ENVIRONMENTAL
Analytical Service, Inc.

Data Deliverable Package

Prepared For:		**Report Sent:**	11/25/2013
AMEC		**Project Number:**	16657
121 Innovative Drive, Suite 200		**EAS SDG Number:**	213619
Irvine	CA 92617	**Sample Event Date:**	11/14/2013

Client Project Manager: Joe Bahde

Project Name: Wildomar Autumnwood Development

Project Number: NB1016075P

This is the Laboratory Data Deliverable Package for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is an unique identifier for the sample. The type of Date Deliverable Package is specified in the QC Level below, and the QC Criteria used for the Project is specified in the QC Critera. There is no Section 6 in Level 4 package.

QC Level: Level 2B **Project QC Criteria:** EAS QC Criteria

INDEX TO DATA PACKAGE:

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Section 6 Chromatograms and Ion Spectra - Level 4

Section 1 Project Summary

The following pages provide detailed information on the sample receipt, log-in, and sample preparation. The Laboratory Work Order provides a cross reference between the Client ID number and the EAS Lab Number as well as a list of the analytical tests preformed. The items included in this section are listed below.

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative

Chain of Custody

Laboratory Work Order

SDG Number: 213619
Project Manager: Joe Bahde
Client: AMEC

Project Number: 16657
Received: 11/19/2013

Report: HC and PDF
Electronic Data Deliverable: None

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample No.	EAS Lab No.	Analysis Requested	Date Sampled
13-SV-15	213619 1	EPA TO-11 Formaldehyde	11/14/2013
14B-SV	213619 2	EPA TO-11 Formaldehyde	11/14/2013
12-SV-15	213619 3	EPA TO-11 Formaldehyde	11/14/2013
2-SV-5	213619 4	EPA TO-11 Formaldehyde	11/14/2013
3B-SV	213619 5	EPA TO-11 Formaldehyde	11/14/2013
10L-SV	213619 6	EPA TO-11 Formaldehyde	11/14/2013
8-SV-3	213619 7	EPA TO-11 Formaldehyde	11/15/2013
6-SV-15	213619 8	EPA TO-11 Formaldehyde	11/14/2013
60-SV-15	213619 9	EPA TO-11 Formaldehyde	11/14/2013
Blank	213619 10	EPA TO-11 Formaldehyde	11/14/2013

Project Sample Media

SDG Number: 213619

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can

SDG	Lab ID	Client Sample No.	Sample Media	Batch	Pressure, torr Initial	Pressure, torr Final	Can Factor
213619	1	13-SV-15	DNPH				
213619	2	14B-SV	DNPH				
213619	3	12-SV-15	DNPH				
213619	4	2-SV-5	DNPH				
213619	5	3B-SV	DNPH				
213619	6	10L-SV	DNPH				
213619	7	8-SV-3	DNPH				
213619	8	6-SV-15	DNPH				
213619	9	60-SV-15	DNPH				
213619	10	Blank	DNPH				

Laboratory Case Narrative

EAS SDG Number: 213619 **Project Number:** 16657

Client: AMEC

The Laboratory Case Narrative for the SDG is below. Any problems with the sample receiving or analysis are recorded in this section. The Chain of Custody forms follow the Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Test Methods

The methods used for sample analysis are listed on the Analytical Report header. Most methods are a modification of the agency method, and the modifications are described in the EAS Quality Manual along with the QC criteria used for the method. Project specific modifications to the methods or project specific QC may overide the EAS modification

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.

Date Approved: 11/25/2013

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

ENVIRONMENTAL
Analytical Service, Inc.

173 Cross Street
San Luis Obispo, CA
93401 - 7597
805.781.3585
Fax 805.541.4550

CHAIN OF CUSTODY RECORD

Project Number: NB1016075P
Project Name: DTSC-Wildomar
Quote Number:

REPORT TO: Joe Bamic

Company: AMEC
Address: 121 Innovation dr #200
City/State/Zip: Irvine, CA, 92617
Phone: (949) 642-0245 (FAX)
ATTENTION:

MATRIX LEGEND: A Ambient Air Low Level; I Indoor Air; S Source Air High Level; G Gas/Product

SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	CANISTER NUMBER	COMP	GRAB	MATRIX A	I	S	G	INITIAL PRESSURE	FINAL PRESSURE	TEST ID (FROM ATOM)	Formaldehyde TO-11						REMARKS: Fridge
13-SV-15	11/14/13	1349										23619-01	X						32min @ 1L/min
014-B-SV	11/14/13	1220										-02	X						
12-SV-15	11/14/13	1157										-03	X						
2-SV-5	11/14/13	1013										-04	X						
3B-SV	11/14/13	1435										-05	X						
10L-SV	11/14/13	1555										-06	X						
8-SV-3	11/15/13	1118										-07	X						
6-SV-15	11/14/13	1656										-08	X						

COMMENTS:

BILLING INFORMATION

Company: AMEC
Address: 121 Innovation dr #200
City/State/Zip: Irvine, CA, 92617
ATTENTION:
Purchase Order/Billing Reference:

	Date	Time		Date	Time
SAMPLED BY:	11/15/13	1400	Received by:		
Relinquished By:	11/18/13	1630	Received by:		
Relinquished By:			Received by:		
Relinquished By:			Received for lab by:	11/19/13	10:00am

ENVIRONMENTAL
Analytical Service, Inc.

173 Cross Street
San Luis Obispo, CA
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805.781.3585
Fax 805.541.4550

CHAIN OF CUSTODY RECORD

Project Number: NB10166675P
Project Name: DTSC-Wildomar
Quote Number:

REPORT TO: Joe Bande

Company: AMEC
Address: 121 Innovation dr #200
City/State/Zip: Irvine CA 92617
Phone: (949) 647-0245 (FAX)
ATTENTION:

MATRIX LEGEND
A - Ambient Air, Low Level
I - Indoor Air
S - Source Air, High Level
G - Gas/Product

SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	CANISTER NUMBER	COMP	GRAB	MATRIX A	MATRIX I	MATRIX S	MATRIX G	INITIAL PRESSURE	FINAL PRESSURE	LAB LABORATORY ID	ANALYTICAL TESTS: Formaldehyde TO-11						REMARKS: Analyze
												213619							
60-SV-15	11/14/13	1654										~~21619~~ 09	X						32 min @ 1 L/min
03 Blank												-10	X						

COMMENTS:

BILLING INFORMATION

Company: AMEC
Address: See Above
City/State/Zip:
ATTENTION:
Purchase Order/Billing Reference:

		Date	Time		Date	Time
SAMPLED BY:	[signature]	11/15/13	1400	Received by:		
Relinquished By:	[signature]	11/18/13	1630	Received by:		
Relinquished By:				Received by:		
Relinquished By:				Received for lab by:		

Section 2 Quality Control Report

This section contains the QC Reports for each Daily Analytical Batch (DAB) which make up the Sample Delivery Group (SDG). It also contains either the EAS or Project QC criteria that was used for the DAB. The methods used for this project have been modified from the original method. The modifications include modifications to the QC for the method. This is either because the method did not specify certain aspects of the QC, the method was originally designed for a different matrix, or additional compounds were added to the target list of the method which required modified QC. The QC used by EAS is generally in line with the QC criteria used by other air testing laboratories.

The Daily Analytical Batch data was checked against the QC criteria for the method. Any deviations from the QC criteria are listed on the QC Reports for each DAB, which are summarized in this section and are given in more detail in Section 4 which has the Quantitation Reports and Calculations for the QC and Samples. This section contains the following:

Quality Control Report

Project QC Critera

QC Criteria Requested for Project	EAS QC Criteria
QC Level:	Level 2B

Quality Control Summary Level 2

Quality Control Report

EAS SDG Number: 213619

Project Number: 16657

QC Narrative

Unless previously specified, the samples in each QC batch were run with the standard laboratory QC specified in the EAS Quality Manual. Any deviations from the QC are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch.

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: LABQC
Laboratory ID: B11203

Description:	METHOD BLANK	Date Sampled:		Time:	
Can/Tube#:	B02273A	Date Received:		Time:	
QC_Batch:	112013-HPT	Date Analyzed:	11/20/13	Time:	18:05
Air Volume:	32 Liters	Dilution Factor:	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

Laboratory Control Spike and Laboratory Control Duplicate
EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

LCS QC11203A
LCD QC11203B
Date 11/20/13
QC Batch 112013-HPT

CAS#	Compound	LCS %	Flag	LCD %	Flag	UCL %	UCL %	RPD %	Limit %	Flag %
50-00-0	Formaldehyde	87		87		70	130	1	30	
75-07-0	Acetaldehyde	86		87		70	130	1	30	
67-64-1	Acetone	94		99		70	130	5	30	
123-38-6	Propionaldehyde	84		85		70	130	1	30	
4170-30-3	Crotonaldehyde	89		89		70	130	0	30	
123-72-8	Butyraldehyde	85		84		70	130	1	30	
100-52-7	Benzaldehyde	92		87		70	130	5	30	
590-86-3	Isovaleraldehyde	90		89		70	130	0	30	
110-62-3	Valeraldehyde	82		82		70	130	0	30	
529-20-4	o-Tolualdehyde	93		94		70	130	1	30	
620-23-5	m-Tolualdehyde	83		84		70	130	1	30	
104-87-0	p-Tolualdehyde	91		97		70	130	6	30	
66-25-1	Hexaldehyde	79		75		70	130	3	30	

CONTINUING CALIBRATION REPORT

EPA Method TO-11A Modified HPLC

SDG: LABQC
QC_Batch: 112013-HPT
Sample ID: ST61265
Sample Analysis Date: 11/20/13
Run Method: TO11.MTH
Quant/Calibration Method: TO11.MTH
Calibration Method: Initial Calibration
Template: WNK_TO11
Calibration Level: **Level 4** **0.60** ug/ml
Type:

Sample Calculation:

1) $CCRFi = \left| \frac{(Astdi)}{(Cstdi)} \right|_i$

CCRFi is the Continuing Calibration RF

Compound	Area Astdi	**Cal Level Cstdi ug/ml**	CCRRFi	ICALRF AvgRFn	%Dev	%Dev Limit	%Dev Flag
Formaldehyde	63523	**0.600**	9.45E-06	8.18E-06	-15.4	**30**	IN

INITIAL CALIBRATION REPORT

EPA Method TO-11A Modified HPLC

File Name:	C11203C	**SDG:**	**LABQC**
Sample ID:	ST61265	**QC_Batch:**	**C11203**
Sample Analysis Date:	11/20/13		
Run Method:	TO11.MTH		
Quant Method:	TO11.MTH		
Calibration Method:	Initial Calibration		
Template:	WNK_TO11		

		Calibration Amount CA, ug/ml					**Calibration Response, Area**				
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 1	Level 2	Level 3	Level 4	Level 5
		Amt	Amt	Amt	Amt	Amt	**C11123C**	**C11133D**	**C11133E**	**C11133F**	**C11133G**
n	Compound	**0.12**	**0.15**	**0.3**	**0.6**	**1.2**	**0.12**	**0.15**	**0.3**	**0.6**	**1.2**
1	Formaldehyde	**0.120**	**0.150**	**0.300**	**0.600**	**1.200**	**14621**	**18954**	**43050**	**60685**	**151205**

INITIAL CALIBRATION REPORT: Response Factors

EPA Method TO-11A Modified HPLC

SDG:	**LABQC**
QC_Batch:	**112013-HPT**
Sample ID:	ST61265
Sample Analysis Date:	11/20/13
Run Method:	TO11.MTH
Quant Method:	TO11.MTH
Calibration Method:	Initial Calibration
Template:	WNK_TO11

Sample Calculation:

1) Avg RFn = Sum $\left| \frac{(Cstdni)}{(Astdni)} \right|_i$

Response Factors Calculated form ICal Page

Compound	RF1	RF2	RF3	RF4	RF5	AvgRFn	%RSD	**%RSD Limit**	RSD Flag
Formaldehyde	8.21E-06	7.91E-06	6.97E-06	9.89E-06	7.94E-06	8.18E-06	13.0	**30**	IN

QC Criteria for Methods

The QC criteria used for this project is listed below for each method used. The EAS Modified Criteria and the method criteria are listed. The criteria is modified because the methods either have target compounds not in the original method or are a different matrix.

EAS Method Quality Control Criteria

TO-11A Aldehydes and Ketones

Method TO-11A is used for the analysis of aldehydes and ketones that have been collected in DNPH sorbent cartridges. The DNPH solution forms a hydrazone derivative with the target compounds. The cartridges are extracted with acetonitrile and are analyzed by reverse phase high-pressure liquid chromatography (HPLC) using UV detection.

