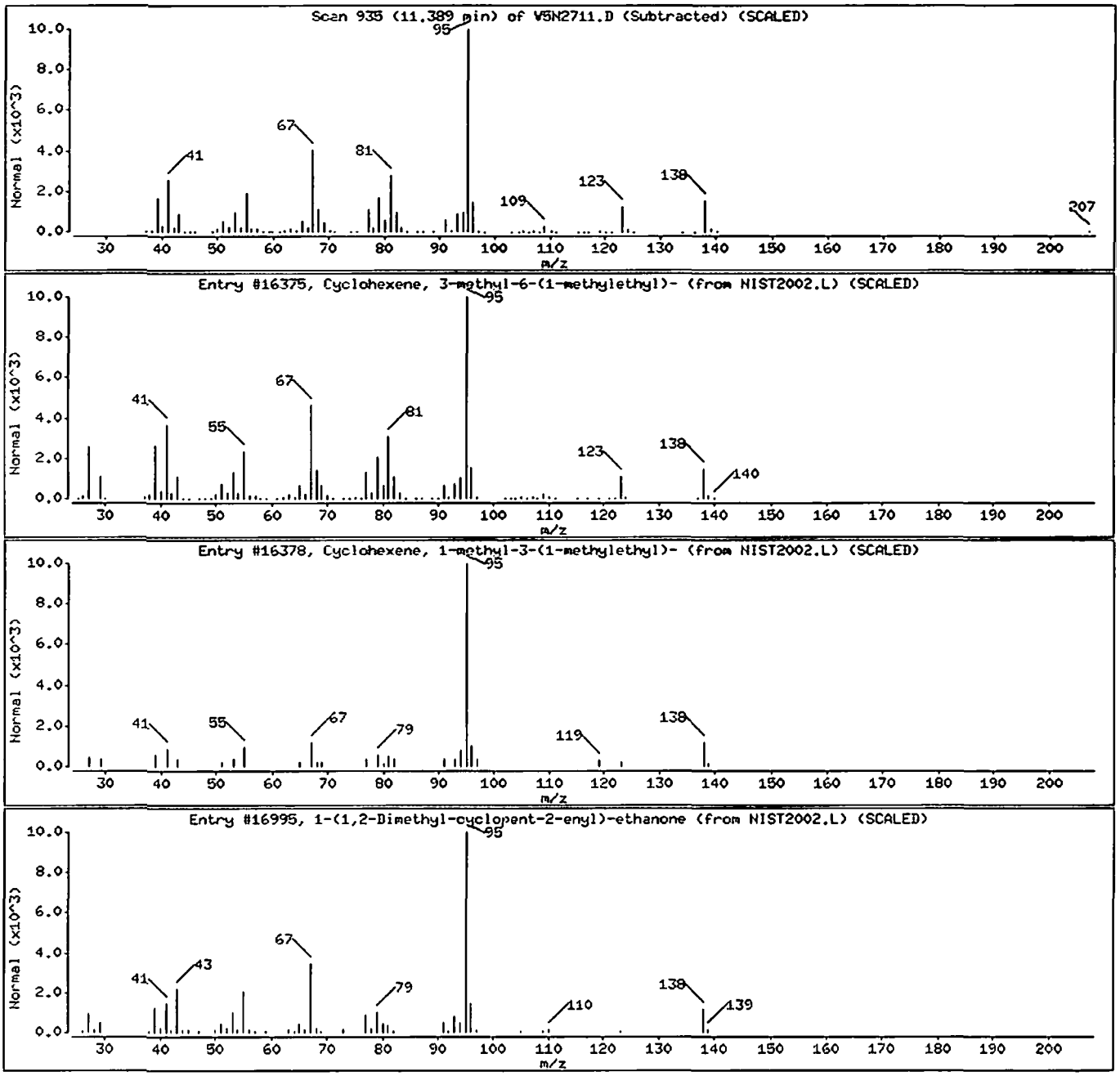
Client ID: H30R1 Instrument: V5.i

Sample Info: 5G,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexene, 3-methyl-6-(1-methylethyl)-	5256-65-5	NIST2002.L	16375	96	C10H18	138
Cyclohexene, 1-methyl-3-(1-methylethyl)-	13828-31-4	NIST2002.L	16378	90	C10H18	138
1-(1,2-Dimethyl-cyclopent-2-enyl)-ethano	70987-82-5	NIST2002.L	16995	87	C9H14O	138



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Date : 07-NOV-2011 03:50

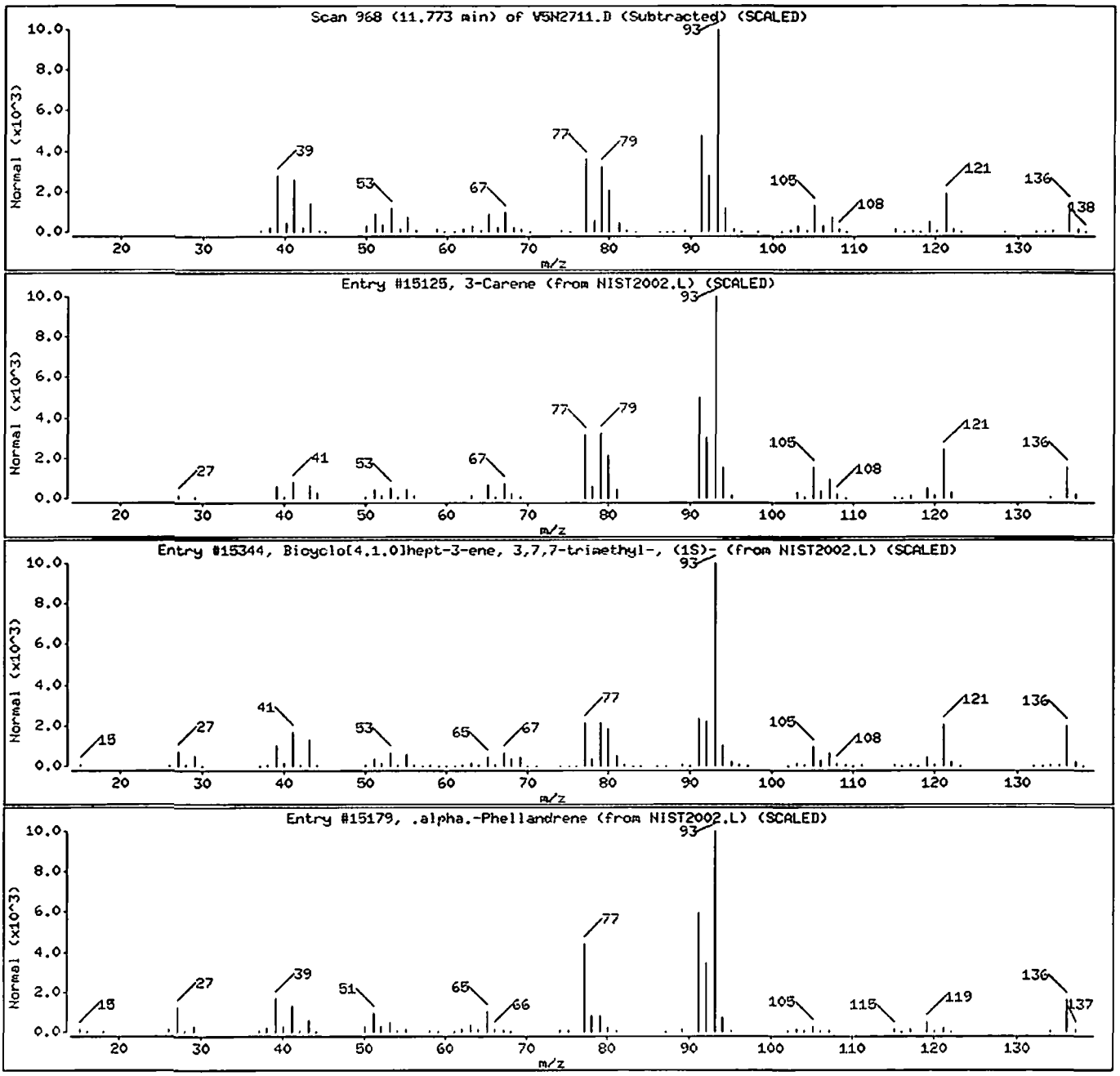
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Carene	13466-78-9	NIST2002.L	15125	97	C10H16	136
Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethy	498-15-7	NIST2002.L	15344	96	C10H16	136
.alpha.-Phellandrene	99-83-2	NIST2002.L	15179	94	C10H16	136



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Date : 07-NOV-2011 03:50

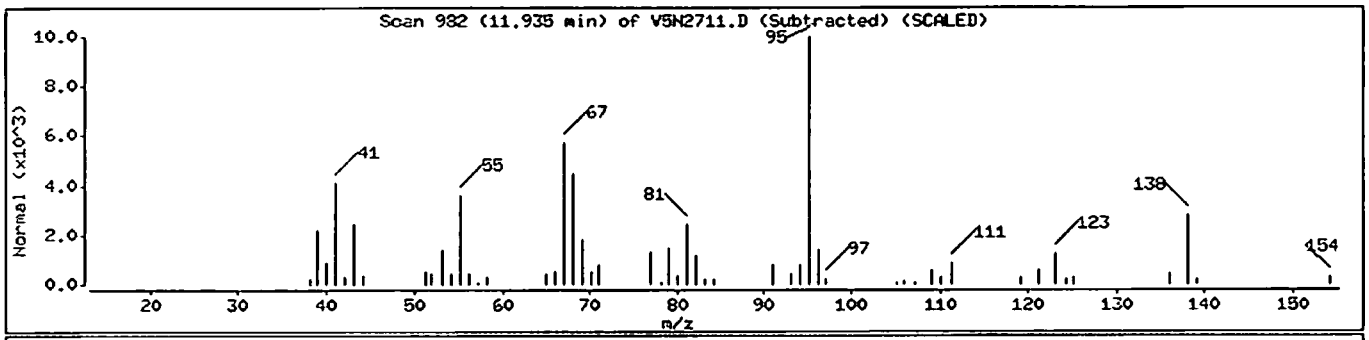
Client ID: H30R1 Instrument: V5.i

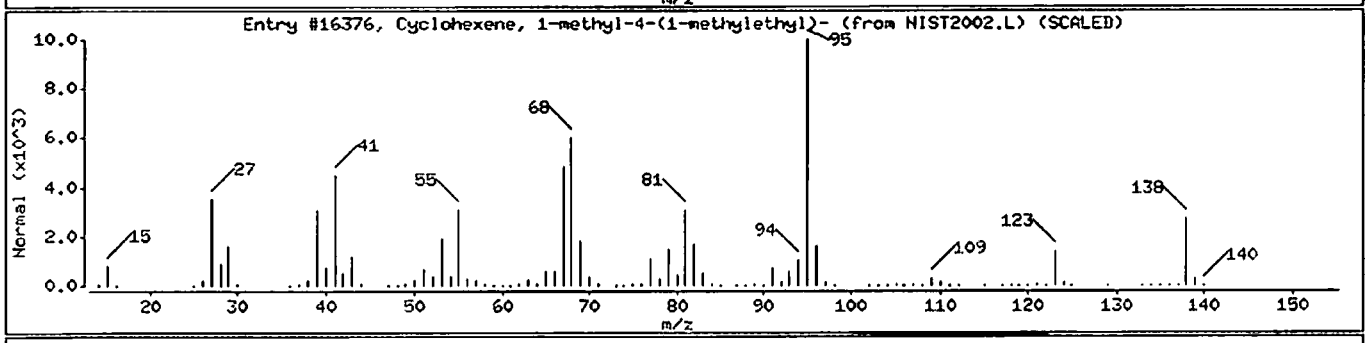
Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexene, 1-methyl-4-(1-methylethyl)-	5502-88-5	NIST2002.L	16376	96	C10H18	138





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Date : 07-NOV-2011 03:50

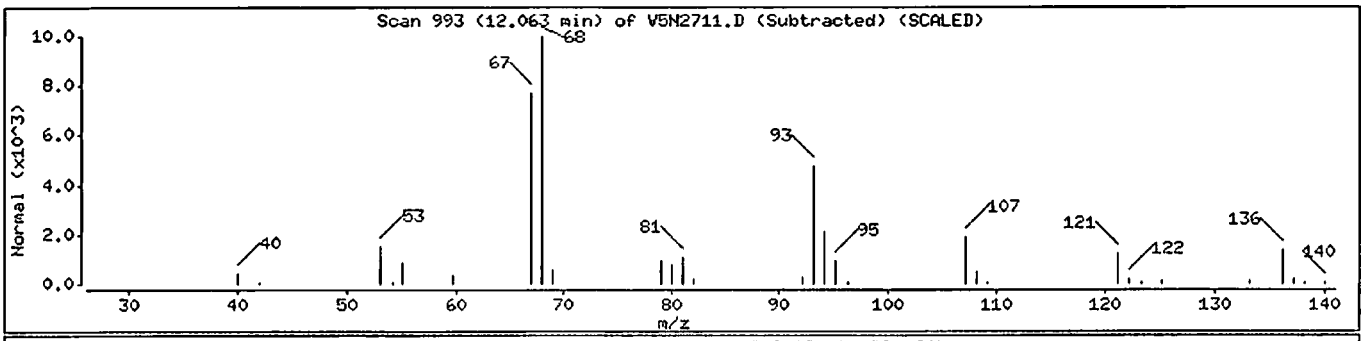
Client ID: H30R1 Instrument: V5.i

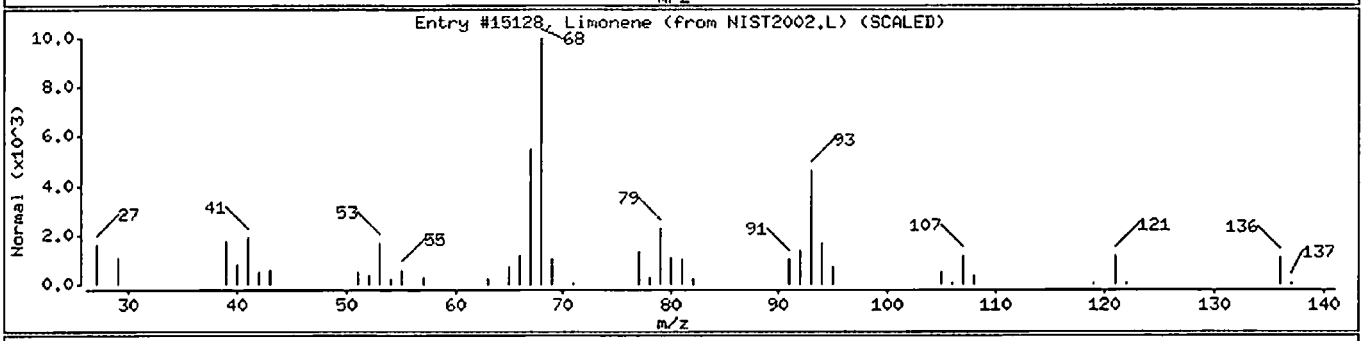
Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Hatch	CAS Number	Library	Entry	Quality	Formula	Weight
Limonene	138-86-3	NIST2002.L	15128	91	C10H16	136





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Date : 07-NOV-2011 03:50

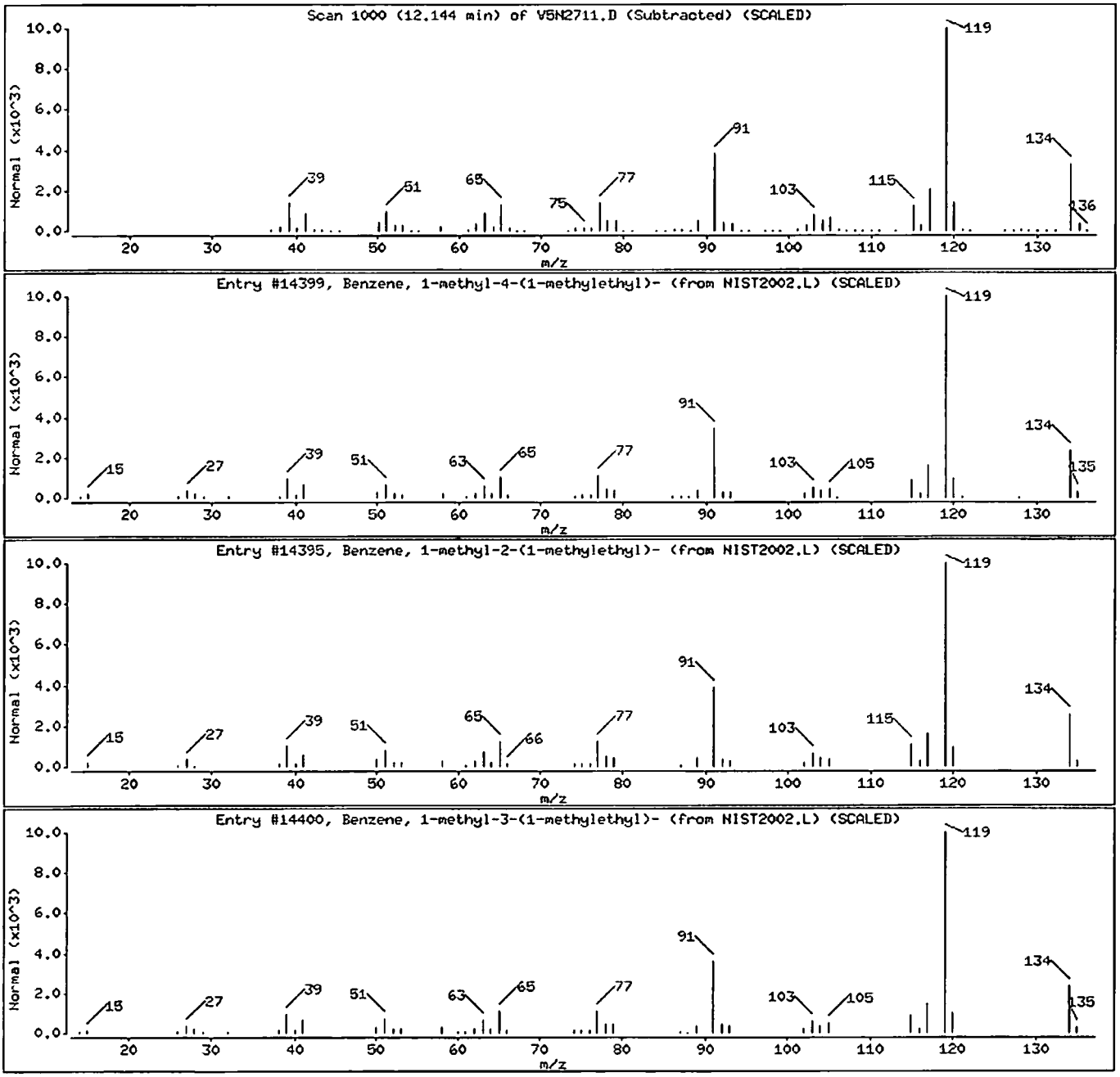
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-methyl-4-(1-methylethyl)-	99-87-6	NIST2002.L	14399	97	C10H14	134
Benzene, 1-methyl-2-(1-methylethyl)-	527-84-4	NIST2002.L	14395	96	C10H14	134
Benzene, 1-methyl-3-(1-methylethyl)-	535-77-3	NIST2002.L	14400	96	C10H14	134



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Date : 07-NOV-2011 03:50

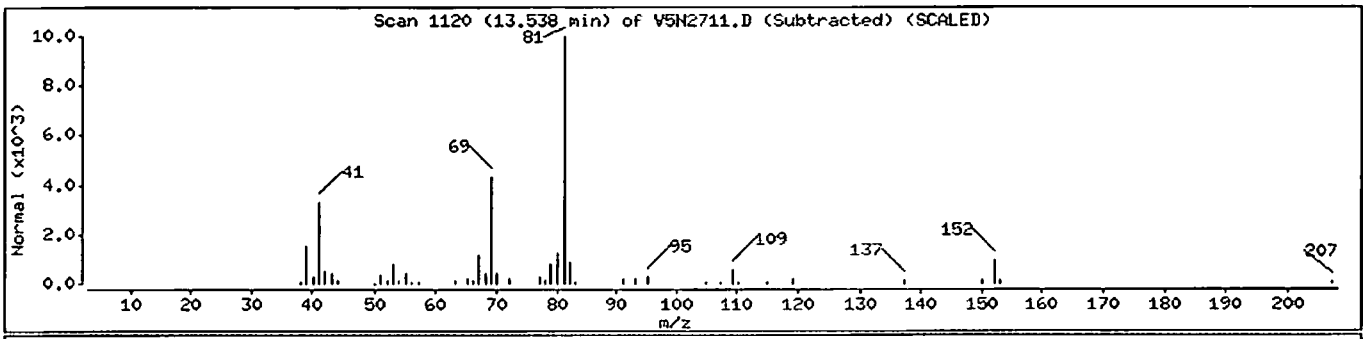
Client ID: H30R1 Instrument: V5.i

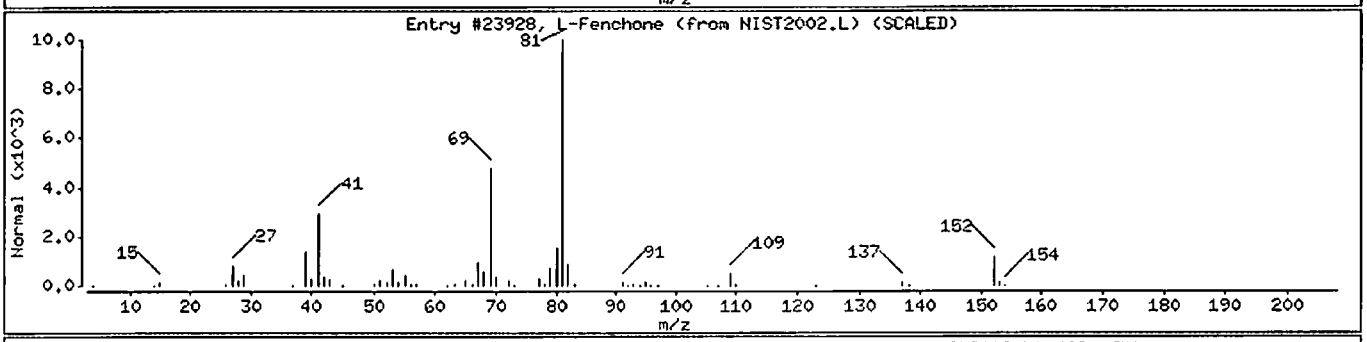
Sample Info: 5G,K2198-10C,,62569

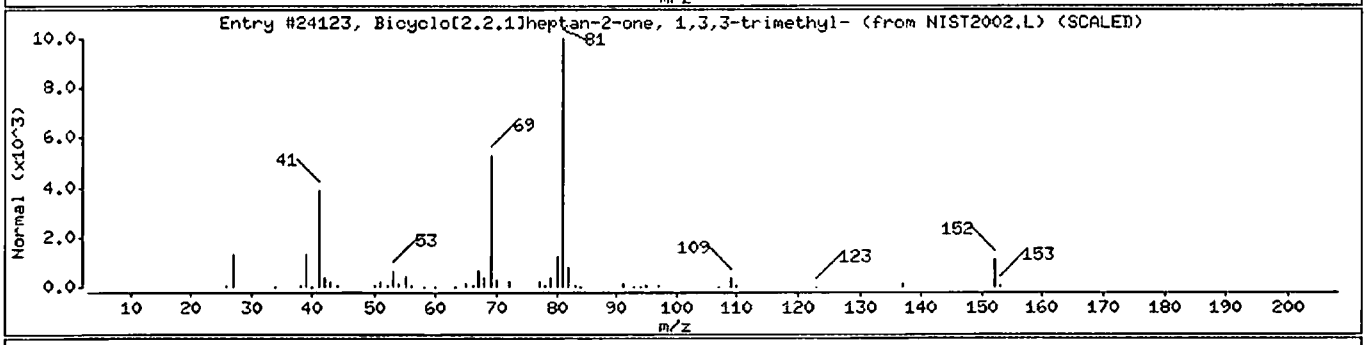
Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
L-Fenchone	126-21-6	NIST2002.L	23928	94	C10H16O	152
Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet	1195-79-5	NIST2002.L	24123	91	C10H16O	152







Data File: \\avogadro\organics\V5.I\111106.B\V5N2711.D

Date : 07-NOV-2011 03:50

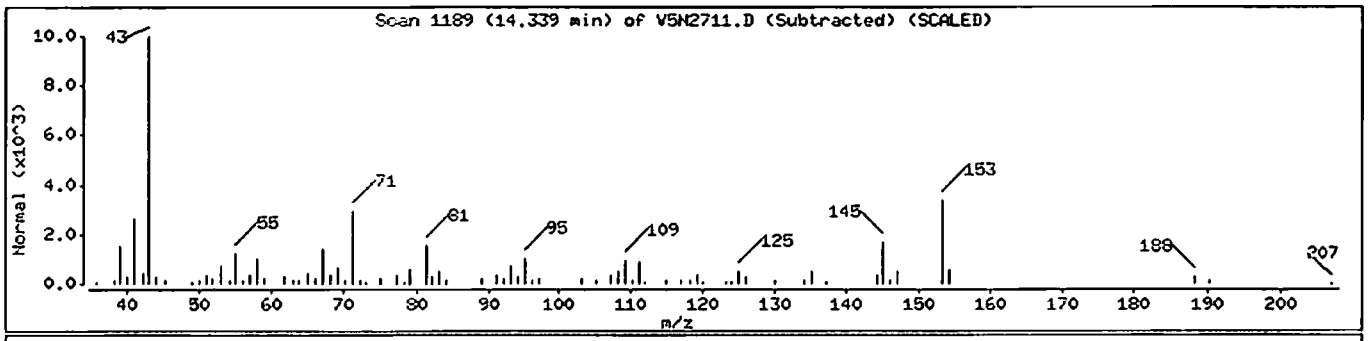
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Unknown			0	0		0



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Date : 07-NOV-2011 03:50

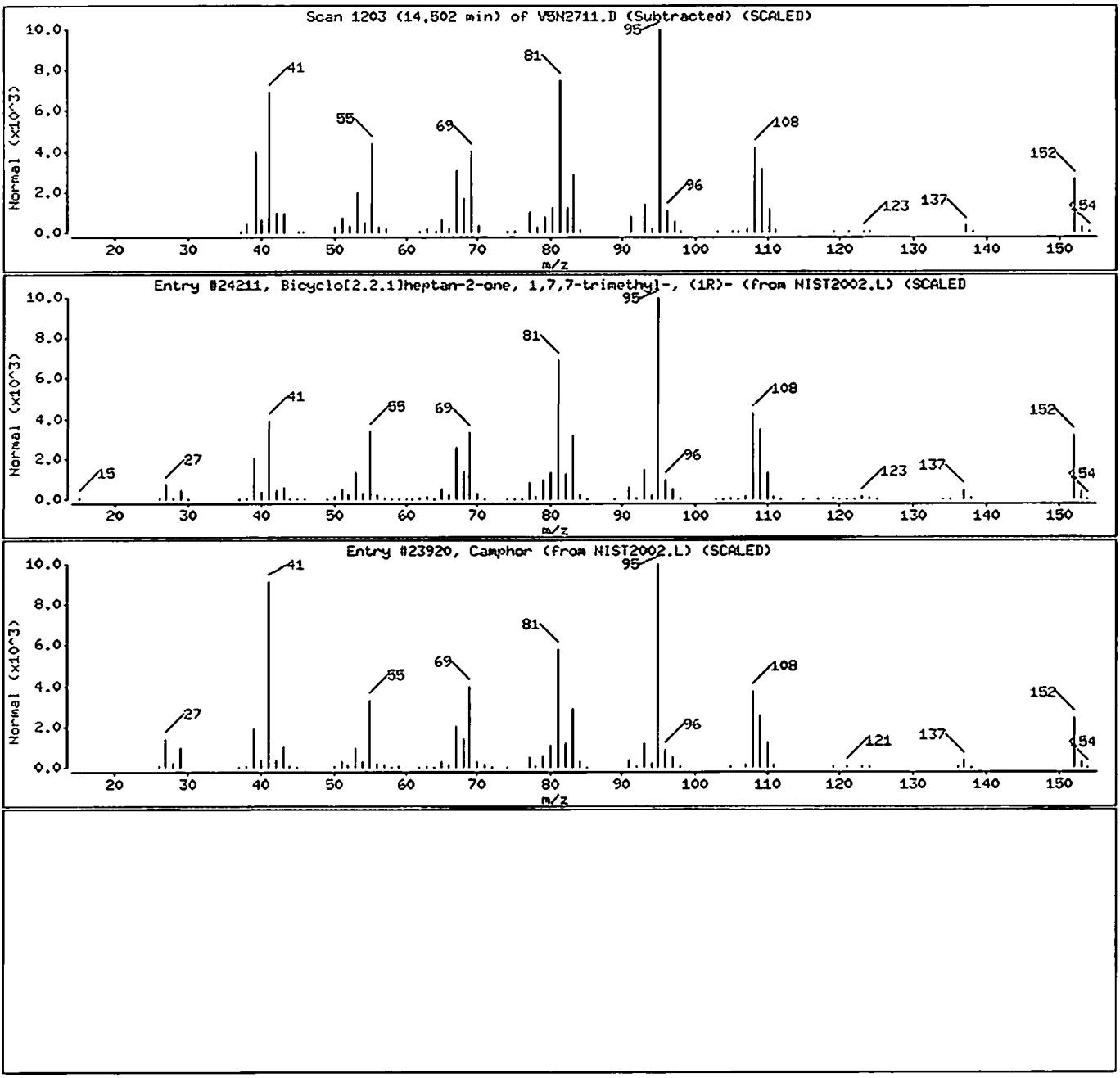
Client ID: H30R1 Instrument: V5.i

Sample Info: 5C,K2198-10C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet	464-49-3	NIST2002.L	24211	97	C10H16O	152
Camphor	76-22-2	NIST2002.L	23920	97	C10H16O	152



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-11C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2712.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 38 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	8.1	U
74-87-3	Chloromethane	8.1	U
75-01-4	Vinyl chloride	8.1	U
74-83-9	Bromomethane	8.1	U
75-00-3	Chloroethane	8.1	U
75-69-4	Trichlorofluoromethane	8.1	U
75-35-4	1,1-Dichloroethene	8.1	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	8.1	U
67-64-1	Acetone	16	U
75-15-0	Carbon disulfide	8.1	U
79-20-9	Methyl acetate	8.1	U
75-09-2	Methylene chloride	8.1	U
156-60-5	trans-1,2-Dichloroethene	8.1	U
1634-04-4	Methyl tert-butyl ether	8.1	U
75-34-3	1,1-Dichloroethane	8.1	U
156-59-2	cis-1,2-Dichloroethene	8.1	U
78-93-3	2-Butanone	16	U
74-97-5	Bromochloromethane	8.1	U
67-66-3	Chloroform	8.1	U
71-55-6	1,1,1-Trichloroethane	8.1	U
110-82-7	Cyclohexane	8.1	U
56-23-5	Carbon tetrachloride	8.1	U
71-43-2	Benzene	8.1	U
107-06-2	1,2-Dichloroethane	8.1	U
123-91-1	1,4-Dioxane	160	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-11C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2712.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 38 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	8.1	U
108-87-2	Methylcyclohexane	8.1	U
78-87-5	1,2-Dichloropropane	8.1	U
75-27-4	Bromodichloromethane	8.1	U
10061-01-5	cis-1,3-Dichloropropene	8.1	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	8.1	U
10061-02-6	trans-1,3-Dichloropropene	8.1	U
79-00-5	1,1,2-Trichloroethane	8.1	U
127-18-4	Tetrachloroethene	8.1	U
591-78-6	2-Hexanone	16	U
124-48-1	Dibromochloromethane	8.1	U
106-93-4	1,2-Dibromoethane	8.1	U
108-90-7	Chlorobenzene	8.1	U
100-41-4	Ethylbenzene	8.1	U
179601-23-1	m,p-Xylene	8.1	U
95-47-6	o-Xylene	8.1	U
100-42-5	Styrene	8.1	U
75-25-2	Bromoform	8.1	U
98-82-8	Isopropylbenzene	8.1	U
79-34-5	1,1,2,2-Tetrachloroethane	8.1	U
541-73-1	1,3-Dichlorobenzene	8.1	U
106-46-7	1,4-Dichlorobenzene	8.1	U
95-50-1	1,2-Dichlorobenzene	8.1	U
96-12-8	1,2-Dibromo-3-chloropropane	8.1	U
120-82-1	1,2,4-Trichlorobenzene	8.1	U
87-61-6	1,2,3-Trichlorobenzene	8.1	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30S4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-11C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2712.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 38 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	1195-79-5	Bicyclo[2.2.1]heptan-2-one,	13.531	10	NJ
02	464-48-2	Bicyclo[2.2.1]heptan-2-one,	14.495	110	NJ
	E96679[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2712.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2712.D
Lab Smp Id: K2198-11C Client Smp ID: H30S4
Inj Date : 07-NOV-2011 04:17
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-11C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 44
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.161	2.173	(0.342)	137162	44.1910	44
$ 80 Chloroethane-d5	69	2.591	2.603	(0.410)	102461	51.0346	51(Q)
$ 81 1,1-Dichloroethene-d2	65	3.357	3.369	(0.531)	33159	51.5072	52(Q)
$ 82 2-Butanone-d5	46	5.076	5.076	(0.803)	54148	62.5537	63
$ 83 Chloroform-d	84	5.378	5.390	(0.851)	181334	48.7635	49(Q)
$ 23 1,2-Dichloroethane-d4	65	5.889	5.901	(0.932)	108493	54.0535	54
$ 84 Benzene-d6	84	5.912	5.912	(0.627)	333524	60.1751	60
* 26 1,4-Difluorobenzene	114	6.319	6.319	(1.000)	325970	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.725	6.725	(0.713)	130690	57.0569	57
$ 94 1,4-Dioxane-d8	96	6.911	6.911	(1.094)	23060	1207.08	1200
$ 33 Toluene-d8	98	7.840	7.840	(0.831)	263146	51.4305	51
$ 86 trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	95003	55.0881	55
$ 87 2-Hexanone-d5	63	8.595	8.572	(0.911)	30779	69.8452	70(Q)
* 42 Chlorobenzene-d5	117	9.431	9.431	(1.000)	209317	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.929	10.929	(1.159)	73641	49.1198	49
* 78 1,4-Dichlorobenzene-d4	152	12.183	12.172	(1.000)	60318	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.636	12.625	(1.037)	55519	49.2703	49(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2712.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2712.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2712.D
Lab Smp Id: K2198-11C Client Smp ID: H30S4
Inj Date : 07-NOV-2011 04:17
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-11C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 44
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 78 1,4-Dichlorobenzene-d4	12.184	581834	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet				CAS #: 1195-79-5			
13.531	72437	6.22490260	6.2	91	NIST2002.L	24121	78
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet				CAS #: 464-46-2			
14.495	779422	66.9797348	67	98	NIST2002.L	24208	78

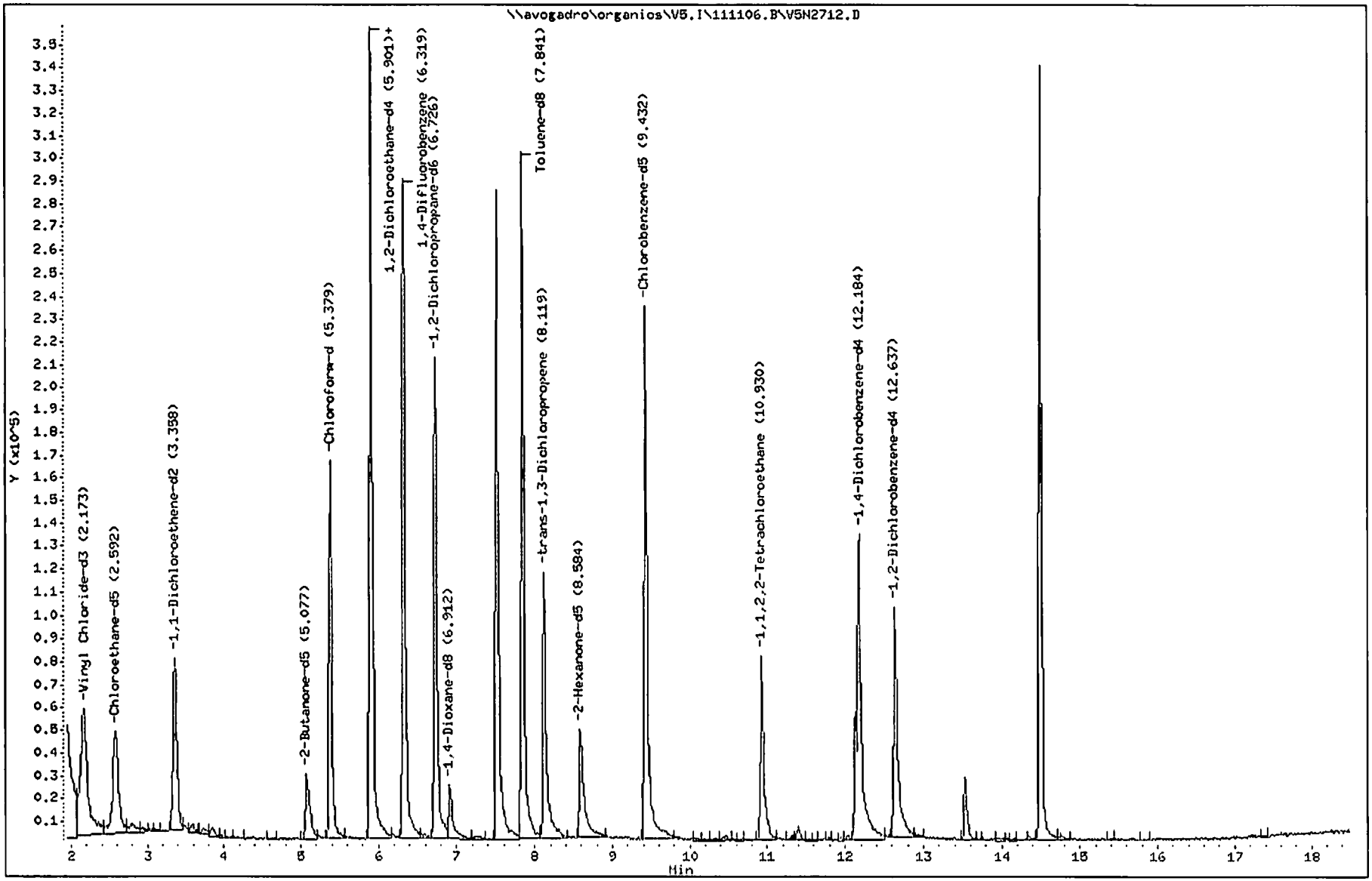
Data File: \\avogadro\organics\V5.I\111106.B\V5N2712.D
Date : 07-NOV-2011 04:17
Client ID: H30S4
Sample Info: 5C,K2198-11C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111106.B\V5N2712.D

Date : 07-NOV-2011 04:17

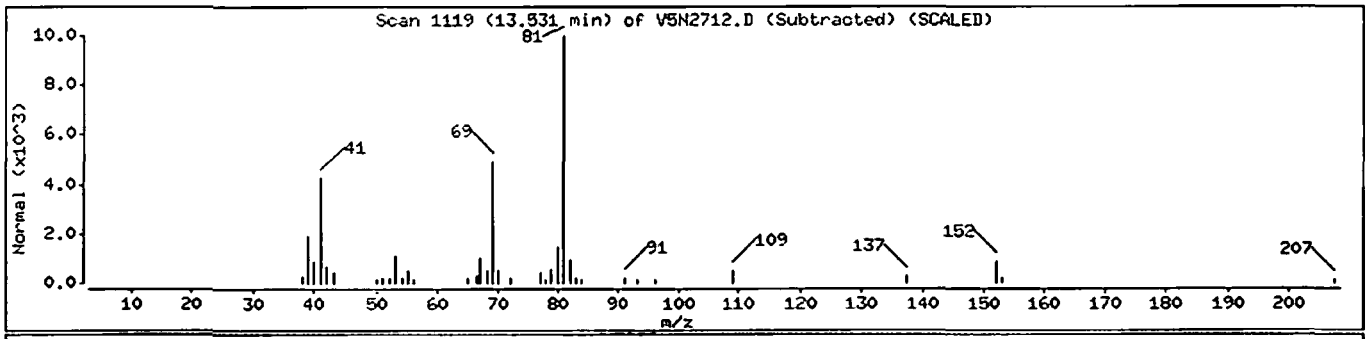
Client ID: H30S4 Instrument: V5.i

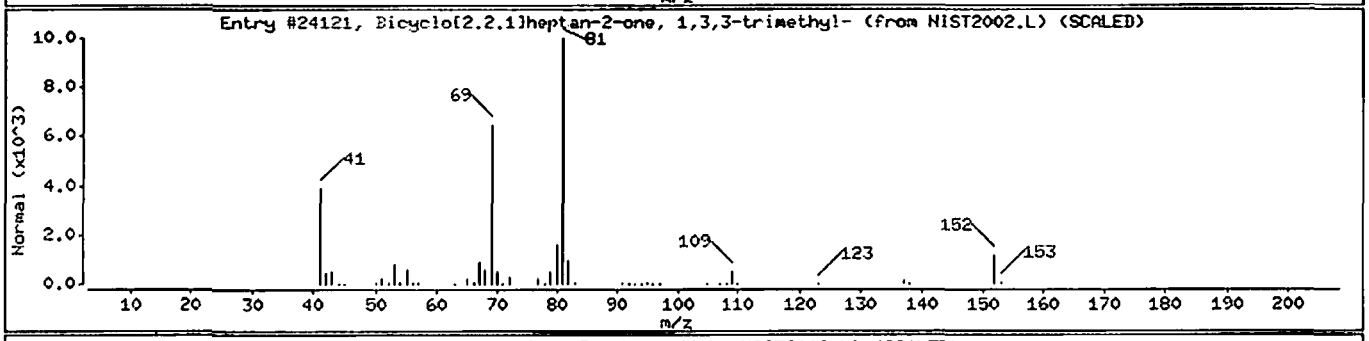
Sample Info: 5G,K2198-11C,,62569

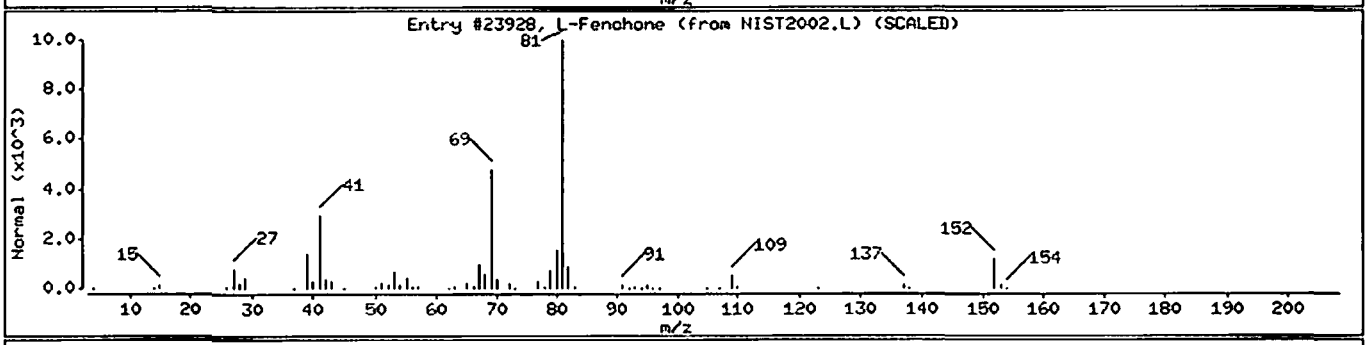
Operator: SRC: LIHS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimet	1195-79-5	NIST2002.L	24121	91	C10H16O	152
L-Fenchone	126-21-6	NIST2002.L	23928	90	C10H16O	152







Data File: \\avogadro\organics\V5.I\111106.B\V5N2712.D

Date : 07-NOV-2011 04:17

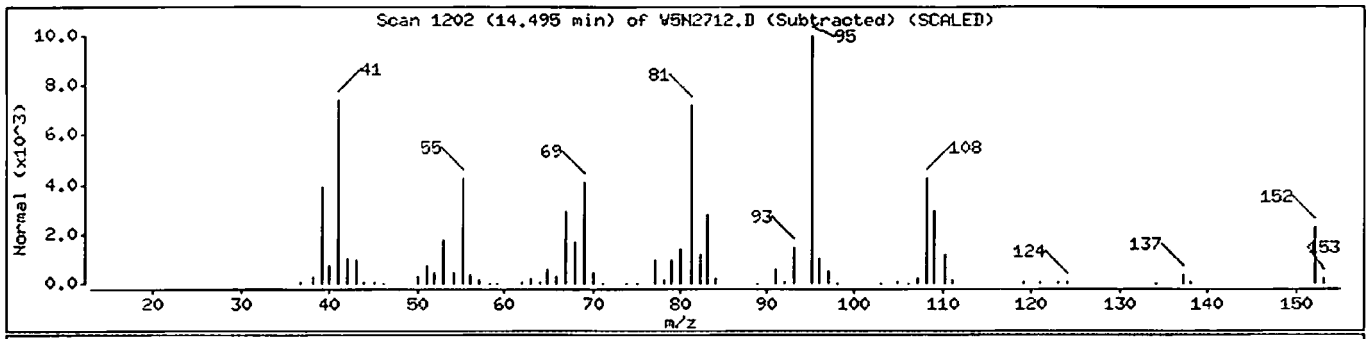
Client ID: H30S4 Instrument: V5.i

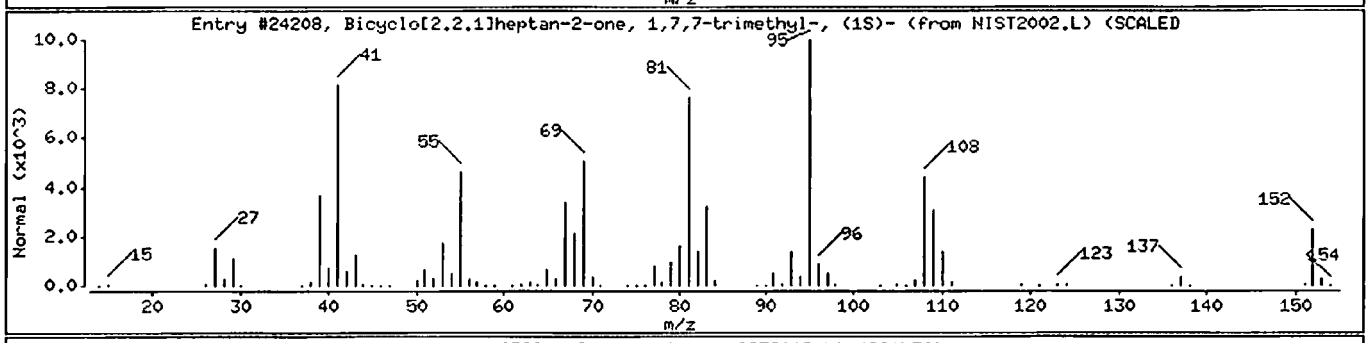
Sample Info: 5G,K2198-11C,,62569

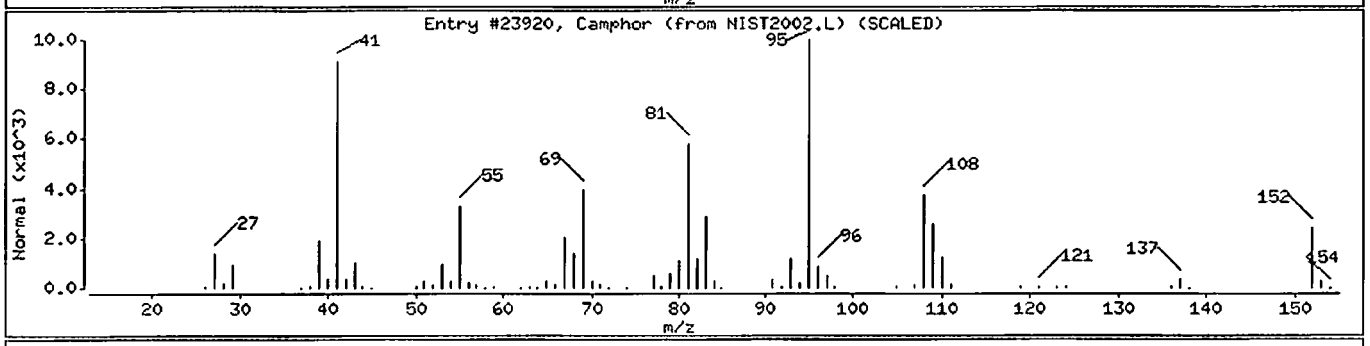
Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimet	464-48-2	NIST2002.L	24208	98	C10H16O	152
Camphor	76-22-2	NIST2002.L	23920	98	C10H16O	152







1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-12C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2713.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 14 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.8	U
74-87-3	Chloromethane	5.8	U
75-01-4	Vinyl chloride	5.8	U
74-83-9	Bromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
75-69-4	Trichlorofluoromethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.8	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	5.8	U
79-20-9	Methyl acetate	5.8	U
75-09-2	Methylene chloride	5.8	U
156-60-5	trans-1,2-Dichloroethene	5.8	U
1634-04-4	Methyl tert-butyl ether	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	5.8	U
67-66-3	Chloroform	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
110-82-7	Cyclohexane	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
71-43-2	Benzene	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-12C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2713.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 14 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.8	U
108-87-2	Methylcyclohexane	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
75-27-4	Bromodichloromethane	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	5.8	U
106-93-4	1,2-Dibromoethane	5.8	U
108-90-7	Chlorobenzene	5.8	U
100-41-4	Ethylbenzene	5.8	U
179601-23-1	m,p-Xylene	5.8	U
95-47-6	o-Xylene	5.8	U
100-42-5	Styrene	5.8	U
75-25-2	Bromoform	5.8	U
98-82-8	Isopropylbenzene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
541-73-1	1,3-Dichlorobenzene	5.8	U
106-46-7	1,4-Dichlorobenzene	5.8	U
95-50-1	1,2-Dichlorobenzene	5.8	U
96-12-8	1,2-Dibromo-3-chloropropane	5.8	U
120-82-1	1,2,4-Trichlorobenzene	5.8	U
87-61-6	1,2,3-Trichlorobenzene	5.8	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30S5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-12C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2713.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 14 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	76-22-2	Camphor	14.506	19	NJ
	E966796[1]	Total Alkanes	N/A	.	

