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Analysis of Field-Collected Air Samples

Customer and Project Information

Report Certification	
Report number	061-024-IH-July2415
Report date	July 24, 2015
Certified by (Name/Title)	Alfred T. Hodgson, Research Director
Signature	Alfred T Hodgson
Date	*July 24, 2015*

Methods	
U.S. EPA TO-17	Determination of Volatile Organic Compounds in Ambient...
ASTM D 5197	Std. Test Method for Determination of Formaldehyde...

Customer Information	
Customer:	US EPA
City/State/Country	San Francisco, CA, USA
Contact name/Title	Jeff Woodlee
Phone number	415-972-3740

Project Information	
Project number	Not given
Project name	IAQ 75 Hawthorne
Project location	Not given
Project date	July 20, 2015

Laboratory Receiving Information	
Date samples received by lab	July 21, 2015
Condition of samples	No observed problems
Lab tracking numbers	061-024-01 to 061-024-10

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Sample Information

Sample No.	Sample Description	Sampler No.	Date Collected	Volume (L)	Analysis Type	Specified Method
C4-01	75 Hawthorne Office	A10976	July 20, 2015	6.22	TVOC, Individual VOCs	TO-17
C4-02	75 Hawthorne Office	A10992	July 20, 2015	6.18	Caprolactam	TO-17
C4-03	75 Hawthorne Office	A10997	July 20, 2015	7.02	Caprolactam	TO-17
C4-04	75 Hawthorne Office	A10951	July 20, 2015	5.65	TVOC, Individual VOCs	TO-17
C4-05	75 Hawthorne Office	A10987	July 20, 2015	5.75	Caprolactam	TO-17
F4-01	75 Hawthorne Office	Waters Cart	July 20, 2015	53.44	Formaldehyde	D 5197
F4-02	75 Hawthorne Office	Waters Cart	July 20, 2015	50.97	Formaldehyde	D 5197
F4-03	75 Hawthorne Office	Waters Cart	July 20, 2015	47.50	Formaldehyde	D 5197
F4-04	75 Hawthorne Office	Waters Cart	July 20, 2015	54.60	Formaldehyde	D 5197
F4-05	75 Hawthorne Office	Waters Cart	July 20, 2015	55.66	Formaldehyde	D 5197

Analytical Information

Sample No.	Lab Track. No.	Method	Date Analyzed	Analyst	Data File
C4-01	061-024-01	TO-17	July 23, 2015	R. Gill	T150721_03
C4-02	061-024-02	TO-17	July 23, 2015	R. Gill	T150721_04
C4-03	061-024-03	TO-17	July 23, 2015	R. Gill	T150721_05
C4-04	061-024-04	TO-17	July 22, 2015	R. Gill	T150722_01
C4-05	061-024-05	TO-17	July 23, 2015	R. Gill	T150721_07
F4-01	061-024-06	D 5197	July 23, 2015	T. Cheng	150721\150721003.D
F4-02	061-024-07	D 5197	July 23, 2015	T. Cheng	150721\150721005.D
F4-03	061-024-08	D 5197	July 23, 2015	T. Cheng	150721\150721006.D
F4-04	061-024-09	D 5197	July 23, 2015	T. Cheng	150721\150721007.D
F4-05	061-024-10	D 5197	July 23, 2015	T. Cheng	150721\150721008.D

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Project Specific Information

Air samples for the analysis of total volatile organic compounds (TVOC), Individual VOCs, caprolactam and formaldehyde were received by the laboratory on July 21, 2015. There were five multi-sorbent tubes. Two tubes were designated for the analysis of TVOC and Individual VOCs (iVOCs) and three were designated for caprolactam analysis. There were five DNPH cartridges for the analysis of formaldehyde. The analytical results are reported in Tables 1 – 5.

The multisorbent air samples were analyzed for iVOCs following U.S. EPA Compendium Method TO-17. iVOCs were quantified using multi-point (4 or more points) calibration curves prepared with pure standards, unless otherwise noted. iVOCs without pure standards were quantified based on their total-ion-current (TIC) responses using toluene as the surrogate calibration reference. VOCs at or above the limit of 2 $\mu g/m^3$ are included in the report. TVOC spanning a chromatographic interval bounded by n-pentane and n-heptadecane was determined by summing the TIC response over this interval and calculating the mass using toluene as the calibration reference. The total-ion-current chromatograms for the VOC samples analyzed for iVOCs are shown in Figures 1 and 2.

Formaldehyde was analyzed by HPLC following ASTM Standard Method D5197 and quantified using a multi-point (4 or more points) calibration curve. The lower limit of quantitation (LQ) for formaldehyde is 1 $\mu g/m^3$.

All test methods used in this project are contained in the scope of Berkeley Analytical's ISO/IEC 17025 accreditation (TL-383, International Accreditation Service, Inc.). All laboratory data, including but not limited to raw instrument files, calibration files, and quality control checks used to generate the results will be made available to the customer upon request.

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Results

Table 1. Quantitative analysis of TVOC

Sample No.	Sample Name	Volume (L)	Mass* (ng)	Conc ($\mu g/m^3$)
C4-01	75 Hawthorne Office	6.22	404	65.0
C4-04	75 Hawthorne Office	5.65	513	91.0

*Acetonitrile peak if present (contaminate from DNPH sampling) excluded from analysis

Table 2. Quantitative analysis of formaldehyde

Sample No.	Sample Name	Volume (L)	Mass (ng)	Conc ($\mu g/m^3$)	Conc* (ppb)
F4-01	75 Hawthorne Office	53.44	456	8.5	7.0
F4-02	75 Hawthorne Office	50.97	452	8.9	7.2
F4-03	75 Hawthorne Office	47.50	376	7.9	6.4
F4-04	75 Hawthorne Office	54.60	490	9.0	7.3
F4-05	75 Hawthorne Office	55.66	716	12.9	10.5

Concentration in ppb calculated assuming standard conditions of 25° C and 101.3 kPa.

Table 3. Quantitative analysis of Caprolactam

Sample No.	Sample Name	Volume (L)	Mass* (ng)	Conc ($\mu g/m^3$)
C4-02	75 Hawthorne Office	6.18	75.2	12.2
C4-03	75 Hawthorne Office	7.02	92.1	13.1
C4-05	75 Hawthorne Office	5.75	99.8	17.3

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Results, Continued

Table 4. Quantitative analysis of A10976; C4-01; 6.22 L

RT (min)	Compound	CAS #	Calib Type*	Mass (ng)	Conc (µg/m³)
1.99	Ethanol	64-17-5	S	73.6	11.8
2.26	2-Propanone (Acetone)	67-64-1	S	57.6	9.3
2.39	2-Propanol	67-63-0	S	18.0	2.9
2.48	Acetonitrile	75-05-8	TIC	20.7	3.3
6.85	Acetic acid	64-19-7	TIC	26.9	4.3
19.29	Nonanal	124-19-6	S	30.8	4.9
19.43	Decamethylcyclopentasiloxane	541-02-6	TIC	51.7	8.3
21.73	Decanal	112-31-2	TIC	17.3	2.8
23.69	Caprolactam	105-60-2	S	112	17.9

* TIC = Total-ion-current calibration using toluene as surrogate standard; S = pure standard calibration

Table 5. Quantitative analysis of A10951; C4-04; 5.65 L

RT (min)	Compound	CAS #	Calib Type*	Mass (ng)	Conc (µg/m³)
1.99	Ethanol	64-17-5	S	50.0	8.8
2.25	2-Propanone (Acetone)	67-64-1	S	60.5	10.7
2.38	2-Propanol	67-63-0	S	78.4	13.9
2.50	Acetonitrile	75-05-8	TIC	581	103
6.86	Acetic acid	64-19-7	TIC	20.3	3.6
11.02	Propylene glycol	57-55-6	S	35.3	6.2
16.45	1,2-Ethanediol, diacetate	111-55-7	TIC	13.3	2.4
19.29	Nonanal	124-19-6	S	31.0	5.5
21.73	Decanal	112-31-2	TIC	15.1	2.7
23.69	Caprolactam	105-60-2	S	59.2	10.5

* TIC = Total-ion-current calibration using toluene as surrogate standard; S = pure standard calibration

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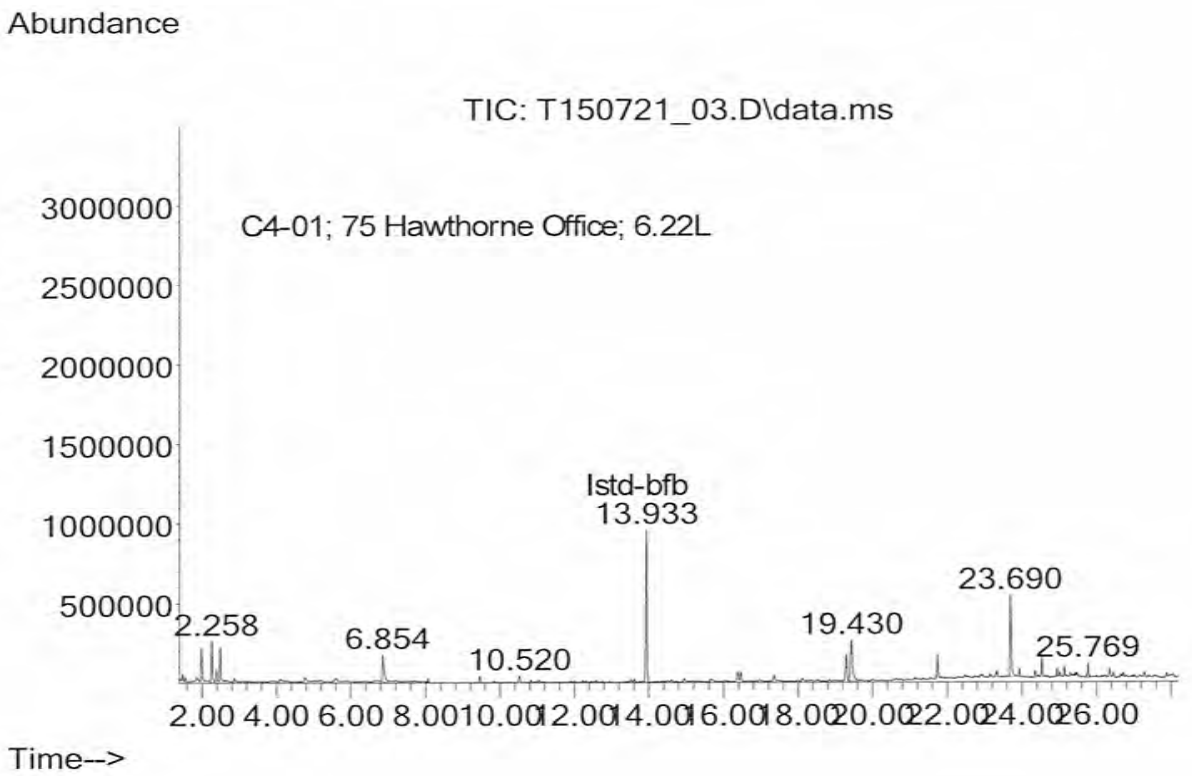
Results, Continued

Figure 1. GC/MS Total-ion-Current chromatogram of A10976; C4-01; 6.22 L



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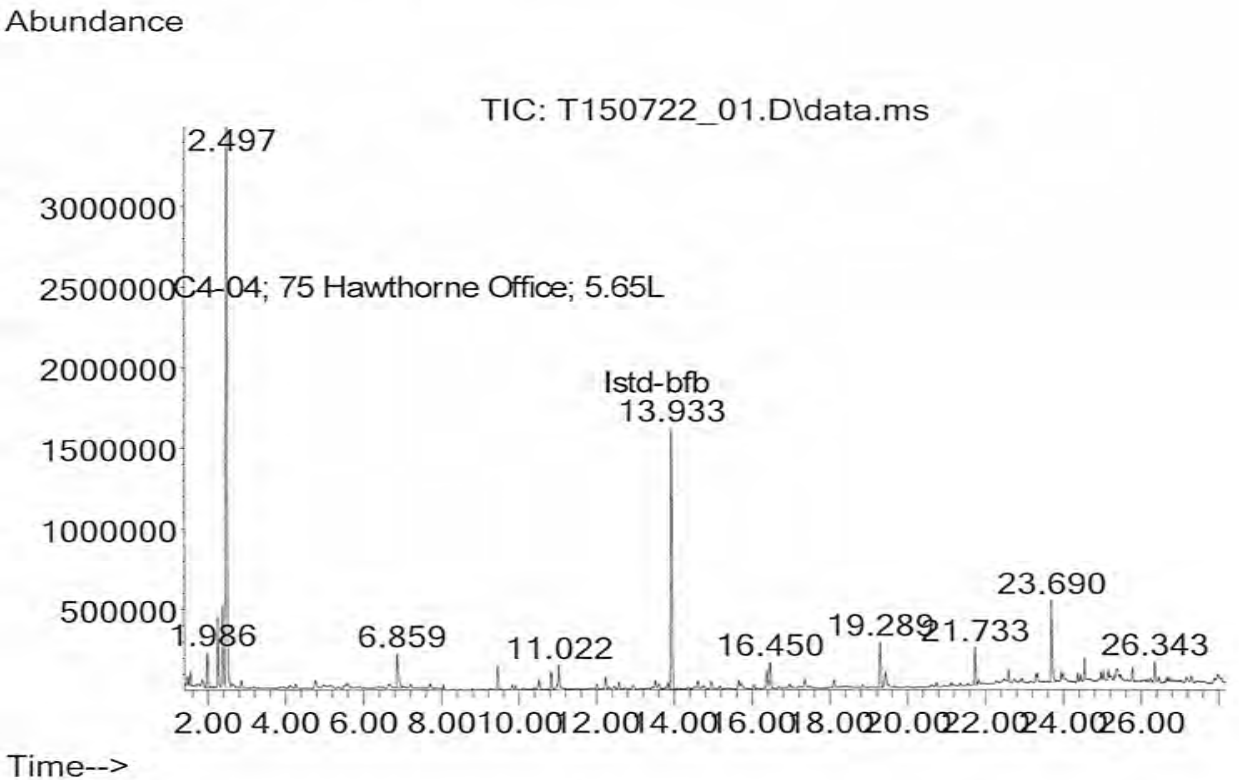
Results, Continued