The EAS modification to this method includes the calibration procedure and QC criteria.

Table 13.4a
Summary of QC Criteria for TO-11A Modified

Parameter	EAS TO-11A Modified	TO-11A Method
Initial Calibration	5 points minimum <30%	Method specifies standards run in triplicate. RT <2% RSD. Method criteria 0.999 correlation coefficient.
Continuing Calibration Verification (CCV)	Daily (24 hours) Mid range standard <30%	10% precision on replicate <15% D for calibration verifications
Method Blank	Less than LOQ A cartridge blank is analyzed for the method blank.	Average Blank Subtraction
Laboratory Control Spike	1 per Daily Batch 70-130% Recovery	Not Specified
Duplicate Lab Control Dup Sample Dup	Duplicate with each 20 samples <30%	50% of sampling events should have a collocated sample. <20% D
Holding Times	Extract 14 days; analyze within 30 days.	Extract 14 days from sampling date

Section 3 Analytical Reports

This section contains a summary of the Analytical Methods used for the project and the Analytical Reports for the Sample Delivery Group (SDG) listed below. The reports are organized in order of the EAS Laboratory Number.

EAS SDG Number: 213619

The following items are contained in this Section:

Sample Analytical Reports

Analytical Method Summaries

Analytical Reports

Method Description

A brief description of the analytical methods used for this Sample Delivery Group (SDG) are given below.

EPA TO-11

Formaldehyde and carbonyl samples are collected on a DNPH (2,4-dinitrophenyl-hydrazine) cartridge available from Supelco or Waters. The carbonyl-DNPH derivatives are extracted with 2 mL of carbonyl-free acrtonitrile. The derivatives are analyzed by HPLC with UV detection at 360 nm and the mobile phase is water/acetonitrile: A Restek Pinnacle TO-11 column is used with a Shimadzu Model LC-6A Pump and SPD-6AV UV detector. The standards used are commercially available carbonyl-DNPH derivatives of the target compounds.

Sample Analytical Reports

EAS SDG Number: 213619

Project Number: 16657

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of EAS Lab ID number. The laboratory Work Order serves as a reference, showing the client sample description, the Lab ID number, and the date sampled. The QC batch field identifies the Daily Analytical Batch and links the sample to the corresponding QC

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has two Amount columns, for the commonly used reporting units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature or pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (milligrams) per cubic meter is a mass/volume ratio and is dependent on temperature and pressure. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: UG/M3 = PPBV x MW/24.46 where 24.26 is the gas constant and MW is the Compound Molecular Weight.

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 01

Description:	13-SV-15	**Date Sampled:**	11/14/13	**Time:**	13:49
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	18:25
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 02

Description:	14B-SV	**Date Sampled:**	11/14/13	**Time:**	12:20
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	19:13
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	0.26	1.56	3.75	8.10	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 03

Description:	12-SV-15	Date Sampled:	11/14/13	Time:	11:57
Can/Tube#:	CART	Date Received:	11/19/13	Time:	10:00
QC_Batch:	112013-HPT	Date Analyzed:	11/20/13	Time:	19:38
Air Volume:	32 Liters	Dilution Factor:	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 04

Description:	2-SV-5	**Date Sampled:**	11/14/13	**Time:**	10:18
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	19:59
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 05

Description:	3B-SV	**Date Sampled:**	11/14/13	**Time:**	14:35
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	20:21
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	0.21	1.56	3.75	6.53	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 06

Description:	10L-SV	Date Sampled:	11/14/13	Time:	15:55
Can/Tube#:	CART	Date Received:	11/19/13	Time:	10:00
QC_Batch:	112013-HPT	Date Analyzed:	11/20/13	Time:	20:43
Air Volume:	32 Liters	Dilution Factor:	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	0.21	1.56	3.75	6.64	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 07

Description:	8-SV-3	**Date Sampled:**	11/15/13	**Time:**	11:18
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	21:04
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 08

Description:	6-SV-15	**Date Sampled:**	11/14/13	**Time:**	16:56
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	21:26
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 09

Description:	60-SV-15	**Date Sampled:**	11/14/13	**Time:**	16:54
Can/Tube#:	CART	**Date Received:**	11/19/13	**Time:**	10:00
QC_Batch:	112013-HPT	**Date Analyzed:**	11/20/13	**Time:**	21:48
Air Volume:	32 Liters	**Dilution Factor:**	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-11A Modified HPLC
Analytical Method: TO-11A

SDG: 213619
Laboratory ID: 10

Description:	BLANK	Date Sampled:		Time:	
Can/Tube#:	CART	Date Received:	11/19/13	Time:	10:00
QC_Batch:	112013-HPT	Date Analyzed:	11/20/13	Time:	22:10
Air Volume:	32 Liters	Dilution Factor:	1.00		

CAS#	Compound	MDL UG	RL UG	Amount UG	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
50-00-0	Formaldehyde	0.05	0.12	ND	1.56	3.75	ND	ND

Section 4 Quantitation Reports and Calculations

This section contains the Level 3 Data Package information printed for each sample. The information is organized by continuing calibration, method blank, laboratory control samples, client samples. The initial claibration information is included with each sample. Some items are not provided if they are not part of the method. For example: The tune is not provided if a mass spectrometer was not used.

Items provided in Level 3 Data Package:

Quantitation Report

Calculation Sheet for Results, MDL and RL

Initial Calibration Data

Initial Calibration Response Factors

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

						SDG:	LABQC		
						EAS ID:	B11203		
Method:	TO-11A		B11203B			File Name:	B11203B		
MiscInfo-Vol						Sample ID:	METHOD BLANK		
Date:	11/20/13					Date Sampled:		Time:	
Run Method:	TO11.MTH					Date Received:		Time:	
Quant Method	TO11.MTH	MDL FAC	1			Date Extracted:		Time:	
Cal Update:	11/12/2013	SF:	2			Date Analyzed:	11/20/13	Time:	18:05
Template:	WNK_TO11					SamType:	MB		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3	Air Volume:	32.00		
Analyst	SH	Temp	25.0			Can (Vial) No:	B02273A		
Can Factor:	1.00		HPT			QCbatch:	112013-HPT		
						EXT Volume:	4 ml		
		Type	TRG			Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.32	0	63523

STD	0.60	ug/ml
	E18	
Initial Cal	E18	
Con Cal	D18	

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL: TO11.MTH
Run Method: TO11.MTH
Calibration Method E18
Can Factor: 1.00
Air Volume: 32
Base Volume 1000 Liters
Combined Factor 31.25
Gas Constant: 24.462
Unit Factor (ppbv) 1000 UG
Sig Figs 2 ConCal InitCal

Initial Calibration

MDL Factor 1

UG/M3

SDG: **LABQC**
Laboratory Number: **B11203**

Gas Constant
T 25.0
P **760**
MV 24.4622

Compound	M.W.	Raw UG/SAM	Raw UG/SAM	ResultV UG	Result UG/M3	ResultV UG	Result UG/M3	ResultQ UG/M3	(1) MDL	(2) RL UG	Calc MDL UG	Calc MDL UG/M3	Calc RL UG	Calc RL UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\B11203B.D
Operator : KS
Instrument : HPT
Sample Name : B11203A
Run Time Bar Code:
Acquired on : 20 Nov 13 06:05 PM
Report Created on: 20 Nov 13 06:23 PM

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\B11203B.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.367	6320	463	BV	0.203	0.2138
2	1.903	1582	152	VV	0.147	0.0535
3	2.390	2944611	193599	VV	0.218	99.6271
4	5.057	3120	177	BB S	0.246	0.1056

Total area = 2955634

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\B11203A.D
Operator : KL
Instrument : HPT
Sample Name : B02273A
Run Time Bar Code:
Acquired on : 20 Nov 13 05:04 PM
Report Created on: 20 Nov 13 05:43 PM

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\B11203A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.351	8789	540	BV	0.226	0.3365
2	1.885	2736	259	VV	0.143	0.1047
3	2.375	2586055	168160	VV	0.213	99.0021
4	3.283	6517	326	VV	0.264	0.2495
5	4.006	2506	120	VB	0.278	0.0959
6	5.051	3915	185	BB S	0.292	0.1499
7	7.204	1604	77	BB	0.297	0.0614

Total area = 2612122

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\QC11203B.D
Operator : KL
Instrument : HPT
Sample Name : ST61266
Run Time Bar Code:
Acquired on : 20 Nov 13 04:39 PM
Report Created on: 21 Nov 13 08:41 AM

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\QC11203B.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.349	19424	536	BV	0.464	7.9500
2	3.291	28976	1804	BV	0.226	11.8594
3	3.997	23384	1378	VF	0.241	9.5707
4	4.917	13725	1601	MF	0.143	5.6173
5	4.996	24534	1733	FF	0.236	10.0413
6	5.383	20019	1090	FM	0.306	8.1932
7	6.399	16679	867	BV T	0.275	6.8264
8	7.290	14108	683	VV T	0.294	5.7739
9	7.930	10659	512	VB T	0.307	4.3623
10	9.605	12095	513	BV	0.344	4.9503
11	10.205	12010	508	VV	0.342	4.9156
12	10.710	8586	430	VV	0.283	3.5141
13	11.099	9061	507	VV	0.252	3.7083
14	11.322	12422	521	VB	0.332	5.0840
15	14.814	8325	409	MF	0.339	3.4073
16	14.867	10325	409	FM	0.297	4.2259

Total area = 244333

User Modified

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\QC11203A.D
Operator : KL
Instrument : HPT
Sample Name : ST61266
Run Time Bar Code:
Acquired on : 20 Nov 13 04:08 PM
Report Created on: 21 Nov 13 08:40 AM

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\QC11203A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.352	17810	479	BV	0.468	7.3591
2	3.296	28687	1791	BV	0.224	11.8539
3	4.004	23209	1371	VF	0.250	9.5901
4	4.946	14841	1622	MF	0.153	6.1326
5	5.005	23290	1736	FF	0.224	9.6235
6	5.398	19758	1085	FM	0.303	8.1644
7	6.419	16679	860	BF T	0.286	6.8919
8	7.310	14297	684	FF T	0.313	5.9077
9	7.965	11250	514	FF T	0.318	4.6485
10	9.635	12160	509	BF T	0.336	5.0245
11	10.234	11941	503	FF T	0.348	4.9341
12	10.760	8533	421	FF T	0.289	3.5261
13	11.129	8966	494	FF T	0.251	3.7047
14	11.382	11677	506	FF T	0.320	4.8252
15	14.884	8690	408	MF	0.355	3.5906
16	14.980	10220	403	FM	0.422	4.2232

Total area = 242008

User Modified

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\C11203D.D
Operator : KL
Instrument : HPT
Sample Name : ST61265
Run Time Bar Code:
Acquired on : 20 Nov 13 03:45 PM
Report Created on: 20 Nov 13 04:33 PM

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\C11203D.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.265	18502	475	BV	0.482	4.0007
2	3.227	56978	3512	BV	0.231	12.3204
3	3.942	46010	2666	VF	0.245	9.9487
4	4.890	27935	3187	MF	0.146	6.0403
5	4.953	46682	3412	FM	0.228	10.0940
6	5.353	43458	2112	HB S	0.285	9.3970
7	6.391	32925	1685	BV T	0.288	7.1193
8	7.286	28195	1346	VV T	0.308	6.0966
9	7.958	21786	1006	VV T	0.318	4.7107
10	9.639	23001	983	VV T	0.343	4.9735
11	10.249	23019	973	VV T	0.351	4.9775
12	10.791	15652	798	VV T	0.292	3.3845
13	11.168	18835	944	VV T	0.281	4.0726
14	11.439	22511	968	VV T	0.345	4.8676
15	14.892	20680	751	BV	0.396	4.4716
16	15.152	16302	726	VB	0.374	3.5249

Total area = 462469

User Modified

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Area Percent Report

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Data File Name : C:\GCCHEM\1\DATA\11203HPT\C11203C.D
Operator : KL
Instrument : HPT
Sample Name : ST61265
Run Time Bar Code:
Acquired on : 20 Nov 13 03:16 PM
Report Created on: 20 Nov 13 04:43 PM

