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815 Harbour Way South, Suite 6
Richmond, CA 94804
Ph. 510-236-2325; Fax 510-236-2335
E-mail info@berkeleyanalytical.com

Analysis of Field-Collected Air Samples

Customer and Project Information

Report Certification	
Report number	061-034-IH-July2116
Report date	July 21, 2016
Certified by (Name/Title)	Raja Tannous, Laboratory Director
Signature	
Date	*July 21, 2016*

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	Not given
Project location	Not given
Project date	July 18, 2016

Laboratory Receiving Information	
Date samples received by lab	July 19, 2016
Condition of samples	No observed problems
Lab tracking numbers	061-034-01 to 061-034-20

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Sample Information, Caprolactam

Sample No.	Sample Description	Sampler No.	Date Collected	Volume* (L)	Analysis Type	Specified Method
C12-01	10366	Mi58846	July 18, 2016	5.52	Caprolactam	TO-17
C12-02	10344	Mi58849	July 18, 2016	5.46	Caprolactam	TO-17
C12-03	10332	Mi51153	July 18, 2016	5.63	Caprolactam	TO-17
C12-04	10221	Mi58850	July 18, 2016	5.38	Caprolactam	TO-17
C12-05	10151	Mi59957	July 18, 2016	5.49	Caprolactam	TO-17
C12-06	10216	Mi59921	July 18, 2016	5.79	Caprolactam	TO-17
C12-07	10146	Mi58844	July 18, 2016	5.02	Caprolactam	TO-17
C12-08	10411	Mi59922	July 18, 2016	5.78	Caprolactam	TO-17
C12-09	10448	Mi58836	July 18, 2016	6.20	Caprolactam	TO-17
C12-10	10419	Mi51119	July 18, 2016	5.72	Caprolactam	TO-17

*Volume in liters reported by customer

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Sample Information, Formaldehyde

Sample No.	Sample Description	Sampler No.	Date Collected	Volume* (L)	Analysis Type	Specified Method
F12-01	Not given	Supelco Cart	July 18, 2016	52.41	Formaldehyde	D 5197
F12-02	Not given	Supelco Cart	July 18, 2016	53.35	Formaldehyde	D 5197
F12-03	Not given	Supelco Cart	July 18, 2016	52.65	Formaldehyde	D 5197
F12-04	Not given	Supelco Cart	July 18, 2016	51.53	Formaldehyde	D 5197
F12-05	Not given	Supelco Cart	July 18, 2016	52.71	Formaldehyde	D 5197
F12-06	Not given	Supelco Cart	July 18, 2016	52.16	Formaldehyde	D 5197
F12-07	Not given	Supelco Cart	July 18, 2016	45.29	Formaldehyde	D 5197
F12-08	Not given	Supelco Cart	July 18, 2016	54.61	Formaldehyde	D 5197
F12-09	Not given	Supelco Cart	July 18, 2016	54.80	Formaldehyde	D 5197
F12-10	Not given	Supelco Cart	July 18, 2016	52.43	Formaldehyde	D 5197

*Volume in liters reported by customer

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Analytical Information, Caprolactam

Sample No.	Lab Track. No.	Method	Date Analyzed	Analyst	Data File
C12-01	061-034-01	TO-17	July 20, 2016	R. Gill	T160720_03
C12-02	061-034-02	TO-17	July 20, 2016	R. Gill	T160720_04
C12-03	061-034-03	TO-17	July 20, 2016	R. Gill	T160720_05
C12-04	061-034-04	TO-17	July 20, 2016	R. Gill	T160720_06
C12-05	061-034-05	TO-17	July 20, 2016	R. Gill	T160720_07
C12-06	061-034-06	TO-17	July 20, 2016	R. Gill	T160720_08
C12-07	061-034-07	TO-17	July 20, 2016	R. Gill	T160720_09
C12-08	061-034-08	TO-17	July 20, 2016	R. Gill	T160720_10
C12-09	061-034-09	TO-17	July 20, 2016	R. Gill	T160720_11
C12-10	061-034-10	TO-17	July 20, 2016	R. Gill	T160720_12

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Analytical Information, Formaldehyde

Sample No.	Lab Track. No.	Method	Date Analyzed	Analyst	Data File
F12-01	061-034-11	D 5197	July 19, 2016	T.Cheng	160719\160719003.D
F12-02	061-034-12	D 5197	July 19, 2016	T.Cheng	160719\160719004.D
F12-03	061-034-13	D 5197	July 19, 2016	T.Cheng	160719\160719005.D
F12-04	061-034-14	D 5197	July 19, 2016	T.Cheng	160719\160719006.D
F12-05	061-034-15	D 5197	July 19, 2016	T.Cheng	160719\160719007.D
F12-06	061-034-16	D 5197	July 19, 2016	T.Cheng	160719\160719008.D
F12-07	061-034-17	D 5197	July 19, 2016	T.Cheng	160719\160719009.D
F12-08	061-034-18	D 5197	July 19, 2016	T.Cheng	160719\160719010.D
F12-09	061-034-19	D 5197	July 19, 2016	T.Cheng	160719\160719011.D
F12-10	061-034-20	D 5197	July 19, 2016	T.Cheng	160719\160719012.D

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Project Specific Information

Air samples for the analysis of formaldehyde (CAS # 50-00-0) and caprolactam (CAS # 105-60-2) were received by the laboratory on July 19, 2016. There were ten Supelco DNPH cartridges for the analysis of formaldehyde and there were ten multi-sorbent tubes for caprolactam analysis. The analytical results for caprolactam are presented in Table 1. The analytical results for formaldehyde are presented in Table 2. 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.

Formaldehyde was analyzed by HPLC following ASTM Standard Method D5197. Formaldehyde was quantified using a multi-point (4 or more points) calibration curve.

Cartridge Blank – The average Waters DNPH cartridge blank for formaldehyde is 40 ng. The average cartridge blank was subtracted from a measured mass to determine a blank subtracted sample mass.

MDL and LOQ – A Method Detection Limit (MDL) for formaldehyde of 15 ng was determined from the analysis of ten replicates of a low level standard spiked onto DNPH cartridges. The practical lower limit of quantitation (LOQ) is three times the MDL.

Uncertainty – The laboratory uses the ISO GUM method to estimate the uncertainties associated with the measurement of formaldehyde. The expanded uncertainty is equal to two times the relative standard deviation. For 2015, the expanded uncertainty estimated for formaldehyde was <9.0%.

Caprolactam was analyzed by thermal desorption GC/MS following U.S. EPA Compendium Method TO-17. Caprolactam was quantified using a multi-point (4 or more points) calibration cure prepared with a pure standard.

MDL and LOQ – A Method Detection Limit (MDL) for caprolactam of 2.3 ng was determined from the analysis of three replicates of a low level standard spiked onto multi-sorbent air sampling tubes. The practical lower limit of quantitation (LOQ) is three times the MDL.

Uncertainty – The laboratory uses the ISO GUM method to estimate the uncertainties associated with the measurement of VOCs . The expanded uncertainty is equal to two times the relative standard deviation. For 2015, the expanded uncertainty estimated for caprolactam was 11%.

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.).

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Results, Caprolactam

Table 1. Quantitative analysis of Caprolactam (CAS # 105-60-2).

Sample No.	Sample Name	Volume (L)	Mass (ng)	Conc ($\mu g/m^3$)	Conc* (ppb)
C12-01	10366	5.52	43.7	7.9	1.7
C12-02	10344	5.46	11.6	2.1	0.5
C12-03	10332	5.63	34.9	6.2	1.3
C12-04	10221	5.38	27.7	5.2	1.1
C12-05	10151	5.49	39.9	7.3	1.6
C12-06	10216	5.79	30.6	5.3	1.1
C12-07	10146	5.02	33.4	6.6	1.4
C12-08	10411	5.78	37.4	6.5	1.4
C12-09	10448	6.20	26.2	4.2	0.9
C12-10	10419	5.72	27.2	4.7	1.0

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

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Results, Formaldehyde

Table 2. Quantitative analysis of formaldehyde (CAS #50-00-0)

Sample No.	Sample Name	Volume (L)	Measured Mass (ng)	Mass – Blank* (ng)	Conc (µg/m^3)	Conc** (ppb)
F12-01	Not given	52.41	369	329	6.3	5.1
F12-02	Not given	53.35	385	345	6.5	5.3
F12-03	Not given	52.65	379	339	6.4	5.3
F12-04	Not given	51.53	367	327	6.3	5.2
F12-05	Not given	52.71	387	347	6.6	5.4
F12-06	Not given	52.16	379	339	6.5	5.3
F12-07	Not given	45.29	348	308	6.8	5.5
F12-08	Not given	54.61	382	342	6.3	5.1
F12-09	Not given	54.80	392	362	6.6	5.4
F12-10	Not given	52.43	351	311	5.9	4.8

*Measured mass corrected for typical 40 ng formaldehyde cartridge blank.

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

END OF REPORT

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Berkeley Analytical Associates, LLC
815 Harbour Way South, Suite 6
Richmond, CA 94804-3612
Phone: 510-236-2325 Fax: 510-236-2335
e-mail: baalab@berkeleyanalytical.com

CHAIN-OF-CUSTODY RECORD for ANALYTICAL SERVICES

2009 Update

Client Information*			
Company:	US EPA		
Street Address:	75 Hawthorne St		
City/State/Zip Code:			
Country:	Contact (for reporting):	J. Woodlee	
Project/Job Name:			
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
	C12-01	7/18/16	58	5.52	10366	b - Caprolactam	
	C12-02	↓	58	5.46	10344	↓	
	C12-03		58	5.63	10332		
	C12-04		56	5.38	10221		
	C12-05		57	5.49	10151		
	C12-06		59	5.79	10216		
	C12-07		51	5.02	10146		
	C12-08		60	5.78	10411		
	C12-09		63	6.20	10448		
	C12-10	↓	58	5.72	10419	↓	

Sample(s) Handling

Relinquished By	Received By	Signature	Date	Company
J. Woodlee			7/19/16	US EPA
	R Gill		7/19/16	BKA

JC 061-034

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Richmond, CA 94804-3612
Phone: 510-236-2325 Fax: 510-236-2335
e-mail: baalab@berkeleyanalytical.com

CHAIN-OF-CUSTODY RECORD for ANALYTICAL SERVICES

2009 Update

Client Information*			
Company:	US EPA		
Street Address:	75 Hawthorne St		
City/State/Zip Code:			
Country:	Contact (for reporting):	Woodlee	
Project/Job Name:			
Project/Job #:		P.O. #:	
Phone:	415-972-3740	Fax:	
E-mail address:			

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
	F12-01	7/18/16	58	52.41		f	
	F12-02		58	53.35			
	F12-03		58	52.65			
	F12-04		56	51.53			
	F12-05		57	52.71			
	F12-06		59	52.16			
	F12-07		51	45.29			
	F12-08		60	54.61			
	F12-09		63	54.80			
	F12-10		58	52.43			

Sample(s) Handling

Relinquished By	Received By	Signature	Date	Company
J. Woodlee			7/19/16	USEPA
	R Gill		7/19/16	BAA

SC061-034

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Client Information*	
Company: US EPA	
Street Address: 75 Hawthorne St	
City/State/Zip Code:	
Country:	Contact (for reporting): J. Woodlee
Project/Job Name:	
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
Mi 58846	C12-01	7/18/16	58	5.52	10366	b - Caprolactam	
Mi 58849	C12-02	↓	58	5.46	10344	↓	
Mi 51153	C12-03	↓	58	5.63	10332	↓	
Mi 58850	C12-04	↓	56	5.38	10221	↓	
Mi 59957	C12-05	↓	57	5.49	10151	↓	
Mi 59921	C12-06	↓	59	5.79	10216	↓	
Mi 58844	C12-07	↓	51	5.02	10146	↓	
Mi 59922	C12-08	↓	60	5.78	10411	↓	
Mi 58836	C12-09	↓	63	6.20	10448	↓	
Mi 51119	C12-10	↓	58	5.72	10419	↓	

Sample(s) Handling

Relinquished By	Received By	Signature	Date	Company
J. Woodlee			7/19/16	US EPA
	R Gill		7/19/16	BKA

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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
	C12-01	7/18/16	58	5.52	10366	b - Caprolactam	
	C12-02	↓	58	5.46	10344	↓	
	C12-03	↓	58	5.63	10332	↓	
	C12-04	↓	56	5.38	10221	↓	
	C12-05	↓	57	5.49	10151	↓	
	C12-06	↓	59	5.79	10216	↓	
	C12-07	↓	51	5.02	10146	↓	
	C12-08	↓	60	5.78	10411	↓	
	C12-09	↓	63	6.20	10448	↓	
	C12-10	↓	58	5.72	10419	↓	

Sample(s) Handling

Relinquished By	Received By	Signature	Date	Company
J. Woodlee			7/19/16	US EPA
	R Gill		7/19/16	BKA

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815 Harbour Way South, Suite 6
Richmond, CA 94804-3612
Phone: 510-236-2325 Fax: 510-236-2335
e-mail: baalab@berkeleyanalytical.com

CHAIN-OF-CUSTODY RECORD
for ANALYTICAL SERVICES
2009 Update

Client Information*			
Company:	US EPA		
Street Address:	75 Hawthorne St		
City/State/Zip Code:			
Country:	Contact (for reporting):	Woodlee	
Project/Job Name:			
Project/Job #:		P.O. #:	
Phone:	415-972-3740	Fax:	
E-mail address:			