Figure 2. GC/MS Total-ion-Current chromatogram of A10951; C4-04; 5.65 L



END OF REPORT

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CHAIN-OF-CUSTODY RECORD for ANALYTICAL SERVICES

2009 Update

Client Information*	
Company: US EPA	
Street Address: 75 Hawthorne St	
City/State/Zip Code: San Francisco CA 94105	
Country:	Contact (for reporting): Jeff Woodlee
Project/Job Name: IAQ 75 Hawthorne	
Project/Job #:	P.O. #:
Phone: (415) 972-3740	Fax:
E-mail address: woodlee.jeff@epa.gov	

Received from BAA (check if applicable)	
Multi-sorbent tube samplers	☑
Aldehyde cartridge samplers	☑
Sampling pump(s)	☐
Other materials (specify):	☐

BAA Analysis Code	
Total VOCs by GC/MS total-ion-current method (TIC)	a
Qualitative GC/MS of individual VOCs	b
Qualitative GC/MS plus quantitation of up to 15 individual VOCs	c
Quantitative GC/MS analysis of target list of compounds	d
Quantitative GC/MS Total VOCs plus 4-PCH	e
Quantitative HPLC analysis of formaldehyde	f
Quantitative HPLC analysis of formaldehyde & acetaldehyde	g
Quantitative HPLC analysis of formaldehyde & C2-C9 carbonyls	h
Quantitative HPLC analysis of glutaraldehyde	i
	k
Other (specify):	z

Air Sampling Record

Tube/Cartridge Sampler No.	Collected Sample ID	Date Collected	Collection Minutes	Collected Volume (L)	Sample Location / Description / Remarks	Analysis Code	BAA Remarks
A10976	C4-01	7/20/15	64	6.22	75 Hawthorne Office	Full Scan	
A10992	C4-02	↓	64	6.18	↓	Caprolactam	
A10997	C4-03	↓	74	7.02	↓	Caprolactam	
A10951	C4-04	↓	59	5.65	↓	Full Scan	
A10987	C4-05	↓	60	5.75	↓	Caprolactam	
	F4-01	↓	57	53.44	↓	f	
	F4-02	↓	58	50.97	↓	f	
	F4-03	↓	51	47.50	↓	f	
	F4-04	↓	59	54.60	↓	f	
	F4-05	↓	60	55.66	↓	f	

Sample(s) Handling

Relinquished By	Received By	Signature	Date	Company
J Woodlee		[signature]	7/21	US EPA
	Lois Switzer	[signature]	7/21/15	BKA

JC061-024

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Data File C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\150721003.D
Sample Name: 061-024-06

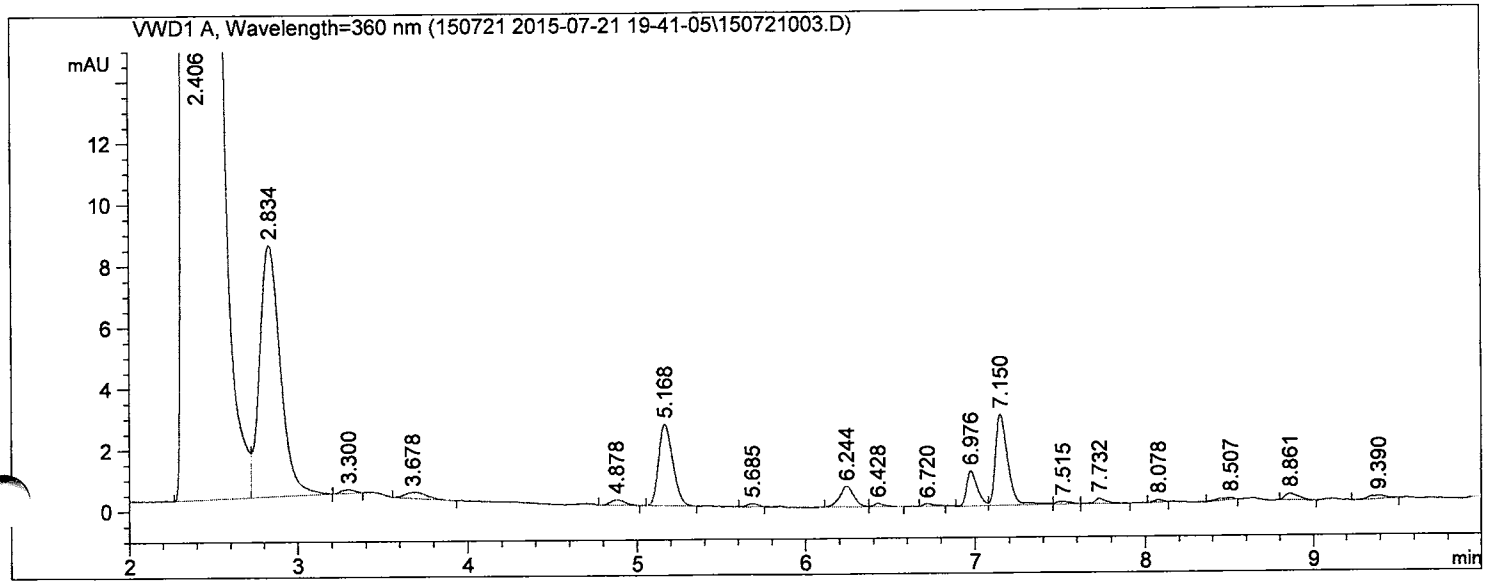
==========

Acq. Operator : SYSTEM
Acq. Instrument : Agilent 1260
Injection Date : 7/21/2015 8:15:09 PM

Seq. Line : 2
Location : Vial 2
Inj : 1
Inj Volume : 2.000 µl

Acq. Method : C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\FORMALDEHYDE.M
Last changed : 7/21/2015 7:41:07 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/19/2015 5:31:43 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-024-06; F4-01; 0720; 75 Hawthorne Office; 53.44L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/19/2015 5:31:36 PM
Multiplier : 2.000e3
Dilution : 1.0000
Sample Amount: : 1.00000 [ng] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=360 nm

RetTime [min]	Sig	Type	Area [mAU*s]	Amt/Area	Amount [ng]	Grp	Name
5.168	1	BB	15.54356	1.46706e-2	456.06613		Formaldehyde;50-00-0
6.244	1	BV	3.86838	1.84328e-2	142.61017		Acetaldehyde;75-07-0

Totals : 598.67630

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*** End of Report ***

Data File C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\150721004.D
Sample Name: 061-024-06

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Acq. Operator : SYSTEM
Seq. Line : 2
Acq. Instrument : Agilent 1260
Location : Vial 2
Injection Date : 7/21/2015 8:31:47 PM
Inj : 2
Inj Volume : 2.000 µl

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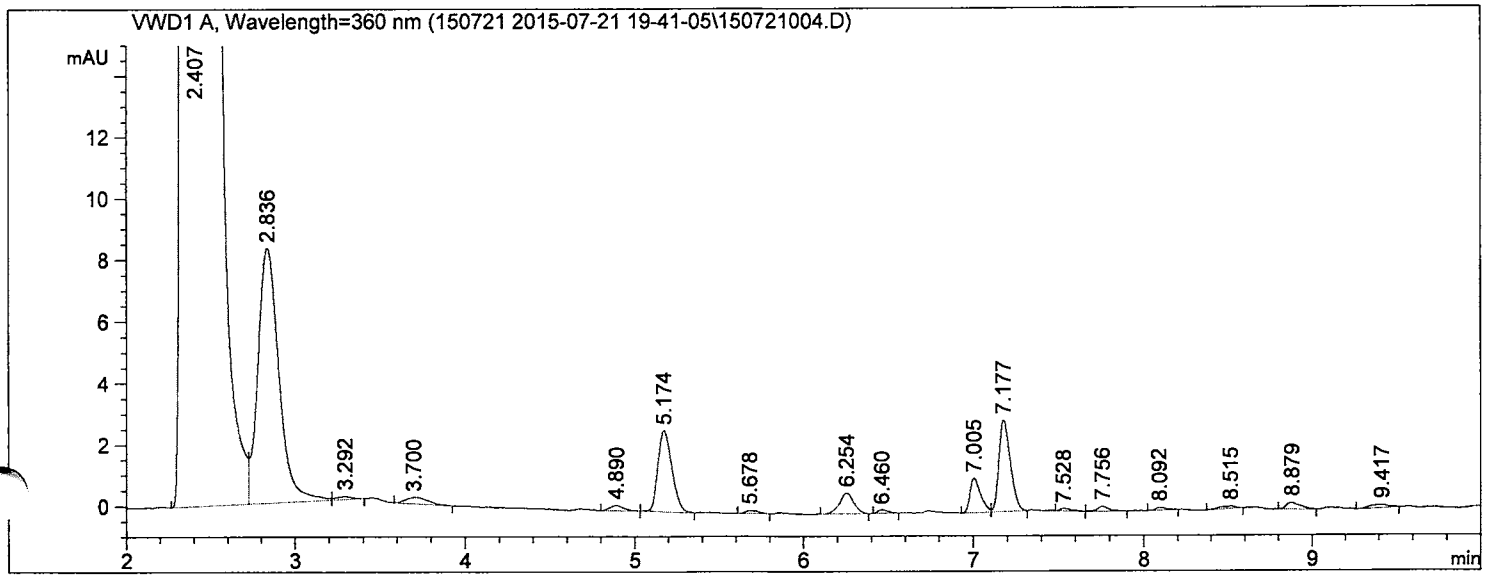
Last changed : 7/21/2015 7:41:07 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/19/2015 5:31:43 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-024-06; F4-01; 0720; 75 Hawthorne Office; 53.44L



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External Standard Report

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Multiplier : 2.000e3
Dilution : 1.0000
Sample Amount: : 1.00000 [ng] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=360 nm

RetTime [min]	Sig	Type	Area [mAU*s]	Amt/Area	Amount [ng]	Grp	Name
5.174	1	BB	15.33571	1.46706e-2	449.96764		Formaldehyde;50-00-0
6.254	1	BB	3.98249	1.84328e-2	146.81677		Acetaldehyde;75-07-0

Totals : 596.78441

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*** End of Report ***

Data File C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\150721005.D
Sample Name: 061-024-07

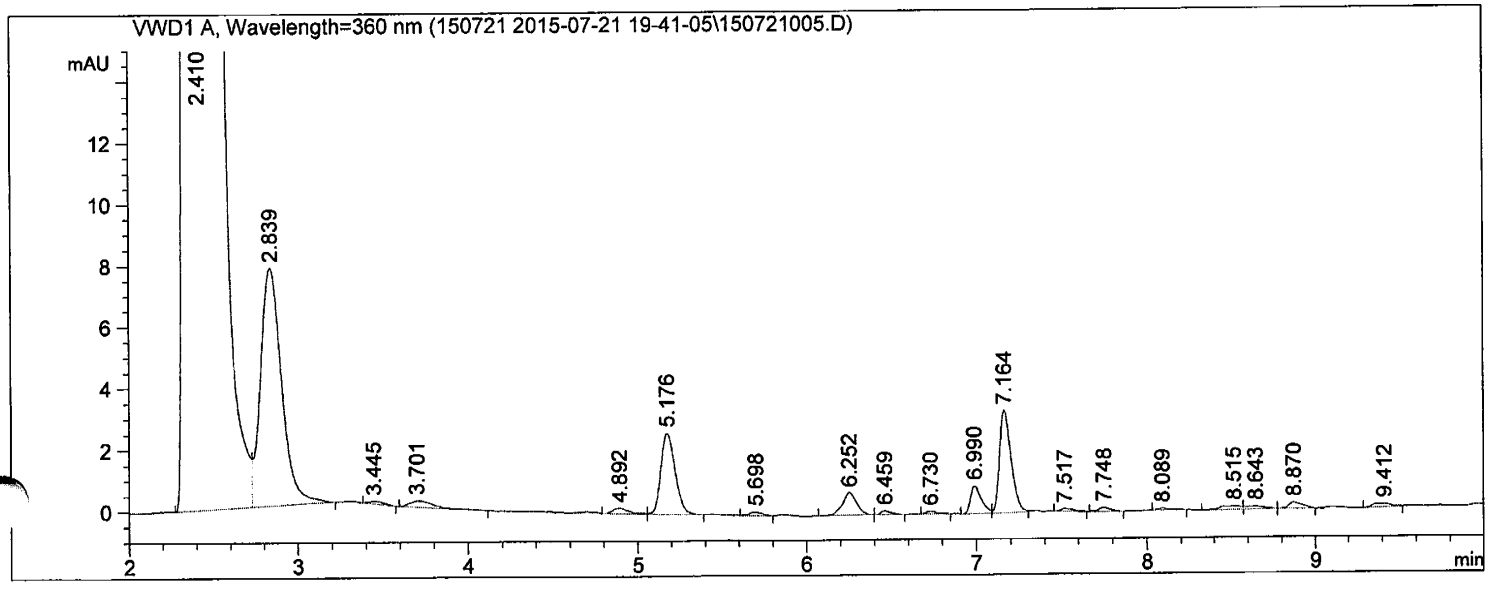
==========

Acq. Operator : SYSTEM
Acq. Instrument : Agilent 1260
Injection Date : 7/21/2015 8:48:26 PM