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\C11203C.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.340	22375	604	BF	0.468	4.3499
2	3.321	63523	3915	MF	0.270	12.3495
3	4.045	51977	2964	FM	0.292	10.1048
4	5.019	35942	3617	MF	0.166	6.9875
5	5.067	48538	3771	MM	0.215	9.4363
6	5.471	43521	2340	MM	0.310	8.4609
7	6.529	36386	1840	BF T	0.282	7.0738
8	7.427	31417	1465	FF T	0.307	6.1077
9	8.122	24406	1097	FF T	0.317	4.7448
10	9.805	26095	1076	FF T	0.356	5.0732
11	10.427	26097	1063	FF T	0.368	5.0736
12	11.008	17859	877	FF T	0.306	3.4720
13	11.381	20772	1036	FF T	0.301	4.0384
14	11.664	24545	1037	FF T	0.333	4.7719
15	15.136	21325	797	BF	0.393	4.1458
16	15.461	19597	731	FB	0.400	3.8099

Total area = 514376

User Modified

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Area Percent Report

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Data File Name : C:\GCCHEM\1\DATA\11203HPT\C11203B.D
Operator : KL
Instrument : HPT
Sample Name : ST61265
Run Time Bar Code:
Acquired on : 20 Nov 13 02:39 PM
Report Created on: 20 Nov 13 03:15 PM
Sample Info : 0.6 UG/ML TO11

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\C11203B.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.444	6362	301	BV	0.275	3.1657
2	3.404	29901	1362	PV	0.292	14.8777
3	4.115	21746	992	VV	0.297	10.8202
4	5.041	44557	1357	HB S	0.431	22.1700
5	5.513	3856	347	BB T	0.170	1.9187
6	6.549	18150	911	BV T	0.291	9.0308
7	7.444	8972	420	VV T	0.320	4.4641
8	8.116	9740	435	VV T	0.320	4.8463
9	9.813	7692	313	BV	0.360	3.8271
10	10.424	7490	303	VV	0.358	3.7267
11	10.998	7869	363	VV	0.319	3.9155
12	11.381	8157	441	VV	0.259	4.0586
13	11.638	12007	467	VB	0.359	5.9744
14	15.512	14479	293	BB	0.618	7.2042

Total area = 200978

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Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\C11203A.D
Operator : KL
Instrument : HPT
Sample Name : ST61265
Run Time Bar Code:
Acquired on : 20 Nov 13 01:34 PM
Report Created on: 20 Nov 13 02:37 PM
Sample Info : 0.6 UG/ML TO11

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\C11203A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.360	3538	239	BB	0.214	1.9278
2	3.264	19897	1271	BV	0.223	10.8410
3	3.955	15827	899	VV	0.251	8.6234
4	4.849	32184	1359	VV	0.317	17.5354
5	5.308	15963	723	HB S	0.299	8.6972
6	6.289	18403	946	BV T	0.273	10.0268
7	7.165	8979	439	VV T	0.301	4.8924
8	7.766	10033	461	VV T	0.322	5.4663
9	9.420	7746	329	BV	0.338	4.2205
10	9.991	7365	326	VV	0.333	4.0130
11	10.455	8071	400	VV	0.288	4.3977
12	11.042	20501	530	VB	0.500	11.1696
13	14.574	15030	380	BB	0.520	8.1888

Total area = 183539

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

Method:	TO-11A		1361901				SDG:	213619	
MisclnfoVol							EAS ID:	01	
Date:	11/20/13						File Name:	1361901A	
Run Method:	TO11.MTH						Sample ID:	13-SV-15	
Quant Method	TO11.MTH	MDL FAC	1				Date Sampled:	11/14/13	Time: 13:49
Cal Update:	11/12/2013	SF:	2				Date Received:	11/19/13	Time: 10:00
Template:	WNK_TO11						Date Extracted:	11/20/13	Time: 17:15
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3		Date Analyzed:	11/20/13	Time: 18:25
Analyst	SH	Temp	25.0				SamType:	SA	
Can Factor:	1.00		HPT				Air Volume:	32.00	
							Can (Vial) No:	CART	
							QCbatch:	112013-HPT	
							EXT Volume:	4 ml	
		Type	TRG				Matrix:	AA	

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.32	0	63523

	STD	0.60	ug/ml
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL:	TO11.MTH												**SDG:**	**213619**	
Run Method:	TO11.MTH												**Laboratory Number:**	**01**	
Calibration Method	E18			Initial Calibration											
Can Factor:	1.00														
Air Volume:	32										Gas Constant				
Base Volume	1000	Liters									T	25.0			
Combined Factor	31.25										P	**760**			
Gas Constant:	24.462				MDL Factor	1					MV	24.4622			
Unit Factor (ppbv)	1000	UG		UG/M3											
Sig Figs	2	ConCal	InitCal						(1)	(2)	Calc	Calc	Calc	Calc	
	M.W.	Raw	Raw	ResultV	Result	ResultV	Result	ResultQ	MDL	RL	MDL	MDL	RL	RL	
Compound		UG/SAM	UG/SAM	UG	UG/M3	UG	UG/M3	UG/M3		UG	UG	UG/M3	UG	UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361901A.D
Operator : KS
Instrument : HPT
Sample Name : 13-SV-15
Run Time Bar Code:
Acquired on : 20 Nov 13 06:25 PM
Report Created on: 20 Nov 13 06:58 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361901A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.380	4162	630	BV	0.110	0.1130
2	1.579	18040	1263	VV	0.209	0.4899
3	1.903	6475	681	VV	0.129	0.1758
4	2.391	3647375	234557	VV	0.215	99.0448
5	5.054	4311	236	BB S	0.254	0.1171
6	13.010	2186	76	BB	0.393	0.0594

Total area = 3682549

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

Method:	TO-11A	1361902			SDG:	213619	
MiscInfo-Vol					EAS ID:	02	
Date:	11/20/13				File Name:	1361902A	
Run Method:	TO11.MTH				Sample ID:	14B-SV	
Quant Method	TO11.MTH	MDL FAC	1		Date Sampled:	11/14/13	Time: 12:20
Cal Update:	11/12/2013	SF:	2		Date Received:	11/19/13	Time: 10:00
Template:	WNK_TO11				Date Extracted:	11/20/13	Time: 17:15
Instrument:	HPLC	UnitDil:	1000	UG UG/M3	Date Analyzed:	11/20/13	Time: 19:13
Analyst	SH	Temp	25.0		SamType:	SA	
Can Factor:	1.00		HPT		Air Volume:	32.00	
					Can (Vial) No:	CART	
					QCbatch:	112013-HPT	
					EXT Volume:	4 ml	
		Type	TRG		Matrix:	AA	

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.30	7915	63523

STD	0.60	ug/ml
	E18	
Initial Cal	E18	
Con Cal	D18	

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL:	TO11.MTH												**SDG:**	**213619**	
Run Method:	TO11.MTH												**Laboratory Number:**	**02**	
Calibration Method	E18			Initial Calibration											
Can Factor:	1.00														
Air Volume:	32										Gas Constant				
Base Volume	1000	Liters									T	25.0			
Combined Factor	31.25										P	**760**			
Gas Constant:	24.462				MDL Factor	1					MV	24.4622			
Unit Factor (ppbv)	1000	UG		UG/M3											
Sig Figs	2	ConCal	InitCal						(1)	(2)	Calc	Calc	Calc	Calc	
	M.W.	Raw	Raw	ResultV	Result	ResultV	Result	ResultQ	MDL	RL	MDL	MDL	RL	RL	
Compound		UG/SAM	UG/SAM	UG	UG/M3	UG	UG/M3	UG/M3		UG	UG	UG/M3	UG	UG/M3	Flag
Formaldehyde	30.0	0.07	0.06	0.26	8.10	0.26	8.10	8.10	**0.050**	0.120	0.05	1.56	0.120	3.75	

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361902A.D
Operator : KS
Instrument : HPT
Sample Name : 14-B-SV
Run Time Bar Code:
Acquired on : 20 Nov 13 07:13 PM
Report Created on: 20 Nov 13 07:36 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361902A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.363	10688	603	BV	0.237	0.2953
2	2.389	3308832	214809	VV	0.218	91.4130
3	3.296	7915	342	VV	0.305	0.2187
4	4.029	14259	670	VV	0.291	0.3939
5	5.076	261195	14571	HB S	0.261	7.2160
6	7.230	7775	346	VV	0.315	0.2148
7	9.938	5320	141	BB	0.495	0.1470
8	17.429	3669	111	BV	0.438	0.1014

Total area = 3619651

QUANTITATION REPORT

								SDG:	213619		
EPA Method TO-11A Modified HPLC								EAS ID:	03		
Method:	TO-11A		1361903					File Name:	1361903A		
MiscInfo-Vol								Sample ID:	12-SV-15		
Date:	11/20/13							Date Sampled:	11/14/13	Time:	11:57
Run Method:	TO11.MTH							Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1					Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2					Date Analyzed:	11/20/13	Time:	19:38
Template:	WNK_TO11							SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3			Air Volume:	32.00		
Analyst	SH	Temp	25.0					Can (Vial) No:	CART		
Can Factor:	1.00		HPT					QCbatch:	112013-HPT		
								EXT Volume:	4 ml		
		Type	TRG					Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.30	0	63523

	STD	0.60	ug/ml
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL: TO11.MTH
Run Method: TO11.MTH
Calibration Method E18
Can Factor: 1.00
Air Volume: 32
Base Volume 1000 Liters
Combined Factor 31.25
Gas Constant: 24.462
Unit Factor (ppbv) 1000 UG UG/M3
Sig Figs 2 ConCal InitCal

Initial Calibration

MDL Factor 1

SDG: **213619**
Laboratory Number: **03**

Gas Constant
T 25.0
P **760**
MV 24.4622

Compound	M.W.	Raw UG/SAM	Raw UG/SAM	ResultV UG	Result UG/M3	ResultV UG	Result UG/M3	ResultQ UG/M3	(1) MDL	(2) RL UG	Calc MDL UG	Calc MDL UG/M3	Calc RL UG	Calc RL UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361903A.D
Operator : KS
Instrument : HPT
Sample Name : 12-SV-15
Run Time Bar Code:
Acquired on : 20 Nov 13 07:38 PM
Report Created on: 20 Nov 13 07:58 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361903A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.369	9752	651	BV	0.209	0.2671
2	2.393	3629749	235612	VV	0.212	99.4040
3	4.016	2530	120	VB	0.276	0.0693
4	5.075	6696	367	BB S	0.255	0.1834
5	7.215	2787	109	BB	0.357	0.0763

Total area = 3651514

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

								SDG:	213619		
								EAS ID:	04		
Method:	TO-11A		1361904					File Name:	1361904A		
MiscInfo-Vol								Sample ID:	2-SV-5		
Date:	11/20/13							Date Sampled:	11/14/13	Time:	10:18
Run Method:	TO11.MTH							Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1					Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2					Date Analyzed:	11/20/13	Time:	19:59
Template:	WNK_TO11							SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3			Air Volume:	32.00		
Analyst	SH	Temp	25.0					Can (Vial) No:	CART		
Can Factor:	1.00		HPT					QCbatch:	112013-HPT		
								EXT Volume:	4 ml		
		Type	TRG					Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.30	0	63523

	STD	0.60	ug/ml
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL:	TO11.MTH												**SDG:**	**213619**	
Run Method:	TO11.MTH												**Laboratory Number:**	**04**	
Calibration Method	E18			Initial Calibration											
Can Factor:	1.00														
Air Volume:	32											Gas Constant			
Base Volume	1000	Liters										T	25.0		
Combined Factor	31.25											P	**760**		
Gas Constant:	24.462				MDL Factor	1						MV	24.4622		
Unit Factor (ppbv)	1000	UG		UG/M3											
Sig Figs	2	ConCal	InitCal						(1)	(2)	Calc	Calc	Calc	Calc	
	M.W.	Raw	Raw	ResultV	Result	ResultV	Result	ResultQ	MDL	RL	MDL	MDL	RL	RL	
Compound		UG/SAM	UG/SAM	UG	UG/M3	UG	UG/M3	UG/M3		UG	UG	UG/M3	UG	UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361904A.D
Operator : KS
Page Number : 1
Instrument : HPT
Vial Number :
Sample Name : 2-SV-5
Injection Number :
Run Time Bar Code:
Sequence Line :
Acquired on : 20 Nov 13 07:59 PM
Instrument Method: TO11.MTH
Report Created on: 20 Nov 13 08:20 PM
Analysis Method : TO11.MTH
Sample Info : AMEC