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
	F12-01	7/18/16	58	52.41		f	
	F12-02		58	53.35			
	F12-03		58	52.65			
	F12-04		56	51.53			
	F12-05		57	52.71			
	F12-06		59	52.16			
	F12-07		51	45.29			
	F12-08		60	54.61			
	F12-09		63	54.80			
	F12-10		58	52.43			

Sample(s) Handling

Relinquished By	Received By	Signature	Date	Company
J. Woodle			7/19/16	USEPA
	R Gill		7/19/16	BICA

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IH Testing, Invoicing and Report Checklist

Date:	7/19/16	Report ID & Billing Ref:	
Company:	US EPA	Test Methd/ Description: (highlite all applicable)	TO-17; ASTM D5197
Contact Name:	Jeff Woodlee	Program	LEED V4
Contact Phone:	415-972-3740	Quote #:	Date:
Contact Email:	woodlee.jeff@epa.gov	PO #:	
Initiator:		Sample IDs:	

Notes & Deviations:

Item to Check	Initials	Notes
COC		
Is it clear what test to be performed[1]?		YES / NO :
Log in samples and check the Turnaround of the report		YES / NO :
Scan (to PDF) a copy of the COC form		YES / NO :
Check and confirm that the samples match the COC		YES / NO :
Chemical Analysis		
Analyze sampels by TO-17		YES / NO :
Analyze samples by ASTM D5197		YES / NO :
Report Preparation		
Prepare the draft reprot		YES / NO :
Does the Report match Method and Criteria?		YES / NO : *(check COC, estimate send to customer and the top part of this check list)*
Verify customer information on first page of previewed report (vs. COC or e-mail info)		
Insert in the PDF report: - Raja or Al's signature and check signature date - the scanned COC page at the end of the report		
Print, Optimize and Secure the report		
E-mail copy of the PDF report to client and other authorized contacts and organizations (enter date sent)		7/21/16
Invoicing		
Invoice Matches PO/Quote w/ correct ReportID & Billing Reference		
Invoice Number and Date		55845
Date invoice sent to customer and other authorized contacts		7/22/16

HCHO\JC061-034_EPA.XLS
Created 7/21/16, rgill

US EPA
Formaldehyde Analysis
Sequence 160719
Method FORMALDEHYDE.M

40 Typical cartridge blank

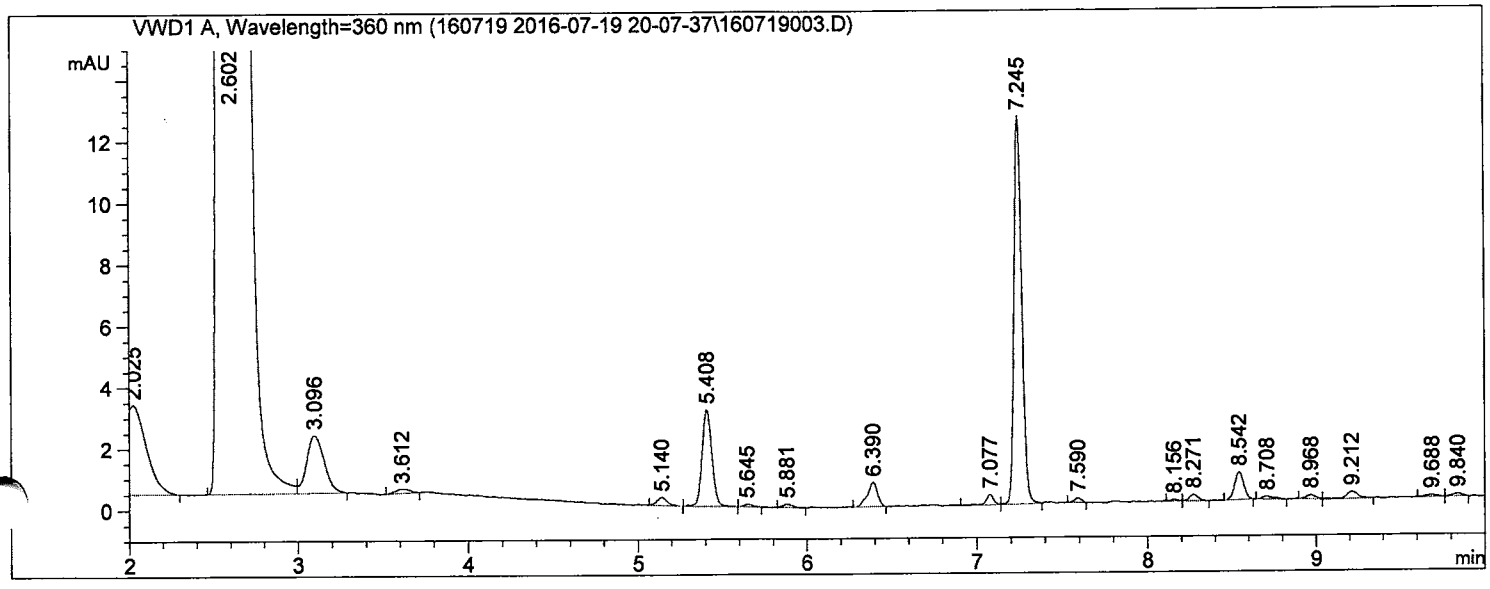
File	Sample ID	Rt min	Meas Conc ng/ul	Meas Mass ng	Mass -Blnk ng	Volume L	Conc ng/L	Conc ppbv
160719\160719003.D	F12-01	5.408		369	329	52.41	6.3	5.1
160719\160719004.D	F12-02	5.396		385	345	53.35	6.5	5.3
160719\160719005.D	F12-03	5.408		379	339	52.65	6.4	5.3
160719\160719006.D	F12-04	5.351		367	327	51.53	6.3	5.2
160719\160719007.D	F12-05	5.339		387	347	52.71	6.6	5.4
160719\160719008.D	F12-06	5.337		379	339	52.16	6.5	5.3
160719\160719009.D	F12-07	5.337		348	308	45.29	6.8	5.5
160719\160719010.D	F12-08	5.337		382	342	54.61	6.3	5.1
160719\160719011.D	F12-09	5.335		392	362	54.8	6.6	5.4
160719\160719012.D	F12-10	5.337		351	311	52.43	5.9	4.8

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719003.D
Sample Name: 061-034-11

Acq. Operator	: SYSTEM	Seq. Line :	2
Acq. Instrument	: Agilent 1260	Location :	Vial 2
Injection Date	: 7/19/2016 8:41:39 PM	Inj :	1
		Inj Volume :	2.000 µl

Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-11; C12-01; 0718; 10366; 5.52L



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.408	1	BB	12.67751	1.45655e-2	369.30899		Formaldehyde;50-00-0
6.390	1	BB	3.32178	1.94485e-2	129.20701		Acetaldehyde;75-07-0

Totals : 498.51599

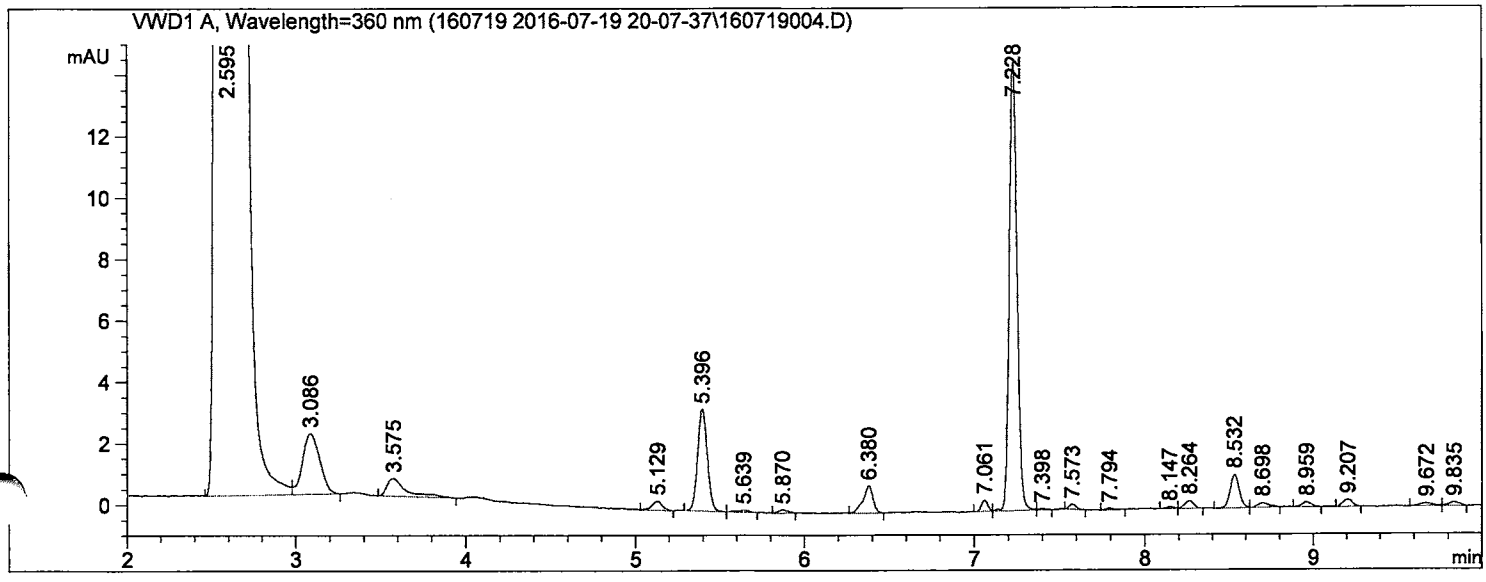
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719004.D
Sample Name: 061-034-12

==========

Acq. Operator : SYSTEM Seq. Line : 3
Acq. Instrument : Agilent 1260 Location : Vial 3
Injection Date : 7/19/2016 8:58:19 PM Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-12; C12-02; 0718; 10344; 5.46L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.396	1	BB	13.22345	1.45655e-2	385.21288		Formaldehyde;50-00-0
6.380	1	BB	3.60876	1.94485e-2	140.36984		Acetaldehyde;75-07-0

Totals : 525.58272

==========

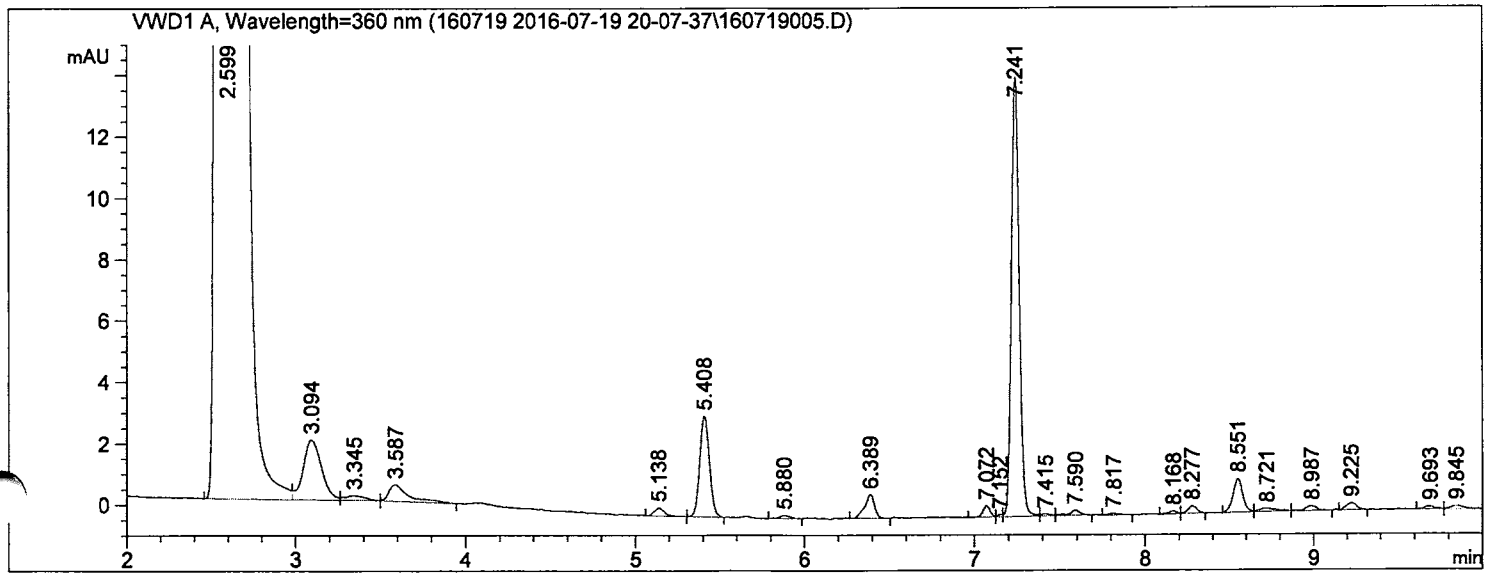
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719005.D
Sample Name: 061-034-13

==========

Acq. Operator : SYSTEM Seq. Line : 4
Acq. Instrument : Agilent 1260 Location : Vial 4
Injection Date : 7/19/2016 9:14:59 PM Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-13; C12-03; 0718; 10332; 5.63L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.408	1	BB	13.02400	1.45655e-2	379.40265		Formaldehyde;50-00-0
6.389	1	BB	3.20754	1.94485e-2	124.76345		Acetaldehyde;75-07-0