Seq. Line : 3
Location : Vial 3
Inj : 1
Inj Volume : 2.000 µl

Acq. Method : C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\FORMALDEHYDE.M
Last changed : 7/21/2015 7:41:07 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/19/2015 5:31:43 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-024-07; F4-02; 0720; 75 Hawthorne Office; 50.97L



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External Standard Report

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Multiplier : 2.000e3
Dilution : 1.0000
Sample Amount: : 1.00000 [ng] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=360 nm

RetTime [min]	Sig	Type	Area [mAU*s]	Amt/Area	Amount [ng]	Grp	Name
5.176	1	VB	15.40564	1.46706e-2	452.01958		Formaldehyde;50-00-0
6.252	1	BB	4.31022	1.84328e-2	158.89874		Acetaldehyde;75-07-0

Totals : 610.91832

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*** End of Report ***

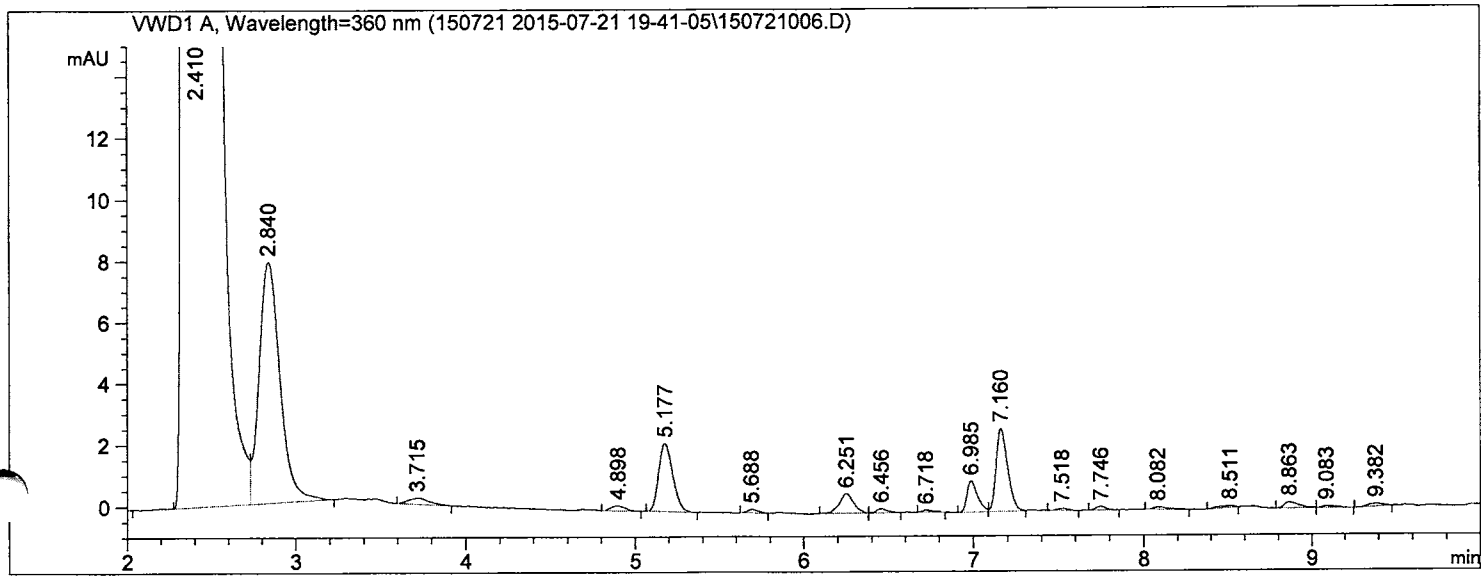
Data File C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\150721006.D
Sample Name: 061-024-08

==========

Acq. Operator : SYSTEM
Seq. Line : 4
Acq. Instrument : Agilent 1260
Location : Vial 4
Injection Date : 7/21/2015 9:05:06 PM
Inj : 1
Inj Volume : 2.000 µl

Acq. Method : C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\FORMALDEHYDE.M
Last changed : 7/21/2015 7:41:07 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/19/2015 5:31:43 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-024-08; F4-03; 0720; 75 Hawthorne Office; 47.5L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/19/2015 5:31:36 PM
Multiplier : 2.000e3
Dilution : 1.0000
Sample Amount: : 1.00000 [ng] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=360 nm

RetTime [min]	Sig	Type	Area [mAU*s]	Amt/Area	Amount [ng]	Grp	Name
5.177	1	BB	12.80313	1.46706e-2	375.65877		Formaldehyde;50-00-0
6.251	1	BB	3.74863	1.84328e-2	138.19530		Acetaldehyde;75-07-0

Totals : 513.85407

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*** End of Report ***

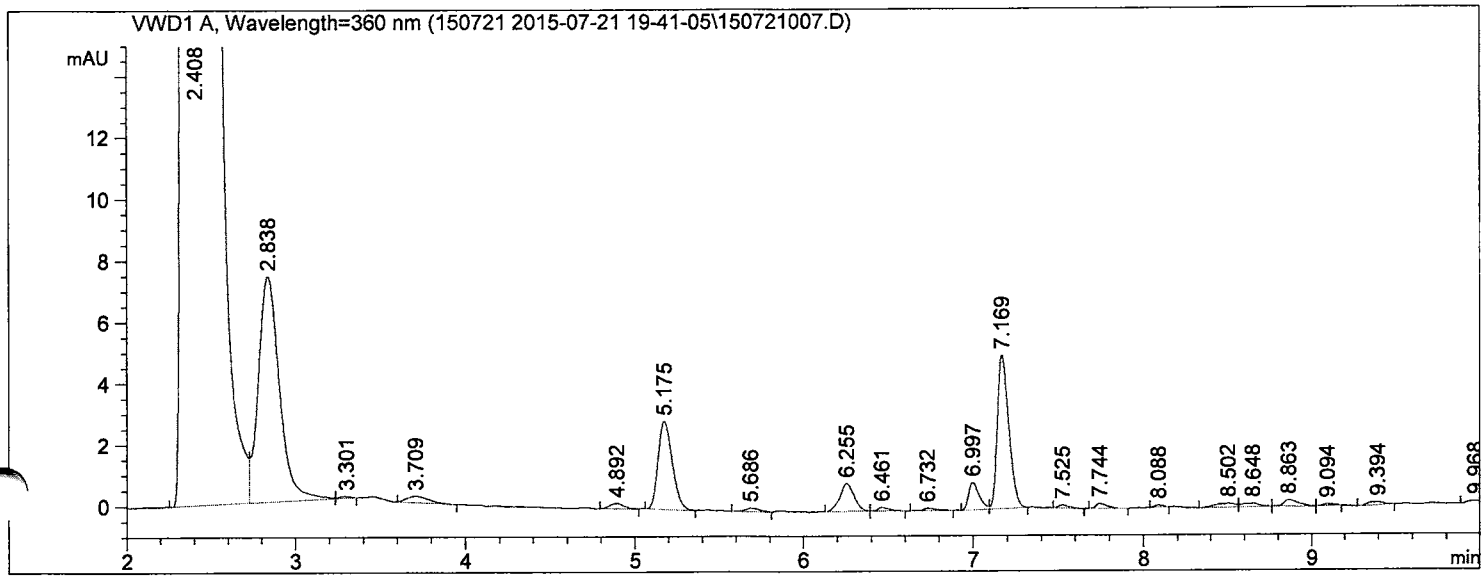
Data File C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\150721007.D
Sample Name: 061-024-09

==========

Acq. Operator : SYSTEM
Seq. Line : 5
Acq. Instrument : Agilent 1260
Location : Vial 5
Injection Date : 7/21/2015 9:21:46 PM
Inj : 1
Inj Volume : 2.000 µl

Acq. Method : C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\FORMALDEHYDE.M
Last changed : 7/21/2015 7:41:07 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/19/2015 5:31:43 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-024-09; F4-04; 0720; 75 Hawthorne Office; 54.6L



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External Standard Report

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Multiplier : 2.000e3
Dilution : 1.0000
Sample Amount: : 1.00000 [ng] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=360 nm

RetTime [min]	Sig	Type	Area [mAU*s]	Amt/Area	Amount [ng]	Grp	Name
5.175	1	BB	16.69459	1.46706e-2	489.83874		Formaldehyde;50-00-0
6.255	1	BV	5.29234	1.84328e-2	195.10498		Acetaldehyde;75-07-0

Totals : 684.94372

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*** End of Report ***

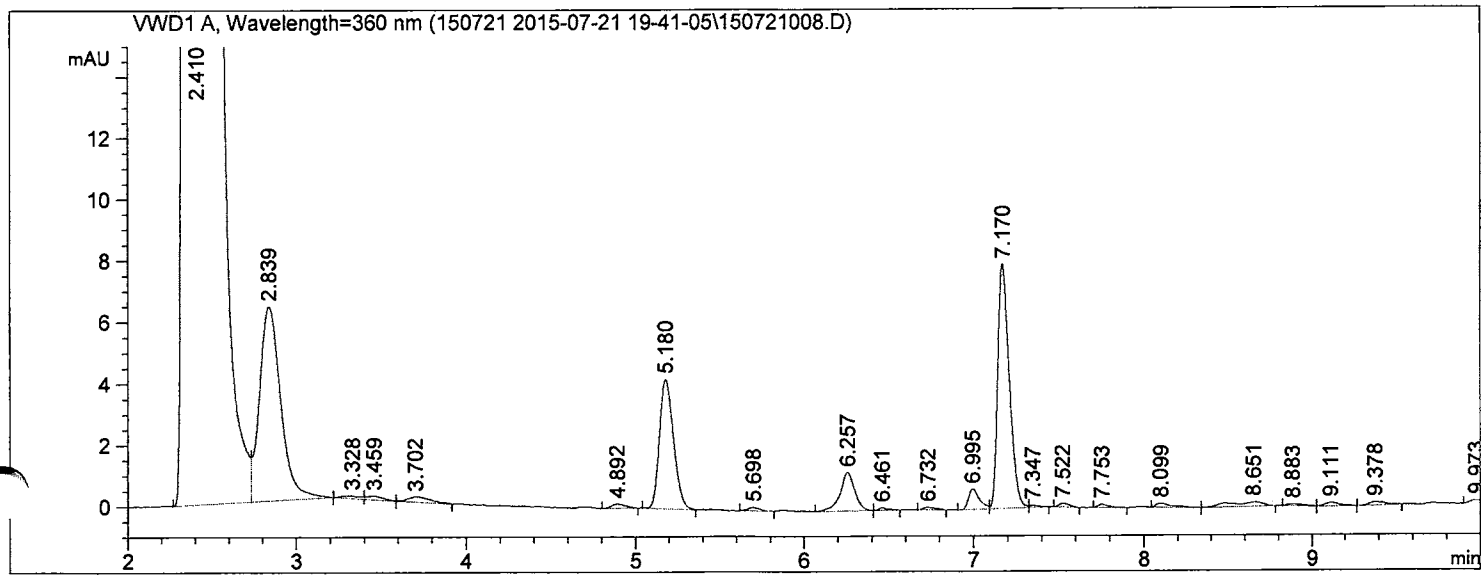
Data File C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\150721008.D
Sample Name: 061-024-10

==========

Acq. Operator : SYSTEM
Seq. Line : 6
Acq. Instrument : Agilent 1260
Location : Vial 6
Injection Date : 7/21/2015 9:38:27 PM
Inj : 1
Inj Volume : 2.000 µl

Acq. Method : C:\CHEM32\1\DATA\150721 2015-07-21 19-41-05\FORMALDEHYDE.M
Last changed : 7/21/2015 7:41:07 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/19/2015 5:31:43 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-024-10; F4-05; 0720; 75 Hawthorne Office; 55.66L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/19/2015 5:31:36 PM
Multiplier : 2.000e3
Dilution : 1.0000
Sample Amount: : 1.00000 [ng] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=360 nm

RetTime [min]	Sig	Type	Area [mAU*s]	Amt/Area	Amount [ng]	Grp	Name
5.180	1	BB	24.41725	1.46706e-2	716.43063		Formaldehyde;50-00-0
6.257	1	BB	7.66003	1.84328e-2	282.39150		Acetaldehyde;75-07-0

Totals : 998.82213

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*** End of Report ***

Quantitation Report (QT Reviewed)