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361904A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.370	9228	605	BV	0.215	0.2609
2	1.907	1777	192	VV	0.154	0.0502
3	2.391	3501332	228506	VV	0.212	98.9762
4	5.069	14948	852	BB S	0.293	0.4225
5	7.217	2748	133	BB	0.290	0.0777
6	9.912	2962	106	BB	0.347	0.0837
7	13.052	4555	168	VV	0.344	0.1288

Total area = 3537549

QUANTITATION REPORT

								SDG:	213619		
EPA Method TO-11A Modified HPLC								EAS ID:	05		
Method:	TO-11A		1361905					File Name:	1361905A		
MiscInfo-Vol								Sample ID:	3B-SV		
Date:	11/20/13							Date Sampled:	11/14/13	Time:	14:35
Run Method:	TO11.MTH							Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1					Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2					Date Analyzed:	11/20/13	Time:	20:21
Template:	WNK_TO11							SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3			Air Volume:	32.00		
Analyst	SH	Temp	25.0					Can (Vial) No:	CART		
Can Factor:	1.00		HPT					QCbatch:	112013-HPT		
								EXT Volume:	4 ml		
		Type	TRG					Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.29	6387	63523

STD	0.60	ug/ml	
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL: TO11.MTH
Run Method: TO11.MTH
Calibration Method E18
Can Factor: 1.00
Air Volume: 32
Base Volume 1000 Liters
Combined Factor 31.25
Gas Constant: 24.462
Unit Factor (ppbv) 1000 UG UG/M3
Sig Figs 2 ConCal InitCal

Initial Calibration

MDL Factor 1

SDG: **213619**
Laboratory Number: **05**

Gas Constant
T 25.0
P **760**
MV 24.4622

Compound	M.W.	Raw UG/SAM	Raw UG/SAM	ResultV UG	Result UG/M3	ResultV UG	Result UG/M3	ResultQ UG/M3	(1) MDL	(2) RL UG	Calc MDL UG	Calc MDL UG/M3	Calc RL UG	Calc RL UG/M3	Flag
Formaldehyde	30.0	0.06	0.05	0.21	6.53	0.21	6.53	6.53	**0.050**	0.120	0.05	1.56	0.120	3.75	

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361905A.D
Operator : KS
Instrument : HPT
Sample Name : 3B-SV
Run Time Bar Code:
Acquired on : 20 Nov 13 08:21 PM
Report Created on: 20 Nov 13 08:42 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361905A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.377	9552	562	BV	0.233	0.2669
2	1.907	2001	237	VV	0.141	0.0559
3	2.392	3440696	225869	VV	0.212	96.1234
4	3.294	6387	287	VV	0.284	0.1784
5	4.026	10703	601	VB	0.256	0.2990
6	5.067	105562	5970	BB S	0.250	2.9491
7	7.223	4557	154	BB	0.404	0.1273

Total area = 3579458

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

						SDG:	213619		
						EAS ID:	06		
Method:	TO-11A		1361906			File Name:	1361906A		
MiscInfo-Vol						Sample ID:	10L-SV		
Date:	11/20/13					Date Sampled:	11/14/13	Time:	15:55
Run Method:	TO11.MTH					Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1			Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2			Date Analyzed:	11/20/13	Time:	20:43
Template:	WNK_TO11					SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3	Air Volume:	32.00		
Analyst	SH	Temp	25.0			Can (Vial) No:	CART		
Can Factor:	1.00		HPT			QCbatch:	112013-HPT		
						EXT Volume:	4 ml		
		Type	TRG			Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.27	6490	63523

STD	0.60	ug/ml	
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL:	TO11.MTH												**SDG:**	**213619**	
Run Method:	TO11.MTH												**Laboratory Number:**	**06**	
Calibration Method	E18			Initial Calibration											
Can Factor:	1.00														
Air Volume:	32										Gas Constant				
Base Volume	1000	Liters									T	25.0			
Combined Factor	31.25										P	**760**			
Gas Constant:	24.462				MDL Factor	1					MV	24.4622			
Unit Factor (ppbv)	1000	UG		UG/M3											
Sig Figs	2	ConCal	InitCal						(1)	(2)	Calc	Calc	Calc	Calc	
	M.W.	Raw	Raw	ResultV	Result	ResultV	Result	ResultQ	MDL	RL	MDL	MDL	RL	RL	
Compound		UG/SAM	UG/SAM	UG	UG/M3	UG	UG/M3	UG/M3		UG	UG	UG/M3	UG	UG/M3	Flag
Formaldehyde	30.0	0.06	0.05	0.21	6.64	0.21	6.64	6.64	**0.050**	0.120	0.05	1.56	0.120	3.75	

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361906A.D
Operator : KS
Instrument : HPT
Sample Name : 10L-SV
Run Time Bar Code:
Acquired on : 20 Nov 13 08:43 PM
Report Created on: 20 Nov 13 09:03 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361906A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.374	9355	600	BV	0.218	0.2470
2	2.389	3464165	227077	VV	0.211	91.4784
3	3.273	6490	306	VV	0.273	0.1714
4	4.022	38077	2087	VV	0.255	1.0055
5	5.060	257431	14405	HB S	0.253	6.7980
6	7.219	6568	277	VV	0.326	0.1734
7	9.901	637	39	BV	0.213	0.0168
8	17.253	4144	128	BV	0.424	0.1094

Total area = 3786867

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

						SDG:	213619		
						EAS ID:	07		
Method:	TO-11A		1361907			File Name:	1361907A		
MiscInfo-Vol						Sample ID:	8-SV-3		
Date:	11/20/13					Date Sampled:	11/15/13	Time:	11:18
Run Method:	TO11.MTH					Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1			Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2			Date Analyzed:	11/20/13	Time:	21:04
Template:	WNK_TO11					SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3	Air Volume:	32.00		
Analyst	SH	Temp	25.0			Can (Vial) No:	CART		
Can Factor:	1.00		HPT			QCbatch:	112013-HPT		
						EXT Volume:	4 ml		
		Type	TRG			Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.27	0	63523

STD	0.60	ug/ml	
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL: TO11.MTH
Run Method: TO11.MTH
Calibration Method E18
Can Factor: 1.00
Air Volume: 32
Base Volume 1000 Liters
Combined Factor 31.25
Gas Constant: 24.462
Unit Factor (ppbv) 1000 UG UG/M3
Sig Figs 2 ConCal InitCal

Initial Calibration

MDL Factor 1

SDG: **213619**
Laboratory Number: **07**

Gas Constant
T 25.0
P **760**
MV 24.4622

Compound	M.W.	Raw UG/SAM	Raw UG/SAM	ResultV UG	Result UG/M3	ResultV UG	Result UG/M3	ResultQ UG/M3	(1) MDL	(2) RL UG	Calc MDL UG	Calc MDL UG/M3	Calc RL UG	Calc RL UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

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Area Percent Report

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Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361907A.D
Operator : KS
Page Number : 1
Instrument : HPT
Vial Number :
Sample Name : 8-SV-3
Injection Number :
Run Time Bar Code:
Sequence Line :
Acquired on : 20 Nov 13 09:04 PM
Instrument Method: TO11.MTH
Report Created on: 20 Nov 13 09:25 PM
Analysis Method : TO11.MTH
Sample Info : AMEC

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361907A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.378	8534	519	BV	0.229	0.2388
2	2.390	3543303	230554	VV	0.215	99.1552
3	4.027	3917	200	VB	0.268	0.1096
4	5.068	13396	773	BB S	0.248	0.3749
5	7.475	4342	179	BB	0.334	0.1215

Total area = 3573491

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QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

								SDG:	213619		
								EAS ID:	08		
Method:	TO-11A		1361908					File Name:	1361908A		
MiscInfo-Vol								Sample ID:	6-SV-15		
Date:	11/20/13							Date Sampled:	11/14/13	Time:	16:56
Run Method:	TO11.MTH							Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1					Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2					Date Analyzed:	11/20/13	Time:	21:26
Template:	WNK_TO11							SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3			Air Volume:	32.00		
Analyst	SH	Temp	25.0					Can (Vial) No:	CART		
Can Factor:	1.00		HPT					QCbatch:	112013-HPT		
								EXT Volume:	4 ml		
		Type	TRG					Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.27	0	63523

STD	0.60	ug/ml	
	E18		
Initial Cal	E18		
Con Cal	D18		

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL: TO11.MTH
Run Method: TO11.MTH
Calibration Method E18
Can Factor: 1.00
Air Volume: 32
Base Volume 1000 Liters
Combined Factor 31.25
Gas Constant: 24.462
Unit Factor (ppbv) 1000 UG
Sig Figs 2 ConCal InitCal

Initial Calibration

MDL Factor 1

UG/M3

SDG: **213619**
Laboratory Number: **08**

Gas Constant
T 25.0
P **760**
MV 24.4622

Compound	M.W.	Raw UG/SAM	Raw UG/SAM	ResultV UG	Result UG/M3	ResultV UG	Result UG/M3	ResultQ UG/M3	(1) MDL	(2) RL UG	Calc MDL UG	Calc MDL UG/M3	Calc RL UG	Calc RL UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361908A.D
Operator : KS
Instrument : HPT
Sample Name : 6-SV-15
Run Time Bar Code:
Acquired on : 20 Nov 13 09:26 PM
Report Created on: 20 Nov 13 09:46 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361908A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.377	8438	548	BV	0.216	0.2399
2	1.908	1654	193	VV	0.143	0.0470
3	2.391	3504488	229836	VV	0.212	99.6504
4	5.069	2204	130	BB S	0.230	0.0627

Total area = 3516784

QUANTITATION REPORT

						SDG:	213619		
EPA Method TO-11A Modified HPLC						EAS ID:	09		
Method:	TO-11A		1361909			File Name:	1361909A		
MiscInfo-Vol						Sample ID:	60-SV-15		
Date:	11/20/13					Date Sampled:	11/14/13	Time:	16:54
Run Method:	TO11.MTH					Date Received:	11/19/13	Time:	10:00
Quant Method	TO11.MTH	MDL FAC	1			Date Extracted:	11/20/13	Time:	17:15
Cal Update:	11/12/2013	SF:	2			Date Analyzed:	11/20/13	Time:	21:48
Template:	WNK_TO11					SamType:	SA		
Instrument:	HPLC	UnitDil:	1000	UG	UG/M3	Air Volume:	32.00		
Analyst	SH	Temp	25.0			Can (Vial) No:	CART		
Can Factor:	1.00		HPT			QCbatch:	112013-HPT		
						EXT Volume:	4 ml		
		Type	TRG			Matrix:	AA		

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.27	0	63523

STD	0.60	ug/ml
	E18	
Initial Cal	E18	
Con Cal	D18	

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL:	TO11.MTH												**SDG:**	**213619**	
Run Method:	TO11.MTH												**Laboratory Number:**	**09**	
Calibration Method	E18			Initial Calibration											
Can Factor:	1.00														
Air Volume:	32										Gas Constant				
Base Volume	1000	Liters									T	25.0			
Combined Factor	31.25										P	**760**			
Gas Constant:	24.462				MDL Factor	1					MV	24.4622			
Unit Factor (ppbv)	1000	UG		UG/M3											
Sig Figs	2	ConCal	InitCal						(1)	(2)	Calc	Calc	Calc	Calc	
	M.W.	Raw	Raw	ResultV	Result	ResultV	Result	ResultQ	MDL	RL	MDL	MDL	RL	RL	
Compound		UG/SAM	UG/SAM	UG	UG/M3	UG	UG/M3	UG/M3		UG	UG	UG/M3	UG	UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361909A.D
Operator : KS
Page Number : 1
Instrument : HPT
Vial Number :
Sample Name : 60-SV-15
Injection Number :
Run Time Bar Code:
Sequence Line :
Acquired on : 20 Nov 13 09:48 PM
Instrument Method: TO11.MTH
Report Created on: 20 Nov 13 10:08 PM
Analysis Method : TO11.MTH
Sample Info : AMEC

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361909A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.370	9882	587	BV	0.233	0.2656
2	1.903	1956	228	VV	0.143	0.0526
3	2.389	3701314	242126	VV	0.216	99.4930
4	4.013	3245	157	VB	0.277	0.0872
5	5.065	3778	213	BB S	0.258	0.1015