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2713.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2713.D
Lab Smp Id: K2198-12C Client Smp ID: H30S5
Inj Date : 07-NOV-2011 04:45
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-12C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 45
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.161	2.173	(0.342)	125409	41.5189	42
$ 80 Chloroethane-d5	69	2.590	2.603	(0.410)	92025	47.1009	47(Q)
$ 81 1,1-Dichloroethene-d2	65	3.357	3.369	(0.531)	28935	46.1856	46(Q)
$ 82 2-Butanone-d5	46	5.076	5.076	(0.803)	55559	65.9541	66
$ 83 Chloroform-d	84	5.378	5.390	(0.851)	179419	49.5794	50(Q)
$ 23 1,2-Dichloroethane-d4	65	5.889	5.901	(0.932)	97354	49.8418	50(Q)
$ 84 Benzene-d6	84	5.912	5.912	(0.627)	320702	54.4543	54
* 26 1,4-Difluorobenzene	114	6.318	6.319	(1.000)	317220	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.725	6.725	(0.713)	126173	51.8409	52
$ 94 1,4-Dioxane-d8	96	6.910	6.911	(1.094)	18969	1020.32	1000
$ 33 Toluene-d8	98	7.840	7.840	(0.831)	269106	49.4980	49
$ 86 trans-1,3-Dichloropropene-d4	79	8.118	8.119	(0.861)	93894	51.2387	51
$ 87 2-Hexanone-d5	63	8.583	8.572	(0.910)	28580	61.0358	61
* 42 Chlorobenzene-d5	117	9.431	9.431	(1.000)	222415	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.929	10.929	(1.159)	75433	47.3521	47
* 78 1,4-Dichlorobenzene-d4	152	12.183	12.172	(1.000)	66365	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.636	12.625	(1.037)	58174	46.9224	47(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2713.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2713.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2713.D
Lab Smp Id: K2198-12C Client Smp ID: H30S5
Inj Date : 07-NOV-2011 04:45
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-12C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 45
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 78 1,4-Dichlorobenzene-d4	12.183	504812	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Camphor				CAS #: 76-22-2			
14.506	162638	16.1087211	16	87	NIST2002.L	23920	78

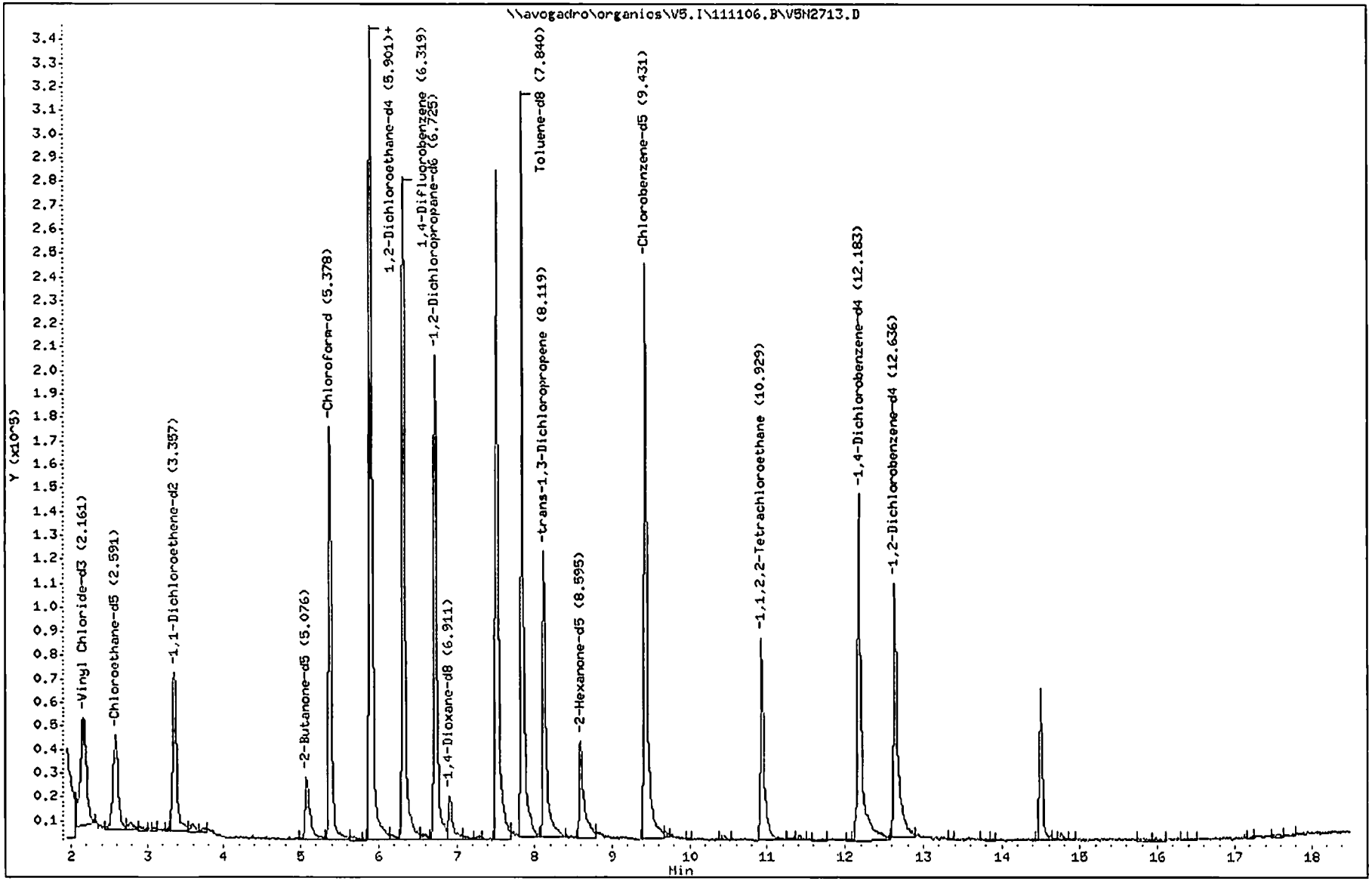
Data File: \\avogadro\organics\V5.I\111106.B\V5N2713.D
Date : 07-NOV-2011 04:45
Client ID: H30S5
Sample Info: 5C,K2198-12C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111106.B\V5N2713.D

Date : 07-NOV-2011 04:45

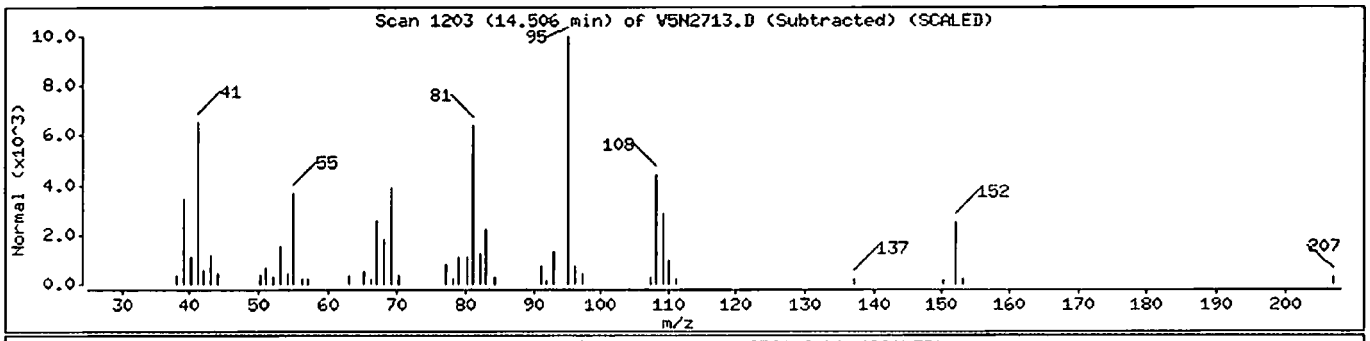
Client ID: H30S5 Instrument: V5.i

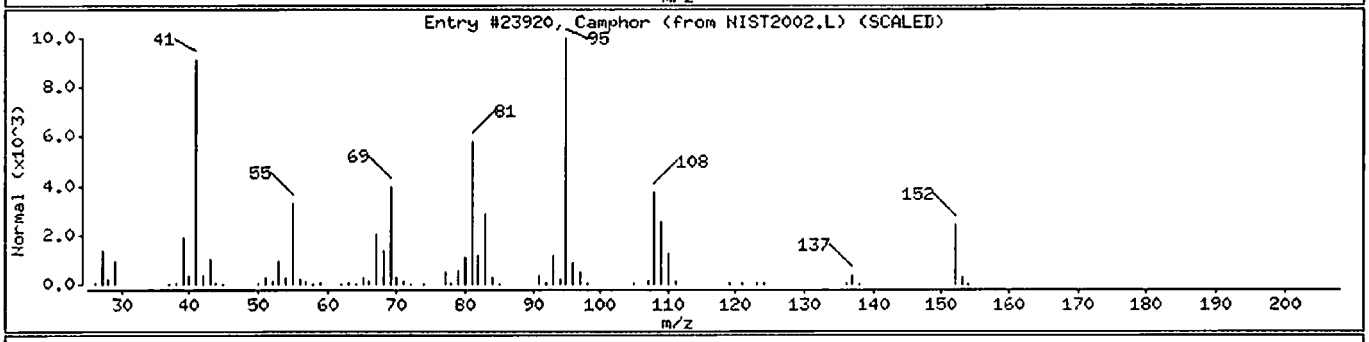
Sample Info: 5G,K2198-12C,,62569

Operator: SRC: LIMS

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Camphor	76-22-2	NIST2002.L	23920	87	C10H16O	152





1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S8

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-13C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2714.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 33 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	7.5	U
74-87-3	Chloromethane	7.5	U
75-01-4	Vinyl chloride	7.5	U
74-83-9	Bromomethane	7.5	U
75-00-3	Chloroethane	7.5	U
75-69-4	Trichlorofluoromethane	7.5	U
75-35-4	1,1-Dichloroethene	7.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.5	U
67-64-1	Acetone	15	U
75-15-0	Carbon disulfide	7.5	U
79-20-9	Methyl acetate	7.5	U
75-09-2	Methylene chloride	7.5	U
156-60-5	trans-1,2-Dichloroethene	7.5	U
1634-04-4	Methyl tert-butyl ether	7.5	U
75-34-3	1,1-Dichloroethane	7.5	U
156-59-2	cis-1,2-Dichloroethene	7.5	U
78-93-3	2-Butanone	15	U
74-97-5	Bromochloromethane	7.5	U
67-66-3	Chloroform	7.5	U
71-55-6	1,1,1-Trichloroethane	7.5	U
110-82-7	Cyclohexane	7.5	U
56-23-5	Carbon tetrachloride	7.5	U
71-43-2	Benzene	7.5	U
107-06-2	1,2-Dichloroethane	7.5	U
123-91-1	1,4-Dioxane	150	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S8

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-13C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2714.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 33 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	7.5	U
108-87-2	Methylcyclohexane	7.5	U
78-87-5	1,2-Dichloropropane	7.5	U
75-27-4	Bromodichloromethane	7.5	U
10061-01-5	cis-1,3-Dichloropropene	7.5	U
108-10-1	4-Methyl-2-pentanone	15	U
108-88-3	Toluene	7.5	U
10061-02-6	trans-1,3-Dichloropropene	7.5	U
79-00-5	1,1,2-Trichloroethane	7.5	U
127-18-4	Tetrachloroethene	7.5	U
591-78-6	2-Hexanone	15	U
124-48-1	Dibromochloromethane	7.5	U
106-93-4	1,2-Dibromoethane	7.5	U
108-90-7	Chlorobenzene	7.5	U
100-41-4	Ethylbenzene	7.5	U
179601-23-1	m,p-Xylene	7.5	U
95-47-6	o-Xylene	7.5	U
100-42-5	Styrene	7.5	U
75-25-2	Bromoform	7.5	U
98-82-8	Isopropylbenzene	7.5	U
79-34-5	1,1,2,2-Tetrachloroethane	7.5	U
541-73-1	1,3-Dichlorobenzene	7.5	U
106-46-7	1,4-Dichlorobenzene	7.5	U
95-50-1	1,2-Dichlorobenzene	7.5	U
96-12-8	1,2-Dibromo-3-chloropropane	7.5	U
120-82-1	1,2,4-Trichlorobenzene	7.5	U
87-61-6	1,2,3-Trichlorobenzene	7.5	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30S8

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-13C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2714.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 33 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2714.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2714.D
Lab Smp Id: K2198-13C Client Smp ID: H30S8
Inj Date : 07-NOV-2011 05:12
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-13C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 46
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.167	2.173	(0.343)	101553	39.4159	39
$ 80 Chloroethane-d5	69	2.597	2.603	(0.411)	76475	45.8886	46(Q)
$ 81 1,1-Dichloroethene-d2	65	3.364	3.369	(0.532)	24262	45.4017	45(Q)
$ 82 2-Butanone-d5	46	5.082	5.076	(0.804)	46145	64.2205	64
$ 83 Chloroform-d	84	5.384	5.390	(0.851)	143661	46.5408	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.895	5.901	(0.932)	81233	48.7566	49(Q)
$ 84 Benzene-d6	84	5.907	5.912	(0.626)	269816	49.4150	49
* 26 1,4-Difluorobenzene	114	6.325	6.319	(1.000)	270582	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.731	6.725	(0.713)	106799	47.3297	47
$ 94 1,4-Dioxane-d8	96	6.917	6.911	(1.094)	14650	923.831	920
$ 33 Toluene-d8	98	7.846	7.840	(0.831)	232902	46.2060	46
$ 86 trans-1,3-Dichloropropene-d4	79	8.125	8.119	(0.861)	76235	44.8720	45
$ 87 2-Hexanone-d5	63	8.601	8.572	(0.911)	21909	50.4668	50(Q)
* 42 Chlorobenzene-d5	117	9.437	9.431	(1.000)	206207	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.935	10.929	(1.159)	69506	47.0609	47
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.172	(1.000)	66131	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.642	12.625	(1.038)	56215	45.5027	46(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2714.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2714.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2714.D
Lab Smp Id: K2198-13C Client Smp ID: H30S8
Inj Date : 07-NOV-2011 05:12
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-13C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 46
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

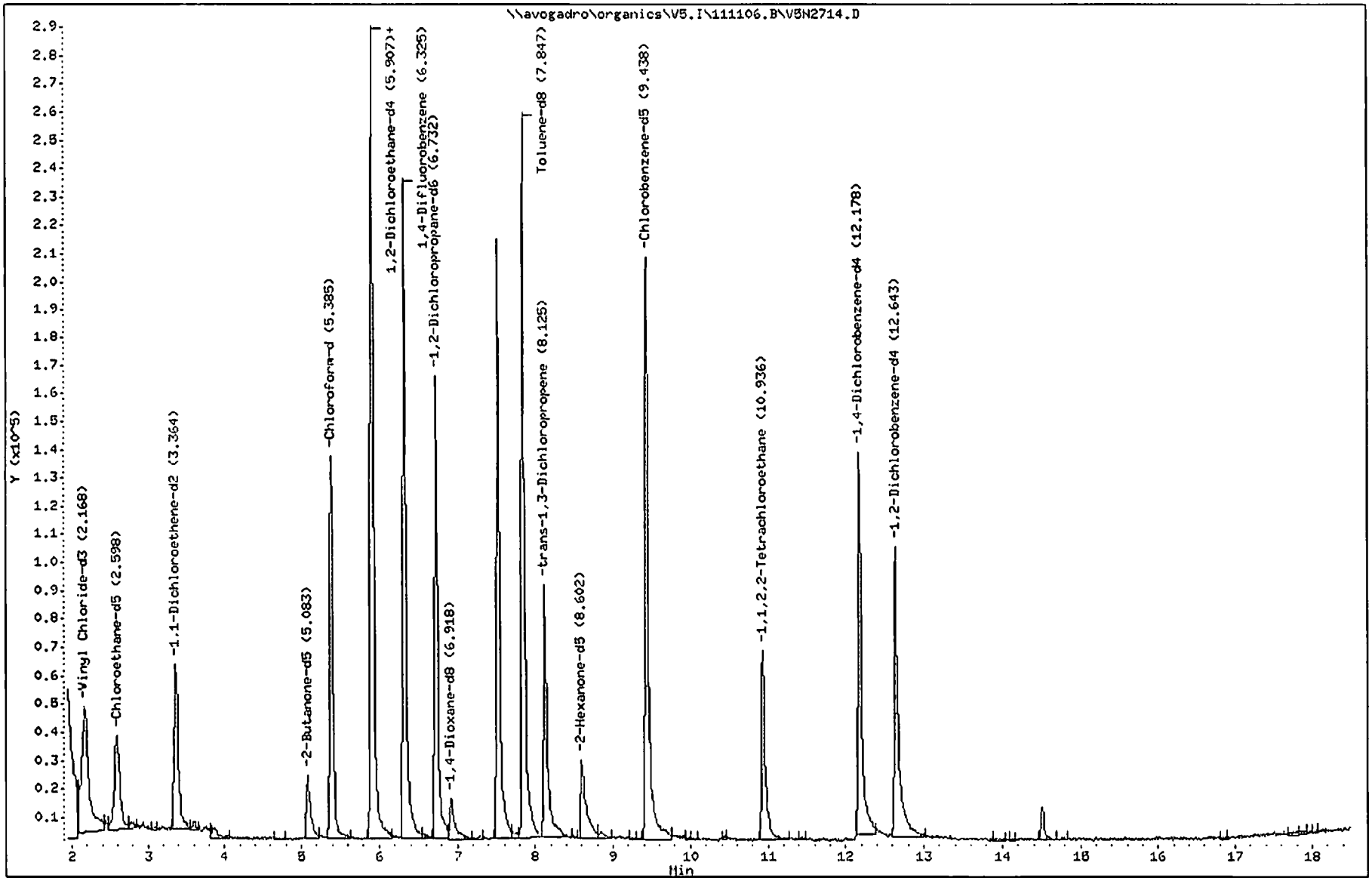
Data File: \\avogadro\organics\V5.I\111106.B\V5N2714.D
Date : 07-NOV-2011 05:12
Client ID: H30S8
Sample Info: 5G,K2198-13C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S9

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-14C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2715.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 34 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	7.3	U
74-87-3	Chloromethane	7.3	U
75-01-4	Vinyl chloride	7.3	U
74-83-9	Bromomethane	7.3	U
75-00-3	Chloroethane	7.3	U
75-69-4	Trichlorofluoromethane	7.3	U
75-35-4	1,1-Dichloroethene	7.3	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.3	U
67-64-1	Acetone	15	U
75-15-0	Carbon disulfide	7.3	U
79-20-9	Methyl acetate	7.3	U
75-09-2	Methylene chloride	7.3	U
156-60-5	trans-1,2-Dichloroethene	7.3	U
1634-04-4	Methyl tert-butyl ether	7.3	U
75-34-3	1,1-Dichloroethane	7.3	U
156-59-2	cis-1,2-Dichloroethene	7.3	U
78-93-3	2-Butanone	15	U
74-97-5	Bromochloromethane	7.3	U
67-66-3	Chloroform	7.3	U
71-55-6	1,1,1-Trichloroethane	7.3	U
110-82-7	Cyclohexane	7.3	U
56-23-5	Carbon tetrachloride	7.3	U
71-43-2	Benzene	7.3	U
107-06-2	1,2-Dichloroethane	7.3	U
123-91-1	1,4-Dioxane	150	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30S9

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-14C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2715.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 34 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	7.3	U
108-87-2	Methylcyclohexane	7.3	U
78-87-5	1,2-Dichloropropane	7.3	U
75-27-4	Bromodichloromethane	7.3	U
10061-01-5	cis-1,3-Dichloropropene	7.3	U
108-10-1	4-Methyl-2-pentanone	15	U
108-88-3	Toluene	7.3	U
10061-02-6	trans-1,3-Dichloropropene	7.3	U
79-00-5	1,1,2-Trichloroethane	7.3	U
127-18-4	Tetrachloroethene	7.3	U
591-78-6	2-Hexanone	15	U
124-48-1	Dibromochloromethane	7.3	U
106-93-4	1,2-Dibromoethane	7.3	U
108-90-7	Chlorobenzene	7.3	U
100-41-4	Ethylbenzene	7.3	U
179601-23-1	m,p-Xylene	7.3	U
95-47-6	o-Xylene	7.3	U
100-42-5	Styrene	7.3	U
75-25-2	Bromoform	7.3	U
98-82-8	Isopropylbenzene	7.3	U
79-34-5	1,1,2,2-Tetrachloroethane	7.3	U
541-73-1	1,3-Dichlorobenzene	7.3	U
106-46-7	1,4-Dichlorobenzene	7.3	U
95-50-1	1,2-Dichlorobenzene	7.3	U
96-12-8	1,2-Dibromo-3-chloropropane	7.3	U
120-82-1	1,2,4-Trichlorobenzene	7.3	U
87-61-6	1,2,3-Trichlorobenzene	7.3	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30S9

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-14C

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V5N2715.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 34 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2715.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2715.D
Lab Smp Id: K2198-14C Client Smp ID: H30S9
Inj Date : 07-NOV-2011 05:39
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-14C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 47
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.200	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.168	2.173	(0.343)	104979	40.3576	39
$ 80 Chloroethane-d5	69	2.586	2.603	(0.409)	76851	45.6750	44(Q)
$ 81 1,1-Dichloroethene-d2	65	3.364	3.369	(0.532)	24623	45.6383	44(Q)
$ 82 2-Butanone-d5	46	5.083	5.076	(0.804)	53591	73.8728	71
$ 83 Chloroform-d	84	5.385	5.390	(0.851)	150175	48.1877	46(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.901	(0.932)	81357	48.3660	47(Q)
$ 84 Benzene-d6	84	5.907	5.912	(0.627)	277108	49.7131	48
* 26 1,4-Difluorobenzene	114	6.325	6.319	(1.000)	273184	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.732	6.725	(0.714)	104287	45.2718	44
$ 94 1,4-Dioxane-d8	96	6.929	6.911	(1.095)	14426	901.040	870
$ 33 Toluene-d8	98	7.847	7.840	(0.832)	240416	46.7218	45
$ 86 trans-1,3-Dichloropropene-d4	79	8.125	8.119	(0.862)	78569	45.3005	44
$ 87 2-Hexanone-d5	63	8.590	8.572	(0.911)	25433	57.3867	55
* 42 Chlorobenzene-d5	117	9.426	9.431	(1.000)	210510	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.936	10.929	(1.160)	71637	47.5123	46
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.172	(1.000)	70381	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.643	12.625	(1.038)	59460	45.2231	43(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2715.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2715.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2715.D
Lab Smp Id: K2198-14C Client Smp ID: H30S9
Inj Date : 07-NOV-2011 05:39
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-14C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 47
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

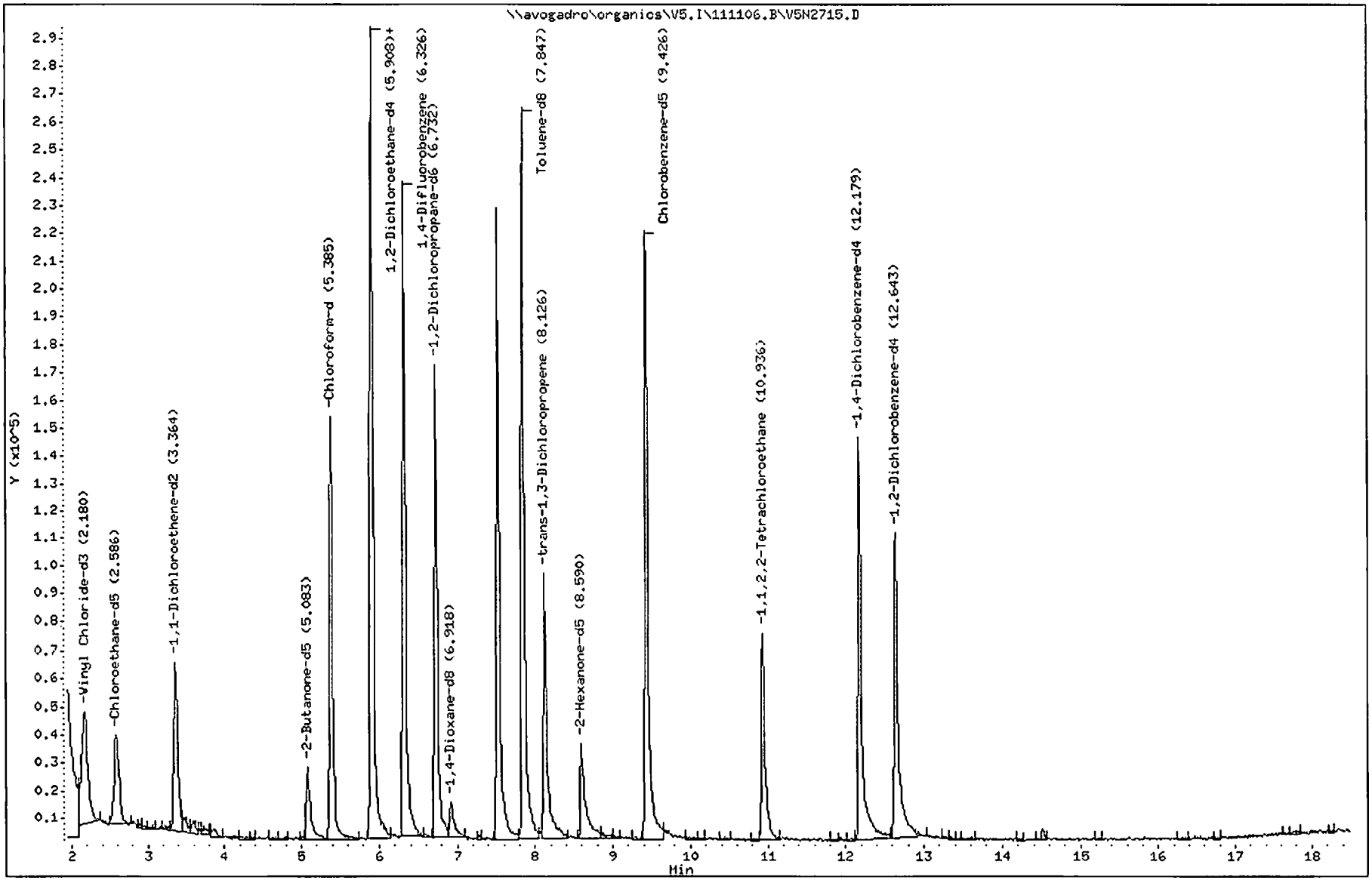
Data File: \\avogadro\organics\V5.I\111106.B\V5N2715.D
Date : 07-NOV-2011 05:39
Client ID: H30S9
Sample Info: 5G,K2198-14C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-15C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2716.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 28 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.9	U
74-87-3	Chloromethane	6.9	U
75-01-4	Vinyl chloride	6.9	U
74-83-9	Bromomethane	6.9	U
75-00-3	Chloroethane	6.9	U
75-69-4	Trichlorofluoromethane	6.9	U
75-35-4	1,1-Dichloroethene	6.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.9	U
67-64-1	Acetone	14	U
75-15-0	Carbon disulfide	6.9	U
79-20-9	Methyl acetate	6.9	U
75-09-2	Methylene chloride	6.9	U
156-60-5	trans-1,2-Dichloroethene	6.9	U
1634-04-4	Methyl tert-butyl ether	6.9	U
75-34-3	1,1-Dichloroethane	6.9	U
156-59-2	cis-1,2-Dichloroethene	6.9	U
78-93-3	2-Butanone	14	U
74-97-5	Bromochloromethane	6.9	U
67-66-3	Chloroform	6.9	U
71-55-6	1,1,1-Trichloroethane	6.9	U
110-82-7	Cyclohexane	6.9	U
56-23-5	Carbon tetrachloride	6.9	U
71-43-2	Benzene	6.9	U
107-06-2	1,2-Dichloroethane	6.9	U
123-91-1	1,4-Dioxane	140	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-15C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2716.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 28 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.9	U
108-87-2	Methylcyclohexane	6.9	U
78-87-5	1,2-Dichloropropane	6.9	U
75-27-4	Bromodichloromethane	6.9	U
10061-01-5	cis-1,3-Dichloropropene	6.9	U
108-10-1	4-Methyl-2-pentanone	14	U
108-88-3	Toluene	6.9	U
10061-02-6	trans-1,3-Dichloropropene	6.9	U
79-00-5	1,1,2-Trichloroethane	6.9	U
127-18-4	Tetrachloroethene	6.9	U
591-78-6	2-Hexanone	14	U
124-48-1	Dibromochloromethane	6.9	U
106-93-4	1,2-Dibromoethane	6.9	U
108-90-7	Chlorobenzene	6.9	U
100-41-4	Ethylbenzene	6.9	U
179601-23-1	m,p-Xylene	6.9	U
95-47-6	o-Xylene	6.9	U
100-42-5	Styrene	6.9	U
75-25-2	Bromoform	6.9	U
98-82-8	Isopropylbenzene	6.9	U
79-34-5	1,1,2,2-Tetrachloroethane	6.9	U
541-73-1	1,3-Dichlorobenzene	6.9	U
106-46-7	1,4-Dichlorobenzene	6.9	U
95-50-1	1,2-Dichlorobenzene	6.9	U
96-12-8	1,2-Dibromo-3-chloropropane	6.9	U
120-82-1	1,2,4-Trichlorobenzene	6.9	U
87-61-6	1,2,3-Trichlorobenzene	6.9	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30T0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-15C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2716.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 28 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2716.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2716.D
Lab Smp Id: K2198-15C Client Smp ID: H30T0
Inj Date : 07-NOV-2011 06:07
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-15C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 48
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.160	2.173	(0.342)	92408	38.4328	38
$ 80 Chloroethane-d5	69	2.578	2.603	(0.408)	72922	46.8875	47
$ 81 1,1-Dichloroethene-d2	65	3.356	3.369	(0.531)	22091	44.2970	44(Q)
$ 82 2-Butanone-d5	46	5.075	5.076	(0.803)	49284	73.4968	73
$ 83 Chloroform-d	84	5.377	5.390	(0.851)	134173	46.5772	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.888	5.901	(0.932)	74675	48.0275	48(Q)
$ 84 Benzene-d6	84	5.911	5.912	(0.627)	260557	52.4366	52
* 26 1,4-Difluorobenzene	114	6.317	6.319	(1.000)	252514	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.724	6.725	(0.713)	100204	48.7969	49
$ 94 1,4-Dioxane-d8	96	6.921	6.911	(1.096)	14325	967.972	970
$ 33 Toluene-d8	98	7.839	7.840	(0.831)	219573	47.8680	48
$ 86 trans-1,3-Dichloropropene-d4	79	8.129	8.119	(0.862)	73229	47.3637	47
$ 87 2-Hexanone-d5	63	8.594	8.572	(0.911)	26328	66.6410	67(Q)
* 42 Chlorobenzene-d5	117	9.430	9.431	(1.000)	187656	50.0000	
$ 39 1,1,2,2-Tetrachloroethane-d2	84	10.928	10.929	(1.159)	65351	48.6219	49
* 78 1,4-Dichlorobenzene-d4	152	12.182	12.172	(1.000)	56870	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.647	12.625	(1.038)	51343	48.3268	48(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2716.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2716.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2716.D
Lab Smp Id: K2198-15C Client Smp ID: H30T0
Inj Date : 07-NOV-2011 06:07
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-15C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 48
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

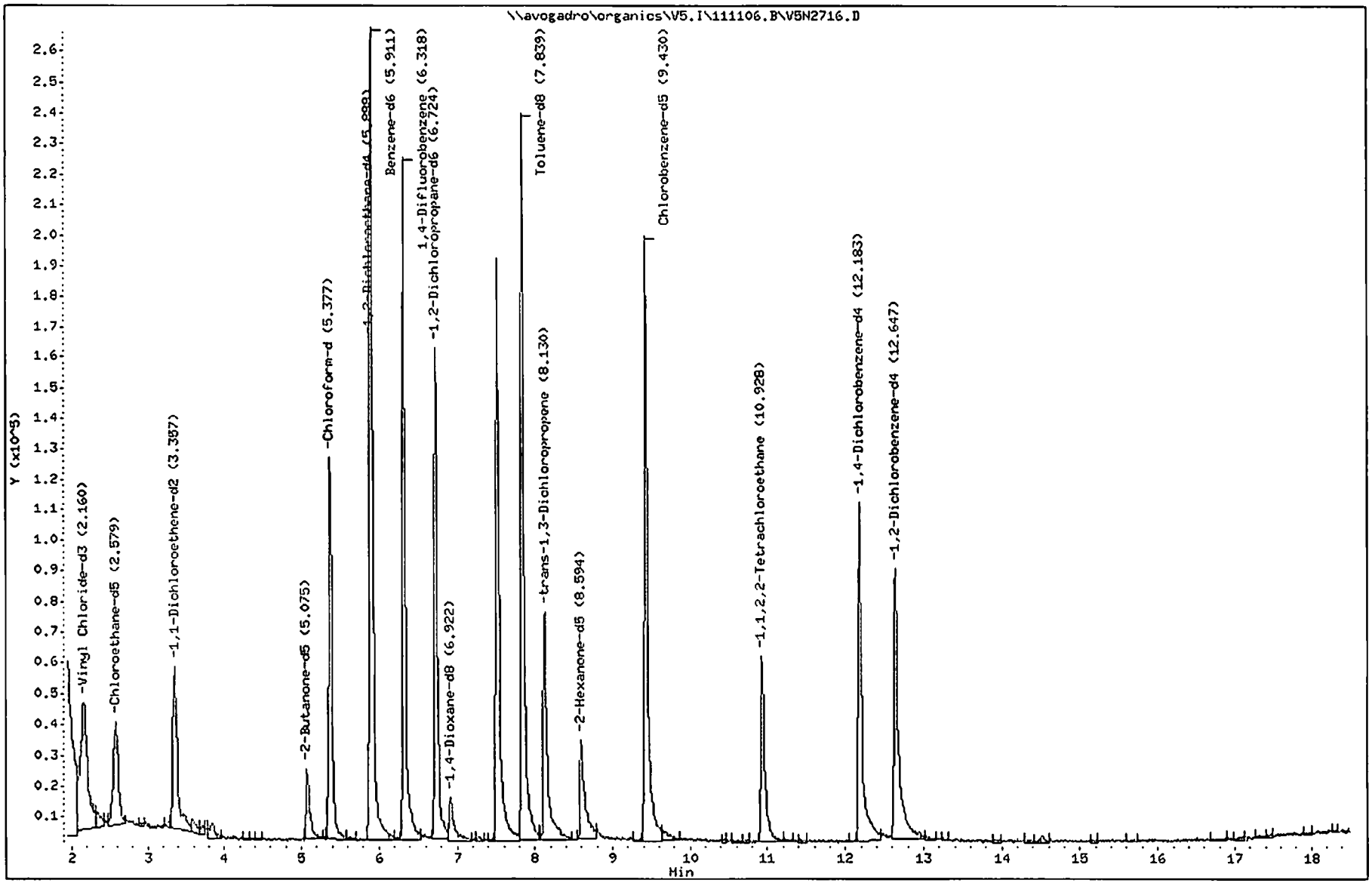
Data File: \\avogadro\organics\V5.I\111106.B\V5N2716.D
Date : 07-NOV-2011 06:07
Client ID: H30T0
Sample Info: 5C,K2198-15C,,62569

Instrument: V5.I

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-16C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2717.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 9.6 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.5	U
74-87-3	Chloromethane	5.5	U
75-01-4	Vinyl chloride	5.5	U
74-83-9	Bromomethane	5.5	U
75-00-3	Chloroethane	5.5	U
75-69-4	Trichlorofluoromethane	5.5	U
75-35-4	1,1-Dichloroethene	5.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.5	U
67-64-1	Acetone	11	U
75-15-0	Carbon disulfide	5.5	U
79-20-9	Methyl acetate	5.5	U
75-09-2	Methylene chloride	5.5	U
156-60-5	trans-1,2-Dichloroethene	5.5	U
1634-04-4	Methyl tert-butyl ether	5.5	U
75-34-3	1,1-Dichloroethane	5.5	U
156-59-2	cis-1,2-Dichloroethene	5.5	U
78-93-3	2-Butanone	11	U
74-97-5	Bromochloromethane	5.5	U
67-66-3	Chloroform	5.5	U
71-55-6	1,1,1-Trichloroethane	5.5	U
110-82-7	Cyclohexane	5.5	U
56-23-5	Carbon tetrachloride	5.5	U
71-43-2	Benzene	5.5	U
107-06-2	1,2-Dichloroethane	5.5	U
123-91-1	1,4-Dioxane	110	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-16C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2717.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 9.6 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.5	U
108-87-2	Methylcyclohexane	5.5	U
78-87-5	1,2-Dichloropropane	5.5	U
75-27-4	Bromodichloromethane	5.5	U
10061-01-5	cis-1,3-Dichloropropene	5.5	U
108-10-1	4-Methyl-2-pentanone	11	U
108-88-3	Toluene	5.5	U
10061-02-6	trans-1,3-Dichloropropene	5.5	U
79-00-5	1,1,2-Trichloroethane	5.5	U
127-18-4	Tetrachloroethene	5.5	U
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	5.5	U
106-93-4	1,2-Dibromoethane	5.5	U
108-90-7	Chlorobenzene	5.5	U
100-41-4	Ethylbenzene	5.5	U
179601-23-1	m,p-Xylene	5.5	U
95-47-6	o-Xylene	5.5	U
100-42-5	Styrene	5.5	U
75-25-2	Bromoform	5.5	U
98-82-8	Isopropylbenzene	5.5	U
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U
541-73-1	1,3-Dichlorobenzene	5.5	U
106-46-7	1,4-Dichlorobenzene	5.5	U
95-50-1	1,2-Dichlorobenzene	5.5	U
96-12-8	1,2-Dibromo-3-chloropropane	5.5	U
120-82-1	1,2,4-Trichlorobenzene	5.5	U
87-61-6	1,2,3-Trichlorobenzene	5.5	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30T1

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-16C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2717.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 9.6 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2717.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2717.D
Lab Smp Id: K2198-16C Client Smp ID: H30T1
Inj Date : 07-NOV-2011 06:34
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-16C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 49
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.173	2.173	(0.344)	117737	38.6611	39
$ 80 Chloroethane-d5	69	2.591	2.603	(0.410)	85320	43.3130	43(Q)
$ 81 1,1-Dichloroethene-d2	65	3.358	3.369	(0.531)	26118	41.3492	41(Q)
$ 82 2-Butanone-d5	46	5.076	5.076	(0.803)	79742	93.8898	94
$ 83 Chloroform-d	84	5.390	5.390	(0.853)	169109	46.3494	46(Q)
$ 23 1,2-Dichloroethane-d4	65	5.901	5.901	(0.934)	97546	49.5328	50
$ 84 Benzene-d6	84	5.913	5.912	(0.627)	322143	47.0943	47
* 26 1,4-Difluorobenzene	114	6.319	6.319	(1.000)	319828	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.726	6.725	(0.713)	123122	43.5543	44
$ 94 1,4-Dioxane-d8	96	6.923	6.911	(1.096)	15166	809.111	810
$ 33 Toluene-d8	98	7.840	7.840	(0.831)	284613	45.0722	45
$ 86 trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	102956	48.3728	48
$ 87 2-Hexanone-d5	63	8.584	8.572	(0.910)	42324	77.8212	78(Q)
* 42 Chlorobenzene-d5	117	9.431	9.431	(1.000)	258330	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.929	10.929	(1.159)	82203	44.4278	44
* 78 1,4-Dichlorobenzene-d4	152	12.172	12.172	(1.000)	98463	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.637	12.625	(1.038)	81103	44.0914	44(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2717.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2717.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2717.D
Lab Smp Id: K2198-16C Client Smp ID: H30T1
Inj Date : 07-NOV-2011 06:34
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-16C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 49
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

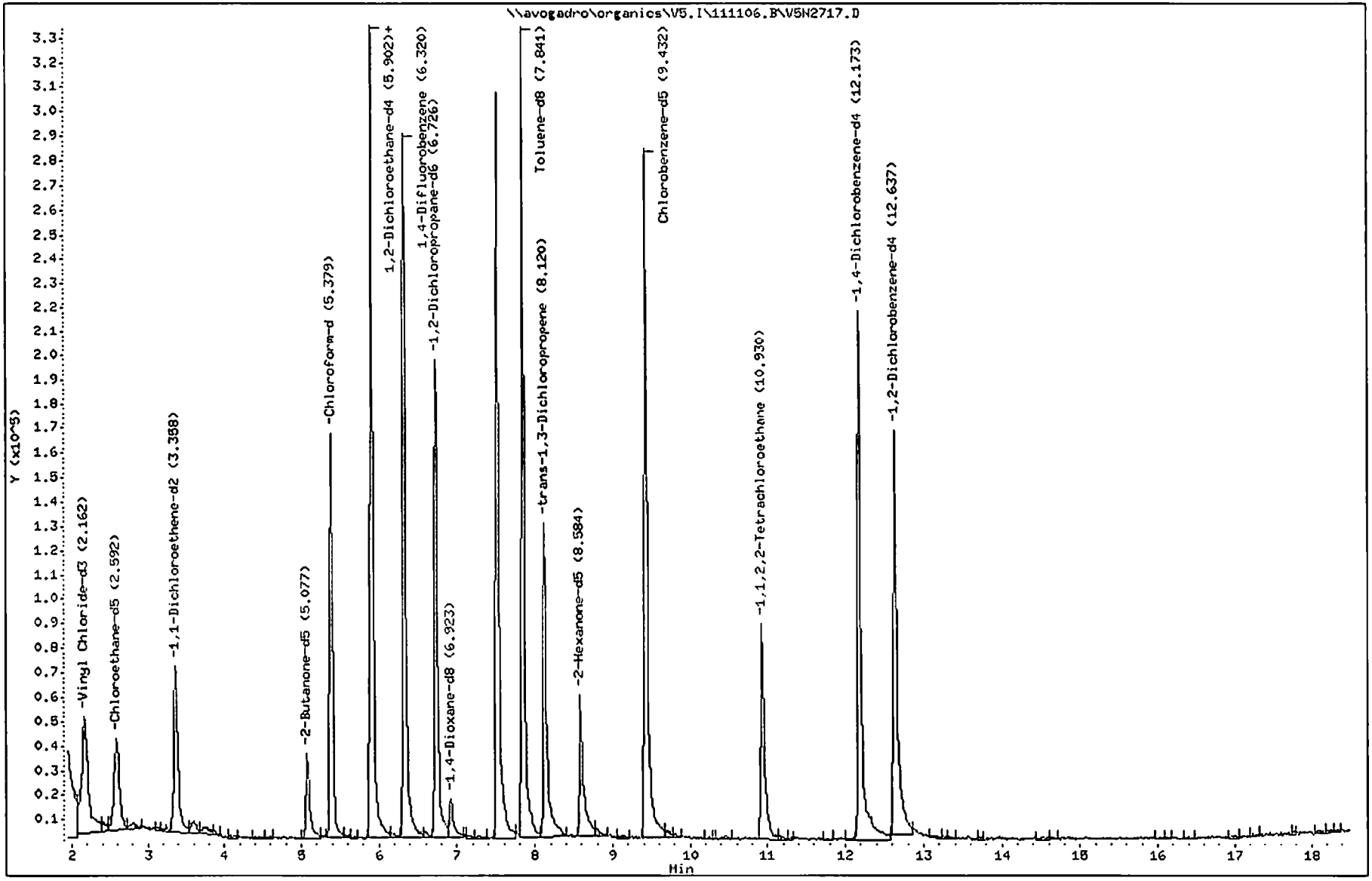
Data File: \\avogadro\organics\V5.I\111106.B\V5N2717.D
Date : 07-NOV-2011 06:34
Client ID: H30T1
Sample Info: 5G,K2198-16C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T2