Totals : 504.16611

==========

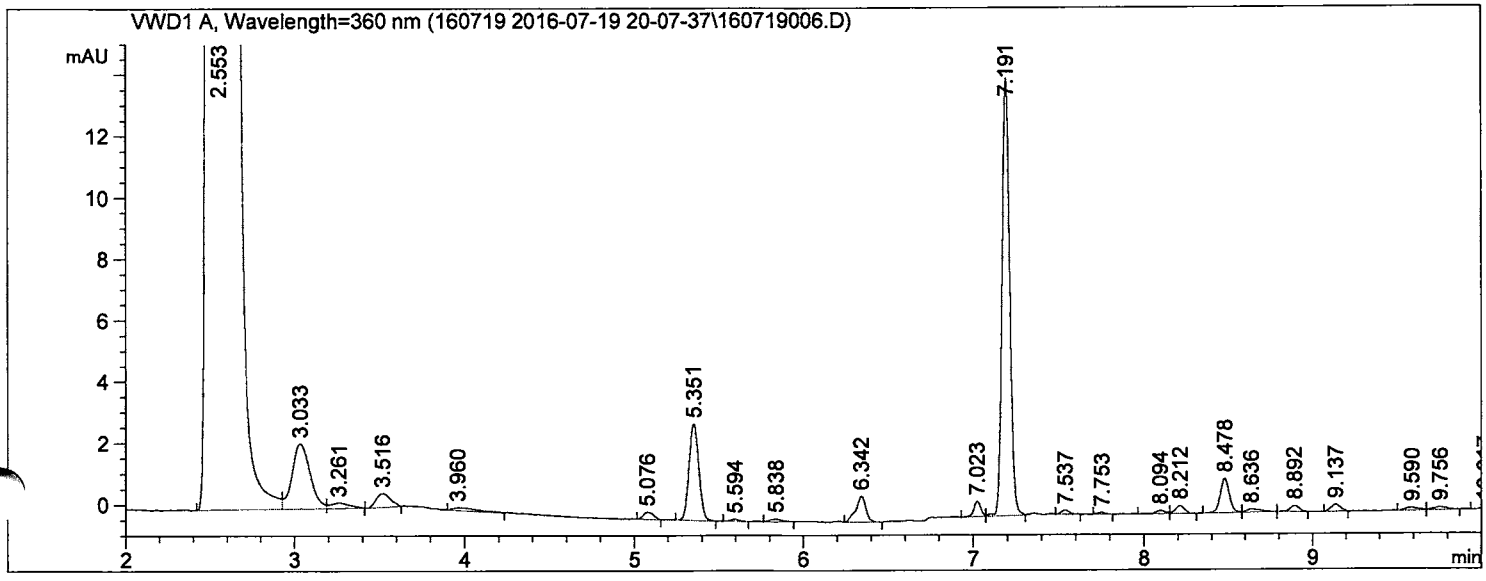
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719006.D
Sample Name: 061-034-14

==========

Acq. Operator : SYSTEM Seq. Line : 5
Acq. Instrument : Agilent 1260 Location : Vial 5
Injection Date : 7/19/2016 9:31:40 PM Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-14; C12-04; 0718; 10221; 5.38L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.351	1	BB	12.59246	1.45655e-2	366.83140		Formaldehyde;50-00-0
6.342	1	VB	3.48921	1.94485e-2	135.71948		Acetaldehyde;75-07-0

Totals : 502.55088

==========

*** End of Report ***

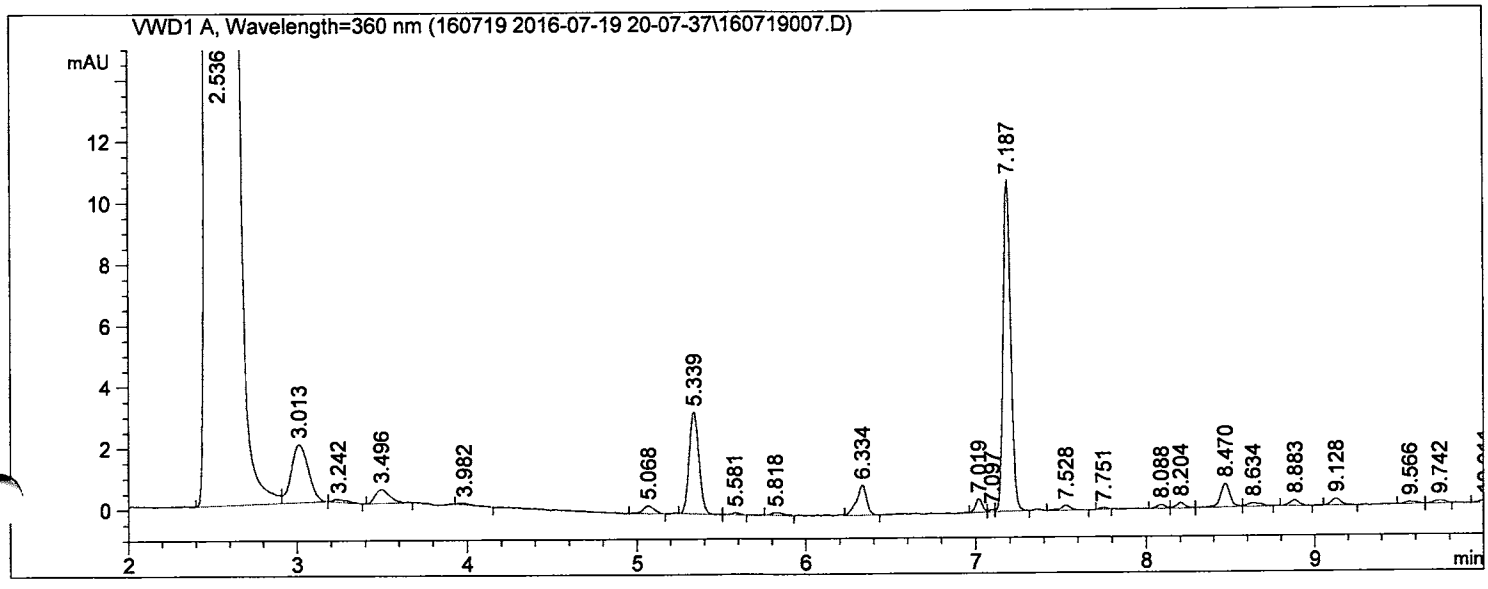
Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719007.D
Sample Name: 061-034-15

==========

Acq. Operator : SYSTEM
Seq. Line : 6
Acq. Instrument : Agilent 1260
Location : Vial 6
Injection Date : 7/19/2016 9:48:20 PM
Inj : 1
Inj Volume : 2.000 µl

Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-15; C12-05; 0718; 10151; 5.49L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.339	1	BB	13.29681	1.45655e-2	387.34981		Formaldehyde;50-00-0
6.334	1	VB	4.07248	1.94485e-2	158.40687		Acetaldehyde;75-07-0

Totals : 545.75668

==========

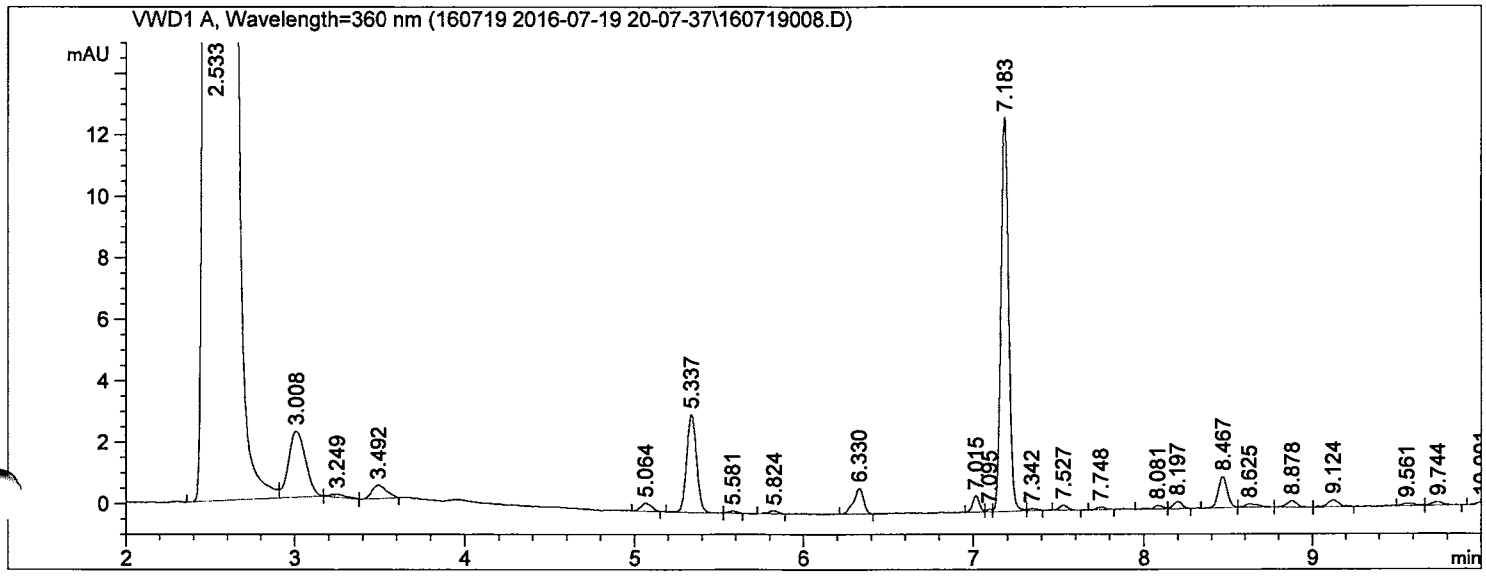
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719008.D
Sample Name: 061-034-16

==========

Acq. Operator : SYSTEM Seq. Line : 7
Acq. Instrument : Agilent 1260 Location : Vial 7
Injection Date : 7/19/2016 10:05:01 PM Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-16; C12-06; 0718; 10216; 5.79L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.337	1	BB	13.01062	1.45655e-2	379.01291		Formaldehyde;50-00-0
6.330	1	BB	3.39049	1.94485e-2	131.87978		Acetaldehyde;75-07-0

Totals : 510.89268

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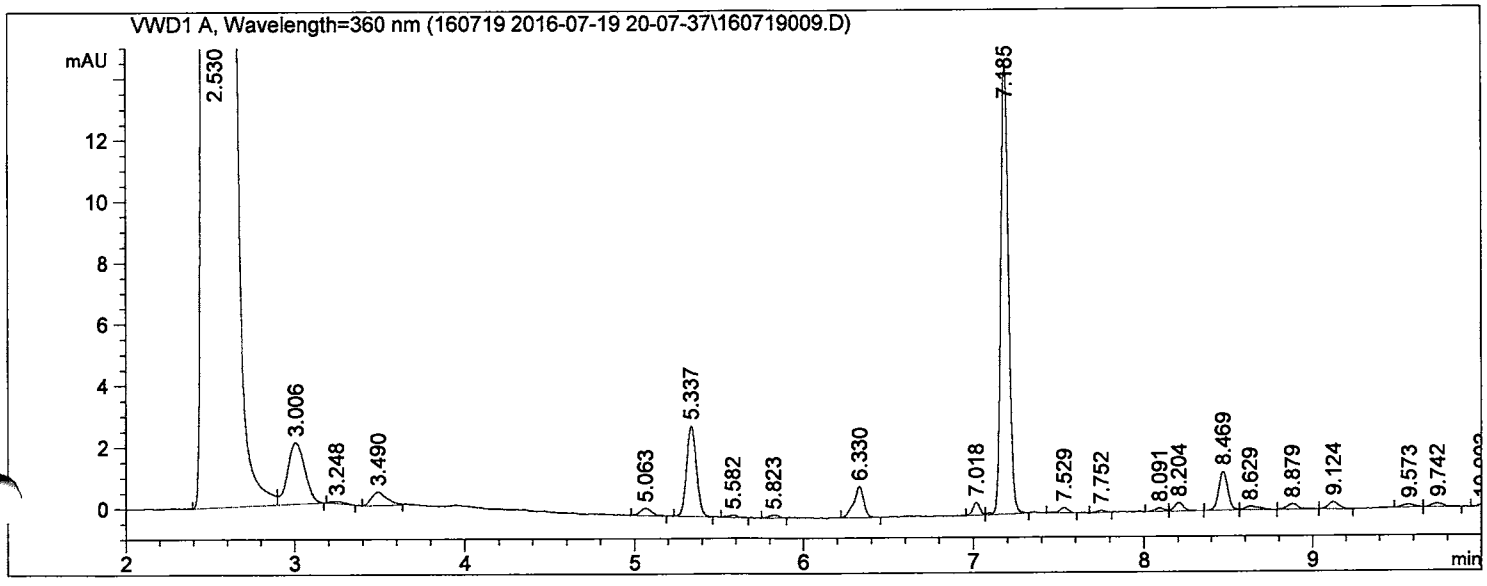
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719009.D
Sample Name: 061-034-17

==========

Acq. Operator : SYSTEM
Seq. Line : 8
Acq. Instrument : Agilent 1260
Location : Vial 8
Injection Date : 7/19/2016 10:21:42 PM
Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-17; C12-07; 0718; 10146; 5.02L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.337	1	BV	11.93565	1.45655e-2	347.69782		Formaldehyde;50-00-0
6.330	1	BB	4.23248	1.94485e-2	164.63037		Acetaldehyde;75-07-0