Data Path : T:\5975 Data Files\Y2K15\July\
Data File : T150722_01.D
Acq On : 22 Jul 2015 10:47 am
Operator : rgill
Sample : 061-024-04; US EPA; C4-04; 5.65L
Misc : A10951; 107ngBFB;10:1 split
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 24 12:34:21 2015
Quant Method : M:\5975 Methods\Y2K14\Desorb_Merged_2014.M
Quant Title : AB95168
QLast Update : Fri Aug 09 12:40:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.933	95	882038	107.00 ng	# 0.00
22) 1-Bromo-4-flourobenzen...	13.933	95	882038	107.00 ng	# 0.00
35) 1-Bromo-4-flourobenzen...	13.933	95	882038	107.00 ng	# 0.00
52) 1-Bromo-4-flourobenzen...	13.933	95	882038	107.00 ng	# 0.00
62) 1-Bromo-4-flourobenzen...	13.933	95	882038	107.00 ng	# 0.00
83) 1-Bromo-4-flourobenzen...	13.933	95	882038	107.00 ng	# 0.00
Target Compounds					Qvalue
2) Trichloroethene;79-01-6	0.000		0	N.D.	
3) Methyl methacrylate; 8...	0.000		0	N.D.	
4) Toluene; 108-88-3	0.000		0	N.D. d	
5) Tetrachloroethene; 127...	0.000		0	N.D.	
6) N,N-Dimethylformamide;...	0.000		0	N.D.	
7) Ethylbenzene; 100-41-4	0.000		0	N.D. d	
8) Xylene {1}; 108-38-3	0.000		0	N.D. d	
9) Xylene {2}; 95-47-6	0.000		0	N.D. d	
10) Xylene - TOTAL; 1330-20-7	0.000		0	N.D. d	
11) Styrene; 100-42-5	0.000		0	N.D.	
12) 1,2,4-Trimethylbenzene...	0.000		0	N.D. d	
13) Octanal; 124-13-0	0.000		0	N.D. d	
14) Phenol; 108-95-2	0.000		0	N.D. d	
15) 1-Phenylethanone; 98-86-2	0.000		0	N.D. d	
16) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
17) Nonanal; 124-19-6	19.284	41	72413	31.03 ng	# 82
18) 2-Ethylhexanoic acid; ...	0.000		0	N.D. d	
19) Naphthalene; 91-20-3	0.000		0	N.D.	
20) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
21) Caprolactam; 105-60-2	23.690	113	129355	59.24 ng	98
23) 1-Methoxy-2-propanol; ...	0.000		0	N.D. d	
24) Ethylene glycol; 107-21-1	0.000		0	N.D. d	
25) Butyl acetate; 123-86-4	0.000		0	N.D. d	
26) Propylene glycol; 57-55-6	11.017	45	210147m	35.27 ng	
27) 2-Butoxyethanol; 111-76-2	0.000		0	N.D. d	
28) Hexanoic acid; 142-62-1	0.000		0	N.D. d	
29) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D. d	
30) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D. d	
31) Dodecanol; 112-53-8	0.000		0	N.D. d	
32) Butylated hydroxytolue...	0.000		0	N.D.	
33) Texanol 1; 25265-77-4-IS1	0.000		0	N.D. d	
34) Texanol 3; 25265-77-4-IS3	0.000		0	N.D. d	
36) n-Pentane; 109-66-0	0.000		0	N.D. d	
37) Ethanol; 64-17-5	1.986	31	216741	49.97 ng	# 85
38) 2-Propanone(acetone); ...	2.253	43	512769	60.49 ng	# 86
39) 2-Propanol; 67-63-0	2.380	45	755628	78.37 ng	94
40) Carbon disulfide; 75-15-0	0.000		0	N.D.	
41) Dichloromethane; 75-09-2	0.000		0	N.D.	
42) n-Hexane; 110-54-3	0.000		0	N.D.	
43) Vinyl acetate; 108-05-4	0.000		0	N.D.	
44) 2-Butanone; 78-93-3	0.000		0	N.D. d	

45)	Ethyl acetate; 141-78-6	0.000	0	N.D. d
46)	Cyclohexane; 110-82-7	0.000	0	N.D.
47)	Benzene; 71-43-2	0.000	0	N.D. d
48)	2-Methyl-1-propanol; 7...	0.000	0	N.D.
49)	1-Butanol; 71-36-3	0.000	0	N.D.
50)	1,4-Dioxane; 123-91-1	0.000	0	N.D.
51)	Epichlorohydrin; 106-89-8	0.000	0	N.D.
53)	n-Butanal;123-72-8	0.000	0	N.D.
54)	Pentanal; 110-62-3	0.000	0	N.D. d
55)	4-Methyl-2-pentanone; ...	0.000	0	N.D.
56)	Hexanal; 66-25-1	0.000	0	N.D. d
57)	2-Furancarboxaldehyde;...	0.000	0	N.D.
58)	4-Heptanone; 123-19-3	0.000	0	N.D. d
59)	2-Heptanone; 110-43-0	0.000	0	N.D. d
60)	Heptanal; 111-71-7	0.000	0	N.D.
61)	Benzaldehyde; 100-52-7	0.000	0	N.D. d
63)	Octane; 111-65-9	0.000	0	N.D. d
64)	n-Nonane; 111-84-2	0.000	0	N.D.
65)	alpha-Pinene; 7785-70-8	0.000	0	N.D. d
66)	Cyclohexanone; 108-94-1	0.000	0	N.D.
67)	Camphene; 5794-03-6	0.000	0	N.D. d
68)	beta-Pinene; 19902-08-0	0.000	0	N.D.
69)	n-Decane; 124-18-5	0.000	0	N.D.
70)	3-Carene; 13466-78-9	0.000	0	N.D.
71)	d-Limonene; 5989-27-5	0.000	0	N.D.
72)	p-Cymene; 99-87-6	0.000	0	N.D.
73)	1-Undecene; 821-95-4	0.000	0	N.D.
74)	n-Undecane; 1120-21-4	0.000	0	N.D.
75)	n-Dodecane; 112-40-3	0.000	0	N.D.
76)	Dodecamethylpentasilox...	0.000	0	N.D.
77)	n-Tridecane; 629-50-5	0.000	0	N.D. d
78)	Benzothiazole; 95-16-9	0.000	0	N.D.
79)	n-Tetradecane; 629-59-4	0.000	0	N.D. d
80)	n-Pentadecane; 629-62-9	0.000	0	N.D. d
81)	n-Hexadecane; 544-76-3	0.000	0	N.D. d
82)	n-Heptadecane; 629-78-7	0.000	0	N.D.
84)	Propyl acetate; 109-60-4	0.000	0	N.D.
85)	Isobutyl acetate;110-19-0	0.000	0	N.D. d
86)	PGMEA; 108-65-6	0.000	0	N.D. d
87)	1,3-Dichloro-2-propano...	0.000	0	N.D.
88)	DPGME isomer 1; 34590-...	0.000	0	N.D.
89)	DPGME isomer 2; 34590-...	0.000	0	N.D.
90)	DPGME isomer 3; 34590-...	0.000	0	N.D.
91)	1,1'-Oxybis-2-propanol...	0.000	0	N.D.
92)	Benzenemethanol; 100-51-6	0.000	0	N.D.
93)	Propylene carbonate; 1...	0.000	0	N.D.
94)	2,2'-Oxybis(1-propanol...	0.000	0	N.D.
95)	2-(2-Hydroxypropoxy)1-...	0.000	0	N.D.
96)	Octanoic acid; 124-07-2	0.000	0	N.D.
97)	alpha-Terpineol; 10482...	0.000	0	N.D.
98)	1-Dodecanamine, N,N-di...	0.000	0	N.D.
99)	3-Methyl-1,1'-biphenyl...	0.000	0	N.D.
100)	TXIB; 6846-50-0	0.000	0	N.D. d

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

Desorb_Merged_2014.M Fri Jul 24 12:34:27 2015

Quantitation Report (QT Reviewed)

Data Path : T:\5975 Data Files\Y2K15\July\
Data File : T150721_03.D
Acq On : 21 Jul 2015 3:01 pm
Operator : rgill
Sample : 061-024-01; US EPA; C4-01; 6.22L
Misc : A10976; 107ngBFB;10:1 split
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 24 12:19:35 2015
Quant Method : M:\5975 Methods\Y2K14\Desorb_Merged_2014.M
Quant Title : AB95168
QLast Update : Fri Aug 09 12:40:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.933	95	514785	107.00 ng	# 0.00
22) 1-Bromo-4-flourobenzen...	13.933	95	514785	107.00 ng	# 0.00
35) 1-Bromo-4-flourobenzen...	13.933	95	514785	107.00 ng	# 0.00
52) 1-Bromo-4-flourobenzen...	13.933	95	514785	107.00 ng	# 0.00
62) 1-Bromo-4-flourobenzen...	13.933	95	514785	107.00 ng	# 0.00
83) 1-Bromo-4-flourobenzen...	13.933	95	514785	107.00 ng	# 0.00
Target Compounds					Qvalue
2) Trichloroethene;79-01-6	0.000		0	N.D.	
3) Methyl methacrylate; 8...	0.000		0	N.D.	
4) Toluene; 108-88-3	0.000		0	N.D. d	
5) Tetrachloroethene; 127...	0.000		0	N.D.	
6) N,N-Dimethylformamide;...	0.000		0	N.D.	
7) Ethylbenzene; 100-41-4	0.000		0	N.D.	
8) Xylene {1}; 108-38-3	0.000		0	N.D.	
9) Xylene {2}; 95-47-6	0.000		0	N.D.	
10) Xylene - TOTAL; 1330-20-7	0.000		0	N.D.	
11) Styrene; 100-42-5	0.000		0	N.D.	
12) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
13) Octanal; 124-13-0	0.000		0	N.D. d	
14) Phenol; 108-95-2	0.000		0	N.D. d	
15) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
16) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
17) Nonanal; 124-19-6	19.284	41	41917	30.77 ng	# 62
18) 2-Ethylhexanoic acid; ...	0.000		0	N.D. d	
19) Naphthalene; 91-20-3	0.000		0	N.D.	
20) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
21) Caprolactam; 105-60-2	23.690	113	142266	111.64 ng	96
23) 1-Methoxy-2-propanol; ...	0.000		0	N.D. d	
24) Ethylene glycol; 107-21-1	0.000		0	N.D.	
25) Butyl acetate; 123-86-4	0.000		0	N.D.	
26) Propylene glycol; 57-55-6	0.000		0	N.D.	
27) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
28) Hexanoic acid; 142-62-1	0.000		0	N.D.	
29) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D. d	
30) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D. d	
31) Dodecanol; 112-53-8	0.000		0	N.D.	
32) Butylated hydroxytolue...	0.000		0	N.D.	
33) Texanol 1; 25265-77-4-IS1	0.000		0	N.D.	
34) Texanol 3; 25265-77-4-IS3	0.000		0	N.D. d	
36) n-Pentane; 109-66-0	0.000		0	N.D. d	
37) Ethanol; 64-17-5	1.986	31	186258	73.58 ng	# 82
38) 2-Propanone(acetone); ...	2.258	43	285097	57.63 ng	# 87
39) 2-Propanol; 67-63-0	2.385	45	101030	17.95 ng	# 62
40) Carbon disulfide; 75-15-0	0.000		0	N.D.	
41) Dichloromethane; 75-09-2	0.000		0	N.D.	
42) n-Hexane; 110-54-3	0.000		0	N.D.	
43) Vinyl acetate; 108-05-4	0.000		0	N.D.	
44) 2-Butanone; 78-93-3	0.000		0	N.D.	

45)	Ethyl acetate; 141-78-6	0.000	0	N.D.
46)	Cyclohexane; 110-82-7	0.000	0	N.D.
47)	Benzene; 71-43-2	0.000	0	N.D. d
48)	2-Methyl-1-propanol; 7...	0.000	0	N.D.
49)	1-Butanol; 71-36-3	0.000	0	N.D.
50)	1,4-Dioxane; 123-91-1	0.000	0	N.D.
51)	Epichlorohydrin; 106-89-8	0.000	0	N.D.
53)	n-Butanal;123-72-8	0.000	0	N.D.
54)	Pentanal; 110-62-3	0.000	0	N.D.
55)	4-Methyl-2-pentanone; ...	0.000	0	N.D.
56)	Hexanal; 66-25-1	0.000	0	N.D.
57)	2-Furancarboxaldehyde;...	0.000	0	N.D.
58)	4-Heptanone; 123-19-3	0.000	0	N.D.
59)	2-Heptanone; 110-43-0	0.000	0	N.D.
60)	Heptanal; 111-71-7	0.000	0	N.D.
61)	Benzaldehyde; 100-52-7	0.000	0	N.D.
63)	Octane; 111-65-9	0.000	0	N.D.
64)	n-Nonane; 111-84-2	0.000	0	N.D.
65)	alpha-Pinene; 7785-70-8	0.000	0	N.D.
66)	Cyclohexanone; 108-94-1	0.000	0	N.D.
67)	Camphene; 5794-03-6	0.000	0	N.D.
68)	beta-Pinene; 19902-08-0	0.000	0	N.D.
69)	n-Decane; 124-18-5	0.000	0	N.D.
70)	3-Carene; 13466-78-9	0.000	0	N.D.
71)	d-Limonene; 5989-27-5	0.000	0	N.D.
72)	p-Cymene; 99-87-6	0.000	0	N.D.
73)	1-Undecene; 821-95-4	0.000	0	N.D.
74)	n-Undecane; 1120-21-4	0.000	0	N.D.
75)	n-Dodecane; 112-40-3	0.000	0	N.D.
76)	Dodecamethylpentasilox...	0.000	0	N.D.
77)	n-Tridecane; 629-50-5	0.000	0	N.D.
78)	Benzothiazole; 95-16-9	0.000	0	N.D.
79)	n-Tetradecane; 629-59-4	0.000	0	N.D.
80)	n-Pentadecane; 629-62-9	0.000	0	N.D.
81)	n-Hexadecane; 544-76-3	0.000	0	N.D. d
82)	n-Heptadecane; 629-78-7	0.000	0	N.D.
84)	Propyl acetate; 109-60-4	0.000	0	N.D.
85)	Isobutyl acetate;110-19-0	0.000	0	N.D.
86)	PGMEA; 108-65-6	0.000	0	N.D.
87)	1,3-Dichloro-2-propano...	0.000	0	N.D.
88)	DPGME isomer 1; 34590-...	0.000	0	N.D.
89)	DPGME isomer 2; 34590-...	0.000	0	N.D.
90)	DPGME isomer 3; 34590-...	0.000	0	N.D.
91)	1,1'-Oxybis-2-propanol...	0.000	0	N.D.
92)	Benzenemethanol; 100-51-6	0.000	0	N.D.
93)	Propylene carbonate; 1...	0.000	0	N.D.
94)	2,2'-Oxybis(1-propanol...	0.000	0	N.D.
95)	2-(2-Hydroxypropoxy)1-...	0.000	0	N.D.
96)	Octanoic acid; 124-07-2	0.000	0	N.D.
97)	alpha-Terpineol; 10482...	0.000	0	N.D.
98)	1-Dodecanamine, N,N-di...	0.000	0	N.D.
99)	3-Methyl-1,1'-biphenyl...	0.000	0	N.D.
100)	TXIB; 6846-50-0	0.000	0	N.D. d