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-17C

Sample wt/vol: 5.30 (g/mL) G Lab File ID: V5N2718.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 24 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.2	U
74-87-3	Chloromethane	6.2	U
75-01-4	Vinyl chloride	6.2	U
74-83-9	Bromomethane	6.2	U
75-00-3	Chloroethane	6.2	U
75-69-4	Trichlorofluoromethane	6.2	U
75-35-4	1,1-Dichloroethene	6.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.2	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	6.2	U
79-20-9	Methyl acetate	6.2	U
75-09-2	Methylene chloride	6.2	U
156-60-5	trans-1,2-Dichloroethene	6.2	U
1634-04-4	Methyl tert-butyl ether	6.2	U
75-34-3	1,1-Dichloroethane	6.2	U
156-59-2	cis-1,2-Dichloroethene	6.2	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	6.2	U
67-66-3	Chloroform	6.2	U
71-55-6	1,1,1-Trichloroethane	6.2	U
110-82-7	Cyclohexane	6.2	U
56-23-5	Carbon tetrachloride	6.2	U
71-43-2	Benzene	6.2	U
107-06-2	1,2-Dichloroethane	6.2	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T2

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-17C

Sample wt/vol: 5.30 (g/mL) G Lab File ID: V5N2718.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 24 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.2	U
108-87-2	Methylcyclohexane	6.2	U
78-87-5	1,2-Dichloropropane	6.2	U
75-27-4	Bromodichloromethane	6.2	U
10061-01-5	cis-1,3-Dichloropropene	6.2	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	6.2	U
10061-02-6	trans-1,3-Dichloropropene	6.2	U
79-00-5	1,1,2-Trichloroethane	6.2	U
127-18-4	Tetrachloroethene	6.2	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	6.2	U
106-93-4	1,2-Dibromoethane	6.2	U
108-90-7	Chlorobenzene	6.2	U
100-41-4	Ethylbenzene	6.2	U
179601-23-1	m,p-Xylene	6.2	U
95-47-6	o-Xylene	6.2	U
100-42-5	Styrene	6.2	U
75-25-2	Bromoform	6.2	U
98-82-8	Isopropylbenzene	6.2	U
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U
541-73-1	1,3-Dichlorobenzene	6.2	U
106-46-7	1,4-Dichlorobenzene	6.2	U
95-50-1	1,2-Dichlorobenzene	6.2	U
96-12-8	1,2-Dibromo-3-chloropropane	6.2	U
120-82-1	1,2,4-Trichlorobenzene	6.2	U
87-61-6	1,2,3-Trichlorobenzene	6.2	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30T2

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-17C

Sample wt/vol: 5.30 (g/mL) G Lab File ID: V5N2718.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 24 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2718.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2718.D
Lab Smp Id: K2198-17C Client Smp ID: H30T2
Inj Date : 07-NOV-2011 07:02
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-17C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 50
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.300	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.167	2.173	(0.343)	109664	36.7522	35
$ 80 Chloroethane-d5	69	2.585	2.603	(0.409)	85304	44.1972	42(Q)
$ 81 1,1-Dichlorcethene-d2	65	3.363	3.369	(0.532)	27211	43.9673	41(Q)
$ 82 2-Butanone-d5	46	5.082	5.076	(0.804)	59724	71.7692	68
$ 83 Chloroform-d	84	5.384	5.390	(0.851)	166071	46.4546	44(Q)
$ 23 1,2-Dichloroethane-d4	65	5.895	5.901	(0.932)	92104	47.7331	45
$ 84 Benzene-d6	84	5.906	5.912	(0.627)	303070	48.9920	46
* 26 1,4-Difluorobenzene	114	6.324	6.319	(1.000)	313371	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.731	6.725	(0.714)	118405	46.3157	44
$ 94 1,4-Dioxane-d8	96	6.928	6.911	(1.095)	17800	969.203	910
$ 33 Toluene-d8	98	7.846	7.840	(0.832)	269271	47.1527	44
$ 86 trans-1,3-Dichloropropene-d4	79	8.124	8.119	(0.862)	92057	47.8266	45
$ 87 2-Hexanone-d5	63	8.589	8.572	(0.911)	32538	66.1554	62(Q)
* 42 Chlorobenzene-d5	117	9.425	9.431	(1.000)	233621	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.935	10.929	(1.160)	81008	48.4125	46
* 78 1,4-Dichlorobenzene-d4	152	12.177	12.172	(1.000)	85544	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.642	12.625	(1.038)	73225	45.8205	43(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2718.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2718.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2718.D
Lab Smp Id: K2198-17C Client Smp ID: H30T2
Inj Date : 07-NOV-2011 07:02
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-17C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 50
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

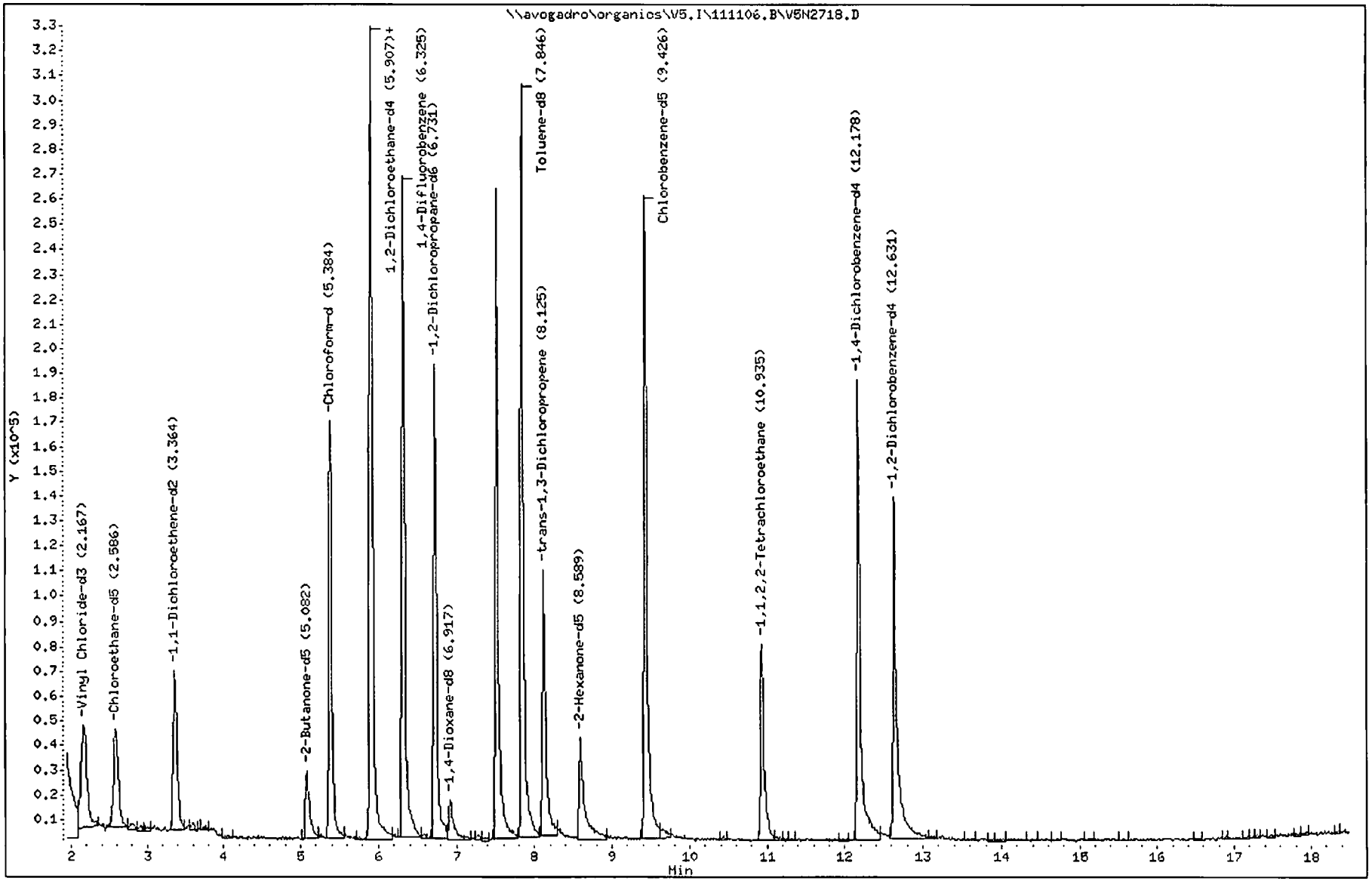
Data File: \\avogadro\organics\V5.I\111106.B\V5N2718.D
Date : 07-NOV-2011 07:02
Client ID: H30T2
Sample Info: 5C,K2198-17C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T3

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-18C

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2719.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 22 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.5	U
74-87-3	Chloromethane	6.5	U
75-01-4	Vinyl chloride	6.5	U
74-83-9	Bromomethane	6.5	U
75-00-3	Chloroethane	6.5	U
75-69-4	Trichlorofluoromethane	6.5	U
75-35-4	1,1-Dichloroethene	6.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.5	U
67-64-1	Acetone	13	U
75-15-0	Carbon disulfide	6.5	U
79-20-9	Methyl acetate	6.5	U
75-09-2	Methylene chloride	6.5	U
156-60-5	trans-1,2-Dichloroethene	6.5	U
1634-04-4	Methyl tert-butyl ether	6.5	U
75-34-3	1,1-Dichloroethane	6.5	U
156-59-2	cis-1,2-Dichloroethene	6.5	U
78-93-3	2-Butanone	13	U
74-97-5	Bromochloromethane	6.5	U
67-66-3	Chloroform	6.5	U
71-55-6	1,1,1-Trichloroethane	6.5	U
110-82-7	Cyclohexane	6.5	U
56-23-5	Carbon tetrachloride	6.5	U
71-43-2	Benzene	6.5	U
107-06-2	1,2-Dichloroethane	6.5	U
123-91-1	1,4-Dioxane	130	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T3

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-18C

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2719.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 22 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.5	U
108-87-2	Methylcyclohexane	6.5	U
78-87-5	1,2-Dichloropropane	6.5	U
75-27-4	Bromodichloromethane	6.5	U
10061-01-5	cis-1,3-Dichloropropene	6.5	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	6.5	U
10061-02-6	trans-1,3-Dichloropropene	6.5	U
79-00-5	1,1,2-Trichloroethane	6.5	U
127-18-4	Tetrachloroethene	6.5	U
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	6.5	U
106-93-4	1,2-Dibromoethane	6.5	U
108-90-7	Chlorobenzene	6.5	U
100-41-4	Ethylbenzene	6.5	U
179601-23-1	m,p-Xylene	6.5	U
95-47-6	o-Xylene	6.5	U
100-42-5	Styrene	6.5	U
75-25-2	Bromoform	6.5	U
98-82-8	Isopropylbenzene	6.5	U
79-34-5	1,1,2,2-Tetrachloroethane	6.5	U
541-73-1	1,3-Dichlorobenzene	6.5	U
106-46-7	1,4-Dichlorobenzene	6.5	U
95-50-1	1,2-Dichlorobenzene	6.5	U
96-12-8	1,2-Dibromo-3-chloropropane	6.5	U
120-82-1	1,2,4-Trichlorobenzene	6.5	U
87-61-6	1,2,3-Trichlorobenzene	6.5	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30T3

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-18C

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2719.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 22 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2719.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2719.D
Lab Smp Id: K2198-18C Client Smp ID: H30T3
Inj Date : 07-NOV-2011 07:29
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-18C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 51
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.900	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.158	2.173	(0.342)	109588	36.8778	38
$ 80 Chloroethane-d5	69	2.588	2.603	(0.410)	81249	42.2694	43(Q)
$ 81 1,1-Dichloroethene-d2	65	3.354	3.369	(0.531)	26201	42.5095	43(Q)
$ 82 2-Butanone-d5	46	5.073	5.076	(0.803)	71782	86.6139	88
$ 83 Chloroform-d	84	5.387	5.390	(0.853)	156586	43.9816	45(Q)
$ 23 1,2-Dichloroethane-d4	65	5.898	5.901	(0.934)	88138	45.8657	47(Q)
$ 84 Benzene-d6	84	5.909	5.912	(0.627)	300235	46.4282	47
* 26 1,4-Difluorobenzene	114	6.316	6.319	(1.000)	312087	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.722	6.725	(0.713)	121279	45.3818	46
$ 94 1,4-Dioxane-d8	96	6.919	6.911	(1.096)	16469	900.420	920
$ 33 Toluene-d8	98	7.837	7.840	(0.831)	267672	44.8391	46
$ 86 trans-1,3-Dichloropropene-d4	79	8.116	8.119	(0.861)	93344	46.3913	47
$ 87 2-Hexanone-d5	63	8.592	8.572	(0.911)	35986	69.9916	71(Q)
* 42 Chlorobenzene-d5	117	9.428	9.431	(1.000)	244216	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.926	10.929	(1.159)	78574	44.9207	46
* 78 1,4-Dichlorobenzene-d4	152	12.180	12.172	(1.000)	88290	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.633	12.625	(1.037)	77849	47.1989	48

Data File: \\avogadro\organics\V5.I\111106.B\V5N2719.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2719.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2719.D
Lab Smp Id: K2198-18C Client Smp ID: H30T3
Inj Date : 07-NOV-2011 07:29
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-18C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 51
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

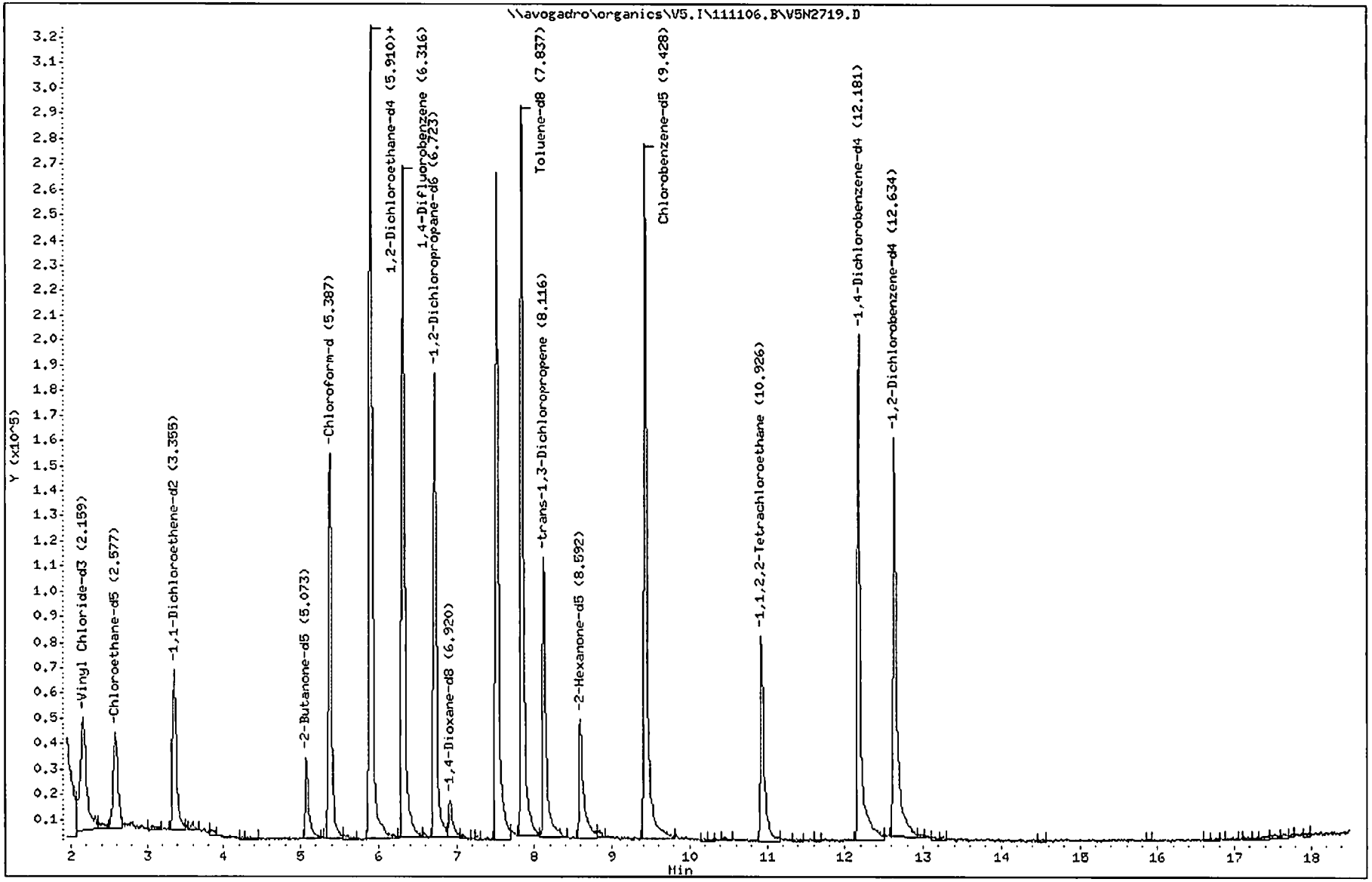
Data File: \\avogadro\organics\V5.I\111106.B\V5N2719.D
Date : 07-NOV-2011 07:29
Client ID: H30T3
Sample Info: 5C,K2198-18C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-19C

Sample wt/vol: 4.80 (g/mL) G Lab File ID: V5N2720.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 20 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.5	U
74-87-3	Chloromethane	6.5	U
75-01-4	Vinyl chloride	6.5	U
74-83-9	Bromomethane	6.5	U
75-00-3	Chloroethane	6.5	U
75-69-4	Trichlorofluoromethane	6.5	U
75-35-4	1,1-Dichloroethene	6.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.5	U
67-64-1	Acetone	13	U
75-15-0	Carbon disulfide	6.5	U
79-20-9	Methyl acetate	6.5	U
75-09-2	Methylene chloride	6.5	U
156-60-5	trans-1,2-Dichloroethene	6.5	U
1634-04-4	Methyl tert-butyl ether	6.5	U
75-34-3	1,1-Dichloroethane	6.5	U
156-59-2	cis-1,2-Dichloroethene	6.5	U
78-93-3	2-Butanone	13	U
74-97-5	Bromochloromethane	6.5	U
67-66-3	Chloroform	6.5	U
71-55-6	1,1,1-Trichloroethane	6.5	U
110-82-7	Cyclohexane	6.5	U
56-23-5	Carbon tetrachloride	6.5	U
71-43-2	Benzene	6.5	U
107-06-2	1,2-Dichloroethane	6.5	U
123-91-1	1,4-Dioxane	130	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-19C

Sample wt/vol: 4.80 (g/mL) G Lab File ID: V5N2720.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 20 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.5	U
108-87-2	Methylcyclohexane	6.5	U
78-87-5	1,2-Dichloropropane	6.5	U
75-27-4	Bromodichloromethane	6.5	U
10061-01-5	cis-1,3-Dichloropropene	6.5	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	6.5	U
10061-02-6	trans-1,3-Dichloropropene	6.5	U
79-00-5	1,1,2-Trichloroethane	6.5	U
127-18-4	Tetrachloroethene	6.5	U
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	6.5	U
106-93-4	1,2-Dibromoethane	6.5	U
108-90-7	Chlorobenzene	6.5	U
100-41-4	Ethylbenzene	6.5	U
179601-23-1	m,p-Xylene	6.5	U
95-47-6	o-Xylene	6.5	U
100-42-5	Styrene	6.5	U
75-25-2	Bromoform	6.5	U
98-82-8	Isopropylbenzene	6.5	U
79-34-5	1,1,2,2-Tetrachloroethane	6.5	U
541-73-1	1,3-Dichlorobenzene	6.5	U
106-46-7	1,4-Dichlorobenzene	6.5	U
95-50-1	1,2-Dichlorobenzene	6.5	U
96-12-8	1,2-Dibromo-3-chloropropane	6.5	U
120-82-1	1,2,4-Trichlorobenzene	6.5	U
87-61-6	1,2,3-Trichlorobenzene	6.5	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30T4

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-19C

Sample wt/vol: 4.80 (g/mL) G Lab File ID: V5N2720.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 20 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2720.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2720.D
Lab Smp Id: K2198-19C Client Smp ID: H30T4
Inj Date : 07-NOV-2011 07:56
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-19C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 52
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.800	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.157	2.173	(0.341)	132554	38.6322	40
$ 80 Chloroethane-d5	69	2.586	2.603	(0.409)	95489	43.0246	45(Q)
$ 81 1,1-Dichloroethene-d2	65	3.353	3.369	(0.530)	28874	40.5723	42(Q)
$ 82 2-Butanone-d5	46	5.071	5.076	(0.802)	79714	83.3032	87
$ 83 Chloroform-d	84	5.385	5.390	(0.851)	194322	47.2710	49(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.901	(0.932)	111327	50.1741	52(Q)
$ 84 Benzene-d6	84	5.908	5.912	(0.627)	358371	46.0975	48
* 26 1,4-Difluorobenzene	114	6.326	6.319	(1.000)	360347	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.732	6.725	(0.714)	144280	44.9082	47
$ 94 1,4-Dioxane-d8	96	6.918	6.911	(1.094)	19867	940.730	980
$ 33 Toluene-d8	98	7.835	7.840	(0.831)	322921	44.9961	47
$ 86 trans-1,3-Dichloropropene-d4	79	8.114	8.119	(0.861)	116428	48.1318	50
$ 87 2-Hexanone-d5	63	8.579	8.572	(0.910)	39607	64.0779	67
* 42 Chlorobenzene-d5	117	9.426	9.431	(1.000)	293596	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.924	10.929	(1.159)	96113	45.7061	48
* 78 1,4-Dichlorobenzene-d4	152	12.179	12.172	(1.000)	105745	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.632	12.625	(1.037)	96744	48.9728	51

Data File: \\avogadro\organics\V5.I\111106.B\V5N2720.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2720.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2720.D
Lab Smp Id: K2198-19C Client Smp ID: H30T4
Inj Date : 07-NOV-2011 07:56
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-19C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 52
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

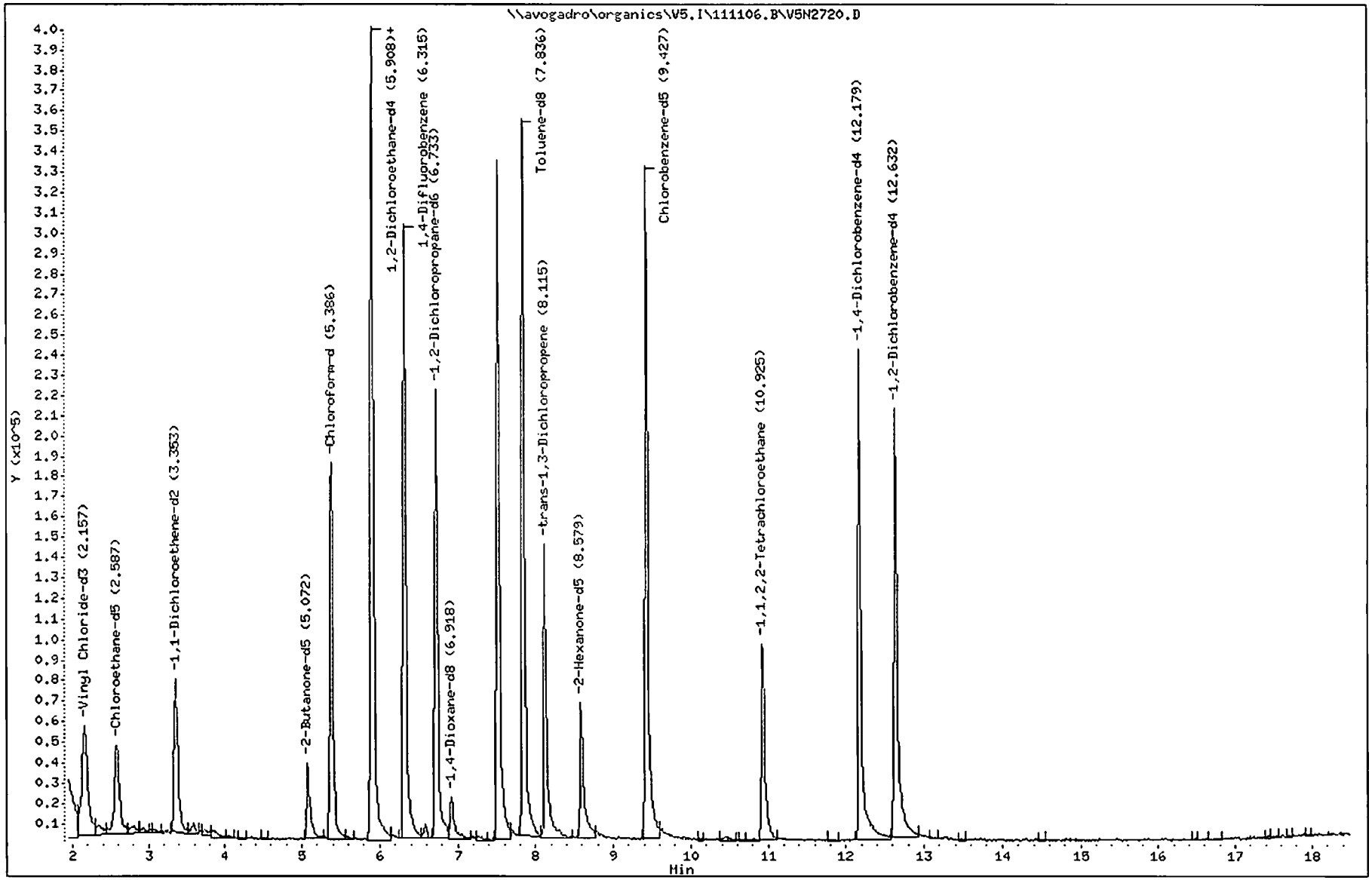
Data File: \\avogadro\organics\V5.I\111106.B\V5N2720.D
Date : 07-NOV-2011 07:56
Client ID: H30T4
Sample Info: 5G,K2198-19C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-20C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2721.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 24 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.6	U
74-87-3	Chloromethane	6.6	U
75-01-4	Vinyl chloride	6.6	U
74-83-9	Bromomethane	6.6	U
75-00-3	Chloroethane	6.6	U
75-69-4	Trichlorofluoromethane	6.6	U
75-35-4	1,1-Dichloroethene	6.6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.6	U
67-64-1	Acetone	13	U
75-15-0	Carbon disulfide	6.6	U
79-20-9	Methyl acetate	6.6	U
75-09-2	Methylene chloride	6.6	U
156-60-5	trans-1,2-Dichloroethene	6.6	U
1634-04-4	Methyl tert-butyl ether	6.6	U
75-34-3	1,1-Dichloroethane	6.6	U
156-59-2	cis-1,2-Dichloroethene	6.6	U
78-93-3	2-Butanone	13	U
74-97-5	Bromochloromethane	6.6	U
67-66-3	Chloroform	6.6	U
71-55-6	1,1,1-Trichloroethane	6.6	U
110-82-7	Cyclohexane	6.6	U
56-23-5	Carbon tetrachloride	6.6	U
71-43-2	Benzene	6.6	U
107-06-2	1,2-Dichloroethane	6.6	U
123-91-1	1,4-Dioxane	130	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30T5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-20C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2721.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 24 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	6.6	U
108-87-2	Methylcyclohexane	6.6	U
78-87-5	1,2-Dichloropropane	6.6	U
75-27-4	Bromodichloromethane	6.6	U
10061-01-5	cis-1,3-Dichloropropene	6.6	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	6.6	U
10061-02-6	trans-1,3-Dichloropropene	6.6	U
79-00-5	1,1,2-Trichloroethane	6.6	U
127-18-4	Tetrachloroethene	6.6	U
591-78-6	2-Hexanone	13	U
124-48-1	Dibromochloromethane	6.6	U
106-93-4	1,2-Dibromoethane	6.6	U
108-90-7	Chlorobenzene	6.6	U
100-41-4	Ethylbenzene	6.6	U
179601-23-1	m,p-Xylene	6.6	U
95-47-6	o-Xylene	6.6	U
100-42-5	Styrene	6.6	U
75-25-2	Bromoform	6.6	U
98-82-8	Isopropylbenzene	6.6	U
79-34-5	1,1,2,2-Tetrachloroethane	6.6	U
541-73-1	1,3-Dichlorobenzene	6.6	U
106-46-7	1,4-Dichlorobenzene	6.6	U
95-50-1	1,2-Dichlorobenzene	6.6	U
96-12-8	1,2-Dibromo-3-chloropropane	6.6	U
120-82-1	1,2,4-Trichlorobenzene	6.6	U
87-61-6	1,2,3-Trichlorobenzene	6.6	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30T5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-20C

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2721.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 24 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2721.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2721.D
Lab Smp Id: K2198-20C Client Smp ID: H30T5
Inj Date : 07-NOV-2011 08:23
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-20C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 53
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.168	2.173	(0.343)	127515	39.1554	39
$ 80 Chloroethane-d5	69	2.586	2.603	(0.410)	93092	44.1925	44
$ 81 1,1-Dichloroethene-d2	65	3.353	3.369	(0.531)	29284	43.3538	43(Q)
$ 82 2-Butanone-d5	46	5.072	5.076	(0.803)	76188	83.8855	84
$ 83 Chloroform-d	84	5.385	5.390	(0.853)	182033	46.6548	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.901	(0.934)	105621	50.1537	50(Q)
$ 84 Benzene-d6	84	5.908	5.912	(0.627)	340782	49.0898	49
* 26 1,4-Difluorobenzene	114	6.314	6.319	(1.000)	342017	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.721	6.725	(0.713)	134067	46.7318	47
$ 94 1,4-Dioxane-d8	96	6.918	6.911	(1.096)	20932	1044.28	1000
$ 33 Toluene-d8	98	7.835	7.840	(0.831)	300010	46.8150	47
$ 86 trans-1,3-Dichloropropene-d4	79	8.114	8.119	(0.861)	108872	50.4036	50
$ 87 2-Hexanone-d5	63	8.579	8.572	(0.910)	40492	73.3628	73(Q)
* 42 Chlorobenzene-d5	117	9.426	9.431	(1.000)	262168	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.925	10.929	(1.159)	91589	48.7759	49
* 78 1,4-Dichlorobenzene-d4	152	12.179	12.172	(1.000)	89318	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.632	12.625	(1.037)	77602	46.5076	47(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2721.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2721.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2721.D
Lab Smp Id: K2198-20C Client Smp ID: H30T5
Inj Date : 07-NOV-2011 08:23
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-20C,,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 53
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

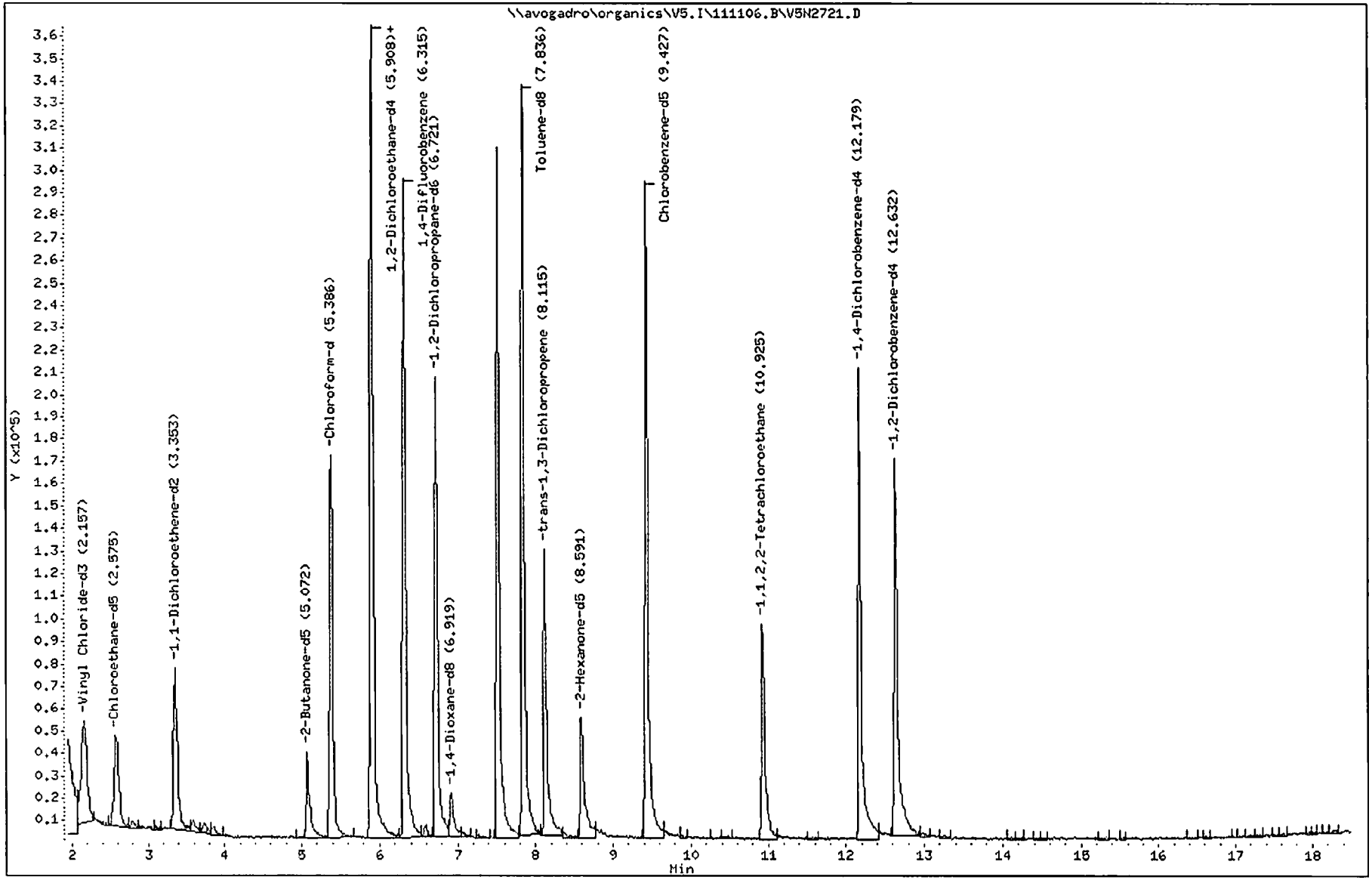
Data File: \\avogadro\organics\V5.I\111106.B\V5N2721.D
Date : 07-NOV-2011 08:23
Client ID: H30T5
Sample Info: 5G,K2198-20C,,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



6A - FORM VI VOA-1

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date(s): 10/04/2011 10/04/2011

Heated Purge: (Y/N) Y Calibration Time(s): 17:11 19:04

Purge Volume: 10.0 (mL)

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

LAB FILE ID: RRF005 = V5N1312.D RRF010 = V5N1315.D

RRF050 = V5N1311.D RRF100 = V5N1314.D RRF200 = V5N1313.D

COMPOUND	RRF005	RRF010	RRF050	RRF100	RRF200	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.574	0.603	0.504	0.558	0.541	0.556	6.7
Chloromethane	0.810	0.842	0.730	0.768	0.734	0.777	6.3
Vinyl chloride	0.602	0.589	0.513	0.547	0.521	0.554	7.2
Bromomethane	0.391	0.388	0.322	0.346	0.320	0.353	9.8
Chloroethane	0.325	0.301	0.264	0.274	0.256	0.284	10.0
Trichlorofluoromethane	0.660	0.636	0.581	0.650	0.614	0.628	5.0
1,1-Dichloroethene	0.356	0.368	0.339	0.359	0.343	0.353	3.4
1,1,2-Trichloro-1,2,2-trifluoroethane	0.456	0.437	0.389	0.424	0.400	0.421	6.5
Acetone	0.130	0.106	0.073	0.075	0.072	0.091	28.5
Carbon disulfide	1.709	1.628	1.315	1.422	1.344	1.484	11.8
Methyl acetate	0.268	0.279	0.223	0.227	0.193	0.238	14.8
Methylene chloride	0.419	0.422	0.361	0.379	0.358	0.388	8.0
trans-1,2-Dichloroethene	0.381	0.387	0.357	0.372	0.356	0.370	3.8
Methyl tert-butyl ether	0.720	0.828	0.649	0.652	0.607	0.691	12.5
1,1-Dichloroethane	0.712	0.733	0.647	0.694	0.658	0.689	5.2
cis-1,2-Dichloroethene	0.369	0.394	0.348	0.364	0.342	0.363	5.6
2-Butanone	0.137	0.157	0.127	0.130	0.115	0.133	11.6
Bromochloromethane	0.191	0.197	0.165	0.174	0.166	0.179	8.1
Chloroform	0.774	0.711	0.581	0.582	0.537	0.637	15.8
1,1,1-Trichloroethane	0.598	0.609	0.584	0.601	0.547	0.588	4.2
Cyclohexane	0.858	0.832	0.788	0.818	0.742	0.808	5.5
Carbon tetrachloride	0.564	0.544	0.547	0.570	0.512	0.547	4.2
Benzene	1.526	1.559	1.417	1.429	1.316	1.449	6.7
1,2-Dichloroethane	0.384	0.407	0.323	0.343	0.338	0.359	9.8
1,4-Dioxane	0.002	0.003	0.002	0.003	0.003	0.003	10.4
Trichloroethene	0.409	0.422	0.428	0.442	0.402	0.420	3.8
Methylcyclohexane	0.740	0.766	0.708	0.761	0.714	0.738	3.6

Report 1,4-Dioxane for Low-Medium VOA analysis only SOM01.2 (6/2007)

6B - FORM VI VOA-2

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date(s): 10/04/2011 10/04/2011

Heated Purge: (Y/N) Y Calibration Time(s): 17:11 19:04

Purge Volume: 10.0 (mL)

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

LAB FILE ID: RRF005 = V5N1312.D RRF010 = V5N1315.D

RRF050 = V5N1311.D RRF100 = V5N1314.D RRF200 = V5N1313.D

COMPOUND	RRF005	RRF010	RRF050	RRF100	RRF200	$\overline{RRF}$	%RSD
1,2-Dichloropropane	0.476	0.463	0.444	0.429	0.389	0.440	7.6
Bromodichloromethane	0.481	0.518	0.499	0.499	0.459	0.491	4.5
cis-1,3-Dichloropropene	0.582	0.647	0.584	0.577	0.535	0.585	6.9
4-Methyl-2-pentanone	0.485	0.473	0.333	0.356	0.294	0.388	22.1
Toluene	1.449	1.563	1.410	1.452	1.284	1.432	7.0
trans-1,3-Dichloropropene	0.484	0.504	0.455	0.450	0.417	0.462	7.2
1,1,2-Trichloroethane	0.300	0.320	0.284	0.283	0.253	0.288	8.5
Tetrachloroethene	0.317	0.298	0.307	0.324	0.293	0.308	4.2
2-Hexanone	0.404	0.431	0.201	0.262	0.192	0.298	37.9
Dibromochloromethane	0.411	0.390	0.365	0.380	0.355	0.380	5.8
1,2-Dibromoethane	0.319	0.306	0.308	0.313	0.297	0.309	2.6
Chlorobenzene	0.971	1.046	0.964	1.008	0.932	0.984	4.5
Ethylbenzene	1.531	1.601	1.544	1.578	1.437	1.538	4.1
m,p-Xylene	0.616	0.696	0.644	0.660	0.605	0.644	5.6
o-Xylene	0.636	0.637	0.598	0.621	0.588	0.616	3.6
Styrene	1.010	1.025	0.995	1.041	0.977	1.010	2.5
Bromoform	0.494	0.542	0.519	0.532	0.474	0.512	5.5
Isopropylbenzene	1.575	1.604	1.581	1.628	1.474	1.572	3.7
1,1,2,2-Tetrachloroethane	0.351	0.402	0.332	0.329	0.292	0.341	11.8
1,3-Dichlorobenzene	1.336	1.456	1.468	1.558	1.440	1.452	5.5
1,4-Dichlorobenzene	1.894	1.820	1.613	1.662	1.498	1.697	9.4
1,2-Dichlorobenzene	1.486	1.560	1.372	1.410	1.305	1.427	7.0
1,2-Dibromo-3-chloropropane	0.105	0.096	0.099	0.106	0.098	0.101	4.3
1,2,4-Trichlorobenzene	1.017	1.287	0.966	1.064	1.014	1.070	11.8
1,2,3-Trichlorobenzene	0.916	1.217	0.824	0.907	0.813	0.935	17.6

6C - FORM VI VOA-3

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date(s): 10/04/2011 10/04/2011

Heated Purge: (Y/N) Y Calibration Time(s): 17:11 19:04

Purge Volume: 10.0 (mL)

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

LAB FILE ID: RRF005 = V5N1312.D RRF010 = V5N1315.D

RRF050 = V5N1311.D RRF100 = V5N1314.D RRF200 = V5N1313.D

COMPOUND	RRF005	RRF010	RRF050	RRF100	RRF200	$\overline{RRF}$	%RSD
Vinyl chloride-d3	0.510	0.524	0.450	0.435	0.462	0.476	8.2
Chloroethane-d5	0.305	0.334	0.314	0.289	0.299	0.308	5.5
1,1-Dichloroethene-d2	0.111	0.092	0.096	0.095	0.100	0.099	7.4
2-Butanone-d5	0.132	0.155	0.131	0.125	0.122	0.133	9.8
Chloroform-d	0.585	0.606	0.573	0.542	0.547	0.570	4.7
1,2-Dichloroethane-d4	0.364	0.353	0.284	0.282	0.256	0.308	15.6
Benzene-d6	1.345	1.432	1.359	1.249	1.235	1.324	6.2
1,2-Dichloropropane-d6	0.563	0.583	0.555	0.527	0.508	0.547	5.4
Toluene-d8	1.256	1.288	1.253	1.175	1.139	1.222	5.1
trans-1,3-Dichloropropene-d4	0.386	0.454	0.423	0.412	0.385	0.412	6.9
2-Hexanone-d5	0.099	0.146	0.093	0.102	0.086	0.105	22.7
1,4-Dioxane-d8	0.003	0.003	0.003	0.003	0.003	0.003	6.8
1,1,2,2-Tetrachloroethane-d2	0.351	0.430	0.363	0.341	0.306	0.358	12.7
1,2-Dichlorobenzene-d4	0.973	1.044	0.915	0.880	0.859	0.934	8.0

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1311.D
Report Date: 13-Oct-2011 08:46

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111004A.B\V5N1311.D
Lab Smp Id: VSTD0505N Client Smp ID: VSTD0505N
Inj Date : 04-OCT-2011 17:11
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD0505N,VSTD0505N
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111004A.B\V5_SOM_S.m
Meth Date : 12-Oct-2011 14:03 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:11 Cal File: V5N1311.D
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.906	1.894	(0.301)	299975	50.0000	45
2 Chloromethane	50	2.045	2.045	(0.323)	434369	50.0000	47
$ 79 Vinyl Chloride-d3	65	2.184	2.173	(0.345)	267768	50.0000	47
3 Vinyl Chloride	62	2.184	2.184	(0.345)	305183	50.0000	46
4 Bromomethane	94	2.533	2.509	(0.400)	191561	50.0000	46
$ 80 Chloroethane-d5	69	2.603	2.579	(0.411)	186785	50.0000	51
5 Chloroethane	64	2.626	2.614	(0.415)	157360	50.0000	47
6 Trichlorofluoromethane	101	2.893	2.904	(0.457)	345935	50.0000	46
$ 81 1,1-Dichloroethene-d2	65	3.369	3.369	(0.532)	57374	50.0000	49(Q)
7 1,1-Dichloroethene	96	3.381	3.380	(0.534)	202080	50.0000	48
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.427	3.415	(0.541)	231466	50.0000	46
9 Acetone	43	3.462	3.450	(0.547)	86530	100.000	80
10 Carbon Disulfide	76	3.601	3.624	(0.569)	783033	50.0000	44
11 Methyl Acetate	43	3.775	3.764	(0.596)	132570	50.0000	47
12 Methylene Chloride	84	3.868	3.868	(0.611)	214752	50.0000	46
13 trans-1,2-Dichloroethene	96	4.124	4.124	(0.651)	212294	50.0000	48
14 Methyl tert-Butyl Ether	73	4.147	4.135	(0.655)	386323	50.0000	47
15 1,1-Dichloroethane	63	4.542	4.530	(0.718)	385424	50.0000	47
$ 82 2-Butanone-d5	46	5.076	5.064	(0.802)	155603	100.000	98
17 cis-1,2-Dichloroethene	96	5.111	5.099	(0.807)	207212	50.0000	48
16 2-Butanone	43	5.134	5.122	(0.811)	150755	100.000	95

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1311.D
Report Date: 13-Oct-2011 08:46

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18	Bromochloromethane	128	5.343	5.331	(0.844)	98217	50.0000	46
$	83	Chloroform-d	84	5.390	5.389	(0.851)	340968	50.0000	50
	19	Chloroform	83	5.413	5.401	(0.855)	345949	50.0000	46
	20	1,1,1-Trichloroethane	97	5.599	5.587	(0.594)	274755	50.0000	50
	21	Cyclohexane	56	5.645	5.645	(0.599)	370434	50.0000	49
	22	Carbon Tetrachloride	117	5.761	5.749	(0.611)	257413	50.0000	50
$	23	1,2-Dichloroethane-d4	65	5.901	5.900	(0.932)	168991	50.0000	46
$	84	Benzene-d6	84	5.924	5.912	(0.628)	639092	50.0000	51
	25	Benzene	78	5.959	5.959	(0.632)	666384	50.0000	49
	24	1,2-Dichloroethane	62	5.982	5.970	(0.945)	192340	50.0000	45
*	26	1,4-Difluorobenzene	114	6.330	6.319	(1.000)	595316	50.0000	
	27	Trichloroethene	95	6.597	6.586	(0.700)	201361	50.0000	51
$	85	1,2-Dichloropropane-d6	67	6.737	6.737	(0.714)	260951	50.0000	51
	28	Methylcyclohexane	83	6.783	6.783	(0.719)	332791	50.0000	48
	29	1,2-Dichloropropane	63	6.830	6.818	(0.724)	208689	50.0000	50
$	94	1,4-Dioxane-d8	96	6.923	6.911	(1.094)	35285	1000.00	1000
	93	1,4-Dioxane	88	6.981	6.969	(1.103)	27387	1000.00	870
	30	Bromodichloromethane	83	7.097	7.097	(0.753)	234761	50.0000	51
	31	cis-1,3-Dichloropropene	75	7.561	7.561	(0.802)	274880	50.0000	50
	32	4-Methyl-2-Pentanone	43	7.736	7.724	(0.820)	313590	100.000	86
$	33	Toluene-d8	98	7.852	7.840	(0.833)	589525	50.0000	51
	34	Toluene	91	7.921	7.909	(0.840)	663306	50.0000	49
$	86	trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	198900	50.0000	51
	35	trans-1,3-Dichloropropene	75	8.154	8.153	(0.865)	213829	50.0000	49
	36	1,1,2-Trichloroethane	97	8.351	8.351	(0.885)	133364	50.0000	49
	37	Tetrachloroethene	164	8.502	8.502	(0.901)	144333	50.0000	50
$	87	2-Hexanone-d5	63	8.583	8.571	(0.910)	87637	100.000	88(Q)
	38	2-Hexanone	43	8.630	8.618	(0.915)	188779	100.000	67
	39	Dibromochloromethane	129	8.792	8.780	(0.932)	171460	50.0000	48
	40	1,2-Dibromoethane	107	8.920	8.920	(0.946)	145099	50.0000	50
*	42	Chlorobenzene-d5	117	9.431	9.431	(1.000)	470363	50.0000	
	43	Chlorobenzene	112	9.466	9.466	(1.004)	453579	50.0000	49
	44	Ethylbenzene	91	9.582	9.582	(1.016)	726171	50.0000	50
	45	m,p-Xylene	106	9.721	9.710	(1.031)	302904	50.0000	50
	46	o-Xylene	106	10.174	10.174	(1.079)	281051	50.0000	49
	47	Styrene	104	10.198	10.186	(1.081)	468215	50.0000	49
	48	Bromoform	173	10.418	10.418	(0.856)	104737	50.0000	51
	49	Isopropylbenzene	105	10.604	10.604	(1.124)	743678	50.0000	50
$	89	1,1,2,2-Tetrachloroethane-d2	84	10.929	10.929	(1.159)	170812	50.0000	51
	51	1,1,2,2-Tetrachloroethane	83	10.964	10.952	(1.163)	156245	50.0000	49
M	41	Xylene (total)	106				583955	50.0000	99
	52	1,3-Dichlorobenzene	146	12.102	12.090	(0.994)	296215	50.0000	51
*	78	1,4-Dichlorobenzene-d4	152	12.172	12.171	(1.000)	201784	50.0000	(Q)
	53	1,4-Dichlorobenzene	146	12.207	12.206	(1.003)	325459	50.0000	48
$	90	1,2-Dichlorobenzene-d4	152	12.636	12.636	(1.038)	184545	50.0000	49(Q)
	54	1,2-Dichlorobenzene	146	12.659	12.659	(1.040)	276829	50.0000	48
	55	1,2-Dibromo-3-chloropropane	75	13.647	13.635	(1.121)	19926	50.0000	49(Q)
	56	1,2,4-Trichlorobenzene	180	14.645	14.633	(1.203)	194923	50.0000	45
	77	1,2,3-Trichlorobenzene	180	15.249	15.237	(1.253)	166182	50.0000	44

QC Flag Legend

Q - Qualifier signal failed the ratio test.