Totals : 512.32820

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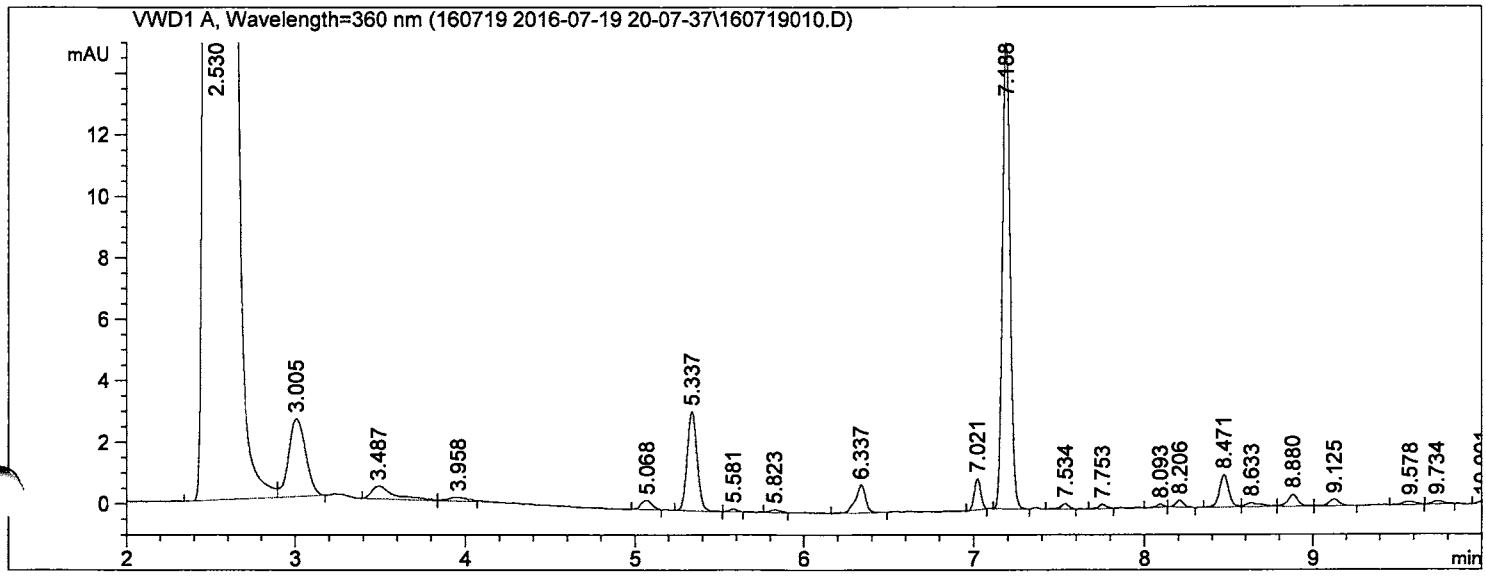
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719010.D
Sample Name: 061-034-18

==========

Acq. Operator : SYSTEM Seq. Line : 9
Acq. Instrument : Agilent 1260 Location : Vial 9
Injection Date : 7/19/2016 10:38:22 PM Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-18; C12-08; 0718; 10411; 5.78L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.337	1	BB	13.12658	1.45655e-2	382.39078		Formaldehyde;50-00-0
6.337	1	BB	3.88035	1.94485e-2	150.93375		Acetaldehyde;75-07-0

Totals : 533.32453

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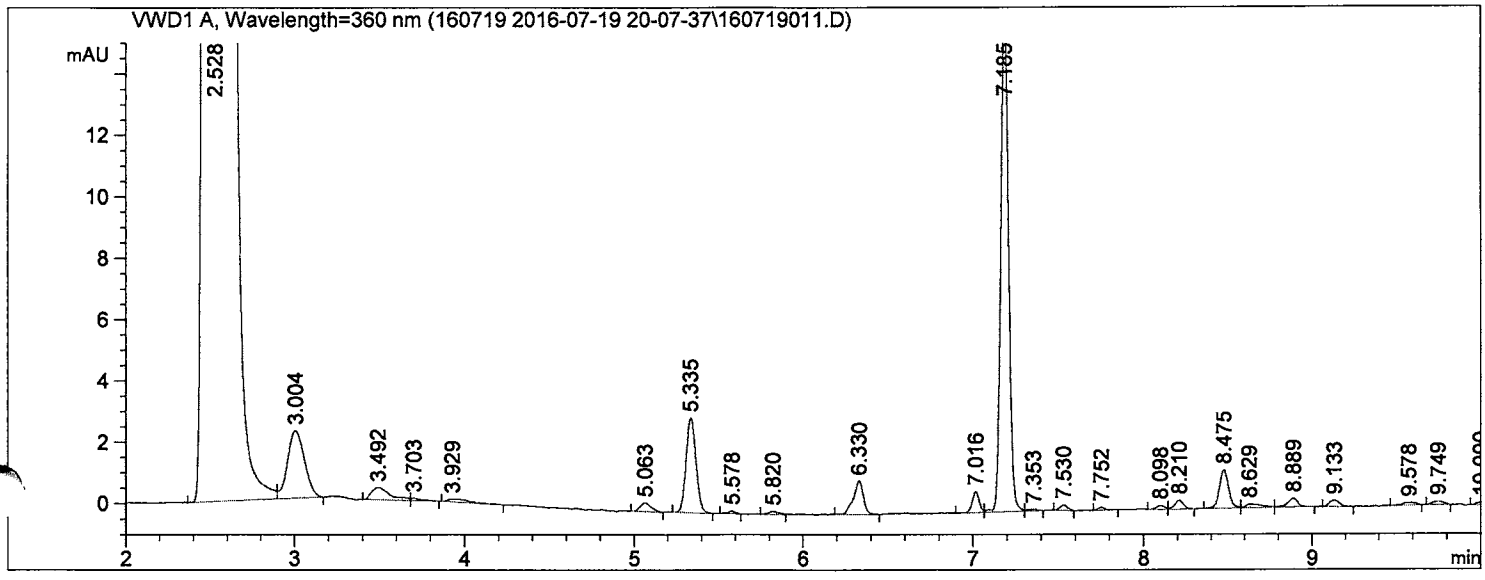
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719011.D
Sample Name: 061-034-19

==========

Acq. Operator : SYSTEM Seq. Line : 10
Acq. Instrument : Agilent 1260 Location : Vial 10
Injection Date : 7/19/2016 10:55:05 PM Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-19; C12-09; 0718; 10448; 6.2L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.335	1	BB	12.43678	1.45655e-2	362.29640		Formaldehyde;50-00-0
6.330	1	BB	4.51000	1.94485e-2	175.42502		Acetaldehyde;75-07-0

Totals : 537.72142

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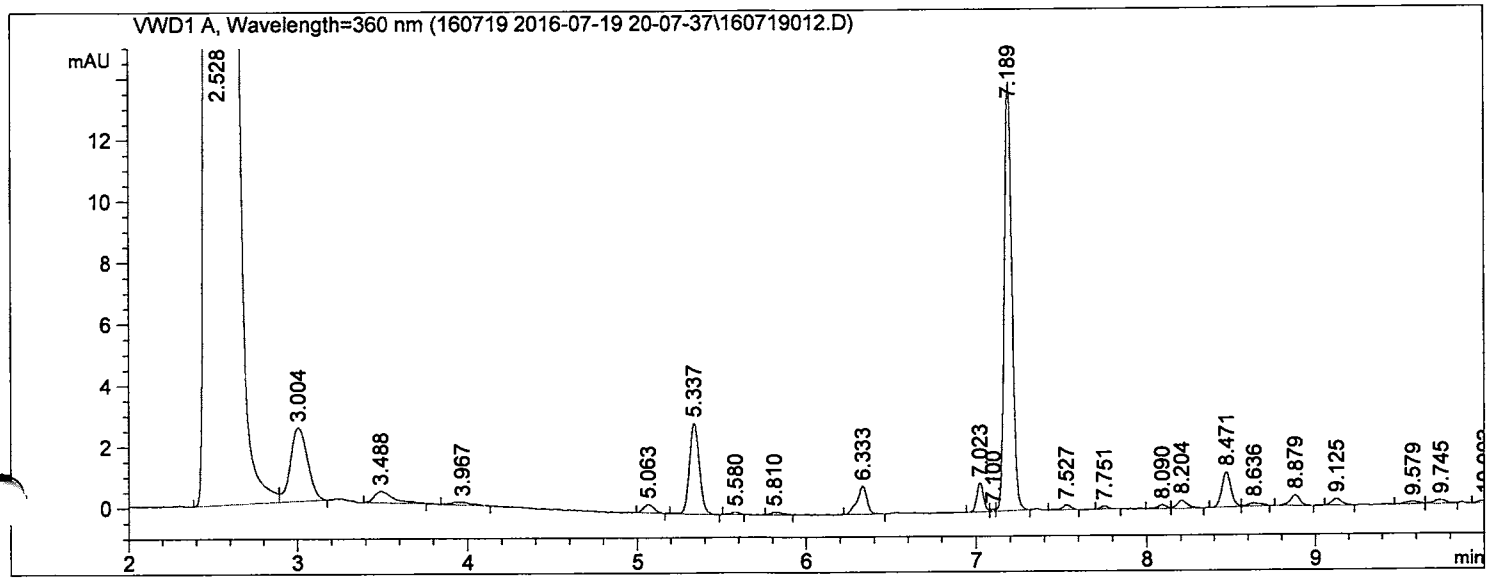
*** End of Report ***

Data File C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\160719012.D
Sample Name: 061-034-20

==========

Acq. Operator : SYSTEM
Seq. Line : 11
Acq. Instrument : Agilent 1260
Location : Vial 11
Injection Date : 7/19/2016 11:11:49 PM
Inj : 1
Inj Volume : 2.000 µl
Acq. Method : C:\CHEM32\1\DATA\160719 2016-07-19 20-07-37\FORMALDEHYDE.M
Last changed : 7/19/2016 8:07:38 PM by SYSTEM
Analysis Method : C:\CHEM32\1\METHODS\FORMALDEHYDE.M
Last changed : 7/20/2016 8:39:54 PM by SYSTEM
(modified after loading)
Method Info : 2.1*100; 2.7um poroshell 120 EC-C18 column;

Sample Info : US EPA 061-034-20; C12-10; 0718; 10419; 5.72L



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 7/20/2016 8:39:54 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
5.337	1	BB	12.06571	1.45655e-2	351.48678		Formaldehyde;50-00-0
6.333	1	BB	3.77991	1.94485e-2	147.02694		Acetaldehyde;75-07-0

Totals : 498.51372

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*** End of Report ***

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_03.D
Acq On : 20 Jul 2016 2:32 pm
Operator : rgill
Sample : 061-034-01_US EPA; Mi58846; 5.52L
Misc : C12-01; 10366; 107ngBFB;10:1 split
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 12:38:54 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.914	95	896820	111.00 ng	-0.01
21) 1-Bromo-4-flourobenzen...	13.914	95	896820	111.00 ng	-0.02
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.685	113	88286m	43.67 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D. d	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D. d	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_04.D
Acq On : 20 Jul 2016 3:25 pm
Operator : rgill
Sample : 061-034-02_US EPA; Mi58849; 5.46L
Misc : C12-02; 10344; 107ngBFB;10:1 split
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 21 12:38:17 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.919	95	1006229	111.00 ng	0.00
21) 1-Bromo-4-flourobenzen...	13.919	95	1006229	111.00 ng	-0.01
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.714	113	26221m	11.56 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D.	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D. d	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D. d	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_05.D
Acq On : 20 Jul 2016 4:19 pm
Operator : rgill
Sample : 061-034-03_US EPA; Mi51153; 5.63L
Misc : C12-03; 10332; 107ngBFB;10:1 split
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 21 12:37:37 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards							
1)	1-Bromo-4-flourobenzen...	13.914	95	971608	111.00	ng	-0.01
21)	1-Bromo-4-flourobenzen...	13.914	95	971608	111.00	ng	-0.02
32)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93
52)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93
66)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93
97)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93