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

Desorb_Merged_2014.M Fri Jul 24 12:19:38 2015

Quantitation Report (QT Reviewed)

Data Path : T:\5975 Data Files\Y2K15\July\
Data File : T150721_04.D
Acq On : 21 Jul 2015 3:47 pm
Operator : rgill
Sample : 061-024-02; US EPA; C4-02; 6.18L
Misc : A10992; 107ngBFB;10:1 split
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 23 16:23:48 2015
Quant Method : M:\5975 Methods\Y2K14\Desorb_Merged_2014.M
Quant Title : AB95168
QLast Update : Fri Aug 09 12:40:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.933	95	691171	107.00 ng	# 0.00
22) 1-Bromo-4-flourobenzen...	13.933	95	691171	107.00 ng	# 0.00
35) 1-Bromo-4-flourobenzen...	13.933	95	691171	107.00 ng	# 0.00
52) 1-Bromo-4-flourobenzen...	13.933	95	691171	107.00 ng	# 0.00
62) 1-Bromo-4-flourobenzen...	13.933	95	691171	107.00 ng	# 0.00
83) 1-Bromo-4-flourobenzen...	13.933	95	691171	107.00 ng	# 0.00
Target Compounds					Qvalue
2) Trichloroethene;79-01-6	0.000		0	N.D.	
3) Methyl methacrylate; 8...	0.000		0	N.D.	
4) Toluene; 108-88-3	0.000		0	N.D. d	
5) Tetrachloroethene; 127...	0.000		0	N.D.	
6) N,N-Dimethylformamide;...	0.000		0	N.D.	
7) Ethylbenzene; 100-41-4	0.000		0	N.D. d	
8) Xylene {1}; 108-38-3	0.000		0	N.D. d	
9) Xylene {2}; 95-47-6	0.000		0	N.D.	
10) Xylene - TOTAL; 1330-20-7	0.000		0	N.D.	
11) Styrene; 100-42-5	0.000		0	N.D.	
12) 1,2,4-Trimethylbenzene...	0.000		0	N.D. d	
13) Octanal; 124-13-0	0.000		0	N.D. d	
14) Phenol; 108-95-2	0.000		0	N.D. d	
15) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
16) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
17) Nonanal; 124-19-6	0.000		0	N.D. d	
18) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
19) Naphthalene; 91-20-3	0.000		0	N.D.	
20) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
21) Caprolactam; 105-60-2	23.690	113	128719	75.23 ng	94
23) 1-Methoxy-2-propanol; ...	0.000		0	N.D. d	
24) Ethylene glycol; 107-21-1	0.000		0	N.D.	
25) Butyl acetate; 123-86-4	0.000		0	N.D. d	
26) Propylene glycol; 57-55-6	0.000		0	N.D. d	
27) 2-Butoxyethanol; 111-76-2	0.000		0	N.D. d	
28) Hexanoic acid; 142-62-1	0.000		0	N.D.	
29) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D. d	
30) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D. d	
31) Dodecanol; 112-53-8	0.000		0	N.D.	
32) Butylated hydroxytolue...	0.000		0	N.D.	
33) Texanol 1; 25265-77-4-IS1	0.000		0	N.D.	
34) Texanol 3; 25265-77-4-IS3	0.000		0	N.D. d	
36) n-Pentane; 109-66-0	0.000		0	N.D. d	
37) Ethanol; 64-17-5	0.000		0	N.D. d	
38) 2-Propanone(acetone); ...	0.000		0	N.D. d	
39) 2-Propanol; 67-63-0	0.000		0	N.D. d	
40) Carbon disulfide; 75-15-0	0.000		0	N.D.	
41) Dichloromethane; 75-09-2	0.000		0	N.D.	
42) n-Hexane; 110-54-3	0.000		0	N.D.	
43) Vinyl acetate; 108-05-4	0.000		0	N.D.	
44) 2-Butanone; 78-93-3	0.000		0	N.D. d	

45)	Ethyl acetate; 141-78-6	0.000	0	N.D. d
46)	Cyclohexane; 110-82-7	0.000	0	N.D.
47)	Benzene; 71-43-2	0.000	0	N.D. d
48)	2-Methyl-1-propanol; 7...	0.000	0	N.D.
49)	1-Butanol; 71-36-3	0.000	0	N.D.
50)	1,4-Dioxane; 123-91-1	0.000	0	N.D.
51)	Epichlorohydrin; 106-89-8	0.000	0	N.D.
53)	n-Butanal;123-72-8	0.000	0	N.D.
54)	Pentanal; 110-62-3	0.000	0	N.D. d
55)	4-Methyl-2-pentanone; ...	0.000	0	N.D.
56)	Hexanal; 66-25-1	0.000	0	N.D. d
57)	2-Furancarboxaldehyde;...	0.000	0	N.D.
58)	4-Heptanone; 123-19-3	0.000	0	N.D.
59)	2-Heptanone; 110-43-0	0.000	0	N.D. d
60)	Heptanal; 111-71-7	0.000	0	N.D.
61)	Benzaldehyde; 100-52-7	0.000	0	N.D. d
63)	Octane; 111-65-9	0.000	0	N.D.
64)	n-Nonane; 111-84-2	0.000	0	N.D.
65)	alpha-Pinene; 7785-70-8	0.000	0	N.D. d
66)	Cyclohexanone; 108-94-1	0.000	0	N.D.
67)	Camphene; 5794-03-6	0.000	0	N.D. d
68)	beta-Pinene; 19902-08-0	0.000	0	N.D.
69)	n-Decane; 124-18-5	0.000	0	N.D.
70)	3-Carene; 13466-78-9	0.000	0	N.D.
71)	d-Limonene; 5989-27-5	0.000	0	N.D. d
72)	p-Cymene; 99-87-6	0.000	0	N.D.
73)	1-Undecene; 821-95-4	0.000	0	N.D.
74)	n-Undecane; 1120-21-4	0.000	0	N.D.
75)	n-Dodecane; 112-40-3	0.000	0	N.D.
76)	Dodecamethylpentasilox...	0.000	0	N.D.
77)	n-Tridecane; 629-50-5	0.000	0	N.D.
78)	Benzothiazole; 95-16-9	0.000	0	N.D.
79)	n-Tetradecane; 629-59-4	0.000	0	N.D. d
80)	n-Pentadecane; 629-62-9	0.000	0	N.D. d
81)	n-Hexadecane; 544-76-3	0.000	0	N.D. d
82)	n-Heptadecane; 629-78-7	0.000	0	N.D.
84)	Propyl acetate; 109-60-4	0.000	0	N.D.
85)	Isobutyl acetate;110-19-0	0.000	0	N.D.
86)	PGMEA; 108-65-6	0.000	0	N.D.
87)	1,3-Dichloro-2-propano...	0.000	0	N.D.
88)	DPGME isomer 1; 34590-...	0.000	0	N.D.
89)	DPGME isomer 2; 34590-...	0.000	0	N.D.
90)	DPGME isomer 3; 34590-...	0.000	0	N.D.
91)	1,1'-Oxybis-2-propanol...	0.000	0	N.D.
92)	Benzenemethanol; 100-51-6	0.000	0	N.D.
93)	Propylene carbonate; 1...	0.000	0	N.D.
94)	2,2'-Oxybis(1-propanol...	0.000	0	N.D.
95)	2-(2-Hydroxypropoxy)1-...	0.000	0	N.D.
96)	Octanoic acid; 124-07-2	0.000	0	N.D.
97)	alpha-Terpineol; 10482...	0.000	0	N.D.
98)	1-Dodecanamine, N,N-di...	0.000	0	N.D.
99)	3-Methyl-1,1'-biphenyl...	0.000	0	N.D.
100)	TXIB; 6846-50-0	0.000	0	N.D. d

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

Desorb_Merged_2014.M Thu Jul 23 16:23:51 2015

Quantitation Report (QT Reviewed)

Data Path : T:\5975 Data Files\Y2K15\July\
Data File : T150721_05.D
Acq On : 21 Jul 2015 4:33 pm
Operator : rgill
Sample : 061-024-03; US EPA; C4-03; 7.02L
Misc : A10997; 107ngBFB;10:1 split
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 23 16:24:55 2015
Quant Method : M:\5975 Methods\Y2K14\Desorb_Merged_2014.M
Quant Title : AB95168
QLast Update : Fri Aug 09 12:40:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.933	95	766493	107.00 ng	# 0.00
22) 1-Bromo-4-flourobenzen...	13.933	95	766493	107.00 ng	# 0.00
35) 1-Bromo-4-flourobenzen...	13.933	95	766493	107.00 ng	# 0.00
52) 1-Bromo-4-flourobenzen...	13.933	95	766493	107.00 ng	# 0.00
62) 1-Bromo-4-flourobenzen...	13.933	95	766493	107.00 ng	# 0.00
83) 1-Bromo-4-flourobenzen...	13.933	95	766493	107.00 ng	# 0.00
Target Compounds					Qvalue
2) Trichloroethene;79-01-6	0.000		0	N.D.	
3) Methyl methacrylate; 8...	0.000		0	N.D.	
4) Toluene; 108-88-3	0.000		0	N.D. d	
5) Tetrachloroethene; 127...	0.000		0	N.D.	
6) N,N-Dimethylformamide;...	0.000		0	N.D.	
7) Ethylbenzene; 100-41-4	0.000		0	N.D. d	
8) Xylene {1}; 108-38-3	0.000		0	N.D. d	
9) Xylene {2}; 95-47-6	0.000		0	N.D. d	
10) Xylene - TOTAL; 1330-20-7	0.000		0	N.D. d	
11) Styrene; 100-42-5	0.000		0	N.D.	
12) 1,2,4-Trimethylbenzene...	0.000		0	N.D. d	
13) Octanal; 124-13-0	0.000		0	N.D. d	
14) Phenol; 108-95-2	0.000		0	N.D. d	
15) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
16) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
17) Nonanal; 124-19-6	0.000		0	N.D. d	
18) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
19) Naphthalene; 91-20-3	0.000		0	N.D.	
20) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
21) Caprolactam; 105-60-2	23.690	113	174765	92.10 ng	96
23) 1-Methoxy-2-propanol; ...	0.000		0	N.D. d	
24) Ethylene glycol; 107-21-1	0.000		0	N.D. d	
25) Butyl acetate; 123-86-4	0.000		0	N.D. d	
26) Propylene glycol; 57-55-6	0.000		0	N.D. d	
27) 2-Butoxyethanol; 111-76-2	0.000		0	N.D. d	
28) Hexanoic acid; 142-62-1	0.000		0	N.D. d	
29) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D. d	
30) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D. d	
31) Dodecanol; 112-53-8	0.000		0	N.D. d	
32) Butylated hydroxytolue...	0.000		0	N.D.	
33) Texanol 1; 25265-77-4-IS1	0.000		0	N.D. d	
34) Texanol 3; 25265-77-4-IS3	0.000		0	N.D. d	
36) n-Pentane; 109-66-0	0.000		0	N.D. d	
37) Ethanol; 64-17-5	0.000		0	N.D. d	
38) 2-Propanone(acetone); ...	0.000		0	N.D. d	
39) 2-Propanol; 67-63-0	0.000		0	N.D. d	
40) Carbon disulfide; 75-15-0	0.000		0	N.D.	
41) Dichloromethane; 75-09-2	0.000		0	N.D.	
42) n-Hexane; 110-54-3	0.000		0	N.D.	
43) Vinyl acetate; 108-05-4	0.000		0	N.D.	
44) 2-Butanone; 78-93-3	0.000		0	N.D. d	