Total area = 3720175

QUANTITATION REPORT

EPA Method TO-11A Modified HPLC

Method:	TO-11A	1361910			SDG:	213619	
MiscInfo-Vol					EAS ID:	10	
Date:	11/20/13				File Name:	1361910A	
Run Method:	TO11.MTH				Sample ID:	BLANK	
Quant Method	TO11.MTH	MDL FAC	1		Date Sampled:	11/14/13	Time: NA
Cal Update:	11/12/2013	SF:	2		Date Received:	11/19/13	Time: 10:00
Template:	WNK_TO11				Date Extracted:	11/20/13	Time: 17:15
Instrument:	HPLC	UnitDil:	1000	UG UG/M3	Date Analyzed:	11/20/13	Time: 22:10
Analyst	SH	Temp	25.0		SamType:	SA	
Can Factor:	1.00		HPT		Air Volume:	32.00	
					Can (Vial) No:	CART	
					QCbatch:	112013-HPT	
					EXT Volume:	4 ml	
		Type	TRG		Matrix:	AA	

CAS#	Compound	n	Type	STD RT	RT LOW	RT HIGH	ADJ RT	SAM RT	Sample Area	Standard Area
50-00-0	Formaldehyde	1	TRG	3.32	2.78	3.86		3.27	0	63523

STD	0.60	ug/ml
	E18	
Initial Cal	E18	
Con Cal	D18	

CALCULATIONS

EPA Method TO-11A Modified HPLC

RL:	TO11.MTH												**SDG:**	**213619**	
Run Method:	TO11.MTH												**Laboratory Number:**	**10**	
Calibration Method	E18			Initial Calibration											
Can Factor:	1.00														
Air Volume:	32										Gas Constant				
Base Volume	1000	Liters									T	25.0			
Combined Factor	31.25										P	**760**			
Gas Constant:	24.462				MDL Factor	1					MV	24.4622			
Unit Factor (ppbv)	1000	UG		UG/M3											
Sig Figs	2	ConCal	InitCal						(1)	(2)	Calc	Calc	Calc	Calc	
	M.W.	Raw	Raw	ResultV	Result	ResultV	Result	ResultQ	MDL	RL	MDL	MDL	RL	RL	
Compound		UG/SAM	UG/SAM	UG	UG/M3	UG	UG/M3	UG/M3		UG	UG	UG/M3	UG	UG/M3	Flag
Formaldehyde	30.0	0.00	0.00	0.00	0.00	0.05	1.56		**0.050**	0.120	0.05	1.56	0.120	3.75	ND

Area Percent Report

Data File Name : C:\GCCHEM\1\DATA\11203HPT\1361910A.D
Operator : KS
Instrument : HPT
Sample Name : BLANK
Run Time Bar Code:
Acquired on : 20 Nov 13 10:10 PM
Report Created on: 20 Nov 13 10:31 PM
Sample Info : AMEC

Page Number : 1
Vial Number :
Injection Number :
Sequence Line :
Instrument Method: TO11.MTH
Analysis Method : TO11.MTH

Sig. 1 in C:\GCCHEM\1\DATA\11203HPT\1361910A.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	1.374	7823	573	BV	0.198	0.2305
2	1.902	1619	160	VV	0.143	0.0477
3	2.385	3378714	224595	VV	0.210	99.5716
4	5.060	5094	290	BB S	0.247	0.1501

Total area = 3393249

Section 5 SDG Logs Information

This section contains the Data Package information related to the Sample Delivery Group (SDG) for this project.

Items provided in Data Package:

Run Logs, Sample Preparation Logs

Shipping Receipts and Correspondence

Standard Calibration Certificates

DAILY ANALYTICAL BATCH FORM

DAB 112013 - HPT

ANALYST REPORT

Method TO-11 Chemist KL/KNK

	Passed/NA	Out of Limits
Instrument Tune	☒	☐
GC/MS BFBTune	☒	☐
Continuing Calibration	☒	☐
Instrument Blank	☒	☐
Laboratory Control Spike	☒	☐
Laboratory Control Spike Dup	☒	☐

Internal Standard Response Limits:

IS #1: _____ -- _____

IS #2: _____ -- _____

IS #3: _____ -- _____

Run Comments: _____

Analyst Certification

Out of Limits QC Approval _____

DATA PROCESSING

SDG 213619 Lab ID 01-10

QEDITED _____ EART Sheet(s) _____

	Processed	Checked	
BFB Tune (if needed)	☒	☒	Client IDs, Load Volumes, Dates, and Times
Continuing Calibration	☒	☒	Logbook completely filled out and correct
Method Blank	☒	☒	QC Exceptions noted on Corrective Action Form
Samples	☒	☒	Copies of all associated DAB Items appear
Laboratory Control Spike and Duplicate	☒		

Data Processing Chemist Certification

☒ Ready for Review

DATA REVIEW

	Checked	Checked	
BFB Tune (if needed)	☒	☒	Client Ids, load volumes, dates, and times
Continuing Calibration	☒	☒	Logbook completely filled out and correct
Method Blank	☒	☒	QC Exceptions noted on Corrective Action Form
Samples	☒	☒	Copies of all associated DAB Items appear
Laboratory Control Spike and Duplicate	☒		

Data Review Comments: _____

Data Review Chemist Certification

☒ Ready for Project Folder

FORM
DAB.v11

Daily Analytical Batch

DAB 112013-HPT

HPT

DAB	RUN	INST:	TYPE	SDG	ID	File ID	Can	Description	Client	Vol	Tech	Qual	Method	Comments	Qedit	Proc:
112013-HPT	01	HPT	STD			C11203A		ST61265	0.6 UG/ML TO11	20.0	KL	NG	TO11	WRG WAVEL		
112013-HPT	02	HPT	STD			C11203B		ST61265	0.6 UG/ML TO11	20.0	KL	NG	TO11	WRG WAVEL		
112013-HPT	03	HPT	STD			C11203C		ST61265	0.6 UG/ML TO11	20.0	KL	OK	TO11			
112013-HPT	04	HPT	STD			C11203D		ST61265	0.6 UG/ML TO11	20.0	KL		TO11			
112013-HPT	05	HPT	SPK			QC11203A		ST61265	0.6 UG/ML TO11	20.0	KL		TO11			
112013-HPT	06	HPT	SPK			QC11203B		ST61265	0.6 UG/ML TO11	20.0	KL		TO11			
112013-HPT	07	HPT	BLK			B11203A		METHOD BLANK	B02273A	20.0	KL		TO11			
112013-HPT	08	HPT	BLK			B11203B		METHOD BLANK	B02273A	20.0	KS		TO11			
112013-HPT	09	HPT	SA	213619	01	1361901A	DNP	13-SV-15	AMEC	20.0	KS		TO11			
112013-HPT	10	HPT	SA	213619	02	1361902A	DNP	14B-SV	AMEC	20.0	KS		TO11			
112013-HPT	11	HPT	SA	213619	03	1361903A	DNP	12-SV-15	AMEC	20.0	KS		TO11			
112013-HPT	12	HPT	SA	213619	04	1361904A	DNP	2-SV-5	AMEC	20.0	KS		TO11			
112013-HPT	13	HPT	SA	213619	05	1361905A	DNP	3B-SV	AMEC	20.0	KS		TO11			
112013-HPT	14	HPT	SA	213619	06	1361906A	DNP	10L-SV	AMEC	20.0	KS		TO11			
112013-HPT	15	HPT	SA	213619	07	1361907A	DNP	8-SV-3	AMEC	20.0	KS		TO11			
112013-HPT	16	HPT	SA	213619	08	1361908A	DNP	6-SV-15	AMEC	20.0	KS		TO11			
112013-HPT	17	HPT	SA	213619	09	1361909A	DNP	60-SV-15	AMEC	20.0	KS		TO11			
112013-HPT	18	HPT	SA	213619	10	1361910A	DNP	BLANK	AMEC	20.0	KS		TO11			

REVIEWED

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	1

Client: AMEC

Client ID: 13-SV-15

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 1:49:00 PM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	2

Client: AMEC

Client ID: 14B-SV

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 12:20:00 PM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	3

Client: AMEC

Client ID: 12-SV-15

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 11:57:00 AM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	4

Client: AMEC

Client ID: 2-SV-5

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 10:18:00 AM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	5

Client: AMEC

Client ID: 3B-SV

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 2:35:00 PM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	6

Client: AMEC

Client ID: 10L-SV

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 3:55:00 PM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/29/2013	213619	7

Client: AMEC

Client ID: 8-SV-3

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/15/2013 Time: 11:18:00 AM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	8

Client: AMEC

Client ID: 6-SV-15

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 4:56:00 PM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	9

Client: AMEC

Client ID: 60-SV-15

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time: 4:54:00 PM

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test: Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Laboratory Worksheet

Due:	Expires:		
11/17/2013	11/28/2013	213619	10

Client: AMEC

Client ID: Blank

Project Name: Wildomar Autumnwood Development

EAS Project: 16657 ID: 0 TAT Working: 3 Project Manager: Kristine King

Description:

MS Load Vol:

GCK Load Vol:

GCP Load Vol:

Initial Pressure: Final Pressure: Sampled: 11/14/2013 Time:

Gas: None Factor: Received: 11/19/2013 Time: 10:00:00 AM

Can Number: DNPH Sampling Time: Flow Rate:

FC Number: Sample Volume:

LABORATORY

Analytical Test:

Sample Location: Fridge

Instrument:	Item Description:	Holding Time:
HPT	EPA TO-11 Formaldehyde	14

Analysis Instructions

Sample Type:

Have Steve take a look at the samples before they are extracted. Extract ASAP. These are soil gas samples so they will be different then ambient air

Project QC: EAS QC Criteria

No Project Specific QC Requirements

Report Instructions

Report Types: HC and PDF

EDD Instructions

EDD Type: None

No Modifications to Standard EDD Format

Sample Receipt Notification

ENVIRONMENTAL
Analytical Service, Inc.
173 Cross Street, San Luis Obispo, CA 93401

Client Project Manager:	Joe Bahde	**EAS SDG Number:**	**213619**
Company:	AMEC	**Date Received:**	11/19/2013
Sample Event Date:	11/14/2013	**EAS Project/Quote Number:**	16657

Thank you for submitting samples to Environmental Analytical Service. Attached to this sample receipt notification are copies of your Chain of Custody forms signed by Sample Control. If there were any problems with the sample shipment they will be recorded in the Sample Control Case Narrative. Each batch of samples received is assigned a Sample Delivery Group (SDG). When contacting EAS please reference your SDG number.

In a couple of days Client Services will e-mail you an EAS Work Order that has the LIMS login information on your samples, including your field ID, the EAS sample ID, canister pressures, and the analytical tests requested for each sample. Please review this information to make sure it is correct.

Normal Turn Around Time is 10 working days from date of receipt of samples unless an expedited TAT was requested. If you need your report sooner then this, please contact us and we will try to accomodate your request.

EAS uses the method specified holding times. EPA TO-15 specifies a holding time for SUMMA canisters of 30 days, which is the holding time used by EAS. EAS pressurizes the canisters as soon as they are received so they will qualify for the 30 day holding time. If your project Project Plan specifies a canister holding time that is shorter than 30 days, please notify us as soon as possible. If you have questions on canister pressurization, dilution factors, holding times, or any other technical questions, please contact Dr. Steve Hoyt for assistance.

Sample Control Case Narrative

The samples were all received in good condition and with proper preservation.

Airbill:

797188892554

phone: (805) 781-3585

Contact Log

Full Name:	Joe Bahde	Ref Number:	19186
Company Name:	AMEC	Date:	01/15/14 14:10
Company:	AMEC	Contact Type	E-Mail from Client
Phone:		Assigned By:	Steve Hoyt
Project:	16657 PM	Assigned To:	Kristine King
SDG Number:	213619 Call Type: Call	Status:	Assigned
Shipping SR:	Log Contact Log	Priority	1 days

Summary:

Data Package for 213619

Thanks, I will have them start on it.

Steve
-----Original Message-----
From: Bahde, Joseph [mailto:Joseph.Bahde@amec.com]
Sent: Wednesday, January 15, 2014 1:01 PM
To: Steve Hoyt
Subject: RE: Revised Quote 16657.pdf

We have approval for preparing Level IV data package. Please proceed.

Joe

From: Steve Hoyt [mailto:stevehoyt@easlab.com]
Sent: Friday, December 13, 2013 3:41 PM
To: Bahde, Joseph
Subject: Revised Quote 16657.pdf

Joe,

Here is the revised quotation with the charge for the data package. I estimate that it will take about 2 or 3 days to generate the package.