	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.
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}; 1330-20-7	0.000		0	N.D.
9)	Xylene {2}; 1330-20-7	0.000		0	N.D.
10)	Styrene; 100-42-5	0.000		0	N.D.
11)	1,2,4-Trimethylbenzene...	0.000		0	N.D.
12)	Octanal; 124-13-0	0.000		0	N.D.
13)	Phenol; 108-95-2	0.000		0	N.D.
14)	1-Phenylethanone; 98-86-2	0.000		0	N.D.
15)	1-Methyl-2-pyrrolidino...	0.000		0	N.D.
16)	Nonanal; 124-19-6	0.000		0	N.D.
17)	2-Ethylhexanoic acid; ...	0.000		0	N.D.
18)	Naphthalene; 91-20-3	0.000		0	N.D.
19)	4-Phenylcyclohexene; 4...	0.000		0	N.D.
20)	Caprolactam; 105-60-2	23.685	113	76394m	34.88 ng
22)	1-Methoxy-2-propanol; ...	0.000		0	N.D.
23)	Ethylene glycol; 107-21-1	0.000		0	N.D.
24)	Butyl acetate; 123-86-4	0.000		0	N.D.
25)	Propylene glycol; 57-55-6	0.000		0	N.D. d
26)	2-Butoxyethanol; 111-76-2	0.000		0	N.D.
27)	Hexanoic acid; 142-62-1	0.000		0	N.D.
28)	2-Ethyl-1-hexanol; 104...	0.000		0	N.D.
29)	2-(2-Butoxyethoxy) eth...	0.000		0	N.D.
30)	Dodecanol; 112-53-8	0.000		0	N.D.
31)	Butylated hydroxytolue...	0.000		0	N.D.
33)	n-Pentane; 109-66-0	0.000		0	N.D. d
34)	Ethanol; 64-17-5	0.000		0	N.D. d
35)	2-Propanone(acetone); ...	0.000		0	N.D. d
36)	1,1-Dichloroethylene;7...	0.000		0	N.D.
37)	2-Propanol; 67-63-0	0.000		0	N.D. d
38)	Carbon disulfide; 75-15-0	0.000		0	N.D.
39)	Dichloromethane; 75-09-2	0.000		0	N.D.
40)	n-Hexane; 110-54-3	0.000		0	N.D.
41)	Vinyl acetate; 108-05-4	0.000		0	N.D.
42)	2-Butanone; 78-93-3	0.000		0	N.D.
43)	Ethyl acetate; 141-78-6	0.000		0	N.D.
44)	Chloroform;67-66-3	0.000		0	N.D.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_06.D
Acq On : 20 Jul 2016 5:12 pm
Operator : rgill
Sample : 061-034-04_US EPA; Mi58850; 5.38L
Misc : C12-04; 10221; 107ngBFB;10:1 split
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 21 12:37:00 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.919	95	982502	111.00 ng	0.00
21) 1-Bromo-4-flourobenzen...	13.919	95	982502	111.00 ng	-0.01
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.695	113	61385m	27.71 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D.	
34) Ethanol; 64-17-5	0.000		0	N.D.	
35) 2-Propanone(acetone); ...	0.000		0	N.D.	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D.	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_07.D
Acq On : 20 Jul 2016 6:06 pm
Operator : rgill
Sample : 061-034-05_US EPA; Mi59957; 5.49L
Misc : C12-05; 10151; 107ngBFB;10:1 split
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 21 12:36:11 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards							
1)	1-Bromo-4-flourobenzen...	13.919	95	995196	111.00	ng	0.00
21)	1-Bromo-4-flourobenzen...	13.919	95	995196	111.00	ng	-0.01
32)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93
52)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93
66)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93
97)	1-Bromo-4-flourobenzen...	0.000	95	0m	111.00	ng	-13.93

	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.
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}; 1330-20-7	0.000		0	N.D.
9)	Xylene {2}; 1330-20-7	0.000		0	N.D.
10)	Styrene; 100-42-5	0.000		0	N.D.
11)	1,2,4-Trimethylbenzene...	0.000		0	N.D.
12)	Octanal; 124-13-0	0.000		0	N.D.
13)	Phenol; 108-95-2	0.000		0	N.D.
14)	1-Phenylethanone; 98-86-2	0.000		0	N.D.
15)	1-Methyl-2-pyrrolidino...	0.000		0	N.D.
16)	Nonanal; 124-19-6	0.000		0	N.D.
17)	2-Ethylhexanoic acid; ...	0.000		0	N.D.
18)	Naphthalene; 91-20-3	0.000		0	N.D.
19)	4-Phenylcyclohexene; 4...	0.000		0	N.D.
20)	Caprolactam; 105-60-2	23.690	113	89592m	39.93 ng
22)	1-Methoxy-2-propanol; ...	0.000		0	N.D.
23)	Ethylene glycol; 107-21-1	0.000		0	N.D.
24)	Butyl acetate; 123-86-4	0.000		0	N.D.
25)	Propylene glycol; 57-55-6	0.000		0	N.D. d
26)	2-Butoxyethanol; 111-76-2	0.000		0	N.D.
27)	Hexanoic acid; 142-62-1	0.000		0	N.D.
28)	2-Ethyl-1-hexanol; 104...	0.000		0	N.D.
29)	2-(2-Butoxyethoxy) eth...	0.000		0	N.D.
30)	Dodecanol; 112-53-8	0.000		0	N.D.
31)	Butylated hydroxytolue...	0.000		0	N.D.
33)	n-Pentane; 109-66-0	0.000		0	N.D. d
34)	Ethanol; 64-17-5	0.000		0	N.D. d
35)	2-Propanone(acetone); ...	0.000		0	N.D. d
36)	1,1-Dichloroethylene;7...	0.000		0	N.D.
37)	2-Propanol; 67-63-0	0.000		0	N.D. d
38)	Carbon disulfide; 75-15-0	0.000		0	N.D.
39)	Dichloromethane; 75-09-2	0.000		0	N.D.
40)	n-Hexane; 110-54-3	0.000		0	N.D.
41)	Vinyl acetate; 108-05-4	0.000		0	N.D.
42)	2-Butanone; 78-93-3	0.000		0	N.D.
43)	Ethyl acetate; 141-78-6	0.000		0	N.D.
44)	Chloroform;67-66-3	0.000		0	N.D.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_08.D
Acq On : 20 Jul 2016 7:00 pm
Operator : rgill
Sample : 061-034-06_US EPA; Mi59921; 5.79L
Misc : C12-06; 10216; 107ngBFB;10:1 split
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 21 12:35:23 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.914	95	995393	111.00 ng	-0.01
21) 1-Bromo-4-flourobenzen...	13.914	95	995393	111.00 ng	-0.02
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.695	113	68758m	30.64 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D.	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D.	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_09.D
Acq On : 20 Jul 2016 7:53 pm
Operator : rgill
Sample : 061-034-07_US EPA; Mi58844; 5.02L
Misc : C12-07; 10146; 107ngBFB;10:1 split
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 21 12:34:10 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.919	95	962451	111.00 ng	0.00
21) 1-Bromo-4-flourobenzen...	13.919	95	962451	111.00 ng	-0.01
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.695	113	72362m	33.35 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D. d	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D. d	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_10.D
Acq On : 20 Jul 2016 8:46 pm
Operator : rgill
Sample : 061-034-08_US EPA; Mi59922; 5.78L
Misc : C12-08; 10411; 107ngBFB;10:1 split
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 21 12:33:22 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.919	95	967828	111.00 ng	0.00
21) 1-Bromo-4-flourobenzen...	13.919	95	967828	111.00 ng	-0.01
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.690	113	81653m	37.42 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D. d	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D. d	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_11.D
Acq On : 20 Jul 2016 9:41 pm
Operator : rgill
Sample : 061-034-09_US EPA; Mi58836; 6.2L
Misc : C12-09; 10448; 107ngBFB;10:1 split
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 21 12:32:33 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.919	95	966043	111.00 ng	0.00
21) 1-Bromo-4-flourobenzen...	13.919	95	966043	111.00 ng	-0.01
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.700	113	57143m	26.24 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D. d	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D. d	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

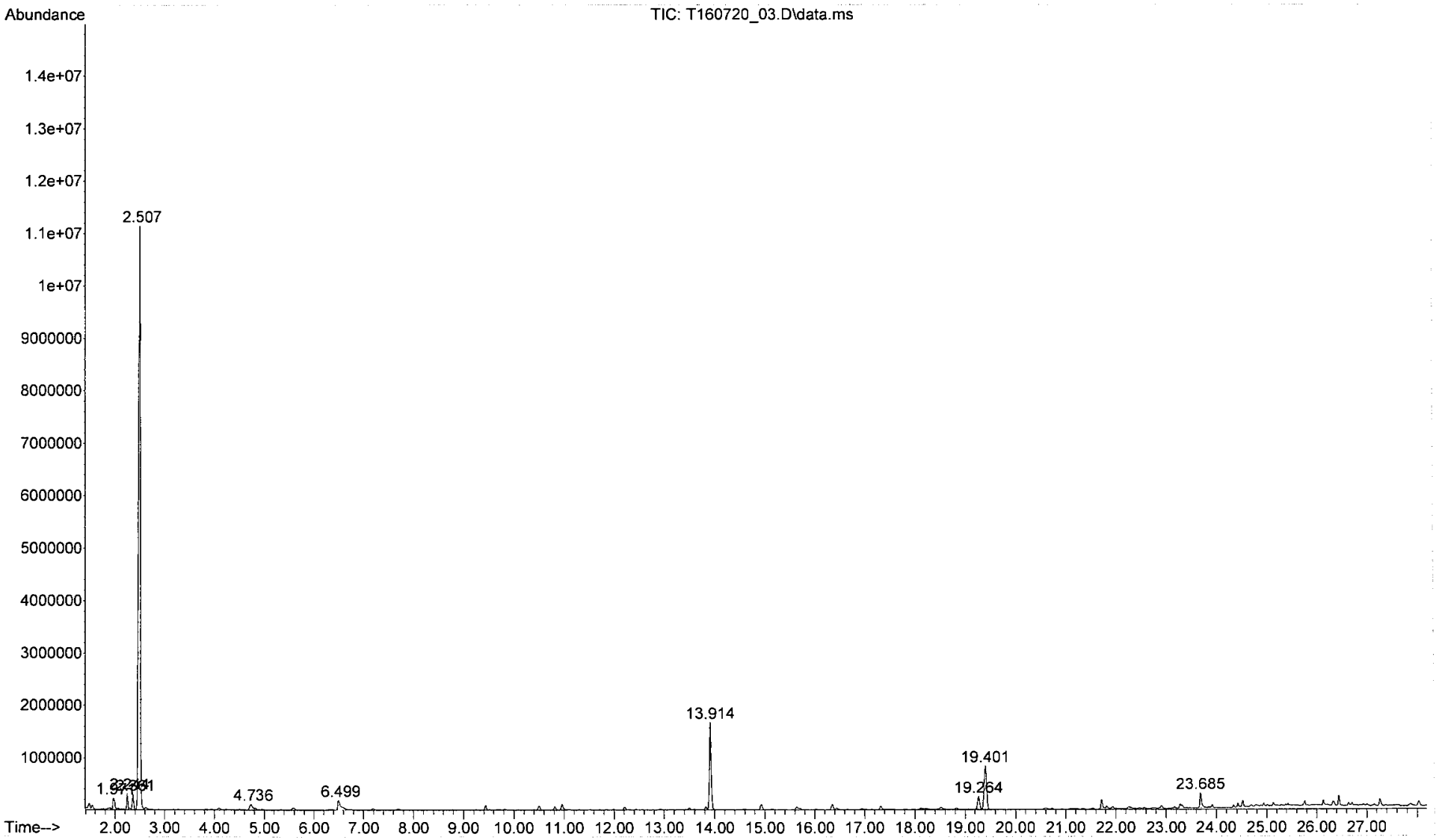
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2016\July\
Data File : T160720_12.D
Acq On : 20 Jul 2016 10:36 pm
Operator : rgill
Sample : 061-034-10_US EPA; Mi51119; 5.72L
Misc : C12-10; 10419; 107ngBFB;10:1 split
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 21 12:31:55 2016
Quant Method : \\Ba-fs1\RESOURCES\GCMSFILE\METHODS\5975 Methods\Y2K16\Desorb_Merged_2016.M
Quant Title : AB95168
QLast Update : Thu Mar 31 15:13:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Bromo-4-flourobenzen...	13.919	95	945490	111.00 ng	0.00
21) 1-Bromo-4-flourobenzen...	13.919	95	945490	111.00 ng	-0.01
32) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
52) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
66) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
97) 1-Bromo-4-flourobenzen...	0.000	95	0m	111.00 ng	-13.93
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.	
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}; 1330-20-7	0.000		0	N.D.	
9) Xylene {2}; 1330-20-7	0.000		0	N.D.	
10) Styrene; 100-42-5	0.000		0	N.D.	
11) 1,2,4-Trimethylbenzene...	0.000		0	N.D.	
12) Octanal; 124-13-0	0.000		0	N.D.	
13) Phenol; 108-95-2	0.000		0	N.D.	
14) 1-Phenylethanone; 98-86-2	0.000		0	N.D.	
15) 1-Methyl-2-pyrrolidino...	0.000		0	N.D.	
16) Nonanal; 124-19-6	0.000		0	N.D.	
17) 2-Ethylhexanoic acid; ...	0.000		0	N.D.	
18) Naphthalene; 91-20-3	0.000		0	N.D.	
19) 4-Phenylcyclohexene; 4...	0.000		0	N.D.	
20) Caprolactam; 105-60-2	23.700	113	57897m	27.16 ng	
22) 1-Methoxy-2-propanol; ...	0.000		0	N.D.	
23) Ethylene glycol; 107-21-1	0.000		0	N.D.	
24) Butyl acetate; 123-86-4	0.000		0	N.D.	
25) Propylene glycol; 57-55-6	0.000		0	N.D. d	
26) 2-Butoxyethanol; 111-76-2	0.000		0	N.D.	
27) Hexanoic acid; 142-62-1	0.000		0	N.D.	
28) 2-Ethyl-1-hexanol; 104...	0.000		0	N.D.	
29) 2-(2-Butoxyethoxy) eth...	0.000		0	N.D.	
30) Dodecanol; 112-53-8	0.000		0	N.D.	
31) Butylated hydroxytolue...	0.000		0	N.D.	
33) n-Pentane; 109-66-0	0.000		0	N.D. d	
34) Ethanol; 64-17-5	0.000		0	N.D. d	
35) 2-Propanone(acetone); ...	0.000		0	N.D. d	
36) 1,1-Dichloroethylene;7...	0.000		0	N.D.	
37) 2-Propanol; 67-63-0	0.000		0	N.D. d	
38) Carbon disulfide; 75-15-0	0.000		0	N.D.	
39) Dichloromethane; 75-09-2	0.000		0	N.D.	
40) n-Hexane; 110-54-3	0.000		0	N.D.	
41) Vinyl acetate; 108-05-4	0.000		0	N.D.	
42) 2-Butanone; 78-93-3	0.000		0	N.D.	
43) Ethyl acetate; 141-78-6	0.000		0	N.D.	
44) Chloroform;67-66-3	0.000		0	N.D.	