45)	Ethyl acetate; 141-78-6	0.000	0	N.D. d
46)	Cyclohexane; 110-82-7	0.000	0	N.D.
47)	Benzene; 71-43-2	0.000	0	N.D. d
48)	2-Methyl-1-propanol; 7...	0.000	0	N.D.
49)	1-Butanol; 71-36-3	0.000	0	N.D. d
50)	1,4-Dioxane; 123-91-1	0.000	0	N.D.
51)	Epichlorohydrin; 106-89-8	0.000	0	N.D.
53)	n-Butanal;123-72-8	0.000	0	N.D.
54)	Pentanal; 110-62-3	0.000	0	N.D. d
55)	4-Methyl-2-pentanone; ...	0.000	0	N.D.
56)	Hexanal; 66-25-1	0.000	0	N.D. d
57)	2-Furancarboxaldehyde;...	0.000	0	N.D.
58)	4-Heptanone; 123-19-3	0.000	0	N.D. d
59)	2-Heptanone; 110-43-0	0.000	0	N.D. d
60)	Heptanal; 111-71-7	0.000	0	N.D.
61)	Benzaldehyde; 100-52-7	0.000	0	N.D. d
63)	Octane; 111-65-9	0.000	0	N.D.
64)	n-Nonane; 111-84-2	0.000	0	N.D.
65)	alpha-Pinene; 7785-70-8	0.000	0	N.D. d
66)	Cyclohexanone; 108-94-1	0.000	0	N.D.
67)	Camphene; 5794-03-6	0.000	0	N.D. d
68)	beta-Pinene; 19902-08-0	0.000	0	N.D.
69)	n-Decane; 124-18-5	0.000	0	N.D.
70)	3-Carene; 13466-78-9	0.000	0	N.D.
71)	d-Limonene; 5989-27-5	0.000	0	N.D.
72)	p-Cymene; 99-87-6	0.000	0	N.D.
73)	1-Undecene; 821-95-4	0.000	0	N.D.
74)	n-Undecane; 1120-21-4	0.000	0	N.D.
75)	n-Dodecane; 112-40-3	0.000	0	N.D.
76)	Dodecamethylpentasilox...	0.000	0	N.D.
77)	n-Tridecane; 629-50-5	0.000	0	N.D.
78)	Benzothiazole; 95-16-9	0.000	0	N.D.
79)	n-Tetradecane; 629-59-4	0.000	0	N.D. d
80)	n-Pentadecane; 629-62-9	0.000	0	N.D. d
81)	n-Hexadecane; 544-76-3	0.000	0	N.D. d
82)	n-Heptadecane; 629-78-7	0.000	0	N.D.
84)	Propyl acetate; 109-60-4	0.000	0	N.D.
85)	Isobutyl acetate;110-19-0	0.000	0	N.D.
86)	PGMEA; 108-65-6	0.000	0	N.D. d
87)	1,3-Dichloro-2-propano...	0.000	0	N.D.
88)	DPGME isomer 1; 34590-...	0.000	0	N.D.
89)	DPGME isomer 2; 34590-...	0.000	0	N.D.
90)	DPGME isomer 3; 34590-...	0.000	0	N.D.
91)	1,1'-Oxybis-2-propanol...	0.000	0	N.D.
92)	Benzenemethanol; 100-51-6	0.000	0	N.D.
93)	Propylene carbonate; 1...	0.000	0	N.D.
94)	2,2'-Oxybis(1-propanol...	0.000	0	N.D.
95)	2-(2-Hydroxypropoxy)1-...	0.000	0	N.D.
96)	Octanoic acid; 124-07-2	0.000	0	N.D. d
97)	alpha-Terpineol; 10482...	0.000	0	N.D.
98)	1-Dodecanamine, N,N-di...	0.000	0	N.D.
99)	3-Methyl-1,1'-biphenyl...	0.000	0	N.D.
100)	TXIB; 6846-50-0	0.000	0	N.D. d

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

Desorb_Merged_2014.M Thu Jul 23 16:24:58 2015

Quantitation Report (QT Reviewed)

Data Path : T:\5975 Data Files\Y2K15\July\
Data File : T150721_07.D
Acq On : 21 Jul 2015 5:51 pm
Operator : rgill
Sample : 061-024-05; US EPA; C4-05; 5.75L
Misc : A10987; 107ngBFB;10:1 split
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 23 16:26:01 2015
Quant Method : M:\5975 Methods\Y2K14\Desorb_Merged_2014.M
Quant Title : AB95168
QLast Update : Fri Aug 09 12:40:29 2013
Response via : Initial Calibration

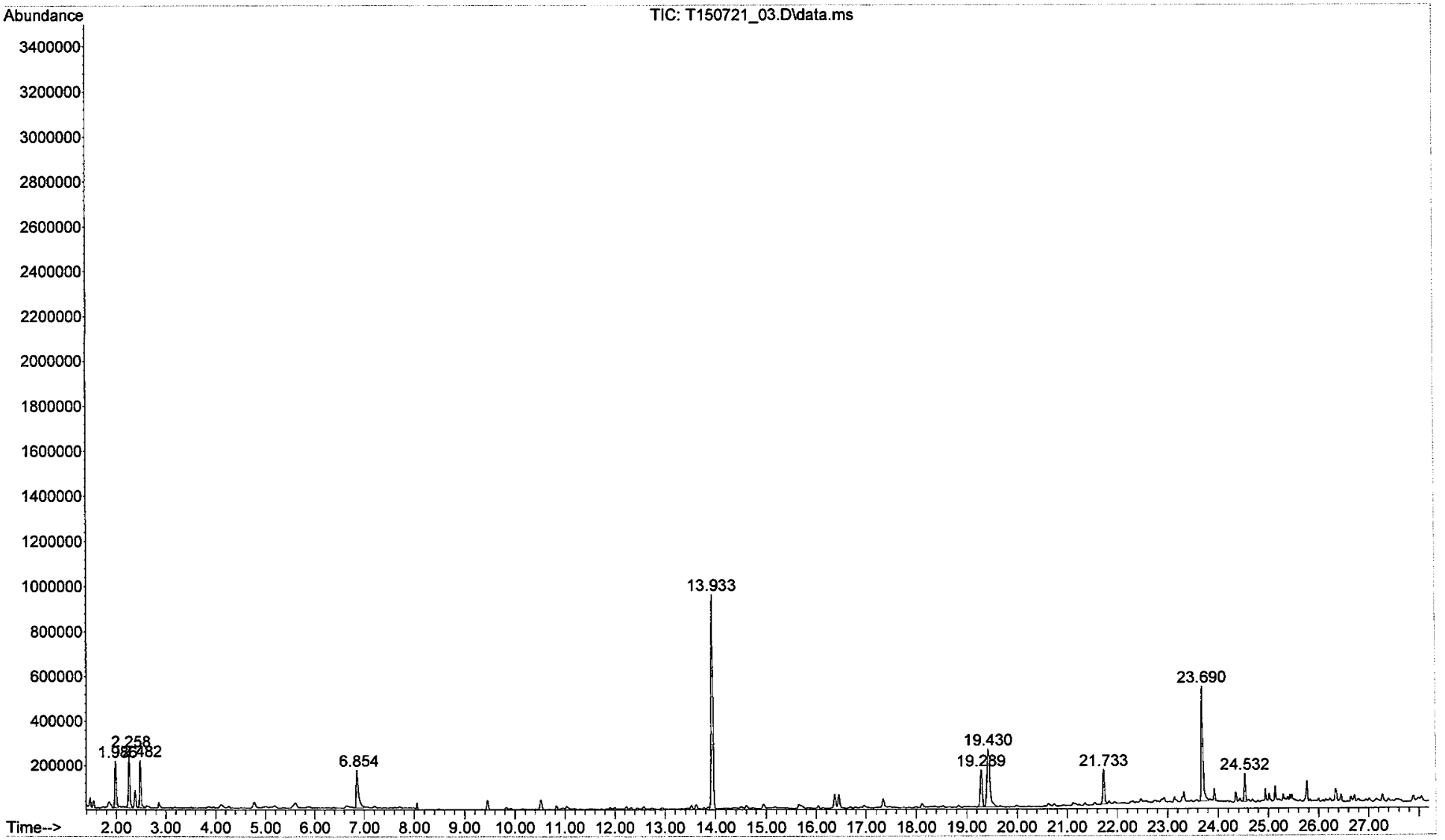
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.933	95	677439	107.00 ng	# 0.00
22) 1-Bromo-4-flourobenzen...	13.933	95	677439	107.00 ng	# 0.00
35) 1-Bromo-4-flourobenzen...	13.933	95	677439	107.00 ng	# 0.00
52) 1-Bromo-4-flourobenzen...	13.933	95	677439	107.00 ng	# 0.00
62) 1-Bromo-4-flourobenzen...	13.933	95	677439	107.00 ng	# 0.00
83) 1-Bromo-4-flourobenzen...	13.933	95	677439	107.00 ng	# 0.00
Target Compounds					Qvalue
2) Trichloroethene;79-01-6	0.000		0	N.D.	
3) Methyl methacrylate; 8...	0.000		0	N.D.	
4) Toluene; 108-88-3	0.000		0	N.D. d	
5) Tetrachloroethene; 127...	0.000		0	N.D.	
6) N,N-Dimethylformamide;...	0.000		0	N.D.	
7) Ethylbenzene; 100-41-4	0.000		0	N.D. d	
8) Xylene {1}; 108-38-3	0.000		0	N.D. d	
9) Xylene {2}; 95-47-6	0.000		0	N.D. d	
10) Xylene - TOTAL; 1330-20-7	0.000		0	N.D. d	
11) Styrene; 100-42-5	0.000		0	N.D.	
12) 1,2,4-Trimethylbenzene...	0.000		0	N.D. d	
13) Octanal; 124-13-0	0.000		0	N.D. d	
14) Phenol; 108-95-2	0.000		0	N.D. d	
15) 1-Phenylethanone; 98-86-2	0.000		0	N.D. d	
16) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
17) Nonanal; 124-19-6	0.000		0	N.D. d	
18) 2-Ethylhexanoic acid; ...	0.000		0	N.D. d	
19) Naphthalene; 91-20-3	0.000		0	N.D.	
20) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
21) Caprolactam; 105-60-2	23.690	113	167302	99.76 ng	95
23) 1-Methoxy-2-propanol; ...	0.000		0	N.D. d	
24) Ethylene glycol; 107-21-1	0.000		0	N.D. d	
25) Butyl acetate; 123-86-4	0.000		0	N.D. d	
26) Propylene glycol; 57-55-6	0.000		0	N.D. d	
27) 2-Butoxyethanol; 111-76-2	0.000		0	N.D. d	
28) Hexanoic acid; 142-62-1	0.000		0	N.D. d	
29) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D. d	
30) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D. d	
31) Dodecanol; 112-53-8	0.000		0	N.D. d	
32) Butylated hydroxytolue...	0.000		0	N.D.	
33) Texanol 1; 25265-77-4-IS1	0.000		0	N.D. d	
34) Texanol 3; 25265-77-4-IS3	0.000		0	N.D. d	
36) n-Pentane; 109-66-0	0.000		0	N.D. d	
37) Ethanol; 64-17-5	0.000		0	N.D. d	
38) 2-Propanone(acetone); ...	0.000		0	N.D. d	
39) 2-Propanol; 67-63-0	0.000		0	N.D. d	
40) Carbon disulfide; 75-15-0	0.000		0	N.D.	
41) Dichloromethane; 75-09-2	0.000		0	N.D.	
42) n-Hexane; 110-54-3	0.000		0	N.D.	
43) Vinyl acetate; 108-05-4	0.000		0	N.D.	
44) 2-Butanone; 78-93-3	0.000		0	N.D. d	

45)	Ethyl acetate; 141-78-6	0.000	0	N.D. d
46)	Cyclohexane; 110-82-7	0.000	0	N.D.
47)	Benzene; 71-43-2	0.000	0	N.D. d
48)	2-Methyl-1-propanol; 7...	0.000	0	N.D.
49)	1-Butanol; 71-36-3	0.000	0	N.D. d
50)	1,4-Dioxane; 123-91-1	0.000	0	N.D.
51)	Epichlorohydrin; 106-89-8	0.000	0	N.D.
53)	n-Butanal;123-72-8	0.000	0	N.D.
54)	Pentanal; 110-62-3	0.000	0	N.D. d
55)	4-Methyl-2-pentanone; ...	0.000	0	N.D.
56)	Hexanal; 66-25-1	0.000	0	N.D. d
57)	2-Furancarboxaldehyde;...	0.000	0	N.D.
58)	4-Heptanone; 123-19-3	0.000	0	N.D. d
59)	2-Heptanone; 110-43-0	0.000	0	N.D. d
60)	Heptanal; 111-71-7	0.000	0	N.D.
61)	Benzaldehyde; 100-52-7	0.000	0	N.D. d
63)	Octane; 111-65-9	0.000	0	N.D.
64)	n-Nonane; 111-84-2	0.000	0	N.D.
65)	alpha-Pinene; 7785-70-8	0.000	0	N.D. d
66)	Cyclohexanone; 108-94-1	0.000	0	N.D.
67)	Camphene; 5794-03-6	0.000	0	N.D. d
68)	beta-Pinene; 19902-08-0	0.000	0	N.D.
69)	n-Decane; 124-18-5	0.000	0	N.D. d
70)	3-Carene; 13466-78-9	0.000	0	N.D.
71)	d-Limonene; 5989-27-5	0.000	0	N.D. d
72)	p-Cymene; 99-87-6	0.000	0	N.D.
73)	1-Undecene; 821-95-4	0.000	0	N.D.
74)	n-Undecane; 1120-21-4	0.000	0	N.D.
75)	n-Dodecane; 112-40-3	0.000	0	N.D.
76)	Dodecamethylpentasilox...	0.000	0	N.D.
77)	n-Tridecane; 629-50-5	0.000	0	N.D.
78)	Benzothiazole; 95-16-9	0.000	0	N.D.
79)	n-Tetradecane; 629-59-4	0.000	0	N.D. d
80)	n-Pentadecane; 629-62-9	0.000	0	N.D. d
81)	n-Hexadecane; 544-76-3	0.000	0	N.D. d
82)	n-Heptadecane; 629-78-7	0.000	0	N.D. d
84)	Propyl acetate; 109-60-4	0.000	0	N.D.
85)	Isobutyl acetate;110-19-0	0.000	0	N.D.
86)	PGMEA; 108-65-6	0.000	0	N.D. d
87)	1,3-Dichloro-2-propano...	0.000	0	N.D.
88)	DPGME isomer 1; 34590-...	0.000	0	N.D.
89)	DPGME isomer 2; 34590-...	0.000	0	N.D.
90)	DPGME isomer 3; 34590-...	0.000	0	N.D.
91)	1,1'-Oxybis-2-propanol...	0.000	0	N.D.
92)	Benzenemethanol; 100-51-6	0.000	0	N.D.
93)	Propylene carbonate; 1...	0.000	0	N.D.
94)	2,2'-Oxybis(1-propanol...	0.000	0	N.D. d
95)	2-(2-Hydroxypropoxy)1-...	0.000	0	N.D. d
96)	Octanoic acid; 124-07-2	0.000	0	N.D.
97)	alpha-Terpineol; 10482...	0.000	0	N.D.
98)	1-Dodecanamine, N,N-di...	0.000	0	N.D.
99)	3-Methyl-1,1'-biphenyl...	0.000	0	N.D.
100)	TXIB; 6846-50-0	0.000	0	N.D. d