ST61189 10µg/mL TCPP STD 8/8/13
Repeat ST61188 instructions with correction: RB
4.6µL ST61175
995.4µL Hexane Ether

ST61190 5µg/mL TCPP STD 8/8/13
Repeat ST61189 instructions with correction: RB
2.2µL ST61175
997.8µL Hexane Ether

ST61191 PAR DMDS STD 8/12/13

Spiked into 6L SUMMA Canister
DMDS 1.22g
Cyclohexane 0.160g

ST61192 SS
8/12/13

NOTEBOOK INSERT LABEL

T011/IP-6A Aldehyde/Ketone-DNPH Mix 47285-U
Lot: LB96211 EXP: OCT/2015 STORAGE: REFRIGERATE 1 x 1ml
DATE RECEIVED: 8/12/13
SUPELCO
Solutions within.™
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

ST61193 Albumin from bovine serum SS
Lot # SLBF5375V 8/12/13

ST61199 AUDIT Spike 8/14/13

200mL of ST61058 was spiked into a 6.0L can with 500µL of DI H_2O then pressurized to 60psi
can #758 cert can #6056

OKK

ST61200 AUDIT Spike 8/14/13

200mL of ST61058 was spiked into a 6.0L can with 500µL of DI H_2O, then pressurized to 60psi.
can #775 cert can #6056

OKK

ST61201 Argon Std 10% 8/15/13

Blue Scotty 14 vented to -30.0psig and pressured to atmospheric pressure 0psig. Cylinder was filled to 147psig with UHP Nitrogen Gauge 603003.

$$\frac{14.7 * 100}{147} = 10\%$$

ST61202 T011/IP-6A 1.2µg/mL calib. STD 8/19/13
800µL ST61192 Aldehyde/Ketone-DNPH Mix diluted to 10mL in Volumetric flask with acetonitrile (R60335)

ST61264 Working Siloxane Std 10/30/13
25 mL of ST61263 was spiked into a 1 L Tedlar Bag and filled w/ UHP Nitrogen.

100 mL of ST61019 was spiked into a 6L can with 1000 mL of DI H_2O and pressurized to 60 psi.
Can # 609 SS 11/1/13

200 mL of ST61019 was spiked into a 6L can with 1000 mL of DI H_2O and pressurized to 60 psi.
Can # 729 SS 11/1/13

ST61265 0.6 ug/mL TO11 STD KS
1:1 dilution of ST61202 in acetonitrile
(R60428)

ST61266 0.3 ug/mL TO11 STD KS
1:1 dilution of ST61265 in acetonitrile
(R60428)

Section 6 Chromatograms and Ion Spectra

This section contains the Level 4 Data Package information with the chromatograms, total ion chromatograms, and ion spectra. The information is presented in order of tune, continuing calibration, method blanks, laboratory control samples, initial calibration, and samples organized by Daily Analytical Batch (DAB).

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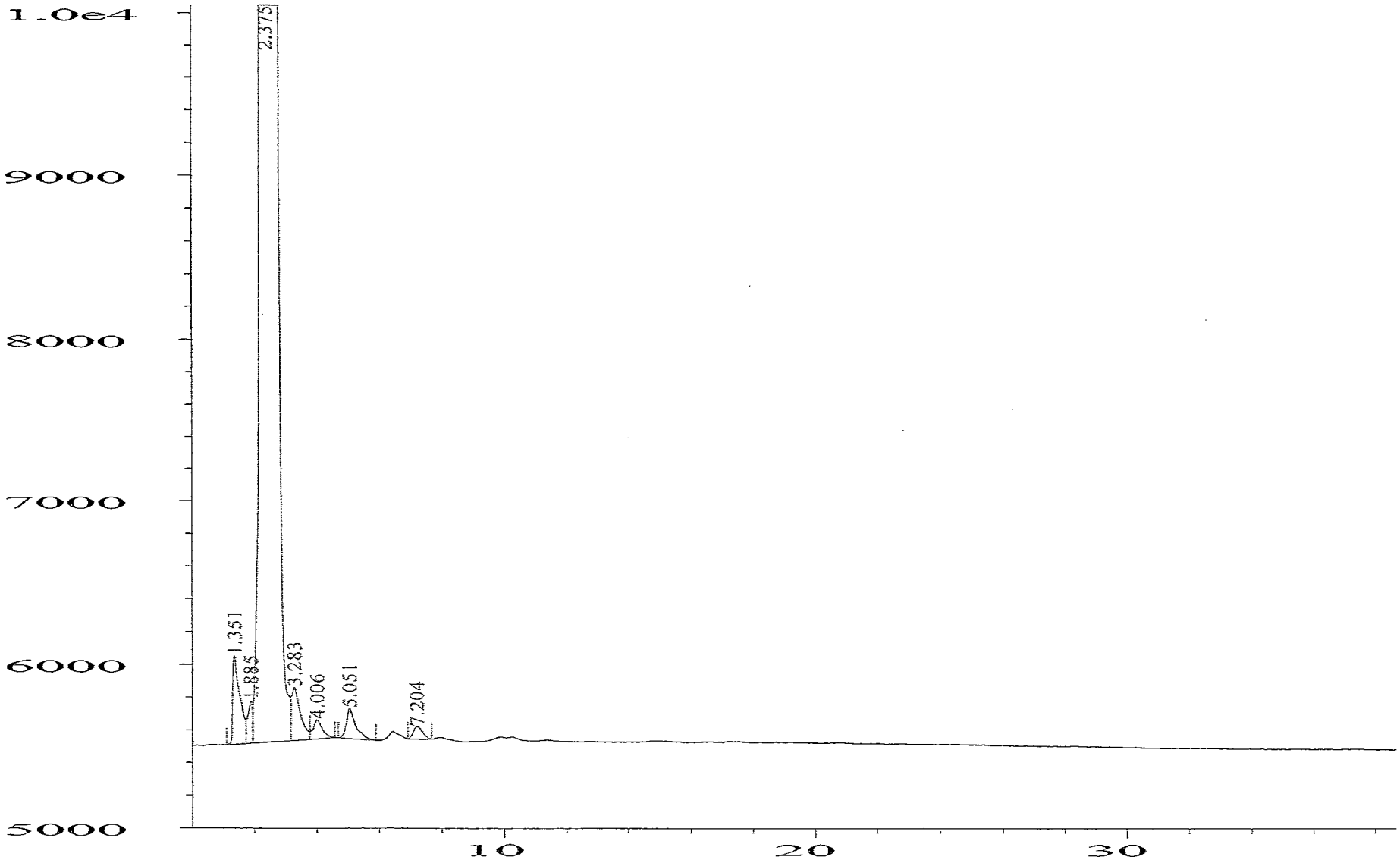

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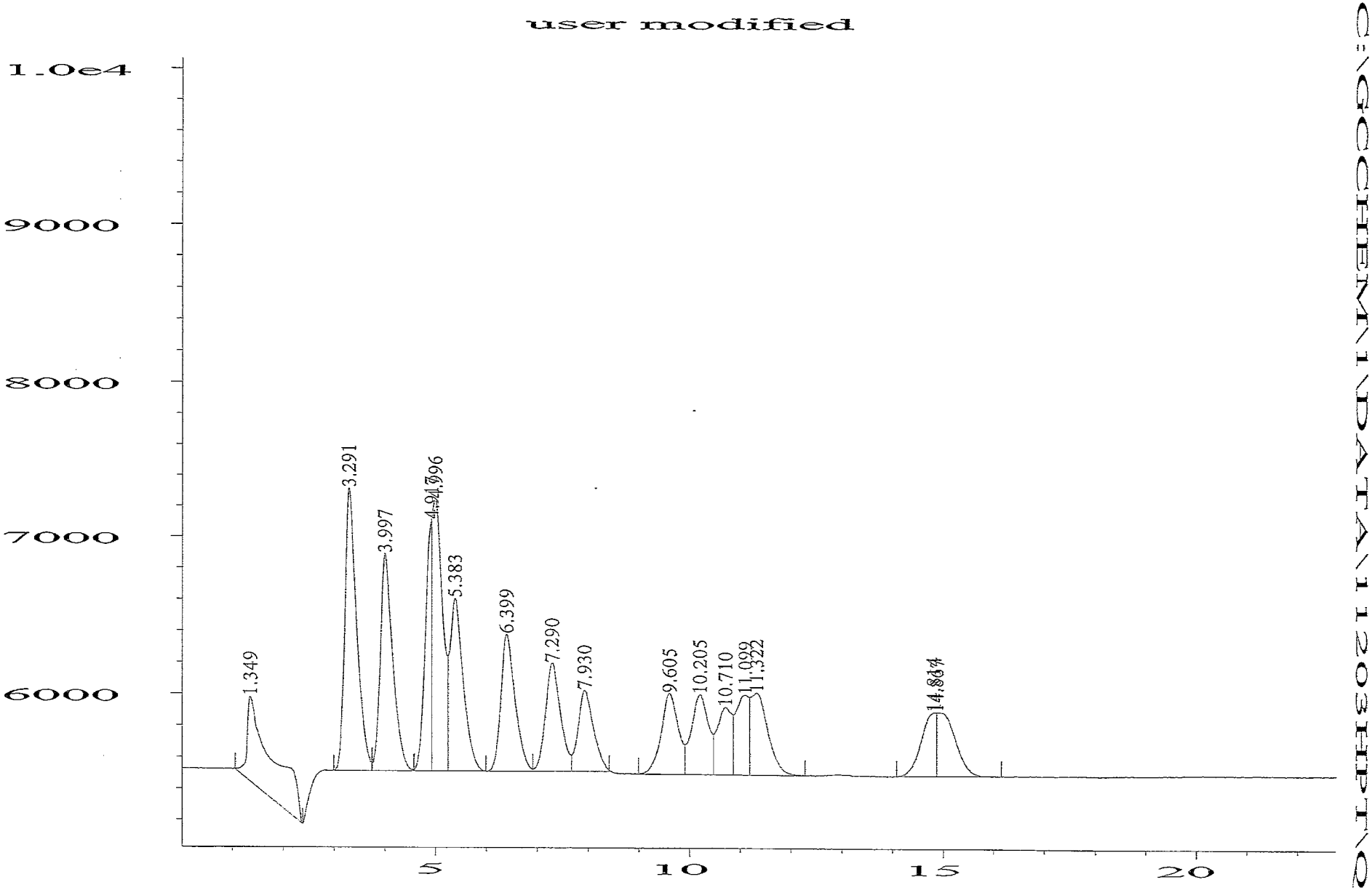

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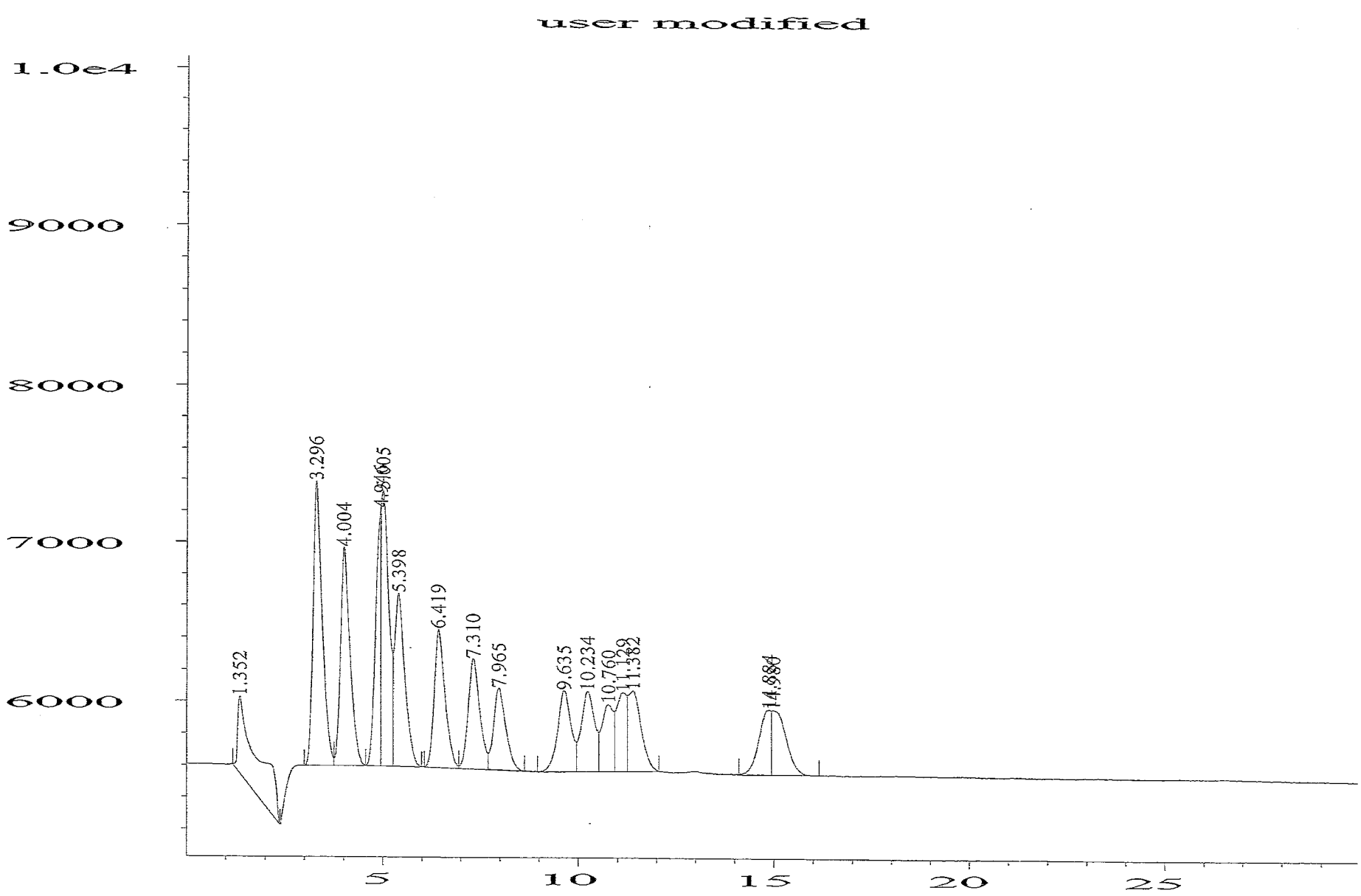