File :C:\msdchem\1\data\2016\July\T160720_03.D
Operator : rgill
Acquired : 20 Jul 2016 2:32 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-01_US EPA; Mi58846; 5.52L
Misc Info : C12-01; 10366; 107ngBFB;10:1 split
Vial Number: 3



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File        :C:\msdchem\1\data\2016\July\T160720_04.D
Operator    : rgill
Acquired    : 20 Jul 2016   3:25 pm using AcqMethod 130812VOC.M
Instrument :   GCMS_7890
Sample Name: 061-034-02_US EPA; Mi58849; 5.46L
Misc Info   : C12-02; 10344; 107ngBFB;10:1 split
Vial Number: 4
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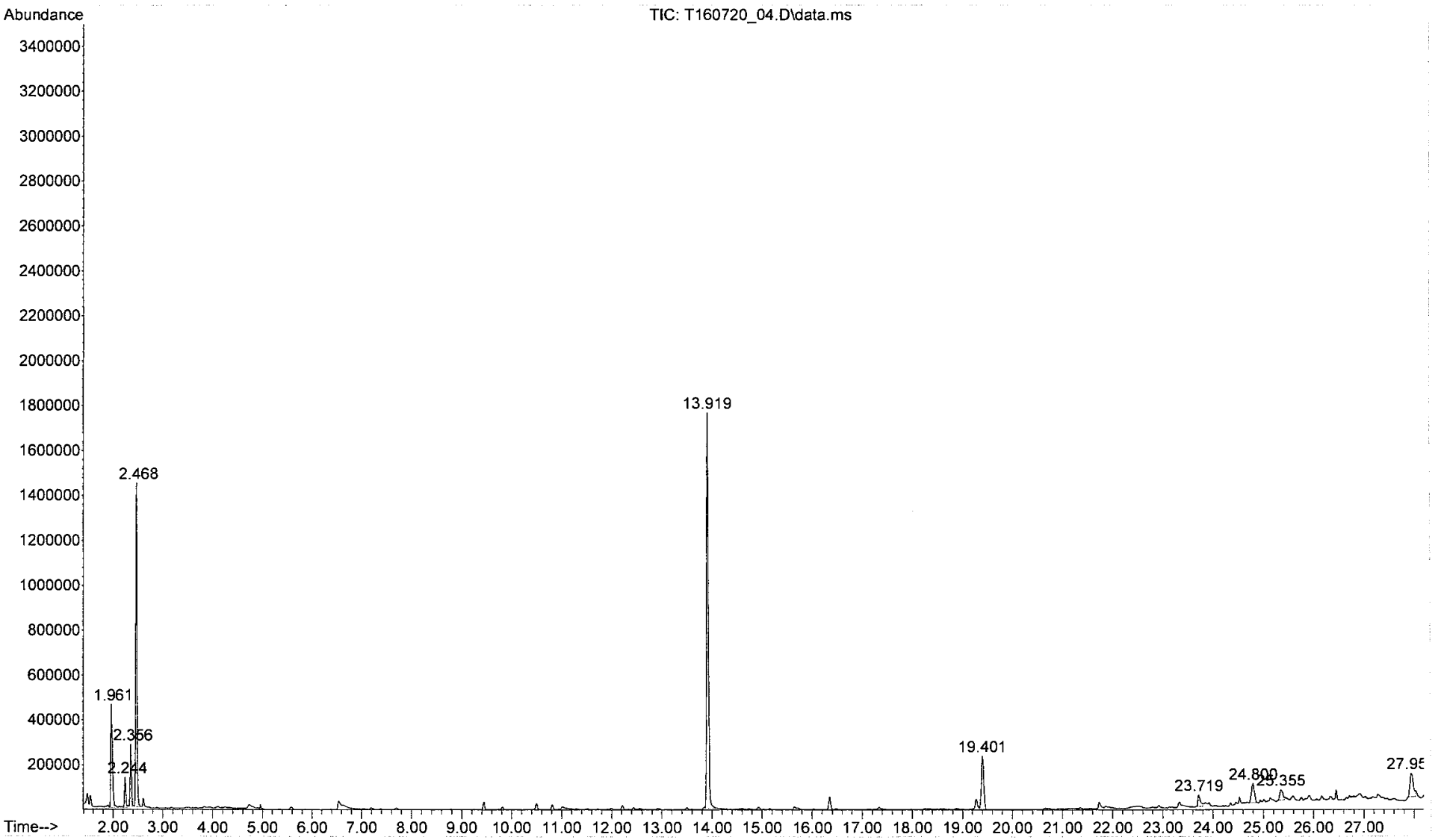
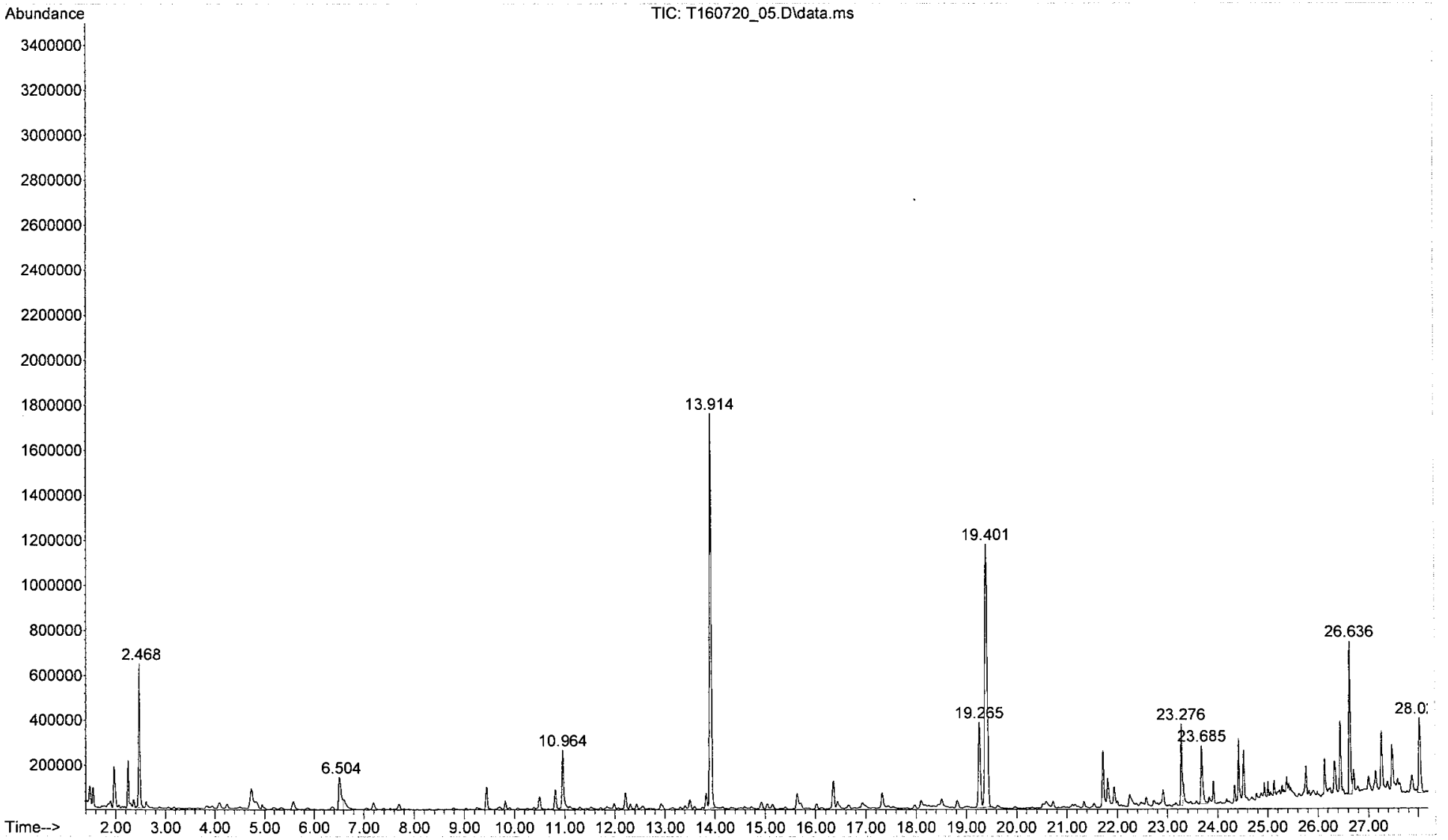
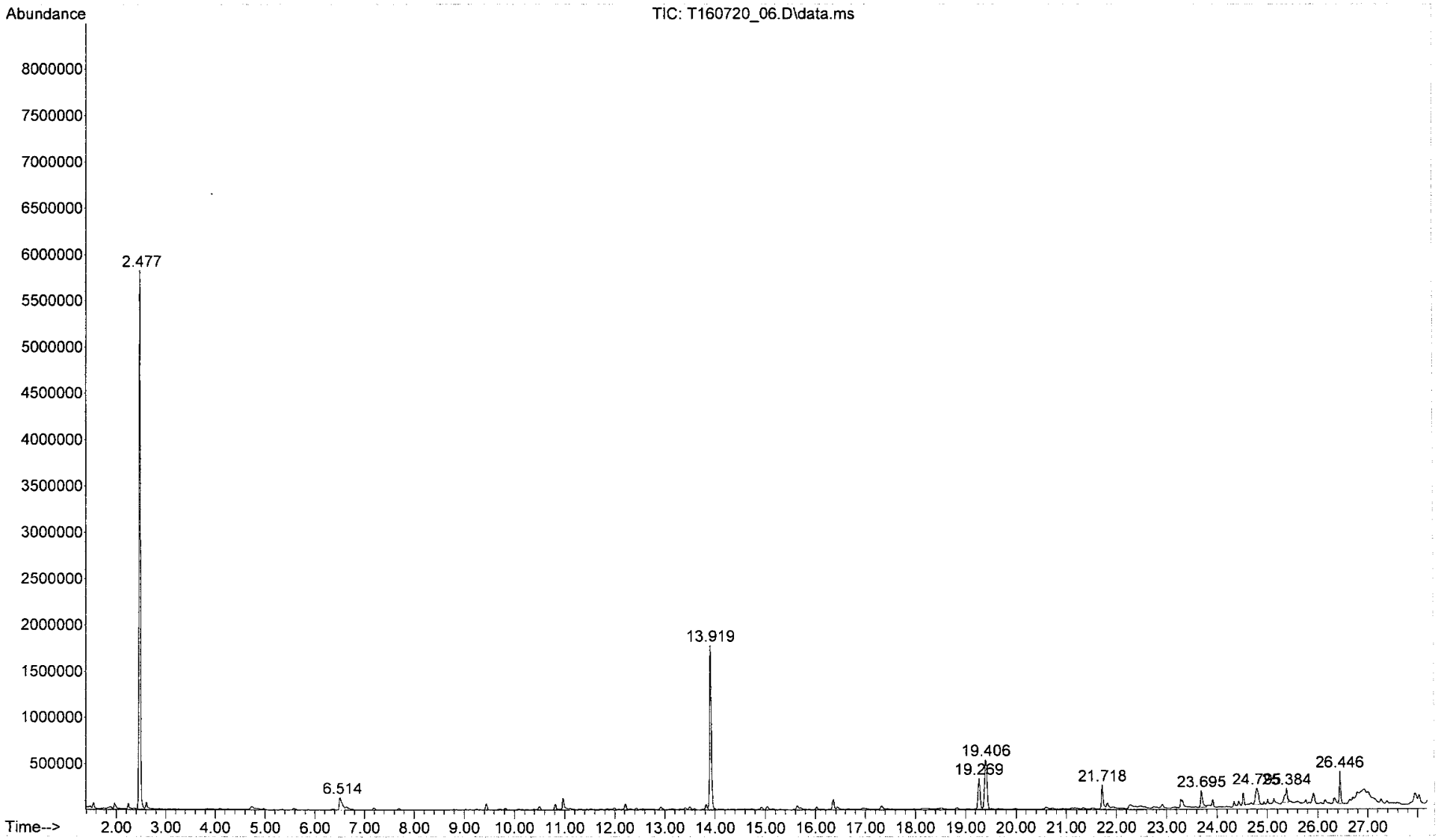