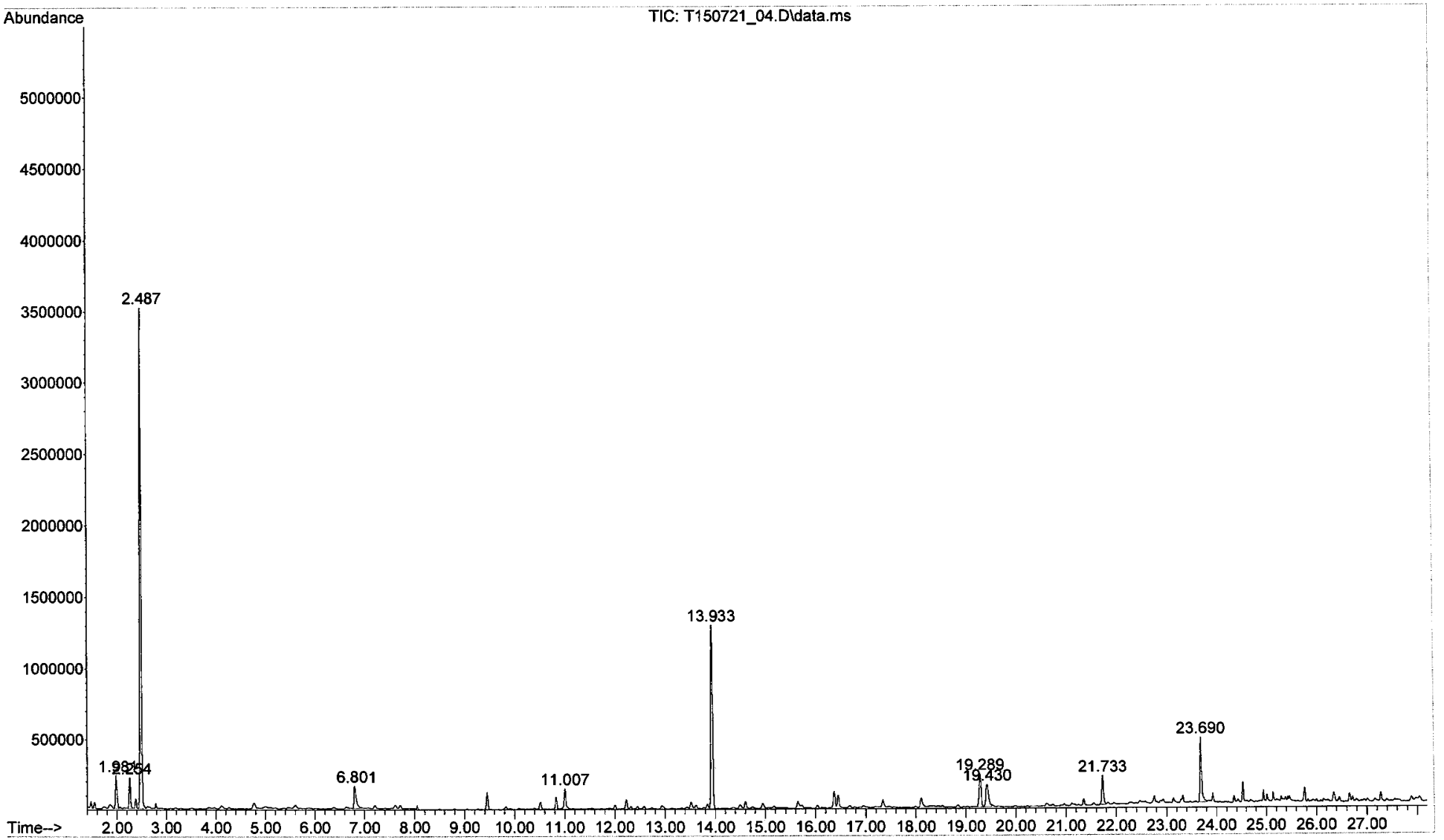
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Desorb_Merged_2014.M Thu Jul 23 16:26:04 2015

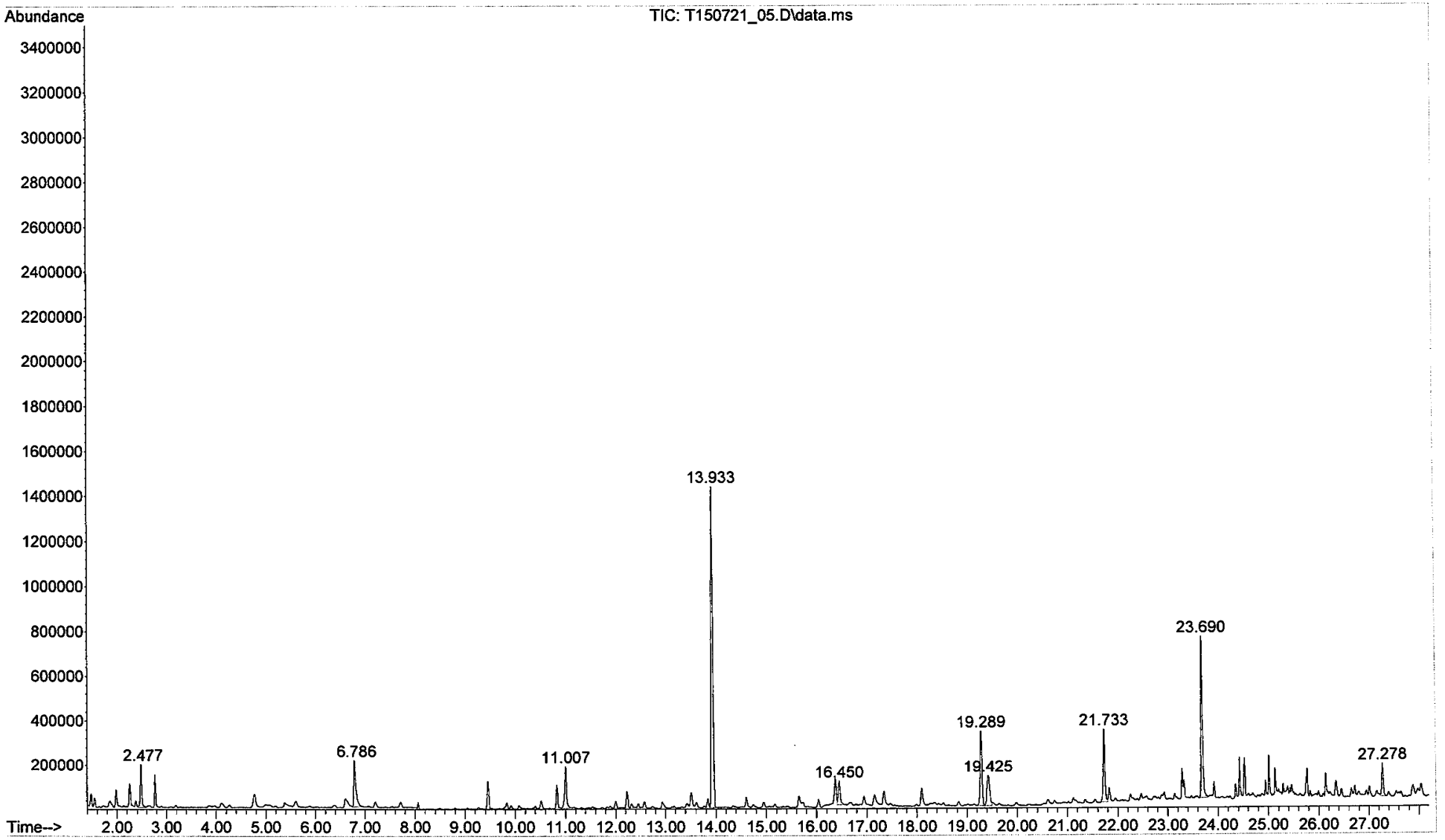
File :T:\5975 Data Files\Y2K15\July\T150721_03.D
Operator : rgill
Acquired : 21 Jul 2015 3:01 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-024-01; US EPA; C4-01; 6.22L
Misc Info : A10976; 107ngBFB;10:1 split
Vial Number: 3



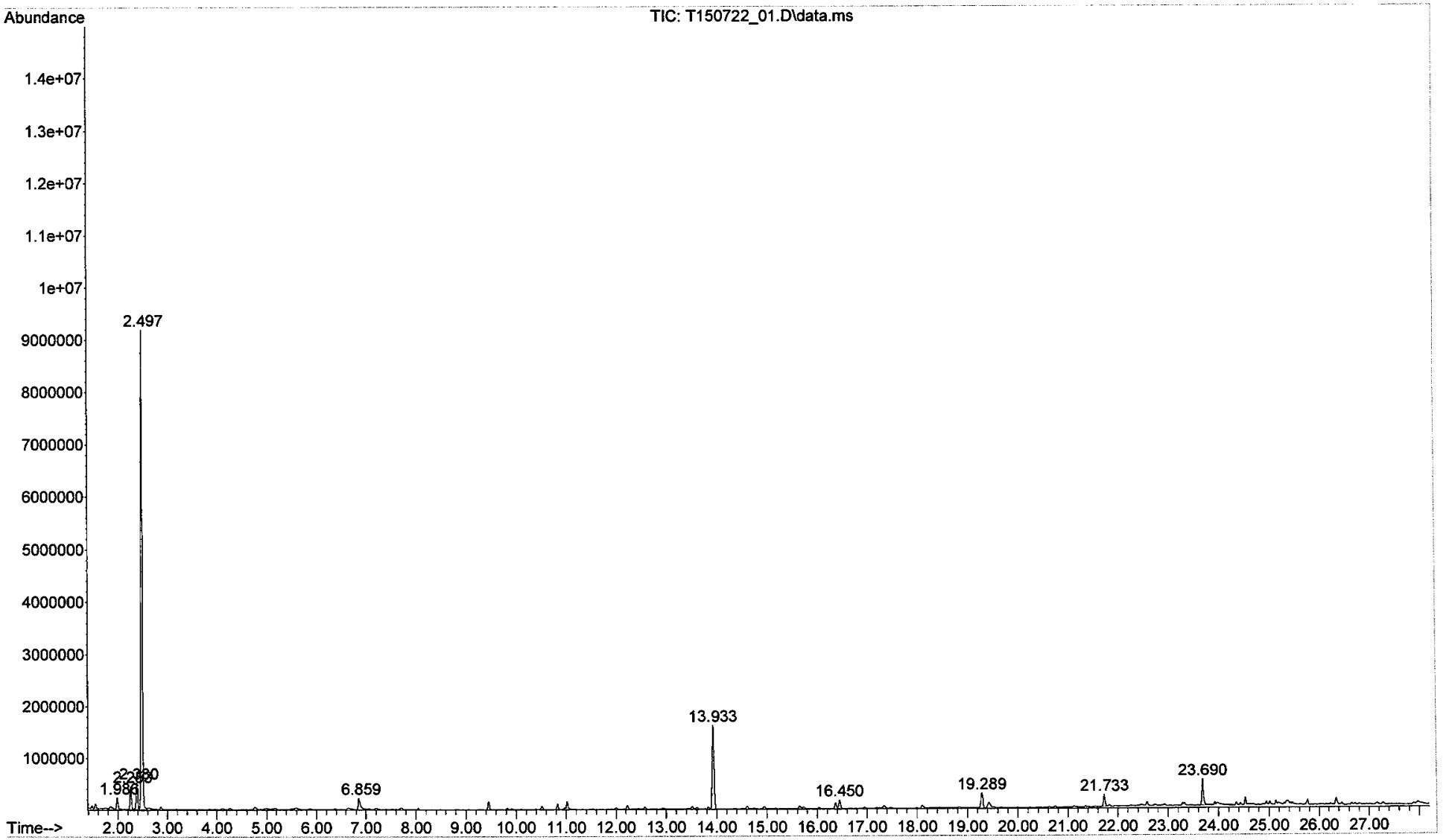
File :T:\5975 Data Files\Y2K15\July\T150721_04.D
Operator : rgill
Acquired : 21 Jul 2015 3:47 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-024-02; US EPA; C4-02; 6.18L
Misc Info : A10992; 107ngBFB;10:1 split
Vial Number: 4