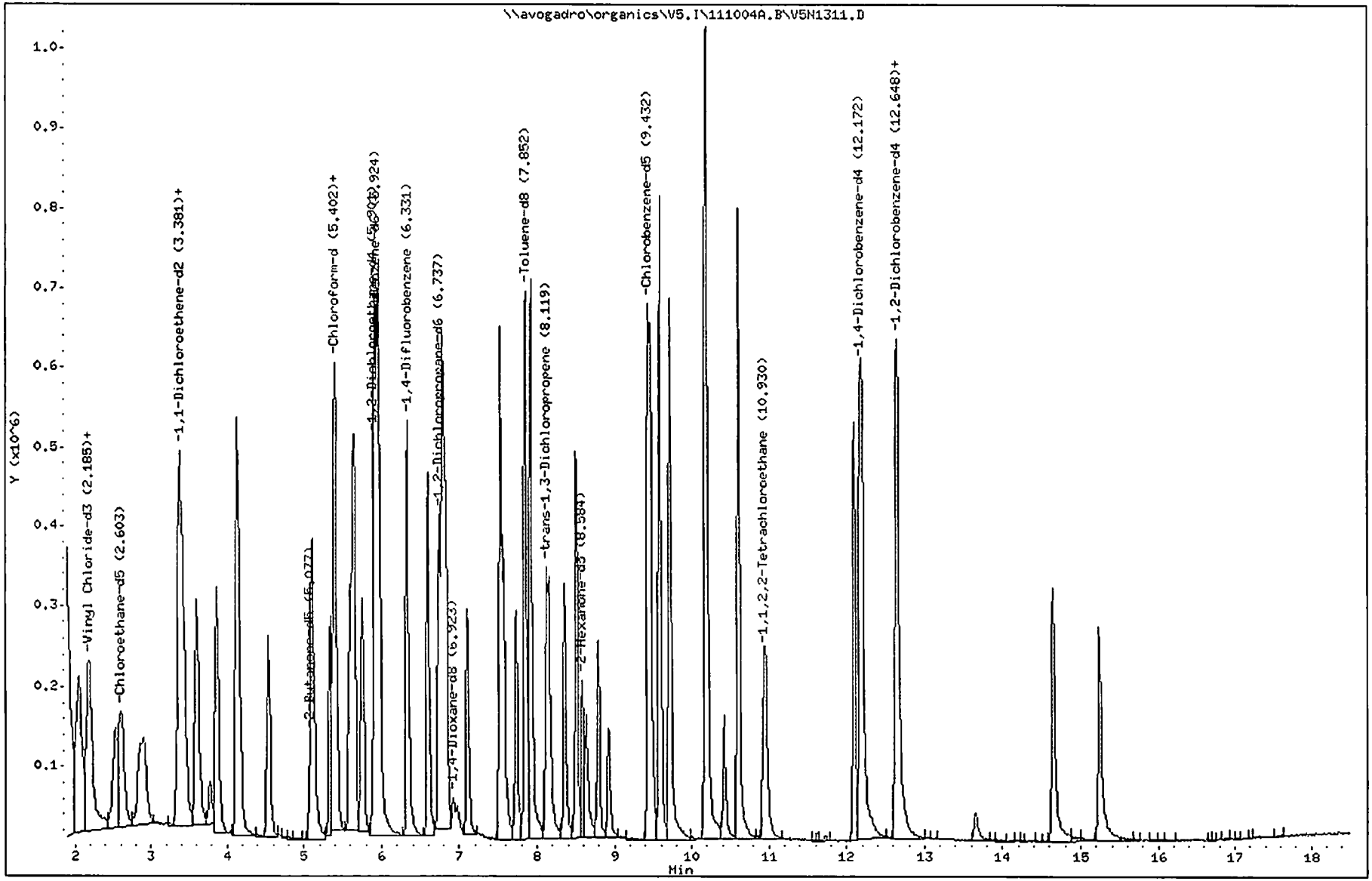
Data File: \\avogadro\organics\V5.I\111004A.B\V5N1311.D
Date : 04-OCT-2011 17:11
Client ID: VSTD0505N
Sample Info: 5C,VSTD0505N,VSTD0505N

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111004A.B\V5N1312.D
Report Date: 13-Oct-2011 08:46

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111004A.B\V5N1312.D
Lab Smp Id: VSTD0055N Client Smp ID: VSTD0055N
Inj Date : 04-OCT-2011 17:39
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD0055N,VSTD0055N
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111004A.B\V5_SOM_S.m
Meth Date : 12-Oct-2011 14:03 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.893	1.894	(0.299)	36197	5.00000	5.2
2 Chloromethane	50	2.033	2.045	(0.321)	51024	5.00000	5.2
$ 79 Vinyl Chloride-d3	65	2.172	2.173	(0.343)	32120	5.00000	5.4
3 Vinyl Chloride	62	2.172	2.184	(0.343)	37959	5.00000	5.4
4 Bromomethane	94	2.521	2.509	(0.398)	24654	5.00000	5.5
$ 80 Chloroethane-d5	69	2.579	2.579	(0.407)	19191	5.00000	4.9
5 Chloroethane	64	2.625	2.614	(0.415)	20461	5.00000	5.7
6 Trichlorofluoromethane	101	2.881	2.904	(0.455)	41607	5.00000	5.3
$ 81 1,1-Dichloroethene-d2	65	3.368	3.369	(0.532)	6979	5.00000	5.6
7 1,1-Dichloroethene	96	3.380	3.380	(0.534)	22419	5.00000	5.0
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.415	3.415	(0.540)	28754	5.00000	5.4
9 Acetone	43	3.461	3.450	(0.547)	16347	10.0000	14
10 Carbon Disulfide	76	3.601	3.624	(0.569)	107730	5.00000	5.8
11 Methyl Acetate	43	3.775	3.764	(0.596)	16894	5.00000	5.6
12 Methylene Chloride	84	3.868	3.868	(0.611)	26401	5.00000	5.4
13 trans-1,2-Dichloroethene	96	4.135	4.124	(0.653)	24020	5.00000	5.1
14 Methyl tert-Butyl Ether	73	4.146	4.135	(0.655)	45347	5.00000	5.2
15 1,1-Dichloroethane	63	4.541	4.530	(0.717)	44867	5.00000	5.2
$ 82 2-Butanone-d5	46	5.099	5.064	(0.806)	16595	10.0000	9.9
17 cis-1,2-Dichloroethene	96	5.110	5.099	(0.807)	23279	5.00000	5.1
16 2-Butanone	43	5.157	5.122	(0.815)	17304	10.0000	10

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1312.D
Report Date: 13-Oct-2011 08:46

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18	Bromochloromethane	128	5.343	5.331	(0.844)	12019	5.00000	5.3
$	83	Chloroform-d	84	5.401	5.389	(0.853)	36847	5.00000	5.1
	19	Chloroform	83	5.412	5.401	(0.855)	48773	5.00000	6.1
	20	1,1,1-Trichloroethane	97	5.598	5.587	(0.594)	30822	5.00000	5.1
	21	Cyclohexane	56	5.644	5.645	(0.599)	44246	5.00000	5.3
	22	Carbon Tetrachloride	117	5.761	5.749	(0.611)	29090	5.00000	5.2
$	23	1,2-Dichloroethane-d4	65	5.912	5.900	(0.934)	22942	5.00000	5.9
$	84	Benzene-d6	84	5.923	5.912	(0.628)	69349	5.00000	5.1
	25	Benzene	78	5.958	5.959	(0.632)	78698	5.00000	5.3
	24	1,2-Dichloroethane	62	5.993	5.970	(0.947)	24202	5.00000	5.3
•	26	1,4-Difluorobenzene	114	6.330	6.319	(1.000)	630230	50.0000	
	27	Trichloroethene	95	6.597	6.586	(0.700)	21074	5.00000	4.9
$	85	1,2-Dichloropropane-d6	67	6.748	6.737	(0.716)	29052	5.00000	5.1
	28	Methylcyclohexane	83	6.794	6.783	(0.720)	38156	5.00000	5.0
	29	1,2-Dichloropropane	63	6.841	6.818	(0.725)	24541	5.00000	5.4(T)
$	94	1,4-Dioxane-d8	96	6.945	6.911	(1.097)	3380	100.000	92
	93	1,4-Dioxane	88	6.992	6.969	(1.105)	3066	100.000	92
	30	Bromodichloromethane	83	7.108	7.097	(0.754)	24794	5.00000	4.9
	31	cis-1,3-Dichloropropene	75	7.584	7.561	(0.804)	29997	5.00000	5.0
	32	4-Methyl-2-Pentanone	43	7.758	7.724	(0.823)	50051	10.0000	12
$	33	Toluene-d8	98	7.863	7.840	(0.834)	64764	5.00000	5.1
	34	Toluene	91	7.932	7.909	(0.841)	74708	5.00000	5.1
$	86	trans-1,3-Dichloropropene-d4	79	8.153	8.119	(0.865)	19882	5.00000	4.7
	35	trans-1,3-Dichloropropene	75	8.188	8.153	(0.868)	24965	5.00000	5.2
	36	1,1,2-Trichloroethane	97	8.374	8.351	(0.888)	15474	5.00000	5.2
	37	Tetrachloroethene	164	8.513	8.502	(0.903)	16370	5.00000	5.2
$	87	2-Hexanone-d5	63	8.629	8.571	(0.915)	10167	10.0000	9.4
	38	2-Hexanone	43	8.675	8.618	(0.920)	41648	10.0000	14
	39	Dibromochloromethane	129	8.803	8.780	(0.934)	21204	5.00000	5.4
	40	1,2-Dibromoethane	107	8.943	8.920	(0.948)	16435	5.00000	5.2(T)
•	42	Chlorobenzene-d5	117	9.430	9.431	(1.000)	515605	50.0000	
	43	Chlorobenzene	112	9.477	9.466	(1.005)	50063	5.00000	4.9
	44	Ethylbenzene	91	9.593	9.582	(1.017)	78946	5.00000	5.0
	45	m,p-Xylene	106	9.732	9.710	(1.032)	31762	5.00000	4.8
	46	o-Xylene	106	10.197	10.174	(1.081)	32775	5.00000	5.2
	47	Styrene	104	10.232	10.186	(1.085)	52095	5.00000	5.0
	48	Bromoform	173	10.441	10.418	(0.857)	10408	5.00000	4.8
	49	Isopropylbenzene	105	10.615	10.604	(1.126)	81194	5.00000	5.0
$	89	1,1,2,2-Tetrachloroethane-d2	84	10.952	10.929	(1.161)	18102	5.00000	4.9
	51	1,1,2,2-Tetrachloroethane	83	10.986	10.952	(1.165)	18111	5.00000	5.1
M	41	Xylene (total)	106				64537	5.00000	9.9
	52	1,3-Dichlorobenzene	146	12.125	12.090	(0.995)	28119	5.00000	4.6
•	78	1,4-Dichlorobenzene-d4	152	12.183	12.171	(1.000)	210499	50.0000	
	53	1,4-Dichlorobenzene	146	12.217	12.206	(1.003)	39863	5.00000	5.6
$	90	1,2-Dichlorobenzene-d4	152	12.670	12.636	(1.040)	20472	5.00000	5.2
	54	1,2-Dichlorobenzene	146	12.694	12.659	(1.042)	31289	5.00000	5.2
	55	1,2-Dibromo-3-chloropropane	75	13.739	13.635	(1.128)	2204	5.00000	5.2
	56	1,2,4-Trichlorobenzene	180	14.726	14.633	(1.209)	21399	5.00000	4.8
	77	1,2,3-Trichlorobenzene	180	15.295	15.237	(1.255)	19274	5.00000	4.9

QC Flag Legend

T - Target compound detected outside RT window.

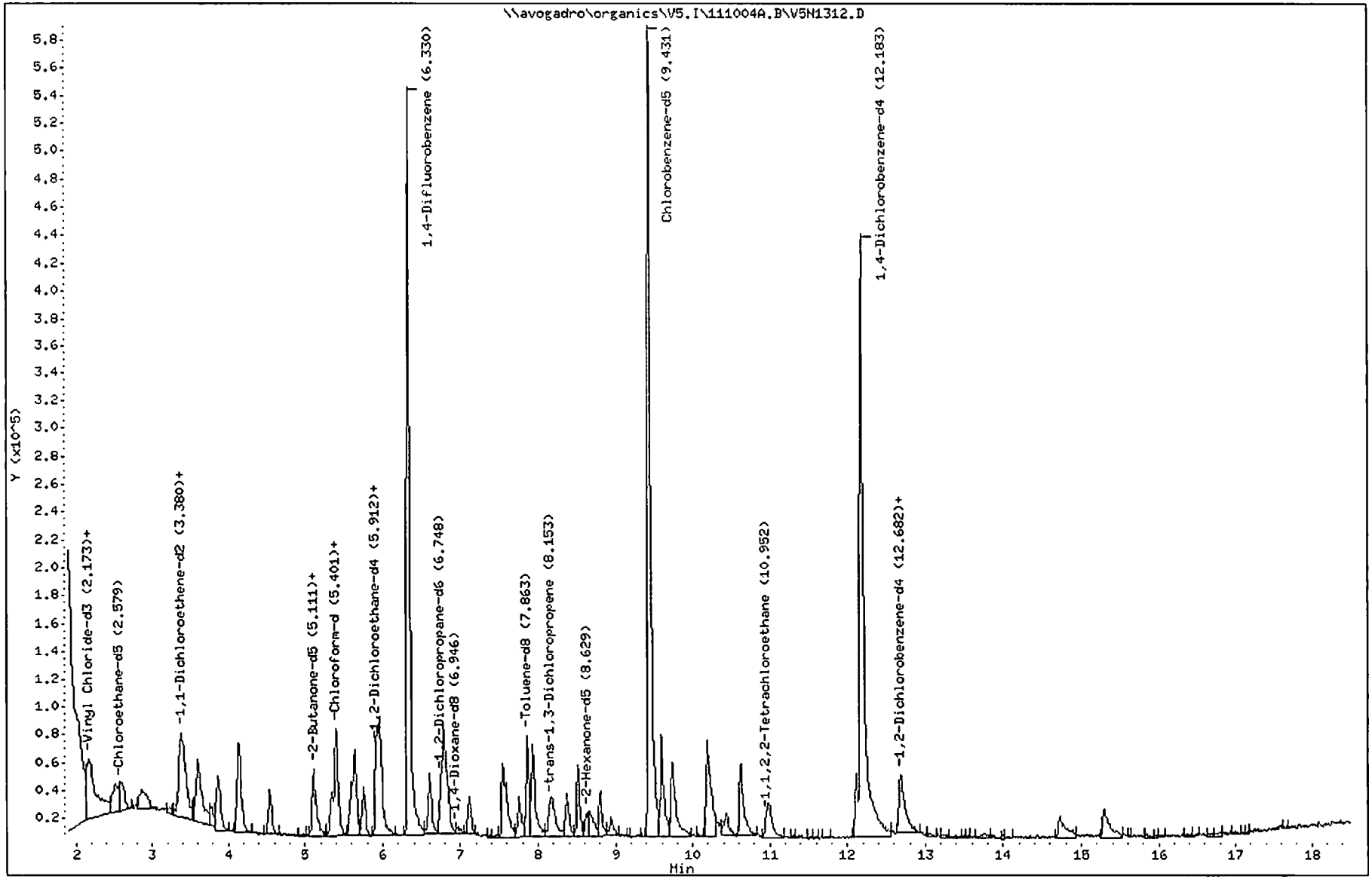
Data File: \\avogadro\organics\V5.I\111004A.B\V5N1312.D
Date : 04-OCT-2011 17:39
Client ID: VSTD0055N
Sample Info: 5G,VSTD0055N,VSTD0055N

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111004A.B\V5N1313.D
Report Date: 13-Oct-2011 08:46

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111004A.B\V5N1313.D
Lab Smp Id: VSTD2005N Client Smp ID: VSTD2005N
Inj Date : 04-OCT-2011 18:08
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD2005N,VSTD2005N
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111004A.B\V5_SOM_S.m
Meth Date : 12-Oct-2011 14:03 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 18:08 Cal File: V5N1313.D
Als bottle: 3 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.901	1.894	(0.301)	1343426	200.000	190
2 Chloromethane	50	2.063	2.045	(0.326)	1824569	200.000	190
$ 79 Vinyl Chloride-d3	65	2.191	2.173	(0.346)	1147112	200.000	190
3 Vinyl Chloride	62	2.191	2.184	(0.346)	1294391	200.000	190
4 Bromomethane	94	2.528	2.509	(0.400)	795475	200.000	180
$ 80 Chloroethane-d5	69	2.597	2.579	(0.411)	742004	200.000	190
5 Chloroethane	64	2.632	2.614	(0.416)	636553	200.000	180
6 Trichlorofluoromethane	101	2.899	2.904	(0.458)	1525878	200.000	200
$ 81 1,1-Dichloroethene-d2	65	3.364	3.369	(0.532)	248182	200.000	200(AQ)
7 1,1-Dichloroethene	96	3.376	3.380	(0.534)	851918	200.000	190
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.422	3.415	(0.541)	993154	200.000	190
9 Acetone	43	3.457	3.450	(0.547)	356628	400.000	320
10 Carbon Disulfide	76	3.596	3.624	(0.569)	3340344	200.000	180
11 Methyl Acetate	43	3.770	3.764	(0.596)	479665	200.000	160
12 Methylene Chloride	84	3.863	3.868	(0.611)	890442	200.000	180
13 trans-1,2-Dichloroethene	96	4.130	4.124	(0.653)	884014	200.000	190
14 Methyl tert-Butyl Ether	73	4.154	4.135	(0.657)	1507962	200.000	180
15 1,1-Dichloroethane	63	4.537	4.530	(0.717)	1635232	200.000	190
$ 82 2-Butanone-d5	46	5.071	5.064	(0.802)	604238	400.000	370(A)
17 cis-1,2-Dichloroethene	96	5.106	5.099	(0.807)	849810	200.000	190
16 2-Butanone	43	5.129	5.122	(0.811)	573614	400.000	350

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1313.D
Report Date: 13-Oct-2011 08:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18 Bromochloromethane	128	5.338	5.331	(0.844)	411918	200.000	190
$	83 Chloroform-d	84	5.396	5.389	(0.853)	1358505	200.000	190
	19 Chloroform	83	5.408	5.401	(0.855)	1334401	200.000	170
	20 1,1,1-Trichloroethane	97	5.594	5.587	(0.593)	1142742	200.000	190
	21 Cyclohexane	56	5.652	5.645	(0.599)	1549507	200.000	180
	22 Carbon Tetrachloride	117	5.756	5.749	(0.610)	1068680	200.000	190
$	23 1,2-Dichloroethane-d4	65	5.907	5.900	(0.934)	635355	200.000	170(Q)
$	84 Benzene-d6	84	5.919	5.912	(0.627)	2579655	200.000	190
	25 Benzene	78	5.954	5.959	(0.631)	2747364	200.000	180
	24 1,2-Dichloroethane	62	5.977	5.970	(0.945)	839565	200.000	190
*	26 1,4-Difluorobenzene	114	6.325	6.319	(1.000)	621323	50.0000	(Q)
	27 Trichloroethene	95	6.592	6.586	(0.699)	838695	200.000	190
$	85 1,2-Dichloropropane-d6	67	6.732	6.737	(0.713)	1059996	200.000	190
	28 Methylcyclohexane	83	6.790	6.783	(0.719)	1490171	200.000	190
	29 1,2-Dichloropropane	63	6.825	6.818	(0.723)	813077	200.000	180
$	94 1,4-Dioxane-d8	96	6.918	6.911	(1.094)	141245	4000.00	3900
	93 1,4-Dioxane	88	6.976	6.969	(1.103)	133337	4000.00	4100(A)
	30 Bromodichloromethane	83	7.103	7.097	(0.753)	958079	200.000	190
	31 cis-1,3-Dichloropropene	75	7.556	7.561	(0.801)	1116719	200.000	180
	32 4-Methyl-2-Pentanone	43	7.730	7.724	(0.819)	1226367	400.000	300
$	33 Toluene-d8	98	7.847	7.840	(0.831)	2378240	200.000	190
	34 Toluene	91	7.916	7.909	(0.839)	2681639	200.000	180
$	86 trans-1,3-Dichloropropene-d4	79	8.114	8.119	(0.860)	804849	200.000	190
	35 trans-1,3-Dichloropropene	75	8.149	8.153	(0.863)	871784	200.000	180
	36 1,1,2-Trichloroethane	97	8.346	8.351	(0.884)	528524	200.000	180
	37 Tetrachloroethene	164	8.509	8.502	(0.902)	612133	200.000	190
$	87 2-Hexanone-d5	63	8.567	8.571	(0.908)	358673	400.000	330(AQ)
	38 2-Hexanone	43	8.625	8.618	(0.914)	802445	400.000	260
	39 Dibromochloromethane	129	8.787	8.780	(0.931)	740552	200.000	190
	40 1,2-Dibromoethane	107	8.927	8.920	(0.946)	620668	200.000	190
*	42 Chlorobenzene-d5	117	9.438	9.431	(1.000)	522035	50.0000	
	43 Chlorobenzene	112	9.461	9.466	(1.002)	1945144	200.000	190
	44 Ethylbenzene	91	9.577	9.582	(1.015)	3001198	200.000	190
	45 m,p-Xylene	106	9.716	9.710	(1.030)	1263400	200.000	190(Q)
	46 o-Xylene	106	10.169	10.174	(1.078)	1227588	200.000	190
	47 Styrene	104	10.192	10.186	(1.080)	2041110	200.000	190
	48 Bromoform	173	10.413	10.418	(0.855)	424205	200.000	180
	49 Isopropylbenzene	105	10.599	10.604	(1.123)	3078586	200.000	190
$	89 1,1,2,2-Tetrachloroethane-d2	84	10.924	10.929	(1.157)	638790	200.000	170
	51 1,1,2,2-Tetrachloroethane	83	10.959	10.952	(1.161)	609250	200.000	170
M	41 Xylene (total)	106				2490988	200.000	380
	52 1,3-Dichlorobenzene	146	12.097	12.090	(0.993)	1288932	200.000	200
*	78 1,4-Dichlorobenzene-d4	152	12.178	12.171	(1.000)	223743	50.0000	(Q)
	53 1,4-Dichlorobenzene	146	12.201	12.206	(1.002)	1340796	200.000	180
$	90 1,2-Dichlorobenzene-d4	152	12.631	12.636	(1.037)	769017	200.000	180(Q)
	54 1,2-Dichlorobenzene	146	12.654	12.659	(1.039)	1168263	200.000	180
	55 1,2-Dibromo-3-chloropropane	75	13.618	13.635	(1.118)	87768	200.000	190(Q)
	56 1,2,4-Trichlorobenzene	180	14.629	14.633	(1.201)	907483	200.000	190
	77 1,2,3-Trichlorobenzene	180	15.232	15.237	(1.251)	727794	200.000	170

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1313.D
Report Date: 13-Oct-2011 08:46

QC Flag Legend

Q - Qualifier signal failed the ratio test.

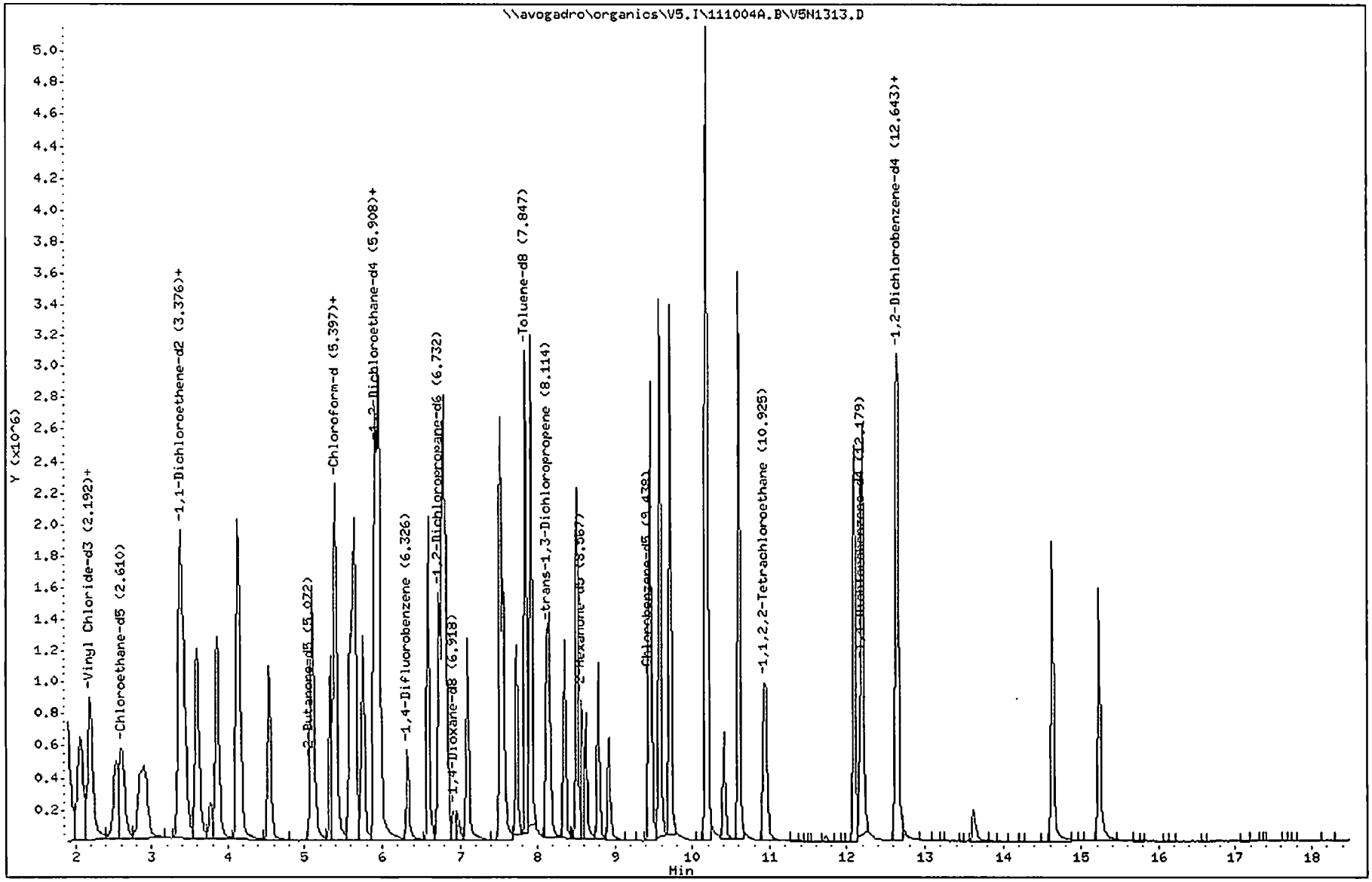
Data File: \\avogadro\organics\V5.I\111004A.B\V5N1313.D
Date : 04-OCT-2011 18:08
Client ID: VSTD2005N
Sample Info: 5C,VSTD2005N,VSTD2005N

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111004A.B\V5N1314.D
Report Date: 13-Oct-2011 08:46

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111004A.B\V5N1314.D
Lab Smp Id: VSTD1005N Client Smp ID: VSTD1005N
Inj Date : 04-OCT-2011 18:36
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD1005N,VSTD1005N
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111004A.B\V5_SOM_S.m
Meth Date : 12-Oct-2011 14:03 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 18:36 Cal File: V5N1314.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.899	1.894	(0.300)	728784	100.000	100
2 Chloromethane	50	2.062	2.045	(0.326)	1003007	100.000	99
$ 79 Vinyl Chloride-d3	65	2.189	2.173	(0.346)	568073	100.000	91
3 Vinyl Chloride	62	2.201	2.184	(0.348)	714303	100.000	99
4 Bromomethane	94	2.526	2.509	(0.400)	451411	100.000	98
$ 80 Chloroethane-d5	69	2.608	2.579	(0.412)	377714	100.000	94
5 Chloroethane	64	2.631	2.614	(0.416)	357829	100.000	96
6 Trichlorofluoromethane	101	2.898	2.904	(0.458)	848320	100.000	100
$ 81 1,1-Dichloroethene-d2	65	3.362	3.369	(0.532)	123584	100.000	96(Q)
7 1,1-Dichloroethene	96	3.386	3.380	(0.535)	469268	100.000	100
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.420	3.415	(0.541)	553328	100.000	100
9 Acetone	43	3.455	3.450	(0.546)	195948	200.000	160
10 Carbon Disulfide	76	3.595	3.624	(0.568)	1855878	100.000	96
11 Methyl Acetate	43	3.780	3.764	(0.598)	296102	100.000	95
12 Methylene Chloride	84	3.862	3.868	(0.611)	495236	100.000	98
13 trans-1,2-Dichloroethene	96	4.129	4.124	(0.653)	485064	100.000	100
14 Methyl tert-Butyl Ether	73	4.152	4.135	(0.657)	851590	100.000	94
15 1,1-Dichloroethane	63	4.535	4.530	(0.717)	905667	100.000	100
$ 82 2-Butanone-d5	46	5.081	5.064	(0.804)	326499	200.000	190
17 cis-1,2-Dichloroethene	96	5.104	5.099	(0.807)	475064	100.000	100
16 2-Butanone	43	5.139	5.122	(0.813)	338185	200.000	190

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1314.D
Report Date: 13-Oct-2011 08:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18 Bromochloromethane	128	5.337	5.331	(0.844)	227764	100.000	98
$	83 Chloroform-d	84	5.395	5.389	(0.853)	707472	100.000	95
	19 Chloroform	83	5.406	5.401	(0.855)	760072	100.000	91
	20 1,1,1-Trichloroethane	97	5.592	5.587	(0.593)	630512	100.000	100
	21 Cyclohexane	56	5.650	5.645	(0.599)	858283	100.000	100
	22 Carbon Tetrachloride	117	5.755	5.749	(0.610)	598441	100.000	100
$	23 1,2-Dichloroethane-d4	65	5.906	5.900	(0.934)	368626	100.000	92
$	84 Benzene-d6	84	5.917	5.912	(0.627)	1310448	100.000	94
	25 Benzene	78	5.964	5.959	(0.632)	1499243	100.000	99
	24 1,2-Dichloroethane	62	5.975	5.970	(0.945)	447146	100.000	95
*	26 1,4-Difluorobenzene	114	6.324	6.319	(1.000)	652703	50.0000	
	27 Trichloroethene	95	6.591	6.586	(0.698)	463947	100.000	110
$	85 1,2-Dichloropropane-d6	67	6.730	6.737	(0.713)	553125	100.000	96
	28 Methylcyclohexane	83	6.788	6.783	(0.719)	798598	100.000	100
	29 1,2-Dichloropropane	63	6.823	6.818	(0.723)	449976	100.000	97
$	94 1,4-Dioxane-d8	96	6.916	6.911	(1.094)	76779	2000.00	2000
	93 1,4-Dioxane	88	6.974	6.969	(1.103)	76182	2000.00	2200
	30 Bromodichloromethane	83	7.102	7.097	(0.753)	523580	100.000	100
	31 cis-1,3-Dichloropropene	75	7.566	7.561	(0.802)	604881	100.000	99
	32 4-Methyl-2-Pentanone	43	7.729	7.724	(0.819)	747658	200.000	180
$	33 Toluene-d8	98	7.845	7.840	(0.831)	1232529	100.000	96
	34 Toluene	91	7.915	7.909	(0.839)	1523032	100.000	100
$	86 trans-1,3-Dichloropropene-d4	79	8.112	8.119	(0.860)	432349	100.000	100
	35 trans-1,3-Dichloropropene	75	8.147	8.153	(0.863)	472368	100.000	97
	36 1,1,2-Trichloroethane	97	8.356	8.351	(0.886)	296720	100.000	98
	37 Tetrachloroethene	164	8.507	8.502	(0.902)	339876	100.000	110
$	87 2-Hexanone-d5	63	8.577	8.571	(0.909)	214463	200.000	190(Q)
	38 2-Hexanone	43	8.623	8.618	(0.914)	548711	200.000	180
	39 Dibromochloromethane	129	8.786	8.780	(0.931)	398804	100.000	100
	40 1,2-Dibromoethane	107	8.925	8.920	(0.946)	328624	100.000	100
*	42 Chlorobenzene-d5	117	9.436	9.431	(1.000)	524573	50.0000	
	43 Chlorobenzene	112	9.471	9.466	(1.004)	1057636	100.000	100
	44 Ethylbenzene	91	9.575	9.582	(1.015)	1655269	100.000	100
	45 m,p-Xylene	106	9.715	9.710	(1.030)	692375	100.000	100
	46 o-Xylene	106	10.179	10.174	(1.079)	651511	100.000	100
	47 Styrene	104	10.191	10.186	(1.080)	1092374	100.000	100
	48 Bromoform	173	10.412	10.418	(0.855)	236922	100.000	100
	49 Isopropylbenzene	105	10.597	10.604	(1.123)	1707553	100.000	100
$	89 1,1,2,2-Tetrachloroethane-d2	84	10.934	10.929	(1.159)	357598	100.000	95
	51 1,1,2,2-Tetrachloroethane	83	10.957	10.952	(1.161)	345482	100.000	96
M	41 Xylene (total)	106				1343886	100.000	200
	52 1,3-Dichlorobenzene	146	12.095	12.090	(0.993)	693303	100.000	110
*	78 1,4-Dichlorobenzene-d4	152	12.177	12.171	(1.000)	222487	50.0000	(Q)
	53 1,4-Dichlorobenzene	146	12.200	12.206	(1.002)	739355	100.000	98
$	90 1,2-Dichlorobenzene-d4	152	12.630	12.636	(1.037)	391450	100.000	94(Q)
	54 1,2-Dichlorobenzene	146	12.653	12.659	(1.039)	627402	100.000	99
	55 1,2-Dibromo-3-chloropropane	75	13.628	13.635	(1.119)	47093	100.000	110(Q)
	56 1,2,4-Trichlorobenzene	180	14.639	14.633	(1.202)	473479	100.000	99
	77 1,2,3-Trichlorobenzene	180	15.243	15.237	(1.252)	403637	100.000	97

QC Flag Legend

Q - Qualifier signal failed the ratio test.

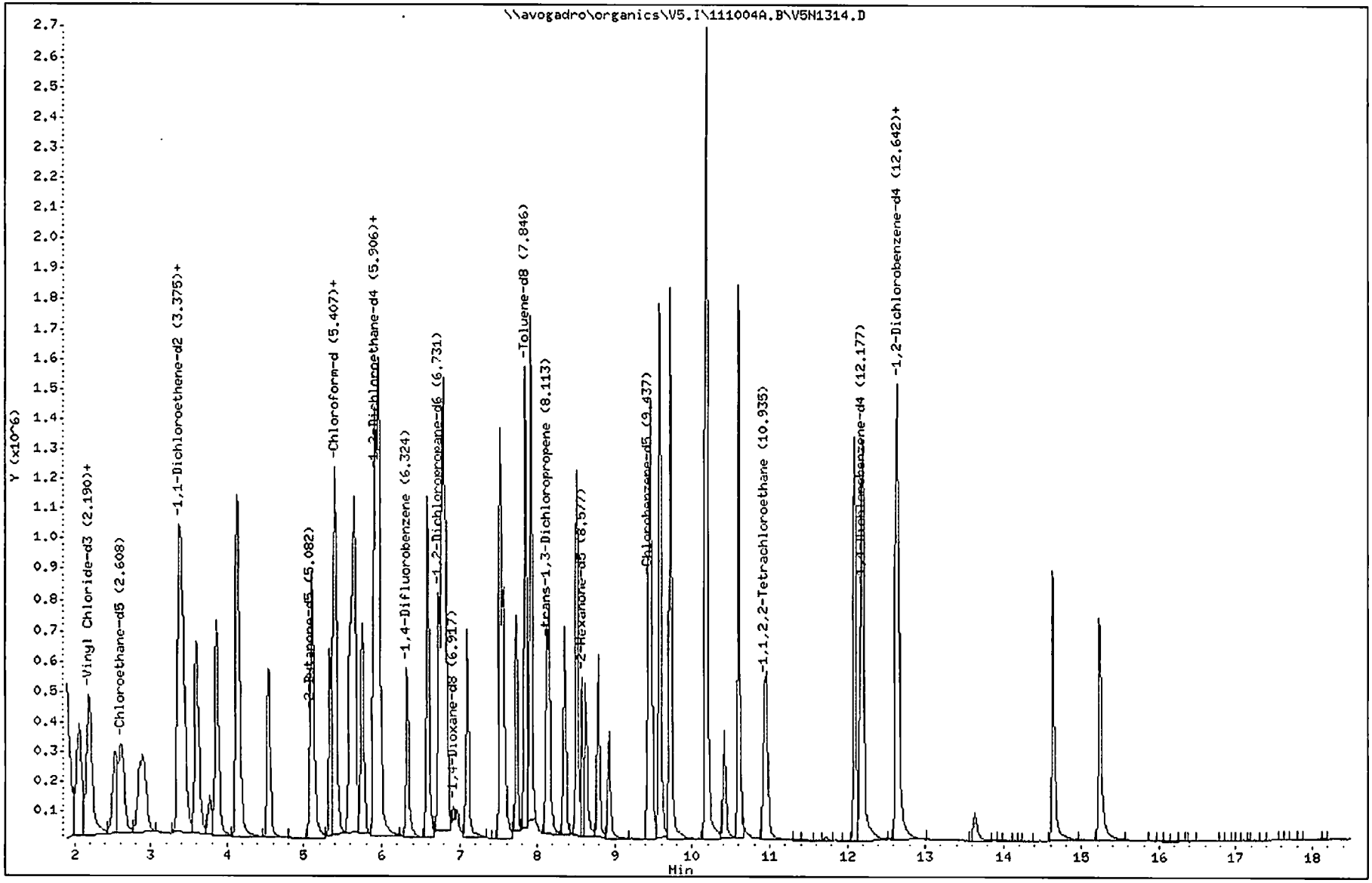
Data File: \\avogadro\organics\V5.I\111004A.B\V5N1314.D
Date : 04-OCT-2011 18:36
Client ID: VSTD1005N
Sample Info: 5G,VSTD1005N,VSTD1005N

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111004A.B\V5N1315.D
Report Date: 13-Oct-2011 08:46

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111004A.B\V5N1315.D
Lab Smp Id: VSTD0105N Client Smp ID: VSTD0105N
Inj Date : 04-OCT-2011 19:04
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD0105N,VSTD0105N
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111004A.B\V5_SOM_S.m
Meth Date : 12-Oct-2011 14:03 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 19:04 Cal File: V5N1315.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.888	1.894	(0.299)	74376	10.0000	11
2 Chloromethane	50	2.039	2.045	(0.322)	103887	10.0000	11
$ 79 Vinyl Chloride-d3	65	2.167	2.173	(0.343)	64656	10.0000	11
3 Vinyl Chloride	62	2.190	2.184	(0.346)	72601	10.0000	11
4 Bromomethane	94	2.503	2.509	(0.396)	47886	10.0000	11
$ 80 Chloroethane-d5	69	2.585	2.579	(0.409)	41140	10.0000	11
5 Chloroethane	64	2.620	2.614	(0.414)	37177	10.0000	11
6 Trichlorofluoromethane	101	2.898	2.904	(0.458)	78439	10.0000	10
$ 81 1,1-Dichloroethene-d2	65	3.363	3.369	(0.532)	11357	10.0000	9.3(Q)
7 1,1-Dichloroethene	96	3.386	3.380	(0.535)	45407	10.0000	10
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.421	3.415	(0.541)	53896	10.0000	10
9 Acetone	43	3.456	3.450	(0.546)	26221	20.0000	23
10 Carbon Disulfide	76	3.607	3.624	(0.570)	200799	10.0000	11
11 Methyl Acetate	43	3.781	3.764	(0.598)	34388	10.0000	12
12 Methylene Chloride	84	3.862	3.868	(0.611)	52059	10.0000	11
13 trans-1,2-Dichloroethene	96	4.129	4.124	(0.653)	47743	10.0000	10
14 Methyl tert-Butyl Ether	73	4.141	4.135	(0.655)	102149	10.0000	12
15 1,1-Dichloroethane	63	4.547	4.530	(0.719)	90414	10.0000	11
$ 82 2-Butanone-d5	46	5.093	5.064	(0.805)	38209	20.0000	23
17 cis-1,2-Dichloroethene	96	5.105	5.099	(0.807)	48573	10.0000	11
16 2-Butanone	43	5.151	5.122	(0.815)	38694	20.0000	24

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1315.D
Report Date: 13-Oct-2011 08:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18 Bromochloromethane	128	5.349	5.331	(0.846)	24272	10.0000	11(Q)
S	83 Chloroform-d	84	5.395	5.389	(0.853)	74732	10.0000	11
	19 Chloroform	83	5.407	5.401	(0.855)	87623	10.0000	11
	20 1,1,1-Trichloroethane	97	5.593	5.587	(0.593)	62850	10.0000	10
	21 Cyclohexane	56	5.639	5.645	(0.598)	85810	10.0000	10
	22 Carbon Tetrachloride	117	5.755	5.749	(0.610)	56074	10.0000	9.9
S	23 1,2-Dichloroethane-d4	65	5.906	5.900	(0.934)	43586	10.0000	11
S	84 Benzene-d6	84	5.918	5.912	(0.627)	147654	10.0000	11
	25 Benzene	78	5.964	5.959	(0.632)	160771	10.0000	11
	24 1,2-Dichloroethane	62	5.987	5.970	(0.947)	50225	10.0000	11
*	26 1,4-Difluorobenzene	114	6.324	6.319	(1.000)	616605	50.0000	
	27 Trichloroethene	95	6.603	6.586	(0.700)	43479	10.0000	10
S	85 1,2-Dichloropropane-d6	67	6.742	6.737	(0.715)	60090	10.0000	11
	28 Methylcyclohexane	83	6.789	6.783	(0.719)	79022	10.0000	10
	29 1,2-Dichloropropane	63	6.835	6.818	(0.724)	47705	10.0000	11
S	94 1,4-Dioxane-d8	96	6.940	6.911	(1.097)	7952	200.000	220
	93 1,4-Dioxane	88	6.986	6.969	(1.105)	7144	200.000	220(Q)
	30 Bromodichloromethane	83	7.102	7.097	(0.753)	53397	10.0000	11
	31 cis-1,3-Dichloropropene	75	7.578	7.561	(0.803)	66749	10.0000	11
	32 4-Methyl-2-Pentanone	43	7.741	7.724	(0.820)	97538	20.0000	24
S	33 Toluene-d8	98	7.857	7.840	(0.833)	132824	10.0000	11
	34 Toluene	91	7.927	7.909	(0.840)	161215	10.0000	11
S	86 trans-1,3-Dichloropropene-d4	79	8.136	8.119	(0.862)	46798	10.0000	11
	35 trans-1,3-Dichloropropene	75	8.171	8.153	(0.866)	51950	10.0000	11
	36 1,1,2-Trichloroethane	97	8.368	8.351	(0.887)	32978	10.0000	11
	37 Tetrachloroethene	164	8.519	8.502	(0.903)	30767	10.0000	9.7
S	87 2-Hexanone-d5	63	8.600	8.571	(0.911)	30215	20.0000	28(Q)
	38 2-Hexanone	43	8.647	8.618	(0.916)	88909	20.0000	29
	39 Dibromochloromethane	129	8.798	8.780	(0.932)	40272	10.0000	10
	40 1,2-Dibromoethane	107	8.937	8.920	(0.947)	31528	10.0000	9.9
*	42 Chlorobenzene-d5	117	9.436	9.431	(1.000)	515681	50.0000	
	43 Chlorobenzene	112	9.471	9.466	(1.004)	107912	10.0000	11
	44 Ethylbenzene	91	9.587	9.582	(1.016)	165158	10.0000	10
	45 m,p-Xylene	106	9.727	9.710	(1.031)	71767	10.0000	11
	46 o-Xylene	106	10.180	10.174	(1.079)	65673	10.0000	10
	47 Styrene	104	10.215	10.186	(1.082)	105666	10.0000	10
	48 Bromoform	173	10.435	10.418	(0.857)	25771	10.0000	11
	49 Isopropylbenzene	105	10.609	10.604	(1.124)	165474	10.0000	10
S	89 1,1,2,2-Tetrachloroethane-d2	84	10.946	10.929	(1.160)	44308	10.0000	12
	51 1,1,2,2-Tetrachloroethane	83	10.969	10.952	(1.162)	41450	10.0000	12
M	41 Xylene (total)	106				137440	10.0000	21
	52 1,3-Dichlorobenzene	146	12.107	12.090	(0.994)	69184	10.0000	10
*	78 1,4-Dichlorobenzene-d4	152	12.177	12.171	(1.000)	237594	50.0000	
	53 1,4-Dichlorobenzene	146	12.212	12.206	(1.003)	86467	10.0000	11
S	90 1,2-Dichlorobenzene-d4	152	12.653	12.636	(1.039)	49622	10.0000	11(Q)
	54 1,2-Dichlorobenzene	146	12.677	12.659	(1.041)	74148	10.0000	11
	55 1,2-Dibromo-3-chloropropane	75	13.687	13.635	(1.124)	4565	10.0000	9.5(Q)
	56 1,2,4-Trichlorobenzene	180	14.674	14.633	(1.205)	61165	10.0000	12
	77 1,2,3-Trichlorobenzene	180	15.266	15.237	(1.254)	57838	10.0000	13

QC Flag Legend

Q - Qualifier signal failed the ratio test.