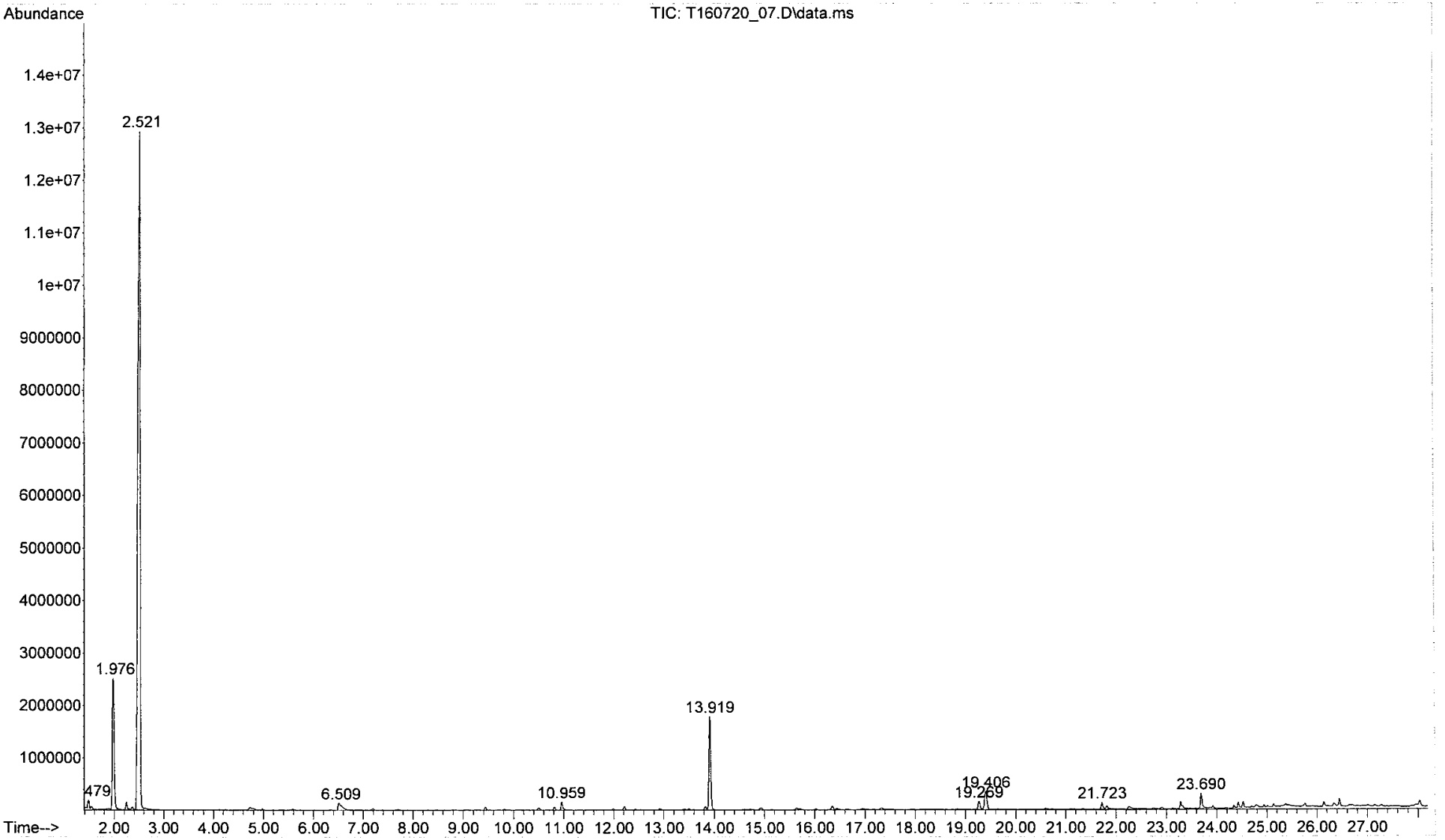
File :C:\msdchem\1\data\2016\July\T160720_05.D
Operator : rgill
Acquired : 20 Jul 2016 4:19 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-03_US EPA; Mi51153; 5.63L
Misc Info : C12-03; 10332; 107ngBFB;10:1 split
Vial Number: 5



File :C:\msdchem\1\data\2016\July\T160720_06.D
Operator : rgill
Acquired : 20 Jul 2016 5:12 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-04_US EPA; Mi58850; 5.38L
Misc Info : C12-04; 10221; 107ngBFB;10:1 split
Vial Number: 6



File :C:\msdchem\1\data\2016\July\T160720_07.D
Operator : rgill
Acquired : 20 Jul 2016 6:06 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-05_US EPA; Mi59957; 5.49L
Misc Info : C12-05; 10151; 107ngBFB;10:1 split
Vial Number: 7



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File        :C:\msdchem\1\data\2016\July\T160720_08.D
Operator    : rgill
Acquired    : 20 Jul 2016   7:00 pm using AcqMethod 130812VOC.M
Instrument  :   GCMS_7890
Sample Name: 061-034-06_US EPA; Mi59921; 5.79L
Misc Info   : C12-06; 10216; 107ngBFB;10:1 split
Vial Number: 8
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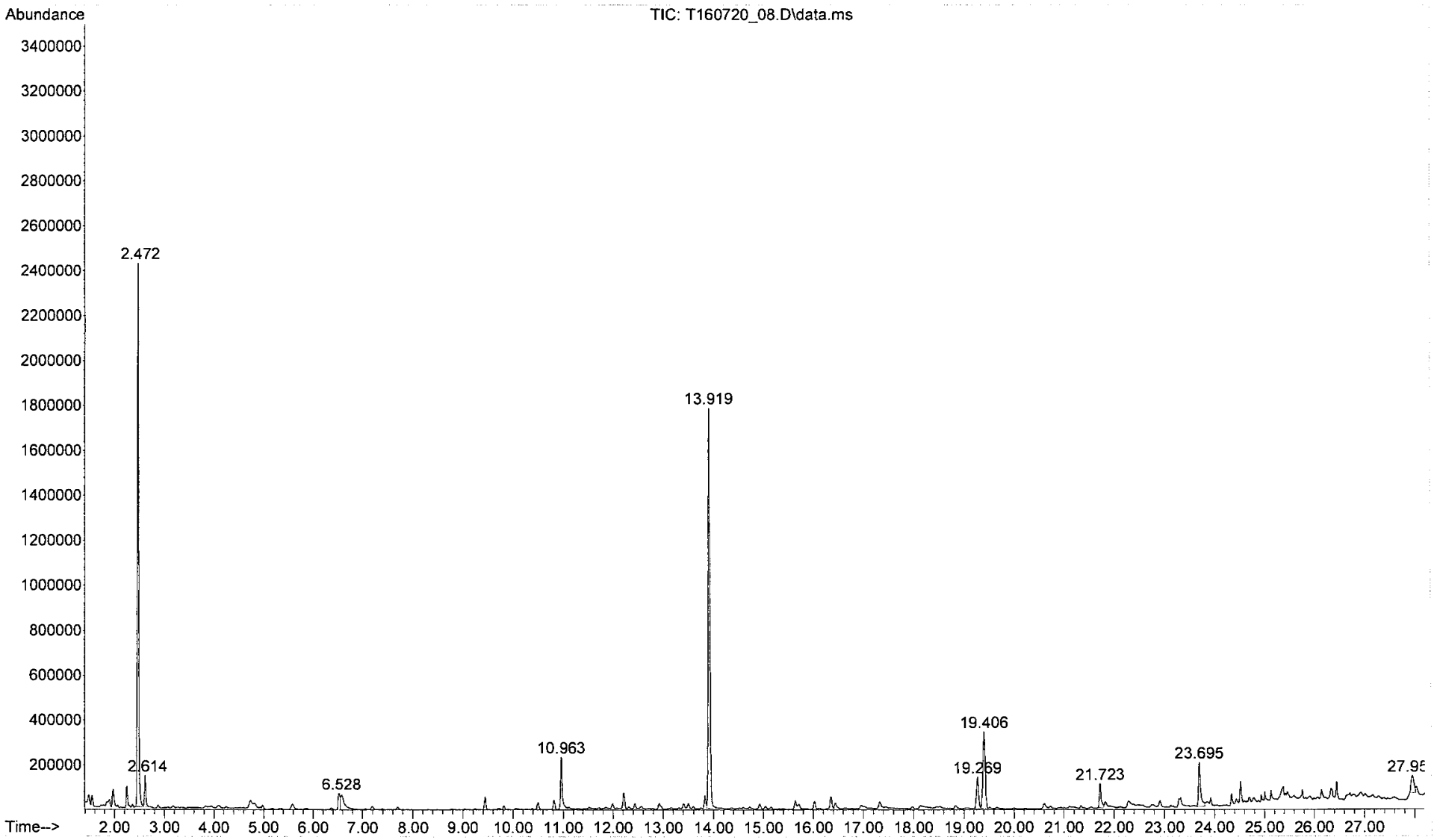
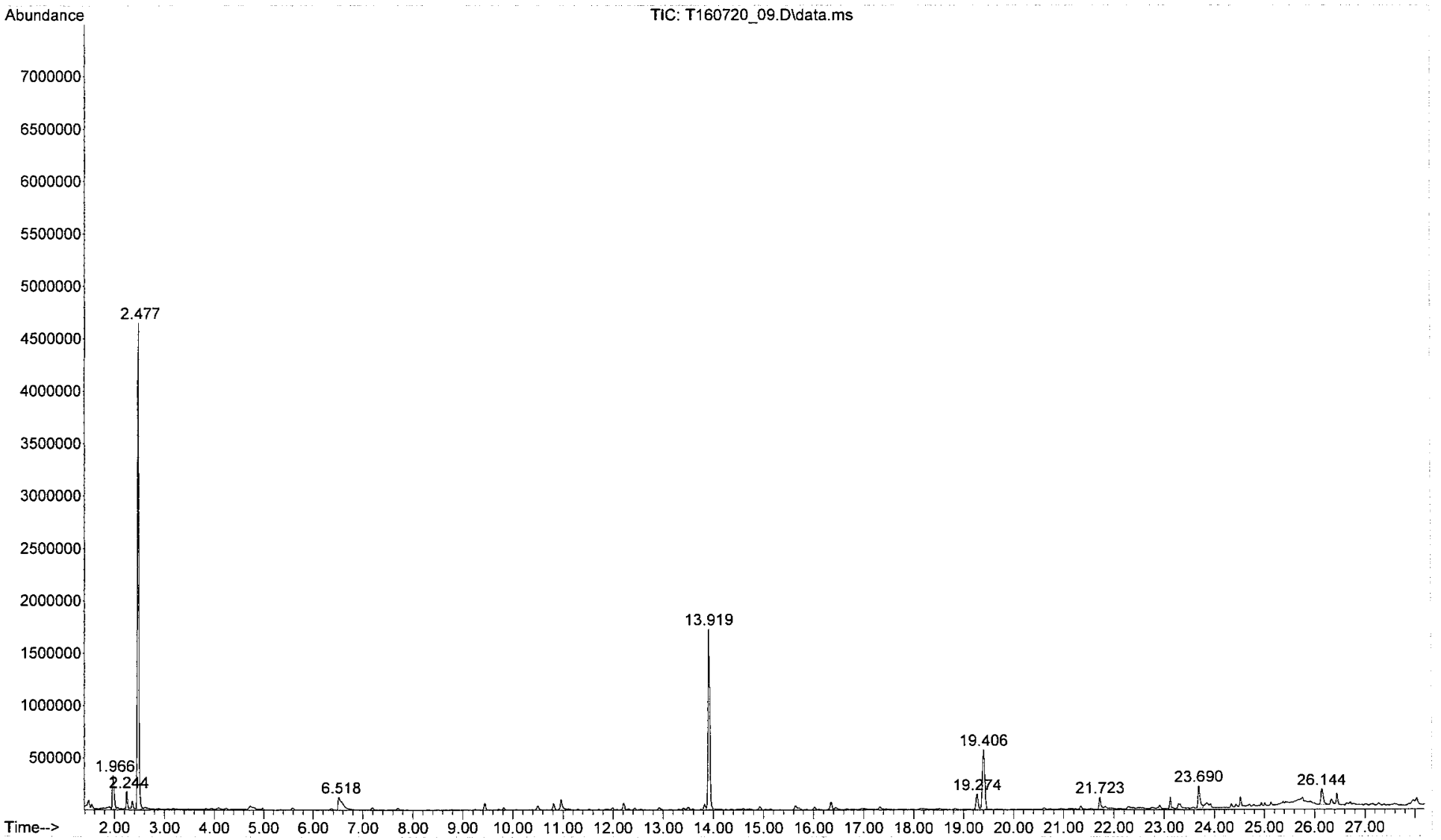
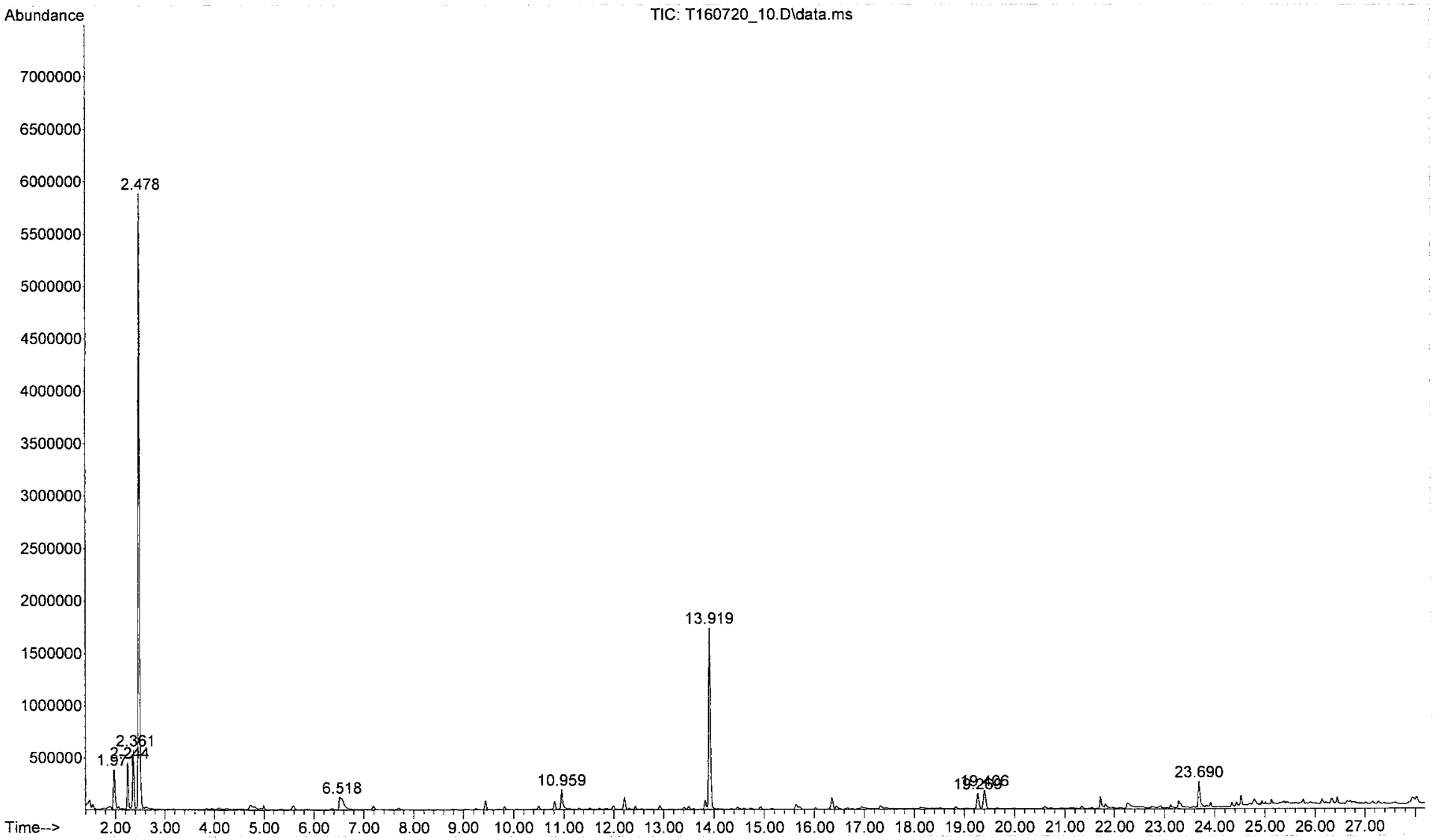