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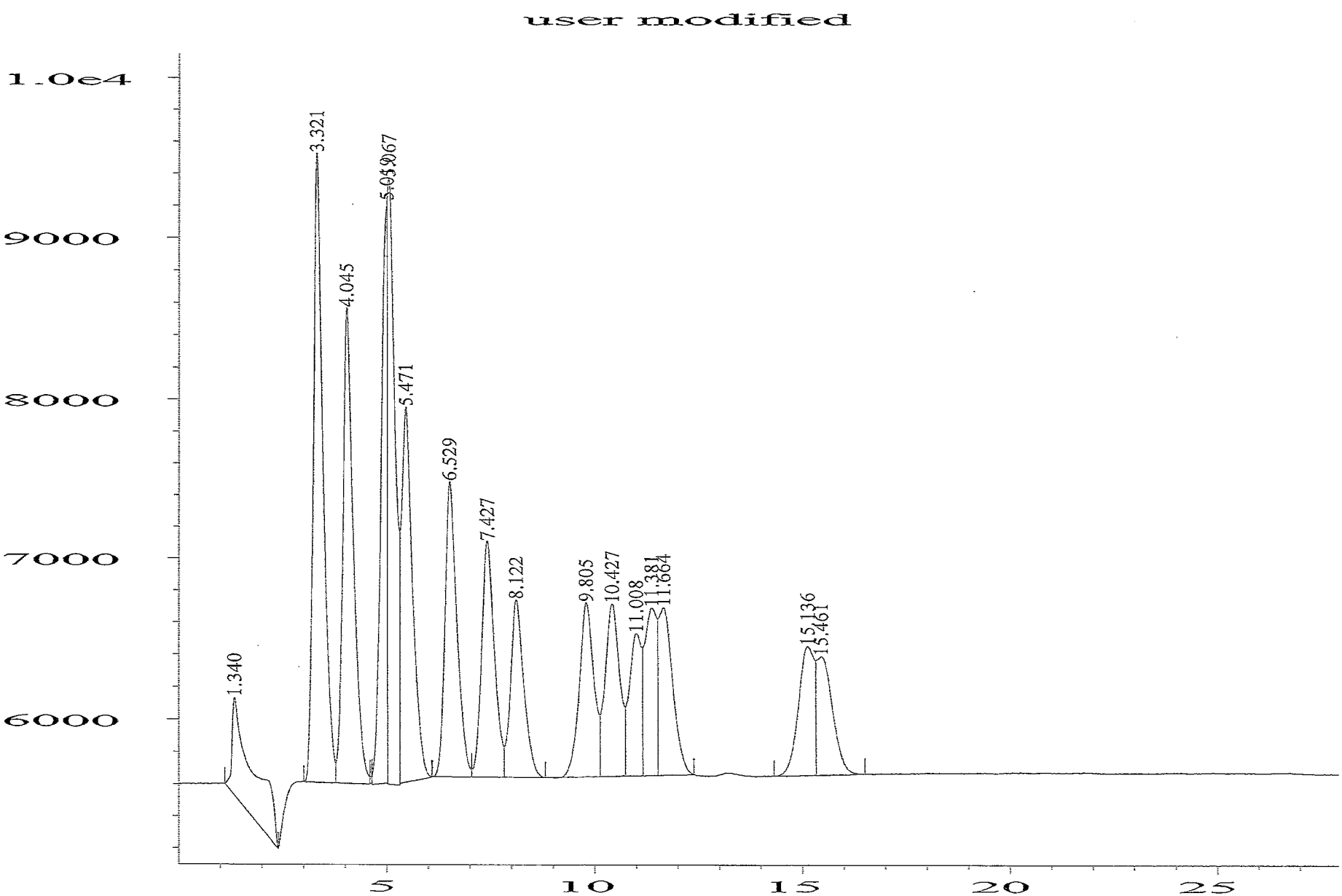

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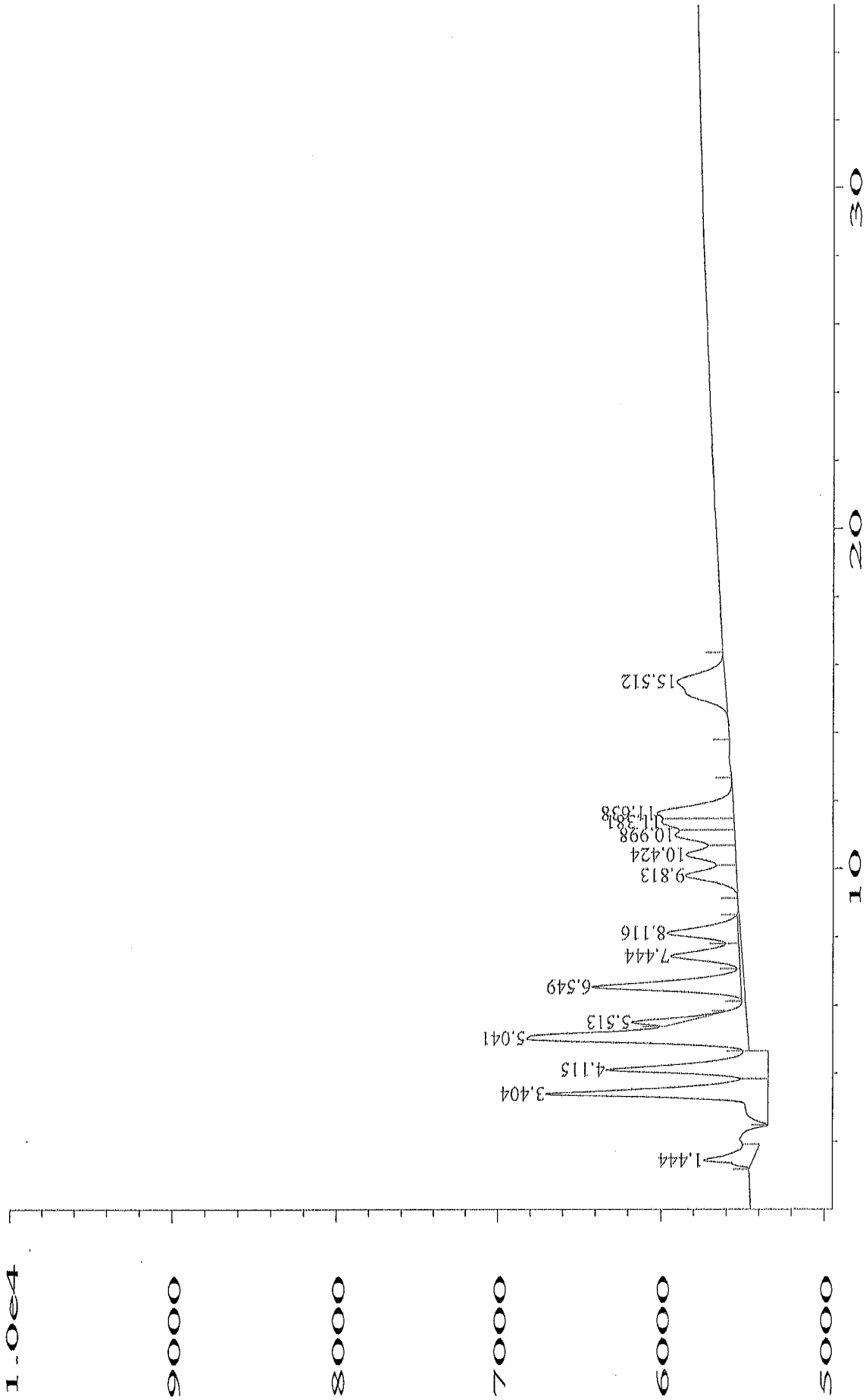

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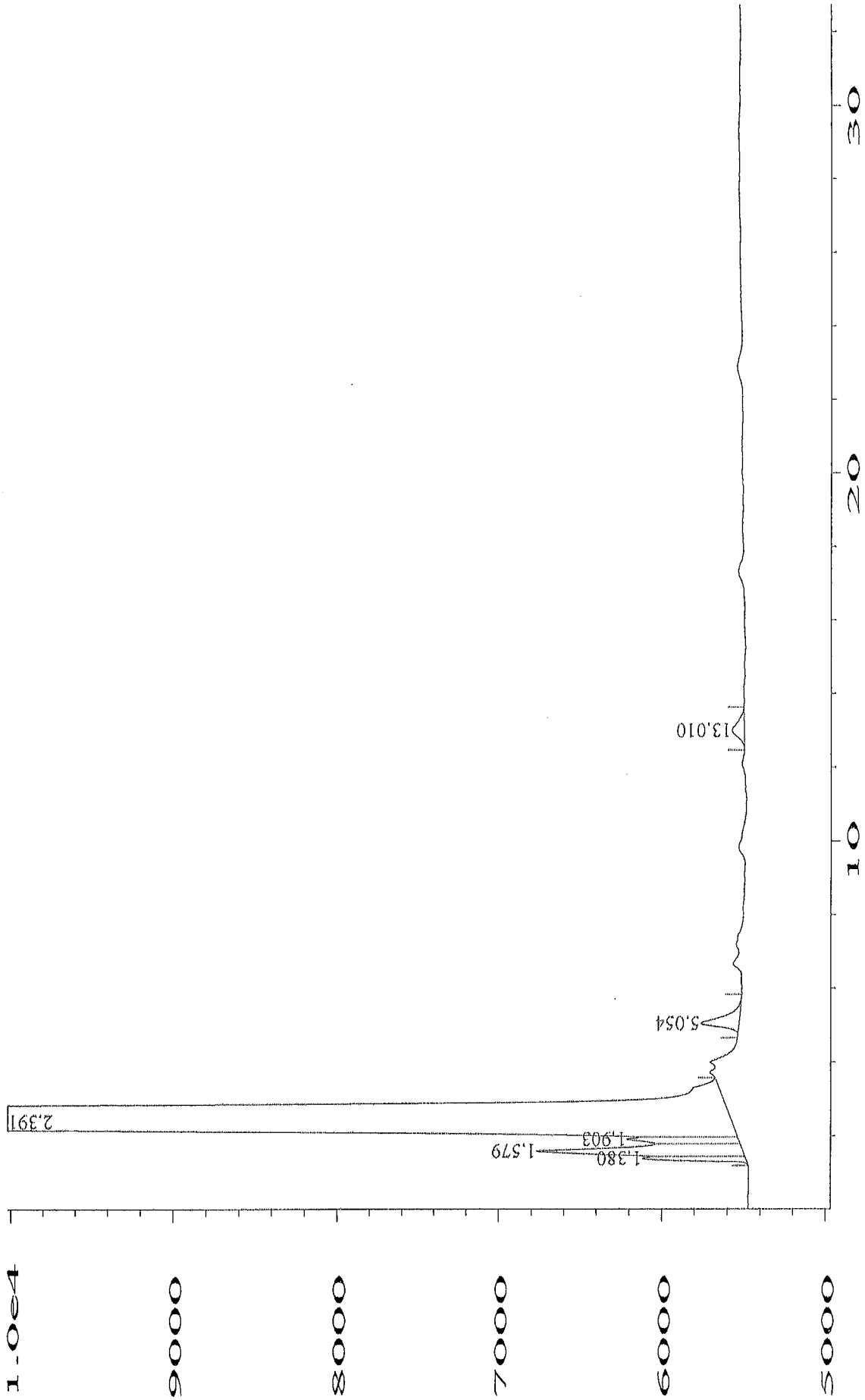