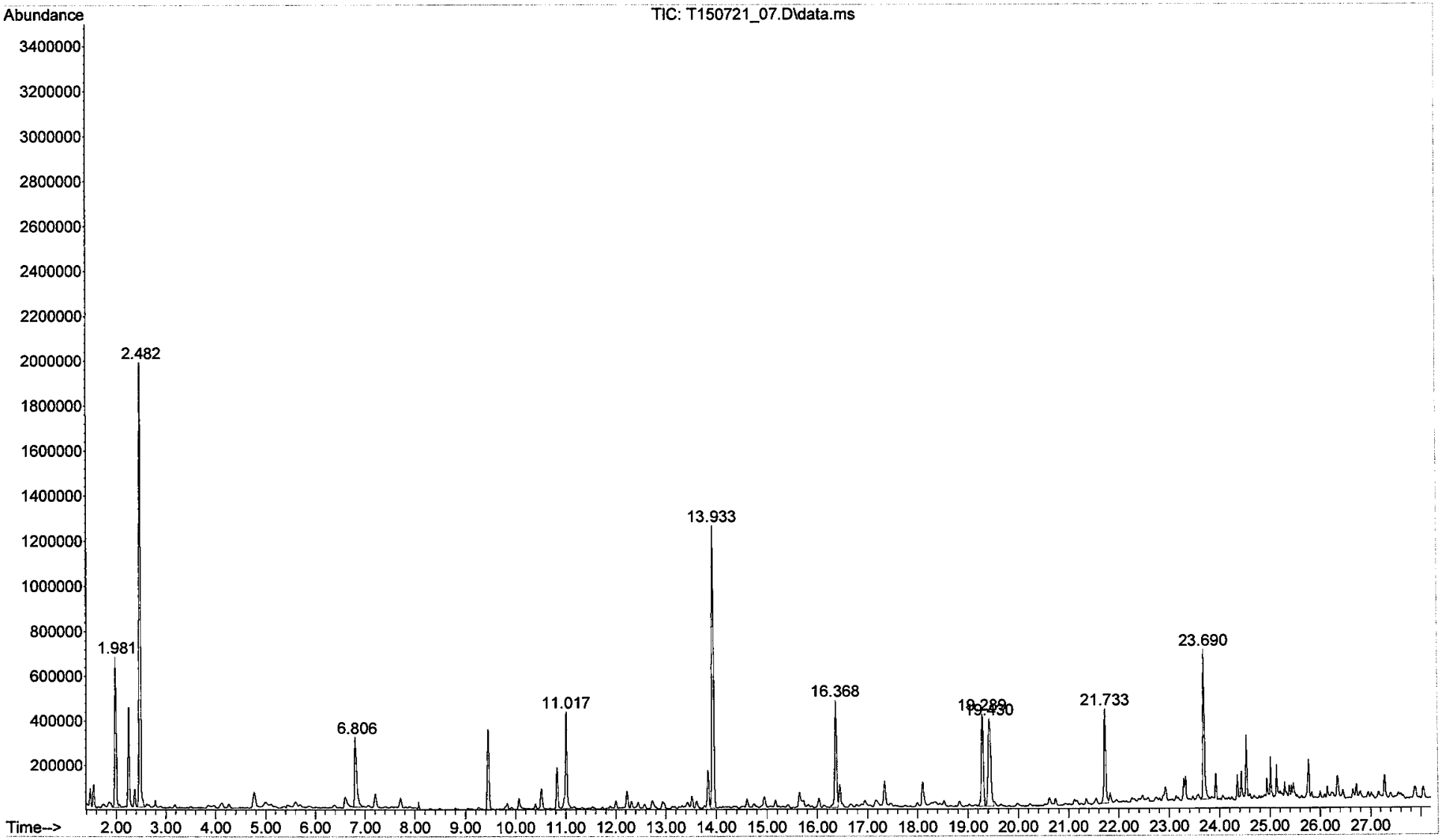
File :T:\5975 Data Files\Y2K15\July\T150721_05.D
Operator : rgill
Acquired : 21 Jul 2015 4:33 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-024-03; US EPA; C4-03; 7.02L
Misc Info : A10997; 107ngBFB;10:1 split
Vial Number: 5



File :T:\5975 Data Files\Y2K15\July\T150722_01.D
Operator : rgill
Acquired : 22 Jul 2015 10:47 am using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-024-04; US EPA; C4-04; 5.65L
Misc Info : A10951; 107ngBFB;10:1 split
Vial Number: 1



File :T:\5975 Data Files\Y2K15\July\T150721_07.D
Operator : rgill
Acquired : 21 Jul 2015 5:51 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-024-05; US EPA; C4-05; 5.75L
Misc Info : A10987; 107ngBFB;10:1 split
Vial Number: 7



TVOC
061-024-01; US EPA; C4-01; 6.22L
7/23/2015
A10976
TIC: T150721_03.D\data.ms

2.26	1267094	
6.85	535622	
9.45	95719	
10.52	113754	
13.93	2246049	**bfb-Istd**
16.37	784135	
19.43	1601490	
23.69	2223478	
25.77	1441891	

Total area	10309232
Relative resp	3.6
Mass (ng)	404
Vol (L)	6.22
Conc (µg/m3)	65

TVOC
061-024-02; US EPA; C4-02; 6.18L
7/23/2015
A10992
TIC: T150721_04.D\data.ms

1.98	1300284	
2.78	59456	
4.77	126585	
6.80	496313	
9.45	274906	
11.01	756623	
12.23	151419	
13.52	332044	
13.93	3010716	**bfb-Istd**
14.61	354850	
15.65	217844	
16.37	1568763	
19.29	1267483	
21.36	102783	
23.69	2531943	
24.53	1832486	
26.35	878449	

Total area	15262947
Relative resp	4.1
Mass (ng)	458
Vol (L)	6.18
Conc (µg/m3)	74

TVOC
061-024-03; US EPA; C4-03; 7.02L
7/23/2015
A10997
TIC: T150721_05.D\data.ms

2.25	580069	
2.77	226671	
4.77	763773	
6.79	1333142	
9.45	280781	
11.01	895990	
12.23	176658	
13.51	413381	
13.93	3329108	**bfb-Istd**
14.61	118949	
16.37	2974924	
19.29	1461110	
21.83	146215	
23.69	2106663	
24.53	819774	
25.14	2510699	

Total area	18137907
Relative resp	4.4
Mass (ng)	501
Vol (L)	7.02
Conc (µg/m3)	71

TVOC
061-024-04; US EPA; C4-04; 5.65L
7/23/2015
A10951
TIC: T150722_01.D\data.ms

2.38	2632973	
2.87	102185	
4.77	403955	
6.86	1110517	
9.45	353874	
11.02	913132	
12.23	561966	
13.52	428587	
13.93	3783802	**bfb-Istd**
14.61	442816	
16.45	2320367	
19.29	1260191	
20.74	78372	
21.83	79612	
22.59	188088	
23.69	6353420	

Total area	21013857
Relative resp	4.6
Mass (ng)	513
Vol (L)	5.65
Conc (µg/m3)	91

TVOC
061-024-05; US EPA; C4-05; 5.75L
7/23/2015
A10997
TIC: T150721_07.D\data.ms

1.98	2661487	
2.79	47893	
4.77	237849	
6.81	1798282	
9.45	826344	
11.02	1929815	
12.23	287113	
13.84	673788	
13.93	2970275	**bfb-lstd**
14.95	539131	
16.37	2207630	
17.34	997455	
19.29	2596867	
20.62	657833	
21.83	114236	
22.93	230213	
23.69	3346540	
25.77	3200069	

Total area	25322820
Relative resp	7.5
Mass (ng)	848
Vol (L)	5.75
Conc (µg/m3)	147

The mass for the UC compounds are calculated based on TIC using Toluene response factor.

TIC Unconfirmed
061-024-01; US EPA; C4-01; 6.22L
Note: Unconfirmed added to lab manager highlighted!
7/23/2015, Rgill

	BFB(ng)	RF		
TIC: T150721_03.D\data.ms	107	0.95	6.2	

RT	Area	RelResp	Mass ng	Conc. ug/m3	CAS#	Compound
13.9	2246049.0	1.000	112.6	18.1		bfb-lstd
1.99	439678.0	0.196	73.6	11.8		Ethanol
2.26	485191.0	0.216	57.6	9.3		2-Propanone (Acetone)
2.39	151331.0	0.067	18.0	2.9		2-Propanol
2.48	412368.0	0.184	20.7	3.3	75-05-8	Acetonitrile
6.85	535622.0	0.238	26.9	4.3		Acetic acid
19.29	456986.0	0.203	30.8	4.9		Nonanal
19.43	1031751.0	0.459	51.7	8.3	541-02-6	Decamethylcyclopentasiloxane
21.73	345216.0	0.154	17.3	2.8		Decanal
23.69	1213544.0	0.540	111.6	17.9		Caprolactam
24.53	214572.0	0.096	10.8	1.7		
16.37	176036.0	0.078	8.8	1.4		
25.77	164048.0	0.073	8.2	1.3		
16.46	157793.0	0.070	7.9	1.3		
5.60	125199.0	0.056	6.3	1.0		
26.35	120370.0	0.054	6.0	1.0		
10.52	113754.0	0.051	5.7	0.9		
17.35	111495.0	0.050	5.6	0.9		
25.14	105156.0	0.047	5.3	0.8		
9.45	95719.0	0.043	4.8	0.8		

The mass for the UC compounds are calculated based on TIC using Toluene response factor.

TIC Unconfirmed
061-024-02; US EPA; C4-02; 6.18L

7/23/2015, Rgill

	BFB(ng)	RF		
TIC: T150721_04.D\data.ms	107	0.95	6.180	

RT	Area	RelResp	Mass ng	Conc. ug/m3	CAS#	Compound
13.9	3010716.0	1.000	112.6	18.2		bfb-Istd
23.7	1095462.0	0.364	75.2	12.2		Caprolactam

The mass for the UC compounds are calculated based on TIC using Toluene response factor.

TIC Unconfirmed
061-024-03; US EPA; C4-03; 7.02L

7/23/2015, Rgill

	BFB(ng)	RF		
TIC: T150721_05.D\data.ms	107	0.95	7.020	

RT	Area	RelResp	Mass ng	Conc. ug/m3	CAS#	Compound
13.9	3329108.0	1.000	112.6	16.0		bfb-lstd
23.7	1471229.0	0.442	92.1	13.1		Caprolactam

The mass for the UC compounds are calculated based on TIC using Toluene response factor.

TIC Unconfirmed
061-024-04; US EPA; C4-04; 5.65L
Note: Unconfirmed added to lab manager highlighted!
7/22/2015, Rgill

	BFB(ng)	RF		
TIC: T150722_01.D\data.ms	107	0.95	5.7	

RT	Area	RelResp	Mass ng	Conc. ug/m3	CAS#	Compound
13.9	3783802.0	1.000	112.6	19.9		bfb-Istd
1.99	485836.0	0.128	50.0	8.8		Ethanol
2.25	836522.0	0.221	60.5	10.7		2-Propanone (Acetone)
2.38	1119230.0	0.296	78.4	13.9		2-Propanol
2.50	19502734.0	5.154	580.5	102.7	75-05-8	Acetonitrile
6.86	680740.0	0.180	20.3	3.6		Acetic acid
11.02	343138.0	0.091	35.3	6.2		Propylene glycol
16.45	446565.0	0.118	13.3	2.4	111-55-7	1,2-Ethanediol, diacetate
19.29	766337.0	0.203	31.0	5.5		Nonanal
21.73	505687.0	0.134	15.1	2.7		Decanal
23.69	1120405.0	0.296	59.2	10.5		Caprolactam
19.43	364708.0	0.096	10.9	1.9		
9.45	353874.0	0.094	10.5	1.9		
16.37	275065.0	0.073	8.2	1.4		
26.34	265289.0	0.070	7.9	1.4		
24.53	244363.0	0.065	7.3	1.3		
10.83	239900.0	0.063	7.1	1.3		
25.77	212518.0	0.056	6.3	1.1		

The mass for the UC compounds are calculated based on TIC using Toluene response factor.

TIC Unconfirmed
061-024-05; US EPA; C4-05; 5.75L

7/23/2015, Rgill

	BFB(ng)	RF				
TIC: T150721_07.D\data.ms	107		0.95	5.750		
			Mass	**Conc.**		
RT	Area	RelResp	ng	ug/m3	CAS#	Compound
13.9	2970275.0	1.000	112.6	19.6		bfb-lstd
23.7	1419452.0	0.478	99.8	17.3		Caprolactam

HCHO\JC061-024_EPA.XLS
Created 07/23/15, rgill

US EPA
Formaldehyde Analysis
Sequence 150721
Method FORMALDEHYDE.M

File	Sample ID	Rt min	Meas Conc ng/ul	Meas Mass ng	Volume L	Conc ng/L	Conc ppbv
150721\150721003.D	F4-01	5.168		456	53.44	8.5	7.0
150721\150721005.D	F4-02	5.176		452	50.97	8.9	7.2
150721\150721006.D	F4-03	5.177		376	47.50	7.9	6.4
150721\150721007.D	F4-04	5.175		490	54.60	9.0	7.3
150721\150721008.D	F4-05	5.180		716	55.66	12.9	10.5

061-024-01 6.22 litres
US EPA
A10976 collected: 7/20/2015
1

061-024-02 6.18 litres
US EPA
A10992 collected: 7/20/2015
C4-02

061-024-03 7.02 litres
US EPA
A10997 collected: 7/20/2015
C4-03

061-024-04 5.65 litres
US EPA
A10951 collected: 7/20/2015
C4-04

061-024-05 5.75 litres
US EPA
A10987 collected: 7/20/2015
C4-05

061-024-06 53.44 litres
US EPA
F4-01 collected: 7/20/2015
75 Hawthorne Office

061-024-07 50.97 litres
US EPA
F4-02 collected: 7/20/2015
75 Hawthorne Office

061-024-08 47.5 litres
US EPA
F4-03 collected: 7/20/2015
75 Hawthorne Office

061-024-09 54.6 litres
US EPA
F4-04 collected: 7/20/2015
75 Hawthorne Office

061-024-10 55.66 litres
US EPA
F4-05 collected: 7/20/2015
75 Hawthorne Office