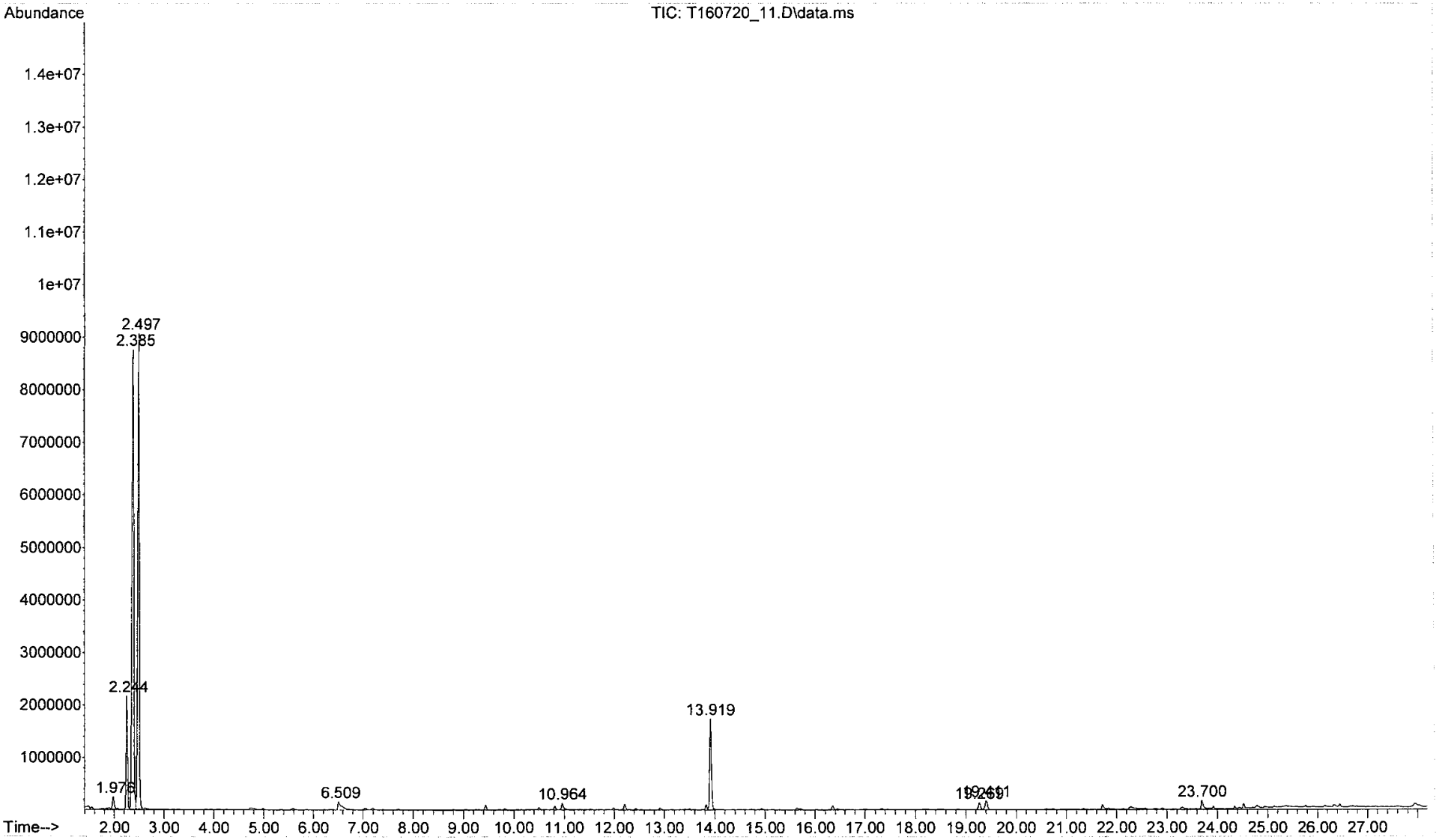
File :C:\msdchem\1\data\2016\July\T160720_09.D
Operator : rgill
Acquired : 20 Jul 2016 7:53 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-07_US EPA; Mi58844; 5.02L
Misc Info : C12-07; 10146; 107ngBFB;10:1 split
Vial Number: 9



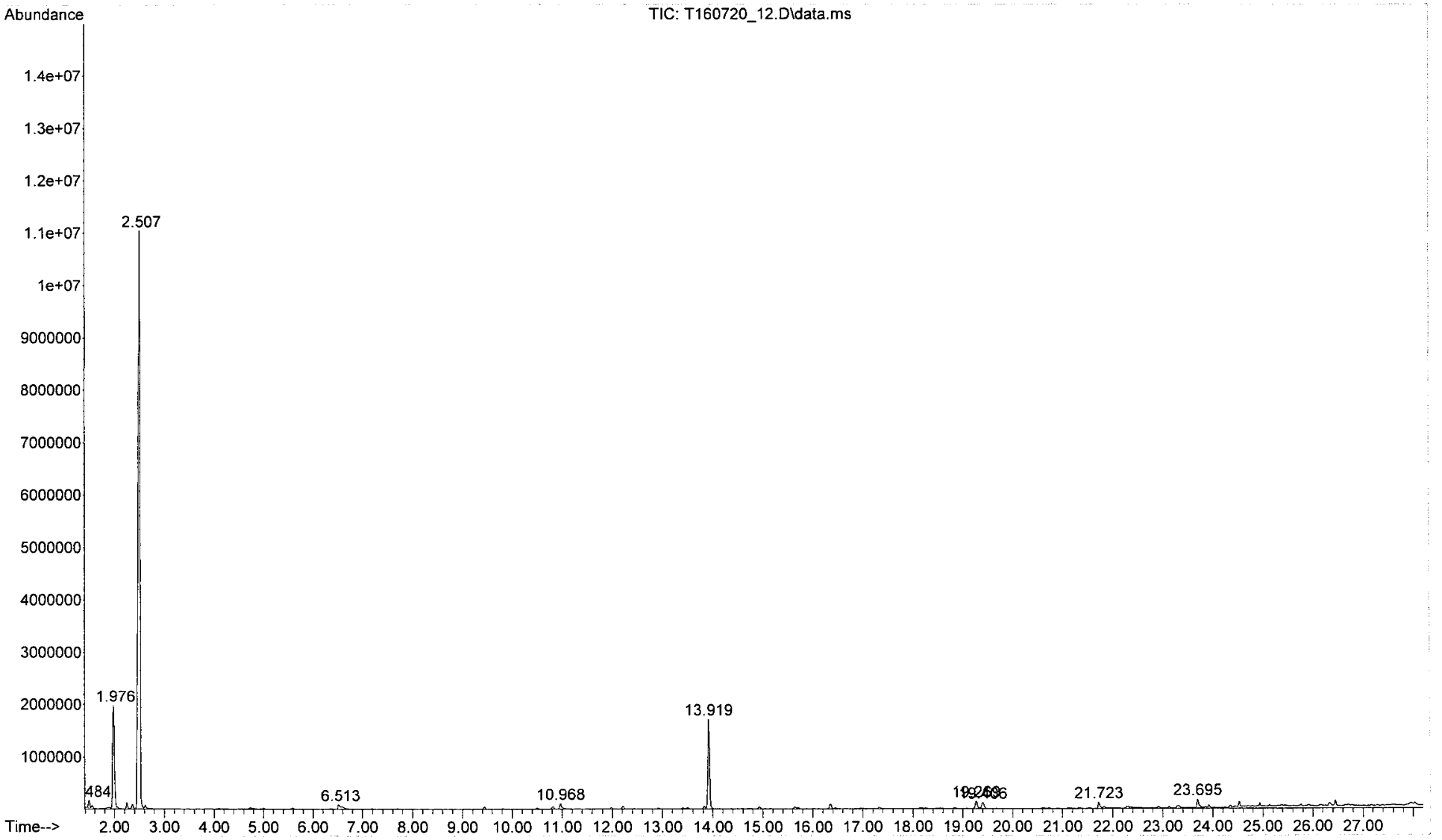
File :C:\msdchem\1\data\2016\July\T160720_10.D
Operator : rgill
Acquired : 20 Jul 2016 8:46 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-08_US EPA; Mi59922; 5.78L
Misc Info : C12-08; 10411; 107ngBFB;10:1 split
Vial Number: 10



File :C:\msdchem\1\data\2016\July\T160720_11.D
Operator : rgill
Acquired : 20 Jul 2016 9:41 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-09_US EPA; Mi58836; 6.2L
Misc Info : C12-09; 10448; 107ngBFB;10:1 split
Vial Number: 11



File :C:\msdchem\1\data\2016\July\T160720_12.D
Operator : rgill
Acquired : 20 Jul 2016 10:36 pm using AcqMethod 130812VOC.M
Instrument : GCMS_7890
Sample Name: 061-034-10_US EPA; Mi51119; 5.72L
Misc Info : C12-10; 10419; 107ngBFB;10:1 split
Vial Number: 12



061-034; 7/21/2016
Caprolactam calculations

		mass (ng)	vol (L)	conc (ug/m3)	conc (ppb)
061-034-01	T160720_03	43.7	5.520	7.9	1.7
061-034-02	T160720_04	11.6	5.460	2.1	0.5
061-034-03	T160720_05	34.9	5.630	6.2	1.3
061-034-04	T160720_06	27.7	5.380	5.2	1.1
061-034-05	T160720_07	39.9	5.490	7.3	1.6
061-034-06	T160720_08	30.6	5.790	5.3	1.1
061-034-07	T160720_09	33.4	5.020	6.6	1.4
061-034-08	T160720_10	37.4	5.780	6.5	1.4
061-034-09	T160720_11	26.2	6.200	4.2	0.9
061-034-10	T160720_12	27.2	5.720	4.7	1.0

061-034-01 5.52 litres
US EPA
Mi58846 collected: 7/18/2016
C12-01; 10366

061-034-02 5.46 litres
US EPA
Mi58849 collected: 7/18/2016
C12-02; 10344

061-034-03 5.63 litres
US EPA
Mi51153 collected: 7/18/2016
C12-03; 10332

061-034-04 5.38 litres
US EPA
Mi58850 collected: 7/18/2016
C12-04; 10221

061-034-05 5.49 litres
US EPA
Mi59957 collected: 7/18/2016
C12-05; 10151

061-034-06 5.79 litres
US EPA
Mi59921 collected: 7/18/2016
C12-06; 10216

061-034-07 5.02 litres
US EPA
Mi58844 collected: 7/18/2016
C12-07; 10146

061-034-08 5.78 litres
US EPA
Mi59922 collected: 7/18/2016
C12-08; 10411

061-034-09 6.2 litres
US EPA
Mi58836 collected: 7/18/2016
C12-09; 10448

061-034-10 5.72 litres
US EPA
Mi51119 collected: 7/18/2016
C12-10; 10419

061-034-11 5.52 litres
US EPA
C12-01 collected: 7/18/2016
10366

061-034-12 5.46 litres
US EPA
C12-02 collected: 7/18/2016
10344

061-034-13 5.63 litres
US EPA
C12-03 collected: 7/18/2016
10332

061-034-14 5.38 litres
US EPA
C12-04 collected: 7/18/2016
10221

061-034-15 5.49 litres
US EPA
C12-05 collected: 7/18/2016
10151

061-034-16 5.79 litres
US EPA
C12-06 collected: 7/18/2016
10216

061-034-17 5.02 litres
US EPA
C12-07 collected: 7/18/2016
10146

061-034-18 5.78 litres
US EPA
C12-08 collected: 7/18/2016
10411

061-034-19 6.2 litres
US EPA
C12-09 collected: 7/18/2016
10448

061-034-20 5.72 litres
US EPA
C12-10 collected: 7/18/2016
10419