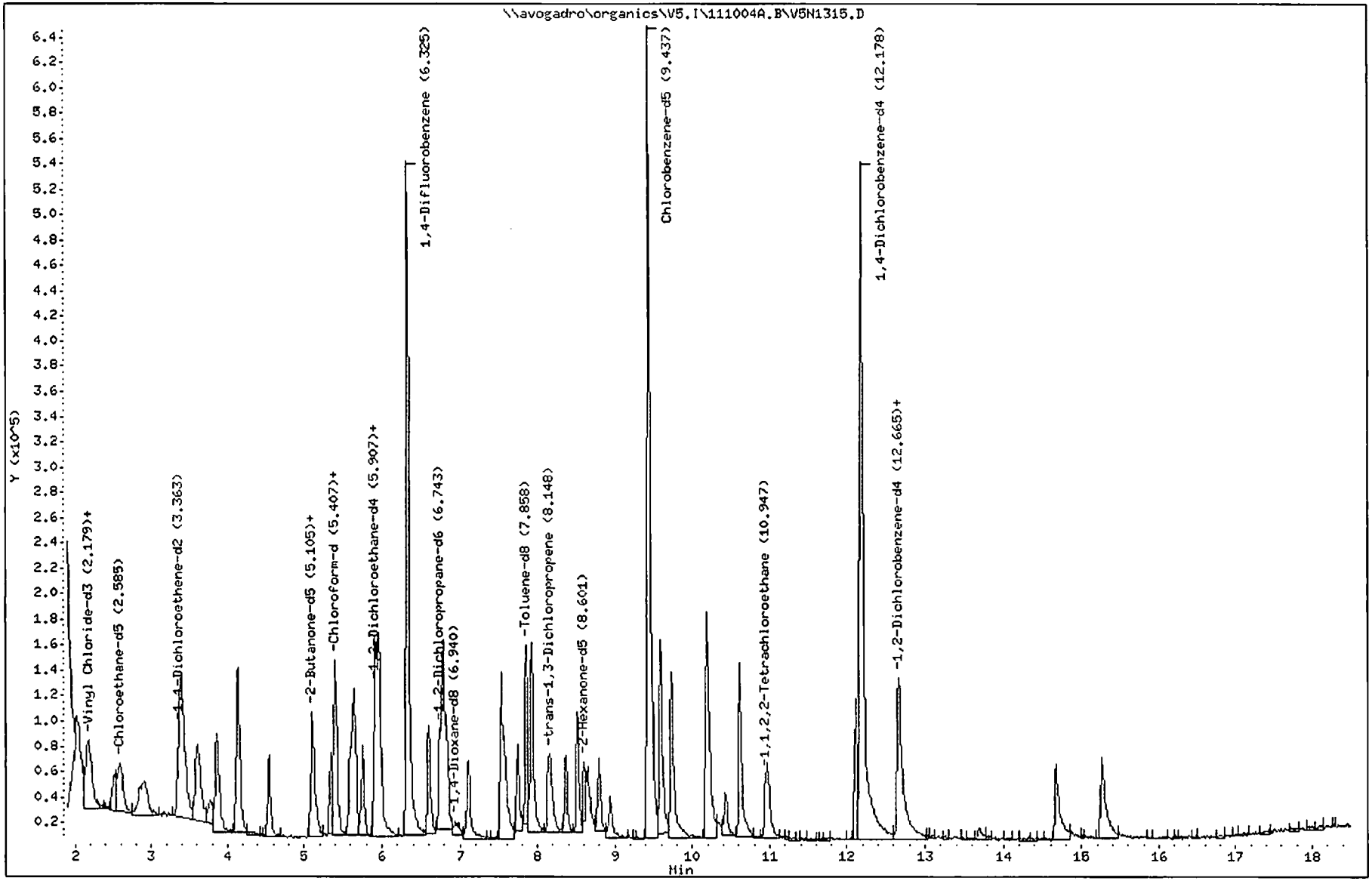
Data File: \\avogadro\organics\V5.I\111004A.B\V5N1315.D
Date : 04-OCT-2011 19:04
Client ID: VSTD0105N
Sample Info: 5G,VSTD0105N,VSTD0105N

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



7A - FORM VII VOA-1

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/06/2011 Time: 23:16

Lab File ID: V5N2701.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050J5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.556	0.425	0.010	-23.7	40.0
Chloromethane	0.777	0.660	0.010	-15.0	40.0
Vinyl chloride	0.554	0.493	0.100	-11.1	25.0
Bromomethane	0.353	0.281	0.100	-20.5	25.0
Chloroethane	0.284	0.264	0.010	-7.2	40.0
Trichlorofluoromethane	0.628	0.571	0.010	-9.0	40.0
1,1-Dichloroethene	0.353	0.327	0.100	-7.3	25.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.421	0.333	0.010	-20.9	40.0
Acetone	0.091	0.064	0.010	-29.5	40.0
Carbon disulfide	1.484	1.287	0.010	-13.2	40.0
Methyl acetate	0.238	0.153	0.010	-35.8	40.0
Methylene chloride	0.388	0.315	0.010	-18.8	40.0
trans-1,2-Dichloroethene	0.370	0.360	0.010	-2.9	40.0
Methyl tert-butyl ether	0.691	0.512	0.010	-25.9	40.0
1,1-Dichloroethane	0.689	0.672	0.200	-2.4	25.0
cis-1,2-Dichloroethene	0.363	0.342	0.010	-5.8	40.0
2-Butanone	0.133	0.094	0.010	-29.5	40.0
Bromochloromethane	0.179	0.151	0.050	-15.2	25.0
Chloroform	0.637	0.539	0.200	-15.4	25.0
1,1,1-Trichloroethane	0.588	0.712	0.100	21.1	25.0
Cyclohexane	0.808	0.942	0.010	16.6	40.0
Carbon tetrachloride	0.547	0.682	0.100	24.6	25.0
Benzene	1.449	1.653	0.400	14.0	25.0
1,2-Dichloroethane	0.359	0.327	0.100	-9.0	25.0
1,4-Dioxane	0.003	0.002	0.005	-41.7	50.0
Trichloroethene	0.420	0.519	0.300	23.5	25.0
Methylcyclohexane	0.738	0.813	0.010	10.3	40.0

Report 1,4-Dioxane for Low-Medium VOA analysis only SOM01.2 (6/2007)

7B - FORM VII VOA-2

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/06/2011 Time: 23:16

Lab File ID: V5N2701.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050J5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.440	0.500	0.010	13.6	40.0
Bromodichloromethane	0.491	0.522	0.200	6.3	25.0
cis-1,3-Dichloropropene	0.585	0.617	0.200	5.4	25.0
4-Methyl-2-pentanone	0.388	0.269	0.010	-30.8	40.0
Toluene	1.432	1.642	0.400	14.7	25.0
trans-1,3-Dichloropropene	0.462	0.464	0.100	0.4	25.0
1,1,2-Trichloroethane	0.288	0.275	0.100	-4.6	25.0
Tetrachloroethene	0.308	0.366	0.100	18.7	25.0
2-Hexanone	0.298	0.180	0.010	-39.7	40.0
Dibromochloromethane	0.380	0.378	0.100	-0.5	25.0
1,2-Dibromoethane	0.309	0.302	0.010	-2.1	40.0
Chlorobenzene	0.984	1.112	0.500	13.0	25.0
Ethylbenzene	1.538	1.766	0.100	14.8	25.0
m,p-Xylene	0.644	0.711	0.300	10.5	25.0
o-Xylene	0.616	0.650	0.300	5.6	25.0
Styrene	1.010	1.079	0.300	6.9	25.0
Bromoform	0.512	0.524	0.050	2.2	25.0
Isopropylbenzene	1.572	1.782	0.010	13.3	40.0
1,1,2,2-Tetrachloroethane	0.341	0.294	0.300	-13.9	25.0
1,3-Dichlorobenzene	1.452	1.596	0.600	9.9	25.0
1,4-Dichlorobenzene	1.697	1.783	0.500	5.0	25.0
1,2-Dichlorobenzene	1.427	1.465	0.400	2.7	25.0
1,2-Dibromo-3-chloropropane	0.101	0.084	0.010	-16.3	40.0
1,2,4-Trichlorobenzene	1.070	0.880	0.200	-17.7	25.0
1,2,3-Trichlorobenzene	0.935	0.728	0.200	-22.2	25.0

7C - FORM VII VOA-3

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/06/2011 Time: 23:16

Lab File ID: V5N2701.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050J5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.476	0.413	0.010	-13.3	25.0
Chloroethane-d5	0.308	0.296	0.010	-3.9	40.0
1,1-Dichloroethene-d2	0.099	0.100	0.010	1.3	25.0
2-Butanone-d5	0.133	0.095	0.010	-28.5	40.0
Chloroform-d	0.570	0.527	0.010	-7.6	25.0
1,2-Dichloroethane-d4	0.308	0.261	0.010	-15.2	25.0
Benzene-d6	1.324	1.520	0.010	14.8	25.0
1,2-Dichloropropane-d6	0.547	0.580	0.010	5.9	40.0
Toluene-d8	1.222	1.383	0.010	13.1	25.0
trans-1,3-Dichloropropene-d4	0.412	0.439	0.010	6.6	25.0
2-Hexanone-d5	0.105	0.070	0.010	-33.3	40.0
1,4-Dioxane-d8	0.003	0.002	0.005	-34.7	50.0
1,1,2,2-Tetrachloroethane-d2	0.358	0.305	0.010	-14.9	25.0
1,2-Dichlorobenzene-d4	0.934	0.966	0.010	3.4	25.0

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only SOM01.2 (6/2007)

7A - FORM VII VOA-1

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/07/2011 Time: 9:45

Lab File ID: V5N2724.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050K5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.556	0.423	0.010	-23.8	40.0
Chloromethane	0.777	0.717	0.010	-7.8	40.0
Vinyl chloride	0.554	0.482	0.100	-13.1	25.0
Bromomethane	0.353	0.311	0.100	-12.1	25.0
Chloroethane	0.284	0.251	0.010	-11.8	40.0
Trichlorofluoromethane	0.628	0.526	0.010	-16.2	40.0
1,1-Dichloroethene	0.353	0.294	0.100	-16.7	25.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.421	0.309	0.010	-26.7	40.0
Acetone	0.091	0.093	0.010	1.9	40.0
Carbon disulfide	1.484	1.218	0.010	-17.9	40.0
Methyl acetate	0.238	0.262	0.010	10.2	40.0
Methylene chloride	0.388	0.382	0.010	-1.4	40.0
trans-1,2-Dichloroethene	0.370	0.356	0.010	-3.9	40.0
Methyl tert-butyl ether	0.691	0.788	0.010	14.0	40.0
1,1-Dichloroethane	0.689	0.704	0.200	2.2	25.0
cis-1,2-Dichloroethene	0.363	0.389	0.010	6.9	40.0
2-Butanone	0.133	0.167	0.010	25.4	40.0
Bromochloromethane	0.179	0.204	0.050	14.2	25.0
Chloroform	0.637	0.631	0.200	-1.0	25.0
1,1,1-Trichloroethane	0.588	0.558	0.100	-5.0	25.0
Cyclohexane	0.808	0.685	0.010	-15.2	40.0
Carbon tetrachloride	0.547	0.510	0.100	-6.9	25.0
Benzene	1.449	1.396	0.400	-3.6	25.0
1,2-Dichloroethane	0.359	0.429	0.100	19.4	25.0
1,4-Dioxane	0.003	0.003	0.005	23.9	50.0
Trichloroethene	0.420	0.396	0.300	-5.8	25.0
Methylcyclohexane	0.738	0.559	0.010	-24.3	40.0

Report 1,4-Dioxane for Low-Medium VOA analysis only SOM01.2 (6/2007)

7B - FORM VII VOA-2

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/07/2011 Time: 9:45

Lab File ID: V5N2724.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050K5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.440	0.475	0.010	7.9	40.0
Bromodichloromethane	0.491	0.522	0.200	6.3	25.0
cis-1,3-Dichloropropene	0.585	0.639	0.200	9.2	25.0
4-Methyl-2-pentanone	0.388	0.410	0.010	5.6	40.0
Toluene	1.432	1.391	0.400	-2.8	25.0
trans-1,3-Dichloropropene	0.462	0.502	0.100	8.6	25.0
1,1,2-Trichloroethane	0.288	0.324	0.100	12.7	25.0
Tetrachloroethene	0.308	0.281	0.100	-8.6	25.0
2-Hexanone	0.298	0.238	0.010	-20.0	40.0
Dibromochloromethane	0.380	0.423	0.100	11.3	25.0
1,2-Dibromoethane	0.309	0.365	0.010	18.3	40.0
Chlorobenzene	0.984	1.018	0.500	3.5	25.0
Ethylbenzene	1.538	1.475	0.100	-4.1	25.0
m,p-Xylene	0.644	0.605	0.300	-6.1	25.0
o-Xylene	0.616	0.590	0.300	-4.2	25.0
Styrene	1.010	1.009	0.300	-0.1	25.0
Bromoform	0.512	0.584	0.050	14.0	25.0
Isopropylbenzene	1.572	1.499	0.010	-4.7	40.0
1,1,2,2-Tetrachloroethane	0.341	0.398	0.300	16.5	25.0
1,3-Dichlorobenzene	1.452	1.542	0.600	6.2	25.0
1,4-Dichlorobenzene	1.697	1.628	0.500	-4.1	25.0
1,2-Dichlorobenzene	1.427	1.518	0.400	6.4	25.0
1,2-Dibromo-3-chloropropane	0.101	0.127	0.010	26.6	40.0
1,2,4-Trichlorobenzene	1.070	0.987	0.200	-7.7	25.0
1,2,3-Trichlorobenzene	0.935	0.917	0.200	-2.0	25.0

7C - FORM VII VOA-3

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/07/2011 Time: 9:45

Lab File ID: V5N2724.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050K5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.476	0.409	0.010	-14.1	25.0
Chloroethane-d5	0.308	0.290	0.010	-5.7	40.0
1,1-Dichloroethene-d2	0.099	0.090	0.010	-8.7	25.0
2-Butanone-d5	0.133	0.162	0.010	21.9	40.0
Chloroform-d	0.570	0.601	0.010	5.4	25.0
1,2-Dichloroethane-d4	0.308	0.372	0.010	20.9	25.0
Benzene-d6	1.324	1.291	0.010	-2.5	25.0
1,2-Dichloropropane-d6	0.547	0.559	0.010	2.1	40.0
Toluene-d8	1.222	1.173	0.010	-4.0	25.0
trans-1,3-Dichloropropene-d4	0.412	0.449	0.010	9.0	25.0
2-Hexanone-d5	0.105	0.115	0.010	9.3	40.0
1,4-Dioxane-d8	0.003	0.003	0.005	17.3	50.0
1,1,2,2-Tetrachloroethane-d2	0.358	0.412	0.010	15.0	25.0
1,2-Dichlorobenzene-d4	0.934	0.927	0.010	-0.8	25.0

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only SOM01.2 (6/2007)

7A - FORM VII VOA-1

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/07/2011 Time: 21:33

Lab File ID: V5N2749.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050L5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.556	0.422	0.010	-24.1	50.0
Chloromethane	0.777	0.679	0.010	-12.6	50.0
Vinyl chloride	0.554	0.496	0.010	-10.6	50.0
Bromomethane	0.353	0.300	0.010	-15.2	50.0
Chloroethane	0.284	0.252	0.010	-11.4	50.0
Trichlorofluoromethane	0.628	0.587	0.010	-6.6	50.0
1,1-Dichloroethene	0.353	0.341	0.010	-3.4	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.421	0.336	0.010	-20.1	50.0
Acetone	0.091	0.068	0.010	-25.0	50.0
Carbon disulfide	1.484	1.349	0.010	-9.1	50.0
Methyl acetate	0.238	0.182	0.010	-23.4	50.0
Methylene chloride	0.388	0.343	0.010	-11.5	50.0
trans-1,2-Dichloroethene	0.370	0.373	0.010	0.7	50.0
Methyl tert-butyl ether	0.691	0.600	0.010	-13.2	50.0
1,1-Dichloroethane	0.689	0.687	0.010	-0.3	50.0
cis-1,2-Dichloroethene	0.363	0.356	0.010	-1.9	50.0
2-Butanone	0.133	0.114	0.010	-14.1	50.0
Bromochloromethane	0.179	0.160	0.010	-10.7	50.0
Chloroform	0.637	0.570	0.010	-10.4	50.0
1,1,1-Trichloroethane	0.588	0.633	0.010	7.6	50.0
Cyclohexane	0.808	0.840	0.010	4.0	50.0
Carbon tetrachloride	0.547	0.610	0.010	11.4	50.0
Benzene	1.449	1.512	0.010	4.3	50.0
1,2-Dichloroethane	0.359	0.343	0.010	-4.5	50.0
1,4-Dioxane	0.003	0.002	0.005	-18.6	50.0
Trichloroethene	0.420	0.471	0.010	11.9	50.0
Methylcyclohexane	0.738	0.691	0.010	-6.4	50.0

Report 1,4-Dioxane for Low-Medium VOA analysis only SOM01.2 (6/2007)

7B - FORM VII VOA-2

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/07/2011 Time: 21:33

Lab File ID: V5N2749.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050L5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.440	0.466	0.010	5.9	50.0
Bromodichloromethane	0.491	0.529	0.010	7.8	50.0
cis-1,3-Dichloropropene	0.585	0.586	0.010	0.2	50.0
4-Methyl-2-pentanone	0.388	0.308	0.010	-20.7	50.0
Toluene	1.432	1.508	0.010	5.3	50.0
trans-1,3-Dichloropropene	0.462	0.432	0.010	-6.4	50.0
1,1,2-Trichloroethane	0.288	0.263	0.010	-8.5	50.0
Tetrachloroethene	0.308	0.332	0.010	7.9	50.0
2-Hexanone	0.298	0.195	0.010	-34.7	50.0
Dibromochloromethane	0.380	0.373	0.010	-1.8	50.0
1,2-Dibromoethane	0.309	0.296	0.010	-4.1	50.0
Chlorobenzene	0.984	1.021	0.010	3.7	50.0
Ethylbenzene	1.538	1.645	0.010	6.9	50.0
m,p-Xylene	0.644	0.666	0.010	3.4	50.0
o-Xylene	0.616	0.596	0.010	-3.2	50.0
Styrene	1.010	1.007	0.010	-0.3	50.0
Bromoform	0.512	0.531	0.010	3.6	50.0
Isopropylbenzene	1.572	1.648	0.010	4.8	50.0
1,1,2,2-Tetrachloroethane	0.341	0.297	0.010	-13.1	50.0
1,3-Dichlorobenzene	1.452	1.595	0.010	9.9	50.0
1,4-Dichlorobenzene	1.697	1.710	0.010	0.7	50.0
1,2-Dichlorobenzene	1.427	1.462	0.010	2.4	50.0
1,2-Dibromo-3-chloropropane	0.101	0.094	0.010	-6.3	50.0
1,2,4-Trichlorobenzene	1.070	0.894	0.010	-16.4	50.0
1,2,3-Trichlorobenzene	0.935	0.715	0.010	-23.5	50.0

7C - FORM VII VOA-3

VOLATILE CONTINUING CALIBRATION DATA

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Instrument ID: V5 Calibration Date: 11/07/2011 Time: 21:33

Lab File ID: V5N2749.D Init. Calib. Date(s): 10/04/2011 10/04/2011

EPA Sample No.(VSTD#####) VSTD050L5 Init. Calib. Time(s): 17:11 19:04

Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 10.0 (mL)

COMPOUND	$\overline{RRF}$	RRF050	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.476	0.413	0.010	-13.4	50.0
Chloroethane-d5	0.308	0.300	0.010	-2.6	50.0
1,1-Dichloroethene-d2	0.099	0.107	0.010	8.0	50.0
2-Butanone-d5	0.133	0.106	0.010	-20.5	50.0
Chloroform-d	0.570	0.554	0.010	-2.9	50.0
1,2-Dichloroethane-d4	0.308	0.289	0.010	-6.2	50.0
Benzene-d6	1.324	1.398	0.010	5.6	50.0
1,2-Dichloropropane-d6	0.547	0.551	0.010	0.6	50.0
Toluene-d8	1.222	1.305	0.010	6.7	50.0
trans-1,3-Dichloropropene-d4	0.412	0.383	0.010	-7.0	50.0
2-Hexanone-d5	0.105	0.083	0.010	-21.0	50.0
1,4-Dioxane-d8	0.003	0.002	0.005	-17.4	50.0
1,1,2,2-Tetrachloroethane-d2	0.358	0.318	0.010	-11.2	50.0
1,2-Dichlorobenzene-d4	0.934	0.930	0.010	-0.5	50.0

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only SOM01.2 (6/2007)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2701.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2701.D
Lab Smp Id: VSTD050J5 Client Smp ID: VSTD050J5
Inj Date : 06-NOV-2011 23:16
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD050J5,VSTD050J5
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.878	1.906	(0.298)	114672	50.0000	38
2 Chloromethane	50	2.029	2.045	(0.321)	178296	50.0000	42
$ 79 Vinyl Chloride-d3	65	2.157	2.173	(0.342)	111444	50.0000	43
3 Vinyl Chloride	62	2.169	2.185	(0.344)	133112	50.0000	44
4 Bromomethane	94	2.506	2.521	(0.397)	75899	50.0000	40
$ 80 Chloroethane-d5	69	2.575	2.603	(0.408)	79954	50.0000	48
5 Chloroethane	64	2.610	2.626	(0.413)	71259	50.0000	46
6 Trichlorofluoromethane	101	2.842	2.893	(0.450)	154344	50.0000	45
$ 81 1,1-Dichloroethene-d2	65	3.353	3.369	(0.531)	27014	50.0000	51
7 1,1-Dichloroethene	96	3.365	3.381	(0.533)	88453	50.0000	46
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.411	3.427	(0.540)	89933	50.0000	40
9 Acetone	43	3.435	3.450	(0.544)	34703	100.000	71
10 Carbon Disulfide	76	3.586	3.601	(0.568)	347696	50.0000	43
11 Methyl Acetate	43	3.760	3.776	(0.595)	41224	50.0000	32
12 Methylene Chloride	84	3.853	3.857	(0.610)	85107	50.0000	41
13 trans-1,2-Dichloroethene	96	4.120	4.124	(0.652)	97131	50.0000	49
14 Methyl tert-Butyl Ether	73	4.131	4.147	(0.654)	138415	50.0000	37
15 1,1-Dichloroethane	63	4.526	4.530	(0.717)	181588	50.0000	49
$ 82 2-Butanone-d5	46	5.072	5.076	(0.803)	51305	100.000	72
17 cis-1,2-Dichloroethene	96	5.095	5.099	(0.807)	92450	50.0000	47
16 2-Butanone	43	5.130	5.134	(0.812)	50717	100.000	71

Data File: \\avogadro\organics\V5.I\111106.B\V5N2701.D
Report Date: 09-Nov-2011 07:59

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18	Bromochloromethane	128	5.328	5.332	(0.844)	40877	50.0000	42
$	83	Chloroform-d	84	5.374	5.390	(0.851)	142305	50.0000	46
	19	Chloroform	83	5.397	5.401	(0.855)	145615	50.0000	42
	20	1,1,1-Trichloroethane	97	5.583	5.587	(0.592)	131139	50.0000	61
	21	Cyclohexane	56	5.630	5.645	(0.597)	173398	50.0000	58
	22	Carbon Tetrachloride	117	5.746	5.750	(0.610)	125666	50.0000	62
$	23	1,2-Dichloroethane-d4	65	5.885	5.901	(0.932)	70542	50.0000	42
$	84	Benzene-d6	84	5.908	5.912	(0.627)	279888	50.0000	57
	25	Benzene	78	5.943	5.947	(0.630)	304319	50.0000	57
	24	1,2-Dichloroethane	62	5.966	5.970	(0.945)	88202	50.0000	45
*	26	1,4-Difluorobenzene	114	6.315	6.319	(1.000)	270116	50.0000	
	27	Trichloroethene	95	6.582	6.586	(0.698)	95661	50.0000	62
$	85	1,2-Dichloropropane-d6	67	6.721	6.725	(0.713)	106728	50.0000	53
	28	Methylcyclohexane	83	6.768	6.783	(0.718)	149798	50.0000	55
	29	1,2-Dichloropropane	63	6.814	6.818	(0.723)	92068	50.0000	57
$	94	1,4-Dioxane-d8	96	6.919	6.911	(1.096)	10331	1000.00	650
	93	1,4-Dioxane	88	6.977	6.969	(1.105)	8340	1000.00	580
	30	Bromodichloromethane	83	7.093	7.097	(0.752)	96120	50.0000	53
	31	cis-1,3-Dichloropropene	75	7.557	7.561	(0.802)	113541	50.0000	53
	32	4-Methyl-2-Pentanone	43	7.720	7.724	(0.819)	99031	100.000	69
$	33	Toluene-d8	98	7.836	7.840	(0.831)	254625	50.0000	57
	34	Toluene	91	7.906	7.910	(0.839)	302351	50.0000	57
$	86	trans-1,3-Dichloropropene-d4	79	8.115	8.119	(0.861)	80870	50.0000	53
	35	trans-1,3-Dichloropropene	75	8.150	8.142	(0.864)	85456	50.0000	50
	36	1,1,2-Trichloroethane	97	8.347	8.351	(0.885)	50560	50.0000	48
	37	Tetrachloroethene	164	8.498	8.502	(0.901)	67330	50.0000	59
$	87	2-Hexanone-d5	63	8.579	8.572	(0.910)	25854	100.000	67(Q)
	38	2-Hexanone	43	8.637	8.630	(0.916)	66161	100.000	60
	39	Dibromochloromethane	129	8.777	8.781	(0.931)	69664	50.0000	50
	40	1,2-Dibromoethane	107	8.916	8.920	(0.946)	55665	50.0000	49
*	42	Chlorobenzene-d5	117	9.427	9.431	(1.000)	184155	50.0000	
	43	Chlorobenzene	112	9.462	9.466	(1.004)	204789	50.0000	56
	44	Ethylbenzene	91	9.578	9.582	(1.016)	325191	50.0000	57
	45	m,p-Xylene	106	9.706	9.710	(1.030)	131025	50.0000	55
	46	o-Xylene	106	10.170	10.174	(1.079)	119741	50.0000	53
	47	Styrene	104	10.182	10.186	(1.080)	198701	50.0000	53
	48	Bromoform	173	10.414	10.418	(0.856)	36823	50.0000	51
	49	Isopropylbenzene	105	10.600	10.604	(1.124)	328095	50.0000	57
$	89	1,1,2,2-Tetrachloroethane-d2	84	10.925	10.929	(1.159)	56154	50.0000	43
	51	1,1,2,2-Tetrachloroethane	83	10.960	10.952	(1.163)	54124	50.0000	43
	52	1,3-Dichlorobenzene	146	12.098	12.091	(0.994)	112235	50.0000	55
*	78	1,4-Dichlorobenzene-d4	152	12.168	12.172	(1.000)	70335	50.0000	
	53	1,4-Dichlorobenzene	146	12.203	12.195	(1.003)	125374	50.0000	53
$	90	1,2-Dichlorobenzene-d4	152	12.632	12.625	(1.038)	67931	50.0000	52(Q)
	54	1,2-Dichlorobenzene	146	12.655	12.648	(1.040)	103072	50.0000	51
	55	1,2-Dibromo-3-chloropropane	75	13.654	13.647	(1.122)	5928	50.0000	42(Q)
	56	1,2,4-Trichlorobenzene	180	14.641	14.645	(1.203)	61909	50.0000	41
	77	1,2,3-Trichlorobenzene	180	15.245	15.238	(1.253)	51202	50.0000	39

QC Flag Legend

Q - Qualifier signal failed the ratio test.

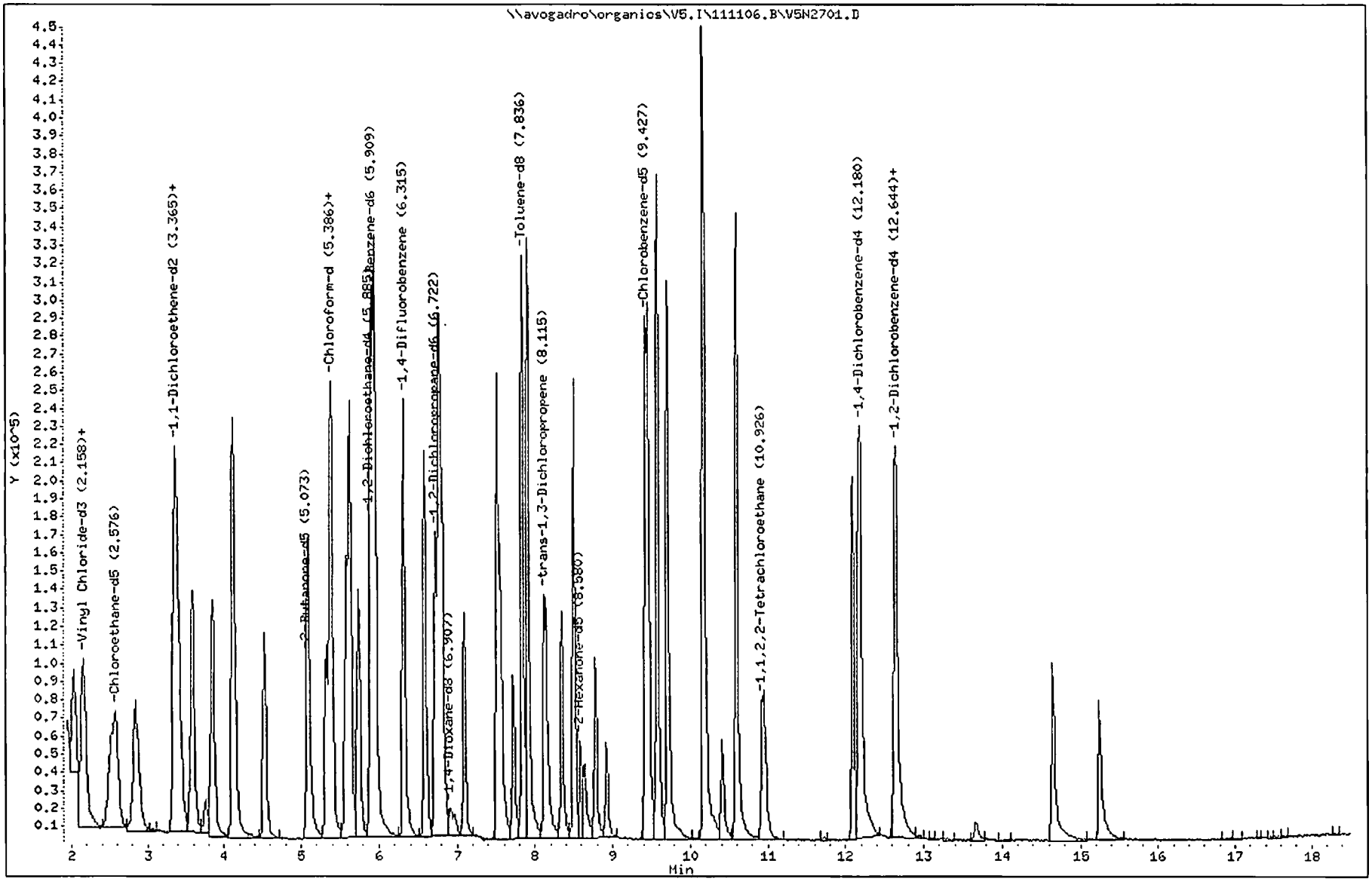
Data File: \\avogadro\organics\V5.I\111106.B\V5N2701.D
Date : 06-NOV-2011 23:16
Client ID: VSTD050J5
Sample Info: 5G,VSTD050J5,VSTD050J5

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111106.B\V5N2724.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2724.D
Lab Smp Id: VSTD050K5 Client Smp ID: VSTD050K5
Inj Date : 07-NOV-2011 09:45
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD050K5,VSTD050K5
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 56 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.906	1.906	(0.302)	102874	50.0000	38
2 Chloromethane	50	2.045	2.045	(0.324)	174053	50.0000	46
$ 79 Vinyl Chloride-d3	65	2.173	2.173	(0.344)	99401	50.0000	43
3 Vinyl Chloride	62	2.185	2.185	(0.346)	117034	50.0000	43
4 Bromomethane	94	2.521	2.521	(0.399)	75502	50.0000	44
$ 80 Chloroethane-d5	69	2.603	2.603	(0.412)	70555	50.0000	47
5 Chloroethane	64	2.626	2.626	(0.416)	60900	50.0000	44
6 Trichlorofluoromethane	101	2.893	2.893	(0.458)	127879	50.0000	42
$ 81 1,1-Dichloroethene-d2	65	3.369	3.369	(0.533)	21896	50.0000	46
7 1,1-Dichloroethene	96	3.381	3.381	(0.535)	71444	50.0000	42
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.427	3.427	(0.542)	75025	50.0000	37
9 Acetone	43	3.450	3.450	(0.546)	45119	100.000	100
10 Carbon Disulfide	76	3.601	3.601	(0.570)	295780	50.0000	41
11 Methyl Acetate	43	3.776	3.776	(0.598)	63691	50.0000	55
12 Methylene Chloride	84	3.857	3.857	(0.610)	92912	50.0000	49
13 trans-1,2-Dichloroethene	96	4.124	4.124	(0.653)	86481	50.0000	48
14 Methyl tert-Butyl Ether	73	4.147	4.147	(0.656)	191385	50.0000	57
15 1,1-Dichloroethane	63	4.530	4.530	(0.717)	171091	50.0000	51
$ 82 2-Butanone-d5	46	5.076	5.076	(0.803)	78641	100.000	120
17 cis-1,2-Dichloroethene	96	5.099	5.099	(0.807)	94411	50.0000	53
16 2-Butanone	43	5.134	5.134	(0.813)	81109	100.000	130

Data File: \\avogadro\organics\V5.I\111106.B\V5N2724.D
Report Date: 09-Nov-2011 07:59

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18	Bromochloromethane	128	5.332	5.332	(0.844)	49524	50.0000	57
$	83	Chloroform-d	84	5.390	5.390	(0.853)	146006	50.0000	53
	19	Chloroform	83	5.401	5.401	(0.855)	153167	50.0000	49
	20	1,1,1-Trichloroethane	97	5.587	5.587	(0.592)	115419	50.0000	47
	21	Cyclohexane	56	5.645	5.645	(0.599)	141541	50.0000	42
	22	Carbon Tetrachloride	117	5.750	5.750	(0.610)	105434	50.0000	47
$	23	1,2-Dichloroethane-d4	65	5.901	5.901	(0.934)	90430	50.0000	60
$	84	Benzene-d6	84	5.912	5.912	(0.627)	266938	50.0000	49
	25	Benzene	78	5.947	5.947	(0.631)	288732	50.0000	48
	24	1,2-Dichloroethane	62	5.970	5.970	(0.945)	104099	50.0000	60
*	26	1,4-Difluorobenzene	114	6.319	6.319	(1.000)	242917	50.0000	
	27	Trichloroethene	95	6.586	6.586	(0.698)	81875	50.0000	47
$	85	1,2-Dichloropropane-d6	67	6.725	6.725	(0.713)	115548	50.0000	51
	28	Methylcyclohexane	83	6.783	6.783	(0.719)	115486	50.0000	38
	29	1,2-Dichloropropane	63	6.818	6.818	(0.723)	98159	50.0000	54
$	94	1,4-Dioxane-d8	96	6.911	6.911	(1.094)	16703	1000.00	1200
	93	1,4-Dioxane	88	6.969	6.969	(1.103)	15922	1000.00	1200
	30	Bromodichloromethane	83	7.097	7.097	(0.753)	107971	50.0000	53
	31	cis-1,3-Dichloropropene	75	7.561	7.561	(0.802)	132053	50.0000	55
	32	4-Methyl-2-Pentanone	43	7.724	7.724	(0.819)	169608	100.000	110
$	33	Toluene-d8	98	7.840	7.840	(0.831)	242499	50.0000	48
	34	Toluene	91	7.910	7.910	(0.839)	287608	50.0000	49
$	86	trans-1,3-Dichloropropene-d4	79	8.119	8.119	(0.861)	92862	50.0000	55
	35	trans-1,3-Dichloropropene	75	8.142	8.142	(0.863)	103783	50.0000	54
	36	1,1,2-Trichloroethane	97	8.351	8.351	(0.885)	67052	50.0000	56
	37	Tetrachloroethene	164	8.502	8.502	(0.901)	58186	50.0000	46
$	87	2-Hexanone-d5	63	8.572	8.572	(0.909)	47563	100.000	110(Q)
	38	2-Hexanone	43	8.630	8.630	(0.915)	98586	100.000	80
	39	Dibromochloromethane	129	8.781	8.781	(0.931)	87511	50.0000	56
	40	1,2-Dibromoethane	107	8.920	8.920	(0.946)	75489	50.0000	59
*	42	Chlorobenzene-d5	117	9.431	9.431	(1.000)	206756	50.0000	
	43	Chlorobenzene	112	9.466	9.466	(1.004)	210578	50.0000	52
	44	Ethylbenzene	91	9.582	9.582	(1.016)	304904	50.0000	48
	45	m,p-Xylene	106	9.710	9.710	(1.030)	125107	50.0000	47
	46	o-Xylene	106	10.174	10.174	(1.079)	122005	50.0000	48
	47	Styrene	104	10.186	10.186	(1.080)	208578	50.0000	50
	48	Bromoform	173	10.418	10.418	(0.856)	51255	50.0000	57
	49	Isopropylbenzene	105	10.604	10.604	(1.124)	309947	50.0000	48
$	89	1,1,2,2-Tetrachloroethane-d2	84	10.929	10.929	(1.159)	85142	50.0000	57
	51	1,1,2,2-Tetrachloroethane	83	10.952	10.952	(1.161)	82213	50.0000	58
	52	1,3-Dichlorobenzene	146	12.091	12.091	(0.993)	135322	50.0000	53
*	78	1,4-Dichlorobenzene-d4	152	12.172	12.172	(1.000)	87745	50.0000	(Q)
	53	1,4-Dichlorobenzene	146	12.195	12.195	(1.002)	142846	50.0000	48
$	90	1,2-Dichlorobenzene-d4	152	12.625	12.625	(1.037)	81325	50.0000	50(Q)
	54	1,2-Dichlorobenzene	146	12.648	12.648	(1.039)	133212	50.0000	53
	55	1,2-Dibromo-3-chloropropane	75	13.647	13.647	(1.121)	11185	50.0000	63(Q)
	56	1,2,4-Trichlorobenzene	180	14.645	14.645	(1.203)	86635	50.0000	46
	77	1,2,3-Trichlorobenzene	180	15.238	15.238	(1.252)	80421	50.0000	49

QC Flag Legend

Q - Qualifier signal failed the ratio test.

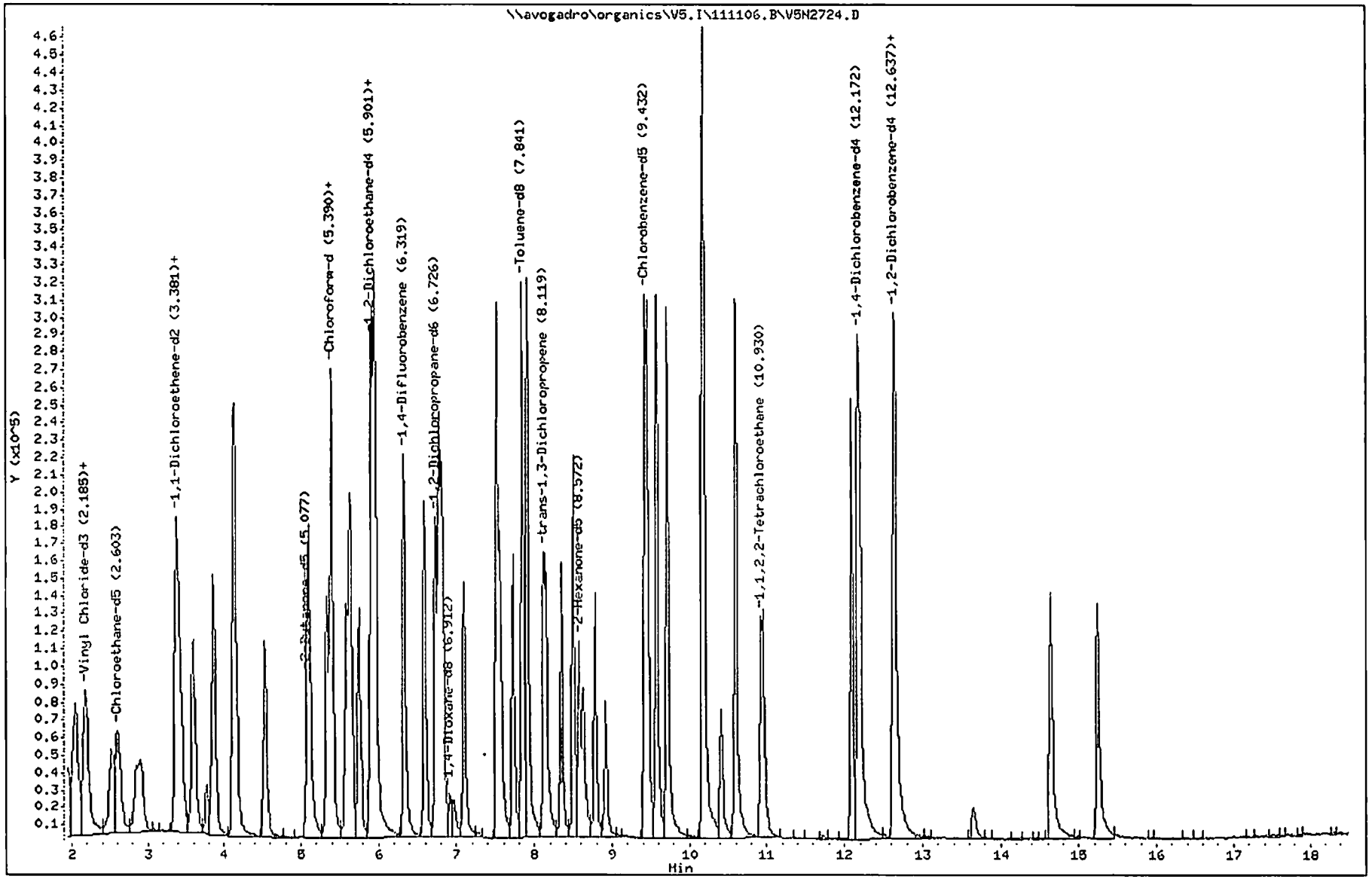
Data File: \\avogadro\organics\V5.I\111106.B\V5N2724.D
Date : 07-NOV-2011 09:45
Client ID: VSTD050K5
Sample Info: 5G,VSTD050K5,VSTD050K5

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111107.B\V5N2749.D
Report Date: 09-Nov-2011 08:01

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2749.D
Lab Smp Id: VSTD050L5 Client Smp ID: VSTD050L5
Inj Date : 07-NOV-2011 21:33
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VSTD050L5,VSTD050L5
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.901	1.901	(0.301)	154767	50.0000	38
2 Chloromethane	50	2.040	2.040	(0.323)	249104	50.0000	44
$ 79 Vinyl Chloride-d3	65	2.168	2.168	(0.343)	151276	50.0000	43
3 Vinyl Chloride	62	2.179	2.179	(0.345)	181752	50.0000	45
4 Bromomethane	94	2.516	2.516	(0.398)	109899	50.0000	42
$ 80 Chloroethane-d5	69	2.597	2.597	(0.411)	110012	50.0000	49
5 Chloroethane	64	2.621	2.621	(0.414)	92311	50.0000	44
6 Trichlorofluoromethane	101	2.853	2.853	(0.451)	215180	50.0000	47
$ 81 1,1-Dichloroethene-d2	65	3.364	3.364	(0.532)	39109	50.0000	54
7 1,1-Dichloroethene	96	3.376	3.376	(0.534)	125063	50.0000	48
8 1,1,2-Trichloro-1,2,2-trifluo	101	3.410	3.410	(0.539)	123314	50.0000	40
9 Acetone	43	3.445	3.445	(0.545)	50132	100.000	75
10 Carbon Disulfide	76	3.596	3.596	(0.569)	494716	50.0000	45
11 Methyl Acetate	43	3.770	3.770	(0.596)	66795	50.0000	38
12 Methylene Chloride	84	3.852	3.852	(0.609)	125934	50.0000	44
13 trans-1,2-Dichloroethene	96	4.119	4.119	(0.651)	136775	50.0000	50
14 Methyl tert-Butyl Ether	73	4.142	4.142	(0.655)	220031	50.0000	43
15 1,1-Dichloroethane	63	4.537	4.537	(0.717)	251943	50.0000	50
$ 82 2-Butanone-d5	46	5.071	5.071	(0.802)	77405	100.000	79
17 cis-1,2-Dichloroethene	96	5.094	5.094	(0.805)	130691	50.0000	49
16 2-Butanone	43	5.129	5.129	(0.811)	83881	100.000	86

Data File: \\avogadro\organics\V5.I\111107.B\V5N2749.D
Report Date: 09-Nov-2011 08:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	18 Bromochloromethane	128	5.338	5.338	(0.844)	58494	50.0000	45(Q)
$	83 Chloroform-d	84	5.385	5.385	(0.851)	203088	50.0000	49
	19 Chloroform	83	5.396	5.396	(0.853)	209191	50.0000	45
	20 1,1,1-Trichloroethane	97	5.582	5.582	(0.592)	172361	50.0000	54
	21 Cyclohexane	56	5.640	5.640	(0.598)	228783	50.0000	52
	22 Carbon Tetrachloride	117	5.745	5.745	(0.609)	166122	50.0000	56
$	23 1,2-Dichloroethane-d4	65	5.896	5.896	(0.932)	105883	50.0000	47
$	84 Benzene-d6	84	5.907	5.907	(0.627)	381057	50.0000	53
	25 Benzene	78	5.942	5.942	(0.630)	411885	50.0000	52
	24 1,2-Dichloroethane	62	5.965	5.965	(0.943)	125664	50.0000	48
*	26 1,4-Difluorobenzene	114	6.325	6.325	(1.000)	366711	50.0000	
	27 Trichloroethene	95	6.581	6.581	(0.698)	128255	50.0000	56
$	85 1,2-Dichloropropane-d6	67	6.732	6.732	(0.714)	150039	50.0000	50
	28 Methylcyclohexane	83	6.778	6.778	(0.719)	188187	50.0000	47
	29 1,2-Dichloropropane	63	6.813	6.813	(0.723)	127032	50.0000	53
$	94 1,4-Dioxane-d8	96	6.917	6.917	(1.094)	17753	1000.00	830
	93 1,4-Dioxane	88	6.976	6.976	(1.103)	15802	1000.00	810
	30 Bromodichloromethane	83	7.092	7.092	(0.752)	144275	50.0000	54
	31 cis-1,3-Dichloropropene	75	7.556	7.556	(0.802)	159702	50.0000	50
	32 4-Methyl-2-Pentanone	43	7.719	7.719	(0.819)	167770	100.000	79
$	33 Toluene-d8	98	7.835	7.835	(0.831)	355504	50.0000	53
	34 Toluene	91	7.916	7.916	(0.840)	410942	50.0000	53
$	86 trans-1,3-Dichloropropene-d4	79	8.114	8.114	(0.861)	104389	50.0000	46
	35 trans-1,3-Dichloropropene	75	8.148	8.148	(0.864)	117786	50.0000	47
	36 1,1,2-Trichloroethane	97	8.346	8.346	(0.885)	71777	50.0000	46
	37 Tetrachloroethene	164	8.497	8.497	(0.901)	90576	50.0000	54
$	87 2-Hexanone-d5	63	8.578	8.578	(0.910)	45313	100.000	79(Q)
	38 2-Hexanone	43	8.625	8.625	(0.915)	106007	100.000	65
	39 Dibromochloromethane	129	8.776	8.776	(0.931)	101726	50.0000	49
	40 1,2-Dibromoethane	107	8.915	8.915	(0.946)	80656	50.0000	48
*	42 Chlorobenzene-d5	117	9.426	9.426	(1.000)	272488	50.0000	
	43 Chlorobenzene	112	9.461	9.461	(1.004)	278208	50.0000	52
	44 Ethylbenzene	91	9.577	9.577	(1.016)	448168	50.0000	53
	45 m,p-Xylene	106	9.705	9.705	(1.030)	181566	50.0000	52
	46 o-Xylene	106	10.169	10.169	(1.079)	162452	50.0000	48
	47 Styrene	104	10.192	10.192	(1.081)	274326	50.0000	50
	48 Bromoform	173	10.413	10.413	(0.856)	53715	50.0000	52
	49 Isopropylbenzene	105	10.599	10.599	(1.124)	448962	50.0000	52
$	89 1,1,2,2-Tetrachloroethane-d2	84	10.924	10.924	(1.159)	86619	50.0000	44
	51 1,1,2,2-Tetrachloroethane	83	10.959	10.959	(1.163)	80854	50.0000	43
	52 1,3-Dichlorobenzene	146	12.097	12.097	(0.994)	161333	50.0000	55
*	78 1,4-Dichlorobenzene-d4	152	12.167	12.167	(1.000)	101156	50.0000	(Q)
	53 1,4-Dichlorobenzene	146	12.201	12.201	(1.003)	172931	50.0000	50
$	90 1,2-Dichlorobenzene-d4	152	12.631	12.631	(1.038)	94034	50.0000	50(Q)
	54 1,2-Dichlorobenzene	146	12.654	12.654	(1.040)	147862	50.0000	51
	55 1,2-Dibromo-3-chloropropane	75	13.653	13.653	(1.122)	9541	50.0000	47(Q)
	56 1,2,4-Trichlorobenzene	180	14.640	14.640	(1.203)	90420	50.0000	42
	77 1,2,3-Trichlorobenzene	180	15.244	15.244	(1.253)	72373	50.0000	38

QC Flag Legend

Q - Qualifier signal failed the ratio test.