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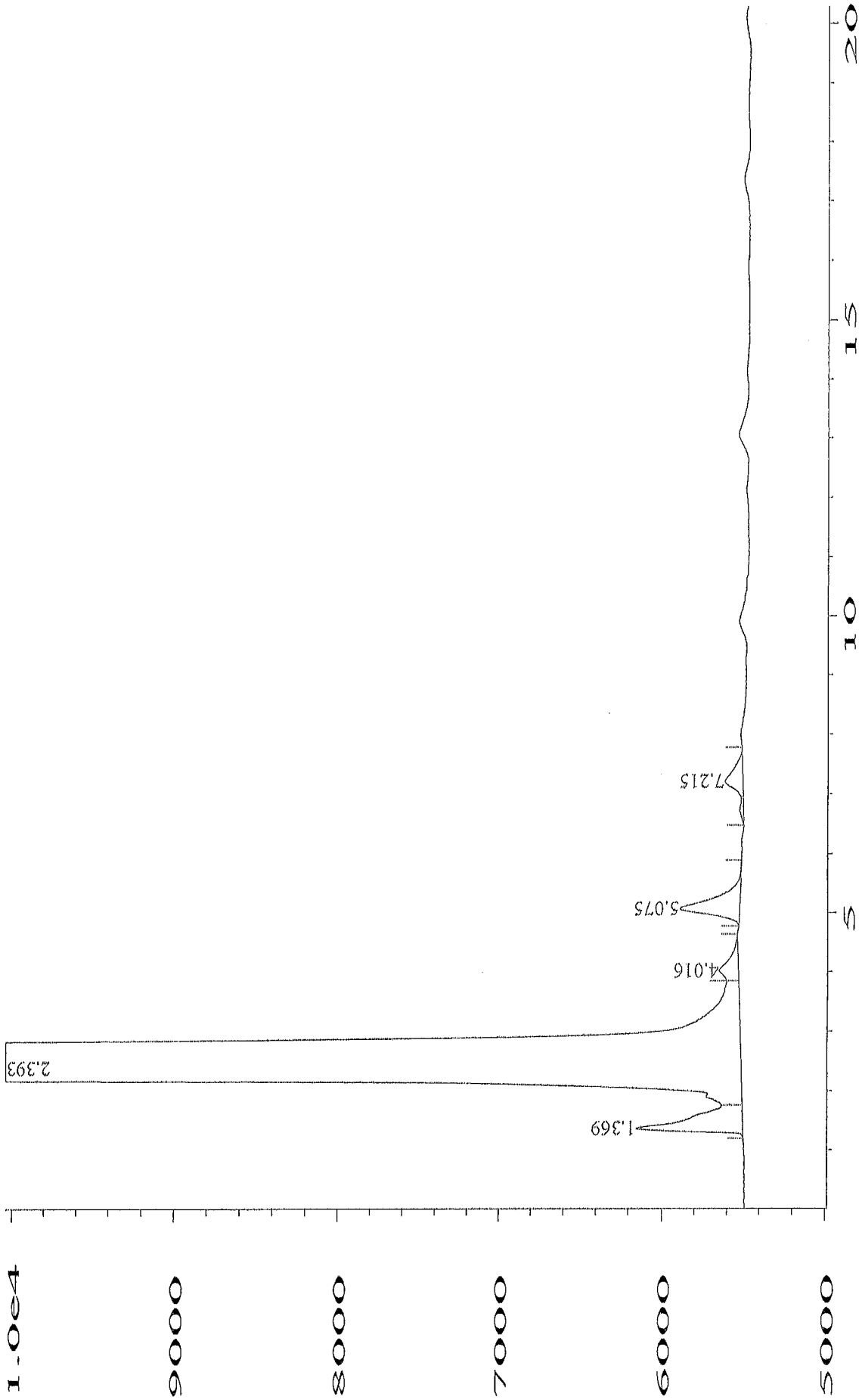
C:\GCCHEM\1\DATA\11203HPT\13619C



C:\GCCHEM\1\DATA\11203HPT\13619C

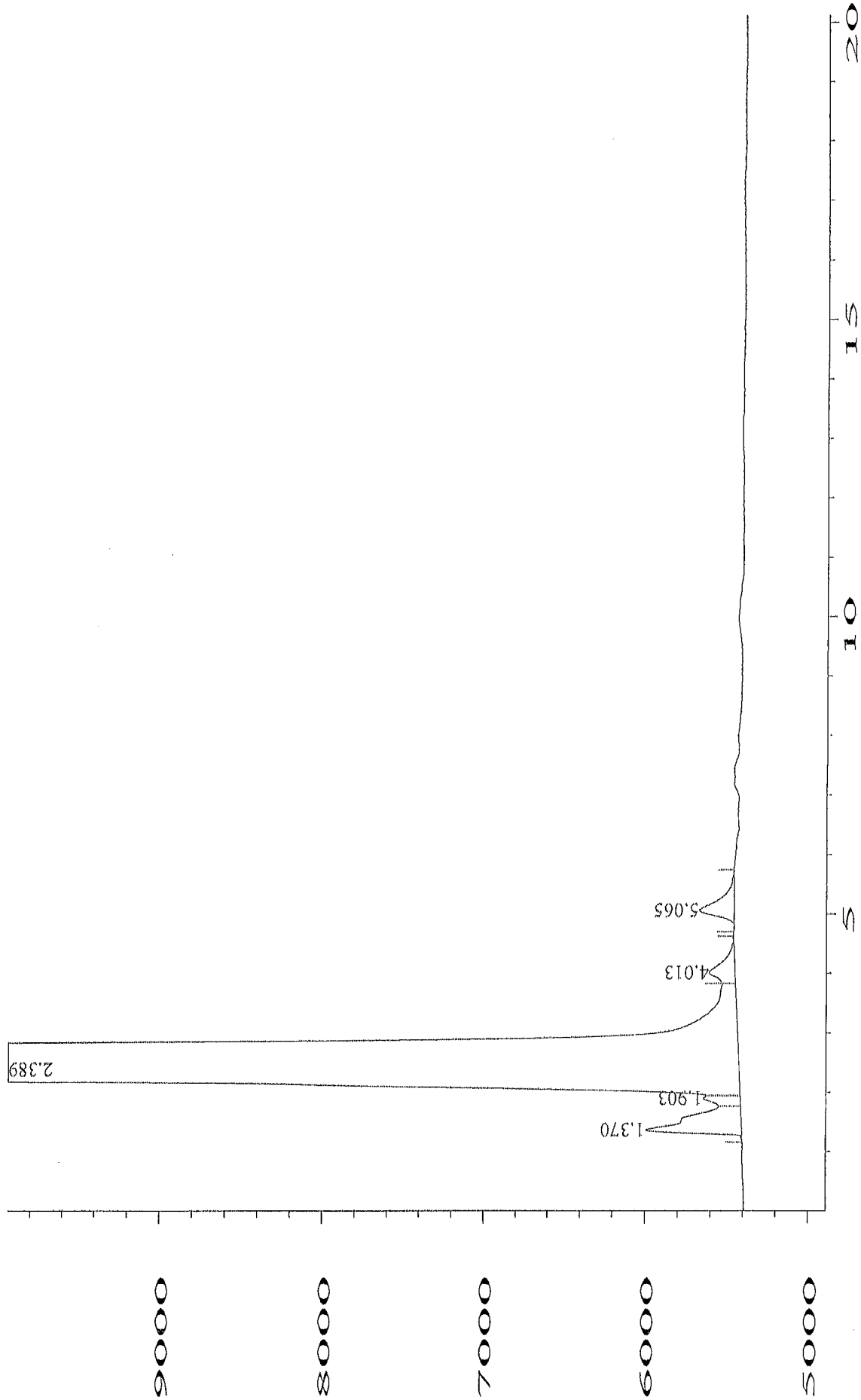
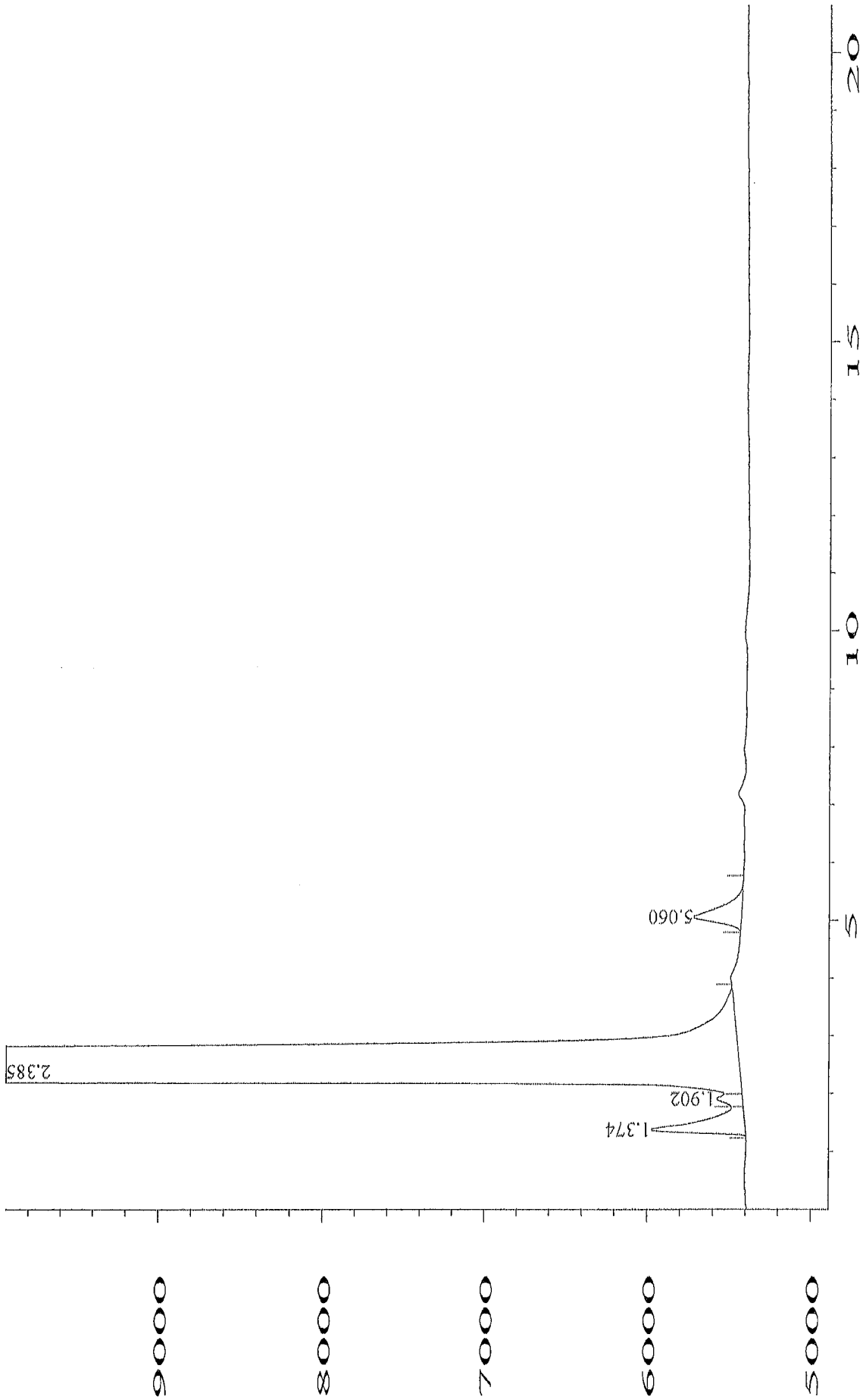
C:\GCCHEM\1\DATA\11203HPT\13619C

C:\GCCHEM\1\DATA\11203HPT\13619C

C:\GCCHEM\1\DATA\11203HPT\13619C

C:\GCCHEM\1\DATA\11203HPT\13619C

C:\GCCHEM\1\DATA\11203HPT\13619C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