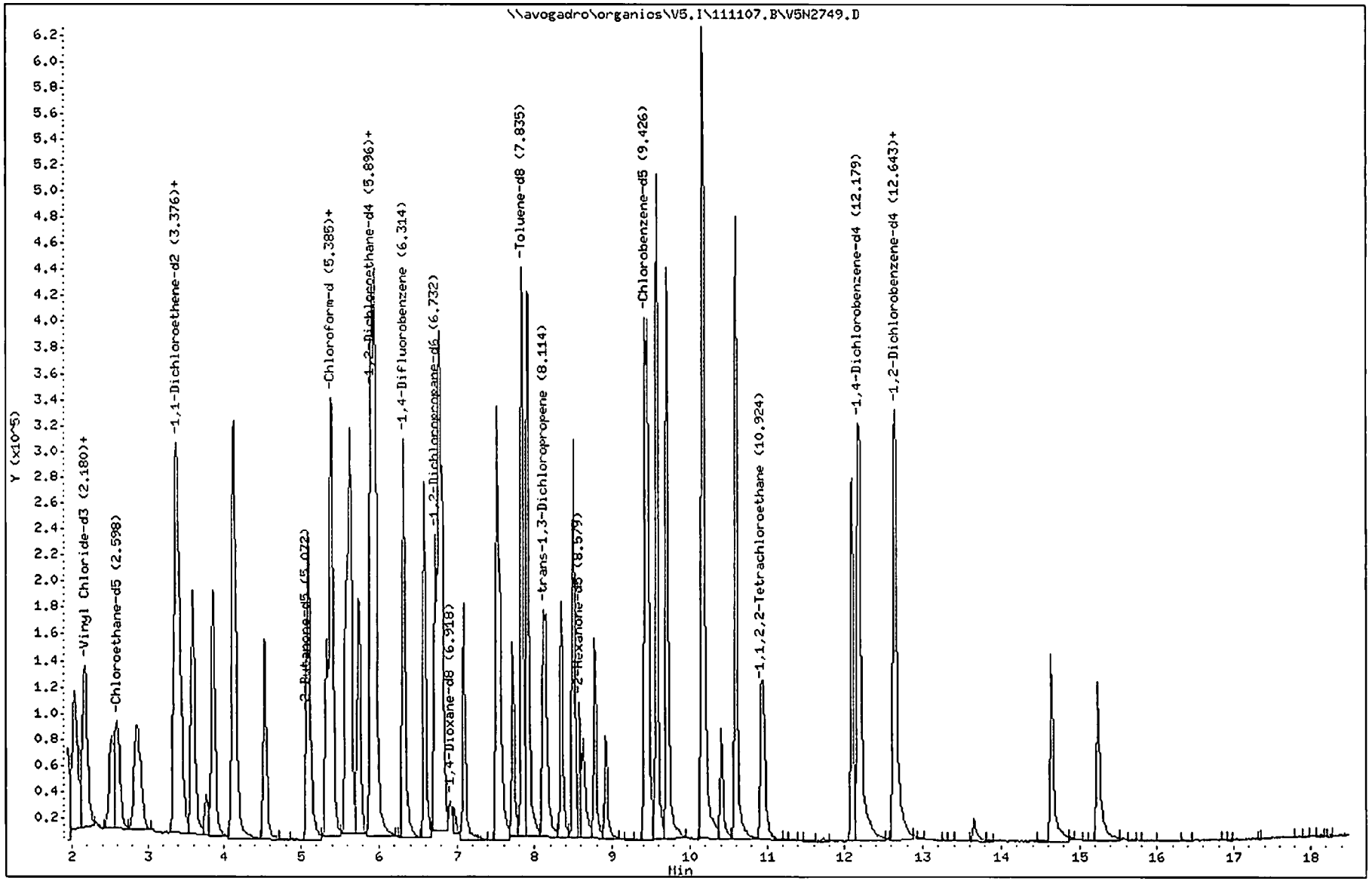
Data File: \\avogadro\organics\V5.I\111107.B\V5N2749.D
Date : 07-NOV-2011 21:33
Client ID: VSTD050L5
Sample Info: 5C,VSTD050L5,VSTD050L5

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Spectrum Analytical, Inc. RI Division

Data file : \\avogadro\organics\V5.I\111004A.B\V5N1310.D
Lab Smp Id: BFB5N Client Smp ID: BFB5N
Inj Date : 04-OCT-2011 16:43
Operator : SRC: Inst ID: V5.i
Smp Info : 2UL,BFB5N,BFB5N
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111004A.B\V5_BFB_SOM.m
Meth Date : 11-Jul-2011 15:17 wluo Quant Type: ISTD
Cal Date : 25-JAN-2006 16:13 Cal File: V5G4422.D
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14 Sample Matrix: WATER
Processing Host: TARGET103

Concentration Formula: Amt * DF * Uf * Vf * VI * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
10.797	11.000	(0.000)	95	75968			0.00- 100.00	100.00
10.797	11.000	(0.000)	50	16098			15.00- 40.00	21.19
10.797	11.000	(0.000)	75	32176			30.00- 80.00	42.35
10.797	11.000	(0.000)	96	4954			5.00- 9.00	6.52
10.797	11.000	(0.000)	173	0	0.0	0.0	0.00- 2.00	0.00
10.797	11.000	(0.000)	174	59816			50.00- 120.00	78.74
10.797	11.000	(0.000)	175	4930			5.00- 9.00	8.24
10.797	11.000	(0.000)	176	59568			95.00- 101.00	99.59
10.797	11.000	(0.000)	177	3678			5.00- 9.00	6.17

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1310.D

Date : 04-OCT-2011 16:43

Client ID: BFB5N

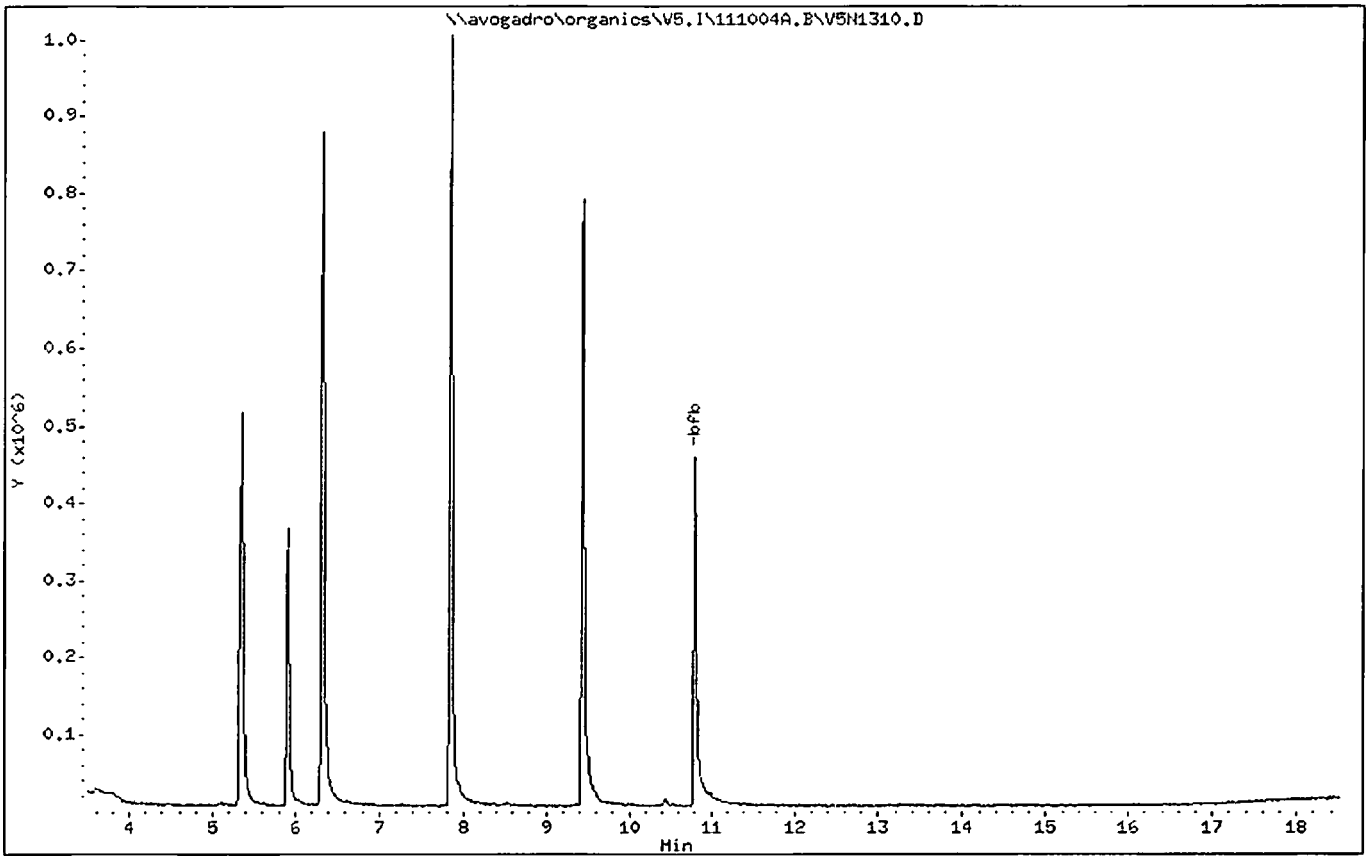
Instrument: V5.i

Sample Info: 2UL,BFB5N,BFB5N

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111004A.B\V5N1310.D

Date : 04-OCT-2011 16:43

Client ID: BFB5N

Instrument: V5.i

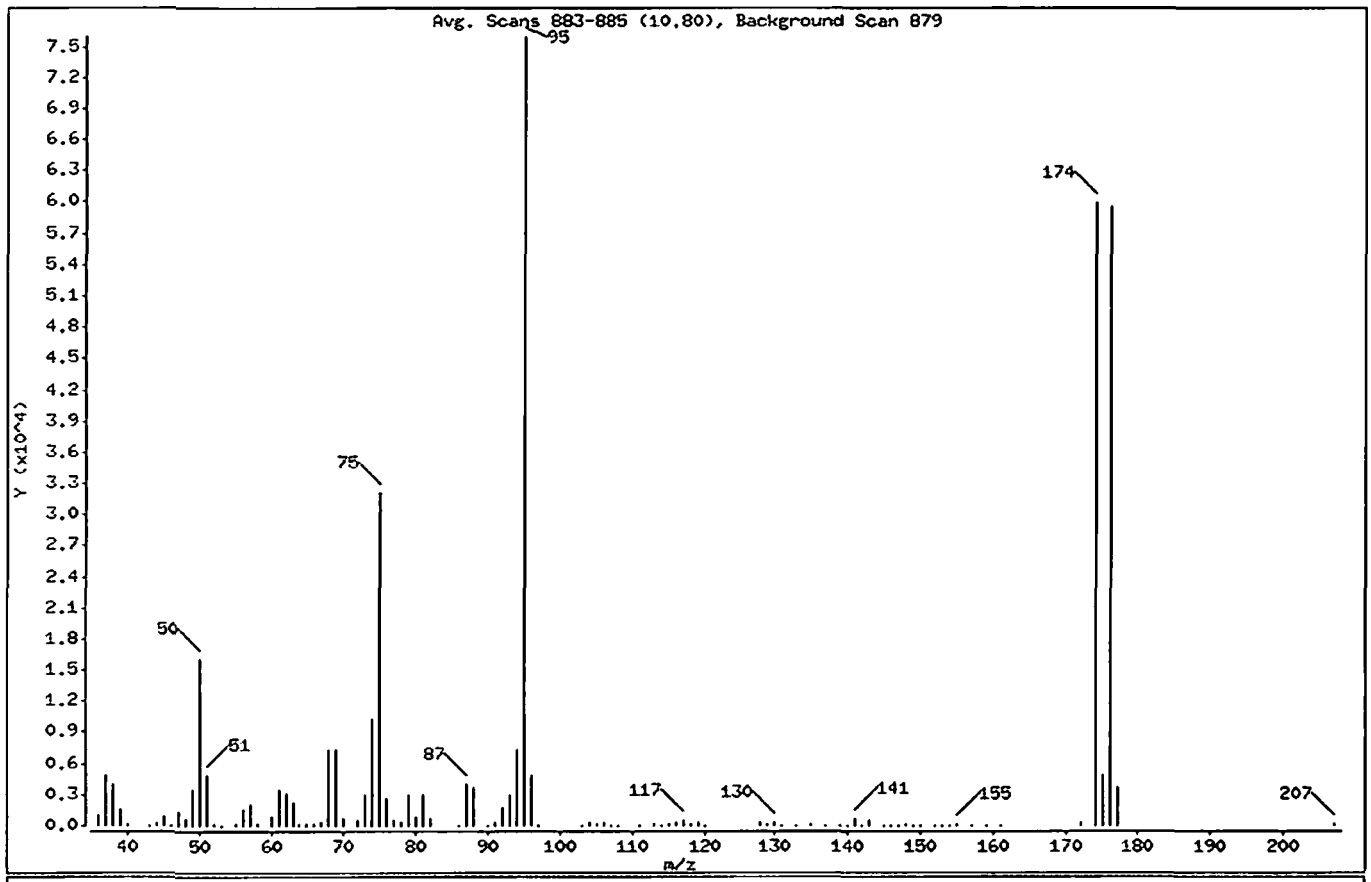
Sample Info: 2UL,BFB5N,BFB5N

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.19
75	30.00 - 80.00% of mass 95	42.35
96	5.00 - 9.00% of mass 95	6.52
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	78.74
175	5.00 - 9.00% of mass 174	6.49 (8.24)
176	95.00 - 101.00% of mass 174	78.41 (99.59)
177	5.00 - 9.00% of mass 176	4.84 (6.17)

Data File: \\avogadro\organics\V5.I\111004A.B\V5N1310.D

Date : 04-OCT-2011 16:43

Client ID: BFB5N

Instrument: V5.i

Sample Info: 2UL,BFB5N,BFB5N

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25

Data File: V5N1310.D
Spectrum: Avg. Scans 883-885 (10.80), Background Scan 879
Location of Maximum: 95.00
Number of points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1118	65.00	199	95.00	75968	139.00	44
37.00	4891	66.00	106	96.00	4954	140.00	43
38.00	4070	67.00	361	97.00	56	141.00	693
39.00	1502	68.00	7415	103.00	46	142.00	77
40.00	92	69.00	7270	104.00	346	143.00	552
43.00	49	70.00	668	105.00	156	145.00	42
44.00	425	72.00	458	106.00	289	146.00	41
45.00	858	73.00	2908	107.00	87	147.00	35
46.00	39	74.00	10337	108.00	38	148.00	214
47.00	1361	75.00	32176	111.00	40	149.00	35
48.00	658	76.00	2687	113.00	100	150.00	41
49.00	3460	77.00	527	114.00	43	152.00	34
50.00	16098	78.00	281	115.00	105	153.00	36
51.00	4835	79.00	2919	116.00	313	154.00	48
52.00	219	80.00	863	117.00	474	155.00	173
53.00	51	81.00	2986	118.00	242	157.00	51
55.00	236	82.00	747	119.00	418	159.00	39
56.00	1517	86.00	43	120.00	35	161.00	57
57.00	2048	87.00	4008	128.00	275	172.00	327
58.00	154	88.00	3736	129.00	129	174.00	59816
60.00	882	90.00	47	130.00	280	175.00	4930
61.00	3470	91.00	343	131.00	53	176.00	59568
62.00	3135	92.00	1701	133.00	37	177.00	3678
63.00	2329	93.00	2901	135.00	118	207.00	126
64.00	218	94.00	7415	137.00	71		

Spectrum Analytical, Inc. RI Division

Data file : \\avogadro\organics\V5.I\111106.B\V5N2700.D
Lab Smp Id: BFBJ5 Client Smp ID: BFBJ5
Inj Date : 06-NOV-2011 22:49
Operator : SRC: Inst ID: V5.i
Smp Info : 2UL,BFBJ5,BFBJ5
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_BFB_SOM.m
Meth Date : 11-Jul-2011 15:17 wluo Quant Type: ISTD
Cal Date : 25-JAN-2006 16:13 Cal File: V5G4422.D
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14 Sample Matrix: WATER
Processing Host: TARGET103

Concentration Formula: Amt * DF * Uf * Vf * VI * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
10.783	11.000	(0.000)	95	46176			0.00- 100.00	100.00
10.783	11.000	(0.000)	50	10919			15.00- 40.00	23.65
10.783	11.000	(0.000)	75	20224			30.00- 80.00	43.80
10.783	11.000	(0.000)	96	2965			5.00- 9.00	6.42
10.783	11.000	(0.000)	173	0	0.0	0.0	0.00- 2.00	0.00
10.783	11.000	(0.000)	174	32744			50.00- 120.00	70.91
10.783	11.000	(0.000)	175	2684			5.00- 9.00	8.20
10.783	11.000	(0.000)	176	32352			95.00- 101.00	98.80
10.783	11.000	(0.000)	177	2144			5.00- 9.00	6.63

Data File: \\avogadro\organics\V5.I\111106.B\V5N2700.D

Date : 06-NOV-2011 22:49

Client ID: BFBJ5

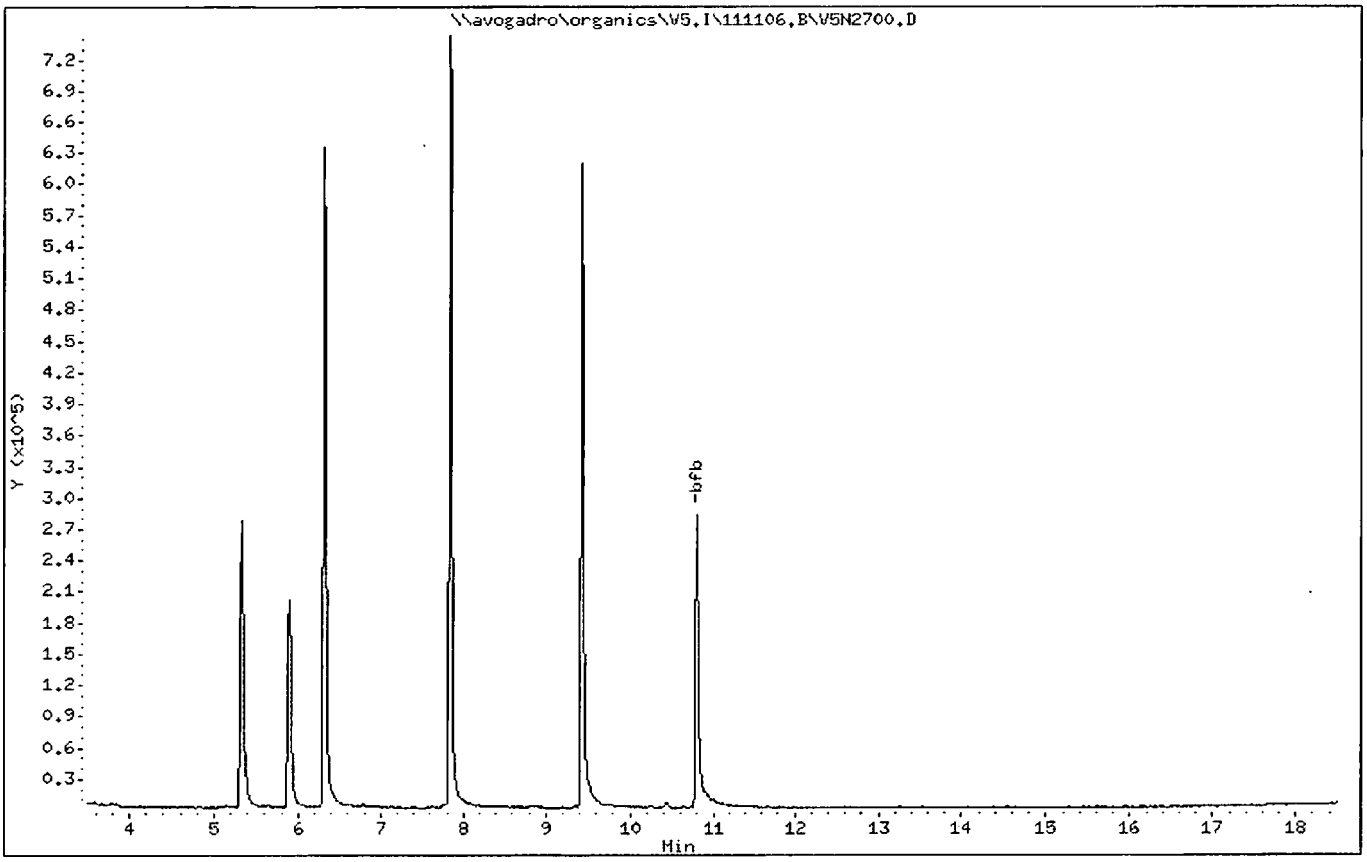
Instrument: V5.i

Sample Info: 2UL,BFBJ5,BFBJ5

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



Data File: \\avogadro\organics\V5.I\111106.B\V5N2700.D

Date : 06-NOV-2011 22:49

Client ID: BFBJ5

Instrument: V5.i

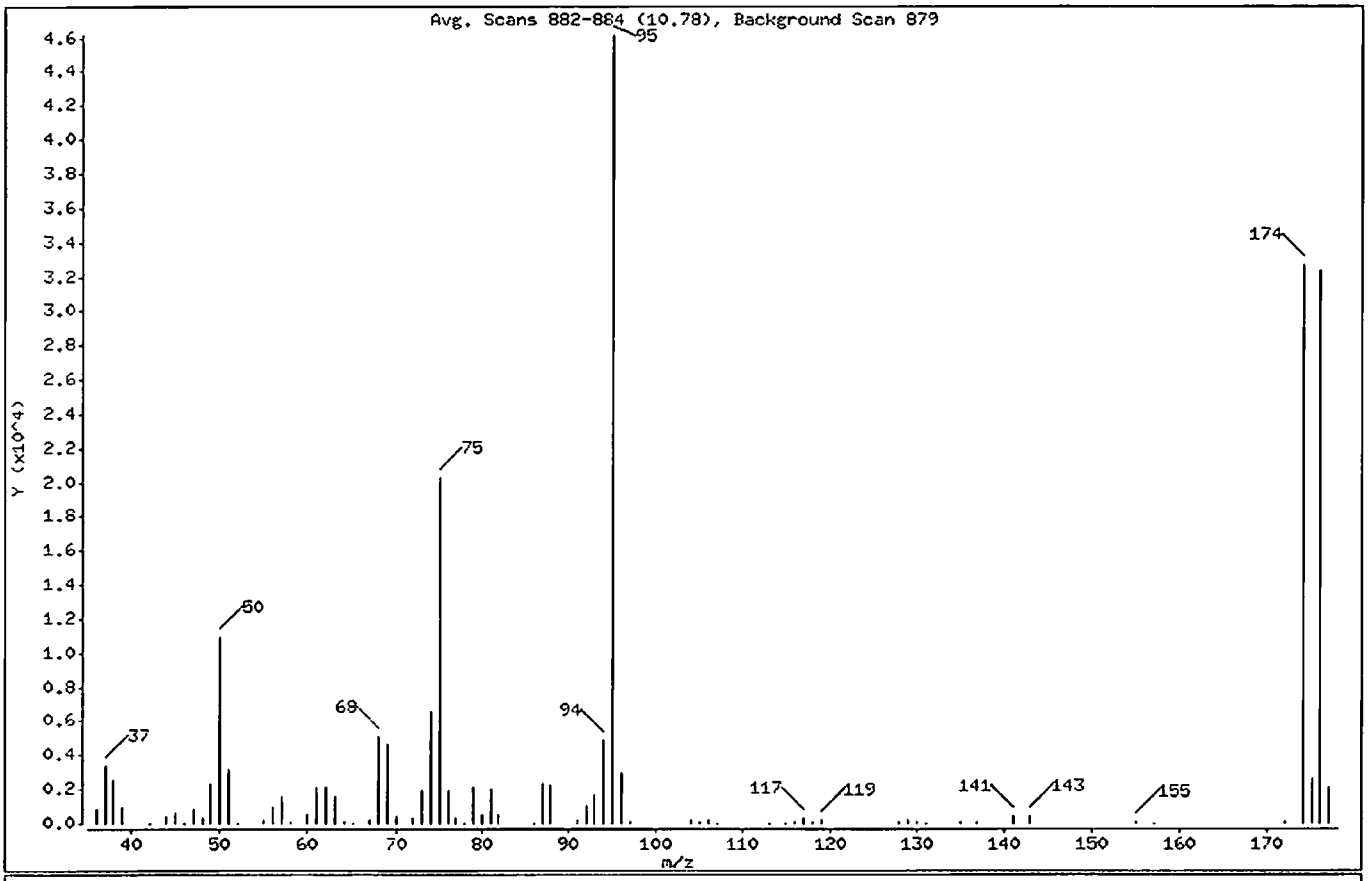
Sample Info: 2UL,BFBJ5,BFBJ5

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.65
75	30.00 - 80.00% of mass 95	43.80
96	5.00 - 9.00% of mass 95	6.42
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	70.91
175	5.00 - 9.00% of mass 174	5.81 (8.20)
176	95.00 - 101.00% of mass 174	70.06 (98.80)
177	5.00 - 9.00% of mass 176	4.64 (6.63)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2700.D

Date : 06-NOV-2011 22:49

Client ID: BFBJ5 Instrument: V5.i

Sample Info: 2UL,BFBJ5,BFBJ5

Operator: SRC:

Column phase: DB-624 Column diameter: 0.25

Data File: V5N2700.D
Spectrum: Avg. Scans 882-884 (10.78), Background Scan 879
Location of Maximum: 95.00
Number of points: 74

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	797	61.00	2147	82.00	580	118.00	144
37.00	3412	62.00	2154	86.00	46	119.00	253
38.00	2513	63.00	1546	87.00	2295	128.00	103
39.00	965	64.00	128	88.00	2199	129.00	172
42.00	36	65.00	38	91.00	199	130.00	70
44.00	422	67.00	183	92.00	1082	131.00	38
45.00	665	68.00	5072	93.00	1710	135.00	56
46.00	40	69.00	4706	94.00	4868	137.00	85
47.00	856	70.00	396	95.00	46176	141.00	465
48.00	348	72.00	278	96.00	2965	143.00	451
49.00	2330	73.00	1866	97.00	91	155.00	138
50.00	10919	74.00	6594	104.00	220	157.00	44
51.00	3185	75.00	20224	105.00	66	172.00	118
52.00	9	76.00	1876	106.00	239	174.00	32744
55.00	204	77.00	344	107.00	44	175.00	2684
56.00	976	78.00	51	113.00	33	176.00	32352
57.00	1627	79.00	2123	115.00	35	177.00	2144
58.00	73	80.00	508	116.00	122		
60.00	540	81.00	2049	117.00	316		

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62569

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2702.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/06/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62569

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2702.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/06/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62569

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2702.D

Level: (TRACE or LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/06/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2702.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2702.D
Lab Smp Id: MB-62569 Client Smp ID: VBLKJ5
Inj Date : 06-NOV-2011 23:44
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,MB-62569,VBLKJ5,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 34 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.167	2.173	(0.343)	123768	37.6278	38
$ 80 Chloroethane-d5	69	2.585	2.603	(0.409)	90381	42.4799	42(Q)
$ 81 1,1-Dichloroethene-d2	65	3.352	3.369	(0.530)	31303	45.8831	46(Q)
$ 82 2-Butanone-d5	46	5.070	5.076	(0.802)	63006	68.6835	69
$ 83 Chloroform-d	84	5.384	5.390	(0.851)	168490	42.7553	43(Q)
$ 23 1,2-Dichloroethane-d4	65	5.895	5.901	(0.932)	86071	40.4650	40(Q)
$ 84 Benzene-d6	84	5.907	5.912	(0.627)	329726	50.5000	51
* 26 1,4-Difluorobenzene	114	6.325	6.319	(1.000)	345444	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.731	6.725	(0.714)	124268	46.0546	46
$ 94 1,4-Dioxane-d8	96	6.917	6.911	(1.094)	13685	675.960	680
$ 33 Toluene-d8	98	7.846	7.840	(0.832)	294589	48.8752	49
$ 86 trans-1,3-Dichloropropene-d4	79	8.125	8.119	(0.862)	94652	46.5906	47
$ 87 2-Hexanone-d5	63	8.589	8.572	(0.911)	31801	61.2592	61(Q)
* 42 Chlorobenzene-d5	117	9.425	9.431	(1.000)	246579	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.935	10.929	(1.160)	71522	40.4972	40
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.172	(1.000)	91770	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.630	12.625	(1.037)	75409	43.9858	44(Q)

Data File: \\avogadro\organics\V5.I\111106.B\V5N2702.D
Report Date: 09-Nov-2011 07:59

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111106.B\V5N2702.D
Report Date: 09-Nov-2011 07:59

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111106.B\V5N2702.D
Lab Smp Id: MB-62569 Client Smp ID: VBLKJ5
Inj Date : 06-NOV-2011 23:44
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,MB-62569,VBLKJ5,62569
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111106.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 16:40 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 34 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

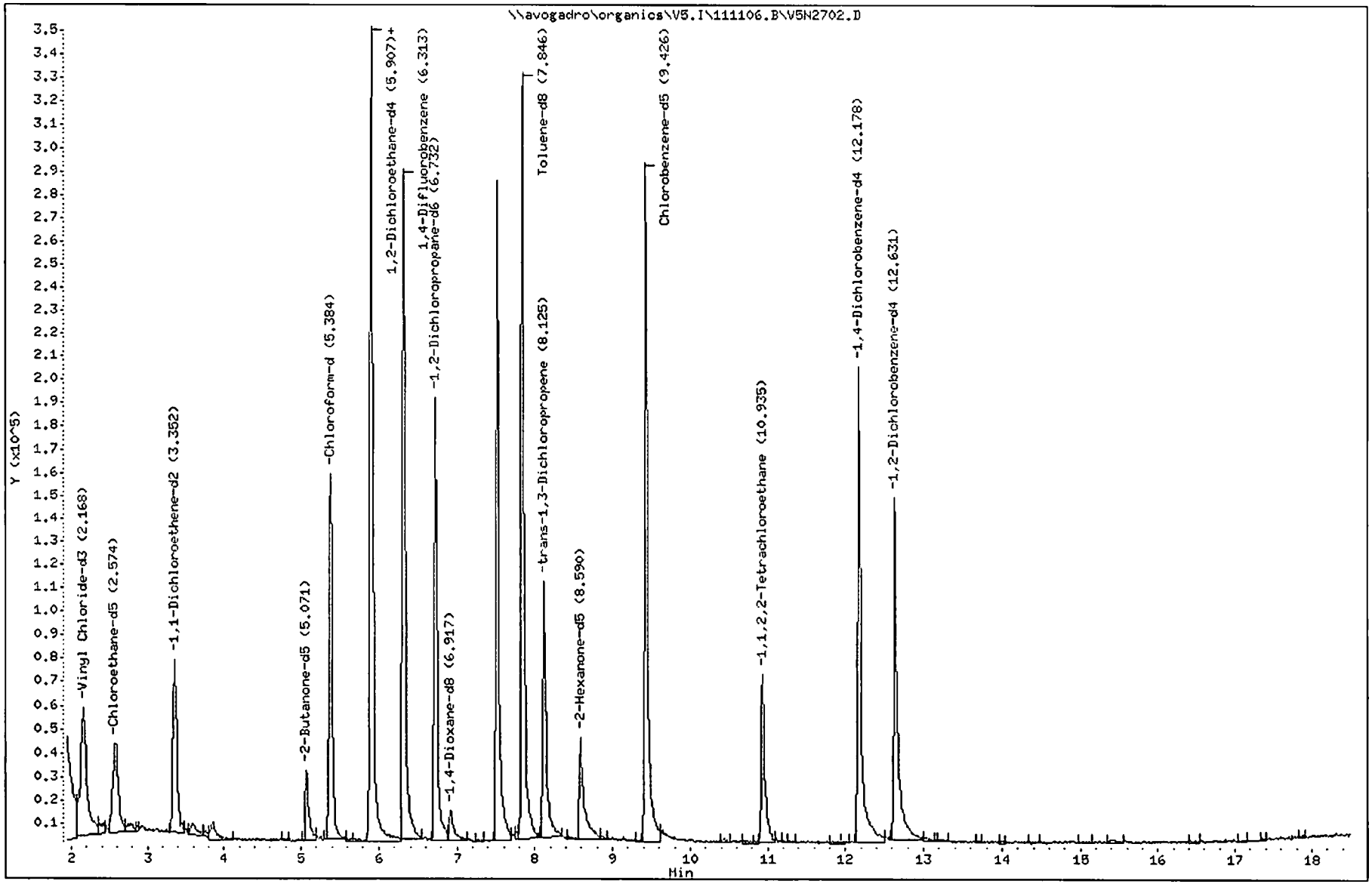
Data File: \\avogadro\organics\V5.I\111106.B\V5N2702.D
Date : 06-NOV-2011 23:44
Client ID: VBLKJ5
Sample Info: 5C,MB-62569,VBLKJ5,62569

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62780

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2725.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62780

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2725.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62780

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2725.D

Level: (TRACE or LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111107.B\V5N2725.D
Report Date: 09-Nov-2011 08:00

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2725.D
Lab Smp Id: MB-62780 Client Smp ID: VBLKK5
Inj Date : 07-NOV-2011 10:12
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,MB-62780,VBLKK5,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.168	2.168	(0.343)	113629	36.6517	37
$ 80 Chloroethane-d5	69	2.598	2.597	(0.411)	83712	41.7445	42(Q)
$ 81 1,1-Dichloroethene-d2	65	3.364	3.364	(0.532)	26484	41.1865	41(Q)
$ 82 2-Butanone-d5	46	5.071	5.071	(0.802)	73317	84.7969	85
$ 83 Chloroform-d	84	5.385	5.385	(0.851)	168411	45.3411	45(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.896	(0.932)	86018	42.9059	43(Q)
$ 84 Benzene-d6	84	5.908	5.907	(0.627)	317191	46.5151	47
* 26 1,4-Difluorobenzene	114	6.326	6.325	(1.000)	325591	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.732	6.732	(0.714)	123220	43.7250	44
$ 94 1,4-Dioxane-d8	96	6.918	6.917	(1.094)	14715	771.155	770
$ 33 Toluene-d8	98	7.847	7.835	(0.832)	287060	45.6016	46
$ 86 trans-1,3-Dichloropropene-d4	79	8.126	8.114	(0.862)	93921	44.2656	44
$ 87 2-Hexanone-d5	63	8.590	8.578	(0.911)	38746	71.4648	71(Q)
* 42 Chlorobenzene-d5	117	9.426	9.426	(1.000)	257526	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.936	10.924	(1.160)	76261	41.3450	41
* 78 1,4-Dichlorobenzene-d4	152	12.179	12.167	(1.000)	97710	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.632	12.631	(1.037)	78488	42.9986	43(Q)

Data File: \\avogadro\organics\V5.I\111107.B\V5N2725.D
Report Date: 09-Nov-2011 08:00

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111107.B\V5N2725.D
Report Date: 09-Nov-2011 08:00

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2725.D
Lab Smp Id: MB-62780 Client Smp ID: VBLKK5
Inj Date : 07-NOV-2011 10:12
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,MB-62780,VBLKK5,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

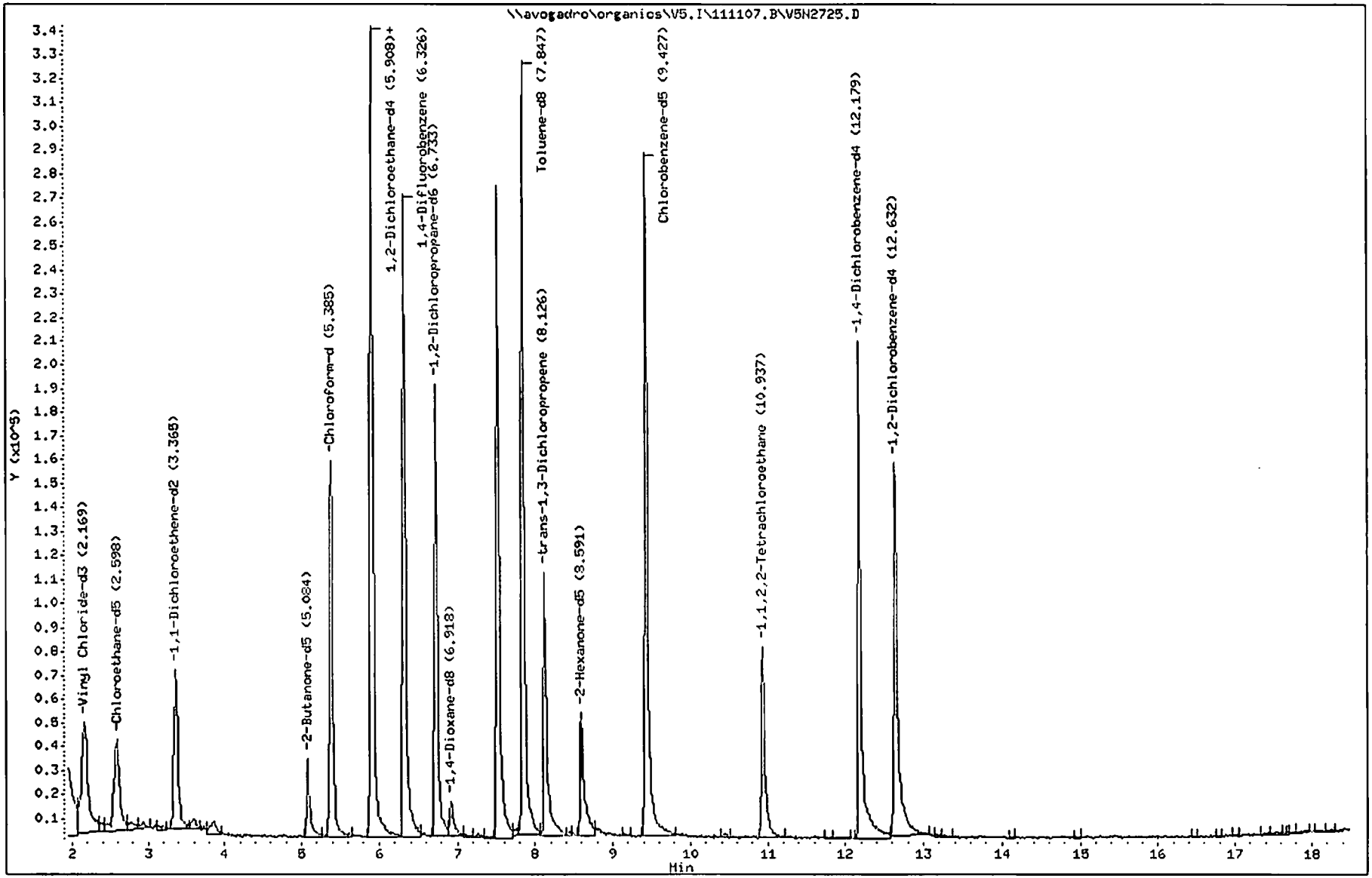
Data File: \\avogadro\organics\V5.I\111107.B\V5N2725.D
Date : 07-NOV-2011 10:12
Client ID: VBLKK5
Sample Info: 5G,MB-62780,VBLKK5,62780

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: VHBLKK5

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2748.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: VHBLKK5

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2748.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLKK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: VHBLKK5

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V5N2748.D

Level: (TRACE or LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

Data File: \\avogadro\organics\V5.I\111107.B\V5N2748.D
Report Date: 09-Nov-2011 08:01

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2748.D
Lab Smp Id: VHBLKK5 Client Smp ID: VHBLKK5
Inj Date : 07-NOV-2011 21:05
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VHBLKK5,VHBLKK5,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	5.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
$ 79 Vinyl Chloride-d3	65	2.167	2.168	(0.343)	146259	40.5381	41
$ 80 Chloroethane-d5	69	2.585	2.597	(0.410)	111078	47.5965	48(Q)
$ 81 1,1-Dichloroethene-d2	65	3.352	3.364	(0.531)	32118	42.9196	43(Q)
$ 82 2-Butanone-d5	46	5.071	5.071	(0.803)	104139	103.496	100
$ 83 Chloroform-d	84	5.384	5.385	(0.853)	204857	47.3922	47(Q)
$ 23 1,2-Dichloroethane-d4	65	5.895	5.896	(0.934)	120510	51.6519	52
$ 84 Benzene-d6	84	5.907	5.907	(0.627)	375861	45.2187	45
* 26 1,4-Difluorobenzene	114	6.313	6.325	(1.000)	378911	50.0000	
$ 85 1,2-Dichloropropane-d6	67	6.731	6.732	(0.714)	149665	43.5699	44
$ 94 1,4-Dioxane-d8	96	6.917	6.917	(1.096)	23797	1071.61	1100
$ 33 Toluene-d8	98	7.846	7.835	(0.832)	338289	44.0872	44
$ 86 trans-1,3-Dichloropropene-d4	79	8.113	8.114	(0.861)	126578	48.9417	49
$ 87 2-Hexanone-d5	63	8.578	8.578	(0.910)	55892	84.5731	85(Q)
* 42 Chlorobenzene-d5	117	9.425	9.426	(1.000)	313909	50.0000	
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.924	10.924	(1.159)	109872	48.8680	49
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.167	(1.000)	127972	50.0000	
$ 90 1,2-Dichlorobenzene-d4	152	12.631	12.631	(1.037)	108580	45.4177	45(Q)

Data File: \\avogadro\organics\V5.I\111107.B\V5N2748.D
Report Date: 09-Nov-2011 08:01

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\avogadro\organics\V5.I\111107.B\V5N2748.D
Report Date: 09-Nov-2011 08:01

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2748.D
Lab Smp Id: VHBLKK5 Client Smp ID: VHBLKK5
Inj Date : 07-NOV-2011 21:05
Operator : SRC: Inst ID: V5.i
Smp Info : 5G,VHBLKK5,VHBLKK5,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

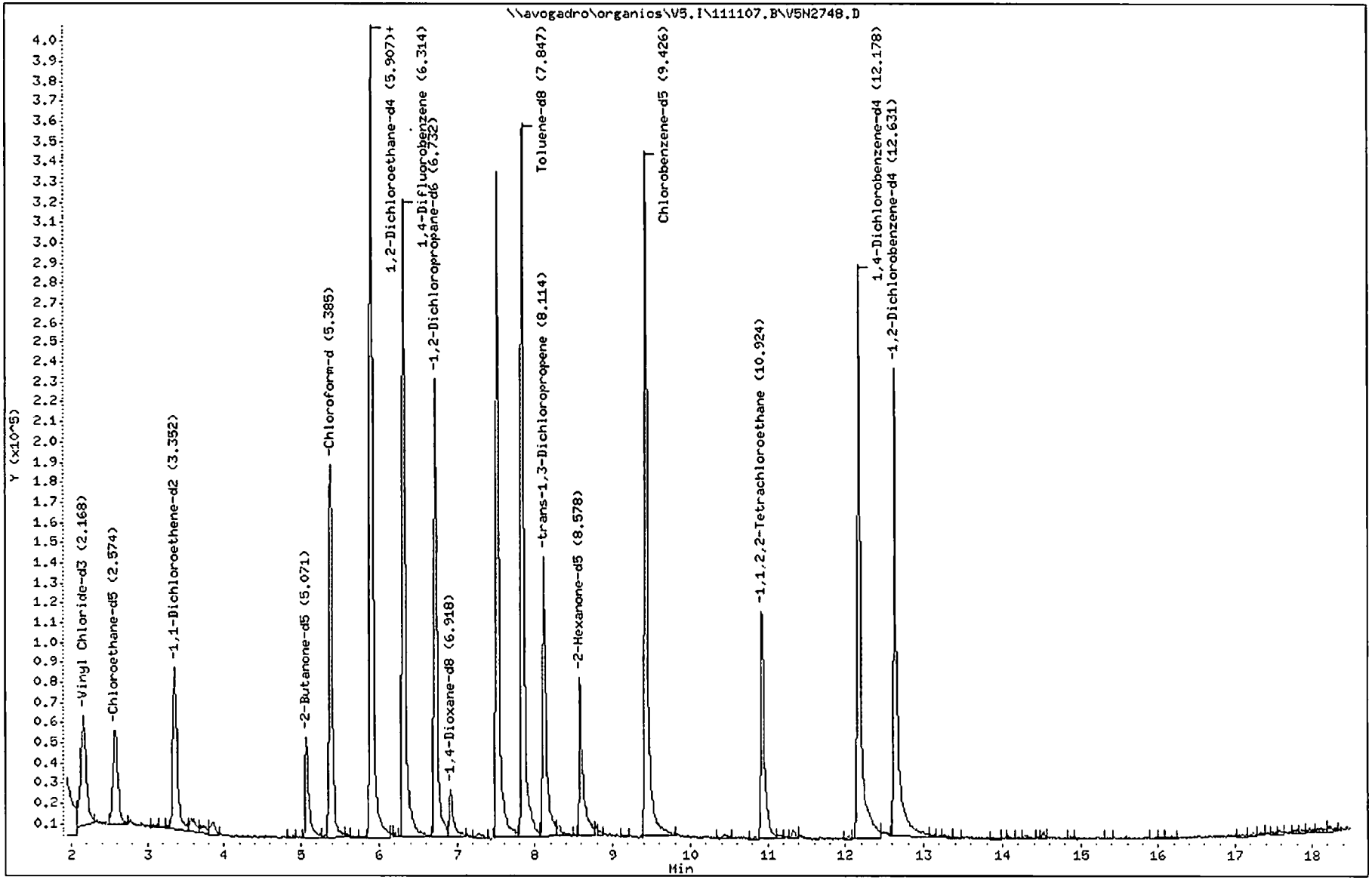
Data File: \\avogadro\organics\V5.I\111107.B\V5N2748.D
Date : 07-NOV-2011 21:05
Client ID: VHBLKK5
Sample Info: 5C,VHBLKK5,VHBLKK5,62780

Instrument: V5.i

Operator: SRC:

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0MS

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01CMS

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2730.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.0	U
74-87-3	Chloromethane	6.0	U
75-01-4	Vinyl chloride	6.0	U
74-83-9	Bromomethane	6.0	U
75-00-3	Chloroethane	6.0	U
75-69-4	Trichlorofluoromethane	6.0	U
75-35-4	1,1-Dichloroethene	54	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	6.0	U
79-20-9	Methyl acetate	6.0	U
75-09-2	Methylene chloride	6.0	U
156-60-5	trans-1,2-Dichloroethene	6.0	U
1634-04-4	Methyl tert-butyl ether	6.0	U
75-34-3	1,1-Dichloroethane	6.0	U
156-59-2	cis-1,2-Dichloroethene	6.0	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	6.0	U
67-66-3	Chloroform	6.0	U
71-55-6	1,1,1-Trichloroethane	6.0	U
110-82-7	Cyclohexane	6.0	U
56-23-5	Carbon tetrachloride	6.0	U
71-43-2	Benzene	65	
107-06-2	1,2-Dichloroethane	6.0	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0MS

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01CMS

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2730.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	68	
108-87-2	Methylcyclohexane	6.0	U
78-87-5	1,2-Dichloropropane	6.0	U
75-27-4	Bromodichloromethane	6.0	U
10061-01-5	cis-1,3-Dichloropropene	6.0	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	66	
10061-02-6	trans-1,3-Dichloropropene	6.0	U
79-00-5	1,1,2-Trichloroethane	6.0	U
127-18-4	Tetrachloroethene	6.0	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	6.0	U
106-93-4	1,2-Dibromoethane	6.0	U
108-90-7	Chlorobenzene	64	
100-41-4	Ethylbenzene	6.0	U
179601-23-1	m,p-Xylene	6.0	U
95-47-6	o-Xylene	6.0	U
100-42-5	Styrene	6.0	U
75-25-2	Bromoform	6.0	U
98-82-8	Isopropylbenzene	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U
541-73-1	1,3-Dichlorobenzene	6.0	U
106-46-7	1,4-Dichlorobenzene	6.0	U
95-50-1	1,2-Dichlorobenzene	6.0	U
96-12-8	1,2-Dibromo-3-chloropropane	6.0	U
120-82-1	1,2,4-Trichlorobenzene	6.0	U
87-61-6	1,2,3-Trichlorobenzene	6.0	U

Data File: \\avogadro\organics\V5.I\111107.B\V5N2730.D
Report Date: 09-Nov-2011 08:00

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2730.D
Lab Smp Id: K2198-01CMS Client Smp ID: H30Q0MS
Inj Date : 07-NOV-2011 12:57
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-01CMS,,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.900	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 79 Vinyl Chloride-d3	65	2.156	2.168	(0.342)	110006	50.0000	38
$ 80 Chloroethane-d5	69	2.574	2.597	(0.408)	77853	50.0000	42
$ 81 1,1-Dichloroethene-d2	65	3.352	3.364	(0.531)	28758	50.0000	48
7 1,1-Dichloroethene	96	3.364	3.376	(0.533)	96375	50.0000	45
$ 82 2-Butanone-d5	46	5.071	5.071	(0.803)	53109	100.000	66
$ 83 Chloroform-d	84	5.385	5.385	(0.853)	149520	50.0000	44(Q)
$ 23 1,2-Dichloroethane-d4	65	5.896	5.896	(0.934)	72303	50.0000	39
$ 84 Benzene-d6	84	5.907	5.907	(0.627)	292289	50.0000	49
25 Benzene	78	5.942	5.942	(0.630)	356816	50.0000	55
* 26 1,4-Difluorobenzene	114	6.314	6.325	(1.000)	300837	50.0000	
27 Trichloroethene	95	6.581	6.581	(0.698)	108194	50.0000	57
$ 85 1,2-Dichloropropane-d6	67	6.732	6.732	(0.714)	104969	50.0000	43
$ 94 1,4-Dioxane-d8	96	6.929	6.917	(1.097)	12564	1000.00	710
$ 33 Toluene-d8	98	7.847	7.835	(0.832)	259624	50.0000	47
34 Toluene	91	7.916	7.916	(0.840)	356508	50.0000	55
$ 86 trans-1,3-Dichloropropene-d4	79	8.125	8.114	(0.862)	77921	50.0000	42
$ 87 2-Hexanone-d5	63	8.590	8.578	(0.911)	27213	100.000	57(Q)
* 42 Chlorobenzene-d5	117	9.426	9.426	(1.000)	225651	50.0000	
43 Chlorobenzene	112	9.461	9.461	(1.004)	238678	50.0000	54
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.936	10.924	(1.160)	58175	50.0000	36
* 78 1,4-Dichlorobenzene-d4	152	12.178	12.167	(1.000)	78733	50.0000	

Data File: \\avogadro\organics\V5.I\111107.B\V5N2730.D
Report Date: 09-Nov-2011 08:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 90 1,2-Dichlorobenzene-d4	152	12.643	12.631	(1.038)	64398	50.0000	44

QC Flag Legend

Q - Qualifier signal failed the ratio test.

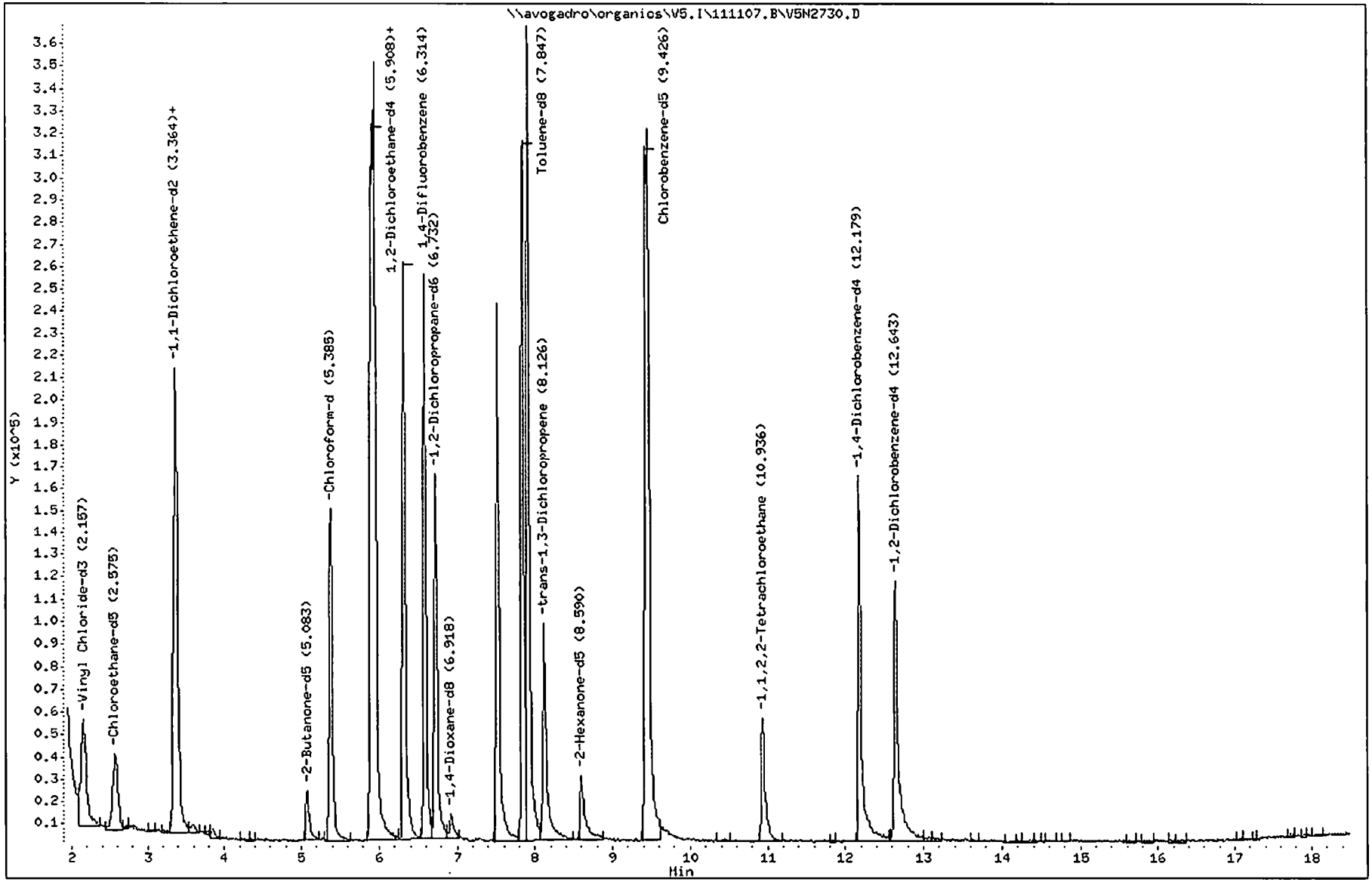
Data File: \\avogadro\organics\V5.I\111107.B\V5N2730.D
Date : 07-NOV-2011 12:57
Client ID: H30Q0MS
Sample Info: 5C,K2198-01CMS,,62780

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0MSD

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01CMSD

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2731.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
75-71-8	Dichlorodifluoromethane	6.0	U
74-87-3	Chloromethane	6.0	U
75-01-4	Vinyl chloride	6.0	U
74-83-9	Bromomethane	6.0	U
75-00-3	Chloroethane	6.0	U
75-69-4	Trichlorofluoromethane	6.0	U
75-35-4	1,1-Dichloroethene	52	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	6.0	U
79-20-9	Methyl acetate	6.0	U
75-09-2	Methylene chloride	6.0	U
156-60-5	trans-1,2-Dichloroethene	6.0	U
1634-04-4	Methyl tert-butyl ether	6.0	U
75-34-3	1,1-Dichloroethane	6.0	U
156-59-2	cis-1,2-Dichloroethene	6.0	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	6.0	U
67-66-3	Chloroform	6.0	U
71-55-6	1,1,1-Trichloroethane	6.0	U
110-82-7	Cyclohexane	6.0	U
56-23-5	Carbon tetrachloride	6.0	U
71-43-2	Benzene	64	
107-06-2	1,2-Dichloroethane	6.0	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (6/2007)

1B - FORM I VOA-2

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0MSD

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01CMSD

Sample wt/vol: 4.90 (g/mL) G Lab File ID: V5N2731.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/28/2011

% Moisture: not dec. 15 Date Analyzed: 11/07/2011

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
79-01-6	Trichloroethene	68	
108-87-2	Methylcyclohexane	6.0	U
78-87-5	1,2-Dichloropropane	6.0	U
75-27-4	Bromodichloromethane	6.0	U
10061-01-5	cis-1,3-Dichloropropene	6.0	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	65	
10061-02-6	trans-1,3-Dichloropropene	6.0	U
79-00-5	1,1,2-Trichloroethane	6.0	U
127-18-4	Tetrachloroethene	6.0	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	6.0	U
106-93-4	1,2-Dibromoethane	6.0	U
108-90-7	Chlorobenzene	65	
100-41-4	Ethylbenzene	6.0	U
179601-23-1	m,p-Xylene	6.0	U
95-47-6	o-Xylene	6.0	U
100-42-5	Styrene	6.0	U
75-25-2	Bromoform	6.0	U
98-82-8	Isopropylbenzene	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U
541-73-1	1,3-Dichlorobenzene	6.0	U
106-46-7	1,4-Dichlorobenzene	6.0	U
95-50-1	1,2-Dichlorobenzene	6.0	U
96-12-8	1,2-Dibromo-3-chloropropane	6.0	U
120-82-1	1,2,4-Trichlorobenzene	6.0	U
87-61-6	1,2,3-Trichlorobenzene	6.0	U

Data File: \\avogadro\organics\V5.I\111107.B\V5N2731.D
Report Date: 09-Nov-2011 08:00

Spectrum Analytical, Inc. RI Division

SOM01.0 - Low/Med Volatiles

Data file : \\avogadro\organics\V5.I\111107.B\V5N2731.D
Lab Smp Id: K2198-01CMSD Client Smp ID: H30Q0MSD
Inj Date : 07-NOV-2011 13:24
Operator : SRC: LIMS Inst ID: V5.i
Smp Info : 5G,K2198-01CMSD,,62780
Misc Info :
Comment :
Method : \\avogadro\organics\V5.I\111107.B\V5_SOM_S.m
Meth Date : 08-Nov-2011 18:06 V5.i Quant Type: ISTD
Cal Date : 04-OCT-2011 17:39 Cal File: V5N1312.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM1.2.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * 5/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Ws	4.900	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.000	Aliquot of methanol (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
$ 79 Vinyl Chloride-d3	65	2.160	2.168	(0.342)	114233	50.0000	38
$ 80 Chloroethane-d5	69	2.578	2.597	(0.408)	78952	50.0000	40(Q)
$ 81 1,1-Dichloroethene-d2	65	3.357	3.364	(0.531)	28075	50.0000	45
7 1,1-Dichloroethene	96	3.368	3.376	(0.533)	97564	50.0000	43
$ 82 2-Butanone-d5	46	5.075	5.071	(0.803)	62670	100.000	74
$ 83 Chloroform-d	84	5.377	5.385	(0.851)	157632	50.0000	43(Q)
$ 23 1,2-Dichloroethane-d4	65	5.888	5.896	(0.932)	78217	50.0000	40
$ 84 Benzene-d6	84	5.911	5.907	(0.627)	309344	50.0000	49
25 Benzene	78	5.946	5.942	(0.631)	367909	50.0000	53
* 26 1,4-Difluorobenzene	114	6.318	6.325	(1.000)	319097	50.0000	
27 Trichloroethene	95	6.585	6.581	(0.698)	114228	50.0000	57
$ 85 1,2-Dichloropropane-d6	67	6.724	6.732	(0.713)	115219	50.0000	44
$ 94 1,4-Dioxane-d8	96	6.922	6.917	(1.096)	13069	1000.00	700
$ 33 Toluene-d8	98	7.839	7.835	(0.831)	279628	50.0000	48
34 Toluene	91	7.909	7.916	(0.839)	369577	50.0000	54
$ 86 trans-1,3-Dichloropropene-d4	79	8.118	8.114	(0.861)	90893	50.0000	46
$ 87 2-Hexanone-d5	63	8.582	8.578	(0.910)	30380	100.000	61(Q)
* 42 Chlorobenzene-d5	117	9.430	9.426	(1.000)	237777	50.0000	
43 Chlorobenzene	112	9.465	9.461	(1.004)	256025	50.0000	55
$ 89 1,1,2,2-Tetrachloroethane-d2	84	10.928	10.924	(1.159)	68958	50.0000	40
* 78 1,4-Dichlorobenzene-d4	152	12.183	12.167	(1.000)	82248	50.0000	(Q)

Data File: \\avogadro\organics\V5.I\111107.B\V5N2731.D
Report Date: 09-Nov-2011 08:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
$ 90 1,2-Dichlorobenzene-d4	152	12.635	12.631	(1.037)	72193	50.0000	47(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

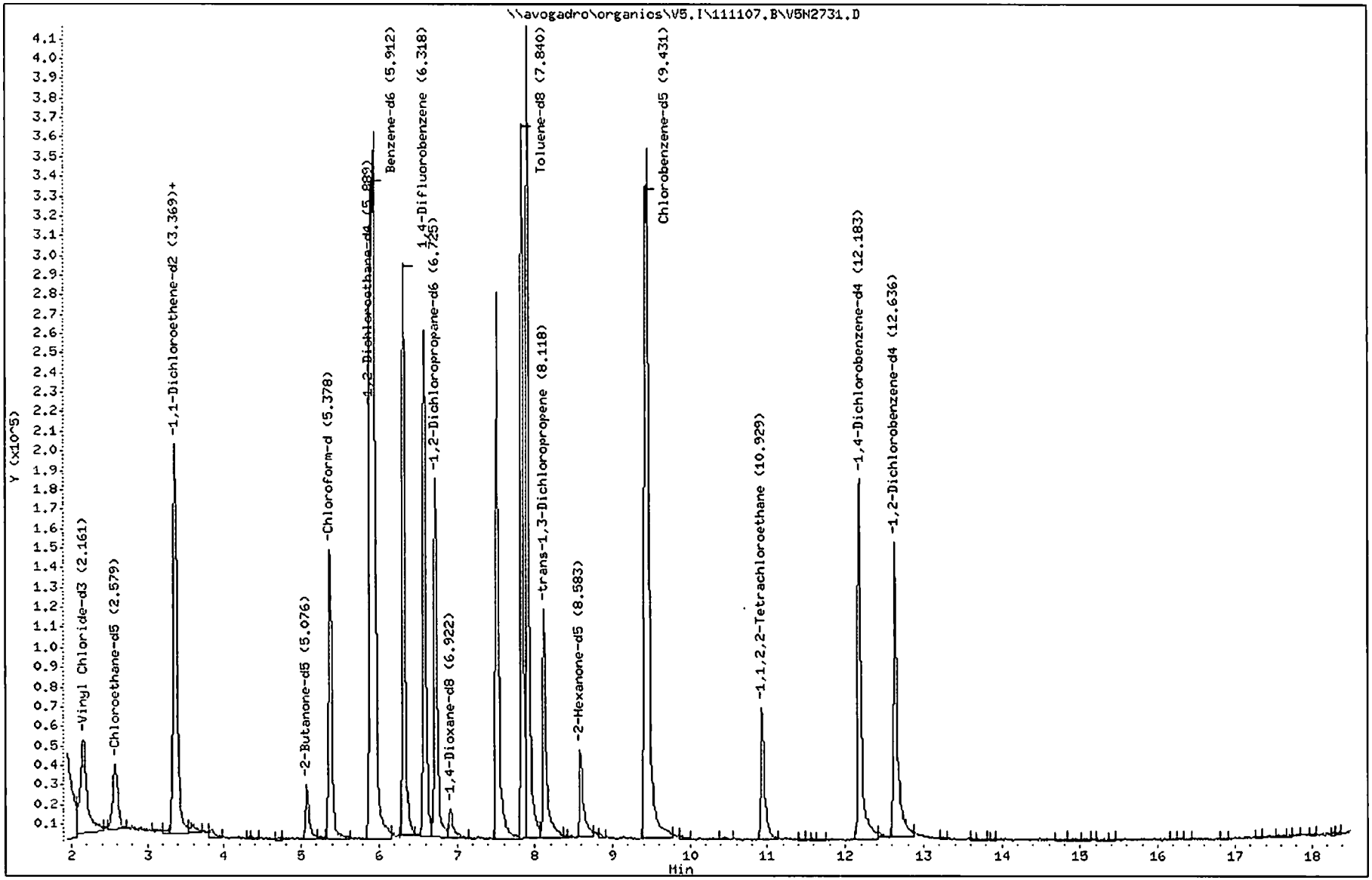
Data File: \\avogadro\organics\V5.I\111107.B\V5N2731.D
Date : 07-NOV-2011 13:24
Client ID: H30Q0MSD
Sample Info: 5C,K2198-01CMSD,,62780

Instrument: V5.i

Operator: SRC: LIMS

Column phase: DB-624

Column diameter: 0.25



2J - FORM II SV-3

SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC1 (PHL) #	SDMC2 (BCE) #	SDMC3 (2CP) #	SDMC4 (4MP) #	SDMC5 (NBZ) #	SDMC6 (2NP) #	SDMC7 (DCP) #	SDMC8 (4CA) #
01	SBLK2X	65	60	68	66	63	69	73	48
02	H30Q0	47	46	49	48	51	55	59	26
03	H30Q0MS	48	44	49	51	49	56	63	29
04	H30Q0MSD	47	39	44	52	46	51	55	14
05	H30Q1	47	44	50	53	49	55	62	12
06	H30Q2	53	46	51	54	50	56	64	25
07	H30Q4	49	44	50	50	44	52	57	28
08	H30Q6	50	44	47	49	46	51	56	14
09	H30Q8	54	50	53	54	46	53	58	10
10	H30Q9	41	39	46	41	45	53	53	6
11	H30R0	43	40	47	47	46	50	54	10
12	H30R1	41	34	44	48	41	47	47	5
13	H30S4	46	38	49	54	40	51	53	6
14	H30S5	46	41	51	59	49	51	55	12
15	H30S8	43	40	49	51	42	49	49	15
16	H30S9	39	33	42	46	41	40	43	9
17	H30T0	30	27	34	38	32	34	36	5
18	H30T1	47	43	52	51	48	54	54	24
19	H30T2	41	36	45	46	40	48	49	8
20	H30T3	41	35	44	47	42	45	45	7
21	H30T5	38	34	43	46	42	44	48	12
22	H30T4	47	44	50	46	46	47	49	14
23	H30Q3	48	44	51	52	45	54	61	17

			QC LIMITS
SDMC1	(PHL)	= Phenol-d5	(17-103)
SDMC2	(BCE)	= Bis(2-chloroethyl)ether-d8	(12-98)
SDMC3	(2CP)	= 2-Chlorophenol-d4	(13-101)
SDMC4	(4MP)	= 4-Methylphenol-d8	(8-100)
SDMC5	(NBZ)	= Nitrobenzene-d5	(16-103)
SDMC6	(2NP)	= 2-Nitrophenol-d4	(16-104)
SDMC7	(DCP)	= 2,4-Dichlorophenol-d3	(23-104)
SDMC8	(4CA)	= 4-Chloroaniline-d4	(1-145)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

2K - FORM II SV-4

SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC9 (DMP) #	SDMC10 (ACY) #	SDMC11 (4NP) #	SDMC12 (FLR) #	SDMC13 (NMP) #	SDMC14 (ANC) #	SDMC15 (PYR) #	SDMC16 (BAP) #	TOT OUT
01	SBLK2X	74	67	79	67	58	63	69	65	0
02	H30Q0	53	44	42	49	41	47	54	47	0
03	H30Q0MS	50	44	53	49	43	48	54	48	0
04	H30Q0MSD	45	40	52	45	42	44	47 *	46	1
05	H30Q1	49	43	52	46	45	45	49 *	46	1
06	H30Q2	49	45	56	48	49	48	54	46	0
07	H30Q4	50	44	54	46	42	44	47 *	30 *	2
08	H30Q6	53	44	52	49	42	46	48 *	31 *	2
09	H30Q8	51	44	48	49	44	45	50 *	39 *	2
10	H30Q9	49	46	59	45	48	46	39 *	50	1
11	H30R0	46	44	52	42	46	43	42 *	32 *	2
12	H30R1	51	47	53	44	52	46	47 *	37 *	2
13	H30S4	51	47	51	44	41	44	59	44	0
14	H30S5	60	52	57	52	55	54	65	52	0
15	H30S8	56	45	53	48	50	46	54	48	0
16	H30S9	49	39	50	40 *	45	40	47 *	39 *	3
17	H30T0	40 *	35	37	35 *	35	34	40 *	35 *	4
18	H30T1	56	50	56	50	46	47	60	50	0
19	H30T2	45	40	52	43	38	39	51 *	40 *	2
20	H30T3	52	43	50	45	46	45	53	43	0
21	H30T5	51	42	46	42	46	43	51 *	42 *	2
22	H30T4	53	45	39	44	42	45	58	46	0
23	H30Q3	57	45	60	47	53	45	58	47	0

			QC LIMITS
SDMC9	(DMP)	= Dimethylphthalate-d6	(43-111)
SDMC10	(ACY)	= Acenaphthylene-d8	(20-97)
SDMC11	(4NP)	= 4-Nitrophenol-d4	(16-166)
SDMC12	(FLR)	= Fluorene-d10	(40-108)
SDMC13	(NMP)	= 4,6-Dinitro-2-methylphenol-d2	(1-121)
SDMC14	(ANC)	= Anthracene-d10	(22-98)
SDMC15	(PYR)	= Pyrene-d10	(51-120)
SDMC16	(BAP)	= Benzo(a)pyrene-d12	(43-111)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

3D - FORM III SV-2

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix Spike - EPA Sample No.: H30Q0

COMPOUND	SPIKE ADDED (µg/Kg)	SAMPLE CONCENTRATION (µg/Kg)	MS CONCENTRATION (µg/Kg)	MS %REC	#	QC. LIMITS REC.
Phenol	1557.8530	0.0000	781.2677	50		26-90
2-Chlorophenol	1557.8530	0.0000	741.0851	48		25-102
N-Nitroso-di-n-propylamine	1557.8530	0.0000	771.5571	50		41-126
4-Chloro-3-methylphenol	1557.8530	0.0000	1014.4920	65		26-103
Acenaphthene	1557.8530	0.0000	771.6985	50		31-137
4-Nitrophenol	1557.8530	0.0000	906.6189	58		11-114
2,4-Dinitrotoluene	1557.8530	0.0000	801.7713	51		28-89
Pentachlorophenol	1557.8530	0.0000	954.0575	61		17-109
Pyrene	1557.8530	0.0000	610.5268	39		35-142

COMPOUND	SPIKE ADDED (µg/Kg)	MSD CONCENTRATION (µg/Kg)	MSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Phenol	1542.4795	718.3022	47		7		0-35	26-90
2-Chlorophenol	1542.4795	676.9792	44		8		0-50	25-102
N-Nitroso-di-n-propylamine	1542.4795	655.3772	42		15		0-38	41-126
4-Chloro-3-methylphenol	1542.4795	871.7778	57		14		0-33	26-103
Acenaphthene	1542.4795	644.2259	42		17		0-19	31-137
4-Nitrophenol	1542.4795	757.7935	49		17		0-50	11-114
2,4-Dinitrotoluene	1542.4795	717.6828	47		10		0-47	28-89
Pentachlorophenol	1542.4795	845.0883	55		11		0-47	17-109
Pyrene	1542.4795	489.8701	32	*	21		0-36	35-142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 9 outside limits

Spike Recovery: 1 out of 18 outside limits

COMMENTS:

SOM01.2 (6/2007)

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK2X

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: S2H5249.D Lab Sample ID: MB-62764

Instrument ID: S2 Date Extracted: 11/07/2011

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/10/2011

Level: (LOW/MED) LOW Time Analyzed: 9:57

Extraction: (Type) SONC GPC Cleanup: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	H30Q0	K2198-01A	S2H5250.D	11/10/2011
02	H30Q0MS	K2198-01AMS	S2H5251.D	11/10/2011
03	H30Q0MSD	K2198-01AMSD	S2H5252.D	11/10/2011
04	H30Q1	K2198-02A	S2H5253.D	11/10/2011
05	H30Q2	K2198-03A	S2H5254.D	11/10/2011
06	H30Q4	K2198-05A	S2H5256.D	11/10/2011
07	H30Q6	K2198-06A	S2H5257.D	11/10/2011
08	H30Q8	K2198-07A	S2H5258.D	11/10/2011
09	H30Q9	K2198-08A	S2H5259.D	11/10/2011
10	H30R0	K2198-09A	S2H5260.D	11/10/2011
11	H30R1	K2198-10A	S2H5261.D	11/10/2011
12	H30S4	K2198-11A	S2H5262.D	11/10/2011
13	H30S5	K2198-12A	S2H5263.D	11/10/2011
14	H30S8	K2198-13A	S2H5264.D	11/10/2011
15	H30S9	K2198-14A	S2H5265.D	11/10/2011
16	H30T0	K2198-15A	S2H5266.D	11/10/2011
17	H30T1	K2198-16A	S2H5267.D	11/10/2011
18	H30T2	K2198-17A	S2H5268.D	11/10/2011
19	H30T3	K2198-18A	S2H5269.D	11/10/2011
20	H30T5	K2198-20A	S2H5271.D	11/10/2011
21	H30T4	K2198-19A	S2H5277.D	11/11/2011
22	H30Q3	K2198-04A	S2H5292.D	11/14/2011

COMMENTS:

5B - FORM V SV
SEMIVOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPINE (DFTPP)

EPA SAMPLE NO.

DFTPP2W

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: S2H5052.D DFTPP Injection Date: 10/25/2011

Instrument ID: S2 DFTPP Injection Time: 9:32

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	61.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	83.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	47.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	15.3
365	Greater than 1.0% of mass 198	1.5
441	Present, but less than mass 443	9.2
442	50.0 - 100% of mass 198	52.5
443	15.0 - 24.0% of mass 442	10.1 (19.2)2

1 - Value is % mass 69 2 - Value is %·mass 442

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD0202W	SSTD0202W	S2H5053C.D	10/25/2011	11:35
02	SSTD0052W	SSTD0052W	S2H5054.D	10/25/2011	11:58
03	SSTD0802W	SSTD0802W	S2H5055.D	10/25/2011	12:21
04	SSTD0102W	SSTD0102W	S2H5056.D	10/25/2011	12:44
05	SSTD0402W	SSTD0402W	S2H5057.D	10/25/2011	13:07

5B - FORM V SV
SEMIVOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPINE (DFTPP)

EPA SAMPLE NO.

DFTPP2X

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: S2H5247.D DFTPP Injection Date: 11/10/2011

Instrument ID: S2 DFTPP Injection Time: 9:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	52.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	71.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	46.0
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 60.0% of mass 198	15.5
365	Greater than 1.0% of mass 198	1.7
441	Present, but less than mass 443	9.7
442	50.0 - 100% of mass 198	53.8
443	15.0 - 24.0% of mass 442	10.5 (19.6)2

1 - Value is % mass 69 2 - Value is % mass 442

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD0202X	SSTD0202X	S2H5248.D	11/10/2011	9:31
02	SBLK2X	MB-62764	S2H5249.D	11/10/2011	9:57
03	H30Q0	K2198-01A	S2H5250.D	11/10/2011	10:23
04	H30Q0MS	K2198-01AMS	S2H5251.D	11/10/2011	10:44
05	H30Q0MSD	K2198-01AMSD	S2H5252.D	11/10/2011	11:05
06	H30Q1	K2198-02A	S2H5253.D	11/10/2011	11:26
07	H30Q2	K2198-03A	S2H5254.D	11/10/2011	11:47
08	H30Q4	K2198-05A	S2H5256.D	11/10/2011	12:29
09	H30Q6	K2198-06A	S2H5257.D	11/10/2011	12:50
10	H30Q8	K2198-07A	S2H5258.D	11/10/2011	13:11
11	H30Q9	K2198-08A	S2H5259.D	11/10/2011	13:32
12	H30R0	K2198-09A	S2H5260.D	11/10/2011	13:53
13	H30R1	K2198-10A	S2H5261.D	11/10/2011	14:14
14	H30S4	K2198-11A	S2H5262.D	11/10/2011	14:35
15	H30S5	K2198-12A	S2H5263.D	11/10/2011	14:56
16	H30S8	K2198-13A	S2H5264.D	11/10/2011	15:17
17	H30S9	K2198-14A	S2H5265.D	11/10/2011	15:38
18	H30T0	K2198-15A	S2H5266.D	11/10/2011	15:59
19	H30T1	K2198-16A	S2H5267.D	11/10/2011	16:20

5B - FORM V SV
SEMIVOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPINE (DFTPP)

EPA SAMPLE NO.

DFTPP2X

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: S2H5247.D DFTPP Injection Date: 11/10/2011

Instrument ID: S2 DFTPP Injection Time: 9:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	52.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	71.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	46.0
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 60.0% of mass 198	15.5
365	Greater than 1.0% of mass 198	1.7
441	Present, but less than mass 443	9.7
442	50.0 - 100% of mass 198	53.8
443	15.0 - 24.0% of mass 442	10.5 (19.6)2

1 - Value is % mass 69 2 - Value is % mass 442

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
20	H30T2	K2198-17A	S2H5268.D	11/10/2011	16:41
21	H30T3	K2198-18A	S2H5269.D	11/10/2011	17:01
22	H30T5	K2198-20A	S2H5271.D	11/10/2011	17:44
23	SSTD0202Y	SSTD0202Y	S2H5273.D	11/10/2011	18:26

5B - FORM V SV
SEMIVOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPINE (DFTPP)

EPA SAMPLE NO.

DFTPP2Z

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: S2H5275.D DFTPP Injection Date: 11/11/2011

Instrument ID: S2 DFTPP Injection Time: 8:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	50.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	66.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	43.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	15.5
365	Greater than 1.0% of mass 198	1.7
441	Present, but less than mass 443	9.4
442	50.0 - 100% of mass 198	52.3
443	15.0 - 24.0% of mass 442	10.2 (19.5)2

1 - Value is % mass 69 2 - Value is % mass 442

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD0202Z	SSTD0202Z	S2H5276.D	11/11/2011	9:01
02	H30T4	K2198-19A	S2H5277.D	11/11/2011	9:38
03	SSTD0202A	SSTD0202A	S2H5278.D	11/11/2011	9:59

5B - FORM V SV
SEMIVOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPINE (DFTPP)

EPA SAMPLE NO.
DFTPP2C

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Lab File ID: S2H5289.D DFTPP Injection Date: 11/14/2011

Instrument ID: S2 DFTPP Injection Time: 16:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	63.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	82.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	49.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	15.4
365	Greater than 1.0% of mass 198	1.6
441	Present, but less than mass 443	10.0
442	50.0 - 100% of mass 198	56.2
443	15.0 - 24.0% of mass 442	10.9 (19.5)2

1 - Value is % mass 69 2 - Value is % mass 442

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD0202C	SSTD0202C	S2H5290.D	11/14/2011	16:35
02	H30Q3	K2198-04A	S2H5292.D	11/14/2011	17:19
03	SSTD0202D	SSTD0202D	S2H5295.D	11/14/2011	18:23

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 10/25/2011 10/25/2011

EPA Sample No.(SSTD020##) SSTD0202X Date Analyzed: 11/10/2011

Lab File ID (Standard): S2H5248.D Time Analyzed: 9:31

Instrument ID: S2

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	81169	3.685	241890	4.746	192480	6.205
	UPPER LIMIT	162338	4.185	483780	5.246	384960	6.705
	LOWER LIMIT	40585	3.185	120945	4.246	96240	5.705
	EPA SAMPLE NO.						
01	SBLK2X	106927	3.692	304913	4.754	237533	6.212
02	H30Q0	103736	3.684	276677	4.756	235470	6.214
03	H30Q0MS	91840	3.692	235761	4.754	198281	6.212
04	H30Q0MSD	122184	3.683	342681	4.755	289861	6.213
05	H30Q1	122116	3.683	336655	4.755	277157	6.214
06	H30Q2	103710	3.683	295457	4.756	250023	6.214
07	H30Q4	103723	3.693	295150	4.755	254295	6.213
08	H30Q6	135586	3.693	387125	4.754	324890	6.213
09	H30Q8	107688	3.694	329178	4.756	269569	6.214
10	H30Q9	84890	3.696	215371	4.758	140868	6.216
11	H30R0	111018	3.697	313194	4.758	198015	6.217
12	H30R1	150432	3.696	416641	4.757	242709	6.216
13	H30S4	121237	3.695	388838	4.757	300290	6.215
14	H30S5	119709	3.693	375281	4.754	295722	6.213
15	H30S8	117360	3.694	370407	4.755	292501	6.214

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

EPA Sample No.(SSTD020##) SSTD0202X Date Analyzed: 11/10/2011

Lab File ID (Standard): S2H5248.D Time Analyzed: 9:31

Instrument ID: S2 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	336767		7.438		260346		9.669		189730		10.966	
	UPPER LIMIT	673534		7.938		520692		10.169		379460		11.466	
	LOWER LIMIT	168384		6.938		130173		9.169		94865		10.466	
	EPA SAMPLE NO.												
01	SBLK2X	441541		7.435		328906		9.698		242896		11.017	
02	H30Q0	440222		7.437		300719		9.678		213994		10.986	
03	H30Q0MS	372929		7.435		245548		9.655		160951		10.941	
04	H30Q0MSD	557836		7.436		403738		9.645		279063		10.921	
05	H30Q1	549310		7.436		393200		9.656		268495		10.932	
06	H30Q2	495820		7.437		354148		9.646		250588		10.911	
07	H30Q4	463350		7.436		345936		9.634		245498		10.899	
08	H30Q6	585066		7.435		375322		9.644		291994		10.920	
09	H30Q8	499573		7.437		339161		9.646		225942		10.911	
10	H30Q9	264045		7.439		201300		9.648		147616		10.924	
11	H30R0	333538		7.439		216064		9.648		140048		10.914	
12	H30R1	328220		7.438		228882		9.658		127057		10.934	
13	H30S4	426710		7.437		194916		9.657		130650		10.944	
14	H30S5	452388		7.435		270891		9.666		194093		10.942	
15	H30S8	478485		7.436		312428		9.699		209596		11.018	

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 10/25/2011 10/25/2011

EPA Sample No.(SSTD020##) SSTD0202X Date Analyzed: 11/10/2011

Lab File ID (Standard): S2H5248.D Time Analyzed: 9:31

Instrument ID: S2

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	81169	3.685	241890	4.746	192480	6.205
	UPPER LIMIT	162338	4.185	483780	5.246	384960	6.705
	LOWER LIMIT	40585	3.185	120945	4.246	96240	5.705
	EPA SAMPLE NO.						
16	H30S9	127894	3.693	406966	4.754	318703	6.213
17	H30T0	125306	3.693	368702	4.754	286792	6.213
18	H30T1	110696	3.695	335776	4.757	267194	6.215
19	H30T2	112569	3.696	351001	4.758	307639	6.217
20	H30T3	117198	3.693	352621	4.755	264072	6.213
21	H30T5	115492	3.693	330737	4.754	262825	6.213

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

EPA Sample No.(SSTD020##) SSTD0202X Date Analyzed: 11/10/2011

Lab File ID (Standard): S2H5248.D Time Analyzed: 9:31

Instrument ID: S2 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	336767	7.438	260346	9.669	189730	10.966
	UPPER LIMIT	673534	7.938	520692	10.169	379460	11.466
	LOWER LIMIT	168384	6.938	130173	9.169	94865	10.466
	EPA SAMPLE NO.						
16	H30S9	551660	7.435	380220	9.698	246045	11.006
17	H30T0	483453	7.435	309100	9.676	213018	10.985
18	H30T1	451626	7.438	283522	9.700	199890	11.019
19	H30T2	570138	7.439	349288	9.680	226153	10.989
20	H30T3	436431	7.436	299096	9.688	214703	10.996
21	H30T5	446585	7.435	314998	9.655	203321	10.920

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 10/25/2011 10/25/2011

EPA Sample No.(SSTD020##) SSTD0202Z Date Analyzed: 11/11/2011

Lab File ID (Standard): S2H5276.D Time Analyzed: 9:01

Instrument ID: S2

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	69137	3.693	191263	4.766	159791	6.224
	UPPER LIMIT	138274	4.193	382526	5.266	319582	6.724
	LOWER LIMIT	34569	3.193	95632	4.266	79896	5.724
	EPA SAMPLE NO.						
01	H30T4	94080	3.704	279602	4.765	220127	6.224

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

EPA Sample No.(SSTD020##) SSTD0202Z Date Analyzed: 11/11/2011

Lab File ID (Standard): S2H5276.D Time Analyzed: 9:01

Instrument ID: S2 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	278381	7.447	188206	9.709	150875	11.039
	UPPER LIMIT	556762	7.947	376412	10.209	301750	11.539
	LOWER LIMIT	139191	6.947	94103	9.209	75438	10.539
	EPA SAMPLE NO.						
01	H30T4	362746	7.446	230835	9.752	150151	11.103

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 10/25/2011 10/25/2011

EPA Sample No.(SSTD020##) SSTD0202C Date Analyzed: 11/14/2011

Lab File ID (Standard): S2H5290.D Time Analyzed: 16:35

Instrument ID: S2

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	91340	3.611	299945	4.684	279595	6.142
	UPPER LIMIT	182680	4.111	599890	5.184	559190	6.642
	LOWER LIMIT	45670	3.111	149973	4.184	139798	5.642
	EPA SAMPLE NO.						
01	H30Q3	99111	3.612	297218	4.673	249500	6.142

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

EPA Sample No.(SSTD020##) SSTD0202C Date Analyzed: 11/14/2011

Lab File ID (Standard): S2H5290.D Time Analyzed: 16:35

Instrument ID: S2 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	516565		7.365		343656		9.606		203023		10.893	
	UPPER LIMIT	1033130		7.865		687312		10.106		406046		11.393	
	LOWER LIMIT	258283		6.865		171828		9.106		101512		10.393	
	EPA SAMPLE NO.												
01	H30Q3	493686		7.354		341539		9.585		182383		10.850	

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: S2H5250.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 15 Decanted: (Y/N) N Date Received: 10/28/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 11/07/2011

Injection Volume: 2.0 (uL) GPC Factor: 2.00 Date Analyzed: 11/10/2011

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	380	U
83-32-9	Acenaphthene	200	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H30Q0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: S2H5250.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 15 Decanted: (Y/N) N Date Received: 10/28/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 11/07/2011

Injection Volume: 2.0 (uL) GPC Factor: 2.00 Date Analyzed: 11/10/2011

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	380	U
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	61	J
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	81	J
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

(1) Cannot be separated from Diphenylamine

SOM01.2 (6/2007)

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H30Q0

Lab Name: MITKEM LABORATORIES Contract: EP-W-11-033

Lab Code: MITKEM Case No.: 41926 Mod. Ref No.: SDG No.: H30Q0

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2198-01A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: S2H5250.D

Level: (TRACE or LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 15 Decanted: (Y/N) N Date Received: 10/28/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 11/07/2011

Injection Volume: 2.0 (uL) GPC Factor: 2.00 Date Analyzed: 11/10/2011

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) µG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	2.986	200	J
02	5469-16-9	2(3H)-Furanone, dihydro-4-hy	4.488	300	BNJ
03		Unknown-02	4.692	210	J
04		Unknown-03	5.206	260	J
05		Unknown-04	5.303	87	J
06		Unknown-05	7.598	84	J
07		Unknown-06	7.909	110	J
08		Unknown-07	9.206	95	J
09	506-52-5	1-Hexacosanol	9.581	90	NJ
10	301-02-0	9-Octadecenamide, (Z)-	10.429	300	NJ
11		Unknown-08	10.772	400	J
12		Unknown-09	11.480	180	J
	E96679[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Report Date: 11-Nov-2011 13:32

Spectrum Analytical, Inc. RI Division

CLP SOM QUANTITATION REPORT

Data file : \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Lab Smp Id: K2198-01A Client Smp ID: H30Q0
Inj Date : 10-NOV-2011 10:23
Operator : SRC: LIMS Inst ID: S2.i
Smp Info : K2198-01A,,62764,,
Misc Info : ****** CHECK MOISTURE ******
Comment :
Method : \\Avogadro\Organics\S2.I\111110.B\S2_SOM.m
Meth Date : 11-Nov-2011 13:31 S2.i Quant Type: ISTD
Cal Date : 25-OCT-2011 13:07 Cal File: S2H5057.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM.sub
Target Version: 4.14
Processing Host: TARGET104

Concentration Formula: Amt * DF * Uf*(Vt/Vi)*(1/Ws)*(100/(100-M)) * CpndVariabl

Name	Value	Description
DF	1.000	Dilution Factor
Uf	2.000	GPC correction factor
Vt	500.000	Volume of final extract (uL)(1000 low, 2
Vi	2.000	Volume injected (uL)
Ws	30.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$ 2 Phenol-d5	71	3.383	3.373	(0.918)	121759	37.2735	620
$ 4 bis(2-Chloroethyl)ether-d8	67	3.426	3.427	(0.930)	163951	36.4227	600
$ 6 2-Chlorophenol-d4	132	3.501	3.491	(0.951)	111566	39.4806	650
* 8 1,4-Dichlorobenzene-d4	152	3.683	3.684	(1.000)	103736	40.0000	(Q)
$ 11 4-Methylphenol-d8	113	4.005	4.006	(1.087)	169786	38.3380	630
$ 16 Nitrobenzene-d5	128	4.144	4.145	(0.871)	58397	40.5288	670
$ 19 2-Nitrophenol-d4	143	4.423	4.424	(0.930)	70592	44.3798	730
$ 23 2,4-Dichlorophenol-d3	165	4.627	4.628	(0.973)	137234	47.2615	780
* 25 Naphthalene-d8	136	4.755	4.746	(1.000)	276677	40.0000	
$ 27 4-Chloroaniline-d4	131	4.809	4.810	(1.011)	53646	20.8072	340(Q)
$ 40 Dimethylphthalate-d6	166	5.978	5.968	(0.962)	366056	42.2805	700
$ 43 Acenaphthylene-d8	160	6.085	6.076	(0.979)	394754	35.0629	580
* 46 Acenaphthene-d10	164	6.214	6.204	(1.000)	235470	40.0000	
$ 49 4-Nitrophenol-d4	143	6.321	6.312	(1.017)	42161	33.7910	560(Q)
$ 54 Fluorene-d10	176	6.643	6.633	(1.069)	310466	39.0386	640
$ 58 4,6-Dinitro-2-methylphenol-d2	200	6.696	6.698	(0.901)	55737	32.4459	540
* 65 Phenanthrene-d10	188	7.436	7.438	(1.000)	440222	40.0000	
$ 67 Anthracene-d10	188	7.479	7.480	(1.006)	468305	37.2407	610
70 Di-n-butylphthalate	149	7.930	7.931	(1.066)	34606	3.17196	52(a)

Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Report Date: 11-Nov-2011 13:32

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
S 72 Pyrene-d10	212	8.616	8.606	(0.890)	409746	43.2525	710
* 77 Chrysene-d12	240	9.678	9.668	(1.000)	300719	40.0000	(Q)
79 bis(2-Ethylhexyl)phthalate	149	9.710	9.700	(1.003)	19245	4.21255	70(a)
S 83 Benzo(a)pyrene-d12	264	10.900	10.891	(0.992)	198609	37.8224	620
* 85 Perylene-d12	264	10.986	10.966	(1.000)	213994	40.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Report Date: 11-Nov-2011 13:32

Spectrum Analytical, Inc. RI Division

CLP SOM QUANTITATION REPORT

Data file : \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Lab Smp Id: K2198-01A Client Smp ID: H30Q0
Inj Date : 10-NOV-2011 10:23
Operator : SRC: LIMS Inst ID: S2.i
Smp Info : K2198-01A,,62764,,
Misc Info : ****** CHECK MOISTURE ******
Comment :
Method : \\Avogadro\Organics\S2.I\111110.B\S2_SOM.m
Meth Date : 11-Nov-2011 13:31 S2.i Quant Type: ISTD
Cal Date : 25-OCT-2011 13:07 Cal File: S2H5057.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SOM.sub
Target Version: 4.14
Processing Host: TARGET104

Concentration Formula: Amt * DF * Uf*(Vt/Vi)*(1/Ws)*(100/(100-M)) * CpndVariabl

Name	Value	Description
DF	1.000	Dilution Factor
Uf	2.000	GPC correction factor
Vt	500.000	Volume of final extract (uL)(1000 low, 2
Vi	2.000	Volume injected (uL)
Ws	30.300	Weight of sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 8 1,4-Dichlorobenzene-d4	3.684	936099	40.000
* 25 Naphthalene-d8	4.756	959078	40.000
* 65 Phenanthrene-d10	7.437	1194537	40.000
* 77 Chrysene-d12	9.678	842869	40.000
* 85 Perylene-d12	10.986	536715	40.000

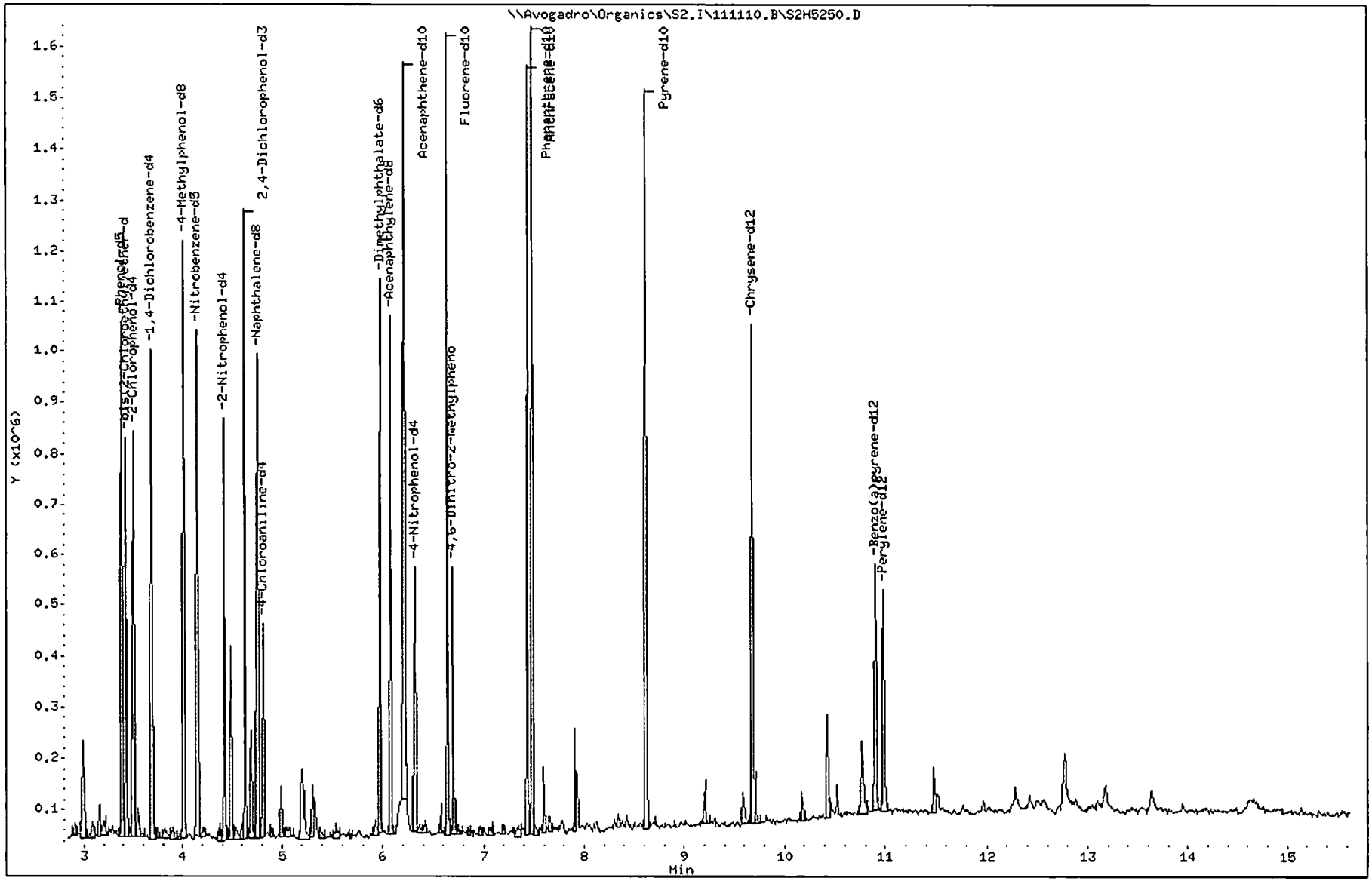
		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.986	239056	10.2149662	170	0		0	8
2(3H)-Furanone, dihydro-4-hydroxy-				CAS #: 5469-16-9			
4.488	376974	15.7223614	260	90	NIST2002.L	4145	25

Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Report Date: 11-Nov-2011 13:32

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
4.692	255360	10.6502355	180	0		0	25
Unknown				CAS #:			
5.206	317706	13.2504818	220	0		0	25
Unknown				CAS #:			
5.303	107269	4.47385248	74	0		0	25
Unknown				CAS #:			
7.598	129585	4.33924097	72	0		0	65
Unknown				CAS #:			
7.909	166955	5.59062583	92	0		0	65
Unknown				CAS #:			
9.206	103887	4.93017599	81	0		0	77
1-Hexacosanol				CAS #: 506-52-5			
9.581	98075	4.65436132	77	91	NIST2002.L	152037	77
9-Octadecenamide, (Z)-				CAS #: 301-02-0			
10.429	204644	15.2516016	250	91	NIST2002.L	106877	85
Unknown				CAS #:			
10.772	280004	20.8679744	340	0		0	85
Unknown				CAS #:			
11.480	123072	9.17223333	150	0		0	85

Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D
Date : 10-NOV-2011 10:23
Client ID: H30Q0
Sample Info: K2198-01A,,62764,,
Volume Injected (uL): 2.0
Column phase: RXI-5SILMS

Instrument: S2.i
Operator: SRC: LIMS
Column diameter: 0.25



Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D

Date : 10-NOV-2011 10:23

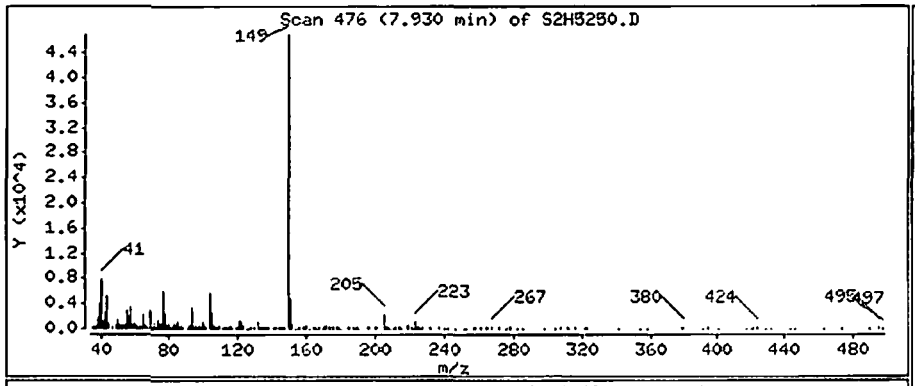
Client ID: H30Q0 Instrument: S2.i

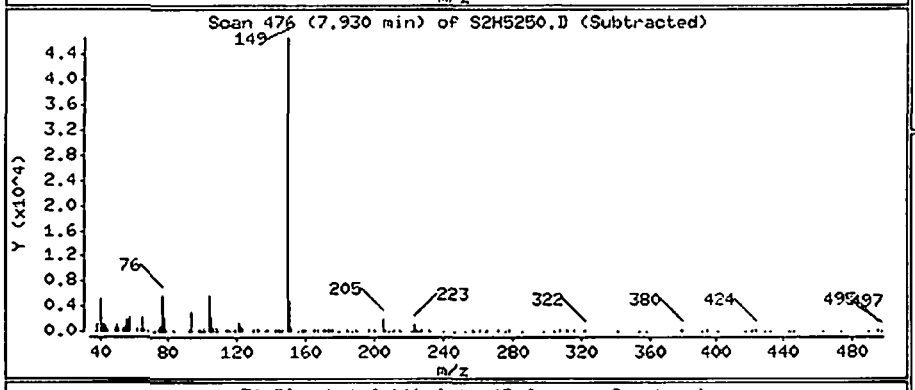
Sample Info: K2198-01A,,62764,,

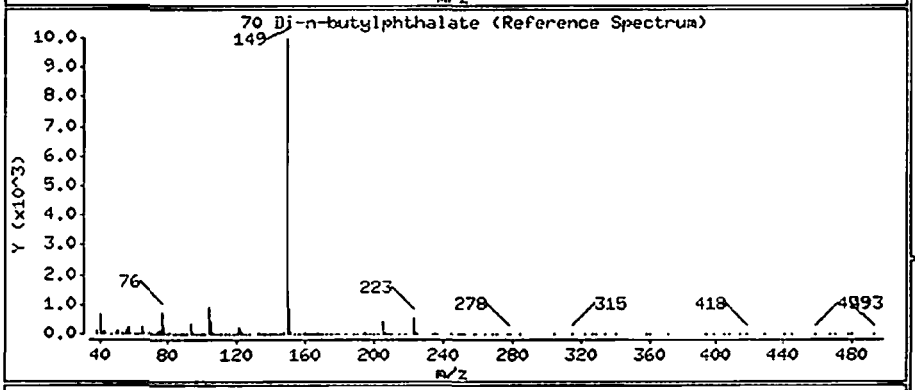
Volume Injected (uL): 2.0 Operator: SRC: LIMS

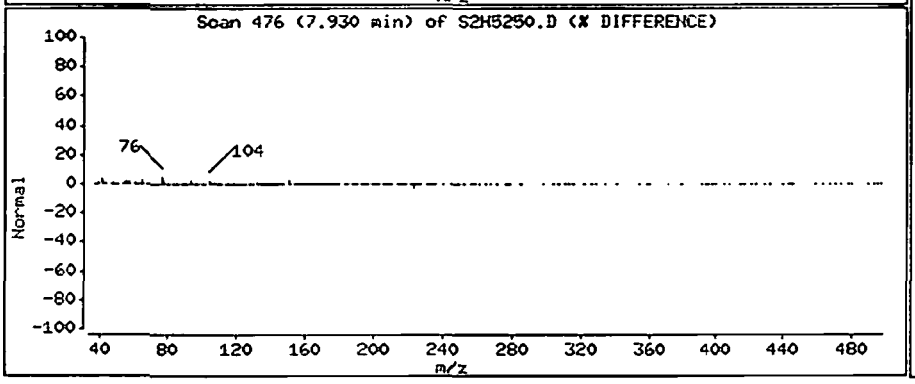
Column phase: RXI-5SILMS Column diameter: 0.25

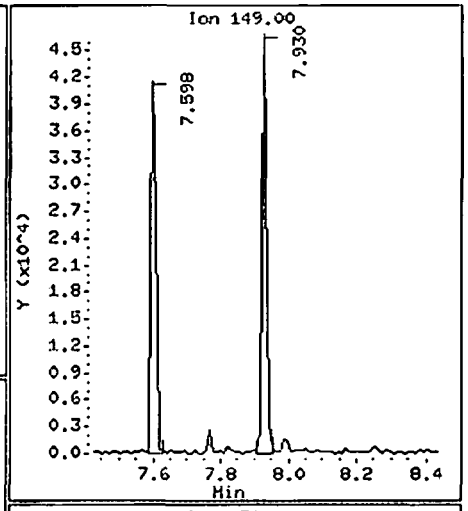
70 Di-n-butylphthalate Concentration: 52 ug/Kg

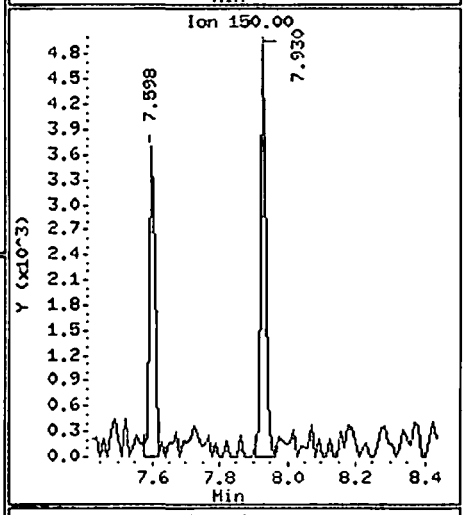


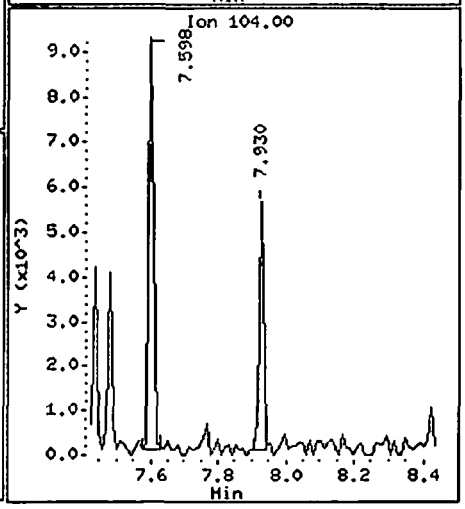












Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D

Date : 10-NOV-2011 10:23

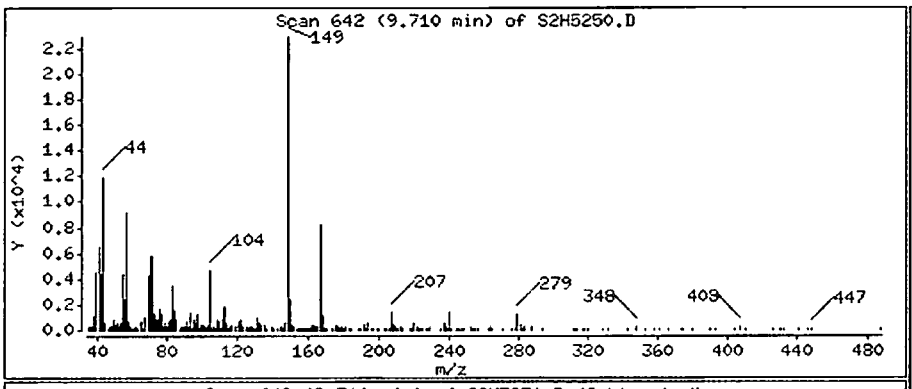
Client ID: H30Q0 Instrument: S2.i

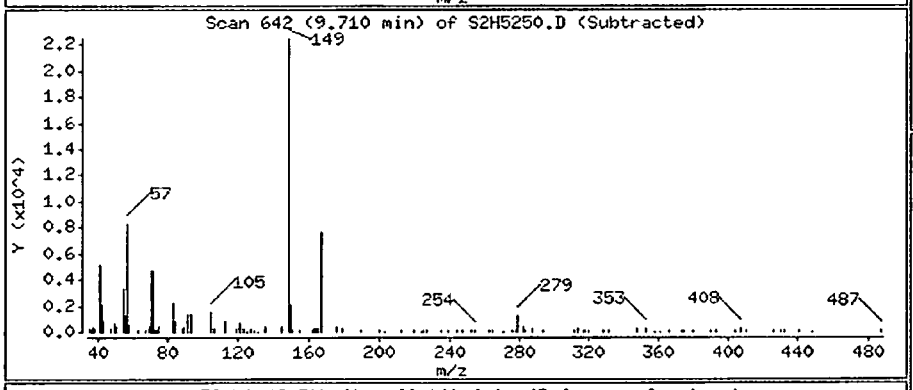
Sample Info: K2198-01A,,62764,,

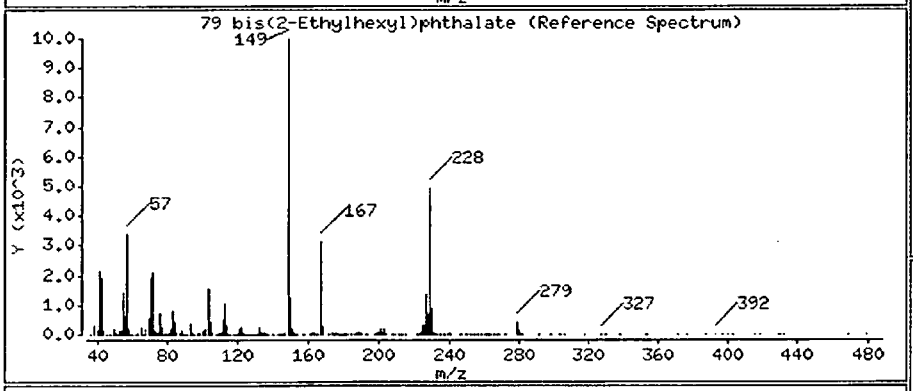
Volume Injected (uL): 2.0 Operator: SRC: LIHS

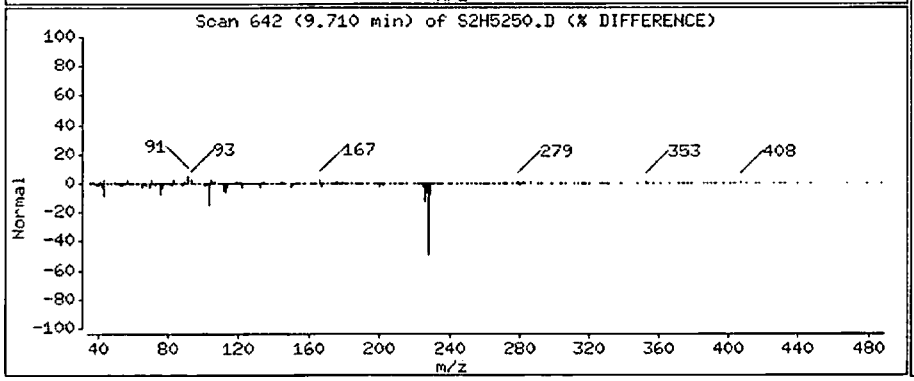
Column phase: RXI-5SILHS Column diameter: 0.25

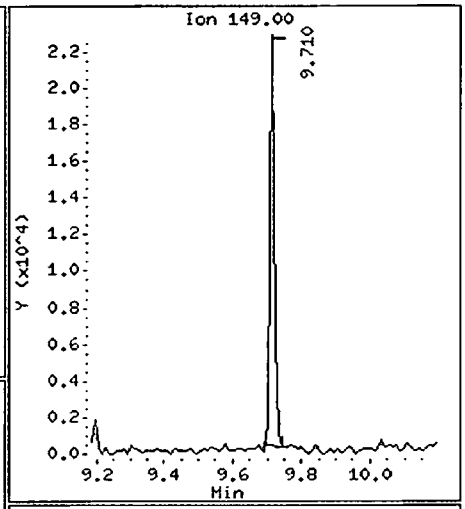
79 bis(2-Ethylhexyl)phthalate Concentration: 70 ug/Kg

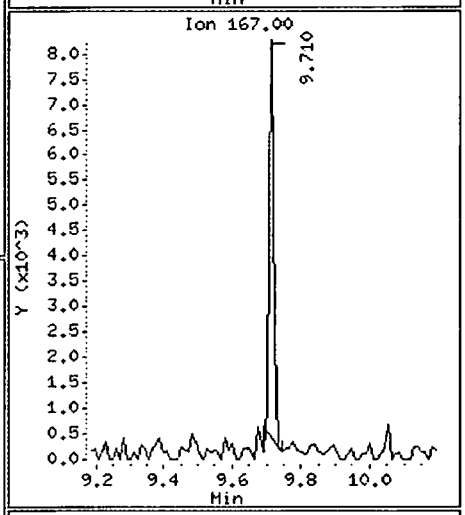


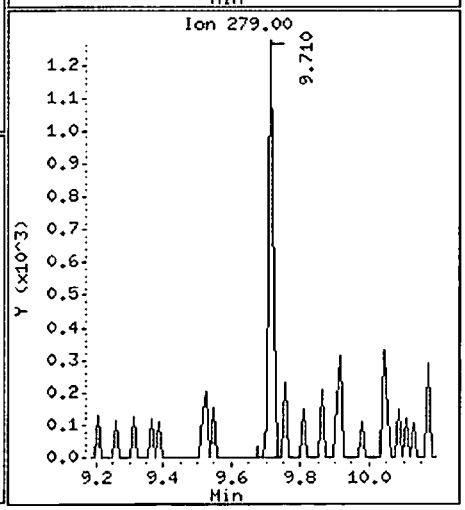












Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D

Date : 10-NOV-2011 10:23

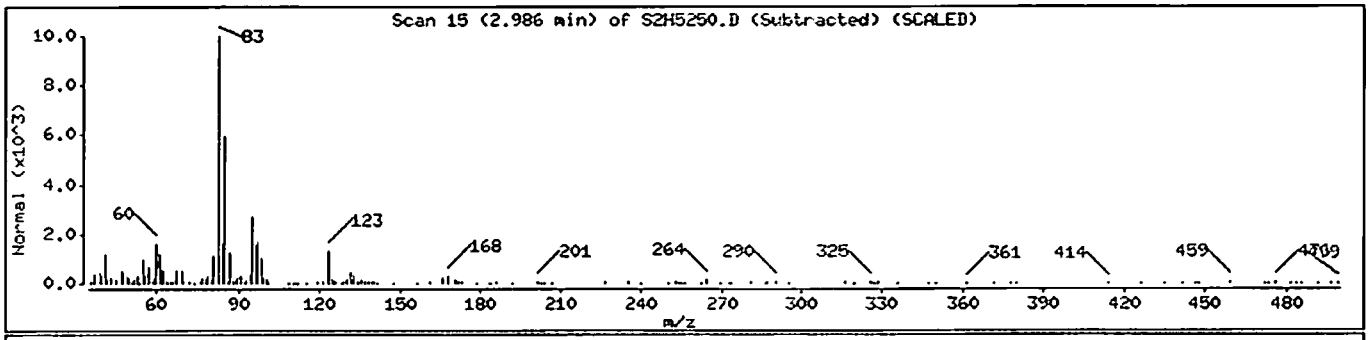
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIHS

Column phase: RXI-5SILHS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 10-NOV-2011 10:23

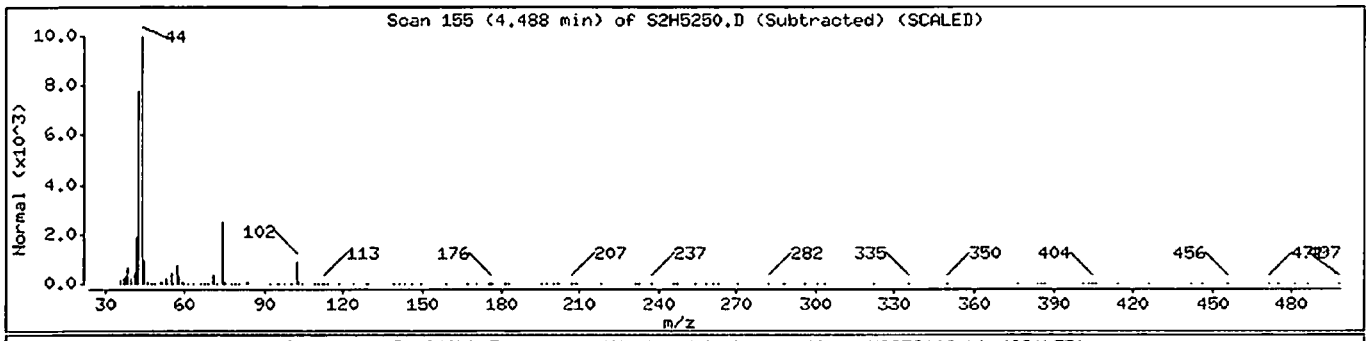
Client ID: H30Q0 Instrument: S2.i

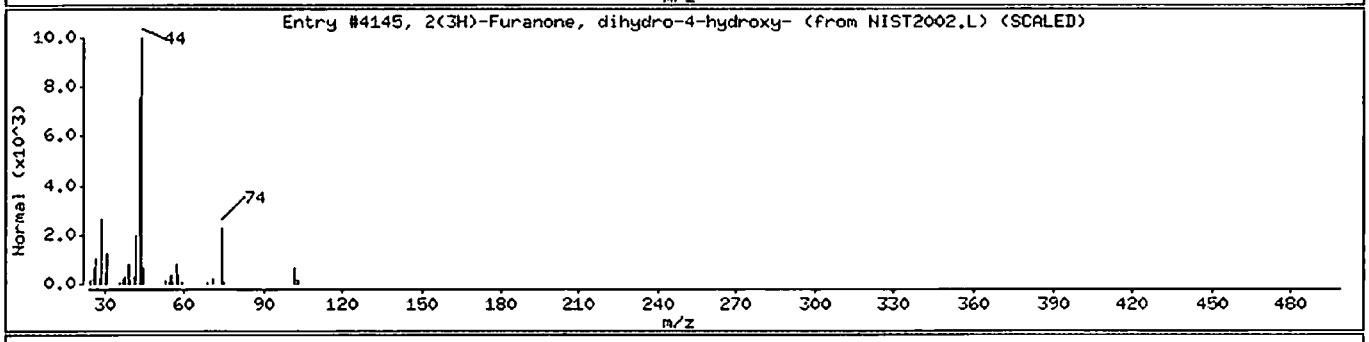
Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2(3H)-Furanone, dihydro-4-hydroxy-	5469-16-9	NIST2002.L	4145	90	C4H6O3	102





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Date : 10-NOV-2011 10:23

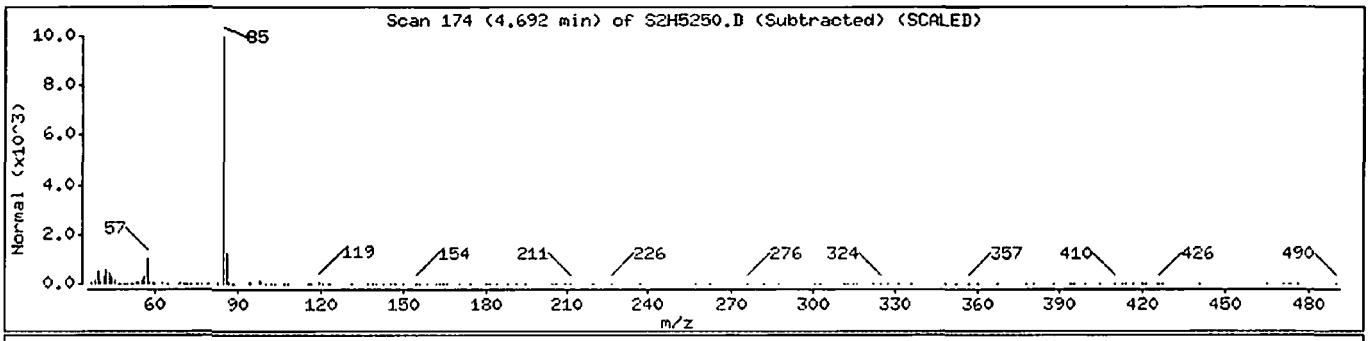
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 10-NOV-2011 10:23

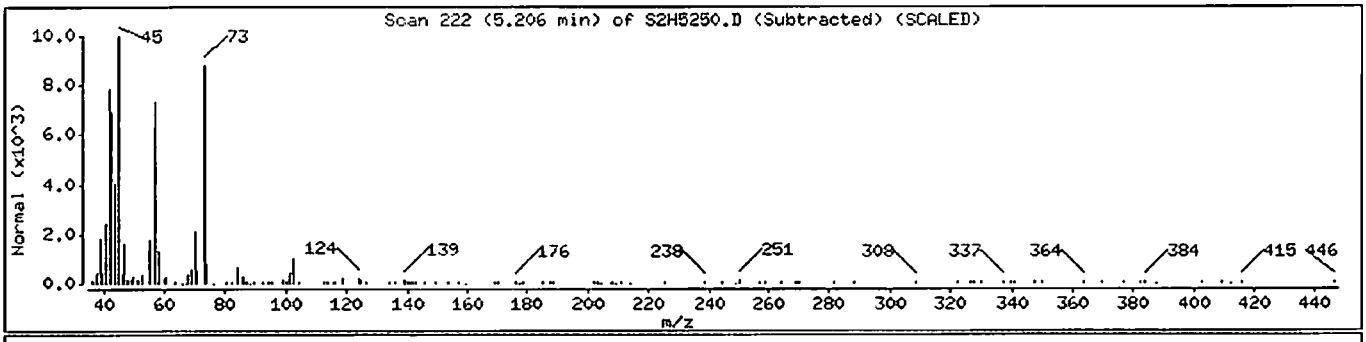
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 10-NOV-2011 10:23

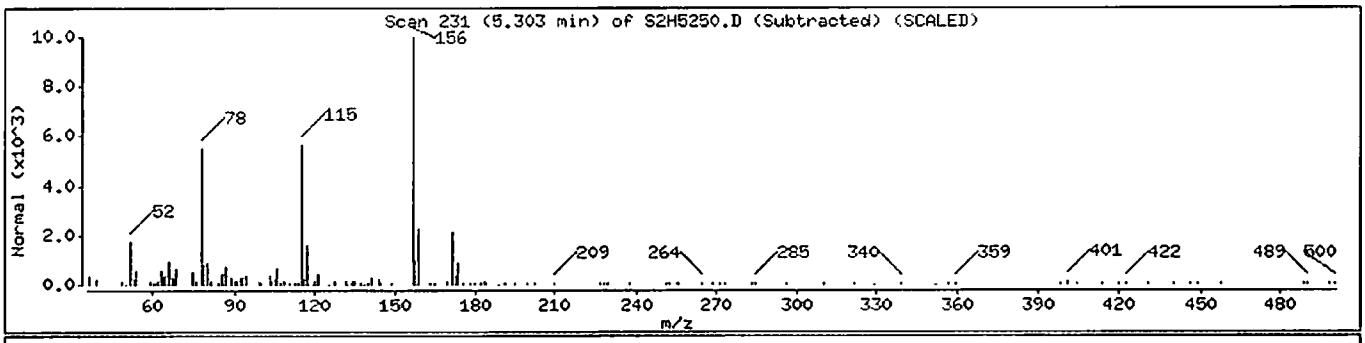
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 10-NOV-2011 10:23

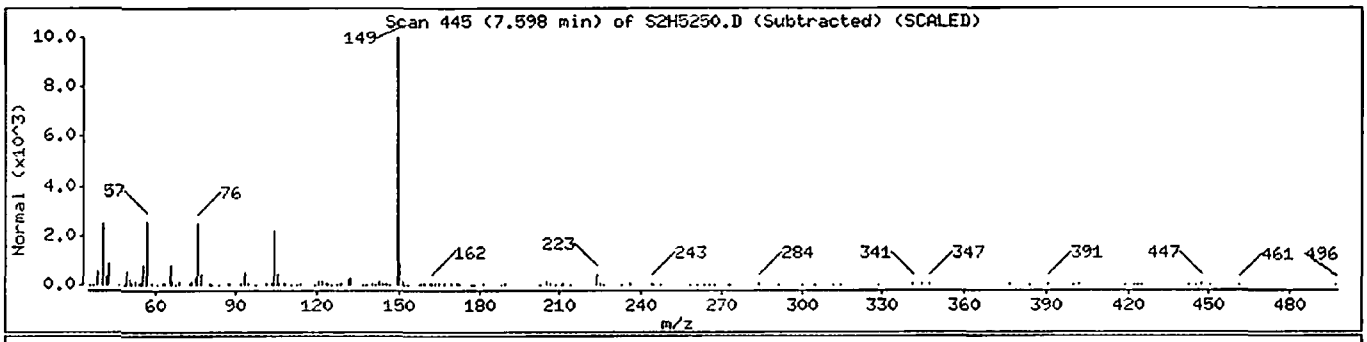
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 10-NOV-2011 10:23

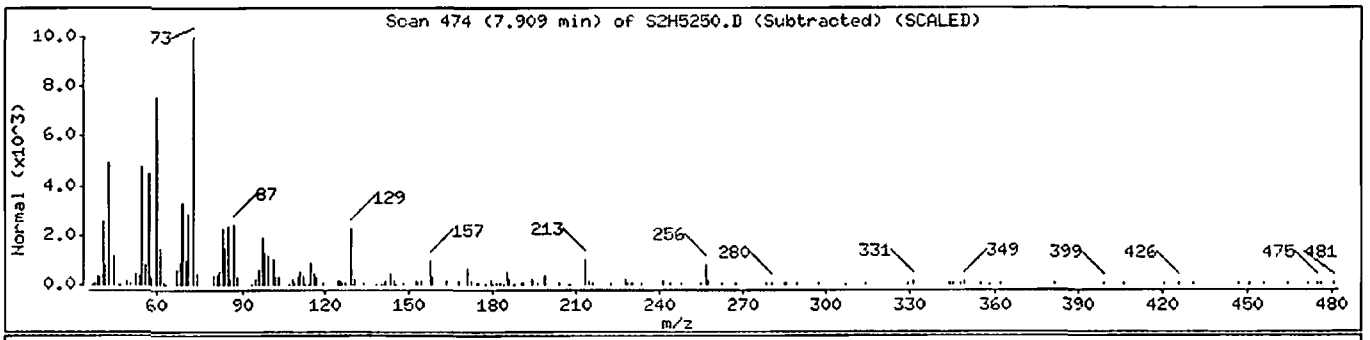
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIHS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D

Date : 10-NOV-2011 10:23

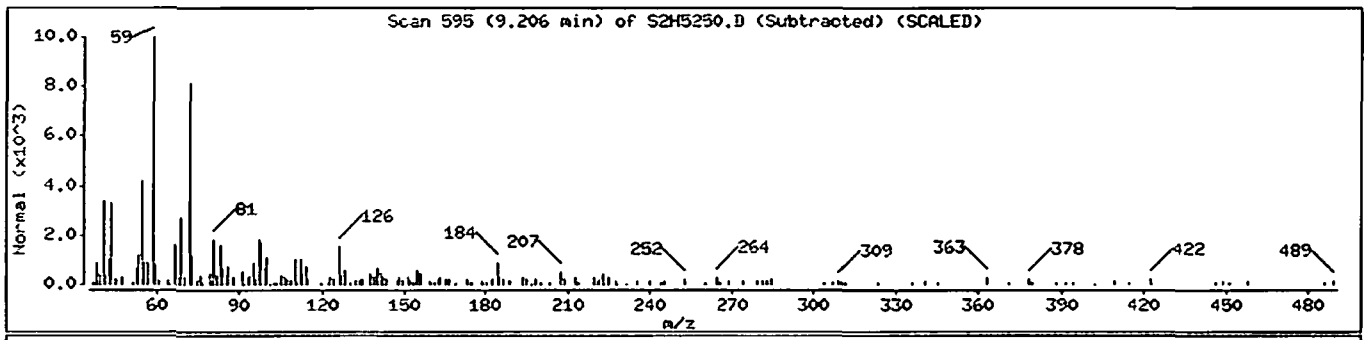
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



Data File: \\Avogadro\Organics\S2.I\111110.B\S2H5250.D

Date : 10-NOV-2011 10:23

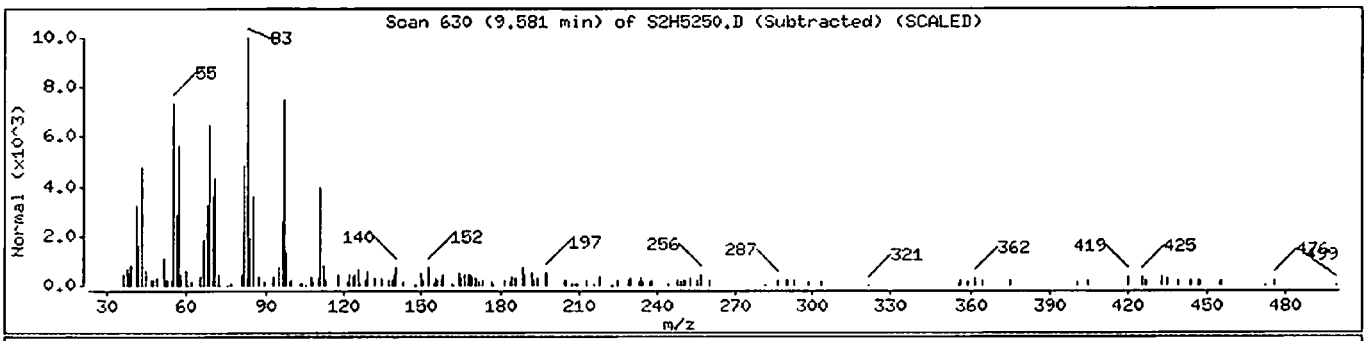
Client ID: H30Q0 Instrument: S2.i

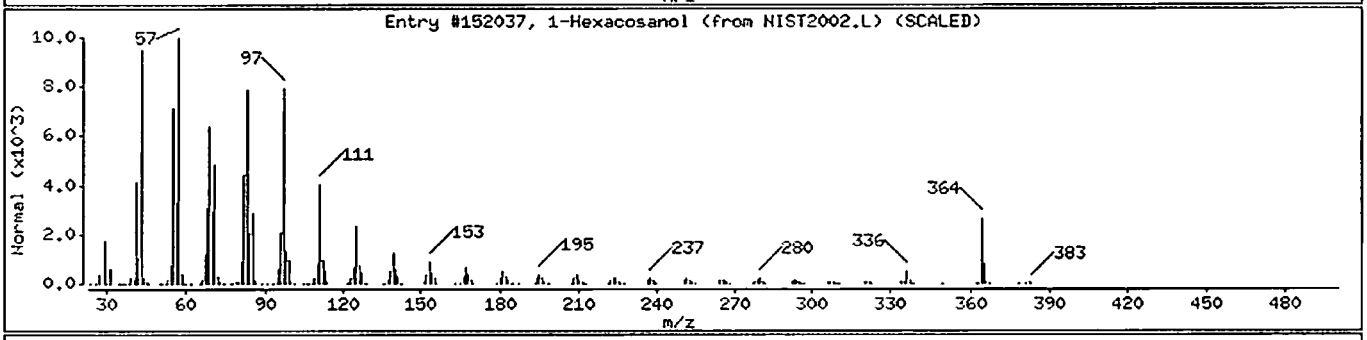
Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Hexacosanol	506-52-5	NIST2002.L	152037	91	C26H540	382





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Date : 10-NOV-2011 10:23

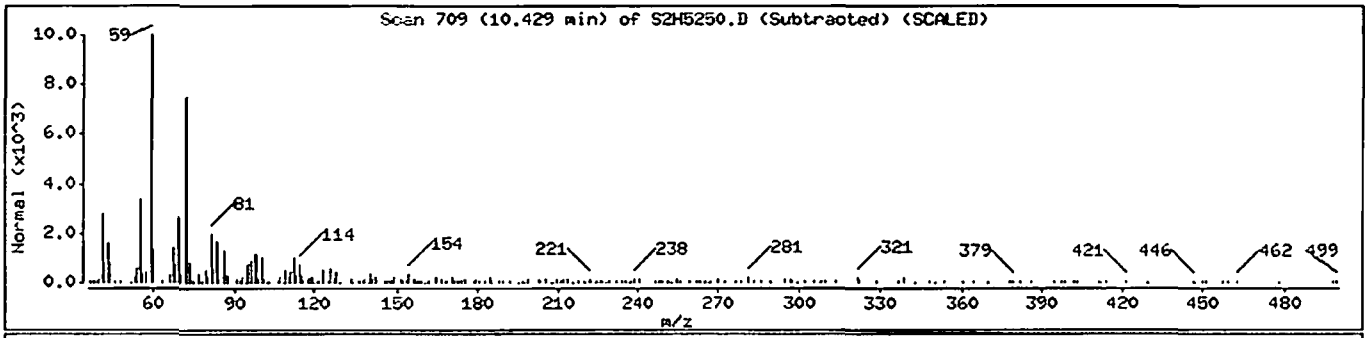
Client ID: H30Q0 Instrument: S2.i

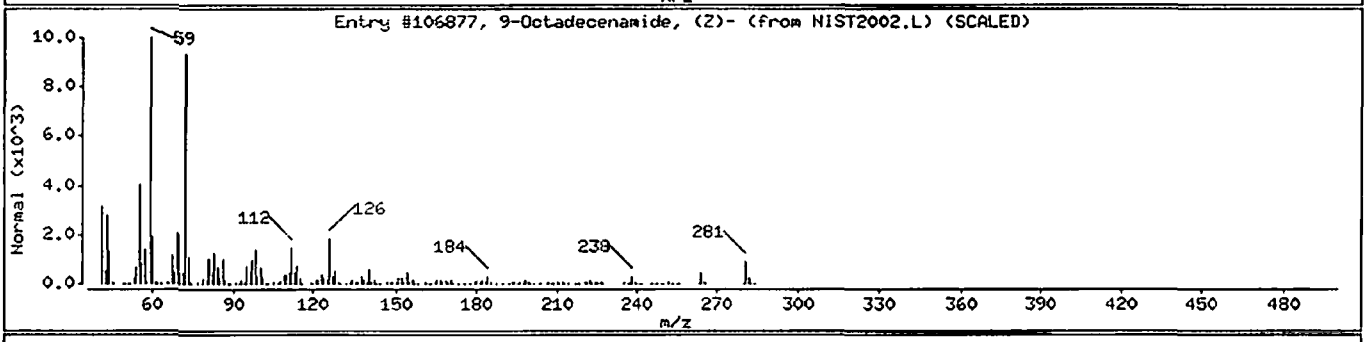
Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
9-Octadecenamide, (Z)-	301-02-0	NIST2002.L	106877	91	C18H35NO	281





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Date : 10-NOV-2011 10:23

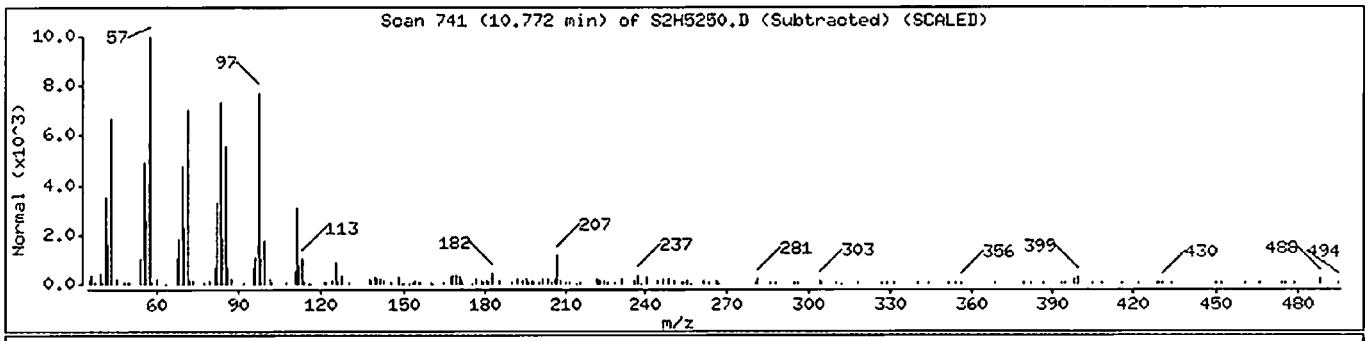
Client ID: H30Q0 Instrument: S2.i

Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0



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Date : 10-NOV-2011 10:23

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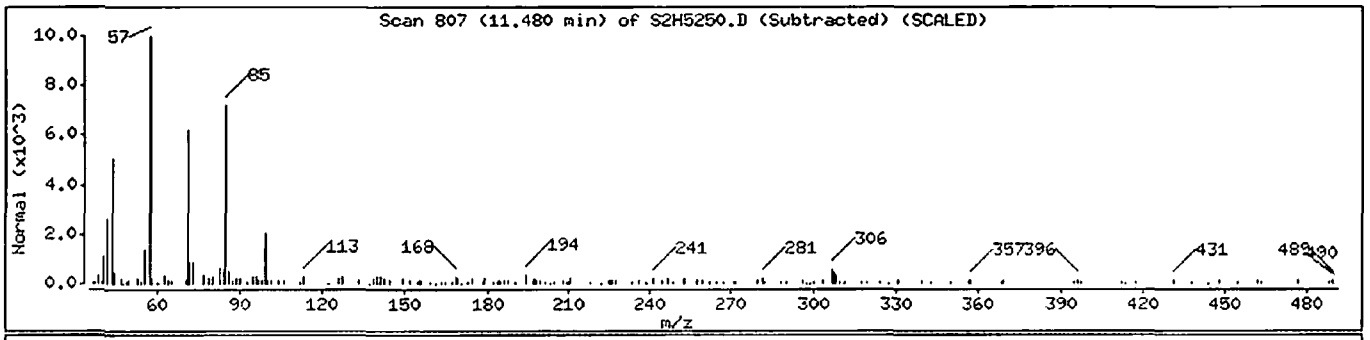
Sample Info: K2198-01A,,62764,,

Volume Injected (uL): 2.0 Operator: SRC: LIMS

Column phase: RXI-5SILMS Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0